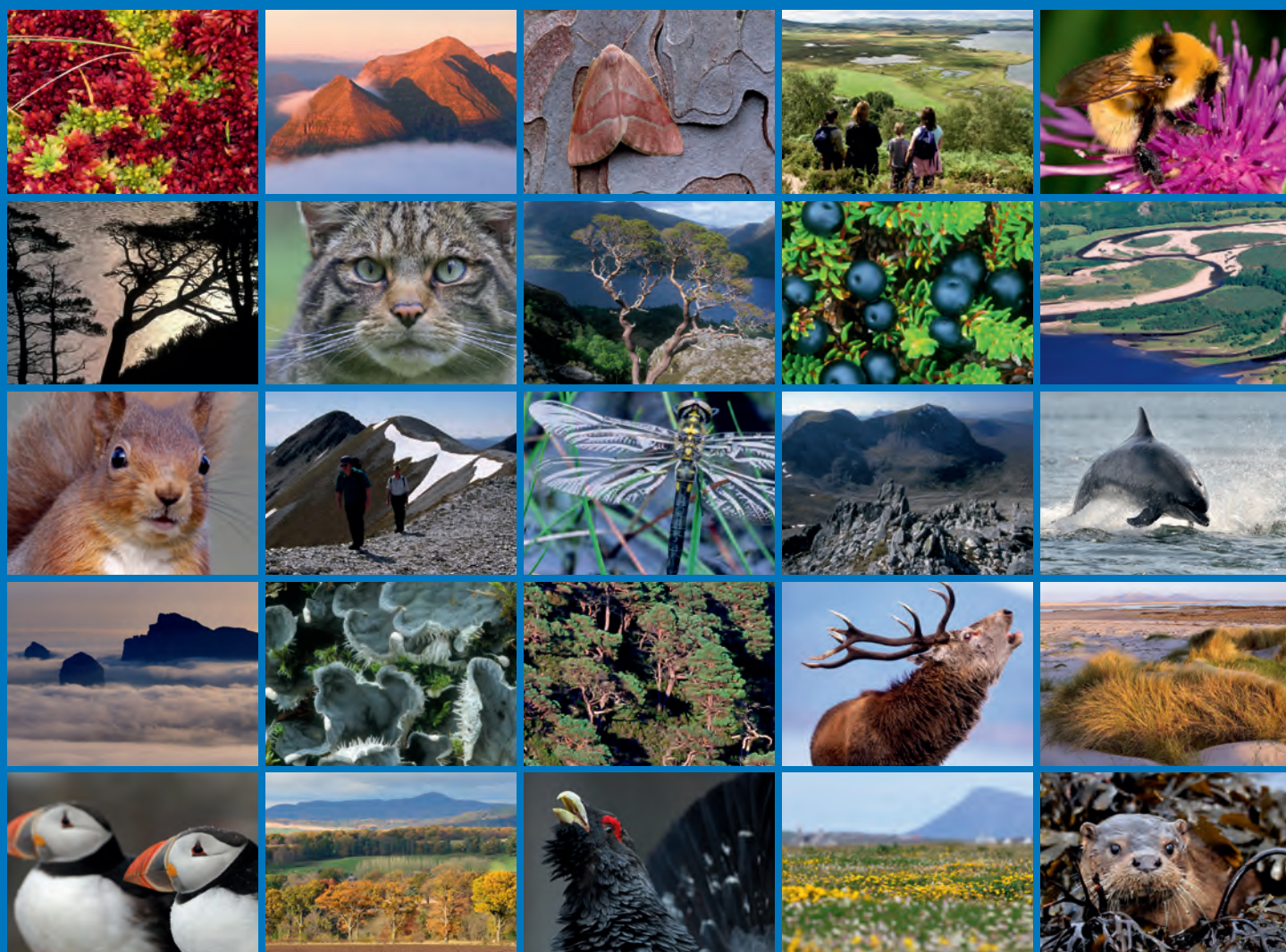


An assessment of the conservation importance of benthic epifaunal species and habitats identified during a series of research cruises around NW Scotland and Shetland in 2011





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COMMISSIONED REPORT

Commissioned Report No. 507

**An assessment of the conservation importance
of benthic epifaunal species and habitats
identified during a series of research cruises
around NW Scotland and Shetland in 2011**

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Summary

An assessment of the conservation importance of benthic epifaunal species and habitats identified during a series of research cruises around NW Scotland and Shetland in 2011

Commissioned Report No. 507 (Project no. 13058)

Contractor: Dr Colin Moore

Year of publication: 2012

Background

To help target marine nature conservation action in Scotland, SNH and JNCC have generated a focused list of habitats and species of importance in Scottish waters - the Priority Marine Features (PMFs). A subset of these features (termed MPA search features) will drive the identification of Nature Conservation MPAs. The principal aim of the present investigation was to improve knowledge of the occurrence and distribution of species and habitats of recognised conservation importance in Scottish waters, especially PMFs, but also taking into consideration other importance measures. This was to be achieved through the analysis of seabed video and still photographic imagery collected during research cruises around Scotland in 2011 by Marine Scotland Science, Scottish Environment Protection Agency and Scottish Natural Heritage.

Imagery was analysed from surveys at 9 locations: around Fetlar and south-west of Scalloway in the Shetland Isles, along the northern mainland coast off Armadale and in Loch Eriboll, in the mouth of Little Loch Broom, in two bank areas in the Minch (Shiant East Bank and The Little Minch), around the Isle of Canna and in the Sound of Sleat including the outer parts of Loch Hourn and Loch Nevis.

Main findings

- Fifteen species and 21 habitats of conservation importance were recorded, which included 17 PMFs, of which 14 were MPA search features.
- No habitat PMFs were identified at Fetlar, Scalloway and Armadale, the only PMFs observed being sparse records of cod at Fetlar and Armadale, and ling at Fetlar.
- Burrowed mud (**SS.SMu.CFiMu.SpMmeg**) was widely distributed in the inner part of Loch Eriboll but the characterising seapen populations were generally sparse or absent. The outer part of the loch is extensively floored with rippled fine sand and this appeared to be utilised by sandeels at one station.

- Mapping of the aggregations of northern feather star *Leptometra celtica* at the mouth of Little Loch Broom revealed a fairly well-defined bed running across the centre of the outer sill. The extent of the bed was estimated to be of the order of 2 ha, although the north-eastern margin was not precisely determined. Sparse northern sea fans *Swiftia pallida* were also recorded on the outer sill.
- The two Minch locations supported ten PMFs. *Swiftia pallida* (chiefly **CR.MCR.EcCr.CarSwi.LgAs**) and deep sponge (**CR.HCR.DpSp.PhaAxi**) communities were widely distributed in the Minch, but most instances were atypical examples, being substrates of cobbles and boulders on sediment. Burrowed mud with the tall seapen *Funiculina quadrangularis* (**SS.SMu.CFiMu.SpnMeg.Fun**) and sparse firework anemones *Pachycerianthus multiplicatus* were observed off the Shiant East Bank, whilst The Little Minch supported white cluster anemones *Parazoanthus anguicomus* and fields of *Leptometra celtica* on mixed substrata at several sites.
- Eleven PMFs were noted around the Isle of Canna. *Swiftia pallida* and the associated biotope, **CR.MCR.EcCr.CarSwi.LgAs**, were widely distributed throughout the survey area, with the community including *Parazoanthus anguicomus* at a number of sites. **CR.HCR.DpSp.PhaAxi** was also present, particularly on the margins of the Hyskeir Bank. Burrowed mud was extensively recorded, particularly to the north of Rum, where the mud supported dense *Funiculina quadrangularis* and megafaunal crustaceans (**SS.SMu.CFiMu.SpnMeg.Fun**). *Pachycerianthus multiplicatus* was also present here. Fields of dense *Leptometra celtica* on mixed substrata were recorded in the Sound of Canna and to the north and south of the sound. Specimens of the fan mussel *Atrina fragilis* were observed along five video runs in the Sound of Canna and became common at points along three of them.
- The video survey suggests that extensive areas of the Sound of Sleat and the outer basins of Loch Hourn and Loch Nevis support densely burrowed mud with rich populations of *Funiculina quadrangularis* (**SS.SMu.CFiMu.SpnMeg.Fun**), accompanied by *Pachycerianthus multiplicatus* in the mouth of Loch Hourn. Fields of *Leptometra celtica* on mixed substrata were also recorded in Loch Hourn.

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Contents

	<i>Page no.</i>
1 INTRODUCTION	1
2 METHODS	2
3 RESULTS	3
3.1 Fetlar	3
3.2 Scalloway	5
3.3 Armadale	5
3.4 Loch Eriboll	7
3.5 Little Loch Broom	8
3.6 Shiant East Bank	9
3.7 The Little Minch.....	11
3.8 Canna.....	12
3.9 Sound of Sleat, Loch Hourn and Loch Nevis	14
4 DISCUSSION	16
5 REFERENCES	20

LIST OF APPENDICES

<i>Appendix 1 Positional and temporal details of video sequences recorded during the surveys</i>	22
<i>Appendix 2 Physical and biological descriptions of the survey sites</i>	36
<i>Appendix 3 Biotopes recorded with sites of occurrence and illustrative photograph or video frame grab</i>	108

LIST OF TABLES

<i>Table 1 Survey location details</i>	2
<i>Table 2 Species and biotopes, recorded during the surveys, of recognised conservation importance and their frequency of occurrence in each survey location</i>	17

LIST OF FIGURES

	Page no.	
<i>Figure 1</i>	<i>Distribution of survey locations (blue boxes) and sites (red circles).....</i>	1
<i>Figure 2</i>	<i>Distribution of biotope records around Fetlar, Shetland Isles.....</i>	4
<i>Figure 3</i>	<i>Distribution of biotope records off Scalloway, Shetland Isles.....</i>	5
<i>Figure 4</i>	<i>Distribution of biotope records off Armadale.....</i>	6
<i>Figure 5</i>	<i>Distribution of biotope records in Loch Eriboll.....</i>	8
<i>Figure 6</i>	<i>Distribution of biotope records at the mouth of Little Loch Broom, with inset showing the distribution of dense Leptometra celtica on mixed substrates.....</i>	9
<i>Figure 7</i>	<i>Distribution of biotope records around the Shiant East Bank.....</i>	10
<i>Figure 8</i>	<i>Distribution of biotope records in The Little Minch.....</i>	12
<i>Figure 9</i>	<i>Distribution of biotope records around Canna, with inset showing detail within the Sound of Canna.....</i>	13
<i>Figure 10</i>	<i>Distribution of biotope records in the Sound of Sleat, Loch Hourn and Loch Nevis.....</i>	15
<i>Figure 11</i>	<i>Distribution of PMF records in the Minch.....</i>	18
<i>Figure 12</i>	<i>Distribution of PMF records around Canna.....</i>	19
<i>Figure 13</i>	<i>Distribution of PMF records in the Sound of Sleat, Loch Hourn and Loch Nevis.....</i>	20

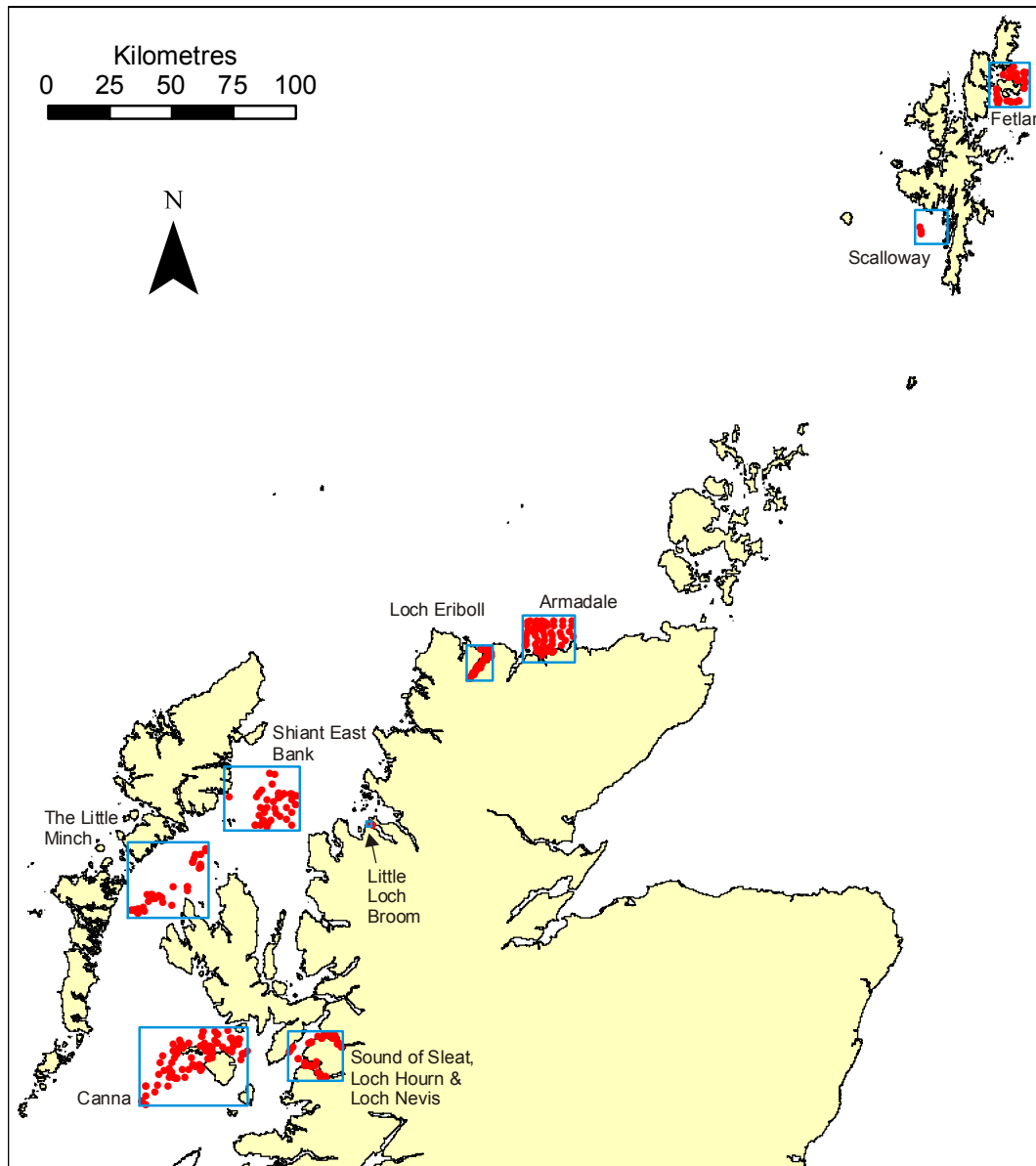
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1 INTRODUCTION

The Marine (Scotland) Act 2010 provides a framework which will help balance competing demands on the maritime environment, integrating the economic growth of industry with the need to protect Scotland's seas. Where necessary, suitable conservation measures may be implemented at the wider seas level (e.g. through marine planning), targeted at specific species (e.g. improved protection for seals), or delivered within key locations (e.g. through the identification of new Marine Protected Areas - MPAs). Further details are provided in the Strategy for Marine Nature Conservation in Scotland (Marine Scotland, 2011a).

Figure 1 Distribution of survey locations (blue boxes) and sites (red circles)



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To help target action under each of these three pillars, Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC) have generated a focused list of habitats and species of importance in Scottish waters - the Priority Marine Features (PMFs) (SNH, 2011). A subset of these biological features (termed MPA search features) will drive the identification of Nature Conservation MPAs (Marine Scotland, 2011b).

The principal aim of the present investigation was to improve knowledge of the occurrence and distribution of species and habitats of recognised conservation importance in Scottish waters, especially PMFs, but also taking cognisance of other importance measures. This was to be achieved through the analysis of seabed video and still photographic imagery collected during research cruises around Scotland in 2011.

Imagery was analysed from surveys by Marine Scotland Science (MSS), Scottish Environment Protection Agency (SEPA) and Scottish Natural Heritage (SNH) at nine locations (Figure 1). Shetland Isles surveys were carried out around Fetlar and south-west of Scalloway. Surveys along the northern mainland coast were undertaken off Armadale and in Loch Eriboll. To the west, survey locations were established in the mouth of Little Loch Broom, in two bank areas in the Minch (Shiant East Bank and The Little Minch), around the Isle of Canna and in the Sound of Sleat including the outer parts of Loch Hourn and Loch Nevis.

2 METHODS

Details of the survey locations are provided in Table 1. Video images were obtained from a drop-down video system deployed just above the seabed. For most surveys the camera frame also carried a digital stills camera, which took vertically-orientated photographs of the seabed at intervals, and a laser scaling system. For Canna and the Sound of Sleat, lower quality stills were provided by a video frame grab system. Positional, time and depth data were provided for the start and end of video runs, with depths and positions also available at 10 second intervals for the Minch and Little Loch Broom surveys and positions every minute for the Canna and Sleat surveys. All depths were converted to depth below chart datum, employing TotalTide software (Admiralty, Taunton) to determine tidal rise at the nearest secondary port.

Table 1 Survey location details

Location	Date	Vessel	Cruise	Stations
Fetlar	17-21/10/2011	MRV <i>Scotia</i>	1211S	24
Scalloway	16/10/2011	MRV <i>Scotia</i>	1211S	3
Armadale	19-21/09/2011	MRV <i>Alba na Mara</i>	1311A	47
Armadale	29-31/10/2011	MRV <i>Scotia</i>	1211S	11
Loch Eriboll	22-26/09/2011	MRV <i>Alba na Mara</i>	1311A	32
Little Loch Broom	02/11/2011	MRV <i>Alba na Mara</i>	1511A	9
East Shiant Bank	26/10/2011 - 03/11/2011	MRV <i>Alba na Mara</i>	1511A	35
The Little Minch	23-25/10/2011	MRV <i>Alba na Mara</i>	1511A	25
Canna	17-20/06/2011	SV <i>Sir John Murray</i>	N/A	75
Sound of Sleat, Loch Hourn and Loch Nevis	15-16/06/2011	SV <i>Sir John Murray</i>	N/A	35

The images were used to describe the nature of the seabed, in terms of the physical structure and the species assemblages. Species present were, as far as possible, identified and quantified using the semi-quantitative MNCR SACFOR scale (Hiscock, 1996). Based on the physical and biological attributes, biotopes were allocated (Connor *et al.*, 2004). Runs traversing a sequence of biotopes were split into corresponding segments, with the transition points recorded using the time, except in the case of the Minch, Little Loch Broom, Canna and the Sound of Sleat, where positional data could also be used. Segmentation of

runs was not practicable in the case of mosaics of recurring biotopes, in which case all biotopes observed were simply listed.

Runs and run segments were assessed for the presence of PMFs, as well as for the presence of species and habitats of recognised conservation importance according to a number of additional criteria, including citation on the following lists: species of conservation concern (UK Biodiversity Steering Group, 1995), IUCN Red List of Threatened Species (lower risk category) (IUCN, 2011), OSPAR List of Threatened and/or Declining Species and Habitats (OSPAR, 2008), UK Biodiversity Action Plan Priority Species (UKBAP, 2007) and Scottish Biodiversity List (SNH, 2010).

Species SACFOR data, habitat descriptions, biotopes, depth and positional data have been incorporated into the Marine Recorder repository.

3 RESULTS

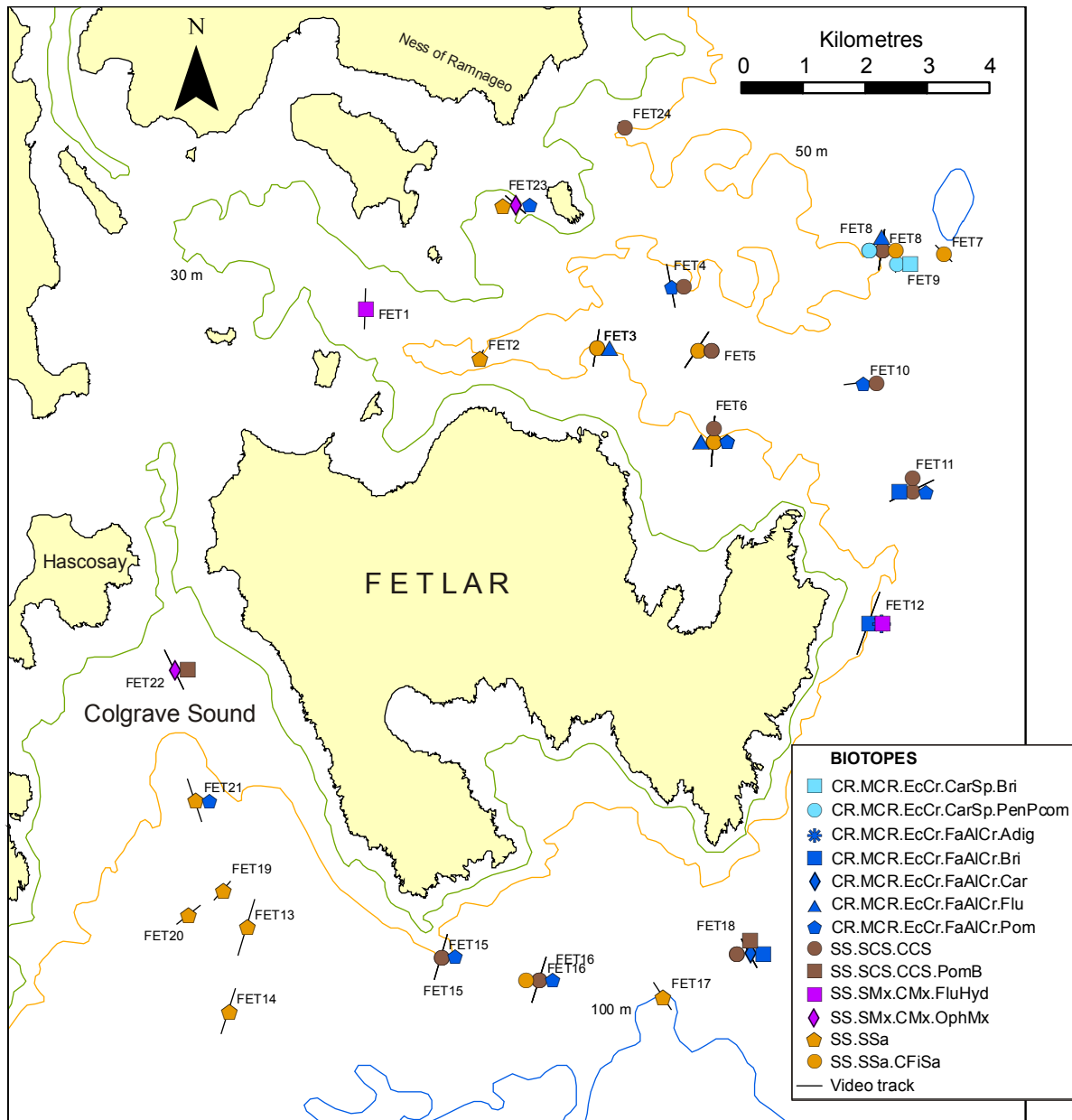
Habitat descriptions, biotopes and PMF records for the nine locations are summarised in this section but presented in detail for each site in Appendix 2, with site location data in Appendix 1. Appendix 3 provides an inventory of the biotopes recorded, together with illustrative photographs and lists of their occurrence.

3.1 Fetlar

In Colgrave Sound to the west of Fetlar shelly medium sand predominated below 50 m, supporting a fairly sparse visible fauna dominated by hermit crabs (**SS.SSa**). At one site (FET21) the rarely recorded night anemone, *Halcampoides elongatus*, was recorded as frequent. As the channel narrows and shallows between Fetlar and Hascosay the substrate coarsened to a medium - coarse sand with scattered and probably mobile *Spirobranchus*-encrusted stones (**SS.SCS.CCS.PomB**). *Ophiothrix fragilis* blanketed the substrate here over extensive areas, together with lesser quantities of *Ophiocomina nigra* (**SS.SMx.CMx.OphMx**). To the north, east and south of Fetlar a mix of biotopes was recorded at most sites, principally consisting of rock supporting faunal crust communities, waves of coarse sand (**SS.SCS.CCS**) and rippled fine sand (**SS.SSa.CFiSa**), with sharp boundaries often in evidence between coarse and fine sand biotopes. The coarse sand generally supported a sparse visible fauna, although two sites to the north-east of Fetlar exhibited abundant populations of the small scallop, *Palliolum* sp. Rippled fine sand also displayed little evidence of an infaunal community apart from the presence of bivalve siphons, whilst the epifauna was dominated by hermit crabs, small teleosts and occasional asteroids, particularly *Luidia ciliaris*. Areas of rocky reef were interspersed with sedimentary areas around most of the Fetlar coastline. Most of the reef areas consisted of low-profile sand-influenced bedrock and boulders, often incorporating sand pockets, and supporting variants of **CR.MCR.EcCr.FaAICr** depending on the domination by *Spirobranchus* spp. (**FaAICr.Pom**), *Caryophyllia smithii* (**FaAICr.Car**), *Alcyonium digitatum* (**FaAICr.Adig**) or, at the more sand-scoured sites north of Fetlar, *Flustra foliacea* (**FaAICr.Flu**). Off the east of Fetlar the rock supported abundant populations of *Ophiocomina nigra* and *Ophiothrix fragilis* at a number of sites (**FaAICr.Bri**). To the north-east of Fetlar at depths of 53 - 71 m a somewhat richer faunal community was recorded at two sites (FET8 and FET9), where the faunal crust component was accompanied by dense *Caryophyllia smithii* and *Porella compressa* and a sparse sponge fauna including *Polymastia boletiformis?* and *Axinella infundibuliformis/Phakellia ventilabrum* (ascribed to **CR.MCR.EcCr.CarSp.PenPcom**, though intermediate between this and **CR.MCR.EcCr.FaAICr.Car**). A high density of *Ophiocomina nigra* was also present over extensive areas (**CR.MCR.EcCr.CarSp.Bri**).

No habitat PMFs were recorded during the survey. Live *Phymatolithon calcareum* was scattered over waves of medium - coarse sand at a depth of 31 m south of Ness of Ramnageo (FET23), but at too low a density to represent a maerl bed. Two mobile species PMFs were recorded. Large cod were present over rock and sand at one site (FET18) off the south-east of Fetlar and a few specimens of ling were observed amongst rock to the north-east of Fetlar (site FET11). No MPA search features were recorded.

Figure 2 Distribution of biotope records around Fetlar, Shetland Isles



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Lack of detailed infaunal data and the sparse visual signs of the nature of the infaunal community necessitated ascription of sedimentary biotopes at a coarse level of resolution. However, a recent survey incorporating grab sampling around Fetlar by the North Atlantic Fisheries College (NAFC pers. comm.) recorded the coarse sediment biotope **SS.SCS.CCS.MedLumVen** at several sites to the north of Fetlar. Thus it is possible that the 2011 records of patches of coarse sand waves to the north and possibly south of Fetlar may be at least in part referable to this biotope. NAFC (pers. comm.) also recorded the

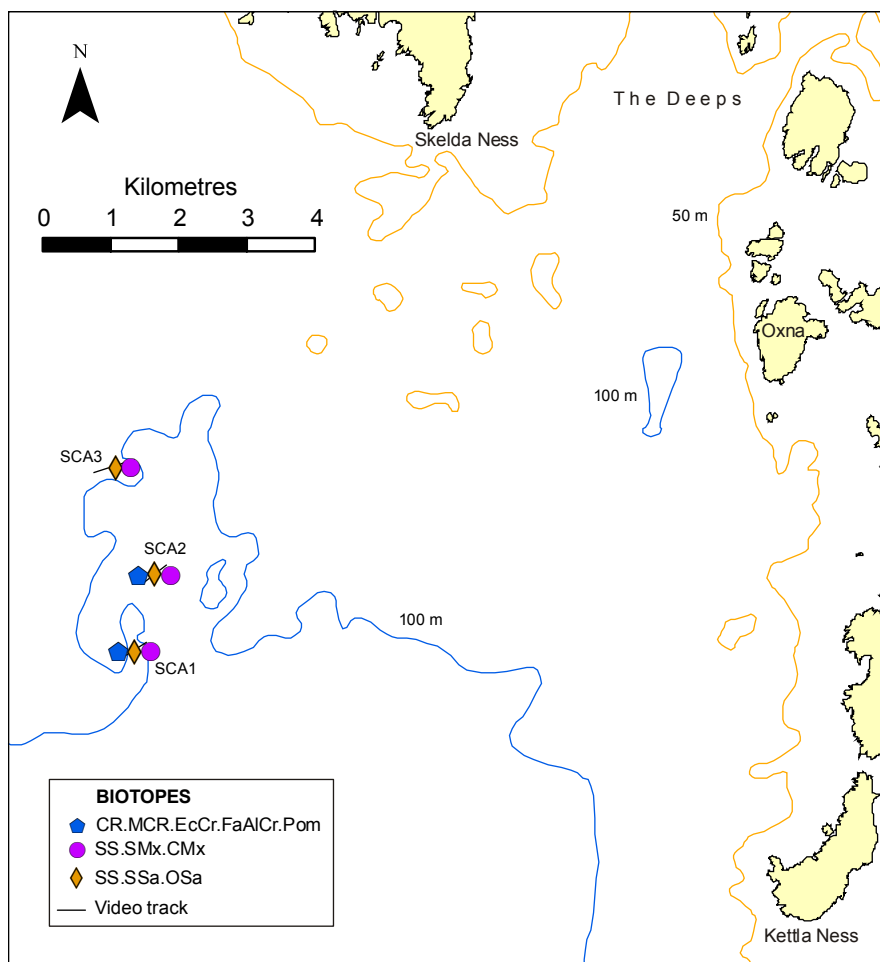
infralittoral coarse sediment PMF biotope **SS.SCS.ICS.MoeVen** in the southern Fetlar embayment, but this area was not examined during the current work.

3.2 Scalloway

The seabed here at depths of 98 - 109 m was floored by muddy sand exhibiting small holes, emergent faunal tubes and the distinctive small perforated mounds of the foraminiferan, *Toxisarcon alba* (**SS.SSa.OSa**). Patches of scattered gravel, pebbles and cobbles were present with a sparse encrusting fauna of serpulid worms and bryozoans (**SS.SMx.CMx**). There were also frequent empty shells of *Modiolus modiolus*, although live specimens were rarely observed. Occasional aggregations of dense boulders and cobbles, encrusted with *Spirobranchus* spp. and bryozoans, provided a habitat for *Echinus esculentus*, *Munida rugosa* and possibly *Conger conger* (**CR.MCR.EcCr.FaAlCr.Pom**).

No PMFs were recorded at this site, although several specimens of the rarely recorded starfish, *Hippasteria phrygiana*, were observed.

Figure 3 Distribution of biotope records off Scalloway, Shetland Isles



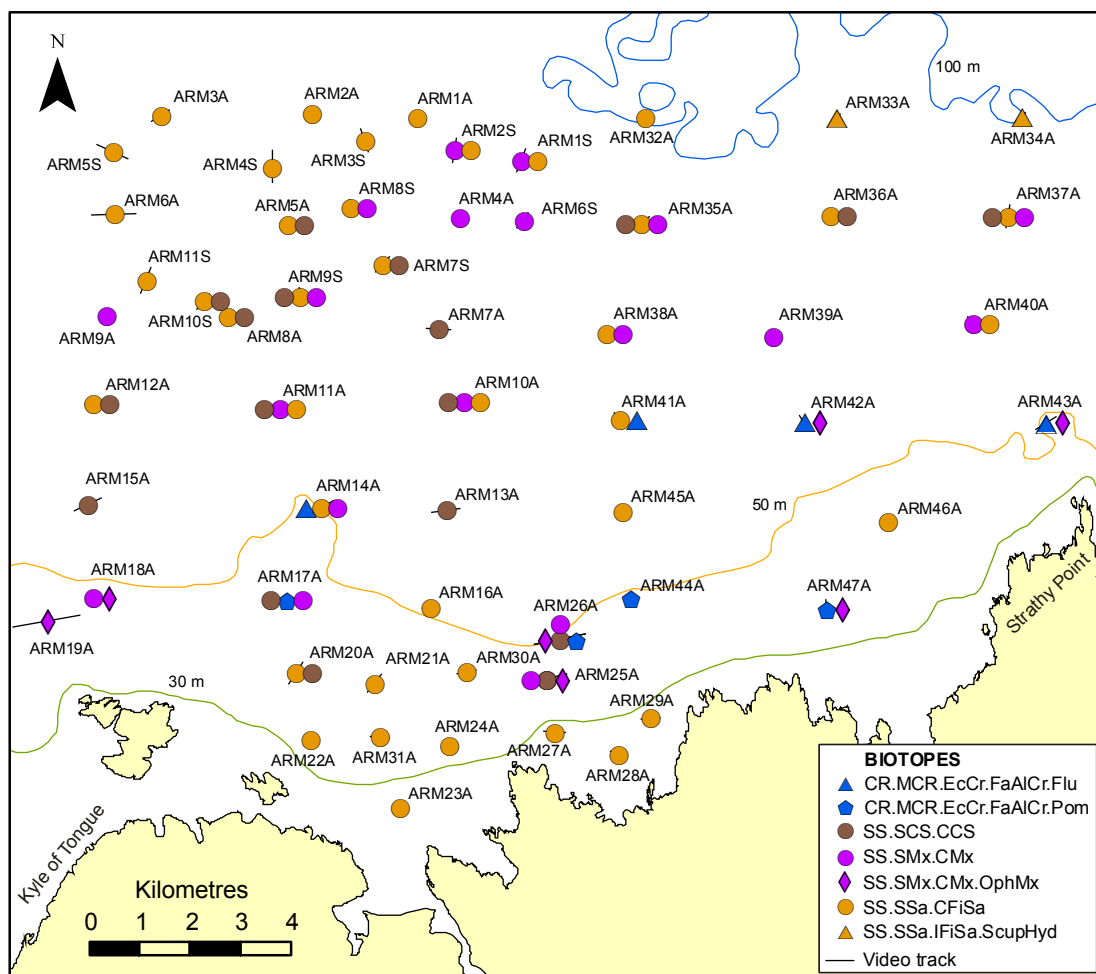
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3.3 Armadale

Rippled fine sand is extensively distributed off Armadale from 25 -103 m. Depth related trends in the physical nature of the habitat include a transition from well-developed ripples of

clean sand, with evidence of some blackening (reduction) of trough sediment in shallower areas, to faintly rippled slightly silty fine sand in deep water, but all such sites have been ascribed to **SS.SSa.CFiSa**. The visible fauna was sparse with at most occasional pagurids, including *Pagurus bernhardus*, echinoderms, such as *Astropecten irregularis*, *Luidia ciliaris* and *Asterias rubens*, and emergent infaunal tubes. At the shallowest sites only sparse *A. rubens* was generally observed. Whilst fine sand was the predominant substrate off Armadale, at many sites from 40 - 91 m patches of coarse sediment were observed in the form of medium - coarse sand or, in shallower waters, coarse sand and gravel, often formed into waves (**SS.SCS.CCS**). Such sediment supported very little visible life, typically sparse pagurids and asteroids, such as *L. ciliaris*. At many sites the sand was accompanied by an admixture of gravel, pebbles, cobbles, shells and occasional boulders. Stones were encrusted by serpulid worms and bryozoans such as *Parasmittina trispinosa*, and supported a sparse sessile fauna including thin populations of hydroids, *Flustra foliacea*, *Urticina felina* and *Polymastia boletiformis* (**SS.SMx.CMx**). Although hydroid clumps were widely observed at low density throughout much of the survey area, at two of the deeper, north-east sites scattered stones and shells on fine sand provided a substrate for a well-developed hydroid fauna with possibly *Hydrallmania falcata* as one of the dominant forms. Despite the depth of 86 - 100 m, these sites have been referred to the infralittoral biotope, **SS.SSa.IFiSa.ScupHyd**.

Figure 4 Distribution of biotope records off Armadale



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The substratum at several of the shallower sites from 40 - 67 m was dominated by apparently stable boulders and cobbles leading to the recognition of faunal crust reef

biotopes, although mixed sand and stone pockets were also generally present. Boulders and cobbles were encrusted with dense *Spirobranchus* spp. and *Parasmittina trispinosa* (**CR.MCR.EcCr.FaAICr.Pom**), accompanied by dense patches of *Flustra foliacea* at the deeper sites (**CR.MCR.EcCr.FaAICr.Flu**). At six of the inshore sites dense *Ophiocomina nigra* occurred on mixed sand and stone substrates (**SS.SMx.CMx.OphMx**).

Although no detailed infaunal data are available, the visual impression of the area is one of low diversity sediment and reef habitats. The only PMF encountered was a single cod recorded over fine sand at 70 m.

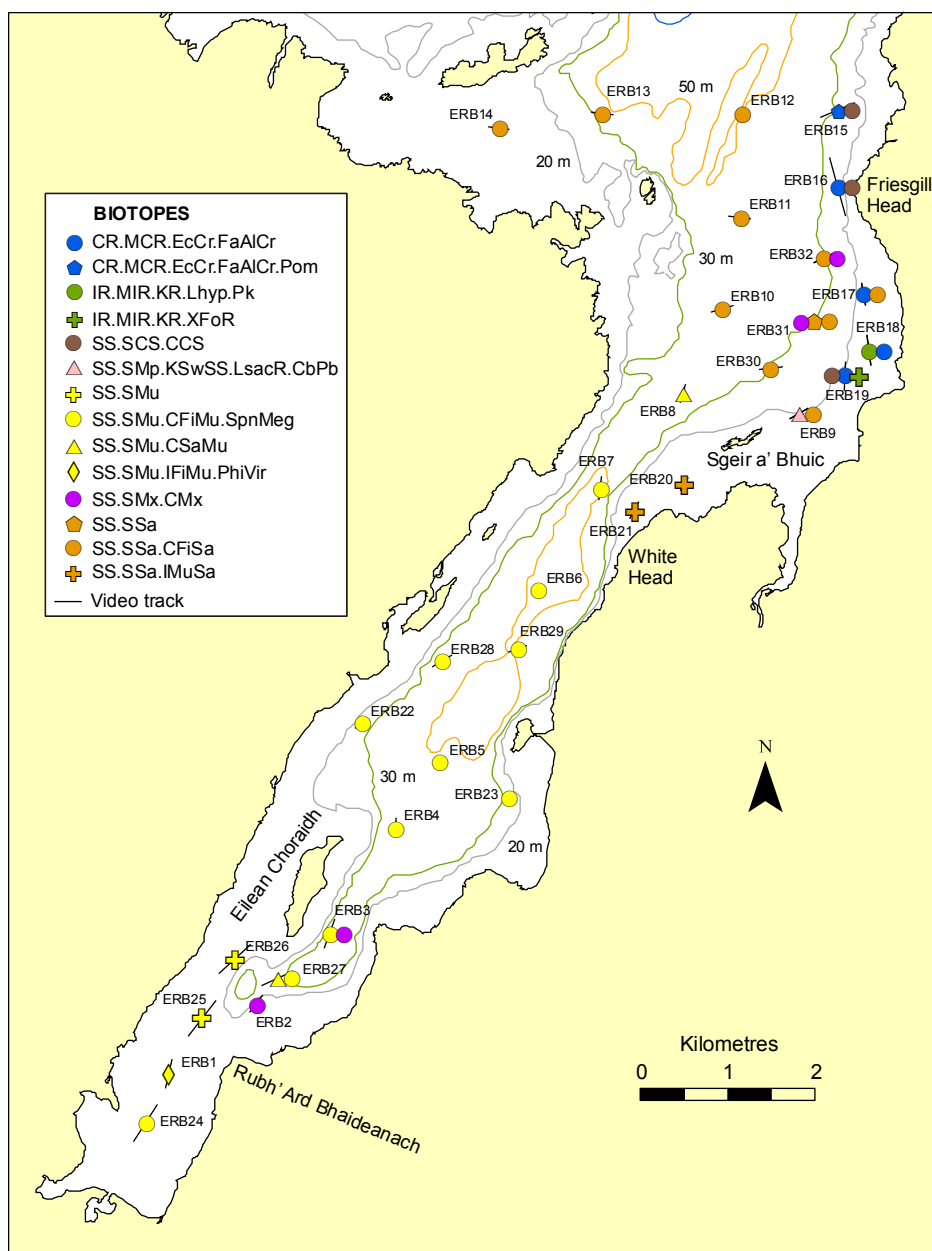
3.4 Loch Eriboll

Much of the outer part of the loch, north of Sgeir a'Bhuic, is floored by rippled fine sand. This was recorded from 19 - 43 m depth and supported a sparse visible fauna, including *Asterias rubens* and *Ophiura ophiura* (**SS.SSa.CFiSa**). Further into the loch south-west of Sgeir a'Bhuic in shallower water (9 - 12 m) the slightly silty rippled sand was coated in a brown diatomaceous film and at one site (ERB20) supported abundant *O. ophiura* (**SS.SSa.IMuSa**). On the eastern side of the loch between Sgeir a'Bhuic and Friesgill Head the fine sand gained a dense, serpulid-encrusted, pebble cover at around 29 m (**SS.SMx.CMx**) and farther inshore the stone size further increased to dense boulders and cobbles supporting a sparse encrusting community of *Spirobranchus* spp., pink coralline algae and *Parasmittina trispinosa* (**CR.MCR.EcCr.FaAICr**) recorded at depths of 13 - 27 m.

A *Laminaria hyperborea* kelp park with a poorly developed algal understorey (**IR.MIR.KR.Lhyp.Pk**) was recorded here at around 11 - 12 m and in slightly deeper water (c. 20 m), the sand-dusted boulders and cobbles supported scour-tolerant stands of filamentous and foliose red algae (**IR.MIR.KR.XFoR**). A red algal turf on a mobile mixed substrate of pebbles, cobbles and small boulders was also observed close to the north-east point of Sgeir a'Bhuic (ERB9), accompanied by sparse kelp plants (assigned to the PMF biotope, **SS.SMp.KSwSS.LsacR.CbPb**).

The inner part of the loch beyond White Head is less exposed and is largely floored by burrowed mud, which was recorded widely at depths from 24 - 58 m north of Rubh' Ard Bhaideanach, and at the head of the loch at 12 m. The soft mud was generally densely perforated by small burrows (< 3 cm diameter), probably including those of thalassinid shrimps, as well as by *Nephrops norvegicus*. Records have been tentatively assigned to the PMF **SS.SMu.CFiMu.SpnMeg**, as seapens were absent at all stations. Seapens were only observed in the innermost part of the loch south of Eilean Choraidh above the 20 m contour. At stations ERB25 and ERB26 *Virgularia mirabilis* and megafaunal burrows were found to be very sparse at 15 - 18 m depth (**SS.SMu**), whereas at 14 - 15 m (ERB1) the burrows were lost but the soft flat mud surface was coated in an extensive brown diatomaceous film and supported frequent *V. mirabilis* and *Sagartiogeton laceratus*. This has the characteristics of **SS.SMu.IFiMu.PhiVir**, although *Philine aperta* was not observed. Megafaunal burrows reappeared at the head of the loch at 12 - 13 m (ERB24) in association with dense *V. mirabilis* (**SS.SMu.CFiMu.SpnMeg**).

Figure 5 Distribution of biotope records in Loch Eriboll



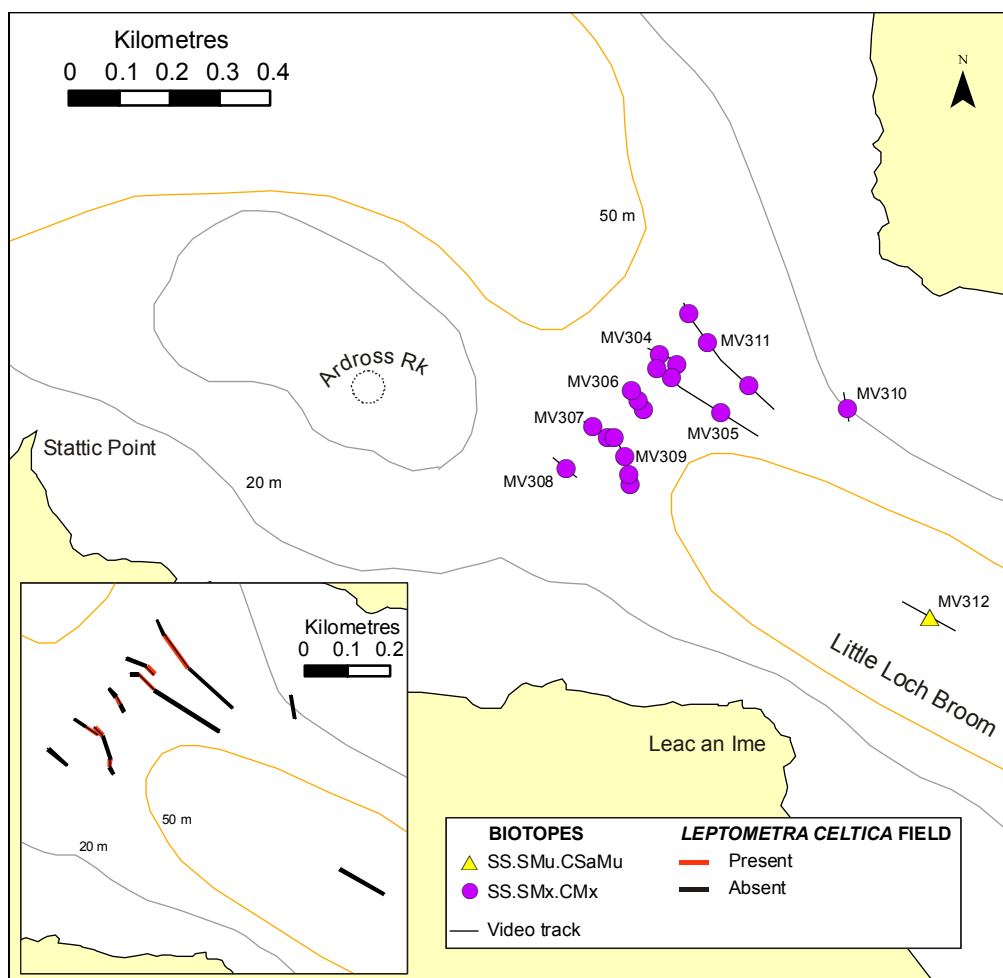
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3.5 Little Loch Broom

The sill at the mouth of the loch is floored with muddy sand with scattered gravel, pebbles, cobbles and boulders, with larger stones supporting an encrusting fauna of serpulid worms with sparse bryozoans and coralline algae. Other sessile forms were sparse but *Munida rugosa* was numerous (**SS.SMx.CMx**). This biotope was recorded from 27 - 53 m, but an associated band of dense *Leptometra celtica* was observed running across the centre of the sill at depths of 38 - 47 m, with an isolated small patch farther south. As the sill deepens with progression into the loch, the sediment changes to sandy mud (**SS.SMu.CSaMu**).

PMFs noted in Little Loch Broom include the *Leptometra celtica* records (seven of which constitute the MPA search feature of aggregations on mixed substrates) and a single occurrence of sparse *Swiftia pallida*.

Figure 6 Distribution of biotope records at the mouth of Little Loch Broom, with inset showing the distribution of dense *Leptometra celtica* on mixed substrates

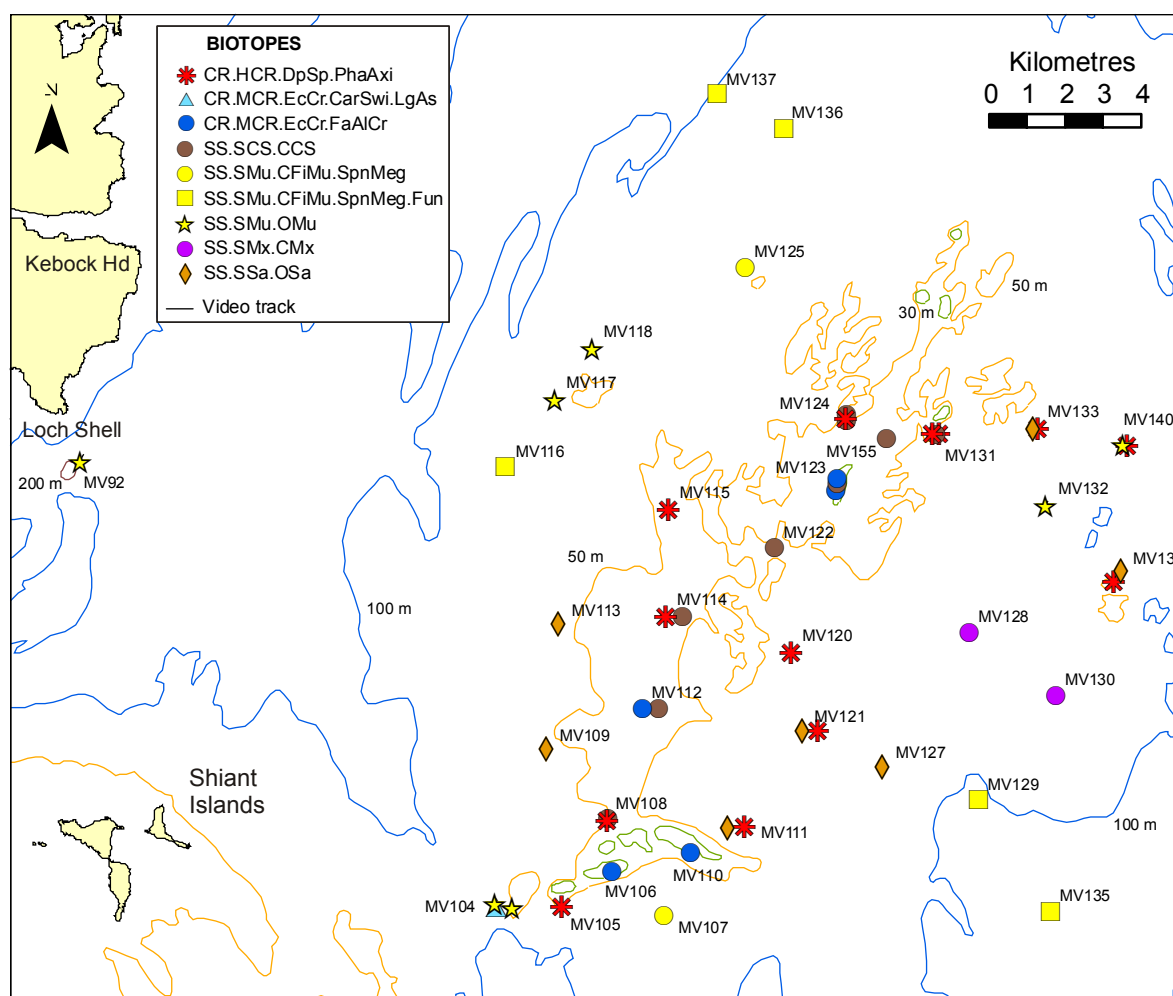


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3.6 Shiant East Bank

The sea bed rises to around 30 m depth at the northern and southern margins of the bank and three tows targeted these areas, where mostly smooth bedrock and areas of dense boulders and cobbles were encountered from around 30 - 40 m. The community was fairly sparse and characterised by pink coralline algal crusts and faunal crusts of *Parasmittina trispinosa* and sparse *Spirobranchus* spp. and *Caryophyllia smithii* (**CR.MCR.EcCr.FaAICr**). Small patches of *Axinella infundibuliformis* and possibly *Corynactis viridis* were present at the most northerly site. Over much of the bank to depths of around 60 m the substrate was a mix of cobbles, boulders and pebbles on gravelly sand with sediment dusted bedrock outcrops. The rock was sparsely encrusted with bryozoans and serpulid worms and supported a sponge fauna dominated by *Axinella infundibuliformis* (with *Phakellia ventilabrum* also possibly present), *Iophon nigricans*, *Polymastia boletiformis*, *A. dissimilis?* and *Hymedesmia paupertas*, together with often high densities of *Porella compressa*. Although such records have been assigned to the deep sponge PMF biotope, **CR.HCR.DpSp.PhaAxi**, the sponge fauna was poorly developed in the more mixed, stony areas, where the biotope fit was poor. Intermingled with the bedrock and mixed stony areas and impinging on them in places were areas of sediment waves composed of medium - coarse sand with coarser material in the troughs. This mobile habitat revealed few visible life forms (**SS.SCS.CCS**).

