East Anglia Offshore Wind

VATTENFALL

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East Anglia THREE

Appendix 10.3

East Anglia One Offshore Windfarm Cable Route: Benthic and Intertidal Characterisation Report

Environmental Statement

Volume 3

Document Reference – 6.3.10 (3)

Author – Marine Ecological Surveys Ltd

East Anglia THREE Limited

Date – November 2015

Revision History – Revision A

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10.3 EAST ANGLIA ONE OFFSHORE WINDFARM CABLE ROUTE: BENTHIC AND INTERTIDAL CHARACTERISATION REPORT

1. This appendix contains a report written by Marine Ecological Surveys Limited which characterises the benthic and intertidal ecology of the East Anglia ONE windfarm cable route.

East Anglia Offshore Windfarm Cable Route: Benthic and Intertidal Characterisation Report

Document No: ERMCAB11

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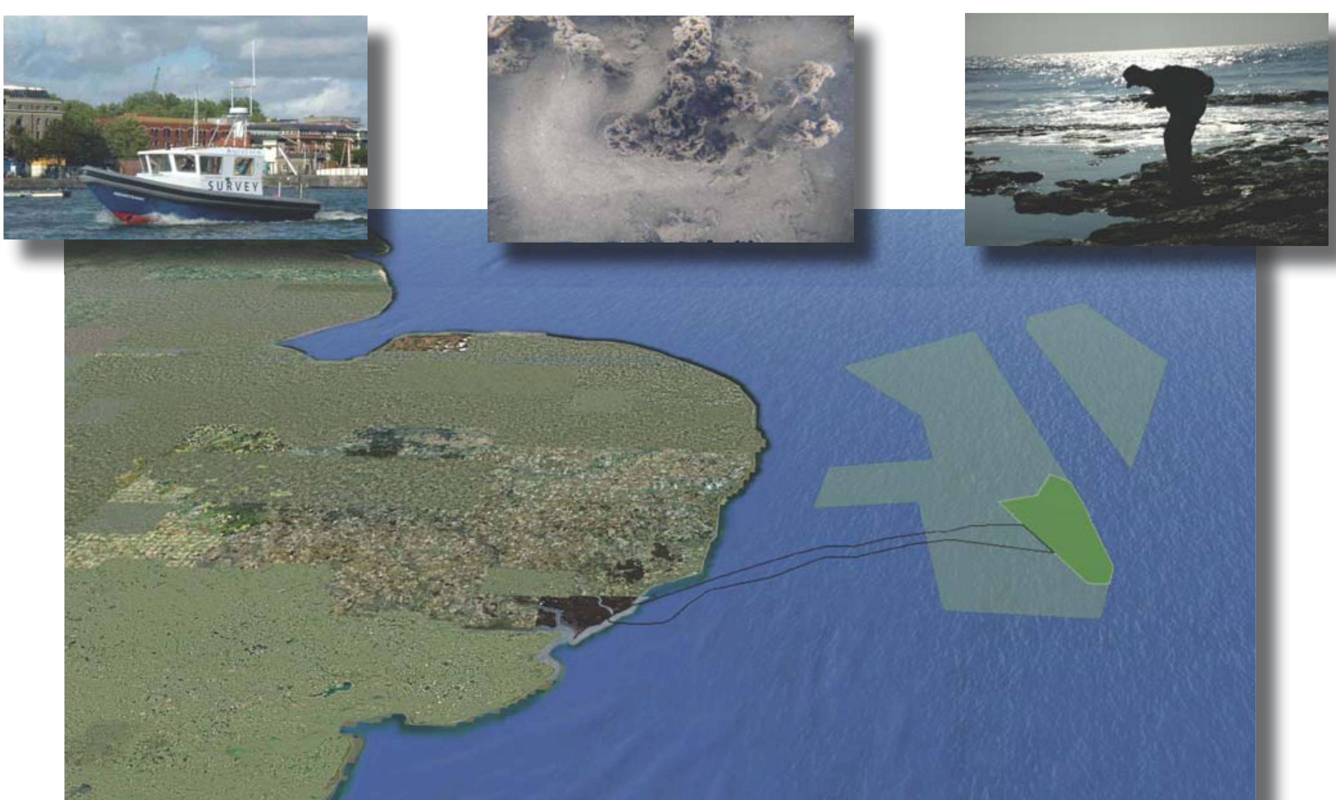

EAST ANGLIA OFFSHORE WINDFARM CABLE ROUTE:
BENTHIC AND INTERTIDAL CHARACTERISATION REPORT

Report No:	ERMCAB1211
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Status:	FINAL		
Issue Date:	9.3.11		

STATEMENT

Marine Ecological Surveys Limited (MESL) were commissioned by ERM on behalf of East Anglia Offshore Windfarm Limited (EAOW Ltd) to carry out an intertidal and sub-tidal (benthic) characterisation study of the cable corridor associated with the East Anglia Offshore Windfarm cable route. This survey was part of a wider project that encompassed the benthic and epi-benthic characterisation studies of the entire East Anglia Offshore Windfarm Zone.

The benthic characterisation study consisted of obtaining seabed imagery and grab samples from 40 stations located along the cable corridor. All samples were acquired between the 17th & 21st August 2011.

The intertidal characterisation study consisted of providing EAOW Ltd with a broad-scale habitat map and an assessment of two potential cable landfall sites. The intertidal survey was carried out between the 16th & 19th August 2011.

The following report provides details of the methodologies employed throughout the design and implementation of the EAOW cable route surveys and presents the collated data and results from the same. The objective of this report is to provide a baseline assessment of the habitats which occur within the cable corridor area. The results of this investigation will support EAOW Ltd's application for the relevant permits and licences associated with the East Anglia Offshore Windfarm development.

Marine Ecological Surveys Limited is a member of the Institute of Environmental Management and Assessment (IEMA) and is a leading participant in the National Marine Biological Analytical Control (NMBAQC) scheme.

Marine Ecological Surveys Limited

iema
INSTITUTE OF ENVIRONMENTAL MANAGEMENT & ASSESSMENT

NMBAQC SCHEME

CONTENTS

NON-TECHNICAL SUMMARY

The East Anglia Offshore Windfarm zone (EAOW) is situated at a minimum distance of 14km off the East Anglian coast. Marine Ecological Surveys Ltd was commissioned by East Anglia Offshore Wind Ltd (EAOW Ltd), via ERM Ltd, to complete a characterisation of the potential EAOW cable route area during 2011. EAOW Ltd is a joint venture comprising Scottish Power Renewables and Vattenfall Wind Power. The project completed by MESL included a sub-tidal benthic characterisation study of the EAOW cable route area of search and intertidal characterisation studies of two potential cable landfall locations.

The following report represents a detailed account of the EAOW cable route intertidal and sub-tidal characterisation studies. This report provides a full description of the methods used to design the benthic sampling array and during sample acquisition, as well as a detailed analysis and presentation of the results. A full account of the protocol for the intertidal habitat characterisation survey and the findings from this investigation is also presented; this includes broad-scale habitat maps and an in-depth assessment of both sites.

The objective of this report is to provide a detailed account of the biological communities of the sub-tidal area of search and their associated sediment types, together with a characterisation of the potential intertidal landfall sites. This report will be used by EAOW Ltd to inform their decision on their preferred route for the EAOW transmission assets. In addition the findings of this report will support the development licence application process.

The following report has been compiled using survey data collected between 17th August and 21st August 2011. A total of 40 stations were sampled during this period. Additional data have been incorporated into this report from 11 stations sampled during wider EAOW zonal characterisation programme, which ran from July 2010 to January 2011. Data from a total of 51 benthic stations have, therefore, informed the findings of this report.

Benthic Survey Summary

A total of 41 sediment samples were acquired from across the EAOW cable route area. Analysis of these samples reveals that the predominant deposit type of the survey area is sand, with areas of mixed sediments distributed across the site. Localised areas dominated by gravel and finer sediments were also observed. London clay eroded from coastal cliffs has been deposited at near shore sites.

Multivariate analysis of the sediment data reveals that the deposits found across the area can be divided into three groups, namely; Gravelly Sand, Muddy Sandy Gravel and slightly Gravelly Muddy Sand. The dominant sediment type for the area was Gravelly Sand, which was widely distributed over the cable route study area, but dominated the most easterly section of the area. Muddy Sandy Gravel was more common closer to the shore and slightly Gravelly Muddy Sand was only found within 10km of the shore.

A total of 50 faunal samples were acquired from the area of interest, from which 270 taxa were recorded. Mean values of 93 individuals and 20 taxa were recorded at each station. The mean biomass per station was 0.38 gAFDW (ash free dry weight).

Annelida made the greatest contribution to total abundance and taxonomic richness (diversity). The polychaete worm *Sabellaria spinulosa* was the most abundant organism identified across the site. Mollusca was the second most abundant group across the area. Crustacea and Miscellanea made broadly equal, but low contributions to total abundance. Echinodermata made the least significant contribution to total abundance.

Miscellanea made the second greatest contribution to taxonomic richness, followed by Mollusca and Crustacea respectively. Echinodermata made the smallest contribution to taxonomic richness.

Mollusca made the greatest contribution to the total biomass, followed by Echinodermata and Annelida respectively. Crustacea and Miscellanea made limited contributions to the total biomass recorded from across the area of interest.

Abundance, taxonomic richness and biomass were not uniformly distributed across the site. The total abundance and taxonomic richness indices showed a strong correlation in terms of their distribution across the site. In general, at stations where high relative abundances were noted, higher numbers of taxa were also recorded. Areas in which relatively high abundances were observed tended to occur as a result of the presence of high abundances of a single taxon.

Multivariate statistical analysis revealed that seven distinct faunal groups were present across the EAOW cable route survey area. Multivariate statistical analysis also demonstrated that a strong correlation between the distribution of fauna and the distribution of sediments existed.

Species and habitats of conservation concern were recorded during the course of the EAOW cable route investigation. A single record of the nationally scarce species *Apherusa ovalipes* was found at one sampling location. In addition, Annex I habitats – principally *Sabellaria* reef habitats - have previously been described from adjacent areas of the southern North Sea, including from within EAOW Area B. Evidence of *Sabellaria* reef was found at one site across the EAOW cable route area. This habitat was identified from seabed imagery.

Intertidal Survey Summary

The broad-scale habitat mapping exercise of the two proposed cable landfall sites commenced on 16th August 2011 and was completed on 19th August 2011. This survey revealed that both shores predominantly comprised shingle habitat, with scattered patches of vegetated shingle also present. Localised patches of sand overlaying shingle occurred at both sites. Apart from the vegetation supported by the shingle and the localised patches of common rocky shore species attached to man-made structures, both sites were devoid of any substantial intertidal communities. The two sites differed in so much as the southern site exhibited more signs of sea defence management due to the presence of residential and business properties adjacent to the site. The northern site is a more remote, isolated location where sea defence measures are limited to a sea wall located adjacent to the site.

The vegetated shingle habitat that is characteristic of these two sites is common along the Suffolk coast. This habitat is considered scarce at a national scale and some beaches where these habitats occur have been designated as Special Areas of Conservation (SACs) under Annex I of the EU Habitats Directive. The study sites investigated for this report have not received such designations and it is not believed that these sites will be put forward for designation. Vegetated shingle supports a range of plants including the sea pea, *Lathyrus japonicus,* identified at the southern intertidal site.

No evidence of *Sabellaria* reef was found at either of the intertidal sites.

A. INTRODUCTION

The East Anglia Windfarm (EAOW) zone covers an area of approximately 4,700km^2. The EAOW zone is split into two areas known as Area A and Area B (Figure 1). The two areas are separated by an International Maritime Organisation (IMO) deep water shipping channel and together the areas are referred to as the EAOW Zonal Environmental Assessment (ZEA) area. The EAOW zone is to be developed by East Anglia Offshore Wind Ltd (EAOW Ltd) – a joint venture between Scottish Power Renewables Ltd and Vattenfall Wind Power Ltd.

Area B contains the initial EAOW development area, which is known as East Anglia ONE (EA ONE) (Figure 1). EA ONE lies approximately 44km off the Suffolk coast. Following the completion of development it is anticipated that EA ONE will yield a maximum of 1.2GW of electricity. It is proposed that further windfarms will be developed across the EAOW zone over the course of the coming years.

Marine Ecological Surveys Limited (MESL) was commissioned by ERM on behalf of EAOW Ltd, to undertake a benthic biological characterisation of the EAOW zone. Hence, MESL carried out large scale benthic and epibenthic surveys of the EAOW zone between June 2010 and January 2011. The EAOW cable route survey, the subject of the present report, represents an ancillary stage of these characterisation studies.

The principle aims of EAOW cable route characterisation project were to provide:-

- An intertidal characterisation of the habitat, sediment types and community composition of the shore up to the mean high water mark (MHWM).
- An offshore benthic characterisation study of the cable corridor.

The intertidal characterisation study covered two potential landfall areas referred to as the northern site and southern site. The northern site is located just north of the River Deben and is approximately 2.1km long. The southern site is located south of the River Deben and is approximately 1.1km long. Initial site assessments of both areas indicated that sample acquisition would not be beneficial to the characterisation of the areas. Therefore, broad-scale habitat mapping of both areas was undertaken instead.

The offshore benthic characterisation took into consideration the whole of the cable corridor. A total of 40 stations were allocated along the cable corridor in order to best represent the habitats and sediment types which typically occurred across the area. Each station was sampled with a 0.1m^2 mini-Hamon grab.

The most easterly area of the cable corridor overlaps part of the EAOW ZEA survey area. This area was surveyed as part of the EAOW zonal study undertaken in 2010/11. This area was not surveyed again and data from the EAOW zonal characterisation study have been integrated into the data-set upon which this report is based. Therefore, data from 51 stations have informed the findings of this report.

As no geophysical data was available for the cable corridor at the time of the cable route survey, seabed imagery was acquired at each of the 40 stations prior to deployment of the grab in order to ensure that no potential Annex I habitats were damaged during survey. In addition to the acquisition of benthic grabs which were retained for faunal analysis, sub-samples of each grab were acquired for particle size distribution (PSD) analysis.

Benthic survey operations of the cable corridor commenced on 17th August 2011 and were completed on 21st August 2011. Intertidal habitat mapping survey operations of the two selected landfall sites (Northern and Southern Sites) commenced on 16th August 2011 and concluded on 19th August 2011.

The following report provides a detailed account of the EAOW cable route characterisation, including the methodology employed during survey design and data acquisition, the analysis and presentation of the data and the results. The information outlined in this report provides the following information relevant to the proposed cable route construction:-

- A description of the main benthic taxa and faunal groups in the area, together with their distribution and abundance.
- A broad-scale view of the distribution of sediments and associated faunal groups.
- An evaluation and habitat map of the intertidal sites.
- The occurrence and distribution of species and habitats of conservation importance.

This information will help inform EAOW Ltd on the best positioning for the EAOW cable route and cable landfall sites and is complementary to the wider EAOW ZEA report, EA ONE report and PEI report which have been commissioned as part of the EAOW project.

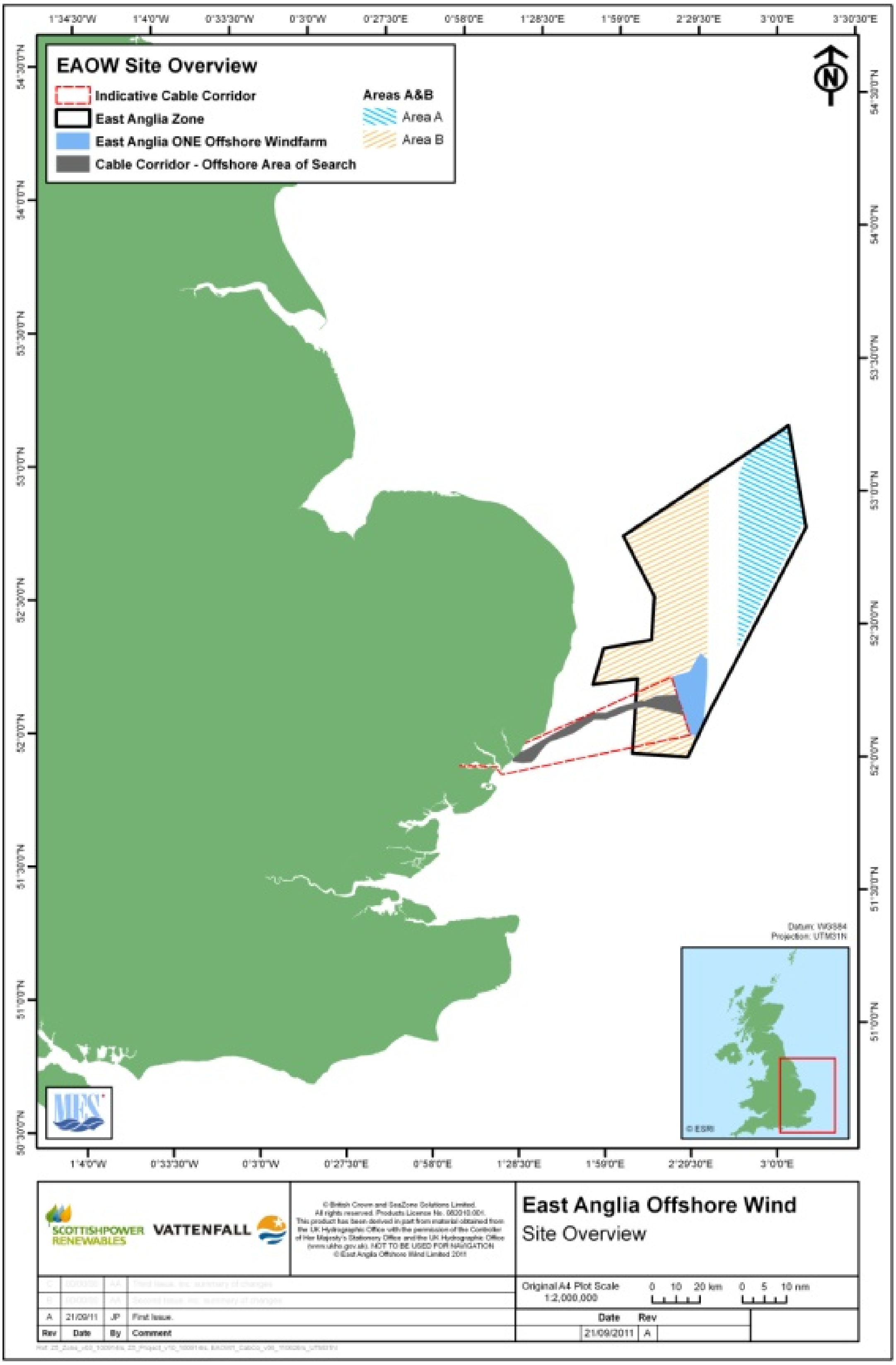

Figure 1. Overview of the EAOW cable route area and the EAOW zone off the Suffolk coast.

B. METHODOLOGY

B.1 Intertidal Habitat Survey Rationale

Following an initial desk-based assessment of both sites – based on aerial imagery (Figure 2) - it was proposed that a qualitative walk over survey would be undertaken to provide a broad-scale assessment of the habitats and fauna which were indicative of both sites. Prior to survey, mobilisation maps of both sites were prepared using the aerial photographs supplied by EAOW Ltd. The co-ordinates of each site were pre-recorded in a Garmin hand-held GPS device prior to the survey.

Tide tables were consulted before site visits to ensure surveys started within one hour of low-tide. A structured walk was taken over each of the sites. Station positions (way-points) were logged using a Garmin hand held GPS device (accurate to 3-4m). Information on sediment type, biota present and ancillary information on the immediate area such as the presence of man-made structures was noted in the intertidal survey field notes. Summaries of these notes are presented in Appendix Tables 11-13. Habitat maps were also made. Photographic samples, labelled with the way-point numbers, were also acquired at each station (Appendix Plates 2 and 3).

B.1.1 Intertidal Habitat Mapping

On completion of the intertidal walk over surveys, all the survey information was transferred to the MESL database and photographs and GPS data were downloaded for assessment. Maps of both sites were produced by systematically analysing the survey notes, photographs and GPS data. Maps were produced using ArcGIS 9.3.1 software.

B.2 Benthic Survey Rationale and Positioning of the Sampling Stations

Prior to the commencement of field operations, sediment data for the sub-tidal cable corridor and surrounding area were sourced from the Outer Thames Estuary Regional Environmental Characterisation (2009[1]). The positions of sampling hazards, such as pipelines and wrecks, were obtained from ARCS charts for the area supplied by the UK Hydrographic Office. This information was used to inform the positioning of the sampling stations as no geophysical information was available to MESL ahead of the offshore operations.

The EAOW cable route survey area lies in an area of heterogeneous sediments, hence a random stratified sampling design was established in order to fairly represent the benthic habitats found across the area (Figure 3). The back ground to this approach is outlined in the the Guidelines for the Conduct of Benthic Studies at Marine Aggregate Extraction Sites (2011[2]).

The eastern fringes of the EAOW cable corridor overlap part of EAOW Area B. This area was sampled during the EAOW zonal benthic characterisation study. The sampling protocol closely followed that of the EAOW cable route survey and so this area was not re-sampled during summer 2011. Instead, relevant data from the EAOW zone benthic characterisation study were integrated into the cable route data acquired during summer 2011. Note that only one station within this area was targeted for seabed imagery analysis during the EAOW zonal survey. Table 1 provides a breakdown of the total number of samples, by type, which contributed to this report. In addition, insight into the source of the samples is also provided.

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[1] Marine Aggregate Levy Sustainability Fund (MALSF) 2009. The Outer Thames Estuary Regional Environmental Characterisation. 09/J/1/06/1305/0870. Report prepared by Emu Ltd and University of Southampton.

[2] Ware, S.J. & Kenny, A.J. 2011. Guidelines for the Conduct of Benthic Studies at Marine Aggregate Extraction Sites (2nd Edition). Marine Aggregate Levy Sustainability Fund. 80 pp.

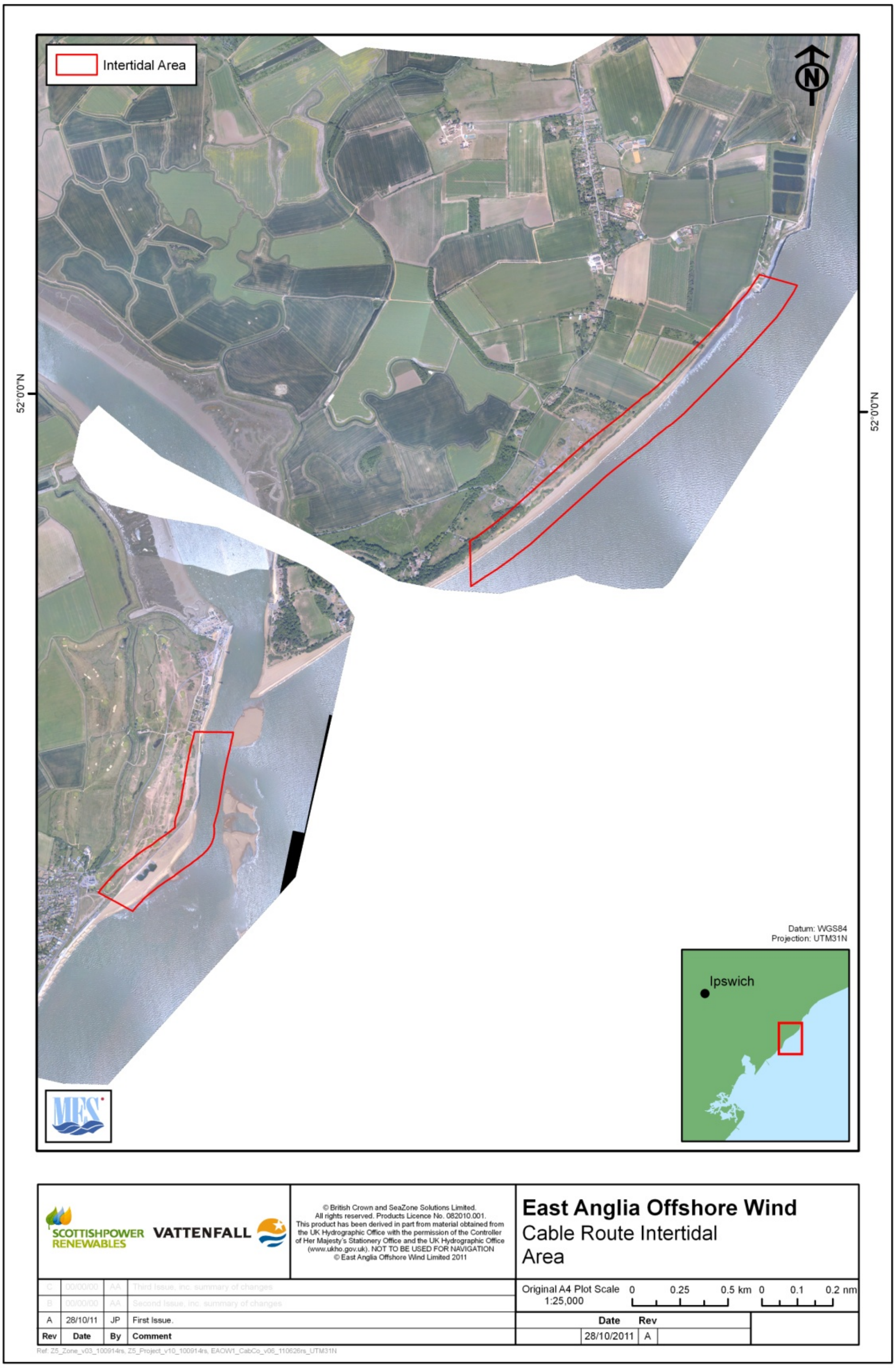

Figure 2. The possible EAOW cable route landfall locations.

