

# JNCC/Cefas Partnership Report Series

*Report No. 14A*

**CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner  
Pockmark cSAC and Turbot Bank NCMPA proposal**

Ware, S.

June 2017

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**CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC  
and Turbot Bank NCMPA proposal**

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## **Executive summary**

This cruise report summarises operations and initial observations made on board the RV Cefas Endeavour during the cruise CEND19x/12 on behalf of the Joint Nature Conservation Committee (JNCC). The survey took place between 17<sup>th</sup> November and 1<sup>st</sup> December 2012.

The primary aims of the survey were to gather evidence from three areas: Braemar Pockmarks Site of Community Importance (SCI), Scanner Pockmark SCI and Turbot Bank Nature Conservation Marine Protected Area (NCMPA) proposal, identified through the Scottish MPA project.

The Braemar pockmarks are a series of crater-like depressions on the sea floor, two of which contain the Annex I habitat “Submarine structures made by leaking gases”. In this location, large blocks, pavements, slabs and smaller fragments of Methane Derived Authigenic Carbonate (MDAC) have been deposited through a process of precipitation during the oxidation of methane gas. The survey at Braemar Pockmarks SCI consisted of a full coverage acoustic survey (employing multibeam echosounder (MBES) and sidescan sonar) and directed groundtruthing (using drop-camera and grabbing techniques) based on the processed acoustic data. The planned survey for this SCI was successfully completed before moving onto the second survey area at the Scanner Pockmark SCI.

Scanner pockmark is a large seabed depression in the northern North Sea which contains large blocks of the Annex I habitat “Submarine structures made by leaking gases”. The blocks are reported to lie in the base of the pockmark and support fauna more typically associated with rocky reef. The survey at Scanner Pockmark SCI consisted of a full coverage acoustic survey (employing MBES and sidescan sonar) and directed groundtruthing (using drop-camera and grabbing techniques) based on the processed acoustic data. The planned survey for this SCI was successfully completed before moving onto the third and final survey area at the Turbot Bank Nature Conservation Marine Protected Area (NCMPA) proposal.

Turbot Bank has been proposed as a Scottish Nature Conservation MPA primarily for the protection of sandeels. This area has also been selected as a ‘science-based alternative’ for the search features ‘shelf banks and mounds’ and ‘offshore subtidal sands and gravels’ present in the ‘Firth of Forth Banks Complex proposed NCMPA’ (JNCC 2012). The survey at the Turbot Bank NCMPA proposal comprised a combination of groundtruthing (using drop-camera and grabbing techniques) informed using existing MBES data (collected under the Civil Hydrography Programme) and additional acoustic data collection and groundtruthing in the eastern portion of the proposal where CHP data does not exist. All planned survey work at Turbot Bank NCMPA was successfully completed.

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# 1 Introduction

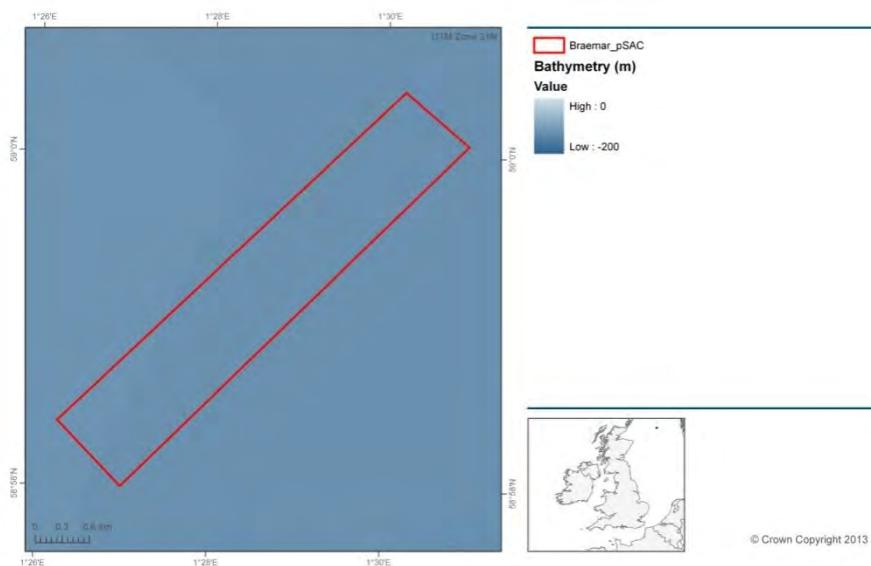
## 1.1 Survey project team

The surveys were carried out during 17<sup>th</sup> November – 1<sup>st</sup> December 2012 on the RV Cefas Endeavour. The survey team for the duration of the fieldwork included staff from JNCC, Cefas and NetSurvey.

## 1.2 Braemar Pockmarks cSAC

### 1.2.1 Location

The site name originates from its proximity to the Braemar oil field in the northern North Sea, approximately 240km east of the Orkney Islands (Figure 1). The water depth at the site is approximately 120m.



**Figure 1.** Location of Braemar Pockmarks SCI. Bathymetry is from Defra's Digital Elevation Model (Astrium 2011).

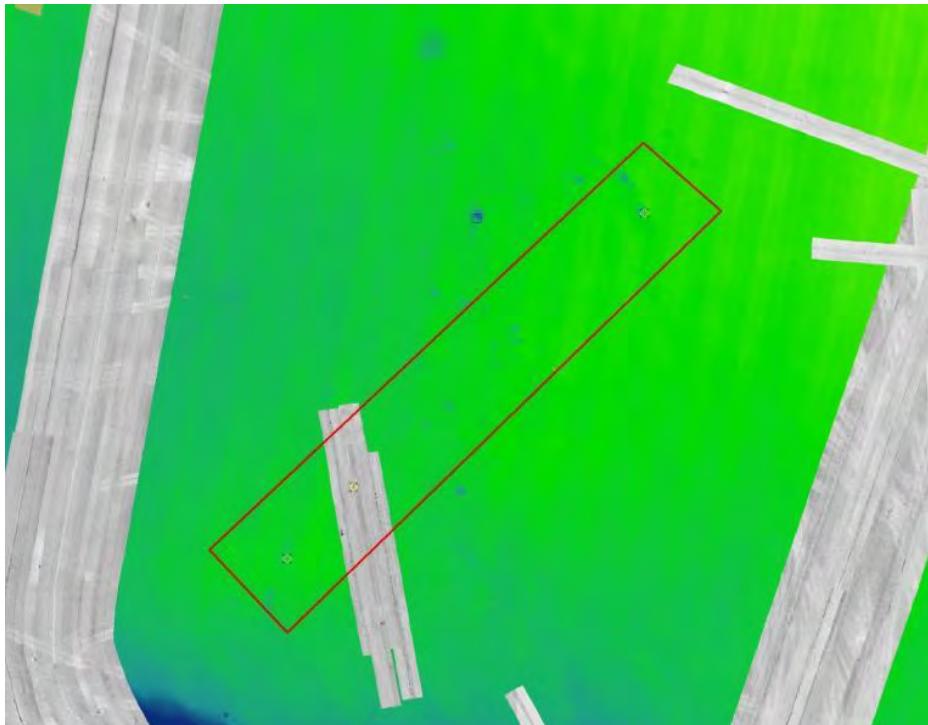
### 1.2.2 Geological and biological context

The pockmarks at the site are shallow, ovoid, seabed depressions, several metres across, which were probably formed by the venting of biogenic/petrogenic fluids or gases into the water column (Hovland & Judd 1988). In this location, large blocks, pavements, slabs and smaller fragments of Methane Derived Authigenic Carbonate (MDAC) have been deposited through a process of precipitation during the oxidation of methane gas. These carbonate structures provide a habitat for marine fauna usually associated with rocky reef, and very specific chemosynthetic organisms which feed off both methane (seeping from beneath the

ea floor) and its by-product, hydrogen sulphide (Judd 2001). Larger blocks of carbonate also provide shelter for fish species such as wolf-fish and gadoids (e.g. cod and haddock). Close by the two pockmarks containing blocks of carbonate, to the south west, there is another block of carbonate which is not associated with a pockmark (Hartley 2005).

### 1.2.3 Existing data and information utilised to inform survey planning

Limited multibeam bathymetry data and sidescan sonar data, collected by British Petroleum (BP) exists for the Braemar Pockmarks SCI (Figure 2).



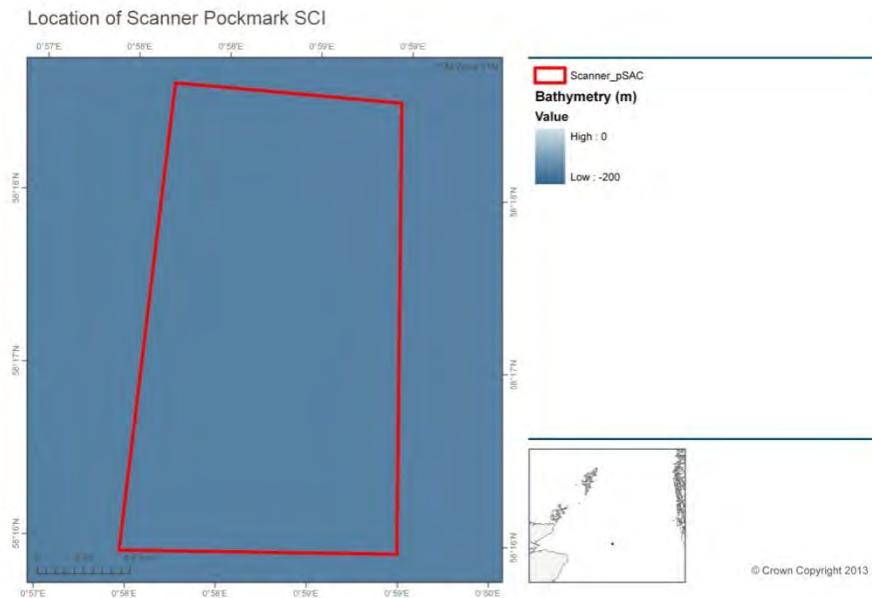
**Figure 2.** Existing multibeam bathymetry and sidescan sonar data collected by the oil and gas industry at Braemar Pockmarks cSAC. Data © BP 2006.

Whilst existing acoustic data were identified for this site it was decided that new ‘full coverage’ acoustic data (multibeam bathymetry and backscatter, and sidescan sonar) would be acquired due to the limited coverage of the existing data and the significant time elapsed since its collection.

## 1.3 Scanner cSAC

### 1.3.1 Location

The site is situated approximately 185km off the north-east coast of Scotland near the centre of the Witch Ground Basin, in waters of approximately 150m depth (Figure 3).



**Figure 3.** Location of Scanner Pockmark SCI. Bathymetry is from Defra's Digital Elevation Model (Astrium 2011).

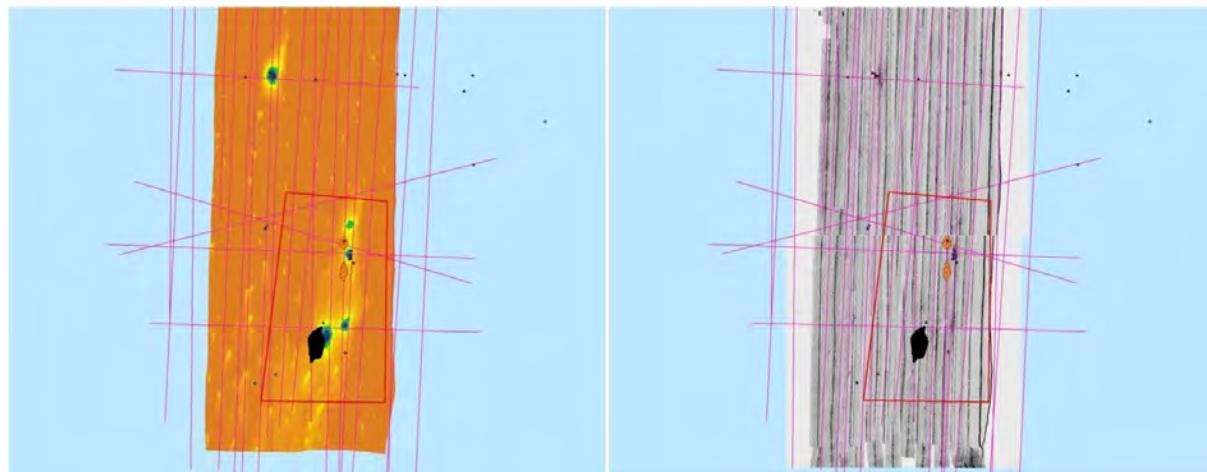
The pockmark contains two deep areas, is roughly oval in shape and measures approximately 900m by 450m across, with a depth of around 22m below the surrounding sea floor (Judd & Hovland 2007).

### 1.3.2 Geological and biological context

Scanner pockmark is a large seabed depression in the northern North Sea, which contains large blocks of the Annex I habitat "Submarine structures made by leaking gases" (Figure 3). The blocks lie in the base of the pockmark and support fauna more typically associated with rocky reef. These carbonate structures are notably colonised by large numbers of anemones (*Urticina felina* and *Metridium senile*) and squat lobsters (Dando 2001). These features also appear to support micro-organisms known as 'chemosynthesizers' which utilise the discharged methane and its by-product, hydrogen sulphide (Judd 2001). The gutless nematode *Astomonema southwardorum*, which may have a symbiotic relationship with chemosynthetic bacteria, is unique to this site (Austen *et al* 1993). Several fish species (hagfish, haddock, wolf-fish and small redfish) also appear to be using the pockmark depressions and the carbonate structures for shelter (Dando 2001). This site also contains the Scotia pockmark complex in the north, a composite feature composed of two deeper sections with active methane seeps (Dando 2001). The volumes of these pockmarks (Scanner: approximately 1 million m<sup>3</sup>) are considerably greater than the typical pockmarks in the area.

### 1.3.3 Existing data and information utilised to inform survey planning

Full coverage acoustic data (multibeam bathymetry and sidescan sonar) had previously been collected within the Scanner Pockmark SCI in support of the Strategic Environmental Assessment (SEA) carried out by offshore energy industry in 2001 (Figure 4).



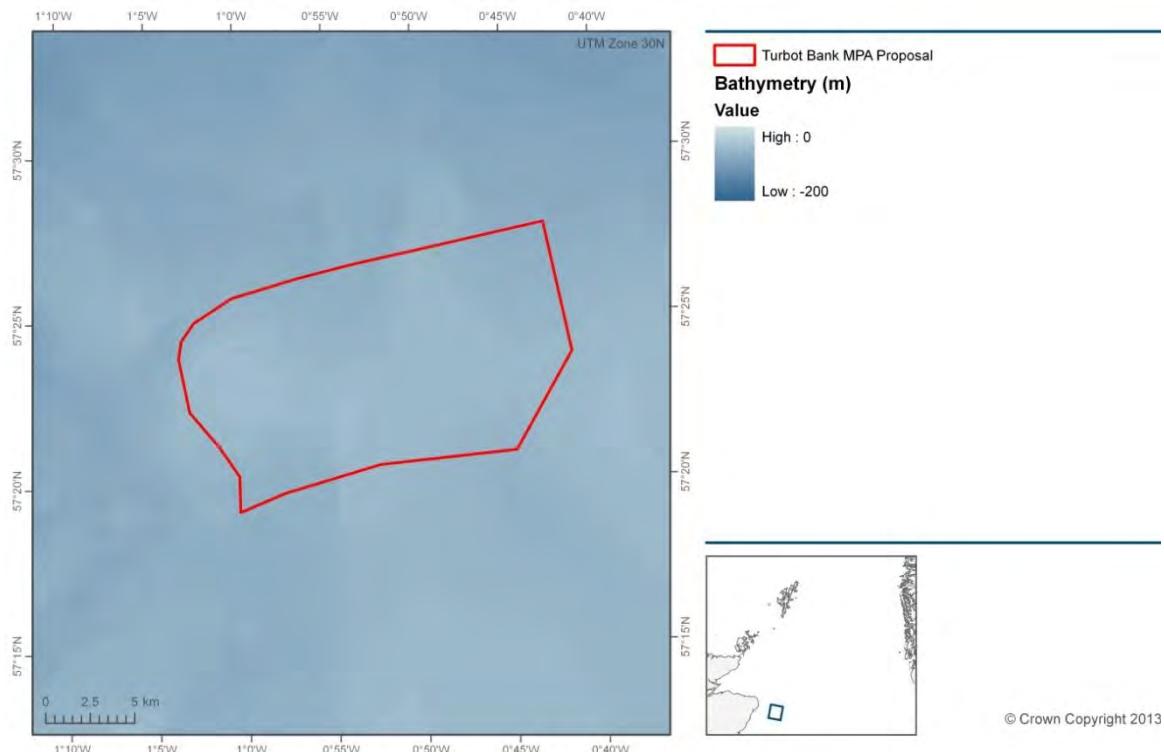
**Figure 4.** Existing multibeam bathymetry (left) and sidescan sonar data (right) collected by the offshore energy industry in support of their Strategic Environmental Assessment (SEA). Data © DECC 2001.

Whilst existing acoustic data were identified for this site it was decided that new 'full coverage' acoustic data (multibeam bathymetry and backscatter, and sidescan sonar) would be acquired due to the significant time elapsed (11 years) since its collection.

## 1.4 Turbot Bank NCMPA Proposal

### 1.4.1 Location

The Turbot Bank Nature Conservation MPA proposal is situated approximately 65km east of Peterhead on the Aberdeenshire coast (Figure 5). The water depth at the site ranges between 60-80m across the site.



**Figure 5.** Location of the Turbot Bank NCMPA Proposal. Bathymetry is from Defra's Digital Elevation Model (Astrium 2011).

#### 1.4.2 Geological and biological context

Following application of the selection guidelines and discussion with Marine Scotland Science regarding sandeels in the OSPAR Region, it was concluded that the search location should be proposed as an MPA for the protection of sandeels. The area has also been selected as a science based alternative for the features 'shelf banks and mounds' and 'offshore subtidal sands and gravels' present in the Firth of Forth Banks complex proposed MPA. The boundary of the MPA proposal has been drawn to encompass the entirety of the Turbot Bank.

#### 1.4.3 Existing data and information utilised to inform survey planning

Existing multibeam bathymetry and backscatter data, collected in support of the Civil Hydrography programme (CHP), has been identified for the western portion of the Turbot Bank. However, as these acoustic data are currently unprocessed (and therefore not useable for the purposes of groundtruth survey planning) we used the available Astrium Digital Elevation Model (DEM) to inform survey planning (Figure 6).



Figure 6. Turbot Bank MPA proposal with Astrium DEM bathymetry overlaid (Astrium 2011).

## 2 Aims and Objectives

### 2.1 Braemar Pockmarks cSAC and Scanner Pockmark cSAC

#### 2.1.1 Search strategy and methods: acoustic survey

The objectives of the acoustic survey were to gather 100% coverage acoustic data (multibeam echosounder and sidescan sonar) from within the survey area specified to assist in delineating the extent of pockmarks and associated methane derived authentic carbonate (MDAC) structures and to aid the identification of anthropogenic activity; during acquisition of

the acoustic data, evidence of anthropogenic activity was recorded (for example, trawl scar counts during sidescan acquisition).

Multibeam bathymetry and backscatter data were acquired using the Kongsberg EM2040 system operated at 200kHz and deployed on the drop keel of RV Cefas Endeavour, which was lowered to its full extent to minimise the effect of bad weather on the acoustic signal. Variations of sound velocity with water depth were determined using a CTD (conductivity-temperature-depth) probe and applied during multibeam data acquisition. The raw multibeam bathymetry data were processed using CARIS HIPS and QPS Fledermaus. Tidal information was extracted from a high precision CNAV 3050 DGPS receiver. Tide height data were smoothed and extracted to reduce the bathymetry data to Chart Datum. The soundings were cleaned by an experienced hydrographic surveyor using CARIS. Data collected will need to meet IHO Order 1a requirements. Multibeam backscatter data were processed with the QPS Fledermaus Geocoder Toolbox (FMGT) software to produce floating point (FP) GeoTiff images.

Sidescan sonar data were acquired using the Edgetech 4200MP system running with Edgetech DISCOVER acquisition software. Cable-out measurements were used to provide layback information. The sidescan sonar data were recoded onto hard drive in Edgetech proprietary JSF format and XTF format for later processing.

### 2.1.2 Search strategy and methods: groundtruthoring survey

The objective of the groundtruthoring survey was to gather data from within the survey area (video and still images and grabbing techniques) to allow a robust characterisation of the habitats and the faunal communities within the pockmark features and the surrounding areas. Sub-sampling of the grab samples for meiofauna was carried out to determine the presence/abundance of the gutless nematode *Astomonema southwardorum* and other meiofauna that may be associated with the pockmark features. Multiple grab samples (3 samples) were collected at a sub-set of stations (separated by a distance of approximately 5 metres) to explore the effects of survey design and sampling density on the species accumulation curve within the site.

## 2.2 Turbot Bank NCMPA proposal

### 2.2.1 Search strategy and methods: acoustic survey

The objectives of the acoustic survey at the Turbot Bank NCMPA proposal were to achieve as much acoustic data coverage as possible (multibeam bathymetry and backscatter) across the portion of the site where CHP MBES data does not exist in order to assist in the delineation of the bank feature as well as the constituent acoustic facies that are present on the bank. Acoustic data was acquired within equidistant corridors across the eastern portion of the site to enable the acoustic data gaps to be infilled at a later date where required.

### 2.2.2 Search strategy and methods: groundtruthoring survey

Objectives of the groundtruthoring survey at Turbot Bank were to gather appropriate evidence (specifically infaunal samples and seabed imagery) to allow a robust characterisation of the site and to demonstrate the presence of Scottish Priority Marine Features and MPA Search Features within Turbot Bank NCMPA proposal.

## 2.3 Sample collection and processing methods: Braemar Pockmarks and Scanner Pockmark cSACs

### 2.3.1 Grab sampling

Sediments across the Braemar Pockmarks and Scanner Pockmark cSACs were predicted to be broadly dominated by soft mud. Therefore, a Day grab was employed for the acquisition of samples for Particle Size Analysis (PSA) and infaunal analysis (macrofauna and meiofauna) within these areas. On recovery of the Day grab, a photograph was taken of the intact sediment surface and the depth of the sample was recorded. The grab sample was then sub-sampled, using a full depth core (diameter 30mm) for PSA. The same coring devise was used to collect an additional sub-sample (to a depth of 5cm) for meiofaunal analysis. Benthic fauna were collected from the remaining sample by washing it with sea-water over a 1mm sieve. The retained >1mm fraction was transferred to a labelled container and preserved in 4% buffered formaldehyde for later analysis ashore.

Areas characterised by possible MDAC were similarly sampled using a Hamon grab, which is a more reliable sampling gear for use in coarse sediment types. The grab system comprised a 0.1m<sup>2</sup> mini-Hamon grab fitted with a video camera, the combined gear being known as a HamCam (Figure 7). This allowed an image of the undisturbed seabed surface to be obtained for each grab sample. On recovery, the grab was emptied into a large plastic bin and a representative sub-sample of sediment (approx. 0.5 litres) taken for Particle Size Analysis (PSA). The sample was stored in a labelled plastic container and frozen ready for transfer to a laboratory ashore. The remaining sample was photographed and the volume of sediment measured and recorded. Benthic fauna were collected by washing the sample with sea-water over a 1mm sieve. The retained >1mm fraction was transferred to a labelled container and preserved in 4% buffered formaldehyde for later analysis ashore.

Where possible MDAC was identified in a sample, the possible MDAC fragments were removed from the sample and transferred to a suitable storage container for transport to the BGS laboratory for subsequent analysis of composition and time of formation.



Figure 7. Mini-Hamon grab with video camera (HamCam), © Cefas 2012.

### 2.3.2 Video and still images

The drop-camera system comprised a video camera with capability to also capture still images. Illumination was provided by two Cefas high intensity LED striplights and a flash unit. The camera was fitted with a four-spot laser-scaling device to provide a reference scale in the video image. Set-up and operation followed the MESH 'Recommended Operating Guidelines (ROG) for underwater video and photographic imaging techniques'. Video was recorded simultaneously to a Sony GV-HD700 DV tape recorder and a computer hard drive. A video overlay was used to provide station metadata, time and GPS position (of the vessel) in the recorded video image.



**Figure 8.** Drop-camera frame fitted with video and still imaging system, © Cefas 2012.

Deployments lasted a minimum of 10 minutes, with the vessel executing a controlled drift at ~ 0.5 knots ( $\sim 0.25\text{ms}^{-1}$ ) across a 100m 'bullring' centred on the sampling station. Stills images were captured at regular one minute intervals and opportunistically if specific features of interest were encountered. The height of the camera off the seabed was controlled by a winch operator with sight of the video monitor.

## 2.4 Sample collection and processing methods: Turbot Bank NCMPA proposal

### 2.4.1 Grab sample

The HamCam system was also employed at all stations within the Turbot Bank MPA proposal. On recovery of the Hamon grab the sample was processed for PSA and infauna as described above in section 3.3.1. Where cobbles were present in the grab sample, a full 'cobble analysis' was carried out (following accepted protocols) to assist in the identification and characterisation of the cobble fraction of the sediment and associated epifaunal communities.

### 2.4.2 Video and still images

The drop-camera system was similarly employed to acquire video and still images at a subset of the sampling stations using the methods described above in section 3.3.2.

## 3 Cruise narrative

### 3.1 Cruise narrative

The RV Cefas Endeavour departed from Hartlepool at 07:00 on 17<sup>th</sup> November 2012 and began transit to the planned MBES calibration site at Swallow Hole. Calibration of the MBES began on arrival at Swallow Hole (14:00 on 17/11/12) and continued until 17:45 on the same day after which the vessel began transit to the Braemar Pockmarks cSAC.

#### 3.1.1 Braemar Pockmarks cSAC

The survey vessel arrived at the first survey site at Braemar Pockmarks cSAC at 11:00 on the 18<sup>th</sup> November 2012 where the acoustic survey (employing MBES and sidescan sonar) commenced. The acoustic survey continued at this site until 13:00 on 20/11/12 after which the drop-camera survey began across the site. The drop-camera survey continued until 07:30 on 21/11/12 during which time 14 stations were completed. Acoustic survey then recommenced at 08:30 on the same day and continued until the survey had been successfully completed at 10:45. Grab sampling then began across the site and continued until all stations had been completed (27 in total) at 03:45 on 22/11/12. The vessel then began transit to the next survey area at the Scanner Pockmark cSAC.

#### 3.1.2 Scanner Pockmark cSAC

Acoustic survey (employing MBES and sidescan sonar) began on arrival at the Scanner Pockmark cSAC (08:15 on 22/11/12) and continued until 14:06 on 23/11/12. Grab sampling then commenced across the site and continued until 10:30 on 24/11/12 during which time a total of 35 stations were successfully completed. Survey work then continued, using the drop-camera until 17:10 during which time seven stations were successfully completed. The acoustic survey then recommenced until completion at 23:00 on 24/11/12, after which the drop-camera survey recommenced. The remaining drop-camera stations (11 in total) were then completed, followed by the remaining grab stations (three in total), after which the vessel began transit to the final survey area at Turbot Bank.

#### 3.1.3 Turbot Bank NCMPA proposal

Acoustic survey began on arrival at the Turbot Bank NCMPA proposal at 18:00 on 25/11/12 and continued until 05:45 on 26/11/12. The grab survey then commenced until 11:30 (during which time seven grab stations were successfully completed) before the drop-camera system was deployed. A combination of grab sampling and drop-camera survey then continued across the survey grid until 20:20 on the 27/11/12 (30 grab stations and 19 drop-camera stations completed) after which acoustic survey recommenced. Acoustic survey continued until 13:00 on 28/11/12 after which the remaining grab stations (37 in total) and drop-camera stations (eight in total) were completed. The remaining survey time was then employed to acquire additional acoustic data before the vessel began the transit back to Lowestoft, arriving at 07:00 on 01/12/12 for demobilisation.

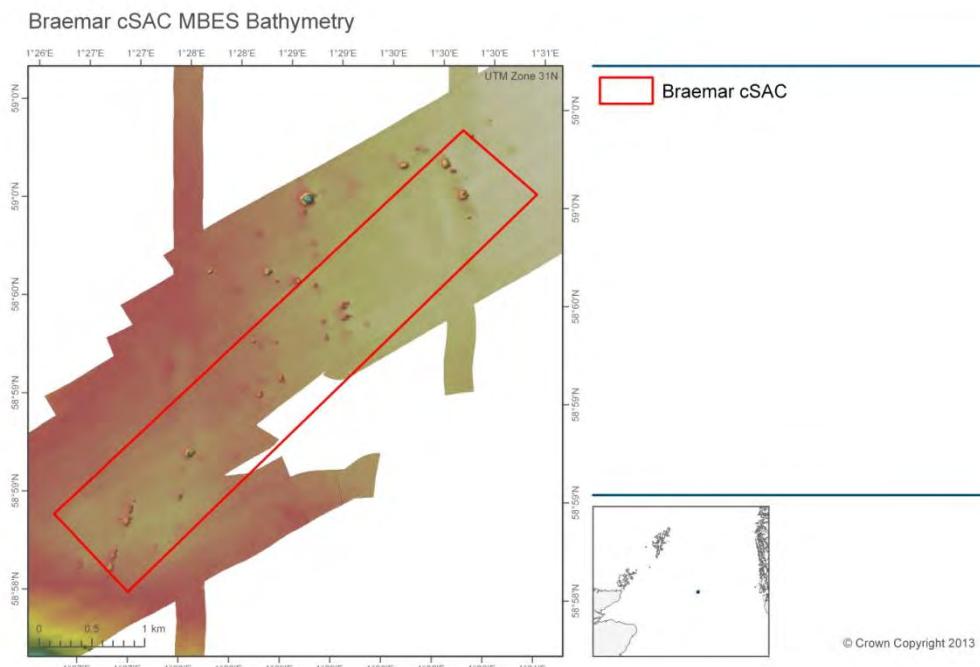
## 4 Preliminary results

Please note that preliminary results from this report of the survey are provided in the knowledge that more detailed analyses and interpretations are to be carried out and reported subsequently.

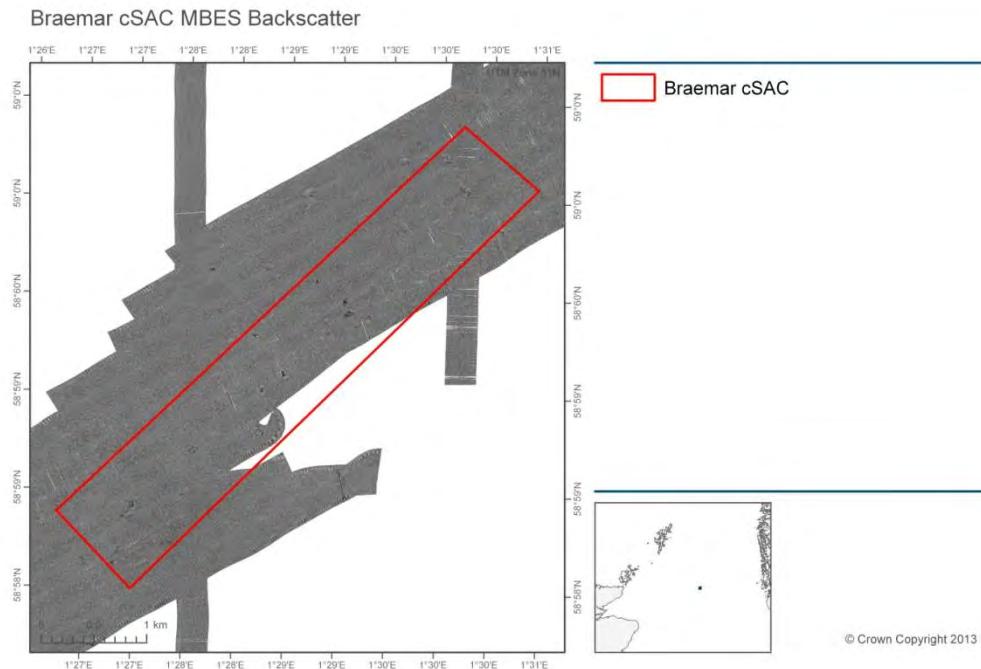
### 4.1 Braemar Pockmarks cSAC

#### 4.1.1 Acoustic survey

Full MBES bathymetry and backscatter data coverage was achieved across the Braemar Pockmarks cSAC (Figure 9 and Figure 10). These data were processed during the survey to enable their use in the planning and design of the groundtruthing element of the survey. MBES data for a small portion of the survey area, along the south-eastern boundary of the cSAC, could not be acquired due to obstruction caused by a well head and the associated vessel exclusion zone.

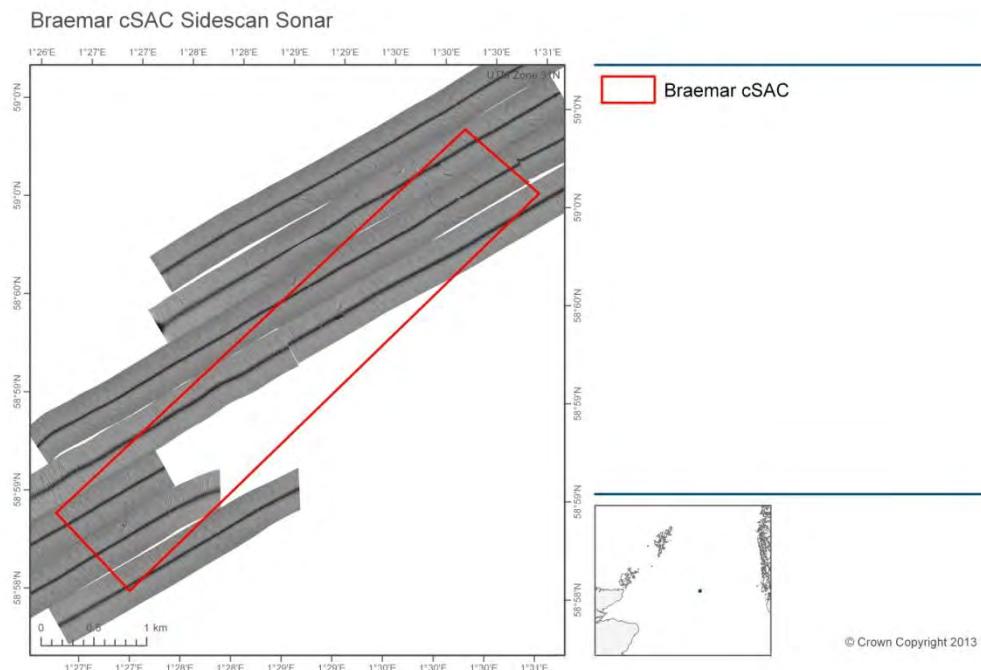


**Figure 9.** MBES Bathymetry data collected at Braemar Pockmarks cSAC survey area.



**Figure 10.** MBES backscatter data collected at Braemar Pockmarks cSAC survey area.

Full sidescan sonar data coverage was also achieved at this site, excluding a small portion of the survey area along the south-eastern boundary of the cSAC which could not be accessed due to obstruction caused by a well head. These data were processed on-board to allow their use in informing the groundtruthing survey design (Figure 11).



**Figure 11.** Sidescan sonar data collected at Braemar Pockmarks cSAC survey area.

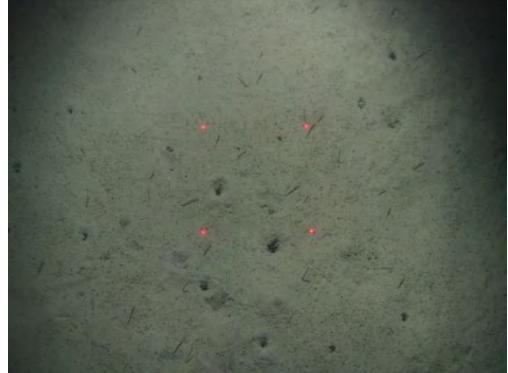
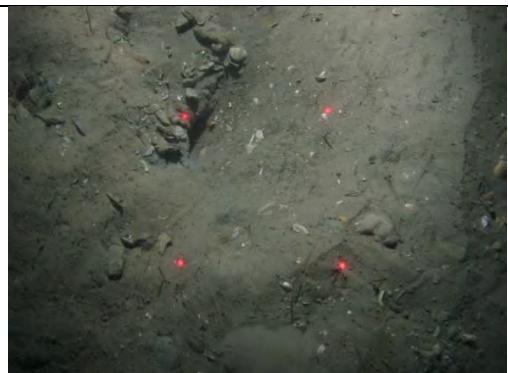
#### 4.1.2 Seabed imagery

A selection of images from each of the video camera deployments at Braemar cSAC is presented in Table 1 below to illustrate the variety of substrates observed on each transect.

**Table 1.** Preliminary summary of the seabed habitats and epifaunal communities observed during each video transect and associated still images at Braemar Pockmarks cSAC – note these are field observations and may change following formal analysis.

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>BRMR 25</b>	Burrowed mud with patches of broken shell and potential MDAC  <i>Echinus acutus, Virgularia mirabilis, Bolocera tuediae, Anarhichas lupus, Pollachius virens</i>	
<b>BRMR 26-27</b>	Burrowed mud, with patches of broken shell and potential MDAC  <i>Asterias rubens, Pennatula phosphorea, Paguridae, Echinus acutus</i>	
<b>BRMR 28</b>	Burrowed mud, with patches of broken shell and potential MDAC  <i>Echinus acutus, Munida rugosa, Virgularia mirabilis, Myxine glutinosa, Asterias rubens, Bolocera tuediae, Pollachius virens</i>	
<b>BRMR 29</b>	Burrowed mud  <i>Echinus acutus, Asterias rubens, Virgularia mirabilis, Pennatula phosphorea</i>	

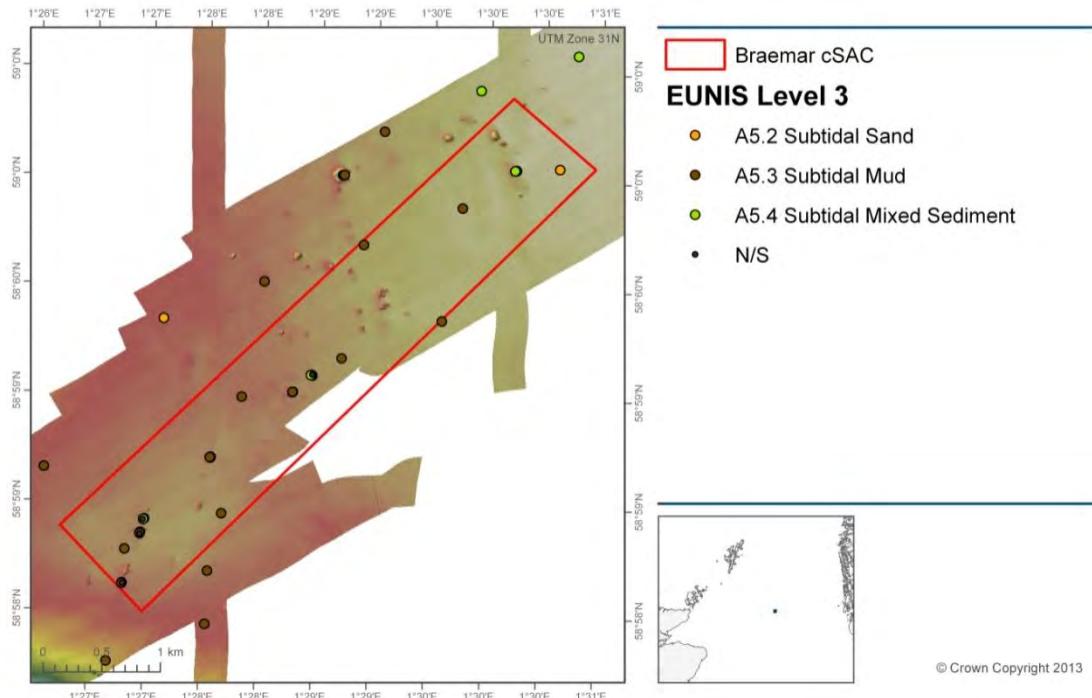
Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>BRMR 30-31</b>	Burrowed mud with patches of broken shell and potential MDAC (and occasional patches of bacterial mat)?  <i>Asterias rubens, Bolocera tuediae, Paguridae, Astropecten irregularis,</i>	
<b>BRMR 32</b>	Burrowed mud, with patches of broken shell and potential MDAC  <i>Myxine glutinosa, Lophius piscatorius, Trisopterus luscus</i>	
<b>BRMR 33</b>	Burrowed mud  <i>Glyptocephalus cynoglossus, Trispoterus luscus</i>	
<b>BRMR 37</b>	Burrowed mud, with patches of broken shell and potential MDAC  <i>Virgularia mirabilis, Bolocera tuediae, Asterias rubens, Paguridae, Pennatula phosphorea</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>BRMR 38</b>	Burrowed mud  <i>Virgularia mirabilis</i>	
<b>BRMR 39</b>	Burrowed mud  <i>Echinus acutus</i> , <i>Pollachius virens</i> , Paguridae	
<b>BRMR 40</b>	Burrowed mud with patches of broken shell  <i>Myxine glutinosa</i> , <i>Pagurus bernhardus</i> , <i>Trisopterus luscus</i>	
<b>BRMR 41</b>	Burrowed mud, with patches of broken shell and potential MDAC (and occasional bacterial mat)?  <i>Virgularia mirabilis</i> , <i>Pennatula phosphorea</i> , <i>Echinus acutus</i> , <i>Pagurus bernhardus</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>BRMR 42</b>	Burrowed mud with occasional bacterial mat  <i>Bolocera tuediae, Pennatula phosphorea, Glyptocephalus cynoglossus, Microstomus kitt, Asterias rubens</i>	

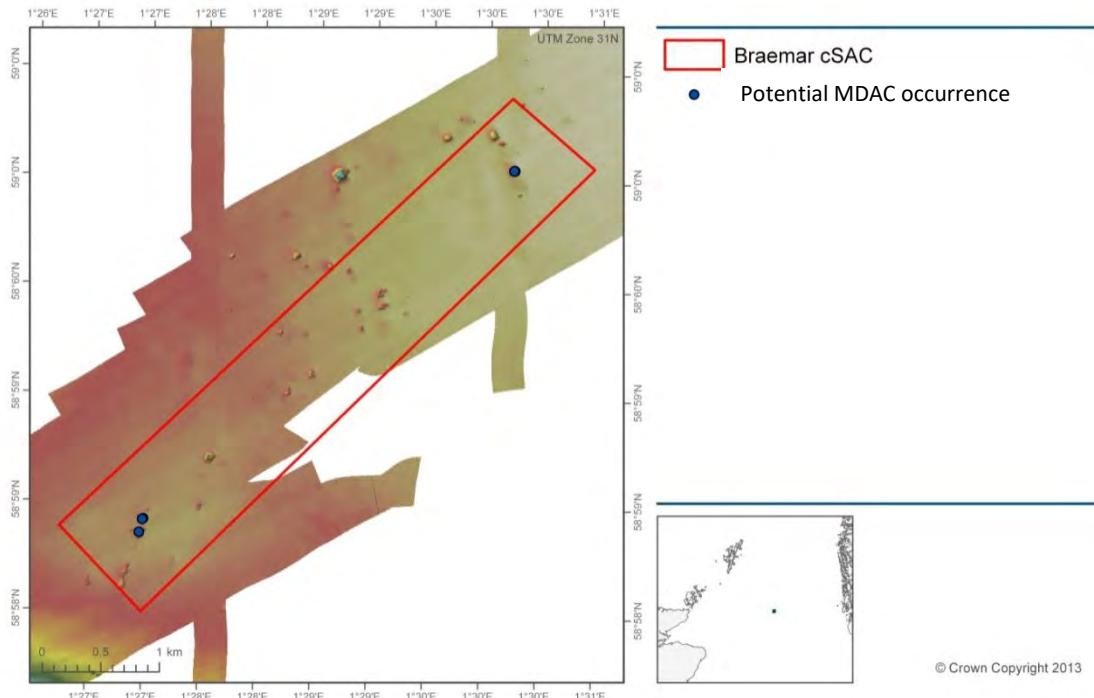
#### 4.1.3 Grab samples and preliminary sediment descriptions

Preliminary, visual sediment descriptions from grab samples are provided below in Figure 12.



**Figure 12.** Preliminary sediment descriptions from grab samples collected at Braemar Pockmarks cSAC survey area.

The locations of grab samples, which contained potential MDAC (to be confirmed following laboratory analysis) are shown below in Figure 13.

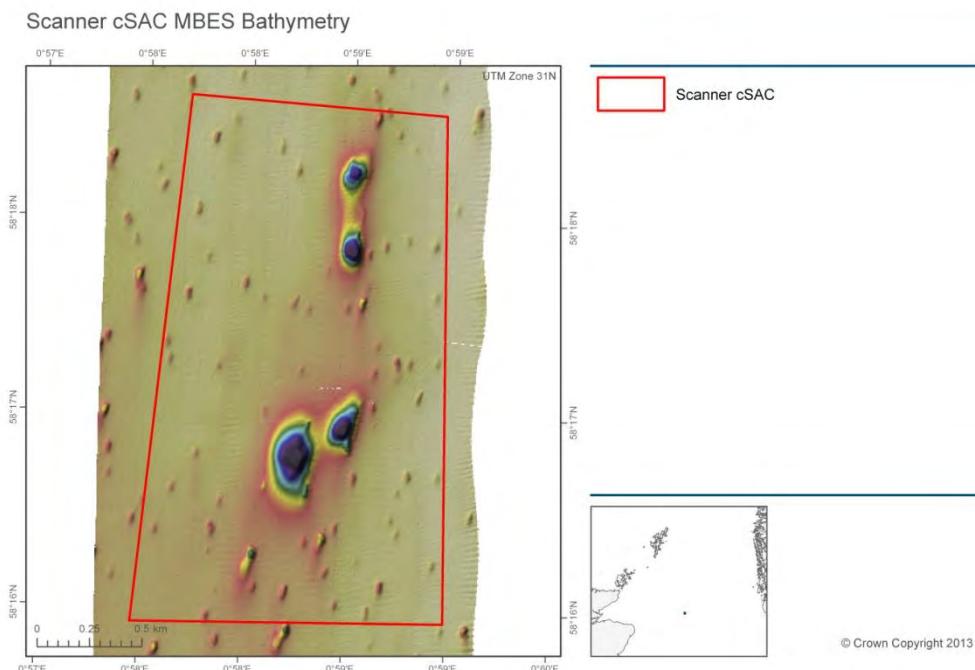


**Figure 13.** Locations of grab samples collected at Braemar Pockmarks cSAC survey area, which contained potential MDAC.