Figure 7 Distribution of biotope records around the Shiant East Bank



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Deep sponge communities were also widely recorded in deeper water on the eastern side of the bank down to a depth of 94 m but were generally poorly developed examples of **CR.HCR.DpSp.PhaAxi** on cobbles and boulders on silty sediments with silted bedrock outcrops, a more typical example being recorded in an area of rock pinnacles at site MV134. Axinellid sponges were also common on bedrock and scattered cobbles and boulders on sandy mud at around 90 m off the southern edge of the bank, where they were accompanied by fairly high densities of *Swiftia pallida* and *P. compressa* (ascribed to the PMF, **CR.MCR.EcCr.CarSwi.LgAs**). The component species PMF, *Swiftia pallida*, was also recorded at a number of other sites in the area but at low density.

Most of the video runs at the stations surrounding the bank at depths of over 60 m recorded sediments. Silty fine sands were encountered at depths from 57 - 84 m (**SS.SSa.OSa**), accompanied by varying amounts of scattered gravel and larger stones supporting numerous *Munida rugosa*. The more heterogeneous sites displaying relatively high stone densities have been referred to **SS.SMx.CMx**, where low numbers of axinellid sponges occurred, and at one site, the PMF *Pachycerianthus multiplicatus*. Sandy muds were recorded from 68 - 94 m and at the deepest site surveyed well to the west of the bank off Loch Shell at 200 m. The sediment displayed low densities of megafaunal burrows, including those of *Nephrops norvegicus*. Little epifaunal life on the mud was visible apart from fairly sparse pagurids and *M. rugosa* (**SS.SMu.OMu**). Moderate to high densities of thalassinid shrimp and *N. norvegicus* burrows were recorded in sandy mud and soft mud at seven sites around the bank at depths of 75 - 152 m, constituting the MPA search feature of

burrowed mud. Although no seapens were observed at two of the sites, they have been referred to **SS.SMu.CFiMu.SpMmeg**. At the other sites *Funiculina quadrangularis* was fairly numerous (frequent - common) (**SS.SMu.CFiMu.SpMmeg.Fun**).

In addition to the PMFs noted above, sparse *Leptometra celtica* were observed at a single site.

3.7 The Little Minch

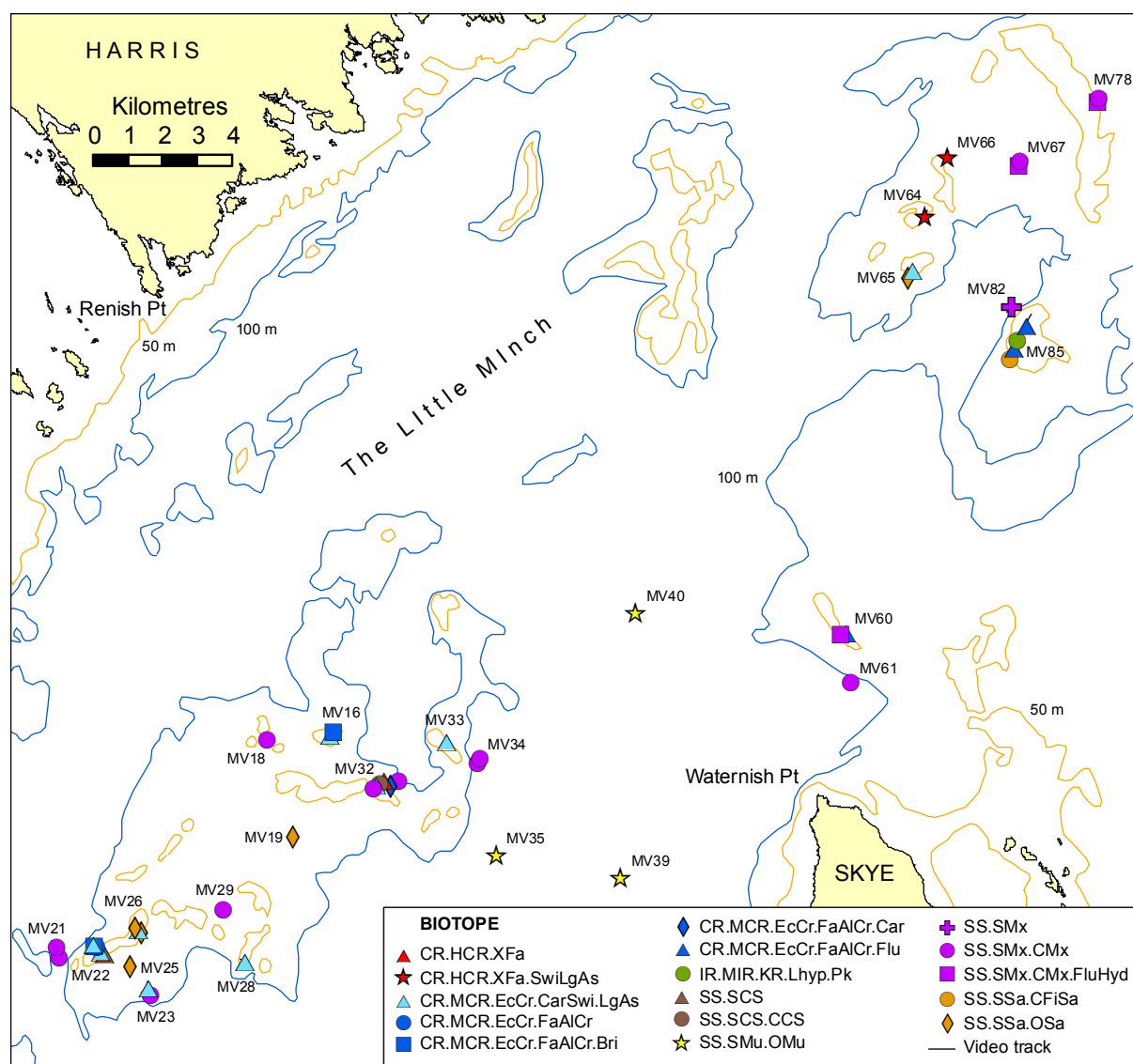
The predominant substrate encountered over a wide depth range (54 - 128 m) was a poorly sorted silty gravelly sand, widely distributed throughout the area (**SS.SMx.CMx**). The sediment was accompanied by varying quantities of scattered pebbles, cobbles, boulders and shells, generally supporting a sparse fauna of encrusting serpulids and bryozoans, with low densities of *Caryophyllia smithii*, *Alcyonidium diaphanum* and *Porella compressa* and a motile fauna dominated by *Munida rugosa* and pagurids, especially *Pagurus prideaux*. At three of the sites in the southern Little Minch the substrate was colonised by dense *Leptometra celtica* (common - abundant) and at three sites in the central and northern areas by patchy turfs of *Flustra foliacea* and hydroids. These latter records have been assigned to **SS.SMx.CMx.FluHyd**, although the community included a number of low density species atypical of the biotope, such as *Pentapora fascialis*. *Swiftia pallida* communities (MPA search features) were widely recorded throughout the area from 31 - 70 m on bedrock outcrops and on boulders and cobbles on silty gravelly sand. At most sites *S. pallida* (frequent - common) was accompanied by *Caryophyllia smithii*, *Porella compressa* and a moderately rich sponge fauna, including *Axinella infundibuliformis*, *Phakellia ventilabrum*, *A. dissimilis?*, *Iophon nigricans* and *Polymastia boletiformis* (**CR.MCR.EcCr.CarSwi.LgAs**), and at two of the northern sites by a patchy bryozoan turf including *Flustra foliacea* and *Securiflustra securifrons* (**CR.HCR.XFa.SwiLgAs**).

Video runs across several of the shallower areas in the Little Minch from 29 - 62 m revealed substrates of sand-scoured bedrock and boulders supporting coralline algal crusts and sparse faunal crusts of *Spirobranchus* spp. and *Parasmittina trispinosa*. At the shallowest site (MV85) the rock also supported a park of small *Laminaria hyperborea* with a patchy foliose red algal understory (**IR.MIR.KR.Lhyp.Pk**) and sparse rhodoliths of *Phymatolithon calcareum* scattered over coarse sand patches. In the upper circalittoral zone the foliose algal component diminished or disappeared, but the algal and faunal crust continued (**CR.MCR.EcCr.FaAICr**) and was accompanied by dense beds of *Ophiocomina nigra* at two of the southern sites (**CR.MCR.EcCr.FaAICr.Bri**) and by patches of *Flustra foliacea* and hydroids, including *Sertularia cupressina?* at two sites in the northern half of the surveyed area (**CR.MCR.EcCr.FaAICr.Flu**).

The Little Minch generally appeared more tide-swept than the Shiant East Bank and this was reflected in the sediments, with no burrowed mud encountered. The deepest sediments surveyed at 150 - 181 m appeared to be cohesive muddy sands or possibly sandy muds (**SS.SMu.OMu**) with *Sagartiogeton laceratus?* and a motile crustacean fauna including *Pagurus prideaux*, *Munida rugosa* and *Inachus* sp. Shallower sediments from 46 - 103 m depth were mostly slightly silty fine-medium sands supporting populations of pagurids and *Munida rugosa*, with little sign of infaunal life apart from sparse emergent tubes, including those of *Chaetopterus variopedatus* (**SS.SSa.OSa**).

In addition to the PMF records detailed above, *Swiftia pallida* was recorded at low density at an additional four sites and *Parazoanthus anguicomus* at five sites spread widely over the area and mostly in association with *Swiftia* biotopes.

Figure 8 Distribution of biotope records in The Little Minch



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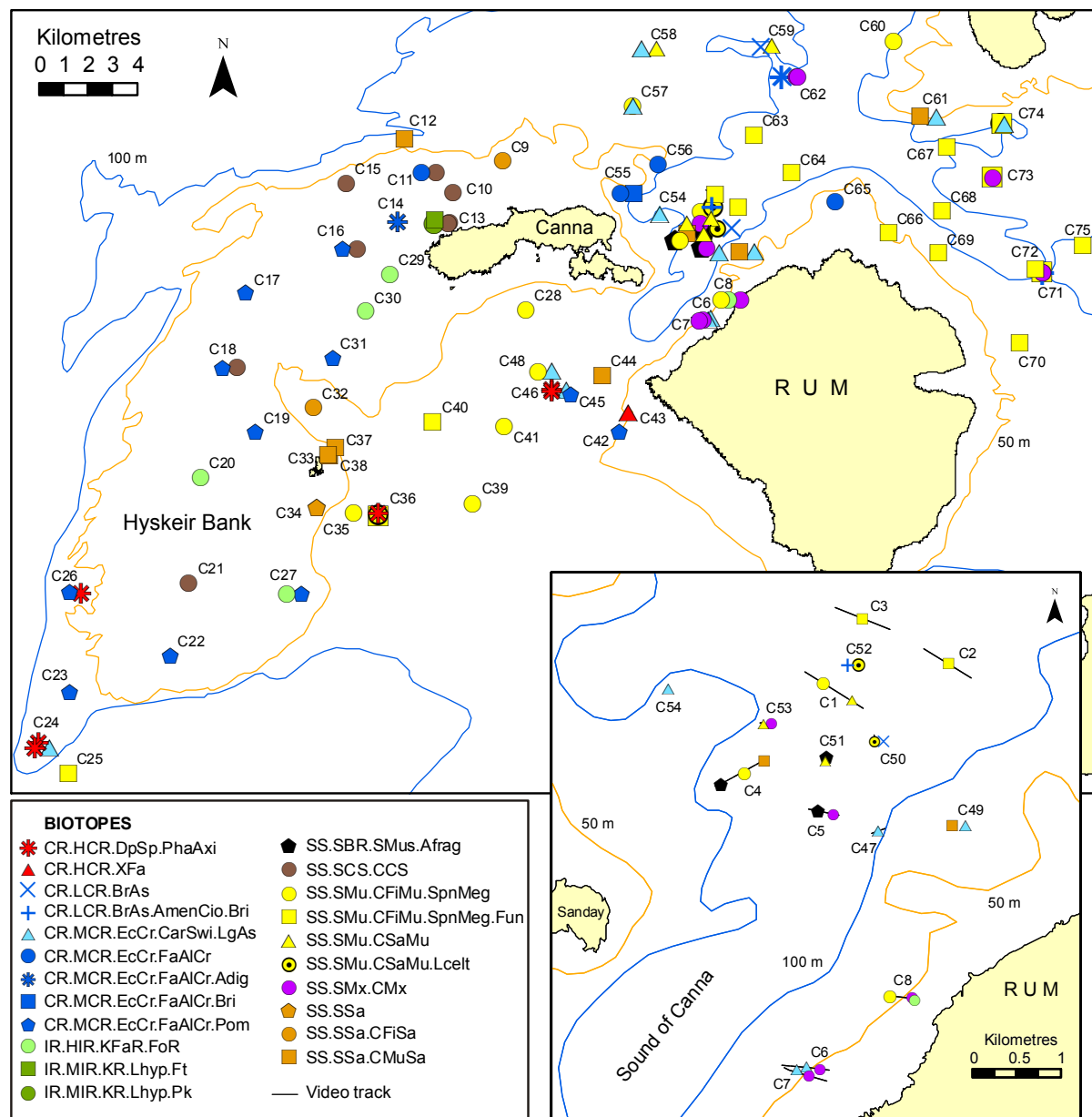
3.8 Canna

To facilitate subsequent integration of the results for this area with those of the recent survey by Howson *et al.* (2012) an attempt has been made where possible to use the two new biotopes developed for Canna habitats **SS.SBR.SMus.Afrag** and **SS.SMu.CSaMu.Lcelt**. The alternative existing biotope designation, used for Marine Recorder data entry, is also provided in brackets in Appendices 2 and 3.

At the northern entrance to the Sound of Canna a bed of the PMF, *Atrina fragilis*, with common occurrence of *Atrina* was recorded at three sites at depths of 113 - 185 m (**SS.SBR.SMus.Afrag**). The substrate was mud, burrowed in places by *Nephrops norvegicus*, supporting dense *Amphiura* spp. and *Sagartiogeton laceratus* with *Atrina* colonised by *Alcyonium digitatum* and hydroids. In the same area, where *Atrina* was absent or rare, burrowed mud sites supporting sparse or absent seapens have been ascribed to the PMF, **SS.SMu.CFiMu.SpnMeg**. Two sites here with a substrate of scattered stones and shells on burrowed mud supported fields of *Leptometra celtica* (**SS.SMu.CSaMu.Lcelt**) (an MPA search feature), together with *Funiculina quadrangularis* and *Pennatula phosphorea*.

At several sites in the Sound of Canna bedrock outcrops and aggregations of boulders and cobbles on muddy sand or mud were colonised by frequent - common *Swiftia pallida* (PMF), generally with *Caryophyllia smithii*, *Porella compressa* and axinellid sponges, ascribed to the PMF biotope, **CR.MCR.EcCr.CarSwi.LgAs**. Three runs (C6-8) were located off the north-west Rum coast in the vicinity of a maerl bed recorded by Howson *et al.* (2012). Only one of these traversed the infralittoral (minimum depth 22 m) but no maerl was found, only a foliose red algal turf on boulders, cobbles and pebbles on gravelly sand (**IR.HIR.KFaR.FoR**). Howson *et al.* (2012) also recorded *Limaria hians* in grab samples off this coastline but no visual evidence of a *Limaria* bed was encountered during the current survey.

Figure 9 Distribution of biotope records around Canna, with inset showing detail within the Sound of Canna



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In the channel between the Small Isles and Skye soft burrowed mud, representing an MPA search feature, was widely recorded at depths of 55 - 178 m, characterised by dense thalassinid and *Nephrops norvegicus* burrows, a rich *Funiculina quadrangularis* population (generally frequent or common but locally abundant) and *Pennatula phosphorea*

(**SS.SMu.CFiMu.SpMg.Fun**). At one of these sites to the south of Soay a dense field of *Leptometra celtica* was present on the mud surface and scattered cobbles and boulders (**SS.SMu.CSaMu.Lcelt**).

On the extensive Hyskeir bank south-west of Canna the predominant habitat recorded from around 26 - 60 m was outcropping bedrock and boulders, cobbles and pebbles, often lying on a bed of coarse sand. The rock supported faunal crusts of dense *Spirobranchus* spp. with *Parasmittina trispinosa*, together with pink coralline algae (**CR.MCR.EcCr.FaAICr.Pom**), augmented west of Canna with dense *Alcyonium digitatum* (**CR.MCR.EcCr.FaAICr.Adig**). Coarse sand was present in patches and in extensive areas in the form of waves (**SS.SCS.CCS**). In deeper water on the slope around the bank from 60 - 97 m the faunal crust community was also found on bedrock, boulders and cobbles but accompanied by a fairly rich sponge fauna dominated by *Axinella infundibuliformis* and/or *Phakellia ventilabrum*, together with some branching erect species, *Polymastia boletiformis*, *Porella compressa* and patches of *Swiftia pallida* (**CR.HCR.DpSp.PhaAxi**). This PMF biotope was also found at the south-western entrance to the Sound of Canna. On the shallower parts of the bank from 23 - 30 m the faunal and algal crust was accompanied by common - abundant foliose red algae and patches of *Dictyota dichotoma* (**IR.HIR.KFaR.FoR**), together with *Alcyonium digitatum* to the west of Canna. To the east of the Hyskeir bank in the southern approaches to the Sound of Canna mud burrowed by *Nephrops norvegicus*, thalassinid shrimps and probably *Goneplax rhomboides* was widely distributed, generally with sparse seapens (**SS.SMu.CFiMu.SpMg**), although *Funiculina quadrangularis* was common locally to the south-east of Hyskeir (**SS.SMu.CFiMu.SpMg.Fun**), where a dense field of *Leptometra celtica* also occurred on the mud and scattered stones (**SS.SMu.CSaMu.Lcelt**).

In addition to the PMFs noted above, several limited mobility PMFs were recorded. *Parazoanthus anguicomus* was widely distributed in the Sound of Canna as part of the **CR.MCR.EcCr.CarSwi.LgAs** community. Overall it was rare at the sites at which it occurred, although sometimes present in dense patches. *Pachycerianthus multiplicatus* was found at two sites to the north of Rum, where it was locally frequent. In addition to characterising the **SS.SBR.SMus.Afrag** biotope at three stations, *Atrina fragilis* was also found at low density in other biotopes at an additional six locations distributed along four video runs in the Sound of Canna.

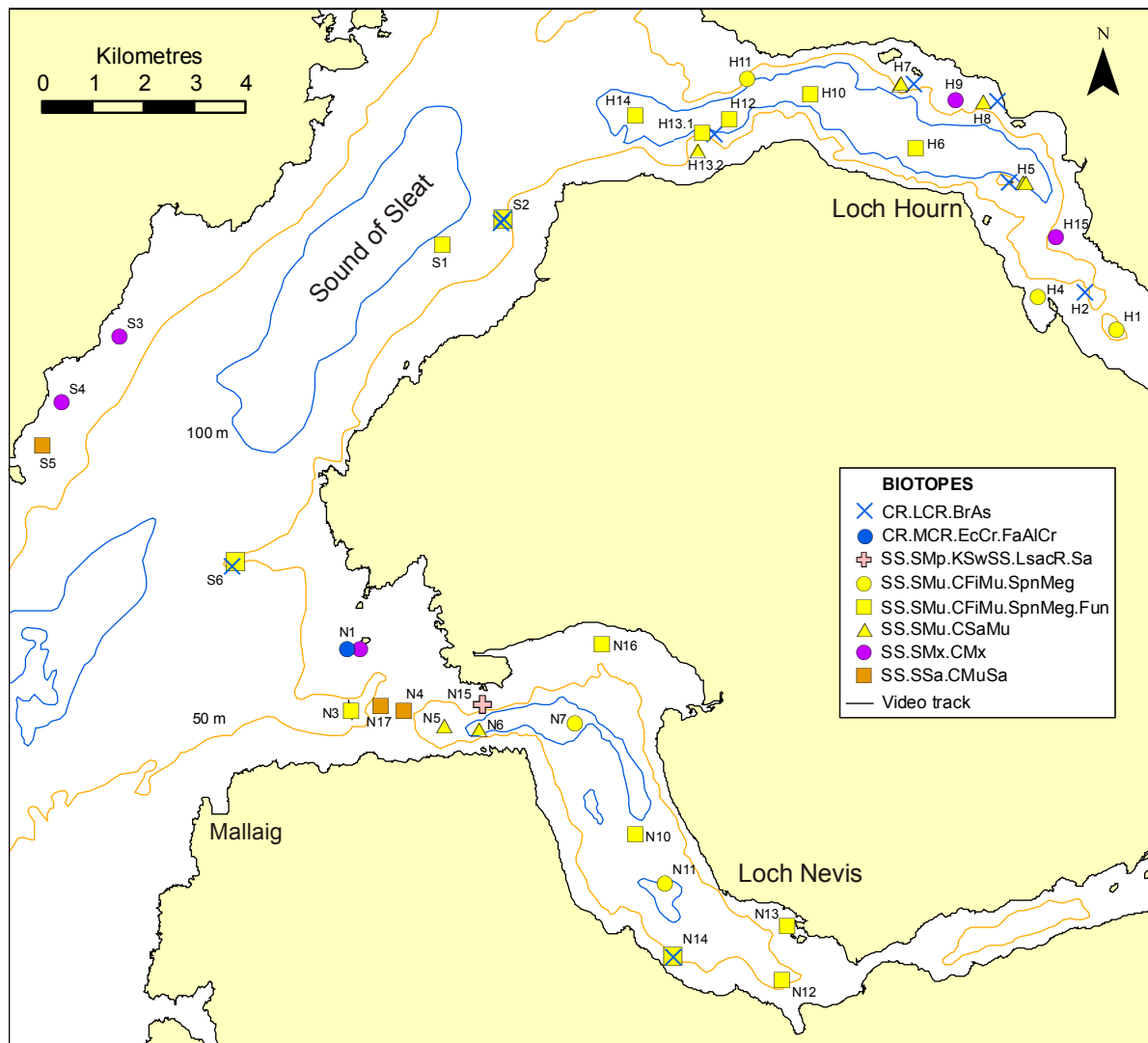
3.9 Sound of Sleat, Loch Hourn and Loch Nevis

The seabed of Loch Hourn is extensively floored by mud. Beyond the 100 m contour the mud was burrowed, densely in places, by thalassinid shrimps and *Nephrops norvegicus* and supported fairly high densities of the PMFs, *Funiculina quadrangularis* (frequent - common) and *Pachycerianthus multiplicatus* (locally common), together with *Virgularia mirabilis* (ascribed to the PMF biotope, **SS.SMu.CFiMu.SpMg.Fun**). Sandy muds were recorded at shallower depths of 29 - 44 m, generally supporting at most sparse small burrows, as well as *Amphiura* spp. and *Cerianthus lloydii* (**SS.SMu.CSaMu**). At intermediate depths at the mouth of the loch (72 m) at the head of the outer basin at 59 m and in sheltered conditions at 16 m the muds were worked by *N. norvegicus*, and at the latter site supported frequent *V. mirabilis* (**SS.SMu.CFiMu.SpMg** - a PMF). Bedrock outcrops and scattered boulders and cobbles on the mud at a number of points in the loch were found to support a rich ascidian fauna dominated by *Diazona violacea* and large solitary forms including *Ascidia mentula*, *A. virginea* and *Asciidiella aspersa*, together with brachiopods (**CR.LCR.BrAs**).

Between Loch Hourn and Loch Nevis three sites were worked on the eastern side of the Sound of Sleat and three on the western side. The eastern sites at depths of 46 - 57 m were similar to those in the deeper parts of Loch Hourn, with burrowed mud supporting high population densities of *Funiculina quadrangularis* (common - abundant) and *Amphiura* spp.

(**SS.SMu.CFiMu.SpnMeg.Fun**). Bedrock outcrops and silted boulders and cobbles supported a similar, rich, ascidian fauna, together with *Tubularia indivisa* and axinellid sponges including *Axinella infundibuliformis* (**CR.LCR.BrAs**). Dense *Leptometra celtica* coated the rock at one of the sites. On the western side of the Sound the shallower sites (24 - 25 m) displayed mixed sediments of slightly silty shelly sand with a dense scatter of shells, pebbles and occasional cobbles and boulders, with the area acting as a sink for much drift algae (**SS.SMx.CMx**). The sediment was less mixed and slightly muddier at the deepest site (28 m) (**SS.SSa.CMuSa**) but *Amalosoma eddytonense* was common to both areas.

Figure 10 Distribution of biotope records in the Sound of Sleat, Loch Hourn and Loch Nevis



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Most of the sites examined in Loch Nevis were soft muds densely burrowed by thalassinid shrimps and *Nephrops norvegicus*. Above the 100 m contour most sites displayed fairly dense *Funiculina quadrangularis* (frequent - common) (**SS.SMu.CFiMu.SpnMeg.Fun**), but seapens were absent from the deeper sites (**SS.SMu.CFiMu.SpnMeg**). Coarser sediments displaying occasional small burrows and sparse *Leptometra celtica* were observed where tidal currents are accelerated at the entrance to the loch (**SS.SSa.CMuSa** and **SS.SMu.CSaMu**), where possible trawl scarring was evident. Occasional *Saccharina latissima* on a mixed sandy substrate was recorded in the infralittoral (17 m) (**SS.SMp.KSwSS.LsacR.Sa**), but this was not a rich example of this PMF biotope, with most of the algal material seemingly unattached.

4 DISCUSSION

This section considers the conservation importance of the species and habitats encountered during the 2011 surveys and also serves to summarise the distribution of PMFs described above. The conservation importance of species and habitats and their occurrence in each of the survey locations is summarised in Table 2. A number of biotopes listed in the lower part of the table fall within broad habitat types included in the UK Biodiversity Action Plan (UKBAP) (UKBAP, 2007) and Scottish Biodiversity List (SBL) (SNH, 2010) but are generally of wide occurrence. Several non-PMF species are included on the Species of Conservation Concern (UK Biodiversity Steering Group, 1995) or UKBAP and SBL. *Amphianthus dohrni* was observed on *Swiftia pallida* at one site in The Little Minch, *Amalosoma eddystonense* at two adjacent sites in the Sound of Sleat, whilst *Echinus esculentus* (also on the IUCN Red List of Threatened Species: IUCN, 2011) was widely recorded often in high abundance, reflecting its status in Scottish waters. *Phymatolithon calcareum*, *Modiolus modiolus* and *Pleuronectes platessa* were only observed at low densities.

A total of 17 PMFs were encountered during the surveys of which 14 represent MPA search features. Fetlar, Scalloway and Armadale exhibited no habitat PMFs and only very sparse records of cod and ling. Much of the inner part of Loch Eriboll is floored with burrowed mud but the habitat was generally not a good example of the MPA search feature **SS.SMu.CFiMu.SpnMeg**, as the seapen population was poorly developed. In the outer part of the loch there were single occurrences of a low diversity example of *Saccharina latissima* and red algae on cobbles and pebbles (**SS.SMp.KSwSS.LsacR.CbPb**) and what appeared to be sparse *Ammodytes* sp. emerging from rippled fine sand.

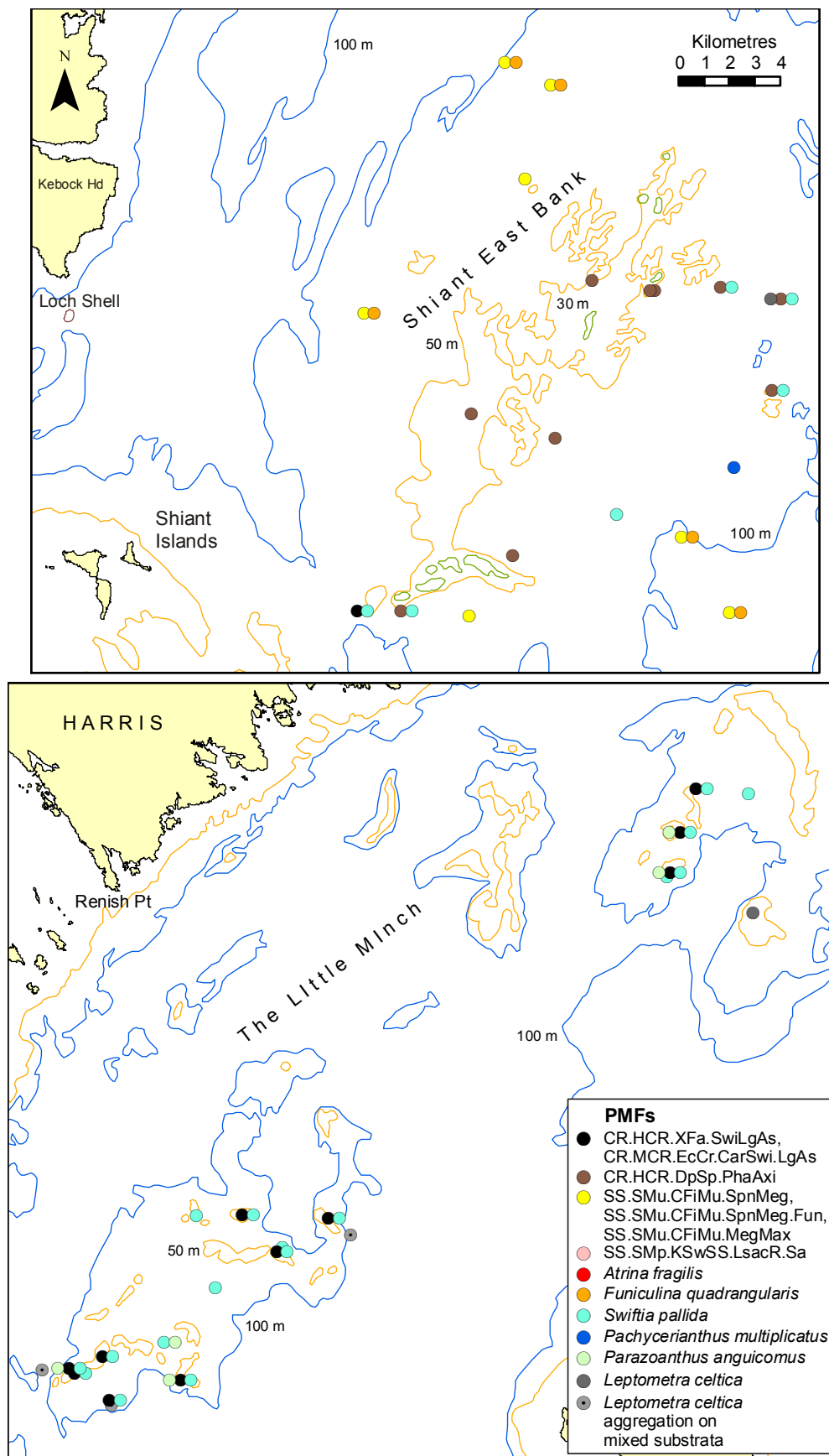
The 2011 survey of the outer sill of Little Loch Broom revealed a dense field of *Leptometra celtica* on a mixed muddy substrate extending over an area of the order of 2 ha, although the north-eastern bed margin remains poorly defined. During a 2010 survey of the loch, Moore *et al.* (2011) also recorded dense *L. celtica* within the bounds of the 2011 bed, as well as on the inner sill of the loch. Sparse *Swiftia pallida* was also recorded on the outer sill in 2011.

Five habitat and five species PMFs were recorded in the Minch (Figure 11). *Swiftia pallida* was widespread, being recorded at 20 of the 60 stations, although generally at low density on the Shiant East Bank. In the Little Minch the higher *Swiftia* density led to the recognition of *Swiftia* biotopes (mainly **CR.MCR.EcCr.CarSwi.LgAs** but also **CR.HCR.XFa.SwiLgAs**) over a wide area, where *Swiftia* was accompanied by a moderately rich sponge fauna. On the Shiant East Bank a similar sponge fauna but reduced *Swiftia* density led to the widespread recording of the deep sponge community **CR.HCR.DpSp.PhaAxi**. Although some areas of bedrock were surveyed, most of the *Swiftia* and deep sponge records were from substrates of mainly cobbles and boulders on sediment, so were somewhat atypical of the assigned reef biotopes. Soft burrowed mud supporting fairly rich *Funiculina quadrangularis* and burrowing crustaceans (**SS.SMu.CFiMu.SpnMeg.Fun**) was found around the Shiant East Bank. *Leptometra celtica* was recorded at five sites in the Minch, but only at three sites in the south-west of The Little Minch did it occur as dense fields on mixed substrates. Other species PMFs observed included sparse *Parazoanthus anguicomus* at five sites in The Little Minch and occasional *Pachycerianthus multiplicatus* on gravelly sand to the east of the Shiant East Bank.

Table 2 Species and biotopes, recorded during the surveys, of recognised conservation importance and their frequency of occurrence in each survey location. Locations are Fet (Fetlar), Sca (Scalloway), Arm (Armadale), Eri (Loch Eriboll), LB (Little Loch Broom), Min (Minch - including Shiant East Bank and Little Minch), Can (Canna), Sle (Sleat, Hourn and Nevis). Importance indicators are UK = UK Biodiversity Action Plan Priority Habitats and Species, SBL = Scottish Biodiversity List of Habitats and Species, OSP= OSPAR List of Threatened and/or Declining Species and Habitats, SCC = Species of Conservation Concern, PMF = Priority Marine Feature, SF = MPA search feature

Biotopes/species	Survey location frequency								Conservation importance					
	Fet	Sca	Arm	Eri	LB	Min	Can	Sle	UK	SBL	OSP	SCC	PMF	SF
CR.HCR.DpSp.PhaAxi						12	4		•	•			•	•
CR.HCR.XFa.SwiLgAs						2			•	•			•	•
CR.MCR.EcCr.CarSwi.LgAs						9	12			•			•	•
SS.SMp.KSwSS.LsacR.CbPb				1					•	•			•	•
SS.SMp.KSwSS.LsacR.Sa								1	•	•			•	•
SS.SMu.CFiMu.SpnMeg				11		2	10	5	•	•	•		•	•
SS.SMu.CFiMu.SpnMeg.Fun						5	18	14	•	•	•		•	•
<i>Funiculina quadrangularis</i>						5	18	14	•			•	•	•
<i>Swiftia pallida</i>					1	20	15		•				•	•
<i>Pachycerianthus multiplicatus</i>						1	2	2				•	•	•
<i>Parazoanthus anguicomus</i>						5	5					•	•	
<i>Atrina fragilis</i>							5		•	•		•	•	•
<i>Leptometra celtica</i>					6	5	7	8					•	•
<i>Ammodytes</i> spp.				1					•	•			•	•
<i>Molva molva</i>	1								•	•		•	•	
<i>Gadus morhua</i>	1		1										•	
<i>Phymatolithon calcareum</i>	1					1			•			•		
<i>Amphianthus dohrni</i>						1			•	•				
<i>Amalosoma eddystonense</i>								2				•		
<i>Modiolus modiolus</i>		2		1								•		
<i>Echinus esculentus</i>	17	3	20	6	5	35	33	1				•		
<i>Pleuronectes platessa</i>			1						•	•		•		
SS.SCS						1			•	•				
SS.SCS.CCS	10		18	3		9	7		•	•				
SS.SCS.CCS.PomB	2								•	•				
SS.SSa	8			1			1		•	•				
SS.SSa.CFiSa	6		40	10		1	2		•	•				
SS.SSa.CMuSa							8	3	•	•				
SS.SSa.OSa		3				11			•	•				
SS.SSa.IFiSa.ScupHyd			2						•	•				
SS.SSa.IMuSa				2					•	•				
SS.SMu.CSaMu				2	1		6	6	•	•				
SS.SMu.IFiMu.PhiVir				1					•		•			
SS.SMx.CMx.FluHyd	2					3			•	•				
SS.SMx.CMx.OphMx	2		7						•	•				

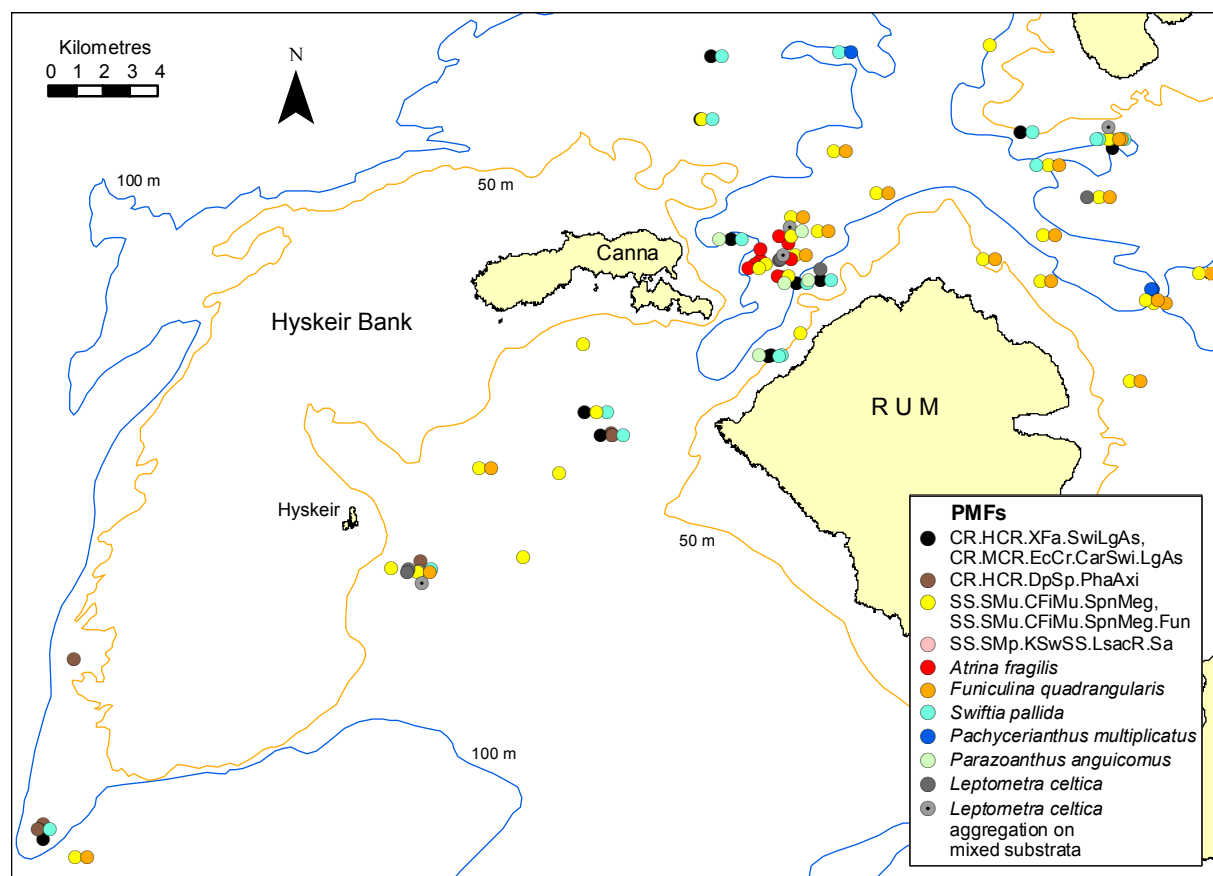
Figure 11 Distribution of PMF records in the Minch



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Five habitat and six species PMFs were recorded around Canna (Figure 12). *Swiftia pallida* was widely distributed over the surveyed area being recorded at 15 sites, generally at sufficiently high density, in association with axinellid sponges, to characterise the biotope **CR.MCR.EcCr.CarSwi.LgAs**, which included *Parazoanthus anguicomus* at four of the sites. The deep sponge community **CR.HCR.DpSp.PhaAxi** occurred at four sites. There was an extensive distribution of burrowed mud with dense *Funiculina quadrangularis* and megafaunal crustaceans north of Rum (**SS.SMu.CFiMu.SpnMeg.Fun**), where *Pachycerianthus multiplicatus* was also recorded at two sites. In the Sound of Canna and its southern approaches burrowed mud was also widespread but seapens were sparse or absent. These sites have been referred to **SS.SMu.CFiMu.SpnMeg**. *Leptometra celtica* was observed at seven sites forming dense fields on mixed substrates at four of them.

Figure 12 Distribution of PMF records around Canna



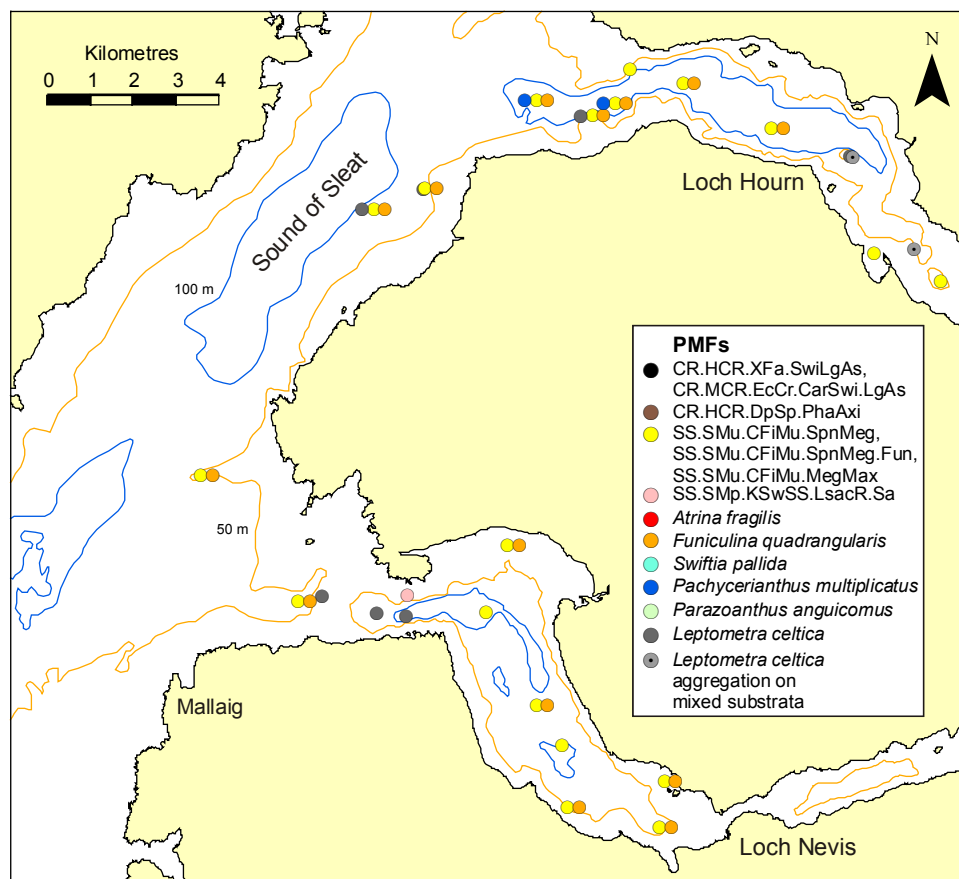
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Atrina fragilis was recorded along five video runs in the Sound of Canna. Within run segments along three of them the biotope **SS.SBR.SMus.Afrag** was recognised where *Atrina* became common. Within a further six run segments distributed over four sites, *Atrina* was a low density component of other biotopes. All recorded positions of *Atrina* records lie within or very close to the *Atrina* bed margin delineated by Howson *et al.* (2012).

The video survey indicates that much of the sea bed of the outer basins of Loch Hourn, Loch Nevis and of the adjacent region of the Sound of Sleaf consists of burrowed mud with extensive areas of densely burrowed sediments supporting rich populations of *Funiculina quadrangularis* (**SS.SMu.CFiMu.SpnMeg.Fun**), accompanied by *Pachycerianthus multiplicatus* in Loch Hourn (Figure 13). Densely burrowed mud with no evidence of seapens was also encountered in deeper water in Loch Nevis (**SS.SMu.CFiMu.SpnMeg**) and sparsely burrowed mud with *Virgularia mirabilis* or no seapens

(**SS.SMu.CFiMu.SpnMeg**) in the shallower areas of Loch Hourn. Loch Nevis also displayed a poor example of the biotope **SS.SMp.KSwSS.LsacR.Sa** at the mouth. *Leptometra celtica* was recorded in all three areas but mainly as sparsely scattered individuals. However, dense populations were observed on rock in the Sound of Sleat and at the entrance to Loch Hourn, and at two sites on mixed substrata in the eastern half of the outer basin of Loch Hourn.

