



**East of Gannet and Montrose Fields (EGM) and
Norwegian Boundary Sediment Plain (NSP) Scottish
Nature Conservation Marine Protected Areas (NCMPAs)**

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1. Introduction

In Autumn 2015 an offshore seabed survey of two Nature Conservation Marine Protected Areas was undertaken by the JNCC and Marine Scotland Science. The sites surveyed were East of Gannet and Montrose Fields (EGM) and Norwegian Boundary Sediment Plain (NSP). A total of 276 stations were sampled using a 0.25 m² Hamon Grab with 156 from EGM and 120 from NSP.

In January 2016 Thomson Unicomarine were awarded a contract to undertake the benthic faunal processing of these samples.

2. Methodology

2.1 Faunal analysis

Analysis of the macrobenthic samples was carried out according to the agreed specifications, using Thomson Unicomarine's standard operating procedures (TEM09, 2013). All biological analyses were conducted at Thomson Unicomarine's laboratory by Thomson Unicomarine staff with internal quality control procedures at each stage of the process.

The biological samples were sieved over a stack of sieves (4 mm, 2mm and 1 mm) in a ventilated washroom. Lighter animals, such as polychaetes and smaller crustaceans, are removed from each size fraction of the sample by elutriation.

The greater than 2 mm fraction was sorted in white trays in the washroom to extract all fauna whilst the 1 mm fraction was examined using low power stereo microscopes. In-house quality control procedures were carried out, to reduce the risk of biota being missed. All sorted trays were checked by a second analyst and feedback given on any biota consistently missed. At least 10 % of stereomicroscope sorted samples were checked, including one from each analyst involved in the project.

After these procedures were completed, the sediment residues (sediment from which biota had been extracted) were returned to their original bucket and stored in 4% formaldehyde. The extracted biota were preserved in 70% industrial denatured alcohol (IDA) and passed to an experienced analyst for identification.

Countable fauna removed from the samples were identified to the most accurate taxonomic level practicable, usually species, and enumerated. Non-countable taxa, such as colonial fauna, were recorded as present ('P'). High power compound microscopes were used to confirm the identity of some species.

In each instance of a new taxon being recorded the identification was checked by a second analyst. Specimens with difficult taxonomic characters were also checked.

2.2 Data Analysis

The data were reviewed and the most abundant species in each sample identified. The data review was used to inform the presence of Priority Marine Features (PMFs).

3. External QA

As outlined in the project deliverables, 5% of the total samples were sent to an external contractor, Aquatic Environments Ltd., for audit. Data matrices for each area were provided to the auditor and samples were randomly selected. All fauna and the residue for each selected sample were sent to the auditor to be checked. Six Norwegian Sediment Plain and eight East Gannet and Montrose samples were audited. The audit was carried out in line with NMBAQC Own Sample Module, where the identifications, counts and biomass are checked and the residue is re-sorted to check for missed taxa. A pass/fail criterion is applied to the samples using a Bray Curtis Similarity Index. The system as taken from www.nmbaqcs.org is given below;

- 100% BCSI - Excellent
- 95 - <100% BCSI - Good
- 90 - 95% BCSI - Acceptable
- 85 - 90% BCSI - Fail Poor - Remedial action suggested
- <85% BCSI - Fail Bad - Remedial action required.

The full audit results can be found in Appendix 1 and a summary is given in Table 1 below.

Station	BCSI
EGM023 073 (64090)	99.62
EGM030 094 (64097)	99.58
EGM063 139 (64130)	96.92
EGM083 061 (64150)	98.97
EGM100 042 (64167)	98.62
EGM104 117 (64171)	99.76
EGM108 028 (64175)	98.84
EGM116 156 (64183)	98.02
NSP010 334 (64233)	98.15
NSP037 290 (64260)	100.00
NSP052 321 (64275)	99.64
NSP077 180 (64299)	96.87
NSP090 162 (64312)	100.00
NSP094 303 (64316)	97.39

Table 1. Summary of external audit results.

Following the return of the audit data, data matrices were updated to reflect any changes.

4. Results

Abundance and biomass matrices can be found in Appendix 2.

5. Priority Marine Features

Examining the faunal data and the sediment descriptions provided by JNCC, five Priority Marine Features were identified as having potential to occur in the area; these are given in Table 2.

	PMF	Component biotopes/species	Biotope code
1	Burrowed mud	Sea pens and burrowing megafauna in circalittoral fine mud	SS.SMu.CFiMu.SpnMeg
2	Inshore deep mud with burrowing heart urchins	Brissopsis lyrifera and Amphiuira chiajei in circalittoral mud	SS.SMu.CFiMu.BlyrAchi
3	Offshore deep sea muds	Paramphinome jeffreysii, Thyasira spp. and Amphiuira filiformis in offshore circalittoral sandy mud	SS.SMu.OMu.PjefThyAfil
4	Offshore subtidal sands and gravels	Abra prismatica, Bathyporeia elegans and polychaetes in circalittoral fine sand	SS.SSa.CFiSa.ApriBatPo
		Maldanid polychaetes and Eudorellopsis deformis in offshore circalittoral sand or muddy sand	SS.SSa.OSa.MalEdef
		Owenia fusiformis and Amphiuira filiformis in offshore circalittoral sand or muddy sand	SS.SSa.OSa.OfusAfil
5	Ocean quahog	Arctica islandica	

Table 2. Potential PMFs in the area with their component biotopes

The PMF Burrowed Mud is hard to characterise solely from grab data as the characterising species are often not sampled well through grabs and need video data to back up the biotope assignment (JNCC, 2015). As there is no video data available for the NSP MPA we have noted that where there are sea pens present this may constitute the Burrowed Mud PMF. The EGM video data supplied by JNCC has been used to help assign whether the Burrowed Mud PMF is present within this NCMPA.

The presence of live *Arctica islandica* was the only factor taken into consideration for the presence of the Ocean quahog PMF. The presence of juveniles of *Arctica islandica* was used in determining the presence of the feature as these will be of particular importance for the future of the site.

Tables 3 and 4 show the total number of samples which fall into each PMF in NSP and EGM respectively. The details for each sample are included in Appendix 3 and the shapefiles. Some samples have been included in both the Offshore subtidal sands and gravels and the Offshore deep sea muds PMF's as the faunal composition matches the biotope in each and there is limited information provided on sediment type. Figures 1 and 2 show the distribution of the PMF's within each site.

Priority Marine Feature	Number of Samples
Burrowed mud	26
Inshore deep mud with burrowing heart urchins	0
Offshore deep sea muds	25
Offshore subtidal sand and gravels	87
Ocean quahog	22 (18 of which only contained juveniles)

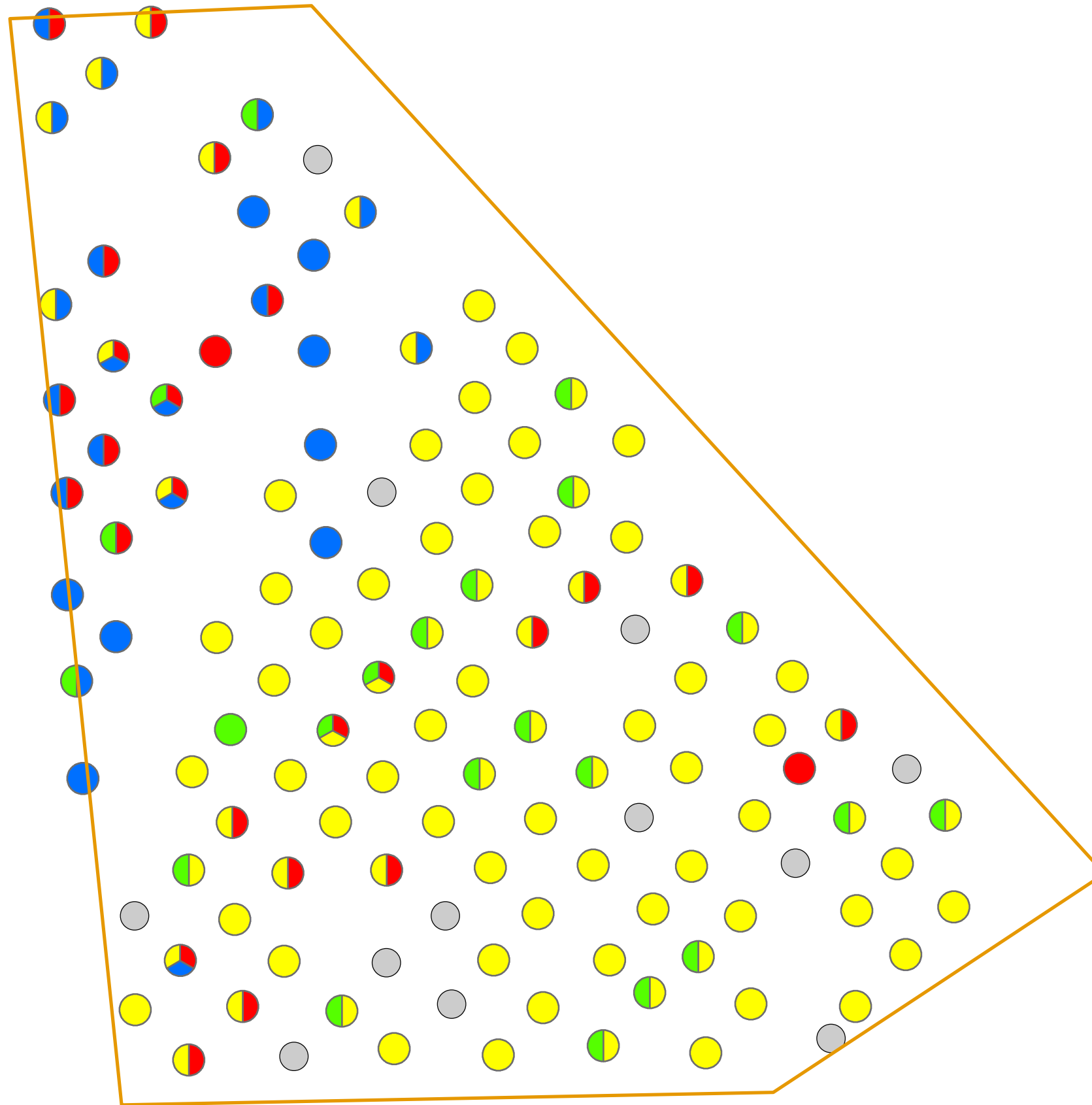
Table 3. Number of samples in each Priority Marine Feature for Norwegian Sediment Plain NCMPA