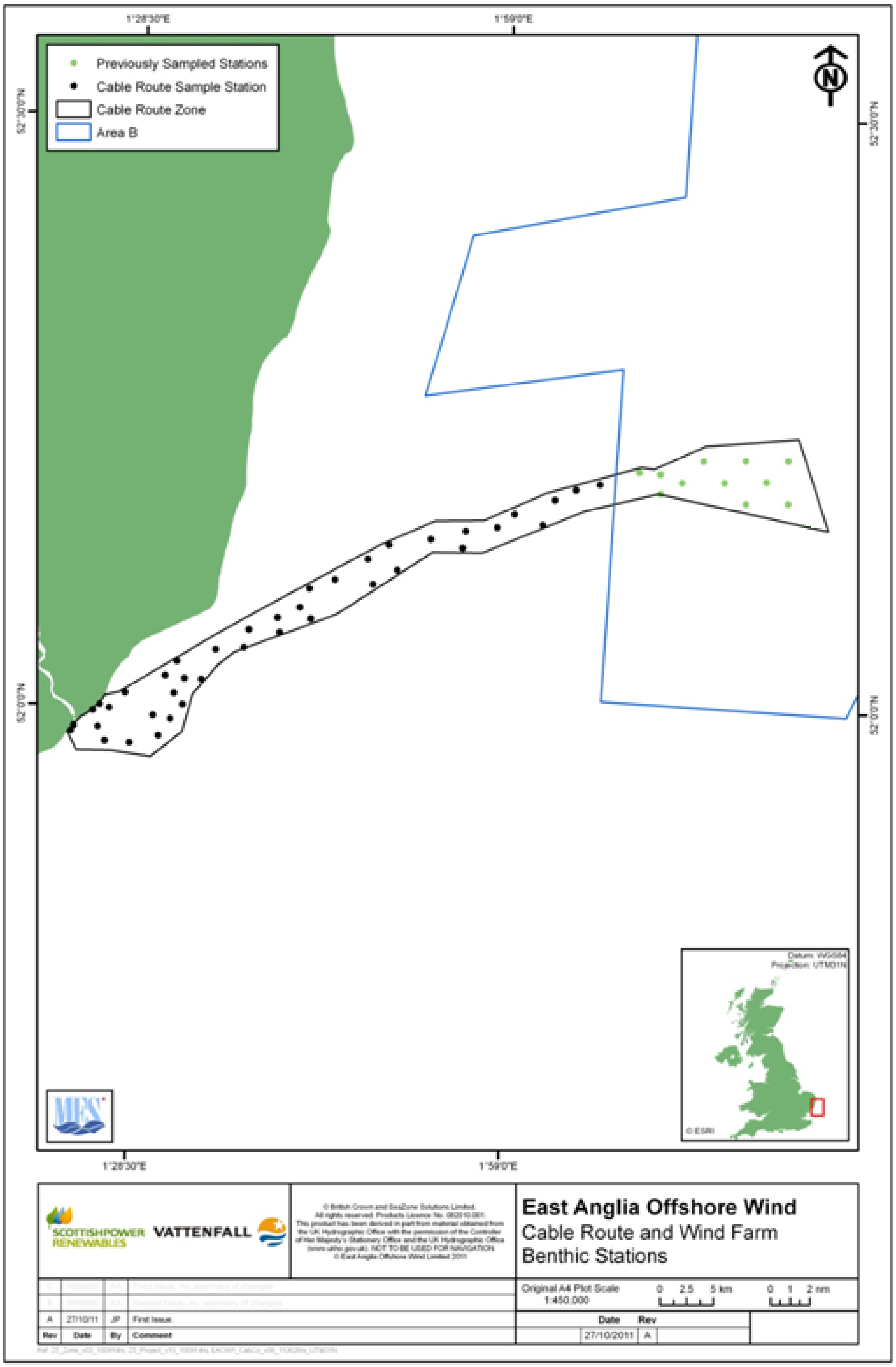

Figure 3. Sampling positions for 40 benthic camera and grab stations in the EAOW cable route along with the positions of the 11 stations sampled during the EAOW benthic characterisation survey located in Area B.

Sample Type	Cable Route Survey 2011	EAOW Zonal Survey	Total
Total Sampling Stations	40	11	**51**
Video Stations	40	1	**41**
Fauna Grab Samples	39	11	**50**
Sediment Samples Stations	30	11	**41**

Table 1. A breakdown of the total number of samples, by type, which contributed to this report. Information on the source of the samples is also presented.

B.3 Benthic Sample Acquisition and Assessment

The vessel used for the EAOW benthic cable route sub-tidal survey was the "*Aquadynamic*", a 12m survey vessel operated by Aquatech. This vessel is Workboat Coded MCA Category 2.

B.3.1 Seabed Imagery Analysis

As geophysical data was not available for the EAOW cable route sub-tidal survey area before mobilisation, seabed imagery was acquired for each of the 40 stations before deployment of the 0.1m^2 mini-Hamon grab. This protocol was in line with guidance established by Cefas (in draft, 2011[3]).

Seabed images were acquired using an underwater camera with a freshwater lens specifically designed to capture still images and video in turbid waters. The camera was deployed from the survey vessel via a winch, which was operated by the vessel Master. The camera was slowly lowered to the seabed and live images were fed to an onboard computer where they were analysed by MESL survey staff. Still images and video data were saved to a computer onboard the vessel (along with a backup copy). Data pertaining to the fix position, depth, time and sea-state were all logged in the imagery survey note-book along with a description of the observed sediments and fauna. This information is summarized in Appendix Table 3. Representative examples of the seabed imagery are provided in Appendix Plate 4.

[3] Judd, A. 2011. Guidelines for data acquisition to support marine environmental assessments of offshore renewable energy projects. Draft for Consultation. Cefas contract: ME5403 - Module 15. Centre for Environment, Fisheries & Aquaculture Science. 78

Co-ordinates for each image taken were recorded via the vessels dGPS device and logged to the vessels computer along with information including water depth, time, date and position fix number. This information was checked against the survey log book for consistency.

The presence of potential Annex I habitats were noted and flagged to the vessel Master, and additional imagery was obtained for the site in order to adequately assess the extent of the habitat.

B.3.2 Benthic Sample Acquisition

Following assessment of the underwater still and video footage 39 stations were sampled using a 0.1m^2 mini-Hamon grab. Target station locations were located using the vessel's on-board dGPS device and the position of the vessel held. The 0.1m^2 mini-Hamon grab was deployed by the vessel master using a winch and gantry and lowered to the seabed. Once triggered the grab was recovered and, before the jaws of the grab were opened, positioned over a 1mm mesh sieve supported by a mesh wire frame. The grab was then opened and all of the sediment was released onto the sieve. Notes relating to the key characteristics of each sample were made. These notes included the sediment type, notable biota and sample size. All notes were recorded as the fieldnotes in the survey notebook. The benthic field notes are summarised in Appendix Table 2.

A photograph of each sample was taken (Appendix Plate 1) and the sample was either accepted or rejected depending on the volume (sample >5l accepted). A maximum of three attempts were made at each station to obtain a sample in excess of 5l. Where all 3 samples were <5l in volume, the largest was retained for processing and a decision was made as to whether removal of a sub-sample for particle size distribution (PSD) analysis was appropriate.

PSD sub-samples were taken from all samples in excess of 5L and placed in a labelled (external and internal) plastic bag, which was tightly sealed and stored. The remainder of the sample was gently eluted with seawater over the 1mm sieve to remove fine particles of sediment. The remainder of the sample was placed in a labelled (external and internal) plastic bucket and preserved with formalin before being tightly sealed and stored.

B.3.3 Separation and Analysis of Fauna

On arrival at MESL's laboratory the benthic and PSD samples were counted and checked against the reference list from the survey in accordance with MESL's standard operating procedures. The samples were also logged into the UNICORN (Access based) database system. The samples were subsequently sent to Gardline Environmental Limited for analysis.

The formalin used to preserve the benthic samples was removed and collected into specialised containers for licensed disposal. In order to remove the low-density faunal components, such as Annelida and Crustacea, the sample was gently eluted over a 1mm sieve. Larger organisms and organisms attached to stones were removed directly from the residual sample. All fauna >1mm were retained for identification and enumeration. These initial stages were carried out in the open air to reduce the effects of residual formalin used to preserve the sample on the survey vessel.

Sediment residues were checked under a stereomicroscope in order to remove smaller organisms. All organisms were placed in labelled containers and preserved with Industrial Methylated Spirit (IMS). These organisms were subsequently separated into major taxonomic groups before being identified to species level (where possible) by MESL's trained taxonomists. Each organism was identified and enumerated. Identification was thoroughly checked throughout the process both by senior analysts and against a reference collection held for ease of use in the analytical laboratory. For QA purposes all taxonomists signed log sheets as the samples' progressed through the analytical phases.

Marine Ecological Surveys Limited is a leading participant in the National Marine Biological Analytical Quality Control (NMBAQC) scheme. Species identification was recorded in a standard format using species codes from Howson & Picton (1997). The data were entered into the MESL UNICORN (Access based) database.

B.3.4 Biomass Determination

Following faunal analysis and abundance counts the blotted wet weight of the major groups were recorded. These data were then used to estimate total biomass as ash-free dry weight (AFDW) in grams using conventional conversion factors for each of the faunal groups. The conversion factors are as follows, in accordance with Eleftheriou & Basford (1989)[4].

Annelida = x0.155;
Crustacea = x0.225;
Mollusca = x0.085;
Echinodermata = x0.08;
Miscellaneous groups

B.3.5 Particle Size Distribution

The sub-samples of sediment obtained from the grab samples, in accordance with the procedures outlined in Section B.3.2, were subject to full particle size analysis by Gardline Environmental Limited. The sediments were sieved over the range 31.5mm-0.063mm on the Wentworth scale. The results were expressed as absolute percentage retained on each sieve size. These results are presented in Appendix Table 4 and a summary of %gravel, %sand and %silt for each sample for ease of broad-scale substrate assessment is presented in Appendix Table 5.

[4] Eleftheriou,A & Basford,D.J. 1989. The macrofauna of the offshore northern North Sea. *Journal of the Marine Biological Association, UK*. 69, 123-143.

B.4 Statistical Analysis

B.4.1 Univariate Analysis

Univariate statistical analyses were carried out by MESL using Microsoft Excel (2007). The data were analysed in a number of ways in order to extract information regarding the abundance of fauna, the number of taxa present (taxonomic richness) and the total major group biomass (gAFDW) at each station. Additional summary data were extracted and are presented where appropriate.

B.4.2 Multivariate Analysis

Multivariate analysis was carried out using the PRIMER V6 software package (Clarke & Warwick 1994a[5], Clarke & Gorley 2001[6]). The following routines were employed:

Hierarchical Cluster Analysis

Cluster analysis aims to find 'natural groupings' such that samples within a group are more similar to each other than samples in different groups. The most commonly used clustering techniques are the hierarchical agglomerative methods.

The hierarchical agglomerative cluster method starts with a similarity matrix and 'fuses' the samples into groups and the groups into larger clusters, starting with the highest mutual similarities then gradually lowering the similarity level at which groups are formed until all of the samples are contained in a single cluster. The results of hierarchical clustering are represented by a tree diagram or dendrogram, with the x axis representing the full set of samples and the y axis representing the similarity level at which the groups are considered to have fused.

Multidimensional Scaling (MDS) Ordination

This technique allows the construction of a 'map' or configuration of the samples in multidimensional space. This configuration attempts to position the samples as accurately as possible to reflect the similarity between the samples. For example, if sample 1 has a greater similarity to sample 2 than it does to sample 3 then sample 1 will be positioned more closely to sample 2 than it is to sample 3. This 'map' of the relative similarities between samples is then plotted in two dimensions. It is important to remember that this two-dimensional plot is a representation of a multidimensional picture.

When large numbers of samples are analysed, or datasets that include samples that are very different to one another the accuracy of the two-dimensional plot may be reduced. A measure of the accuracy of the two-dimensional representation (stress) is given on the MDS plot. Stress values <0.1 correspond to a good ordination; values <0.2 give a useful two-dimensional picture but one should not place too much reliance on the fine details of the plot; stress >0.3 indicates that the samples are close to being positioned in an arbitrary manner and should not be regarded as necessarily similar to one another, particularly in the upper half of this range.

The SIMPER Routine

The SIMPER routine allows the identification and comparison of groups of samples. The SIMPER routine provides information on which factors are responsible for the within-group similarities and provides insight into the composition of the groups through the provision of summary statistics relating to the factors which drive the internal similarity of groups identified at a given statistical level.

Following the identification of groups within a given dataset the SIMPER routine provides insight into the species (or particle size fractions) responsible for the dissimilarity between groups. The species are listed in decreasing order of importance to group dissimilarity.

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[5] Clarke,K.A. & Warwick, R.M. 1994. Similarity-based testing for community pattern: the 2-way layout with no replication. *Marine Biology, 118*: 167-176.

[6] Clarke,K.R. & Gorley, R.N. 2001. PRIMER v5: User Manual/Tutorial. Primer-E Ltd., Plymouth Marine Laboratory, Prospect Place, West Hoe, Plymouth PL1 3DH, UK. 91pp.

Matching Two Multivariate Patterns (Bio-Env and Relate)

The RELATE routine provides a means of testing for correlations between two multivariate patterns within two different, but potentially related datasets. RELATE tests are used to test for correlations between the distribution of biological communities and the distribution of sediment types. The BIO-ENV sub-routine is an exploratory tool that matches multivariate patterns so that combinations of variables are considered at ever increasing levels of complexity in order to find the BEST sub-set of variables that match with the biological patterns observed in the data.

B.5 GIS

All of the GIS maps used in this report were generated using ArcGIS 9.3.1. The WGS84 datum and UTM degrees N projection were used throughout.

C. RESULTS

C.1. Composition of the Seabed

C.1.1 Univariate Statistical Analysis of the EAOW Cable Route Sediment Data

A total of 41 PSD samples were acquired from across the site. This figure includes the PSD sub-samples taken from benthic samples during the EAOW zonal benthic survey within Area B (Table 1).

All sediment samples were sieved across a range of sieves from 31.5mm to 0.063mm. The results showing the percentages of material retained on each sieve are presented in Appendix Table 4.

The PSD data acquired from the EAOW cable corridor area has been grouped into three broad sediment categories:-

- % gravel (≥ 2mm diameter)
- % sand (0.063mm – 2mm diameter)
- % silt (<0.063mm diameter)

Appendix Table 5 outlines the %gravel, %sand and %silt found at each station across the EAOW cable corridor area.

Figure 4 illustrates the distribution of the percent gravel, sand and silt found across the EAOW cable area from the PSD data acquired during this survey. Sand was the most prominent sediment type found across the area of interest. Some of the sites near to the shore were dominated by either silt or gravel, which may be reflective of the fluvial and coastal processes which influence these areas. Coarser sediments were recorded at many stations; especially those which lay within 10nm of land.

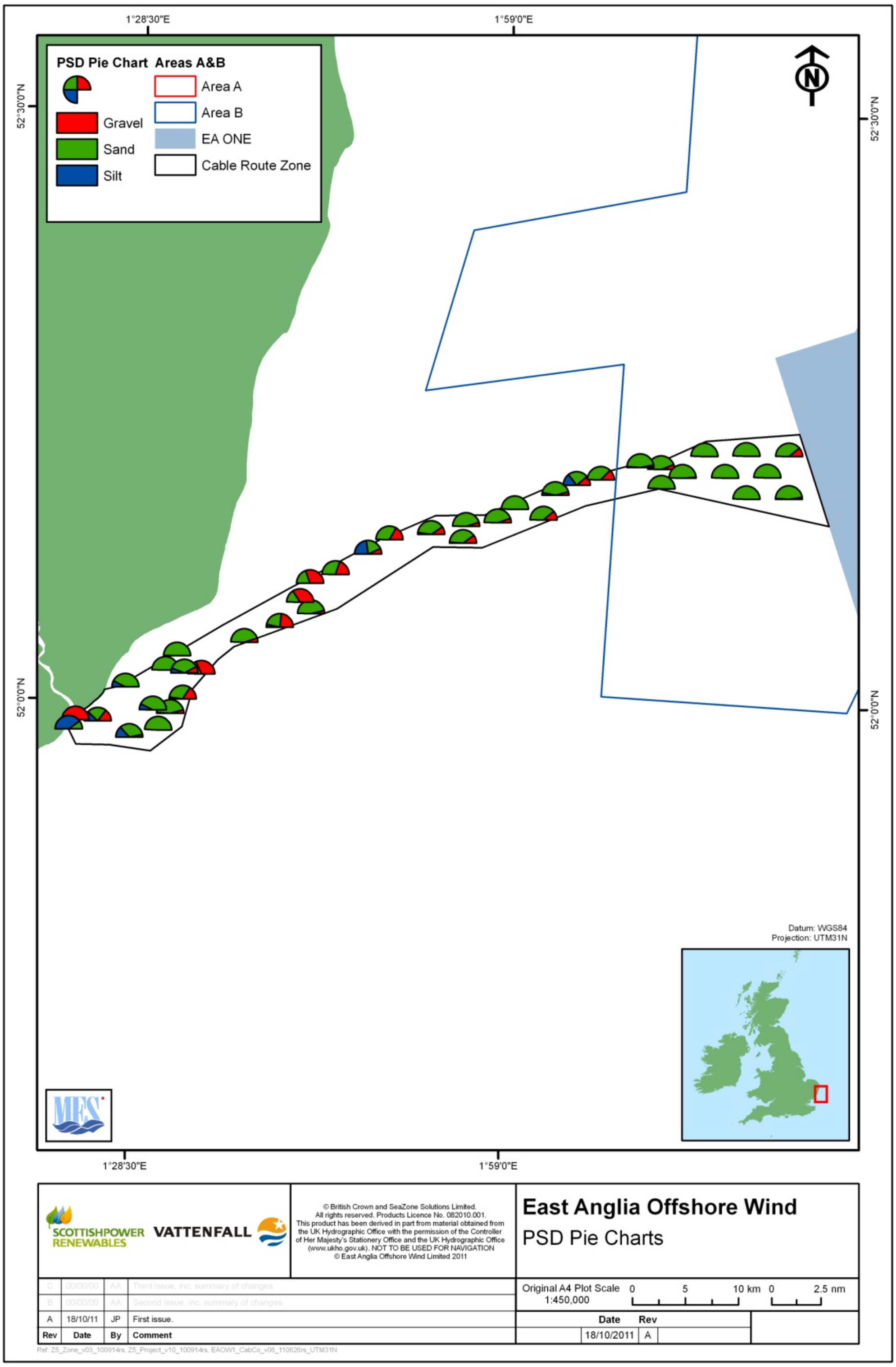


Figure 4. The distribution of gravel, sand and silt across the area of interest.

C.1.2 Multivariate Statistical Analysis of the EAOW Cable Route Sediment Data

The pie diagrams presented in Figure 4 provide a convenient visualisation of the overall proportions of silt, sand and gravel present at each station. However, presenting PSD data in such a manner is of limited utility given that each sediment category represents an agglomeration of detailed data under broad headings and, as such, the nuances of the sediment composition at each station may be subsumed.

Hence, the EAOW cable route PSD data were subject to sophisticated multivariate statistical analysis techniques. These methods allow greater insight into the overarching composition of the sediments found at each station, in addition to facilitating comparisons between the sediment samples acquired from across the EAOW cable route area. Several statistical techniques were employed using the PRIMER software package (outlined in section B.4).

A group average sorting dendogram, based on Euclidean distance, is presented in Figure 5 together with a corresponding two-dimensional multidimensional scaling (MDS) ordination.

Figure 5 illustrates that at a Euclidean distance of 55 the sediments within the EAOW cable route area comprise 3 distinct sediments. These groups have been categorised as **Sediment Group A**, **Sediment Group B** and **Sediment Group C**. In addition to these groups one sample was classified as an outlier.

Table 2 provides an overview of the character of each of the sediment groups along with the folk classification appropriate to each sediment group.

Sediment Group A was the sediment group which was encountered most frequently across the area of interest. Table 1 reveals that **Sediment Group A** comprised Gravelly Sand deposits. This sediment group dominated the most easterly section of the area, although it was found at a few sites closer to shore (Figure 6).

Sediment Group B was the second largest sediment group. The percentage of gravel, sand and silt that characterised this group is presented in Table 1. **Sediment Group B** is classified as Muddy Sandy Gravel under the folk classification system. **Sediment Group B** occurred across the full length of the proposed cable route, but was less common towards the near-shore and offshore extremes of the area of interest (Figure 6).

Sediment Group C was the smallest of the sediment groups encountered across the area of interest. This group can be defined as Slightly Gravelly Muddy Sand deposits using the folk classification system (Table 1). **Sediment Group C** occurred predominately at inshore sites.

Representative photographs of each sediment group are presented in Plate 1.

Sediment Group	% Gravel	% Sand	% Silt	Folk Classification
Sediment Group A	**10.57** (CI 4.82)	**87.55** (CI 4.98)	**1.88** (CI 0.62)	Gravelly Sand (gS)
Sediment Group B	**36.1** (CI 27.89)	**55** (CI 27.11)	**8.9** (CI 14.40)	Muddy Sandy Gravel (msG)
Sediment Group C	**3.95** (CI 6.16)	**84.52** (CI 12.98)	**11.53** (CI 9.54)	Slightly Gravelly Muddy Sand ((g) mS)

Table 2. The mean proportions of gravel, sand and silt which comprised each of the multivariate sediment groups. Each group has been assigned a group description based on the Folk classification system. Confidence intervals at the 95% levels are presented within parentheses for each mean.

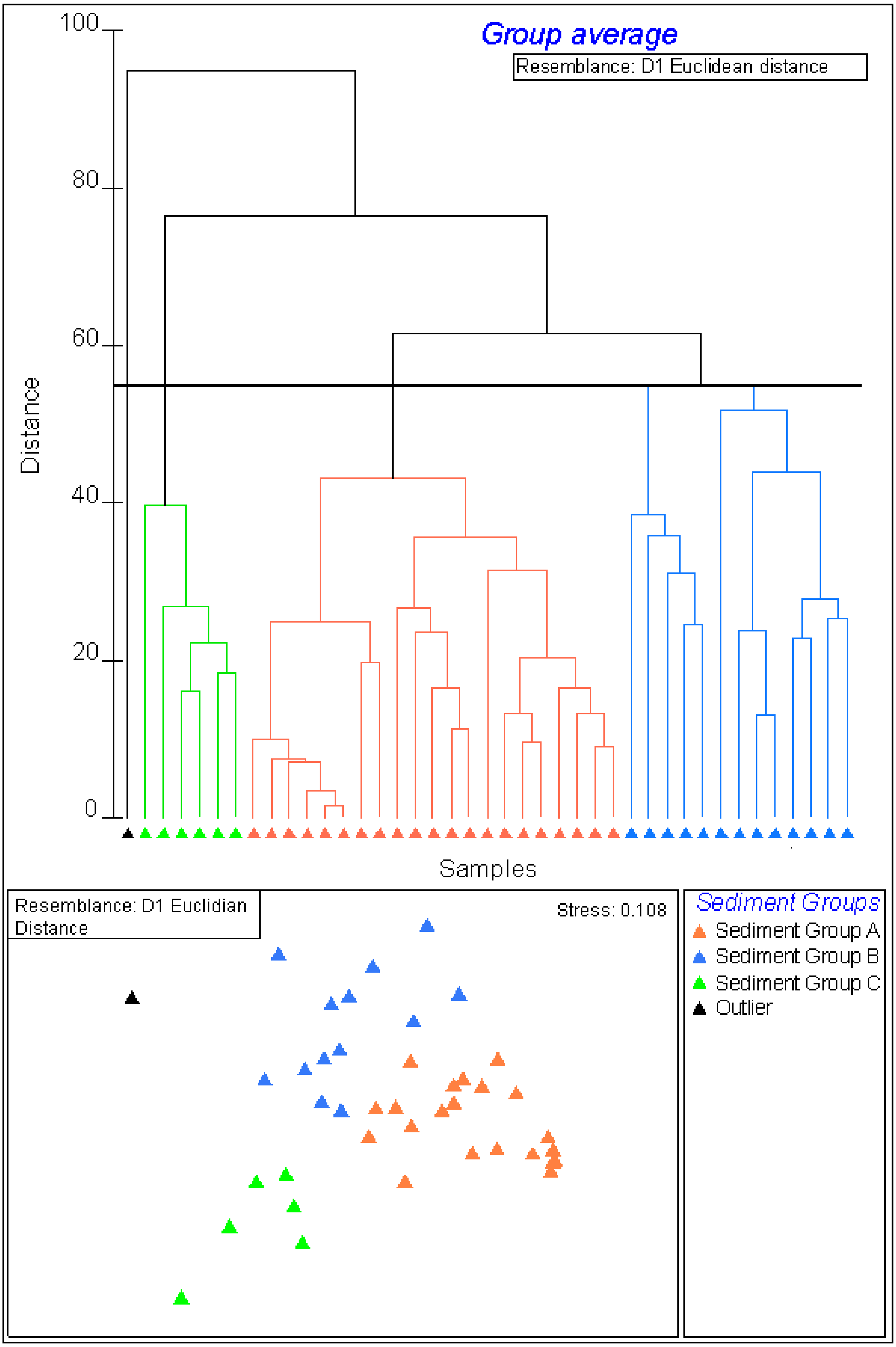


Figure 5. A group average sorting dendrogram and corresponding two dimensional multi-dimensional scaling ordination for the sediment groups of the EAOW cable route area. The stress value of 0.108 suggests that the MDS presented above is a reliable interpretation of the relationships between samples.