Figure 13 Distribution of PMF records in the Sound of Sleat, Loch Hourn and Loch Nevis



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Appendix 1 *Positional and temporal details of video sequences recorded during the surveys. Where there is more than one entry for a site, this reflects splitting of the video run amongst different habitat types*

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Fetlar	FET1	17/10/2011	60.65084	-0.89902	60.64488	-0.89987	46.9	48.9	13:11:10	13:41:18	Fetlar 1211S Disc 3
Fetlar	FET2	17/10/2011	60.64138	-0.86452	60.63892	-0.86746	54.0	54.0	14:05:28	14:25:40	Fetlar 1211S Disc 3
Fetlar	FET3	17/10/2011	60.64374	-0.83053	60.63831	-0.83239	55.2	55.2	14:50:56	15:07:15	Fetlar 1211S Disc 4
Fetlar	FET3	17/10/2011	60.64374	-0.83053	60.63831	-0.83239	55.2	55.2	15:07:15	15:13:15	Fetlar 1211S Disc 4
Fetlar	FET3	17/10/2011	60.64374	-0.83053	60.63831	-0.83239	55.2	55.2	15:13:15	15:20:38	Fetlar 1211S Disc 4
Fetlar	FET4	17/10/2011	60.65279	-0.80987	60.64649	-0.80784	46.5	57.5	15:48:14	15:56:49	Fetlar 1211S Disc 4
Fetlar	FET4	17/10/2011	60.65279	-0.80987	60.64649	-0.80784	46.5	57.5	15:56:49	16:18:23	Fetlar 1211S Disc 4
Fetlar	FET5	17/10/2011	60.64289	-0.79777	60.63764	-0.80542	58.9	58.9	17:06:51	17:29:39	Fetlar 1211S Disc 5
Fetlar	FET5	17/10/2011	60.64289	-0.79777	60.63764	-0.80542	58.9	58.9	17:29:39	17:33:21	Fetlar 1211S Disc 5
Fetlar	FET5	17/10/2011	60.64289	-0.79777	60.63764	-0.80542	58.9	58.9	17:33:21	17:35:55	Fetlar 1211S Disc 5
Fetlar	FET5	17/10/2011	60.64289	-0.79777	60.63764	-0.80542	58.9	58.9	17:35:55	17:36:58	Fetlar 1211S Disc 5
Fetlar	FET6	17/10/2011	60.63065	-0.79717	60.62326	-0.79864	55.1	49.1	17:53:18	17:59:19	Fetlar 1211S Disc 5
Fetlar	FET6	17/10/2011	60.63065	-0.79717	60.62326	-0.79864	55.1	49.1	17:59:19	17:59:59	Fetlar 1211S Disc 5
Fetlar	FET6	17/10/2011	60.63065	-0.79717	60.62326	-0.79864	55.1	49.1	17:59:59	18:07:16	Fetlar 1211S Disc 5
Fetlar	FET6	17/10/2011	60.63065	-0.79717	60.62326	-0.79864	55.1	49.1	18:07:16	18:11:40	Fetlar 1211S Disc 5
Fetlar	FET6	17/10/2011	60.63065	-0.79717	60.62326	-0.79864	55.1	49.1	18:11:40	18:18:08	Fetlar 1211S Disc 5
Fetlar	FET6	17/10/2011	60.63065	-0.79717	60.62326	-0.79864	55.1	49.1	18:18:08	18:26:03	Fetlar 1211S Disc 5
Fetlar	FET6	17/10/2011	60.63065	-0.79717	60.62326	-0.79864	55.1	49.1	18:26:03	18:26:52	Fetlar 1211S Disc 5
Fetlar	FET7	18/10/2011	60.65437	-0.73017	60.65187	-0.72553	95.2	95.2	12:17:20	12:37:24	Fetlar 1211S Disc 6
Fetlar	FET8	18/10/2011	60.65683	-0.74500	60.65083	-0.74717	70.1	53.1	13:02:03	13:20:18	Fetlar 1211S Disc 6
Fetlar	FET8	18/10/2011	60.65683	-0.74500	60.65083	-0.74717	70.1	53.1	13:20:18	13:26:12	Fetlar 1211S Disc 6
Fetlar	FET8	18/10/2011	60.65683	-0.74500	60.65083	-0.74717	70.1	53.1	13:26:12	13:27:30	Fetlar 1211S Disc 6
Fetlar	FET8	18/10/2011	60.65683	-0.74500	60.65083	-0.74717	70.1	53.1	13:27:30	13:29:52	Fetlar 1211S Disc 6
Fetlar	FET8	18/10/2011	60.65683	-0.74500	60.65083	-0.74717	70.1	53.1	13:29:52	13:42:25	Fetlar 1211S Disc 6
Fetlar	FET9	18/10/2011	60.65055	-0.74214	60.65318	-0.74170	71.1	67.1	14:07:38	14:37:51	Fetlar 1211S Disc 7
Fetlar	FET10	18/10/2011	60.63499	-0.74737	60.63449	-0.75876	73.2	71.2	15:04:17	15:34:47	Fetlar 1211S Disc 7
Fetlar	FET11	18/10/2011	60.61737	-0.74620	60.62020	-0.73295	74.5	71.5	16:02:32	16:14:18	Fetlar 1211S Disc 8
Fetlar	FET11	18/10/2011	60.61737	-0.74620	60.62020	-0.73295	74.5	71.5	16:14:18	16:32:37	Fetlar 1211S Disc 8

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Fetlar	FET12	18/10/2011	60.59538	-0.75739	60.60431	-0.75002	56.8	58.8	17:18:50	17:45:42	Fetlar 1211S Disc 8
Fetlar	FET12	18/10/2011	60.59538	-0.75739	60.60431	-0.75002	56.8	58.8	17:45:42	17:59:13	Fetlar 1211S Disc 8
Fetlar	FET13	20/10/2011	60.55462	-0.94284	60.56274	-0.93746	81.8	82.8	07:30:54	08:00:59	Fetlar 1211S Disc 9
Fetlar	FET14	20/10/2011	60.54330	-0.94850	60.54980	-0.94385	93.8	93.8	08:30:07	09:00:11	Fetlar 1211S Disc 9
Fetlar	FET15	20/10/2011	60.55677	-0.88105	60.55017	-0.88534	52.8	66.8	09:30:40	09:38:41	Fetlar 1211S Disc 10
Fetlar	FET15	20/10/2011	60.55677	-0.88105	60.55017	-0.88534	52.8	66.8	09:38:41	10:00:40	Fetlar 1211S Disc 10
Fetlar	FET16	20/10/2011	60.55293	-0.85208	60.54645	-0.85685	72.7	72.7	10:24:59	10:31:47	Fetlar 1211S Disc 10
Fetlar	FET16	20/10/2011	60.55293	-0.85208	60.54645	-0.85685	72.7	72.7	10:31:47	10:53:23	Fetlar 1211S Disc 10
Fetlar	FET16	20/10/2011	60.55293	-0.85208	60.54645	-0.85685	72.7	72.7	10:53:23	10:55:05	Fetlar 1211S Disc 10
Fetlar	FET17	20/10/2011	60.54461	-0.81551	60.54876	-0.82067	100.6	100.6	11:33:25	12:03:29	Fetlar 1211S Disc 11
Fetlar	FET18	20/10/2011	60.55040	-0.78991	60.55467	-0.79442	71.5	71.5	12:30:02	12:48:46	Fetlar 1211S Disc 11
Fetlar	FET18	20/10/2011	60.55040	-0.78991	60.55467	-0.79442	71.5	71.5	12:48:46	12:56:32	Fetlar 1211S Disc 11
Fetlar	FET18	20/10/2011	60.55040	-0.78991	60.55467	-0.79442	71.5	71.5	12:56:32	13:00:15	Fetlar 1211S Disc 11
Fetlar	FET19	20/10/2011	60.56544	-0.94428	60.56269	-0.94947	71.3	71.3	17:08:52	17:38:59	Fetlar 1211S Disc 12
Fetlar	FET20	20/10/2011	60.56210	-0.95356	60.55927	-0.96062	74.5	74.5	17:46:59	18:17:17	Fetlar 1211S Disc 12
Fetlar	FET21	20/10/2011	60.58053	-0.95602	60.57407	-0.95220	53.7	53.7	18:51:30	19:21:37	Fetlar 1211S Disc 13
Fetlar	FET22	20/10/2011	60.59931	-0.96175	60.59341	-0.95623	40.8	40.8	19:50:46	20:08:07	Fetlar 1211S Disc 13
Fetlar	FET22	20/10/2011	60.59931	-0.96175	60.59341	-0.95623	40.8	40.8	20:08:07	20:20:46	Fetlar 1211S Disc 13
Fetlar	FET23	21/10/2011	60.66354	-0.85676	60.66084	-0.85092	30.8	31.8	11:25:05	11:46:53	Fetlar 1211S Disc 14
Fetlar	FET23	21/10/2011	60.66354	-0.85676	60.66084	-0.85092	30.8	31.8	11:46:53	11:55:20	Fetlar 1211S Disc 14
Fetlar	FET24	21/10/2011	60.67361	-0.82252	60.67254	-0.81916	47.7	48.7	12:25:00	12:33:58	Fetlar 1211S Disc 14
Scalloway	SCA1	16/10/2011	60.07968	-1.54039	60.07775	-1.54685	101.9	101.9	13:32:52	14:02:48	Scalloway A 1211S Disc 1
Scalloway	SCA2	16/10/2011	60.08994	-1.53473	60.08747	-1.54104	109.1	109.1	14:37:49	14:58:02	Scalloway A 1211S Disc 1
Scalloway	SCA3	16/10/2011	60.10376	-1.54227	60.10219	-1.55324	99.3	98.3	15:29:54	16:00:20	Scalloway A 1211S Disc 2
Armadale	ARM1S	29/10/2011	58.66225	-4.21140	58.65797	-4.21464	87.7	88.7	12:03:45	12:33:52	Armadale 1211S Disc 15
Armadale	ARM2S	29/10/2011	58.66396	-4.23498	58.65943	-4.23671	85.5	79.5	12:55:03	13:25:15	Armadale 1211S Disc 15
Armadale	ARM3S	29/10/2011	58.66541	-4.26796	58.66112	-4.26542	91.2	80.2	13:50:57	14:21:12	Armadale 1211S Disc 16
Armadale	ARM4S	29/10/2011	58.66116	-4.29802	58.65511	-4.29808	91.6	90.6	14:45:00	15:15:00	Armadale 1211S Disc 16
Armadale	ARM5S	29/10/2011	58.66161	-4.35841	58.65895	-4.34712	93.4	90.4	15:53:11	16:22:59	Armadale 1211S Disc 17
Armadale	ARM6S	31/10/2011	58.65091	-4.21014	58.64816	-4.21411	59.4	56.4	08:15:57	08:31:03	Armadale 1211S Disc 17

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Armadale	ARM7S	31/10/2011	58.64251	-4.25758	58.63963	-4.26206	80.9	81.9	09:01:25	09:16:35	Armadale 1211S Disc 17
Armadale	ARM8S	31/10/2011	58.65283	-4.27124	58.64935	-4.27113	85.6	86.6	09:42:42	09:57:47	Armadale 1211S Disc 18
Armadale	ARM9S	31/10/2011	58.63676	-4.28797	58.63343	-4.28766	79.5	80.5	10:21:54	10:37:01	Armadale 1211S Disc 18
Armadale	ARM10S	31/10/2011	58.63543	-4.31858	58.63238	-4.32328	70.7	68.7	11:03:49	11:21:52	Armadale 1211S Disc 18
Armadale	ARM11S	31/10/2011	58.63991	-4.33859	58.63517	-4.34230	72.4	69.4	12:10:31	12:35:46	Armadale 1211S Disc 18
Armadale	ARM1A	19/09/2011	58.66695	-4.24958	58.66789	-4.24818	89.5	90.5	10:08:06	10:28:40	Armadale 1311A Disc 1
Armadale	ARM2A	19/09/2011	58.66675	-4.28633	58.66850	-4.28372	94.3	96.3	10:53:12	11:13:13	Armadale 1311A Disc 1
Armadale	ARM3A	19/09/2011	58.66582	-4.33967	58.66804	-4.33354	92.4	94.4	12:03:40	12:24:04	Armadale 1311A Disc 1
Armadale	ARM4A	19/09/2011	58.64861	-4.23588	58.65078	-4.23171	65.1	67.1	13:48:38	14:11:04	Armadale 1311A Disc 2
Armadale	ARM5A	19/09/2011	58.64725	-4.29474	58.64860	-4.29087	87.5	86.5	14:37:31	14:57:31	Armadale 1311A Disc 2
Armadale	ARM6A	19/09/2011	58.64887	-4.35948	58.64949	-4.34408	90.8	88.8	15:29:34	15:49:41	Armadale 1311A Disc 2
Armadale	ARM7A	19/09/2011	58.62994	-4.24436	58.62982	-4.23603	79.1	73.1	17:13:04	17:33:36	Armadale 1311A Disc 3
Armadale	ARM8A	19/09/2011	58.63160	-4.31472	58.63077	-4.31027	80.1	79.1	18:01:26	18:21:49	Armadale 1311A Disc 3
Armadale	ARM9A	19/09/2011	58.63127	-4.35524	58.63063	-4.35216	82.0	81.0	18:42:04	18:58:15	Armadale 1311A Disc 3
Armadale	ARM10A	20/09/2011	58.61611	-4.23366	58.61745	-4.22815	67.0	67.0	09:47:33	10:02:42	Armadale 1311A Disc 4
Armadale	ARM11A	20/09/2011	58.61484	-4.29762	58.61531	-4.29025	63.8	65.8	10:32:04	10:47:16	Armadale 1311A Disc 4
Armadale	ARM12A	20/09/2011	58.61519	-4.36088	58.61569	-4.35482	68.6	67.6	11:18:05	11:30:20	Armadale 1311A Disc 4
Armadale	ARM13A	20/09/2011	58.59712	-4.24152	58.59803	-4.23166	62.6	62.6	12:58:34	13:13:37	Armadale 1311A Disc 5
Armadale	ARM14A	20/09/2011	58.59617	-4.28362	58.59883	-4.27482	49.7	59.7	13:41:39	13:57:34	Armadale 1311A Disc 5
Armadale	ARM15A	20/09/2011	58.59617	-4.36347	58.59847	-4.35431	60.2	61.2	15:08:35	15:23:39	Armadale 1311A Disc 5
Armadale	ARM16A	20/09/2011	58.57982	-4.24427	58.58049	-4.23840	50.7	49.7	16:55:22	17:05:32	Armadale 1311A Disc 6
Armadale	ARM17A	20/09/2011	58.58025	-4.29624	58.58176	-4.28487	44.9	47.9	17:29:39	17:49:45	Armadale 1311A Disc 6
Armadale	ARM18A	20/09/2011	58.58000	-4.35830	58.58113	-4.35476	49.9	49.9	18:16:21	18:32:02	Armadale 1311A Disc 6
Armadale	ARM19A	21/09/2011	58.57747	-4.36051	58.57526	-4.38347	43.3	46.3	10:05:26	10:25:31	Armadale 1311A Disc 7
Armadale	ARM20A	21/09/2011	58.56583	-4.28919	58.57009	-4.28419	45.0	49.0	10:59:30	11:20:09	Armadale 1311A Disc 7
Armadale	ARM21A	21/09/2011	58.56475	-4.26235	58.56824	-4.25724	44.7	46.7	12:14:08	12:29:34	Armadale 1311A Disc 7
Armadale	ARM22A	21/09/2011	58.55549	-4.28299	58.55666	-4.27979	40.6	42.6	12:52:47	13:02:57	Armadale 1311A Disc 8
Armadale	ARM23A	21/09/2011	58.54353	-4.25255	58.54501	-4.24879	26.6	28.6	13:20:23	13:30:31	Armadale 1311A Disc 8
Armadale	ARM24A	21/09/2011	58.55498	-4.23657	58.55612	-4.23177	36.6	37.6	13:42:00	13:52:05	Armadale 1311A Disc 8
Armadale	ARM25A	21/09/2011	58.56669	-4.20853	58.56871	-4.19400	45.6	40.6	14:06:05	14:13:00	Armadale 1311A Disc 8

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Armadale	ARM25A	21/09/2011	58.56669	-4.20853	58.56871	-4.19400	45.6	40.6	14:13:00	14:26:15	Armadale 1311A Disc 8
Armadale	ARM26A	21/09/2011	58.57384	-4.20560	58.57587	-4.18809	50.7	40.7	14:46:09	14:48:35	Armadale 1311A Disc 9
Armadale	ARM26A	21/09/2011	58.57384	-4.20560	58.57587	-4.18809	50.7	40.7	14:48:35	15:06:15	Armadale 1311A Disc 9
Armadale	ARM27A	21/09/2011	58.55841	-4.20215	58.55817	-4.19415	33.9	30.9	15:25:11	15:35:25	Armadale 1311A Disc 9
Armadale	ARM28A	21/09/2011	58.55498	-4.17934	58.55444	-4.17356	27.0	25.0	15:47:03	15:57:37	Armadale 1311A Disc 9
Armadale	ARM29A	21/09/2011	58.56098	-4.16891	58.56114	-4.16221	32.1	32.1	16:06:36	16:16:48	Armadale 1311A Disc 9
Armadale	ARM30A	21/09/2011	58.56849	-4.23199	58.56924	-4.22501	48.5	50.5	17:09:44	17:20:00	Armadale 1311A Disc 10
Armadale	ARM31A	21/09/2011	58.55681	-4.26102	58.55675	-4.25453	42.6	40.6	17:40:18	17:50:32	Armadale 1311A Disc 10
Armadale	ARM32A	24/09/2011	58.66758	-4.17276	58.66858	-4.16893	100.1	103.1	15:46:06	15:56:19	Armadale 1311A Disc 15
Armadale	ARM33A	24/09/2011	58.66793	-4.10720	58.66941	-4.10391	87.9	85.9	16:23:54	16:34:04	Armadale 1311A Disc 15
Armadale	ARM34A	24/09/2011	58.66849	-4.04422	58.67020	-4.04045	99.9	99.9	17:15:49	17:27:11	Armadale 1311A Disc 15
Armadale	ARM35A	25/09/2011	58.64813	-4.17446	58.65050	-4.16863	86.9	86.9	09:26:22	09:41:28	Armadale 1311A Disc 15
Armadale	ARM36A	25/09/2011	58.65001	-4.10703	58.65261	-4.10671	91.3	91.3	10:12:47	10:23:07	Armadale 1311A Disc 15
Armadale	ARM37A	25/09/2011	58.64956	-4.04710	58.65379	-4.04543	86.6	88.6	10:51:38	11:06:44	Armadale 1311A Disc 15
Armadale	ARM38A	25/09/2011	58.62902	-4.18143	58.63003	-4.18440	74.8	72.8	12:25:36	12:36:41	Armadale 1311A Disc 15
Armadale	ARM39A	25/09/2011	58.62875	-4.12415	58.63020	-4.12795	70.5	62.5	13:03:08	13:13:39	Armadale 1311A Disc 15
Armadale	ARM40A	25/09/2011	58.63094	-4.05537	58.63376	-4.05953	71.2	73.2	13:42:10	13:52:25	Armadale 1311A Disc 15
Armadale	ARM41A	25/09/2011	58.61277	-4.17615	58.61559	-4.17963	66.8	66.8	15:11:32	15:26:37	Armadale 1311A Disc 16
Armadale	ARM42A	25/09/2011	58.61289	-4.11326	58.61571	-4.11633	56.3	57.3	15:52:39	16:07:49	Armadale 1311A Disc 16
Armadale	ARM43A	25/09/2011	58.61363	-4.03582	58.61617	-4.02862	53.6	48.6	17:00:21	17:15:24	Armadale 1311A Disc 16
Armadale	ARM44A	28/09/2011	58.58128	-4.17420	58.58313	-4.17165	43.6	45.6	11:06:12	11:16:43	Armadale 1311A Disc 19
Armadale	ARM45A	28/09/2011	58.59718	-4.17793	58.59862	-4.17492	63.7	61.7	12:10:20	12:20:46	Armadale 1311A Disc 19
Armadale	ARM46A	28/09/2011	58.59606	-4.08634	58.59741	-4.08500	39.2	39.2	12:50:57	13:01:26	Armadale 1311A Disc 19
Armadale	ARM47A	28/09/2011	58.57925	-4.10636	58.58292	-4.10615	39.5	44.5	13:20:02	13:40:09	Armadale 1311A Disc 19
Eriboll	ERB1	22/09/2011	58.46036	-4.73604	58.46344	-4.73471	14.3	15.2	12:00:05	12:15:24	Eriboll 1311A Disc 11
Eriboll	ERB2	22/09/2011	58.46837	-4.71973	58.47018	-4.71708	20.2	18.1	12:27:07	12:42:12	Eriboll 1311A Disc 11
Eriboll	ERB3	22/09/2011	58.47526	-4.70536	58.47825	-4.70340	37.0	40.9	12:54:42	13:09:48	Eriboll 1311A Disc 11
Eriboll	ERB4	22/09/2011	58.48682	-4.69193	58.48881	-4.69186	42.9	36.8	13:23:05	13:33:10	Eriboll 1311A Disc 11
Eriboll	ERB5	22/09/2011	58.49398	-4.68399	58.49540	-4.68300	45.8	46.7	13:44:03	13:54:14	Eriboll 1311A Disc 12
Eriboll	ERB6	22/09/2011	58.51206	-4.66545	58.51327	-4.66479	51.6	57.6	14:13:07	14:23:17	Eriboll 1311A Disc 12

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Eriboll	ERB7	22/09/2011	58.52218	-4.65342	58.52459	-4.65305	49.5	53.4	14:47:19	14:57:59	Eriboll 1311A Disc 12
Eriboll	ERB8	22/09/2011	58.53238	-4.63776	58.53431	-4.63684	37.7	37.6	15:11:31	15:22:02	Eriboll 1311A Disc 12
Eriboll	ERB9	22/09/2011	58.53107	-4.61616	58.53212	-4.61253	20.5	21.5	15:33:58	15:38:35	Eriboll 1311A Disc 12
Eriboll	ERB9	22/09/2011	58.53107	-4.61616	58.53212	-4.61253	20.5	21.5	15:38:35	15:44:09	Eriboll 1311A Disc 12
Eriboll	ERB10	22/09/2011	58.54181	-4.63227	58.54248	-4.62769	34.4	34.3	15:57:06	16:07:28	Eriboll 1311A Disc 13
Eriboll	ERB11	22/09/2011	58.55176	-4.62918	58.55145	-4.62471	41.2	40.2	16:18:12	16:28:11	Eriboll 1311A Disc 13
Eriboll	ERB12	22/09/2011	58.56181	-4.62724	58.56302	-4.62676	48.2	47.3	17:19:28	17:29:32	Eriboll 1311A Disc 13
Eriboll	ERB13	22/09/2011	58.56211	-4.65696	58.56190	-4.65227	28.3	43.3	17:44:42	17:54:53	Eriboll 1311A Disc 13
Eriboll	ERB14	22/09/2011	58.56037	-4.67719	58.56015	-4.67294	20.4	20.4	18:09:00	18:19:02	Eriboll 1311A Disc 13
Eriboll	ERB15	23/09/2011	58.56211	-4.61151	58.56384	-4.60475	33.0	25.2	08:32:47	08:52:49	Eriboll 1311A Disc 13
Eriboll	ERB16	23/09/2011	58.55207	-4.60611	58.55799	-4.60951	23.3	27.4	09:09:36	09:29:42	Eriboll 1311A Disc 13
Eriboll	ERB17	23/09/2011	58.54294	-4.60187	58.54524	-4.60268	18.5	20.6	09:48:45	09:51:50	Eriboll 1311A Disc 14
Eriboll	ERB17	23/09/2011	58.54294	-4.60187	58.54524	-4.60268	18.5	20.6	09:51:50	09:58:51	Eriboll 1311A Disc 14
Eriboll	ERB18	23/09/2011	58.53664	-4.60042	58.53981	-4.60126	11.0	13.0	10:11:28	10:29:00	Eriboll 1311A Disc 14
Eriboll	ERB18	23/09/2011	58.53664	-4.60042	58.53981	-4.60126	11.0	13.0	10:29:00	10:31:29	Eriboll 1311A Disc 14
Eriboll	ERB19	23/09/2011	58.53410	-4.60560	58.53706	-4.60553	15.8	20.8	10:45:11	11:05:25	Eriboll 1311A Disc 14
Eriboll	ERB20	23/09/2011	58.52335	-4.63748	58.52469	-4.63601	8.8	10.8	12:01:07	12:11:20	Eriboll 1311A Disc 14
Eriboll	ERB21	23/09/2011	58.52022	-4.64734	58.52205	-4.64555	10.8	11.8	12:22:46	12:32:46	Eriboll 1311A Disc 14
Eriboll	ERB22	23/09/2011	58.49803	-4.70040	58.49891	-4.69759	23.6	27.6	12:57:48	13:07:54	Eriboll 1311A Disc 14
Eriboll	ERB23	23/09/2011	58.49054	-4.67024	58.49181	-4.66938	25.5	26.4	13:21:07	13:31:10	Eriboll 1311A Disc 14
Eriboll	ERB24	26/09/2011	58.45474	-4.74187	58.45874	-4.73730	11.8	13.1	09:27:22	09:48:01	Eriboll 1311A Disc 17
Eriboll	ERB25	26/09/2011	58.46574	-4.73182	58.46958	-4.72642	15.2	17.5	09:58:36	10:18:43	Eriboll 1311A Disc 17
Eriboll	ERB26	26/09/2011	58.47227	-4.72602	58.47541	-4.71987	16.6	17.9	10:25:39	10:45:50	Eriboll 1311A Disc 17
Eriboll	ERB27	26/09/2011	58.47121	-4.71763	58.47275	-4.71134	28.2	35.3	10:59:02	11:14:08	Eriboll 1311A Disc 17
Eriboll	ERB28	26/09/2011	58.50451	-4.68544	58.50581	-4.68169	36.2	38.3	12:12:19	12:22:23	Eriboll 1311A Disc 17
Eriboll	ERB29	26/09/2011	58.50629	-4.67070	58.50694	-4.66684	39.4	46.5	12:34:07	12:44:21	Eriboll 1311A Disc 17
Eriboll	ERB30	26/09/2011	58.53596	-4.62260	58.53628	-4.61774	29.8	27.9	13:09:31	13:19:32	Eriboll 1311A Disc 17
Eriboll	ERB31	26/09/2011	58.54081	-4.61408	58.54143	-4.60958	31.0	29.0	13:29:44	13:34:34	Eriboll 1311A Disc 17
Eriboll	ERB31	26/09/2011	58.54081	-4.61408	58.54143	-4.60958	31.0	29.0	13:34:34	13:38:07	Eriboll 1311A Disc 17
Eriboll	ERB31	26/09/2011	58.54081	-4.61408	58.54143	-4.60958	31.0	29.0	13:38:07	13:40:43	Eriboll 1311A Disc 17

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Eriboll	ERB32	26/09/2011	58.54720	-4.61212	58.54815	-4.60836	29.1	26.1	13:50:06	13:58:30	Eriboll 1311A Disc 18
Eriboll	ERB32	26/09/2011	58.54720	-4.61212	58.54815	-4.60836	29.1	26.1	13:58:30	14:02:12	Eriboll 1311A Disc 18
Little Minch	MV16	25/10/2011	57.61667	-6.87300	57.61717	-6.87233	41.2	41.2	16:13:51	16:15:10	D-MINCH-1011-DVD5
Little Minch	MV16	25/10/2011	57.61717	-6.87233	57.61900	-6.86950	41.2	41.5	16:15:10	16:21:39	D-MINCH-1011-DVD5
Little Minch	MV18	25/10/2011	57.61367	-6.90317	57.61683	-6.90233	74.2	62.9	15:52:22	16:00:13	D-MINCH-1011-DVD5
Little Minch	MV19	25/10/2011	57.59017	-6.88650	57.59083	-6.88850	77.3	82.6	11:00:22	11:06:21	D-MINCH-1011-DVD4
Little Minch	MV21	25/10/2011	57.55533	-6.99633	57.55617	-6.99717	128.4	118.4	13:26:04	13:29:47	D-MINCH-1011-DVD4
Little Minch	MV21	25/10/2011	57.55617	-6.99717	57.55967	-7.00017	118.4	118.5	13:29:47	13:43:43	D-MINCH-1011-DVD4
Little Minch	MV22	25/10/2011	57.55683	-6.97467	57.55700	-6.97533	73.3	69.8	12:50:41	12:52:00	D-MINCH-1011-DVD4
Little Minch	MV22	25/10/2011	57.55700	-6.97533	57.55817	-6.97850	69.8	31.1	12:52:00	13:00:53	D-MINCH-1011-DVD4
Little Minch	MV22	25/10/2011	57.55817	-6.97850	57.55883	-6.97983	31.1	46.1	13:00:53	13:05:00	D-MINCH-1011-DVD4
Little Minch	MV22	25/10/2011	57.55883	-6.97983	57.55900	-6.98000	46.1	47.4	13:05:00	13:05:30	D-MINCH-1011-DVD4
Little Minch	MV22	25/10/2011	57.55900	-6.98000	57.55983	-6.98150	47.4	64.8	13:05:30	13:10:32	D-MINCH-1011-DVD4
Little Minch	MV23	25/10/2011	57.54717	-6.95183	57.54717	-6.95200	86.9	85.9	14:41:59	14:42:30	D-MINCH-1011-DVD5
Little Minch	MV23	25/10/2011	57.54717	-6.95200	57.55050	-6.95367	85.9	68.8	14:42:30	14:53:18	D-MINCH-1011-DVD5
Little Minch	MV25	25/10/2011	57.55317	-6.96133	57.55533	-6.96300	98.3	102.7	14:07:18	14:14:17	D-MINCH-1011-DVD4
Little Minch	MV26	25/10/2011	57.56283	-6.95767	57.56333	-6.95850	76.1	58.2	12:28:10	12:30:37	D-MINCH-1011-DVD4
Little Minch	MV26	25/10/2011	57.56333	-6.95850	57.56417	-6.96050	58.2	47.9	12:30:37	12:36:30	D-MINCH-1011-DVD4
Little Minch	MV26	25/10/2011	57.56417	-6.96050	57.56433	-6.96100	47.9	46.0	12:36:30	12:37:59	D-MINCH-1011-DVD4
Little Minch	MV28	25/10/2011	57.55650	-6.90517	57.55767	-6.90950	63.2	75.6	11:59:47	12:08:17	D-MINCH-1011-DVD4
Little Minch	MV29	25/10/2011	57.57017	-6.91767	57.57033	-6.92067	62.7	60.3	11:27:24	11:34:21	D-MINCH-1011-DVD4
Little Minch	MV32	25/10/2011	57.60650	-6.84417	57.60567	-6.84650	66.0	39.5	10:07:39	10:12:11	D-MINCH-1011-DVD4
Little Minch	MV32	25/10/2011	57.60567	-6.84650	57.60517	-6.84750	39.5	38.7	10:12:11	10:13:59	D-MINCH-1011-DVD4
Little Minch	MV32	25/10/2011	57.60517	-6.84750	57.60417	-6.85000	38.7	53.5	10:13:59	10:18:19	D-MINCH-1011-DVD4
Little Minch	MV32	25/10/2011	57.60417	-6.85000	57.60400	-6.85067	53.5	55.2	10:18:19	10:19:25	D-MINCH-1011-DVD4
Little Minch	MV33	25/10/2011	57.61650	-6.81733	57.61783	-6.81483	46.2	71.7	16:40:17	16:43:52	D-MINCH-1011-DVD5
Little Minch	MV34	25/10/2011	57.61200	-6.80083	57.61217	-6.80067	110.7	111.6	16:59:03	16:59:15	D-MINCH-1011-DVD5
Little Minch	MV34	25/10/2011	57.61217	-6.80067	57.61433	-6.79883	111.6	122.5	16:59:15	17:05:12	D-MINCH-1011-DVD5
Little Minch	MV35	25/10/2011	57.58917	-6.78783	57.58800	-6.79017	154.1	149.5	09:34:39	09:41:08	D-MINCH-1011-DVD4
Little Minch	MV39	25/10/2011	57.58500	-6.72683	57.58383	-6.73000	180.4	181.1	09:00:16	09:08:03	D-MINCH-1011-DVD4

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Little Minch	MV40	25/10/2011	57.65200	-6.72800	57.65517	-6.72817	148.6	153.5	17:35:51	17:45:40	D-MINCH-1011-DVD5
Little Minch	MV60	24/10/2011	57.65100	-6.62583	57.65083	-6.62650	61.8	52.0	09:07:40	09:09:19	D-MINCH-1011-DVD3
Little Minch	MV60	24/10/2011	57.65083	-6.62650	57.65033	-6.63117	52.0	69.1	09:09:19	09:20:27	D-MINCH-1011-DVD3
Little Minch	MV61	24/10/2011	57.63800	-6.62083	57.63883	-6.62450	114.2	108.1	08:29:09	08:39:43	D-MINCH-1011-DVD3
Little Minch	MV64	24/10/2011	57.75850	-6.59967	57.76167	-6.59733	58.0	50.9	17:09:40	17:17:32	D-MINCH-1011-DVD3
Little Minch	MV65	24/10/2011	57.74300	-6.60650	57.74483	-6.60417	91.4	65.5	17:36:24	17:44:57	D-MINCH-1011-DVD3
Little Minch	MV65	24/10/2011	57.74483	-6.60417	57.74633	-6.60283	65.5	51.3	17:44:57	17:51:14	D-MINCH-1011-DVD3
Little Minch	MV66	24/10/2011	57.77383	-6.59033	57.77733	-6.58833	55.4	60.6	16:43:57	16:52:27	D-MINCH-1011-DVD3
Little Minch	MV67	23/10/2011	57.77400	-6.55517	57.77517	-6.55433	61.9	65.5	16:22:04	16:25:30	D-MINCH-1011-DVD1
Little Minch	MV67	23/10/2011	57.77517	-6.55433	57.77600	-6.55400	65.5	67.2	16:25:30	16:28:38	D-MINCH-1011-DVD1
Little Minch	MV78	23/10/2011	57.79183	-6.51850	57.79250	-6.51817	58.2	63.1	17:03:07	17:05:40	D-MINCH-1011-DVD2
Little Minch	MV78	23/10/2011	57.79250	-6.51817	57.79350	-6.51750	63.1	67.6	17:05:40	17:09:18	D-MINCH-1011-DVD2
Little Minch	MV82	23/10/2011	57.73633	-6.55600	57.73900	-6.55317	131.6	135.0	14:26:44	14:35:50	D-MINCH-1011-DVD1
Little Minch	MV85	23/10/2011	57.72317	-6.55467	57.72533	-6.55300	58.3	55.1	13:18:41	13:25:55	D-MINCH-1011-DVD1
Little Minch	MV85	23/10/2011	57.72533	-6.55300	57.72883	-6.55083	55.1	28.8	13:25:55	13:37:43	D-MINCH-1011-DVD1
Little Minch	MV85	23/10/2011	57.72883	-6.55083	57.73000	-6.55000	28.8	28.7	13:37:43	13:41:38	D-MINCH-1011-DVD1
Little Minch	MV85	23/10/2011	57.73000	-6.55000	57.73600	-6.54400	28.7	35.1	13:41:38	14:02:37	D-MINCH-1011-DVD1
Shiant East Bank	MV92	01/11/2011	57.98717	-6.38217	57.99033	-6.37883	204.1	192.0	08:04:40	08:14:10	D-MINCH-1011-DVD9
Shiant East Bank	MV104	26/10/2011	57.88700	-6.18517	57.88833	-6.18583	86.4	88.3	08:33:55	08:39:30	D-MINCH-1011-DVD6
Shiant East Bank	MV104	26/10/2011	57.88833	-6.18583	57.88900	-6.18617	88.3	88.9	08:39:30	08:41:39	D-MINCH-1011-DVD6
Shiant East Bank	MV105	26/10/2011	57.88817	-6.15650	57.88917	-6.15617	57.2	52.4	08:57:48	09:05:57	D-MINCH-1011-DVD6
Shiant East Bank	MV106	26/10/2011	57.89700	-6.13533	57.89800	-6.13433	34.8	29.7	09:19:10	09:25:02	D-MINCH-1011-DVD6
Shiant East Bank	MV107	26/10/2011	57.88750	-6.10967	57.88767	-6.11200	93.0	93.0	12:29:49	12:36:51	D-MINCH-1011-DVD6
Shiant East Bank	MV108	26/10/2011	57.90933	-6.13817	57.90983	-6.13800	54.8	55.9	09:35:40	09:38:27	D-MINCH-1011-DVD6
Shiant East Bank	MV108	26/10/2011	57.90983	-6.13800	57.91050	-6.13750	55.9	55.9	09:38:27	09:42:43	D-MINCH-1011-DVD6
Shiant East Bank	MV109	26/10/2011	57.92567	-6.16667	57.92650	-6.16600	57.0	57.1	09:59:19	10:04:51	D-MINCH-1011-DVD6
Shiant East Bank	MV110	26/10/2011	57.90350	-6.09883	57.90267	-6.10100	34.3	34.8	12:53:56	13:01:19	D-MINCH-1011-DVD6
Shiant East Bank	MV111	26/10/2011	57.90933	-6.08217	57.90950	-6.08517	73.2	71.5	13:15:12	13:24:13	D-MINCH-1011-DVD6
Shiant East Bank	MV112	26/10/2011	57.93667	-6.12250	57.93683	-6.12583	48.4	48.6	11:50:08	11:58:10	D-MINCH-1011-DVD6
Shiant East Bank	MV113	26/10/2011	57.95617	-6.16233	57.95583	-6.16483	58.8	60.3	10:53:50	10:59:37	D-MINCH-1011-DVD6

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Shiant East Bank	MV114	26/10/2011	57.95917	-6.11333	57.95867	-6.11817	47.1	46.5	11:24:43	11:34:00	D-MINCH-1011-DVD6
Shiant East Bank	MV115	03/11/2011	57.98433	-6.11583	57.98400	-6.11750	51.3	49.6	10:48:23	10:56:15	D-MINCH-1011-DVD11
Shiant East Bank	MV116	03/11/2011	57.99267	-6.18967	57.99267	-6.19133	88.7	89.3	11:21:05	11:28:00	D-MINCH-1011-DVD11
Shiant East Bank	MV117	03/11/2011	58.00867	-6.16933	58.00967	-6.17017	76.9	81.2	12:12:06	12:17:11	D-MINCH-1011-DVD11
Shiant East Bank	MV118	03/11/2011	58.02083	-6.15400	58.02183	-6.15483	67.7	67.5	12:29:22	12:35:31	D-MINCH-1011-DVD11
Shiant East Bank	MV120	26/10/2011	57.95150	-6.05783	57.95183	-6.06067	61.7	61.5	14:27:50	14:36:44	D-MINCH-1011-DVD6
Shiant East Bank	MV121	26/10/2011	57.93300	-6.05167	57.93333	-6.05417	70.3	75.1	14:02:26	14:10:37	D-MINCH-1011-DVD6
Shiant East Bank	MV122	26/10/2011	57.97600	-6.06767	57.97667	-6.07017	56.0	57.1	14:56:02	15:04:50	D-MINCH-1011-DVD6
Shiant East Bank	MV123	28/10/2011	57.98933	-6.04233	57.99183	-6.04217	36.7	39.2	11:13:42	11:21:41	D-MINCH-1011-DVD8
Shiant East Bank	MV123	28/10/2011	57.99183	-6.04217	57.99267	-6.04217	39.2	41.6	11:21:41	11:24:38	D-MINCH-1011-DVD8
Shiant East Bank	MV123	28/10/2011	57.99267	-6.04217	57.99433	-6.04183	41.6	42.3	11:24:38	11:30:37	D-MINCH-1011-DVD8
Shiant East Bank	MV124	28/10/2011	58.00733	-6.03950	58.00733	-6.03933	53.4	52.8	12:04:46	12:05:14	D-MINCH-1011-DVD8
Shiant East Bank	MV124	28/10/2011	58.00733	-6.03933	58.00817	-6.03933	52.8	52.9	12:05:14	12:07:47	D-MINCH-1011-DVD8
Shiant East Bank	MV124	28/10/2011	58.00817	-6.03933	58.00933	-6.03933	52.9	53.4	12:07:47	12:12:26	D-MINCH-1011-DVD8
Shiant East Bank	MV125	03/11/2011	58.04217	-6.08683	58.04300	-6.08800	75.4	80.0	13:04:11	13:10:05	D-MINCH-1011-DVD11
Shiant East Bank	MV127	27/10/2011	57.92517	-6.01850	57.92600	-6.01400	75.2	84.1	16:32:16	16:40:16	D-MINCH-1011-DVD7
Shiant East Bank	MV128	27/10/2011	57.95833	-5.98283	57.95817	-5.97733	68.8	70.9	17:01:40	17:10:32	D-MINCH-1011-DVD7
Shiant East Bank	MV129	23/10/2011	57.91783	-5.97250	57.91967	-5.97250	114.6	110.5	09:41:31	09:49:59	D-MINCH-1011-DVD1
Shiant East Bank	MV130	23/10/2011	57.94317	-5.93983	57.94550	-5.94033	70.6	70.1	08:38:50	08:48:01	D-MINCH-1011-DVD1
Shiant East Bank	MV131	03/11/2011	58.00533	-5.99733	58.00517	-5.99817	53.6	58.5	10:03:20	10:05:14	D-MINCH-1011-DVD11
Shiant East Bank	MV131	03/11/2011	58.00517	-5.99817	58.00500	-5.99933	58.5	55.8	10:05:14	10:08:17	D-MINCH-1011-DVD11
Shiant East Bank	MV131	03/11/2011	58.00500	-5.99933	58.00500	-6.00167	55.8	60.0	10:08:17	10:14:28	D-MINCH-1011-DVD11
Shiant East Bank	MV132	28/10/2011	57.98750	-5.94917	57.99017	-5.94700	87.8	80.4	10:20:05	10:27:26	D-MINCH-1011-DVD8
Shiant East Bank	MV133	03/11/2011	58.00783	-5.95233	58.00717	-5.95500	56.4	68.8	09:36:18	09:41:30	D-MINCH-1011-DVD11
Shiant East Bank	MV133	03/11/2011	58.00717	-5.95500	58.00717	-5.95600	68.8	70.8	09:41:30	09:44:02	D-MINCH-1011-DVD11
Shiant East Bank	MV134	28/10/2011	57.96967	-5.91950	57.97433	-5.91383	58.4	66.4	09:48:57	10:01:00	D-MINCH-1011-DVD8
Shiant East Bank	MV134	28/10/2011	57.97433	-5.91383	57.97467	-5.91367	66.4	67.1	10:01:00	10:01:31	D-MINCH-1011-DVD8
Shiant East Bank	MV135	26/10/2011	57.89217	-5.93950	57.89367	-5.93733	150.9	151.9	16:12:48	16:20:57	D-MINCH-1011-DVD6
Shiant East Bank	MV136	03/11/2011	58.07583	-6.07283	58.07617	-6.07383	82.4	81.8	13:58:48	14:04:37	D-MINCH-1011-DVD11
Shiant East Bank	MV137	03/11/2011	58.08300	-6.10350	58.08350	-6.10433	95.8	98.7	13:34:56	13:41:02	D-MINCH-1011-DVD11

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Shiant East Bank	MV140	03/11/2011	58.00433	-5.91183	58.00433	-5.91433	79.4	93.7	09:08:47	09:16:00	D-MINCH-1011-DVD11
Shiant East Bank	MV140	03/11/2011	58.00433	-5.91433	58.00417	-5.91550	93.7	93.7	09:16:00	09:18:57	D-MINCH-1011-DVD11
Shiant East Bank	MV155	02/11/2011	58.00317	-6.02083	58.00367	-6.02067	51.3	50.4	09:15:25	09:17:44	D-MINCH-1011-DVD10
Little Loch Broom	MV304	02/11/2011	57.91083	-5.40067	57.91100	-5.40100	40.9	46.2	14:19:03	14:20:47	D-MINCH-1011-DVD10
Little Loch Broom	MV304	02/11/2011	57.91100	-5.40100	57.91117	-5.40183	46.2	49.3	14:20:47	14:23:14	D-MINCH-1011-DVD10
Little Loch Broom	MV305	02/11/2011	57.90967	-5.39800	57.91050	-5.40067	52.8	39.9	14:33:00	14:39:15	D-MINCH-1011-DVD10
Little Loch Broom	MV305	02/11/2011	57.91050	-5.40067	57.91083	-5.40133	39.9	47.0	14:39:15	14:41:01	D-MINCH-1011-DVD10
Little Loch Broom	MV305	02/11/2011	57.91083	-5.40133	57.91083	-5.40167	47.0	48.6	14:41:01	14:41:53	D-MINCH-1011-DVD10
Little Loch Broom	MV306	02/11/2011	57.91000	-5.40183	57.91017	-5.40200	42.9	41.2	14:53:43	14:54:25	D-MINCH-1011-DVD10
Little Loch Broom	MV306	02/11/2011	57.91017	-5.40200	57.91033	-5.40217	41.2	39.6	14:54:25	14:55:40	D-MINCH-1011-DVD10
Little Loch Broom	MV306	02/11/2011	57.91033	-5.40217	57.91050	-5.40250	39.6	41.4	14:55:40	14:56:46	D-MINCH-1011-DVD10
Little Loch Broom	MV307	02/11/2011	57.90950	-5.40283	57.90967	-5.40333	40.4	38.1	15:04:50	15:06:04	D-MINCH-1011-DVD10
Little Loch Broom	MV307	02/11/2011	57.90967	-5.40333	57.90983	-5.40383	38.1	34.8	15:06:04	15:07:17	D-MINCH-1011-DVD10
Little Loch Broom	MV308	02/11/2011	57.90883	-5.40400	57.90917	-5.40483	34.1	33.7	15:17:23	15:19:41	D-MINCH-1011-DVD10
Little Loch Broom	MV309	02/11/2011	57.90867	-5.40217	57.90883	-5.40233	45.2	43.2	15:28:54	15:29:12	D-MINCH-1011-DVD10
Little Loch Broom	MV309	02/11/2011	57.90883	-5.40233	57.90900	-5.40233	43.2	40.3	15:29:12	15:29:47	D-MINCH-1011-DVD10
Little Loch Broom	MV309	02/11/2011	57.90900	-5.40233	57.90950	-5.40267	40.3	40.6	15:29:47	15:31:37	D-MINCH-1011-DVD10
Little Loch Broom	MV309	02/11/2011	57.90950	-5.40267	57.90967	-5.40300	40.6	39.8	15:31:37	15:32:56	D-MINCH-1011-DVD10
Little Loch Broom	MV310	02/11/2011	57.91000	-5.39500	57.91050	-5.39517	38.6	27.2	15:42:32	15:45:24	D-MINCH-1011-DVD10
Little Loch Broom	MV311	02/11/2011	57.91017	-5.39750	57.91100	-5.39933	50.9	41.0	15:52:10	15:57:24	D-MINCH-1011-DVD10
Little Loch Broom	MV311	02/11/2011	57.91100	-5.39933	57.91167	-5.40033	41.0	45.3	15:57:24	16:00:50	D-MINCH-1011-DVD10
Little Loch Broom	MV311	02/11/2011	57.91167	-5.40033	57.91200	-5.40067	45.3	47.2	16:00:50	16:01:57	D-MINCH-1011-DVD10
Little Loch Broom	MV312	02/11/2011	57.90633	-5.39117	57.90683	-5.39300	64.7	65.1	16:15:45	16:19:57	D-MINCH-1011-DVD10
Sound of Canna	C1	17/06/2011	57.06917	-6.42025	57.07049	-6.42448	155.4	182.7	09:23:00	09:35:00	Canna Disc 3
Sound of Canna	C1	17/06/2011	57.07049	-6.42448	57.07258	-6.43149	155.4	182.7	09:35:00	09:54:04	Canna Disc 3
Sound of Canna	C2	17/06/2011	57.07280	-6.40033	57.07550	-6.40938	126.0	178.4	10:26:00	10:46:13	Canna Disc 3
Sound of Canna	C3	17/06/2011	57.07736	-6.41590	57.07935	-6.42642	127.4	161.9	11:52:00	12:20:40	Canna Disc 3
Sound of Canna	C4	17/06/2011	57.06359	-6.43769	57.06318	-6.43873	165.2	178.6	12:49:00	12:53:10	Canna Disc 3
Sound of Canna	C4	17/06/2011	57.06318	-6.43873	57.06109	-6.44504	165.2	178.6	12:53:10	13:13:33	Canna Disc 3
Sound of Canna	C4	17/06/2011	57.06109	-6.44504	57.06047	-6.44702	165.2	178.6	13:13:33	13:21:20	Canna Disc 3

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Sound of Canna	C5	17/06/2011	57.05814	-6.42378	57.05838	-6.42601	112.9	184.9	14:15:00	14:20:33	Canna Disc 3
Sound of Canna	C5	17/06/2011	57.05838	-6.42601	57.05869	-6.42942	112.9	184.9	14:20:33	14:28:16	Canna Disc 3
Sound of Canna	C6	17/06/2011	57.03221	-6.42317	57.03233	-6.42669	36.9	80.7	14:57:00	15:03:37	Canna Disc 3
Sound of Canna	C6	17/06/2011	57.03233	-6.42669	57.03247	-6.43206	36.9	80.7	15:03:37	15:13:05	Canna Disc 3
Sound of Canna	C7	17/06/2011	57.03108	-6.42336	57.03204	-6.43051	86.7	265.5	15:23:00	15:39:48	Canna Disc 3
Sound of Canna	C7	17/06/2011	57.03204	-6.43051	57.03220	-6.43143	86.7	265.5	15:39:48	15:42:04	Canna Disc 3
Sound of Canna	C8	17/06/2011	57.03960	-6.40767	57.03991	-6.40821	22.3	60.1	15:55:00	15:56:50	Canna Disc 3
Sound of Canna	C8	17/06/2011	57.03991	-6.40821	57.04004	-6.41202	22.3	60.1	15:56:50	16:07:57	Canna Disc 3
Sound of Canna	C8	17/06/2011	57.04004	-6.41202	57.04025	-6.41310	22.3	60.1	16:07:57	16:11:28	Canna Disc 3
Sound of Canna	C9	18/06/2011	57.08626	-6.56373	57.08641	-6.56467	47.4	47.4	09:42:00	09:45:17	Canna Disc 4
Sound of Canna	C10	18/06/2011	57.07444	-6.59459	57.07382	-6.59759	26.5	26.0	09:56:00	10:01:37	Canna Disc 4
Sound of Canna	C11	18/06/2011	57.08047	-6.61631	57.08075	-6.61949	30.1	35.1	10:10:00	10:15:51	Canna Disc 4
Sound of Canna	C12	18/06/2011	57.09225	-6.63071	57.09296	-6.63118	79.6	96.7	10:25:00	10:30:04	Canna Disc 4
Sound of Canna	C13	18/06/2011	57.06387	-6.60811	57.06278	-6.60799	20.9	21.0	10:48:00	10:50:06	Canna Disc 4
Sound of Canna	C13	18/06/2011	57.06278	-6.60799	57.06249	-6.60843	20.9	21.0	10:50:06	10:51:39	Canna Disc 4
Sound of Canna	C13	18/06/2011	57.06249	-6.60843	57.06223	-6.60882	20.9	21.0	10:51:39	10:53:40	Canna Disc 4
Sound of Canna	C13	18/06/2011	57.06223	-6.60882	57.06197	-6.60917	20.9	21.0	10:53:40	10:55:58	Canna Disc 4
Sound of Canna	C14	18/06/2011	57.06262	-6.63114	57.06200	-6.63347	26.1	26.1	11:05:00	11:11:30	Canna Disc 4
Sound of Canna	C15	18/06/2011	57.07468	-6.66821	57.07571	-6.66903	43.3	43.4	11:22:00	11:28:39	Canna Disc 4
Sound of Canna	C16	18/06/2011	57.05140	-6.66820	57.05085	-6.66818	28.6	28.7	11:42:00	11:48:42	Canna Disc 4
Sound of Canna	C17	18/06/2011	57.03344	-6.73169	57.03318	-6.73193	39.5	35.0	12:06:00	12:11:39	Canna Disc 4
Sound of Canna	C18	18/06/2011	57.00640	-6.74414	57.00501	-6.74517	40.3	37.4	12:24:00	12:29:42	Canna Disc 4
Sound of Canna	C19	18/06/2011	56.98385	-6.72035	56.98224	-6.72050	29.5	29.7	12:42:00	12:48:20	Canna Disc 4
Sound of Canna	C20	18/06/2011	56.96584	-6.75473	56.96467	-6.75565	29.3	28.9	12:59:00	13:04:34	Canna Disc 4
Sound of Canna	C21	18/06/2011	56.92659	-6.75913	56.92599	-6.75946	39.4	39.4	13:39:00	13:42:38	Canna Disc 4
Sound of Canna	C22	18/06/2011	56.90014	-6.76892	56.89894	-6.76971	41.5	42.6	13:55:00	14:00:10	Canna Disc 4
Sound of Canna	C23	18/06/2011	56.88517	-6.83379	56.88343	-6.83627	42.7	53.8	14:16:00	14:25:32	Canna Disc 4
Sound of Canna	C24	18/06/2011	56.86664	-6.85143	56.86325	-6.85560	68.3	68.9	14:35:00	14:42:55	Canna Disc 4
Sound of Canna	C24	18/06/2011	56.86325	-6.85560	56.86316	-6.85565	68.3	68.9	14:42:55	14:44:22	Canna Disc 4
Sound of Canna	C24	18/06/2011	56.86316	-6.85565	56.86276	-6.85641	68.3	68.9	14:44:22	14:48:58	Canna Disc 4

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Sound of Canna	C25	18/06/2011	56.85473	-6.83210	56.85421	-6.83331	158.8	161.8	15:32:00	15:38:41	Canna Disc 4
Sound of Canna	C26	18/06/2011	56.92120	-6.83824	56.92030	-6.83950	60.0	59.4	16:14:00	16:24:20	Canna Disc 4
Sound of Canna	C26	18/06/2011	56.92030	-6.83950	56.91987	-6.84064	60.0	59.4	16:24:20	16:29:54	Canna Disc 4
Sound of Canna	C27	18/06/2011	56.92434	-6.69348	56.92430	-6.69418	28.4	29.7	17:04:00	17:16:34	Canna Disc 4
Sound of Canna	C28	19/06/2011	57.03273	-6.54368	57.03257	-6.54322	77.1	77.5	08:06:00	08:11:39	Canna Disc 5
Sound of Canna	C29	19/06/2011	57.04199	-6.63611	57.04400	-6.63616	25.4	23.4	08:39:00	08:46:40	Canna Disc 5
Sound of Canna	C30	19/06/2011	57.02824	-6.65023	57.02954	-6.65091	28.3	26.3	08:58:00	09:05:59	Canna Disc 5
Sound of Canna	C31	19/06/2011	57.01092	-6.67127	57.01170	-6.67147	34.3	33.3	09:17:00	09:23:57	Canna Disc 5
Sound of Canna	C32	19/06/2011	56.99271	-6.68182	56.99295	-6.68301	56.4	56.4	09:35:00	09:39:15	Canna Disc 5
Sound of Canna	C33	19/06/2011	56.97532	-6.66872	56.97617	-6.67207	77.4	69.5	09:52:00	10:15:29	Canna Disc 5
Sound of Canna	C34	19/06/2011	56.95655	-6.67651	56.95606	-6.67690	59.1	60.1	10:32:00	10:37:42	Canna Disc 5
Sound of Canna	C35	19/06/2011	56.95571	-6.65167	56.95549	-6.65196	103.7	103.7	10:49:00	10:53:25	Canna Disc 5
Sound of Canna	C36	19/06/2011	56.95593	-6.63442	56.95538	-6.63493	68.3	97.0	11:08:00	11:16:00	Canna Disc 5
Sound of Canna	C36	19/06/2011	56.95538	-6.63493	56.95469	-6.63537	68.3	97.0	11:16:00	11:26:26	Canna Disc 5
Sound of Canna	C36	19/06/2011	56.95469	-6.63537	56.95437	-6.63562	68.3	97.0	11:26:26	11:30:32	Canna Disc 5
Sound of Canna	C37	19/06/2011	56.97910	-6.66743	56.97868	-6.66495	71.2	70.5	11:46:00	12:10:00	Canna Disc 5
Sound of Canna	C38	19/06/2011	56.97641	-6.67140	56.97589	-6.67116	65.6	68.8	12:18:00	12:27:21	Canna Disc 5
Sound of Canna	C39	19/06/2011	56.96144	-6.57277	56.96095	-6.57244	89.1	87.2	12:55:00	12:58:03	Canna Disc 5
Sound of Canna	C40	19/06/2011	56.99040	-6.60188	56.98990	-6.60168	83.0	83.0	13:53:00	13:56:05	Canna Disc 5
Sound of Canna	C41	19/06/2011	56.99009	-6.55432	56.98975	-6.55376	85.2	85.3	14:11:00	14:13:20	Canna Disc 5
Sound of Canna	C42	19/06/2011	56.99086	-6.47811	56.98911	-6.47665	47.0	42.5	14:40:00	14:46:59	Canna Disc 5
Sound of Canna	C43	19/06/2011	56.99748	-6.47164	56.99627	-6.47106	27.6	32.7	14:56:00	14:59:36	Canna Disc 5
Sound of Canna	C44	19/06/2011	57.01081	-6.49052	57.00984	-6.49022	145.7	145.7	15:12:00	15:17:18	Canna Disc 5
Sound of Canna	C45	19/06/2011	57.00309	-6.51110	57.00206	-6.51072	43.3	43.8	15:29:00	15:34:34	Canna Disc 5
Sound of Canna	C46	19/06/2011	57.00409	-6.52331	57.00364	-6.52322	52.8	57.3	15:41:00	15:46:20	Canna Disc 5
Sound of Canna	C46	19/06/2011	57.00364	-6.52322	57.00356	-6.52311	52.8	57.3	15:46:20	15:47:12	Canna Disc 5
Sound of Canna	C46	19/06/2011	57.00356	-6.52311	57.00332	-6.52271	52.8	57.3	15:47:12	15:49:38	Canna Disc 5
Sound of Canna	C47	20/06/2011	57.05650	-6.41743	57.05711	-6.41506	52.5	75.5	10:08:00	10:23:01	Canna Disc 6
Sound of Canna	C48	19/06/2011	57.01105	-6.53458	57.01014	-6.53234	82.7	92.7	16:04:00	16:11:54	Canna Disc 5
Sound of Canna	C49	20/06/2011	57.05785	-6.40286	57.05785	-6.40218	58.1	68.6	10:30:00	10:31:53	Canna Disc 6