Priority Marine Feature	Number of Samples
Burrowed mud	67
Inshore deep mud with burrowing heart urchins	2
Offshore deep sea muds	109
Offshore subtidal sand and gravels	51
Ocean quahog	31 (17 of which only contained juveniles)







Table 4. Number of samples in each Priority Marine Feature for East of Gannet and Montrose fields NCMPA

6. References

JNCC (2015) The Marine Habitat Classification for Britain and Ireland Version 15.03 [Online]. [26/03/2015]. Available from: jncc.defra.gov.uk/MarineHabitatClassification



Legend

-  Burrowed Mud
-  Offshore Deep Sea Muds
-  Offshore Subtidal Sands and Gravels
-  Ocean Quahog
-  None
-  Norwegian Boundary Sediment Plain Marine Protected Area



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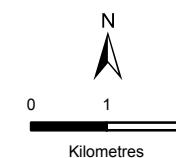
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Date 05/04/2016	Date 05/04/2016
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

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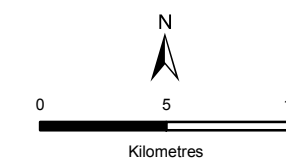
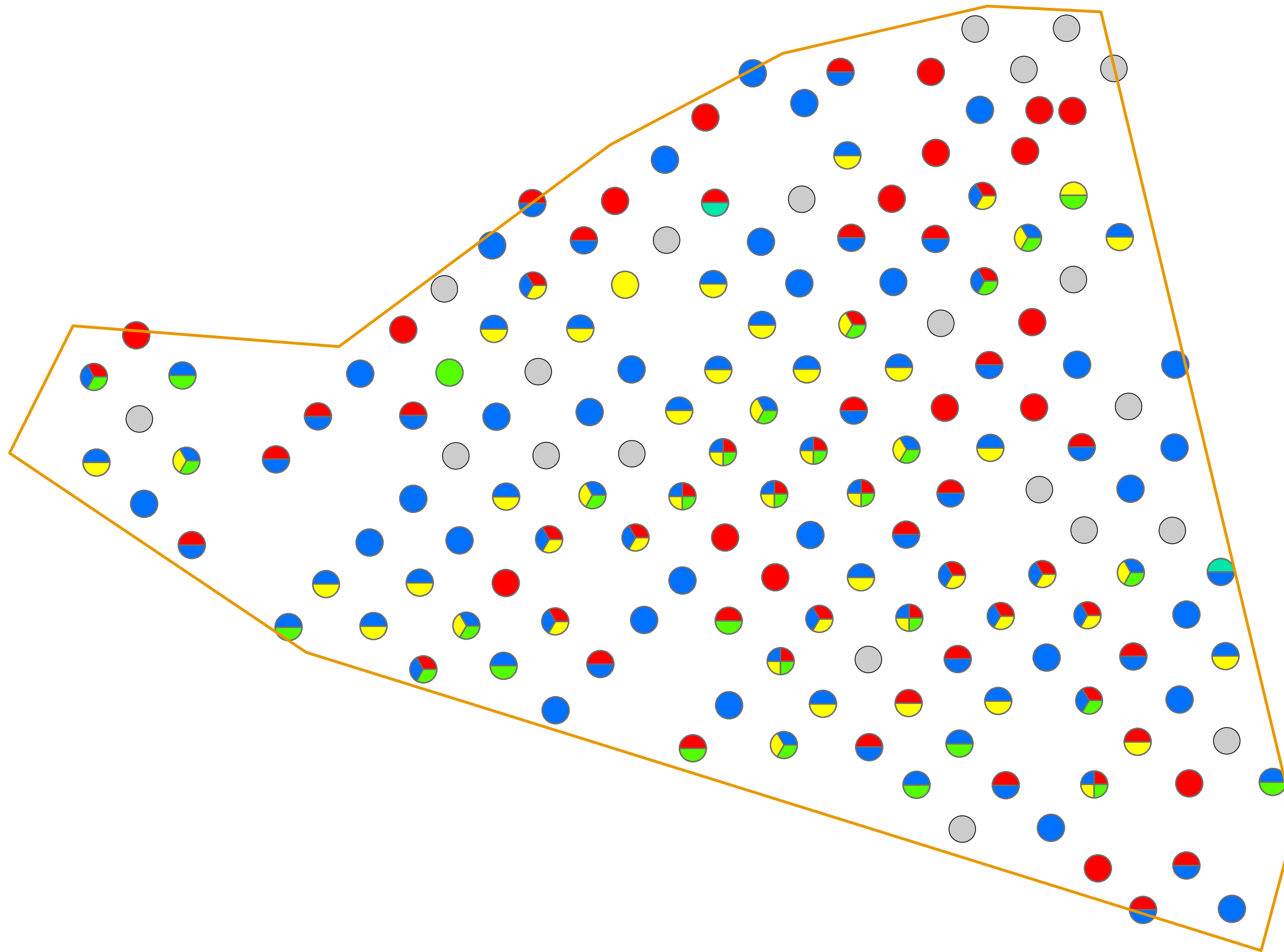
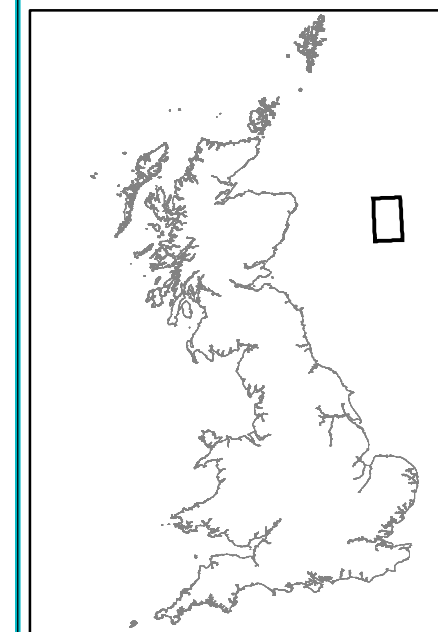
Figure Title
**Norwegian Sediment Plain
Priority Marine
Feature Distribution**



Legend

Grab Sample Locations

-  **Grab Sample Locations**
-  Burrowed Mud
-  Inshore Deep Mud with Burrowing Heart Urchins
-  Offshore Deep Sea Muds
-  Offshore Subtidal Sands and Gravels
-  Ocean Quahog
-  None
-  East of Gannet and Montrose Fields Marine Protected Area



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Client			
Marine Scotland / JNCC			
Figure Number		2	

Figure Title
**East of Gannet and Montrose
Priority Marine
Feature Distribution**