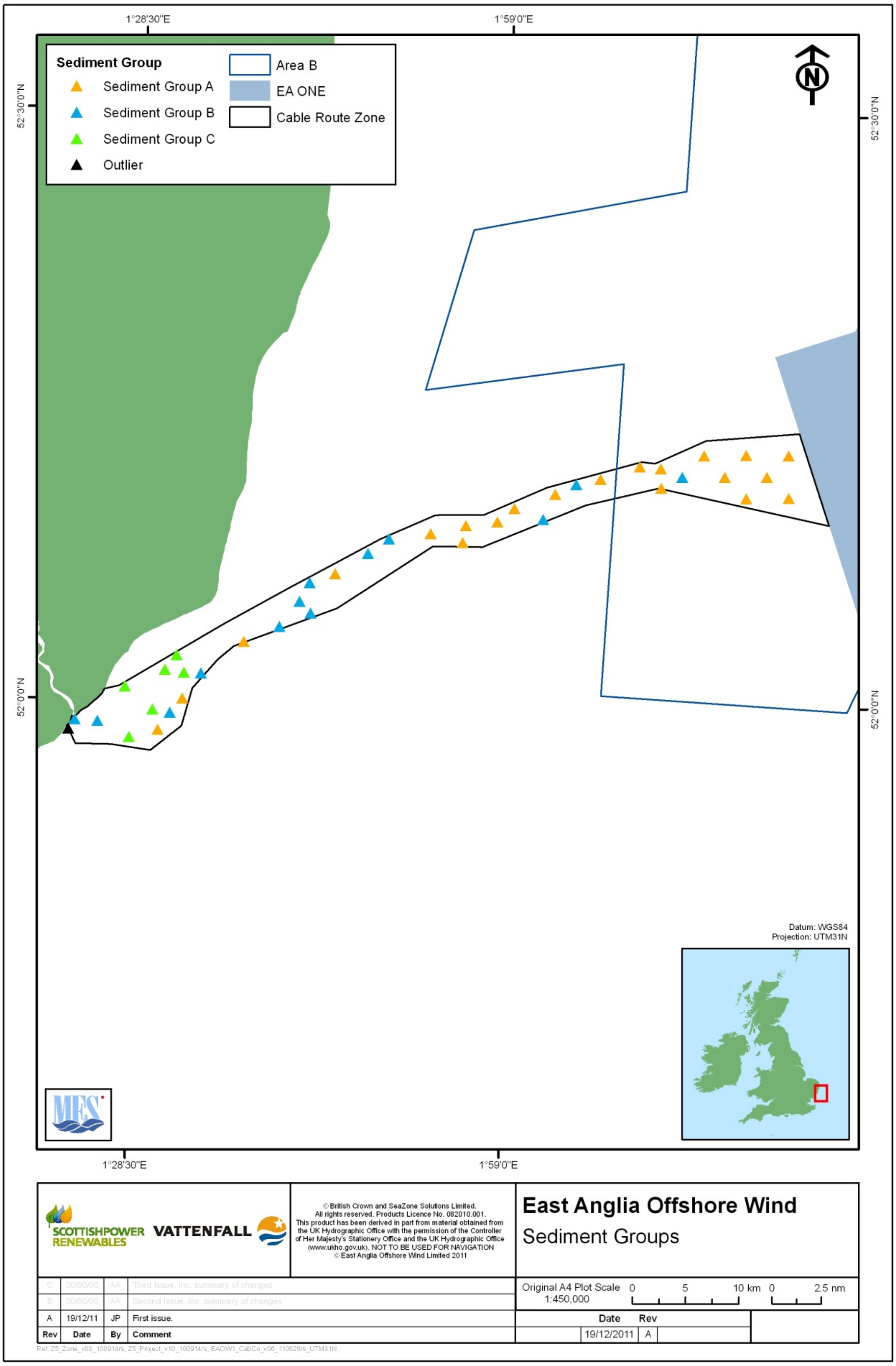
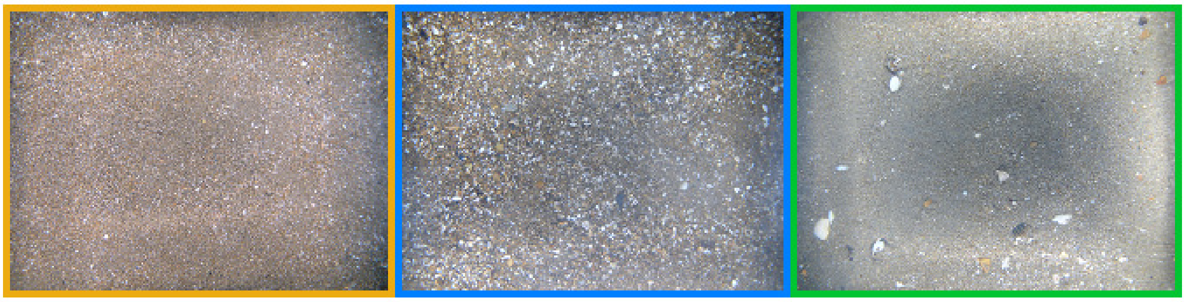


Figure 6. Chart section showing the distribution of the sediment groups identified by multivariate analysis across the EAOW cable route area of search.

Plate 1. Representations of the sediment groups found across the EAOW cable route area © www.seasurvey.co.uk



C.2 Evaluation of the Benthic Fauna

The following results include data acquired through analysis of benthic grab samples collected during the EAOW cable route survey and the EAOW benthic characterisation survey (50 sampled stations).

A total of 270 taxa were present across the EAOW cable route benthic study site. A full species list together with abundance counts for each station is presented in Appendix Table 6. A breakdown of the biomass (gAFDW) of each major group per station is presented in Appendix Table 7.

The mean number of individual organisms per sample was 93 (+/-36.50 at 95% confidence limited) and the mean number of taxa within a sample was 20 (+/-3.71 at 95% confidence limited). The mean biomass per sample is 0.38g (gAFDW) (+/-0.24 at 95% confidence limited).

The area of interest is broadly characterised by relatively high numbers of individuals drawn from comparatively few taxa. The relative contribution of each major faunal group (Annelida, Crustacea, Echinodermata, Mollusca and Miscellanea) to the abundance (N), taxonomic richness (S) and biomass (B) across the survey area is presented in Figure 7.

Annelida accounted for 47% of the overall abundance at the surveyed sites, followed by Mollusca (26%), Crustacea (11%), and Miscellanea (11%). The smallest contribution to relative abundance was made by Echinodermata (5%).

Figure 7 outlines the relative contribution made by each major faunal group to the total taxonomic richness of the area. Annelida made the greatest contribution to the taxonomic richness (49%) relative to the other major groups. This was followed by Miscellanea which contributed 26% of the taxonomic richness across the study site. Mollusca contributed 10% and Crustacea contributed to 9% of the relative taxonomic richness. Echinodermata contributed to just 6% of the total taxonomic richness of the area.

The relative biomass of each major group is also presented in Figure 7. The major group that contributed most to the relative biomass was Mollusca (45%), this was followed by the groups Annelida and Echinodermata both with 22% of the relative contribution to biomass. The smallest contributions made to the total sampled biomass were made by Miscellanea (8%) and Crustacea (2%).

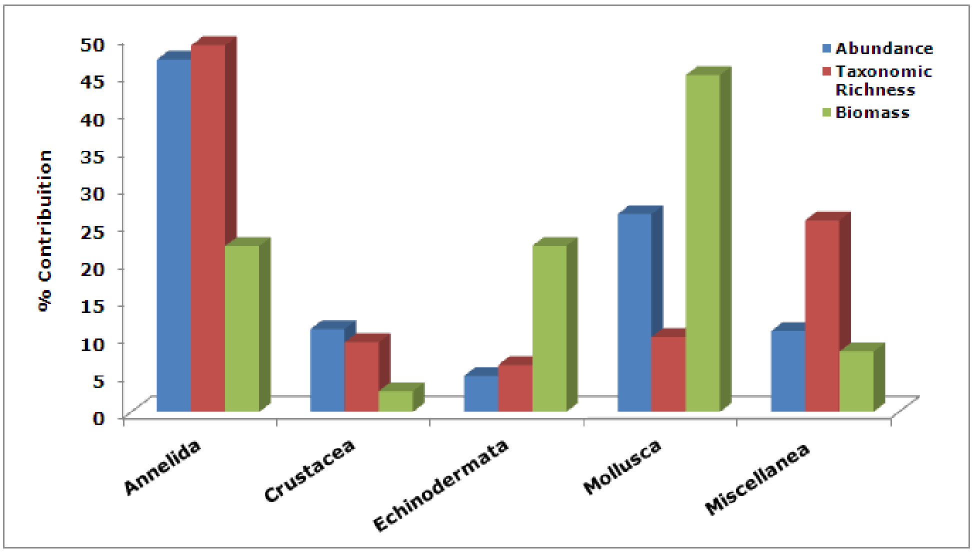


Figure 7. A histogram illustrating the relative contributions made by each major faunal group to the total abundance, taxonomic richness and biomass sampled from across the EAOW cable route area.

Figure 8 illustrates the ten taxa that made the greatest contribution to total abundance across the study area. The most abundant taxon was the tubiculous polychaete *Sabellaria spinulosa*, this was followed by the bivalve molluscs of the family Mytilidae and the species *Abra alba*. The species that made the fourth greatest contribution to abundance was the barnacle *Balanus crenatus*. The polychaetes *Sphaerosyllis bulbosa* and *Spiophanes bombyx* also made significant contributions to total abundance. The ten species listed in Figure 8 contributed 55% of the total abundance from samples across the site.

Figure 9 illustrates the ten taxa were found in the greatest proportion of samples across the area of interest. The most widely distributed taxa were the ribbon worms (NEMERTEA), followed by the polychaete worm *Spiophanes bombyx,* which both occurred in over 50% of the samples.

Bivalve molluscs of the family Mytilidae occurred at 48% of the survey stations. The round worms (NEMATODA) were identified in 38% of the samples. OPHIUROIDEA (brittle stars) and the polychaete worm of the genus *Polycirrus* occurred in 34% of the samples.

Comparisons between Figure 8 and Figure 9 reveal that many of the most abundant taxa were also widely distributed across the area of interest, although their abundances at each station were not necessarily consistent.

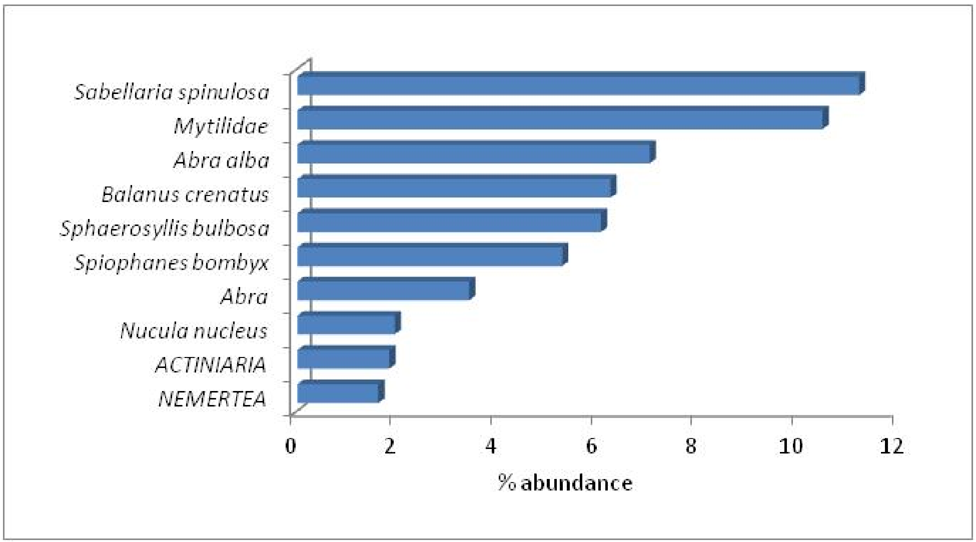


Figure 8. The ten taxa which made the greatest contribution to the total abundance of fauna across the EAOW cable route area.

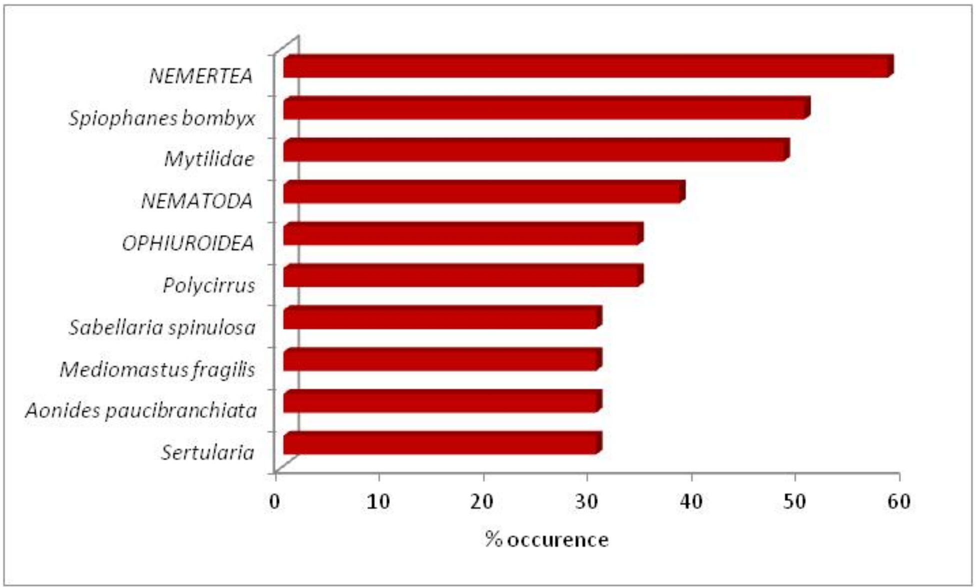


Figure 9. The ten taxa which were distributed most widely across the EAOW cable route area.

C.2.1 Distribution of Abundance, Taxonomic Richness and Biomass

Figures 10, 11 and 12 illustrate the distribution of abundance, taxonomic richness and biomass across the site.

Figure 10 illustrates the abundance sampled at each station. The majority of stations (36 out of 50) supported fewer than 80 organisms. Only five stations supported over 250 organisms and only 1 of these supported over 600. The highest levels of abundance were spread across the survey EAOW cable route area. The 11 samples previously sampled within Area B showed markedly low abundances of 44 organisms or fewer. Stations positioned close to the coast had a markedly high abundance in caparison with the sites further offshore.

Figure 11 illustrates the distribution taxonomic richness across the area of interest. Of the 50 samples collected across the site, 29 supported fewer than 19 taxa. Six stations supported over 39 taxa and the remaining 15 supported between 19 and 38 taxa. Stations supporting relatively high taxonomic richness were distributed across the area of search. Notably high levels of taxonomic richness were recorded at the majority of stations found within 3km of the shore. Lower taxonomic richness was apparent within the area intersecting Area B.

Comparisons of Figure 10 and Figure 11 reveal that there was a strong correlation between abundance and taxonomic richness across the area, with stations exhibiting high abundance figures also exhibiting comparatively high taxonomic richness. Stations sampled within Area B both showed relatively low abundance and taxonomic richness levels compared to stations sampled in the rest of the EAOW cable route area, which perhaps reflects the seasonal differences in the composition of the benthos that occurred during the interval between sampling events or differences in substrata.

Figure 12 depicts the distribution of biomass (gAFDW) across the area of interest. Forty stations had total biomass values below the stated mean for the area of search (less than 0.38 (gAFDW)). The majority of stations (27) displayed a biomass of 0.10 gAFDW or less. Only two stations supported a biomass of over 1.553 gAFDW. There were no discernable spatial patterns governing the distribution of biomass across the survey area. The largest total biomass was recorded at a station within Area B.

Comparisons between the distribution of biomass across the site (Figure 12) and the distribution of abundance across the site (Figure 10) reveal little correlation between these two faunal indices. In some instances biomass is relatively high where abundance is relatively low. Similarly, comparisons of the distribution of biomass (Figure 12) and the distribution of taxonomic richness (Figure 11) reveal that these two faunal metrics were also poorly correlated.

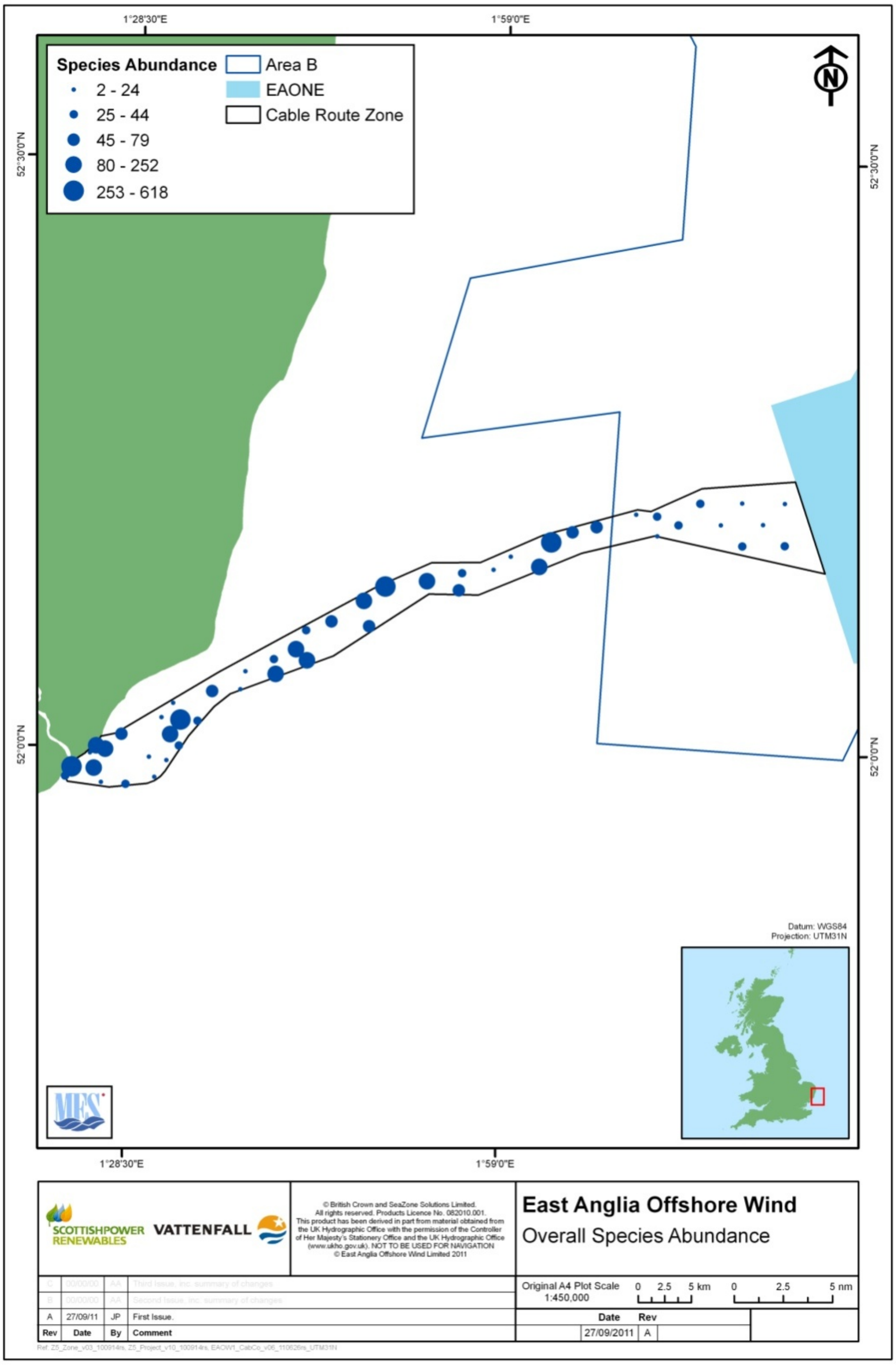


Figure 10. The distribution of faunal abundance (number of individuals) across the EAOW cable route area.

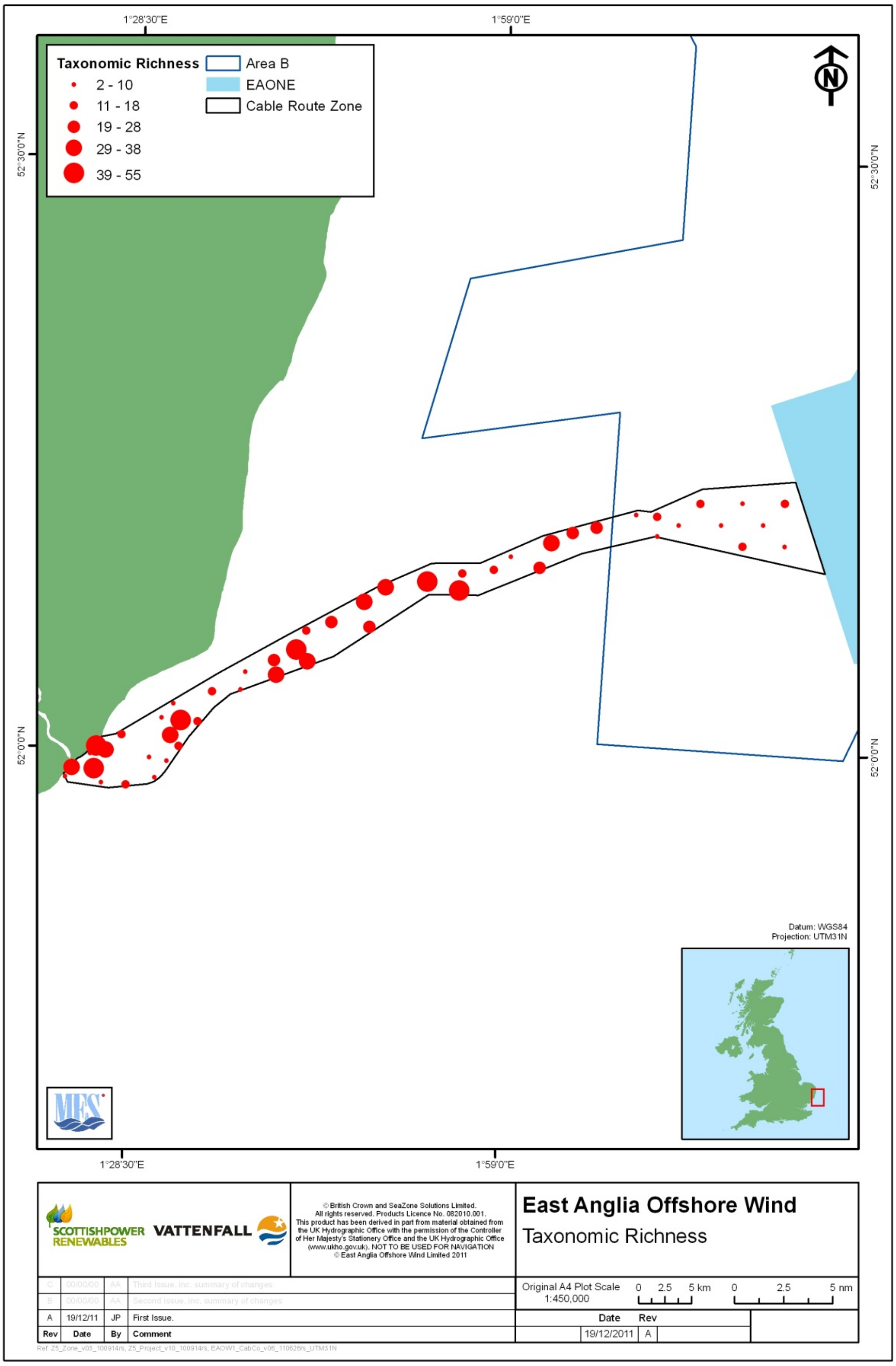


Figure 11. The distribution of taxonomic richness across the EAOW Cable route area.