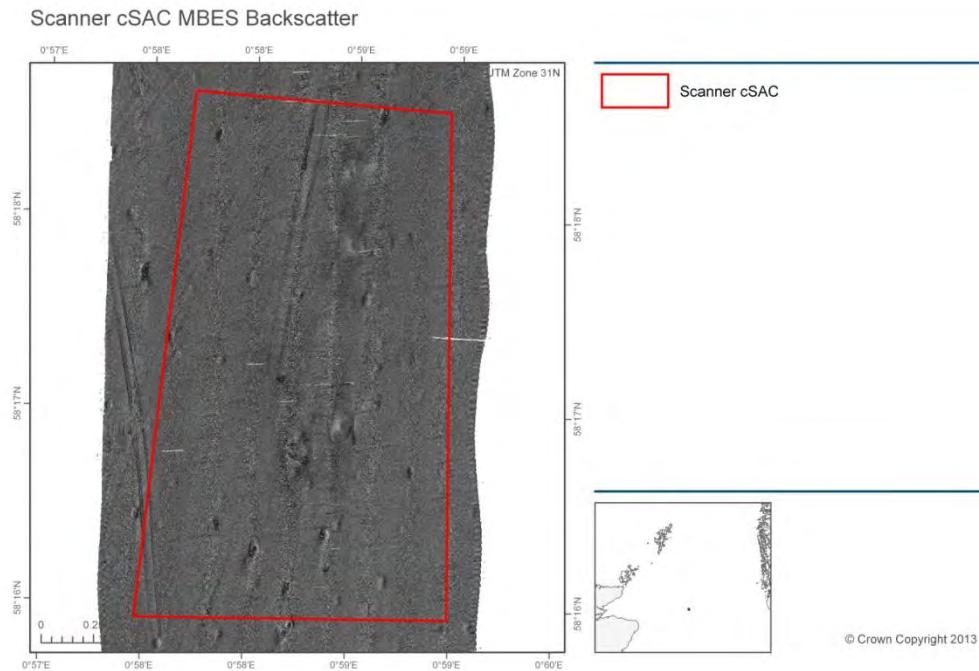
## 4.2 Scanner Pockmark cSAC

### 4.2.1 Acoustic survey

Full MBES data coverage was achieved across the Scanner Pockmark cSAC. These data were processed during the survey to enable their use in the planning and design of the groundtruthing element of the survey (Figure 14 and Figure 15).

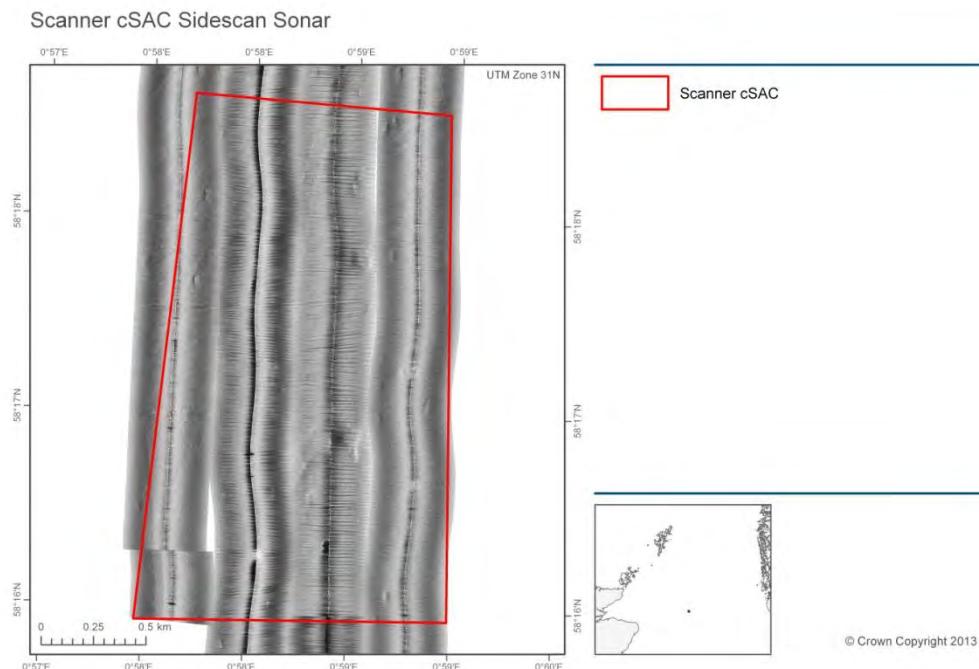


**Figure 14.** MBES bathymetry collected at Scanner Pockmark cSAC.



**Figure 15.** MBES backscatter collected at Scanner Pockmark cSAC.

Full sidescan sonar data coverage was also achieved at this site. Similarly, the data were processed onboard to allow their use in informing the groundtruthing survey design (Figure 16).



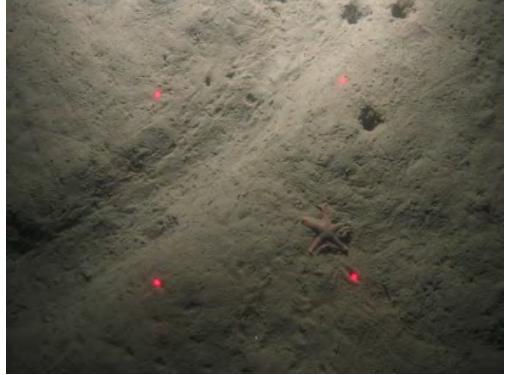
**Figure 16.** Sidescan sonar data collected at Scanner Pockmark cSAC.

#### 4.2.2 Seabed imagery

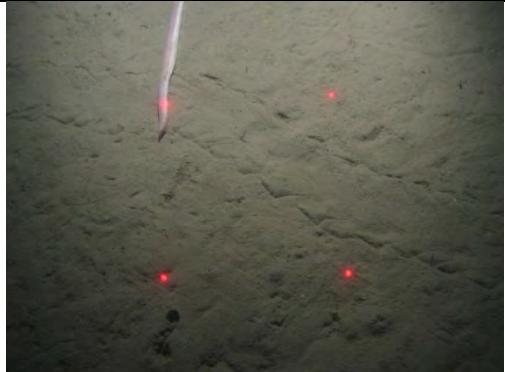
A selection of images from each of the video camera deployments at Scanner cSAC is presented in Table 2 below to illustrate the variety of substrates observed on each transect.

**Table 2.** Preliminary summary of the seabed habitats and epifaunal communities observed during each video transect and associated still images at Scanner cSAC – note these are field observations and may change following formal analysis.

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>SCDC_01</b>	Burrowed mud  <i>Pennatula phosphorea, Myxine glutinosa, Astropecten irregularis</i>	
<b>SCDC_02</b>	Burrowed mud  <i>Pennatula phosphorea, Pollachius virens</i>	
<b>SCCS_02</b>	Burrowed mud  <i>Paguridae</i>	
<b>SCDC_03</b>	Burrowed mud  <i>Astropecten irregularis, Myxine glutinosa, Pennatula phosphorea</i>	

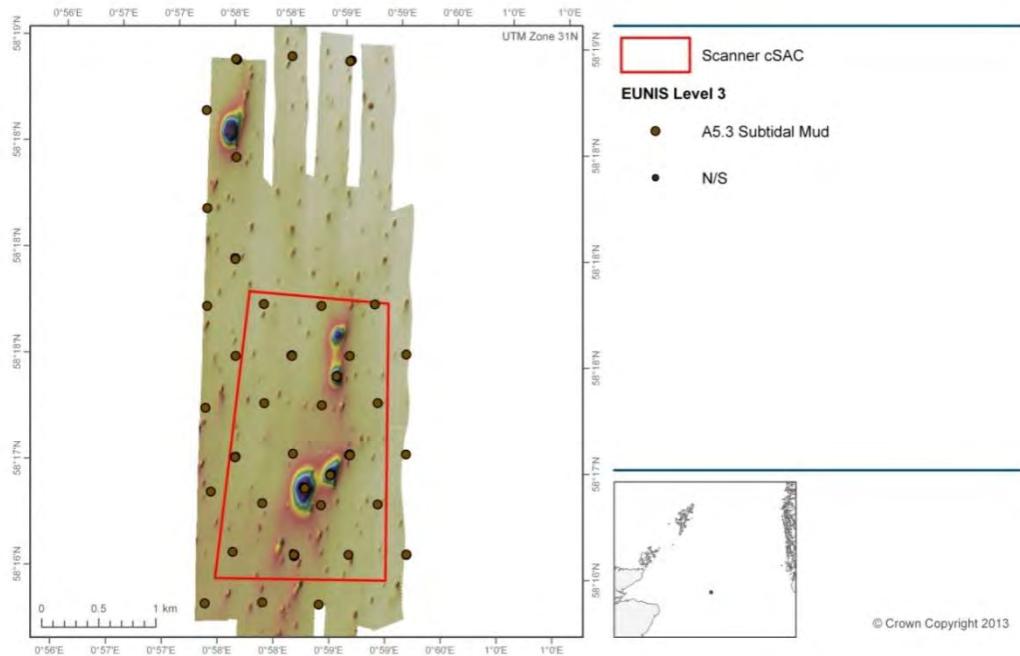
Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>SCDC_04</b>	Burrowed mud  <i>Nephrops norvegicus, Myxine glutinosa, Pollachius virens</i>	
<b>SCDC_05</b>	Burrowed mud  <i>Astropecten irregularis, Trisopterus luscus, Nephrops norvegicus, Pennatula phosphorea</i>	
<b>SCDC_06</b>	Burrowed mud  <i>Pennatula phosphorea, Myxine glutinosa</i>	
<b>SCDC_07</b>	Burrowed mud  <i>Virgularia mirabilis, Pennatula phosphorea</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>SCDC_08</b>	Burrowed mud <i>Pennatula phosphorea</i>	
<b>SCDC_09</b>	Burrowed mud Paguridae	
<b>SCDC_10</b>	Burrowed mud <i>Myxine glutinosa</i>	
<b>SCDC_11</b>	Burrowed mud	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>SCDC_12</b>	Burrowed mud  <i>Pennatula phosphorea, Myxine glutinosa, Luidia sarsi, Paguridae</i>	
<b>SCDC_13</b>	Burrowed mud  <i>Myxine glutinosa, Paguridae</i>	
<b>SCDC_14</b>	Burrowed mud  <i>Astropecten irregularis, Pennatula phosphorea</i>	
<b>SCDC_15</b>	Burrowed mud  <i>Nephrops norvegicus</i>	

#### 4.2.3 Grab samples and preliminary sediment descriptions

Preliminary, visual sediment descriptions from grab samples are provided below in Figure 17.

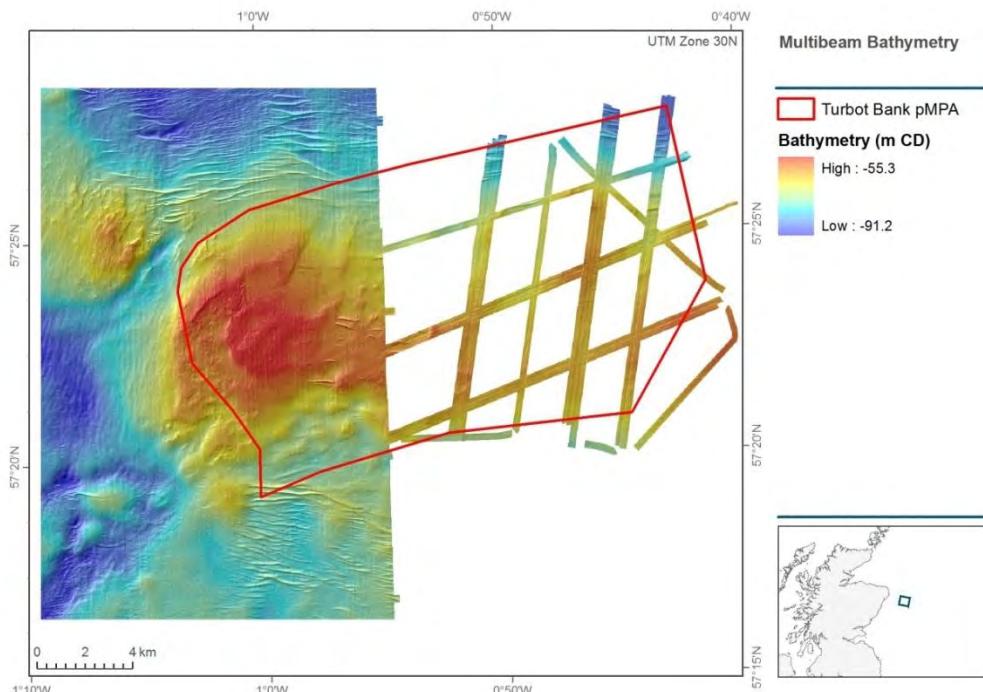


**Figure 17.** Preliminary sediment descriptions from grab samples collected at Scanner Pockmark cSAC survey area.

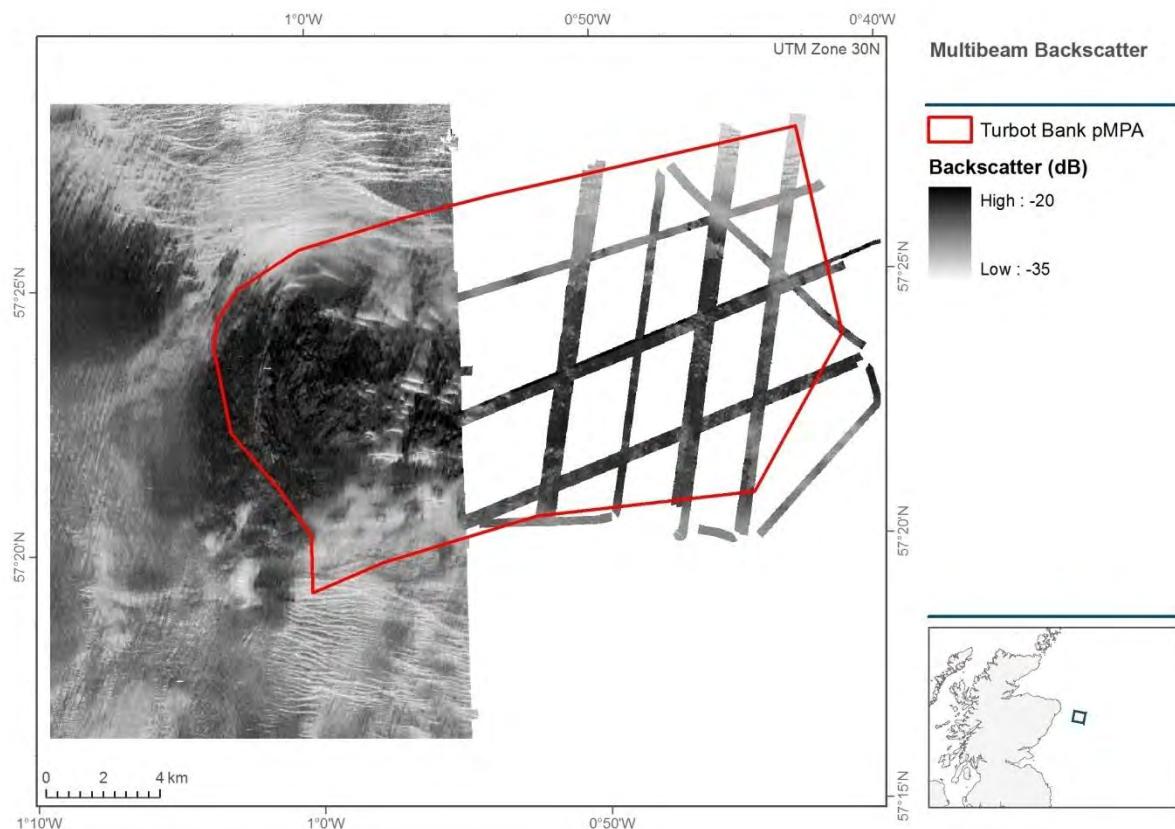
### 4.3 Turbot Bank NCMPA proposal

#### 4.3.1 Acoustic survey

MBES bathymetry and backscatter data were acquired from corridors across the eastern portion of the site, where CHP MBES data are absent (Figure 18 and Figure 19).



**Figure 18.** MBES bathymetry data collected at Turbot Bank NCMPA proposal.



**Figure 19.** MBES backscatter data collected at Turbot Bank NCMPA proposal.

#### 4.3.2 Seabed imagery

A selection of images from each of the video camera deployments at Turbot Bank NCMPA proposal is presented in Table 3 below to illustrate the variety of substrates observed on each transect.

**Table 3.** Preliminary summary of the seabed habitats and epifaunal communities observed during each video transect and associated still images at Turbot Bank NCMPA proposal – note these are field observations and may change following formal analysis.

Stn Code	BSH Habitat/Faunal Summary	Still Image
TRBT_03	Slightly sandy gravel with pebble and cobble  <i>Porania pulvillus, Flustra foliacea, Abietinaria sp., Munida rugosa</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>TRBT_06</b>	Slightly sandy gravel with pebble and cobble  <i>Flustra foliacea, Cancer pagurus, Trispoterus luscus, Macropodia sp., Urticina felina, Porania pulvillus, Luidia ciliaris, Munida rugosa, Pagurus prideaux</i>	
<b>TRBT_08</b>	Slightly sandy gravel with pebble, cobble and occasional boulder  <i>Flustra foliacea, Munida rugosa, Pagurus prideaux, Echinus esculentus, Porania pulvillus, Liocarcinus sp.</i>	
<b>TRBT_10</b>	Slightly sandy gravel with pebble and cobble  <i>Flustra foliacea, Munida rugosa, Echinus esculentus, Pagurus prideaux, Porania pulvillus, Asterias rubens, Hippasteria phrygiana, Luidia ciliaris, Pecten maximus</i>	
<b>TRBT_15</b>	Slightly sandy gravel with pebble and cobble  <i>Luidia sarsi, Munida rugosa, Porania pulvillus, Pagurus prideaux, Luidia ciliaris, Cancer pagurus</i>	

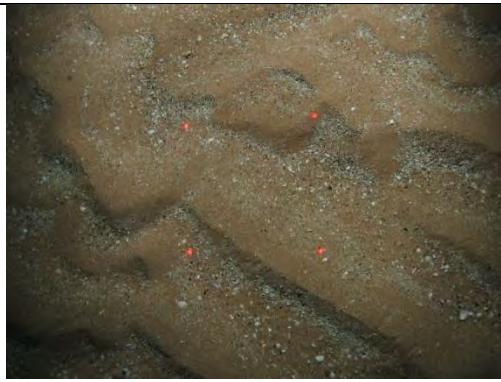
Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>TRBT_18</b>	Slightly sandy gravel with pebble, cobble and occasional boulder  <i>Pagurus prideaux, Flustra foliacea, Pecten maximus, Munida rugosa, Henricia oculata, Abietinaria sp.</i>	
<b>TRBT_19</b>	Slightly sandy gravel with pebble and cobble  <i>Flustra foliacea, Pecten maximus, Porania pulvillus, Echinus esculentus, Munida rugosa, Asterias rubens, Pagurus prideaux</i>	
<b>TRBT_23</b>	Rippled gravelly sand with occasional pebble and cobble  <i>Pagurus prideaux, Asterias rubens, Flustra foliacea, Abietinaria sp., Pleuronectes platessa</i>	
<b>TRBT_25</b>	Slightly sandy gravel with pebble and cobble  <i>Pecten maximus, Pholis gunnellus, Munida rugosa, Asterias rubens, Cancer pagurus, Porania pulvillus, Pagurus prideaux</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>TRBT_28</b>	Slightly sandy gravel with pebble and cobble  <i>Flustra foliacea, Trisopterus luscus, Abietinaria sp., Munida rugosa, Porania pulvillus, Pagurus prideaux, Agonus cataphractus, Pagurus bernhardus, Echinus esculentus, Ebalia sp.</i>	
<b>TRBT_30</b>	Sandy gravel with pebble and cobble  <i>Porania pulvillus, Inachus sp., Pagurus prideaux, Luidia ciliaris, Cancer pagurus</i>	
<b>TRBT_33</b>	Slightly shelly coarse sand  <i>Flustra foliacea, Agonus cataphractus, Porania pulvillus, Pagurus bernhardus, Pleuronectes platessa</i>	
<b>TRBT_34</b>	Slightly sandy gravel with pebble and cobble  <i>Flustra foliacea, Paguridae, Munida rugosa, Aequipecten opercularis, Porania pulvillus</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>TRBT_43</b>	Slightly sandy gravel  <i>Flustra foliacea, Asterias rubens, Ophiura ophiura, Chelidonichthys lucerna</i>	
<b>TRBT_52</b>	Slightly shelly rippled sand  <i>Pagurus prideaux, Flustra foliacea</i>	
<b>TRBT_57</b>	Slightly sandy gravel with pebble and cobble  <i>Flustra foliacea, Porania pulvillus, Crossaster papposus, Trisopterus luscus, Pagurus prideaux, Chelidonichthys cuculus</i>	
<b>TRBT_59</b>	Slightly gravelly sand with occasional cobble  <i>Flustra foliacea, Hippasteria phrygiana, Sagartia sp., Munida rugosa, Abietinaria sp., Echinus esculentus, Atelecyclus rotundus</i>	

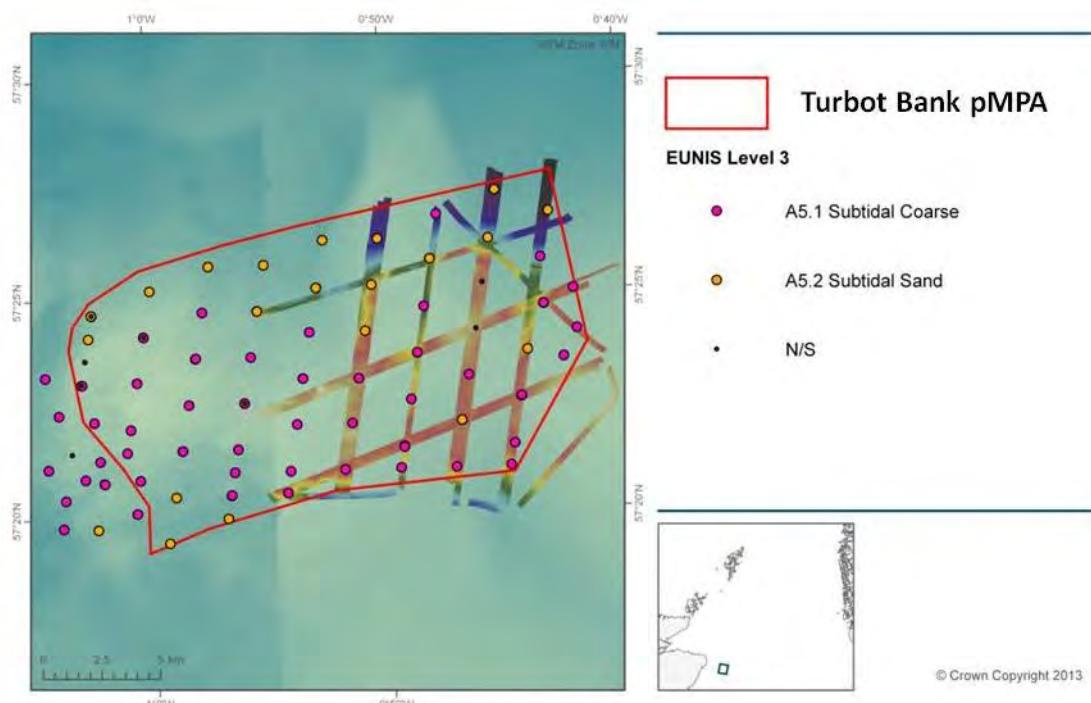
Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>TRBT_61</b>	Slightly shelly coarse sand  <i>Pagurus prideaux, Flustra foliacea, Asterias rubens, Luidia ciliaris, Urticina ciliaris</i>	
<b>TRBT_62</b>	Rippled gravelly sand with occasional cobble and boulder  <i>Urticina felina, Flustra foliacea, Munida rugosa, Cancer pagurus, Hippasteria phrygiana, Metridium senile, Abietinaria sp.</i>	
<b>TRBT_67</b>	Sandy gravel with pebble, cobble and occasional boulder  <i>Flustra foliacea, Echinus esculentus, Pecten maximus, Porania pulvillus, Luidia ciliaris, Munida rugosa, Trisopterus luscus</i>	
<b>TRBT_69</b>	Slightly sandy gravel  <i>Flustra foliacea, Pagurus bernhardus, Porania pulvillus, Pagurus prideaux, Trisopterus luscus</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>TRBT_75</b>	Slightly sandy gravel and cobble interspersed with rippled sand  <i>Flustra foliacea, Pecten maximus, Pagurus prideaux, Porania pulvillus, Echinus esculentus, Munida rugosa, Abietinaria sp., Maja squinado</i>	
<b>TRBT_76</b>	Slightly sandy gravel interspersed with rippled sand  <i>Flustra foliacea, Porania pulvillus, Pagurus prideaux</i>	
<b>TRBT_77</b>	Slightly gravelly sand with occasional cobble and boulder  <i>Flustra foliacea, Porania pulvillus, Pagurus prideaux, Echinus esculentus, Pecten maximus</i>	
<b>TRBT_78</b>	Slightly sandy gravel and cobble interspersed with rippled sand  <i>Flustra foliacea, Abietinaria sp., Crossaster papposus, Pagurus prideaux, Porania pulvillus, Asterias rubens</i>	

Stn Code	BSH Habitat/Faunal Summary	Still Image
<b>TRBT_79</b>	Slightly sandy gravel <i>Flustra foliacea, Crossaster papposus, Pagurus prideaux, Pecten maximus</i>	
<b>TRBT_80</b>	Rippled sand <i>Pagurus prideaux</i>	

#### 4.3.3 Grab samples and preliminary sediment descriptions

Preliminary sediment descriptions of grab samples from visual observations are provided below in Figure 20.



**Figure 20.** Preliminary sediment descriptions from grab samples collected at Turbot Bank NCMPA proposal (N/S denotes No Sample).

## 5 Quality control

### 5.1 Positioning

Vessel offsets are defined from the pitch roll centre of the vessel, the Common Reference Point (CRP) used by the Tower CEMAP software to calculate offsets. Positioning for the sidescan sonar data acquisition was calculated using a ‘layback’ correction.

### 5.2 Seabed Video and Stills

Seabed video and stills ground truth data was collected according to the MESH Recommended operating guidelines (ROG) for underwater video and photographic imaging techniques (Coggan *et al* 2007). Video and stills camera settings were varied depending on underwater visibility and ambient lights levels.

### 5.3 Physical Seabed Sampling

The Cefas Standard Operating Procedures (SOP) for use of a 0.1m<sup>2</sup> Day grab (Cefas 2004), the mini-Hamon grab (Cefas 2006) and the processing of the benthic sample associated with that grab were followed during the physical sample collection.

## 6 Human activity

A number of oil and gas industry installations were present in the vicinity of the Braemar and Scanner cSACs. Furthermore, evidence of demersal fishing (trawl marks in sidescan sonar and multibeam backscatter data) was observed within the Braemar and Scanner cSACs. A number of instances of marine litter present on the seabed were observed in the video and stills data acquired within all survey areas.

## 7 H&S events

No health and safety incidences occurred during the survey.

## 8 References

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- Dando, P.R. (2001). A review of pockmarks in the UK part of the North Sea, with particular respect to their biology. Technical report produced for Strategic Environmental Assessment-SEA2. UK: Department of Trade and Industry.
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- JNCC. (2012). Scottish MPA Project data Confidence Assessment: Turbot Bank MPA Proposal. 12pp.

## 9 Appendices

### 9.1 Appendix 1: RV Endeavour Specifications



<b>Port of registry</b>	Lowestoft
<b>Length OA</b>	73.00 m (excluding stern roller)
<b>Length extreme</b>	73.916 m
<b>Breadth (MLD)</b>	15.80 m
<b>Depth (MLD)</b>	8.20 m
<b>Design draft</b>	5.00 m
<b>Deep draught</b>	5.50 m
<b>LBP</b>	66.50 m
<b>Gross tonnage</b>	2983 tonnes
<b>Net register tonnage</b>	894 tonnes
<b>Net lightship</b>	2436 tonnes
<b>Deadweight @ 5.00 m</b>	784 tonnes
<b>Deadweight @ 5.50 m</b>	1244 tonnes
<b>Displacement @ 5.00 m</b>	3210 tonnes
<b>Displacement @ 5.50 m</b>	3680 tonnes
<b>Builder</b>	Ferguson Shipbuilders Limited, Port Glasgow
<b>Commissioned</b>	2003
<b>Communications</b>	In port BT Tel. Cellphone Voice/Fax/Data Radio TELEX Inmarsat C Fleet 77 (Inmarsat F) and VSAT (eutelsat) internet access
<b>Endurance</b>	42 days
<b>Complement</b>	En-suite accommodation for 16 crew and 19 scientists with dedicated hospital facility
<b>Propulsion System</b>	AC/DC Diesel Electric 3 x diesel electric AC generators, individually raft mounted 2 x tandem electric DC motors Single screw
<b>Power generation</b>	3240 Kw
<b>Power propulsion</b>	2230 Kw
<b>Thrusters</b>	Bow thruster (flush mounted azimuthing) Stern thruster (tunnel)
<b>Trial speed</b>	14.4 knots
<b>Bollard pull</b>	29 tonnes
<b>Call sign</b>	VQHF3
<b>Official number</b>	906938
<b>MMSI</b>	235005270
<b>Lloyds/IMO number</b>	9251107
<b>Side Gantry</b>	7.5 tonne articulated side A-frame

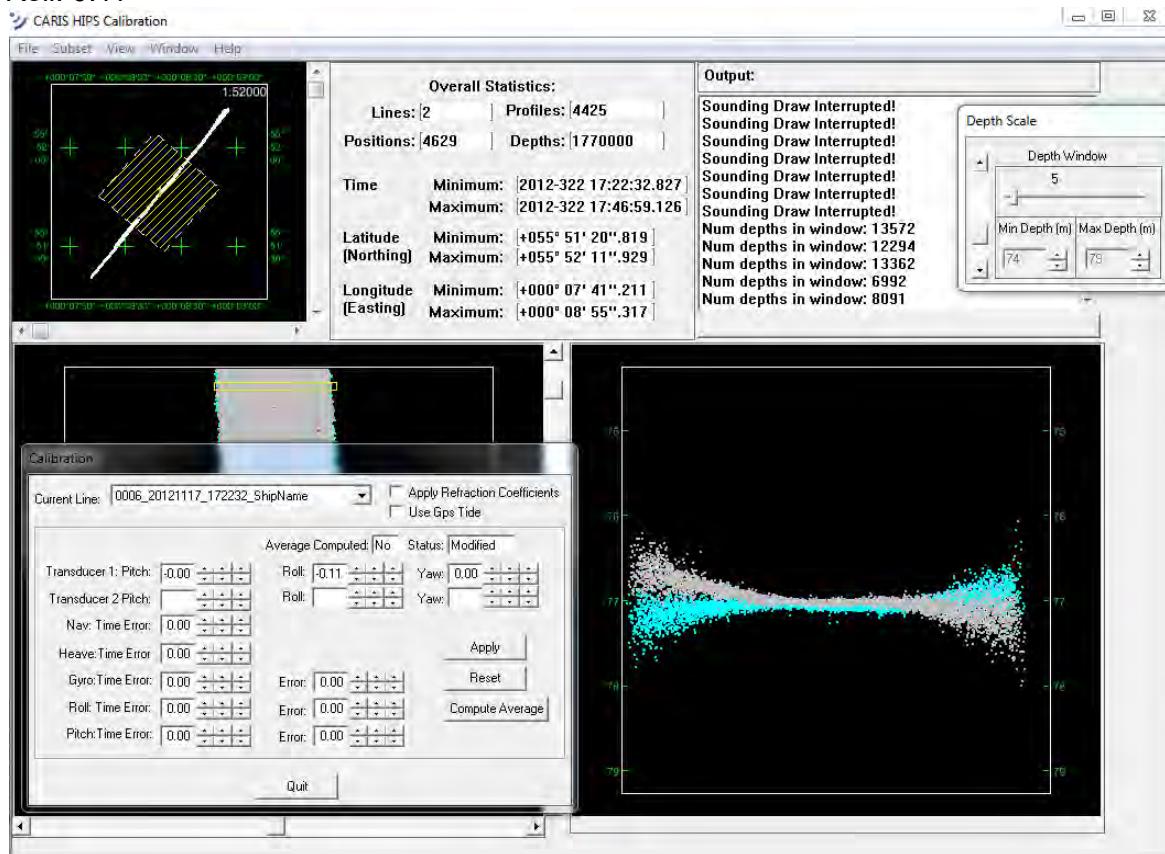
<b>Stern Gantry</b>	25 tonne stern A-frame
<b>Winches</b>	3 x cranes 35 tM, heave compensated 2 x trawl winches 2 x drum winches, (1 double) Double barrel survey winch with motion compensation and slip rings Double barrel survey winch with slip rings Double barrel towing winch with slip rings Side-scan sonar winch with slip rings 3 x Gilson winches (one fitted to stern A-frame)
<b>Transducers/Sea tube</b>	Drop keel to deploy transducers outside the hull boundary layer in addition to hull mounted transducers 1.2 m diameter sea tube/moon-pool
<b>Acoustic equipment</b>	Kongsberg Simrad: HiPAP 500 positioning sonar EK60, 38/120 kHz scientific sounder EA 600, 50/200 kHz scientific sounder Scanmar net mensuration system SH80 high frequency omnidirectional sonar EM3002 swathe bathymetry sounder Hull mounted Scanmar fishing computer transducers
<b>Boats</b>	2 x 8m rigid work and rescue boats with suite of navigational equipment deployed on heave-compensated davits
<b>Laboratories</b>	8 networked laboratories designed for optimum flexibility of purpose 4 serviced deck locations for containerised laboratories
<b>Special features</b>	Dynamic positioning system Intereng anti-roll system Local Area Network with scientific data management system Ship-wide general information system CCTV
<b>Class</b>	LRS 100A1+LMC UMS SCM CCS ICC IP ES(2) DP(CM) ICE class 2

## 9.2 Appendix 2: MBES specification and calibration

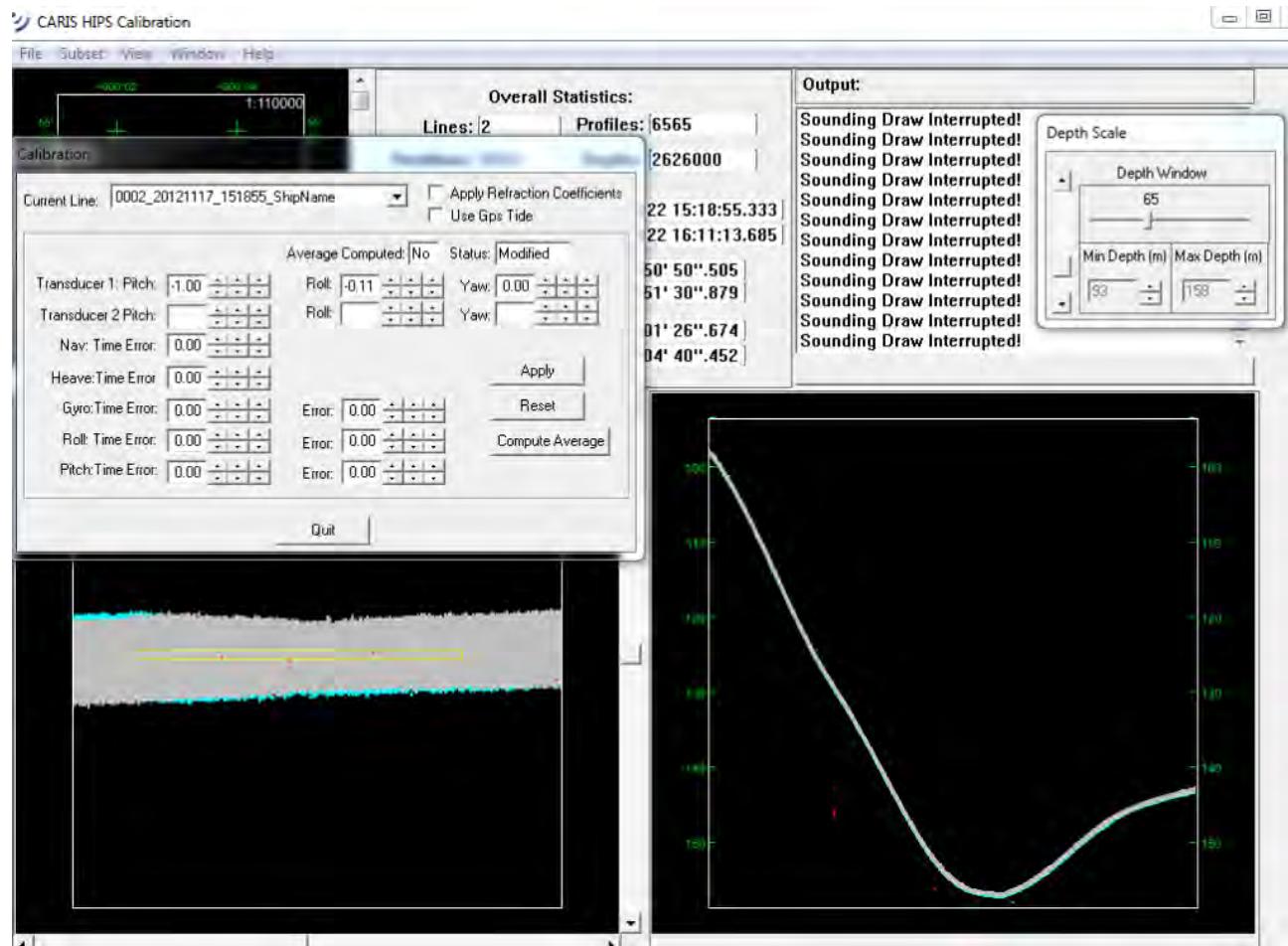
Model: Simrad EM2040

Frequency: 200/300/400kHz, swathe width variable dependant on water depth.  
 The calibration was done in Swallow Hole on 17th of November 2012. Six lines were run in total. No lines were run for latency as 1 PPS correction is used. No offsets have been changed in SIS. The changes have been applied in the HVF (Endeavour\_EM2040\_20121117.hvf) in Caris. Four of the lines were run on a steep slope, two others on a flat seabed. Caris was used for the calibration.

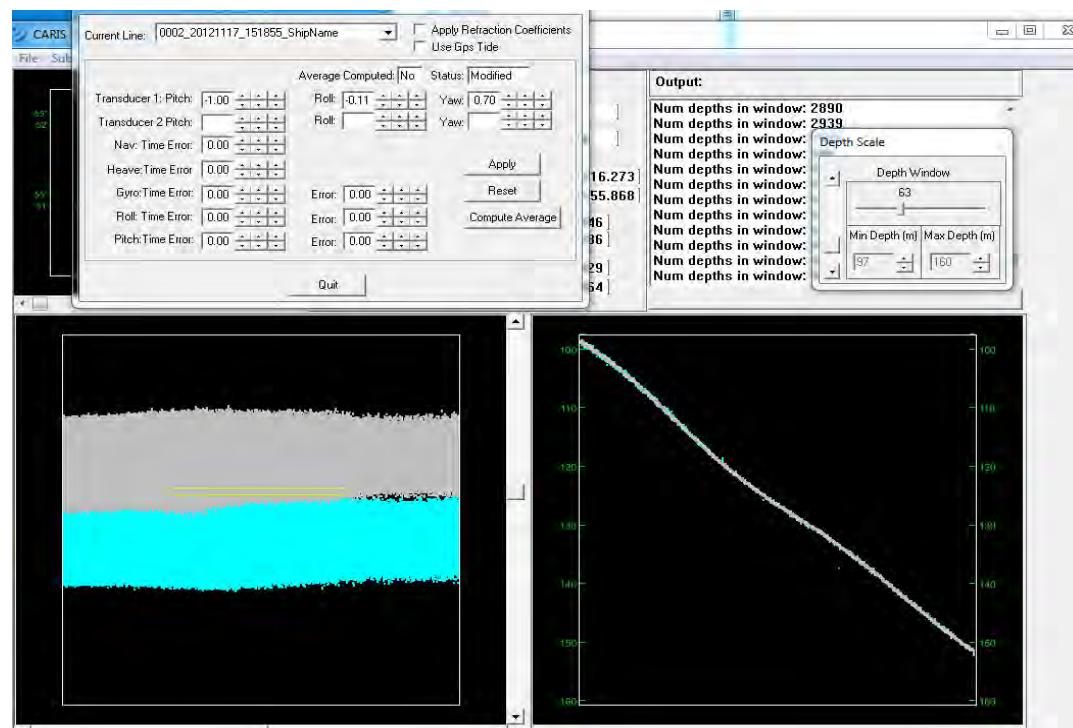
Roll: 0.11



CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal



Pitch : -1.0



Yaw: 0.7

During the survey at Braemar Pockmarks cSAC, some Roll error was observed. Therefore, two survey lines, going in opposite directions over the same ground, were used to identify a better Roll value. This value was then applied for Roll and re used to calibrate for the Pitch and the Yaw.

Final values used for the calibration were:

Roll: 0.04

Pitch: -1.00

Yaw: 1.2

### 9.3 Appendix 3: Drop-camera specification

Flash model: Kongsberg 11-242

Underwater lights – Cefas high power LED strip lights

Video and stills camera settings variable depending on underwater visibility and ambient light levels.

### 9.4 Appendix 4: Position Logging Software – Tower Navigation

Vessel offsets are defined from the pitch roll centre of the vessel the Common Reference Point (CRP) used by the Tower CEMAP software to calculate offsets.

### 9.5 Appendix 5: Acoustic Survey Metadata

Metadata for the acoustic elements of the Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal surveys on cruise CEND 19x/12 is provided below. The station number is a sequential event number for the cruise. The station code is used to identify the location of the sampling station. MB=Multibeam, SS=Sidescan Sonar.