Appendix 1

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Astrorhiza		1 -	Astrorhiza	1 -		
TURBELLARIA	1	0.0069	TURBELLARIA	1	0.0067	
NEMERTEA	4	0.0243	NEMERTEA	4	0.023	
Phyllodoce groenlandica	2	0.0131	Phyllodoce groenlandica	2	0.0123	
Glycera	P	0.1282	Glycera	P	0.1307	
Glycera alba (juv.)	1	0.0027	Glycera alba (juv.)	1	0.0028	
Glycinde nordmanni	1	0.016	Glycinde nordmanni	1	0.015	
Sphaerodorum gracilis	1	0.002	Sphaerodorum gracilis	1	0.0019	
Nephtys longosetosa	1	0.0367	Nephtys longosetosa	1	0.0329	
Paramphinome jeffreysii	17	0.0059	Paramphinome jeffreysii	17	0.0053	
Hyalinoecia tubicola	2	0.1376	Hyalinoecia tubicola	2	0.1252	
Lumbrineridae	P	0.0017	Lumbrineridae	P	0.0016	
Scoloplos armiger	7	0.0367	Scoloplos armiger	7	0.0332	
Spiophanes bombyx	18	0.0403	Spiophanes bombyx	18	0.0371	
Spiophanes kroyeri	2	0.0021	Spiophanes kroyeri	2	0.002	
Chaetozone	P	0.0023	Chaetozone	P	0.0025	
Chaetozone setosa	1	0.002	Chaetozone setosa	1	0.0021	
Cirratulus cirratus	2	0.0185	Cirratulus cirratus	2	0.0178	
Tharyx killariensis	2	0.0016	Tharyx killariensis	2	0.0014	
Scalibregma inflatum	2	0.0555	Scalibregma inflatum	2	0.0488	
Galathowenia	3	0.0007	Galathowenia	3	0.0007	
Owenia borealis	1	0.0058	Owenia borealis	1	0.0051	
TEREBELLOMORPHA	P	0.0506	TEREBELLOMORPHA	P	0.0474	
Pectinaria auricoma	5	0.0355	Pectinaria auricoma	5	0.0331	
Ampharete falcata	6	0.0056	Ampharete falcata	6	0.0051	
Lanice conchilega	3	0.0793	Lanice conchilega	3	0.0722	
Trichobranchus roseus	3	0.0502	Trichobranchus roseus	3	0.0486	
Serpulidae	1	0.0007	Serpulidae	1	0.0007	
Synchelidium maculatum	1	0.0001	Synchelidium maculatum	1	0.0001	
Urothoe elegans	1	0.0014	Urothoe elegans	1	0.0014	
Ampelisca macrocephala	2	0.0354	Ampelisca macrocephala	2	0.0339	
Eudorellopsis deformis	4	0.0006	Eudorellopsis deformis	4	0.0006	
Philine	1	0.0039	Philine	1	0.0037	
Cylichna cylindracea	3	0.0534	Cylichna cylindracea	3	0.0501	
Antalis entalis	1	0.0139	Antalis entalis	1	0.0127	
Thyasira	5	0.0183	Thyasira	5	0.0171	
Tellimya ferruginosa	1	0.0069	Tellimya ferruginosa	1	0.0069	
Abra prismatica	1	0.0052	Abra prismatica	1	0.0045	
Pharidae	1	0.0039	Pharidae	1	0.0037	
Phoronis	2	0.022	Phoronis	2	0.0229	
ASTEROIDEA (juv.)	1	0.0218	ASTEROIDEA (juv.)	1	0.023	
Amphiura filiformis	13	0.3405	Amphiura filiformis	13	0.3565	
Amphiura filiformis (juv.)	3	0.0012	Amphiura filiformis (juv.)	3	0.0012	
Echinocardium flavescens	2	15.395	Echinocardium flavescens	2	14.466	
Pseudothyone raphanus	1	0.0401	Pseudothyone raphanus	1	0.037	
Labidoplax buskii (?)	1	0.0003	Labidoplax buskii (?)	1	0.0003	
ENTEROPNEUSTA	1	0.0011	ENTEROPNEUSTA	1	0.001	

Specimens found within Taxon pots

None found

Specimens found in residue

Spiophanes bombyx 1 0.0012

Abundance Total

132

133

Bray Curtis Similarity Index

99.62%

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Pennatula phosphorea		2	3.0672	Pennatula phosphorea	2	3.0451
Edwardsiidae		1	0.0056	Edwardsiidae	1	0.0061
NEMERTEA		5	0.2153	NEMERTEA	5	0.2107
Polynoidea		1	0.0003	Polynoidea	1	0.0003
Harmothoe glabra		1	0.0006	Harmothoe glabra	1	0.0006
Sthenelais limicola		3	0.0131	Sthenelais limicola	3	0.0131
Phyllodoce groenlandica		1	0.0023	Phyllodoce groenlandica	1	0.0022
Eteone cf. longa		1	0.0037	Eteone cf. longa	1	0.0038
Glycera alba		1	0.1159	Glycera alba	1	0.1164
Goniada maculata		1	0.0094	Goniada maculata	1	0.0097
Nephtys hombergii		1	0.0152	Nephtys hombergii	1	0.0141
Nephtys longosetosa		2	0.144	Nephtys longosetosa	2	0.1442
Hyalinoecia tubicola		1	0.0041	Hyalinoecia tubicola	1	0.004
				Lumbrineris cf. cingulata		
Lumbrineris cf. cingulata (agg.)		1	0.0023	(agg.)	1	0.0021
Scoloplos armiger		12	0.0909	Scoloplos armiger	12	0.0917
Spiophanes bombyx		5	0.0063	Spiophanes bombyx	5	0.0064
Chaetozone christiei		2	0.0021	Chaetozone christiei	2	0.0025
Cirratulus cirratus		1	0.0031	Cirratulus cirratus	1	0.0032
Diplocirrus glaucus		2	0.0378	Diplocirrus glaucus	2	0.0369
Notomastus		1	0.0023	Notomastus	1	0.0022
Maldanidae	P		0.0243	Maldanidae	P	0.0238
Scalibregma inflatum		1	0.0515	Scalibregma inflatum	1	0.0511
Galathowenia		3	0.0031	Galathowenia	3	0.0028
Owenia borealis		9	0.0576	Owenia borealis	9	0.0543
Pectinaria auricoma		3	0.011	Pectinaria auricoma	3	0.0119
Ampharete falcata		1	0.0006	Ampharete falcata	1	0.0005
Anobothrus gracilis		1	0.0055	Anobothrus gracilis	1	0.005
Ampelisca macrocephala		1	0.011	Ampelisca macrocephala	1	0.0109
Ampelisca spinipes		1	0.197	Ampelisca spinipes	1	0.1972
Eudorella truncatula		2	0.0004	Eudorella truncatula	2	0.0003
Euspira (juv.)		1	0.0006	Euspira (juv.)	1	0.0004
Antalis entalis		6	0.2721	Antalis entalis	6	0.2744
BIVALVIA	P		0.0077	BIVALVIA	P	0.0078
Lucinoma borealis		1	0.3355	Lucinoma borealis	1	0.3427
Lucinoma borealis (juv.)		1	0.0013	Lucinoma borealis (juv.)	1	0.0014
Thyasira flexuosa		5	0.0593	Thyasira flexuosa	5	0.0576
Abra prismatica		1	0.0073	Abra prismatica	1	0.0068
Phaxas pellucidus		1	0.0077	Phaxas pellucidus	1	0.0071
Phaxas pellucidus (juv.)		1	0.0001	Phaxas pellucidus (juv.)	1	0.0001
ASTEROIDEA (juv.)		1	0.0002	ASTEROIDEA (juv.)	1	0.0002
Amphiura filiformis		18	0.7256	Amphiura filiformis	18	0.6853
Amphiura filiformis (juv.)		10	0.0056	Amphiura filiformis (juv.)	10	0.0048
Echinocyamus pusillus		2	0.0015	Echinocyamus pusillus	2	0.0013
SPATANGOIDA (juv.)		1	0.0019	SPATANGOIDA (juv.)	1	0.0016
Echinocardium flavescens		1	4.1642	Echinocardium flavescens	1	3.5479
Leptosynapta inhaerens		3	0.3677	Leptosynapta inhaerens	3	0.3297

Specimens found within Taxon pots

None found

Specimens found in residue

Thyasira flexuosa 1 0.0038

Abundance Total 120

121

Bray Curtis Similarity Index 99.58%

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Virgularia mirabilis	P	0.0097	Virgularia mirabilis	P	0.0089	
Pennatula phosphorea	1	1.385	Pennatula phosphorea	1	1.2117	
NEMERTEA	1	0.0031	NEMERTEA	1	0.003	
Polynoidae	P	0.0037	Polynoidae	P	0.0032	
Polynoe scolopendrina	1	0.0457	Polynoe scolopendrina	1	0.0398	
Sthenelais limicola	1	0.0643	Sthenelais limicola	1	0.0574	
Glycera unicornis	1	0.0028	Glycera unicornis	1	0.0027	
Goniada maculata	3	0.0524	Goniada maculata	3	0.0502	
Nephtys caeca	1	0.5685	Nephtys caeca	1	0.5415	
Paramphinome jeffreysii	6	0.0037	Paramphinome jeffreysii	6	0.0033	
Scoloplos armiger	9	0.0637	Scoloplos armiger	9	0.0611	
Spiophanes bombyx	7	0.0136	Spiophanes bombyx	7	0.013	
Chaetozone	1	0.0037	Chaetozone	1	0.0035	
Cirratulus	1	0.0365	Cirratulus	1	0.0309	
Cirratulus cirratus	1	0.0056	Cirratulus cirratus	1	0.0051	
Galathowenia	3	0.0017	Galathowenia	3	0.0016	
Owenia borealis	12	0.0591	Owenia borealis	12	0.0567	
Owenia borealis (juv.)	1	0.002	Owenia borealis (juv.)	1	0.002	
Pectinaria auricoma	3	0.0147	Pectinaria auricoma	3	0.0136	
Pectinaria koreni	1	0.0093	Pectinaria koreni	1	0.0087	
Lanice conchilega	1	0.0657	Lanice conchilega	1	0.0631	
Tmetonyx	1	0.0127	Tmetonyx	1	0.0117	
Ampelisca macrocephala	1	0.0605	Ampelisca macrocephala	1	0.0594	
Ampelisca tenuicornis	1	0.0108	Ampelisca tenuicornis	1	0.0091	
Bathyporeia elegans	1	0.0022	Bathyporeia elegans	1	0.0021	
Eudorella truncatula	1	0.0011	Eudorella truncatula	1	0.0011	
Eudorellopsis deformis	4	0.0019	Eudorellopsis deformis	4	0.0019	
Diastylodes biplicatus	1	0.0013	Diastylodes biplicatus	1	0.0013	
Cylichna cylindracea	1	0.0131	Cylichna cylindracea	1	0.0125	
Antalis entalis	1	0.1958	Antalis entalis	1	0.1844	
BIVALVIA	P	0.0382	BIVALVIA	P	0.0367	
Lucinoma borealis	1	0.0265	Lucinoma borealis	1	0.0241	
Thyasira flexuosa	2	0.0287	Thyasira flexuosa	2	0.0277	
Kurtiella bidentata	9	0.0091	Kurtiella bidentata	9	0.0083	
ASTEROIDEA (juv.)	1	0.0006	ASTEROIDEA (juv.)	1	0.0006	
Amphiura filiformis	20	0.6447	Amphiura filiformis	24	0.6572	Mis-count
Amphiura filiformis (juv.)	6	0.0035	Amphiura filiformis (juv.)	6	0.0041	
ECHINOIDEA	P	0.897	ECHINOIDEA	P	0.9032	
SPATANGOIDA (juv.)	1	0.0016	SPATANGOIDA (juv.)	1	0.0016	
Echinocardium flavescens	2	8.3554	Echinocardium flavescens	2	8.6354	
Labidoplax buskii (?)	1	0.0007	Labidoplax buskii (?)	1	0.0008	