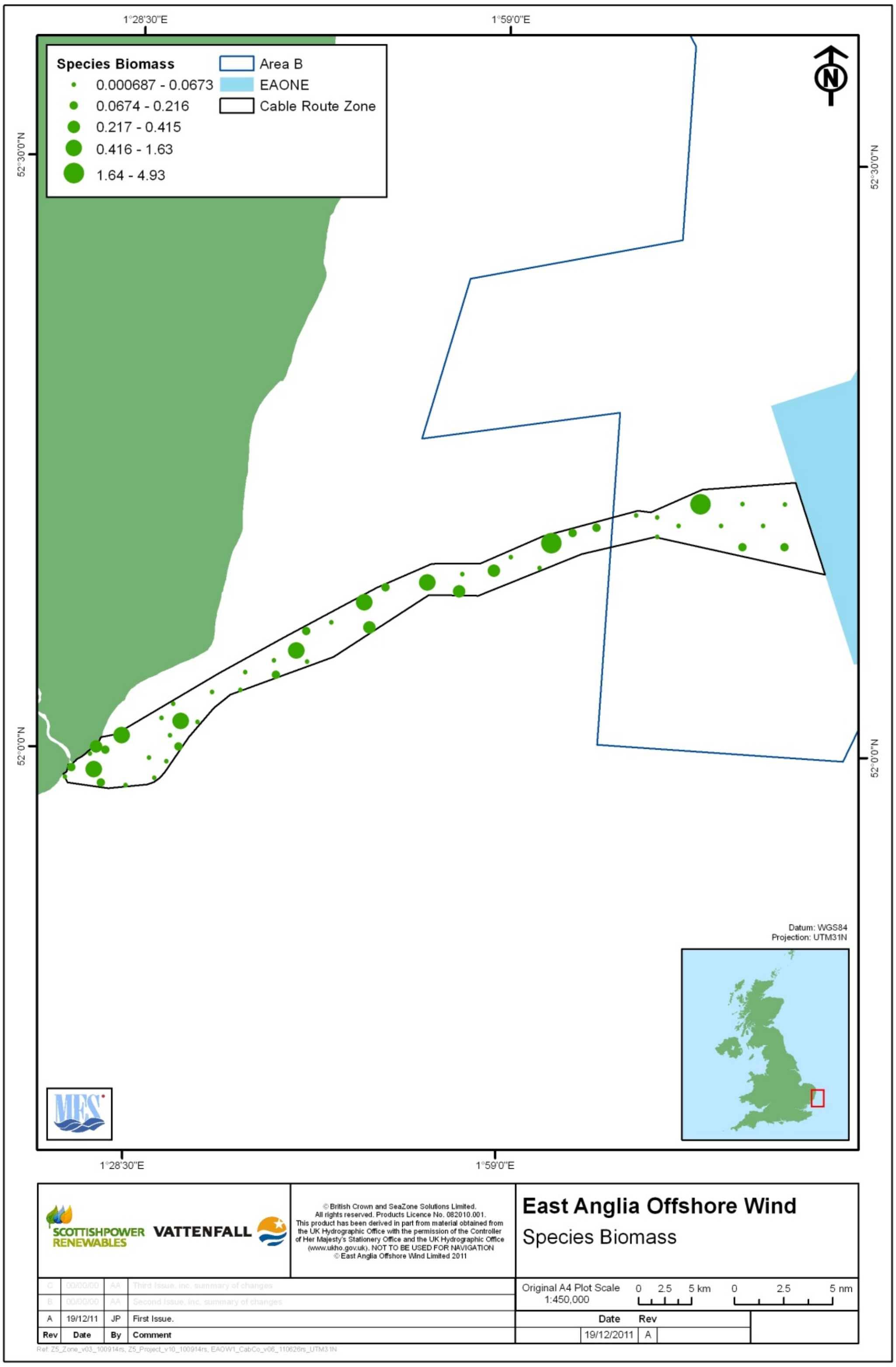


Figure 12. The distribution of biomass (gAFDW) across the EAOW cable route area.

C.2.2 Multivariate Statistical Analysis of Infauna

Multivariate analysis has been used in order to provide greater insight into the composition of the faunal communities found across the area of interest. The data were subject to analysis using the multivariate statistical techniques available in PRIMER v6. The faunal abundance data were subject to a square-root transformation prior to the commencement of analysis.

Figure 13 represents a group average sorting dendrogram (based on Bray-Curtis similarity) and includes a corresponding multidimensional scaling ordination (shown in two-dimensional format). The SIMPROF routine within PRIMER was used to classify the station into seven faunal groups, which have been categorised as follows; **Faunal Group A**, **Faunal Group B**, **Faunal Group C**, **Faunal Group D**, **Faunal Group E** and **Faunal Group F** and **Faunal Group G**.

Two samples failed to group and are therefore considered **Outliers**. The 2D stress factor (0.209) presented in Figure 13 demonstrates the need for caution when interpreting the finer details of the MDS.

Detailed descriptions of the composition of the faunal groups are available in Appendix Table 9. Appendix Table 9 includes statistical descriptions of the similarities and dissimilarities within and between the faunal groupings. The following provides a brief overview of the seven faunal groups.

Faunal Group A – Appendix Table 9 reveals that this faunal group has an average similarity of 19%. A total of 7 taxa represented 75% of the group similarity. The key characteristic taxon for this group was *Spiophanes bombyx, Nephtys cirrosa* and *Ophelia borealis*. This group was found at 15 stations (Figure 14). **Faunal Group A** predominantly occurred across the eastern section of EAOW cable route area.

Faunal Group B – Appendix Table 9 reveals that this faunal group displays an average similarity of 29.55%. A total of two taxa represented over 85% of the group's similarity; these were *Sabellaria spinulosa* and Mytilidae. Figure 14 illustrates that this faunal group was represented at three inshore sites.

Faunal Group C – Appendix Table 9 reveals that **Faunal Group C** had an average similarity of 31%. Seven species represented over 78% of the group's similarity. The taxa which defined this group were *Pseudonotomastus southerni*, Mytilidae and *Aonides paucibranchiata*. **Faunal Group C** was recorded at eight stations. **Faunal Group C** were present across most of the EAOW cable route area of search, but was notably absent from the more inshore sites (Figure 14).

Faunal Group D – Appendix Table 9 reveals that **Faunal Group D** displayed an average similarity of 22.98%. Three taxa accounted for over 83% of the group similarity. The key species associated with this group are *Spiophanes bombyx*, *Nucula nucleus* and *Nucula nitidosa*. Figure 14 demonstrates that this group was representative of six stations and reveals **Faunal Group D** was recorded exclusively at inshore stations.

Faunal Group E – Appendix Table 9 reveals that **Faunal Group E** displayed an average similarity of 28%. This was a complex group containing 9 taxa representing over 75% of the similarity. The defining taxa for this group were *Sabellaria spinulosa* and Mytilidae. Figure 14 illustrates that this faunal group was found at six stations across the study area. **Faunal Group E** was mainly found within 10km of the shoreline, however one station from this group was situated in the mid-section of the area (Figure 14).

Faunal Group F - Appendix Table 9 reveals that **Faunal Group F** displays an average similarity of 34%. 17 taxa represented over 75% of the group's similarity. The key species highlighted for this group include *Mediomastus fragilis*, NEMERTEA and *Pomatoceros lamarcki.* **Faunal Group F** was recorded at a total of six stations, all of which occurred within the mid-section of the area of interest (Figure 14).

Faunal Group G was dominated by Mytilidae, whom accounted for over 75% of the average group similarity. Figure 14 reveals that this faunal group was found at just two stations, both of which occurred towards the inshore end of the area of interest.

The **Outliers** were not similar in composition, although both samples supported low abundances of fauna; principally Annelida.

Table 3 shows the mean number of taxa and the mean numberical abundance supported within each faunal group. The 95% confidence intervals are also shown.

Group Averages	A	B	C	D	E	F	G
Taxa	11.19	6.25	22.75	10.50	35.71	39.00	10.00
95% Confidence Interval +/-	2.72	0.65	6.46	3.81	5.51	8.53	7.84
Abundance	23.31	11.25	124.50	33.67	230.00	122.17	27.50
95% Confidence Interval +/-	6.19	1.96	93.29	18.42	114.97	51.01	10.78

Table 3. The mean number of taxa and the mean numberical abundance supported within each faunal group. The 95% confidence intervals are also shown.

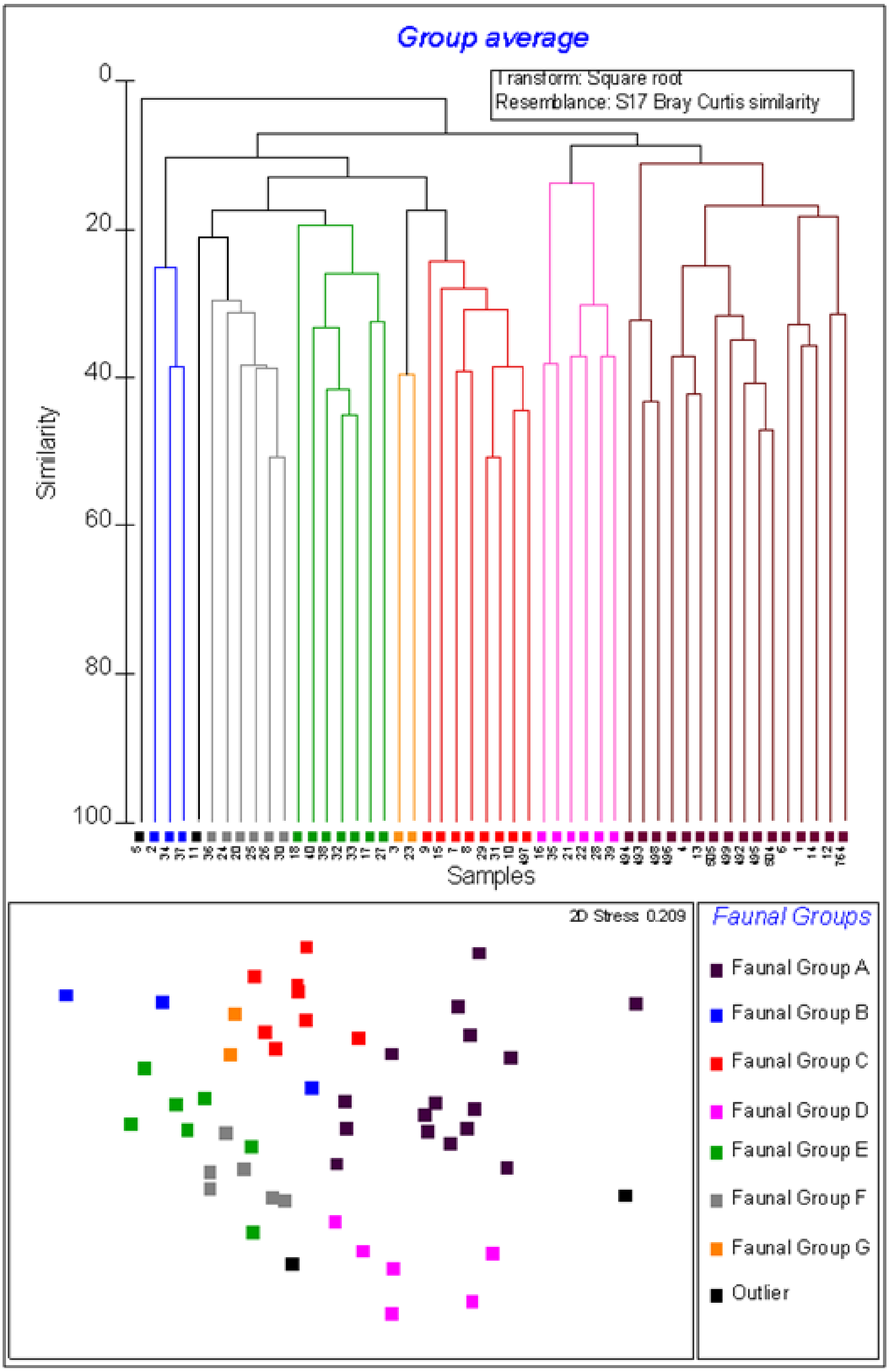


Figure 13. A group average sorting dendrogram and corresponding two dimensional multi-dimensional scaling ordination for the fauna of the EAOW cable route area. Data for colonial taxa were excluded from this analysis.

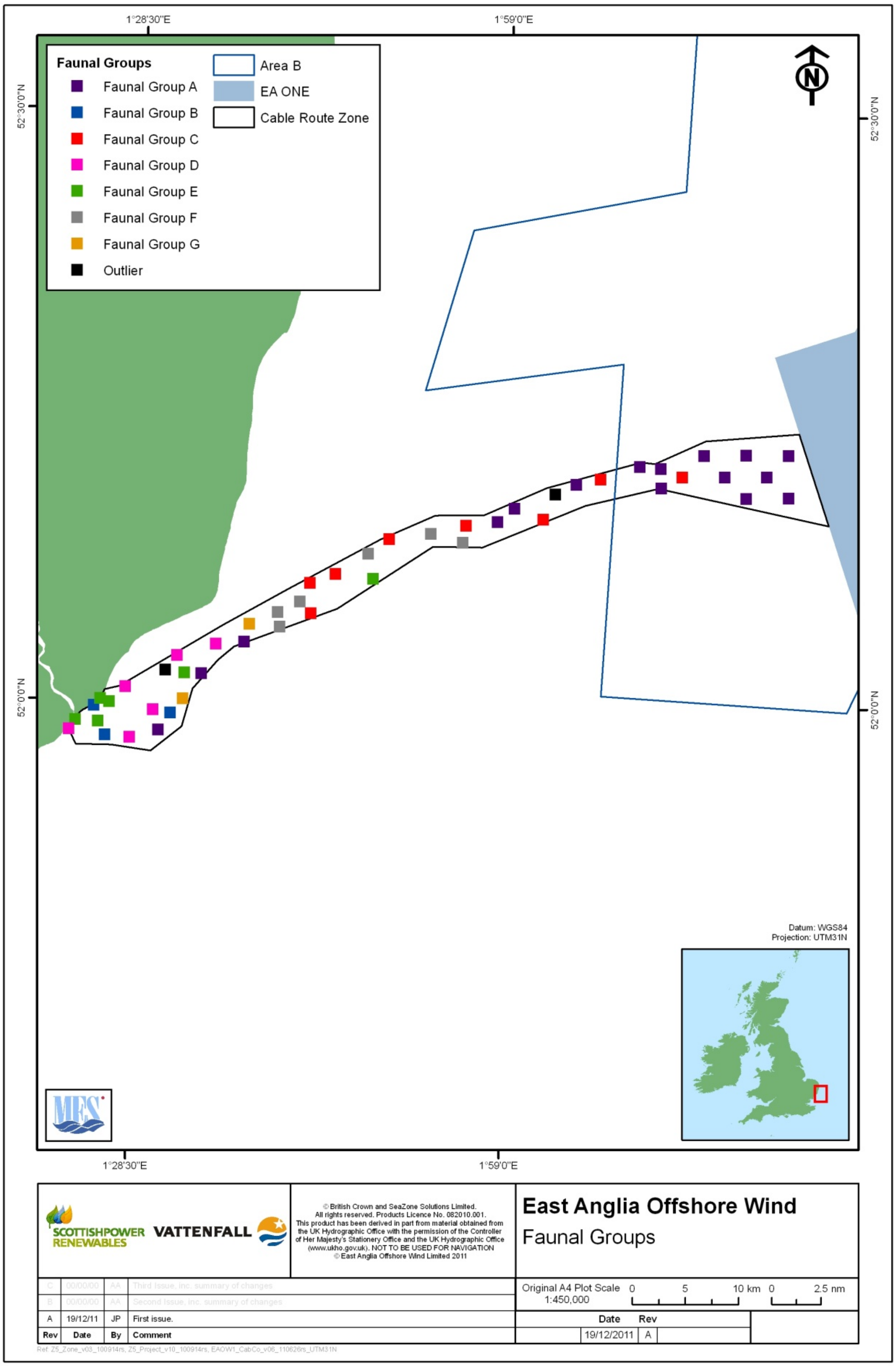


Figure 14. The distribution of multivariate faunal groups across the EAOW cable route area. Data for colonial taxa were excluded from the analysis

C.2.3 The Distribution of Species of Interest

Figures 15-21 illustrate the distribution and abundances of a number of taxa across the area of interest. The taxa chosen represent those which made a major contribution to the over-arching character of the area, in addition to taxa which are of importance for nature conservation reasons.

Figure 15 illustrates the distribution and abundance of *Sabellaria spinulosa* (Plate 2), a polychaete worm, which is capable of building biogenic reef structures. Biogenic reef structures are important benthic habitats and are thus protected under the Annex I of the EU Habitats Directive. *Sabellaria spinulosa* was the most abundant species found across the survey site but no evidence of *Sabellaria* reef was evident in any of the grab samples obtained. However, photographic evidence of a potential reef structure was recorded at a single station (Station 19 – see Figure 31).

Figure 15 demonstrates that *Sabellaria spinulosa* was found at 15 stations. Twelve of these stations supported *Sabellaria spinulosa* abundances of less than 50. Two of the 15 stations supported abundances of over 100, while the remaining station supported abundances of between 51 and 100. *Sabellaria spinulosa* was found in higher abundances at stations closer to shore.

Figure 16 illustrates the distribution of Mytilidae across the study area. The Mytilidae (Plate 2) are a family of bivalve molluscs which include the blue mussel (*Mytilus edulis*) and the horse mussel (*Modiolus modiolus*). These species have the ability to form dense aggregations (mussel beds), which are protected under the Annex I Habitats Directive. Mytilidae were the second most abundant taxon across the study site (Figure 8), but no evidence of mussel beds was recorded.

Figure 16 demonstrates that 24 stations across the study site supported Mytilidae. None of these stations were positioned within the cable route area of search that overlapped Area B.

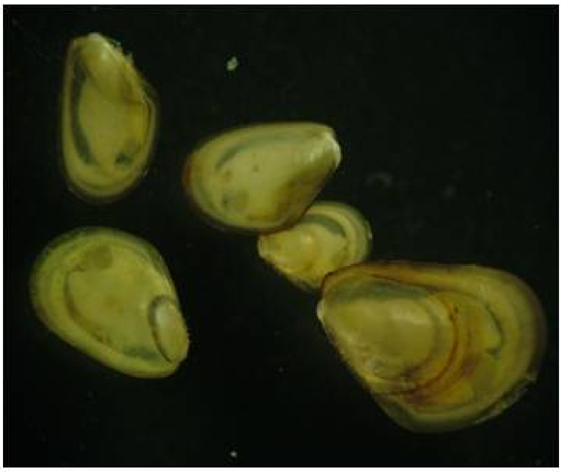
Twenty-three of the stations where Mytilidae were found had an abundance of less than 55 and 40% of the total abundance of Mytilidae across the site came from just one site, which was found towards the middle of the proposed cable route.

Figure 17 illustrates the distribution of *Abra alba* across the area of interest. *Abra alba* is a bivalve mollusc (Plate 2) which is common in near-coastal waters of the North Sea. It is recognised by its fragile, translucent shell (Plate 2). *Abra alba* was one of the most abundant organisms identified from across the survey site (Figure 8). *Abra alba* was found at seven stations within the area. One of these stations was positioned in the most easterly section of the cable route that intersects Area B. Figure 17 demonstrates that, where present, *Abra alba* was usually recorded at low abundances. That this species was recorded as the third most abundant taxon across the area of interest reflects the high abundance recorded at just one station, which was located close to, but outside of, the Area B boundary.

Figure 18 illustrates the distribution of the barnacle, *Balanus crenatus* across the study area. *Balanus crenatus* is a crustacean of the Balanidae family (Plate 2). This crustacean colonises rocks, mussels and other hard surfaces and is essentially a sub-littoral species. *Balanus crenatus* can tolerate areas of low salinities explaining its localised distribution at inshore sites. *Balanus crenatus* was found at three inshore sites across the area of search. Ninety-nine percent of the total abundance of this species came from just one site.

Figure 19 illustrates the distribution of *Sphaerosyllis bulbosa* abundance across the study area. *Sphaerosyllis bulbosa* is a polychaete worm of the Syllidae family (Plate 2). This species was found at six stations over the study area, these stations were positioned mainly in the mid-section of the cable corridor. *S. bulbosa* was one of the most abundant organisms identified across the site, but 95% of the total abundance of this taxon was recorded at just one station. The majority of stations supported fewer than 10 individuals of this species.


Sabellaria spinulosa


Mytilidae


Abra alba


Balanus crenatus


Spiophanes bombyx


Sphaerosyllis bulbosa

Plate 2. Examples of the fauna sampled from across the EAOW cable route area. © www.seasurvey.co.uk

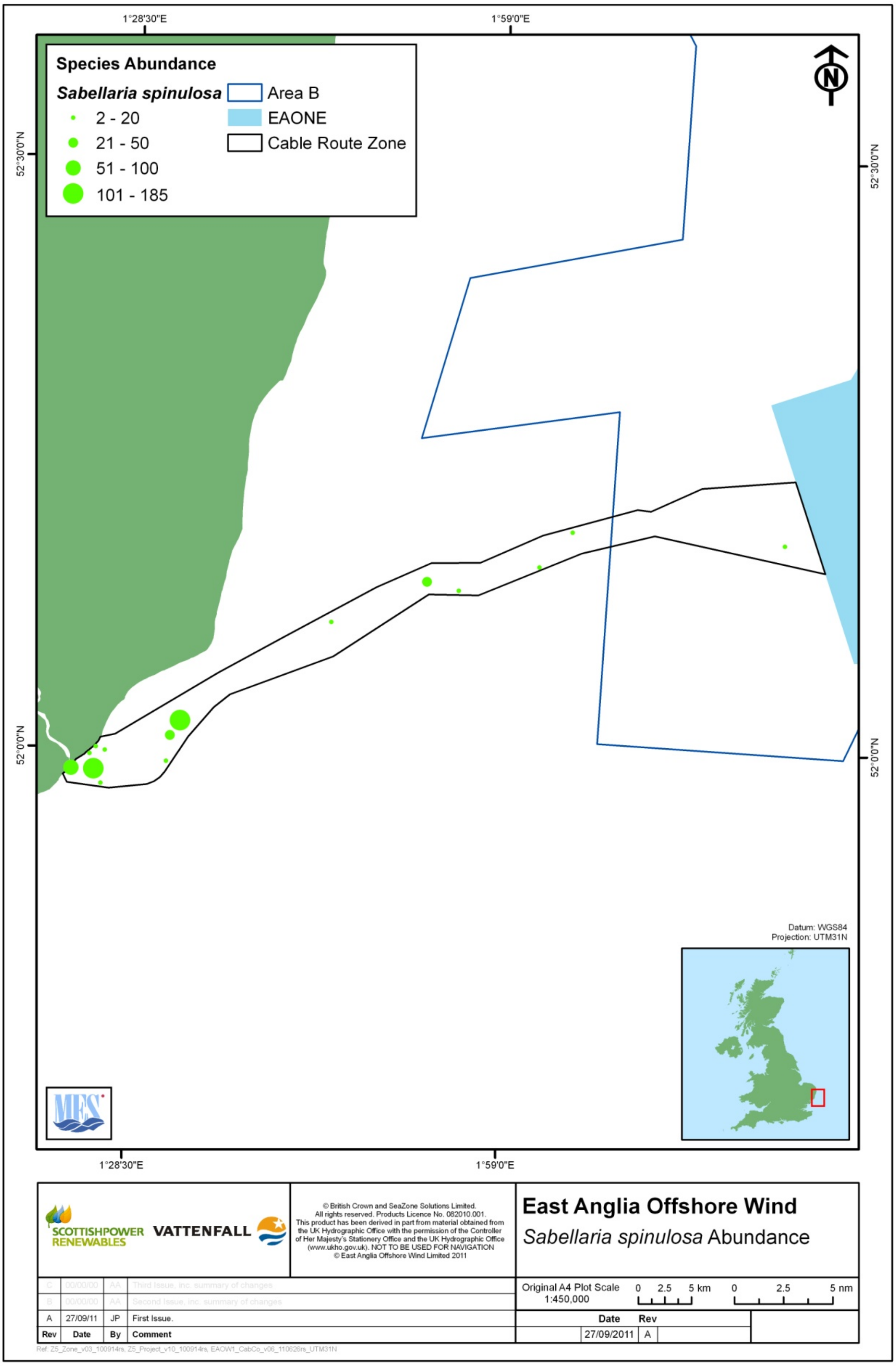


Figure 15. The distribution of *Sabellaria spinulosa* abundance across the EAOW cable route area.

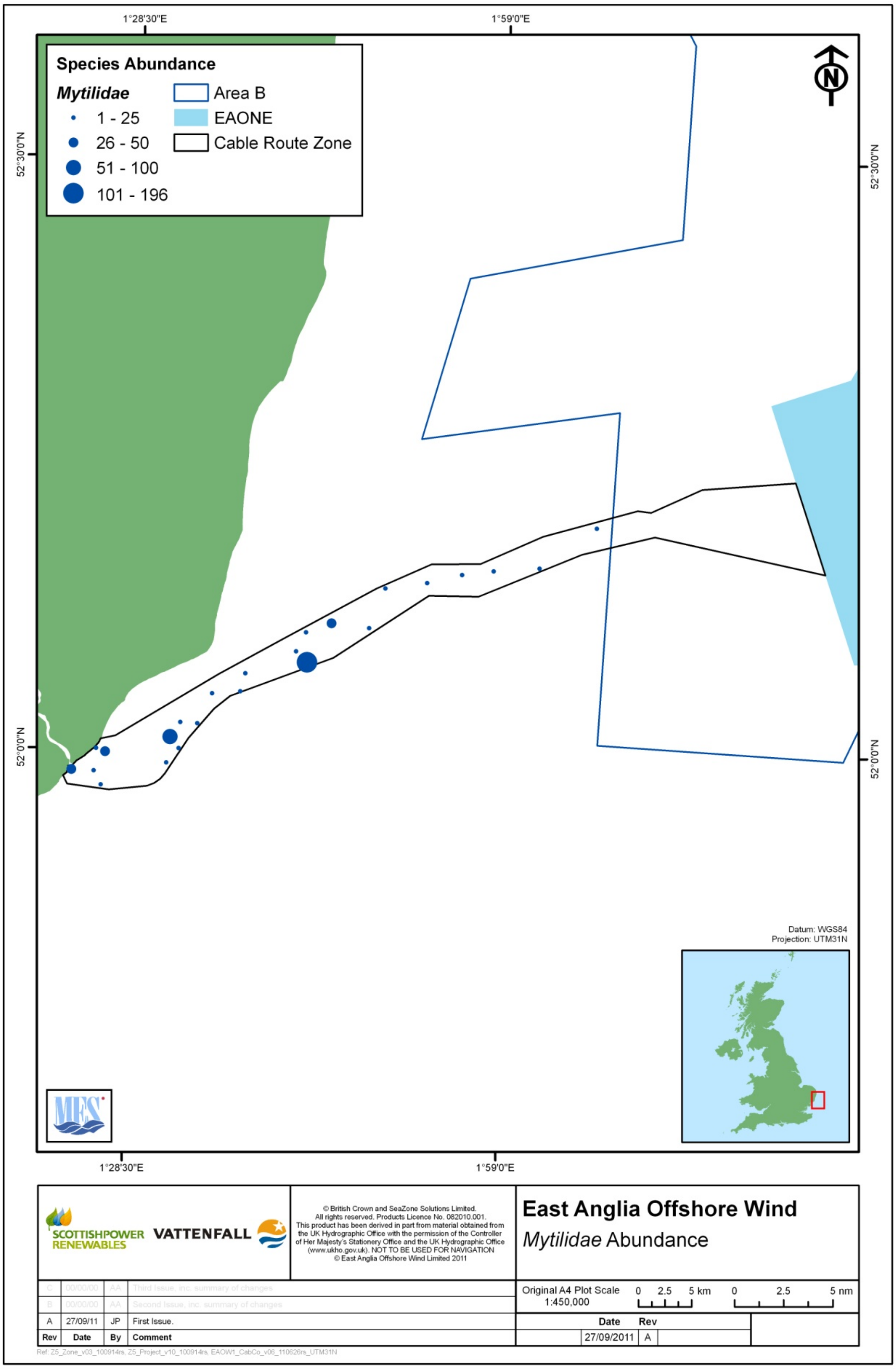


Figure 16. The distribution of *Mytilidae* abundance across the EAOW cable route area.