#### 9.5.1 Braemar Pockmarks cSAC

Date sampled	Time for SOL	Time for EOL	Station code	Stn no.	Gear code	Replicate	Fix no.	Latitude (degrees)	Longitude (degrees)
17/11/2012	14:14	14:26	MBCAL	2	MB	CAL1A	SOL	55.84690	0.02970
17/11/2012	14:14	14:26	MBCAL	2	MB	CAL1A	EOL	55.85364	0.05999
17/11/2012	14:48	15:07	MBCAL	2	MB	CAL1	SOL	55.85920	0.07200
17/11/2012	14:48	15:07	MBCAL	2	MB	CAL1	EOL	55.84890	0.02360
17/11/2012	15:18	15:37	MBCAL	2	MB	CAL1A	SOL	55.84080	0.02670
17/11/2012	15:18	15:37	MBCAL	2	MB	CAL1A	EOL	55.85780	0.07440
17/11/2012	15:50	16:13	MBCAL	2	MB	CAL1A	EOL	55.84739	0.01839
17/11/2012	15:50	16:13	MBCAL	2	MB	CAL1A	SOL	55.85840	0.07720
17/11/2012	16:41	16:54	MBCAL	2	MB	CAL5	SOL	55.85820	0.13180
17/11/2012	16:41	16:54	MBCAL	2	MB	CAL5	EOL	55.87380	0.15420
17/11/2012	17:02	17:16	MBCAL	2	MB	CAL5	SOL	55.87140	0.15250
17/11/2012	17:02	17:16	MBCAL	2	MB	CAL5	EOL	55.85530	0.12770
17/11/2012	17:22	17:31	MBCAL	2	MB	CAL5	SOL	55.85880	0.13240
17/11/2012	17:22	17:31	MBCAL	2	MB	CAL5	EOL	55.87020	0.14910
17/11/2012	17:36	17:47	MBCAL	2	MB	CAL5	SOL	55.86960	0.14760
17/11/2012	17:36	17:47	MBCAL	2	MB	CAL5	EOL	55.85510	0.12771
18/11/2012	00:02	00:25	BRMR_MB_SS	4	MB + SS	BRMB18	EOL	58.97630	1.49075
18/11/2012	00:02	00:25	BRMR_MB_SS	4	MB + SS	BRMB18	SOL	58.96080	1.43058
18/11/2012	00:02	00:25	BRMR_MB_SS	4	SS7	BRMB18	EOL	58.97630	1.49075
18/11/2012	00:02	00:25	BRMR_MB_SS	4	SS7	BRMB18	SOL	58.96080	1.43058
18/11/2012	01:29	01:57	BRMR_MB_SS	4	MB + SS	BRMB6	SOL	58.99420	1.45610
18/11/2012	01:29	01:57	BRMR_MB_SS	4	MB + SS	BRMB6	EOL	59.01380	1.51873
18/11/2012	01:29	01:57	BRMR_MB_SS	4	SS7	BRMB6	EOL	59.01380	1.51873
18/11/2012	01:29	01:57	BRMR_MB_SS	4	SS7	BRMB6	SOL	58.99420	1.45610
18/11/2012	02:41	02:48	BRMR_MB_SS	4	MB + SS	BRMB7	EOL	59.00550	1.49020
18/11/2012	02:41	02:48	BRMR_MB_SS	4	MB + SS	BRMB7	SOL	59.01110	1.51450
18/11/2012	02:41	02:48	BRMR_MB_SS	4	SS7	BRMB7	EOL	59.00550	1.49020
18/11/2012	02:41	02:48	BRMR_MB_SS	4	SS7	BRMB7	SOL	59.01110	1.51450
18/11/2012	03:15	03:45	BRMR_MB_SS	4	MB + SS	BRMB7 Rerun	EOL	59.01260	1.52134
18/11/2012	03:15	03:45	BRMR_MB_SS	4	MB + SS	BRMB7 Rerun	SOL	58.99000	1.44923
18/11/2012	03:15	03:45	BRMR_MB_SS	4	SS7	BRMB7 Rerun	EOL	59.01260	1.52134
18/11/2012	03:15	03:45	BRMR_MB_SS	4	SS7	BRMB7 Rerun	SOL	58.99000	1.44923
18/11/2012	04:27	05:04	BRMR_MB_SS	4	MB + SS	BRNB9	EOL	59.00110	1.52668
18/11/2012	04:27	05:04	BRMR_MB_SS	4	MB + SS	BRNB9	SOL	58.98198	1.43699
18/11/2012	04:27	05:04	BRMR_MB_SS	4	SS7	BRNB9	EOL	59.00110	1.52668
18/11/2012	04:27	05:04	BRMR_MB_SS	4	SS7	BRNB9	SOL	58.98198	1.43699
18/11/2012	05:55	06:40	BRMR_MB_SS	4	MB + SS	BRMB11	SOL	58.97450	1.42468
18/11/2012	05:55	06:40	BRMR_MB_SS	4	MB + SS	BRMB11	EOL	59.00770	1.53280
18/11/2012	05:55	06:40	BRMR_MB_SS	4	SS7	BRMB11	EOL	59.00770	1.53280
18/11/2012	05:55	06:40	BRMR_MB_SS	4	SS7	BRMB11	SOL	58.97450	1.42468

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Time for SOL	Time for EOL	Station code	Stn no.	Gear code	Replicate	Fix no.	Latitude (degrees)	Longitude (degrees)
18/11/2012	07:36	08:24	BRMR_MB_SS	4	MB + SS	BRMB12	EOL	59.00500	1.53200
18/11/2012	07:36	08:24	BRMR_MB_SS	4	MB + SS	BRMB12	SOL	58.96800	1.41855
18/11/2012	07:36	08:24	BRMR_MB_SS	4	SS7	BRMB12	EOL	59.00500	1.53200
18/11/2012	07:36	08:24	BRMR_MB_SS	4	SS7	BRMB12	SOL	58.96800	1.41855
18/11/2012	09:35	10:20	BRMR_MB_SS	4	MB + SS	BRMB13	SOL	58.96710	1.41740
18/11/2012	09:35	10:20	BRMR_MB_SS	4	MB + SS	BRMB13	EOL	59.00020	1.52230
18/11/2012	09:35	10:20	BRMR_MB_SS	4	SS7	BRMB13	SOL	58.96710	1.41740
18/11/2012	09:35	10:20	BRMR_MB_SS	4	SS7	BRMB13	EOL	59.00020	1.52230
18/11/2012	11:50	12:06	BRMR_MB_SS	4	MB + SS	BASELINE	EOL	58.98200	1.46000
18/11/2012	11:50	12:06	BRMR_MB_SS	4	MB + SS	BASELINE	SOL	58.96630	1.41690
18/11/2012	11:50	12:06	BRMR_MB_SS	4	SS7	BASELINE	EOL	58.98200	1.46000
18/11/2012	11:50	12:06	BRMR_MB_SS	4	SS7	BASELINE	SOL	58.96630	1.41690
18/11/2012	13:00	13:39	BRMR_MB_SS	4	MB + SS	BRMB12	EOL	59.00602	1.53470
18/11/2012	13:00	13:39	BRMR_MB_SS	4	MB + SS	BRMB12	SOL	58.97100	1.42400
18/11/2012	13:00	13:39	BRMR_MB_SS	4	SS7	BRMB12	EOL	59.00602	1.53470
18/11/2012	13:00	13:39	BRMR_MB_SS	4	SS7	BRMB12	SOL	58.97100	1.42400
18/11/2012	15:35	16:20	BRMR_MB_SS	4	MB + SS	BRMB10	SOL	58.97651	1.42776
18/11/2012	15:35	16:20	BRMR_MB_SS	4	MB + SS	BRMB10	EOL	59.00832	1.52778
18/11/2012	15:35	16:20	BRMR_MB_SS	4	SS7	BRMB10	SOL	58.97651	1.42776
18/11/2012	15:35	16:20	BRMR_MB_SS	4	SS7	BRMB10	EOL	59.00832	1.52778
18/11/2012	17:12	17:18	BRMR_MB_SS	4	MB + SS	BRMB9	EOL	59.00500	1.51000
18/11/2012	17:12	17:18	BRMR_MB_SS	4	MB + SS	BRMB9	SOL	59.00911	1.52418
18/11/2012	17:12	17:18	BRMR_MB_SS	4	SS7	BRMB9	EOL	59.00500	1.51000
18/11/2012	17:12	17:18	BRMR_MB_SS	4	SS7	BRMB9	SOL	59.00911	1.52418
18/11/2012	18:10	18:40	BRMR_MB_SS	4	MB + SS	BRMB8	SOL	58.98722	1.44720
18/11/2012	18:10	18:40	BRMR_MB_SS	4	MB + SS	BRMB8	EOL	59.01059	1.52209
18/11/2012	18:10	18:40	BRMR_MB_SS	4	SS7	BRMB8	SOL	58.98722	1.44720
18/11/2012	18:10	18:40	BRMR_MB_SS	4	SS7	BRMB8	EOL	59.01059	1.52209
18/11/2012	20:21	20:50	BRMR_MB_SS	4	MB + SS	BRMB14	SOL	58.96493	1.41641
18/11/2012	20:21	20:50	BRMR_MB_SS	4	MB + SS	BRMB14	EOL	58.98899	1.48562
18/11/2012	20:21	20:50	BRMR_MB_SS	4	SS7	BRMB14	EOL	58.98899	1.48562
18/11/2012	20:21	20:50	BRMR_MB_SS	4	SS7	BRMB14	SOL	58.96493	1.41641
18/11/2012	21:57	22:20	BRMR_MB_SS	4	MB + SS	BRMB16	EOL	58.97603	1.47699
18/11/2012	21:57	22:20	BRMR_MB_SS	4	MB + SS	BRMB16	SOL	58.96274	1.42278
18/11/2012	21:57	22:20	BRMR_MB_SS	4	SS7	BRMB16	EOL	58.97603	1.47699
18/11/2012	21:57	22:20	BRMR_MB_SS	4	SS7	BRMB16	SOL	58.96274	1.42278
20/11/2012	08:00	08:21	BRMR_MB_SS	6	MB + SS	BRMB15	EOL	58.98110	1.47231
20/11/2012	08:00	08:21	BRMR_MB_SS	6	MB + SS	BRMB15	SOL	58.96410	1.41998
20/11/2012	08:00	08:21	BRMR_MB_SS	6	SS7	BRMB15	EOL	58.98110	1.47231
20/11/2012	08:00	08:21	BRMR_MB_SS	6	SS7	BRMB15	SOL	58.96410	1.41998
20/11/2012	08:52	09:13	BRMR_MB_SS	6	MB + SS	BRMB17	EOL	58.97773	1.47580
20/11/2012	08:52	09:13	BRMR_MB_SS	6	MB + SS	BRMB17	SOL	58.96170	1.42592
20/11/2012	08:52	09:13	BRMR_MB_SS	6	SS7	BRMB17	EOL	58.97773	1.47580
20/11/2012	08:52	09:13	BRMR_MB_SS	6	SS7	BRMB17	SOL	58.96170	1.42592
20/11/2012	09:42	10:08	BRMR_MB_SS	6	MB + SS	BRMB19	SOL	58.95903	1.43228
20/11/2012	09:42	10:08	BRMR_MB_SS	6	MB + SS	BRMB19	EOL	58.97767	1.49048
20/11/2012	09:42	10:08	BRMR_MB_SS	6	SS7	BRMB19	EOL	58.97767	1.49048
20/11/2012	09:42	10:08	BRMR_MB_SS	6	SS7	BRMB19	SOL	58.95903	1.43228
20/11/2012	10:50	11:38	BRMR_MB_SS	6	MB + SS	BRMB_CROSS1	EOL	59.02207	1.45784
20/11/2012	10:50	11:38	BRMR_MB_SS	6	MB + SS	BRMB_CROSS1	SOL	58.95714	1.46094
20/11/2012	10:50	11:38	BRMR_MB_SS	6	SS7	BRMB_CROSS1	EOL	59.02207	1.45784
20/11/2012	10:50	11:38	BRMR_MB_SS	6	SS7	BRMB_CROSS1	SOL	58.95714	1.46094
20/11/2012	12:30	12:56	BRMR_MB_SS	6	MB + SS	BRMB_CROSS2	EOL	58.98456	1.50350
20/11/2012	12:30	12:56	BRMR_MB_SS	6	MB + SS	BRMB_CROSS2	SOL	59.01965	1.50343
20/11/2012	12:30	12:56	BRMR_MB_SS	6	SS7	BRMB_CROSS2	EOL	58.98456	1.50350
20/11/2012	12:30	12:56	BRMR_MB_SS	6	SS7	BRMB_CROSS2	SOL	59.01965	1.50343
21/11/2012	08:55	09:11	BRMRMB	22	MB	BRMB14	SOL	58.99790	1.52080
21/11/2012	08:55	09:11	BRMRMB	22	MB	BRMB14	EOL	58.98640	1.48255
21/11/2012	08:55	09:11	BRMRMB	22	SS7	BRMB14	EOL	58.98640	1.48255
21/11/2012	08:55	09:11	BRMRMB	22	SS7	BRMB14	SOL	58.99790	1.52080
21/11/2012	09:33	10:02	BRMRMB	22	MB	BRMBCROSS2A	SOL	58.94800	1.50377
21/11/2012	09:33	10:02	BRMRMB	22	MB	BRMBCROSS2A	EOL	59.02470	1.50297
21/11/2012	09:33	10:02	BRMRMB	22	SS7	BRMBCROSS2A	SOL	58.94800	1.50377
21/11/2012	09:33	10:02	BRMRMB	22	SS7	BRMBCROSS2A	EOL	59.02470	1.50297
21/11/2012	10:33	10:45	BRMRMB	22	MB	BRMRCROSS2B	SOL	59.02109	1.50326

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Time for SOL	Time for EOL	Station code	Stn no.	Gear code	Replicate	Fix no.	Latitude (degrees)	Longitude (degrees)
21/11/2012	10:33	10:45	BRMRMB	22	MB	BRMRCCROSS2B	EOL	59.00275	1.50342
21/11/2012	10:33	10:45	BRMRMB	22	SS7	BRMRCCROSS2B	SOL	59.02109	1.50326
21/11/2012	10:33	10:45	BRMRMB	22	SS7	BRMRCCROSS2B	EOL	59.00275	1.50342

### 9.5.2 Scanner Pockmark cSAC

Date sampled	Time for SOL	Time for EOL	Station code	Stn no.	Gear code	Replicate	Fix no.	Latitude (degrees)	Longitude (degrees)
22/11/2012	09:29	10:41	SCMR_MB_SS	51	MB +SS	SCMR_950	SOL	58.33370	0.97147
22/11/2012	09:29	10:41	SCMR_MB_SS	51	MB +SS	SCMR_950	EOL	58.24481	0.97100
22/11/2012	10:51	11:55	SCMR_MB_SS	51	MB +SS	SCMR570	EOL	58.33010	0.96576
22/11/2012	10:51	11:55	SCMR_MB_SS	51	MB +SS	SCMR570	SOL	58.24713	0.95938
22/11/2012	13:31	13:59	SCMR_MB_SS	51	MB +SS	SCMR950A	EOL	58.31760	0.97368
22/11/2012	13:31	13:59	SCMR_MB_SS	51	MB +SS	SCMR950A	SOL	58.27260	0.97355
23/11/2012	07:43	08:18	SCNR_MB_SS	53	MB +SS	SCNR760	EOL	58.30607	0.97124
23/11/2012	07:43	08:18	SCNR_MB_SS	53	MB +SS	SCNR760	SOL	58.25047	0.96972
23/11/2012	08:22	08:26	SCNR_MB_SS	53	MB +SS	SCNR1140	EOL	58.29946	0.97678
23/11/2012	08:22	08:26	SCNR_MB_SS	53	MB +SS	SCNR1140	SOL	58.30544	0.97707
23/11/2012	08:49	09:17	SCNR_MB_SS	53	MB +SS	SCNR380	SOL	58.26840	0.96377
23/11/2012	08:49	09:17	SCNR_MB_SS	53	MB +SS	SCNR380	EOL	58.30501	0.96475
23/11/2012	09:46	10:05	SCNR_MB_SS	53	MB +SS	SCNR1140A	EOL	58.28326	0.92685
23/11/2012	09:46	10:05	SCNR_MB_SS	53	MB +SS	SCNR1140A	SOL	58.26919	0.97759
23/11/2012	10:35	11:00	SCNR_MB_SS	53	MB +SS	SCNR1520	EOL	58.30369	0.98350
23/11/2012	10:35	11:00	SCNR_MB_SS	53	MB +SS	SCNR1520	SOL	58.27102	0.98395
23/11/2012	11:06	11:14	SCNR_MB_SS	53	MB +SS	SCNR1140B	EOL	58.28971	0.97655
23/11/2012	11:06	11:14	SCNR_MB_SS	53	MB +SS	SCNR1140B	SOL	58.29960	0.97712
23/11/2012	11:33	11:58	SCNR_MB_SS	53	MB +SS	SCNR1140C	EOL	58.30195	0.97705
23/11/2012	11:33	11:58	SCNR_MB_SS	53	MB +SS	SCNR1140C	SOL	58.26790	0.97654
23/11/2012	12:41	13:08	SCNR_MB_SS	53	MB +SS	SCNR BASELINE	SOL	58.27127	0.95810
23/11/2012	12:41	13:08	SCNR_MB_SS	53	MB +SS	SCNR BASELINE	EOL	58.30783	0.95752
23/11/2012	13:52	14:06	SCNR_MB_SS	53	MB +SS	SCNR BASELINE B	EOL	58.30069	0.95745
23/11/2012	13:52	14:06	SCNR_MB_SS	53	MB +SS	SCNR BASELINE B	SOL	58.28228	0.95796
24/11/2012	18:23	18:41	SCNR_MB_SS	98	MB +SS	SCNR760	SOL	58.27197	0.97333
24/11/2012	18:23	18:41	SCNR_MB_SS	98	MB +SS	SCNR760	EOL	58.29013	0.96726
24/11/2012	18:50	19:10	SCNR_MB_SS	98	MB +SS	SCNR760A	SOL	58.29287	0.96953
24/11/2012	18:50	19:10	SCNR_MB_SS	98	MB +SS	SCNR760A	EOL	58.27118	0.97062
24/11/2012	19:40	20:18	SCNR_MB_SS	98	MB +SS	SCNR BASELINE	SOL	58.27095	0.95753
24/11/2012	19:40	20:18	SCNR_MB_SS	98	MB +SS	SCNR BASELINE	EOL	58.31512	0.95747
24/11/2012	20:55	21:34	SCNR_MB_SS	98	MB +SS	SCNR190	EOL	58.27169	0.96063
24/11/2012	20:55	21:34	SCNR_MB_SS	98	MB +SS	SCNR190	SOL	58.31520	0.96065
24/11/2012	22:12	22:53	SCNR_MB_SS	98	MB +SS	SCNR1330	SOL	58.27490	0.97921
24/11/2012	22:12	22:53	SCNR_MB_SS	98	MB +SS	SCNR1330	EOL	58.31049	0.97967

### 9.5.3 Turbot Bank NCMPA proposal

Date sampled	Time for SOL	Time for EOL	Station code	Stn no.	Gear code	Replicate	Fix no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	00:39	01:46	TURBOT MB	170	MB	TRBTB5200	SOL	57.45100	0.83200
27/11/2012	00:39	01:46	TURBOT MB	170	MB	TRBTB5200	EOL	57.33800	0.86700
27/11/2012	03:23	04:45	TURBOT MB	170	MB	TRBTB5400	SOL	57.45200	0.82800
27/11/2012	03:23	04:45	TURBOT MB	170	MB	TRBTB5400	EOL	57.38300	0.86400
27/11/2012	06:16	07:39	TURBOT MB	170	MB	TRTBBASE7	SOL	57.46300	0.75400
27/11/2012	06:16	07:39	TURBOT MB	170	MB	TRTBBASE7	EOL	57.34300	0.79100
27/11/2012	08:54	10:07	TURBOT MB	170	MB	TRBTB7200	EOL	57.34300	0.78800
27/11/2012	08:54	10:07	TURBOT MB	170	MB	TRBTB7200	SOL	57.46000	0.75100
27/11/2012	11:38	12:54	TURBOT MB	170	MB	TRBTB7400	EOL	57.33506	0.78748
27/11/2012	11:38	12:54	TURBOT MB	170	MB	TRBTB7400	SOL	57.46140	0.74960
27/11/2012	21:48	22:55	TURBOT MB	170	MB	TRTBBASE5	EOL	57.34100	0.87000
27/11/2012	21:48	22:55	TURBOT MB	170	MB	TRTBBASE5	SOL	57.45000	0.83600
29/11/2012	00:35	01:01	TRBT_MM	217	MB	TRANSIT LINE WEST	EOL	57.33957	0.90617
29/11/2012	00:35	01:01	TRBT_MM	217	MB	TRANSIT LINE WEST	SOL	57.34065	0.82878
29/11/2012	15:24	15:31	TRBT_MM	217	MB	TRANSIT TO TRBT8100	SOL	57.33519	0.77251
29/11/2012	15:24	15:31	TRBT_MM	217	MB	TRANSIT TO TRBT8100	EOL	57.33294	0.75674
29/11/2012	15:33	17:04	TRBT_MM	217	MB	TRBT8100	SOL	57.33470	0.75499
29/11/2012	15:33	17:04	TRBT_MM	217	MB	TRBT8100	EOL	57.46547	0.71357

Date sampled	Time for SOL	Time for EOL	Station code	Stn no.	Gear code	Replicate	Fix no.	Latitude (degrees)	Longitude (degrees)
29/11/2012	17:13	18:59	TRBT_MM	217	MB	TRBT8300	SOL	57.46555	0.70999
29/11/2012	17:13	18:59	TRBT_MM	217	MB	TRBT8300	EOL	57.33365	0.75185
29/11/2012	18:59	19:21	TRBT_MM	217	MB	TRNSIT TO TRBT100 FROM TRBT300	EOL	57.38499	0.67647
29/11/2012	18:59	19:21	TRBT_MM	217	MB	TRNSIT TO TRBT100 FROM TRBT300	SOL	57.33322	0.71000
29/11/2012	19:28	20:56	TRBT_MM	217	MB	TRBT100	SOL	57.38629	0.68223
29/11/2012	19:28	20:56	TRBT_MM	217	MB	TRBT100	EOL	57.33862	0.91762
29/11/2012	21:06	22:33	TRBT_MM	217	MB	TRBT300	SOL	57.34028	0.91982
29/11/2012	21:06	22:33	TRBT_MM	217	MB	TRBT300	EOL	57.38849	0.68049
29/11/2012	22:38	23:22	TRBT_MM	217	MB	TRANSIT TRBT300-TRBTB6-300	SOL	57.39158	0.67794
29/11/2012	22:38	23:22	TRBT_MM	217	MB	TRANSIT TRBT300-TRBTB6-300	EOL	57.45072	0.78834
29/11/2012	23:27	00:33	TRBT_MM	217	MB	TRBTB6-300	SOL	57.44863	0.79283
29/11/2012	23:27	00:33	TRBT_MM	217	MB	TRBTB6-300	EOL	57.34134	0.82669

## 9.6 Appendix 6: Grab sampling survey metadata

Metadata for the biological elements of the Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal surveys on cruise CEND 19x/12 is provided below. The station number is a sequential event number for the cruise, so changes each time a new gear is used or a new location is sampled. The station code is used to identify the location of the sampling station. DG=Day grab, HC=HamCam, DC=Drop-camera.

### 9.6.1 Braemar Pockmarks cSAC

Date sampled	Stn no.	Station code	Gear code	Rep	Time sampled	Fix no.	Latitude (degrees)	Longitude (degrees)	Preliminary sediment description
21/11/2012	23	HG 11	HC	A	13:00	645	58.96877	1.44681	A5.4 Subtidal Mixed
21/11/2012	23	HG 11	HC	B	13:19	646	58.96875	1.44678	A5.3 Subtidal Mud
21/11/2012	23	HG 11	HC	X	11:56	644	58.96875	1.44686	N/S
21/11/2012	24	BRMR1	DG	A	13:48	647	58.96833	1.43253	A5.3 Subtidal Mud
21/11/2012	25	BRMR2	DG	A	14:16	648	58.96276	1.44470	A5.3 Subtidal Mud
21/11/2012	26	BRMR5	DG	A	14:34	649	58.96574	1.45923	A5.3 Subtidal Mud
21/11/2012	27	BRMR4	DG	A	14:52	650	58.97137	1.44712	A5.3 Subtidal Mud
21/11/2012	28	BRMR3	DG	A	15:09	651	58.97757	1.43491	A5.3 Subtidal Mud
21/11/2012	29	HG10	HC	X	16:20	657	58.97252	1.44930	N/S
21/11/2012	29	HG10	HC	X	15:37	652	58.97264	1.44939	N/S
21/11/2012	29	HG10	HC	A	15:45	653	58.97266	1.44935	A5.4 Subtidal Mixed
21/11/2012	29	HG10	HC	X	16:00	654	58.97262	1.44936	N/S
21/11/2012	29	HG10	HC	B	16:05	655	58.97257	1.44931	A5.3 Subtidal Mud
21/11/2012	29	HG10	HC	X	16:15	656	58.97253	1.44932	N/S
21/11/2012	30	HG09	HC	X	16:35	662	58.97367	1.44973	N/S
21/11/2012	30	HG09	HC	A	16:40	658	58.97371	1.44995	A5.4 Subtidal Mixed
21/11/2012	30	HG09	HC	X	16:45	659	58.97371	1.44985	N/S
21/11/2012	30	HG09	HC	B	16:52	660	58.97367	1.44980	A5.4 Subtidal Mixed
21/11/2012	30	HG09	HC	X	17:02	661	58.97365	1.44973	N/S
21/11/2012	31	HG6	HC	A	17:52	663	58.97855	1.45954	A5.3 Subtidal Mud
21/11/2012	31	HG6	HC	B	18:00	664	58.97849	1.45956	A5.3 Subtidal Mud
21/11/2012	31	HG6	HC	C	18:10	665	58.97852	1.45947	A5.3 Subtidal Mud
21/11/2012	32	BRMR7	DG	A	18:31	666	58.97424	1.46135	A5.3 Subtidal Mud
21/11/2012	33	BRMR6	DG	A	18:42	667	58.96981	1.45944	A5.3 Subtidal Mud
21/11/2012	34	BRMR8	DG	A	19:25	668	58.98910	1.45218	A5.2 Subtidal Sand
21/11/2012	35	BRMR10	DG	A	19:44	669	58.98319	1.46400	A5.3 Subtidal Mud
21/11/2012	36	HG12	HC	A	20:00	670	58.98362	1.47149	A5.3 Subtidal Mud
21/11/2012	36	HG12	HC	C	20:19	672	58.98365	1.47158	A5.3 Subtidal Mud
21/11/2012	36	HG12	HC	B	20:10	671	58.98366	1.47150	A5.3 Subtidal Mud
21/11/2012	37	HG8	HC	A	20:43	674	58.98493	1.47441	A5.3 Subtidal Mud
21/11/2012	37	HG8	HC	X	20:54	675	58.98496	1.47430	N/S
21/11/2012	37	HG8	HC	X	21:02	676	58.98498	1.47429	N/S
21/11/2012	37	HG8	HC	B	21:10	677	58.98498	1.47419	A5.4 Subtidal Mixed
21/11/2012	37	HG8	HC	C	21:18	678	58.98495	1.47420	A5.4 Subtidal Mixed
21/11/2012	37	HG8	HC	X	20:39	673	58.98500	1.47438	N/S

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Rep	Time sampled	Fix no.	Latitude (degrees)	Longitude (degrees)	Preliminary sediment description
21/11/2012	38	BRMR13	DG	A	21:42	679	58.98629	1.47867	A5.3 Subtidal Mud
21/11/2012	39	BRMR12	DG	A	22:26	680	58.99206	1.46698	A5.3 Subtidal Mud
21/11/2012	40	BRMR17	DG	A	23:03	681	58.98929	1.49341	A5.3 Subtidal Mud
21/11/2012	41	BRMR16	DG	A	23:32	682	58.99502	1.48163	A5.3 Subtidal Mud
22/11/2012	42	HG3	HC	A	00:08	683	59.00034	1.47833	A5.3 Subtidal Mud
22/11/2012	42	HG3	HC	B	00:16	684	59.00032	1.47847	A5.3 Subtidal Mud
22/11/2012	42	HG3	HC	C	00:28	685	59.00034	1.47854	A5.3 Subtidal Mud
22/11/2012	43	BRMR18	DG	A	00:42	686	59.00372	1.48435	A5.3 Subtidal Mud
22/11/2012	44	BRMR19	DG	X	01:08	687	58.99798	1.49615	N/S
22/11/2012	44	BRMR19	DG	A	01:14	688	58.99797	1.49615	A5.3 Subtidal Mud
22/11/2012	45	BRMR22	DG	A	01:35	689	59.00108	1.51048	A5.2 Subtidal Sand
22/11/2012	46	HG2	HC	B	02:01	691	59.00091	1.50396	A5.4 Subtidal Mixed
22/11/2012	46	HG2	HC	A	01:55	690	59.00093	1.50406	A5.3 Subtidal Mud
22/11/2012	46	HG2	HC	X	02:13	693	59.00089	1.50388	N/S
22/11/2012	46	HG2	HC	X	02:08	692	59.00091	1.50385	N/S
22/11/2012	46	HG2	HC	X	02:20	694	59.00088	1.50379	N/S
22/11/2012	46	HG2	HC	C	02:38	695	59.00092	1.50382	A5.4 Subtidal Mixed
22/11/2012	47	BRMR21	DG	A	02:58	696	59.00700	1.49855	A5.4 Subtidal Mixed
22/11/2012	48	BRMR23	DG	A	03:17	697	59.00978	1.51289	A5.4 Subtidal Mixed
22/11/2012	49	BRMR24	DG	A	03:46	699	59.00420	1.52508	A5.3 Subtidal Mud
22/11/2012	49	BRMR24	DG	X	03:38	698	59.00425	1.52507	N/S

### 9.6.2 Scanner Pockmark cSAC

Date sampled	Stn no.	Station code	Gear code	Rep	Time sampled	Fix no.	Latitude (degrees)	Longitude (degrees)	Preliminary sediment description
23/11/2012	54	SCNR_39	DG	A	15:14	702	58.31530	0.97592	A5.3 Subtidal Mud
23/11/2012	54	SCNR_39	DG	B	15:24	703	58.31524	0.97580	A5.3 Subtidal Mud
23/11/2012	54	SCNR_39	DG	C	15:33	704	58.31523	0.97578	A5.3 Subtidal Mud
23/11/2012	54	SCNR_39	DG	X	15:48	705	58.31518	0.97571	N/S
23/11/2012	54	SCNR_39	DG	D	15:56	706	58.31523	0.97569	A5.3 Subtidal Mud
23/11/2012	55	SCNR_34	DG	A	16:14	707	58.31549	0.96706	A5.3 Subtidal Mud
23/11/2012	56	SCNR_29	DG	A	16:31	708	58.31507	0.95881	A5.3 Subtidal Mud
23/11/2012	56	SCNR_29	DG	B	16:40	709	58.31511	0.95873	A5.3 Subtidal Mud
23/11/2012	56	SCNR_29	DG	C	16:53	710	58.31511	0.95871	A5.3 Subtidal Mud
23/11/2012	56	SCNR_29	DG	D	17:05	711	58.31515	0.95863	A5.3 Subtidal Mud
23/11/2012	57	SCNR_26	DG	A	17:50	712	58.31105	0.95446	A5.3 Subtidal Mud
23/11/2012	58	SCNR_28	DG	A	18:15	713	58.30742	0.95912	A5.3 Subtidal Mud
23/11/2012	59	SCNR_25	DG	A	18:34	714	58.30336	0.95499	A5.3 Subtidal Mud
23/11/2012	60	SCNR_27	DG	A	18:53	715	58.29950	0.95939	A5.3 Subtidal Mud
23/11/2012	60	SCNR_27	DG	B	19:03	716	58.29948	0.95946	A5.3 Subtidal Mud
23/11/2012	60	SCNR_27	DG	C	19:15	717	58.29947	0.95943	A5.3 Subtidal Mud
23/11/2012	60	SCNR_27	DG	X	19:32	718	58.29952	0.95936	N/S
23/11/2012	60	SCNR_27	DG	X	19:40	719	58.29949	0.95944	N/S
23/11/2012	60	SCNR_27	DG	D	19:50	720	58.29943	0.95942	A5.3 Subtidal Mud
23/11/2012	61	SCNR_3	DG	A	20:11	721	58.29568	0.95539	A5.3 Subtidal Mud
23/11/2012	62	SCNR_6	DG	A	20:35	722	58.29182	0.95989	A5.3 Subtidal Mud
23/11/2012	63	SCNR_2	DG	A	20:51	723	58.28768	0.95563	A5.3 Subtidal Mud
23/11/2012	64	SCNR_5	DG	A	21:10	724	58.28392	0.96034	A5.3 Subtidal Mud
23/11/2012	64	SCNR_5	DG	X	21:21	725	58.28393	0.96034	N/S
23/11/2012	64	SCNR_5	DG	B	21:30	726	58.28391	0.96033	A5.3 Subtidal Mud
23/11/2012	64	SCNR_5	DG	C	21:40	727	58.28389	0.96023	A5.3 Subtidal Mud
23/11/2012	64	SCNR_5	DG	D	21:53	728	58.28387	0.96027	A5.3 Subtidal Mud
23/11/2012	65	SCNR_1	DG	A	22:21	729	58.28112	0.95679	A5.3 Subtidal Mud
23/11/2012	66	SCNR_4	DG	X	23:13	730	58.27646	0.96028	N/S
23/11/2012	66	SCNR_4	DG	A	23:20	731	58.27644	0.96033	A5.3 Subtidal Mud
24/11/2012	67	SCNR43	DG	A	00:04	732	58.27233	0.95640	A5.3 Subtidal Mud
24/11/2012	68	SCNR_42	DG	A	00:28	733	58.27254	0.96499	A5.3 Subtidal Mud
24/11/2012	69	SCNR_10	DG	X	00:46	734	58.27650	0.96928	N/S
24/11/2012	69	SCNR_10	DG	A	01:03	735	58.27624	0.96951	A5.3 Subtidal Mud
24/11/2012	69	SCNR_10	DG	B	01:13	736	58.27626	0.96958	A5.3 Subtidal Mud
24/11/2012	69	SCNR_10	DG	C	01:23	737	58.27636	0.96956	A5.3 Subtidal Mud
24/11/2012	69	SCNR_10	DG	D	01:40	738	58.27635	0.96950	A5.3 Subtidal Mud
24/11/2012	70	SCNR_7	DG	A	02:00	739	58.28033	0.96451	A5.3 Subtidal Mud
24/11/2012	71	SCNR_11	DG	A	02:20	740	58.28428	0.96890	A5.3 Subtidal Mud
24/11/2012	72	SCNR_8	DG	A	02:38	741	58.28819	0.96439	A5.3 Subtidal Mud

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Date sampled	Stn no.	Station code	Gear code	Rep	Time sampled	Fix no.	Latitude (degrees)	Longitude (degrees)	Preliminary sediment description
24/11/2012	73	SCNR_12	DG	A	03:02	742	58.29202	0.96832	A5.3 Subtidal Mud
24/11/2012	73	SCNR_12	DG	B	03:11	743	58.29200	0.96831	A5.3 Subtidal Mud
24/11/2012	73	SCNR_12	DG	C	03:20	744	58.29199	0.96824	A5.3 Subtidal Mud
24/11/2012	73	SCNR_12	DG	D	03:35	745	58.29196	0.96830	A5.3 Subtidal Mud
24/11/2012	74	SCNR_9	DG	A	03:54	746	58.29596	0.96387	A5.3 Subtidal Mud
24/11/2012	75	SCNR_15	DG	A	04:12	747	58.29595	0.97247	A5.3 Subtidal Mud
24/11/2012	76	SCNR_18	DG	A	04:28	748	58.29209	0.97695	A5.3 Subtidal Mud
24/11/2012	77	SCNR_14	DG	X	04:45	749	58.28819	0.97309	N/S
24/11/2012	77	SCNR_14	DG	A	04:52	750	58.28815	0.97300	A5.3 Subtidal Mud
24/11/2012	78	SCNR_17	DG	A	05:10	751	58.28437	0.97737	A5.3 Subtidal Mud
24/11/2012	78	SCNR_17	DG	B	05:19	752	58.28432	0.97728	A5.3 Subtidal Mud
24/11/2012	78	SCNR_17	DG	C	05:31	753	58.28428	0.97737	A5.3 Subtidal Mud
24/11/2012	78	SCNR_17	DG	D	05:56	754	58.28430	0.97740	A5.3 Subtidal Mud
24/11/2012	79	SCNR_13	DG	A	06:14	755	58.28030	0.97331	A5.3 Subtidal Mud
24/11/2012	80	SCNR_16	DG	A	06:32	756	58.27647	0.97763	A5.3 Subtidal Mud
24/11/2012	81	SCNR_45	DG	A	06:47	757	58.27250	0.97340	A5.3 Subtidal Mud
24/11/2012	83	SCNR_22	DG	A	08:00	760	58.27663	0.98630	A5.3 Subtidal Mud
24/11/2012	83	SCNR_22	DG	B	08:09	761	58.27663	0.98631	A5.3 Subtidal Mud
24/11/2012	83	SCNR_22	DG	C	08:23	762	58.27660	0.98629	A5.3 Subtidal Mud
24/11/2012	83	SCNR_22	DG	D	08:31	763	58.27664	0.98629	A5.3 Subtidal Mud
24/11/2012	84	SCNR_19	DG	A	08:54	764	58.28050	0.98177	A5.3 Subtidal Mud
24/11/2012	85	SCNR_23	DG	A	09:13	765	58.28449	0.98579	A5.3 Subtidal Mud
24/11/2012	86	SCNR_20	DG	A	09:36	766	58.28846	0.98132	A5.3 Subtidal Mud
24/11/2012	87	SCNR_24	DG	A	10:03	767	58.29233	0.98539	A5.3 Subtidal Mud
24/11/2012	88	SCNR_21	DG	A	10:29	768	58.29619	0.98045	A5.3 Subtidal Mud
25/11/2012	107	SCRNR_M1	DG	A	05:37	1167	58.28168	0.97059	A5.3 Subtidal Mud
25/11/2012	107	SCRNR_M1	DG	B	05:48	1168	58.28165	0.97076	A5.3 Subtidal Mud
25/11/2012	107	SCRNR_M1	DG	C	05:58	1169	58.28160	0.97084	A5.3 Subtidal Mud
25/11/2012	108	SCRNR_M2	DG	A	06:25	1170	58.28277	0.97458	A5.3 Subtidal Mud
25/11/2012	108	SCRNR_M2	DG	B	06:36	1171	58.28276	0.97460	A5.3 Subtidal Mud
25/11/2012	108	SCRNR_M2	DG	C	06:46	1172	58.28270	0.97455	A5.3 Subtidal Mud
25/11/2012	109	SCRNR_M3	DG	A	07:15	1173	58.29045	0.97505	A5.3 Subtidal Mud
25/11/2012	109	SCRNR_M3	DG	B	07:24	1173	58.29045	0.97505	A5.3 Subtidal Mud

### 9.6.3 Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Rep	Time sampled	Fix no.	Latitude (degrees)	Longitude (degrees)	Preliminary sediment description
26/11/2012	112	TRBT33	HC	A	06:02	1175	57.41101	-0.92374	A5.2 Subtidal Sand
26/11/2012	112	TRBT33	HC	B	06:09	1176	57.41101	-0.92384	A5.2 Subtidal Sand
26/11/2012	112	TRBT33	HC	C	06:15	1177	57.41097	-0.92381	A5.2 Subtidal Sand
26/11/2012	113	TRBT35	HC	A	06:44	1178	57.42850	-0.91824	A5.2 Subtidal Sand
26/11/2012	114	TRBT29	HC	A	07:13	1179	57.42850	-0.95757	A5.2 Subtidal Sand
26/11/2012	115	TRBT22	HC	A	08:02	1180	57.41965	-0.99955	A5.2 Subtidal Sand
26/11/2012	116	TRBT15	HC	A	08:29	1181	57.41082	-1.04126	A5.2 Subtidal Sand
26/11/2012	116	TRBT15	HC	B	08:41	1183	57.41087	-1.04124	A5.2 Subtidal Sand
26/11/2012	116	TRBT15	HC	C	08:46	1184	57.41088	-1.04136	A5.2 Subtidal Sand
26/11/2012	116	TRBT15	HC	X		1182	57.41087	-1.04129	N\S
26/11/2012	118	TRBT12	HC	A	09:57	1185	57.40197	-1.04393	A5.2 Subtidal Sand
26/11/2012	119	TRBT19	HC	A	10:30	1186	57.40219	-1.00470	A5.1 Subtidal Coarse
26/11/2012	119	TRBT19	HC	X	10:40	1188	57.40219	-1.00458	N\S
26/11/2012	119	TRBT19	HC	B	10:47	1189	57.40215	-1.00457	A5.1 Subtidal Coarse
26/11/2012	119	TRBT19	HC	C	10:53	1190	57.40211	-1.00458	A5.1 Subtidal Coarse
26/11/2012	119	TRBT19	HC	X		1187	57.40218	-1.00456	N\S
26/11/2012	121	TRBT27	HC	X	12:35	1219	57.41101	-0.96284	N\S
26/11/2012	121	TRBT27	HC	A	12:40	1220	57.41101	-0.96278	A5.1 Subtidal Coarse
26/11/2012	122	TRBT31	HC	A	13:07	1221	57.39346	-0.92917	A5.1 Subtidal Coarse
26/11/2012	123	TRBT25	HC	A	13:28	1222	57.39345	-0.96835	A5.1 Subtidal Coarse
26/11/2012	123	TRBT25	HC	X	13:33	1223	57.39347	-0.96830	N\S
26/11/2012	123	TRBT25	HC	B	13:40	1224	57.39352	-0.96819	A5.1 Subtidal Coarse
26/11/2012	123	TRBT25	HC	X	13:44	1225	57.39357	-0.96815	N\S
26/11/2012	123	TRBT25	HC	C	13:49	1226	57.39358	-0.96804	A5.1 Subtidal Coarse
26/11/2012	124	TRBT17	HC	X	14:15	1227	57.38474	-1.01002	N\S
26/11/2012	124	TRBT17	HC	A	14:20	1228	57.38476	-1.01004	A5.1 Subtidal Coarse
26/11/2012	125	TRBT10	HC	X	14:47	1229	57.39355	-1.04673	N\S
26/11/2012	125	TRBT10	HC	X	14:52	1230	57.39356	-1.04667	N\S

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Date sampled	Stn no.	Station code	Gear code	Rep	Time sampled	Fix no.	Latitude (degrees)	Longitude (degrees)	Preliminary sediment description
26/11/2012	125	TRBT10	HC	X	14:59	1231	57.39339	-1.04649	N\S
26/11/2012	126	TRBT5	HC	A	15:21	1232	57.38741	-1.07497	A5.1 Subtidal Coarse
26/11/2012	127	TRBT8	HC	A	15:40	1233	57.38451	-1.04955	A5.1 Subtidal Coarse
26/11/2012	127	TRBT8	HC	X	15:54	1235	57.38450	-1.04929	N\S
26/11/2012	127	TRBT8	HC	B	15:58	1236	57.38450	-1.04918	A5.1 Subtidal Coarse
26/11/2012	127	TRBT8	HC	C	16:05	1237	57.38450	-1.04912	A5.1 Subtidal Coarse
26/11/2012	127	TRBT8	HC	X		1234	57.38451	-1.04944	N\S
26/11/2012	128	TRBT4	HC	A	16:29	1238	57.37285	-1.06593	A5.1 Subtidal Coarse
26/11/2012	129	TRBT7	HC	A	16:49	1239	57.37003	-1.04105	A5.1 Subtidal Coarse
26/11/2012	130	TRBT3	HC	X	17:29	1240	57.35808	-1.05739	N\S
26/11/2012	130	TRBT3	HC	X	17:34	1241	57.35814	-1.05743	N\S
26/11/2012	130	TRBT3	HC	X	17:40	1242	57.35812	-1.05732	N\S
26/11/2012	131	TRBT11	HC	X	18:03	1243	57.35815	-1.01821	N\S
26/11/2012	131	TRBT11	HC	X	18:07	1244	57.35819	-1.01820	N\S
26/11/2012	131	TRBT11	HC	A	18:13	1245	57.35821	-1.01812	A5.1 Subtidal Coarse
26/11/2012	132	TRBT14	HC	X	18:31	1246	57.36698	-1.01538	N\S
26/11/2012	132	TRBT14	HC	A	18:36	1247	57.36694	-1.01534	A5.1 Subtidal Coarse
26/11/2012	133	TRBT21	HC	A	19:00	1248	57.37583	-0.97371	A5.1 Subtidal Coarse
26/11/2012	134	TRBT28	HC	X	19:26	1249	57.37600	-0.93438	N\S
26/11/2012	134	TRBT28	HC	X	19:32	1250	57.37598	-0.93445	N\S
26/11/2012	134	TRBT28	HC	A	19:41	1252	57.37601	-0.93433	A5.1 Subtidal Coarse
26/11/2012	134	TRBT28	HC	X	19:43	1253	57.37608	-0.93430	N\S
26/11/2012	135	TRBT26	HC	X	20:13	1254	57.35851	-0.93980	N\S
26/11/2012	135	TRBT26	HC	A	20:16	1255	57.35844	-0.93972	A5.1 Subtidal Coarse
26/11/2012	136	TRBT24	HC	A	20:37	1256	57.34968	-0.94254	A5.1 Subtidal Coarse
26/11/2012	137	TRBT18	HC	A	21:01	1257	57.35835	-0.97903	A5.1 Subtidal Coarse
26/11/2012	137	TRBT18	HC	B	21:06	1258	57.35839	-0.97908	A5.1 Subtidal Coarse
26/11/2012	137	TRBT18	HC	C	21:12	1259	57.35839	-0.97901	A5.1 Subtidal Coarse
26/11/2012	138	TRBT73	HC	X	21:40	1260	57.34753	-1.00963	N\S
26/11/2012	138	TRBT73	HC	X	21:46	1261	57.34750	-1.00946	N\S
26/11/2012	138	TRBT73	HC	A	21:52	1262	57.34752	-1.00941	A5.1 Subtidal Coarse
26/11/2012	139	TRBT6	HC	A	22:21	1263	57.34666	-1.03490	A5.1 Subtidal Coarse
26/11/2012	139	TRBT6	HC	B	22:27	1264	57.34660	-1.03478	A5.1 Subtidal Coarse
26/11/2012	139	TRBT6	HC	X	22:35	1265	57.34663	-1.03470	N\S
26/11/2012	139	TRBT6	HC	C	22:42	1266	57.34663	-1.03460	A5.1 Subtidal Coarse
26/11/2012	140	TRBT71	HC	X	23:05	1267	57.34835	-1.04828	N\S
26/11/2012	140	TRBT71	HC	A	23:11	1268	57.34836	-1.04825	A5.1 Subtidal Coarse
26/11/2012	141	TRBT70	HC	X	23:40	1269	57.35513	-1.03730	N/S
26/11/2012	141	TRBT70	HC	A	23:40	1270	57.35511	-1.03739	A5.1 Subtidal Coarse
26/11/2012	142	TRBT72	HC	A	00:18	1271	57.35239	-1.07424	A5.1 Subtidal Coarse
27/11/2012	143	TRBT1	HC	X	00:37	1272	57.34051	-1.06266	N/S
27/11/2012	143	TRBT1	HC	A	00:43	1273	57.34055	-1.06258	A5.1 Subtidal Coarse
27/11/2012	144	TRBT74	HC	A	01:04	1274	57.32985	-1.06453	A5.1 Subtidal Coarse
27/11/2012	145	TRBT2	HC	A	01:24	1275	57.32912	-1.04014	A5.2 Subtidal Sand
27/11/2012	146	TRBT9	HC	A	01:47	1276	57.33490	-1.01224	A5.1 Subtidal Coarse
27/11/2012	147	TRBT16	HC	A	02:00	1277	57.34074	-0.98442	A5.2 Subtidal Sand
27/11/2012	148	TRBT23	HC	A	02:23	1278	57.34099	-0.94520	A5.1 Subtidal Coarse
27/11/2012	148	TRBT23	HC	B	02:29	1279	57.34104	-0.94511	A5.1 Subtidal Coarse
27/11/2012	148	TRBT23	HC	C	02:34	1280	57.34108	-0.94508	A5.1 Subtidal Coarse
27/11/2012	149	TRBT20	HC	A	02:53	1281	57.33220	-0.94793	A5.2 Subtidal Sand
27/11/2012	150	TRBT13	HC	A	03:19	1282	57.32343	-0.98980	A5.2 Subtidal Sand
28/11/2012	171	TRBT47	HC	A	13:21	1834	57.34971	-0.74686	A5.1 Subtidal Coarse
28/11/2012	172	TRBT48	HC	A	13:34	1835	57.35800	-0.74383	A5.1 Subtidal Coarse
27/11/2012	173	TRBT69	HC	X	14:11	1836	57.37577	-0.73812	N/S
27/11/2012	173	TRBT69	HC	A	14:15	1837	57.37590	-0.73813	A5.1 Subtidal Coarse
27/11/2012	173	TRBT69	HC	B	14:22	1838	57.37590	-0.73807	A5.1 Subtidal Coarse
27/11/2012	173	TRBT69	HC	X	14:36	1839	57.37601	-0.73808	N/S
27/11/2012	173	TRBT69	HC	C	14:36	1840	57.37605	-0.73805	A5.1 Subtidal Coarse
28/11/2012	174	TRBT53	HC	X	15:14	1841	57.39048	-0.70742	N/S
28/11/2012	174	TRBT53	HC	X	15:18	1842	57.39056	-0.70735	N/S
28/11/2012	174	TRBT53	HC	A	15:40	1843	57.39065	-0.70739	A5.1 Subtidal Coarse
28/11/2012	175	TRBT51	HC	A	15:58	1844	57.39360	-0.73279	
28/11/2012	176	TRBT55	HC	A	16:21	1845	57.40129	-0.69756	A5.1 Subtidal Coarse
28/11/2012	177	TRBT59	HC	A	16:39	1846	57.41087	-0.72049	A5.1 Subtidal Coarse