Specimens found within Taxon pots

None found

Specimens found in residue

Abra prismatica	1	0.0363
Thyasira flexuosa	1	0.0154
Amphiura filiformis	1	0.0064

Abundance Total 110**117****Bray Curtis Similarity Index** 96.92%

Original data				Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes	
ANIMALIA	P	0.156	ANIMALIA	P	0.1536		
CNIDARIA		0.0221	CNIDARIA		0.0235		
Cerianthus lloydii		0.1351	Cerianthus lloydii		0.1411		
NEMERTEA	P	0.0025	NEMERTEA	P	0.0024		
Golfingiidae		0.0008	Golfingiidae		0.0007		
Pholoe pallida		0.0025	Pholoe pallida		0.0022		
Glycera unicornis		0.2032	Glycera unicornis		0.1906		
Glycinde nordmanni		0.0041	Glycinde nordmanni		0.0038		
Goniada maculata	P	0.0146	Goniada maculata	P	0.0131		
Goniada norvegica		1.4614	Goniada norvegica		1.3567		
Nephtys hystrix		0.0257	Nephtys hystrix		0.0232		
Paramphinome jeffreysii		28	Paramphinome jeffreysii		26	0.021 Mis-count	
Hyalinoecia tubicola		1	Hyalinoecia tubicola		1	0.2961	
Abyssoninoe hibernica		7	Abyssoninoe hibernica		7	0.0697	
Lumbrineris cf. cingulata (agg.)		8	Lumbrineris cf. cingulata (agg.)		8	0.0598	
Phylo grubei		3	Phylo grubei		3	0.2437	
Levinsenia gracilis		1	Levinsenia gracilis		1	0.0003	
Dipolydora coeca (agg.)		1	Dipolydora coeca (agg.)		1	0.0004	
Laonice sarsi		1	Laonice sarsi		1	0.06	
Prionospio		1	Prionospio		1	0.0034	
Scolelepis tridentata		2	Scolelepis tridentata		2	0.0146	
Spiophanes bombyx		23	Spiophanes bombyx		22	0.0533 Mis-count	
Spiophanes kroyeri		12	Spiophanes kroyeri		12	0.043	
Chaetopteridae	P	0.0646	Chaetopteridae	P	0.0629		
Capitellidae	P	0.0793	Capitellidae	P	0.0793		
Notomastus		15	Notomastus		15	0.0562	
Pseudonotomastus southerni		9	Pseudonotomastus southerni		9	0.0649	
Maldanidae	P	0.2368	Maldanidae	P	0.2154		
Euclymene droebachiensis		2	Euclymene droebachiensis		2	0.1359	
Praxillella affinis		2	Praxillella affinis		2	0.0533	
Galathowenia		9	Galathowenia		9	0.0061	
TEREBELLOMORPHA	P	0.0204	TEREBELLOMORPHA	P	0.02		
Ampharete falcata		1	Ampharete falcata		1	0.0001	
Anobothrus gracilis		1	Anobothrus gracilis		1	0.0026	
Eclysippe vanelli		3	Eclysippe vanelli		3	0.0091	
Amaeana trilobata		1	Amaeana trilobata		1	0.0085	
Paramphitrite birulai		2	Paramphitrite birulai		2	0.0281	
Streblosoma intestinalis		1	Streblosoma intestinalis		1	0.1002	
Trichobranthus roseus		2	Trichobranthus roseus		2	0.0121	
Chone		2	Chone		2	0.0034	
Harpinia antennaria		1	Harpinia antennaria		1	0.0017	
Nicippe tumida		1	Nicippe tumida		1	0.0016	
Ampelisca tenuicornis		3	Ampelisca tenuicornis		3	0.0118	
Diastylis laevis		1	Diastylis laevis		1	0.0056	
Antalis entalis		3	Antalis entalis		3	0.1437	
Axinulus croulinensis		6	Axinulus croulinensis		6	0.0056	
Mendicula ferruginosa		2	Mendicula ferruginosa		2	0.0008	
Thyasira		11	Thyasira		11	0.0647	
Phaxas pellucidus		2	Phaxas pellucidus		2	0.0511	
Phoronis	P	0.0085	Phoronis	P	0.0081		
Astropecten irregularis (juv.)		1	Astropecten irregularis (juv.)		1	0.0047	
Amphiura chiajei		7	Amphiura chiajei		7	0.8283	
Amphiura filiformis		2	Amphiura filiformis		2	0.0014	
SPATANGOIDA (juv.)		2	SPATANGOIDA (juv.)		2	0.0014	
Labidoplax buskii (?)		5	Labidoplax buskii (?)		5	0.0086	

Specimens found within Taxon pots

None found

Specimens found in residue

Thyasira 1

Abundance Total	196	194
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Bray Curtis Similarity Index	98.97%
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EGM100 042 64167

Original data		Quality Assurance				
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Pennatula phosphorea		2	0.0032	Pennatula phosphorea	2	0.0035
Cerianthus lloydii		1	0.1163	Cerianthus lloydii	1	0.1189
NEMERTEA		1	0.1232	NEMERTEA	1	0.1276
Polynoidae		1	0.0015	Polynoidae	1	0.0015
Pholoe pallida		3	0.0078	Pholoe pallida	3	0.0079
Phyllococe rosea		1	0.0002	Phyllococe rosea	1	0.0002
Glycera unicornis		1	0.1828	Glycera unicornis	1	0.1867
Goniada maculata		2	0.0116	Goniada maculata	2	0.0119
Nephtys (juv.)		1	0.0143	Nephtys (juv.)	1	0.0158
Paramphinome jeffreysii		10	0.0102	Paramphinome jeffreysii	10	0.01
Abyssoninoe hibernica		6	0.0678	Abyssoninoe hibernica	6	0.0705
Lumbrineris cf. cingulata (agg.)		6	0.0727	(agg.)	6	0.0749
Phylo grubei		5	0.3769	Phylo grubei	5	0.3811
Dipolydora coeca (agg.)		2	0.002	Dipolydora coeca (agg.)	2	0.002
Laonice sarsi		1	0.0413	Laonice sarsi	1	0.0427
Prionospio cirrifera		1	0.0005	Prionospio cirrifera	1	0.0005
Spiophanes bombyx		9	0.0084	Spiophanes bombyx	10	0.0085 Mis-count
Spiophanes kroyeri		10	0.0239	Spiophanes kroyeri	9	0.0236 Mis-count
Diplocirrus glaucus		1	0.0112	Diplocirrus glaucus	1	0.0119
Notomastus		17	0.0954	Notomastus	17	0.0997
Maldanidae	P		0.1345	Maldanidae	P	0.1379
Praxillella affinis		5	0.0322	Praxillella affinis	5	0.034
Galathowenia		2	0.0029	Galathowenia	2	0.0028
Owenia borealis		1	0.0126	Owenia borealis	1	0.012
TEREBELLOMORPHA	P		0.2098	TEREBELLOMORPHA	P	0.199
Ampharete falcata		2	0.0031	Ampharete falcata	2	0.003
Eclysippe vanelli		1	0.0052	Eclysippe vanelli	1	0.005
Samytha sexcirrata		1	0.0436	Samytha sexcirrata	1	0.0431
Amaeana trilobata		3	0.1008	Amaeana trilobata	3	0.0987
Trichobranchus roseus		4	0.0563	Trichobranchus roseus	4	0.053
Chone		1	0.0022	Chone	1	0.0021
Westwoodilla caecula		2	0.0019	Westwoodilla caecula	2	0.0021
Urothoe elegans		1	0.0001	Urothoe elegans	1	0.0001
Byblis gaimardii		1	0.0111	Byblis gaimardii	1	0.0115
Photis longicaudata		4	0.0062	Photis longicaudata	4	0.0066
Caprellidae		1	0.0001	Caprellidae	1	0.0001
Gnathia (female)		4	0.0029	Gnathia (female)	4	0.0028
Gnathia oxyuraea		4	0.0025	Gnathia oxyuraea	4	0.0025
Arcturella dilatata		7	0.0104	Arcturella dilatata	7	0.01
Eudorella truncatula		1	0.0027	Eudorella truncatula	1	0.003
Leucon nasica		1	0.0028	Leucon nasica	1	0.0026
Campylaspis		1	0.0006	Campylaspis	1	0.0006
Diastylis	P		0.0003	Diastylis	P	0.0003
Chaetoderma nitidulum		1	0.0105	Chaetoderma nitidulum	1	0.0101
Melanella polita		1	0.0025	Melanella polita	1	0.0023
Axinulus croulinensis		7	0.0033	Axinulus croulinensis	7	0.0035
Thyasira		25	0.1352	Thyasira	25	0.1397
Phaxas pellucidus		1	0.0183	Phaxas pellucidus	1	0.0176
Astropecten irregularis		1	0.0733	Astropecten irregularis	1	0.0739
Amphiura chiajei		6	0.9211	Amphiura chiajei	6	0.9265
Ophiocten affinis		3	0.0025	Ophiocten affinis	3	0.0023
SPATANGOIDA (juv.)		7	0.0194	SPATANGOIDA (juv.)	7	0.018