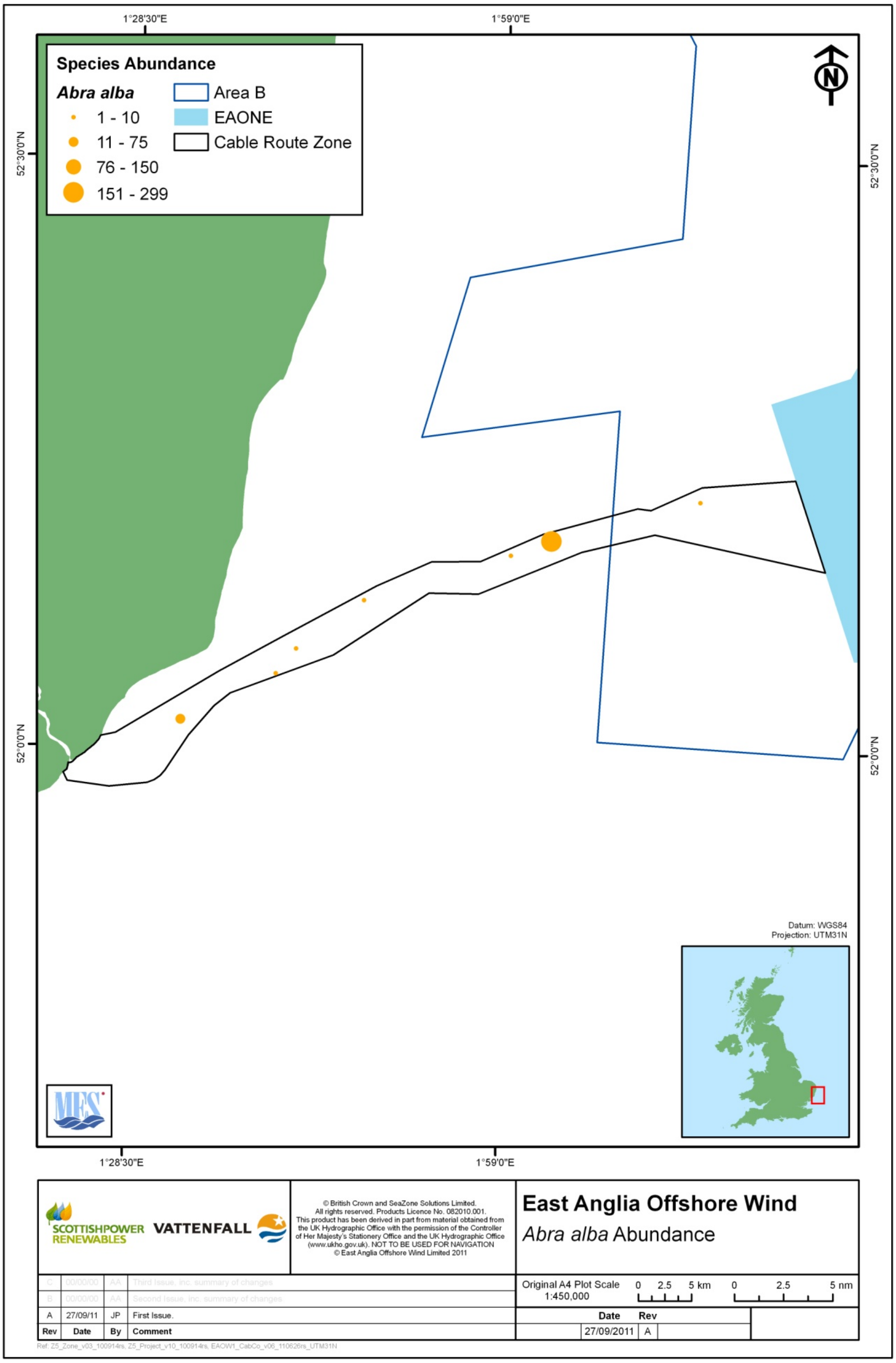


Figure 17. The distribution of *Abra alba* abundance across the EAOW cable route area.

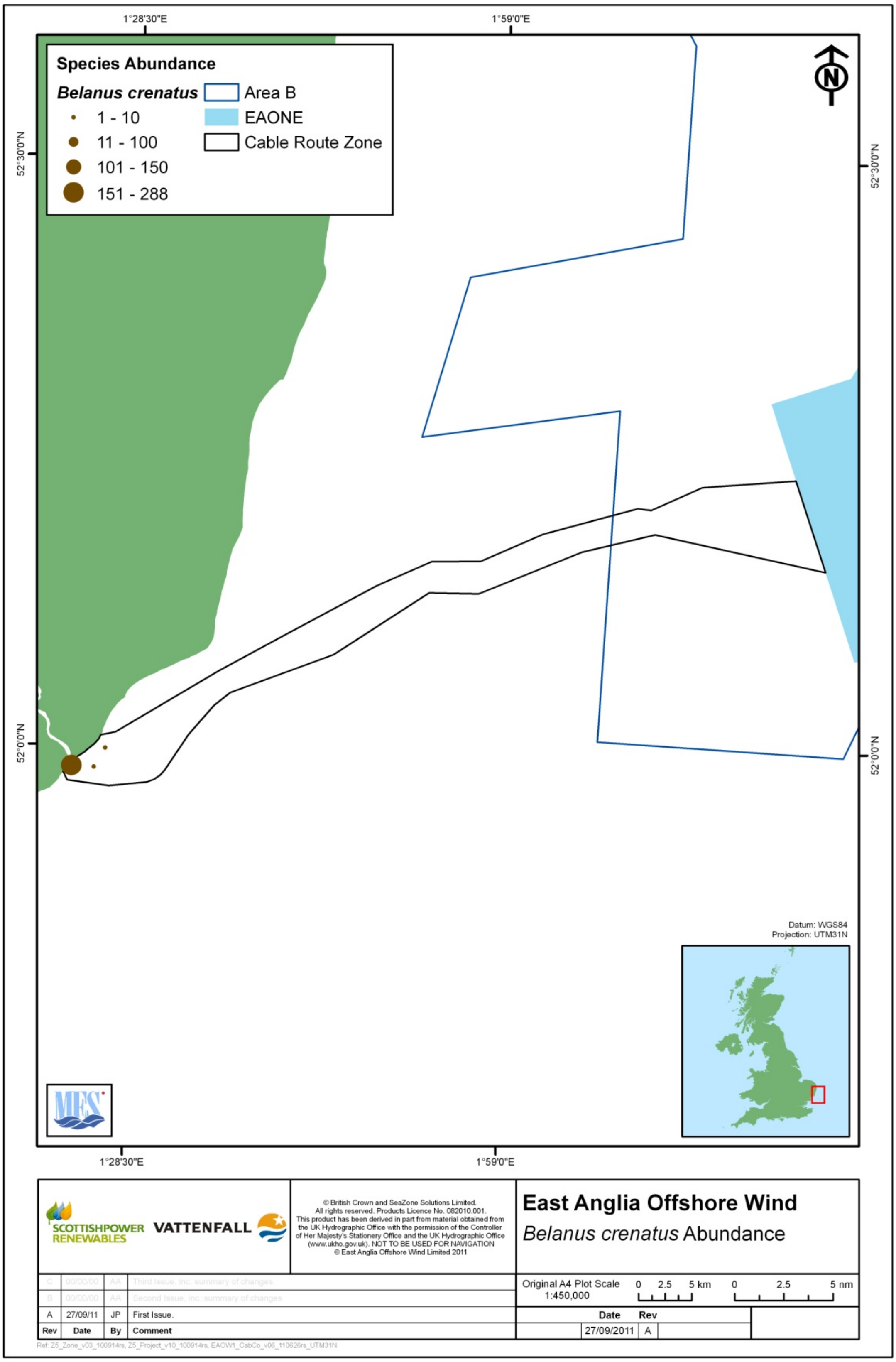


Figure 18. The distribution of *Balanus crenatus* abundance across the EAOW cable route area.

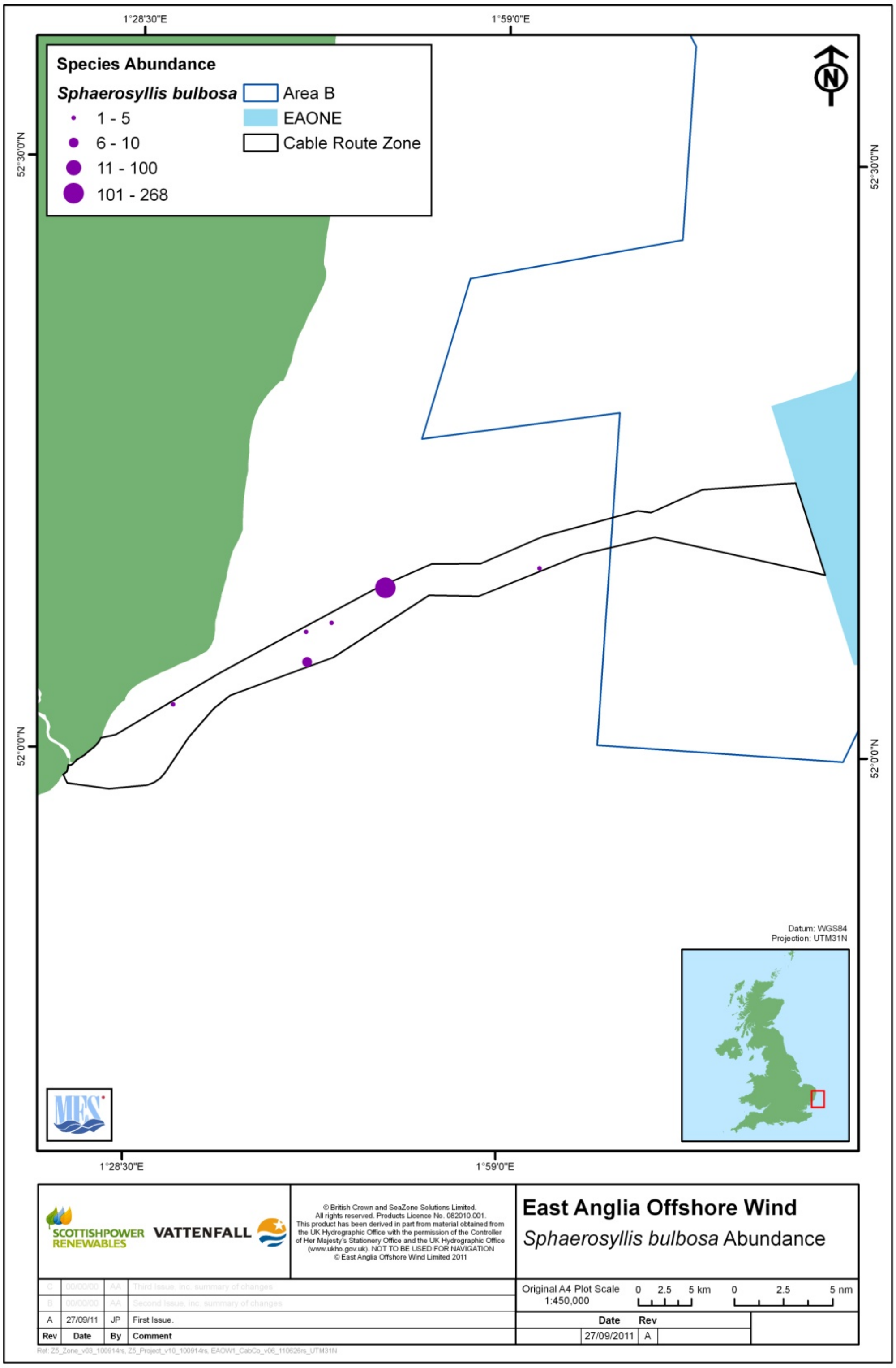


Figure 19. The distribution of *Sphaerosyllis bulbosa* abundance from data acquired from the EAOW cable route area.

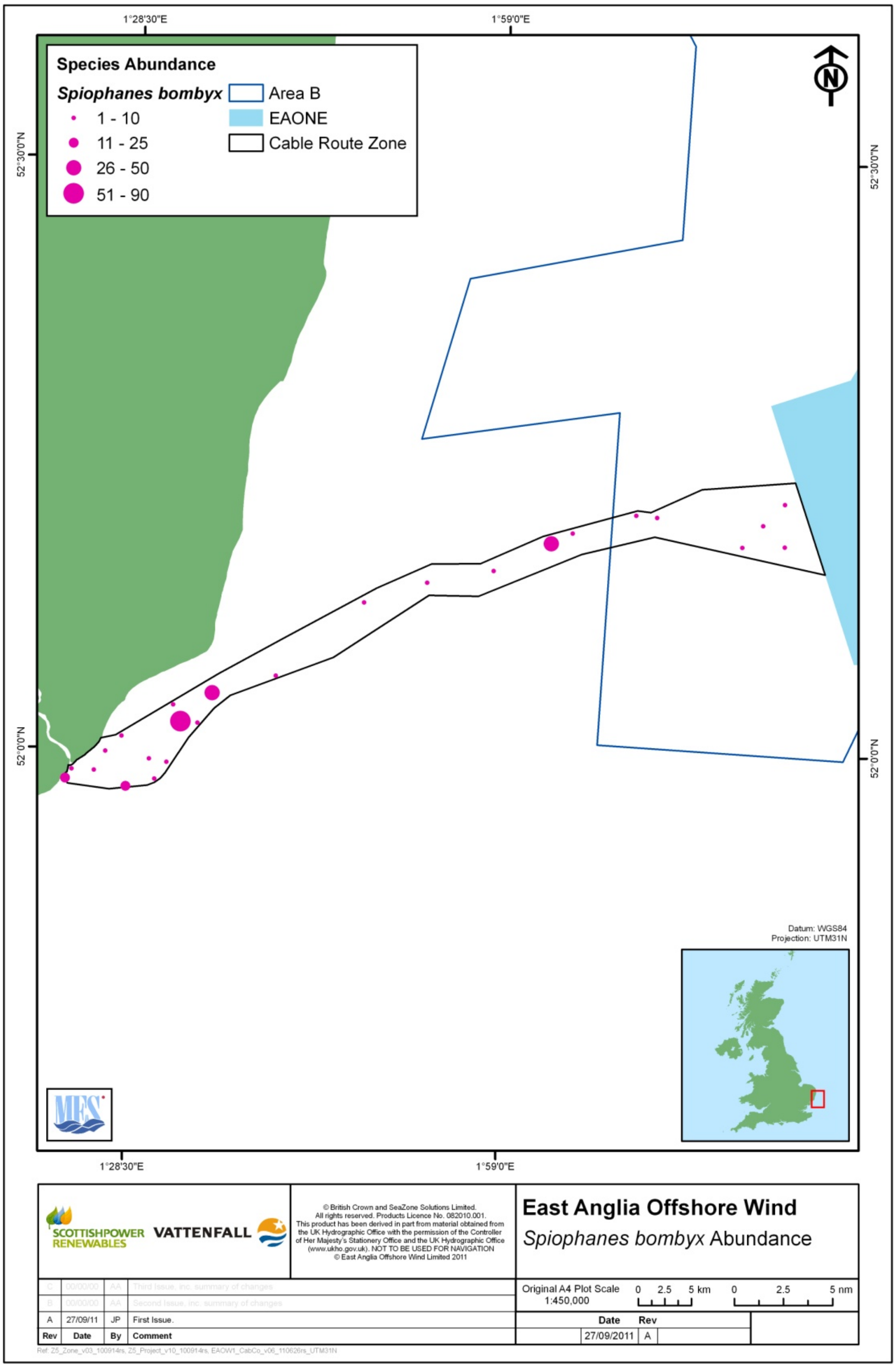


Figure 20. The distribution of *Spiophanes bombyx* abundance from data acquired from the EAOW cable route area.

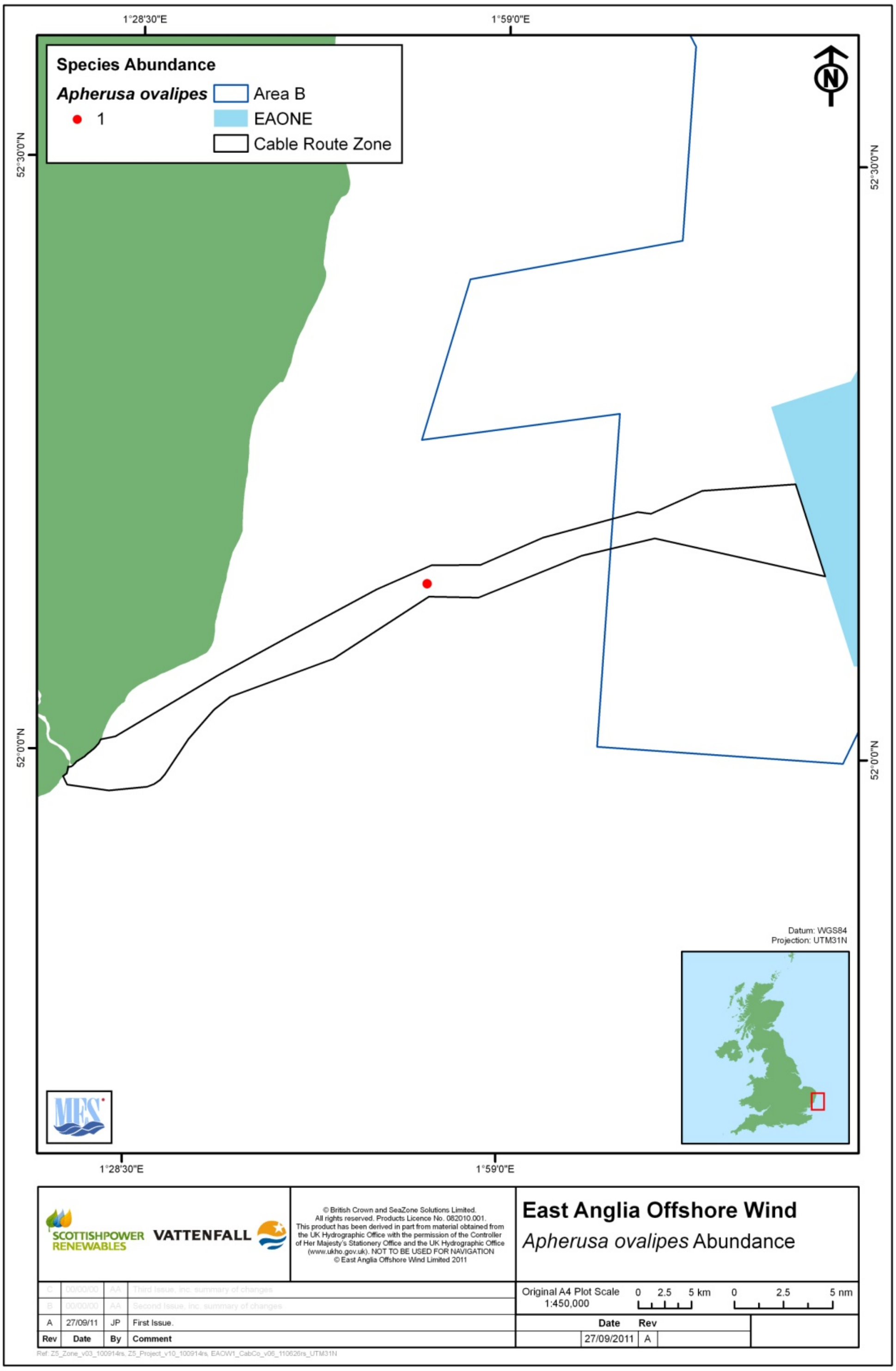


Figure 21. The distribution of *Apherusa ovalipes* abundance from data acquired from the EAOW cable route area.

Figure 20 illustrates the distribution of *Spiophanes bombyx* across the area of interest. *Spiophanes bombyx* is a polychaete worm (Plate 2) which constructs tubes of sand grains; it is common across the southern North Sea and can often be found in high densities.

Spiophanes bombyx was found at 25 stations across the study site. These stations were spread over much of the cable corridor except for an area in the mid-section of the cable corridor and a section at the western end of the cable corridor. Twenty-two of the stations where *S. bombyx* was found supported fewer than 25 individuals of this species. None of the stations sampled supported more than 90 individuals of this species.

The amphipod crustacean *Apherusa ovalipes* is considered nationally rare and has only been recorded at a hand-full of sites around the UK, although it may be under-recorded.

Figure 21 outlines the station at which this species was recorded. Only one individual was recorded across the EAOW cable route sub-tidal area of search.

C.2.4 Relating the Multivariate Patterns within the Sediment Data to the Multivariate Patterns within the Faunal Data

A brief review of the information presented in Section C.1.2 and C.2.2 reveals the existence of a possible relationship between multivariate faunal groups and multivariate sediment groups sampled during the course of the East Anglia cable route area survey. In order to establish the robustness of this relationship, the faunal data were compared with the sediment data using the BIO-ENV and RELATE (see methods) multivariate statistical routines within PRIMER v6.

The RELATE routine provides a means of testing for correlations between two multivariate patterns, which in this case was a test for correlations between the distribution of biological communities and the distribution of sediment types. The full results of this test are presented in Appendix Table 10 which demonstrates that there was a significant relationship (Rho = 0.476, Significance Level = 0.1%) between the multivariate patterns observed in the sediment data and in the faunal communities.

In order to ascertain which particle sizes correlated most strongly with the multivariate patterns observed within the faunal data the faunal and sediment data were tested using the BIO-ENV routine. The full results of this test are presented in Appendix Table 10 and reveal that the strongest correlation between the multivariate patterns in the sediment data and the faunal data occurred between sand (particle sizes 1 mm and 0.25-0.063mm) and silt (particle size <0.063mm). A combination of these sediment sizes together accounted for approximately almost 50% of the observed variation in faunal communities. Other factors that could influence the community composition are likely to include current speed, water depth and influence of the tidal regime.

D. Subtidal Habitat Mapping

D.1 Introduction to Habitat Mapping

In Section C.2.3, the distribution of faunal groups has been shown for each individual station across the cable route area. However, to provide a full coverage map of each group, it is necessary to relate their occurrence to the physical environmental characteristics of the area. The relationships between ecological communities and the physical character of a site may be relatively well established (e.g. reliance of sediment type on fauna) or experimental. To date, the habitat modeling techniques used within this report have been utilized within a large number of studies both at the regional scale (e.g. Humber Regional Environmental Characterisation (REC)[7]); and national level (e.g. the UKSeaMap 2010[8]).

The habitat mapping presented here is provided in three phases:

- The creation of a seabed sediment map based on the SeaZone Folk map, modified by survey sediment data
- The creation of a broadscale EUNIS physical habitat map
- The development of a complex habitat suitability model to predict the likelihood of each faunal group across the region.

D.1.1 Seabed sediment Folk map

A seabed sediment map has been created based on the SeaZone sediment Folk map which was supplied under license to this project. Where sediment samples were taken during the cable route survey, these have been categorised into the Folk system and the map adjusted where necessary. This approach differs from that used in the zonal, EA ONE and PEI reports because the spatial locations of stations are not sufficient to allow interpolation. This is partly due to the nature of the cable route: it is a narrow band and interpolation of points carries greater uncertainty due to lack of points taken into account for a given interpolation location.

Also, three of the Folk categories assigned to samples were sub-divided based on the standard EUNIS habitat classification interpretation of the Folk triangle, as applied in the Humber REC and other EAOW reports. As the SeaZone Folk map does not have this subdivision, it was considered more appropriate to create the final sediment map according to the broader EUNIS level 4 categories, which contains 6 sediment types (instead of the 15 for Folk).

The sediment map shown in Figure 22 reveals that the sediments of the cable route area were dominated by fine sand and mixed sediments with patches of gravel and finer sediments also present.