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Rep	Time sampled	Fix no.	Latitude (degrees)	Longitude (degrees)	Preliminary sediment description
28/11/2012	177	TRBT59	HC	B	16:46	1847	57.41093	-0.72053	A5.1 Subtidal Coarse
28/11/2012	177	TRBT59	HC	C	16:55	1848	57.41100	-0.72055	A5.1 Subtidal Coarse
28/11/2012	178	TRBT60	HC	X	17:56	1849	57.41665	-0.69916	N/S
28/11/2012	178	TRBT60	HC	A	18:02	1850	57.41670	-0.69918	A5.1 Subtidal Coarse
28/11/2012	179	TRBT54	HC	A	18:26	1851	57.42868	-0.72181	A5.1 Subtidal Coarse
27/11/2012	180	TRBT64	HC	A	18:46	1852	57.44619	-0.71540	A5.2 Subtidal Sand
28/11/2012	181	TRBT52	HC	A	19:13	1853	57.45482	-0.75292	A5.2 Subtidal Sand
28/11/2012	182	TRBT49	HC	A	19:40	1854	57.44615	-0.79489	A5.1 Subtidal Coarse
28/11/2012	183	TRBT63	HC	A	20:03	1855	57.43651	-0.75850	A5.2 Subtidal Sand
28/11/2012	184	TRBT62	HC	C	18:58	1858	57.42915	-0.80030	A5.2 Subtidal Sand
28/11/2012	184	TRBT62	HC	A	20:33	1856	57.42921	-0.80036	A5.2 Subtidal Sand
28/11/2012	184	TRBT62	HC	B	20:38	1857	57.42918	-0.80035	A5.2 Subtidal Sand
28/11/2012	185	TRBT50	HC	X	21:11	1859	57.41977	-0.76361	N/S
28/11/2012	185	TRBT50	HC	X	21:16	1860	57.41982	-0.76363	N/S
28/11/2012	185	TRBT50	HC	X	21:22	1861	57.41985	-0.76361	N/S
28/11/2012	186	TRBT45	HC	A	21:57	1862	57.41113	-0.80544	A5.1 Subtidal Coarse
28/11/2012	187	TRBT58	HC	X	22:22	1863	57.40205	-0.76885	N/S
28/11/2012	187	TRBT58	HC	X	22:26	1864	57.40209	-0.76887	N/S
28/11/2012	187	TRBT58	HC	X	22:33	1865	57.40213	-0.76899	N/S
28/11/2012	188	TRBT57	HC	A	22:58	1866	57.39347	-0.81090	A5.1 Subtidal Coarse
28/11/2012	188	TRBT57	HC	B	23:04	1867	57.39351	-0.81102	A5.1 Subtidal Coarse
28/11/2012	188	TRBT57	HC	C	23:10	1868	57.39354	-0.81096	A5.1 Subtidal Coarse
28/11/2012	189	TRBT46	HC	X	23:33	1869	57.38460	-0.77485	N/S
28/11/2012	189	TRBT46	HC	X	23:39	1870	57.38460	-0.77484	N/S
28/11/2012	189	TRBT46	HC	A	23:45	1871	57.38462	-0.77490	A5.1 Subtidal Coarse
29/11/2012	190	TRBT41	HC	A	00:11	1872	57.37580	-0.81643	A5.1 Subtidal Coarse
29/11/2012	191	TRBT68	HC	X	00:35	1873	57.36724	-0.78077	N/S
29/11/2012	191	TRBT68	HC	A	00:40	1874	57.36730	-0.78074	A5.2 Subtidal Sand
29/11/2012	192	TRBT43	HC	X	01:02	1875	57.34956	-0.78545	N/S
29/11/2012	192	TRBT43	HC	X	01:06	1876	57.34954	-0.78545	N/S
29/11/2012	192	TRBT43	HC	A	01:12	1877	57.34950	-0.78547	A5.1 Subtidal Coarse
29/11/2012	193	TRBT38	HC	A	01:34	1878	57.34980	-0.82475	A5.1 Subtidal Coarse
29/11/2012	194	TRBT67	HC	A	01:46	1879	57.35800	-0.82202	A5.2 Subtidal Sand
29/11/2012	194	TRBT67	HC	X	01:51	1880	57.35793	-0.82205	
29/11/2012	194	TRBT67	HC	B	01:56	1881	57.35790	-0.82200	A5.1 Subtidal Coarse
29/11/2012	194	TRBT67	HC	X	02:01	1882	57.35783	-0.82203	N/S
29/11/2012	194	TRBT67	HC	X	02:05	1883	57.35782	-0.82206	N/S
29/11/2012	194	TRBT67	HC	C	02:11	1884	57.35774	-0.82203	A5.1 Subtidal Coarse
29/11/2012	195	TRBT66	HC	A	02:33	1885	57.34970	-0.86434	A5.1 Subtidal Coarse
29/11/2012	196	TRBT65	HC	A	02:55	1886	57.34138	-0.90536	A5.1 Subtidal Coarse
29/11/2012	197	TRBT30	HC	A	03:10	1887	57.34961	-0.90307	A5.1 Subtidal Coarse
29/11/2012	197	TRBT30	HC	B	03:15	1888	57.34966	-0.90307	A5.1 Subtidal Coarse
29/11/2012	197	TRBT30	HC	C	03:19	1889	57.34970	-0.90306	A5.1 Subtidal Coarse
29/11/2012	198	TRBT37	HC	A	03:45	1890	57.36735	-0.85857	A5.1 Subtidal Coarse
29/11/2012	199	TRBT1	HC	A	04:04	1891	57.36739	-0.89756	A5.1 Subtidal Coarse
29/11/2012	200	TRBT56	HC	A	04:27	1892	57.38437	-0.85296	A5.1 Subtidal Coarse
29/11/2012	201	TRBT34	HC	A	04:46	1893	57.38482	-0.89265	A5.1 Subtidal Coarse
29/11/2012	201	TRBT34	HC	B	04:51	1894	57.38483	-0.89264	A5.1 Subtidal Coarse
29/11/2012	201	TRBT34	HC	C	04:55	1895	57.38486	-0.89250	A5.1 Subtidal Coarse
29/11/2012	202	TRBT40	HC	A	05:19	1896	57.40237	-0.84750	A5.2 Subtidal Sand
29/11/2012	203	TRBT36	HC	A	05:38	1897	57.40241	-0.88704	A5.1 Subtidal Coarse
29/11/2012	204	TRBT42	HC	A	06:01	1898	57.41990	-0.84216	A5.2 Subtidal Sand
29/11/2012	205	TRBT61	HC	A	06:20	1899	57.41928	-0.88144	A5.2 Subtidal Sand
29/11/2012	205	TRBT61	HC	B	06:25	1900	57.41924	-0.88145	A5.2 Subtidal Sand
29/11/2012	205	TRBT61	HC	C	06:30	1901	57.41922	-0.88152	A5.2 Subtidal Sand
29/11/2012	206	TRBT44	HC	A	07:00	1902	57.43737	-0.83692	A5.2 Subtidal Sand
29/11/2012	207	TRBT39	HC	A	07:26	1903	57.43740	-0.87598	A5.2 Subtidal Sand

## 9.7 Appendix 7: Drop-camera survey metadata

### 9.7.1 Braemar Pockmarks cSAC

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	8	58.97484	1.45066
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	9	58.97482	1.45063
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	10	58.97472	1.45060
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	11	58.97469	1.45053
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	12	58.97467	1.45050
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	13	58.97465	1.45048
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	14	58.97456	1.45043
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	15	58.97454	1.45044
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	16	58.97450	1.45040
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	17	58.97448	1.45038
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	18	58.97445	1.45036
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	19	58.97444	1.45036
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	20	58.97436	1.45034
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	21	58.97432	1.45032
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	22	58.97428	1.45029
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	23	58.97429	1.45028
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	24	58.97419	1.45026
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	25	58.97414	1.45027
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	26	58.97409	1.45020
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	27	58.97409	1.45015
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	28	58.97407	1.45011
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	29	58.97398	1.45005
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	30	58.97394	1.45005
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	31	58.97388	1.45007
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	32	58.97388	1.45006
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	33	58.97382	1.45000
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	34	58.97377	1.44996
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	35	58.97377	1.44995
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	36	58.97375	1.44993
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	37	58.97374	1.44988
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	38	58.97369	1.44989
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	39	58.97365	1.44990
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	40	58.97359	1.44987
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	41	58.97357	1.44985
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	42	58.97355	1.44978
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	43	58.97340	1.44972
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	44	58.97338	1.44970
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	45	58.97338	1.44973
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	46	58.97338	1.44968
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	47	58.97330	1.44964
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	48	58.97325	1.44960
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	49	58.97322	1.44960
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	50	58.97320	1.44961
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	51	58.97317	1.44953
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	52	58.97314	1.44947
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	53	58.97307	1.44948
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	54	58.97301	1.44945
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	55	58.97300	1.44946
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	56	58.97297	1.44948
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	57	58.97288	1.44941
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	58	58.97286	1.44941
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	59	58.97277	1.44932
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	60	58.97277	1.44933
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	61	58.97268	1.44924
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	62	58.97264	1.44922
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	63	58.97258	1.44921
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	64	58.97258	1.44918
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	65	58.97254	1.44916
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	66	58.97250	1.44917
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	67	58.97249	1.44918
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	68	58.97242	1.44913

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Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	69	58.97243	1.44910
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	70	58.97233	1.44904
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	71	58.97231	1.44901
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	72	58.97224	1.44894
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	73	58.97217	1.44894
20/11/2012	8	BRMR26-27	DC	A	15:58	16:35	74	58.97210	1.44895
20/11/2012	9	BRMR25	DC	A	17:41	18:09	4	58.97762	1.45958
20/11/2012	9	BRMR25	DC	A	17:41	18:09	5	58.97765	1.45958
20/11/2012	9	BRMR25	DC	A	17:41	18:09	6	58.97770	1.45957
20/11/2012	9	BRMR25	DC	A	17:41	18:09	7	58.97774	1.45956
20/11/2012	9	BRMR25	DC	A	17:41	18:09	8	58.97783	1.45957
20/11/2012	9	BRMR25	DC	A	17:41	18:09	9	58.97784	1.45954
20/11/2012	9	BRMR25	DC	A	17:41	18:09	10	58.97785	1.45954
20/11/2012	9	BRMR25	DC	A	17:41	18:09	11	58.97791	1.45960
20/11/2012	9	BRMR25	DC	A	17:41	18:09	12	58.97797	1.45956
20/11/2012	9	BRMR25	DC	A	17:41	18:09	13	58.97802	1.45956
20/11/2012	9	BRMR25	DC	A	17:41	18:09	14	58.97810	1.45957
20/11/2012	9	BRMR25	DC	A	17:41	18:09	15	58.97817	1.45956
20/11/2012	9	BRMR25	DC	A	17:41	18:09	16	58.97825	1.45955
20/11/2012	9	BRMR25	DC	A	17:41	18:09	17	58.97830	1.45956
20/11/2012	9	BRMR25	DC	A	17:41	18:09	18	58.97833	1.45947
20/11/2012	9	BRMR25	DC	A	17:41	18:09	19	58.97835	1.45948
20/11/2012	9	BRMR25	DC	A	17:41	18:09	20	58.97836	1.45948
20/11/2012	9	BRMR25	DC	A	17:41	18:09	21	58.97837	1.45949
20/11/2012	9	BRMR25	DC	A	17:41	18:09	22	58.97840	1.45951
20/11/2012	9	BRMR25	DC	A	17:41	18:09	23	58.97850	1.45957
20/11/2012	9	BRMR25	DC	A	17:41	18:09	24	58.97855	1.45950
20/11/2012	9	BRMR25	DC	A	17:41	18:09	25	58.97861	1.45945
20/11/2012	9	BRMR25	DC	A	17:41	18:09	26	58.97865	1.45945
20/11/2012	9	BRMR25	DC	A	17:41	18:09	27	58.97866	1.45945
20/11/2012	9	BRMR25	DC	A	17:41	18:09	28	58.97865	1.45946
20/11/2012	9	BRMR25	DC	A	17:41	18:09	29	58.97865	1.45949
20/11/2012	9	BRMR25	DC	A	17:41	18:09	30	58.97878	1.45954
20/11/2012	9	BRMR25	DC	A	17:41	18:09	31	58.97876	1.45951
20/11/2012	9	BRMR25	DC	A	17:41	18:09	32	58.97879	1.45952
20/11/2012	9	BRMR25	DC	A	17:41	18:09	33	58.97891	1.45950
20/11/2012	9	BRMR25	DC	A	17:41	18:09	34	58.97891	1.45949
20/11/2012	9	BRMR25	DC	A	17:41	18:09	35	58.97893	1.45950
20/11/2012	9	BRMR25	DC	A	17:41	18:09	36	58.97896	1.45946
20/11/2012	9	BRMR25	DC	A	17:41	18:09	37	58.97902	1.45948
20/11/2012	9	BRMR25	DC	A	17:41	18:09	38	58.97910	1.45955
20/11/2012	9	BRMR25	DC	A	17:41	18:09	39	58.97911	1.45952
20/11/2012	9	BRMR25	DC	A	17:41	18:09	40	58.97915	1.45952
20/11/2012	9	BRMR25	DC	A	17:41	18:09	41	58.97924	1.45950
20/11/2012	9	BRMR25	DC	A	17:41	18:09	42	58.97931	1.45951
20/11/2012	9	BRMR25	DC	A	17:41	18:09	43	58.97937	1.45949
20/11/2012	9	BRMR25	DC	A	17:41	18:09	44	58.97943	1.45948
20/11/2012	9	BRMR25	DC	A	17:41	18:09	45	58.97947	1.45947
20/11/2012	9	BRMR25	DC	B	18:37	18:56	46	58.97848	1.45760
20/11/2012	9	BRMR25	DC	B	18:37	18:56	47	58.97846	1.45764
20/11/2012	9	BRMR25	DC	B	18:37	18:56	48	58.97844	1.45764
20/11/2012	9	BRMR25	DC	B	18:37	18:56	49	58.97844	1.45765
20/11/2012	9	BRMR25	DC	B	18:37	18:56	50	58.97845	1.45763
20/11/2012	9	BRMR25	DC	B	18:37	18:56	51	58.97846	1.45786
20/11/2012	9	BRMR25	DC	B	18:37	18:56	52	58.97845	1.45812
20/11/2012	9	BRMR25	DC	B	18:37	18:56	53	58.97844	1.45835
20/11/2012	9	BRMR25	DC	B	18:37	18:56	54	58.97849	1.45846
20/11/2012	9	BRMR25	DC	B	18:37	18:56	55	58.97844	1.45859
20/11/2012	9	BRMR25	DC	B	18:37	18:56	56	58.97844	1.45863
20/11/2012	9	BRMR25	DC	B	18:37	18:56	57	58.97845	1.45874
20/11/2012	9	BRMR25	DC	B	18:37	18:56	58	58.97845	1.45884
20/11/2012	9	BRMR25	DC	B	18:37	18:56	59	58.97843	1.45904
20/11/2012	9	BRMR25	DC	B	18:37	18:56	60	58.97844	1.45927
20/11/2012	9	BRMR25	DC	B	18:37	18:56	61	58.97846	1.45943
20/11/2012	9	BRMR25	DC	B	18:37	18:56	62	58.97846	1.45949

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
20/11/2012	9	BRMR25	DC	B	18:37	18:56	63	58.97844	1.45953
20/11/2012	9	BRMR25	DC	B	18:37	18:56	64	58.97843	1.45979
20/11/2012	9	BRMR25	DC	B	18:37	18:56	65	58.97845	1.45992
20/11/2012	9	BRMR25	DC	B	18:37	18:56	66	58.97844	1.46011
20/11/2012	9	BRMR25	DC	B	18:37	18:56	67	58.97844	1.46024
20/11/2012	9	BRMR25	DC	B	18:37	18:56	68	58.97847	1.46045
20/11/2012	9	BRMR25	DC	B	18:37	18:56	69	58.97846	1.46069
20/11/2012	9	BRMR25	DC	B	18:37	18:56	70	58.97845	1.46086
20/11/2012	9	BRMR25	DC	B	18:37	18:56	71	58.97847	1.46115
20/11/2012	9	BRMR25	DC	C	19:06	20:11	72	58.97838	1.46131
20/11/2012	9	BRMR25	DC	C	19:06	20:11	73	58.97836	1.46130
20/11/2012	9	BRMR25	DC	C	19:06	20:11	74	58.97839	1.46132
20/11/2012	9	BRMR25	DC	C	19:06	20:11	75	58.97837	1.46112
20/11/2012	9	BRMR25	DC	C	19:06	20:11	76	58.97837	1.46109
20/11/2012	9	BRMR25	DC	C	19:06	20:11	77	58.97839	1.46068
20/11/2012	9	BRMR25	DC	C	19:06	20:11	78	58.97839	1.46041
20/11/2012	9	BRMR25	DC	C	19:06	20:11	79	58.97835	1.46012
20/11/2012	9	BRMR25	DC	C	19:06	20:11	80	58.97842	1.45994
20/11/2012	9	BRMR25	DC	C	19:06	20:11	81	58.97834	1.45981
20/11/2012	9	BRMR25	DC	C	19:06	20:11	82	58.97834	1.45979
20/11/2012	9	BRMR25	DC	C	19:06	20:11	83	58.97832	1.45968
20/11/2012	9	BRMR25	DC	C	19:06	20:11	84	58.97824	1.45978
20/11/2012	9	BRMR25	DC	C	19:06	20:11	85	58.97832	1.45974
20/11/2012	9	BRMR25	DC	C	19:06	20:11	86	58.97845	1.45957
20/11/2012	9	BRMR25	DC	C	19:06	20:11	87	58.97845	1.45941
20/11/2012	9	BRMR25	DC	C	19:06	20:11	88	58.97846	1.45937
20/11/2012	9	BRMR25	DC	C	19:06	20:11	89	58.97846	1.45933
20/11/2012	9	BRMR25	DC	C	19:06	20:11	90	58.97847	1.45931
20/11/2012	9	BRMR25	DC	C	19:06	20:11	91	58.97851	1.45928
20/11/2012	9	BRMR25	DC	C	19:06	20:11	92	58.97857	1.45929
20/11/2012	9	BRMR25	DC	C	19:06	20:11	93	58.97860	1.45928
20/11/2012	9	BRMR25	DC	C	19:06	20:11	94	58.97868	1.45930
20/11/2012	9	BRMR25	DC	C	19:06	20:11	95	58.97867	1.45925
20/11/2012	9	BRMR25	DC	C	19:06	20:11	96	58.97864	1.45924
20/11/2012	9	BRMR25	DC	C	19:06	20:11	97	58.97866	1.45911
20/11/2012	9	BRMR25	DC	C	19:06	20:11	98	58.97865	1.45907
20/11/2012	9	BRMR25	DC	C	19:06	20:11	99	58.97864	1.45905
20/11/2012	9	BRMR25	DC	C	19:06	20:11	100	58.97869	1.45894
20/11/2012	9	BRMR25	DC	C	19:06	20:11	101	58.97861	1.45897
20/11/2012	9	BRMR25	DC	C	19:06	20:11	102	58.97858	1.45897
20/11/2012	9	BRMR25	DC	C	19:06	20:11	103	58.97846	1.45895
20/11/2012	9	BRMR25	DC	C	19:06	20:11	104	58.97852	1.45887
20/11/2012	9	BRMR25	DC	C	19:06	20:11	105	58.97845	1.45899
20/11/2012	9	BRMR25	DC	C	19:06	20:11	106	58.97860	1.45920
20/11/2012	9	BRMR25	DC	C	19:06	20:11	107	58.97863	1.45935
20/11/2012	9	BRMR25	DC	C	19:06	20:11	108	58.97859	1.45940
20/11/2012	9	BRMR25	DC	C	19:06	20:11	109	58.97857	1.45962
20/11/2012	9	BRMR25	DC	C	19:06	20:11	110	58.97861	1.45987
20/11/2012	9	BRMR25	DC	C	19:06	20:11	111	58.97859	1.45996
20/11/2012	9	BRMR25	DC	C	19:06	20:11	112	58.97859	1.45995
20/11/2012	9	BRMR25	DC	C	19:06	20:11	113	58.97872	1.45990
20/11/2012	9	BRMR25	DC	C	19:06	20:11	114	58.97886	1.45991
20/11/2012	9	BRMR25	DC	C	19:06	20:11	115	58.97862	1.45981
20/11/2012	9	BRMR25	DC	C	19:06	20:11	116	58.97864	1.45968
20/11/2012	9	BRMR25	DC	C	19:06	20:11	117	58.97855	1.45970
20/11/2012	9	BRMR25	DC	C	19:06	20:11	118	58.97853	1.45965
20/11/2012	9	BRMR25	DC	C	19:06	20:11	119	58.97848	1.45954
20/11/2012	9	BRMR25	DC	C	19:06	20:11	120	58.97846	1.45948
20/11/2012	9	BRMR25	DC	C	19:06	20:11	121	58.97846	1.45944
20/11/2012	9	BRMR25	DC	C	19:06	20:11	122	58.97845	1.45942
20/11/2012	9	BRMR25	DC	C	19:06	20:11	123	58.97844	1.45940
20/11/2012	9	BRMR25	DC	C	19:06	20:11	124	58.97843	1.45935
20/11/2012	9	BRMR25	DC	C	19:06	20:11	125	58.97843	1.45938
20/11/2012	9	BRMR25	DC	C	19:06	20:11	126	58.97845	1.45946
20/11/2012	9	BRMR25	DC	C	19:06	20:11	127	58.97844	1.45946

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
20/11/2012	9	BRMR25	DC	C	19:06	20:11	128	58.97844	1.45946
20/11/2012	9	BRMR25	DC	C	19:06	20:11	129	58.97842	1.45945
20/11/2012	9	BRMR25	DC	C	19:06	20:11	130	58.97839	1.45938
20/11/2012	9	BRMR25	DC	C	19:06	20:11	131	58.97836	1.45931
20/11/2012	9	BRMR25	DC	C	19:06	20:11	132	58.97834	1.45928
20/11/2012	9	BRMR25	DC	C	19:06	20:11	133	58.97833	1.45925
20/11/2012	9	BRMR25	DC	C	19:06	20:11	134	58.97820	1.45900
20/11/2012	9	BRMR25	DC	C	19:06	20:11	135	58.97817	1.45890
20/11/2012	9	BRMR25	DC	C	19:06	20:11	136	58.97815	1.45892
20/11/2012	9	BRMR25	DC	C	19:06	20:11	137	58.97800	1.45800
20/11/2012	10	BRMR32	DC	A	21:06	21:16	2	58.98403	1.47070
20/11/2012	10	BRMR32	DC	A	21:06	21:16	3	58.98403	1.47070
20/11/2012	10	BRMR32	DC	A	21:06	21:16	4	58.98380	1.47077
20/11/2012	10	BRMR32	DC	A	21:06	21:16	5	58.98366	1.47085
20/11/2012	10	BRMR32	DC	A	21:06	21:16	6	58.98364	1.47089
20/11/2012	10	BRMR32	DC	A	21:06	21:16	7	58.98359	1.47092
20/11/2012	10	BRMR32	DC	A	21:06	21:16	8	58.98348	1.47092
20/11/2012	10	BRMR32	DC	A	21:06	21:16	9	58.98347	1.47090
20/11/2012	10	BRMR32	DC	A	21:06	21:16	10	58.98326	1.47104
20/11/2012	10	BRMR32	DC	A	21:06	21:16	11	58.98316	1.47103
20/11/2012	11	BRMR37	DC	A	21:49	22:13	14	58.98478	1.47442
20/11/2012	11	BRMR37	DC	A	21:49	22:13	15	58.98479	1.47448
20/11/2012	11	BRMR37	DC	A	21:49	22:13	16	58.98479	1.47448
20/11/2012	11	BRMR37	DC	A	21:49	22:13	17	58.98489	1.47449
20/11/2012	11	BRMR37	DC	A	21:49	22:13	18	58.98500	1.47442
20/11/2012	11	BRMR37	DC	A	21:49	22:13	19	58.98504	1.47443
20/11/2012	11	BRMR37	DC	A	21:49	22:13	20	58.98507	1.47441
20/11/2012	11	BRMR37	DC	A	21:49	22:13	21	58.98511	1.47439
20/11/2012	11	BRMR37	DC	A	21:49	22:13	22	58.98520	1.47426
20/11/2012	11	BRMR37	DC	A	21:49	22:13	23	58.98516	1.47417
20/11/2012	11	BRMR37	DC	A	21:49	22:13	24	58.98511	1.47415
20/11/2012	11	BRMR37	DC	A	21:49	22:13	25	58.98505	1.47408
20/11/2012	11	BRMR37	DC	A	21:49	22:13	26	58.98504	1.47409
20/11/2012	11	BRMR37	DC	A	21:49	22:13	27	58.98498	1.47402
20/11/2012	11	BRMR37	DC	A	21:49	22:13	28	58.98494	1.47398
20/11/2012	11	BRMR37	DC	A	21:49	22:13	29	58.98489	1.47394
20/11/2012	11	BRMR37	DC	A	21:49	22:13	30	58.98485	1.47390
20/11/2012	11	BRMR37	DC	A	21:49	22:13	31	58.98481	1.47385
20/11/2012	11	BRMR37	DC	A	21:49	22:13	32	58.98481	1.47385
20/11/2012	11	BRMR37	DC	A	21:49	22:13	33	58.98499	1.47405
20/11/2012	11	BRMR37	DC	A	21:49	22:13	34	58.98503	1.47419
20/11/2012	11	BRMR37	DC	A	21:49	22:13	35	58.98502	1.47419
20/11/2012	11	BRMR37	DC	A	21:49	22:13	36	58.98504	1.47429
20/11/2012	11	BRMR37	DC	A	21:49	22:13	37	58.98505	1.47436
20/11/2012	11	BRMR37	DC	A	21:49	22:13	38	58.98507	1.47443
20/11/2012	11	BRMR37	DC	A	21:49	22:13	39	58.98508	1.47450
20/11/2012	11	BRMR37	DC	A	21:49	22:13	40	58.98510	1.47458
20/11/2012	11	BRMR37	DC	A	21:49	22:13	41	58.98510	1.47458
20/11/2012	11	BRMR37	DC	A	21:49	22:13	42	58.98528	1.47412
20/11/2012	11	BRMR37	DC	A	21:49	22:13	43	58.98532	1.47401
20/11/2012	11	BRMR37	DC	A	21:49	22:13	44	58.98538	1.47387
20/11/2012	11	BRMR37	DC	A	21:49	22:13	45	58.98541	1.47395
20/11/2012	11	BRMR37	DC	A	21:49	22:13	46	58.98535	1.47399
20/11/2012	11	BRMR37	DC	A	21:49	22:13	47	58.98531	1.47403
20/11/2012	11	BRMR37	DC	A	21:49	22:13	48	58.98529	1.47417
20/11/2012	11	BRMR37	DC	A	21:49	22:13	49	58.98513	1.47441
20/11/2012	12	BRMR33	DC	A	22:49	22:59	3	58.98838	1.46926
20/11/2012	12	BRMR33	DC	A	22:49	22:59	4	58.98836	1.46926
20/11/2012	12	BRMR33	DC	A	22:49	22:59	5	58.98825	1.46934
20/11/2012	12	BRMR33	DC	A	22:49	22:59	6	58.98820	1.46936
20/11/2012	12	BRMR33	DC	A	22:49	22:59	7	58.98820	1.46933
20/11/2012	12	BRMR33	DC	A	22:49	22:59	8	58.98819	1.46936
20/11/2012	12	BRMR33	DC	A	22:49	22:59	9	58.98815	1.46938
20/11/2012	12	BRMR33	DC	A	22:49	22:59	10	58.98813	1.46940
20/11/2012	12	BRMR33	DC	A	22:49	22:59	11	58.98808	1.46952

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
20/11/2012	12	BRMR33	DC	A	22:49	22:59	12	58.98804	1.46954
20/11/2012	12	BRMR33	DC	A	22:49	22:59	13	58.98796	1.46959
20/11/2012	12	BRMR33	DC	A	22:49	22:59	14	58.98793	1.46981
20/11/2012	12	BRMR33	DC	A	22:49	22:59	15	58.98789	1.46994
20/11/2012	12	BRMR33	DC	A	22:49	22:59	16	58.98788	1.46994
20/11/2012	12	BRMR33	DC	A	22:49	22:59	17	58.98788	1.46999
20/11/2012	12	BRMR33	DC	A	22:49	22:59	18	58.98788	1.47006
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	4	58.99004	1.48469
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	5	58.99009	1.48471
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	6	58.99019	1.48466
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	7	58.99030	1.48468
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	8	58.99043	1.48459
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	9	58.99050	1.48456
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	10	58.99054	1.48453
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	11	58.99065	1.48448
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	12	58.99066	1.48446
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	13	58.99076	1.48449
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	14	58.99080	1.48447
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	15	58.99095	1.48446
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	16	58.99094	1.48442
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	17	58.99100	1.48437
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	18	58.99103	1.48440
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	19	58.99109	1.48438
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	20	58.99115	1.48438
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	21	58.99119	1.48438
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	22	58.99128	1.48433
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	23	58.99133	1.48429
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	24	58.99144	1.48420
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	25	58.99145	1.48419
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	26	58.99148	1.48421
20/11/2012	13	BRMR30-31	DC	A	23:54	00:12	27	58.99154	1.48422
21/11/2012	14	BRMR38	DC	A	00:57	01:05	2	58.99296	1.48005
21/11/2012	14	BRMR38	DC	A	00:57	01:05	3	58.99297	1.47994
21/11/2012	14	BRMR38	DC	A	00:57	01:05	4	58.99306	1.47971
21/11/2012	14	BRMR38	DC	A	00:57	01:05	5	58.99300	1.47955
21/11/2012	14	BRMR38	DC	A	00:57	01:05	6	58.99302	1.47946
21/11/2012	14	BRMR38	DC	A	00:57	01:05	7	58.99301	1.47935
21/11/2012	14	BRMR38	DC	A	00:57	01:05	8	58.99309	1.47927
21/11/2012	14	BRMR38	DC	A	00:57	01:05	9	58.99314	1.47915
21/11/2012	14	BRMR38	DC	A	00:57	01:05	10	58.99320	1.47900
21/11/2012	15	BRMR28	DC	A	01:37	01:50	22	59.00089	1.50266
21/11/2012	15	BRMR28	DC	A	01:37	01:50	23	59.00081	1.50263
21/11/2012	15	BRMR28	DC	A	01:37	01:50	24	59.00081	1.50289
21/11/2012	15	BRMR28	DC	A	01:37	01:50	25	59.00075	1.50309
21/11/2012	15	BRMR28	DC	A	01:37	01:50	26	59.00074	1.50331
21/11/2012	15	BRMR28	DC	A	01:37	01:50	27	59.00074	1.50341
21/11/2012	15	BRMR28	DC	A	01:37	01:50	28	59.00072	1.50346
21/11/2012	15	BRMR28	DC	A	01:37	01:50	29	59.00071	1.50350
21/11/2012	15	BRMR28	DC	A	01:37	01:50	30	59.00069	1.50353
21/11/2012	15	BRMR28	DC	A	01:37	01:50	31	59.00068	1.50373
21/11/2012	15	BRMR28	DC	A	01:37	01:50	32	59.00070	1.50377
21/11/2012	15	BRMR28	DC	A	01:37	01:50	33	59.00072	1.50386
21/11/2012	15	BRMR28	DC	A	01:37	01:50	34	59.00063	1.50378
21/11/2012	15	BRMR28	DC	A	01:37	01:50	35	59.00059	1.50383
21/11/2012	15	BRMR28	DC	A	01:37	01:50	36	59.00064	1.50404
21/11/2012	15	BRMR28	DC	A	01:37	01:50	37	59.00055	1.50418
21/11/2012	15	BRMR28	DC	A	01:37	01:50	38	59.00056	1.50445
21/11/2012	15	BRMR28	DC	B	01:53	02:05	38	59.00056	1.50445
21/11/2012	15	BRMR28	DC	B	01:53	02:05	39	59.00046	1.50469
21/11/2012	15	BRMR28	DC	B	01:53	02:05	40	59.00055	1.50459
21/11/2012	15	BRMR28	DC	B	01:53	02:05	41	59.00054	1.50453
21/11/2012	15	BRMR28	DC	B	01:53	02:05	42	59.00056	1.50446
21/11/2012	15	BRMR28	DC	B	01:53	02:05	43	59.00060	1.50437
21/11/2012	15	BRMR28	DC	B	01:53	02:05	44	59.00068	1.50408
21/11/2012	15	BRMR28	DC	B	01:53	02:05	45	59.00077	1.50389

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
21/11/2012	15	BRMR28	DC	B	01:53	02:05	46	59.00087	1.50375
21/11/2012	15	BRMR28	DC	B	01:53	02:05	47	59.00092	1.50357
21/11/2012	15	BRMR28	DC	B	01:53	02:05	48	59.00097	1.50338
21/11/2012	15	BRMR28	DC	B	01:53	02:05	49	59.00097	1.50337
21/11/2012	15	BRMR28	DC	B	01:53	02:05	50	59.00103	1.50322
21/11/2012	15	BRMR28	DC	B	01:53	02:05	51	59.00103	1.50319
21/11/2012	15	BRMR28	DC	B	01:53	02:05	52	59.00105	1.50306
21/11/2012	15	BRMR28	DC	B	01:53	02:05	53	59.00107	1.50303
21/11/2012	15	BRMR28	DC	B	01:53	02:05	54	59.00119	1.50285
21/11/2012	15	BRMR28	DC	C	02:08	02:22	55	59.00131	1.50264
21/11/2012	15	BRMR28	DC	C	02:08	02:22	56	59.00156	1.50225
21/11/2012	15	BRMR28	DC	C	02:08	02:22	57	59.00147	1.50240
21/11/2012	15	BRMR28	DC	C	02:08	02:22	58	59.00148	1.50244
21/11/2012	15	BRMR28	DC	C	02:08	02:22	59	59.00150	1.50255
21/11/2012	15	BRMR28	DC	C	02:08	02:22	60	59.00145	1.50262
21/11/2012	15	BRMR28	DC	C	02:08	02:22	61	59.00141	1.50279
21/11/2012	15	BRMR28	DC	C	02:08	02:22	62	59.00130	1.50279
21/11/2012	15	BRMR28	DC	C	02:08	02:22	63	59.00128	1.50283
21/11/2012	15	BRMR28	DC	C	02:08	02:22	64	59.00126	1.50286
21/11/2012	15	BRMR28	DC	C	02:08	02:22	65	59.00126	1.50299
21/11/2012	15	BRMR28	DC	C	02:08	02:22	66	59.00121	1.50313
21/11/2012	15	BRMR28	DC	C	02:08	02:22	67	59.00120	1.50316
21/11/2012	15	BRMR28	DC	C	02:08	02:22	68	59.00116	1.50323
21/11/2012	15	BRMR28	DC	C	02:08	02:22	69	59.00113	1.50338
21/11/2012	15	BRMR28	DC	C	02:08	02:22	70	59.00111	1.50348
21/11/2012	15	BRMR28	DC	D	02:24	02:35	75	59.00080	1.50451
21/11/2012	15	BRMR28	DC	D	02:24	02:35	76	59.00080	1.50451
21/11/2012	15	BRMR28	DC	D	02:24	02:35	77	59.00075	1.50482
21/11/2012	15	BRMR28	DC	D	02:24	02:35	78	59.00074	1.50482
21/11/2012	15	BRMR28	DC	D	02:24	02:35	79	59.00075	1.50479
21/11/2012	15	BRMR28	DC	D	02:24	02:35	80	59.00077	1.50475
21/11/2012	15	BRMR28	DC	D	02:24	02:35	81	59.00088	1.50458
21/11/2012	15	BRMR28	DC	D	02:24	02:35	82	59.00092	1.50435
21/11/2012	15	BRMR28	DC	D	02:24	02:35	83	59.00103	1.50419
21/11/2012	15	BRMR28	DC	D	02:24	02:35	84	59.00111	1.50405
21/11/2012	15	BRMR28	DC	D	02:24	02:35	85	59.00120	1.50387
21/11/2012	15	BRMR28	DC	D	02:24	02:35	86	59.00129	1.50380
21/11/2012	15	BRMR28	DC	D	02:24	02:35	87	59.00136	1.50374
21/11/2012	15	BRMR28	DC	D	02:24	02:35	88	59.00137	1.50359
21/11/2012	15	BRMR28	DC	D	02:24	02:35	89	59.00143	1.50354
21/11/2012	15	BRMR28	DC	D	02:24	02:35	90	59.00150	1.50349
21/11/2012	16	BRMR29	DC	A	03:04	03:12	2	59.00269	1.50245
21/11/2012	16	BRMR29	DC	A	03:04	03:12	3	59.00272	1.50248
21/11/2012	16	BRMR29	DC	A	03:04	03:12	4	59.00279	1.50234
21/11/2012	16	BRMR29	DC	A	03:04	03:12	5	59.00280	1.50235
21/11/2012	16	BRMR29	DC	A	03:04	03:12	6	59.00303	1.50204
21/11/2012	16	BRMR29	DC	A	03:04	03:12	7	59.00328	1.50174
21/11/2012	16	BRMR29	DC	A	03:04	03:12	8	59.00343	1.50160
21/11/2012	16	BRMR29	DC	A	03:04	03:12	9	59.00369	1.50150
21/11/2012	16	BRMR29	DC	A	03:04	03:12	10	59.00393	1.50143
21/11/2012	16	BRMR29	DC	A	03:04	03:12	11	59.00410	1.50137
21/11/2012	16	BRMR29	DC	A	03:04	03:12	12	59.00450	1.50136
21/11/2012	16	BRMR29	DC	A	03:04	03:12	13	59.00460	1.50132
21/11/2012	16	BRMR29	DC	B	03:20	03:46	14	59.00428	1.50093
21/11/2012	16	BRMR29	DC	B	03:20	03:46	15	59.00430	1.50099
21/11/2012	16	BRMR29	DC	B	03:20	03:46	16	59.00431	1.50097
21/11/2012	16	BRMR29	DC	B	03:20	03:46	17	59.00429	1.50100
21/11/2012	16	BRMR29	DC	B	03:20	03:46	18	59.00420	1.50109
21/11/2012	16	BRMR29	DC	B	03:20	03:46	19	59.00418	1.50108
21/11/2012	16	BRMR29	DC	B	03:20	03:46	20	59.00415	1.50110
21/11/2012	16	BRMR29	DC	B	03:20	03:46	21	59.00413	1.50112

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
21/11/2012	16	BRMR29	DC	B	03:20	03:46	22	59.00410	1.50118
21/11/2012	16	BRMR29	DC	B	03:20	03:46	23	59.00405	1.50124
21/11/2012	16	BRMR29	DC	B	03:20	03:46	24	59.00398	1.50132
21/11/2012	16	BRMR29	DC	B	03:20	03:46	25	59.00390	1.50145
21/11/2012	16	BRMR29	DC	B	03:20	03:46	26	59.00388	1.50148
21/11/2012	16	BRMR29	DC	B	03:20	03:46	27	59.00378	1.50152
21/11/2012	16	BRMR29	DC	B	03:20	03:46	28	59.00381	1.50155
21/11/2012	16	BRMR29	DC	B	03:20	03:46	29	59.00376	1.50161
21/11/2012	16	BRMR29	DC	B	03:20	03:46	30	59.00368	1.50161
21/11/2012	16	BRMR29	DC	B	03:20	03:46	31	59.00367	1.50167
21/11/2012	16	BRMR29	DC	B	03:20	03:46	32	59.00359	1.50173
21/11/2012	16	BRMR29	DC	B	03:20	03:46	33	59.00358	1.50180
21/11/2012	16	BRMR29	DC	B	03:20	03:46	34	59.00350	1.50181
21/11/2012	16	BRMR29	DC	B	03:20	03:46	35	59.00348	1.50190
21/11/2012	16	BRMR29	DC	B	03:20	03:46	36	59.00343	1.50192
21/11/2012	16	BRMR29	DC	B	03:20	03:46	37	59.00332	1.50207
21/11/2012	16	BRMR29	DC	B	03:20	03:46	38	59.00328	1.50210
21/11/2012	16	BRMR29	DC	B	03:20	03:46	39	59.00327	1.50216
21/11/2012	16	BRMR29	DC	B	03:20	03:46	40	59.00322	1.50217
21/11/2012	16	BRMR29	DC	B	03:20	03:46	41	59.00320	1.50221
21/11/2012	17	BRMR42	DC	A	04:11	04:30	2	59.00338	1.49468
21/11/2012	17	BRMR42	DC	A	04:11	04:30	3	59.00335	1.49472
21/11/2012	17	BRMR42	DC	A	04:11	04:30	4	59.00337	1.49463
21/11/2012	17	BRMR42	DC	A	04:11	04:30	5	59.00340	1.49453
21/11/2012	17	BRMR42	DC	A	04:11	04:30	6	59.00340	1.49450
21/11/2012	17	BRMR42	DC	A	04:11	04:30	7	59.00336	1.49440
21/11/2012	17	BRMR42	DC	A	04:11	04:30	8	59.00337	1.49428
21/11/2012	17	BRMR42	DC	A	04:11	04:30	9	59.00338	1.49422
21/11/2012	17	BRMR42	DC	A	04:11	04:30	10	59.00339	1.49409
21/11/2012	17	BRMR42	DC	A	04:11	04:30	11	59.00336	1.49392
21/11/2012	17	BRMR42	DC	A	04:11	04:30	12	59.00335	1.49389
21/11/2012	17	BRMR42	DC	A	04:11	04:30	13	59.00337	1.49382
21/11/2012	17	BRMR42	DC	A	04:11	04:30	14	59.00338	1.49378
21/11/2012	17	BRMR42	DC	A	04:11	04:30	15	59.00342	1.49372
21/11/2012	17	BRMR42	DC	A	04:11	04:30	16	59.00337	1.49362
21/11/2012	17	BRMR42	DC	A	04:11	04:30	17	59.00336	1.49354
21/11/2012	17	BRMR42	DC	A	04:11	04:30	18	59.00338	1.49355
21/11/2012	17	BRMR42	DC	A	04:11	04:30	19	59.00341	1.49354
21/11/2012	17	BRMR42	DC	A	04:11	04:30	20	59.00340	1.49354
21/11/2012	17	BRMR42	DC	A	04:11	04:30	21	59.00340	1.49351
21/11/2012	17	BRMR42	DC	A	04:11	04:30	22	59.00338	1.49346
21/11/2012	17	BRMR42	DC	A	04:11	04:30	23	59.00336	1.49330
21/11/2012	17	BRMR42	DC	A	04:11	04:30	24	59.00337	1.49330
21/11/2012	17	BRMR42	DC	A	04:11	04:30	25	59.00339	1.49317
21/11/2012	17	BRMR42	DC	A	04:11	04:30	26	59.00338	1.49310
21/11/2012	17	BRMR42	DC	A	04:11	04:30	27	59.00335	1.49308
21/11/2012	17	BRMR42	DC	A	04:11	04:30	28	59.00337	1.49294
21/11/2012	17	BRMR42	DC	A	04:11	04:30	29	59.00338	1.49293
21/11/2012	17	BRMR42	DC	A	04:11	04:30	30	59.00336	1.49287
21/11/2012	17	BRMR42	DC	A	04:11	04:30	31	59.00338	1.49279
21/11/2012	18	BRMR41	DC	A	04:52	05:23	2	59.00161	1.47839
21/11/2012	18	BRMR41	DC	A	04:52	05:23	3	59.00161	1.47839
21/11/2012	18	BRMR41	DC	A	04:52	05:23	4	59.00156	1.47839
21/11/2012	18	BRMR41	DC	A	04:52	05:23	5	59.00151	1.47838
21/11/2012	18	BRMR41	DC	A	04:52	05:23	6	59.00148	1.47841
21/11/2012	18	BRMR41	DC	A	04:52	05:23	7	59.00145	1.47839
21/11/2012	18	BRMR41	DC	A	04:52	05:23	8	59.00136	1.47835
21/11/2012	18	BRMR41	DC	A	04:52	05:23	9	59.00135	1.47838
21/11/2012	18	BRMR41	DC	A	04:52	05:23	10	59.00132	1.47838
21/11/2012	18	BRMR41	DC	A	04:52	05:23	11	59.00128	1.47837
21/11/2012	18	BRMR41	DC	A	04:52	05:23	12	59.00115	1.47834
21/11/2012	18	BRMR41	DC	A	04:52	05:23	13	59.00111	1.47839
21/11/2012	18	BRMR41	DC	A	04:52	05:23	14	59.00108	1.47837
21/11/2012	18	BRMR41	DC	A	04:52	05:23	15	59.00097	1.47836
21/11/2012	18	BRMR41	DC	A	04:52	05:23	16	59.00095	1.47841