Specimens found within Taxon pots

None found

Specimens found in residue

Dipolydora coeca (agg.)	1	0.0004
Notomastus	1	0.001
Paramphinome jeffreysii	1	0.0002

Abundance Total	180	183
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Bray Curtis Similarity Index	98.62%
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Original data				Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes	
Virgularia mirabilis		1	Virgularia mirabilis	1	0.0012		
NEMERTEA		5	NEMERTEA	5	0.961		
Pholoe pallida		1	Pholoe pallida	1	0.0033		
Eumida	P		Eumida	P	0.0051		
Glycera unicornis		1	Glycera unicornis	1	0.1211		
Glycinde nordmanni		3	Glycinde nordmanni	3	0.009		
Goniada maculata		1	Goniada maculata	1	0.012		
Goniada norvegica		2	Goniada norvegica	2	0.0093		
Paramphinome jeffreysii		25	Paramphinome jeffreysii	25	0.0256		
Hyalinoecia tubicola		1	Hyalinoecia tubicola	1	0.1685		
Abyssoninoe hibernica		4	Abyssoninoe hibernica	4	0.033		
Lumbrineris cf. cingulata (agg.)		7	Lumbrineris cf. cingulata (agg.)	7	0.1035		
Phylo grubei		1	Phylo grubei	1	0.0617		
Dipolydora coeca (agg.)		1	Dipolydora coeca (agg.)	1	0.0015		
Laonice sarsi		4	Laonice sarsi	4	0.0642		
Prionospio cirrifera		2	Prionospio cirrifera	2	0.0041		
Spiophanes bombyx		15	Spiophanes bombyx	15	0.0262		
Spiophanes kroyeri		25	Spiophanes kroyeri	25	0.0409		
Diplocirrus glaucus		1	Diplocirrus glaucus	1	0.0103		
Notomastus		26	Notomastus	26	0.2199		
Peresiella clymenoides		1	Peresiella clymenoides	1	0.0019		
Pseudonotomastus southerni		2	Pseudonotomastus southerni	2	0.0254		
Maldanidae	P		Maldanidae	P	0.0946		
Leiochone		1	Leiochone	1	0.0039		
Praxillella affinis		5	Praxillella affinis	5	0.0506		
Galathowenia		4	Galathowenia	4	0.0037		
Owenia borealis		1	Owenia borealis	1	0.0059		
Anobothrus gracilis		1	Anobothrus gracilis	1	0.0229		
Eclysisippe vanelli		4	Eclysisippe vanelli	4	0.0096		
Lanice conchilega		1	Lanice conchilega	1	0.0017		
Streblosoma intestinalis		1	Streblosoma intestinalis	1	0.2304		
Terebellides shetlandica		1	Terebellides shetlandica	1	0.0053		
Trichobranthus roseus		1	Trichobranthus roseus	1	0.0087		
Chone		6	Chone	6	0.028		
COPEPODA (Type 1)	2 -		COPEPODA (Type 1)	2 -			
Melinnacheres	1 -		Melinnacheres	1 -			
Urothoe elegans		1	Urothoe elegans	1	0.0012		
Nicippe tumida		1	Nicippe tumida	1	0.0105		
Ampelisca		2	Ampelisca	2	0.0047		
Ampelisca tenuicornis		3	Ampelisca tenuicornis	3	0.0076		
Arcturella dilatata		1	Arcturella dilatata	1	0.0022		
Diastylodes biplicatus		1	Diastylodes biplicatus	1	0.0011		
Chaetoderma nitidulum		1	Chaetoderma nitidulum	1	0.0014		
Axinulus croulinensis		5	Axinulus croulinensis	5	0.0059		
Thyasira		16	Thyasira	16	0.1447		
Abra		1	Abra	1	0.0038		
Timoclea ovata		1	Timoclea ovata	1	0.0253		
THRACIOIDEA		1	THRACIOIDEA	1	0.1202		
Amphiura chiajei		9	Amphiura chiajei	9	0.6123		
Amphiura filiformis		3	Amphiura filiformis	3	0.0754		
Labidoplax buskii (?)		6	Labidoplax buskii (?)	6	0.0327		
Leptosynapta inhaerens		2	Leptosynapta inhaerens	2	0.0082		

Specimens found within Taxon pots

None found

Specimens found in residue

Phylo grubei 1 0.0161 In Antalis shell

Abundance Total 212

213

Bray Curtis Similarity Index 99.76%

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Cerianthus lloydii		1	0.215	Cerianthus lloydii	1	0.225
Pholoe	P		0.0013	Pholoe	P	0.0012
Glycera unicornis		1	0.0823	Glycera unicornis		0.0855
Ceratocephale loveni		1	0.0023	Ceratocephale loveni		0.0024
Nephtys hystericis		1	0.0184	Nephtys hystericis		0.0189
Paramphinome jeffreysii		19	0.0156	Paramphinome jeffreysii		0.0152
Lumbrineridae	P		0.0364	Lumbrineridae	P	0.0378
Abyssoninoe hibernica		9	0.0501	Abyssoninoe hibernica		0.0523
Lumbrineris cf. cingulata (agg.)		5	0.0394	Lumbrineris cf. cingulata (agg.)		0.0389
Phylo grubei		7	0.3331	Phylo grubei		0.3206
Dipolydora coeca (agg.)		1	0.0018	Dipolydora coeca (agg.)		0.0017
Pseudopolydora pulchra		1	0.0116	Pseudopolydora pulchra		0.0125
Spiophanes bombyx		7	0.006	Spiophanes bombyx		0.005
Spiophanes kroyeri		6	0.1154	Spiophanes kroyeri		0.1091
Chaetozone	P		0.0021	Chaetozone	P	0.0022
Diplocirrus glaucus		1	0.0174	Diplocirrus glaucus		0.019
Capitellidae	P		0.0617	Capitellidae	P	0.0629
Notomastus		3	0.0065	Notomastus		0.0055 Mis-count
Pseudonotomastus southerni		1	0.0092	Pseudonotomastus southerni		0.0092
Praxillella affinis		3	0.091	Praxillella affinis		0.095
Ampharete falcata		1	0.001	Ampharete falcata		0.001
Amaeana trilobata		1	0.0471	Amaeana trilobata		0.0453
Lanice conchilega		1	0.0017	Lanice conchilega		0.0015
Harpinia crenulata		1	0.0004	Harpinia crenulata		0.0004
Gnathia (female)		3	0.0012	Gnathia (female)		0.0012
Gnathia oxyuraea		1	0.0066	Gnathia oxyuraea		0.006
Arcturella dilatata		7	0.0139	Arcturella dilatata		0.0142
Astacilla		3	0.0015	Astacilla		0.0014
Eudorella truncatula		1	0.0002	Eudorella truncatula		0.0002
Euspira montagui		1	0.1389	Euspira montagui		0.141
Antalis entalis		1	0.0888	Antalis entalis		0.0857
Ennucula tenuis		1	0.0052	Ennucula tenuis		0.0056
Thyasira		10	0.0534	Thyasira		0.0581
Abra nitida		2	0.0774	Abra nitida		0.0729
Chamelea striatula		1	0.0369	Chamelea striatula		0.0342
Phaxas pellucidus		2	0.0902	Phaxas pellucidus		0.0875
Astropecten irregularis (juv.)		2	0.03	Astropecten irregularis (juv.)		0.0338
Amphiura chiajei		13	1.5377	Amphiura chiajei		1.5202
Amphiura filiformis (juv.)		2	0.0009	Amphiura filiformis (juv.)		0.0009
SPATANGOIDA (juv.)		9	0.0295	SPATANGOIDA (juv.)		0.0274