[7] Tappin, D R, Pearce, B, Fitch, S, Dove, D, Gearey, B, Hill, J M, Chambers, C, Bates, R, Pinnion, J, Diaz Doce, D, Green, M, Gallyot, J, Georgiou, L, Brutto, D, Marzialetti, S, Hopla, E, Ramsay, E, and Fielding, H. 2011. The Humber Regional Environmental Characterisation. British Geological Survey Open Report OR/10/54. 357pp.
[8] McBreen, F., Askew, N. & Cameron, A. (2011) UKSeaMap 2010: Predictive mapping of seabed habitats in UK waters. *JNCC Report*, No. 446

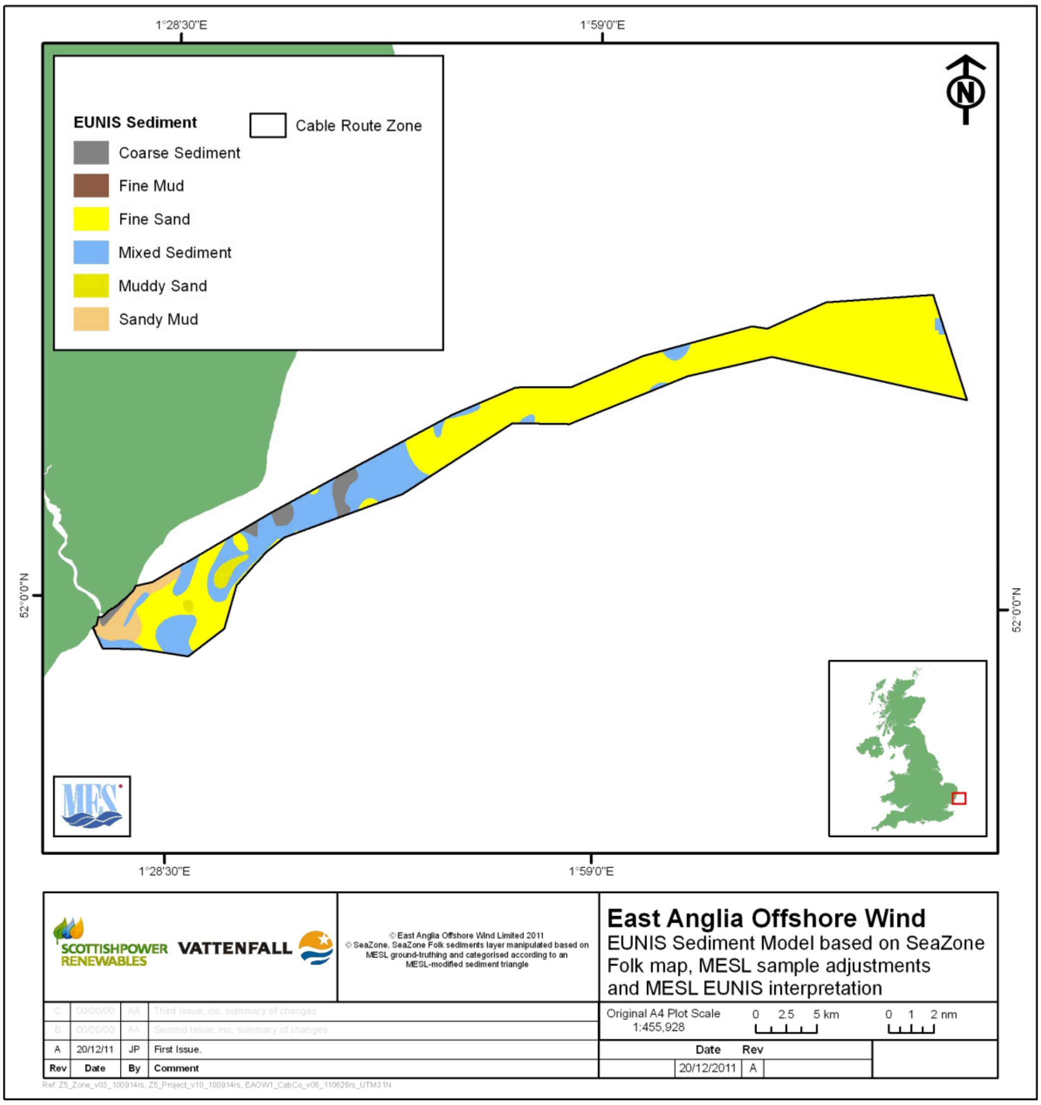


Figure 22. A complete coverage Folk model of the cable route area.

D.1.2 Level 4 EUNIS physical habitat model

The EUNIS habitat classification scheme was developed by the European Environment Agency (2001)[9]. It provides a hierarchical structure, with progressive layers dealing with different features of the habitat. Level 1 distinguishes the marine environment from terrestrial; and Levels 2, 3 and 4 separate sediments into biological zones in increasing detail. Biological zones are divided by depths which are governed by certain physical characteristics provided below (this list only includes those biological zones found within the area of interest):

- Infralittoral: low tide to maximum depth of 1% light attenuation
- Ciraclittoral: from maximum depth of Infralittoral zone to the maximum depth of wave impact (wavebase)
- Deep Circalittoral: below wavebase and on the continental shelf
- Littoral: the intertidal zone

The Level 4 EUNIS model shown in Figure 23 was created using ten EUNIS categories which were assigned to different areas on the basis of the sediment map detailed in D.1.1 and the biological zones (governed by depth, light attenuation and wavebase) provided by UKSeaMap 2010 as detailed in Table 4 (see fifth column).

Figure 23 shows that the area of interest is dominated by circalittoral fine sand (i.e. fine sand below 1% light attenuation and above the wavebase) across the central and eastern section of the cable route, with deep circalittoral sand to the extreme east and infralittoral sand to the west, inshore. However, infralittoral groups of all sediment types were more common across the near-shore area.

Figure 24 shows the multivariate faunal groups identified in Section C.2.4 super-imposed onto the EUNIS Level 4 habitat model presented in Figure 23. Figure 24 demonstrates that the majority of the faunal communities occurred on more than one habitat across the cable route area. This is likely to be a reflection of the fact that whilst there are a number of different habitats present across the area of interest, some are not radically different from one another. Hence, many of the faunal communities are capable of existing within a range of habitats that do occur.

[9] The European Environment Agency (EEA) 2001. (http://eunis.eea.europa.eu/introduction.jsp)

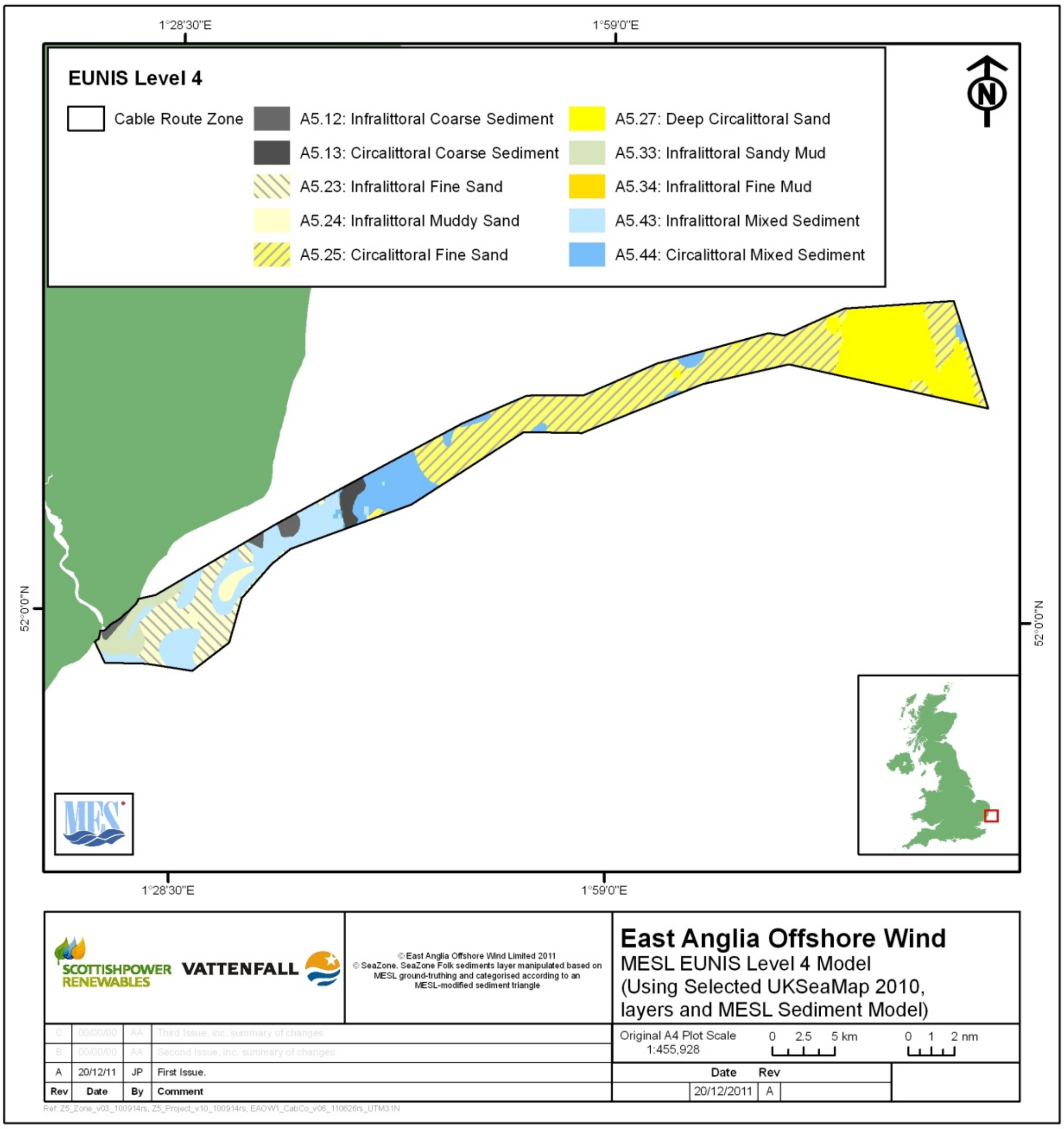


Figure 23. A complete coverage EUNIS Level 4 model for the cable route area.

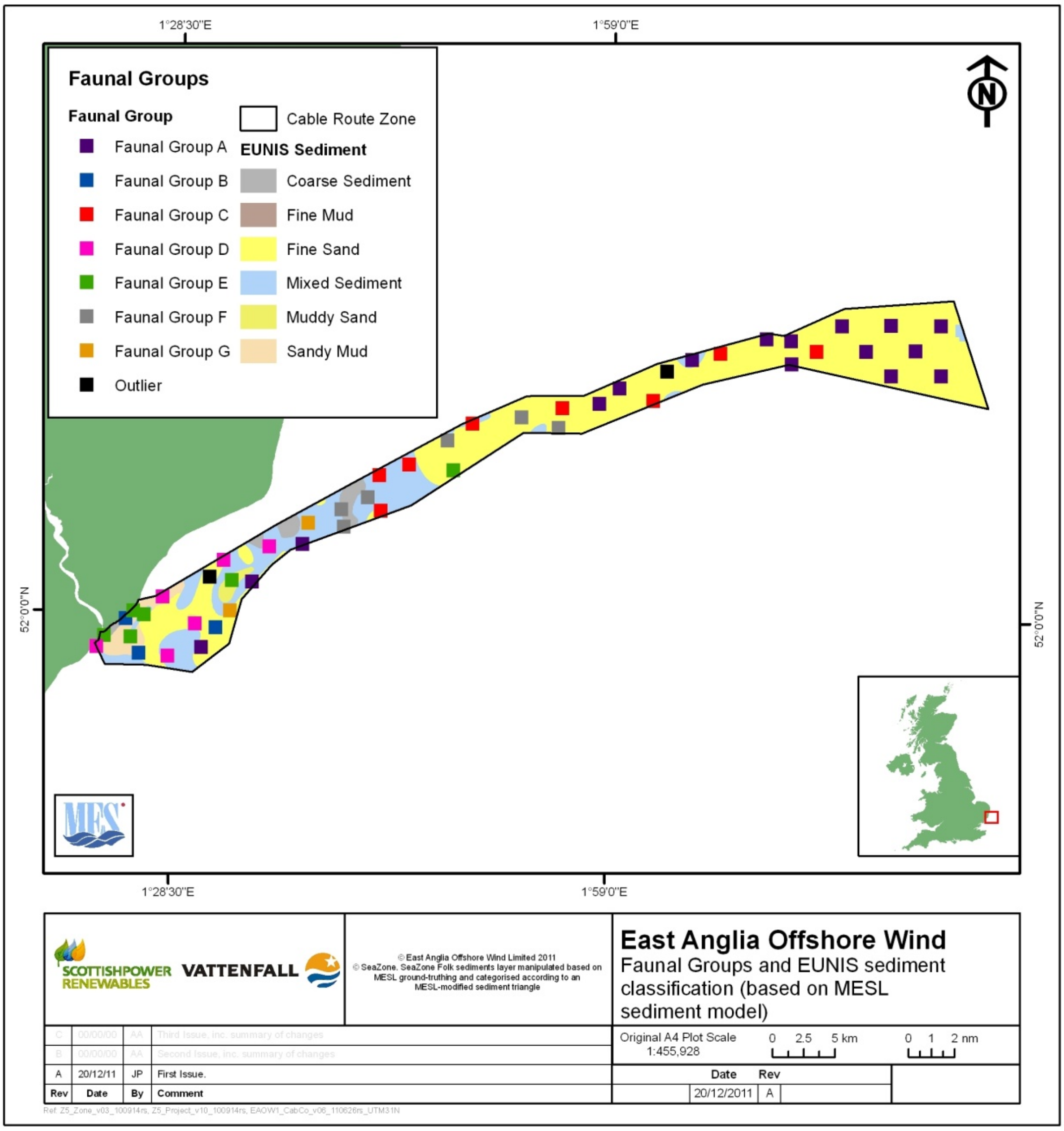


Figure 24. A complete coverage EUNIS Level 4 model for the cable route area.

Table 4. Layers used in the Level 4 EUNIS model and in the faunal model: showing source, processing and categorisation for models.

Layer	Additional Details	Source	MESL Processing	Used in Level 4 EUNIS Model	Used in Faunal Model
Folk Sediment categories (modified to EUNIS)	Folk categories with additional subdivision or three categories to align with EUNIS classification system	MESL 2011	Categorisation of percentage gravel, sand and silt layers	No – not relevant	No
EUNIS sediment categories (modified)		MESL 2011	Simplification of Folk sediment categories using EUNIS interpretation at Level 4 EUNIS, and MESL interpretation of EUNIS Level; categories of coarse sediment, mixed sediment, fine sand, muddy sand, sandy mud, fine mud	Yes	Yes
Depth		SeaZone	Categorised in 10m intervals	No – not relevant	No - Model trials proved biological zone has a closer correlation than depth
Biological zone	Infralittoral (penetration of light to 1%) Circalittoral (to wavebase) Deep circalittoral (below wavebase)	UKSeaMap 2010		Yes	Yes
Seabed energy	Combined wave and tidal seabed energy Low, moderate, high energy classes	UKSeaMap 2010	None	No (only applied to rock at Level 4 and no rock predicted)	Yes
Water body type	Well mixed shelf water and well mixed Region of Freshwater Influence classes provided for each of summer and winter	UKSeaMap 2010	Raster interpreted to produce contoured map	No – not relevant	Yes
Seabed temperature		MyOcean / Proudman Oceano-graphic Laboratory	Raster interpreted to produce contoured map; categorised in 0.5°C intervals	No – not relevant	Yes
Seabed salinity		MyOcean / Proudman Oceano-graphic Laboratory	Raster interpreted to produce contoured map; categorised in 0.2 psu intervals	No – not relevant	No – does not provide any additional correlation if temperature used

D.1.3 Habitat model

The habitat model developed for the cable route benthic faunal groups (as identified in Section C.2.3) has used a bottom-up modelling approach similar to that developed in Biomor 5/Habmap[10] and modified in the Humber Regional Environmental Characterisation[11]. This approach analyses the environmental conditions within which each faunal group was found to inform a prediction of its occurrence across the whole area of interest based on the variation of the environmental conditions.

As well as the layers processed for the Level 4 EUNIS model, a series of additional GIS layers were developed for use in the faunal model, as detailed in Table 4 (see last column); and all layers were combined to one united layer. By extracting the values of this 'united' layer per sample point, a set of environmental conditions were determined for each faunal group, i.e. minimum and maximum for numerical classes, otherwise preferred category types. The model was then set up to allocate a score to each unique area of the map according to how similar it was to each of the faunal groups. Agreement with any one of the physical layer categories / classes for each faunal group resulted in a score of 1 (and agreement with 2 layers = 2, 3 layers = 3 etc) for that area. Therefore, if any given area was within the range of all the required environmental conditions for one particular faunal group, then the likelihood of it occurring there would be the maximum score possible.

A series of trials were carried out to weight parameters in varying combinations (including removing some layers altogether by weighting with zero) until the best prediction was achieved. This was considered to be where the predictions produced the maximum area of unique faunal groups, i.e. without overlaps between the groups. Due to the significant bearing of sediment type on faunal communities, the model was adjusted such that if an area did not agree with the sediment types by which it was characterised, the score was forced to zero. By applying this forcing, it was found that it was not necessary to weight any of the parameters, because weighting made no difference to the result.

The final model therefore used a selection of the following five layers:

- EUNIS sediment categories (modified)
- Biological zone
- Seabed energy
- Water body type
- Seabed temperature

Predictions for each faunal group resulted in scores from zero to five. The results are shown in Figure 25a-25c for each individual faunal group, whereby the scores of zero to five have been allocated labels as follows:

- 0 = not qualified (i.e. not correct sediment type)
- 1 = very low likelihood
- 2 = low likelihood
- 3 = moderate likelihood
- 4 = high likelihood
- 5 = very high likelihood

---

[10] Robinson K.A., Ramsay K., Lindenbaum C., Frost N., Moore J., Petrey D. & Darbyshire T., 2009. Habitat Mapping for Conservation and Management of the Southern Irsih Sea Volume II: Modelling & Mapping. Studies in Marine Biodiversity and Systematics from the National Museum of Wales. BIOMÔR Reports 5(2): 66pp.

[11] Tappin, D R, Pearce, B, Fitch, S, Dove, D, Gearey, B, Hill, J M, Chambers, C, Bates, R, Pinnion, J, Diaz Doce, D, Green, M, Gallyot, J, Georgiou, L, Brutto, D, Marzialetti, S, Hopla, E, Ramsay, E, and Fielding, H. 2011. The Humber Regional Environmental Characterisation. British Geological Survey Open Report OR/10/54. 357pp.

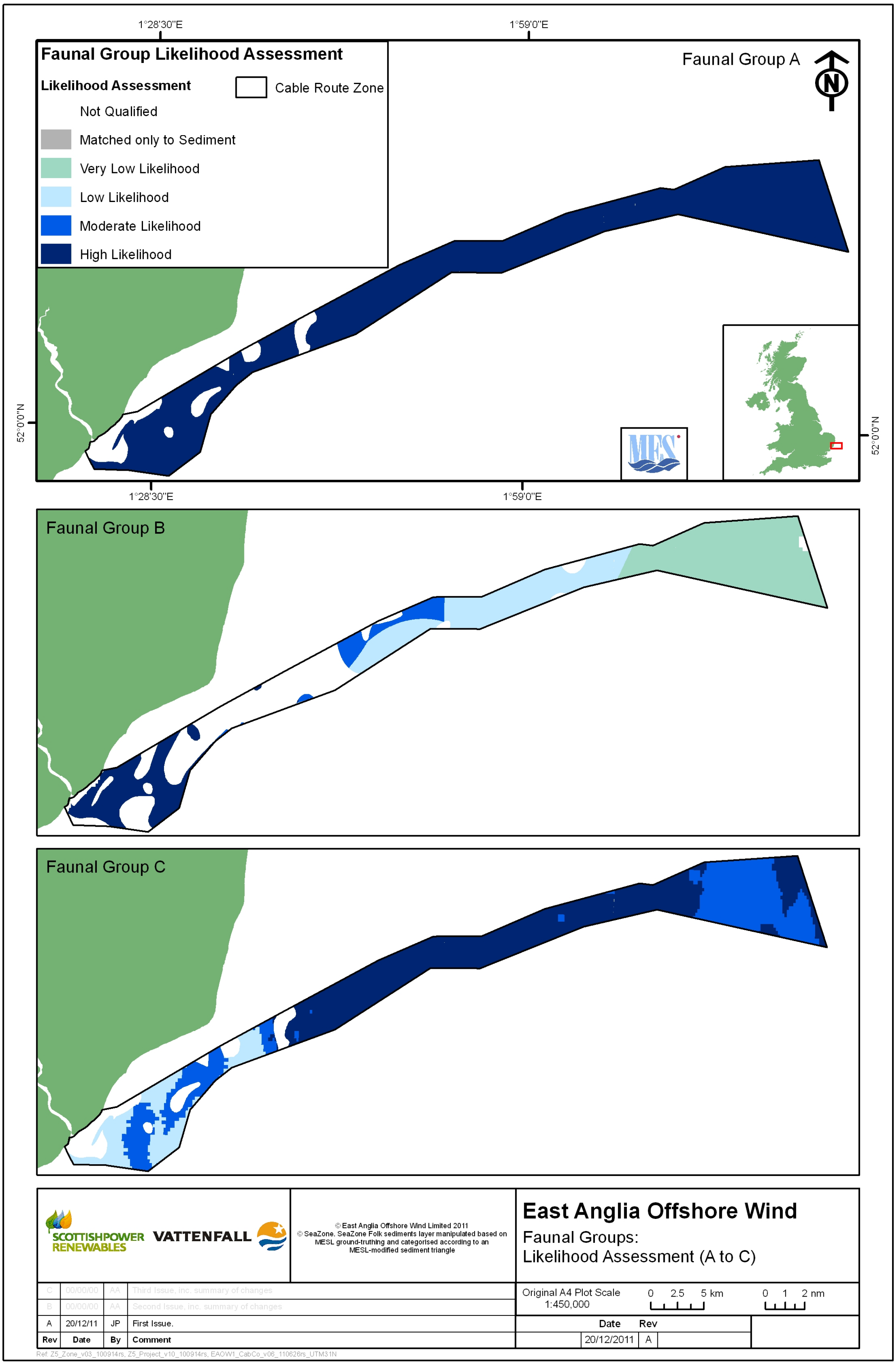


Figure 25a. Faunal group prediction across the cable route area, based on a likelihood model.

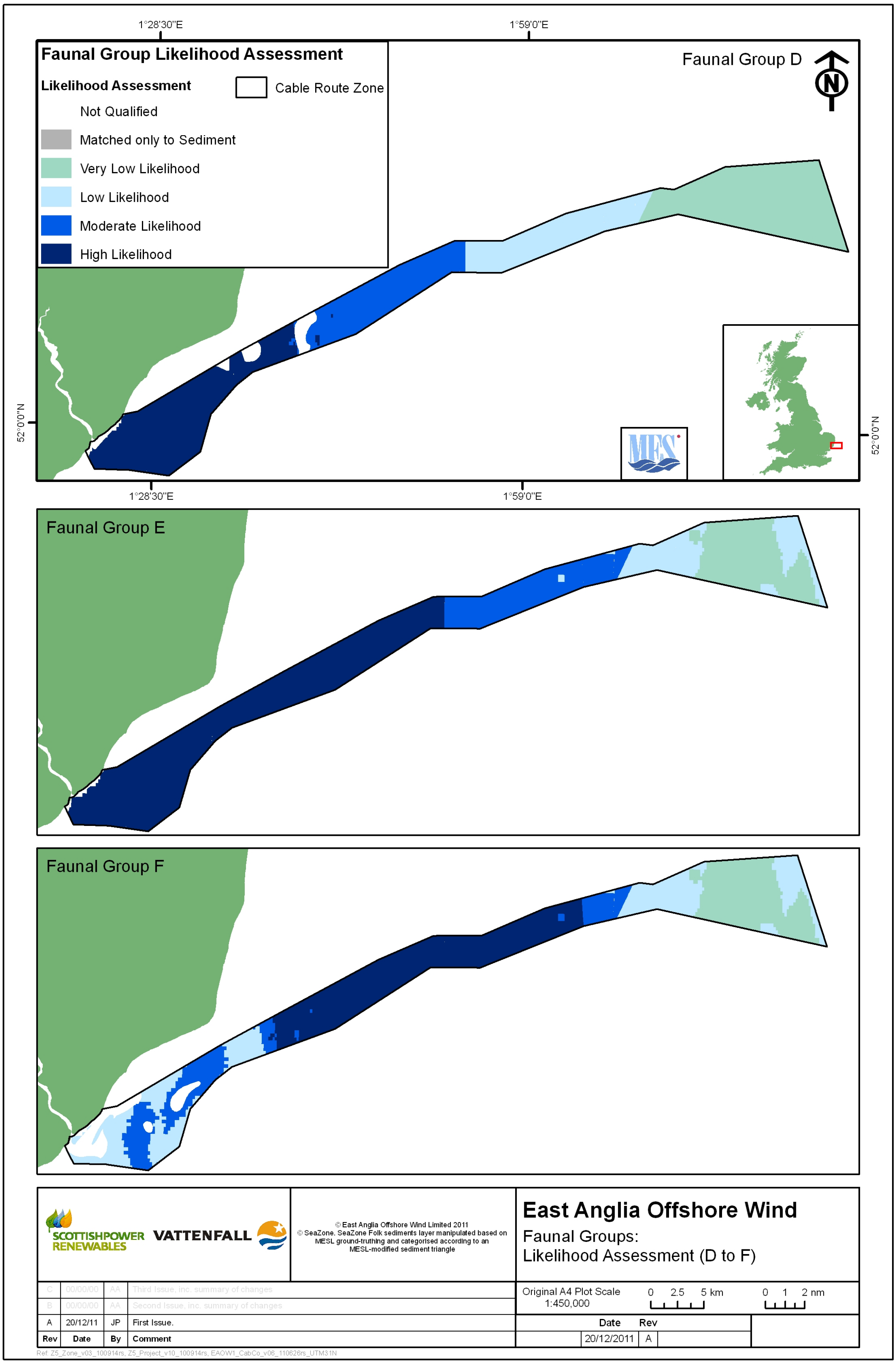


Figure 25b. Faunal group prediction across the cable route area, based on a likelihood model.