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
21/11/2012	18	BRMR41	DC	A	04:52	05:23	17	59.00082	1.47834
21/11/2012	18	BRMR41	DC	A	04:52	05:23	18	59.00075	1.47835
21/11/2012	18	BRMR41	DC	A	04:52	05:23	19	59.00070	1.47833
21/11/2012	18	BRMR41	DC	A	04:52	05:23	20	59.00071	1.47835
21/11/2012	18	BRMR41	DC	A	04:52	05:23	21	59.00071	1.47840
21/11/2012	18	BRMR41	DC	A	04:52	05:23	22	59.00066	1.47832
21/11/2012	18	BRMR41	DC	A	04:52	05:23	23	59.00059	1.47833
21/11/2012	18	BRMR41	DC	A	04:52	05:23	24	59.00055	1.47831
21/11/2012	18	BRMR41	DC	A	04:52	05:23	25	59.00055	1.47832
21/11/2012	18	BRMR41	DC	A	04:52	05:23	26	59.00053	1.47832
21/11/2012	18	BRMR41	DC	A	04:52	05:23	27	59.00051	1.47833
21/11/2012	18	BRMR41	DC	A	04:52	05:23	28	59.00048	1.47835
21/11/2012	18	BRMR41	DC	A	04:52	05:23	29	59.00044	1.47833
21/11/2012	18	BRMR41	DC	A	04:52	05:23	30	59.00044	1.47833
21/11/2012	18	BRMR41	DC	A	04:52	05:23	31	59.00027	1.47831
21/11/2012	18	BRMR41	DC	A	04:52	05:23	32	59.00026	1.47836
21/11/2012	18	BRMR41	DC	A	04:52	05:23	33	59.00024	1.47833
21/11/2012	18	BRMR41	DC	A	04:52	05:23	34	59.00023	1.47834
21/11/2012	18	BRMR41	DC	A	04:52	05:23	35	59.00019	1.47832
21/11/2012	18	BRMR41	DC	A	04:52	05:23	36	59.00015	1.47833
21/11/2012	18	BRMR41	DC	A	04:52	05:23	37	59.00010	1.47828
21/11/2012	18	BRMR41	DC	A	04:52	05:23	38	59.00006	1.47828
21/11/2012	18	BRMR41	DC	A	04:52	05:23	39	58.99995	1.47830
21/11/2012	18	BRMR41	DC	A	04:52	05:23	40	58.99985	1.47825
21/11/2012	18	BRMR41	DC	A	04:52	05:23	41	59.00003	1.47802
21/11/2012	18	BRMR41	DC	A	04:52	05:23	42	59.00003	1.47802
21/11/2012	18	BRMR41	DC	B	05:32	05:56	43	59.00005	1.47804
21/11/2012	18	BRMR41	DC	B	05:32	05:56	44	59.00007	1.47810
21/11/2012	18	BRMR41	DC	B	05:32	05:56	45	59.00010	1.47810
21/11/2012	18	BRMR41	DC	B	05:32	05:56	46	59.00010	1.47810
21/11/2012	18	BRMR41	DC	B	05:32	05:56	47	59.00011	1.47811
21/11/2012	18	BRMR41	DC	B	05:32	05:56	48	59.00011	1.47816
21/11/2012	18	BRMR41	DC	B	05:32	05:56	49	59.00014	1.47818
21/11/2012	18	BRMR41	DC	B	05:32	05:56	50	59.00022	1.47828
21/11/2012	18	BRMR41	DC	B	05:32	05:56	51	59.00022	1.47831
21/11/2012	18	BRMR41	DC	B	05:32	05:56	52	59.00022	1.47831
21/11/2012	18	BRMR41	DC	B	05:32	05:56	53	59.00026	1.47836
21/11/2012	18	BRMR41	DC	B	05:32	05:56	54	59.00027	1.47838
21/11/2012	18	BRMR41	DC	B	05:32	05:56	55	59.00029	1.47843
21/11/2012	18	BRMR41	DC	B	05:32	05:56	56	59.00027	1.47840
21/11/2012	18	BRMR41	DC	B	05:32	05:56	57	59.00034	1.47851
21/11/2012	18	BRMR41	DC	B	05:32	05:56	58	59.00036	1.47857
21/11/2012	18	BRMR41	DC	B	05:32	05:56	59	59.00044	1.47864
21/11/2012	18	BRMR41	DC	B	05:32	05:56	60	59.00045	1.47872
21/11/2012	18	BRMR41	DC	B	05:32	05:56	61	59.00051	1.47882
21/11/2012	18	BRMR41	DC	B	05:32	05:56	62	59.00055	1.47889
21/11/2012	18	BRMR41	DC	B	05:32	05:56	63	59.00055	1.47891
21/11/2012	18	BRMR41	DC	B	05:32	05:56	64	59.00056	1.47889
21/11/2012	18	BRMR41	DC	B	05:32	05:56	65	59.00056	1.47889
21/11/2012	18	BRMR41	DC	B	05:32	05:56	66	59.00061	1.47897
21/11/2012	18	BRMR41	DC	B	05:32	05:56	67	59.00063	1.47901
21/11/2012	18	BRMR41	DC	B	05:32	05:56	68	59.00065	1.47904
21/11/2012	18	BRMR41	DC	B	05:32	05:56	69	59.00069	1.47911
21/11/2012	18	BRMR41	DC	B	05:32	05:56	70	59.00076	1.47924
21/11/2012	18	BRMR41	DC	B	05:32	05:56	71	59.00081	1.47926
21/11/2012	18	BRMR41	DC	B	05:32	05:56	72	59.00082	1.47933
21/11/2012	18	BRMR41	DC	B	05:32	05:56	73	59.00089	1.47944
21/11/2012	18	BRMR41	DC	B	05:32	05:56	74	59.00089	1.47944
21/11/2012	18	BRMR41	DC	B	05:32	05:56	75	59.00092	1.47952
21/11/2012	18	BRMR41	DC	B	05:32	05:56	76	59.00098	1.47960
21/11/2012	18	BRMR41	DC	B	05:32	05:56	77	59.00101	1.47966
21/11/2012	19	BRMR40	DC	A	06:27	06:39	2	58.99432	1.47222
21/11/2012	19	BRMR40	DC	A	06:27	06:39	3	58.99424	1.47206
21/11/2012	19	BRMR40	DC	A	06:27	06:39	4	58.99422	1.47198
21/11/2012	19	BRMR40	DC	A	06:27	06:39	5	58.99420	1.47195

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
21/11/2012	19	BRMR40	DC	A	06:27	06:39	6	58.99419	1.47193
21/11/2012	19	BRMR40	DC	A	06:27	06:39	7	58.99418	1.47191
21/11/2012	19	BRMR40	DC	A	06:27	06:39	8	58.99415	1.47182
21/11/2012	19	BRMR40	DC	A	06:27	06:39	9	58.99411	1.47168
21/11/2012	19	BRMR40	DC	A	06:27	06:39	10	58.99410	1.47168
21/11/2012	19	BRMR40	DC	A	06:27	06:39	11	58.99400	1.47149
21/11/2012	19	BRMR40	DC	A	06:27	06:39	12	58.99398	1.47142
21/11/2012	19	BRMR40	DC	A	06:27	06:39	13	58.99401	1.47138
21/11/2012	19	BRMR40	DC	A	06:27	06:39	14	58.99400	1.47132
21/11/2012	19	BRMR40	DC	A	06:27	06:39	15	58.99392	1.47128
21/11/2012	19	BRMR40	DC	A	06:27	06:39	16	58.99393	1.47124
21/11/2012	19	BRMR40	DC	A	06:27	06:39	17	58.99392	1.47122
21/11/2012	19	BRMR40	DC	A	06:27	06:39	18	58.99392	1.47118
21/11/2012	19	BRMR40	DC	A	06:27	06:39	19	58.99390	1.47114
21/11/2012	19	BRMR40	DC	A	06:27	06:39	20	58.99386	1.47098
21/11/2012	19	BRMR40	DC	A	06:27	06:39	21	58.99381	1.47090
21/11/2012	19	BRMR40	DC	A	06:27	06:39	22	58.99377	1.47086
21/11/2012	19	BRMR40	DC	A	06:27	06:39	23	58.99374	1.47077
21/11/2012	19	BRMR40	DC	A	06:27	06:39	24	58.99370	1.47063
21/11/2012	20	BRMR39	DC	A	07:04	07:14	3	58.99365	1.46253
21/11/2012	20	BRMR39	DC	A	07:04	07:14	4	58.99377	1.46245
21/11/2012	20	BRMR39	DC	A	07:04	07:14	5	58.99380	1.46244
21/11/2012	20	BRMR39	DC	A	07:04	07:14	6	58.99382	1.46243
21/11/2012	20	BRMR39	DC	A	07:04	07:14	7	58.99387	1.46240
21/11/2012	20	BRMR39	DC	A	07:04	07:14	8	58.99395	1.46238
21/11/2012	20	BRMR39	DC	A	07:04	07:14	9	58.99396	1.46239
21/11/2012	20	BRMR39	DC	A	07:04	07:14	10	58.99400	1.46239
21/11/2012	20	BRMR39	DC	A	07:04	07:14	11	58.99400	1.46238
21/11/2012	20	BRMR39	DC	A	07:04	07:14	12	58.99401	1.46234
21/11/2012	20	BRMR39	DC	A	07:04	07:14	13	58.99401	1.46236
21/11/2012	20	BRMR39	DC	A	07:04	07:14	14	58.99404	1.46226
21/11/2012	20	BRMR39	DC	A	07:04	07:14	15	58.99406	1.46228
21/11/2012	20	BRMR39	DC	A	07:04	07:14	16	58.99414	1.46220
21/11/2012	20	BRMR39	DC	A	07:04	07:14	17	58.99424	1.46217
21/11/2012	20	BRMR39	DC	A	07:04	07:14	18	58.99423	1.46215
21/11/2012	20	BRMR39	DC	A	07:04	07:14	19	58.99432	1.46217
21/11/2012	20	BRMR39	DC	A	07:04	07:14	20	58.99437	1.46204
21/11/2012	20	BRMR39	DC	A	07:04	07:14	21	58.99448	1.46204
21/11/2012	20	BRMR39	DC	B	07:24	07:37	22	58.99369	1.46158
21/11/2012	20	BRMR39	DC	B	07:24	07:37	23	58.99368	1.46163
21/11/2012	20	BRMR39	DC	B	07:24	07:37	24	58.99367	1.46162
21/11/2012	20	BRMR39	DC	B	07:24	07:37	25	58.99366	1.46164
21/11/2012	20	BRMR39	DC	B	07:24	07:37	26	58.99371	1.46167
21/11/2012	20	BRMR39	DC	B	07:24	07:37	27	58.99374	1.46178
21/11/2012	20	BRMR39	DC	B	07:24	07:37	28	58.99377	1.46197
21/11/2012	20	BRMR39	DC	B	07:24	07:37	29	58.99377	1.46199
21/11/2012	20	BRMR39	DC	B	07:24	07:37	30	58.99376	1.46203
21/11/2012	20	BRMR39	DC	B	07:24	07:37	31	58.99377	1.46204
21/11/2012	20	BRMR39	DC	B	07:24	07:37	32	58.99383	1.46218
21/11/2012	20	BRMR39	DC	B	07:24	07:37	33	58.99380	1.46226
21/11/2012	20	BRMR39	DC	B	07:24	07:37	34	58.99385	1.46237
21/11/2012	20	BRMR39	DC	B	07:24	07:37	35	58.99388	1.46246
21/11/2012	20	BRMR39	DC	B	07:24	07:37	36	58.99391	1.46253
21/11/2012	20	BRMR39	DC	B	07:24	07:37	37	58.99395	1.46265
21/11/2012	20	BRMR39	DC	B	07:24	07:37	38	58.99400	1.46275
21/11/2012	20	BRMR39	DC	B	07:24	07:37	39	58.99404	1.46296
21/11/2012	20	BRMR39	DC	B	07:24	07:37	40	58.99406	1.46302

### 9.7.2 Scanner Pockmark cSAC

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
24/11/2012	89	SCDC04	DC	A	11:20	11:45	4	58.29459	0.97533
24/11/2012	89	SCDC04	DC	A	11:20	11:45	5	58.29459	0.97536
24/11/2012	89	SCDC04	DC	A	11:20	11:45	6	58.29457	0.97534
24/11/2012	89	SCDC04	DC	A	11:20	11:45	7	58.29455	0.97531

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
24/11/2012	89	SCDC04	DC	A	11:20	11:45	8	58.29450	0.97526
24/11/2012	89	SCDC04	DC	A	11:20	11:45	9	58.29438	0.97517
24/11/2012	89	SCDC04	DC	A	11:20	11:45	10	58.29428	0.97508
24/11/2012	89	SCDC04	DC	A	11:20	11:45	11	58.29428	0.97508
24/11/2012	89	SCDC04	DC	A	11:20	11:45	12	58.29424	0.97500
24/11/2012	89	SCDC04	DC	A	11:20	11:45	13	58.29424	0.97500
24/11/2012	89	SCDC04	DC	A	11:20	11:45	14	58.29420	0.97497
24/11/2012	89	SCDC04	DC	A	11:20	11:45	15	58.29420	0.97497
24/11/2012	89	SCDC04	DC	A	11:20	11:45	16	58.29411	0.97492
24/11/2012	89	SCDC04	DC	A	11:20	11:45	17	58.29408	0.97489
24/11/2012	89	SCDC04	DC	A	11:20	11:45	18	58.29405	0.97487
24/11/2012	89	SCDC04	DC	A	11:20	11:45	19	58.29400	0.97483
24/11/2012	89	SCDC04	DC	A	11:20	11:45	20	58.29392	0.97481
24/11/2012	89	SCDC04	DC	A	11:20	11:45	21	58.29388	0.97480
24/11/2012	89	SCDC04	DC	A	11:20	11:45	22	58.29383	0.97477
24/11/2012	89	SCDC04	DC	A	11:20	11:45	23	58.29383	0.97477
24/11/2012	89	SCDC04	DC	A	11:20	11:45	24	58.29379	0.97473
24/11/2012	89	SCDC04	DC	A	11:20	11:45	25	58.29379	0.97473
24/11/2012	89	SCDC04	DC	A	11:20	11:45	26	58.29375	0.97471
24/11/2012	89	SCDC04	DC	A	11:20	11:45	27	58.29373	0.97469
24/11/2012	89	SCDC04	DC	A	11:20	11:45	28	58.29369	0.97464
24/11/2012	89	SCDC04	DC	A	11:20	11:45	29	58.29364	0.97458
24/11/2012	89	SCDC04	DC	A	11:20	11:45	30	58.29362	0.97452
24/11/2012	89	SCDC04	DC	A	11:20	11:45	31	58.29358	0.97451
24/11/2012	89	SCDC04	DC	A	11:20	11:45	32	58.29358	0.97451
24/11/2012	89	SCDC04	DC	A	11:20	11:45	33	58.29354	0.97447
24/11/2012	89	SCDC04	DC	A	11:20	11:45	34	58.29345	0.97440
24/11/2012	89	SCDC04	DC	A	11:20	11:45	35	58.29338	0.97435
24/11/2012	89	SCDC04	DC	A	11:20	11:45	36	58.29334	0.97429
24/11/2012	89	SCDC04	DC	A	11:20	11:45	37	58.29329	0.97420
24/11/2012	89	SCDC04	DC	A	11:20	11:45	38	58.29321	0.97411
24/11/2012	89	SCDC04	DC	A	11:20	11:45	39	58.29317	0.97410
24/11/2012	89	SCDC04	DC	A	11:20	11:45	40	58.29309	0.97408
24/11/2012	89	SCDC04	DC	A	11:20	11:45	41	58.29306	0.97403
24/11/2012	89	SCDC04	DC	A	11:20	11:45	42	58.29302	0.97398
24/11/2012	89	SCDC04	DC	A	11:20	11:45	43	58.29293	0.97395
24/11/2012	89	SCDC04	DC	A	11:20	11:45	44	58.29286	0.97390
24/11/2012	89	SCDC04	DC	A	11:20	11:45	45	58.29277	0.97383
24/11/2012	89	SCDC04	DC	A	11:20	11:45	46	58.29274	0.97382
24/11/2012	89	SCDC04	DC	A	11:20	11:45	47	58.29269	0.97380
24/11/2012	89	SCDC04	DC	A	11:20	11:45	48	58.29255	0.97374
24/11/2012	90	SCDC10	DC	A	12:33	12:49	2	58.29568	0.96385
24/11/2012	90	SCDC10	DC	A	12:33	12:49	3	58.29565	0.96381
24/11/2012	90	SCDC10	DC	A	12:33	12:49	4	58.29565	0.96381
24/11/2012	90	SCDC10	DC	A	12:33	12:49	5	58.29553	0.96378
24/11/2012	90	SCDC10	DC	A	12:33	12:49	6	58.29541	0.96372
24/11/2012	90	SCDC10	DC	A	12:33	12:49	7	58.29536	0.96368
24/11/2012	90	SCDC10	DC	A	12:33	12:49	8	58.29518	0.96361
24/11/2012	90	SCDC10	DC	A	12:33	12:49	9	58.29511	0.96357
24/11/2012	90	SCDC10	DC	A	12:33	12:49	10	58.29503	0.96351
24/11/2012	90	SCDC10	DC	A	12:33	12:49	11	58.29492	0.96343
24/11/2012	90	SCDC10	DC	A	12:33	12:49	12	58.29488	0.96340
24/11/2012	90	SCDC10	DC	A	12:33	12:49	13	58.29483	0.96338
24/11/2012	90	SCDC10	DC	A	12:33	12:49	14	58.29479	0.96336
24/11/2012	90	SCDC10	DC	A	12:33	12:49	15	58.29475	0.96333
24/11/2012	90	SCDC10	DC	A	12:33	12:49	16	58.29462	0.96329
24/11/2012	90	SCDC10	DC	A	12:33	12:49	17	58.29454	0.96326
24/11/2012	91	SCDC5	DC	A	13:12	13:33	3	58.29067	0.97377
24/11/2012	91	SCDC5	DC	A	13:12	13:33	4	58.29060	0.97390
24/11/2012	91	SCDC5	DC	A	13:12	13:33	5	58.29058	0.97406
24/11/2012	91	SCDC5	DC	A	13:12	13:33	6	58.29059	0.97424
24/11/2012	91	SCDC5	DC	A	13:12	13:33	7	58.29052	0.97450
24/11/2012	91	SCDC5	DC	A	13:12	13:33	8	58.29053	0.97460
24/11/2012	91	SCDC5	DC	A	13:12	13:33	9	58.29058	0.97470
24/11/2012	91	SCDC5	DC	A	13:12	13:33	10	58.29048	0.97481

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
24/11/2012	91	SCDC5	DC	A	13:12	13:33	11	58.29045	0.97506
24/11/2012	91	SCDC5	DC	A	13:12	13:33	12	58.29040	0.97523
24/11/2012	91	SCDC5	DC	A	13:12	13:33	13	58.29040	0.97523
24/11/2012	91	SCDC5	DC	A	13:12	13:33	14	58.29038	0.97529
24/11/2012	91	SCDC5	DC	A	13:12	13:33	15	58.29039	0.97544
24/11/2012	91	SCDC5	DC	A	13:12	13:33	16	58.29039	0.97544
24/11/2012	91	SCDC5	DC	A	13:12	13:33	17	58.29034	0.97559
24/11/2012	91	SCDC5	DC	A	13:12	13:33	18	58.29033	0.97575
24/11/2012	91	SCDC5	DC	A	13:12	13:33	19	58.29033	0.97584
24/11/2012	91	SCDC5	DC	A	13:12	13:33	20	58.29029	0.97590
24/11/2012	91	SCDC5	DC	A	13:12	13:33	21	58.29029	0.97590
24/11/2012	91	SCDC5	DC	A	13:12	13:33	22	58.29028	0.97599
24/11/2012	91	SCDC5	DC	A	13:12	13:33	23	58.29020	0.97651
24/11/2012	91	SCDC5	DC	A	13:12	13:33	24	58.29020	0.97651
24/11/2012	91	SCDC5	DC	A	13:12	13:33	25	58.29020	0.97651
24/11/2012	91	SCDC5	DC	A	13:12	13:33	26	58.29020	0.97651
24/11/2012	91	SCDC5	DC	A	13:12	13:33	27	58.29014	0.97681
24/11/2012	91	SCDC5	DC	A	13:12	13:33	28	58.29014	0.97681
24/11/2012	91	SCDC5	DC	A	13:12	13:33	30	58.29012	0.97698
24/11/2012	92	SCDC6	DC	A	13:54	14:21	2	58.28366	0.97364
24/11/2012	92	SCDC6	DC	A	13:54	14:21	3	58.28355	0.97373
24/11/2012	92	SCDC6	DC	A	13:54	14:21	4	58.28350	0.97380
24/11/2012	92	SCDC6	DC	A	13:54	14:21	5	58.28348	0.97384
24/11/2012	92	SCDC6	DC	A	13:54	14:21	6	58.28340	0.97390
24/11/2012	92	SCDC6	DC	A	13:54	14:21	7	58.28333	0.97396
24/11/2012	92	SCDC6	DC	A	13:54	14:21	8	58.28329	0.97402
24/11/2012	92	SCDC6	DC	A	13:54	14:21	9	58.28320	0.97410
24/11/2012	92	SCDC6	DC	A	13:54	14:21	10	58.28313	0.97419
24/11/2012	92	SCDC6	DC	A	13:54	14:21	11	58.28307	0.97424
24/11/2012	92	SCDC6	DC	A	13:54	14:21	12	58.28294	0.97435
24/11/2012	92	SCDC6	DC	A	13:54	14:21	13	58.28288	0.97443
24/11/2012	92	SCDC6	DC	A	13:54	14:21	14	58.28280	0.97452
24/11/2012	92	SCDC6	DC	A	13:54	14:21	15	58.28270	0.97458
24/11/2012	92	SCDC6	DC	A	13:54	14:21	16	58.28268	0.97460
24/11/2012	92	SCDC6	DC	A	13:54	14:21	17	58.28265	0.97463
24/11/2012	92	SCDC6	DC	A	13:54	14:21	18	58.28252	0.97475
24/11/2012	92	SCDC6	DC	A	13:54	14:21	19	58.28246	0.97485
24/11/2012	92	SCDC6	DC	A	13:54	14:21	20	58.28238	0.97491
24/11/2012	92	SCDC6	DC	A	13:54	14:21	21	58.28226	0.97503
24/11/2012	92	SCDC6	DC	A	13:54	14:21	22	58.28223	0.97506
24/11/2012	92	SCDC6	DC	A	13:54	14:21	23	58.28218	0.97509
24/11/2012	92	SCDC6	DC	A	13:54	14:21	24	58.28214	0.97513
24/11/2012	92	SCDC6	DC	A	13:54	14:21	25	58.28207	0.97520
24/11/2012	92	SCDC6	DC	A	13:54	14:21	26	58.28200	0.97529
24/11/2012	92	SCDC6	DC	A	13:54	14:21	27	58.28191	0.97532
24/11/2012	92	SCDC6	DC	A	13:54	14:21	28	58.28188	0.97535
24/11/2012	92	SCDC6	DC	A	13:54	14:21	29	58.28185	0.97539
24/11/2012	93	SCDC1	DC	A	14:42	15:13	2	58.28301	0.97078
24/11/2012	93	SCDC1	DC	A	14:42	15:13	3	58.28295	0.97073
24/11/2012	93	SCDC1	DC	A	14:42	15:13	4	58.28283	0.97071
24/11/2012	93	SCDC1	DC	A	14:42	15:13	5	58.28273	0.97067
24/11/2012	93	SCDC1	DC	A	14:42	15:13	6	58.28268	0.97065
24/11/2012	93	SCDC1	DC	A	14:42	15:13	7	58.28267	0.97065
24/11/2012	93	SCDC1	DC	A	14:42	15:13	8	58.28258	0.97059
24/11/2012	93	SCDC1	DC	A	14:42	15:13	9	58.28245	0.97049
24/11/2012	93	SCDC1	DC	A	14:42	15:13	10	58.28242	0.97052
24/11/2012	93	SCDC1	DC	A	14:42	15:13	11	58.28238	0.97049
24/11/2012	93	SCDC1	DC	A	14:42	15:13	12	58.28228	0.97045
24/11/2012	93	SCDC1	DC	A	14:42	15:13	13	58.28220	0.97041
24/11/2012	93	SCDC1	DC	A	14:42	15:13	14	58.28210	0.97039
24/11/2012	93	SCDC1	DC	A	14:42	15:13	15	58.28201	0.97031
24/11/2012	93	SCDC1	DC	A	14:42	15:13	16	58.28178	0.97022
24/11/2012	93	SCDC1	DC	A	14:42	15:13	17	58.28169	0.97021
24/11/2012	93	SCDC1	DC	A	14:42	15:13	18	58.28165	0.97018
24/11/2012	93	SCDC1	DC	A	14:42	15:13	19	58.28157	0.97016

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
24/11/2012	93	SCDC1	DC	A	14:42	15:13	20	58.28153	0.97016
24/11/2012	93	SCDC1	DC	A	14:42	15:13	21	58.28148	0.97012
24/11/2012	93	SCDC1	DC	A	14:42	15:13	22	58.28141	0.97006
24/11/2012	93	SCDC1	DC	A	14:42	15:13	23	58.28128	0.97002
24/11/2012	93	SCDC1	DC	A	14:42	15:13	24	58.28120	0.97000
24/11/2012	93	SCDC1	DC	A	14:42	15:13	25	58.28110	0.96995
24/11/2012	93	SCDC1	DC	A	14:42	15:13	26	58.28093	0.96989
24/11/2012	93	SCDC1	DC	A	14:42	15:13	27	58.28088	0.96985
24/11/2012	93	SCDC1	DC	A	14:42	15:13	28	58.28088	0.96985
24/11/2012	93	SCDC1	DC	A	14:42	15:13	29	58.28078	0.96976
24/11/2012	93	SCDC1	DC	A	14:42	15:13	30	58.28070	0.96975
24/11/2012	93	SCDC1	DC	A	14:42	15:13	31	58.28062	0.96972
24/11/2012	93	SCDC1	DC	A	14:42	15:13	32	58.28050	0.96968
24/11/2012	94	SCDC3	DC	A	15:32	15:54	2	58.28208	0.97194
24/11/2012	94	SCDC3	DC	A	15:32	15:54	3	58.28209	0.97189
24/11/2012	94	SCDC3	DC	A	15:32	15:54	4	58.28208	0.97178
24/11/2012	94	SCDC3	DC	A	15:32	15:54	5	58.28208	0.97159
24/11/2012	94	SCDC3	DC	A	15:32	15:54	6	58.28206	0.97145
24/11/2012	94	SCDC3	DC	A	15:32	15:54	7	58.28204	0.97128
24/11/2012	94	SCDC3	DC	A	15:32	15:54	8	58.28202	0.97103
24/11/2012	94	SCDC3	DC	A	15:32	15:54	9	58.28201	0.97087
24/11/2012	94	SCDC3	DC	A	15:32	15:54	10	58.28199	0.97071
24/11/2012	94	SCDC3	DC	A	15:32	15:54	11	58.28199	0.97071
24/11/2012	94	SCDC3	DC	A	15:32	15:54	12	58.28200	0.97056
24/11/2012	94	SCDC3	DC	A	15:32	15:54	13	58.28197	0.97040
24/11/2012	94	SCDC3	DC	A	15:32	15:54	14	58.28198	0.97017
24/11/2012	94	SCDC3	DC	A	15:32	15:54	15	58.28194	0.96989
24/11/2012	94	SCDC3	DC	A	15:32	15:54	16	58.28196	0.96990
24/11/2012	94	SCDC3	DC	A	15:32	15:54	17	58.28194	0.96988
24/11/2012	94	SCDC3	DC	A	15:32	15:54	18	58.28194	0.96988
24/11/2012	94	SCDC3	DC	A	15:32	15:54	19	58.28191	0.96969
24/11/2012	94	SCDC3	DC	A	15:32	15:54	20	58.28190	0.96953
24/11/2012	94	SCDC3	DC	A	15:32	15:54	21	58.28190	0.96934
24/11/2012	94	SCDC3	DC	A	15:32	15:54	22	58.28186	0.96911
24/11/2012	94	SCDC3	DC	A	15:32	15:54	No still	58.28194	0.97001
24/11/2012	95	SCDC2	DC	A	16:00	16:27	23	58.28181	0.96901
24/11/2012	95	SCDC2	DC	A	16:00	16:27	24	58.28184	0.96898
24/11/2012	95	SCDC2	DC	A	16:00	16:27	25	58.28184	0.96897
24/11/2012	95	SCDC2	DC	A	16:00	16:27	26	58.28181	0.96902
24/11/2012	95	SCDC2	DC	A	16:00	16:27	27	58.28175	0.96912
24/11/2012	95	SCDC2	DC	A	16:00	16:27	28	58.28169	0.96935
24/11/2012	95	SCDC2	DC	A	16:00	16:27	29	58.28165	0.96948
24/11/2012	95	SCDC2	DC	A	16:00	16:27	30	58.28159	0.96969
24/11/2012	95	SCDC2	DC	A	16:00	16:27	31	58.28154	0.96985
24/11/2012	95	SCDC2	DC	A	16:00	16:27	32	58.28149	0.97003
24/11/2012	95	SCDC2	DC	A	16:00	16:27	33	58.28145	0.97015
24/11/2012	95	SCDC2	DC	A	16:00	16:27	34	58.28139	0.97038
24/11/2012	95	SCDC2	DC	A	16:00	16:27	35	58.28126	0.97079
24/11/2012	95	SCDC2	DC	A	16:00	16:27	36	58.28125	0.97079
24/11/2012	95	SCDC2	DC	A	16:00	16:27	37	58.28120	0.97091
24/11/2012	95	SCDC2	DC	A	16:00	16:27	38	58.28114	0.97112
24/11/2012	95	SCDC2	DC	A	16:00	16:27	39	58.28109	0.97126
24/11/2012	95	SCDC2	DC	A	16:00	16:27	40	58.28106	0.97139
24/11/2012	95	SCDC2	DC	A	16:00	16:27	41	58.28103	0.97149
24/11/2012	95	SCDC2	DC	A	16:00	16:27	No still	58.28134	0.97051
24/11/2012	96	SCDC11	DC	A	16:59	17:11	2	58.28123	0.97169
24/11/2012	96	SCDC11	DC	A	16:59	17:11	3	58.28141	0.97134
24/11/2012	96	SCDC11	DC	A	16:59	17:11	4	58.28141	0.97134
24/11/2012	96	SCDC11	DC	A	16:59	17:11	5	58.28141	0.97134
24/11/2012	96	SCDC11	DC	A	16:59	17:11	6	58.28145	0.97122
24/11/2012	96	SCDC11	DC	A	16:59	17:11	7	58.28148	0.97113
24/11/2012	96	SCDC11	DC	A	16:59	17:11	8	58.28151	0.97107
24/11/2012	96	SCDC11	DC	A	16:59	17:11	9	58.28153	0.97101
24/11/2012	96	SCDC11	DC	A	16:59	17:11	10	58.28158	0.97092
24/11/2012	96	SCDC11	DC	A	16:59	17:11	11	58.28158	0.97092

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
24/11/2012	96	SCDC11	DC	A	16:59	17:11	12	58.28158	0.97092
24/11/2012	96	SCDC11	DC	A	16:59	17:11	13	58.28164	0.97079
24/11/2012	96	SCDC11	DC	A	16:59	17:11	14	58.28176	0.97052
24/11/2012	96	SCDC11	DC	A	16:59	17:11	15	58.28185	0.97033
24/11/2012	96	SCDC11	DC	A	16:59	17:11	16	58.28198	0.96998
24/11/2012	96	SCDC11	DC	A	16:59	17:11	17	58.28201	0.96990
24/11/2012	99	SCDC12	DC	A	23:50	00:05	3	58.30946	0.95756
24/11/2012	99	SCDC12	DC	A	23:50	00:05	4	58.30942	0.95760
24/11/2012	99	SCDC12	DC	A	23:50	00:05	5	58.30942	0.95760
24/11/2012	99	SCDC12	DC	A	23:50	00:05	6	58.30939	0.95767
24/11/2012	99	SCDC12	DC	A	23:50	00:05	7	58.30936	0.95773
24/11/2012	99	SCDC12	DC	A	23:50	00:05	8	58.30933	0.95779
24/11/2012	99	SCDC12	DC	A	23:50	00:05	9	58.30932	0.95785
24/11/2012	99	SCDC12	DC	A	23:50	00:05	10	58.30926	0.95800
24/11/2012	99	SCDC12	DC	A	23:50	00:05	11	58.30923	0.95807
24/11/2012	99	SCDC12	DC	A	23:50	00:05	12	58.30919	0.95814
24/11/2012	99	SCDC12	DC	A	23:50	00:05	13	58.30912	0.95827
24/11/2012	99	SCDC12	DC	A	23:50	00:05	14	58.30912	0.95827
24/11/2012	99	SCDC12	DC	A	23:50	00:05	15	58.30906	0.95841
24/11/2012	99	SCDC12	DC	A	23:50	00:05	16	58.30906	0.95841
24/11/2012	99	SCDC12	DC	A	23:50	00:05	17	58.30903	0.95843
24/11/2012	99	SCDC12	DC	A	23:50	00:05	18	58.30898	0.95856
24/11/2012	99	SCDC12	DC	A	23:50	00:05	19	58.30891	0.95867
24/11/2012	99	SCDC12	DC	A	23:50	00:05	20	58.30886	0.95880
24/11/2012	99	SCDC12	DC	A	23:50	00:05	21	58.30880	0.95891
24/11/2012	99	SCDC12	DC	A	23:50	00:05	22	58.30875	0.95903
24/11/2012	99	SCDC12	DC	A	23:50	00:05	23	58.30873	0.95910
24/11/2012	99	SCDC12	DC	A	23:50	00:05	24	58.30870	0.95914
24/11/2012	99	SCDC12	DC	A	23:50	00:05	25	58.30863	0.95925
25/11/2012	100	SCDC15	DC	A	00:33	00:49	3	58.29391	0.97425
25/11/2012	100	SCDC15	DC	A	00:33	00:49	4	58.29387	0.97437
25/11/2012	100	SCDC15	DC	A	00:33	00:49	5	58.29386	0.97455
25/11/2012	100	SCDC15	DC	A	00:33	00:49	6	58.29384	0.97462
25/11/2012	100	SCDC15	DC	A	00:33	00:49	7	58.29382	0.97470
25/11/2012	100	SCDC15	DC	A	00:33	00:49	8	58.29380	0.97478
25/11/2012	100	SCDC15	DC	A	00:33	00:49	9	58.29375	0.97491
25/11/2012	100	SCDC15	DC	A	00:33	00:49	10	58.29375	0.97499
25/11/2012	100	SCDC15	DC	A	00:33	00:49	11	58.29370	0.97512
25/11/2012	100	SCDC15	DC	A	00:33	00:49	12	58.29368	0.97518
25/11/2012	100	SCDC15	DC	A	00:33	00:49	13	58.29365	0.97536
25/11/2012	100	SCDC15	DC	A	00:33	00:49	14	58.29363	0.97543
25/11/2012	100	SCDC15	DC	A	00:33	00:49	15	58.29363	0.97543
25/11/2012	100	SCDC15	DC	A	00:33	00:49	16	58.29361	0.97559
25/11/2012	100	SCDC15	DC	A	00:33	00:49	17	58.29356	0.97581
25/11/2012	100	SCDC15	DC	A	00:33	00:49	18	58.29353	0.97586
25/11/2012	100	SCDC15	DC	A	00:33	00:49	19	58.29350	0.97598
25/11/2012	100	SCDC15	DC	A	00:33	00:49	20	58.29345	0.97611
25/11/2012	100	SCDC15	DC	A	00:33	00:49	21	58.29341	0.97625
25/11/2012	100	SCDC15	DC	A	00:33	00:49	22	58.29339	0.97630
25/11/2012	100	SCDC15	DC	A	00:33	00:49	23	58.29339	0.97630
25/11/2012	100	SCDC15	DC	A	00:33	00:49	24	58.29334	0.97646
25/11/2012	101	SCDC13	DC	A	01:11	01:25	2	58.29090	0.97554
25/11/2012	101	SCDC13	DC	A	01:11	01:25	3	58.29087	0.97549
25/11/2012	101	SCDC13	DC	A	01:11	01:25	4	58.29076	0.97541
25/11/2012	101	SCDC13	DC	A	01:11	01:25	5	58.29070	0.97532
25/11/2012	101	SCDC13	DC	A	01:11	01:25	6	58.29058	0.97524
25/11/2012	101	SCDC13	DC	A	01:11	01:25	7	58.29051	0.97518
25/11/2012	101	SCDC13	DC	A	01:11	01:25	8	58.29048	0.97512
25/11/2012	101	SCDC13	DC	A	01:11	01:25	9	58.29034	0.97500
25/11/2012	101	SCDC13	DC	A	01:11	01:25	10	58.29031	0.97497
25/11/2012	101	SCDC13	DC	A	01:11	01:25	11	58.29025	0.97496
25/11/2012	101	SCDC13	DC	A	01:11	01:25	12	58.29020	0.97489
25/11/2012	101	SCDC13	DC	A	01:11	01:25	13	58.29014	0.97475
25/11/2012	101	SCDC13	DC	A	01:11	01:25	14	58.29006	0.97471
25/11/2012	101	SCDC13	DC	A	01:11	01:25	15	58.29006	0.97471

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
25/11/2012	101	SCDC13	DC	A	01:11	01:25	16	58.28995	0.97462
25/11/2012	101	SCDC13	DC	A	01:11	01:25	17	58.28987	0.97455
25/11/2012	102	SCDC14	DC	A	01:48	02:01	2	58.28302	0.97534
25/11/2012	102	SCDC14	DC	A	01:48	02:01	3	58.28302	0.97534
25/11/2012	102	SCDC14	DC	A	01:48	02:01	4	58.28298	0.97523
25/11/2012	102	SCDC14	DC	A	01:48	02:01	5	58.28294	0.97512
25/11/2012	102	SCDC14	DC	A	01:48	02:01	6	58.28289	0.97498
25/11/2012	102	SCDC14	DC	A	01:48	02:01	7	58.28287	0.97481
25/11/2012	102	SCDC14	DC	A	01:48	02:01	8	58.28278	0.97465
25/11/2012	102	SCDC14	DC	A	01:48	02:01	9	58.28273	0.97450
25/11/2012	102	SCDC14	DC	A	01:48	02:01	10	58.28271	0.97443
25/11/2012	102	SCDC14	DC	A	01:48	02:01	11	58.28266	0.97425
25/11/2012	102	SCDC14	DC	A	01:48	02:01	12	58.28260	0.97413
25/11/2012	102	SCDC14	DC	A	01:48	02:01	13	58.28255	0.97390
25/11/2012	102	SCDC14	DC	A	01:48	02:01	14	58.28250	0.97377
25/11/2012	102	SCDC14	DC	A	01:48	02:01	15	58.28246	0.97366
25/11/2012	103	SCDC9	DC	A	02:20	02:52	2	58.27850	0.97324
25/11/2012	103	SCDC9	DC	A	02:20	02:52	3	58.27847	0.97322
25/11/2012	103	SCDC9	DC	A	02:20	02:52	4	58.27843	0.97322
25/11/2012	103	SCDC9	DC	A	02:20	02:52	5	58.27833	0.97325
25/11/2012	103	SCDC9	DC	A	02:20	02:52	6	58.27827	0.97320
25/11/2012	103	SCDC9	DC	A	02:20	02:52	7	58.27822	0.97321
25/11/2012	103	SCDC9	DC	A	02:20	02:52	8	58.27822	0.97321
25/11/2012	103	SCDC9	DC	A	02:20	02:52	9	58.27817	0.97318
25/11/2012	103	SCDC9	DC	A	02:20	02:52	10	58.27813	0.97316
25/11/2012	103	SCDC9	DC	A	02:20	02:52	11	58.27805	0.97313
25/11/2012	103	SCDC9	DC	A	02:20	02:52	12	58.27800	0.97308
25/11/2012	103	SCDC9	DC	A	02:20	02:52	13	58.27797	0.97306
25/11/2012	103	SCDC9	DC	A	02:20	02:52	14	58.27787	0.97302
25/11/2012	103	SCDC9	DC	A	02:20	02:52	15	58.27781	0.97299
25/11/2012	103	SCDC9	DC	A	02:20	02:52	16	58.27779	0.97303
25/11/2012	103	SCDC9	DC	A	02:20	02:52	17	58.27773	0.97304
25/11/2012	103	SCDC9	DC	A	02:20	02:52	18	58.27763	0.97295
25/11/2012	103	SCDC9	DC	A	02:20	02:52	19	58.27763	0.97295
25/11/2012	103	SCDC9	DC	A	02:20	02:52	20	58.27753	0.97293
25/11/2012	103	SCDC9	DC	A	02:20	02:52	21	58.27746	0.97289
25/11/2012	103	SCDC9	DC	A	02:20	02:52	22	58.27746	0.97289
25/11/2012	103	SCDC9	DC	A	02:20	02:52	23	58.27742	0.97288
25/11/2012	103	SCDC9	DC	A	02:20	02:52	24	58.27732	0.97284
25/11/2012	103	SCDC9	DC	A	02:20	02:52	25	58.27730	0.97284
25/11/2012	103	SCDC9	DC	A	02:20	02:52	26	58.27723	0.97280
25/11/2012	103	SCDC9	DC	A	02:20	02:52	27	58.27723	0.97280
25/11/2012	103	SCDC9	DC	A	02:20	02:52	28	58.27717	0.97278
25/11/2012	103	SCDC9	DC	A	02:20	02:52	29	58.27712	0.97277
25/11/2012	103	SCDC9	DC	A	02:20	02:52	30	58.27705	0.97273
25/11/2012	103	SCDC9	DC	A	02:20	02:52	31	58.27701	0.97272
25/11/2012	103	SCDC9	DC	A	02:20	02:52	32	58.27701	0.97285
25/11/2012	103	SCDC9	DC	A	02:20	02:52	33	58.27700	0.97304
25/11/2012	103	SCDC9	DC	A	02:20	02:52	34	58.27702	0.97319
25/11/2012	103	SCDC9	DC	A	02:20	02:52	35	58.27703	0.97336
25/11/2012	103	SCDC9	DC	A	02:20	02:52	36	58.27702	0.97347
25/11/2012	103	SCDC9	DC	A	02:20	02:52	37	58.27694	0.97342
25/11/2012	103	SCDC9	DC	A	02:20	02:52	38	58.27683	0.97338
25/11/2012	103	SCDC9	DC	A	02:20	02:52	39	58.27672	0.97337
25/11/2012	103	SCDC9	DC	A	02:20	02:52	40	58.27667	0.97332
25/11/2012	103	SCDC9	DC	A	02:20	02:52	41	58.27658	0.97335
25/11/2012	103	SCDC9	DC	A	02:20	02:52	42	58.27658	0.97335
25/11/2012	103	SCDC9	DC	A	02:20	02:52	43	58.27645	0.97338
25/11/2012	103	SCDC9	DC	A	02:20	02:52	44	58.27633	0.97338
25/11/2012	104	SCDC8	DC	A	03:20	03:47	2	58.27472	0.97113
25/11/2012	104	SCDC8	DC	A	03:20	03:47	3	58.27466	0.97104
25/11/2012	104	SCDC8	DC	A	03:20	03:47	4	58.27461	0.97093
25/11/2012	104	SCDC8	DC	A	03:20	03:47	5	58.27452	0.97086
25/11/2012	104	SCDC8	DC	A	03:20	03:47	6	58.27443	0.97076
25/11/2012	104	SCDC8	DC	A	03:20	03:47	7	58.27439	0.97067