Specimens found within Taxon pots

None found

Specimens found in residue

Golfingiidae 1 0.0045

Abundance Total 130 129

Bray Curtis Similarity Index 98.84%

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
ANTHOATHECATA	P	-	ANTHOATHECATA	P	-	
Pennatula phosphorea		3	Pennatula phosphorea	3	1.1699	
TURBELLARIA		1	TURBELLARIA	1	0.0005	
NEMERTEA		3	NEMERTEA	3	0.19	
Priapulius caudatus		1	Priapulius caudatus	1	3.711	
Polynoidae		1	Polynoidae	1	0.0003	
Pholoe baltica (sensu Petersen)		2	Pholoe baltica (sensu Petersen)	2	0.0014	
Sthenelais (juv.)		1	Sthenelais (juv.)	1	0.001	
Sthenelais limicola		1	Sthenelais limicola	1	0.0399	
Phyllodoce groenlandica		5	Phyllodoce groenlandica	5	0.0317	
Glycera	P	0.2719	Glycera	P	0.2635	
Glycera (juv.)		1	Glycera (juv.)	1	0.0011	
Goniada maculata		5	Goniada maculata	5	0.082	
Goniada maculata (juv.)		1	Goniada maculata (juv.)	1	0.0009	
Sphaerodorium gracilis		2	Sphaerodorium gracilis	2	0.0012	
Nephtys	P	0.0267	Nephtys	P	0.0235	
Nephtys (juv.)		2	Nephtys (juv.)	2	0.0111	
Nephtys hombergii		1	Nephtys hombergii	1	0.0092	
Nephtys longosetosa		2	Nephtys longosetosa	2	0.068	
Paramphinome jeffreysii		91	Paramphinome jeffreysii	91	0.0614	
Scoloplos armiger		15	Scoloplos armiger	15	0.1009	
Scoloplos armiger (juv.)		1	Scoloplos armiger (juv.)	1	0.0002	
Paradoneis lyra		1	Paradoneis lyra	1	0.0004	
Apistobranchus tullbergi		1	Apistobranchus tullbergi	1	0.0007	
Aonides paucibranchiata		1	Aonides paucibranchiata	1	0.0011	
Scolecopsis		3	Scolecopsis	3	0.012	
Spiophanes bombyx		21	Spiophanes bombyx	21	0.0589	
Spiophanes kroyeri		5	Spiophanes kroyeri	5	0.0097	
Cirratulus cirratus		4	Cirratulus cirratus	4	0.028	
Diplocirrus glaucus		2	Diplocirrus glaucus	2	0.017	
Notomastus		3	Notomastus	3	0.1	
Maldanidae		1	Maldanidae	1	0.0803	
Scalibregma inflatum		1	Scalibregma inflatum	1	0.0001	
Owenia borealis		10	Owenia borealis	9	0.0562	Mis-count
Owenia borealis (juv.)		1	Owenia borealis (juv.)	1	0.0001	
TEREBELLOMORPHA	P	0.1553	TEREBELLOMORPHA	P	0.1546	
Pectinaria auricoma		2	Pectinaria auricoma	2	0.0031	
Ampharete falcata		7	Ampharete falcata	7	0.0051	
Ampharete lindstroemi (agg.)		1	Ampharete lindstroemi (agg.)	1	0.0021	
Eclysippe vanelli		1	Eclysippe vanelli	1	0.0032	
Samytha sexcirrata		1	Samytha sexcirrata	1	0.0052	
Lanice conchilega (juv.)		1	Lanice conchilega (juv.)	1	0.0013	
Polycirrus		2	Polycirrus	2	0.0342	
Terebellides shetlandica		4	Terebellides shetlandica	4	0.0133	
Trichobranchus roseus		1	Trichobranchus roseus	1	0.0161	
Chone		1	Chone	1	0.007	
Hydroides norvegicus		2	Hydroides norvegicus	2	0.0044	
AMPHIPODA	P	0.0032	AMPHIPODA	P	0.0028	
Westwoodilla caecula		2	Westwoodilla caecula	2	0.0039	
Acidostoma obesum		1	Acidostoma obesum	1	0.0007	
Tmetonyx		1	Tmetonyx	1	0.0754	
Tryphosites longipes		1	Tryphosites longipes	1	0.002	
Ampelisca		3	Ampelisca	3	0.0183	
Ampelisca spinipes		2	Ampelisca spinipes	2	0.0095	
Ampelisca tenuicornis		1	Ampelisca tenuicornis	1	0.0051	
Eudorella truncatula		1	Eudorella truncatula	1	0.0005	
Diastylodes biplicatus		1	Diastylodes biplicatus	1	0.001	
Chaetoderma nitidulum		2	Chaetoderma nitidulum	2	0.008	
Philine		4	Philine	4	0.034	
Antalis entalis		4	Antalis entalis	4	0.5111	
Thyasiridae		1	Thyasiridae	1	0.0037	
Kurtiella bidentata		1	Kurtiella bidentata	1	0.0005	
Arctica islandica		1	Arctica islandica	1	0.1498	
Phoronis		2	Phoronis	2	0.0293	
Amphiura filiformis		8	Amphiura filiformis	8	0.4586	
Amphiura filiformis (juv.)		11	Amphiura filiformis (juv.)	11	0.0059	
Ophiocten affinis		1	Ophiocten affinis	1	0.0112	
Labidoplax buskii (?)		10	Labidoplax buskii (?)	10	0.0116	

Specimens found within Taxon pots

None found

Specimens found in residue

Spiophanes bombyx	4	0.0024
Paramphinome jeffreysii	3	0.001
Nemertea	1	0.0045
Diastylodes biplicatus	1	0.0002
Phyllodoce groenlandica	1	0.0011

Abundance Total 274

283

Bray Curtis Similarity Index 98.02%

NSP010 334 64233

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Edwardsia claparedii		1 0.0414	Edwardsia claparedii	1	0.0387	
Sthenelais limicola		3 0.0933	Sthenelais limicola	3	0.0821	
Glycera	P	0.1905	Glycera	P	0.1676	
Glycera alba (juv.)		1 0.0009	Glycera alba (juv.)	1	0.0009	
Goniada maculata		3 0.055	Goniada maculata	3	0.0489	
Nephtys longosetosa		2 0.0672	Nephtys longosetosa	2	0.0608	
Scoloplos armiger		2 0.0114	Scoloplos armiger	2	0.0099	
Paraonidae		1 0.0006	Paraonidae	1	0.0006	
Aonides paucibranchiata		1 0.0007	Aonides paucibranchiata	1	0.0007	
Scolecipis squamata		2 0.007	Scolecipis squamata	2	0.0071	
Spiophanes bombyx		7 0.0082	Spiophanes bombyx	7	0.0086	
Chaetopteridae		1 0.0062	Chaetopteridae	1	0.0065	
Chaetozone christiei		1 0.0036	Chaetozone christiei	1	0.0038	
Diplocirrus glaucus	P	0.0011	Diplocirrus glaucus	P	0.0009	
Owenia borealis		15 0.0953	Owenia borealis	13	0.0875	Miscount
Lanice conchilega		2 0.2762	Lanice conchilega	2	0.289	
Hippomedon denticulatus		1 0.0214	Hippomedon denticulatus	1	0.0181	
Lepidepecreum longicorne		1 0.0024	Lepidepecreum longicorne	1	0.0024	
Tryphosites longipes		1 0.007	Tryphosites longipes	1	0.0067	
Ampelisca brevicornis		1 0.0338	Ampelisca brevicornis	1	0.0327	
Neomenia carinata		1 0.0357	Neomenia carinata	1	0.0323	
Epitonium trevelyanum		1 0.231	Epitonium trevelyanum	1	0.227	
Cylichna cylindracea		1 0.0307	Cylichna cylindracea	1	0.0282	
BIVALVIA	P	0.0016	BIVALVIA	P	0.0014	
Abra (juv.)		2 0.0013	Abra (juv.)	2	0.0014	
Abra prismatica		2 0.1144	Abra prismatica	2	0.1024	
Thracia gracilis		1 0.0864	Thracia gracilis	1	0.0804	
Astropecten irregularis (juv.)		1 0.0268	Astropecten irregularis (juv.)	1	0.0231	
OPHIUROIDEA	P	0.0056	OPHIUROIDEA	P	0.0049	

Specimens found within Taxon pots

Nothing found

Specimens found in residue

Nothing found

Abundance Total 55 53

Bray Curtis Similarity Index 98.15%

NSP037 290 64260

Original data

Identification	Abundance	Biomass
ANTHOATHECATA	P	-
Malmgrenia andreapolis	1	0.009
Sthenelais limicola	4	0.0662
Glycera alba	1	0.016
Glycera celtica	1	0.0209
Goniada maculata	3	0.0133
Nephtys hombergii	2	0.6442
Hyalinoecia tubicola	1	0.0578
Scoloplos armiger	3	0.0051
Spiophanes bombyx	7	0.0214
Tharyx killariensis	1	0.0005
Owenia borealis	3	0.0062
Pectinaria auricoma	1	0.0206
Lanice conchilega	1	0.334
Lysilla loveni	1	0.0299
Westwoodilla caecula	1	0.0029
Harpinia crenulata	1	0.001
Tryphosites longipes	1	0.0024
Ampelisca macrocephala	1	0.0842
Phtisica marina	1	0.0006
Pagurus pubescens	1	0.1032
Antalis entalis	3	0.8869
Lucinoma borealis	1	0.0266
Lucinoma borealis (juv.)	2	0.0087
Thyasira flexuosa	2	0.0321
Abra prismatica	2	0.0063
Amphiura filiformis	7	0.4403
Amphiura filiformis (juv.)	4	0.0022
Leptosynapta	P	0.0115

Quality Assurance

Identification	Abundance	Biomass	Notes
ANTHOATHECATA	P	-	
Malmgrenia andreapolis	1	0.008	
Sthenelais limicola	4	0.064	
Glycera alba	1	0.0179	
Glycera celtica	1	0.0189	
Goniada maculata	3	0.0139	
Nephtys hombergii	2	0.6533	
Hyalinoecia tubicola	1	0.0552	
Scoloplos armiger	3	0.0048	
Spiophanes bombyx	7	0.0219	
Tharyx killariensis	1	0.0005	
Owenia borealis	3	0.0061	
Pectinaria auricoma	1	0.0192	
Lanice conchilega	1	0.3382	
Lysilla loveni	1	0.0314	
Westwoodilla caecula	1	0.0026	
Harpinia crenulata	1	0.0007	
Tryphosites longipes	1	0.0022	
Ampelisca macrocephala	1	0.0859	
Phtisica marina	1	0.0007	
Pagurus pubescens	1	0.1008	
Antalis entalis	3	0.8823	
Lucinoma borealis	1	0.0275	
Lucinoma borealis (juv.)	2	0.0085	
Thyasira flexuosa	2	0.0333	
Abra prismatica	2	0.006	
Amphiura filiformis	7	0.4511	
Amphiura filiformis (juv.)	4	0.0028	
Leptosynapta	P	0.013	