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Sound of Canna	C49	20/06/2011	57.05785	-6.40218	57.05780	-6.40152	58.1	68.6	10:31:53	10:38:29	Canna Disc 6
Sound of Canna	C50	20/06/2011	57.06544	-6.41759	57.06646	-6.41800	121.6	122.7	10:47:00	10:57:54	Canna Disc 6
Sound of Canna	C51	20/06/2011	57.06345	-6.42686	57.06389	-6.42682	169.7	177.9	11:14:00	11:26:00	Canna Disc 6
Sound of Canna	C51	20/06/2011	57.06389	-6.42682	57.06434	-6.42637	169.7	177.9	11:26:00	11:38:09	Canna Disc 6
Sound of Canna	C52	20/06/2011	57.07345	-6.42246	57.07358	-6.42216	99.0	125.1	11:51:00	11:52:53	Canna Disc 6
Sound of Canna	C52	20/06/2011	57.07358	-6.42216	57.07369	-6.42098	99.0	125.1	11:52:53	12:05:26	Canna Disc 6
Sound of Canna	C53	20/06/2011	57.06715	-6.43850	57.06714	-6.43886	184.2	170.3	12:19:00	12:23:35	Canna Disc 6
Sound of Canna	C53	20/06/2011	57.06714	-6.43886	57.06719	-6.43929	184.2	170.3	12:23:35	12:31:38	Canna Disc 6
Sound of Canna	C54	20/06/2011	57.06997	-6.45703	57.07038	-6.45701	47.5	47.1	12:44:00	12:49:28	Canna Disc 6
Sound of Canna	C55	20/06/2011	57.07694	-6.48411	57.07677	-6.48465	43.7	34.8	12:59:00	13:04:00	Canna Disc 6
Sound of Canna	C55	20/06/2011	57.07677	-6.48465	57.07684	-6.48531	43.7	34.8	13:04:00	13:07:49	Canna Disc 6
Sound of Canna	C56	20/06/2011	57.08817	-6.46001	57.08837	-6.46012	41.2	41.3	13:38:00	13:45:00	Canna Disc 6
Sound of Canna	C57	20/06/2011	57.10905	-6.47884	57.10919	-6.47881	50.4	53.6	13:57:00	13:58:26	Canna Disc 6
Sound of Canna	C57	20/06/2011	57.10919	-6.47881	57.10933	-6.47822	50.4	53.6	13:58:26	14:02:15	Canna Disc 6
Sound of Canna	C58	20/06/2011	57.12974	-6.47524	57.12997	-6.47487	65.7	68.8	14:14:00	14:17:43	Canna Disc 6
Sound of Canna	C58	20/06/2011	57.12997	-6.47487	57.13003	-6.47447	65.7	68.8	14:17:43	14:20:04	Canna Disc 6
Sound of Canna	C59	20/06/2011	57.13327	-6.39749	57.13347	-6.39668	125.0	108.1	14:41:00	14:52:21	Canna Disc 6
Sound of Canna	C60	20/06/2011	57.13791	-6.30647	57.13767	-6.30549	142.4	125.5	15:30:00	15:34:43	Canna Disc 6
Sound of Canna	C61	20/06/2011	57.11076	-6.28590	57.11009	-6.28534	45.6	30.1	15:51:00	15:53:40	Canna Disc 6
Sound of Canna	C61	20/06/2011	57.11009	-6.28534	57.10994	-6.28407	45.6	30.1	15:53:40	16:00:08	Canna Disc 6
Sound of Canna	C62	20/06/2011	57.12263	-6.38015	57.12230	-6.37956	140.6	158.5	16:52:00	16:58:51	Canna Disc 6
Sound of Canna	C62	20/06/2011	57.12230	-6.37956	57.12228	-6.37943	140.6	158.5	16:58:51	17:00:00	Canna Disc 6
Sound of Canna	C62	20/06/2011	57.12228	-6.37943	57.12224	-6.37813	140.6	158.5	17:00:00	17:08:21	Canna Disc 6
Sound of Canna	C63	20/06/2011	57.10079	-6.39751	57.10059	-6.39625	145.3	151.3	17:26:00	17:29:32	Canna Disc 6
Sound of Canna	C64	21/06/2011	57.08740	-6.37058	57.08748	-6.36997	133.0	125.9	07:38:00	07:40:51	Canna Disc 6
Sound of Canna	C65	21/06/2011	57.07749	-6.34023	57.07758	-6.33945	32.7	40.7	07:55:00	08:00:17	Canna Disc 6
Sound of Canna	C66	21/06/2011	57.06771	-6.30315	57.06762	-6.30397	66.5	74.5	08:14:00	08:16:58	Canna Disc 6
Sound of Canna	C67	21/06/2011	57.09955	-6.26662	57.09934	-6.26751	102.1	102.1	08:37:00	08:43:24	Canna Disc 6
Sound of Canna	C68	21/06/2011	57.07631	-6.26737	57.07634	-6.26842	158.0	53.9	08:59:00	09:02:35	Canna Disc 6
Sound of Canna	C69	21/06/2011	57.06092	-6.26856	57.06099	-6.26925	54.9	76.8	09:18:00	09:21:07	Canna Disc 6

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Sound of Canna	C70	21/06/2011	57.02921	-6.21144	57.02967	-6.21210	64.7	114.7	09:43:00	09:47:52	Canna Disc 6
Sound of Canna	C71	21/06/2011	57.05554	-6.19842	57.05557	-6.19843	153.6	154.6	10:04:00	10:04:36	Canna Disc 6
Sound of Canna	C71	21/06/2011	57.05557	-6.19843	57.05571	-6.19864	153.6	154.6	10:04:36	10:10:00	Canna Disc 6
Sound of Canna	C71	21/06/2011	57.05571	-6.19864	57.05577	-6.19887	153.6	154.6	10:10:00	10:12:34	Canna Disc 6
Sound of Canna	C71	21/06/2011	57.05577	-6.19887	57.05578	-6.19901	153.6	154.6	10:12:34	10:15:09	Canna Disc 6
Sound of Canna	C72	21/06/2011	57.05663	-6.20363	57.05674	-6.20397	103.6	164.6	10:27:00	10:31:31	Canna Disc 6
Sound of Canna	C73	21/06/2011	57.08911	-6.23446	57.08937	-6.23507	62.7	118.7	10:52:00	10:55:21	Canna Disc 6
Sound of Canna	C73	21/06/2011	57.08937	-6.23507	57.08966	-6.23586	62.7	118.7	10:55:21	10:59:39	Canna Disc 6
Sound of Canna	C74	21/06/2011	57.10914	-6.22876	57.10921	-6.22916	133.7	68.8	11:12:00	11:12:42	Canna Disc 6
Sound of Canna	C74	21/06/2011	57.10921	-6.22916	57.10923	-6.23121	133.7	68.8	11:12:42	11:18:08	Canna Disc 6
Sound of Canna	C74	21/06/2011	57.10923	-6.23121	57.10918	-6.23181	133.7	68.8	11:18:08	11:19:30	Canna Disc 6
Sound of Canna	C75	21/06/2011	57.06585	-6.17224	57.06597	-6.17239	123.9	158.9	11:47:00	11:52:19	Canna Disc 6
Loch Hourn	H1	16/06/2011	57.09656	-5.54130	57.09617	-5.54074	59.4	57.6	10:52:00	10:58:00	Canna Disc 2
Loch Hourn	H2	16/06/2011	57.10300	-5.55207	57.10242	-5.55146	35.6	51.8	10:31:00	10:42:23	Canna Disc 2
Loch Hourn	H4	16/06/2011	57.10246	-5.56795	57.10088	-5.56637	16.2	16.4	10:07:00	10:19:20	Canna Disc 2
Loch Hourn	H5	16/06/2011	57.12181	-5.57822	57.12162	-5.57701	43.9	44.1	09:43:00	09:47:30	Canna Disc 2
Loch Hourn	H5	16/06/2011	57.12162	-5.57701	57.12164	-5.57618	43.9	44.1	09:47:30	09:55:14	Canna Disc 2
Loch Hourn	H6	16/06/2011	57.12713	-5.60874	57.12716	-5.60842	138.6	138.7	09:23:00	09:28:50	Canna Disc 2
Loch Hourn	H7	16/06/2011	57.13824	-5.61444	57.13825	-5.61429	43.1	43.1	12:13:00	12:14:27	Canna Disc 2
Loch Hourn	H7	16/06/2011	57.13825	-5.61429	57.13847	-5.61371	43.1	43.1	12:14:27	12:21:52	Canna Disc 2
Loch Hourn	H8	16/06/2011	57.13557	-5.58682	57.13593	-5.58659	37.0	37.0	11:41:00	11:46:12	Canna Disc 2
Loch Hourn	H8	16/06/2011	57.13593	-5.58659	57.13572	-5.58674	37.0	37.0	11:46:12	11:50:01	Canna Disc 2
Loch Hourn	H9	16/06/2011	57.13631	-5.59515	57.13554	-5.59716	19.8	20.0	11:55:00	12:02:54	Canna Disc 2
Loch Hourn	H10	16/06/2011	57.13580	-5.64370	57.13607	-5.64339	153.2	153.3	12:33:00	12:40:32	Canna Disc 2
Loch Hourn	H11	16/06/2011	57.13838	-5.66371	57.13799	-5.66464	72.3	72.4	12:52:00	13:00:58	Canna Disc 2
Loch Hourn	H12	16/06/2011	57.13100	-5.66885	57.13120	-5.67005	164.2	164.3	08:50:00	08:58:34	Canna Disc 2
Loch Hourn	H13.1	16/06/2011	57.12832	-5.67768	57.12820	-5.67820	98.8	98.9	08:15:00	08:21:52	Canna Disc 2
Loch Hourn	H13.1	16/06/2011	57.12820	-5.67820	57.12816	-5.67856	98.8	98.9	08:21:52	08:25:13	Canna Disc 2
Loch Hourn	H13.2	16/06/2011	57.12544	-5.67891	57.12515	-5.67928	28.5	28.6	08:34:00	08:40:56	Canna Disc 2
Loch Hourn	H14	16/06/2011	57.13091	-5.70035	57.13117	-5.69985	112.5	112.5	13:16:00	13:22:52	Canna Disc 2

Appendix 1 continued

Location	Site ID	Date	Start latitude	Start longitude	End latitude	End longitude	Depth start (m)	Depth end (m)	Time start (hh:mm:ss)	Time end (hh:mm:ss)	DVD ref no.
Loch Hourn	H15	16/06/2011	57.11262	-5.56250	57.11215	-5.56117	25.8	25.9	11:16:00	11:27:04	Canna Disc 2
Loch Nevis	N1	16/06/2011	57.03421	-5.78772	57.03489	-5.78573	21.2	21.1	16:43:00	16:49:44	Canna Disc 2
Loch Nevis	N3	15/06/2011	57.02565	-5.78506	57.02198	-5.78345	36.4	40.7	14:44:00	14:50:44	Canna Disc 1
Loch Nevis	N4	15/06/2011	57.02417	-5.76784	57.02433	-5.76690	32.0	29.9	15:12:00	15:18:45	Canna Disc 1
Loch Nevis	N5	15/06/2011	57.02220	-5.75363	57.02165	-5.75387	82.8	84.1	15:27:00	15:35:24	Canna Disc 1
Loch Nevis	N6	15/06/2011	57.02174	-5.74291	57.02143	-5.74181	106.5	110.3	15:46:00	15:55:15	Canna Disc 1
Loch Nevis	N7	15/06/2011	57.02301	-5.71216	57.02330	-5.71100	129.3	138.1	16:11:00	16:17:54	Canna Disc 1
Loch Nevis	N10	15/06/2011	57.00369	-5.69034	57.00417	-5.69125	93.9	90.8	17:48:00	17:51:42	Canna Disc 1
Loch Nevis	N11	15/06/2011	56.99561	-5.68005	56.99573	-5.68099	107.0	105.9	17:34:00	17:38:20	Canna Disc 1
Loch Nevis	N12	15/06/2011	56.97956	-5.64190	56.97921	-5.64104	57.5	55.4	17:00:00	17:04:28	Canna Disc 1
Loch Nevis	N13	15/06/2011	56.98898	-5.64058	56.98870	-5.64001	39.4	36.6	16:46:00	16:52:12	Canna Disc 1
Loch Nevis	N14	15/06/2011	56.98241	-5.67686	56.98248	-5.67691	49.2	61.1	17:17:00	17:19:02	Canna Disc 1
Loch Nevis	N14	15/06/2011	56.98248	-5.67691	56.98296	-5.67717	49.2	61.1	17:19:02	17:24:05	Canna Disc 1
Loch Nevis	N15	16/06/2011	57.02599	-5.74295	57.02594	-5.74108	17.4	17.2	17:06:00	17:12:59	Canna Disc 2
Loch Nevis	N16	16/06/2011	57.03717	-5.70463	57.03745	-5.70373	35.2	35.1	17:25:00	17:29:05	Canna Disc 2
Loch Nevis	N17	16/06/2011	57.02467	-5.77639	57.02516	-5.77316	31.7	21.6	17:51:00	18:00:30	Canna Disc 2
Sound of Sleat	S1	16/06/2011	57.10630	-5.76157	57.10695	-5.76073	57.2	57.2	14:26:00	14:32:04	Canna Disc 2
Sound of Sleat	S2	16/06/2011	57.11085	-5.74240	57.11150	-5.74180	46.1	46.0	14:42:00	14:48:01	Canna Disc 2
Sound of Sleat	S2	16/06/2011	57.11150	-5.74180	57.11173	-5.74145	46.1	46.0	14:48:01	14:49:39	Canna Disc 2
Sound of Sleat	S2	16/06/2011	57.11173	-5.74145	57.11200	-5.74118	46.1	46.0	14:49:39	14:51:33	Canna Disc 2
Sound of Sleat	S3	16/06/2011	57.08754	-5.86489	57.08896	-5.86383	24.5	24.4	15:26:00	15:33:22	Canna Disc 2
Sound of Sleat	S4	16/06/2011	57.07577	-5.88232	57.07665	-5.88277	24.5	24.4	15:44:00	15:51:07	Canna Disc 2
Sound of Sleat	S5	16/06/2011	57.06810	-5.88796	57.06862	-5.88820	27.5	27.4	16:01:00	16:05:09	Canna Disc 2
Sound of Sleat	S6	16/06/2011	57.04837	-5.82496	57.04873	-5.82440	47.1	47.0	16:23:00	16:25:03	Canna Disc 2
Sound of Sleat	S6	16/06/2011	57.04873	-5.82440	57.04998	-5.82285	47.1	47.0	16:25:03	16:30:39	Canna Disc 2

Appendix 2 *Physical and biological descriptions of the survey sites. Howson et al. (2012) employed two new biotopes for Canna habitats. These are adopted in the report for consistency and listed below for seven of the Canna sites, but the alternative existing biotope designation, used for Marine Recorder data entry, is provided in brackets. Site ID codes correspond with those in Appendix 1. PMF codes used are as follows: habitats - BM (burrowed mud), DS (deep sponge community), KS (kelp and seaweed community on sublittoral sediment), NS (northern sea fan community); species - AF (Atrina fragilis), FQ (Funiculina quadrangularis), GM (Gadus morhua), LA (Leptometra celtica aggregation on mixed substrata), LC (Leptometra celtica), MM (Molva molva), PA (Parazoanthus anguicomus), PM (Pachycerianthus multiplicatus), SE (Ammodytes spp.), SP (Swiftia pallida)*

ID	Substrate	Biota	Biotope	PMF
FET1	Predominantly coarse gravelly sand with pebbles, shells (dense in places) and scattered cobbles, with patches of medium sand	Biota dominated by patchy cover of <i>Flustra foliacea</i> , frequent overall, but locally abundant. Other bryozoans are present including <i>Alcyonidium diaphanum</i> (O). Stones and shells also support encrustations of serpulid worms (C) and pink coralline algae (R), as well as occasional hydroid clumps. <i>Asterias rubens</i> (O), <i>Porania pulvillus</i> (R), <i>Luidia ciliaris</i> (O), <i>Crossaster papposus</i> (O), <i>Stichastrella rosea</i> (O), <i>Ophiocomina nigra</i> (R, locally A), <i>Scyliorhinus</i> sp. (P)	SS.SMx.CMx.FluHyd	
FET2	Initially coarse sand but largely medium sand with broken shell and a surface scatter of shells, especially <i>Ensis</i> spp.	Drift algae and bryozoans, although apparently some attached <i>Flustra foliacea</i> (O) and <i>Alcyonidium diaphanum</i> (R). A sparse epifauna includes <i>Porania pulvillus</i> (R), <i>Asterias rubens?</i> (P), <i>Echinus esculentus</i> (O), <i>Pecten maximus</i> (R), <i>Macropodia</i> sp. (R), <i>Liocarcinus</i> sp. (R) and <i>Cancer pagurus</i> (P). Evidence of an infaunal community includes bivalve siphons (P)	SS.SSa	
FET3	Fine-medium sand, generally with an admixture of broken shell	Little evidence of life apart from <i>Pecten maximus</i> (R), <i>Molgulidae</i> sp. (P) and <i>Flustra foliacea</i> (probably drift)	SS.SSa.CFiSa	
FET3	Low outcropping sand-scoured bedrock with sand patches	Rock encrusted with <i>Spirobranchus</i> spp. (C), pink coralline algae (F) and <i>Parasmittina trispinosa</i> (O) and supporting <i>Flustra foliacea</i> (F, locally S) and <i>Caryophyllia smithii</i> (locally F). Motile forms include <i>Echinus esculentus</i> (C), <i>Luidia ciliaris</i> (F), <i>Porania pulvillus</i> (R), <i>Asterias rubens</i> (P), <i>Crossaster papposus</i> (P) and <i>Cancer pagurus</i> (P)	CR.MCR.EcCr.FaAlCr.Flu	
FET3	Fine-medium sand, slightly rippled in places, with occasional small bedrock outcrops	Little evidence of life apart from <i>Pecten maximus</i> (O), <i>Flustra foliacea</i> (probably drift) and bivalve siphons (O)	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET4	Fissured angular bedrock, broken up into boulders in places with patches of waved coarse sand	Rock densely encrusted with <i>Spirobranchus</i> spp. (A) and pink coralline algae (A), and with occasional <i>Parasmittina trispinosa</i> . <i>Antedon</i> sp. densely coats some vertical faces (locally S), but is rare overall. <i>Echinus esculentus</i> (C), <i>Labrus mixtus</i> (F), Asteroidea spp. (F), <i>Flustra foliacea</i> (R, locally F), <i>Porania pulvillus</i> (R), <i>Ascidia mentula?</i> (P)	CR.MCR.EcCr.FaAlCr.Pom	
FET4	Initially ripples but mostly waves of coarse sand with dense shells in troughs and very occasional boulders	Sparse visible biota of occasional <i>Cancer pagurus</i> (in the vicinity of boulders) and <i>Callionymus lyra</i> , with <i>Luidia ciliaris</i> (R), <i>Porania pulvillus</i> (R) and Paguridae spp. (R)	SS.SCS.CCS	
FET5	Fine sand with broken shell	Sparse visible fauna dominated by pagurids (O) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> , with <i>Callionymus lyra</i> (O), <i>Ophiura</i> sp. (R), <i>Porania pulvillus</i> (R), Molgulidae sp. (P) and bivalve siphons (P)	SS.SSa.CFiSa	
FET5	Waves of coarse sand with dense shells in troughs	Sparse visible fauna with Paguridae spp. (O) and <i>Luidia ciliaris</i> (P)	SS.SCS.CCS	
FET5	Fine sand with broken shell	Sparse visible fauna dominated by pagurids (O), with <i>Callionymus lyra</i> (R), Teleostei sp. (O), Asteroidea sp. (R) and bivalve siphons (P)	SS.SSa.CFiSa	
FET5	Waves of coarse sand with dense shells in troughs	Sparse visible fauna with Paguridae sp. (P) and Asteroidea sp. (P)	SS.SCS.CCS	
FET6	Slightly rippled fine sand, with occasional small rock outcrops	Fauna dominated by small teleosts (O), pagurids (O) and <i>Pecten maximus</i> (O, but C close to rock). <i>Echinus esculentus</i> (P), Molgulidae sp. (P)	SS.SSa.CFiSa	
FET6	Low profile bedrock outcrops and boulders with sand infill	Rock densely encrusted with <i>Spirobranchus</i> spp. (A) and with <i>Parasmittina trispinosa</i> (O) and pink coralline algae (O), grazed by <i>Echinus esculentus</i> (C). <i>Luidia ciliaris</i> (P), <i>Cancer pagurus</i> (P)	CR.MCR.EcCr.FaAlCr.Pom	
FET6	Slightly rippled fine sand	Fauna dominated by pagurids (F), including <i>Pagurus prideaux</i> , with small teleosts (O), <i>Callionymus lyra?</i> (P), bivalve siphons (P), Molgulidae sp. (P), <i>Echinus esculentus</i> (O), <i>Pecten maximus</i> (R) and <i>Cancer pagurus</i> (O)	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET6	Low profile sand-scoured bedrock and boulders	Rock densely encrusted with <i>Spirobranchus</i> spp. (A) and with pink coralline algae (F) and <i>Parasmittina trispinosa</i> (O). Motile forms include <i>Echinus esculentus</i> (C), <i>Crossaster papposus</i> (P), <i>Luidia ciliaris</i> (P) and <i>Porania pulvillus</i> (O). There are patches where <i>Flustra foliacea</i> is abundant, particularly on rock at the rock/sand boundary	CR.MCR.EcCr.FaAlCr.Pom CR.MCR.EcCr.FaAlCr.Flu	
FET6	Rippled fine sand	Sparse visible fauna dominated by small teleosts (O) and pagurids (O). <i>Cancer pagurus</i> (O), <i>Astropecten irregularis?</i> (P)	SS.SSa.CFiSa	
FET6	Waves of coarse sand with shell material in troughs	Sparse visible fauna of occasional pagurids and small teleosts (R) and <i>Ophiura</i> sp. (R)	SS.SCS.CCS	
FET6	Rippled fine sand	Sparse visible fauna of small teleosts (P) and <i>Cancer pagurus</i> (P)	SS.SSa.CFiSa	
FET7	Slightly silty sand with broken shell and isolated boulder	Sparse visible fauna of <i>Luidia ciliaris</i> (F), <i>Hippasteria phrygiana?</i> (R), pagurids (R) and small teleosts (R)	SS.SSa.CFiSa	
FET8	Medium-coarse sand, in places in the form of waves, with dense shell material in the troughs	Little clear evidence of any biota, apart from Paguridae sp. (R) and <i>Scyliorhinus</i> sp. (P)	SS.SCS.CCS	
FET8	Rippled fine sand, in places with surface scattering of coarser material	Occasional <i>Pecten maximus</i> with pagurids (P) and Pleuronectiformes sp. (P)	SS.SSa.CFiSa	
FET8	Low profile outcropping bedrock with coarse sand patches	Rock encrusted with serpulid worms (C), pink coralline algae (R) and <i>Parasmittina trispinosa?</i> (R) and supporting dense <i>Caryophyllia smithii</i> at least in places (C locally) and patches of <i>Flustra foliacea</i> (C locally). <i>Porella compressa?</i> (P), Asteroidea sp. (P), <i>Ascidia</i> sp.? (P), small teleost shoal (P)	CR.MCR.EcCr.CarSp.PenPcom CR.MCR.EcCr.FaAlCr.Flu	
FET8	Waves of medium-coarse sand with dense shell material in the troughs	Sparse visible fauna of <i>Luidia ciliaris</i> (P) and Teleostei sp. (P)	SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET8	Low profile outcropping bedrock and boulders with sand patches	Rock encusted with serpulid worms (A) including <i>Spirobranchus</i> spp. (P), pink coralline algae (R) and <i>Parasmittina trispinosa</i> (R) and supporting dense <i>Caryophyllia smithii</i> (C, locally A) and dense patches of <i>Antedon</i> spp. (A locally) and <i>Corynactis viridis</i> (A locally). <i>Porella compressa</i> is common. Sparser forms include <i>Luidia ciliaris</i> (P), small teleosts (P), <i>Flustra foliacea</i> (R), <i>Urticina</i> sp. (P), <i>Stichastrella rosea?</i> (P), <i>Astropecten irregularis?</i> (P), <i>Porania pulvillus?</i> (P), <i>Echinus esculentus</i> (O), <i>Calliostoma zizyphinum</i> (P), <i>Ascidia mentula</i> (P) and Labridae sp. (P)	CR.MCR.EcCr.CarSp.PenPcom	
FET9	Mosaic of low-profile sand-dusted bedrock and boulders with sand runnels and more extensive areas of sediment. These are predominantly composed of medium-coarse sand with gravel and broken shell, with this coarser material in places concentrated in the troughs of sand waves. There are also smaller areas of rippled fine sand	Rock encusted with serpulid worms (A) including <i>Spirobranchus</i> spp. (P), pink coralline algae (R), <i>Parasmittina trispinosa</i> (O) and <i>Balanus</i> spp. (R). Sessile erect forms include dense <i>Caryophyllia smithii</i> (C, locally A) and <i>Porella compressa</i> (C), with sparser forms including <i>Flustra foliacea</i> (O), <i>Ascidia mentula?</i> (O) and a sparse sponge fauna of <i>Polymastia boletiformis?</i> (O), <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (R), <i>Hymedesmia paupertas</i> (R) and Porifera sp. (R). Motile forms include <i>Luidia ciliaris</i> (F), Asteroidea spp. indet (F), <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (R), <i>Antedon</i> spp. (R), small teleosts (O) and large gadoids (P). Extensive areas of rock are populated by abundant <i>Ophiocomina nigra</i> . <i>Ophiocomina</i> also extends marginally into sediment areas (locally C), which also support <i>Luidia ciliaris</i> (F), <i>Pecten maximus</i> (O), <i>Callionymus lyra?</i> (P) and bivalve siphons (P)	CR.MCR.EcCr.CarSp.PenPcom CR.MCR.EcCr.CarSp.Bri	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET10	Mosaic of low-profile bedrock and boulders with sand pockets and more extensive areas of sediment, which are predominantly composed of waves of medium-coarse sand with gravel and shell material concentrated in the troughs	Rock densely encrusted with <i>Spirobranchus</i> spp. (A) and with pink coralline algae (R) and <i>Parasmittina trispinosa</i> (F). The rock also supports <i>Ascidia mentula</i> (O) and sparse hydroids (R) and <i>Flustra foliacea</i> (R), as well as a motile fauna of <i>Echinus esculentus</i> (C), <i>Stichastrella rosea</i> (P), Asteroidea spp. (O), <i>Asterias rubens</i> (P), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (F), <i>Ophiocomina nigra</i> (A in patches), <i>Cancer pagurus</i> (F), <i>Munida rugosa</i> (O), <i>Calliostoma zizyphinum</i> (P), Teleostei spp. (F) and Gadidae sp. (P). The sediment supports an abundant population of small (c.1 - 2 cm) scallops, <i>Palliolum</i> sp., as well as <i>Pecten maximus</i> (R), <i>Porania pulvillus</i> (O), Asteroidea spp. (O), <i>Luidia ciliaris</i> (F), <i>Echinus esculentus</i> (R), <i>Cancer pagurus</i> (O), Paguridae spp. (O), Teleostei spp. (O) and <i>Scyliorhinus</i> sp. (O)	CR.MCR.EcCr.FaAlCr.Pom SS.SCS.CCS	
FET11	Shell gravel and coarse sand, locally formed into waves	Sparse visible fauna of <i>Ophiocomina nigra</i> (O, but locally A close to rock), <i>Luidia ciliaris</i> (O), <i>Asterias rubens</i> (P), Asteroidea sp. (P), <i>Scyliorhinus</i> sp. (O) and Gadidae sp. (P)	SS.SCS.CCS	
FET11	Low profile bedrock and boulders with coarse sand patches	Rock encrusted with <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (O), <i>Balanus</i> spp (R) and pink coralline algae (R) and supporting abundant <i>Ophiocomina nigra</i> over most of the run and patches of superabundant <i>Ophiothrix fragilis</i> . <i>Caryophyllia smithii</i> appears generally absent, although is common in patches. Motile forms include <i>Echinus esculentus</i> (C), Asteroidea spp. (F), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (O), <i>Asterias rubens</i> (P), <i>Stichastrella rosea</i> (P), <i>Crossaster papposus</i> (P), <i>Cancer pagurus</i> (P), <i>Munida rugosa</i> (P), Teleostei spp. (O), <i>Scyliorhinus</i> sp. (O) and <i>Molva molva</i> (O). <i>Porella compressa</i> (R), <i>Flustra foliacea</i> (R), <i>Ascidia mentula</i> (P), <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (R)	CR.MCR.EcCr.FaAlCr.Pom CR.MCR.EcCr.FaAlCr.Bri SS.SCS.CCS	MM