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
25/11/2012	104	SCDC8	DC	A	03:20	03:47	8	58.27434	0.97063
25/11/2012	104	SCDC8	DC	A	03:20	03:47	9	58.27425	0.97052
25/11/2012	104	SCDC8	DC	A	03:20	03:47	10	58.27415	0.97045
25/11/2012	104	SCDC8	DC	A	03:20	03:47	11	58.27409	0.97043
25/11/2012	104	SCDC8	DC	A	03:20	03:47	12	58.27409	0.97043
25/11/2012	104	SCDC8	DC	A	03:20	03:47	13	58.27406	0.97031
25/11/2012	104	SCDC8	DC	A	03:20	03:47	14	58.27406	0.97026
25/11/2012	104	SCDC8	DC	A	03:20	03:47	15	58.27392	0.97021
25/11/2012	104	SCDC8	DC	A	03:20	03:47	16	58.27389	0.97018
25/11/2012	104	SCDC8	DC	A	03:20	03:47	17	58.27388	0.97012
25/11/2012	104	SCDC8	DC	A	03:20	03:47	18	58.27383	0.96999
25/11/2012	104	SCDC8	DC	A	03:20	03:47	19	58.27374	0.96999
25/11/2012	104	SCDC8	DC	A	03:20	03:47	20	58.27364	0.96987
25/11/2012	104	SCDC8	DC	A	03:20	03:47	21	58.27359	0.96975
25/11/2012	104	SCDC8	DC	A	03:20	03:47	22	58.27353	0.96975
25/11/2012	104	SCDC8	DC	A	03:20	03:47	23	58.27345	0.96962
25/11/2012	104	SCDC8	DC	A	03:20	03:47	24	58.27338	0.96958
25/11/2012	104	SCDC8	DC	A	03:20	03:47	25	58.27328	0.96948
25/11/2012	104	SCDC8	DC	A	03:20	03:47	26	58.27325	0.96943
25/11/2012	104	SCDC8	DC	A	03:20	03:47	27	58.27317	0.96929
25/11/2012	104	SCDC8	DC	A	03:20	03:47	28	58.27308	0.96923
25/11/2012	104	SCDC8	DC	A	03:20	03:47	29	58.27302	0.96912
25/11/2012	104	SCDC8	DC	A	03:20	03:47	30	58.27295	0.96911
25/11/2012	104	SCDC8	DC	A	03:20	03:47	31	58.27293	0.96907
25/11/2012	104	SCDC8	DC	A	03:20	03:47	32	58.27288	0.96904
25/11/2012	104	SCDC8	DC	A	03:20	03:47	33	58.27286	0.96899
25/11/2012	104	SCDC8	DC	A	03:20	03:47	34	58.27279	0.96890
25/11/2012	104	SCDC8	DC	A	03:20	03:47	35	58.27279	0.96890
25/11/2012	105	SCDC7	DC	A	04:12	04:38	2	58.27607	0.96655
25/11/2012	105	SCDC7	DC	A	04:12	04:38	3	58.27612	0.96664
25/11/2012	105	SCDC7	DC	A	04:12	04:38	4	58.27617	0.96664
25/11/2012	105	SCDC7	DC	A	04:12	04:38	5	58.27617	0.96664
25/11/2012	105	SCDC7	DC	A	04:12	04:38	6	58.27633	0.96676
25/11/2012	105	SCDC7	DC	A	04:12	04:38	7	58.27642	0.96679
25/11/2012	105	SCDC7	DC	A	04:12	04:38	8	58.27644	0.96684
25/11/2012	105	SCDC7	DC	A	04:12	04:38	9	58.27644	0.96684
25/11/2012	105	SCDC7	DC	A	04:12	04:38	10	58.27648	0.96687
25/11/2012	105	SCDC7	DC	A	04:12	04:38	11	58.27662	0.96692
25/11/2012	105	SCDC7	DC	A	04:12	04:38	12	58.27667	0.96700
25/11/2012	105	SCDC7	DC	A	04:12	04:38	13	58.27676	0.96705
25/11/2012	105	SCDC7	DC	A	04:12	04:38	14	58.27684	0.96708
25/11/2012	105	SCDC7	DC	A	04:12	04:38	15	58.27688	0.96713
25/11/2012	105	SCDC7	DC	A	04:12	04:38	16	58.27696	0.96718
25/11/2012	105	SCDC7	DC	A	04:12	04:38	17	58.27700	0.96720
25/11/2012	105	SCDC7	DC	A	04:12	04:38	18	58.27705	0.96723
25/11/2012	105	SCDC7	DC	A	04:12	04:38	19	58.27716	0.96728
25/11/2012	105	SCDC7	DC	A	04:12	04:38	20	58.27716	0.96728
25/11/2012	105	SCDC7	DC	A	04:12	04:38	21	58.27728	0.96738
25/11/2012	105	SCDC7	DC	A	04:12	04:38	22	58.27728	0.96738
25/11/2012	105	SCDC7	DC	A	04:12	04:38	23	58.27742	0.96746
25/11/2012	105	SCDC7	DC	A	04:12	04:38	24	58.27750	0.96753
25/11/2012	105	SCDC7	DC	A	04:12	04:38	25	58.27766	0.96768
25/11/2012	105	SCDC7	DC	A	04:12	04:38	26	58.27774	0.96772
25/11/2012	105	SCDC7	DC	A	04:12	04:38	27	58.27788	0.96777
25/11/2012	105	SCDC7	DC	A	04:12	04:38	28	58.27803	0.96790
25/11/2012	106	SCCS2	DC	A	05:02	05:19	2	58.28476	0.96815
25/11/2012	106	SCCS2	DC	A	05:02	05:19	3	58.28471	0.96830
25/11/2012	106	SCCS2	DC	A	05:02	05:19	4	58.28469	0.96837
25/11/2012	106	SCCS2	DC	A	05:02	05:19	5	58.28470	0.96854
25/11/2012	106	SCCS2	DC	A	05:02	05:19	6	58.28470	0.96880
25/11/2012	106	SCCS2	DC	A	05:02	05:19	7	58.28468	0.96889
25/11/2012	106	SCCS2	DC	A	05:02	05:19	8	58.28467	0.96898
25/11/2012	106	SCCS2	DC	A	05:02	05:19	9	58.28468	0.96916
25/11/2012	106	SCCS2	DC	A	05:02	05:19	10	58.28466	0.96927
25/11/2012	106	SCCS2	DC	A	05:02	05:19	11	58.28467	0.96941

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
25/11/2012	106	SCCS2	DC	A	05:02	05:19	12	58.28461	0.96965
25/11/2012	106	SCCS2	DC	A	05:02	05:19	13	58.28460	0.96977
25/11/2012	106	SCCS2	DC	A	05:02	05:19	14	58.28453	0.97009
25/11/2012	106	SCCS2	DC	A	05:02	05:19	15	58.28453	0.97009
25/11/2012	106	SCCS2	DC	A	05:02	05:19	16	58.28453	0.97020
25/11/2012	106	SCCS2	DC	A	05:02	05:19	17	58.28452	0.97047
25/11/2012	106	SCCS2	DC	A	05:02	05:19	18	58.28452	0.97066
25/11/2012	106	SCCS2	DC	A	05:02	05:19	19	58.28450	0.97082
25/11/2012	106	SCCS2	DC	A	05:02	05:19	No Still	58.28450	0.97082

### 9.7.3 Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
26/11/2012	120	TRBT19	DC	A	11:28	11:40	2	57.40143	-1.00495
26/11/2012	120	TRBT19	DC	A	11:28	11:40	3	57.40143	-1.00495
26/11/2012	120	TRBT19	DC	A	11:28	11:40	4	57.40143	-1.00495
26/11/2012	120	TRBT19	DC	A	11:28	11:40	5	57.40147	-1.00483
26/11/2012	120	TRBT19	DC	A	11:28	11:40	6	57.40148	-1.00479
26/11/2012	120	TRBT19	DC	A	11:28	11:40	7	57.40149	-1.00475
26/11/2012	120	TRBT19	DC	A	11:28	11:40	8	57.40149	-1.00475
26/11/2012	120	TRBT19	DC	A	11:28	11:40	9	57.40151	-1.00465
26/11/2012	120	TRBT19	DC	A	11:28	11:40	10	57.40151	-1.00465
26/11/2012	120	TRBT19	DC	A	11:28	11:40	11	57.40156	-1.00444
26/11/2012	120	TRBT19	DC	A	11:28	11:40	12	57.40157	-1.00443
26/11/2012	120	TRBT19	DC	A	11:28	11:40	13	57.40157	-1.00437
26/11/2012	120	TRBT19	DC	A	11:28	11:40	14	57.40161	-1.00425
26/11/2012	120	TRBT19	DC	A	11:28	11:40	15	57.40165	-1.00416
26/11/2012	120	TRBT19	DC	A	11:28	11:40	16	57.40165	-1.00416
26/11/2012	120	TRBT19	DC	A	11:28	11:40	17	57.40168	-1.00408
26/11/2012	120	TRBT19	DC	A	11:28	11:40	18	57.40169	-1.00403
26/11/2012	120	TRBT19	DC	A	11:28	11:40	19	57.40169	-1.00397
26/11/2012	120	TRBT19	DC	A	11:28	11:40	20	57.40170	-1.00394
26/11/2012	120	TRBT19	DC	A	11:28	11:40	21	57.40170	-1.00397
26/11/2012	120	TRBT19	DC	A	11:28	11:40	22	57.40174	-1.00387
26/11/2012	120	TRBT19	DC	A	11:28	11:40	23	57.40175	-1.00388
26/11/2012	120	TRBT19	DC	A	11:28	11:40	24	57.40178	-1.00386
26/11/2012	120	TRBT19	DC	A	11:28	11:40	25	57.40178	-1.00381
26/11/2012	120	TRBT19	DC	A	11:28	11:40	26	57.40179	-1.00378
26/11/2012	120	TRBT19	DC	A	11:28	11:40	27	57.40181	-1.00378
26/11/2012	120	TRBT19	DC	A	11:28	11:40	28	57.40182	-1.00379
26/11/2012	120	TRBT19	DC	A	11:28	11:40	29	57.40186	-1.00379
26/11/2012	120	TRBT19	DC	A	11:28	11:40	30	57.40187	-1.00378
26/11/2012	120	TRBT19	DC	A	11:28	11:40	31	57.40194	-1.00374
27/11/2012	151	TRBT23	DC	A	03:53	04:12	2	57.34014	-0.94584
27/11/2012	151	TRBT23	DC	A	03:53	04:12	3	57.34013	-0.94584
27/11/2012	151	TRBT23	DC	A	03:53	04:12	4	57.34018	-0.94580
27/11/2012	151	TRBT23	DC	A	03:53	04:12	5	57.34018	-0.94580
27/11/2012	151	TRBT23	DC	A	03:53	04:12	6	57.34028	-0.94573
27/11/2012	151	TRBT23	DC	A	03:53	04:12	7	57.34029	-0.94570
27/11/2012	151	TRBT23	DC	A	03:53	04:12	8	57.34032	-0.94566
27/11/2012	151	TRBT23	DC	A	03:53	04:12	9	57.34035	-0.94565
27/11/2012	151	TRBT23	DC	A	03:53	04:12	10	57.34037	-0.94562
27/11/2012	151	TRBT23	DC	A	03:53	04:12	11	57.34043	-0.94560
27/11/2012	151	TRBT23	DC	A	03:53	04:12	12	57.34049	-0.94556
27/11/2012	151	TRBT23	DC	A	03:53	04:12	13	57.34053	-0.94554
27/11/2012	151	TRBT23	DC	A	03:53	04:12	14	57.34060	-0.94546
27/11/2012	151	TRBT23	DC	A	03:53	04:12	15	57.34060	-0.94546
27/11/2012	151	TRBT23	DC	A	03:53	04:12	16	57.34061	-0.94545
27/11/2012	151	TRBT23	DC	A	03:53	04:12	17	57.34072	-0.94537
27/11/2012	151	TRBT23	DC	A	03:53	04:12	18	57.34076	-0.94533
27/11/2012	151	TRBT23	DC	A	03:53	04:12	19	57.34076	-0.94533
27/11/2012	151	TRBT23	DC	A	03:53	04:12	20	57.34084	-0.94528
27/11/2012	151	TRBT23	DC	A	03:53	04:12	21	57.34097	-0.94515
27/11/2012	151	TRBT23	DC	A	03:53	04:12	22	57.34103	-0.94510
27/11/2012	151	TRBT23	DC	A	03:53	04:12	23	57.34111	-0.94505

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank  
NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	151	TRBT23	DC	A	03:53	04:12	24	57.34115	-0.94505
27/11/2012	151	TRBT23	DC	A	03:53	04:12	25	57.34118	-0.94500
27/11/2012	151	TRBT23	DC	A	03:53	04:12	26	57.34119	-0.94499
27/11/2012	151	TRBT23	DC	A	03:53	04:12	27	57.34127	-0.94490
27/11/2012	151	TRBT23	DC	A	03:53	04:12	28	57.34127	-0.94490
27/11/2012	151	TRBT23	DC	A	03:53	04:12	29	57.34128	-0.94489
27/11/2012	151	TRBT23	DC	A	03:53	04:12	30	57.34134	-0.94484
27/11/2012	151	TRBT23	DC	A	03:53	04:12	31	57.34136	-0.94484
27/11/2012	151	TRBT23	DC	A	03:53	04:12	32	57.34136	-0.94484
27/11/2012	151	TRBT23	DC	A	03:53	04:12	33	57.34140	-0.94482
27/11/2012	151	TRBT23	DC	A	03:53	04:12	34	57.34146	-0.94478
27/11/2012	151	TRBT23	DC	A	03:53	04:12	35	57.34153	-0.94467
27/11/2012	151	TRBT23	DC	A	03:53	04:12	36	57.34161	-0.94462
27/11/2012	151	TRBT23	DC	A	03:53	04:12	37	57.34170	-0.94458
27/11/2012	151	TRBT23	DC	A	03:53	04:12	38	57.34174	-0.94455
27/11/2012	152	TRBT28	DC	A	04:42	05:06	2	57.37519	-0.93558
27/11/2012	152	TRBT28	DC	A	04:42	05:06	3	57.37519	-0.93558
27/11/2012	152	TRBT28	DC	A	04:42	05:06	4	57.37522	-0.93562
27/11/2012	152	TRBT28	DC	A	04:42	05:06	5	57.37524	-0.93562
27/11/2012	152	TRBT28	DC	A	04:42	05:06	6	57.37528	-0.93556
27/11/2012	152	TRBT28	DC	A	04:42	05:06	7	57.37529	-0.93553
27/11/2012	152	TRBT28	DC	A	04:42	05:06	8	57.37534	-0.93543
27/11/2012	152	TRBT28	DC	A	04:42	05:06	9	57.37540	-0.93532
27/11/2012	152	TRBT28	DC	A	04:42	05:06	10	57.37546	-0.93525
27/11/2012	152	TRBT28	DC	A	04:42	05:06	11	57.37550	-0.93518
27/11/2012	152	TRBT28	DC	A	04:42	05:06	12	57.37553	-0.93514
27/11/2012	152	TRBT28	DC	A	04:42	05:06	13	57.37559	-0.93505
27/11/2012	152	TRBT28	DC	A	04:42	05:06	14	57.37559	-0.93505
27/11/2012	152	TRBT28	DC	A	04:42	05:06	15	57.37561	-0.93503
27/11/2012	152	TRBT28	DC	A	04:42	05:06	16	57.37561	-0.93503
27/11/2012	152	TRBT28	DC	A	04:42	05:06	17	57.37564	-0.93501
27/11/2012	152	TRBT28	DC	A	04:42	05:06	18	57.37566	-0.93495
27/11/2012	152	TRBT28	DC	A	04:42	05:06	19	57.37570	-0.93484
27/11/2012	152	TRBT28	DC	A	04:42	05:06	20	57.37572	-0.93481
27/11/2012	152	TRBT28	DC	A	04:42	05:06	21	57.37578	-0.93471
27/11/2012	152	TRBT28	DC	A	04:42	05:06	22	57.37579	-0.93469
27/11/2012	152	TRBT28	DC	A	04:42	05:06	23	57.37583	-0.93465
27/11/2012	152	TRBT28	DC	A	04:42	05:06	24	57.37585	-0.93462
27/11/2012	152	TRBT28	DC	A	04:42	05:06	25	57.37591	-0.93451
27/11/2012	152	TRBT28	DC	A	04:42	05:06	26	57.37596	-0.93441
27/11/2012	152	TRBT28	DC	A	04:42	05:06	27	57.37597	-0.93439
27/11/2012	152	TRBT28	DC	A	04:42	05:06	28	57.37601	-0.93433
27/11/2012	152	TRBT28	DC	A	04:42	05:06	29	57.37604	-0.93428
27/11/2012	152	TRBT28	DC	A	04:42	05:06	30	57.37608	-0.93422
27/11/2012	152	TRBT28	DC	A	04:42	05:06	31	57.37609	-0.93420
27/11/2012	152	TRBT28	DC	A	04:42	05:06	32	57.37615	-0.93409
27/11/2012	152	TRBT28	DC	A	04:42	05:06	33	57.37622	-0.93399
27/11/2012	152	TRBT28	DC	A	04:42	05:06	34	57.37624	-0.93398
27/11/2012	152	TRBT28	DC	A	04:42	05:06	35	57.37629	-0.93387
27/11/2012	152	TRBT28	DC	A	04:42	05:06	36	57.37630	-0.93379
27/11/2012	152	TRBT28	DC	A	04:42	05:06	37	57.37634	-0.93375
27/11/2012	152	TRBT28	DC	A	04:42	05:06	38	57.37637	-0.93370
27/11/2012	152	TRBT28	DC	A	04:42	05:06	39	57.37638	-0.93363
27/11/2012	152	TRBT28	DC	A	04:42	05:06	40	57.37645	-0.93355
27/11/2012	152	TRBT28	DC	A	04:42	05:06	41	57.37648	-0.93353
27/11/2012	152	TRBT28	DC	A	04:42	05:06	42	57.37651	-0.93350
27/11/2012	152	TRBT28	DC	A	04:42	05:06	43	57.37654	-0.93348
27/11/2012	152	TRBT28	DC	A	04:42	05:06	44	57.37659	-0.93342
27/11/2012	152	TRBT28	DC	A	04:42	05:06	45	57.37659	-0.93340
27/11/2012	153	TRBT18	DC	A	05:40	05:59	2	57.35757	-0.97999
27/11/2012	153	TRBT18	DC	A	05:40	05:59	3	57.35759	-0.97997
27/11/2012	153	TRBT18	DC	A	05:40	05:59	4	57.35767	-0.97983
27/11/2012	153	TRBT18	DC	A	05:40	05:59	5	57.35773	-0.97976
27/11/2012	153	TRBT18	DC	A	05:40	05:59	6	57.35775	-0.97975
27/11/2012	153	TRBT18	DC	A	05:40	05:59	7	57.35780	-0.97972

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	153	TRBT18	DC	A	05:40	05:59	8	57.35784	-0.97969
27/11/2012	153	TRBT18	DC	A	05:40	05:59	9	57.35786	-0.97967
27/11/2012	153	TRBT18	DC	A	05:40	05:59	10	57.35788	-0.97965
27/11/2012	153	TRBT18	DC	A	05:40	05:59	11	57.35791	-0.97957
27/11/2012	153	TRBT18	DC	A	05:40	05:59	12	57.35793	-0.97948
27/11/2012	153	TRBT18	DC	A	05:40	05:59	13	57.35797	-0.97944
27/11/2012	153	TRBT18	DC	A	05:40	05:59	14	57.35801	-0.97939
27/11/2012	153	TRBT18	DC	A	05:40	05:59	15	57.35807	-0.97933
27/11/2012	153	TRBT18	DC	A	05:40	05:59	16	57.35810	-0.97932
27/11/2012	153	TRBT18	DC	A	05:40	05:59	17	57.35811	-0.97931
27/11/2012	153	TRBT18	DC	A	05:40	05:59	18	57.35813	-0.97929
27/11/2012	153	TRBT18	DC	A	05:40	05:59	19	57.35817	-0.97922
27/11/2012	153	TRBT18	DC	A	05:40	05:59	20	57.35820	-0.97919
27/11/2012	153	TRBT18	DC	A	05:40	05:59	21	57.35823	-0.97912
27/11/2012	153	TRBT18	DC	A	05:40	05:59	22	57.35829	-0.97904
27/11/2012	153	TRBT18	DC	A	05:40	05:59	23	57.35835	-0.97898
27/11/2012	153	TRBT18	DC	A	05:40	05:59	24	57.35837	-0.97897
27/11/2012	153	TRBT18	DC	A	05:40	05:59	25	57.35843	-0.97890
27/11/2012	153	TRBT18	DC	A	05:40	05:59	26	57.35849	-0.97879
27/11/2012	153	TRBT18	DC	A	05:40	05:59	27	57.35853	-0.97874
27/11/2012	153	TRBT18	DC	A	05:40	05:59	28	57.35857	-0.97866
27/11/2012	153	TRBT18	DC	A	05:40	05:59	29	57.35862	-0.97864
27/11/2012	153	TRBT18	DC	A	05:40	05:59	30	57.35863	-0.97862
27/11/2012	153	TRBT18	DC	A	05:40	05:59	31	57.35871	-0.97851
27/11/2012	153	TRBT18	DC	A	05:40	05:59	32	57.35872	-0.97851
27/11/2012	153	TRBT18	DC	A	05:40	05:59	33	57.35878	-0.97843
27/11/2012	153	TRBT18	DC	A	05:40	05:59	34	57.35879	-0.97841
27/11/2012	153	TRBT18	DC	A	05:40	05:59	35	57.35886	-0.97836
27/11/2012	153	TRBT18	DC	A	05:40	05:59	36	57.35889	-0.97834
27/11/2012	154	TRBT6	DC	A	06:31	06:31	2	57.34588	-1.03559
27/11/2012	154	TRBT6	DC	A	06:31	06:31	3	57.34596	-1.03553
27/11/2012	154	TRBT6	DC	A	06:31	06:31	4	57.34603	-1.03544
27/11/2012	154	TRBT6	DC	A	06:31	06:31	5	57.34610	-1.03538
27/11/2012	154	TRBT6	DC	A	06:31	06:31	6	57.34612	-1.03535
27/11/2012	154	TRBT6	DC	A	06:31	06:31	7	57.34618	-1.03528
27/11/2012	154	TRBT6	DC	A	06:31	06:31	8	57.34625	-1.03518
27/11/2012	154	TRBT6	DC	A	06:31	06:31	9	57.34634	-1.03513
27/11/2012	154	TRBT6	DC	A	06:31	06:31	10	57.34643	-1.03509
27/11/2012	154	TRBT6	DC	A	06:31	06:31	11	57.34650	-1.03507
27/11/2012	154	TRBT6	DC	A	06:31	06:31	12	57.34650	-1.03507
27/11/2012	154	TRBT6	DC	A	06:31	06:31	13	57.34658	-1.03497
27/11/2012	154	TRBT6	DC	A	06:31	06:31	14	57.34663	-1.03487
27/11/2012	154	TRBT6	DC	A	06:31	06:31	15	57.34668	-1.03485
27/11/2012	154	TRBT6	DC	A	06:31	06:31	16	57.34672	-1.03484
27/11/2012	154	TRBT6	DC	A	06:31	06:31	17	57.34676	-1.03481
27/11/2012	154	TRBT6	DC	A	06:31	06:31	18	57.34679	-1.03476
27/11/2012	154	TRBT6	DC	A	06:31	06:31	19	57.34680	-1.03475
27/11/2012	154	TRBT6	DC	A	06:31	06:31	20	57.34686	-1.03471
27/11/2012	154	TRBT6	DC	A	06:31	06:31	21	57.34694	-1.03467
27/11/2012	154	TRBT6	DC	A	06:31	06:31	22	57.34701	-1.03457
27/11/2012	154	TRBT6	DC	A	06:31	06:31	23	57.34708	-1.03444
27/11/2012	154	TRBT6	DC	A	06:31	06:31	24	57.34714	-1.03445
27/11/2012	154	TRBT6	DC	A	06:31	06:31	25	57.34717	-1.03445
27/11/2012	154	TRBT6	DC	A	06:31	06:31	26	57.34721	-1.03440
27/11/2012	154	TRBT6	DC	A	06:31	06:31	27	57.34725	-1.03437
27/11/2012	154	TRBT6	DC	A	06:31	06:31	28	57.34732	-1.03428
27/11/2012	154	TRBT6	DC	A	06:31	06:31	29	57.34739	-1.03420
27/11/2012	155	TRBT3	DC	A	07:12	07:33	3	57.35741	-1.05776
27/11/2012	155	TRBT3	DC	A	07:12	07:33	4	57.35747	-1.05772
27/11/2012	155	TRBT3	DC	A	07:12	07:33	5	57.35748	-1.05771
27/11/2012	155	TRBT3	DC	A	07:12	07:33	6	57.35758	-1.05770
27/11/2012	155	TRBT3	DC	A	07:12	07:33	7	57.35765	-1.05762
27/11/2012	155	TRBT3	DC	A	07:12	07:33	8	57.35773	-1.05759
27/11/2012	155	TRBT3	DC	A	07:12	07:33	9	57.35774	-1.05758
27/11/2012	155	TRBT3	DC	A	07:12	07:33	10	57.35782	-1.05752

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank  
NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	155	TRBT3	DC	A	07:12	07:33	11	57.35785	-1.05750
27/11/2012	155	TRBT3	DC	A	07:12	07:33	12	57.35789	-1.05749
27/11/2012	155	TRBT3	DC	A	07:12	07:33	13	57.35798	-1.05746
27/11/2012	155	TRBT3	DC	A	07:12	07:33	14	57.35799	-1.05745
27/11/2012	155	TRBT3	DC	A	07:12	07:33	15	57.35803	-1.05740
27/11/2012	155	TRBT3	DC	A	07:12	07:33	16	57.35806	-1.05739
27/11/2012	155	TRBT3	DC	A	07:12	07:33	17	57.35807	-1.05740
27/11/2012	155	TRBT3	DC	A	07:12	07:33	18	57.35814	-1.05734
27/11/2012	155	TRBT3	DC	A	07:12	07:33	19	57.35821	-1.05733
27/11/2012	155	TRBT3	DC	A	07:12	07:33	20	57.35823	-1.05727
27/11/2012	155	TRBT3	DC	A	07:12	07:33	21	57.35823	-1.05729
27/11/2012	155	TRBT3	DC	A	07:12	07:33	22	57.35828	-1.05731
27/11/2012	155	TRBT3	DC	A	07:12	07:33	23	57.35831	-1.05729
27/11/2012	155	TRBT3	DC	A	07:12	07:33	24	57.35837	-1.05721
27/11/2012	155	TRBT3	DC	A	07:12	07:33	25	57.35845	-1.05717
27/11/2012	155	TRBT3	DC	A	07:12	07:33	26	57.35850	-1.05713
27/11/2012	155	TRBT3	DC	A	07:12	07:33	27	57.35852	-1.05711
27/11/2012	155	TRBT3	DC	A	07:12	07:33	28	57.35859	-1.05706
27/11/2012	155	TRBT3	DC	A	07:12	07:33	29	57.35865	-1.05699
27/11/2012	155	TRBT3	DC	A	07:12	07:33	30	57.35875	-1.05694
27/11/2012	155	TRBT3	DC	A	07:12	07:33	31	57.35882	-1.05685
27/11/2012	155	TRBT3	DC	A	07:12	07:33	32	57.35882	-1.05683
27/11/2012	155	TRBT3	DC	A	07:12	07:33	33	57.35889	-1.05680
27/11/2012	156	TRBT8	DC	A	08:12	08:28	2	57.38370	-1.04970
27/11/2012	156	TRBT8	DC	A	08:12	08:28	3	57.38370	-1.04970
27/11/2012	156	TRBT8	DC	A	08:12	08:28	4	57.38371	-1.04970
27/11/2012	156	TRBT8	DC	A	08:12	08:28	5	57.38375	-1.04965
27/11/2012	156	TRBT8	DC	A	08:12	08:28	6	57.38382	-1.04955
27/11/2012	156	TRBT8	DC	A	08:12	08:28	7	57.38393	-1.04952
27/11/2012	156	TRBT8	DC	A	08:12	08:28	8	57.38398	-1.04949
27/11/2012	156	TRBT8	DC	A	08:12	08:28	9	57.38403	-1.04948
27/11/2012	156	TRBT8	DC	A	08:12	08:28	10	57.38406	-1.04951
27/11/2012	156	TRBT8	DC	A	08:12	08:28	11	57.38410	-1.04946
27/11/2012	156	TRBT8	DC	A	08:12	08:28	12	57.38415	-1.04946
27/11/2012	156	TRBT8	DC	A	08:12	08:28	13	57.38417	-1.04945
27/11/2012	156	TRBT8	DC	A	08:12	08:28	14	57.38421	-1.04944
27/11/2012	156	TRBT8	DC	A	08:12	08:28	15	57.38425	-1.04944
27/11/2012	156	TRBT8	DC	A	08:12	08:28	16	57.38427	-1.04943
27/11/2012	156	TRBT8	DC	A	08:12	08:28	17	57.38427	-1.04943
27/11/2012	156	TRBT8	DC	A	08:12	08:28	18	57.38430	-1.04941
27/11/2012	156	TRBT8	DC	A	08:12	08:28	19	57.38430	-1.04940
27/11/2012	156	TRBT8	DC	A	08:12	08:28	20	57.38433	-1.04936
27/11/2012	156	TRBT8	DC	A	08:12	08:28	21	57.38437	-1.04931
27/11/2012	156	TRBT8	DC	A	08:12	08:28	22	57.38441	-1.04929
27/11/2012	156	TRBT8	DC	A	08:12	08:28	23	57.38448	-1.04929
27/11/2012	156	TRBT8	DC	A	08:12	08:28	24	57.38459	-1.04923
27/11/2012	156	TRBT8	DC	A	08:12	08:28	25	57.38461	-1.04924
27/11/2012	156	TRBT8	DC	A	08:12	08:28	26	57.38466	-1.04927
27/11/2012	156	TRBT8	DC	A	08:12	08:28	27	57.38472	-1.04916
27/11/2012	156	TRBT8	DC	A	08:12	08:28	28	57.38478	-1.04909
27/11/2012	156	TRBT8	DC	A	08:12	08:28	29	57.38485	-1.04912
27/11/2012	156	TRBT8	DC	A	08:12	08:28	30	57.38488	-1.04913
27/11/2012	156	TRBT8	DC	A	08:12	08:28	31	57.38492	-1.04914
27/11/2012	156	TRBT8	DC	A	08:12	08:28	32	57.38497	-1.04912
27/11/2012	156	TRBT8	DC	A	08:12	08:28	33	57.38500	-1.04912
27/11/2012	157	TRBT10	DC	A	08:48	09:08	3	57.39254	-1.04701
27/11/2012	157	TRBT10	DC	A	08:48	09:08	4	57.39261	-1.04700
27/11/2012	157	TRBT10	DC	A	08:48	09:08	5	57.39262	-1.04698
27/11/2012	157	TRBT10	DC	A	08:48	09:08	6	57.39264	-1.04698
27/11/2012	157	TRBT10	DC	A	08:48	09:08	7	57.39271	-1.04696
27/11/2012	157	TRBT10	DC	A	08:48	09:08	8	57.39273	-1.04695
27/11/2012	157	TRBT10	DC	A	08:48	09:08	9	57.39275	-1.04693
27/11/2012	157	TRBT10	DC	A	08:48	09:08	10	57.39278	-1.04693
27/11/2012	157	TRBT10	DC	A	08:48	09:08	11	57.39281	-1.04689
27/11/2012	157	TRBT10	DC	A	08:48	09:08	12	57.39281	-1.04686

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	157	TRBT10	DC	A	08:48	09:08	13	57.39285	-1.04688
27/11/2012	157	TRBT10	DC	A	08:48	09:08	14	57.39297	-1.04682
27/11/2012	157	TRBT10	DC	A	08:48	09:08	15	57.39299	-1.04678
27/11/2012	157	TRBT10	DC	A	08:48	09:08	16	57.39301	-1.04673
27/11/2012	157	TRBT10	DC	A	08:48	09:08	17	57.39313	-1.04674
27/11/2012	157	TRBT10	DC	A	08:48	09:08	18	57.39314	-1.04676
27/11/2012	157	TRBT10	DC	A	08:48	09:08	19	57.39322	-1.04681
27/11/2012	157	TRBT10	DC	A	08:48	09:08	20	57.39328	-1.04669
27/11/2012	157	TRBT10	DC	A	08:48	09:08	21	57.39329	-1.04667
27/11/2012	157	TRBT10	DC	A	08:48	09:08	22	57.39338	-1.04664
27/11/2012	157	TRBT10	DC	A	08:48	09:08	23	57.39346	-1.04659
27/11/2012	157	TRBT10	DC	A	08:48	09:08	24	57.39347	-1.04659
27/11/2012	157	TRBT10	DC	A	08:48	09:08	25	57.39348	-1.04658
27/11/2012	157	TRBT10	DC	A	08:48	09:08	26	57.39356	-1.04658
27/11/2012	157	TRBT10	DC	A	08:48	09:08	27	57.39360	-1.04658
27/11/2012	157	TRBT10	DC	A	08:48	09:08	28	57.39371	-1.04653
27/11/2012	157	TRBT10	DC	A	08:48	09:08	29	57.39374	-1.04653
27/11/2012	157	TRBT10	DC	A	08:48	09:08	30	57.39378	-1.04654
27/11/2012	157	TRBT10	DC	A	08:48	09:08	31	57.39388	-1.04653
27/11/2012	157	TRBT10	DC	A	08:48	09:08	32	57.39392	-1.04644
27/11/2012	157	TRBT10	DC	A	08:48	09:08	33	57.39400	-1.04640
27/11/2012	157	TRBT10	DC	A	08:48	09:08	34	57.39399	-1.04638
27/11/2012	157	TRBT10	DC	A	08:48	09:08	35	57.39412	-1.04635
27/11/2012	157	TRBT10	DC	A	08:48	09:08	36	57.39415	-1.04634
27/11/2012	158	TRBT15	DC	A	09:33	09:53	2	57.41002	-1.04092
27/11/2012	158	TRBT15	DC	A	09:33	09:53	3	57.41008	-1.04096
27/11/2012	158	TRBT15	DC	A	09:33	09:53	4	57.41016	-1.04100
27/11/2012	158	TRBT15	DC	A	09:33	09:53	5	57.41027	-1.04104
27/11/2012	158	TRBT15	DC	A	09:33	09:53	6	57.41035	-1.04110
27/11/2012	158	TRBT15	DC	A	09:33	09:53	7	57.41039	-1.04115
27/11/2012	158	TRBT15	DC	A	09:33	09:53	8	57.41047	-1.04116
27/11/2012	158	TRBT15	DC	A	09:33	09:53	9	57.41051	-1.04115
27/11/2012	158	TRBT15	DC	A	09:33	09:53	10	57.41055	-1.04121
27/11/2012	158	TRBT15	DC	A	09:33	09:53	11	57.41068	-1.04129
27/11/2012	158	TRBT15	DC	A	09:33	09:53	12	57.41074	-1.04137
27/11/2012	158	TRBT15	DC	A	09:33	09:53	13	57.41076	-1.04139
27/11/2012	158	TRBT15	DC	A	09:33	09:53	14	57.41087	-1.04136
27/11/2012	158	TRBT15	DC	A	09:33	09:53	15	57.41094	-1.04148
27/11/2012	158	TRBT15	DC	A	09:33	09:53	16	57.41105	-1.04151
27/11/2012	158	TRBT15	DC	A	09:33	09:53	17	57.41106	-1.04150
27/11/2012	158	TRBT15	DC	A	09:33	09:53	18	57.41118	-1.04162
27/11/2012	158	TRBT15	DC	A	09:33	09:53	19	57.41127	-1.04161
27/11/2012	158	TRBT15	DC	A	09:33	09:53	20	57.41129	-1.04165
27/11/2012	158	TRBT15	DC	A	09:33	09:53	21	57.41133	-1.04164
27/11/2012	158	TRBT15	DC	A	09:33	09:53	22	57.41134	-1.04171
27/11/2012	158	TRBT15	DC	A	09:33	09:53	23	57.41147	-1.04176
27/11/2012	158	TRBT15	DC	A	09:33	09:53	24	57.41159	-1.04184
27/11/2012	159	TRBT25	DC	A	10:58	11:18	2	57.39281	-0.96762
27/11/2012	159	TRBT25	DC	A	10:58	11:18	3	57.39283	-0.96766
27/11/2012	159	TRBT25	DC	A	10:58	11:18	4	57.39297	-0.96783
27/11/2012	159	TRBT25	DC	A	10:58	11:18	5	57.39297	-0.96792
27/11/2012	159	TRBT25	DC	A	10:58	11:18	6	57.39306	-0.96796
27/11/2012	159	TRBT25	DC	A	10:58	11:18	7	57.39304	-0.96802
27/11/2012	159	TRBT25	DC	A	10:58	11:18	8	57.39305	-0.96798
27/11/2012	159	TRBT25	DC	A	10:58	11:18	9	57.39312	-0.96803
27/11/2012	159	TRBT25	DC	A	10:58	11:18	10	57.39312	-0.96803
27/11/2012	159	TRBT25	DC	A	10:58	11:18	11	57.39317	-0.96796
27/11/2012	159	TRBT25	DC	A	10:58	11:18	12	57.39325	-0.96806
27/11/2012	159	TRBT25	DC	A	10:58	11:18	13	57.39325	-0.96810
27/11/2012	159	TRBT25	DC	A	10:58	11:18	14	57.39328	-0.96813
27/11/2012	159	TRBT25	DC	A	10:58	11:18	15	57.39331	-0.96811
27/11/2012	159	TRBT25	DC	A	10:58	11:18	16	57.39344	-0.96813
27/11/2012	159	TRBT25	DC	A	10:58	11:18	17	57.39349	-0.96821
27/11/2012	159	TRBT25	DC	A	10:58	11:18	18	57.39349	-0.96821
27/11/2012	159	TRBT25	DC	A	10:58	11:18	19	57.39355	-0.96823

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank  
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Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	159	TRBT25	DC	A	10:58	11:18	20	57.39359	-0.96825
27/11/2012	159	TRBT25	DC	A	10:58	11:18	21	57.39370	-0.96833
27/11/2012	159	TRBT25	DC	A	10:58	11:18	22	57.39371	-0.96837
27/11/2012	159	TRBT25	DC	A	10:58	11:18	23	57.39373	-0.96849
27/11/2012	159	TRBT25	DC	A	10:58	11:18	24	57.39375	-0.96858
27/11/2012	159	TRBT25	DC	A	10:58	11:18	25	57.39386	-0.96877
27/11/2012	159	TRBT25	DC	A	10:58	11:18	26	57.39388	-0.96902
27/11/2012	159	TRBT25	DC	A	10:58	11:18	27	57.39401	-0.96908
27/11/2012	159	TRBT25	DC	A	10:58	11:18	28	57.39403	-0.96911
27/11/2012	159	TRBT25	DC	A	10:58	11:18	29	57.39405	-0.96918
27/11/2012	159	TRBT25	DC	A	10:58	11:18	30	57.39412	-0.96927
27/11/2012	159	TRBT25	DC	A	10:58	11:18	31	57.39413	-0.96930
27/11/2012	160	TRBT33	DC	A	11:50	12:06	2	57.41180	-0.92327
27/11/2012	160	TRBT33	DC	A	11:50	12:06	3	57.41173	-0.92329
27/11/2012	160	TRBT33	DC	A	11:50	12:06	4	57.41168	-0.92330
27/11/2012	160	TRBT33	DC	A	11:50	12:06	5	57.41159	-0.92331
27/11/2012	160	TRBT33	DC	A	11:50	12:06	6	57.41152	-0.92321
27/11/2012	160	TRBT33	DC	A	11:50	12:06	7	57.41150	-0.92324
27/11/2012	160	TRBT33	DC	A	11:50	12:06	8	57.41146	-0.92335
27/11/2012	160	TRBT33	DC	A	11:50	12:06	9	57.41145	-0.92344
27/11/2012	160	TRBT33	DC	A	11:50	12:06	10	57.41137	-0.92347
27/11/2012	160	TRBT33	DC	A	11:50	12:06	11	57.41125	-0.92347
27/11/2012	160	TRBT33	DC	A	11:50	12:06	12	57.41122	-0.92352
27/11/2012	160	TRBT33	DC	A	11:50	12:06	13	57.41114	-0.92353
27/11/2012	160	TRBT33	DC	A	11:50	12:06	14	57.41108	-0.92355
27/11/2012	160	TRBT33	DC	A	11:50	12:06	15	57.41104	-0.92350
27/11/2012	160	TRBT33	DC	A	11:50	12:06	16	57.41095	-0.92356
27/11/2012	160	TRBT33	DC	A	11:50	12:06	17	57.41092	-0.92360
27/11/2012	160	TRBT33	DC	A	11:50	12:06	18	57.41084	-0.92372
27/11/2012	160	TRBT33	DC	A	11:50	12:06	19	57.41079	-0.92375
27/11/2012	160	TRBT33	DC	A	11:50	12:06	20	57.41074	-0.92365
27/11/2012	160	TRBT33	DC	A	11:50	12:06	21	57.41067	-0.92362
27/11/2012	160	TRBT33	DC	A	11:50	12:06	22	57.41063	-0.92369
27/11/2012	160	TRBT33	DC	A	11:50	12:06	23	57.41055	-0.92369
27/11/2012	160	TRBT33	DC	A	11:50	12:06	24	57.41050	-0.92373
27/11/2012	161	TRBT61	DC	A	12:44	13:07	2	57.42025	-0.88138
27/11/2012	161	TRBT61	DC	A	12:44	13:07	3	57.42020	-0.88145
27/11/2012	161	TRBT61	DC	A	12:44	13:07	4	57.42011	-0.88142
27/11/2012	161	TRBT61	DC	A	12:44	13:07	5	57.42006	-0.88139
27/11/2012	161	TRBT61	DC	A	12:44	13:07	6	57.41998	-0.88137
27/11/2012	161	TRBT61	DC	A	12:44	13:07	7	57.41996	-0.88146
27/11/2012	161	TRBT61	DC	A	12:44	13:07	8	57.41994	-0.88148
27/11/2012	161	TRBT61	DC	A	12:44	13:07	9	57.41982	-0.88150
27/11/2012	161	TRBT61	DC	A	12:44	13:07	10	57.41964	-0.88151
27/11/2012	161	TRBT61	DC	A	12:44	13:07	11	57.41956	-0.88160
27/11/2012	161	TRBT61	DC	A	12:44	13:07	12	57.41947	-0.88163
27/11/2012	161	TRBT61	DC	A	12:44	13:07	13	57.41940	-0.88162
27/11/2012	161	TRBT61	DC	A	12:44	13:07	14	57.41933	-0.88160
27/11/2012	161	TRBT61	DC	A	12:44	13:07	15	57.41928	-0.88160
27/11/2012	161	TRBT61	DC	A	12:44	13:07	16	57.41921	-0.88161
27/11/2012	161	TRBT61	DC	A	12:44	13:07	17	57.41910	-0.88166
27/11/2012	161	TRBT61	DC	A	12:44	13:07	18	57.41909	-0.88165
27/11/2012	161	TRBT61	DC	A	12:44	13:07	19	57.41899	-0.88160
27/11/2012	161	TRBT61	DC	A	12:44	13:07	20	57.41889	-0.88167
27/11/2012	161	TRBT61	DC	A	12:44	13:07	21	57.41886	-0.88170
27/11/2012	161	TRBT61	DC	A	12:44	13:07	22	57.41877	-0.88167
27/11/2012	161	TRBT61	DC	A	12:44	13:07	23	57.41872	-0.88163
27/11/2012	161	TRBT61	DC	A	12:44	13:07	24	57.41872	-0.88164
27/11/2012	161	TRBT61	DC	A	12:44	13:07	25	57.41867	-0.88164
27/11/2012	161	TRBT61	DC	A	12:44	13:07	26	57.41862	-0.88164
27/11/2012	161	TRBT61	DC	A	12:44	13:07	27	57.41859	-0.88166
27/11/2012	162	TRBT34	DC	A	13:42	14:02	2	57.38577	-0.89227
27/11/2012	162	TRBT34	DC	A	13:42	14:02	3	57.38571	-0.89236
27/11/2012	162	TRBT34	DC	A	13:42	14:02	4	57.38561	-0.89234
27/11/2012	162	TRBT34	DC	A	13:42	14:02	5	57.38553	-0.89231