Specimens found within Taxon pots

Nothing found

Specimens found in residue

Nothing found

Abundance Total**57****57****Bray Curtis Similarity Index****100.00%**

NSP052 321 64275

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Pennatulula phosphorea		2	3.0111 Pennatulula phosphorea	2	2.9319	
Cerianthus lloydii		1	0.0017 Cerianthus lloydii	1	0.0015	
Edwardsiidae		1	0.0751 Edwardsiidae	1	0.073	
Edwardsia claparedii		3	0.0166 Edwardsia claparedii	3	0.0143	
NEMERTEA		1	0.0002 NEMERTEA	1	0.0002	
Polynoidae		1	0.0009 Polynoidae	1	0.0009	
Sthenelais limicola		6	0.133 Sthenelais limicola	6	0.1285	
Phyllodoce groenlandica		1	0.012 Phyllodoce groenlandica	1	0.0115	
Glycera alba		1	0.0955 Glycera alba	1	0.0943	
Glycera alba (juv.)		2	0.0054 Glycera alba (juv.)	2	0.0051	
Goniada maculata		2	0.044 Goniada maculata	2	0.04	
Goniada maculata (juv.)		2	0.0013 Goniada maculata (juv.)	2	0.0013	
Glyphohesionia klatti		1	0.0006 Glyphohesionia klatti	1	0.0006	
Nephtys (juv.)		1	0.0058 Nephtys (juv.)	1	0.0057	
Nephtys caeca		1	0.1063 Nephtys caeca	1	0.0995	
Nephtys longosetosa		2	0.1594 Nephtys longosetosa	2	0.1486	
Paramphinome jeffreysii		6	0.003 Paramphinome jeffreysii	6	0.0031	
Scoloplos armiger		2	0.016 Scoloplos armiger	2	0.0164	
Acmira catherinae		2	0.0013 Acmira catherinae	2	0.0011	
Poecilochaetus serpens		1	0.0002 Poecilochaetus serpens	1	0.0002	
Aonides paucibranchiata		5	0.0034 Aonides paucibranchiata	5	0.0031	
Scolecipis		1	0.0001 Scolecipis	1	0.0001	
Scolecipis bonnierii		1	0.0066 Scolecipis bonnierii	1	0.0065	
Spio decorata		2	0.0014 Spio decorata	2	0.0014	
Spiophanes bombyx		27	0.043 Spiophanes bombyx	27	0.043	
Spiophanes kroyeri		2	0.0534 Spiophanes kroyeri	2	0.052	
Chaetozone		1	0.0012 Chaetozone	1	0.0013	
Tharyx killariensis		1	0.0007 Tharyx killariensis	1	0.0007	
Peresiella clymenoides		1	0.0011 Peresiella clymenoides	1	0.0011	
Opheliidae		1	0.0719 Opheliidae	1	0.0737	
Travisia forbesii		1	0.0488 Travisia forbesii	1	0.0514	
Galathowenia		11	0.0095 Galathowenia	11	0.0099	
Myriochele		2	0.0005 Myriochele	2	0.0005	
Owenia borealis		3	0.0419 Owenia borealis	3	0.043	
Anobothrus gracilis		1	0.0063 Anobothrus gracilis	1	0.0071	
Polycirrus		1	0.0979 Polycirrus	1	0.0926	
Synchelidium maculatum		1	0.0022 Synchelidium maculatum	1	0.0021	
Harpinia antennaria		1	0.0003 Harpinia antennaria	1	0.0003	
Ampelisca macrocephala		1	0.0245 Ampelisca macrocephala	1	0.0263	
Bathyporeia elegans		5	0.0065 Bathyporeia elegans	5	0.0072	
Eudorelopsis deformis		1	0.0001 Eudorelopsis deformis	1	0.0001	
Processa modica		1	0.0323 Processa modica	1	0.0359	
Callianassa subterranea		1	0.1975 Callianassa subterranea	1	0.2045	
Acteon tomatis		1	0.002 Acteon tomatis	1	0.0017	
Antalis entalis		1	0.0545 Antalis entalis	1	0.0573	
Kurtiella bidentata		1	0.0011 Kurtiella bidentata	1	0.0011	
Cardiidae		1	0.0004 Cardiidae	1	0.0004	
Abra prismatica		1	0.0014 Abra prismatica	1	0.0014	
Pharidae		1	0.0002 Pharidae	1	0.0002	
Phoronis		3	0.0033 Phoronis	3	0.003	
Amphiura filiformis		15	0.1445 Amphiura filiformis	15	0.1379	
SPATANGOIDA	P		0.0002 SPATANGOIDA	P	0.0002	
Echinocardium flavescens		2	42.2821 Echinocardium flavescens	2	30.4616	The intact urchin sprang a leak hence the big difference in weight - please ignore.

Specimens found within Taxon pots

Nothing found

Specimens found in residue

Galathowenia 1 0.0002

Abundance Total 137

138

Bray Curtis Similarity Index 99.64%

NSP077 180 64299

Original data			Quality Assurance		
Abundance	Bims	Obs	Abundance	Bims	Obs
	2	00147		2	00129
	2	00295		2	00265
P		00026	P		00024
	1	02639		1	02546
P		00014	P		00012
	4	00952		5	00945
	3	00728		3	00683
	3	00005		3	00005
	4	00129		4	00125
	1	00033		1	00032
	2	00014		2	00014
	1	01459		1	01379
	9	00078		9	00073
	1	00041		1	0004
P		00103	P		00091
	1	00008		1	00008
P		00012	P		00012
	10	04824		9	0.4329
	2	00048		2	00045
	1	00118		1	00111
	3	00017		3	00016
	1	00378		1	00392
	1	0002		1	00023
	3	0008		3	00091
	3	00301		3	00322
	1	00006		1	00006
	1	00143		1	00153
	1	00007		1	00007
	2	189528		2	172437

Specimens found within Taxon pots

Nothing found

Specimens found in residue

Aonides paucibranchiata	1	0.0003	
Paradoneis tyra	1	0.0002	New taxa

Abundance Total	63	65
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Bray Curtis Similarity Index	96.87%
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NSP090 162 64312

Original data			Quality Assurance			
Identification	Abundance	Biomass	Identification	Abundance	Biomass	Notes
Edwardsiidae		1	0.0433 Edwardsiidae		1	0.0407
NEMERTEA	P		0.0293 NEMERTEA	P		0.0261
Sthenelais limicola		2	0.0698 Sthenelais limicola		2	0.0654
Phyllococidae	P		0.0009 Phyllococidae	P		0.0006
Phyllodoce rosea		1	0.0005 Phyllodoce rosea		1	0.0005
Glycera alba		1	0.002 Glycera alba		1	0.002
Goniada maculata		5	0.0288 Goniada maculata		5	0.0268
Nephtys hombergii		1	0.17 Nephtys hombergii		1	0.1395
Paramphinome jeffreysii		1	0.0005 Paramphinome jeffreysii		1	0.0005
Hyalinoecia tubicola		1	0.3634 Hyalinoecia tubicola		1	0.2922
Scoloplos armiger		4	0.0478 Scoloplos armiger		4	0.0444
Aonides paucibranchiata		1	0.0014 Aonides paucibranchiata		1	0.0012
Spiophanes bombyx		3	0.0048 Spiophanes bombyx		3	0.0043
Spiophanes kroyeri		1	0.0019 Spiophanes kroyeri		1	0.0017
Magelona filiformis		1	0.0007 Magelona filiformis		1	0.0007
Nicomache		1	0.0949 Nicomache		1	0.0845
Myriochele olgae		1	0.0008 Myriochele olgae		1	0.0007
Owenia borealis		13	0.8699 Owenia borealis		13	0.7943
Owenia borealis (juv.)		1	0.0003 Owenia borealis (juv.)		1	0.0003
Harpinia antennaria		2	0.0033 Harpinia antennaria		2	0.0029
Bathyporeia elegans		1	0.0002 Bathyporeia elegans		1	0.0002
Eudorellopsis deformis		2	0.0008 Eudorellopsis deformis		2	0.0007
Anapagurus laevis		1	0.0302 Anapagurus laevis		1	0.0281
Majidae		1	0.0244 Majidae		1	0.0226
Antalis entalis		5	0.5975 Antalis entalis		5	0.5499
Cardiidae (juv.)		1	0.007 Cardiidae (juv.)		1	0.007
Abra (juv.)		3	0.002 Abra (juv.)		3	0.002
Arctica islandica (juv.)		1	0.0006 Arctica islandica (juv.)		1	0.0006
Phoronis		2	0.0036 Phoronis		2	0.0033
Amphiura filiformis		9	0.0803 Amphiura filiformis		9	0.0751

Specimens found within Taxon pots

Nothing found

Specimens found in residue

Nothing found

Abundance Total	67	67
Bray Curtis Similarity Index	100.00%	

NSP094 303 64316

Original data

Identification	Abundance	Biomass
Cerianthus lloydii		1
Edwardsiidae	P	
NEMERTEA		2
Malmgrenia arenicolae		2
Goniada maculata		4
Sphaerodorum gracilis	P	
Nephtys (juv.)		1
Paramphinome jeffreysii		5
Scoloplos armiger		4
Scoelepis		1
Spiophanes bombyx		9
Spiophanes kroyeri		1
Cirratulidae	P	
Galathowenia		1
Owenia borealis		5
Lanice conchilega		5
Lanice conchilega (juv.)		1
Stenothoe marina		1
Harpinia antennaria		2
Ampelisca macrocephala		1
Abludomelita obtusata		1
Pagurus pubescens		1
Abra		3
Abra prismatica		1
Amphiura filiformis		4