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET12	Bedrock uneven in places with vertical faces, sand pockets and boulder patches	Rock encrusted with <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (O) and pink coralline algae (C, but A in places) and supporting abundant <i>Ophiocomina nigra</i> and <i>Ophiothrix fragilis</i> over most of the run with blanket of superabundant <i>O. fragilis</i> in places. <i>Alcyonium digitatum</i> is generally common, usually but not universally accompanied by dense brittlestars. Motile fauna includes <i>Echinus esculentus</i> (C), <i>Crossaster papposus</i> (F), <i>Porania pulvillus</i> (O), <i>Asterias rubens</i> (O), Asteroidea spp. indet (O), <i>Antedon</i> spp. (R), <i>Cancer pagurus</i> (R), Teleostei spp. (O) and <i>Scyliorhinus</i> sp. (P), <i>Urticina</i> spp. (R), hydroids (O), <i>Flustra foliacea</i> (R)	CR.MCR.EcCr.FaAICr.Bri CR.MCR.EcCr.FaAICr.Adig	
FET12	Mixed substrate of cobbles, pebbles, gravel and sand, with proportions varying along run	Cobbles and pebbles encrusted with abundant serpulid worms, including <i>Spirobranchus</i> spp. and sparse pink coralline algae (R) and supporting a patchy hydroid turf (F) and <i>Flustra foliacea</i> (overall O, but S in sandier locations). <i>Alcyonium digitatum</i> (R), <i>Echinus esculentus</i> (C), <i>Crossaster papposus</i> (F), <i>Ophiocomina nigra</i> (A on stonier ground), Asteroidea spp. indet (O), <i>Cancer pagurus</i> (F), Teleostei spp. (O), <i>Scyliorhinus</i> spp. (F)	SS.SMx.CMx.FluHyd	
FET13	Medium sand with broken shell material and scatter of whole shells. Scattered cobbles and boulders locally	Fairly sparse visible fauna dominated by pagurids (O), with Teleostei spp. (R), <i>Callionymus lyra</i> (R), <i>Scyliorhinus</i> sp. (P), <i>Ophiura ophiura</i> (R), Asteroidea sp. indet (R), <i>Asterias rubens</i> (P), <i>Porania pulvillus</i> (R). Infaunal evidence includes bivalve siphons (P) and small sediment spoil heaps (P). Drift algae. Stones are encrusted with serpulid worms (locally C) and support <i>Echinus esculentus</i> (P)	SS.SSa	
FET14	Slightly silty shelly medium sand	Fairly sparse visible fauna dominated by pagurids (O) and small teliosts (O). <i>Callionymus lyra</i> (R), Asteroidea sp. indet (O), <i>Asterias rubens</i> (O), <i>Porania pulvillus</i> (R), bivalve siphons (P)	SS.SSa	
FET15	Waves of coarse sand, with accumulations of gravel and shell material in troughs, becoming finer (probably medium sand)	Sparse visible fauna of <i>Asterias rubens</i> (O), small teleosts (P)	SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET15	Mostly uneven bedrock with some extensive vertical faces, with sand patches, mostly of coarse sand, with more extensive patches formed into waves. Boulder fields also present	Rock encrusted with <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (R) and pink coralline algae (O) and supporting a fairly rich echinoderm fauna of <i>Echinus esculentus</i> (C), dense patches of <i>Antedon</i> spp. on vertical faces (locally S), <i>Porania pulvillus</i> (F), <i>Asterias rubens</i> (F), <i>Luidia ciliaris</i> (F) and Asteroidea spp. indet (F, probably largely <i>Stichastrella rosea</i>). Fish were also fairly numerous with <i>Labrus mixtus</i> (F) and shoals of small fish. <i>Caryophyllia smithii</i> (locally C), <i>Porella compressa</i> (R), <i>Metridium senile</i> patches (R overall but locally A). Sediment fauna included <i>Pecten maximus</i> (R), <i>Cancer pagurus</i> (P), and <i>Ophiura</i> sp. (R)	CR.MCR.EcCr.FaAlCr.Pom SS.SCS.CCS	
FET16	Initially small patch of bedrock and boulders but largely waves of coarse sand with broken shell in troughs	Sediment with sparse fauna of pagurids (O), <i>Porania pulvillus</i> (O) and teleosts (O)	SS.SCS.CCS	
FET16	Mosaic of low profile bedrock and boulders interspersed with waves of coarse sand with shell material in troughs	Rock encrusted with <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (R) and pink coralline algae (R) and supporting a fairly rich echinoderm fauna of <i>Echinus esculentus</i> (C), <i>Stichastrella rosea</i> (F), <i>Porania pulvillus</i> (F), <i>Asterias rubens</i> (P), <i>Luidia ciliaris</i> (F) and Asteroidea spp. indet (O). <i>Caryophyllia smithii</i> (locally F), <i>Porella compressa</i> (R), teleosts (O), <i>Cancer pagurus</i> (O), <i>Polymastia boletiformis</i> ? (O), <i>Ascidia mentula</i> (P), <i>Munida rugosa</i> (O), <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (R). Sediment fauna included <i>Luidia ciliaris</i> (F), <i>Porania pulvillus</i> (O), teleosts (P), <i>Stichastrella rosea</i> (P) and pagurids (R)	CR.MCR.EcCr.FaAlCr.Pom SS.SCS.CCS	
FET16	Slightly silty fine-medium sand	Occasional bivalve siphons	SS.SSa.CFiSa	
FET17	Shelly muddy sand	Epifauna includes <i>Porania pulvillus</i> (O), pagurids (O), <i>Luidia ciliaris</i> (O), <i>Stichastrella rosea</i> (R), small teleosts (R) including Gobiidae sp. (R), <i>Callionymus lyra</i> (R) and <i>Pecten maximus</i> (P). Bivalve siphons present.	SS.SSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET18	Low profile bedrock and boulders with sand patches, some extensive as waves of coarse sand with shell material, gravel and pebbles in troughs	Rock encrusted with <i>Spirobranchus</i> spp. (A) and <i>Parasmittina trispinosa</i> (R) and supporting a sessile erect fauna of abundant <i>Caryophyllia smithii</i> , frequent <i>Polymastia boletiformis</i> ?, <i>Flustra foliacea</i> (R), <i>Securiflustra securifrons</i> ? (R) and <i>Ascidia mentula</i> (P). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Stichastrella rosea</i> (O), <i>Luidia ciliaris</i> (F), <i>Leptasterias muelleri</i> ? (F), <i>Porania pulvillus</i> (O), <i>Crassoster papposus</i> (O), Asteroidea spp. indet (O), <i>Cancer pagurus</i> (P), <i>Gadus morhua</i> (P) and small fish shoals. <i>Ophiocomina nigra</i> is common overall, although abundant over extensive areas of rock. Sediment areas are inhabited by <i>Luidia ciliaris</i> (P) and <i>Gadus morhua</i> (P)	CR.MCR.EcCr.FaAICr.Car CR.MCR.EcCr.FaAICr.Bri SS.SCS.CCS	GM
FET18	Coarse sand waves with gravel, pebbles and shell material, particularly concentrated in troughs. Occasional small rock outcrops	Sparse visible fauna of <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (P), <i>Pecten maximus</i> (P), <i>Gadus morhua</i> (P) and small teleosts (P)	SS.SCS.CCS	GM
FET18	Mixed substrate of pebbles, gravel and cobbles on coarse sand with isolated bedrock outcrop	Stones encrusted with serpulid worms (C) and supporting sparse <i>Flustra foliacea</i> (R). Motile species include <i>Porania pulvillus</i> (O), <i>Cancer pagurus</i> (P) and <i>Gadus morhua</i> (P)	SS.SCS.CCS.PomB	GM
FET19	Shelly medium sand	Fauna dominated by pagurids (O) and small teleosts (O), with <i>Asterias rubens</i> (O), <i>Ophiura ophiura</i> (O), <i>Porania pulvillus</i> (R), <i>Pecten maximus</i> (R) and <i>Cancer pagurus</i> (P)	SS.SSa	
FET20	Poorly sorted medium? sand with much shell material, gravel and pebbles, apparently as a thin veneer over a finer sediment	Fauna dominated by pagurids (F) and small teleosts (O), with <i>Asterias rubens</i> (O), <i>Pecten maximus</i> (R), <i>Luidia ciliaris</i> (P), Asteroidea spp. indet (P), and <i>Raja naevus</i> (P)	SS.SSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET21	Medium sand, mostly in long waves, with stones often aggregated in troughs. Occasional small bedrock outcrops, boulders and cobbles	Sandy areas with frequent <i>Halcampoides elongatus</i> and small teleosts and occasional pagurids. <i>Asterias rubens</i> (R), <i>Scyliorhinus</i> sp. (P), Cephalopoda sp. (R), <i>Pecten maximus</i> (R). Rock encrusted with <i>Spirobranchus</i> spp. (A) and <i>Parasmittina trispinosa</i> (R) and supporting <i>Echinus esculentus</i> (C) and sparse <i>Flustra foliacea</i> (R), <i>Urticina</i> spp. (R) and <i>Munida rugosa</i> (R)	SS.SSa CR.MCR.EcCr.FaAICr.Pom	
FET22	Some large boulders but mostly small boulders, cobbles and pebbles on medium-coarse sand	Rock encrusted with <i>Spirobranchus</i> spp. (C), pink coralline algae (C) and <i>Parasmittina trispinosa</i> (R) and supporting frequent <i>Alcyonium digitatum</i> (locally common). <i>Ophiothrix fragilis</i> and <i>Ophiocomina nigra</i> are abundant overall, with the former completely blanketing the seabed (S) over extensive areas; <i>Ophiopholis aculeata</i> is also present. Other echinoderms include <i>Echinus esculentus</i> (C), <i>Crossaster papposus</i> (F), <i>Asterias rubens</i> (F), <i>Luidia ciliaris</i> (O) and Asteroidea spp. indet (O). Teleosts (O), <i>Scyliorhinus</i> sp. (P), pagurids (O), <i>Urticina</i> spp. (R)	SS.SMx.CMx.OphMx	
FET22	Dense cobbles, pebbles and gravel on medium-coarse sand	Stones encrusted with <i>Spirobranchus</i> spp. (C) and pink coralline algae (O) and supporting occasional <i>Alcyonium digitatum</i> and <i>Urticina</i> spp. <i>Ophiocomina nigra</i> is common, with <i>Ophiothrix fragilis</i> also present at low density. The motile fauna is dominated by <i>Echinus esculentus</i> (C), pagurids (F) and <i>Crossaster papposus</i> (F), with <i>Asterias rubens</i> (O) and <i>Cancer pagurus</i> (P)	SS.SCS.CCS.PomB	
FET23	Some boulders but mostly cobbles and pebbles on waves of medium-coarse sand	Stones encrusted with pink coralline algae (O) and sparse serpulid worms (P) but the biota is dominated by abundant <i>Ophiocomina nigra</i> (S locally). In places there is a sparse scatter of live <i>Phymatolithon calcareum</i> (R). <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (O), <i>Luidia ciliaris</i> (O), <i>Porania pulvillus</i> (R), <i>Pecten maximus</i> (R)	SS.SMx.CMx.OphMx	
FET23	Outcropping bedrock and boulders and cobbles on medium sand	Rock densely encrusted with <i>Spirobranchus</i> spp. (A) and pink coralline algae (A), as well as encrusting red and brown algae, and supporting profuse swards of <i>Antedon</i> spp. (locally S) on some vertical faces. Motile forms include <i>Echinus esculentus</i> (C), <i>Crossaster papposus</i> (P), <i>Porania pulvillus</i> (R) and <i>Ophiocomina nigra</i> (locally C), with sessile species including <i>Ascidia mentula</i> (P). Sediment areas support small teleosts and <i>Pecten maximus</i> (R). <i>Laminaria hyperborea</i> and foliose red algal plants are assumed to be largely drift	CR.MCR.EcCr.FaAICr.Pom SS.SSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
FET24	Waves of coarse sand with dense shell material in troughs	Extremely high density of the small scallop <i>Palliolum</i> sp., abundant overall, but superabundant in the troughs of the sand waves. <i>Asterias rubens</i> (F), <i>Luidia ciliata</i> (O), <i>Echinus esculentus</i> (O), <i>Cancer pagurus</i> (F)	SS.SCS.CCS	
SCA1	Mosaic of substrates with areas of muddy sand, muddy sand with varying concentrations of gravel, pebbles, cobbles and <i>Modiolus</i> shells on and embedded in the sediment, and aggregations of boulders and cobbles	Sediment infauna represented by <i>Toxisarcon alba</i> (P), small holes, emergent tubes and polychaete casts. Stones are bare-looking but support an encrusting fauna of serpulid worms (F) and bryozoans, with <i>Spirobranchus</i> spp. becoming common in boulder areas. Other sessile forms include a fine hydroid turf (O), <i>Porella compressa?</i> (R), <i>Alcyonium digitatum</i> (R) and possibly sparse axinellid sponges. Boulder areas provide a habitat for <i>Echinus esculentus</i> (C), <i>Munida rugosa</i> (C), <i>Stichastrella rosea</i> (O) and <i>Conger conger?</i> (O). <i>Pecten maximus</i> (R), <i>Luidia ciliaris</i> (F), Paguridae (P) including <i>Pagurus bernhardus</i> , <i>Hippasteria phrygiana</i> (R), <i>Cancer pagurus</i> (P), Gadidae sp. (P). Although <i>Modiolus</i> shells were frequent, only 2 live specimens were observed (R)	SS.SSa.OSa SS.SMx.CMx CR.MCR.EcCr.FaAlCr.Pom	
SCA2	Mostly muddy sand but areas of dense cobbles and boulders and scattered smaller stones	Sediment infauna represented by <i>Toxisarcon alba</i> (P), small holes and emergent tubes. Stones are bare-looking but support an encrusting fauna of serpulid worms (F) and bryozoans, with <i>Spirobranchus</i> spp. becoming common in boulder areas, a fine hydroid turf (O) and <i>Alcyonium digitatum</i> (R). Boulder areas provide a habitat for <i>Echinus esculentus</i> (C), <i>Munida rugosa</i> (C) and <i>Conger conger?</i> (P). Pectinidae sp. (R), <i>Luidia ciliaris</i> (O), <i>Porania pulvillus</i> (R), Asteroidea sp. (R), Paguridae (O), <i>Hippasteria phrygiana</i> (R), Teleostei sp. (P)	SS.SSa.OSa SS.SMx.CMx CR.MCR.EcCr.FaAlCr.Pom	
SCA3	Muddy sand interrupted by patches of gravel, pebbles, cobbles and occasional boulders on and embedded in muddy sand	Sediment infauna represented by <i>Toxisarcon alba</i> (P), small holes and emergent tubes. Stones are bare-looking, supporting sparse serpulid worms (P) encrusting bryozoans (R) and hydroid clumps (R) including <i>Nemertesia ramosa</i> . <i>Echinus esculentus</i> (O), <i>Luidia ciliaris</i> (O), <i>Porania pulvillus</i> (R), <i>Stichastrella rosea</i> (R), <i>Asterias rubens</i> (P), <i>Macropodia</i> sp. (P), Paguridae (O), <i>Modiolus modiolus</i> (R)	SS.SSa.OSa SS.SMx.CMx	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM1S	Mixed sediment of gravelly sand with scattered shells, dense in places, and scattered pebbles and occasional cobbles and small boulders, with patches of rippled clean fine-medium sand	Sparse visible fauna, especially infaunally. Shells and stones support serpulid worms (locally C) <i>Urticina</i> sp. (R) and very sparse hydroids including <i>Thuiaria thuja?</i> (R), and <i>Flustra foliacea</i> (R). Motile forms include <i>Luidia ciliaris</i> (O), <i>Porania pulvillus</i> (R), <i>Aequipecten opercularis</i> (R), <i>Alloteuthis subulata?</i> (R), <i>Ophiura</i> sp. (R), <i>Pagurus</i> spp. (R), Teleostei spp. (P) and Asteroidea sp. (R)	SS.SMx.CMx SS.SSa.CFiSa	
ARM2S	Mixed sediment of sand, gravel and pebbles with scattered shells and occasional cobbles and boulders, with patch of rippled clean fine-medium sand	Fairly sparse visible fauna. Stones support serpulid worms (C), <i>Parasmittina trispinosa</i> (R), <i>Porella compressa</i> (locally F), <i>Botryllus schlosseri</i> (R), <i>Urticina</i> sp. (O), <i>Alcyonium digitatum</i> (R) and very sparse hydroids including <i>Thuiaria thuja?</i> (R), and <i>Flustra foliacea</i> (R). Motile forms include <i>Luidia ciliaris</i> (O), <i>Porania pulvillus</i> (F), <i>Aequipecten opercularis</i> (R), <i>Pecten maximus</i> (R), <i>Paguridae</i> spp. (O) including <i>Pagurus bernhardus</i> (P), <i>Scylliorhinus</i> sp. (P), <i>Stichastrella rosea?</i> (O), <i>Asterias rubens?</i> (P), <i>Cancer pagurus</i> (P), <i>Munida rugosa</i> (R), Teleostei spp. (P), <i>Inachus</i> sp. (P) and <i>Echinus esculentus</i> (P)	SS.SMx.CMx SS.SSa.CFiSa	
ARM3S	Rippled fine sand with sparsely scattered shells, pebbles and occasional cobbles and boulders	Fairly sparse visible fauna. The sand exhibits sparse infaunal tubes including <i>Chaetopterus variopedatus?</i> (R). Stones and shells support occasional hydroid clumps including <i>Hydrallmania falcata?</i> (P) and <i>Abietinaria abietina</i> (R), serpulid worms (P), <i>Urticina</i> sp? (R), <i>Alcyonium digitatum</i> (R), <i>Porella compressa?</i> (R) and <i>Caryophyllia smithii</i> (R). Motile forms include <i>Luidia ciliaris</i> (P), <i>Porania pulvillus</i> (R), <i>Pecten maximus</i> (R), <i>Paguridae</i> spp. (O), <i>Cancer pagurus</i> (P), Teleostei spp. (P), Asteroidea spp. (O)	SS.SSa.CFiSa	
ARM4S	Rippled fine sand with sparsely scattered shells, pebbles and occasional cobbles and boulders	Sparse visible fauna. Stones support serpulid worms including <i>Sprobranchus</i> spp. (locally C), occasional hydroid clumps and <i>Alcyonium digitatum</i> (R, locally O). <i>Paguridae</i> spp. (P), <i>Pagurus bernhardus</i> (P), <i>Aequipecten opercularis</i> (P), <i>Callionymus lyra</i> (P), infaunal tubes (P)	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM5S	Rippled fine sand in places with sparsely scattered shells, pebbles and occasional cobbles and boulders	Sparse visible fauna. Stones support serpulid worms (P), hydroid clumps (R) including <i>Nemertesia antennina</i> and <i>Hydrallmania falcata?</i> , <i>Alcyonium digitatum</i> (R), <i>Urticina</i> sp. (R), <i>Porella compressa?</i> (R) and <i>Polymastia boletiformis</i> (R). The motile fauna includes Paguridae spp. (R), <i>Pecten maximus</i> (R) and <i>Asterias rubens</i> (P). The only evidence of infaunal life is the presence of emergent tubes (P)	SS.SSa.CFiSa	
ARM6S	Mixed substrate of gravel, pebbles, cobbles and sand with scattered boulders	Encrustations of dense <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (R) and red bryozoans (R) with occasional hydroid clumps. <i>Urticina felina</i> (P), <i>Flustra foliacea</i> (R). Motile forms include <i>Porania pulvillus</i> (O), <i>Stichastrella rosea?</i> (O), <i>Echinus esculentus</i> (F), <i>Luidia ciliaris</i> (O), <i>Asterias rubens</i> (P), <i>Cancer pagurus</i> (O), <i>Munida rugosa</i> (R) and Triglidae sp. (P)	SS.SMx.CMx	
ARM7S	Largely rippled fine sand but interrupted by small patches of medium-coarse sand, locally formed into waves	Little life visible. Paguridae (R) including <i>Pagurus bernhardus</i> , <i>Porania pulvillus</i> (R), hydroid clumps (R), Triglidae sp. (O), Pleuronectiformes sp. (P)	SS.SSa.CFiSa SS.SCS.CCS	
ARM8S	Mostly rippled fine sand but interrupted by coarser sand with scattered shells, gravel, pebbles and occasional cobbles and boulders	Stones support serpulid worms (P), <i>Urticina felina</i> (R) and sparse hydroid patches (R). Paguridae spp. (R), <i>Porania pulvillus</i> (R), <i>Astropecten irregularis?</i> (P)	SS.SSa.CFiSa SS.SMx.CMx	
ARM9S	Rippled fine sand, becoming scattered with gravel, shells and scattered cobbles, eventually formed into gravelly sand waves	Little life visible. Paguridae spp. (R), <i>Aequipecten opercularis</i> (R), <i>Porania pulvillus</i> (R), Teleostei sp. (P). Stones support sparse fauna of serpulid worms (F), <i>Urticina felina</i> (F locally), hydroids (R), <i>Porella compressa?</i> (R) and <i>Botryllus schlosseri</i> (R)	SS.SSa.CFiSa SS.SMx.CMx SS.SCS.CCS	
ARM10S	Rippled fine sand with a small patch of shell gravel and shell	Little life visible. Paguridae spp. (O) including <i>Pagurus bernhardus</i> (P), <i>Cancer pagurus</i> (P), hydroids (R) including <i>Nemertesia antennina?</i> . Some small infaunal tubes and holes visible	SS.SSa.CFiSa SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM11S	Rippled fine sand with patches of sparsely scattered gravel, pebbles, cobbles and occasional boulders	Stones supporting occasional hydroids including <i>Nemertesia antennina</i> (O), serpulid worms (P), <i>Flustra foliacea?</i> (R), <i>Polymastia boletiformis</i> (locally O), <i>Porella compressa?</i> (R), <i>Parasmittina trispinosa</i> (R) and <i>Urticina felina</i> (R). Small infaunal tubes present. Motile fauna includes Paguridae spp. (O), <i>Porania pulvillus</i> (R), <i>Echinus esculentus</i> (P), <i>Munida rugosa</i> (R), <i>Gadus morhua</i> (P) and <i>Astropecten irregularis</i> (R)	SS.SSa.CFiSa	GM
ARM1A	Faintly rippled fine sand with sparsely scattered gravel, pebbles, cobbles and shells	Stones support a patchy hydroid turf (F) including <i>Abietinaria abietina</i> (P) and <i>Nemertesia antennina</i> (P), <i>Flustra foliacea</i> (R), <i>Alcyonium digitatum</i> (R), <i>Porella compressa?</i> (P), <i>Caryophyllia smithii?</i> (R) and serpulid worms (P). Infaunal tubes present. Paguridae spp. (O), <i>Echinus esculentus</i> (P), Buccinidae sp. (O), <i>Henricia</i> sp.? (R)	SS.SSa.CFiSa	
ARM2A	Faintly rippled fine sand with very sparsely scattered pebbles, cobbles and shells	Stones and shells support sparse hydroid tufts (O) including <i>Nemertesia antennina</i> (P), <i>Alcyonium digitatum</i> (R) and <i>Porella compressa?</i> (P). Infaunal tubes present. Paguridae spp. (O), <i>Astropecten irregularis</i> (R), <i>Pleuronectiformes</i> sp. (P)	SS.SSa.CFiSa	
ARM3A	Faintly rippled fine sand with very sparsely scattered pebbles, cobbles and shells	Stones and shells support sparse hydroid tufts (O) including <i>Nemertesia antennina</i> (O), <i>Alcyonium digitatum</i> (R) and <i>Polymastia boletiformis</i> (R). Infaunal tubes present. Paguridae spp. (R) including <i>Pagurus bernhardus</i> , <i>Astropecten irregularis</i> (R), <i>Luidia ciliaris</i> (O), <i>Asterias rubens</i> (O)	SS.SSa.CFiSa	
ARM4A	Dense pebbles, cobbles, gravel and occasional small boulders with sand	Rock encrusted with <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (R) and red bryozoans (R) and supporting sparse hydroids (O) and <i>Urticina felina</i> (R). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (O), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (P), <i>Pagurus bernhardus</i> (P), <i>Asterias rubens</i> (P), <i>Crossaster papposus</i> (O) and Gadidae sp. (P)	SS.SMx.CMx	
ARM5A	Faintly rippled fine sand interrupted by band of coarse sand with shells	Sparse visible fauna. Paguridae spp. (O) including <i>Pagurus bernhardus</i> (P), <i>Porania pulvillus</i> (R), hydroid tufts (R) including <i>Nemertesia antennina</i> , infaunal tubes	SS.SSa.CFiSa SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM6A	Faintly rippled fine sand with sporadic sparse scatterings of pebbles and cobbles	Sediment displaying infaunal tubes and polychaete casts. Stones supporting <i>Alcyonium digitatum</i> (R) and hydroids (R) including <i>Nemertesia antennina</i> . Motile fauna includes Paguridae spp. (R) including <i>Pagurus bernhardus</i> , <i>Luidia ciliaris</i> (P), <i>Porania pulvillus</i> (R), Asteroidea spp. (R) and Pleuronectiformes sp. (P)	SS.SSa.CFiSa	
ARM7A	Medium-coarse sand with shells locally formed into waves with broken shell in troughs; scattered cobbles and boulders towards end of run	Sparse visible fauna dominated by pagurids (O) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> . <i>Porania pulvillus</i> (R), Pleuronectidae sp. (P). Stones support hydroids (R), <i>Spirobranchus</i> spp. (P), <i>Urticina felina</i> (R) and <i>Parasmittina trispinosa</i> (R)	SS.SCS.CCS	
ARM8A	Waves of coarse sand with shells and sparse pebbles, cobbles and boulders, interrupted by bands of rippled fine sand	Sparse visible fauna. Paguridae spp. (R) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> , <i>Luidia ciliaris</i> (P), <i>Callionymus</i> sp. (R), <i>Stichastrella rosea</i> (R), <i>Homarus gammarus</i> (P). Stones support hydroids (R), <i>Spirobranchus</i> spp. (P) and <i>Urticina felina</i> (R). Emergent infaunal tubes (P)	SS.SSa.CFiSa SS.SCS.CCS	
ARM9A	Gravelly sand with pebbles and shells and sparse cobbles and boulders	Sparse visible fauna. Paguridae spp. (O), <i>Luidia ciliaris</i> (P), <i>Stichastrella rosea</i> (O), <i>Porania pulvillus</i> (O), <i>Crossaster papposus</i> (P), <i>Ophiura</i> sp. (R). Stones support hydroids (R), serpulid worms (P), <i>Urticina felina</i> (R), <i>Salmacina dysteri?</i> (P), <i>Parasmittina trispinosa</i> (R), <i>Polymastia boletiformis</i> (O), <i>Caryophyllia smithii</i> (R), and patches of <i>Flustra foliacea</i> at the end of the run (R)	SS.SMx.CMx	
ARM10A	Mosaic of rippled fine sand, heterogeneous mix of sand with gravel, pebbles, cobbles, shell and occasional boulders, and areas of coarse sand waves with shell and stones in troughs	Stones support hydroids (R), serpulid worms (P), <i>Urticina felina</i> (R), <i>Parasmittina trispinosa</i> (R), <i>Polymastia boletiformis</i> (R), <i>Caryophyllia smithii</i> (R), and <i>Flustra foliacea</i> (R). Motile forms include Paguridae spp. (R), <i>Echinus esculentus</i> (P) and <i>Munida rugosa</i> (R)	SS.SMx.CMx SS.SSa.CFiSa SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM11A	Areas of coarse and fine sand with scattered gravel, pebbles, cobbles and boulders, and patches of rippled fine sand and waves of coarse sand and gravel	Stones support hydroids (O), serpulid worms (P), with dense <i>Spirobranchus</i> spp. on larger stones (C), <i>Urticina felina</i> (R), <i>Parasmittina trispinosa</i> (R), red encrusting bryozoans (R), <i>Polymastia boletiformis</i> (R), <i>Securiflustra securifrons</i> (R) and <i>Flustra foliacea</i> (R). Motile forms include Paguridae spp. (R), <i>Porania pulvillus</i> (R), <i>Echinus esculentus</i> (P), <i>Munida rugosa</i> (R), <i>Crossaster papposus</i> (P) and <i>Luidia ciliaris</i> (O)	SS.SMx.CMx SS.SSa.CFiSa SS.SCS.CCS	
ARM12A	Rippled fine sand locally with sparsely scattered pebbles, cobbles and boulders, interrupted by bands of coarse sand waves with shell and pebbles in the troughs	Sparse visible fauna. Paguridae spp. (O) including <i>Pagurus bernhardus</i> (P), <i>Luidia ciliaris</i> (P), <i>Porania pulvillus</i> (R), Triglidae sp. (P) and <i>Astropecten irregularis</i> (R). Stones support hydroids (R), serpulid worms (P), <i>Polymastia boletiformis</i> (R) and <i>Alcyonium digitatum</i> (R)	SS.SSa.CFiSa SS.SCS.CCS	
ARM13A	Waves of coarse sand with broken shell in the troughs	Very sparse visible fauna. <i>Luidia ciliaris</i> (O), Paguridae sp. (R)	SS.SCS.CCS	
ARM14A	Heterogeneous seabed. Fine-medium sand, rippled in places and waved in places, mostly with a surface scatter of pebbles, cobbles and boulders, varying in composition and density, but with patches of dense boulders and cobbles	Dense patches of cobbles and boulders support an encrusting fauna of <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (R) and red bryozoans (R), with <i>Caryophyllia smithii</i> (F), <i>Securiflustra securifrons</i> (P) and patches of <i>Flustra foliacea</i> (F locally). Scattered stones also support <i>Porella compressa?</i> (P), serpulids (P), <i>Alcyonium digitatum</i> (R), <i>Urticina felina</i> (P) and hydroids (R). Motile species include <i>Echinus esculentus</i> (C in dense stone areas), <i>Luidia ciliaris</i> (O), <i>Porania pulvillus</i> (P), Teleostei sp. (P) and <i>Munida rugosa</i> (P)	SS.SSa.CFiSa SS.SMx.CMx CR.MCR.EcCr.FaAlCr.Flu	
ARM15A	Waves of coarse sand with shell material and gravel in the troughs	Very sparse visible fauna. <i>Callionymus</i> sp.? (R), Paguridae sp. (R)	SS.SCS.CCS	
ARM16A	Rippled fine sand	Very sparse visible fauna. <i>Astropecten irregularis</i> (R)	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM17A	Heterogeneous seabed. Boulders, cobbles, pebbles, gravel and sand at varying densities and proportions. Some areas with dense boulders and cobbles with infill of sand and smaller stones. Also waves of medium-coarse sand locally	Boulders and cobbles support an encrusting fauna of <i>Spirobranchus</i> spp. (A), <i>Balanus</i> spp. (R), <i>Parasmittina trispinosa</i> (R) and red bryozoans (R), as well as <i>Alcyonium digitatum</i> (R) and sparse patches of <i>Flustra foliacea</i> (R). Between the boulders there are scattered patches of <i>Ophiocomina nigra</i> (locally A), <i>Urticina felina</i> (O) and <i>Polymastia boletiformis</i> (P). Other motile species include <i>Echinus esculentus</i> (C), <i>Luidia ciliaris</i> (O), Asteroidea spp. (R), <i>Asterias rubens</i> (O), <i>Crossaster papposus</i> (O), <i>Calliostoma zizyphinum</i> (P), Teleostei sp. (P) and <i>Munida rugosa</i> (P)	CR.MCR.EcCr.FaAICr.Pom SS.SMx.CMx SS.SCS.CCS	
ARM18A	Dense pebbles and shells on sand with scattered cobbles	Stones densely encrusted with <i>Spirobranchus</i> spp. (A) and <i>Parasmittina trispinosa</i> (R), with cobbles supporting sparse patches of <i>Flustra foliacea</i> (R). <i>Urticina felina</i> (P), <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (F), <i>Cancer pagurus</i> (P), <i>Nemertesia antennina</i> (R), Triglidae sp. (P), Pleuronectiformes sp. (P). Patchy low density bed of <i>Ophiocomina nigra</i> for part of run (locally A).	SS.SMx.CMx SS.SMx.CMx.OphMx	
ARM19A	Dense pebbles, cobbles and gravel on sand with sparser boulders, and patches of coarse sand and gravel in waves	Stones densely encrusted with <i>Spirobranchus</i> spp. (A) and <i>Parasmittina trispinosa</i> (R) and supporting sparse <i>Flustra foliacea</i> (R) and hydroids (R), <i>Urticina felina</i> (O) and <i>Alcyonium digitatum</i> (R). Motile forms include <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (O), <i>Cancer pagurus</i> (O), Triglidae sp. (O), <i>Luidia ciliaris</i> (P), <i>Munida rugosa</i> (P), <i>Crossaster papposus</i> (O) and dense <i>Palliolum</i> sp. on gravel (locally A). Low density bed of <i>Ophiocomina nigra</i> for most of run (A), with <i>Ophiothrix fragilis</i> (locally A).	SS.SMx.CMx.OphMx	
ARM20A	Patches of coarse sand and gravel in waves, and rippled fine sand displaying mottled blackening	Very sparse visible fauna. <i>Asterias rubens</i> (O), <i>Crossaster papposus</i> (O)	SS.SSa.CFiSa SS.SCS.CCS	
ARM21A	Rippled fine sand displaying mottled blackening	Very sparse visible fauna. <i>Asterias rubens</i> (R), Asteroidea sp. (R)	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM22A	Rippled medium sand with occasional boulders and cobbles	Sand with large bivalve siphons (P), <i>Cancer pagurus</i> (P), <i>Cossaster papposus</i> (O) and small Asteroidea sp. (R). Stones encrusted with <i>Spirobranchus</i> spp. (P) and <i>Parasmittina trispinosa</i> (R) and supporting <i>Alcyonium digitatum</i> (R), <i>Flustra foliacea</i> (R), <i>Urticina felina</i> (R) and hydroid clumps (R)	SS.SSa.CFiSa	
ARM23A	Rippled fine sand	Very sparse visible fauna. Small <i>Brachyura</i> sp. (R)	SS.SSa.CFiSa	
ARM24A	Rippled fine sand	Very sparse visible fauna. <i>Asterias rubens</i> (O), <i>Ophiura ophiura</i> (P)	SS.SSa.CFiSa	
ARM25A	Waves of coarse sand and gravel with gravel, pebbles and shell and occasional cobbles and boulders in the troughs	<i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (O), <i>Crossaster papposus</i> (P), <i>Ophiocomina nigra</i> (R). Stones support serpulid worms (P), <i>Flustra foliacea</i> (R) and <i>Alcyonium digitatum</i> (R)	SS.SCS.CCS	
ARM25A	Medium-coarse sand with gravel, pebbles, cobbles and boulders varying in density and proportions	Low density <i>Ophiocomina nigra</i> bed (A) for much of the run, with <i>Ophiothrix fragilis</i> (P). Cobbles and boulders encrusted with <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (R) and pink coralline algae (R) and support <i>Flustra foliacea</i> (R), <i>Alcyonium digitatum</i> (R) and <i>Urticina felina</i> (P). <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (O)	SS.SMx.CMx.OphMx SS.SMx.CMx SS.SCS.CCS	
ARM26A	Waves of coarse sand with gravel and pebbles in the troughs; occasional boulders	<i>Asterias rubens</i> (R), <i>Ophiocomina nigra</i> (R). <i>Echinus esculentus</i> (P) and <i>Flustra foliacea</i> (R) on boulders	SS.SCS.CCS	
ARM26A	Sand with dense pebbles, gravel and cobbles and aggregations of dense boulders and cobbles	Stones densely encrusted with <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (R), red bryozoans (R) and pink coralline algae (R) and support sparse <i>Caryophyllia smithii</i> (R) and <i>Flustra foliacea</i> (R). <i>Luidia ciliaris</i> (P), <i>Asterias rubens</i> (O), <i>Echinus esculentus</i> (C), <i>Crossaster papposus</i> (P). Areas of dense boulders and cobbles larger devoid of brittlestars but more mixed substrate largely supports a low density bed of <i>Ophiocomina nigra</i> (A)	CR.MCR.EcCr.FaAlCr.Pom SS.SMx.CMx.OphMx SS.SMx.CMx	
ARM27A	Rippled fine sand	Very sparse visible fauna. <i>Asterias rubens</i> (O)	SS.SSa.CFiSa	
ARM28A	Rippled fine sand displaying mottled blackening	No biota discernible	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM29A	Rippled fine sand displaying mottled blackening	Very sparse visible fauna. <i>Asterias rubens</i> (R)	SS.SSa.CFiSa	
ARM30A	Rippled fine sand	Very sparse visible fauna. Paguridae sp. (R), Pleuronectiformes sp. (P)	SS.SSa.CFiSa	
ARM31A	Rippled fine sand	Very sparse visible fauna. <i>Asterias rubens</i> (R)	SS.SSa.CFiSa	
ARM32A	Faintly rippled slightly silty fine sand with very sparsely scattered pebbles, cobbles and shells	Stones and shells support sparse hydroid tufts (O) including <i>Nemertesia antennina</i> (R), and <i>Polymastia boletiformis</i> (R). Infaunal tubes present. Paguridae spp. (O) including <i>Pagurus bernhardus</i> , Teleostei sp. (P), <i>Neptunea antiqua</i> (R)	SS.SSa.CFiSa	
ARM33A	Fine sand with gravel and scattered shells, pebbles, cobbles and occasional boulders	Stones and shells support fairly rich hydroid tufts (C) including <i>Hydrallmania falcata?</i> (P), <i>Nemertesia antennina</i> (P) and <i>Polyplumaria flabellata?</i> (P), as well as <i>Securiflustra securifrons</i> (R), <i>Polymastia boletiformis</i> (O), <i>Porella compressa?</i> (R) and serpulid worms (P). Paguridae spp. (O), <i>Pleuronectes platessa</i> (P), <i>Scyliorhinus</i> sp. (P), <i>Asterias rubens</i> (R)	SS.SSa.IFiSa.ScupHyd	
ARM34A	Faintly rippled slightly silty fine sand with sparsely scattered shells, pebbles, cobbles and sparse boulders	Stones and shells support hydroid tufts (F) including <i>Hydrallmania falcata?</i> (P), as well as <i>Alcyonium digitatum</i> (R) and serpulid worms (P). Paguridae spp. (O) including <i>Pagurus bernhardus</i> (P), Teleostei sp. (P), <i>Luidia ciliaris</i> (P), Pleuronectiformes sp. (P). Emergent infaunal tubes.	SS.SSa.IFiSa.ScupHyd	
ARM35A	Patches of coarse sand, rippled fine sand, and fine sand with dense scatter of gravel, pebbles and shells with occasional cobbles	Paguridae spp. (O), <i>Porania pulvillus</i> (R), <i>Echinus esculentus</i> (P), <i>Cancer pagurus</i> (O), <i>Callionymus lyra</i> (R), <i>Ophiura</i> sp. (P). Stones and shells support serpulid worms (P) and sparse hydroid clumps (R). Emergent infaunal tubes in coarse sand	SS.SSa.CFiSa SS.SMx.CMx SS.SCS.CCS	
ARM36A	Rippled fine sand interrupted by frequent patches of medium-coarse sand with scattered shells and occasional cobbles	Fairly sparse visible fauna. Pagurida spp. (O), <i>Astropecten irregularis</i> (R), Asteroidea sp. (R), Pleuronectiformes sp. (P). Stones and shells support very sparse hydroids (R) and <i>Alcyonium digitatum</i> (R)	SS.SSa.CFiSa SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM37A	Mostly rippled fine sand but with patches of sand with gravel, pebbles and cobbles and scattered boulders, and patches of slightly silty medium-coarse sand	Sediment with sparse fauna of Paguridae spp. (R) and <i>Astropecten irregularis</i> (R). Stones support <i>Urticina felina</i> (O), <i>Echinus esculentus</i> (O), <i>Alcyonium digitatum</i> (R), hydroids (R) and <i>Polymastia boletiformis</i> (P). Boulders also support <i>Flustra foliacea</i> (P) and <i>Spirobranchus</i> spp. (P).	SS.SSa.CFiSa SS.SMx.CMx SS.SCS.CCS	
ARM38A	Rippled fine sand with patches of sand with gravel, pebbles and shell, and coarse sand patches	Fairly sparse visible fauna. Sediment with Paguridae spp. (O), <i>Porania pulvillus</i> (R), <i>Stichastrella rosea</i> (R) and <i>Ophiura ophiura</i> (R). Stones support serpulid worms (P), <i>Urticina felina</i> (O), <i>Flustra foliacea</i> (R), <i>Securiflustra securifrons?</i> (R) and <i>Alcyonium digitatum</i> (R)	SS.SSa.CFiSa SS.SMx.CMx	
ARM39A	Sand with dense gravel, pebbles and cobbles, and occasional boulders	Stones encrusted with serpulid worm (C) including <i>Spirobranchus</i> spp. (P), <i>Parasmittina trispinosa</i> (R) and red bryozoans (R) and supporting sparse hydroids (R), <i>Urticina felina</i> (R), <i>Flustra foliacea</i> (R) and <i>Porella compressa</i> (R). Motile forms include <i>Porania pulvillus</i> (O), <i>Echinus esculentus</i> (O), <i>Stichastrella rosea</i> (O) and <i>Cancer pagurus</i> (P)	SS.SMx.CMx	
ARM40A	Mostly sand with dense gravel, pebbles and locally cobbles, with patches of rippled sand	Stones encrusted with serpulid worms (C) and supporting <i>Urticina felina</i> (P), hydroids (R) and <i>Flustra foliacea</i> (R). <i>Porania pulvillus</i> (O), <i>Stichastrella rosea</i> (P), <i>Asterias rubens</i> (P), <i>Cancer pagurus</i> (O)	SS.SMx.CMx SS.SSa.CFiSa	
ARM41A	Rippled fine sand coarsening through run and with patches of scattered cobbles, boulders and smaller stones	Rippled sand with little visible life apart from small infaunal tubes and Paguridae spp. Cobbles and boulders encrusted with <i>Spirobranchus</i> spp. (P) and <i>Parasmittina trispinosa</i> (P) and supporting <i>Alcyonium digitatum</i> (P), <i>Flustra foliacea</i> (F) and a patchy hydroid turf (O); <i>Urticina felina</i> (P), <i>Luidia ciliaris</i> (P), <i>Munida rugosa</i> (P)	SS.SSa.CFiSa CR.MCR.EcCr.FaAlCr.Flu	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM42A	Cobbles, pebbles and boulders with gravelly sand	Stones encrusted with serpulid worms (A) including <i>Spirobranchus</i> spp. (P), <i>Parasmittina trispinosa</i> (R) and red bryozoans (R) and supporting <i>Flustra foliacea</i> (O, locally C), <i>Securiflustra securifrons?</i> (P), <i>Alcyonium digitatum</i> (R), <i>Caryophyllia smithii</i> (P), <i>Urticina felina</i> (P), <i>Porella compressa?</i> (P) and hydroids (O) including <i>Tubularia indivisa?</i> (R). The motile fauna is dominated by dense <i>Ophiocomina nigra</i> , which forms a bed over much of the run in the more mixed substrate areas (A, locally S); <i>Echinus esculentus</i> (F), <i>Luidia ciliaris</i> (F), Paguridae spp. (P), <i>Porania pulvillus</i> (P), <i>Scyliorhinus</i> sp. (P), Triglidae sp. (P), <i>Stichastrella rosea</i> (O), <i>Asterias rubens</i> (O), <i>Cancer pagurus</i> (O), <i>Callionymus lyra</i> (R), <i>Calliostoma zizyphinum</i> (P)	CR.MCR.EcCr.FaAlCr.Flu SS.SMx.CMx.OphMx	
ARM43A	Boulders, cobbles and pebbles with sand infill	Stones encrusted with <i>Spirobranchus</i> spp. (A) and <i>Parasmittina trispinosa</i> (R) and supporting <i>Flustra foliacea</i> (F), <i>Securiflustra securifrons</i> (P) and <i>Alcyonium digitatum</i> (F). The motile fauna is dominated by dense <i>Ophiocomina nigra</i> , which forms a bed over much of the run (A, locally S) in the more mixed substrate areas; <i>Echinus esculentus</i> (C), <i>Luidia ciliaris</i> (O), <i>Crossaster papposus</i> (F), <i>Porania pulvillus</i> (P), <i>Asterias rubens</i> (O), <i>Cancer pagurus</i> (O), <i>Calliostoma zizyphinum</i> (P)	CR.MCR.EcCr.FaAlCr.Flu SS.SMx.CMx.OphMx	
ARM44A	Boulders, cobbles and pebbles	Rock encrusted with <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (R), red bryozoans (R) and pink coralline algae (R) and of low diversity. Motile fauna includes <i>Ophiocomina nigra</i> (R), <i>Ophiothrix fragilis</i> (R), <i>Echinus esculentus</i> (C), <i>Luidia ciliaris</i> (O), <i>Asterias rubens</i> (F), <i>Munida rugosa</i> (P), <i>Crossaster papposus</i> (O), Caridea sp. (P) and Teleostei sp. (P)	CR.MCR.EcCr.FaAlCr.Pom	
ARM45A	Mostly rippled fine sand but initially with dusting of coarser sand; ripple troughs with black mottling	Sparse visible fauna. Paguridae spp. (O) including <i>Pagurus bernhardus</i> (P), <i>Astropecten irregularis</i> (R), <i>Ophiura ophiura</i> (P), <i>Callionymus lyra</i> (R), Triglidae sp. (P), <i>Raja</i> sp. (P)	SS.SSa.CFiSa	
ARM46A	Rippled fine-medium sand	Sparse visible fauna. Small Asteroidea sp. (R)	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ARM47A	Boulders, cobbles and pebbles with sand infill and patches	Rock encrusted with <i>Spirobranchus</i> spp. (A), <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and pink coralline algae (R) and supporting <i>Alcyonium digitatum</i> (O), <i>Urticina felina</i> (P) and <i>Caryophyllia smithii</i> (R). Motile fauna includes <i>Echinus esculentus</i> (C), <i>Porania pulvillus</i> (R), <i>Asterias rubens</i> (O), <i>Munida rugosa</i> (P), <i>Cancer pagurus</i> (O), <i>Crossaster papposus</i> (O), <i>Marthasterias glacialis</i> (P), <i>Henricia</i> sp. (R), <i>Pecten maximus</i> (P) and Teleostei sp. (P). <i>Ophiocomina nigra</i> occurs in dense patches (locally A) in the more mixed substrate areas	CR.MCR.EcCr.FaAlCr.Pom SS.SMx.CMx.OphMx	
ERB1	Flat plain of soft mud with numerous faunal tracks	Sediment covered by a brown diatomaceous film (A) and supporting frequent <i>Virgularia mirabilis</i> and <i>Sagartiogeton laceratus</i> . Some of the tracks have been created by pagurids (O). <i>Asterias rubens</i> (O), <i>Suberites</i> sp. (R), <i>Carcinus maenas</i> ? (R)	SS.SMu.IFiMu.PhiVir	
ERB2	Muddy sand with scattered gravel, pebbles, cobbles and shells	Fairly sparse visible life including <i>Asterias rubens</i> (O), <i>Marthasterias glacialis</i> (P), <i>Crossaster papposus</i> (P), <i>Aequipecten opercularis</i> (R), <i>Pecten maximus</i> (P), <i>Myxicola infundibulum</i> ? (R), <i>Metridium senile</i> ? (R), <i>Turritella communis</i> shells (P but possibly not inhabited) and scattered <i>Modiolus modiolus</i> shells, with sparse live animals (possibly F locally)	SS.SMx.CMx	
ERB3	Burrowed soft mud interrupted by patches of pebbles and cobbles on muddy sediment	The soft mud is fairly flat but contains small burrows (C, c. 1 - 3 cm in diameter); no seapens are visible. <i>Asterias rubens</i> (O), <i>Turritella communis</i> shells (R), <i>Aequipecten opercularis</i> (R), <i>Liocarcinus</i> sp. (R), <i>Cerianthus lloydii</i> (R), Pleuronectidae sp. (P), Asteroidea sp. (R), small teleosts (O). The stony areas support <i>Metridium senile</i> (C), <i>Echinus esculentus</i> (O) and <i>Munida rugosa</i> (R)	SS.SMu.CFiMu.SpMmeg SS.SMx.CMx	BM
ERB4	Densely burrowed soft mud	Dense small (< 3cm diameter) burrows, some at least containing small <i>Nephrops norvegicus</i> (P)	SS.SMu.CFiMu.SpMmeg	BM
ERB5	Densely burrowed soft mud	Dense small (mostly < 3cm diameter) burrows; small <i>Nephrops norvegicus</i> (P). Pleuronectiformes sp. (P), <i>Liocarcinus</i> sp. (R), small teleosts (P)	SS.SMu.CFiMu.SpMmeg	BM
ERB6	Densely burrowed soft mud	Dense, mostly < 3cm diameter, burrows but <i>Nephrops norvegicus</i> burrows present. Small teleosts (O), <i>Brachyura</i> spp. (O), <i>Munida rugosa</i> (R), <i>Aequipecten opercularis</i> (R), small patch of <i>Metridium senile</i> (locally C)	SS.SMu.CFiMu.SpMmeg	BM

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ERB7	Sparsely burrowed soft mud	Sparse burrows include those of <i>Nephrops norvegicus</i> ; <i>N. norvegicus</i> (P), <i>Asterias rubens</i> (O), small teleosts (O), <i>Brachyura</i> spp. (O), <i>Liocarcinus</i> sp. (P), <i>Aequipecten opercularis</i> (R), <i>Pleuronectidae</i> sp. (P), <i>Munida rugosa</i> (R)	SS.SMu.CFiMu.SpnMeg	BM
ERB8	Muddy sand	Much algal drift material and very sparse burrows. Some areas with superabundant <i>Amphiura</i> sp. <i>Asterias rubens</i> (O), <i>Brachyura</i> spp. (O), <i>Astropecten irregularis?</i> (R), <i>Arenicola</i> -like casts (P), <i>Pleuronectiformes</i> sp. (P)	SS.SMu.CSaMu	
ERB9	Mixed substrate of gravel, pebbles, cobbles and, mostly small, boulders	Larger stones encrusted with serpulid worms (C), pink coralline algae (O) and <i>Parasmittina trispinosa</i> (R) and colonised by patchy turf of red algae (C) and sparse kelp (<i>Laminaria hyperborea</i> O, <i>Saccharina latissima?</i> P). Hydroid clumps (O), <i>Asterias rubens</i> (O)	SS.SMp.KSwSS.LsacR.CbPb	KS
ERB9	Rippled clean fine sand	Little life visible. <i>Asterias rubens</i> (O), <i>Asteroidea</i> spp. indet (O), <i>Ophiura</i> sp. (P), <i>Liocarcinus</i> sp. (R)	SS.SSa.CFiSa	
ERB10	Rippled fine sand	Little life visible. <i>Asterias rubens</i> (O), small <i>Asteroidea</i> sp. (P), <i>Ophiura ophiura</i> (P), <i>Liocarcinus depurator</i> (R), polychaete casts (P)	SS.SSa.CFiSa	
ERB11	Rippled fine sand	Little life visible. <i>Asterias rubens</i> (O), small <i>Asteroidea</i> sp. (P), <i>Ophiura ophiura</i> (P), <i>Liocarcinus depurator</i> (R), polychaete casts (P), <i>Cerianthus lloydii</i> (R)	SS.SSa.CFiSa	
ERB12	Rippled slightly silty fine sand with scattered shell	Little life visible. <i>Asterias rubens</i> (R), <i>Asteroidea</i> sp. (R), <i>Cancer pagurus</i> (P), <i>Liocarcinus</i> sp. (R), <i>Callionymus lyra</i> (O), infaunal tubes (P)	SS.SSa.CFiSa	
ERB13	Slightly silty rippled fine sand	Little life visible. Small <i>Asteroidea</i> sp. (O), <i>Liocarcinus</i> sp. (O), <i>Pecten maximus</i> (R), <i>Ammodytes</i> sp.? (O)	SS.SSa.CFiSa	SE?
ERB14	Slightly rippled fine sand	Little life visible. Small <i>Asteroidea</i> sp. (R), <i>Teleostei</i> sp. (R), <i>Necora puber?</i> (R)	SS.SSa.CFiSa	
ERB15	Bedrock outcrops and dense boulders and cobbles with gravelly sand infill, with patches of coarse sand and gravel in waves	Rock encrusted with <i>Spirobranchus</i> spp. (C, locally A), <i>Balanus</i> spp. (P), <i>Parasmittina trispinosa</i> (O), red bryozoans (R), pink coralline (O) and brown (P) algae and supporting very sparse foliose red algae (R) and hydroids (R). Motile forms include <i>Echinus esculentus</i> (C), <i>Asterias rubens</i> (F), <i>Marthasterias glacialis</i> (P), <i>Crossaster papposus</i> (P), <i>Solaster endeca</i> (P), <i>Luidia ciliaris</i> (P), <i>Munida rugosa</i> (P). Coarse sediment fauna includes <i>Asterias rubens</i> (P) and <i>Liocarcinus</i> sp. (R)	CR.MCR.EcCr.FaAlCr.Pom SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ERB16	Initially cobbles, pebbles and small boulders on medium-coarse sand, with small coarse sand pockets, becoming dense boulders and cobbles and bedrock outcrops	Rock encrusted with <i>Spirobranchus</i> spp. (F, locally C), <i>Parasmittina trispinosa</i> (O), red bryozoans (R), pink coralline (C) and brown (P) algae and supporting sparse <i>Caryophyllia smithii</i> (R, locally F), foliose red algae (R), hydroids (R) and <i>Securiflustra securifrons?</i> (R). Motile forms include <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (C), <i>Marthasterias glacialis?</i> (P), <i>Crossaster papposus</i> (O), <i>Munida rugosa</i> (P), <i>Calliostoma zizyphinum</i> (P) and <i>Necora puber</i> (P)	CR.MCR.EcCr.FaAICr SS.SCS.CCS	
ERB17	Dense boulders and cobbles on sand	Rock sparsely encrusted with serpulids (F), barnacles (F), pink coralline algae (O) and <i>Parasmittina trispinosa</i> (R) and supporting sparse patches of foliose red algae (O) and <i>Dictyota dichotoma?</i> (R). <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (F), <i>Crossaster papposus</i> (P), <i>Cancer pagurus</i> (P), squid eggs? (P), <i>Macropodia</i> sp. (P), <i>Brachyura</i> sp. (P)	CR.MCR.EcCr.FaAICr	
ERB17	Rippled fine sand	Very sparse visible life. <i>Ophiura ophiura</i> (P), Asteroidea sp. indet. (P), <i>Echinus esculentus</i> (P)	SS.SSa.CFiSa	
ERB18	Boulders on sand	<i>Laminaria hyperborea</i> park (overall C but decreasing in density throughout the run). <i>Saccharina latissima</i> is present on the sand surface. Rock is encrusted with pink coralline (F), red and brown algae, as well as with <i>Spirobranchus</i> spp. (F), <i>Balanus</i> spp. (R) and <i>Parasmittina trispinosa</i> (R). A fairly sparse understorey flora of <i>Desmarestia aculeata</i> (O), <i>Dictyota dichotoma</i> (O) and foliose red algae (O), including <i>Callophyllis laciniata</i> (R) and <i>Delesseria sanguinea?</i> (R). <i>Laminaria</i> fronds support <i>Obelia geniculata</i> and <i>Membranipora membranacea</i> . <i>Echinus esculentus</i> (C), <i>Asterias rubens</i> (O), <i>Necora puber?</i> (P), <i>Cancer pagurus</i> (P), small shoal of <i>Gobiusculus flavescens</i>	IR.MIR.KR.Lhyp.Pk	
ERB18	Boulders and cobbles on sand	Rock encrusted with pink coralline algae (F) and sparse <i>Spirobranchus</i> spp. (F), <i>Balanus</i> spp. (R) and <i>Parasmittina trispinosa</i> (R). <i>Asterias rubens</i> (F), scattered clumps of red algae (R)	CR.MCR.EcCr.FaAICr	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ERB19	Mostly boulders and cobbles on medium-coarse sand with patches of sand waves	Rock encrusted with pink coralline algae (F) and sparse <i>Spirobranchus</i> spp. (F), <i>Balanus</i> spp. (O), brown algae and <i>Parasmittina trispinosa</i> (R). <i>Asterias rubens</i> (C), <i>Echinus esculentus</i> (C), <i>Liocarcinus depurator</i> (O), <i>Necora puber?</i> (P), <i>Galathea</i> sp. (P). Through the run there are scattered clumps of red algae (R), <i>Dictyota dichotoma</i> (R) and initially small kelp plants, but at the end of the run filamentous and foliose red algae become common on sand-scoured and dusted boulders and cobbles, with <i>Lanice conchilega</i> present in the sand	CR.MCR.EcCr.FaAlCr IR.MIR.KR.XFoR SS.SCS.CCS	
ERB20	Rippled silty fine sand	Sediment coated with an extensive brown diatomaceous film (A) and supporting an abundant but patchy population of <i>Ophiura ophiura</i> . Small asteroids (F), <i>Liocarcinus</i> sp. (R), <i>Brachyura</i> sp. (R)	SS.SSa.IMuSa	
ERB21	Rippled silty fine sand	Sediment largely with a fairly sparse brown diatomaceous film (F) and with very sparsely scattered shells of <i>Ensis</i> spp. Small asteroids (O), <i>Asterias rubens</i> (P), <i>Liocarcinus depurator</i> (O)	SS.SSa.IMuSa	
ERB22	Densely burrowed soft mud	Dense small (mostly <3 cm diameter) burrows with occasional larger <i>Nephrops</i> -like burrows. Many small fish darting into burrows. <i>Pleuronectiformes</i> sp. (P), <i>Brachyura</i> sp. (R), <i>Aequipecten opercularis</i> (R), <i>Paguridae</i> sp.? (R)	SS.SMu.CFiMu.SpnMeg	BM
ERB23	Burrowed soft mud	Moderately dense, small (mostly < 5 cm diameter) burrows with occasional larger <i>Nephrops</i> -like burrows. High population density of <i>Asterias rubens</i> for sediment type (F, locally C), possibly resulting from vicinity of fish farm. Small teleosts (F), <i>Brachyura</i> sp. (R), <i>Cerianthus lloydii?</i> (R)	SS.SMu.CFiMu.SpnMeg	BM
ERB24	Burrowed soft mud	Lightly burrowed mud with dense <i>Virgularia mirabilis</i> (C) for most of run, with occasional <i>Asterias rubens</i> , brachyurans (possibly <i>Carcinus maenas</i>) and small teleosts. <i>Aequipecten opercularis</i> (R), pagurids (R). At the end of the run an extensive brown diatomaceous film develops (A) and seapens and burrows are lost	SS.SMu.CFiMu.SpnMeg	BM
ERB25	Flat plain of mud with scattered stones in places	Very sparse burrows and <i>Virgularia mirabilis</i> (R). Thin brown diatomaceous film (F), <i>Asterias rubens</i> (O), small teleosts (O), <i>Aequipecten opercularis</i> (O), pagurids (R), <i>Brachyura</i> spp. (R)	SS.SMu	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ERB26	Flat plain of mud with some sand content	Very sparse burrows and <i>Virgularia mirabilis</i> (R). Thin brown diatomaceous film (F), <i>Turritella communis</i> (F), <i>Asterias rubens</i> (O), small teleosts (O), <i>Aequipecten opercularis</i> (R), <i>Liocarcinus depurator</i> (P), <i>Brachyura</i> spp. (O), <i>Crossaster papposus</i> (O), <i>Metridium senile</i> (R)	SS.SMu	
ERB27	Initially sandy mud with scattered cobbles and shells becoming burrowed softer mud	Burrows increase from zero to moderate densities in second half of run, with <i>Nephrops norvegicus</i> present. <i>Asterias rubens</i> is frequent overall but becomes abundant locally in second half of run. <i>Turritella communis</i> (F), <i>Carcinus maenas</i> (R), <i>Brachyura</i> sp. (R), pagurids (R), <i>Aequipecten opercularis</i> (O), small teleosts (O), <i>Eutrigla gurnardus</i> (P), <i>Metridium senile</i> (R)	SS.SMu.CSaMu SS.SMu.CFiMu.SpMmeg	
ERB28	Densely burrowed soft mud	Burrows include some large <i>Nephrops</i> -like burrows. Little life visible. <i>Brachyura</i> spp. (R)	SS.SMu.CFiMu.SpMmeg	BM
ERB29	Densely burrowed soft mud	Burrows include those of <i>Nephrops</i> . Several <i>N. norvegicus</i> seen. Small teleosts (O)	SS.SMu.CFiMu.SpMmeg	BM
ERB30	Rippled slightly silty fine sand	<i>Asterias rubens</i> (O), <i>Myxicola infundibulum</i> (P), Asteroidea spp. indet (P). Very sparsely scattered <i>Ensis/Solen</i> shells	SS.SSa.CFiSa	
ERB31	Large ripples (or waves) of medium sand with dense shell material, including <i>Ensis</i> , in troughs	Little life visible. <i>Asterias rubens</i> (P), <i>Liocarcinus</i> sp. (P), <i>Astropecten irregularis?</i> (P), small teleosts (P)	SS.SSa	
ERB31	Sharp transition at start of biotope from medium sand to rippled slightly silty fine sand. Fine sand interrupted by narrow bands of medium sand in two places	<i>Asterias rubens</i> (F), Asteroidea sp. indet. (R), <i>Cerianthus lloydii?</i> (P)	SS.SSa.CFiSa	
ERB31	Silty fine sand densely covered with pebbles and gravel, with some bare patches	Pebbles encrusted with serpulid worms (C). <i>Liocarcinus</i> sp. (R), Asteroidea sp. indet. (R)	SS.SMx.CMx	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
ERB32	Rippled fine sand	Sparse visible fauna. <i>Asterias rubens</i> (R), Asteroidea sp. indet. (R), <i>Pecten maximus</i> (R), <i>Urticina</i> sp. (R adjacent to isolated boulder), terebellid worms (P)	SS.SSa.CFiSa	
ERB32	Dense pebbles on fine sand with increasing addition of cobbles and small boulders through run	Stones encrusted with serpulid worms (C), pink coralline algae (O) and <i>Parasmittina trispinosa</i> (R). <i>Asterias rubens</i> (F), <i>Liocarcinus</i> sp. (P), small teleosts (P), <i>Munida rugosa</i> (P), <i>Lanice conchilega</i> (P)	SS.SMx.CMx	
MV16	Smooth bedrock with lows of mixed sediment	Rock encrusted with <i>Parasmittina trispinosa</i> (O), serpulid worms (F), including <i>Spirobranchus</i> spp. (P) and pink coralline algae (C). Sessile fauna includes <i>Swiftia pallida</i> (F), <i>Caryophyllia smithii</i> (F), <i>Porella compressa</i> (P), hydroid clumps (R), <i>Polymastia boletiformis</i> ? (P) and <i>Alcyonidium diaphanum</i> (P). Motile species include <i>Echinus esculentus</i> (F), <i>Crossaster papposus</i> (P), <i>Porania pulvillus</i> (F) and Teleostei spp. (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
MV16	Smooth sand-dusted bedrock	Rock encrusted with <i>Parasmittina trispinosa</i> (O), serpulid worms (F), including <i>Spirobranchus</i> spp. (P), <i>Balanus</i> spp. (R) and pink coralline algae (C). Fauna dominated by dense brittlestars dominated by <i>Ophiocomina nigra</i> (A) but with pockets of <i>Ophiothrix fragilis</i> (locally S). Other echinoderms include <i>Luidia ciliaris</i> (F), <i>Porania pulvillus</i> (F), <i>Stichastrella rosea</i> ? (O) and <i>Echinus esculentus</i> (F). <i>Munida rugosa</i> (P), <i>Calliostoma zizyphinum</i> (P), small Pectinidae (locally F)	CR.MCR.EcCr.FaAlCr.Bri	
MV18	Silty gravelly sand with scattered cobbles, pebbles and occasional boulders	Rock sparsely encrusted with <i>Parasmittina trispinosa</i> (R), red bryozoans (R) and serpulid worms (O) and supporting a fairly sparse fauna. <i>Swiftia pallida</i> (O), <i>Porella compressa</i> (P), hydroid clumps (R), <i>Hymedesmia paupertas</i> (R), <i>Polymastia boletiformis</i> (P) and yellow encrusting and branching erect sponges (R). Motile species include <i>Echinus esculentus</i> (F), <i>Pagurus prideaux</i> with <i>Adamsia cariniopados</i> (P), <i>Munida rugosa</i> (C), Teleostei spp. (P), Asteroidea sp. (O)	SS.SMx.CMx	SP

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV19	Silty fine sand, initially with scattered boulders and cobbles	Sediment with <i>Pagurus prideaux</i> and <i>Adamsia carciniopados</i> (P), Paguridae sp. (P), <i>Chaetopterus variopadatus</i> (P), <i>Munida rugosa</i> (C locally), <i>Luidia ciliaris</i> (P) and small fish. Stones are encrusted with <i>Parasmittina trispinosa</i> (R) and support patchy hydroids (O), <i>Swiftia pallida</i> (C on rock), <i>Porella compressa</i> (P), <i>Polymastia boletiformis</i> (P), <i>Urticina</i> sp.? (P) and <i>Securiflustra securifrons?</i> (P)	SS.SSa.OSa	SP
MV21	Silty gravelly sand with pebbles and shells	Sparse visible life. <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P), Teleostei spp. (P), <i>Caryophyllia smithii</i> on pebbles (F locally), <i>Ebalia</i> sp., <i>Nephrops norvegicus</i> (P), burrowing anemone (P)	SS.SMx.CMx	
MV21	Silty gravelly sand with pebbles and flat cobbles and occasional boulders	Dense field of <i>Leptometra celtica</i> (A). <i>Porella compressa</i> (P), <i>Munida rugosa</i> (P), <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P), <i>Urticina</i> sp.? (P), <i>Aequipecten opercularis</i> (P), <i>Salmacina dysteri</i> (R), <i>Cancer pagurus</i> (P), yellow digitiform sponge (P), <i>Trisopterus luscus?</i> (P), Teleostei spp. (P)	SS.SMx.CMx	LA
MV22	Slightly silty gravel and coarse sand	Sparse serpulid worms on stones; also small <i>Porella compressa</i> - possibly dead	SS.SCS	
MV22	Cobbles and boulders on silty gravelly sediment becoming dense boulders and cobbles, then smooth sand-scoured bedrock with progression up the slope	Rock encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R), pink coralline algae (A in shallower water) and serpulid worms (F), including <i>Spirobranchus</i> spp. (P), and supporting <i>Swiftia pallida</i> (F), <i>Porella compressa</i> (locally C), <i>Alcyonidium diaphanum</i> (P), <i>Caryophyllia smithii</i> (F, locally A), <i>Urticina</i> sp. (R), patchy hydroids (F, locally C) including dense patches of <i>Tubularia indivisa?</i> (R overall), and a sponge fauna including <i>Axinella infundibuliformis</i> (locally C), <i>Hymedesmia paupertas</i> (R), <i>Myxilla incrustans?</i> (P) and <i>Haliclona viscosa?</i> (R). Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (F, locally C), <i>Luidia ciliaris</i> (P), Teleostei spp. (P), and <i>Stichastrella rosea?</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
MV22	Smooth sand-scoured bedrock	Rock encrusted with pink coralline algae (A) and <i>Parasmittina trispinosa</i> (R) and supporting a sparse sward of foliose red algae, possibly <i>Phyllophora crispa</i> (F). <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (F), <i>Luidia ciliaris</i> (F)	CR.MCR.EcCr.FaAICr	
MV22	Sand-dusted bedrock	Dense <i>Ophiocomina nigra</i> (A), <i>Stichastrella rosea</i> (P), <i>Luidia ciliaris</i> (P)	CR.MCR.EcCr.FaAICr.Bri	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV22	Boulders and cobbles on silty gravelly sediment with flat bedrock at end	Rock encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R), <i>Balanus</i> spp. (P) and serpulid worms (F), including <i>Spirobranchus</i> spp. (P), and supporting <i>Swiftia pallida</i> (F), <i>Porella compressa</i> (F), <i>Caryophyllia smithii</i> (C), <i>Flustra foliacea</i> (R), hydroid clumps (O), <i>Chaetopterus variopedatus?</i> (P), <i>Parazoanthus anguicomus</i> (R, locally C), <i>Axinella infundibuliformis</i> (O, locally C), <i>Hymedesmia paupertas</i> (R), and <i>Polymastia boletiformis</i> (P). Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (P), <i>Munida rugosa</i> (P), <i>Callionymus lyra</i> (P), Teleostei spp. (P), <i>Crossaster papposus</i> (P) and <i>Stichastrella rosea</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP PA
MV23	Silty gravelly sand with scattered cobbles and pebbles	Field of <i>Leptometra celtica</i> (C)	SS.SMx.CMx	LA
MV23	Dense cobbles and boulders on silty gravelly sand changing to silted bedrock	Rock sparsely encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and serpulid worms (F) and supporting <i>Swiftia pallida</i> (F), <i>Porella compressa</i> (C), <i>Caryophyllia smithii</i> (F), hydroid clumps (O), <i>Alcyonidium diaphanum</i> (locally C), <i>Urticina</i> sp.? (P), <i>Axinella infundibuliformis</i> (locally C) and possibly <i>Phakellia ventilabrum</i> (P), <i>Hymedesmia paupertas</i> (R), <i>Polymastia boletiformis</i> (P) and a yellow erect branching species. Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Munida rugosa</i> (P), <i>Pecten maximus</i> (P), Teleostei spp. (P), <i>Luidia ciliaris</i> (P), Asteroidea sp. (P) and <i>Stichastrella rosea?</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
MV25	Silty fine sand initially with scattered pebbles, cobbles and boulders	Stones support <i>Caryophyllia smithii</i> (R) and <i>Polymastia boletiformis</i> (R). <i>Munida rugosa</i> (R), Paguridae sp. (P), <i>Porania pulvillus</i> (R), <i>Aequipecten opercularis</i> (P), Asteroidea sp. (P), infaunal tubes (P)	SS.SSa.OSa	
MV26	Silty fine-medium sand	Only drift material observed	SS.SSa.OSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV26	Uneven bedrock pinnacle and dense boulders and cobbles on silty gravelly sand	Rock encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R), <i>Balanus</i> spp. (P) and serpulid worms (F) and supporting <i>Swiftia pallida</i> (C) carrying <i>Amphianthus dohrni</i> , <i>Porella compressa</i> (C), <i>Flustra foliacea</i> (R), <i>Securiflustra securifrons?</i> (P), <i>Alcyonidium diaphanum</i> (P), <i>Caryophyllia smithii</i> (F), <i>Ascidia mentula</i> (P), a patchy hydroid turf (F, locally S) including <i>Abietinaria abietina</i> (P) and <i>Tubularia indivisa?</i> (R), and a sponge fauna including <i>Raspailia hispida</i> (P), <i>Axinella infundibuliformis</i> (locally C) and possibly <i>Phakellia ventilabrum</i> (P), <i>Hymedesmia paupertas</i> (R), <i>Pachymatisma johnstonia?</i> (R), a yellow branching-erect form (P), <i>Myxilla incrustans?</i> (P) and others. Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (F), <i>Luidia ciliaris</i> (P), Labridae sp. (P) and <i>Stichastrella rosea?</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
MV26	Silty fine-medium sand	Only drift material observed	SS.SSa.OSa	
MV28	Extensive areas of bedrock, much of it flat, and areas of dense boulders	Rock encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and serpulid worms (P) and supporting <i>Swiftia pallida</i> (F, locally C), <i>Porella compressa</i> (C), <i>Alcyonidium diaphanum</i> (P), <i>Caryophyllia smithii</i> (F), <i>Parazoanthus anguicomus</i> (locally F), a patchy hydroid turf (O) including <i>Abietinaria abietina</i> (R) and <i>Tubularia indivisa?</i> (R), and a sponge fauna including <i>Axinella dissimilis?</i> (locally C), <i>A. infundibuliformis</i> (locally C), <i>Hymedesmia paupertas</i> (R), <i>Pachymatisma johnstonia?</i> (R), <i>Polymastia boletiformis</i> (P) and a yellow encrusting form (P). Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (F), Teleostei sp. (P), <i>Munida rugosa</i> (P), <i>Asterias rubens</i> (P), <i>Stichastrella rosea</i> (O) and <i>Calliostoma zizyphinum</i>	CR.MCR.EcCr.CarSwi.LgAs	NS SP PA
MV29	Silty gravelly pebbly sand with scattered cobbles and boulders	Sediment with <i>Pagurus prideaux</i> and <i>Adamsia carciniopados</i> (P), <i>Munida rugosa</i> (C locally), <i>Ebalia</i> sp. (P), Teleostei spp. (P), <i>Porania pulvillus</i> (O) and <i>Asterias rubens</i> (P). Stones are encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and serpulid worms, and support hydroids (O), <i>Swiftia pallida</i> (R), <i>Porella compressa?</i> (P), <i>Alcyonidium diaphanum</i> (R), <i>Parazoanthus anguicomus</i> (R), <i>Balanus</i> spp. (P), <i>Stichastrella rosea?</i> (P) and <i>Echinus esculentus</i> (O)	SS.SMx.CMx	SP PA