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank  
NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	162	TRBT34	DC	A	13:42	14:02	6	57.38535	-0.89237
27/11/2012	162	TRBT34	DC	A	13:42	14:02	7	57.38528	-0.89232
27/11/2012	162	TRBT34	DC	A	13:42	14:02	8	57.38517	-0.89236
27/11/2012	162	TRBT34	DC	A	13:42	14:02	9	57.38511	-0.89240
27/11/2012	162	TRBT34	DC	A	13:42	14:02	10	57.38509	-0.89246
27/11/2012	162	TRBT34	DC	A	13:42	14:02	11	57.38509	-0.89247
27/11/2012	162	TRBT34	DC	A	13:42	14:02	12	57.38503	-0.89242
27/11/2012	162	TRBT34	DC	A	13:42	14:02	13	57.38500	-0.89243
27/11/2012	162	TRBT34	DC	A	13:42	14:02	14	57.38496	-0.89242
27/11/2012	162	TRBT34	DC	A	13:42	14:02	15	57.38489	-0.89244
27/11/2012	162	TRBT34	DC	A	13:42	14:02	16	57.38487	-0.89246
27/11/2012	162	TRBT34	DC	A	13:42	14:02	17	57.38481	-0.89251
27/11/2012	162	TRBT34	DC	A	13:42	14:02	18	57.38479	-0.89250
27/11/2012	162	TRBT34	DC	A	13:42	14:02	19	57.38468	-0.89248
27/11/2012	162	TRBT34	DC	A	13:42	14:02	20	57.38467	-0.89247
27/11/2012	162	TRBT34	DC	A	13:42	14:02	21	57.38460	-0.89255
27/11/2012	162	TRBT34	DC	A	13:42	14:02	22	57.38458	-0.89255
27/11/2012	162	TRBT34	DC	A	13:42	14:02	23	57.38453	-0.89260
27/11/2012	162	TRBT34	DC	A	13:42	14:02	24	57.38438	-0.89266
27/11/2012	162	TRBT34	DC	A	13:42	14:02	25	57.38430	-0.89267
27/11/2012	162	TRBT34	DC	A	13:42	14:02	26	57.38427	-0.89268
27/11/2012	162	TRBT34	DC	A	13:42	14:02	27	57.38412	-0.89261
27/11/2012	162	TRBT34	DC	A	13:42	14:02	28	57.38408	-0.89264
27/11/2012	163	TRBT30	DC	A	14:37	15:02	2	57.35058	-0.90293
27/11/2012	163	TRBT30	DC	A	14:37	15:02	3	57.35062	-0.90293
27/11/2012	163	TRBT30	DC	A	14:37	15:02	4	57.35053	-0.90301
27/11/2012	163	TRBT30	DC	A	14:37	15:02	5	57.35052	-0.90302
27/11/2012	163	TRBT30	DC	A	14:37	15:02	6	57.35042	-0.90299
27/11/2012	163	TRBT30	DC	A	14:37	15:02	7	57.35033	-0.90298
27/11/2012	163	TRBT30	DC	A	14:37	15:02	8	57.35025	-0.90307
27/11/2012	163	TRBT30	DC	A	14:37	15:02	9	57.35009	-0.90290
27/11/2012	163	TRBT30	DC	A	14:37	15:02	10	57.35004	-0.90306
27/11/2012	163	TRBT30	DC	A	14:37	15:02	11	57.35004	-0.90309
27/11/2012	163	TRBT30	DC	A	14:37	15:02	12	57.34994	-0.90312
27/11/2012	163	TRBT30	DC	A	14:37	15:02	13	57.34984	-0.90310
27/11/2012	163	TRBT30	DC	A	14:37	15:02	14	57.34979	-0.90308
27/11/2012	163	TRBT30	DC	A	14:37	15:02	15	57.34978	-0.90308
27/11/2012	163	TRBT30	DC	A	14:37	15:02	16	57.34964	-0.90316
27/11/2012	163	TRBT30	DC	A	14:37	15:02	17	57.34960	-0.90320
27/11/2012	163	TRBT30	DC	A	14:37	15:02	18	57.34950	-0.90322
27/11/2012	163	TRBT30	DC	A	14:37	15:02	19	57.34948	-0.90324
27/11/2012	163	TRBT30	DC	A	14:37	15:02	20	57.34941	-0.90323
27/11/2012	163	TRBT30	DC	A	14:37	15:02	21	57.34939	-0.90324
27/11/2012	163	TRBT30	DC	A	14:37	15:02	22	57.34926	-0.90320
27/11/2012	163	TRBT30	DC	A	14:37	15:02	23	57.34924	-0.90321
27/11/2012	163	TRBT30	DC	A	14:37	15:02	24	57.34922	-0.90335
27/11/2012	163	TRBT30	DC	A	14:37	15:02	25	57.34912	-0.90334
27/11/2012	163	TRBT30	DC	A	14:37	15:02	26	57.34903	-0.90328
27/11/2012	163	TRBT30	DC	A	14:37	15:02	27	57.34891	-0.90329
27/11/2012	163	TRBT30	DC	A	14:37	15:02	28	57.34889	-0.90330
27/11/2012	163	TRBT30	DC	A	14:37	15:02	29	57.34886	-0.90327
27/11/2012	163	TRBT30	DC	A	14:37	15:02	30	57.34884	-0.90328
27/11/2012	164	TRBT67	DC	A	15:44	16:08	2	57.35899	-0.82153
27/11/2012	164	TRBT67	DC	A	15:44	16:08	3	57.35906	-0.82178
27/11/2012	164	TRBT67	DC	A	15:44	16:08	4	57.35907	-0.82184
27/11/2012	164	TRBT67	DC	A	15:44	16:08	5	57.35905	-0.82188
27/11/2012	164	TRBT67	DC	A	15:44	16:08	6	57.35898	-0.82187
27/11/2012	164	TRBT67	DC	A	15:44	16:08	7	57.35897	-0.82185
27/11/2012	164	TRBT67	DC	A	15:44	16:08	8	57.35885	-0.82183
27/11/2012	164	TRBT67	DC	A	15:44	16:08	9	57.35876	-0.82187
27/11/2012	164	TRBT67	DC	A	15:44	16:08	10	57.35874	-0.82190
27/11/2012	164	TRBT67	DC	A	15:44	16:08	11	57.35870	-0.82189
27/11/2012	164	TRBT67	DC	A	15:44	16:08	12	57.35863	-0.82192
27/11/2012	164	TRBT67	DC	A	15:44	16:08	13	57.35859	-0.82191
27/11/2012	164	TRBT67	DC	A	15:44	16:08	14	57.35856	-0.82191

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	164	TRBT67	DC	A	15:44	16:08	15	57.35854	-0.82188
27/11/2012	164	TRBT67	DC	A	15:44	16:08	16	57.35848	-0.82197
27/11/2012	164	TRBT67	DC	A	15:44	16:08	17	57.35839	-0.82199
27/11/2012	164	TRBT67	DC	A	15:44	16:08	18	57.35829	-0.82195
27/11/2012	164	TRBT67	DC	A	15:44	16:08	19	57.35827	-0.82195
27/11/2012	164	TRBT67	DC	A	15:44	16:08	20	57.35825	-0.82195
27/11/2012	164	TRBT67	DC	A	15:44	16:08	21	57.35824	-0.82196
27/11/2012	164	TRBT67	DC	A	15:44	16:08	22	57.35820	-0.82197
27/11/2012	164	TRBT67	DC	A	15:44	16:08	23	57.35810	-0.82202
27/11/2012	164	TRBT67	DC	A	15:44	16:08	24	57.35801	-0.82204
27/11/2012	164	TRBT67	DC	A	15:44	16:08	25	57.35797	-0.82199
27/11/2012	164	TRBT67	DC	A	15:44	16:08	26	57.35788	-0.82202
27/11/2012	164	TRBT67	DC	A	15:44	16:08	27	57.35778	-0.82209
27/11/2012	164	TRBT67	DC	A	15:44	16:08	28	57.35772	-0.82207
27/11/2012	164	TRBT67	DC	A	15:44	16:08	29	57.35762	-0.82209
27/11/2012	164	TRBT67	DC	A	15:44	16:08	30	57.35758	-0.82208
27/11/2012	164	TRBT67	DC	A	15:44	16:08	31	57.35756	-0.82210
27/11/2012	164	TRBT67	DC	A	15:44	16:08	32	57.35749	-0.82215
27/11/2012	164	TRBT67	DC	A	15:44	16:08	33	57.35746	-0.82213
27/11/2012	164	TRBT67	DC	A	15:44	16:08	34	57.35748	-0.82214
27/11/2012	164	TRBT67	DC	A	15:44	16:08	35	57.35741	-0.82213
27/11/2012	164	TRBT67	DC	A	15:44	16:08	36	57.35731	-0.82218
27/11/2012	165	TRBT57	DC	A	16:46	17:04	2	57.39447	-0.81073
27/11/2012	165	TRBT57	DC	A	16:46	17:04	3	57.39450	-0.81077
27/11/2012	165	TRBT57	DC	A	16:46	17:04	4	57.39441	-0.81074
27/11/2012	165	TRBT57	DC	A	16:46	17:04	5	57.39437	-0.81070
27/11/2012	165	TRBT57	DC	A	16:46	17:04	6	57.39427	-0.81072
27/11/2012	165	TRBT57	DC	A	16:46	17:04	7	57.39423	-0.81075
27/11/2012	165	TRBT57	DC	A	16:46	17:04	8	57.39422	-0.81075
27/11/2012	165	TRBT57	DC	A	16:46	17:04	9	57.39412	-0.81072
27/11/2012	165	TRBT57	DC	A	16:46	17:04	10	57.39410	-0.81073
27/11/2012	165	TRBT57	DC	A	16:46	17:04	11	57.39406	-0.81070
27/11/2012	165	TRBT57	DC	A	16:46	17:04	12	57.39404	-0.81073
27/11/2012	165	TRBT57	DC	A	16:46	17:04	13	57.39395	-0.81075
27/11/2012	165	TRBT57	DC	A	16:46	17:04	14	57.39388	-0.81072
27/11/2012	165	TRBT57	DC	A	16:46	17:04	15	57.39385	-0.81073
27/11/2012	165	TRBT57	DC	A	16:46	17:04	16	57.39385	-0.81073
27/11/2012	165	TRBT57	DC	A	16:46	17:04	17	57.39371	-0.81076
27/11/2012	165	TRBT57	DC	A	16:46	17:04	18	57.39357	-0.81076
27/11/2012	165	TRBT57	DC	A	16:46	17:04	19	57.39357	-0.81077
27/11/2012	165	TRBT57	DC	A	16:46	17:04	20	57.39345	-0.81077
27/11/2012	165	TRBT57	DC	A	16:46	17:04	21	57.39340	-0.81080
27/11/2012	165	TRBT57	DC	A	16:46	17:04	22	57.39331	-0.81079
27/11/2012	165	TRBT57	DC	A	16:46	17:04	23	57.39319	-0.81080
27/11/2012	165	TRBT57	DC	A	16:46	17:04	24	57.39314	-0.81080
27/11/2012	165	TRBT57	DC	A	16:46	17:04	25	57.39305	-0.81078
27/11/2012	166	TRBT62	DC	A	17:49	18:11	2	57.42825	-0.80056
27/11/2012	166	TRBT62	DC	A	17:49	18:11	3	57.42831	-0.80055
27/11/2012	166	TRBT62	DC	A	17:49	18:11	4	57.42837	-0.80052
27/11/2012	166	TRBT62	DC	A	17:49	18:11	5	57.42839	-0.80051
27/11/2012	166	TRBT62	DC	A	17:49	18:11	6	57.42844	-0.80050
27/11/2012	166	TRBT62	DC	A	17:49	18:11	7	57.42844	-0.80053
27/11/2012	166	TRBT62	DC	A	17:49	18:11	8	57.42851	-0.80052
27/11/2012	166	TRBT62	DC	A	17:49	18:11	9	57.42857	-0.80052
27/11/2012	166	TRBT62	DC	A	17:49	18:11	10	57.42862	-0.80051
27/11/2012	166	TRBT62	DC	A	17:49	18:11	11	57.42864	-0.80052
27/11/2012	166	TRBT62	DC	A	17:49	18:11	12	57.42870	-0.80049
27/11/2012	166	TRBT62	DC	A	17:49	18:11	13	57.42875	-0.80049
27/11/2012	166	TRBT62	DC	A	17:49	18:11	14	57.42879	-0.80044
27/11/2012	166	TRBT62	DC	A	17:49	18:11	15	57.42881	-0.80044
27/11/2012	166	TRBT62	DC	A	17:49	18:11	16	57.42892	-0.80045
27/11/2012	166	TRBT62	DC	A	17:49	18:11	17	57.42902	-0.80042
27/11/2012	166	TRBT62	DC	A	17:49	18:11	18	57.42908	-0.80043
27/11/2012	166	TRBT62	DC	A	17:49	18:11	19	57.42910	-0.80044
27/11/2012	166	TRBT62	DC	A	17:49	18:11	20	57.42918	-0.80042

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank  
NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	166	TRBT62	DC	A	17:49	18:11	21	57.42929	-0.80041
27/11/2012	166	TRBT62	DC	A	17:49	18:11	22	57.42932	-0.80041
27/11/2012	166	TRBT62	DC	A	17:49	18:11	23	57.42941	-0.80038
27/11/2012	166	TRBT62	DC	A	17:49	18:11	24	57.42944	-0.80039
27/11/2012	166	TRBT62	DC	A	17:49	18:11	25	57.42950	-0.80039
27/11/2012	166	TRBT62	DC	A	17:49	18:11	26	57.42953	-0.80037
27/11/2012	166	TRBT62	DC	A	17:49	18:11	27	57.42956	-0.80038
27/11/2012	166	TRBT62	DC	A	17:49	18:11	28	57.42958	-0.80035
27/11/2012	166	TRBT62	DC	A	17:49	18:11	29	57.42965	-0.80036
27/11/2012	166	TRBT62	DC	A	17:49	18:11	30	57.42965	-0.80036
27/11/2012	166	TRBT62	DC	A	17:49	18:11	31	57.42974	-0.80033
27/11/2012	166	TRBT62	DC	A	17:49	18:11	32	57.42987	-0.80033
27/11/2012	166	TRBT62	DC	A	17:49	18:11	33	57.42996	-0.80032
27/11/2012	166	TRBT62	DC	A	17:49	18:11	34	57.43002	-0.80032
27/11/2012	166	TRBT62	DC	A	17:49	18:11	35	57.43007	-0.80029
27/11/2012	167	TRBT59	DC	A	18:46	19:09	2	57.40989	-0.72061
27/11/2012	167	TRBT59	DC	A	18:46	19:09	3	57.40995	-0.72061
27/11/2012	167	TRBT59	DC	A	18:46	19:09	4	57.40998	-0.72064
27/11/2012	167	TRBT59	DC	A	18:46	19:09	5	57.41002	-0.72064
27/11/2012	167	TRBT59	DC	A	18:46	19:09	6	57.41009	-0.72066
27/11/2012	167	TRBT59	DC	A	18:46	19:09	7	57.41013	-0.72065
27/11/2012	167	TRBT59	DC	A	18:46	19:09	8	57.41019	-0.72065
27/11/2012	167	TRBT59	DC	A	18:46	19:09	9	57.41026	-0.72061
27/11/2012	167	TRBT59	DC	A	18:46	19:09	10	57.41025	-0.72062
27/11/2012	167	TRBT59	DC	A	18:46	19:09	11	57.41033	-0.72059
27/11/2012	167	TRBT59	DC	A	18:46	19:09	12	57.41044	-0.72058
27/11/2012	167	TRBT59	DC	A	18:46	19:09	13	57.41051	-0.72058
27/11/2012	167	TRBT59	DC	A	18:46	19:09	14	57.41053	-0.72059
27/11/2012	167	TRBT59	DC	A	18:46	19:09	15	57.41055	-0.72061
27/11/2012	167	TRBT59	DC	A	18:46	19:09	16	57.41058	-0.72051
27/11/2012	167	TRBT59	DC	A	18:46	19:09	17	57.41064	-0.72060
27/11/2012	167	TRBT59	DC	A	18:46	19:09	18	57.41073	-0.72061
27/11/2012	167	TRBT59	DC	A	18:46	19:09	19	57.41077	-0.72057
27/11/2012	167	TRBT59	DC	A	18:46	19:09	20	57.41090	-0.72061
27/11/2012	167	TRBT59	DC	A	18:46	19:09	21	57.41100	-0.72062
27/11/2012	167	TRBT59	DC	A	18:46	19:09	22	57.41113	-0.72064
27/11/2012	167	TRBT59	DC	A	18:46	19:09	23	57.41120	-0.72057
27/11/2012	167	TRBT59	DC	A	18:46	19:09	24	57.41129	-0.72057
27/11/2012	167	TRBT59	DC	A	18:46	19:09	25	57.41139	-0.72054
27/11/2012	167	TRBT59	DC	A	18:46	19:09	26	57.41139	-0.72054
27/11/2012	167	TRBT59	DC	A	18:46	19:09	27	57.41150	-0.72051
27/11/2012	167	TRBT59	DC	A	18:46	19:09	28	57.41156	-0.72049
27/11/2012	167	TRBT59	DC	A	18:46	19:09	29	57.41156	-0.72049
27/11/2012	168	TRTB	DC	A	19:46	20:06	2	57.37507	-0.73806
27/11/2012	168	TRTB	DC	A	19:46	20:06	3	57.37514	-0.73807
27/11/2012	168	TRTB	DC	A	19:46	20:06	4	57.37520	-0.73802
27/11/2012	168	TRTB	DC	A	19:46	20:06	5	57.37527	-0.73798
27/11/2012	168	TRTB	DC	A	19:46	20:06	6	57.37539	-0.73812
27/11/2012	168	TRTB	DC	A	19:46	20:06	7	57.37547	-0.73807
27/11/2012	168	TRTB	DC	A	19:46	20:06	8	57.37555	-0.73811
27/11/2012	168	TRTB	DC	A	19:46	20:06	9	57.37561	-0.73816
27/11/2012	168	TRTB	DC	A	19:46	20:06	10	57.37565	-0.73811
27/11/2012	168	TRTB	DC	A	19:46	20:06	11	57.37570	-0.73814
27/11/2012	168	TRTB	DC	A	19:46	20:06	12	57.37579	-0.73822
27/11/2012	168	TRTB	DC	A	19:46	20:06	13	57.37582	-0.73823
27/11/2012	168	TRTB	DC	A	19:46	20:06	14	57.37584	-0.73820
27/11/2012	168	TRTB	DC	A	19:46	20:06	15	57.37585	-0.73812
27/11/2012	168	TRTB	DC	A	19:46	20:06	16	57.37589	-0.73814
27/11/2012	168	TRTB	DC	A	19:46	20:06	17	57.37597	-0.73819
27/11/2012	168	TRTB	DC	A	19:46	20:06	18	57.37600	-0.73820
27/11/2012	168	TRTB	DC	A	19:46	20:06	19	57.37603	-0.73824
27/11/2012	168	TRTB	DC	A	19:46	20:06	20	57.37607	-0.73827
27/11/2012	168	TRTB	DC	A	19:46	20:06	21	57.37613	-0.73831
27/11/2012	168	TRTB	DC	A	19:46	20:06	22	57.37617	-0.73828
27/11/2012	168	TRTB	DC	A	19:46	20:06	23	57.37621	-0.73828

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
27/11/2012	168	TRTB	DC	A	19:46	20:06	24	57.37630	-0.73824
27/11/2012	168	TRTB	DC	A	19:46	20:06	25	57.37636	-0.73825
27/11/2012	168	TRTB	DC	A	19:46	20:06	26	57.37638	-0.73828
27/11/2012	168	TRTB	DC	A	19:46	20:06	27	57.37644	-0.73832
27/11/2012	168	TRTB	DC	A	19:46	20:06	28	57.37653	-0.73832
27/11/2012	168	TRTB	DC	A	19:46	20:06	29	57.37655	-0.73832
27/11/2012	168	TRTB	DC	A	19:46	20:06	30	57.37660	-0.73832
27/11/2012	168	TRTB	DC	A	19:46	20:06	31	57.37663	-0.73834
27/11/2012	168	TRTB	DC	A	19:46	20:06	32	57.37671	-0.73838
27/11/2012	168	TRTB	DC	A	19:46	20:06	33	57.37678	-0.73838
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	2	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	3	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	4	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	5	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	6	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	7	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	8	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	9	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	10	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	11	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	12	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	13	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	14	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	15	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	16	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	17	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	18	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	19	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	20	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	21	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	22	0.00000	0.00000
29/11/2012	208	TRBTDC52	DC	A	08:27	08:47	23	0.00000	0.00000
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	2	57.42603	-0.76295
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	3	57.42597	-0.76299
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	4	57.42595	-0.76301
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	5	57.42593	-0.76302
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	6	57.42590	-0.76304
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	7	57.42588	-0.76305
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	8	57.42583	-0.76308
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	9	57.42579	-0.76310
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	10	57.42578	-0.76311
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	11	57.42571	-0.76312
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	12	57.42569	-0.76315
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	13	57.42565	-0.76317
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	14	57.42564	-0.76318
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	15	57.42559	-0.76320
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	16	57.42554	-0.76321
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	17	57.42551	-0.76325
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	18	57.42548	-0.76325
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	19	57.42547	-0.76326
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	20	57.42545	-0.76325
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	21	57.42545	-0.76327
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	22	57.42544	-0.76329
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	23	57.42544	-0.76329
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	24	57.42533	-0.76337
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	25	57.42524	-0.76342
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	26	57.42516	-0.76347
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	27	57.42511	-0.76348
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	28	57.42509	-0.76350
29/11/2012	209	TRBTDC75	DC	A	09:19	09:32	29	57.42501	-0.76355
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	2	57.42167	-0.76544
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	2	57.42167	-0.76544
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	3	57.42164	-0.76547
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	3	57.42164	-0.76547
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	4	57.42160	-0.76548

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	4	57.42160	-0.76548
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	5	57.42153	-0.76549
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	5	57.42153	-0.76549
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	6	57.42147	-0.76553
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	6	57.42147	-0.76553
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	7	57.42138	-0.76556
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	7	57.42138	-0.76556
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	8	57.42135	-0.76556
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	8	57.42135	-0.76556
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	9	57.42126	-0.76559
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	9	57.42126	-0.76559
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	10	57.42120	-0.76560
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	10	57.42120	-0.76560
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	11	57.42113	-0.76563
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	11	57.42113	-0.76563
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	12	57.42111	-0.76564
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	12	57.42111	-0.76564
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	13	57.42105	-0.76564
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	13	57.42105	-0.76564
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	14	57.42099	-0.76567
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	14	57.42099	-0.76567
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	15	57.42094	-0.76568
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	15	57.42094	-0.76568
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	16	57.42088	-0.76570
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	16	57.42088	-0.76570
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	17	57.42077	-0.76572
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	17	57.42077	-0.76572
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	18	57.42074	-0.76573
29/11/2012	210	TRBTDC76	DC	A	09:57	10:09	18	57.42074	-0.76573
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	2	57.41431	-0.77005
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	3	57.41427	-0.77006
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	4	57.41422	-0.77006
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	5	57.41417	-0.77009
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	6	57.41415	-0.77010
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	7	57.41406	-0.77010
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	8	57.41405	-0.77010
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	9	57.41396	-0.77014
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	10	57.41391	-0.77018
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	11	57.41383	-0.77020
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	12	57.41373	-0.77022
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	13	57.41370	-0.77022
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	14	57.41364	-0.77026
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	15	57.41356	-0.77028
29/11/2012	211	TRBTDC77	DC	A	10:32	10:42	16	57.41346	-0.77028
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	2	57.40020	-0.77301
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	3	57.40015	-0.77297
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	4	57.40014	-0.77298
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	5	57.40009	-0.77294
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	6	57.40004	-0.77290
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	7	57.39999	-0.77294
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	8	57.39995	-0.77295
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	9	57.39992	-0.77295
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	10	57.39988	-0.77292
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	11	57.39988	-0.77291
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	12	57.39986	-0.77291
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	13	57.39983	-0.77286
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	14	57.39982	-0.77285
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	15	57.39980	-0.77284
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	16	57.39978	-0.77283
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	17	57.39973	-0.77280
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	18	57.39972	-0.77279
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	19	57.39970	-0.77278
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	20	57.39963	-0.77274
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	21	57.39956	-0.77272
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	22	57.39955	-0.77271

CEND19x12: Cruise report for Braemar Pockmarks cSAC, Scanner Pockmark cSAC and Turbot Bank  
NCMPA proposal

Date sampled	Stn no.	Station code	Gear code	Replicate	Time for SOL	Time for EOL	Still no.	Latitude (degrees)	Longitude (degrees)
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	23	57.39951	-0.77271
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	24	57.39949	-0.77269
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	25	57.39947	-0.77269
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	26	57.39943	-0.77265
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	27	57.39937	-0.77263
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	28	57.39931	-0.77260
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	29	57.39928	-0.77260
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	30	57.39923	-0.77260
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	31	57.39915	-0.77254
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	32	57.39911	-0.77255
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	33	57.39907	-0.77252
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	34	57.39904	-0.77248
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	35	57.39901	-0.77247
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	36	57.39899	-0.77246
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	37	57.39898	-0.77247
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	38	57.39890	-0.77243
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	39	57.39886	-0.77242
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	40	57.39881	-0.77241
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	41	57.39874	-0.77235
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	42	57.39868	-0.77234
29/11/2012	212	TRBTDC78	DC	A	11:08	11:29	43	57.39859	-0.77230
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	2	57.37911	-0.77746
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	3	57.37911	-0.77751
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	4	57.37902	-0.77751
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	5	57.37895	-0.77753
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	6	57.37893	-0.77754
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	7	57.37891	-0.77755
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	8	57.37885	-0.77755
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	9	57.37881	-0.77756
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	10	57.37877	-0.77759
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	11	57.37869	-0.77760
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	12	57.37859	-0.77763
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	13	57.37853	-0.77766
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	14	57.37844	-0.77772
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	15	57.37837	-0.77775
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	16	57.37837	-0.77775
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	17	57.37833	-0.77775
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	18	57.37830	-0.77775
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	19	57.37823	-0.77778
29/11/2012	213	TRBTDC79	DC	A	13:30	13:45	20	57.37823	-0.77778
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	2	57.35049	-0.78543
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	3	57.35049	-0.78547
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	4	57.35038	-0.78551
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	5	57.35030	-0.78552
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	6	57.35024	-0.78552
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	7	57.35021	-0.78554
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	8	57.35014	-0.78557
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	9	57.35005	-0.78558
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	10	57.34997	-0.78565
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	11	57.34990	-0.78568
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	12	57.34989	-0.78568
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	13	57.34982	-0.78568
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	14	57.34975	-0.78571
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	15	57.34973	-0.78572
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	16	57.34969	-0.78572
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	17	57.34966	-0.78574
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	18	57.34965	-0.78575
29/11/2012	214	TRBTDC43	DC	A	14:14	14:27	19	57.34958	-0.78577
29/11/2012	215	TRBTDC80	DC	A	14:53	15:02	2	57.33717	-0.78690
29/11/2012	215	TRBTDC80	DC	A	14:53	15:02	3	57.33717	-0.78689
29/11/2012	215	TRBTDC80	DC	A	14:53	15:02	4	57.33705	-0.78696
29/11/2012	215	TRBTDC80	DC	A	14:53	15:02	5	57.33702	-0.78694
29/11/2012	215	TRBTDC80	DC	A	14:53	15:02	6	57.33693	-0.78695
29/11/2012	215	TRBTDC80	DC	A	14:53	15:02	7	57.33686	-0.78698

## **9.8 Appendix 8: Daily Progress Reports (DPRs)**

Original content was created pre-GDPR and has been removed as it contained personal information.

No scientific or technical content has been removed.

## DAILY LOG STATUS REPORT

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Current estimated total (Lkm)	Remarks
<b>Acoustic: Multibeam</b>				
Gear type				
<b>Acoustic: Sidescan Sonar</b>				
Gear type				

### Overall Progress Groundtruthing Samples

Action					Remarks

### Weather forecast for the next 24 hours

Weather to hold for Sunday 18<sup>th</sup> but set to deteriorate on Monday 19<sup>th</sup> Nov

### Planned operation for the next 24 hours (00:00 to 24:00 on 18/11/12)

Continue transit to Braemar Pockmark cSAC and commence acoustic survey (multibeam and sidescan) at approx midday. Groundtruthing will commence with drop camera transects over pockmark features.

### Agreed Changes to Scope/Survey operation priorities

Planned acoustic lines will be modified to take account of 500m exclusion zone from Marathon Oil well heads 16/03 b/c (Licence No P313)

### CEFAS/JNCC Comments

CEFAS SIC...Sue Ware..... JNCC Rep: ... *Roddy*

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 2 – Sunday 18/11/12**

Vessel: RV Cefas Endeavour	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey
GSM : 07799 773456	Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 2	Location at 24:00: 58° 57.9313N, 001° 26.7295E
Date: 18/11/12	

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		2
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	Transit	Transit to Braemar cSAC
10:45	Offshore Calibrations	CTD (SVP) for MBES
11:30	Equipment/ Downtime	GPS sidescan towfish issues
11:40	(TOSu)	Acoustics started but aborted due to poor weather
12:30	(TOSu)	Acoustic line BRMB 12 (MBES & SS)
13:39	(TOSu)	Steam back to run BRMB 10 (one direction only)
15:25	(TOSu)	Acoustic Line BRMB 10 (MBES & SS)
16:30	(TOSu)	Steam back to run BRMB 8 (one direction only)
18:10	(TOSu)	Acoustic Line BRMB 8 (MBES & SS)
18:40	(TOSu)	Steam back to run BRMB 14 (one direction only)
20:10	(TOSu)	Acoustic Line BRMB 14 (MBES & SS)
20:50	(TOSu)	Steam back to run BRMB 16 (one direction only)
21:50	(TOSu)	Acoustic Line BRMB 16 (MBES & SS)
22:20	(TOSu)	Steam back to run BRMB 18 (one direction only)
23:15	Ship/Plant Downtime	Winch fault - tripped out/engineer called – had to return to SOL
23:55	(TOSu)	Acoustic Line BRMB 18

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 280° Wind speed: 23 knots Wave height: 3m Visibility: ~10miles	Wind dir: 280° Wind speed: 20 knots Wave height: 2-3m Visibility: ~10miles	Wind dir: 260° Wind speed: 25 knots Wave height: 3m Visibility: ~10miles	Wind dir: 225° Wind speed: 25 – 30 knots Wave height: 3m Visibility: >10miles	Weather deteriorating

## DAILY LOG STATUS REPORT

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:45	05:15	
Total Operation Acoustic Survey (TOSu)	11:40	11:40	
Total Operation Sampling (TOSa)		00:00	
Equipment/Downtime	00:10	00:10	
Ship/Plant Downtime	00:40	00:40	
Waiting On Weather		00:00	
Transit	10:45	23:15	
Standby Port		07:00	
Others			
<b>Total:</b>	<b>24:00</b>	<b>48:00</b>	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Acoustic: Multibeam</b>			
EM 2040	32	50	Lines only run in one direction due to poor weather/sea state.
Beam angle (swathe angle width) on multibeam head was reduced to reduce footprint size and improve data quality. Resulted in less coverage but improved quality in multibeam data.			
<b>Acoustic: Sidescan Sonar</b>			
Edgetech 4200 MP (200/400kHz)	32	32	Lines only run in one direction due to poor weather/sea state

### Overall Progress Groundtruthing Samples

Action			Remarks
-			

### Weather forecast for the next 24 hours

Gale Force 8 to Severe Gale Force 9 forecast for Monday.

### Planned operation for the next 24 hours (00:00 to 24:00 on 19/11/12)

Continue planned acoustic lines and commence groundtruthing (camera transects and grab) within Braemar Pockmark survey area (dependent on weather)

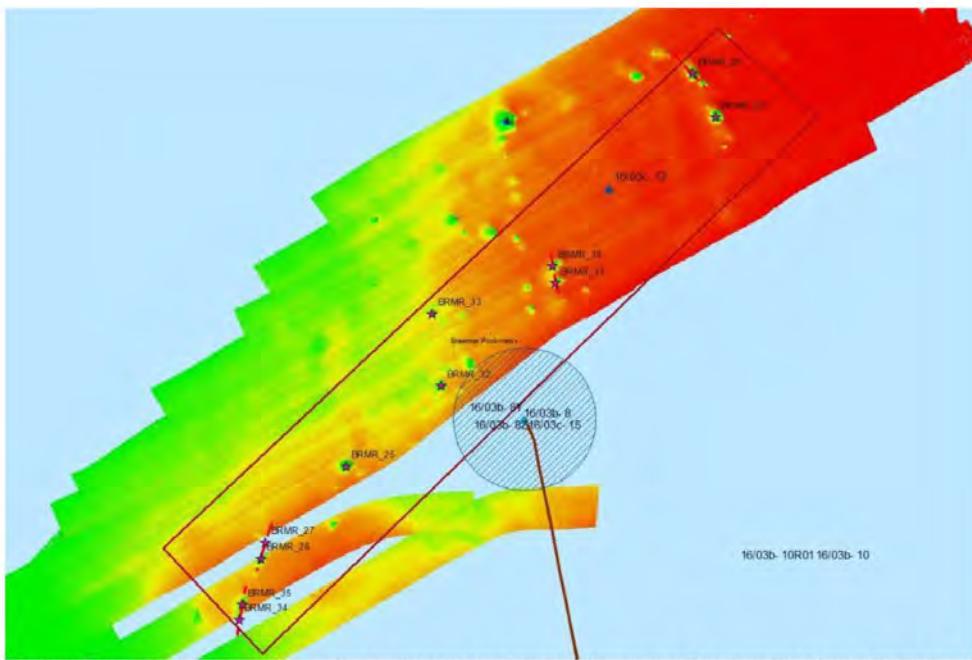
### Agreed Changes to Scope/Survey operation priorities


### CEFAS/JNCC Comments

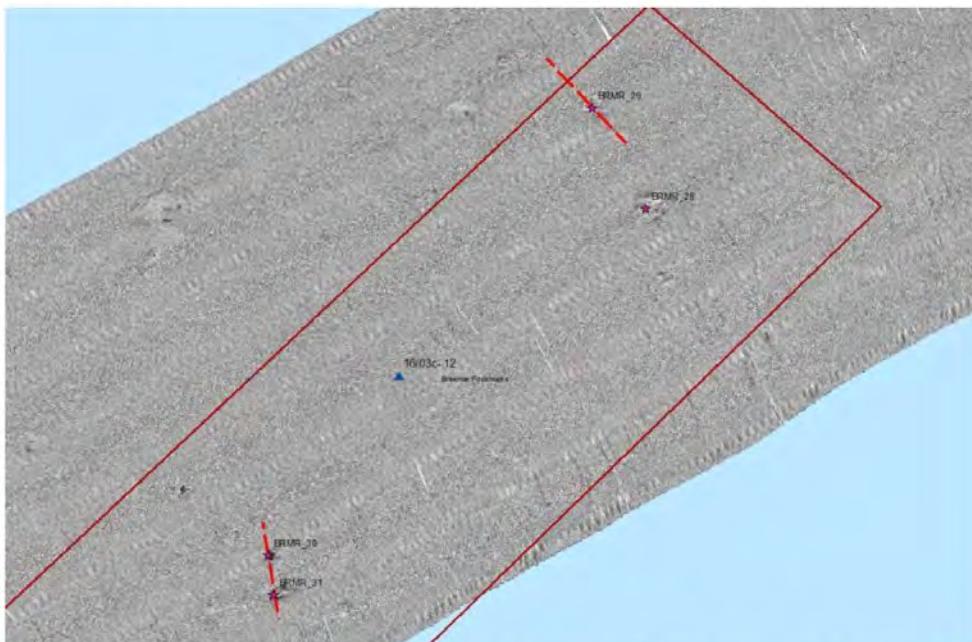

CEFAS SIC.....

JNCC Rep: ..... *Natalia*

## DAILY LOG STATUS REPORT



Preliminary multibeam bathymetry gathered to date for Braemar Pockmarks (prior to being blown out by weather). Proposed camera transect locations shown. Red box delineates cSAC boundary. Blue circle delineates well-head exclusion zone.



Preliminary multibeam backscatter for NE end of Braemar. Darker areas within pockmarks suggest harder substrata (potentially Methane Derived Authigenic Carbonate)

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 3 – Monday 19/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 3	Location at 24:00: 58° 53.8N, 001° 37.1E
Date: 19/11/12	

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		2
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	ToSu	continue acoustic Line BRMB 18 (MBES & SS)
00:25	ToSu	Steam back to run BRMB 6 (one direction only)
01:29	ToSu	Acoustic Line BRMB 6 (MBES & SS)
01:57	ToSu	Steam to end of Line 7 - trial line in NE - SW direction
02:41	ToSu	Acoustic Line BRMB 7 (MBES only) - poor quality
02:48	ToSu	Steam to end of Line 7 for re-run
03:15	ToSu	Acoustic Line BRMB 7 (MBES only) - line re-run
03:45	ToSu	Steam back to run BRMB 9 (one direction only)
04:27	ToSu	Acoustic Line BRMB 9 (MBES only)
05:04	ToSu	Steam back to run BRMB 11 (one direction only)
05:55	ToSu	Acoustic Line BRMB 11 (MBES only)(nav dropped out 06:05)
06:40	ToSu	Steam back to run BRMB 12 (one direction only)
07:36	ToSu	Acoustic Line BRMB 12 (MBES only)
08:24	ToSu	Steam back to run BRMB 13 (one direction only)
09:35	ToSu	Acoustic Line BRMB 13 (MBES only)
10:20	WoW	Weather & sea state deteriorating - Waiting on Weather (WoW)

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 220° Wind speed: 23 knots Wave height: 3m Visibility: ~10 nm	Wind dir: 200° Wind speed: 38-47 knots Wave height: 4m Visibility: overcast and rain, 2nm	Wind dir: 190° Wind speed: 38 knots Wave height: 4m Visibility: ~10nm	Wind dir: 180° Wind speed: 30-40 knots Wave height: 4m Visibility: overcast and rain, ~5nm	

## DAILY LOG STATUS REPORT

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations		05:15	
Total Operation Acoustic Survey (TOSu)	10:20	22:00	
Total Operation Sampling (TOSa)		00:00	
Equipment/Downtime		00:10	
Ship/Plant Downtime		00:40	
Waiting On Weather (WoW)	13:40	13:40	
Transit		23:15	
Standby Port			
Others			
<b>Total:</b>	<b>24:00</b>	<b>72:00</b>	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Acoustic: Multibeam</b>			
EM 2040	44	94	Lines only run in one direction due to poor weather/sea state.
Beam angle (swathe angle width) on multibeam head was reduced to reduce footprint size and improve data quality. Resulted in less coverage but improved quality in multibeam data.			
<b>Acoustic: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	8	31	Lines only run in one direction due to poor weather/sea state

### Overall Progress Groundtruthing Samples

Action			Remarks
-			

### Weather forecast for the next 24 hours

Weather forecast to ease slightly on Tuesday 20<sup>th</sup>.

### Planned operation for the next 24 hours (00:00 to 24:00 on 19/11/12)

Dependent on weather, recommence multibeam and sidescan on Braemar Pockmark cSAC. Continue running lines in one direction with weather behind if required.

### Agreed Changes to Scope/Survey operation priorities

No changes to current plan, although likely that some planned acoustic lines will be shelved due to downtime.

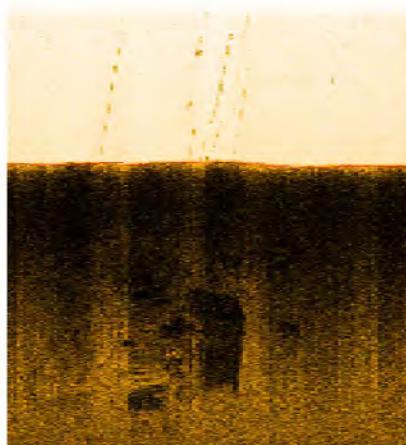
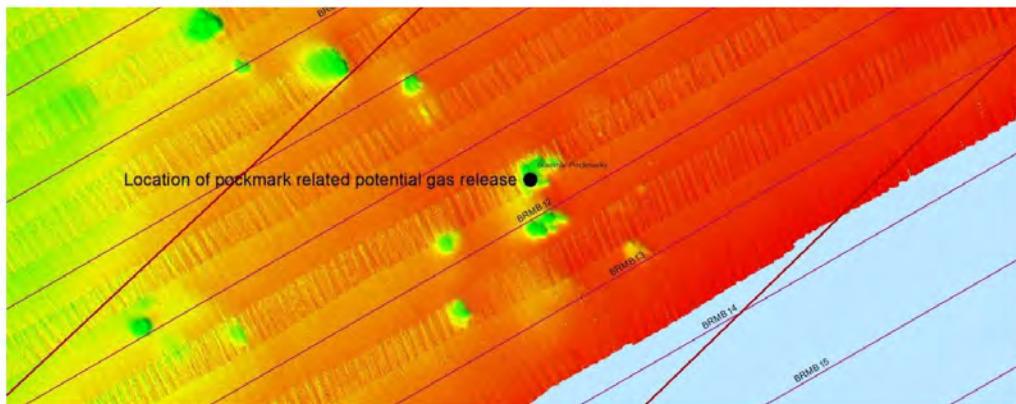
### CEFAS/JNCC Comments

tidal correction issues with multibeam data. This will be corrected back at Cefas Lab with C-Nav corrections.

CEFAS SIC.....Sue Ware.....

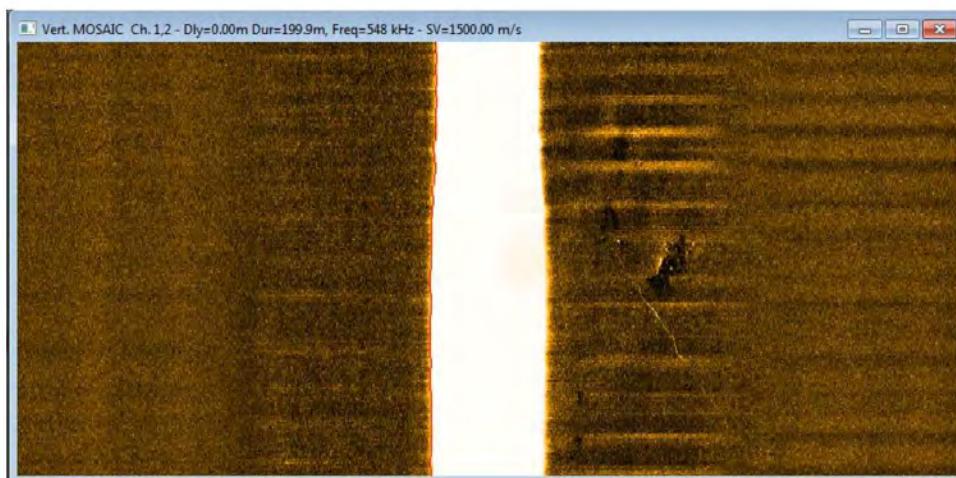
JNCC Rep: ...

## DAILY LOG STATUS REPORT



Location of pockmark gas release shown in map at top within cSAC boundary. Sidescan trace above shows plan view of seabed (note pockmark high reflectivity area of shell hash/carbonate cobbles). Water column above pockmark can be seen, with gas bubbles streaming upwards

Image below shows potential trawl scar through pockmark, with area of high reflectivity. You can see the effect of swell due to the poor weather on the sidescan trace. This pockmark was outside cSAC boundary



**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 4 – Tuesday 20/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 4 Date: 20/11/12	Location at 24:00: 58° 59.40N, 001° 29.00E

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		2
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	WoW	Weather downtime
07:30	Offshore Calibrations	SVP for MBES calibration
08:00	TOSu	Acoustic line BRMB 15 (MBES only)
08:21	TOSu	Steam back to run BRMB 17 (one direction only)
08:52	TOSu	Acoustic line BRMB 17 (MBES only)
09:13	TOSu	Steam back to run BRMB 19 (one direction only)
09:42	TOSu	Acoustic line BRMB 19 (MBES only)
10:08	TOSu	Steam back to run BRMB Cross 1 (one direction only)
10:50	TOSu	Acoustic line BRMB Cross 1 (MBES & SS)
11:38	TOSu	Steam back to run BRMB Cross 2
12:30	TOSu	Acoustic line BRMB Cross 2 (MBES & SS) - aborted due to weather/poor quality
12:56	TOSa	Steam to first camera transect
	TOSa	Camera transect BRMR 34-35 - Flash failed to operate - discovered once camera recovered (Aperture and focus settings also failed). No stills for this transect (only video)
13:30	TOSa	steam to BRMR 26-27
15:10	TOSa	Camera flash failed and swapped out
15:40	Equipment/Downtime	Camera transect BRMR 26-27
15:50	TOSa	Camera transect BRMR 26-27
17:00	TOSa	steam to BRMR 25
17:30	TOSa	Camera transect BRMR 25a
18:09	TOSa	Camera transect BRMR 25b
18:56	TOSa	Camera transect BRMR 25c
20:30	TOSa	steam to BRMR 32
20:50	TOSa	Camera transect BRMR 32
21:25	TOSa	steam to BRMR 37
21:35	TOSa	Camera transect BRMR 37
22:30	TOSa	steam to BRMR 33
22:40	TOSa	Camera transect BRMR 33
23:10	TOSa	steam to BRMR 30-31
23:45	TOSa	Camera transect BRMR 30-31

## DAILY LOG STATUS REPORT

### Weather

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 210° Wind speed: 22 knots Wave height: 3m Visibility: <10miles	Wind dir: 200° Wind speed: 20-30 knots Wave height: 2-3m Visibility: <10miles	Wind dir: 175° Wind speed: 29 knots Wave height: 3m Visibility: <10miles	Wind dir: 200° Wind speed: 25-30 knots Wave height: 2-3m Visibility: <10miles	

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:30	05:45	
Total Operation Acoustic Survey (TOSu)	04:56	26:56	
Total Operation Sampling (TOSa)	10:54	10:54	
Equipment/Downtime		00:20	Flash failed on drop camera frame, also issues with new Kongsberg camera prior to first tow, although not separated out from sampling time
	00:10		
Ship/Plant Downtime		00:40	
Waiting On Weather	07:30	21:10	
Transit		23:15	
Standby Port		00:00	
Others		00:00	
<b>Total:</b>	<b>24:00</b>	<b>96:00</b>	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Acoustic: Multibeam</b>			
EM 2040	22	116	Lines only run in one direction due to poor weather/sea state.
			Beam angle (swathe angle width) on multibeam head was reduced to reduce footprint size and improve data quality. Resulted in less coverage but improved quality in multibeam data.
<b>Acoustic: Sidescan Sonar</b>			
Edgetech 4200 MP (200/400kHz)	7	32	Lines only run in one direction due to poor weather/sea state

### Overall Progress Groundtruthing Samples

Action			Remarks
Drop Camera transects (video and stills)	9	-	

### Weather forecast for the next 24 hours

Weather due to ease but forecast for gales from late Wednesday/early Thursday

## DAILY LOG STATUS REPORT

**Planned operation for the next 24 hours (00:00 to 24:00 on 21/11/12)**

Continue with camera transects over pockmark areas, and then commence grab sampling.

**Agreed Changes to Scope/Survey operation priorities**

No changes to scope

**CEFAS/JNCC Comments**

CEFAS SIC...Sue Ware.....

JNCC Rep: ...