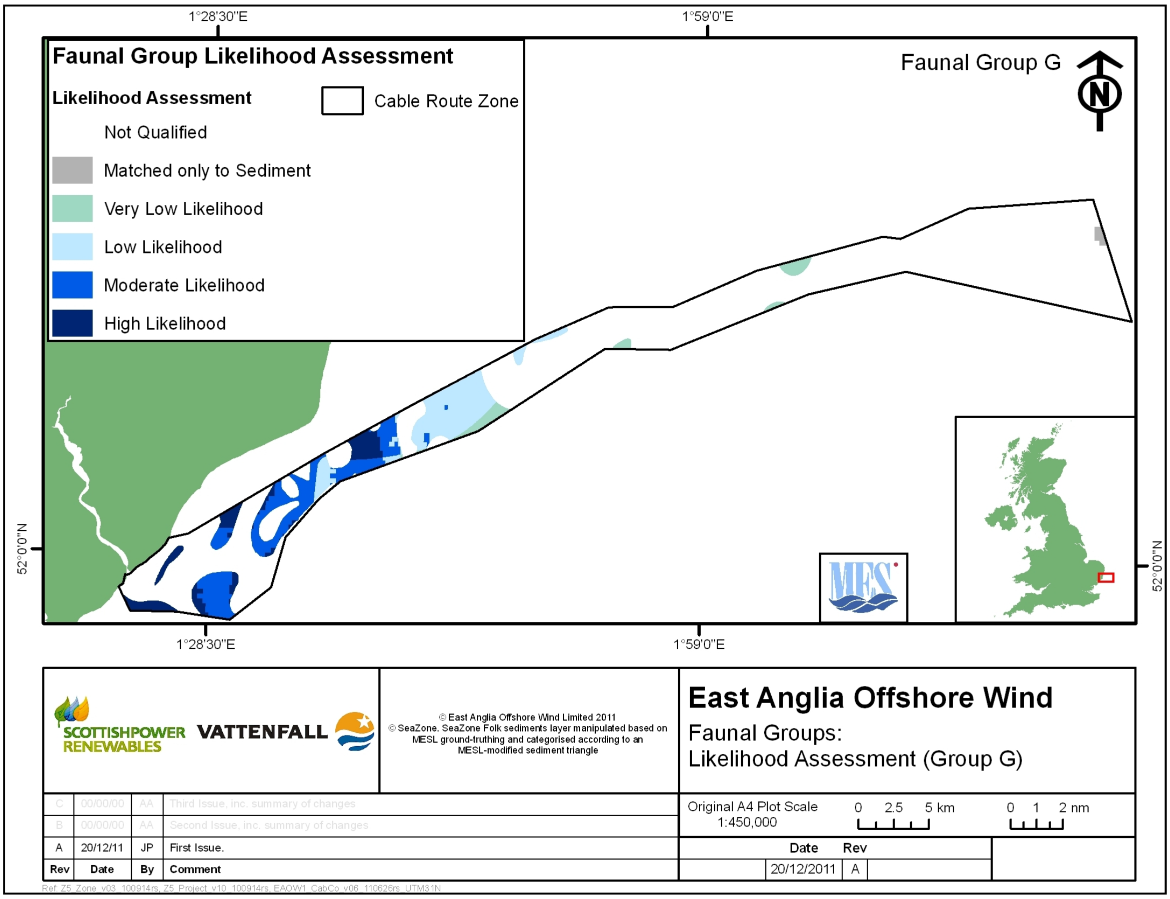


Figure 25c. Faunal group prediction across the cable route area, based on a likelihood model.

Figures 25a, 25b and 25c reveal the likelihood of occurrence of the seven faunal groups show varying degrees of coverage across the cable route area, all showing very high likelihood in certain areas. The differences between the likelihood of occurrence of each group are explained by the preference of each group for the different environmental conditions of the five modelled layers: sediment, biological zone, energy, water body type and temperature. In general terms, the greater the coverage the less defined are a faunal group's requirements for a particular habitat. The whole of the cable route area is characterised by a well mixed Region of Freshwater Influence (ROFI) in summer; whilst there are variations in winter water body type, energy, biological zone, temperature and sediment. More detail is provided below for each faunal group map:

Faunal Group A was highly likely to occur across the majority of the survey area due to the dominance of fine sand and mixed sediments; its preferred habitat. As it was also found across the full range of other environmental conditions (energy, biological zone, temperature, water body type), all the areas predicted are very high likelihood. (Note, as detailed in the method, it is not predicted where the preferred sediment type is not present.)

Faunal Group B had one of the most restricted predictions. It was most likely to occur within 10km of the coast where its preference for sandy mud and fine sand was also met with conditions of infralittoral biological zone, low temperature and well mixed ROFI in winter. This faunal group was less likely to occur in offshore waters where these conditions are less prevalent.

Faunal Group C was most likely to occur on circalittoral fine sand and mixed sediment. Other preferences were dictated by its preference for moderate energy which is dominated away from the coast. Otherwise this faunal group covered the full range of other environmental variables.

Faunal Group D was found to be most likely to occur within 10km of the shore on the majority of sediment types found in the infralittoral zone (mixed sediment, sandy mud, muddy sand, fine sand), characterised by a well mixed ROFI in winter. It has energy preferences. This faunal group was less likely to occur in offshore waters and had no likelihood of occurrence on gravel.

Faunal Group E was most likely to occur on all substrates with the exception of fine mud and gravel, approximately 20km of the shore within the infralittoral and circalittoral zones. The likelihood of occurrence of this group declined with distance from the shore due to its preference for cooler waters and winter well mixed ROFI.

Faunal Group F was most likely to occur in the middle section of the cable route where its preference for mixed sediment, coarse sediment and fine sand combined with moderate energy, the circalittoral zone, winter well mixed ROFI and low temperatures. Likelihood decreased to the west and east due to the lower presence of some of these characteristics.

Faunal Group G was, as with **Faunal Group B**, very restricted in coverage with small patches of high liklihood predicted within 7km of the coast. The patchiness was due to its strong association with mixed sediments, with the nearshore areas also favouring low temperature, high energy and winter well mixed ROFI.

Figure 26 illustrates the overlap between the areas of high likelihood of occurrence for each faunal group.

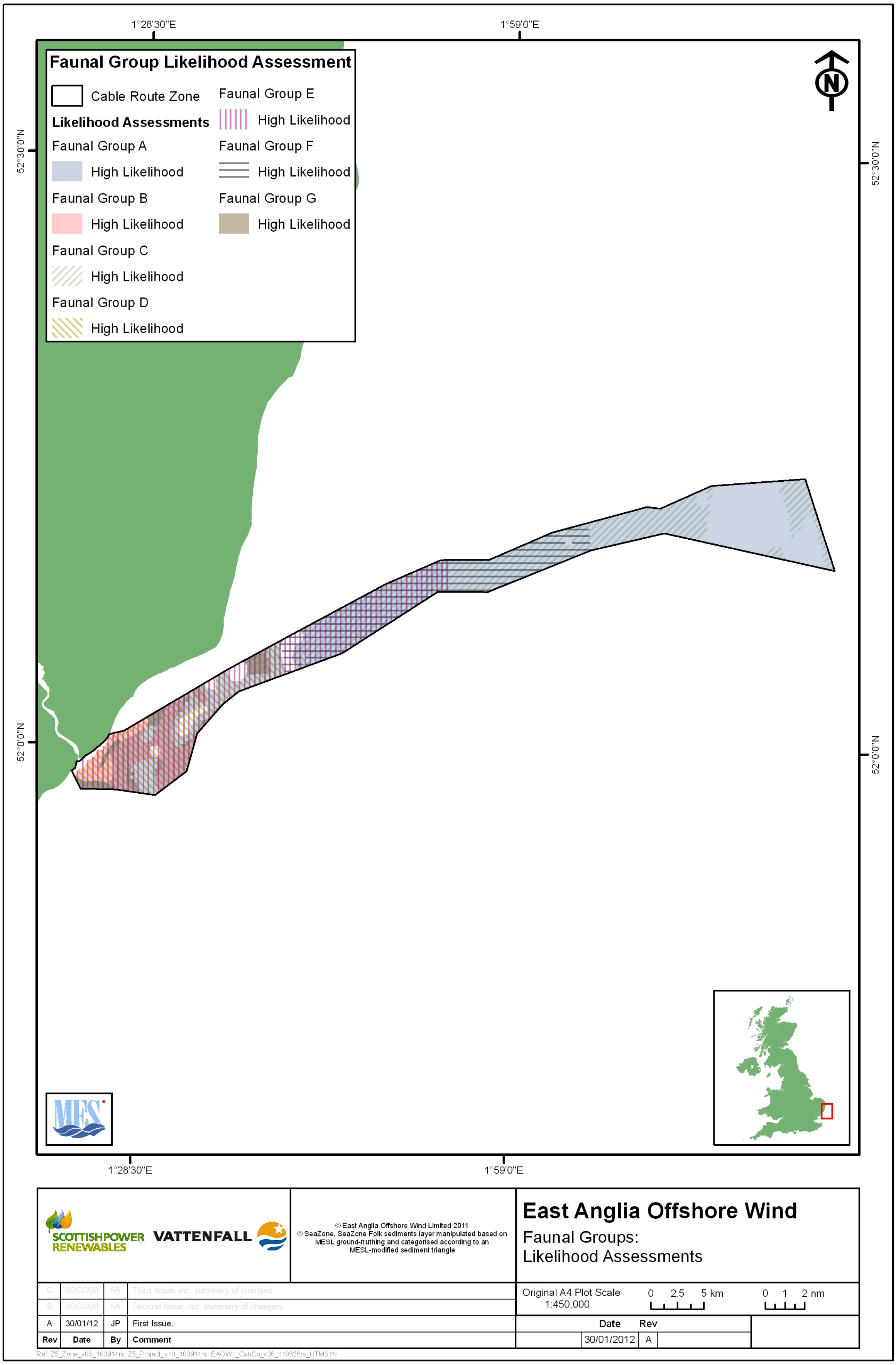


Figure 26. A thematic map illustrating the overlap between the areas of high likelihood of occurrence for each faunal group.

E. Intertidal Habitat Mapping

E.1 Intertidal Habitat Mapping Techniques

The approach used for the EAOW intertidal habitat mapping programme complies with the guidance outlined in JNCC Marine Monitoring Handbook (2001[12]), CCW Intertidal Monitoring Handbook (2006[13]) and Cefas Data Acquisition Guidelines (in draft, 2011[14])

Prior to the commencement of the survey aerial imagery of the area was inspected which revealed that both the northern and southern intertidal sites were predominantly shingle beaches. Given that the intertidal areas primarily comprised dynamic shingle areas which were unlikely to support significant assemblages of fauna, and which would be difficult to sample using quantitative method, it was decided that the areas would be subject to a walk-over (Phase 1) survey. During the survey it was noted that the site supported small areas of vegetated shingle and epiphytic organisms were present on many of the man-made tidal defence structures.

The broad-scale, habitat mapping-based approach to intertidal site surveying produced an illustrated map that defines the habitat areas within a site. However, intertidal areas, particular rapidly eroding sites such as those surveyed, are dynamic systems and the map produced represents a 'snap-shot in time'. Habitats may change naturally through physical and biological processes or through anthropogenic disturbance, such as the creation or removal of sea defence structures.

[12] Joint Nature Conservation Commitee (JNCC) 2001. Marine Monitoring Handbook. 405 pp

[13] Wyn, G., Brazier, P., Birch, K., Bunker, A., Cooke, A., Jones, M., Lough, N., McMath, A., & Roberts, S. 2006. Handbook for Marine Intertidal Phase 1 Biotope Mapping Survey. Countryside Counci for Wales.[13]

[14] Judd, A. 2011. Guidelines for data acquisition to support marine environmental assessments of offshore renewable energy projects. Draft for Consultation. Cefas contract report: ME5403 - Module 15. Centre for Environment, Fisheries & Aquaculture Science. 78 pp.

The target notes for the southern and northern intertidal sites are presented in Appendix Table 12 and Appendix Table 13 and photographic documentation is presented in Appendix Plates 2 and 3. Maps and details of the sites are presented below.

E.2 Southern Intertidal Site

E.2.1 General Site Description

The southern site comprises an approximately 1.1km length of shore line south of the River Deben (Figure 27). This area is managed by the Environment Agency who are attempting to reduce the rapid erosion that is occurring within the area. Adjacent to the site are residential properties and businesses including a golf course, which the high shore backs onto. A seawall runs along the length of the site and beyond, which incorporates a pedestrian path. At the northern end of the site stands an area of rip-rap (rock armour). The pedestrian path runs along the top of this and several warning signs and a fence deter pedestrians from walking onto the rip-rap. At the southern end of the site is a car park giving access to the site by way of step and to the south of these stairs is a row of several beach huts.

The whole area is to be highly dynamic with shifting sandbanks and rip-tides and currents apparent.

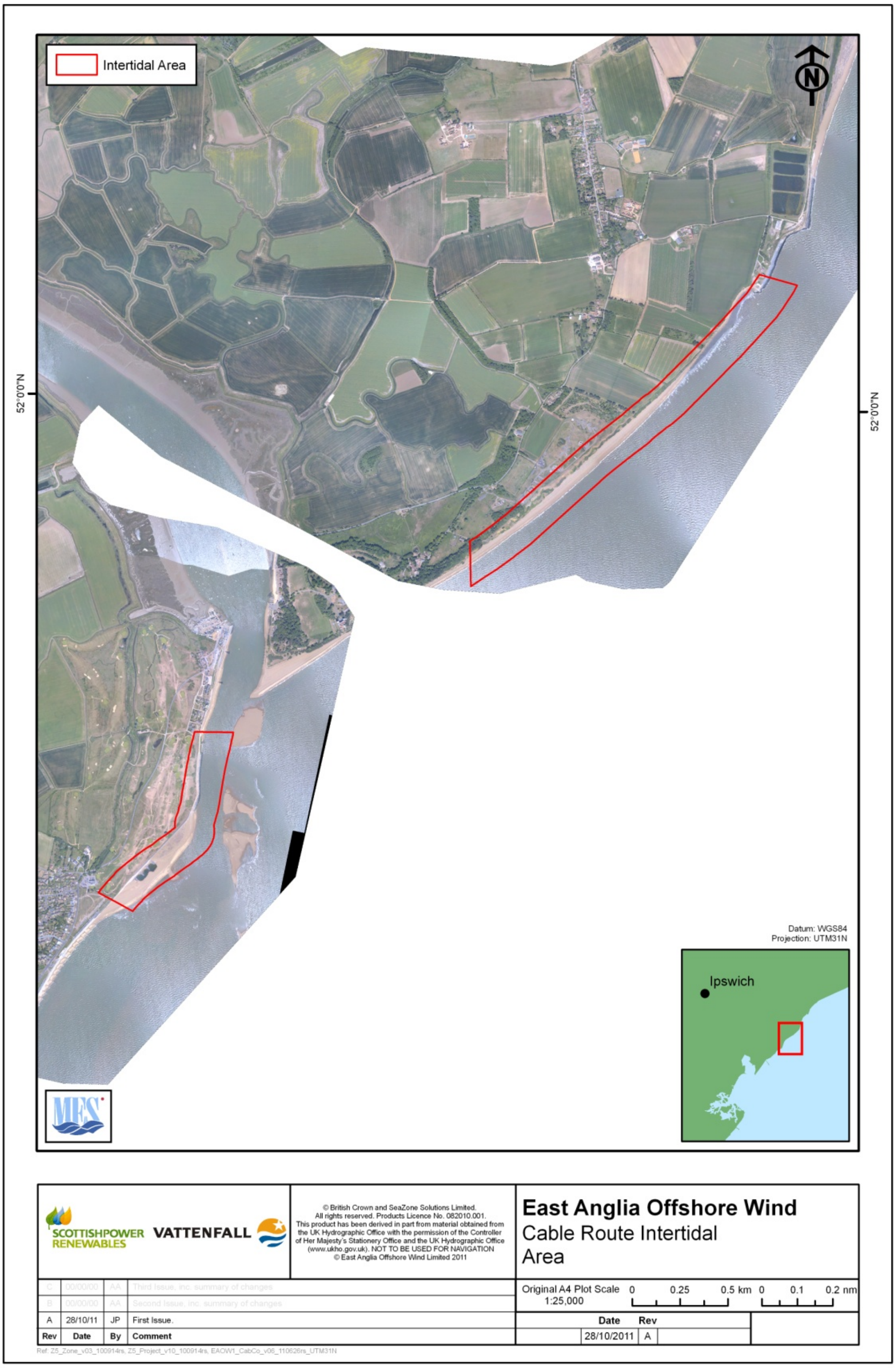


Figure 27. Overview of the two potential intertidal areas for the EAOW cable landfall site. Aerial photography © EAOW Ltd

E.2.2 Southern Intertidal Site: Habitat Characteristics

A habitat map of the southern site is presented in Figure 28. The predominant habitat of this shore is shingle, which runs from the top of the shore to the lower shore from north to south of the site. The mid-shore shingle has a characteristically steep gradient compared to the high and low shore areas. This is interrupted by a lagoon at the mid-shore. At low tide a narrow band of shingle overlain by sand is observed and several shingle banks are exposed at low tide.

At the foot of the rip-rap wall an area of fines are deposited and larger rock and pebbles have also settled in this area.

E.2.3 Southern Intertidal Site: Species Present

The following species were recorded attached to the mid to lower section of the rip-rap at the northern end of the survey site:-

- *Fucus spiralis* (fucoid alga)
- *Enteromorpha* sp. (filamentous green alga)
- *Porphyra* sp. (red alga)
- *Elminius modestus* (barnacle)

These represent typical rocky shore species.

The area of vegetated shingle supported plants adapted to the nutrient poor conditions of this habitat and included:-

- *Crambe maritima* (sea kale)
- *Lathyrus japonicus* (sea pea)

No sign of *Sabellaria* was noted at this site.

E.2.4 Southern Intertidal Site: Sensitive Habitats and Species

A significant area of the high shore to the north of the lagoon is vegetated shingle, which supports several plants including sea kale (*Crambe maritima*) and the sea pea (*Lathyrus japonicus*). Vegetated shingle is considered rare and as an internationally important system and resource, which is disappearing. The Suffolk coast holds around 90% of Britain's vegetated shingle resource and some areas, such as neighbouring Orfordness (Shingle Street), are Special Areas of Conservation (SACs) under Annex I of the Habitats Directive (annual vegetation of drift lines, perennial vegetation of stony banks). The areas of vegetated shingle found at Orfordness are, however, a more extensive example of this habitat type than that which is found across the area of relevance to this investigation. Vegetated shingle is also part of the landscape around the Sizewell B nuclear power station development area.

The sea pea (*Lathyrus japonicus)* is considered nationally scarce.

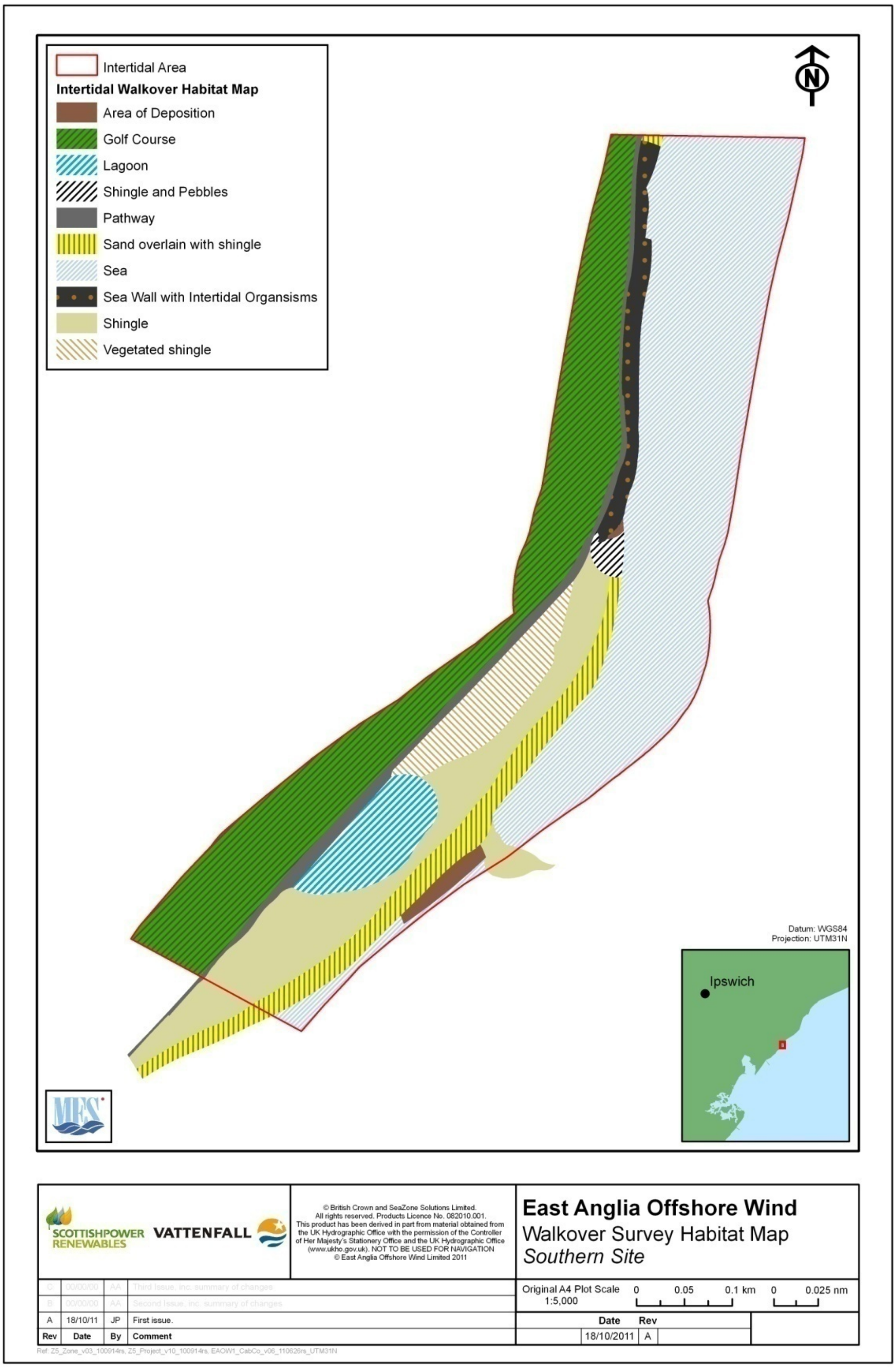


Figure 28. Habitat map of southern intertidal site surveyed during the EAOW intertidal cable route survey.

E.3 Northern Intertidal Site

E.3.1 General Site Description

The north site comprises approximately 2.1km of shore line north of the River Deben, along a part of the coast known as Bawdsey Cliff (Figure 27). The surrounding area is rural, although one house sits to the north of the site in proximity to the sea wall and Morello tower. This is the only area where safe access to the shore is available. The cliffs that border this length of shore back onto farmland and, along the mid length of the shore, an area of fenced-off land belonging to Ministry of Defence (MOD).

Cliff erosion is evident with fissures and fractures present along the cliff face and rifts occurring on the top of the cliffs. Erosion at this site is thought to be occurring at 3-4 meters per month. WWII pill boxes, which were recently on land, are now partly submerged even at low tide.

A degree of scouring is notable at the northern end of the site below the sea wall.

E.3.2 Southern Intertidal Site: Habitat Characteristics

The predominant habitat of this site is shingle (Figure 29), which stretches for most of the shore from the mid to low shoreline. At the southern end of the site the shingle runs into larger pebbles and rock higher up the shore. A relatively steep gradient marks the change from the larger pebbles and rocks to vegetated shingle on the high shore, which gradually morphs into an area of trees and shrubs. An area of shingle and sand mix is also present along the high shore.

The area of vegetated shingle runs along the top of the shoreline for most of the beach until it is met by an area of eroding cliff. The cliffs are formed of red crag and London clay. Clay from the cliff is visible on the shore and has been deposited in some quantity lower on the shore. This has been compacted and is visible at low tide.

E.3.3 Southern Intertidal Site: Species Present

The seawall located at the northern end of the site has provided an attachment site for several species including:-

- *Fucus spiralis*
- *Enteromorpha* sp.
- *Porphyra* sp.
- *Elminius/Chthamalus* and Patella.

The compacted clay deposited on the lower shore was covered in *Enteromorpha* sp., a genus of alga associated with freshwater runoff. Freshwater was noted to be running onto the shore from the cliff face in some areas at this site.