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV32	Boulders and cobbles on silty gravelly sand and small rock outcrops	Stones encrusted with <i>Parasmittina trispinosa</i> (O) and supporting a patchy hydroid/bryozoan turf (F-C), <i>Porella compressa</i> (P), <i>Swiftia pallida</i> (P) and <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (P). <i>Munida rugosa</i> (P), <i>Echinus esculentus</i> (C), <i>Porania pulvillus</i> (O)	CR.HCR.XFa SS.SMx.CMx	SP
MV32	Coarse sand with scattered boulders or outcropping bedrock	No life visible, sand appearing highly mobile	SS.SCS.CCS	
MV32	Uneven bedrock pinnacle with boulders	Rock encrusted with <i>Parasmittina trispinosa</i> (O), serpulid worms (F) and with pink coralline algae in shallower water (locally C) and supporting dense <i>Caryophyllia smithii</i> (C, locally A). Hydroids (F), <i>Porella compressa</i> (P), encrusting digitiform yellow sponge? (P), erect branching yellow sponge (P), <i>Alcyonium digitatum</i> (R), <i>Echinus esculentus</i> (C), <i>Porania pulvillus</i> (F), <i>Labrus mixtus</i> (P), <i>Luidia ciliaris</i> (P), <i>Calliostoma zizyphinum</i> (P), <i>Swiftia pallida</i> (locally F), many small fish	CR.MCR.EcCr.CarSwi.LgAs CR.MCR.EcCr.FaAlCr.Car	NS SP
MV32	Silty gravelly sand with pebbles	<i>Luidia ciliaris</i> (P), small fish (P)	SS.SMx.CMx	
MV33	Steep pinnacle of silted rock	Rock sparsely encrusted with serpulid worms (F), bryozoans (R) and pink coralline algae (R) and supporting <i>Caryophyllia smithii</i> (locally A), hydroid patches (F but dense in places), <i>Porella compressa</i> (P), encrusting and erect sponges? (P) and <i>Swiftia pallida</i> ? (P). Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (P) and <i>Calliostoma zizyphinum</i> (P). Shoal of small fish	CR.MCR.EcCr.CarSwi.LgAs	NS SP
MV34	Silty gravelly sand with scattered pebbles and occasional cobbles and boulders	Small patch of <i>Leptometra celtica</i> (C)	SS.SMx.CMx	LA
MV34	Silty gravelly sand with scattered pebbles and occasional cobbles and boulders	Sparse fauna. <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P), Paguridae spp. (P), Teleostei spp. (P), <i>Chaetopterus variopedatus</i> ? (P), <i>Luidia ciliaris</i> (P), <i>Aequipecten opercularis</i> (P), burrowing anemone (P)	SS.SMx.CMx	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV35	Slightly shelly muddy sand or possibly sandy mud with sparsely scattered boulders	Sediment with orange Actiniaria sp., possibly <i>Sagartiogeton laceratus</i> (P), <i>Pagurus prideaux</i> (P), <i>Adamsia carciniopados</i> (P), Paguridae sp. (P), <i>Munida rugosa</i> (P) and <i>Inachus</i> sp. (P). Boulders support a hydroid/bryozoan turf (P) including <i>Abietinaria abietina</i> , <i>Porella compressa</i> (P), serpulid worms and <i>Caryophyllia smithii</i> (P)	SS.SMu.OMu	
MV39	Slightly shelly muddy sand or possibly sandy mud with sparsely scattered boulders	Sediment with small holes and orange Actiniaria sp., possibly <i>Sagartiogeton laceratus</i> (locally F), Paguridae sp. (P), <i>Munida rugosa</i> (P) and <i>Inachus</i> sp. (P). Boulders support hydroids (P), <i>Porella compressa</i> (P) and <i>Salmacina dysteri</i> (P)	SS.SMu.OMu	
MV40	Muddy sand with scattered gravel and pebbles and occasional cobbles and boulders	Small stones, often buried, support frequent <i>Caryophyllia smithii</i> , <i>Porella compressa</i> (R), serpulid worms (R) and <i>Alcyonidium diaphanum</i> (P) with hydroid patches (R), <i>Salmacina dysteri</i> ? (P), <i>Urticina</i> sp.? and <i>Polymastia</i> sp.? on larger stones. <i>Sagartiogeton laceratus</i> (F), burrowing anemone (P) and small holes in the sediment. Motile forms are Paguridae spp. (F) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P), <i>Aequipecten opercularis</i> (P) and <i>Inachus</i> sp. (P)	SS.SMu.OMu	
MV60	Scoured bedrock and boulders	Rock encrusted with <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (O) and supporting dense patches of <i>Flustra foliacea</i> (C), <i>Caryophyllia smithii</i> (C), <i>Alcyonidium diaphanum</i> (P), <i>Alcyonium digitatum</i> (R), <i>Porella compressa</i> (locally C), hydroid patches (O) and a sponge fauna including yellow cushion and yellow staghorn forms. The motile fauna includes <i>Munida rugosa</i> (P) and <i>Asterias rubens</i> (P), <i>Luidia ciliaris</i> (P)	CR.MCR.EcCr.FaAlCr.Flu	
MV60	Cobbles and pebbles on silty gravelly sand	Stones encrusted with serpulid worms including <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting <i>Alcyonidium diaphanum</i> (locally C), <i>Caryophyllia smithii</i> (P), <i>Flustra foliacea</i> (O), <i>Porella compressa</i> (locally C), <i>Pentapora fascialis</i> (P), a yellow cushion sponge (R) and a patchy hydroid/bryozoan turf (F) including <i>Abietinaria abietina</i> ?. The motile fauna includes <i>Munida rugosa</i> (C), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (P), Crinoidea sp. (R), <i>Henricia</i> sp. (P) and <i>Pecten maximus</i> (P)	SS.SMx.CMx.FluHyd	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV61	Sand with gravel and pebbles and scattered cobbles and boulders	Stones encrusted with serpulid worms (C), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting occasional hydroid clumps and <i>Urticina</i> sp.? (P). <i>Chaetopterus variopedatus</i> (P) in sediment. The motile fauna includes <i>Munida rugosa</i> (P), <i>Porania pulvillus</i> (O), <i>Asterias rubens</i> (P) and Pectinidae sp. (P)	SS.SMx.CMx	
MV64	Silted cobbles, boulders and pebbles on silty gravelly sand	Stones encrusted with serpulid worms (C), including <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting patches of <i>Flustra foliacea</i> (locally C), <i>Alcyonidium diaphanum</i> (locally C), <i>Caryophyllia smithii</i> (F locally) and hydroids (O). <i>Swiftia pallida</i> and <i>Porella compressa</i> are common at least locally and the sponge fauna includes <i>Polymastia boletiformis</i> (P), <i>Hymedesmia paupertas</i> (P), <i>Cliona celata/Myxilla incrustans/lophon nigricans?</i> and yellow lobate and stagshorn forms. One patch of small colonial white anemones (indistinct but probably <i>Parazoanthus anguicomus</i>). The motile fauna includes <i>Munida rugosa</i> (C), <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Trisopterus luscus?</i> (P), <i>Eutrigla gurnardus</i> (P), <i>Asterias rubens</i> (O) and <i>Stichastrella rosea?</i> (P)	CR.HCR.XFa.SwiLgAs	NS SP PA
MV65	Slightly silty fine sand with gravel scatter and occasional cobbles and boulders	Sediment with <i>Pagurus prideaux</i> carrying <i>Adamsia carciniopados</i> (O), Paguridae spp. indet (O), <i>Asterias rubens</i> (P), <i>Pecten maximus</i> (P) and many <i>Trisopterus luscus?</i> Stones support serpulid worms, encrusting bryozoans, <i>Caryophyllia smithii</i> (R), hydroids (P), <i>Polymastia boletiformis</i> (P), <i>Axinella infundibuliformis</i> (R), <i>Inachus</i> sp. (P), <i>Ascidia virginea?</i> (R), <i>Swiftia pallida</i> (R), <i>Pentapora fascialis</i> (R), <i>Munida rugosa</i> (P) and <i>Echinus esculentus</i> (P)	SS.SSa.OSa	SP
MV65	Bedrock and boulders	Rock encrusted with serpulid worms (C), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting a fairly rich sponge fauna including <i>lophon nigricans</i> (F), <i>Polymastia boletiformis</i> (C locally), <i>Hymedesmia paupertas</i> (R), <i>Axinella infundibulum</i> (P), <i>Axinella dissimilis?</i> (P) and <i>Haliclona</i> sp.? (P). Other sessile forma are <i>Swiftia pallida</i> (C), <i>Caryophyllia smithii</i> (C), <i>Porella compressa</i> (C locally), hydroids (O), <i>Parazoanthus anguicomus</i> (R), <i>Securiflustra securifrons</i> (P) and <i>Alcyonidium diaphanum</i> (P). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (P), <i>Porania pulvillus</i> (O) and <i>Henricia</i> sp. (R)	CR.MCR.EcCr.CarSwi.LgAs	NS SP PA

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV66	Cobbles, boulders and pebbles on gravelly sand	Stones encrusted with serpulid worms (C) and <i>Parasmittina trispinosa</i> (O) and supporting patches of <i>Flustra foliacea</i> (F), <i>Securiflustra securifrons</i> (P), <i>Alcyonidium diaphanum</i> (locally C) and hydroids (O). <i>Swiftia pallida</i> and <i>Porella compressa</i> are common at least locally and the sponge fauna includes axinellids (F) with <i>Phakellia ventilabrum</i> and possibly <i>Axinella infundibuliformis</i> , as well as <i>Polymastia boletiformis?</i> (F), <i>Raspailia/Stelligera</i> sp.? (P) and <i>Hymedesmia paupertas</i> (P). The motile fauna includes <i>Munida rugosa</i> (C), <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (P), Teleostei spp. (P), <i>Asterias rubens</i> (O) and <i>Crossaster papposus</i> (P)	CR.HCR.XFa.SwiLgAs	NS SP
MV67	Pebbles, cobbles and boulders on silty gravelly sand	Stones encrusted with <i>Spirobranchus</i> spp. (F), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting patches of <i>Flustra foliacea</i> (O) and hydroids (O). Other sessile species are <i>Caryophyllia smithii</i> (C locally), <i>Alcyonidium diaphanum</i> (P), a yellow encrusting sponge (R), <i>Swiftia pallida</i> (R) and <i>Pentapora fascialis</i> (P). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (C), <i>Luidia ciliaris</i> (O) and <i>Pecten maximus</i> (P)	SS.SMx.CMx.FluHyd	SP
MV67	Silty gravelly sand with surface pebbles	Pebbles support sparse hydroids (R), <i>Alcyonidium diaphanum</i> (P) and <i>Caryophyllia smithii</i> (P). <i>Pagurus bernhardus</i> (P), solitary ascidian (P), Teleostei spp. (P)	SS.SMx.CMx	
MV78	Silty gravelly sand with cobbles and shells	Stones encrusted with serpulid worms including <i>Spirobranchus</i> spp. (C), <i>Balanus</i> spp. (P) and <i>Parasmittina trispinosa</i> (R) and supporting <i>Alcyonidium diaphanum</i> (locally C), <i>Caryophyllia smithii</i> (P) and sparse patches of <i>Flustra foliacea</i> (O) and hydroids (O). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (C), <i>Porania pulvillus</i> (O), <i>Crossaster papposus</i> (P), <i>Macropodia</i> sp. (P) and Caridea sp. (P)	SS.SMx.CMx.FluHyd	
MV78	Silty gravelly sand with scattered shells and pebbles	Pebbles support <i>Alcyonidium diaphanum</i> (locally C) and sparse <i>Caryophyllia smithii</i> (R), serpulid worms (P) and <i>Porella compressa</i> (P). <i>Munida rugosa</i> (C), <i>Porania pulvillus</i> (O)	SS.SMx.CMx	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV82	Silty medium-coarse sand with dense shell cover in places including <i>Glycimeris</i> and venerids	Few signs of infaunal life apart from the presence of occasional emergent tubes. <i>Luidia ciliaris</i> (O), <i>Trisopterus luscus?</i> (P), <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P), <i>Macropodia</i> sp. (P), <i>Ebalia</i> sp. (P), <i>Aequipecten opercularis</i> (P)	SS.SMx	
MV85	Brief glimpse of rock but largely shelly fine-medium sand gradually coarsening and becoming scattered with pebbles, cobbles and boulders	<i>Scylliorhinus</i> sp. (P), <i>Munida rugosa</i> (P), <i>Luidia ciliaris</i> (P)	SS.SSa.CFiSa	
MV85	Scattered cobbles and boulders on sand and sand-scoured bedrock with sediment pockets	Rock encrusted with <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and pink coralline algae (A in shallower water) and supporting patches of <i>Flustra foliacea</i> (O, locally C) and hydroids, dominated by <i>Sertularia cupressina?</i> (locally A), with <i>Abietinaria abietina</i> (R). Other sessile species are <i>Caryophyllia smithii</i> (C), <i>Porella compressa</i> (R), <i>Corynactis viridis</i> (R) and <i>Alcyonidium diaphanum</i> (R). At the shallow end of the run sparse <i>Phymatolithon calcareum</i> rhodoliths (R) are scattered on gravel. The motile fauna includes <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (P), Pectinidae sp. (R) and <i>Liocarcinus</i> sp. (R)	CR.MCR.EcCr.FaAlCr.Flu	
MV85	Smooth bedrock with coarse sand patches	Rock encrusted with pink coralline algae (A), <i>Spirobranchus</i> spp. (P) and <i>Parasmittina trispinosa</i> (P) and supporting a park of small <i>Laminaria hyperborea</i> (C) with a patchy understorey of foliose red algae (F, locally A). Other sessile species are <i>Abietinaria abietina</i> (R), <i>Alcyonium digitatum</i> (R) and scattered <i>Phymatolithon calcareum</i> rhodoliths (R) on coarse sand. The motile fauna includes <i>Echinus esculentus</i> (C), <i>Stichastrella rosea</i> (P), <i>Munida rugosa</i> (P), <i>Porania pulvillus</i> (P), <i>Cancer pagurus</i> (P), <i>Necora puber</i> (P) and patches of dense <i>Ophiocomina nigra</i> (locally A)	IR.MIR.KR.Lhyp.Pk	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV85	Sand-scoured bedrock and boulders on coarse sand	Rock encrusted with <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and pink coralline algae (A in shallower water) and supporting patches of <i>Flustra foliacea</i> (A locally) and hydroids, dominated by <i>Sertularia cupressina?</i> (locally A), with <i>Abietinaria abietina</i> (R). Other sessile species are <i>Caryophyllia smithii</i> (C), <i>Porella compressa</i> (R), <i>Alcyonidium diaphanum</i> (locally A), <i>Alcyonium digitatum</i> (locally C) and sparse sponges (R) including yellow encrusting and orange digitiform species. The motile fauna includes <i>Echinus esculentus</i> (C), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (O), <i>Pecten maximus</i> (P), <i>Calliostoma zizyphinum</i> (P), <i>Asterias rubens</i> (P), <i>Leptometra celtica</i> (R) and patches of dense <i>Ophiocomina nigra</i> (locally A)	CR.MCR.EcCr.FaAlCr.Flu	LC
MV92	Sandy mud with sparsely scattered gravel and occasional boulders	Very sparse burrows including those of <i>Nephrops norvegicus</i> . <i>Cancer pagurus</i> (P), Asteroidea sp. (P), <i>Inachus</i> sp. (P), Paguridae spp. (O) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P), <i>Munida rugosa</i> (P), Caridea sp. (P), <i>Sagartiogeton laceratus?</i> (P), Gadidae spp. (P). Stones support <i>Urticina</i> sp. (P), <i>Metridium senile</i> (P), <i>Caryophyllia smithii</i> (P) and Actiniaria sp. (P)	SS.SMu.OMu	
MV104	Sandy mud with scattered cobbles and boulders and bedrock outcrop	Stones and bedrock support <i>Swiftia pallida</i> (C) and a sponge fauna including <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (C), <i>Polymastia boletiformis?</i> (P) and yellow encrusting and digitiform species. Other sessile forms include hydroid patches (F), <i>Porella compressa</i> (possibly C), <i>Urticina</i> sp.? (P), <i>Bolocera tuediae?</i> (P) and bryozoan crusts. The sediment contains at most sparse burrows. <i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (F), Teleostei spp. (P)	CR.MCR.EcCr.CarSwi.LgAs SS.SMu.OMu	NS SP
MV104	Sandy mud	Fairly low density of megafaunal burrows including probably those of <i>Nephrops norvegicus</i>	SS.SMu.OMu	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV105	Sediment-dusted flat bedrock and dense boulders and cobbles	Rock sparsely encrusted with serpulid worms (F), <i>Parasmittina trispinosa</i> (R) and red bryozoans (R) and supporting a sponge fauna of <i>Iophon nigricans</i> (O), a yellow branching erect form (P), <i>Polymastia boletiformis?</i> (P), <i>Hymedesmia paupertas</i> (R), <i>Clathrina coriacea</i> (P), a cream digitiform species (P) and <i>Axinella infundibuliformis</i> (locally C). <i>Swiftia pallida</i> is present but appears to be sparse (R). Rock also supports <i>Porella compressa</i> (F), <i>Securiflustra securifrons</i> (locally C) and hydroid patches (O). Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Cancer pagurus</i> (P), Asteroidea sp. (P) and Teleostei spp. (P)	CR.HCR.DpSp.PhaAxi	DS SP
MV106	Smooth creviced bedrock with sand in crevices	Sparse fauna. Rock encrusted with pink coralline algae (A), red algae (R), <i>Spirobranchus</i> spp. (sparse, but locally C) and <i>Parasmittina trispinosa</i> , and supporting <i>Caryophyllia smithii</i> (R, locally F). Motile species include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Munida rugosa</i> (P), <i>Calliostoma zizyphinum</i> (P), <i>Crossaster papposus?</i> (P) and <i>Ophiura</i> sp. (R)	CR.MCR.EcCr.FaAICr	
MV107	Burrowed sandy mud	Moderate density of megafaunal burrows, including <i>Nephrops norvegicus</i> and thalassinidean shrimps; 5 <i>N. norvegicus</i> observed. <i>Callionymus lyra?</i> (P), Teleostei spp. (P), <i>Liocarcinus depurator?</i> (P)	SS.SMu.CFiMu.SpnMeg	BM
MV108	Boulders and cobbles on coarse sediment	Rock encrusted with serpulid worms (F) and <i>Parasmittina trispinosa</i> (O) and supporting a sessile fauna dominated by a moderate density of sponges, including <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (F), <i>Polymastia boletiformis</i> (O) and <i>Iophon nigricans</i> (P); <i>Porella compressa</i> (C), hydroids (O), Motile species include <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (C) and <i>Stichastrella rosea</i> (P)	CR.HCR.DpSp.PhaAxi	
MV108	Coarse sand waves with concentration of gravel and shell in the troughs	Small <i>Munida rugosa</i> in troughs (P); shell and stones with sparse Serpulid worms	SS.SCS.CCS	
MV109	Fine sand with gravel gradually coarsening and becoming large ripples of medium sand with gravel and shells in the troughs	<i>Munida rugosa</i> (O), small <i>Salmacina dysteri</i> colony on stone, possibly dead	SS.SSa.OSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV110	Flat creviced bedrock and areas of dense boulders and cobbles	Rock encrusted with <i>Spirobranchus</i> spp. (locally C), <i>Parasmittina trispinosa</i> (F) and pink coralline algae (A) and with <i>Caryophyllia smithii</i> (F locally but R overall), sparse hydroids including <i>Abietinaria abietina?</i> (R), <i>Axinella infundibuliformis</i> (R), <i>Ascidia virginea</i> (R) and <i>A. mentula</i> (R). Motile species include <i>Echinus esculentus</i> (C), <i>Munida rugosa</i> (P), <i>Porania pulvillus</i> (O), <i>Marthasterias glacialis?</i> (O), <i>Crossaster papposus</i> (O), Asteroidea sp. (P), <i>Calliostoma zizyphinum</i> (P) and Teleostei spp. (P)	CR.MCR.EcCr.FaAlCr	
MV111	Predominantly a sediment of silty fine sand but areas where there are additions of gravel, pebbles, cobbles and boulders	Stones support a fairly sparse fauna of <i>Parasmittina trispinosa</i> (R), red brozoan crusts (R), <i>Porella compressa</i> (O), <i>Polymastia boletiformis</i> (O), <i>Axinella infundibuliformis</i> (O) and possibly <i>Swiftia pallida</i> (R). The motile fauna includes <i>Munida rugosa</i> (C), <i>Asterias rubens?</i> (P) and <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P)	SS.SSa.OSa CR.HCR.DpSp.PhaAxi	DS
MV112	Cobbles, boulders and pebbles on gravelly sand with areas of large medium-coarse sand ripples with gravel in the troughs	Rock encrusted with serpulid worms (F), <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and pink coralline algae (O). The habitat appears highly scoured and the sessile fauna is not well-developed: <i>Iophon nigricans</i> (O), <i>Axinella infundibuliformis</i> (R), <i>Securiflustra securifrons</i> (R). Motile species include <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (C), <i>Porania pulvillus</i> (F), <i>Stichastrella rosea</i> (P), Asteroidea sp. (P), <i>Calliostoma zizyphinum</i> (P) and <i>Pecten maximus</i> (P)	CR.MCR.EcCr.FaAlCr SS.SCS.CCS	
MV113	Slightly silty fine sand with gravel and sparsely scattered shells on the surface	Occasional <i>Porania pulvillus</i> and Paguridae spp. <i>Munida rugosa</i> (P), <i>Pecten maximus</i> (P but not certainly alive)	SS.SSa.OSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV114	Cobbles, boulders and pebbles on gravelly sand and sand-scoured bedrock, with patches of coarse sand, partly in waves	Rock encrusted with serpulid worms (C) including <i>Spirobranchus</i> spp. (P), <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and pink coralline algae (F). The sessile fauna includes a number of sponges, including <i>Axinella infundibuliformis</i> (C particularly on sand-scoured bedrock) and possibly <i>Phakellia ventilabrum</i> , <i>Iophon nigricans</i> (O), <i>Polymastia boletiformis</i> (F), <i>Hymedesmia paupertas</i> (R) and a cream encrusting species (P). Also present are <i>Porella compressa</i> (P), hydroids (R), <i>Chaetopterus variopedatus?</i> (P) and <i>Flustra foliacea</i> is frequent on sand-scoured bedrock, Motile species include <i>Echinus esculentus</i> (O), <i>Munida rugosa</i> (C), Teleostei spp. (P), <i>Porania pulvillus</i> (F), <i>Crossaster papposus</i> (P) and <i>Pecten maximus</i> (P)	CR.HCR.DpSp.PhaAxi SS.SCS.CCS	DS
MV115	Cobbles, pebbles and boulders on silty gravelly sand	Rock encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R), <i>Balanus</i> spp. (R) and serpulid worms (F) and supporting <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O, locally F), a yellow branching erect sponge (R), <i>Iophon nigricans</i> (O), <i>Polymastia boletiformis</i> (O), <i>Hymedesmia paupertas</i> (R), <i>Porella compressa</i> (F), <i>Securiflustra securifrons</i> (R, but O in patches) and hydroids (R). Motile forms include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (F), <i>Munida rugosa</i> (C), <i>Luidia ciliaris</i> (P) and Asteroidea spp. (O)	CR.HCR.DpSp.PhaAxi	
MV116	Burrowed soft mud	Moderately high megafaunal burrow density including <i>Nephrops norvegicus</i> and thalassinidean burrows; 4 emergent <i>N. norvegicus</i> . <i>Funiculina quadrangularis</i> (C), <i>Trisopterus luscus?</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
MV117	Sandy mud	Low density of megafaunal burrows including those of <i>Nephrops norvegicus</i> . Small teleosts present	SS.SMu.OMu	
MV118	Fairly hard sandy mud or muddy sand with a sparse scatter of pebbles, cobbles and occasional small boulders at one point	Very sparse <i>Nephrops norvegicus</i> burrows. Stones support <i>Porella compressa</i> (P) and <i>Iophon nigrans?</i> (R). <i>Munida rugosa</i> (O), Paguridae spp. (O), Teleostei spp. (P), <i>Asterias rubens</i> (P)	SS.SMu.OMu	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV120	Generally dense cobbles, boulders and pebbles on silty gravelly sand with areas of flat outcropping bedrock	Stones encrusted with <i>Parasmittina trispinosa</i> (R), red bryozoans (R) and serpulid worms (F). Sessile species include <i>Porella compressa</i> (C), <i>Polymastia boletiformis</i> (O), <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O, locally F), <i>Iophon nigricans</i> (O, locally F), <i>Hymedesmia paupertas</i> (R), <i>Tetilla zetlandica?</i> (R) and <i>Securiflustra securifrons</i> (R, locally F). The motile fauna includes <i>Munida rugosa</i> (C), <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Asterias rubens</i> (P), white holthurian? (P) and Asteroidea spp. (O)	CR.HCR.DpSp.PhaAxi	DS
MV121	A scatter of gravel, pebbles, cobbles and boulders on silty fine sand but with areas of dense cobbles and boulders and areas of faintly rippled silty fine sand	Stones support a fairly sparse fauna of <i>Parasmittina trispinosa</i> (R), <i>Porella compressa</i> (P), <i>Polymastia boletiformis</i> (O), <i>Axinella infundibuliformis</i> and probably <i>Phakellia ventilabrum</i> (O), <i>Iophon nigricans?</i> (P), <i>Hymedesmia paupertas</i> (R), <i>Urticina</i> sp.? (P), hydroids (R), <i>Salmacina dysteri</i> (R) and <i>Ascidia mentula</i> (P). The motile fauna includes <i>Munida rugosa</i> (C), <i>Echinus esculentus</i> (P), <i>Porania pulvillus</i> (O), <i>Stichastrella rosea?</i> (P), <i>Calliostoma zizyphinum</i> (P), <i>Pecten maximus</i> (P), Caridea sp. (P) and Teleostei spp. (P)	SS.SSa.OSa CR.HCR.DpSp.PhaAxi	
MV122	Megaripples of medium sand with often dense cobbles, pebbles and gravel in the troughs and scattered boulders	Stones are encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R), <i>Balanus</i> spp. (R) and serpulid worms (F) including <i>Spirobranchus</i> spp. (locally A) and support patches of <i>Flustra foliacea</i> (O, locally F) and <i>Securiflustra securifrons</i> (R, locally O), as well as <i>Polymastia boletiformis</i> (O) and <i>Ascidia mentula</i> (R). The motile fauna includes <i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (P), <i>Porania pulvillus</i> (O) and <i>Calliostoma zizyphinum</i> (P). No signs of infaunal life are visible in the mobile sediment	SS.SCS.CCS	
MV123	Dense cobbles and boulders on gravelly sand and later on medium sand, with flat bedrock outcrops, in places sand-dusted	Rock encrusted with <i>Parasmittina trispinosa</i> (O on stones), red bryozoans (R), pink coralline algae (A) and serpulid worms (F), including <i>Spirobranchus</i> spp. (P). Sparse additional fauna, which includes <i>Alcyonidium diaphanum</i> (R), <i>Caryophyllia smithii</i> (O), <i>Chaetopterus variopedatus</i> (locally C between stones), patchy bryozoan/hydroid turf (O) including <i>Securiflustra securifrons</i> (R), <i>Ascidia mentula</i> (P). There are patches of <i>Flustra foliacea</i> (locally F) on the more sand-scoured bedrock areas. The motile fauna includes <i>Echinus esculentus</i> (C), <i>Munida rugosa</i> (locally C), <i>Porania pulvillus</i> (O), <i>Stichastrella rosea?</i> (O) and <i>Marthasterias glacialis?</i> (P)	CR.MCR.EcCr.FaAICr	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV123	Medium sand waves with occasional emergent bedrock islands and boulders	No life evident on the mobile sediment	SS.SCS.CCS	
MV123	Dense cobbles and boulders on gravelly sand and then uneven bedrock, in places sand-dusted	Rock encrusted with <i>Parasmittina trispinosa</i> (O on stones), red bryozoans (R), pink coralline algae (O, but A on bedrock) and serpulid worms (F), including <i>Spirobranchus</i> spp. (locally A). Other sessile fauna includes <i>Caryophyllia smithii</i> (O, locally C), a patchy bryozoan/hydroid turf (O) including <i>Securiflustra securifrons</i> (R), <i>Alcyonium digitatum</i> (R), a small patch of <i>Axinella infundibuliformis</i> (locally F) and possibly a small patch of <i>Corynactis viridis</i> . The motile fauna includes <i>Echinus esculentus</i> (C), <i>Munida rugosa</i> (P), <i>Porania pulvillus</i> (P), <i>Stichastrella rosea</i> (P), Asteroidea spp. (O), <i>Labrus mixtus</i> (P), <i>Calliostoma zizyphinum</i> (P) and possibly juvenile <i>Solaster endeca</i> (R)	CR.MCR.EcCr.FaAICr	
MV124	Waves of silty coarse sand and gravel with dense pebbles in the troughs	Serpulid worms are common on the pebbles but may be dead	SS.SCS.CCS	
MV124	Cobbles, boulders and uneven bedrock	Rock encrusted with <i>Parasmittina trispinosa</i> (O) and serpulid worms (F), including <i>Spirobranchus</i> spp. (locally C). The sponge fauna includes <i>Axinella infundibuliformis</i> (P) with <i>A. infundibuliformis/Phakellia ventilabrum</i> (O, locally C), <i>lophon nigrans</i> (O) and <i>Tetilla zetlandica</i> (P). Other sessile forms include <i>Porella compressa</i> (P), sparse hydroids (R) and <i>Ascidia virginea?</i> (P). The motile fauna includes <i>Echinus esculentus</i> (C) and <i>Porania pulvillus</i> (O)	CR.HCR.DpSp.PhaAxi	DS
MV124	Waves of medium sand with coarse sand and comminuted shell in the troughs	Little evidence of life. <i>Astropecten irregularis?</i> (P)	SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV125	Burrowed sandy mud	Moderate density of <i>Nephrops norvegicus</i> and smaller burrows; 12 <i>N. norvegicus</i> seen. Teleostei spp. (P), <i>Munida rugosa</i> (P), Buccinidae sp. (P), Paguridae spp. (O) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i>	SS.SMu.CFiMu.SpnMeg	BM
MV127	Predominantly a sediment of silty fine sand with a scatter of gravel and pebbles but areas where there is denser cover of gravel, pebbles, cobbles and boulders	Stones support a sparse fauna of <i>Parasmittina trispinosa</i> (R), occasional hydroids, <i>Porella compressa</i> (probably dead), <i>Polymastia boletiformis</i> (O), possible sparse <i>Axinella infundibuliformis</i> / <i>Phakellia ventilabrum</i> (R), <i>Urticina</i> sp.? (R) and <i>Swiftia pallida</i> (R). The motile fauna includes <i>Munida rugosa</i> (C), <i>Echinus esculentus</i> (P), <i>Porania pulvillus</i> (P) and Teleostei spp. (P)	SS.SSa.OSa	SP
MV128	Silty gravelly sand with a scatter of pebbles, cobbles and boulders	Stones support a sparse fauna of <i>Parasmittina trispinosa</i> (R), red bryozoan crusts (R), hydroids (R), <i>Porella compressa</i> (locally F), <i>Polymastia boletiformis</i> (O), <i>Axinella infundibuliformis</i> and probably <i>Phakellia ventilabrum</i> (O), <i>Suberites</i> sp.? (P), <i>Hymedesmia paupertas</i> (R) and <i>Ascidia mentula</i> (P). The motile fauna includes <i>Munida rugosa</i> (C), <i>Echinus esculentus</i> (F locally), <i>Porania pulvillus</i> (O), Asteroidea sp. (P) and Teleostei spp. (P)	SS.SMx.CMx	
MV129	Mud	Megafaunal mounds and burrows including <i>Nephrops norvegicus</i> and thalassinidean shrimps; 7 <i>N. norvegicus</i> observed. <i>Funiculina quadrangularis</i> (F), <i>Pagurus bernhardus</i> (R), <i>Cancer pagurus</i> (P), Gadidae sp. (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
MV130	Silty gravelly sand with scattered pebbles, cobbles and boulders, dense in places	Stones bare-looking apart from sparse crusts of red bryozoans, hydroid tufts, serpulid worms and frequent <i>Porella compressa</i> . Other sessile species include <i>Pachycerianthus multiplicatus</i> (O), <i>Phakellia ventilabrum</i> (O) and possibly <i>Axinella infundibuliformis</i> (P). Motile forms include <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (O), <i>Buccinum undatum</i> (P), <i>Echinus esculentus</i> (O), Paguridae sp. (R), Teleostei spp. (P), Pleuronectiformes sp. (P) and <i>Callionymus lyra</i> (P)	SS.SMx.CMx	PM

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV131	Dense cobbles on silty gravelly sand and silted bedrock outcrops	Rock encrusted with <i>Parasmittina trispinosa</i> (R but O on cobbles) and serpulid worms (F) and supporting <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O, locally F on bedrock), <i>lophon nigricans</i> (R, O on bedrock), yellow encrusting sponge (R), <i>Hymedesmia paupertas</i> (R), <i>Porella compressa</i> (C), <i>Securiflustra securifrons</i> (R), hydroids (R) and <i>Caryophyllia smithii</i> (F on bedrock). Motile forms include <i>Echinus esculentus</i> (C) and Teleostei spp. (P)	CR.HCR.DpSp.PhaAxi	DS
MV131	Waves of medium-coarse sand with shell material in troughs	No life visible apart from small Asteroidea sp. (R)	SS.SCS.CCS	
MV131	Dense cobbles and boulders on silty gravelly sand and silted bedrock outcrops with superimposition of sand waves at one point	Rock encrusted with <i>Parasmittina trispinosa</i> (O), red bryozoans (R) and serpulid worms (F), including <i>Spirobranchus</i> spp. (P), and supporting <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O, locally F on bedrock) with <i>A. infundibuliformis</i> (P), <i>Axinella dissimilis?</i> (R), <i>lophon nigricans</i> (O), <i>Polymastia boletiformis</i> (P), <i>Hymedesmia paupertas</i> (R), <i>Porella compressa</i> (C), <i>Securiflustra securifrons</i> (R, but F in patches) and hydroids (R). Motile forms include <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (P), <i>Luidia ciliaris</i> (P), Asteroidea spp. (O) and Teleostei spp. (P)	CR.HCR.DpSp.PhaAxi	DS
MV132	Muddy sand	Little life visible. Small infaunal tubes and sparse burrows locally, including those of <i>Nephrops norvegicus</i> (1 seen at entrance). <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (R), <i>Porania pulvillus</i> (R), Teleostei spp. (P)	SS.SMu.OMu	
MV133	Silted cobbles and boulders on silty gravelly sand with silted bedrock outcrops	Sparse fauna. Rock encrusted with sparse <i>Parasmittina trispinosa</i> (R), red bryozoans (R) and serpulid worms (P) including <i>Spirobranchus</i> spp., and supporting <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O, locally F on bedrock), <i>Polymastia boletiformis</i> (R), <i>Hymedesmia paupertas</i> (R), <i>Porella compressa</i> (C), <i>Securiflustra securifrons</i> (R), hydroids (R) and <i>Swiftia pallida</i> (O). Motile forms include <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O) and Asteroidea spp. (O)	CR.HCR.DpSp.PhaAxi	DS SP
MV133	Scattered gravel and pebbles on silty sand	<i>Porella compressa</i> (R)	SS.SSa.OSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV134	Apparently steep boulder slopes and bedrock stacks with fields of cobbles and small boulders in the lows	Rock encrusted with <i>Parasmittina trispinosa</i> (R), red bryozoans (R) and serpulid worms (F) but dominated by sponges with <i>Axinella infundibuliformis</i> (F, locally C), possibly <i>Phakellia ventilabrum</i> (P), <i>Polymastia boletiformis</i> (O, locally F), <i>Axinella dissimilis?</i> (R), <i>Hymedesmia paupertas</i> (R), a nodular cream sponge (P), <i>Cliona celata/Myxilla incrustans?</i> (R) and a yellow encrusting sponge (O, locally A on flat bedrock). Other sessile forms include <i>Porella compressa</i> (locally C), a sparse hydroid turf (R), Ascidiidae sp. (P) and <i>Alcyonidium diaphanum</i> (R); <i>Swiftia pallida</i> is generally rare but frequent in patches. The motile fauna includes <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (P), <i>Asteroidea</i> sp. (P), <i>Calliostoma zizyphinum</i> (P), <i>Henricia</i> sp. (P) and a white holthurian or anemone (P)	CR.HCR.DpSp.PhaAxi	DS SP
MV134	Silty fine sand with scattered gravel and pebbles	<i>Echinus esculentus</i> (P), <i>Polymastia boletiformis?</i> (P)	SS.SSa.OSa	
MV135	Soft burrowed mud	Moderate density of megafaunal burrows, including <i>Nephrops norvegicus</i> and thalassinidean shrimps; 1 <i>N. norvegicus</i> observed. <i>Funiculina quadrangularis</i> (C)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
MV136	Initially sandy mud with sparsely scattered pebbles, cobbles and shell becoming softer burrowed mud	Moderate density of thalassinidean shrimp and <i>Nephrops norvegicus</i> burrows. Small <i>Funiculina quadrangularis</i> (F). Stony area with hydroids (R), <i>Munida rugosa</i> (O) and Paguridae spp. (O) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i>	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
MV137	Soft burrowed mud	Fairly high density of thalassinidean shrimp and <i>Nephrops norvegicus</i> burrows; 7 <i>N. norvegicus</i> seen. <i>Funiculina quadrangularis</i> (F), Teleostei spp. (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV140	Cobbles and boulders on muddy sediment and outcrops of uneven silted bedrock	Moderate density of axinellid sponges with <i>Axinella infundibuliformis</i> (F, locally C), <i>Phakellia ventilabrum</i> possibly also present, <i>A. dissimilis?</i> (R), <i>Hymedesmia paupertas</i> (R), yellow encrusting sponge (R, locally C). Other sessile forms include <i>Swiftia pallida</i> (R), <i>Caryophyllia smithii</i> (F), <i>Neocrania anomala</i> (locally C), hydroids (O) including <i>Tubularia indivisa</i> (R) and <i>Abietinaria abietina</i> (R), <i>Porella compressa</i> (F), <i>Urticina</i> sp. (R) and <i>Reteporella beaniana</i> (R). Motile components are <i>Munida rugosa</i> (P), <i>Echinus esculentus</i> (O), <i>Porania pulvillus</i> (R), <i>Luidia ciliaris</i> (P), <i>Asterias rubens</i> (P), <i>Antedon</i> sp. (R), <i>Leptometra celtica</i> (R), Teleostei spp. (P) and Caridea sp. (P)	CR.HCR.DpSp.PhaAxi	DS SP LC
MV140	Sandy mud	Fairly sparse megafaunal burrows including those of <i>Nephrops norvegicus</i> ; 1 specimen seen. Paguridae sp. (R), Teleostei spp. (P)	SS.SMu.OMu	
MV155	Waves of medium-coarse sand with shell material in troughs	No life visible	SS.SCS.CCS	
MV304	Scattered cobbles, pebbles, gravel and occasional small boulders on muddy sand	Field of <i>Leptometra celtica</i> (A), with <i>Porania pulvillus</i> (P), <i>Munida rugosa</i> (F) and sparse serpulid worms on stones	SS.SMx.CMx	LA
MV304	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Sparse fauna of serpulid worms on stones (P), <i>Munida rugosa</i> (C), <i>Porania pulvillus</i> (O), <i>Leptometra celtica</i> (R), Teleostei sp. (P)	SS.SMx.CMx	LC
MV305	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Stones encrusted with serpulid worms (C) and pink coralline algae (R) and supporting <i>Porella compressa</i> (O) and possible Porifera sp. (R). <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (O), Asteroidea sp. (P), <i>Astropecten irregularis</i> (P), hydroids (O), Teleostei spp. (P), <i>Echinus esculentus</i> (P)	SS.SMx.CMx	
MV305	Scattered cobbles, pebbles, gravel and boulders, dense in places, on muddy sand	Field of <i>Leptometra celtica</i> (A), with <i>Munida rugosa</i> (F), <i>Porella compressa</i> (P), <i>Echinus esculentus</i> (P), <i>Luidia ciliaris</i> (P), <i>Bolocera tuediae</i> and encrustations of serpulid worms (C) and pink coralline algae (R) on stones	SS.SMx.CMx	LA

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV305	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Stones encrusted with serpulid worms (F) and supporting <i>Bolocera tuediae</i> (P), <i>Munida rugosa</i> (F), Teleostei spp. (P), <i>Echinus esculentus</i> (P), <i>Luidia ciliaris</i> (F), <i>Liocarcinus depurator</i> (P)	SS.SMx.CMx	
MV306	Scattered cobbles, pebbles and gravel on muddy sand	Serpulid worms (F) on stones, <i>Munida rugosa</i> (F), hydroids (R)	SS.SMx.CMx	
MV306	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Field of <i>Leptometra celtica</i> (A), with <i>Porania pulvillus</i> (P), <i>Munida rugosa</i> (P), <i>Marthasterias glacialis</i> (P), <i>Syngnathus acus</i> (P) and serpulid worms on stones (F)	SS.SMx.CMx	LA
MV306	Scattered cobbles, pebbles, gravel and, at end of run, boulders on muddy sand	Stones encrusted with serpulid worms (C), <i>Parasmittina trispinosa</i> (R) and pink coralline algae (R) and supporting <i>Porella compressa</i> (P). <i>Munida rugosa</i> (P), hydroids (R)	SS.SMx.CMx	
MV307	Scattered pebbles and gravel on muddy sand	Field of <i>Leptometra celtica</i> (A), with <i>Munida rugosa</i> (F), <i>Liocarcinus depurator</i> (O) and serpulid worms on stones (C)	SS.SMx.CMx	LA
MV307	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Stones encrusted with serpulid worms (C), <i>Parasmittina trispinosa</i> (R) and pink coralline algae (R) and supporting <i>Porella compressa</i> (O). <i>Munida rugosa</i> (C), hydroids (R), <i>Leptometra celtica</i> (R at start of run), Terebellidae sp. (P) in sediment	SS.SMx.CMx	LC
MV308	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Stones encrusted with serpulid worms (C), <i>Parasmittina trispinosa</i> (R) and pink coralline algae (R) and supporting <i>Porella compressa</i> (P). <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (F), hydroids (R), Teleostei sp. (P), drift algae	SS.SMx.CMx	
MV309	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Serpulid worms (F on stones), <i>Munida rugosa</i> (F)	SS.SMx.CMx	
MV309	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Field of <i>Leptometra celtica</i> (A), with <i>Munida rugosa</i> (C) and serpulid worms (C), hydroids (R) and <i>Parasmittina trispinosa</i> (R) on stones	SS.SMx.CMx	LA
MV309	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Stones encrusted with serpulid worms (F), bryozoans (R) and pink coralline algae (R) and supporting <i>Porella compressa</i> (locally C) and <i>Swiftia pallida</i> (R). <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (F), hydroids (R), <i>Leptometra celtica</i> (R), <i>Marthasterias glacialis</i> (P), <i>Chaetopterus variopedatus?</i> (P)	SS.SMx.CMx	SP LC

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
MV309	Scattered cobbles, pebbles and gravel on muddy sand	Field of <i>Leptometra celtica</i> (A), with <i>Munida rugosa</i> (F), <i>Liocarcinus</i> sp. (P) and serpulid worms (F) on stones	SS.SMx.CMx	LA
MV310	Muddy sand with scattered pebbles, cobbles and shell coarsening during run	<i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (F), <i>Luidia ciliaris</i> (P). Stones encrusted with serpulid worms (F). Much drift kelp	SS.SMx.CMx	
MV311	Scattered cobbles, pebbles, gravel and occasional boulders on muddy sand	Stones encrusted with serpulid worms (C) and supporting <i>sparse hydroids</i> (R). <i>Echinus esculentus</i> (P), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (P), Teleostei spp. (P), <i>Luidia ciliaris</i> (P)	SS.SMx.CMx	
MV311	Scattered cobbles, pebbles, gravel and boulders on muddy sand	Field of <i>Leptometra celtica</i> (A), with <i>Munida rugosa</i> (F), <i>Liocarcinus</i> depurator (P), <i>Porania pulvillus</i> (O), <i>Echinus esculentus</i> (O) and serpulid worms (C) and pink coralline algae (R) on stones	SS.SMx.CMx	LA
MV311	Scattered cobbles, pebbles and gravel on muddy sand	<i>Munida rugosa</i> (P), <i>Callionymus lyra</i> (P), Teleostei spp. (P) and serpulid worms (F) on stones	SS.SMx.CMx	
MV312	Sandy mud	Sediment with fairly sparse small holes and infaunal tubes. <i>Munida rugosa</i> (P), <i>Luidia cilairis</i> (P), Teleostei spp. (P)	SS.SMu.CSaMu	
C1	Poor visibility but apparently sandy mud with scattered stones (mostly small but some cobbles and boulders)	The sediment supports frequent <i>Sagartiogeton laceratus</i> , <i>Turritella communis</i> shells (C) and the emergent tubes of polychaetes (A) and <i>Amphiura</i> spp. arms (A); <i>Sabella pavonina?</i> (P). Around 5 <i>Atrina fragilis</i> observed (F), supporting epifauna apparently including hydroid clumps (<i>Nemertesia ramosa?</i>) and possibly sponges. There are also clumps of <i>Salmacina dysteri</i> (R, locally F) and <i>Alcyonium digitatum</i> (R) with the host substrate not generally clear. <i>Munida rugosa</i> (P), <i>Inachus</i> sp. (P), <i>Urticina</i> spp. (P), <i>Hyas</i> sp. (P), <i>Leptometra celtica?</i> (R), <i>Virgularia mirabilis</i> (R), <i>Ophiothrix fragilis</i> (R), <i>Ascidia virginea</i> (R), Ascidiacea spp. indet. (R), <i>Brachyura</i> sp. (R)	SS.SMu.CSaMu	AF

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C1	Burrowed soft mud	Mud densely perforated with small holes and megafaunal burrows, including <i>Nephtrops norvegicus</i> (6 <i>Nephtrops</i> seen). The sediment supports frequent <i>Sagartiogeton laceratus</i> and the emergent tubes of polychaetes (A) and <i>Amphiura</i> spp. arms (A); <i>Sabella pavonina?</i> (P). Around 4 <i>Atrina fragilis</i> observed (O). <i>Alcyonium digitatum?</i> (R), <i>Salmacina dysteri</i> (R), <i>Pennatula phosphorea</i> (R), <i>Virgularia mirabilis?</i> (R), Caridea sp. (P), <i>Munida rugosa</i> (P), <i>Buccinum undatum</i> (R), <i>Asterias rubens?</i> (P)	SS.SMu.CFiMu.SpnMeg	AF BM
C2	Burrowed soft mud. Apparent trawl scarring early in run	Mud densely burrowed, including by <i>Nephtrops norvegicus</i> (1 <i>Nephtrops</i> seen). <i>Funiculina quadrangularis</i> (probably F-C), <i>Pennatula phosphorea</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C3	Burrowed soft mud with small patch of bedrock and sparse boulders	Mud densely burrowed by megafauna including <i>Nephtrops norvegicus</i> (10 seen). <i>Funiculina quadrangularis</i> (C), <i>Pennatula phosphorea</i> (O), <i>Sagartiogeton laceratus</i> (F locally at least), <i>Munida rugosa</i> (R), Crinoida sp. (P on <i>Funiculina</i>), <i>Turritella communis</i> (P), Pleuronectiformes sp. (P), teleosts (P), <i>Cerianthus lloydii?</i> (P), <i>Amphiura</i> spp.? (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C4	Muddy sand with sparsely scattered shells	The sediment supports frequent <i>Sagartiogeton laceratus</i> and <i>Turritella communis</i> shells and the emergent tubes of polychaetes (A) and <i>Amphiura</i> spp. arms (C). Around 2 <i>Atrina fragilis</i> observed (F). Scattered boulders and presumably cobbles (unclear) support <i>Alcyonium digitatum</i> (R), <i>Salmacina dysteri</i> , <i>Urticina</i> sp. and a patchy hydroid turf. <i>Alcyonidium diaphanum</i> (R), <i>Hyas araneus</i> (P), <i>Ophiocomina nigra</i> (R), Caridea sp. (P), <i>Buccinum undatum</i> (P), <i>Pagurus prideaux</i> (P) bearing <i>Adamsia carciniopados</i>	SS.SSa.CMuSa	AF
C4	Burrowed muddy sand or sandy mud	Densely burrowed sediment by megafauna including <i>Nephtrops norvegicus</i> (1 seen). Around 4 <i>Atrina fragilis</i> seen (F). <i>Amphiura</i> arms (C), <i>Sabella pavonina?</i> (P), small polychaete tubes (P), <i>Sagartiogeton laceratus</i> (O), <i>Urticina</i> spp. (P), <i>Alcyonium digitatum</i> (R), <i>Salmacina dysteri</i> (R), Caridea sp. (P), <i>Turritella communis</i> (P), Pleuronectiformes sp. (P), hydroid clumps	SS.SMu.CFiMu.SpnMeg	AF BM