*R. Doherty*

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 5 – Wednesday 21/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 5 Date: 21/11/12	Location at 24:00: 59° 0.04N, 001° 28.696E

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		2
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSa	Camera transect BRMR 30-31 continued
00:20	TOSa	transit to next camera transect
00:50	TOSa	Camera transect BRMR 38
01:15	TOSa	transit to next camera transect
01:30	TOSa	Camera transect BRMR 28-4
01:50	TOSa	transit to next camera transect
01:53	TOSa	Camera transect BRMR 28-3
02:03	TOSa	transit to next camera transect
02:08	TOSa	Camera transect BRMR 28-2
02:22	TOSa	transit to next camera transect
02:24	TOSa	Camera transect BRMR 28-1
02:45	TOSa	transit to next camera transect
02:54	TOSa	Camera transect BRMR 29
03:15	TOSa	transit to next camera transect
03:20	TOSa	Camera transect BRMR 29A
03:56	TOSa	transit to next camera transect
04:00	TOSa	Camera transect BRMR 42
04:40	TOSa	transit to next camera transect
04:42	TOSa	Camera transect BRMR 41
05:30	TOSa	transit to next camera transect
05:33	TOSa	Camera transect BRMR 41A
06:00	TOSa	transit to next camera transect
06:17	TOSa	Camera transect BRMR 40
06:49	TOSa	transit to next camera transect
06:55	TOSa	Camera transect BRMR 39
07:14	TOSa	transit to next camera transect
07:24	TOSa	Camera transect BRMR 39A
07:47	TOSu	transit to BRMB 14
08:30	Offshore Calibrations	SVP drop for MBES

## DAILY LOG STATUS REPORT

08:55	TOSu	Acoustic line BRMB 14 (MBES only)
09:11	TOSu	Transit to next acoustic line
09:33	TOSu	Acoustic line BRMB Cross2A (SS & MBES)
10:02	TOSu	Transit to next acoustic line
10:33	TOSu	Acoustic line BRMB Cross2B (SS & MBES) – Cross-line repeated due to insufficient run-in allowed and towfish too far off bottom when half way across site
10:45	TOSa	Transit to grab location
11:46	TOSa	Grab sample (HG11X) - no sample
12:50	TOSa	Grab sample (HG11A)
13:10	TOSa	Grab sample (HG11B)
13:29	TOSa	Transit to grab location
13:38	TOSa	Grab sample BRMR 1 (Day Grab)
13:58	TOSa	Transit to grab location
14:10	TOSa	Grab sample BRMR 2 (Day Grab)
14:21	TOSa	Transit to grab location
14:29	TOSa	Grab sample BRMR 5 (Day Grab)
14:39	TOSa	Transit to grab location
14:47	TOSa	Grab sample BRMR 3 (Day Grab)
14:57	TOSa	Transit to grab location
15:32	TOSa	Grab sample (HG10X) - no sample
15:45	TOSa	Grab sample (HG10A)
16:00	TOSa	Grab sample (HG10X) - no sample
16:05	TOSa	Grab sample (HG10B)
16:15	TOSa	Grab sample (HG10X) - no sample
16:20	TOSa	Grab sample (HG10X) - no sample
16:25	TOSa	Transit to grab location
16:40	TOSa	Grab sample (HG09A)
16:45	TOSa	Grab sample (HG09X) - no sample
16:52	TOSa	Grab sample (HG09B)
17:02	TOSa	Grab sample (HG09X) - no sample
17:07	TOSa	Grab sample (HG09X) - no sample
17:13	TOSa	Transit to grab location
17:47	TOSa	Grab sample (HG06A) - Hamon grab wire changed due to continual no-fires of grabs
18:00	TOSa	Grab sample (HG06B)
18:10	TOSa	Grab sample (HG06C)
18:15	TOSa	Transit to grab location
18:26	TOSa	Grab sample BRMR 7 (Day Grab)
18:35	TOSa	Transit to grab location
18:38	TOSa	Grab sample BRMR 6 (Day Grab)
18:47	TOSa	Transit to grab location
19:20	TOSa	Grab sample BRMR 8 (Day Grab)
19:30	TOSa	Transit to grab location
19:40	TOSa	Grab sample BRMR 10 (Day Grab)
19:49	TOSa	Transit to grab location
19:55	TOSa	Grab sample (HG12A)
20:10	TOSa	Grab sample (HG12B)
20:19	TOSa	Grab sample (HG12C)
20:24	TOSa	Transit to grab location
20:30	TOSa	Grab sample (HG8X) - no sample
20:43	TOSa	Grab sample (HG8A)
20:54	TOSa	Grab sample (HG8X) - no sample
21:02	TOSa	Grab sample (HG8X) - no sample
21:10	TOSa	Grab sample (HG8B)
21:18	TOSa	Grab sample (HG8C)
21:23	TOSa	Transit to grab location
21:37	TOSa	Grab sample BRMR 13 (Day Grab)

## DAILY LOG STATUS REPORT

21:47	TOSa	Transit to grab location
22:21	TOSa	Grab sample BRMR 12 (Day Grab)
22:30	TOSa	Transit to grab location
22:57	TOSa	Grab sample BRMR 17 (Day Grab)
23:08	TOSa	Transit to grab location
23:27	TOSa	Grab sample BRMR 16 (Day Grab)
23:37	TOSa	Transit to grab location HG3

### Weather

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind: 200°, 20knts	-	-	-	
Wave Ht: 2-3m Vis:<10 miles					Forecast looking poor for Thursday

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:25	06:10	
Total Operation Acoustic Survey (TOSu)	02:33	29:29	
Total Operation Sampling (TOSa)	21:02	31:56	
Equipment/Downtime		00:20	
Ship/Plant Downtime		00:40	
Waiting On Weather		21:10	
Transit		23:15	
Standby Port			
Others			
Total:	24	120	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Acoustic: Multibeam</b>			
EM 2040	7	123	Beam angle (swathe angle width) on multibeam head was reduced to reduce footprint size and improve data quality. Resulted in less coverage but improved quality in multibeam data.
<b>Acoustic: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	5	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
Drop camera transects	13	22	
Hamon Grab	15	15	Macrofauna/PSA
Day Grab	12	12	Macrofauna/meiofauna/PSA

## DAILY LOG STATUS REPORT

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**Weather forecast for the next 24 hours**

Southerly Gale warnings in force for Thursday AM. Weather downtime expected

**Planned operation for the next 24 hours (00:00 to 24:00 on 22/11/12)**

Complete grabbing in early hours and steam down to Scanner Pockmark cSAC to commence acoustic data acquisition prior to bad weather setting in.

**Agreed Changes to Scope/Survey operation priorities**

--

**CEFAS/JNCC Comments**

Hamon grab wire replaced due to continual non-fire of grab when striking seabed. Sidescan/multibeam aborted during cross lines due to sea conditions

CEFAS SIC...Sue Ware.....

JNCC Rep: .....

*Roddy*

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 6 – Thursday 22/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 6 Date: 22/11/12	Location at 24:00: 58°8.30N 0°59.14E (At 01:30 on 23/11/12)

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		2
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSa	Transit to grab location HG3
00:03	TOSa	Grab sample (HG3A)
00:16	TOSa	Grab sample (HG3B)
00:28	TOSa	Grab sample (HG3C)
00:33	TOSa	Transit to grab location
00:40	TOSa	Grab sample BRMR 18 (Day Grab)
00:47	TOSa	Transit to grab location
01:00	TOSa	Grab sample BRMR 19 (Day Grab) - no sample
01:14	TOSa	Grab sample BRMR 19 (Day Grab)
01:19	TOSa	Transit to grab location
01:30	TOSa	Grab sample BRMR 22 (Day Grab)
01:40	TOSa	Transit to grab location
01:50	TOSa	Grab sample (HG2A)
02:01	TOSa	Grab sample (HG2B)
02:08	TOSa	Grab sample (HG2X) no sample
02:13	TOSa	Grab sample (HG2X) no sample
02:20	TOSa	Grab sample (HG2X) no sample
02:38	TOSa	Grab sample (HG2C)
02:43	TOSa	Transit to grab location
02:53	TOSa	Grab sample BRMR 21 (Day Grab)
03:03	TOSa	Transit to grab location
03:12	TOSa	Grab sample BRMR 23 (Day Grab)
03:22	TOSa	Transit to grab location
03:32	TOSa	Grab sample BRMR 24 (Day Grab) no sample
03:46	TOSa	Grab sample BRMR 24 (Day Grab)
03:51	Transit	Transit down to Scanner Pockmarks
08:15	Offshore Calibrations	SVP drop for multibeam
08:45	Equipment Downtime	Tower logging system down – backup PC installed

## DAILY LOG STATUS REPORT

09:29	TOSu	Acoustic line (Scanner 950) (SS & MBES)
10:41	TOSu	Acoustic line (Scanner 570) (SS & MBES)
11:55	TOSu	Steam back to start of next line
13:31	TOSu	re-run Acoustic line (Scanner 950) (SS & MBES)
13:59	WoW	Waiting on Weather

### Weather

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 200° Speed: 20 knots Wave ht: 2-3m Visibility: <10nm	Wind dir: 180° Speed: 30-35 knots Wave ht: 2m Visibility: <10nm	Wind dir: 180° Speed: 42 knots Wave ht: 4m Visibility: <10nm	Wind dir: 180° Speed: 30 knots Wave ht: 4m Visibility: <10nm	Weather deteriorating

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:30	06:40	
Total Operation Acoustic Survey (TOSu)	04:30	33:59	
Total Operation Sampling (TOSa)	03:51	35:47	
Equipment/Downtime		01:04	Backup PC for Tower installed. Layback not available for camera transects.
	00:44		
Ship/Plant Downtime		00:40	
Waiting On Weather	10:01	31:11	
Transit	04:24	27:39	
Standby Port			
Others			
Total:	24:00	144:00	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Scanner: Multibeam</b>			
EM 2040	24	-	Beam angle (swathe angle width) on multibeam head was reduced to reduce footprint size and improve data quality. Resulted in less coverage but improved quality in multibeam data.
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	To be added	-	Data quality poor due to sea conditions/swell effects
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

## DAILY LOG STATUS REPORT

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Scanner Pockmarks</b>			
Drop camera transects			
Hamon grab			
Day grab			
<b>Braemar Pockmarks</b>			
Drop camera transects		22	
Hamon grab	6	21	
Day grab	6	18	

### Weather forecast for the next 24 hours

Gale force winds forecast to subside tomorrow morning. Large swell set to continue into tomorrow but likely to calm down for the afternoon.

### Planned operation for the next 24 hours (00:00 to 24:00 on 23/11/12)

Re-commence acoustics once sea conditions improve – currently forecast for tomorrow

### Agreed Changes to Scope/Survey operation priorities

Lines run in one direction due to poor sea conditions

### CEFAS/JNCC Comments

Problems getting towfish down to seabed due to weather/sea conditions and amount of cable available on winch (approx 560m). Multibeam backscatter apparently showed trawl marks and pockmarks better than sidescan data being collected, partly due to sea conditions/swell

CEFAS SIC.....Sue Ware JNCC Rep: ..... 

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 7 – Friday 23/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 7 Date: 23/11/12	Location at 24:00: 58°16.346258N 0°57.46844E

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		2
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	WoW	Waiting on Weather
07:31	Offshore calibrations	SVP drop for Multibeam
07:43	TOSu	Acoustic line Scanner 760 (MBES only)
08:22	TOSu	Acoustic line Scanner 1140 (MBES only)
08:49	TOSu	Acoustic line Scanner 380 (MBES only)
09:46	TOSu	Acoustic line Scanner 1140 Re-run (MBES only)
10:05	Equipment/ Downtime	Multibeam downtime and getting back on to line
10:35	TOSu	Acoustic line Scanner 1520 (MBES only)
11:06	TOSu	Acoustic line Scanner 1140 re-run (MBES only)
11:33	TOSu	Acoustic line Scanner 1140 re-run (MBES only)
12:41	TOSu	Acoustic line Scanner Baseline (MBES only)
13:08	Equipment/ Downtime	Multibeam Positioning Unit/GPS error - having to re-run line and return to start - downtime
13:52	TOSu	Acoustic line Scanner Baseline re-run (MBES only)
15:14	TOSa	Day grab sampling within and adjacent to site: 13 stations in total (majority single samples with subset of 3 replicates plus organics)

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 220° Speed: 30 knots Wave ht: 3m Visibility: <10nm	Wind dir: 250° Speed: 25 knots Wave ht: 3m Visibility: <10nm	Wind dir: 230° Speed: 19 knots Wave ht: 2m Visibility: <10nm	Wind dir: 245° Speed: 28 knots Wave ht: 2m Visibility: <10nm	

## DAILY LOG STATUS REPORT

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:12	06:52	
Total Operation Acoustic Survey (TOSu)	06:17	40:16	
Total Operation Sampling (TOSa)	08:46	44:33	
Equipment/Downtime	01:14	02:18	
Ship/Plant Downtime		00:40	
Waiting On Weather	07:31	38:42	
Transit		27:39	
Standby Port			
Others			
<b>Total:</b>	<b>24:00</b>	<b>168:00</b>	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Scanner: Multibeam</b>			
EM 2040	27	51	Beam angle (swathe angle width) on multibeam head was reduced to reduce footprint size and improve data quality. Resulted in less coverage but improved quality in multibeam data. Lines only run in one direction due to poor conditions
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	-	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action			Remarks
<b>Scanner Pockmarks</b>			
Drop camera transects	-	-	
Hamon grab	-	-	
Day grab	21	-	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

Weather to improve and become cyclonic. However, looking ahead, gale warnings forecast for Sunday.

### Planned operation for the next 24 hours (00:00 to 24:00 on 24/11/12)

Continue with day grab sampling until weather and sea conditions improve sufficiently. Then undertake camera transects and complete acoustic coverage.

## DAILY LOG STATUS REPORT

### **Agreed Changes to Scope/Survey operation priorities**

Priorities for Scanner reviewed during weather downtime; complete acoustics, camera transects and sampling within pockmark features.

### **CEFAS/JNCC Comments**

Following weather downtime in morning, conditions improved sufficiently to allow acoustics but then deteriorated in afternoon to an extent that drop camera or acoustics could not be continued. Decision taken to use what would have been weather downtime to gather a suite of day grab samples within site and adjacent to site within SE East Fladen Nature Conservation MPA proposal. Extra sample taken at subset of locations for Cefas to be worked up for 'organics'. Results will be made available to JNCC following analysis.

CEFAS SIC.....Sue Ware.....

JNCC Rep: .....

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 8 – Saturday 24/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 8 Date: 24/11/12	Location at 24:00: 58°18.58N 0°57.44E Scanner Pockmark cSAC

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		2
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSa	Complete Day grab sampling within and adjacent to site: 34 stations in total (majority single samples with subset of 3 replicates plus organics)
10:40	TOSa	Transit to camera transects
11:20	TOSa	Camera transect SCDC 04
12:33	TOSa	Camera transect SCDC 10
13:12	TOSa	Camera transect SCDC 5
13:54	TOSa	Camera transect SCDC 6
14:42	TOSa	Camera transect SCDC 1
15:32	TOSa	Camera transect SCDC 3
16:00	TOSa	Camera transect SCDC 2
16:59	TOSa	Camera transect SCDC 11
18:23	TOSu	Acoustic line Scanner 760 (MBES & SS)
19:40	TOSu	Acoustic line Scanner Baseline (MBES & SS)
20:55	TOSu	Acoustic line Scanner 190 (MBES & SS)
22:12	TOSu	Acoustic line Scanner 1330 (MBES & SS)
23:00	TOSa	Camera transect SCDC 12

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 240° Speed: 14 knots Wave ht: 2m Visibility: <10nm	Wind dir: 210° Speed: 10-12 knots Wave ht: 1m Visibility: <10nm	Wind dir: 170° Speed: 16 knots Wave ht: 1m Visibility: <10nm	Wind dir: 180° Speed: 20-30 knots Wave ht: 1-2m Visibility: <10nm	Weather deteriorating

## DAILY LOG STATUS REPORT

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations		06:52	
Total Operation Acoustic Survey (TOSu)	04:37	44:53	
Total Operation Sampling (TOSa)	19:23	63:56	
Equipment/Downtime		02:18	
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit		27:39	
Standby Port			
Others			
<b>Total:</b>	<b>24:00</b>	<b>192:00</b>	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Scanner: Multibeam</b>			
EM 2040	21	72	Beam angle (swathe angle width) on multibeam head was reduced to reduce footprint size and improve data quality. Resulted in less coverage but improved quality in multibeam data.
			One line re-run over Scanner Pockmark at 400kHz (higher resolution) to try and detect carbonate structures.
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	To be added	To be added	Data quality much improved due to better sea conditions
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action			Remarks
<b>Scanner Pockmarks</b>			
Drop camera transects	9		
Hamon grab			
Day grab	30	51	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

Forecast for southerly Gale 8 to Severe Gale 9 from around 6am.

## DAILY LOG STATUS REPORT

### **Planned operation for the next 24 hours (00:00 to 24:00 on 2511/12)**

Continue camera transects and sampling within pockmarks until weather deteriorates to a level when work is not possible.

### **Agreed Changes to Scope/Survey operation priorities**

Remain on site until remaining camera transects and day grab samples from within the pockmarks have been collected. Monitor forecast bad weather and transit during poor weather to SMPA survey location. SMPA survey re-prioritised from Fladen Ground Nature Conservation MPA proposal to Turbot Bank. Estimated steaming time from Scanner – 6-8 hours dependent on sea conditions.

### **CEFAS/JNCC Comments**

CEFAS SIC....., Sue Ware....., JNCC Rep: ..... 

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 9 – Sunday 25/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 9 Date: 25/11/12	Location at 24:00: 57°22.4037N 0°54.5449W Turbot Bank

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction	1	3
Additional comments:	Muster drill @ 14:00hrs	

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSa	complete Camera transect SCDC 12
00:05	TOSa	Camera transect SCDC15
00:49	TOSa	Camera transect SCDC13
01:25	TOSa	Camera transect SCDC14
02:01	TOSa	Camera transect SCDC9
02:52	TOSa	Camera transect SCDC8
03:47	TOSa	Camera transect SCCS2 (although drop camera not sledge)
05:19	TOSa	Day grab samples from within pockmarks - SCRNPMP1 (3 reps)
05:58	TOSa	Day grab SCRNPMP2 (3 reps)
06:46	TOSa	Day grab SCRNPMP3 (2 reps before being blown out by weather)
07:35	Transit	Blown out by weather so commence transit west to Turbot Bank
17:30	Offshore calibrations	SVP drop for multibeam
18:15	TOSu	Multibeam line Turbot 3800 (run E - W)
20:07	TOSu	Multibeam line Turbot 3600 (run W - E) . Line aborted due to poor quality data
21:50	Other	Time lost turning onto next adjacent line (180° turn) by least experienced (3rd) mate
22:22	TOSu	Multibeam line TRBT50 (run W - E).
23:46	TOSu	Multibeam line TRBT3500A (run E - W) aborted due to sea conditions.

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 120° Speed: 27 knots Wave ht: 2m Visibility: <10nm	Wind dir: 090° Speed: 30-45 knots Wave ht: 3-4m Visibility: <10nm	Wind dir: 020° Speed: 20 knots Wave ht: 2m Visibility: <10nm	Wind dir: 035° Speed: 15-20 knots Wave ht: 2m Visibility: <10nm	Weather deteriorating

**Overall Progress**

## DAILY LOG STATUS REPORT

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:45	07:37	
Total Operation Acoustic Survey (TOSu)	05:13	50:06	
Total Operation Sampling (TOSa)	07:35	71:31	
Equipment/Downtime		02:18	
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit	09:55	37:34	
Standby Port		00:00	
Others	00:32	00:32	Time lost turning onto next adjacent line (180° turn) by least experienced (3 <sup>rd</sup> ) mate
<b>Total:</b>			

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Turbot Bank: Multibeam</b>			
EM 2040	33	33	Lines run in one direction due to sea conditions/weather
<b>Scanner: Multibeam</b>			
EM 2040	-	72	
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	32	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Turbot Bank</b>			
Drop camera transects	-	-	
Hamon grab	-	-	
<b>Scanner Pockmarks</b>			
Drop camera transects	6	15	
Hamon grab	-	-	
Day grab	8	59	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

Weather and sea conditions set to improve in the morning and some settled weather is expected over the coming days

## DAILY LOG STATUS REPORT

### Planned operation for the next 24 hours (00:00 to 24:00 on 26/11/12)

Continue multibeam until conditions permit deployment of hamon grab and camera frame initially within existing CHP data area.

### Agreed Changes to Scope/Survey operation priorities

n/a

### CEFAS/JNCC Comments

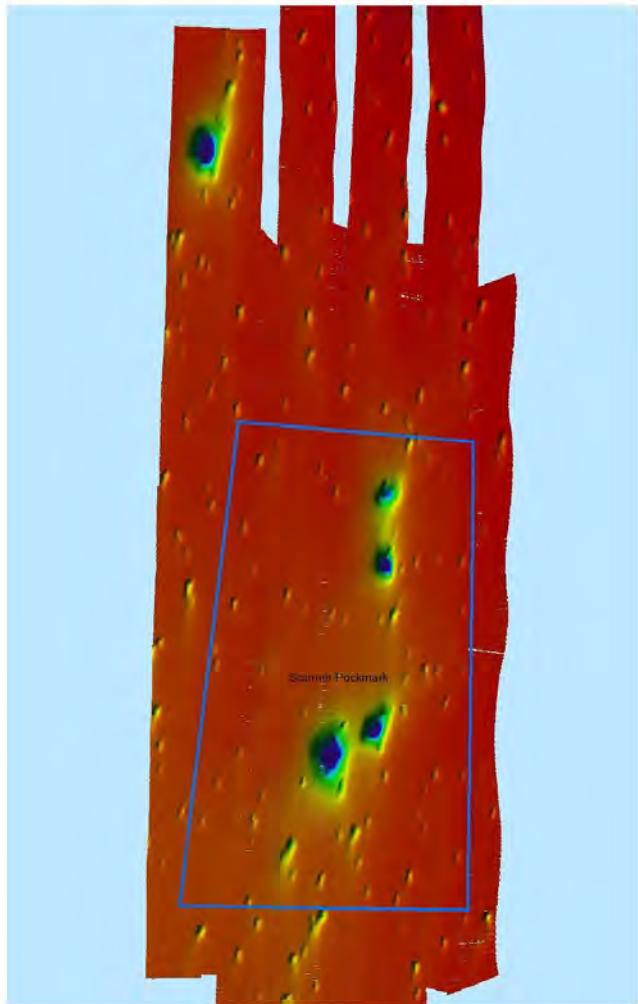
Following the replacement of Tower survey logging PC with backup following failure when arrived at Scanner and following QA checks, it was noted that only a restricted number of fields had been logged by that backup unit. Fixes on tower will be cross-referenced with vessel logs to record spatial positioning information. Relevant offsets (such as Stbd gantry) will then be applied.

*Roddy*

CEFAS SIC...Sue Ware.....

JNCC Rep: .....

.....



Completed bathy for Scanner Pockmark cSAC.

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 10 – Monday 26/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 10 Date: 26/11/12	Location at 24:00: 57°21.0N 0°104.2W Turbot Bank

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		3
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSu	Multibeam line TRBT3500B (run W - E) - line aborted
02:45	TOSu	Multibeam line TRBTBASE (run E - W)
05:44	Equipment downtime	Hamon grabbing within CHP area of Turbot Bank. PSA and infauna (plus HamCam). 3 replicates at a subset; TBRT33 (3), 29(1), TBRT22 (1), 15 (3)
09:15	TOSa	Camera sledge: TBRT 15 - camera light failed – aborted at start
09:30	TOSa	Hamon grabbing TRBT12 (1), TRBT19(3).
11:28	TOSa	Drop camera tow: TRBT 19
12:35	TOSa	Hamon grabbing: TBRT27 (1), 31 (1), 25 (3), 17 (1), 10 (no sample), 5 (1), 8 (3), 4 (1), 3 (no sample), 11 (1), 14 (1), 21 (1), 28 (1), 26 (1), 24 (1), 18 (3), 73 (1), 6 (3), 71 (1), 70 (1)

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 010° Speed: 20 knots Wave ht: 2m Visibility: <10nm	Wind dir: 030° Speed: 20-25 knots Wave ht: 2m Visibility: <10nm	Wind dir: 030° Speed: 20 knots Wave ht: 2m Visibility: <10nm	Wind dir: 025° Speed: 20 knots Wave ht: 1-2m Visibility: <10nm	

## DAILY LOG STATUS REPORT

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations		07:37	
Total Operation Acoustic Survey (TOSu)	05:44	55:50	
Total Operation Sampling (TOSa)	18:01	89:32	
Equipment/Downtime	00:15	02:33	
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit		37:34	
Standby Port		00:00	
Others		00:32	
<b>Total:</b>	<b>24:00</b>	<b>240:00</b>	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Turbot Bank: Multibeam</b>			
EM 2040	30	63	Lines run in one direction due to sea conditions/weather
<b>Scanner: Multibeam</b>			
EM 2040	-	72	
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	32	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Turbot Bank</b>			
Drop camera transects	1	-	Camera failed and had to be restarted numerous times when flash draws a large amount of current to recharge
Hamon grab	38	-	
<b>Scanner Pockmarks</b>			
Drop camera transects	-	15	
Hamon grab	-	-	
Day grab	-	59	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

Northerly 5-7, Sea state rough, showers, visibility good.

## DAILY LOG STATUS REPORT

### Planned operation for the next 24 hours (00:00 to 24:00 on 27/11/12)

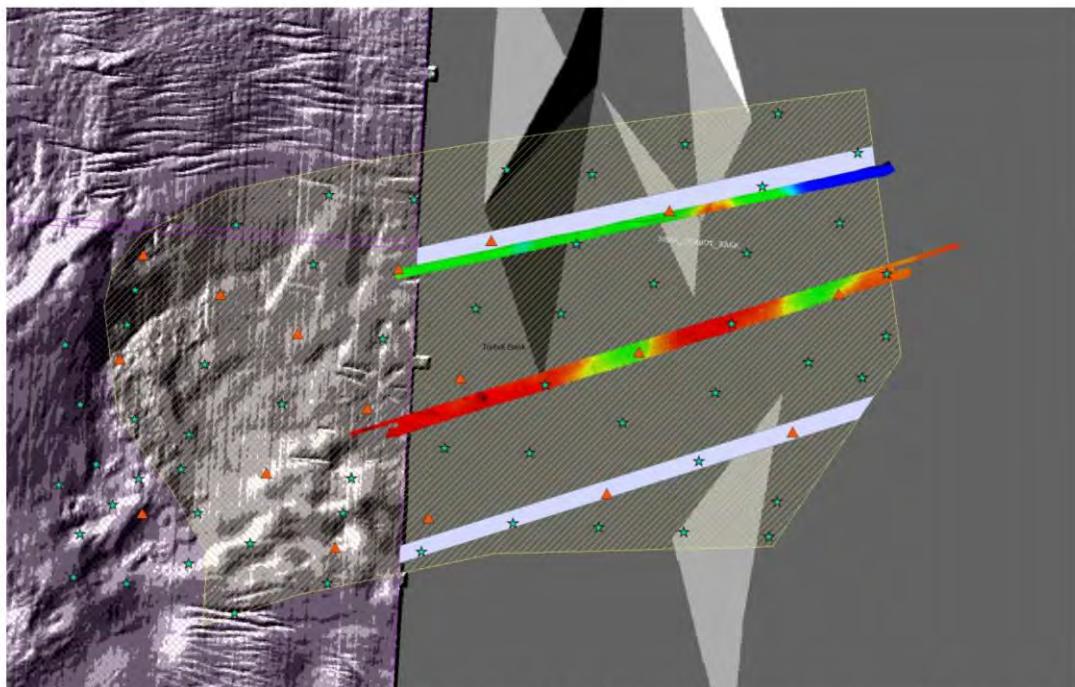
Continue with Hamon grabbing within CHP surveyed area and then move on to drop camera tows (too rocky for camera sledge).

### Agreed Changes to Scope/Survey operation priorities

Additional multibeam lines planned for N – S orientation in line with direction of weather/sea conditions, should weather become too poor for grabbing/camera.

### CEFAS/JNCC Comments

*[Signature]*  
CEFAS SIC... Sue Ware..... JNCC Rep: .....  
.....



Planned at Turbot Bank. The above multibeam lines were completed when the sea conditions were too poor for hamon grab/drop camera deployment. Triangles represent stations with three replicates (to assess species area curves) and camera stations. Stars represent single grab stations.

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 11 – Tuesday 27/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 11 Date: 27/11/12	Location at 24:00: 57°26.5327N 0°50.1275W Turbot Bank

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk
MS	David Mallon	David.Mallon@scotland.gsi.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		3
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSa	Hamon grab TRBT72 (1), 1 (1), 74 (1), 2 (1), 9 (1), 16 (1), 23 (3), 20 (1), 13 (1)
03:53	TOSa	Drop camera transect TRBT23
04:42	TOSa	Drop camera transect TRBT28
05:40	TOSa	Drop camera transect TRBT18
06:31	TOSa	Drop camera transect TRBT6
07:12	TOSa	Drop camera transect TRBT3
08:12	TOSa	Drop camera transect TRBT8
08:48	TOSa	Drop camera transect TRBT10
09:33	TOSa	Drop camera transect TRBT15
10:58	TOSa	Drop camera transect TRBT25
11:50	TOSa	Drop camera transect TRBT33
12:44	TOSa	Drop camera transect TRBT61
13:42	TOSa	Drop camera transect TRBT34
14:37	TOSa	Drop camera transect TRBT30
15:44	TOSa	Drop camera transect TRBT67
16:46	TOSa	Drop camera transect TRBT57
17:49	TOSa	Drop camera transect TRBT62
18:46	TOSa	Drop camera transect TRBT59
19:46	TOSa	Drop camera transect TRBT69 – sea conditions becoming too rough to continue camera/hamon grabbing. Revert to North – South multibeam lines.
20:23	Offshore calibration	SVP drop for multibeam
21:00	TOSu	Steam up to north end of box to start MBES lines
21:48	TOSu	Multibeam line TRBT Base5 (line run N-S due to bad weather)
22:55	TOSu	Steam to end of line again

## DAILY LOG STATUS REPORT

### Weather

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 020° Speed: 22 knots Wave ht: 2m Visibility: <10nm	Wind dir: 010° Speed: 20-35 knots Wave ht: 2m Visibility: <10nm	Wind dir: 005° Speed: 26 knots Wave ht: 2m Visibility: <10nm	Wind dir: 000° Speed: 30-40 knots Wave ht: 3-4m Visibility: <10nm	

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:37	08:14	
Total Operation Acoustic Survey (TOSu)	03:00	58:50	
Total Operation Sampling (TOSa)	20:23	109:55	
Equipment/Downtime		02:33	
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit		37:34	
Standby Port		00:00	
Others		00:32	
<b>Total:</b>	<b>24:00</b>	<b>264:00</b>	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Turbot Bank: Multibeam</b>			
EM 2040	13	76	Lines continue to be run in one direction due to sea conditions/weather
<b>Scanner: Multibeam</b>			
EM 2040	-	72	
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	32	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Turbot Bank</b>			
Drop camera transects	18	19	Camera failed a number of times and had to be restarted numerous times when the flash drew a large amount of current to recharge
Hamon grab	11	49	
<b>Scanner Pockmarks</b>			
Drop camera transects	-	15	
Hamon grab	-	-	

## DAILY LOG STATUS REPORT

Day grab	-	59	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

Wind: Northwest 5 or 6, decreasing 4  
 Sea State: Rough, becoming moderate  
 Weather: Showers  
 Visibility: Good.

### Planned operation for the next 24 hours (00:00 to 24:00 on 28/11/12)

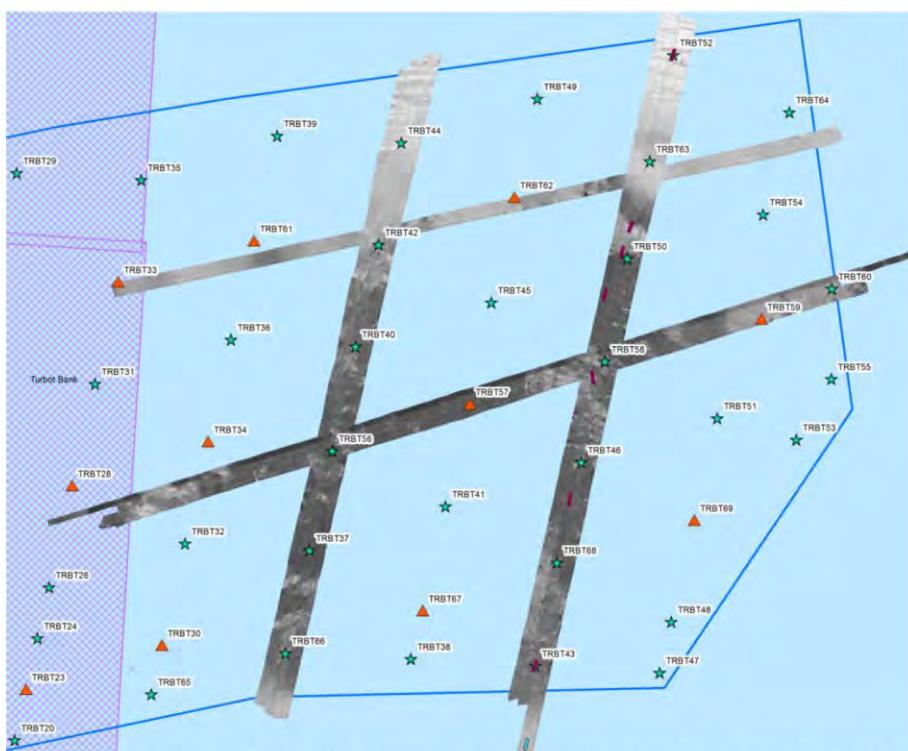
Continue multibeam imaging until sea conditions improve enough to allow hamon grab activities to recommence on the east side of Turbot Bank.

### Agreed Changes to Scope/Survey operation priorities

n/a

### CEFAS/JNCC Comments

CEFAS SIC.....S Ware..... JNCC Rep: .....N Golding.....



Multibeam backscatter for east side of Turbot Bank. The lighter shades in the centre correlate with sand veneer overlying consolidated gravel and pebble with cobbles. Sandy sediment lies to the north.

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 12 – Wednesday 28/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 12 Date: 28/11/12	Location at 24:00: 57°23.0760N 0°46.5027W Turbot Bank

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk
MS	David Mallon	David.Mallon@scotland.gsi.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		3
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
	TOSu	Steam to end of next acoustic line
	TOSu	Multibeam line TRBT B5 200
	TOSu	Multibeam line TRBT B5 400
	TOSu	Multibeam line TRBT Base 7
	TOSu	Multibeam line TRBT B7 200
	TOSu	Multibeam line TRBT B7 400
	TOSa	Hamon grabs at TRBT 47 (1), 48 (1), 69 (3), 53 (1), 51 (1), 55 (1), 59 (3), 60 (1), 54 (1), 64 (1), 52 (1), 49 (1), 63 (1), 62 (3), 50 (no sample), 58 (no sample), 57 (3), 46 (1)

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 355° Speed: 42 knots Wave ht: 3m Visibility: <10nm	Wind dir: 015° Speed: 20-35 knots Wave ht: 2-3m Visibility: <10nm	Wind dir: 000° Speed: 23 knots Wave ht: 2m Visibility: <10nm	Wind dir: 345° Speed: 20-35 knots Wave ht: 1-2m Visibility: <10nm	

**Overall Progress**

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations		08:14	
Total Operation Acoustic Survey (TOSu)	12:54	58:50	
Total Operation Sampling (TOSa)	11:06	109:55	Continual issues with HamCam camera failing during grabbing operations throughout the day

## DAILY LOG STATUS REPORT

Equipment/Downtime		02:33	
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit		37:34	
Standby Port		00:00	
Others		00:32	
Total:	24:00	264:00	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Turbot Bank: Multibeam</b>			
EM 2040	67	143	Lines continue to be run in one direction due to sea conditions/weather
<b>Scanner: Multibeam</b>			
EM 2040	-	72	
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	32	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Turbot Bank</b>			
Drop camera transects		19	
Hamon grab	24	73	
<b>Scanner Pockmarks</b>			
Drop camera transects	-	15	
Hamon grab	-	-	
Day grab	-	59	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

Wind: N to NW 4-5 occasionally 6 at first  
 Sea state: slight to moderate  
 Weather: showers  
 Visibility: good.

### Planned operation for the next 24 hours (00:00 to 24:00 on 29/11/12)

Continue planned Hamon grabbing and additional camera transects identified from multibeam backscatter.  
 Carry out additional multibeam until 01:00hrs and then depart Turbot Bank to meet Lowestoft Harbour pilot at around 7:30am on Sat morning (1<sup>st</sup> Dec)

### Agreed Changes to Scope/Survey operation priorities

North – south acoustic lines developed in light of prevalent weather/sea conditions. East – West lines of sufficient data quality would not be achievable.

## DAILY LOG STATUS REPORT

### **CEFAS/JNCC Comments**

Continued problems with HamCam failing during Hamon grabs (water getting into contacts with subcon connectors?).

2 x lights damaged on Hamon grab when retrieving grab – banging on side of vessel.

CEFAS SIC...Sue Ware..... JNCC Rep: ...Neil Golding.....

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 13 – Thursday 29/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 13 Date: 29/11/12	Location at 24:00: 57°23.8N 0°48.5W Turbot Bank

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk
MS	David Mallon	David.Mallon@scotland.gsi.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		3
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSa	Hamon grab TRBT 41 (1), 68 (1), 43 (1), 38 (1), 67 (3), 66 (1), 65 (1), 30 (3), 37 (1), 32 (1), 56 (1), 34 (3), 40 (1), 36 (1), 42 (1), 61 (3), 44 (1), 39 (1),
08:20	TOSa	Drop camera transect TRBT DC52
09:19	TOSa	Drop camera transect TRBT DC75
09:57	TOSa	Drop camera transect TRBT DC76
10:32	TOSa	Drop camera transect TRBT DC77
11:08	TOSa	Drop camera transect TRBT DC78
11:40	Other	Time getting on station DC79
12:00	Equipment/ Downtime	Camera failed at start of TRBT DC79 - retrieved
12:10	TOSa	Holding station at TRBT DC79
12:30	Equipment/ Downtime	Camera failed again at start of line - retrieved and new connectors fitted
13:30	TOSa	Drop camera transect TRBT DC79
14:14	TOSa	Drop camera transect TRBT DC43
14:53	TOSa	Drop camera transect TRBT DC80
15:02	Offshore Calibrations	SVP drop for multibeam
15:20	TOSu	Transit to first multibeam line
15:24	TOSu	Multibeam line: TRBT8 100
17:13	TOSu	Multibeam line: TRBT8 300
18:59	TOSu	Transit to TRBT 100
19:28	TOSu	Multibeam line: TRBT 100
21:06	TOSu	Multibeam line: TRBT 300
22:38	TOSu	Transit to TRBT6 300
23:27	TOSu	Multibeam line:TRBT6 300

## DAILY LOG STATUS REPORT

### Weather

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 340° Speed: 16 knots Wave ht: 1m Visibility: <10nm	Wind dir: 360° Speed: 10 knots Wave ht: 0.5m Visibility: <10nm	Wind dir: 310° Speed: 12 knots Wave ht: 1m Visibility: <10nm	Wind dir: 310° Speed: 10 knots Wave ht: 1m Visibility: <10nm	

### Overall Progress

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations	00:18	08:32	
Total Operation Acoustic Survey (TOSu)	08:40	80:24	
Total Operation Sampling (TOSa)	13:32	134:33	Continual issues with drop camera failing during camera transects throughout the day. Happened on a number of camera tows.
Equipment/Downtime	01:10	03:43	Camera failure on drop to requiring repair.
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit		37:34	
Standby Port		00:00	
Others	00:20	00:52	Time lost getting onto station by least experienced (3rd) mate
Total:	24:00	312:00	

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Turbot Bank: Multibeam</b>			
EM 2040	90	233	Lines able to be completed in both directions.
<b>Scanner: Multibeam</b>			
EM 2040	-	72	
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	32	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Turbot Bank</b>			
Drop camera transects	8	27	
Hamon grab	26	99	
<b>Scanner Pockmarks</b>			
Drop camera transects	-	15	
Hamon grab	-	-	
Day grab	-	59	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

## DAILY LOG STATUS REPORT

**Weather forecast for the next 24 hours**

Wind: northwesterly, 4 or 5, increasing 6 or 7 later.  
Sea State: Moderate  
Weather: showers  
Visibility: good, occasionally moderate.

**Planned operation for the next 24 hours (00:00 to 24:00 on 30/11/12)**

Leave site at 01:00hrs and transit to Lowestoft

**Agreed Changes to Scope/Survey operation priorities**

n/a

**CEFAS/JNCC Comments**

n/a

CEFAS SIC...Sue Ware..... JNCC Rep: ...Neil Golding.....

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 14 – Friday 30/11/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 14 Date: 30/11/12	Location at 24:00: n/a Transit to Lowestoft

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk
MS	David Mallon	David.Mallon@scotland.gsi.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		3
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	TOSu	Multibeam line:TRBT6 300 continued
00:35	TOSU	Transit line west
01:01	Transit	Depart Turbot Bank for Lowestoft

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	Wind dir: 340° Speed: 16 knots Wave ht: 1m Visibility: <10nm	n/a in transit	n/a in transit	n/a in transit	

**Overall Progress**

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob		07:00	
Offshore Calibrations		08:32	
Total Operation Acoustic Survey (TOSu)	01:01	81:25	Depart Turbot Bank at 1am approx.
Total Operation Sampling (TOSa)		134:33	
Equipment/Downtime		03:43	
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit	22:59	60:33	
Standby Port		00:00	
Others		00:52	
<b>Total:</b>	<b>24:00</b>	<b>336:00</b>	

## DAILY LOG STATUS REPORT

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Turbot Bank: Multibeam</b>			
EM 2040	6	239	
<b>Scanner: Multibeam</b>			
EM 2040	-	72	
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	32	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Turbot Bank</b>			
Drop camera transects	-	27	
Hamon grab	-	99	
<b>Scanner Pockmarks</b>			
Drop camera transects	-	15	
Hamon grab	-	-	
Day grab	-	59	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

n/a

### Planned operation for the next 24 hours (00:00 to 24:00 on 30/11/12)

transit to Lowestoft

### Agreed Changes to Scope/Survey operation priorities

n/a

### CEFAS/JNCC Comments

n/a

CEFAS SIC...Sue Ware..... JNCC Rep: ...Neil Golding.....

**DAILY LOG  
STATUS REPORT  
Braemar/Scanner/SMPA offshore survey  
RV Cefas Endeavour – JNCC – DPR No. 15 – Sat 1/12/12**

Vessel: RV Cefas Endeavour GSM : 07799 773456	Project: CEND 19x/12 Braemar/Scanner/SMPA offshore survey Satellite Voice Bridge: 00 870 (or 00871) 763998027
Daily Progress Report No. 15 Date: 01/12/12	Location at 24:00: n/a

To Company:	Person:	E-mail:
Cefas	Dave Limpenny	david.limpenny@cefas.co.uk
Cefas	Sue Ware	suzanne.ware@cefas.co.uk
Cefas	Sonia Kirby	sonia.kirby@cefas.co.uk
JNCC	Jon Davies	Jon.Davies@jncc.gov.uk
JNCC	Steve Gibson	Steve.Gibson@jncc.gov.uk
JNCC	Gareth Johnson	Gareth.Johnson@jncc.gov.uk
MS	David Mallon	David.Mallon@scotland.gsi.gov.uk

**Safety**

	Today	To Date
Accidents/Incidents		
Near Misses		
Safety Drills/Induction		3
Additional comments:		

**Summary of operations 0000-2400**

Time UTC	Type	Comments
00:00	Transit	Continue transit to Lowestoft
08:00	Demobilisation	Demob in Lowestoft prior to next survey departing at midday

**Weather**

Weather/sea state conditions	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
	-	-	-	-	-

**Overall Progress**

Type	Today (hh:mm)	Accum (hh:mm)	Remarks
Mob/Demob	04:00	11:00	Demob until midday on 1 <sup>st</sup> Dec 2012
Offshore Calibrations		08:32	
Total Operation Acoustic Survey (TOSu)		81:25	
Total Operation Sampling (TOSa)		134:33	
Equipment/Downtime		03:43	
Ship/Plant Downtime		00:40	
Waiting On Weather		38:42	
Transit	08:00	68:33	
Standby Port		00:00	
Others		00:52	
<b>Total:</b>	<b>12:00</b>	<b>348:00</b>	

## DAILY LOG STATUS REPORT

### Overall Progress Geophysical Data Acquisition MBES/Sidescan

Segment/Area/Line	Today (Lkm)	Accum. (Lkm)	Remarks
<b>Turbot Bank: Multibeam</b>			
EM 2040	-	239	
<b>Scanner: Multibeam</b>			
EM 2040	-	72	
<b>Scanner: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	32	
<b>Braemar: Multibeam</b>			
EM 2040	-	123	
<b>Braemar: Sidescan Sonar</b>			
Edgetech 4200 MP (300/600kHz)	-	37	

### Overall Progress Groundtruthing Samples

Action	Today	Accum.	Remarks
<b>Turbot Bank</b>			
Drop camera transects	-	27	
Hamon grab	-	99	
<b>Scanner Pockmarks</b>			
Drop camera transects	-	15	
Hamon grab	-	-	
Day grab	-	59	
<b>Braemar Pockmarks</b>			
Drop camera transects	-	22	
Hamon grab	-	21	
Day grab	-	18	

### Weather forecast for the next 24 hours

n/a

### Planned operation for the next 24 hours (00:00 to 24:00 on 2/12/12)

n/a

### Agreed Changes to Scope/Survey operation priorities

n/a

### CEFAS/JNCC Comments

n/a

CEFAS SIC...Sue Ware.....

JNCC Rep: ...Neil Golding.....

## DAILY LOG STATUS REPORT