Quality Assurance

Identification	Abundance	Biomass	Notes
Cerianthus lloydii		1	0.0011
Edwardsiidae	P		0.016
NEMERTEA		2	0.0356
Malmgrenia arenicolae		2	0.01
Goniada maculata		4	0.0722
Sphaerodorum gracilis	P		0.0001
Nephtys (juv.)		1	0.0185
Paramphinome jeffreysii		5	0.0034
Scoloplos armiger		4	0.0155
Scoelepis		1	0.0228
Spiophanes bombyx		9	0.0102
Spiophanes kroyeri		1	0.0045
Cirratulidae	P		0.0025
Galathowenia		1	0.0002
Owenia borealis		5	0.0601
Lanice conchilega		5	0.6153
Lanice conchilega (juv.)		1	0.0022
Stenothoe marina		1	0.0006
Harpinia antennaria		2	0.0053
Ampelisca macrocephala		1	0.0115
Abludomelita obtusata		1	0.0002
Pagurus pubescens		1	0.0271
Abra		3	0.0007
Abra prismatica		1	0.1034
Amphiura filiformis		4	0.0521

Specimens found within Taxon pots

Nothing found

Specimens found in residue

Paramphinome jeffreysii	1	0.0003
Spiophanes bombyx	1	0.0002
Capitellidae	1	0.0002 New taxa

Abundance Total **56** **59**

Bray Curtis Similarity Index **97.39%**

Appendix 2

Appendix 3

PMFs

Sample	Burrowed mud	Offshore deep sea muds	Offshore subtidal sands and gravels	Ocean quahog
NSP001 182 64224				
NSP002 311 64225				
NSP003 297 64226				
NSP004 288 64227				
NSP005 280 64228				
NSP006 273 64229				
NSP007 263 64230				
NSP008 260 64231				
NSP009 165 64232				
NSP011 310 64234				
NSP012 298 64235				
NSP013 283 64236				
NSP014 274 64237				
NSP015 269 64238				
NSP016 262 64239				
NSP017 157 64240				
NSP018 256 64241				
NSP019 323 64242				
NSP020 315 64243				
NSP021 289 64244				
NSP022 281 64245				
NSP023 261 64246				
NSP024 164 64247				
NSP025 173 64248				
NSP026 322 64249				
NSP027 197 64250				
NSP028 309 64251				
NSP029 275 64252				
NSP030 265 64253				
NSP032 166 64255				
NSP033 174 64256				
NSP034 183 64257				
NSP035 312 64258				
NSP036 299 64259				
NSP037 290 64260				
NSP038 272 64261				
NSP039 268 64262				
NSP040 264 64263				
NSP041 253 64264				
NSP042 181 64265				
NSP043 196 64266				
NSP044 307 64267				
NSP045 293 64268				
NSP046 284 64269				
NSP047 276 64270				
NSP048 270 64271				
NSP050 158 64273				
NSP052 321 64275				
NSP053 189 64276				
NSP054 313 64277				
NSP055 306 64278				
NSP057 267 64280				
NSP060 316 64283				
NSP061 195 64343				
NSP062 305 64284				
NSP063 294 64285				
NSP064 285 64286				

Key



- Good fit
- Potential fit - needs video data

Sample	Burrowed mud	Offshore deep sea muds	Offshore subtidal sands and gravels	Ocean quahog
NSP065 277 64287				
NSP066 251 64288				
NSP067 167 64289				
NSP068 175 64290				
NSP069 188 64291				
NSP070 314 64292				
NSP071 300 64293				
NSP072 292 64294				
NSP073 282 64295				
NSP074 271 64296				
NSP075 254 64297				
NSP076 172 64298				
NSP077 180 64299				
NSP078 194 64300				
NSP079 304 64301				
NSP080 295 64302				
NSP081 286 64303				
NSP082 278 64304				
NSP083 159 64305				
NSP084 258 64306				
NSP085 320 64307				
NSP086 187 64308				
NSP087 308 64309				
NSP088 291 64310				
NSP089 279 64311				
NSP090 162 64312				
NSP091 325 64313				
NSP093 193 64315				
NSP095 296 64317				
NSP096 287 64318				
NSP097 252 64319				
NSP098 168 64320				
NSP099 176 64321				
NSP100 186 64322				
NSP101 199 64323				
NSP102 301 64324				
NSP103 255 64325				
NSP104 171 64326				
NSP105 179 64327				
NSP106 192 64328				
NSP107 302 64329				
NSP110 185 64332				
NSP111 198 64333				
NSP112 161 64334				
NSP113 326 64335				
NSP114 318 64336				
NSP115 190 64337				
NSP116 169 64338				
NSP117 177 64339				
NSP119 170 64341				
NSP120 178 64342				

PMFs

Sample	Burrowed mud	Inshore deep mud with burrowing heart urchins	Offshore deep sea muds	Offshore subtidal sands and gravels	Ocean quahog
EGM001 009 64068	Yellow		Green		Green
EGM003 010 64070	Yellow				
EGM004 004 64071			Green		Green
EGM006 011 64073	Yellow		Green		
EGM007 008 64074	Yellow				
EGM008 003 64075				Green	Green
EGM009 005 64076				Green	
EGM010 012 64077					
EGM011 007 64078			Green		
EGM012 056 64079					Green
EGM013 006 64080			Green		Green
EGM014 055 64081			Green		
EGM015 074 64082	Yellow				Green
EGM016 111 64083			Green	Green	Green
EGM017 013 64084	Yellow		Green		
EGM018 057 64085					Green
EGM020 093 64087			Green		
EGM021 112 64088	Yellow				
EGM022 054 64089	Yellow		Green		
EGM023 073 64090			Green		
EGM024 092 64091	Green				
EGM025 110 64092					Green
EGM026 126 64093	Green				
EGM027 038 64094	Green		Green	Green	Green
EGM028 058 64095	Green		Green		
EGM030 094 64097	Green			Green	
EGM031 113 64098			Green		Green
EGM032 127 64099			Green		
EGM033 014 64100	Yellow				Green
EGM034 053 64101			Green	Green	
EGM035 072 64102	Yellow			Green	
EGM036 091 64103			Green	Green	
EGM037 109 64104			Green		
EGM038 125 64105					Green
EGM039 141 64106	Green		Green		
EGM040 039 64107	Green			Green	Green
EGM041 077 64108	Yellow				
EGM042 095 64109	Green		Green		
EGM043 114 64110			Green		
EGM044 128 64111	Green		Green		
EGM045 052 64112				Green	
EGM046 071 64113			Green		
EGM047 090 64114	Green		Green	Green	
EGM048 108 64115	Yellow		Green	Green	
EGM049 124 64116	Green				Green
EGM050 140 64117	Green		Green	Green	
EGM051 015 64118	Yellow				Green
EGM052 059 64119			Green		
EGM053 078 64120	Yellow			Green	
EGM054 096 64121					Green
EGM055 129 64122			Green	Green	
EGM056 142 64123			Green	Green	
EGM057 037 64124			Green	Green	
EGM058 051 64125	Yellow				
EGM059 070 64126			Green		

Key

	Good fit
	Potential fit - needs more data

Sample	Burrowed mud	Inshore deep mud with burrowing heart urchins	Offshore deep sea muds	Offshore subtidal sands and gravels	Ocean quahog
EGM060 089 64127					
EGM061 107 64128					
EGM062 123 64129					
EGM063 139 64130					
EGM064 149 64131					
EGM065 016 64132					
EGM068 079 64135					
EGM069 097 64136					
EGM070 115 64137					
EGM071 130 64138					
EGM072 150 64139					
EGM073 036 64140					
EGM074 050 64141					
EGM075 069 64142					
EGM076 088 64143					
EGM077 106 64144					
EGM078 122 64145					
EGM079 138 64146					
EGM080 148 64147					
EGM081 017 64148					
EGM083 061 64150					
EGM084 080 64151					
EGM085 098 64152					
EGM086 116 64153					
EGM087 131 64154					
EGM088 143 64155					
EGM089 151 64156					
EGM093 068 64160					
EGM094 087 64161					
EGM095 105 64162					
EGM096 121 64163					
EGM097 137 64164					
EGM098 019 64165					
EGM099 031 64166					
EGM100 042 64167					
EGM102 081 64169					
EGM103 099 64170					
EGM104 117 64171					
EGM105 132 64172					
EGM106 144 64173					
EGM107 152 64174					
EGM108 028 64175					
EGM110 048 64177					
EGM111 086 64178					
EGM112 104 64179					
EGM113 120 64180					
EGM114 136 64181					
EGM115 147 64182					
EGM116 156 64183					
EGM118 043 64185					
EGM120 082 64187					
EGM121 100 64188					
EGM122 118 64189					
EGM123 133 64190					
EGM124 145 64191					
EGM125 153 64192					

Sample	Burrowed mud	Inshore deep mud with burrowing heart urchins	Offshore deep sea muds	Offshore subtidal sands and gravels	Ocean quahog
EGM127 027 64194					
EGM128 033 64195					
EGM130 067 64197					
EGM131 085 64198					
EGM132 103 64199					
EGM133 119 64200					
EGM134 135 64201					
EGM135 146 64202					
EGM136 155 64203					
EGM137 022 64204					
EGM139 044 64206					
EGM140 064 64207					
EGM141 083 64208					
EGM142 101 64209					
EGM143 134 64210					
EGM144 154 64211					
EGM145 024 64212					
EGM146 026 64213					
EGM147 032 64214					
EGM148 046 64215					
EGM149 066 64216					
EGM150 084 64217					
EGM151 102 64218					
EGM152 023 64219					