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C4	Burrowed muddy sand or sandy mud	Densely burrowed sediment by megafauna including <i>Nephrops norvegicus</i> (1 seen). Around 15 <i>Atrina fragilis</i> seen (C) supporting <i>Alcyonium digitatum</i> (R). Abundant small polychaete tubes and <i>Amphiura</i> arms (C) emerging from the sediment. <i>Sagartiogeton laceratus</i> (O), Asteroidea sp. indet. (P), <i>Sabella pavonina?</i> (F), small teleost (P)	SS.SBR.SMus.Afrag (SS.SMu.CFiMu.SpNMeg)	AF BM
C5	Muddy sand with scattered pebbles, cobbles and shells	Abundant <i>Amphiura</i> spp. arms and small polychaete tubes and frequent <i>Sagartiogeton laceratus</i> emerging from the sediment. One <i>Atrina fragilis</i> seen. <i>Munida rugosa</i> (P), <i>Cerianthus lloydii?</i> (P), <i>Turritella communis</i> shells (P), hydroid tufts including <i>Nemertesia antennina</i> (P), <i>Luidia ciliaris</i> (P), pagurid (P)	SS.SMx.CMx	AF
C5	Burrowed sandy mud	Densely burrowed sediment including by <i>Nephrops norvegicus</i> (2 <i>Nephrops</i> seen). Around 14 <i>Atrina fragilis</i> seen (F, locally C towards end of run). <i>Alcyonium digitatum</i> (P, some on <i>Atrina</i>), Caridea sp. (P), <i>Turritella</i> shells (P), <i>Nemertesia antennina</i> (R)	SS.SBR.SMus.Afrag (SS.SMu.CFiMu.SpNMeg)	AF BM
C6	Muddy gravelly sand with pebbles	Apparently small stones support frequent <i>Caryophyllia smithii</i> (locally C), with <i>Munida rugosa</i> (P), <i>Henricia</i> sp. (O) and Gobiidae spp. (P), whilst infauna represented by scattered sediment spoil heaps.	SS.SMx.CMx	
C6	Scattered pebbles, cobbles and boulders (dense in places) on muddy gravelly sand	Stones support a dense hydroid and bryozoan turf (A) including <i>Nemertesia ramosa</i> and <i>Lytocarpia myriophyllum</i> , <i>Securiflustra securifrons</i> and <i>Alcyonidium diaphanum</i> , together with <i>Swiftia pallida</i> (C in dense stone patches), <i>Caryophyllia smithii</i> (C). Other sessile forms include <i>Alcyonium digitatum</i> (R), Porifera spp. including <i>Suberites</i> sp., <i>Porella compressa</i> (O), <i>Ascidia mentula</i> (P), <i>Parasmittina trispinosa</i> (O) and <i>Parazoanthus anguicomus</i> (R). The motile fauna includes <i>Echinus esculentus</i> (O), <i>Porania pulvillus</i> (O), <i>Pecten maximus</i> (P) and <i>Henricia</i> sp. (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP PA

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C7	Dense pebbles with scattered cobbles on gravelly muddy sand, becoming scattered cobbles and pebbles on muddy sand, formed into small waves at one point	Stones encrusted with <i>Balanus</i> spp. (O), serpulid worms and initially pink coralline algae (R) and supporting sparse hydroid tufts including <i>Nemertesia ramosa</i> (R), as well as <i>Alcyonidium diaphanum</i> (R), <i>Corella parallelogramma</i> (R) and <i>Caryophyllia smithii</i> , which becomes common towards the end of the run. <i>Cancer pagurus</i> (P), <i>Munida rugosa</i> (P), <i>Liocarcinus</i> sp. (P), Gobiidae spp. (P), <i>Galathea</i> sp. (P), <i>Cerianthus lloydii</i> (P), <i>Necora puber</i> (P)	SS.SMx.CMx	
C7	Bedrock outcrop and boulders on muddy gravelly sand with scattered pebbles and cobbles	Rock supports dense <i>Caryophyllia smithii</i> (C) and <i>Swiftia pallida</i> (C) and a fairly sparse patchy turf of hydroids (F) including <i>Nemertesia antennina</i> , as well as <i>Securiflustra securifrons</i> (R), <i>Porella compressa</i> (P), <i>Diazona violacea</i> (P), and <i>Parasmittina trispinosa</i> patches (R). <i>Pecten maximus</i> (P), <i>Echinus esculentus</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
C8	Pebbles, cobbles and boulders on gravelly sand	Stones encrusted with pink coralline algae (R), serpulid worms (P) and <i>Balanus</i> spp. (R) and supporting foliose red algae (C, locally A), hydroid clumps (F) including <i>Nemertesia ramosa</i> and <i>N. antennina</i> , and <i>Alcyonidium diaphanum</i> (P) and <i>Urticina</i> sp. (R). <i>Munida rugosa</i> (P)	IR.HIR.KFaR.FoR	
C8	Pebbles and cobbles on gravelly muddy sand	Stones encrusted with pink coralline algae (R) in shallower water, <i>Parasmittina trispinosa</i> (R), serpulid worms (P) and <i>Balanus</i> spp. (R) and supporting <i>Caryophyllia smithii</i> (locally F) and sparse hydroids (R). <i>Munida rugosa</i> (F), <i>Cerianthus lloydii</i> (R), <i>Liocarcinus</i> sp. (R), Paguridae sp. (R), <i>Turritella communis</i> shells (possibly empty)	SS.SMx.CMx	
C8	Burrowed muddy sand	Moderate numbers of mostly small (<5 cm diameter) burrows, some apparently utilised by <i>Munida rugosa</i> (F). <i>Turritella communis</i> (F), <i>Cerianthus lloydii</i> (P), <i>Caryophyllia smithii</i> (O)	SS.SMu.CFiMu.SpnMeg	BM
C9	Rippled fine-medium sand with accumulation of flocculent silty sediment in troughs	Little life visible apart from <i>Scyliorhinus canicula</i> (P) and <i>Aphrodita aculeata</i> ? (P); drift algae	SS.SSa.CFiSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C10	Dense pebbles and gravel with sparse dead maerl on coarse sand with latterly the coarser material concentrated in the troughs of sand waves	Pebbles encrusted with pink coralline algae (R) and serpulid worms (C)	SS.SCS.CCS	
C11	Low profile sand-scoured bedrock and boulders on sand, with coarse sand patches	Rock encrusted with pink coralline algae (C), <i>Parasmittina trispinosa</i> (O) and <i>Spirobranchus</i> spp. (C) and supporting <i>Alcyonium digitatum</i> (P), <i>Alcyonidium diaphanum</i> (R), <i>Urticina</i> sp. (O) and hydroid tufts (R), including <i>Abietinaria abietina?</i> <i>Echinus esculentus</i> (C), <i>Porania pulvillus</i> (P), <i>Luidia ciliaris</i> (P), <i>Munida rugosa</i> (P)	CR.MCR.EcCr.FaAlCr SS.SCS.CCS	
C12	Slightly rippled muddy sand	Little evidence of infauna apart from <i>Cerianthus lloydii</i> tubes (P) and small burrows. <i>Munida rugosa</i> (P), <i>Pecten maximus</i> (P), <i>Inachus</i> sp. (P)	SS.SSa.CMuSa	
C13	Sand scoured bedrock	Forest of small <i>Laminaria hyperborea</i> (A) with an understorey of foliose red algae (F) including <i>Delesseria sanguinea</i> , <i>Dilsea carnosa?</i> and <i>Odonthalia dentata</i> , as well as <i>Dictyota dichotoma</i> (O). The rock surface is mostly sand-dusted but supports a pink coralline crust (P)	IR.MIR.KR.Lhyp.Ft	
C13	Waves of coarse sand with gravel and pebbles in troughs	<i>Spirobranchus</i> spp. and pink coralline algae on larger stones	SS.SCS.CCS	
C13	Sand-scoured boulders on coarse sand and possibly outcropping bedrock	A park of small <i>Laminaria hyperborea</i> (C) with occasional <i>Saccharina latissima</i> and an algal understorey comprising <i>Delesseria sanguinea</i> (C), <i>Dictyota dichotoma</i> (F), <i>Dilsea carnosa?</i> (P) and <i>Odonthalia dentata</i> (P). The rock is also encrusted with pink coralline algae (C) and <i>Balanus</i> spp. (P)	IR.MIR.KR.Lhyp.Pk	
C13	Waves of coarse sand with surface cover of pebbles, gravel and occasional cobbles, largely concentrated in troughs	Sparse serpulids on larger stones (R)	SS.SCS.CCS	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C14	Largely bedrock and areas of boulders, with cobbles and pebbles on gravelly sand towards the end of the run	Biota dominated by <i>Alcyonium digitatum</i> (C), with the rock also supporting crusts of pink coralline algae (C), <i>Parasmittina trispinosa</i> (O) and <i>Spirobranchus</i> spp. (P). Hydroid patches include <i>Tubularia indivisa</i> (R). <i>Haliclona viscosa?</i> (R), foliose red algae (O) including <i>Delesseria sanguinea</i> (O) and <i>Callophyllis laciniata?</i> (P). <i>Echinus esculentus</i> (C), <i>Asterias rubens</i> (O)	CR.MCR.EcCr.FaAlCr.Adig	
C15	Coarse sand with dense surface cover of shells, gravel and pebbles	Shells support a patchy thin hydroid and possibly bryozoan turf (O) including <i>Kirchenpaueria pinnata</i> (R) and are encrusted by <i>Spirobranchus</i> spp. (F, locally C) and <i>Parasmittina trispinosa</i> (R). <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (R), <i>Luidia ciliaris</i> (P), <i>Chaetopterus variopedatus?</i> (P)	SS.SCS.CCS	
C16	Dense boulders and cobbles on coarse sand with coarse sand patches	Rock densely encrusted with <i>Spirobranchus</i> spp. (A), as well as with <i>Parasmittina trispinosa</i> (F) and pink coralline algae (F) and supporting sparse foliose red algae (R) and a hydroid fauna including <i>Kirchenpaueria pinnata</i> (R). <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (O), <i>Ascidia mentula</i> (R)	CR.MCR.EcCr.FaAlCr.Pom SS.SCS.CCS	
C17	Mostly dense boulders and cobbles on gravelly coarse sand	Rock encrusted with <i>Spirobranchus</i> spp. (C), pink coralline algae (O) and <i>Parasmittina trispinosa</i> (F) and supporting a thin hydroid turf (F) including <i>Kirchenpaueria pinnata</i> (F), <i>Nemertesia antennina</i> (P) and <i>N. ramosa</i> (P). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (F), <i>Calliostoma zizyphinum</i> (P), <i>Stichastrella rosea</i> (O), <i>Porania pulvillus</i> (O) and <i>Luidia ciliaris</i> (P). <i>Porella compressa</i> (R), <i>Chaetopterus variopedatus</i> (P)	CR.MCR.EcCr.FaAlCr.Pom	
C18	Waves of coarse sand with scattered cobbles and pebbles, largely concentrated in troughs	Stones encrusted with <i>Spirobranchus</i> spp. (C), pink coralline algae (C), <i>Parasmittina trispinosa</i> (F) and <i>Balanus</i> spp. (R) and supporting a thin hydroid turf (O) including <i>Kirchenpaueria pinnata</i> (O), <i>Nemertesia antennina</i> (R) and <i>N. ramosa</i> (R). <i>Munida rugosa</i> (O)	CR.MCR.EcCr.FaAlCr.Pom SS.SCS.CCS	
C19	Dense boulders and cobbles on coarse sand with expanses of bedrock	Rock encrusted with <i>Spirobranchus</i> spp. (A), pink coralline algae (C) and <i>Parasmittina trispinosa</i> (F) and supporting sparse red algae (R, although initially F), a thin hydroid turf (F) including <i>Kirchenpaueria pinnata</i> (O) and <i>Nemertesia ramosa</i> (R), <i>Ascidia mentula</i> (R), <i>Botryllus schlosseri</i> (R) and <i>Urticina</i> spp. (P). The motile fauna includes <i>Echinus esculentus</i> (F) and <i>Munida rugosa</i> (P)	CR.MCR.EcCr.FaAlCr.Pom	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C20	Low profile bedrock and dense boulders and cobbles with coarse gravelly sand infill	Rock encrusted with <i>Spirobranchus</i> spp. (A), pink coralline algae (C), <i>Balanus</i> spp. (P) and <i>Parasmittina trispinosa</i> (F) and supporting a dense sward of foliose red algae (A) and sparse hydroids (O). <i>Echinus esculentus</i> (F), <i>Galathea</i> sp. (P)	IR.HIR.KFaR.FoR	
C21	Waves of coarse sand (later gravel) with dense cover of gravel and pebbles, concentrated in troughs	Larger stones encrusted with <i>Spirobranchus</i> spp. (F but probably largely dead). <i>Asterias rubens</i> (P), <i>Munida rugosa</i> (P)	SS.SCS.CCS	
C22	Boulder field with infill of cobbles, pebbles and gravel	Rock encrusted with <i>Spirobranchus</i> spp. (C), pink coralline algae (F), and <i>Parasmittina trispinosa</i> (F) and supporting sparse hydroids (O) including <i>Kirchenpaueria pinnata</i> (O), <i>Ascidia mentula</i> (F), <i>Porella compressa</i> (R), <i>Chaetopterus variopedatus</i> (F) and patchy <i>Caryophyllia smithii</i> (R, but locally C). <i>Echinus esculentus</i> (O), <i>Munida rugosa</i> (F).	CR.MCR.EcCr.FaAlCr.Pom	
C23	Slightly silt-dusted bedrock boulders and cobbles	Rock encrusted with <i>Spirobranchus</i> spp. (C), pink coralline algae (R), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R), and supporting <i>Porella compressa</i> (F), hydroids (O) including <i>Nemertesia antennina</i> , <i>Ascidia mentula</i> (F), <i>Ascidia viginea?</i> (P), <i>Chaetopterus variopedatus</i> (F), <i>Salmacina dysteri?</i> (R), patchy <i>Caryophyllia smithii</i> (R, but locally F) and sparse sponges including <i>Axinella infundibuliformis</i> (R) and <i>Polymastia boletiformis</i> (R). <i>Echinus esculentus</i> (O), <i>Asterias rubens</i> (P), <i>Porania pulvillus</i> (R), <i>Stichastrella rosea</i> (O), <i>Munida rugosa</i> (F)	CR.MCR.EcCr.FaAlCr.Pom	
C24	Boulders and cobbles	Rock encrusted with <i>Spirobranchus</i> spp. (C) and <i>Parasmittina trispinosa</i> (O) and supporting a rich sponge fauna dominated by <i>Axinella infundibuliformis</i> / <i>Phakellia ventilabrum</i> (C), some with <i>Tetilla zetlandica</i> (R), and <i>Porella compressa</i> (C). Other sessile forms include occasional hydroids, <i>Chaetopterus variopedatus</i> (P) and possibly <i>Parazoanthus anguicomus</i> (R). <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (R), <i>Luidia ciliaris</i> (P) and <i>Stichastrella rosea</i> (P)	CR.HCR.DpSp.PhaAxi	DS

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C24	Bedrock, boulders and cobbles	Community similar to initial part of run (see above), with the addition of <i>Swiftia pallida</i> (C). Rock encrusted with <i>Spirobranchus</i> spp. (C) and <i>Parasmittina trispinosa</i> (O) and supporting <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (C), <i>Porella compressa</i> (C), hydroids (O), <i>Ascidia mentula</i> (F) and erect branching sponges (R). <i>Munida rugosa</i> (P), <i>Stichastrella rosea</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
C24	Largely cobbles and pebbles with some boulders	Similar to initial part of run (see above) with rock encrusted with <i>Spirobranchus</i> spp. (F) and <i>Parasmittina trispinosa</i> (R) and supporting a sponge fauna dominated by <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (F), and <i>Porella compressa</i> (C). Occasional hydroids, <i>Chaetopterus variopedatus</i> (P) and possibly <i>Parazoanthus anguicomus</i> (R). <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (P), <i>Stichastrella rosea</i> (P), Teleostei sp. (P)	CR.HCR.DpSp.PhaAxi	DS
C25	Burrowed soft mud	Very densely burrowed mud, with virtually all burrows of the thalassinid type. <i>Funiculina quadrangularis</i> (F), <i>Amphiura</i> spp. (A)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C26	Dense pebbles and cobbles with occasional boulders on gravelly coarse sand	Stones encrusted with serpulid worms including <i>Spirobranchus</i> spp. (C) and <i>Parasmittina trispinosa</i> (R) and supporting <i>Porella compressa</i> (F), hydroids (O, locally F) including <i>Nemertesia ramosa</i> , <i>Ascidia mentula</i> (P), <i>Ascidia viginea</i> (F), <i>Chaetopterus variopedatus</i> (F), <i>Botryllus schlosseri</i> (R) and sparse erect sponges (R). <i>Antedon</i> sp. (O), <i>Aequipecten opercularis</i> (R), small Pectnidae (possibly dead), <i>Echinus esculentus</i> (P), <i>Asterias rubens</i> (P), <i>Porania pulvillus</i> (O), <i>Stichastrella rosea</i> (O), <i>Munida rugosa</i> (F)	CR.MCR.EcCr.FaAlCr.Pom	
C26	Bedrock and boulders and cobbles on coarse sand	Similar to initial part of run but with the augmentation of erect sponges especially <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (F); <i>Polymastia boletiformis</i> (R). Rock encrusted with <i>Spirobranchus</i> spp. (F) and <i>Parasmittina trispinosa</i> (R) and supporting <i>Porella compressa</i> (F), hydroids (F) including <i>Tubularia indivisa</i> (R), <i>Ascidia viginea</i> (P), <i>Chaetopterus variopedatus</i> (P), <i>Botryllus schlosseri</i> (R) and <i>Caryophyllia smithii</i> (R). <i>Porania pulvillus</i> (R), <i>Stichastrella rosea</i> (F), <i>Munida rugosa</i> (F), Teleostei sp. (P)	CR.HCR.DpSp.PhaAxi	DS

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C27	Bedrock and areas of boulders and cobbles	The run straddles the infra/circalittoral boundary. Rock encrusted with <i>Spirobranchus</i> spp. (C), pink coralline algae (A) and <i>Parasmittina trispinosa</i> (R) and supporting foliose red algae, which is abundant in the shallower areas of stable substrate, together with <i>Dictyota dichotoma</i> (F locally). Other sessile forms include <i>Alcyonium digitatum</i> (C locally), hydroids (F) including <i>Nemertesia antennina</i> and <i>N. ramosa</i> , <i>Cliona celata</i> (R) and <i>Haliclona viscosa</i> (R). The motile fauna includes <i>Necora puber</i> (P), <i>Porania pulvillus</i> (R) and <i>Stichastrella rosea</i> (O)	IR.HIR.KFaR.FoR CR.MCR.EcCr.FaAlCr.Pom	
C28	Soft burrowed mud	Moderately densely burrowed by thalassinids?, <i>Nephrops norvegicus</i> and <i>Lesuerigobius friesii</i> ? <i>Pennatula phosphorea</i> (R), <i>Luidia cilairis</i> (P), Teleostei sp. (P)	SS.SMu.CFiMu.SpMmeg	BM
C29	Bedrock and boulders and cobbles on gravelly coarse sand	Community strongly dominated by <i>Alcyonium digitatum</i> (C) and foliose red algae (C), including <i>Cryptopleura ramosa</i> and <i>Callophyllis laciniata</i> , with patches of <i>Dictyota dichotoma</i> . There are encrustations of <i>Spirobranchus</i> spp. (A), <i>Balanus</i> spp. (locally A), pink coralline algae (O), <i>Parasmittina trispinosa</i> (P) and possibly a yellow sponge (P), with <i>Clione celata</i> also present (R). Hydroids (F) include <i>Tubularia indivisa</i> , <i>Nemertesia ramosa</i> and <i>N. antennina</i> . <i>Echinus esculentus</i> (C), <i>Asterias rubens</i> (C)	IR.HIR.KFaR.FoR	
C30	Bedrock and boulders, cobbles and pebbles on gravelly sand	Rock encrusted with <i>Spirobranchus</i> spp. (A, locally S), pink coralline algae (C), <i>Balanus</i> spp. (P) and <i>Parasmittina trispinosa</i> (O). A patchy algal turf is dominated by red algae (C) including <i>Cryptopleura ramosa</i> ? and <i>Callophyllis laciniata</i> , as well as filamentous forms and patches of <i>Dictyota dichotoma</i> . A fairly rich hydroid fauna (F, locally C) includes <i>Nemertesia antennina</i> (C over large areas), <i>N. ramosa</i> (P), <i>Kirchenpaueria pinnata</i> (P), <i>Abietinaria abietina</i> (P) and <i>Halecium halecinum</i> ? (P). <i>Alcyonidium diaphanum</i> (R), <i>Caryophyllia smithii</i> (R), <i>Chaetopterus variopedatus</i> (P), <i>Ascidia mentula</i> (P), bryozoan turf patches, <i>Cliona celata</i> (R). Motile forms include <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (O), <i>Porania pulvillus</i> (O), <i>Marthasterias glacialis</i> (O), <i>Crossaster papposus</i> (O) and <i>Brachyura</i> sp. (P),	IR.HIR.KFaR.FoR	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C31	Cobbles and boulders on gravelly sand	Rock encrusted with <i>Spirobranchus</i> spp. (A), pink coralline algae (C), red algae (R), <i>Parasmittina trispinosa</i> (F) and red bryozoans (R). A hydroid fauna (F) includes <i>Nemertesia antennina</i> (P), <i>N. ramosa</i> (P), <i>Kirchenpaueria pinnata?</i> (P) and <i>Halecium halecinum?</i> (P). <i>Chaetopterus variopedatus</i> (C), <i>Ascidia mentula</i> (P). Motile forms include <i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (O), <i>Porania pulvillus</i> (O)	CR.MCR.EcCr.FaAlCr.Pom	
C32	Slightly silty fine-medium sand	Few signs of infaunal life apart from occasional tubes. <i>Callionymus lyra</i> (O), Gobiidae sp. (P)	SS.SSa.CFiSa	
C33	Muddy sand with very sparse scatter of shells	<i>Nemertesia ramosa</i> (R), <i>Munida rugosa</i> (O), <i>Liocarcinus</i> sp. (P), <i>Cerianthus lloydii</i> tubes? (P), <i>Pholis gunnellus</i> (P)	SS.SSa.CMuSa	
C34	Waves of medium sand with dense pebbles in troughs	Little visible life apart from sparse serpulid worms on pebbles (probably dead) and Hydractiniidae sp., possibly on pagurid	SS.SSa	
C35	Burrowed soft mud	Mud with dense burrows of thalassinid shrimps and with <i>Nephrops norvegicus</i> burrows; <i>N. norvegicus</i> (P). Small <i>Funiculina quadrangularis/Virgularia mirabilis</i> (R), small faunal tubes (O)	SS.SMu.CFiMu.SpnMeg	BM
C36	Silted bedrock lip and steep slope down to boulders and cobbles on muddy sand	Rock supports a patchy hydroid turf (C) including <i>Tubularia indivisa</i> (locally C), <i>Swiftia pallida</i> (C locally) and several sponge species including <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (F) and branching erect forms (R). A dense field of <i>Leptometra celtica</i> is present on rock initially (where it is abundant). Other sessile species include <i>Porella compressa</i> (C), <i>Parazoanthus anguicomus</i> (overall R but C in patches), <i>Ascidia mentula</i> (O), serpulid worms (R) and <i>Parasmittina trispinosa</i> (R). The motile fauna includes <i>Munida rugosa</i> (R), <i>Porania pulvillus</i> (O), <i>Crossaster papposus</i> (P), <i>Asterias rubens</i> (P), <i>Stichastrella rosea</i> (P)	CR.HCR.DpSp.PhaAxi	DS SP LC
C36	Scattered boulders, cobbles and shells on muddy sand or sandy mud	A dense field of <i>Leptometra celtica</i> (A) on sediment and stones. Stones also support <i>Caryophyllia smithii</i> (locally C), hydroids (R) and <i>Porella compressa</i> (R), with infauna represented by <i>Cerianthus lloydii</i> (P) and small holes and tubes; <i>Pennatula phosphorea</i> (R). Motile forms include <i>Munida rugosa</i> (O), <i>Asterias rubens</i> (O), <i>Callionymus lyra</i> (P), other teleosts (P) and <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (R)	SS.SMu.CSaMu.Lcelt (SS.SMu.CSaMu)	LA

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C36	Soft burrowed mud	Thalassinid shrimp and <i>Nephrops</i> burrows. <i>Funiculina quadrangularis</i> (C), <i>Pennatula phosphorea</i> (F), <i>Amphiura</i> spp. (A), <i>Cerianthus lloydii</i> (P), <i>Munida rugosa</i> (P), <i>Leptometra celtica</i> present at start (R overall)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ LC
C37	Waves of muddy sand with scatter of boulders and cobbles in centre of run	Few signs of infaunal life apart from occasional small holes, tubes and sparse burrows including <i>Nephrops</i> ; <i>Cerianthus lloydii</i> (R). Stones support a patchy hydroid turf including <i>Nemertesia ramosa</i> (R) and <i>N. antennina</i> (R), <i>Porella compressa</i> (R), <i>Parasmittina trispinosa</i> (R) and sparse erect branching sponges (R). <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (O), <i>Stichastrella rosea</i> (R), <i>Pecten maximus</i> (R), <i>Liocarcinus</i> sp. (R), <i>Atelecyclus rotundatus?</i> (R), <i>Brachiura</i> sp. (R), <i>Callionymus lyra</i> (R)	SS.SSa.CMuSa	
C38	Muddy sand with sparse scatter of shells	Visibility very poor. <i>Nemertesia ramosa</i> (R), <i>N. antennina</i> (R), <i>Cerianthus lloydii</i> (P), <i>Munida rugosa</i> (P)	SS.SSa.CMuSa	
C39	Soft burrowed mud	<i>Nephrops</i> and dense thalassinid shrimp burrows; <i>N. norvegicus</i> (P). <i>Pennatula phosphorea</i> (O)	SS.SMu.CFiMu.SpnMeg	BM
C40	Soft burrowed mud	<i>Nephrops</i> and dense thalassinid shrimp burrows. <i>Funiculina quadrangularis</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C41	Soft burrowed mud	<i>Nephrops</i> and dense thalassinid shrimp burrows; <i>N. norvegicus</i> (P)	SS.SMu.CFiMu.SpnMeg	BM
C42	Dense cobbles and boulders on gravelly sand	Rock encrusted with serpulid worms (C) including <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting a patchy hydroid turf (F) including <i>Nemertesia ramosa</i> , <i>N. antennina</i> and <i>Kirchenpaueria pinnata?</i> . <i>Porella compressa</i> (O), <i>Chaetopterus variopedatus</i> (P), <i>Ascidia mentula</i> (P), <i>Urticina</i> sp. (P). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (O), <i>Porania pulvillus</i> (R), <i>Luidia ciliaris</i> (P), <i>Asterias rubens?</i> (P) <i>Stichastrella rosea</i> (O) and Gobiidae sp. (R)	CR.MCR.EcCr.FaAICr.Pom	
C43	Dense cobbles and boulders	Rock encrusted with <i>Spirobranchus</i> spp. (A), pink coralline algae (O), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting a rich hydroid turf (A) including <i>Nemertesia ramosa</i> and <i>N. antennina</i> but predominantly fine species and possibly bryozoans. Foliose red algae (R), solitary ascidians (P), <i>Alcyonium digitatum</i> (R), <i>Chaetopterus variopedatus?</i> (P). The motile fauna includes <i>Echinus esculentus</i> (C), <i>Porania pulvillus</i> (P), <i>Asterias rubens</i> (F)	CR.HCR.XFa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C44	Sandy mud or muddy sand with shell	Sediment with small holes and tubes and occasional small burrows and supporting a short patchy hydroid turf some of which may be dead (F) with sparse larger hydroids including <i>Halecium halecinum?</i> , <i>Schizotricha frutescens?</i> and <i>Nemertesia antennina?</i> Paguridae spp. (R), <i>Munida rugosa</i> (O), <i>Neptunea antiqua</i> (P), <i>Buccinum undatum</i> (P), <i>Alcyonidium diaphanum</i> (R), <i>Virgularia mirabilis</i> (R), <i>Actiniaria</i> sp.? (P), <i>Aequipecten opercularis</i> (R), <i>Amphiura</i> spp.? (P)	SS.SSa.CMuSa	
C45	Dense cobbles and boulders	Rock encrusted with <i>Spirobranchus</i> spp. (C), <i>Balanus</i> spp. (P), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting a moderately rich hydroid turf (C) including <i>Kirchenpaueria pinnata?</i> (C), <i>Halecium halecinum?</i> (P), <i>Nemertesia ramosa</i> (P) and <i>N. antennina</i> (P). Other sessile forms include <i>Porella compressa</i> (F) with some very large colonies, <i>Asciidiella mentula</i> (P) and sparse sponges including <i>Axinella infundibuliformis/Phakellia ventilabrum?</i> (R) and encrusting forms (R), The motile fauna includes <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Asterias rubens</i> (F), <i>Stichastrella rosea</i> (O), <i>Munida rugosa</i> (F) and <i>Luidia ciliaris</i> (P),	CR.MCR.EcCr.FaAlCr.Pom	
C46	Dense silted cobbles and boulders on shelly gravelly sand	Rock encrusted with <i>Spirobranchus</i> spp. (F), <i>Balanus</i> spp. (F) and <i>Parasmittina trispinosa</i> (O) and supporting a patchy hydroid turf (F) including <i>Schizotricha frutescens?</i> and <i>N. antennina</i> (R). Other sessile forms include <i>Porella compressa</i> (F), <i>Asciidiella mentula</i> (O), <i>Caryophyllia smithii</i> (R), <i>Alcyonidium diaphanum</i> (R) and sponges including <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O, locally F), <i>Haliclona</i> sp.? (R) and <i>Cliona celata</i> (R). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (R), <i>Munida rugosa</i> (O) and <i>Labrus mixtus</i> (P)	CR.HCR.DpSp.PhaAxi	DS
C46	Dense silted cobbles and boulders on shelly gravelly sand	Similar to the previous section of the run but augmented by <i>Swiftia pallida</i> (C) and <i>Caryophyllia smithii</i> locally C). Rock encrusted with <i>Spirobranchus</i> spp. (F), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting a patchy hydroid turf (F) including <i>Schizotricha frutescens?</i> (P). Other sessile forms include <i>Porella compressa</i> (F) and sponges including <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (P) and a yellow erect branching form (P). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O) and <i>Asterias rubens</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C46	Dense silted cobbles and boulders on shelly gravelly sand	Similar to the start of the run with rock encrusted with <i>Spirobranchus</i> spp. (F), <i>Balanus</i> spp. (C), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and supporting a patchy hydroid turf (F) including <i>Nemertesia ramosa</i> (P). Other sessile forms include <i>Porella compressa</i> (F) and sponges including <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (P), <i>Porania pulvillus</i> (O), <i>Munida rugosa?</i> (P), <i>Teleostei</i> sp. (P) and <i>Labrus mixtus</i> (P)	CR.HCR.DpSp.PhaAxi	DS
C47	Silted bedrock and silted boulders and cobbles with pockets of shelly muddy sediment possibly largely a veneer	Fairly rich sponge fauna with dense <i>Axinella infundibuliformis/Phakellia ventilabrum</i> in places (C), supporting <i>Tetilla zetlandica</i> (P), and at least three species of branching erect forms. <i>Swiftia pallida</i> is common and <i>Caryophyllia smithii</i> common overall but abundant in places. A patchy hydroid turf (F) includes <i>Tubularia indivisa</i> (P), <i>Nemertesia antennina</i> (C locally) and <i>N. ramosa</i> (F locally). <i>Parazoanthus anguicomus</i> is rare overall but dense in patches. Other sessile species include <i>Porella compressa</i> (F locally), <i>Cerianthus lloydii</i> (P), <i>Urticina</i> spp.? (P), <i>Parasmittina trispinosa</i> (R), <i>Sabella pavonina?</i> (P), <i>Alcyonium digitatum</i> (R) and <i>Diazona violacea?</i> (R). Motile species include <i>Echinus esculentus</i> (C), <i>Asterias rubens</i> (O), <i>Porania pulvillus</i> (R), <i>Pholis gunnellus</i> (P), <i>Labrus mixtus</i> (P), <i>Teleostei</i> sp. (P), <i>Callionymus lyra?</i> (P), <i>Porania pulvillus</i> (R) and <i>Pecten maximus</i> (O)	CR.MCR.EcCr.CarSwi.LgAs	NS SP PA
C48	Burrowed mud with bands of silted bedrock, boulders and cobbles	Mud with small holes and tubes as well as megafaunal burrows of thalassinid shrimps and <i>Nephrops norvegicus</i> ; frequent emergent <i>N. norvegicus</i> ; <i>Pennatula phosphorea</i> (R). Rock supports <i>Swiftia pallida</i> (C), sparse <i>Caryophyllia smithii</i> (locally F) a patchy hydroid turf (O) including <i>Nemertesia ramosa</i> , <i>N. antennina</i> and <i>Halecium halecinum?</i> , <i>Urticina</i> sp. (R) and <i>Porella compressa</i> (P). Motile species include <i>Leptometra celtica</i> on bedrock and boulders (locally A), <i>Callionymus lyra</i> (P), <i>Teleostei</i> sp. (P), <i>Munida rugosa</i> (F), <i>Turritella communis</i> (P), <i>Goneplax rhomboides?</i> (P), <i>Asterias rubens</i> (P) and <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (R)	SS.SMu.CFiMu.SpnMeg CR.MCR.EcCr.CarSwi.LgAs	BM SP NS
C49	Muddy sand	Sediment with small holes, <i>Cerianthus lloydii?</i> (P), <i>Turritella communis</i> (P) and <i>Aporrhais pespellicani</i> (P)	SS.SSa.CMuSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C49	Silted bedrock and boulders and cobbles on poorly sorted muddy sand	Rock supporting <i>Caryophyllia smithii</i> (C), <i>Swiftia pallida</i> (F) and a sponge fauna including <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (F), <i>Polymastia boletiformis?</i> (R) and a yellow encrusting form (R). Occasional hydroid clumps include <i>Nemertesia antennina</i> (P). Other members of the sessile fauna include patches of <i>Parazoanthus anguicomus</i> , <i>Diazona violacea</i> (O), <i>Porella compressa</i> (P), <i>Parasmittina trispinosa</i> (R), <i>Alcyonidium diaphanum</i> (P) and <i>Alcyonium digitatum</i> (P). Motile species are <i>Echinus esculentus</i> (F), <i>Asterias rubens</i> (P), <i>Porania pulvillus</i> (O), <i>Crossaster papposus</i> (P), <i>Leptometra celtica</i> (R), <i>Turritella communis</i> (P) and <i>Labrus mixtus</i> (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP PA LC
C50	Scattered silted boulders and cobbles on mud	Mud is penetrated by small burrows, polychaete tubes) and fairly sparse megafaunal burrows (possibly thalassinid shrimps) and supports <i>Funiculina quadrangularis</i> (C), <i>Pennatula phosphorea</i> (O), <i>Amphiura</i> spp. (P), <i>Sagartiogeton laceratus</i> (O), <i>Cerianthus lloydii</i> (F) and possibly a single <i>Atrina fragilis</i> . Motile species on the mud include <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (F), Caridea sp. (P) and Pleuronectiformes sp. (P). The rock supports a patchy hydroid turf (C) including <i>Nemertesia ramosa</i> and <i>N. antennina</i> , <i>Alcyonium digitatum</i> (F), <i>Metridium senile</i> (O), <i>Ascidia mentula</i> (O), large solitary Ascidiacea spp. (O), <i>Caryophyllia smithii</i> (O), <i>Salmacina dysteri</i> (P), <i>Spirobranchus</i> spp. (R), <i>Serpula vermicularis/Protula tubularia</i> (R), <i>Urticina</i> spp. (O) and a motile component of <i>Echinus esculentus</i> (P), <i>Asterias rubens</i> (O) and <i>Ophiothrix fragilis</i> (R, locally A). <i>Leptometra celtica</i> is patchily distributed over mud and stones (overall C)	SS.SMu.CSaMu.Lcelt (SS.SMu.CFiMu.SpnMeg.Fun) CR.LCR.BrAs	BM FQ LA
C51	Sandy mud with scatter of shells and cobbles	Mud penetrated by small burrows and supporting polychaete tubes, <i>Amphiura</i> spp. (A), <i>Sagartiogeton laceratus</i> (F, locally C) and <i>Thyone</i> sp.? (P). Stones and shells support sparse hydroids (O) including <i>Halecium halecinum?</i> , <i>Alcyonium digitatum</i> (O), <i>Suberites</i> sp. (R) and <i>Salmacina dysteri</i> (P). Motile forms include <i>Leptometra celtica</i> (R), <i>Munida rugosa</i> (F), <i>Asterias rubens</i> (P), <i>Inachus</i> sp. (R), <i>Brachyura</i> sp. (R) and <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (O). Ophiuroids become numerous towards the end of the run (<i>Ophiothrix fragilis</i> locally A, <i>Ophiocomina nigra</i> locally C)	SS.SMu.CSaMu	LC

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C51	Sandy mud with sparsely scattered shells and possibly cobbles/pebbles	Mud penetrated by small burrows and supporting <i>Amphiura</i> spp. (A), <i>Sagartiogeton laceratus</i> (F, locally C), <i>Cerianthus lloydii</i> (P) and <i>Thyone</i> sp.? (P). Shells and possibly stones support sparse hydroids (O) including <i>Nemertesia ramosa</i> and <i>N. antennina</i> , <i>Alcyonium digitatum</i> (O) and <i>Salmacina dysteri</i> (P). Motile forms include <i>Ophiothrix fragilis</i> (F), <i>Leptometra celtica</i> (R), <i>Munida rugosa</i> (P), <i>Inachus</i> sp. (R), Paguridae spp. (O), <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (O). Eight <i>Atrina fragilis</i> were observed (C)	SS.SBR.SMus.Afrag (SS.SMu.CSaMu)	LC AF
C52	Uneven silted bedrock	Dense brittlestar bed of <i>Ophiothrix fragilis</i> (A, locally S) and <i>Ophiocomina nigra</i> (P). <i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (P)	CR.LCR.BrAs.AmenCio.Bri	
C52	Scattered cobbles, pebbles, gravel and shell in varying proportions on sandy mud	Dense field of <i>Leptometra celtica</i> (A) for most of run. Sediment supports <i>Funiculina quadrangularis</i> (R), <i>Pennatula phosphorea</i> (R), <i>Amphiura</i> spp. (P), small burrows and faunal tubes, <i>Sagartiogeton laceratus</i> (P) and <i>Neptunea antiqua</i> (P). Rock and shells support <i>Alcyonium digitatum</i> (R), <i>Alcyonidium diaphanum</i> (R), <i>Caryophyllia smithii</i> (R), <i>Salmacina dysteri</i> (P), <i>Parazoanthus anguicomus</i> (R), hydroid patches (O) including <i>Nemertesia ramosa</i> (R) and <i>N. antennina</i> (R).. The motile fauna includes <i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (P), <i>Ophiothrix fragilis</i> (R) and <i>Inachus</i> sp. (R)	SS.SMu.CSaMu.Lcelt (SS.SMx.CMx)	LA PA
C53	Sandy mud	Mud penetrated by mostly small burrows but possible occasional <i>Nephrops</i> burrows also. <i>Amphiura</i> spp. (A), <i>Sagartiogeton laceratus</i> (F) and possibly <i>S. undatus</i> (P). <i>Salmacina dysteri</i> (R), hydroids (R), Paguridae spp. (O), Caridea sp. (P). At least one <i>Atrina fragilis</i> at start of run	SS.SMu.CSaMu	AF
C53	Sandy mud with dense surface scatter of shells	Small burrows and emergent <i>Amphiura</i> spp. arms (P), <i>Sagartiogeton laceratus</i> (F), <i>Munida rugosa</i> (O), Caridea sp. (P), <i>Thyone</i> sp.? (P), Holothurioidea sp. (P) and <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P)	SS.SMx.CMx	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C54	Silted bedrock, boulders and cobbles	Rock with sparse encrustations of barnacles and <i>Parasmittina trispinosa</i> (O) but supporting dense <i>Caryophyllia smithii</i> (C), <i>Swiftia pallida</i> (F, locally C), <i>Parazoanthus anguicomus</i> (O), <i>Diazona violacea</i> (F locally), <i>Porella compressa</i> (P), <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (O locally), a yellow encrusting sponge (R) and tufts of hydroids (F) including <i>Nemertesia antennina</i> (F) and <i>Aglaophenia tubulifera</i> (R), and bryozoans including <i>Securiflustra securifrons</i> (R). <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O)	CR.MCR.EcCr.CarSwi.LgAs	NS SP PA
C55	Cobbles on gravelly sand, boulders and bedrock	Rock encrusted with serpulids (F) including <i>Spirobranchus</i> spp. (F) and <i>Serpula vermicularis/Protula tubularia</i> (R), <i>Parasmittina trispinosa</i> (O) and red bryozoans (R) and generally supporting occasional hydroids including <i>Nemertesia antennina</i> , but with patches of dense <i>Tubularia indivisa</i> (locally A). Other sessile forms include <i>Caryophyllia smithii</i> (F), <i>Porella compressa</i> (R), <i>Ascidia</i> spp. (P) and <i>Parazoanthus anguicomus</i> (R). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Cancer pagurus</i> (P) and <i>Munida rugosa</i> (P)	CR.MCR.EcCr.FaAlCr	
C55	Bedrock and boulders	Rock encrusted with <i>Spirobranchus</i> spp. (C), <i>Parasmittina trispinosa</i> (R) and pink coralline algae (P) but blanketed by dense <i>Ophiothrix fragilis</i> (S) and <i>Ophiocomina nigra</i> (C). <i>Diazona violacea</i> (R). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (P), <i>Luidia ciliaris</i> (F) and <i>Crossaster papposus</i> (P)	CR.MCR.EcCr.FaAlCr.Bri	
C56	Bedrock and then boulders, cobbles and pebbles on silty gravelly sand	Rock encrusted with <i>Spirobranchus</i> spp. (F) and <i>Parasmittina trispinosa</i> (R) and supporting occasional hydroid clumps (locally F) including <i>Nemertesia antennina</i> (locally C), <i>N. ramosa</i> (locally C), <i>Abietinaria abietina?</i> (R) and <i>Tubularia indivisa</i> (R), <i>Ascidia mentula</i> (O), <i>Caryophyllia smithii</i> (locally F), <i>Axinella infundibuliformis/Phakellia ventilabrum</i> (R) and patches of <i>Securiflustra securifrons</i> (R); <i>Sagartiogeton laceratus?</i> (R). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O), <i>Stichastrella rosea</i> (F), <i>Munida rugosa</i> (F), <i>Cancer pagurus</i> (P), <i>Asterias rubens</i> (P), <i>Aequipecten opercularis</i> (P), <i>Calliostoma zizyphinum</i> (P) and patches of <i>Ophiothrix fragilis</i> (locally S) and <i>Ophiocomina nigra</i> (P)	CR.MCR.EcCr.FaAlCr	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C57	Silted bedrock and boulders	Rock with dense <i>Swiftia pallida</i> (C) and <i>Caryophyllia smithii</i> (C). <i>Parasmittina trispinosa</i> (R), <i>Axinella infundibuliformis/Phakellia ventilabrum?</i> (R), <i>Porella compressa</i> (R), hydroid tufts (O), <i>Munida rugosa</i> (F), <i>Leptometra celtica</i> (R)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
C57	Burrowed sandy mud	Megafaunal burrows including <i>Nephrops norvegicus</i> ; 1 <i>N. norvegicus</i> emergent. <i>Munida rugosa</i> (O), Paguridea spp. (P), <i>Toxisarcon albida?</i> (P), Gobiidae sp. (P)	SS.SMu.CFiMu.SpnMeg	BM
C58	Silted bedrock and boulders	Rock supporting dense <i>Swiftia pallida</i> (C) and axinellid and possibly other erect sponges (C) including <i>Axinella infundibuliformis</i> and <i>Phakellia ventilabra?</i> , <i>Tetilla zetlandica</i> (P), <i>Porella compressa</i> (F) and patches of hydroids (O) including <i>Abietinaria abietina</i> (R), <i>Nemertesia ramosa</i> (P) and <i>N. antennina</i> (P) and <i>Parasmittina trispinosa</i> (R). The motile component includes <i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (F), <i>Stichastrella rosea</i> (P) and <i>Porania pulvillus</i> (O)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
C58	Sandy mud	Mud with faunal tubes and penetrated by mostly small burrows but possibly a few <i>Nephrops</i> burrows also. <i>Aporrhais pespelicani</i> (P), <i>Turritella</i> shells with some occupied by pagurids (P), <i>Munida rugosa</i> (O)	SS.SMu.CSaMu	
C59	Scattered silted boulders and cobbles on sandy mud with bedrock outcrop	Rock supports <i>Caryophyllia smithii</i> (locally F), <i>Porella compressa</i> (P), <i>Swiftia pallida</i> (O), <i>Pachygerianthus multiplicatus</i> (F), <i>Ascidia mentula</i> (P), encrusting Porifera sp. (R), <i>Haliclona</i> sp.? (R), Actiniaria sp. (R), <i>Sabella pavonina?</i> (R) and occasional hydroid patches. Mud is perforated by small burrows and supports pagurids (P) and <i>Pecten maximus</i> (P). Other motile fauna includes <i>Munida rugosa</i> (F), <i>Echinus esculentus</i> (F), <i>Porania pulvillus</i> (O) and burrowing <i>Cancer pagurus?</i> (P)	CR.LCR.BrAs SS.SMu.CSaMu	SP PM
C60	Soft burrowed mud	Mud densely burrowed by thalassinid shrimps and by <i>Nephrops norvegicus</i> . <i>Pennatula phosphorea</i> (R), <i>Turritella communis</i> shells (P)	SS.SMu.CFiMu.SpnMeg	BM
C61	Muddy sand with scattered cobbles and pebbles	Sediment perforated by small holes and supporting occasional <i>Lanice conchilega</i> and frequent <i>Munida rugosa</i>	SS.SSa.CMuSa	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C61	Bedrock, boulders and cobbles on muddy sand	Rock encrusted with serpulid worms (F), <i>Parasmittina trispinosa</i> (R), red bryozoans (R), pink coralline algae (R) and a yellow sponge (R) and supporting patchy <i>Swiftia pallida</i> (F, locally C), <i>Porella compressa</i> (F, locally C), <i>Axinella infundibulum</i> (locally F), <i>Caryophyllia smithii</i> (P), hydroid clumps (O) including <i>Nemertesia antennina</i> (P) and <i>Halecium halecinum?</i> (R), <i>Diazona violacea</i> (P) and <i>Ascidia mentula</i> (P). The motile fauna includes <i>Echinus esculentus</i> (F), <i>Stichastrella rosea</i> (P), <i>Porania pulvillus</i> (O), <i>Asterias rubens</i> (O), <i>Luidia ciliaris</i> (P) and <i>Calliostoma zizyphinum</i> . <i>Lanice conchilega</i> present in sediment pockets	CR.MCR.EcCr.CarSwi.LgAs	NS SP
C62	Bedrock and boulders and cobbles on poorly sorted shelly muddy sand	Silted rock sparsely encrusted with serpulid worms and supporting <i>Caryophyllia smithii</i> (F), a patchy hydroid turf (F) including <i>Abietinaria abietina?</i> (P), <i>Axinella infundibuliformis</i> (locally F), <i>Urticina</i> spp. (O), <i>Sabella pavonina?</i> (locally F) and many colonies of <i>Salmacina listeri</i> (O). <i>Echinus esculentus</i> (F), <i>Henricia</i> sp. (P) and patches of dense <i>Ophiothrix fragilis</i> (locally A) with <i>Ophiocomina nigra</i> (P). <i>Cerianthus lloydii</i> is locally common in sediment patches with Holothurioidea sp. (P) and <i>Halecium halecinum?</i> (P) on stones	CR.LCR.BrAsSS.SMx.CMx	
C62	Bedrock	Dense bed of <i>Ophiothrix fragilis</i> (S) with <i>Ophiocomina nigra</i> (P), <i>Sabella pavonina?</i> (F), <i>Alcyonium digitatum</i> (R), <i>Echinus esculentus</i> (F) and <i>Urticina</i> spp. (F)	CR.LCR.BrAs.AmenCio.Bri	
C62	Bedrock and boulders and cobbles on poorly sorted shelly muddy sand	Silted rock sparsely encrusted with serpulid worms and supporting <i>Caryophyllia smithii</i> (F), a patchy hydroid turf (F) including <i>Abietinaria abietina?</i> (P), several sponge species including encrusting, cushion and several erect forms, <i>Urticina</i> spp. (P), <i>Sabella pavonina?</i> (F), <i>Alcyonium digitatum</i> (R), <i>Metridium senile</i> (R) and many colonies of <i>Salmacina listeri</i> (O). <i>Echinus esculentus</i> (C), <i>Ophiothrix fragilis</i> (R), <i>Ophiocomina nigra</i> (R) and <i>Inachus</i> sp. (P). <i>Cerianthus lloydii</i> is locally frequent in sediment patches with a patchy hydroid turf (F) including <i>Abietinaria abietina?</i> (P), <i>Munida rugosa</i> (P) and <i>Sagartiogeton laceratus</i> (P)	CR.LCR.BrAs SS.SMx.CMx	
C63	Soft burrowed mud	Thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; <i>Funiculina quadrangularis</i> (P).	SS.SMu.CFiMu.SpMmeg.Fun	BM FQ

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C64	Soft burrowed mud	Thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; <i>Funiculina quadrangularis</i> (P), <i>Pennatula phosphorea</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C65	Bedrock, boulders and cobbles on gravelly sand	Rock encrusted with <i>Parasmittina trispinosa</i> (R) and pink coralline algae (P) and with sparse hydroid tufts (R) including <i>Nemertesia ramosa</i> (R). <i>Echinus esculentus</i> (F), <i>Munida rugosa</i> (P), <i>Alcyonium digitatum</i> (R), <i>Porania pulvillus</i> (O), Teleostei sp. (P)	CR.MCR.EcCr.FaAICr	
C66	Soft burrowed mud	Thalassinid shrimp and dense <i>Nephrops norvegicus</i> burrows; <i>Funiculina quadrangularis</i> (C), <i>Pennatula phosphorea</i> (F), <i>Cerianthus lloydii</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C67	Burrowed mud initially with scattered cobbles and pebbles and isolated boulder	<i>Nephrops norvegicus</i> and dense thalassinid shrimp burrows; <i>Funiculina quadrangularis</i> (F), <i>Cerianthus lloydii</i> (P). Stones support <i>Swiftia pallida</i> (R), <i>Urticina</i> spp. (R), hydroid patches including <i>Nemertesia ramosa</i> (R) and <i>N. antennina</i> (R), <i>Sabella pavonina?</i> (P) and <i>Sagartiogeton laceratus</i> (R). <i>Munida rugosa</i> is frequent amongst the stones	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ SP
C68	Soft burrowed mud	Dense thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; <i>Funiculina quadrangularis</i> (F), <i>Amphiura</i> spp. (A), <i>Sagartiogeton laceratus</i> (R)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C69	Soft burrowed mud	Thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; 1 <i>N. norvegicus</i> observed; <i>Funiculina quadrangularis</i> (A), <i>Pennatula phosphorea</i> (F)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C70	Mud with very sparse cobbles	Megafaunal burrows including <i>Nephrops norvegicus</i> ; 1 specimen seen. <i>Funiculina quadrangularis</i> (C), <i>Pennatula phosphorea</i> (F), <i>Cerianthus lloydii</i> (R), <i>Turritella</i> shells (C), some apparently occupied, Teleostei sp. (P), <i>Munida rugosa</i> (F), <i>Neptunea antiqua?</i> (R), <i>Nemertesia antennina</i> (R), <i>Caryophyllia smithii?</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C71	Shelly mud	<i>Cerianthus lloydii</i> (P), <i>Pachycerianthus multiplicatus</i> (P), <i>Salmacine dysteri?</i> (P)	SS.SMx.CMx	PM
C71	Bedrock, possibly partly wreck	Patchy but dense <i>Ophiothrix fragilis</i> (A), together with patches of dense <i>Metridium senile</i> (locally A), Crinoidea sp. (locally A) and <i>Sabella pavonina?</i> (locally C). <i>Echinus esculentus</i> (P), <i>Urticina</i> sp. (O), <i>Cerianthus lloydii</i> (locally C)	CR.LCR.BrAs.AmenCio.Bri	
C71	Shelly mud	<i>Cerianthus lloydii</i> (F), <i>Pachycerianthus multiplicatus</i> (P), <i>Sabella pavonina?</i> (P), <i>Inachus</i> sp. (P), <i>Pagurus bernhardus</i> (P), Caridea sp. (P), <i>Sagartia</i> sp. (P)	SS.SMx.CMx	PM

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
C71	Soft burrowed mud	Thalassinid shrimp and <i>Nephrops norvegicus</i> burrows. <i>Funiculina quadrangularis</i> (C), <i>Amphiura</i> spp. arms or possibly fine polychaete tubes (A), <i>Cerianthus lloydii</i> (P), <i>Sagartiogeton laceratus</i> (locally F)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C72	Soft burrowed mud	Dense thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; 1 juvenile <i>N. norvegicus</i> observed. <i>Funiculina quadrangularis</i> (C), <i>Pennatula phosphorea</i> (P), <i>Amphiura</i> spp. or fine polychaete tubes (A), <i>Sabella pavonina?</i> (P), <i>Cerianthus lloydii</i> (P), <i>Caridea</i> sp. (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
C73	Shelly mud with scattered cobbles and boulders	Silted stones support sparse hydroids (O), <i>Porella compressa</i> (O) and <i>Caryophyllia smithii</i> (C on larger boulders). Sediment contains sparse small burrows. <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (O), <i>Luidia ciliaris</i> (P), <i>Asterias rubens</i> (P)	SS.SMx.CMx	
C73	Burrowed shelly mud	Thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; 1 <i>N. norvegicus</i> observed. <i>Funiculina quadrangularis</i> (C), <i>Cerianthus lloydii</i> (R), <i>Liocarcinus depurator</i> (P), Paguridae sp. (R), one small patch of sparse <i>Leptometra celtica</i> (F), <i>Munida rugosa</i> (O), <i>Caridea</i> sp. (R)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ LC
C74	Flat sediment-coated bedrock	<i>Swiftia pallida</i> (P, possibly F), <i>Caryophyllia smithii</i> (F), Paguridae spp. (O), <i>Caridea</i> sp. (P)	CR.MCR.EcCr.CarSwi.LgAs	NS SP
C74	Burrowed mud with scattered boulders and cobbles	<i>Nephrops norvegicus</i> and dense thalassinid shrimp burrows; 2 <i>N. norvegicus</i> observed. <i>Funiculina quadrangularis</i> (C), Paguridae spp. (P), <i>Munida rugosa</i> (P). Stones support <i>Swiftia pallida</i> (P), <i>Urticina</i> spp. (P), hydroids (P), <i>Caryophyllia smithii</i> (P) and <i>Bolocera tuediae</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ SP
C74	Burrowed mud with scattered boulders and cobbles	<i>Nephrops norvegicus</i> and dense thalassinid shrimp burrows. <i>Funiculina quadrangularis</i> (P), Paguridae spp. (P), <i>Munida rugosa</i> (P). Stones support <i>Swiftia pallida?</i> (P). Dense field of <i>Leptometra celtica</i> on stones and sediment (C)	SS.SMu.CSaMu.Lcelt (SS.SMu.CFiMu.SpnMeg.Fun)	BM FQ SP LA
C75	Soft burrowed mud	Dense thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; 2 <i>N. norvegicus</i> observed. <i>Funiculina quadrangularis</i> (C), <i>Pennatula phosphorea</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
H1	Soft burrowed mud	Mud penetrated by burrows including <i>Nephrops norvegicus</i> but visibility very poor	SS.SMu.CFiMu.SpnMeg	BM

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
H2	Mostly bedrock or boulders with some patches of muddy sediment	Rock sparsely encrusted with serpulid worms and pink coralline algae (R) and supporting a rich ascidian fauna including <i>Diazona violacea</i> (F), <i>Clavelina lepadiformis</i> (P) and large solitary species (C) including <i>Ascidia mentula</i> (F), <i>A. virginea</i> (P), <i>Ascidiella aspersa</i> (P) and <i>Polycarpa pomaria</i> (P). The sponge fauna includes <i>Polymastia boletiformis?</i> (P) and <i>Axinella infundibuliformis?</i> (P). Other sessile species are <i>Urticina</i> sp.? (P) and <i>Caryophyllia smithii</i> (P), whilst motile forms include <i>Antedon</i> spp. (P), <i>Porania pulvillus</i> (O), <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> (P), <i>Cancer pagurus</i> (P), <i>Ophiura albida</i> (locally C) and <i>Asterias rubens</i> (F). <i>Leptometra celtica</i> is widely distributed (F) but becomes common in mixed sediment areas	CR.LCR.BrAs	LA
H4	Sandy mud with shell material in places	Sparse megafaunal burrows including <i>Nephrops norvegicus</i> . <i>Virgularia mirabilis</i> (F), <i>Amphiura</i> spp. (A locally), <i>Cerianthus lloydii</i> (F), diatom film (C), polychaete casts (P). Motile species include <i>Munida rugosa</i> (F), <i>Asterias rubens</i> (O), Teleostei spp. (P), <i>Turritella</i> shells (possibly unoccupied)	SS.SMu.CFiMu.SpMeg	BM
H5	Bedrock and scattered boulders and cobbles on sandy mud	Rock supports dense ascidians, <i>Diazonoa violacea</i> (C) and solitary forms (A) including <i>Ascidia mentula</i> , <i>A. virginea</i> and <i>Ascidiella aspersa</i> . Other sessile species include <i>Neocrania anomala</i> (P) and <i>Terebratulina retusa?</i> (P), <i>Epizoanthus couchii?</i> (R) and <i>Polymastia boletiformis?</i> (P). Motile species are <i>Leptometra celtica</i> (F), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (F), <i>Cancer pagurus</i> (P), <i>Liocarcinus depurator</i> (O), <i>Ophiothrix fragilis</i> (R) and clumps of <i>Tubularia indivisa</i> (P)	CR.LCR.BrAs SS.SMu.CSaMu	LC
H5	Sparsely scattered pebbles and gravel on sandy shelly mud	Field of <i>Leptometra celtica</i> (C) on stones and sediment. Sediment with <i>Pennatula phosphorea</i> (R), <i>Amphiura</i> spp. (A). Stones support <i>Diazona violacea</i> (F), <i>Ascidiella mentula</i> (F) and <i>Tubularia indivisa</i> (R). Teleostei spp. (P), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (P), <i>Liocarcinus depurator</i> (P)	SS.SMu.CSaMu	LA
H6	Soft burrowed mud	Moderately dense thalassinid shrimp and <i>Nephrops norvegicus</i> burrows. <i>Funiculina quadrangularis</i> (C), <i>Pachycerianthus multiplicatus</i> (F) <i>Amphiura</i> spp. (C), <i>Leseurigobius friesii?</i> (P), Pleuronectiformes sp. (P), Caridea sp. (F)	SS.SMu.CFiMu.SpMeg.Fun	BM FQ
H7	Sandy mud	Sparse small burrows and mounds and polychaete casts. <i>Turritella communis</i> shells (O)	SS.SMu.CSaMu	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
H7	Cobbles and boulders on sandy mud	Rock sparsely encrusted with serpulid worms, including <i>Protula tubularia</i> (P) and pink coralline algae (O) and supporting a rich ascidian fauna including <i>Diazona violacea</i> (C) and large solitary species (C) including <i>Ascidia mentula</i> (C), <i>A. virginea</i> (P), <i>Asciella aspersa</i> (P) and <i>Corella parallelogramma</i> (P). Other sessile forms include <i>Halichondria bowerbanki</i> (R), <i>Halidona urceolus</i> (R), <i>Neocrania anomala</i> (P) and sparse hydroids (R). The motile fauna includes <i>Munida rugosa</i> (F), <i>Cancer pagurus</i> (P), <i>Liocarcinus</i> sp. (P) and <i>Callionymus lyra</i> (P)	CR.LCR.BrAs SS.SMu.CSaMu	
H8	Sandy mud with sparsely scattered cobbles and pebbles	Sediment supports <i>Amphiura</i> spp. (A), <i>Cerianthus lloydii</i> (P), <i>Antalia entalis</i> and occasional small burrows and mounds and polychaete casts. Stones are colonised by serpulid worms (P), pink coralline algae (R), <i>Asciella mentula</i> and <i>Polycarpa pomaria</i> . Occasional <i>Turritella communis</i> shells, at least some of which are occupied by pagurids (P). <i>Munida rugosa</i> (F)	SS.SMu.CSaMu	
H8	Boulders and cobbles on sandy mud	Rock sparsely encrusted with serpulid worms, including <i>Protula tubularia</i> (P), pink coralline algae (R) and orange bryozoans (R) and supporting a rich ascidian fauna including <i>Diazona violacea</i> (P) and <i>Botryllus schlosseri</i> ? (P), and large solitary species (A) including <i>Ascidia mentula</i> (A), <i>A. virginea</i> ? (P) and <i>Asciella aspersa</i> (P). <i>Munida rugosa</i> (P), <i>Necora puber</i> (P), <i>Henricia</i> sp. (P). <i>Amphiura</i> spp. arms are abundant in the sediment	CR.LCR.BrAs	
H9	Shells, broken shell, pebbles, cobbles and small boulders on muddy sand	Sediment with <i>Amphiura</i> spp. (A) and polychaete casts. Stones encrusted with serpulid worms (C) including <i>Spirobranchus</i> spp. (P) and <i>Protula tubularia</i> (P), and pink coralline algae and supporting hydroid tufts (O) and ascidians including <i>Diazona violacea</i> (R), <i>Clavelina lepadiformis</i> (R) and Ascidiidae spp. (P). <i>Porania pulvillus</i> (P), <i>Ophiura albida</i> (P), <i>Turritella</i> shells (P), Crinoidea sp. (R), Teleostei spp. (P), <i>Phyllophora crispa</i> (R)	SS.SMx.CMx	
H10	Soft burrowed mud	Mud with abundant <i>Amphiura</i> spp. and dense small faunal tubes on surface and penetrated by <i>Nephrops norvegicus</i> and moderately dense thalassinid shrimp burrows. <i>Funiculina quadrangularis</i> (F), <i>Virgularia mirabilis</i> (F), <i>Caridea</i> sp. (F)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
H11	Burrowed mud with boulder patches and small rock outcrops	Mud with fairly sparse megafaunal mounds and burrows including <i>Nephrops norvegicus</i> ; 3 <i>N. norvegicus</i> observed. <i>Cerianthus lloydii</i> (P), <i>Turritella communis</i> (R), <i>Munida rugosa</i> (F), <i>Cancer pagurus</i> (P), <i>Callionymus lyra</i> (P) Stony areas support <i>Caryophyllia smithii</i> (F), <i>Asciidiella mentula</i> (P), hydroid clumps (R), <i>Porania pulvillus</i> (P) and <i>Sabella pavonina?</i> tubes (P)	SS.SMu.CFiMu.SpnMeg	BM
H12	Soft burrowed mud	Dense thalassinid shrimp burrows. <i>Funiculina quadrangularis</i> (C), <i>Virgularia mirabilis</i> (R), <i>Pachycerianthus multiplicatus</i> (C), <i>Cerianthus lloydii</i> (O), <i>Pleuronectiformes</i> sp. (P), <i>Caridea</i> sp. (O)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ PM
H13.1	Burrowed mud	Megafaunal burrows, some occupied by <i>Munida rugosa</i> (F). <i>Funiculina quadrangularis</i> (F). Dense euphausiid shoal	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
H13.1	Rock outcrop	Rock surface bare-looking apart from <i>Caryophyllia smithii</i> (F) and an extensive area of dense <i>Leptometra celtica</i> (C). <i>Munida rugosa</i> (F), <i>Caridea</i> sp. (P)	CR.LCR.BrAs	LC
H13.2	Sandy mud or muddy sand	Community characterised by dense <i>Turritella communis</i> (A), although some shells are occupied by pagurids. <i>Cerianthus lloydii</i> (F), <i>Amphiura</i> spp. (P), polychaete casts (P), <i>Toxisarcon alba</i> (P), hydroids (R), <i>Asciidiella aspersa</i> (R). Motile fauna also includes <i>Munida rugosa</i> (O), <i>Inachus</i> sp. (P) and <i>Ophiura ophiura</i> (P)	SS.SMu.CSaMu	
H14	Soft burrowed mud	<i>Nephrops norvegicus</i> and dense thalassinid shrimp burrows. <i>Funiculina quadrangularis</i> (F), <i>Virgularia mirabilis</i> (O), <i>Pachycerianthus multiplicatus</i> (P), <i>Caridea</i> sp. (P). Dense euphausiids in water column	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ PM
H15	Muddy sand with much shell fragments and shells	Shells encrusted with <i>Spirobranchus</i> spp. (F) and support sparse <i>Phyllophora crispa</i> (R). <i>Cerianthus lloydii</i> (F), <i>Myxicola infundibulum</i> (P), <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (P)	SS.SMx.CMx	
N1	Mosaic of pebbles, gravel and sand areas interrupted by patches of bedrock, boulders and cobbles	Rock sparsely encrusted with <i>Spirobranchus</i> spp. (F), pink coralline algae (R) and <i>Parasmittina trispinosa</i> (R) and with <i>Caryophyllia smithii</i> (locally F), hydroid clumps (O) including <i>Nemertesia ramosa</i> (R) and patchy foliose red algae (O but A locally). Other sessile forms include <i>Diazona violacea</i> (P), <i>Ascidia mentula</i> (P), <i>Alcyonidium diaphanum</i> (P), <i>Urticina</i> sp. (R) and Porifera sp. (P). The motile component includes <i>Asterias rubens</i> (F), <i>Echinus esculentus</i> (F), <i>Luidia ciliaris</i> (P) and <i>Aequipecten opercularis</i> (P)	CR.MCR.EcCr.FaAlCr SS.SMx.CMx	

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
N3	Soft burrowed mud	Dense thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; 2 <i>N. norvegicus</i> observed. <i>Funiculina quadrangularis</i> (F), <i>Pennatula phosphorea</i> (P), Teleostei sp. (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
N4	Muddy sand with scatter of shell, gravel, pebbles and cobbles	Sparse life visible. <i>Munida rugosa</i> (P), hydroids (R), <i>Aporrhais pespelicani</i> (P), <i>Turritella communis</i> shells (possibly unoccupied), possible crab pits	SS.SSa.CMuSa	
N5	Sandy mud	Fairly sparse small burrows. For part of the run the mud is flat with linear scarring possibly from trawling. <i>Pagurus prideaux</i> (F) with <i>Adamsia carciniopados</i> , Paguridae spp. (F), <i>Aporrhais pespelicani</i> (O), <i>Buccinum undatum</i> (O), <i>Liocarcinus</i> sp.? (P), <i>Leptometra celtica</i> (O), <i>Ophiura ophiura</i> (P), possible <i>Arctica islandica</i> siphons (locally C), possibly one flattened <i>Funiculina quadrangularis</i>	SS.SMu.CSaMu	LC
N6	Slightly shelly mud	Fairly sparse small burrows and small infaunal mounds. Possible faint trawl scarring. Paguridae spp. (F) including <i>Pagurus prideaux</i> with <i>Adamsia carciniopados</i> , <i>Leptometra celtica</i> (R), <i>Ophiura ophiura</i> (F), <i>Arctica islandica</i> shells on surface, <i>Pennatula phosphorea</i> ? (R), <i>Aphrodita aculeata</i> (P), <i>Turritella communis</i> ? (P), Brachiura sp. (P)	SS.SMu.CSaMu	LC
N7	Soft burrowed mud	Dense thalassinid shrimp and <i>Nephrops norvegicus</i> burrows. Amphiuira spp. (A), <i>Bolocera tuediae</i> (P), Paguridae sp. (R)	SS.SMu.CFiMu.SpnMeg	BM
N10	Soft burrowed mud	<i>Nephrops norvegicus</i> and dense thalassinid shrimp burrows. 1 prostrate <i>Funiculina quadrangularis</i> (R)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
N11	Soft burrowed mud	<i>Nephrops norvegicus</i> and dense thalassinid shrimp burrows. <i>Amphiura</i> spp. (A), Crinoidea sp.? (P)	SS.SMu.CFiMu.SpnMeg	BM
N12	Soft burrowed mud	Dense thalassinid shrimp and <i>Nephrops norvegicus</i> burrows. <i>Funiculina quadrangularis</i> (F), <i>Asterias rubens</i> (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ
N13	Burrowed mud	Fairly sparse burrows including <i>Nephrops norvegicus</i> . <i>Funiculina quadrangularis</i> (F), <i>Munida rugosa</i> (O), <i>Pagurus prideaux</i> (O) with <i>Adamsia carciniopados</i> , <i>Turritella communis</i> (P), <i>Cerianthus lloydii</i> (P), <i>Asterias rubens</i> (P), bivalve siphons (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
N14	Slope of silted boulders on mud	Rock supports sparse <i>Protanthea simplex</i> (O), <i>Caryophyllia smithii</i> (P) and hydroid clumps (O) with <i>Nephrops norvegicus</i> (F) and <i>Munida rugosa</i> (O) on sediment. Teleostei sp. (P)	CR.LCR.BrAs	
N14	Soft burrowed mud	Mud penetrated by thalassinid shrimp and <i>Nephrops norvegicus</i> burrows; 1 emergent <i>N. norvegicus</i> . <i>Funiculina quadrangularis</i> (C), Teleostei sp. (P)	SS.SMu.CFiMu.SpMmeg.Fun	BM FQ
N15	Slightly silty sand with some gravel and much broken and whole shell material on surface including <i>Ensis</i>	Algal complement includes <i>Saccharina latissima</i> (O), foliose and filamentous reds (O), <i>Ulva lactuca</i> (O) and <i>Desmarestia aculeata</i> (P); much material appears to be drift, although some <i>Saccharina</i> appears attached. Shells encrusted with pink coralline algae and serpulid worms. Sediment is coated locally in a brown diatomaceous film (C towards the end of the run) and supports <i>Cerianthus lloydii</i> (C), <i>Lanice conchilega</i> (P) and <i>Chaetopterus variopedatus?</i> (P)	SS.SMp.KSwSS.LsacR.Sa	KS
N16	Soft burrowed mud	Megafaunal burrows including <i>Nephrops norvegicus</i> . <i>Funiculina quadrangularis</i> (C), <i>Turritella communis</i> shells (P), Teleostei spp. (P)	SS.SMu.CFiMu.SpMmeg.Fun	BM FQ
N17	Muddy sand with increasing quantities of surface pebbles, cobbles and boulders	Initially some small holes or burrows in sediment and sparse <i>Leptometra celtica</i> (locally F). Stones sparsely encrusted with serpulid worms (R) and bryozoans (R). <i>Aequipecten opercularis</i> (P), <i>Turritella</i> shells (P), Pleuronectiformes sp. (P), <i>Liocarcinus</i> sp. (P), <i>Munida rugosa</i> frequent in second half of run	SS.SSa.CMuSa	LC
S1	Soft burrowed mud	<i>Nephrops norvegicus</i> and moderately dense thalassinid shrimp burrows. <i>Funiculina quadrangularis</i> (C), <i>Munida rugosa</i> (F), Paguridae spp. occupying <i>Turritella</i> shells (locally F), <i>Cerianthus lloydii</i> (P), <i>Liocarcinus</i> sp. (P), Teleostei sp. (P). Isolated large boulder supports dense <i>Leptometra celtica</i> (locally A)	SS.SMu.CFiMu.SpMmeg.Fun	BM FQ LC




Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
S2	Silted bedrock and boulders and cobbles on sandy mud	Rock supports a rich ascidian fauna with <i>Diazona violacea</i> common over a wide area and <i>Ascidia mentula</i> , <i>A. virginea</i> and a small solitary form (?) locally common. There are also dense patches of hydroids, particularly <i>Tubularia indivisa</i> , and a number of sponges including <i>Axinella infundibuliformis</i> , a white erect form and possibly <i>Phakellia ventilabrum</i> . <i>Leptometra celtica</i> forms fields on the rock where it is common. Other sessile species includes <i>Porella compressa</i> and sparse crusts of <i>Parasmittina trispinosa</i> (R) and red bryozoans (R). The motile fauna includes <i>Munida rugosa</i> (F), <i>Porania pulvillus</i> (F) and <i>Luidia ciliaris</i> (P),	CR.LCR.BrAs	LC
S2	Burrowed sandy shelly mud	Megafaunal burrows and <i>Funiculina quadrangularis</i> (C). Amphiura spp. (A), <i>Diazona violacea</i> (P) on cobble, <i>Munida rugosa</i> (P)	SS.SMu.CFiMu.SpMg.Fun	BM FQ
S2	Silted bedrock and boulders and cobbles on sandy mud	Rock supporting a rich ascidian fauna including <i>Diazona violacea</i> , <i>Clavelina lepadiformis</i> , <i>Ascidia mentula</i> and <i>A. virginea</i> , hydroid patches including <i>Tubularia indivisa</i> , <i>Parasmittina trispinosa</i> (R) and sponges including <i>Axinella infundibuliformis?</i> and a buff erect form	CR.LCR.BrAs	
S3	Silty shelly sand with dense scatter of pebbles and shells and occasional cobbles and boulders	Stones and shells encrusted with pink coralline algae (R), <i>Balanus balanus</i> (P) and serpulid worms including <i>Spirobranchus</i> spp. (P) and <i>Protula tubularia</i> (P). Much drift kelp and smaller algae with <i>Phyllophora crista</i> (R) possibly attached. <i>Munida rugosa</i> (F), <i>Asterias rubens</i> (F), <i>Turritella communis</i> shells (C, locally A), worm casts	SS.SMx.CMx	
S4	Silty sand with an increasingly dense scatter of pebbles, shells and occasional cobbles	Stones and shells encrusted with pink coralline algae (R), <i>Balanus balanus</i> (P) and serpulid worms. Much drift kelp and smaller algae with some <i>Phyllophora crista</i> (R) possibly attached. <i>Munida rugosa</i> (P), <i>Asterias rubens</i> (P), <i>Turritella communis</i> shells (C), with some occupied by pagurids (locally C), <i>Callionymus lyra</i> (P), <i>Aporrhais pespelicani</i> (P), <i>Aequipecten opercularis</i> (P). Sediment supporting <i>Amalosoma eddysonense</i> (P), <i>Toxisarcon alba</i> (P) and worm casts	SS.SMx.CMx	


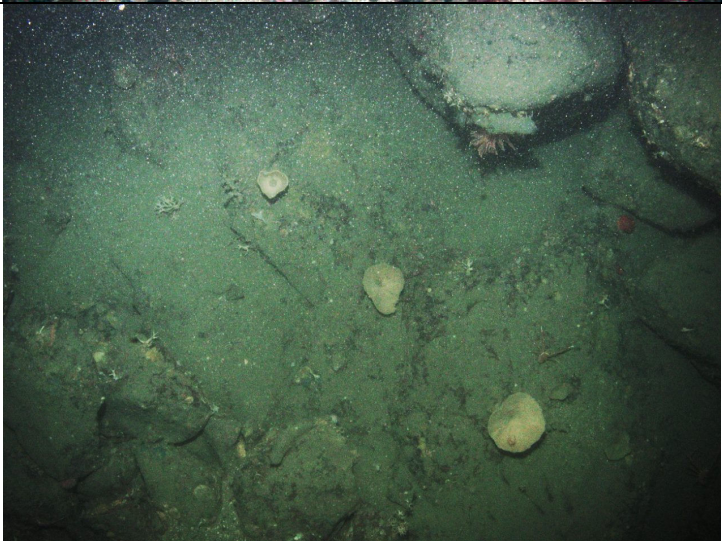

Appendix 2 continued

ID	Substrate	Biota	Biotope	PMF
S5	Slightly muddy sand	Sediment with some small holes, bivalve siphons, worm casts, <i>Amalosoma eddystonense</i> tentacles (P) and possible small <i>Lanice conchilega</i> tubes (locally C) and <i>Chaetopterus variopedatus</i> tube. <i>Turritella communis</i> shells (C), with some occupied by pagurids. <i>Cancer pagurus</i> (P), <i>Ophiura ophiura</i> (P)	SS.SSa.CMuSa	
S6	Scattered cobbles and boulders on shelly mud	Rock supports hydroids including <i>Nemertesia ramosa</i> (P) and <i>Tubularia indivisa</i> (P), and ascidians including <i>Ascidia mentula</i> (P) and <i>Corella parallelogramma</i> (P)	CR.LCR.BrAs	
S6	Soft burrowed mud	Mud supporting <i>Amphiura</i> spp. (C) and with fairly dense megafaunal burrows including <i>Nephrops norvegicus</i> . Abundant <i>Funiculina quadrangularis</i> with occasional <i>Pennatula phosphorea</i> ; <i>Virgularia mirabilis</i> also possibly present. <i>Munida rugosa</i> (F), <i>Turritella</i> shells (P)	SS.SMu.CFiMu.SpnMeg.Fun	BM FQ

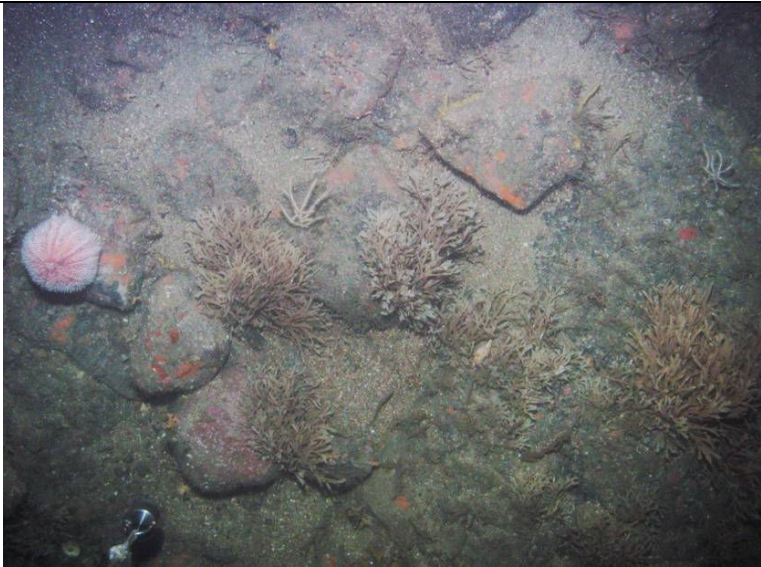


Appendix 3 *Biotopes recorded with sites of occurrence and illustrative photograph or video frame grab. Biotope codes in red are PMFs. Italicised sites indicate provenance of image*

Biotope and Sites	Photograph
<p>IR.HIR.KFaR.FoR</p> <p>Foliose red seaweeds on exposed lower infralittoral rock</p> <p>C8, C20, C27, C29, C30</p> <p>Image: 170611_Canna_video_stills_C08_227</p>	
<p>IR.MIR.KR.Lhyp.Ft</p> <p><i>Laminaria hyperborea</i> forest and foliose red seaweeds on moderately exposed upper infralittoral rock</p> <p>C13</p> <p>Image: video</p>	
<p>IR.MIR.KR.Lhyp.Pk</p> <p><i>Laminaria hyperborea</i> park and foliose red seaweeds on moderately exposed lower infralittoral rock</p> <p>C13, <i>ERB18</i>, MV85</p> <p>Image: ERB_TV18_4967</p>	




Appendix 3 continued

Biotope and Sites	Photograph
<p>IR.MIR.KR.XFoR</p> <p>Dense foliose red seaweeds on moderately exposed, silted, stable infralittoral rock</p> <p><i>ERB19</i></p> <p>Image: ERB_TV19_5008</p>	 <p>This photograph shows a close-up view of a rocky seabed. The surface is covered with a dense, tangled mass of bright red, leafy seaweeds. The rocks are partially obscured by a layer of fine, light-colored silt. The overall appearance is that of a rich, stable infralittoral community.</p>
<p>CR.HCR.DpSp.PhaAxi</p> <p><i>Phakellia ventilabrum</i> and axinellid sponges on deep, wave-exposed circalittoral rock</p> <p>C24, C26, C36, C46, MV105, MV108, MV111, MV114, MV115, MV120, MV121, MV124, MV131, MV133, MV134, <i>MV140</i></p> <p>Image: 149_4987</p>	 <p>This photograph captures a deep-sea environment with a dark, greenish-brown background. Several prominent, pale yellowish-green, rounded sponges are visible, scattered across the rocky substrate. The lighting is somewhat dim, highlighting the texture of the sponges against the darker background.</p>
<p>CR.HCR.XFa</p> <p>Mixed faunal turf communities</p> <p>C43, <i>MV32</i></p> <p>Image: 144_4462</p>	 <p>This photograph shows a rocky seabed covered with a complex, multi-layered community of organisms. The surface is a mix of grey, brown, and orange tones, indicating a diverse and dense faunal turf. Small, intricate structures and textures are visible throughout the scene.</p>

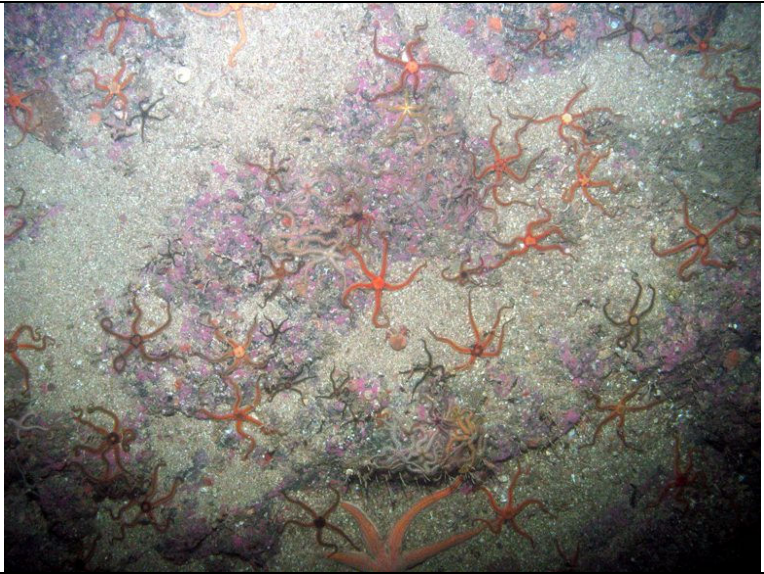


Appendix 3 continued

Biotope and Sites	Photograph
<p>CR.HCR.XFa.SwiLgAs</p> <p>Mixed turf of hydroids and large ascidians with <i>Swiftia pallida</i> and <i>Caryophyllia smithii</i> on weakly tide-swept circalittoral rock</p> <p>MV64, MV66</p> <p style="text-align: right;">Image: 143_4390</p>	
<p>CR.MCR.EcCr.CarSp.Bri</p> <p>Brittlestar bed overlying coralline crusts, <i>Parasmittina trispinosa</i> and <i>Caryophyllia smithii</i> on wave-exposed circalittoral rock</p> <p>FET9</p> <p style="text-align: right;">Image: Fetlar TV Run 9 5445</p>	 <p style="font-size: small; color: red;">©Crown copyright, Marine Scotland Science 2011 Fetlar TV Run 9 5445</p>
<p>CR.MCR.EcCr.CarSp.PenPcom</p> <p><i>Caryophyllia smithii</i> and sponges with <i>Pentapora foliacea</i>, <i>Porella compressa</i> and crustose communities on wave-exposed circalittoral rock</p> <p>FET8, FET9</p> <p style="text-align: right;">Image: Fetlar TV Run 8 5434</p>	 <p style="font-size: small; color: red;">©Crown copyright, Marine Scotland Science 2011 Fetlar TV Run 8 5434</p>




Appendix 3 continued

Biotope and Sites	Photograph
<p>CR.MCR.EcCr.CarSwi.LgAs</p> <p><i>Caryophyllia smithii</i>, <i>Swiftia pallida</i> and large solitary ascidians on exposed or moderately exposed circalittoral rock</p> <p>C7, C24, C46, C47, C48, C49, C54, C57, C58, C6, C61, C74, MV16, MV22, MV23, MV26, MV28, MV32, MV33, MV65, MV104</p> <p>Image: 145_4521</p>	
<p>CR.MCR.EcCr.FaAlCr</p> <p>Faunal and algal crusts on exposed to moderately wave-exposed circalittoral rock</p> <p>C11, C55, C56, C65, <i>ERB16</i>, <i>ERB17</i>, <i>ERB18</i>, <i>ERB19</i>, MV22, MV106, MV110, MV112, MV123, N1</p> <p>Image: Lewis ERB_TV16_4940</p>	
<p>CR.MCR.EcCr.FaAlCr.Adig</p> <p><i>Alcyonium digitatum</i>, <i>Pomatoceros triqueter</i>, algal and bryozoan crusts on wave-exposed circalittoral rock</p> <p>C14, <i>FET12</i></p> <p>Image: Fetlar TV Run 12 5510</p>	




Appendix 3 continued

Biotope and Sites	Photograph
<p>CR.MCR.EcCr.FaAlCr.Bri</p> <p>Brittlestar bed on faunal and algal encrusted, exposed to moderately wave-exposed circalittoral rock</p> <p>C55, FET11, FET12, FET18, MV16, MV22</p> <p style="text-align: right;">Image: 146_4605</p>	 <p>This photograph shows a dense bed of brittlestars (orange and red) on a rock surface. The rock is heavily encrusted with purple and pinkish algal or faunal growth. The scene is illuminated by a bright light source, likely a camera flash, creating a high-contrast image.</p>
<p>CR.MCR.EcCr.FaAlCr.Car</p> <p><i>Caryophyllia smithii</i> with faunal and algal crusts on moderately wave-exposed circalittoral rock</p> <p>FET18, MV32</p> <p style="text-align: right;">Image: Fetlar TV Run 18 5673</p>	 <p>This photograph shows a close-up of a rock surface covered in a dense, greyish-brown crust of <i>Caryophyllia smithii</i>. A white circular object, possibly a scale or a marker, is visible in the upper right quadrant. The rock surface is also covered with other small organisms and algal crusts.</p>
<p>CR.MCR.EcCr.FaAlCr.Flu</p> <p><i>Flustra foliacea</i> on slightly scoured silty circalittoral rock</p> <p>ARM14A, ARM41A, ARM42A, ARM43A, FET3, FET6, FET8, MV60, MV85</p> <p style="text-align: right;">Image: Fetlar TV Run 3 5414</p>	 <p>This photograph shows a rock surface covered in a dense, greenish-brown crust of <i>Flustra foliacea</i>. A white circular object is visible in the upper right quadrant. The rock surface is also covered with other small organisms and algal crusts.</p>




Appendix 3 continued

Biotope and Sites	Photograph
<p>CR.MCR.EcCr.FaAlCr.Pom</p> <p>Faunal and algal crusts with <i>Pomatoceros triqueter</i> and sparse <i>Alcyonium digitatum</i> on exposed to moderately wave-exposed circalittoral rock</p> <p>ARM17A, ARM26A, ARM44A, ARM47A, C16, C17, C18, C19, C22, C23, C26, C27, C31, C42, C45, ERB15, FET4, FET6, FET10, FET11, FET15, FET16, FET21, FET23, SCA1, SCA2</p> <p>Image: ARM_TV47_5379</p>	
<p>CR.LCR.BrAs</p> <p>Brachiopods and ascidians</p> <p>C50, C62, H2, H5, H7, H8, H13.1, N14, S2, S6</p> <p>Image: 160611 Canna video stills_H07_166</p>	
<p>CR.LCR.BrAs.AmenCio.Bri</p> <p>Dense brittlestars with sparse <i>Ascidia mentula</i> and <i>Ciona intestinalis</i> on sheltered circalittoral mixed substrata</p> <p>C52, C62, C71</p> <p>Image: video</p>	




Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SCS</p> <p>Sublittoral coarse sediment (unstable cobbles and pebbles, gravels and coarse sands)</p> <p>MV22</p> <p style="text-align: right;">Image: 145_4527</p>	
<p>SS.SCS.CCS</p> <p>Circolittoral coarse sediment</p> <p>ARM10A, ARM10S, ARM11A, ARM12A, ARM13A, ARM15A, ARM17A, ARM20A, ARM25A, ARM26A, ARM35A, ARM36A, ARM37A, ARM5A, ARM7A, ARM7S, ARM8A, ARM9S, C10, C11, C13, C15, C16, C18, C21, ERB15, ERB16, ERB19, FET4, FET5, FET6, FET8, FET10, FET11, FET15, FET16, FET18, FET24, MV108, MV112, MV114, MV122, MV123, MV124, MV131, MV155, MV32</p> <p style="text-align: right;">Image: ARM_TV13_4480</p>	
<p>SS.SCS.CCS.PomB</p> <p><i>Pomatoceros triqueter</i> with barnacles and bryozoan crusts on unstable circolittoral cobbles and pebbles</p> <p>FET18, FET22</p> <p style="text-align: right;">Image: Fetlar TV Run 22 5814</p>	




Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SSa</p> <p>Sublittoral sands and muddy sands</p> <p>C34, ERB31, FET2, FET21, FET13, FET14, FET17, FET19, FET20, FET23</p> <p>Image: Fetlar TV Run 14 5576</p>	 <p>© Crown copyright, Marine Scotland Science 2011 Fetlar TV Run 14 5576</p>
<p>SS.SSa.CFiSa</p> <p>Circalittoral fine sand</p> <p>ARM2A, ARM2S, ARM3A, ARM3S, ARM4S, ARM5A, ARM5S, ARM6A, ARM7S, ARM8A, ARM8S, ARM9S, ARM10A, ARM10S, ARM11A, ARM11S, ARM12A, ARM14A, ARM16A, ARM1A, ARM1S, ARM20A, ARM21A, ARM22A, ARM23A, ARM24A, ARM27A, ARM28A, ARM29A, ARM30A, ARM31A, ARM32A, ARM35A, ARM36A, ARM37A, ARM38A, ARM40A, ARM41A, ARM45A, ARM46A, C32, C9, ERB9, ERB10, ERB11, ERB12, ERB13, ERB14, ERB17, ERB30, ERB31, ERB32, FET3, FET5, FET6, FET7, FET8, FET16, MV85</p> <p>Image: ARM_TV24_4692</p>	 <p>© Crown copyright, Marine Scotland Science 2011 ARM_TV24_4692</p>
<p>SS.SSa.CMuSa</p> <p>Circalittoral muddy sand</p> <p>C4, C12, C33, C37, C38, C44, C49, C61, N4, N17, S5</p> <p>Image: 160611 Canna video stills_S05_274</p>	




Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SSa.IFiSa.ScupHyd</p> <p><i>Sertularia cupressina</i> and <i>Hydrallmania falcata</i> on tide-swept sublittoral sand with cobbles or pebbles</p> <p>ARM33A, ARM34A</p> <p>Image: ARM_TV33_5065</p>	 <p>© Crown copyright, Marine Scotland Science 2011 ARM_TV33_5065</p>
<p>SS.SSa.IMuSa</p> <p>Infralittoral muddy sand</p> <p>ERB20, ERB21</p> <p>Image: ERB_TV20_5010</p>	 <p>© Crown copyright, Marine Scotland Science 2011 ERB_TV20_5010</p>
<p>SS.SSa.OSa</p> <p>Offshore circalittoral sand</p> <p>MV19, MV25, MV26, MV65, MV109, MV111, MV113, MV121, MV127, MV133, MV134, SCA1, SCA2, SCA3</p> <p>Image: Scalloway A TV Run 2 5335</p>	 <p>© Crown copyright, Marine Scotland Science 2011 Scalloway A TV Run 2 5335</p>

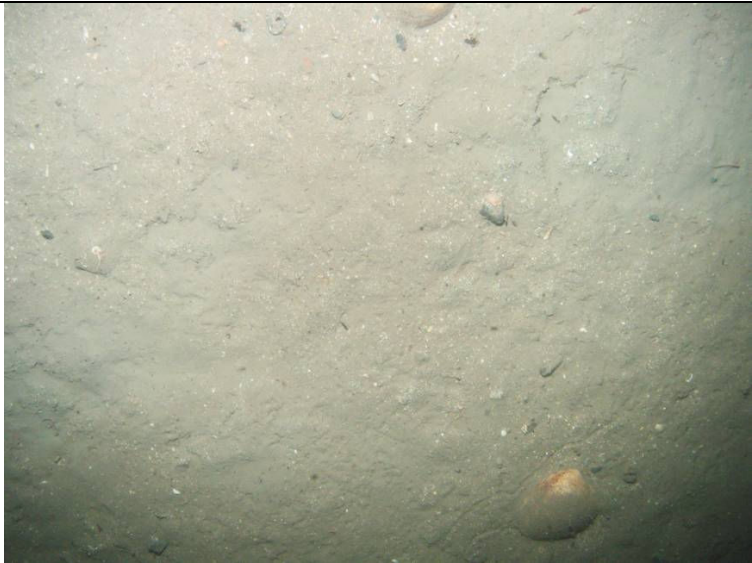


Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SMu</p> <p>Sublittoral cohesive mud and sandy mud communities</p> <p>ERB25, <i>ERB26</i></p> <p style="text-align: right;">Image: ERB_TV26_5260</p>	
<p>SS.SMu.CSaMu</p> <p>Circalittoral sandy mud</p> <p>C1, C51, C53, C58, C59, ERB8, <i>ERB27</i>, H5, H7, H8, H13.2, MV312, N5, N6</p> <p style="text-align: right;">Image: ERB_TV27_5278</p>	
<p>SS.SMu.CSaMu.Lcelt</p> <p>Aggregations of <i>Leptometra celtica</i> on sandy mud.</p> <p>(NB. not a formal biotope and only recognised for Canna for consistency with previous work)</p> <p>C36 (SS.SMu.CSaMu), C50 (SS.SMu.CFiMu.SpnMeg.Fun), C52 (SS.SMx.CMx), C74 (SS.SMu.CFiMu.SpnMeg.Fun)</p> <p style="text-align: right;">Image: video</p>	

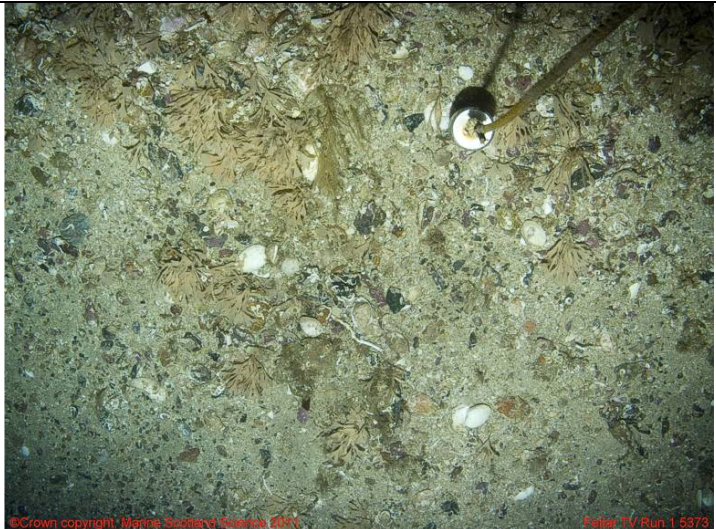


Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SMu.IFiMu.PhiVir</p> <p><i>Philine aperta</i> and <i>Virgularia mirabilis</i> in soft stable infralittoral mud</p> <p>ERB1</p> <p>Image: ERB_TV1_4791</p>	 <p>© Crown copyright. Marine Scotland Science 2011 ERB_TV1_4791</p>
<p>SS.SMu.CFiMu.SpMmeg</p> <p>Seapens and burrowing megafauna in circalittoral fine mud</p> <p>C1, C8, C28, C35, C39, C4, C41, C48, C57, C60, ERB3, ERB4, ERB5, ERB6, ERB7, ERB22, ERB23, ERB24, ERB27, ERB28, ERB29, H1, H4, H11, MV107, MV125, N7, N11</p> <p>Image: ERB_TV24_5210</p>	 <p>© Crown copyright. Marine Scotland Science 2011 ERB_TV24_5210</p>
<p>SS.SMu.CFiMu.SpMmeg.Fun</p> <p>Seapens, including <i>Funiculina quadrangularis</i>, and burrowing megafauna in undisturbed circalittoral fine mud</p> <p>C2, C25, C3, C36, C40, C63, C64, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, H6, H10, H12, H13.1, H14, MV116, MV129, MV135, MV136, MV137, N3, N10, N12, N13, N14, N16, S1, S2, S6</p> <p>Image: 170611_Canna_video_stills_C02_067</p>	


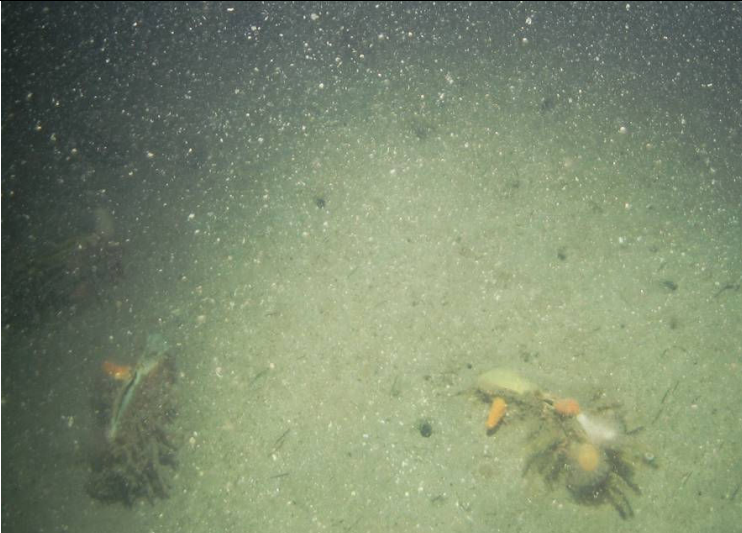
Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SMu.OMu</p> <p>Offshore circalittoral mud</p> <p>MV35, MV39, MV40, MV92, MV104, MV117, MV118, MV132, MV140</p> <p style="text-align: right;">Image: 148_4860</p>	
<p>SS.SMx</p> <p>Sublittoral mixed sediment</p> <p>MV82</p> <p style="text-align: right;">Image: 142_4298</p>	
<p>SS.SMx.CMx</p> <p>Circalittoral mixed sediment</p> <p>ARM1S, ARM2S, ARM4A, ARM6S, ARM8S, ARM9A, ARM9S, ARM10A, ARM11A, ARM14A, ARM17A, ARM18A, ARM25A, ARM26A, ARM35A, ARM37A, ARM38A, ARM39A, ARM40A, C5, C6, C7, C8, C53, C62, C71, C73, ERB2, ERB3, ERB31, ERB32, H9, H15, MV18, MV21, MV23, MV29, MV32, MV34, MV61, MV67, MV78, MV128, MV130, MV304, MV305, MV306, MV307, MV308, MV309, MV310, MV311, N1, S3, S4, SCA1, SCA2, SCA3</p> <p style="text-align: right;">Image: 145_4597</p>	

Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SMx.CMx.FluHyd</p> <p><i>Flustra foliacea</i> and <i>Hydrallmania falcata</i> on tide-swept circalittoral mixed sediment</p> <p>FET1, FET12, MV60, MV67, MV78</p> <p>Image: Fetlar TV Run 1 5373</p>	 <p>© Crown copyright, Marine Scotland Science 2011 Fetlar TV Run 1 5373</p>
<p>SS.SMx.CMx.OphMx</p> <p><i>Ophiothrix fragilis</i> and/or <i>Ophiocomina nigra</i> brittlestar beds on sublittoral mixed sediment</p> <p>ARM18A, ARM19A, ARM25A, ARM26A, ARM42A, ARM43A, ARM47A, FET22, FET23</p> <p>Image: Fetlar TV Run 22 5793</p>	 <p>© Crown copyright, Marine Scotland Science 2011 Fetlar TV Run 22 5793</p>
<p>SS.SMp.KSwSS.LsacR.CbPb</p> <p>Red seaweeds and kelps on tide-swept mobile infralittoral cobbles and pebbles</p> <p>ERB9</p> <p>Image: ERB_TV9_4883</p>	 <p>© Crown copyright, Marine Scotland Science 2011 ERB_TV9_4883</p>

Appendix 3 continued

Biotope and Sites	Photograph
<p>SS.SMp.KSwSS.LsacR.Sa</p> <p><i>Laminara saccharina</i> and filamentous red algae on infralittoral sand</p> <p>N15</p> <p>Image: 160611 Canna video stills_N15_313</p>	
<p>SS.SBR.SMus.Afrag</p> <p>Aggregations of <i>Atrina fragilis</i>. (NB. not a formal biotope)</p> <p>C4 (SS.SMu.CFiMu.SpnMeg), C5 (SS.SMu.CFiMu.SpnMeg), C51 (SS.SMu.CSaMu)</p> <p>Image: 170611_Canna_video_stills_C05_131</p>	

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