On close inspection of the clay deposit, burrow holes were observed and shells of the piddocks (bivalve molluscs) *Pholas dactylus* and *Petricola pholadiformis* were removed from some (though these were dead).

Several grasses were present in the area of vegetated shingle along with the sea kale (*Crambe maritima).*

Species belonging to the genus *Sabellaria* were not recorded at this site.

E.3.4 Southern Intertidal Site: Sensitive Habitats and Species

The main sensitive habitat of note is the vegetated shingle located on the high shore, which is further discussed below. No sensitive species were found at this site.

E.3.5 Ecology of the Shingle Environment

Coastal Shingle

Shingle shores form in wave dominated areas where the sediment is comprised of particle sizes exceeding 2mm in diameter but do not exceed 200mm in diameter. They are heavily influenced by wave energy and can form various structures such as spits like that of Scolt Head in Norfolk, a bar which crosses an estuary or encloses a lagoon, an offshore barrier island or a fringing beach that has contact with the land behind it. In southern Britain the origin of coastal shingle usually lies in Ice Age deposits from the sea bed and flint eroded from chalk cliffs. Coastal shingle often occurs as a transitional environment to other coastal and terrestrial habitats including sand dunes and heath land[15].

Shingle shores experience stark zonation patterns as shingle deposits close to the sea are highly mobile. Shingle is nutrient poor with little to no organic matter being present on the low shore, this area also experiences high levels of desiccation at low tide as shingle is a free-draining habitat. The harsh ecological conditions found across shingle habitats explain why significant intertidal communities are scarce at such locations.

Higher on the shore the shingle environment is more stable, allowing finer sand and organic material to settle. This area of the shingle shore is still nutrient poor and therefore only specially adapted biota are found in this environment, with specialist shingle plants[16] accounting for the primary ecological interest at such sites.

Coastal Vegetated Shingle

The vegetation communities of shingle vary from place to place with the conditions of the environment. The pioneer species found at the two survey sites include sea kale *Crambe maritime* and sea pea *Lathyrus japonicus* these species can tolerate salt spray and some mobility of substrates. Botantical communities will alter seasonally and long-term succession is a documented process which is characteristic of coastal vegetated shingle.

A variety of species can be found in association with vegetated shingle habitats including the short haired bumble bee, *Bombus subterraneus* (considered nationally scarce) and the great crested newt *Triturus cristatus.* Birds such as terns, waders and gulls also utilise these areas[17].

Shingle shores that support plant life are considered scarce globally and this habitat is listed under Annex I of the EC Habitats Directive (92/43/EEC) (*'Perennial vegetation of stony banks'* and *'annual vegetation of drift lines'*). Substantial sites where this habitat occurs are often notified Sites of Scientific Interest (SSSIs) or National Nature Reserves (NNR). Further, several sites in England are designated Special Areas of Conservation (SACs) including Orfordness (Shingle Street) in Suffolk. Some of these sites have also been submitted/designated as Special Protected Areas (SPA) under the EC Birds Directive (2009/147/EC) [10, 13].

Degradation of coastal shingle and vegetated shingle habitats has occurred recently through coastal development and the construction of sea defence structures. Further, extraction of shingle resources from shingle shores for aggregates has led to the destruction of some sites, severely altering the sites morphology and ecological function. Natural coastal processes have led to the loss of some habitats and the expected rise in sea level is also likely to negatively impact these coastal habitats [12,18].

[15] Murdock, A., Hill, A., Cox, J., & Randell, R.E. 2010. *Development of an evidence base of the extent and quality of shingle habitats in England to improve targeting and delivery of the coastal vegetated shingle HAP*. Number 054. Natural England.

[16] Little, C (2003) The biology of soft shores and estuaries. Oxford University Press, New York

[17] UK Biodiversity Group Tranche 2 Action Plans - Volume V: Maritime species and habitats (October 1999, Tranche 2, Vol V, p117)

[18] JNCC 2004. Common Standards Monitoring Guidelines for Vegetated Shingle.JNCC ISSN 1743-8160.

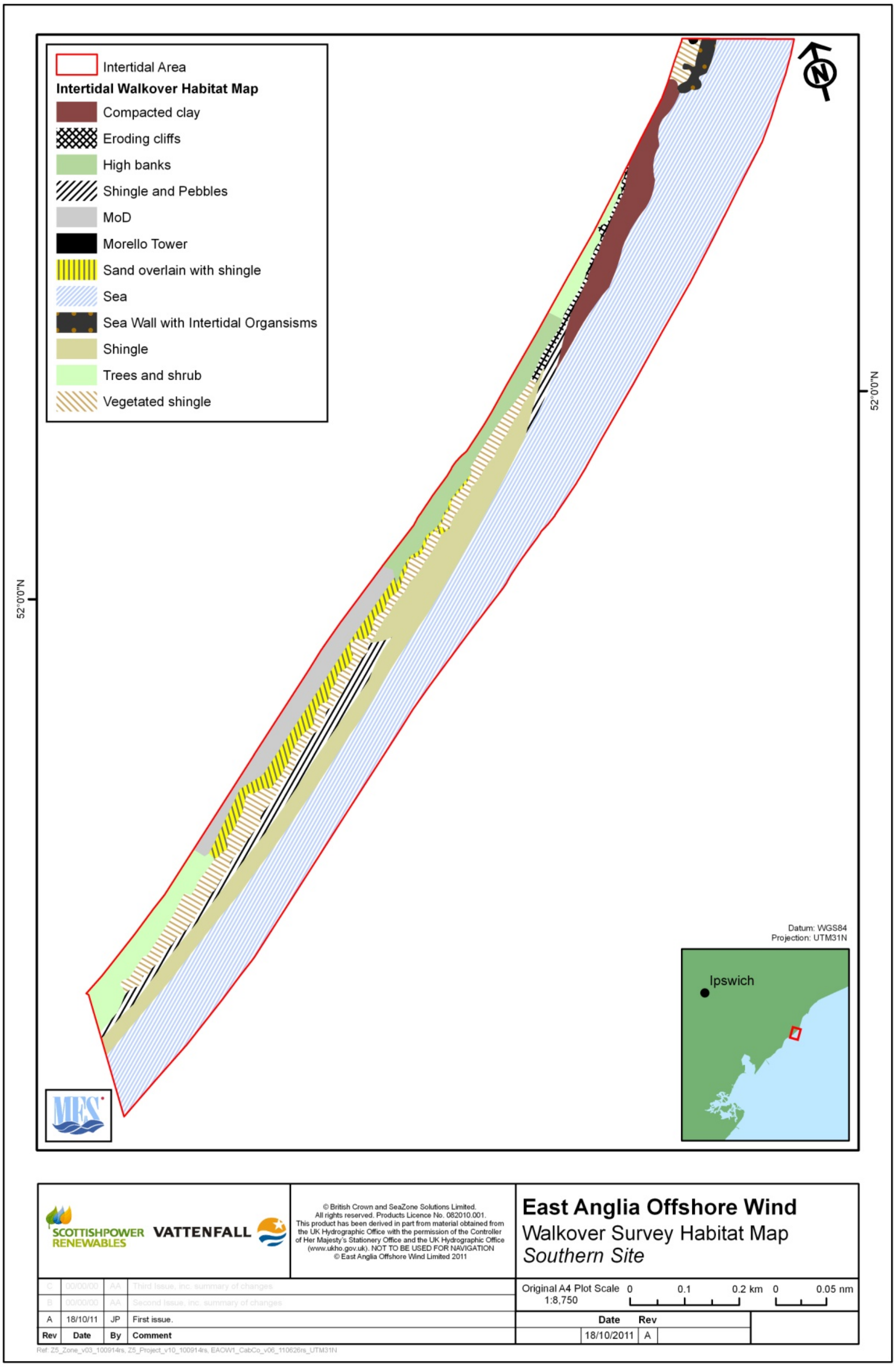


Figure 29. Habitat map of northern intertidal site surveyed during the EAOW intertidal cable route survey.

E.4 EUNIS and MNCR Habitat Classification

The EUNIS (European Nature Information System) habitat mapping classification system was used to help describe the habitats characterising the two potential cable landfall areas.

The EUNIS Classification system was developed by the European Topic Centre for Nature Protection and Biodiversity (ETC/NPB) for the European Environment Agency (EEA) and the European Environmental Information Observation Network (EIONET) and provides a useful descriptive tool. Habitats are divided into hierarchical levels; Level 1 splits marine, coastal and various terrestrial habitats. Due to the nature of the shores surveyed both coastal and marine habitat classifications are used to describe the areas. EUNIS Levels 2 and 3 use the physical characteristics of the environment to further split habitats.

The MNCR biotope classification system is also used extensively in the UK and Ireland. Both the EUNIS and MNCR biotope codes are presented in Table 5.

The southern and northern intertidal survey sites can be divided into two main habitats by using the EUNIS scheme to level three. The lower shore of both sites is described as ***littoral coarse sediment*** (A2.1) exhibiting the following characteristics:-

- Shores of mobile pebbles, cobbles and gravel, sometimes with varying amounts of coarse sand
- Sediments are highly mobile and subject to high degrees of drying between tides. As a result, few species are able to survive in this environment
- Littoral coarse sediments are found along relatively exposed open shores, where wave action prevents finer sediments from settling

Further definition can be related to this habitat using the MNCR (Marine Nature Conservation Review) classification scheme, which describes this habitat as Barren littoral shingle (LS.LCS.Sh.Bar.Sh).

The upper part of the shore at both intertidal sites contained areas of vegetated shingle described under the EUNIS scheme as ***upper shingle beach with open vegetation*** (B2.3)**.** This habitat type exhibits the following characteristics:-

- The upper beach of large shingle bars
- Open perennial vegetation mostly formed by *Crambe maritima*,*Honkenya peploides*, *Lathyrus japonica* and a few other specialised species.

Level	EUNIS	Description	MNCR
	Lower Shingle Shore		
1	A	Marine	
2	A2	Littoral Sediment	LS
3	A2.1	Littoral Coarse Sediment	LCS
		Shingle/pebble/gravel shores	LSC.Sh
		Barren littoral shingle	LS.LCS.Sh.Bar.Sh
	Upper Shingle Shore		
1	B	Coastal	
2	B2	Coastal Shingle	
3	B2.3	Upper Shingle Beach with open vegetation	

Table 5. Description of the important intertidal habitats of the southern and northern intertidal sites following the EUNIS and MNCR classification systems.

F.1 Sub-tidal Protected Areas

F.1.1 Internationally Protected Areas

The EAOW cable corridor and potential landfall sites are situated in close proximity to several areas of conservation interest protected under UK and international legislation. Figure 30 depicts where these areas are positioned in relation to the EAOW cable corridor. Below is a synopsis of the marine protected areas that occur at, and adjacent to, the study sites.

The Outer Thames Area Special Protected Area (SPA) was awarded SPA status due to the presence of a significant population of Red-throated divers (*Gavia stellata*). The population reaches a maximum outside of their breeding season and accounts for 38 percent of the UK's over-wintering population. The area also includes sandbanks, which are considered important feeding sites for sandeels.

Margate and Long Sands candidate Special Area of Conservation (cSAC) has been selected to provide protection to the sandbanks designated as Annex I habitats, which occur across the site. As a candidate SAC, Margate and Long Sands has not been approved for designation as an SAC but has been recommended to the European Commission by the UK Government. However, as a cSAC Margate and Long Sands receives protection equivalent to that received by a confirmed SAC designation.

F.1.2 Marine Conservation Zones

Following the passage of the Marine and Coastal Access Act (2009) through parliament a network of new Marine Protected Areas (MPAs) will be designated across the seas of the British Isles. These MPAs will be known as Marine Conservation Zones.

Net Gain, is currently in the process of selecting the sites that will contributed to the network across the EAOW area and wider English North Sea. The MCZ designation process is presently scheduled for completion in December 2012, however, Defra has indicated that this process is likely to over-run. Net Gain has recently published their final recommendations for Marine Conservation Zones (Net Gain, 2011)[19], but Defra is keen to re-assess the evidence that contributed towards these recommendations. The recommended sites may, therefore, be subject to significant revision. The final recommendations made by the project will be considered for designation by the Secretary of State for the Environment.

However, the locations of the recommended MCZ's as they stand at the present time are presented in Figure 29.

F.1.3 Species of Conservation Interest

During the survey the amphipod *Apherusa ovalipes* was recorded at one site (station 20A). This amphipod is considered nationally rare; however, only one individual was recorded at this site.

F.2 Annex I Habitats

Annex I Habitats are defined under the the EU Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats Flora and Fauna).

Two main types of Annex I habitats were considered likely to occur across the EAOW cable route area of search:-

- **Sandbanks** which are permanently covered by seawater – described in the Directive as '*Sublittoral sandbanks which are slightly covered by seawater all the time. Water depth is seldom more than 20 m below Chart Datum.*
- **Reefs** described in the Directive as *'Submarine or exposed at low tide, rocky substrates and biogenic concretions, which arise from the sea floor in the sublittoral zone but may extend into the littoral zone where there is an uninterrupted zonation of plant and animal communities. These reefs generally support a zonation of benthic communities of algae and animal species including concretions, encrustations and corallogenic concretions.'*

[19] Net Gain (2011). Final Recommendations Summary Report. Net Gain, pp20.

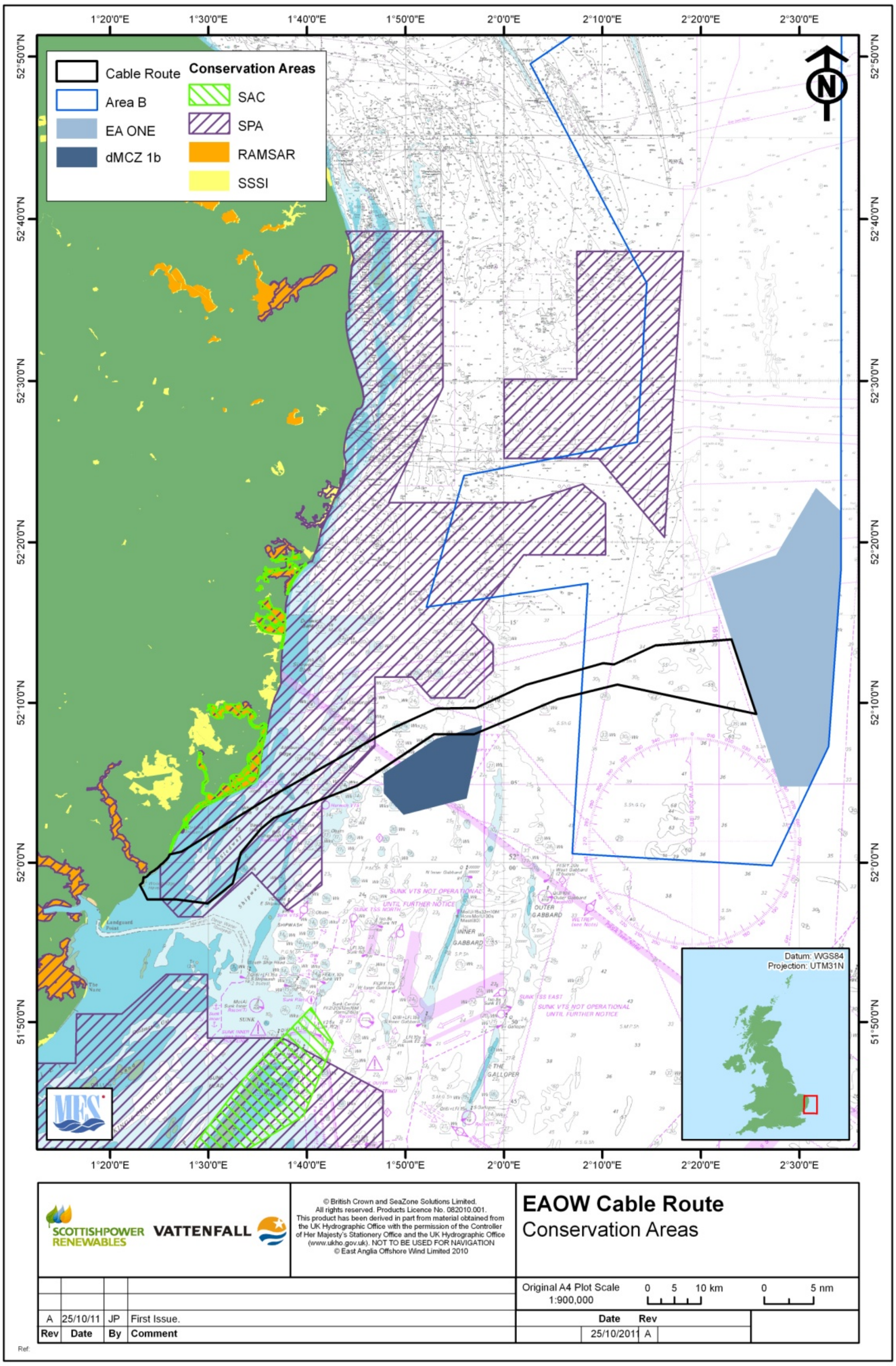


Figure 30. Map illustrating the position of the EAOW cable route and EAOW zone in relation to conservation areas of interest. ARCs charts are licenced by the UK Hydrographic office.

F.2.1 Sandbanks

Annex I Sandbanks do not occur within or intersect any part of the cable route area of search. However, the Biodiversity Action Plan Habitat Subtidal Sands and Gravels occurred across much of the survey area.

F.2.2 Sabellaria spinulosa Reefs

Over the course of the EAOW cable route sub-tidal survey the polycheate worm *Sabellaria spinulosa,* known as the Ross Worm, was identified at several stations (Figure 31) and was the most abundant organism in the survey. *Sabellaria spinulosa* belongs to the family Sabellidae. *Sabellaria spinulosa* can form dense aggregations and, under the right conditions where tidal flow is medium to strong and fine to medium organic debris is present, they will create biogenic reef structures. These structures can become home to an abundant and diverse range of marine biota and due to this are listed within the EC Habitats Directive (1992) and deemed to be of European significance. As an EU member-state, the UK Government has a responsibility to ensure that these habitats receive adequate protection from unnecessary damage and destruction.

Sabellaria reefs are rare and *Sabellaria spinulosa* will more often be found encrusting stones and other hard surfaces. *Sabellaria* reef formations were found at one site within the search area (Station 19) identified from video and still imagery (Figure 31). The still seabed images acquired from this location is presented in Plate 3.

In order to ensure that anthropogenic activities do not adversely affect any areas of *Sabellaria* reef that might be found across the area of interest, it is important that the distribution of *Sabellaria* across the site is adequately defined. Further, it is important to make a distinction between *Sabellaria* reef environments and the presence of *Sabellaria* populations at a given site when evaluating potential Annex I sites. MESL describe the presence of *Sabellaria* in terms of tube type; rubble, crusts, veneer and reefs in-line with methods devised by Hendrick and Foster-Smith[20] and Gubbay[21]. To ensure no reef environments were disturbed during the EAOW cable route survey, and as no geophysical data were available for assessment before commencement of the survey, all stations were subject to seabed imagery analysis prior to deployment of the grab. The geophysical data that have subsequently bee acquired from the survey area could be used to identify the extent of any potential reef at Station 19.

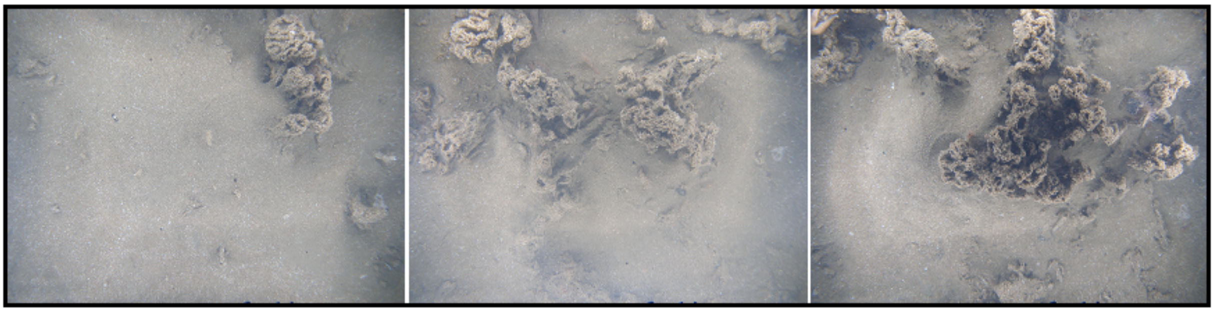


Plate 3. The seabed imagery acquired at EAOW Cable Route Survey Station 19.

[20] Hendrick and Foster Smith (2006). *Sabellaria spinulosa* reef: a scoring system for evaluating 'reefiness' in the context of the Habitats Directive. Journal of the Marine Biological Association of the United Kingdom; 86: 665-677.

[21] Gubbay (2007). Defining and Managing *Sabellaria spuinulosa* Reefs:Report of an Inter-Agency Workshop. http://jncc.defra.gov.uk/page-4097.

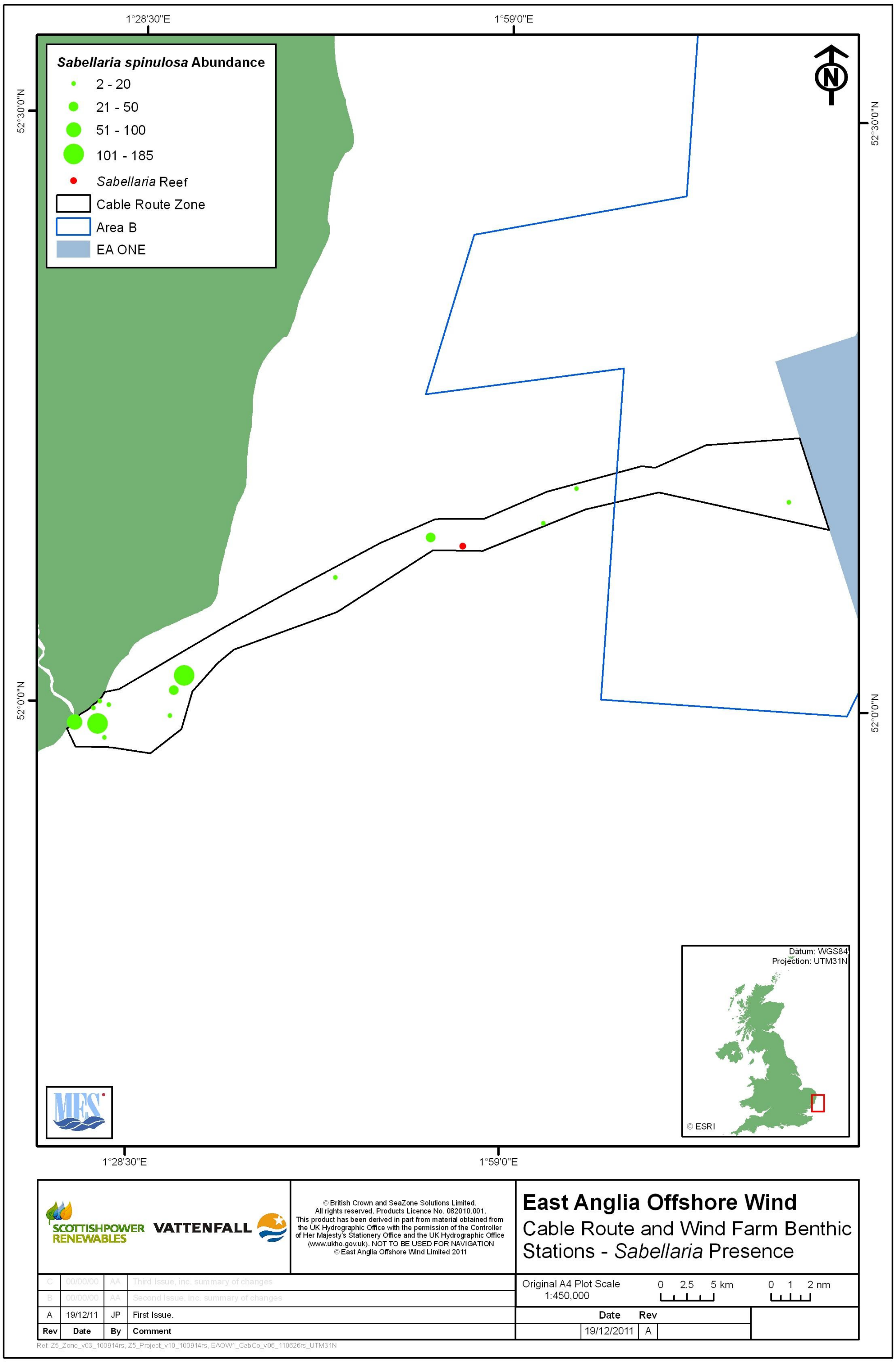


Figure 31. Map illustrating the locations at which *Sabellaria spinulosa* was recorded during the EAOW cable route investigation. The green circles indicate the abundance of *Sabellaria spinulosa* within grab samples and the red circle indicates the presence of potential reef as noted in the seabed imagery.

F.3 Intertidal Protected Areas

F.3.1 Internationally and Nationally Protected Areas

The two potential landfall study sites are situated along the Suffolk coastline, an area which supports a diverse range of habitats such as salt marshes, estuaries and cliffs. Several areas receive protection under UK and international conservation legislation, mainly due the presence of wildfowl, waders and migratory bird species that utilise these habitats (Figure 32).

In addition to the above, several protected estuaries lie adjacent to the study sites. These are:-

- The Deben Estuary SPA and Ramsar site mainly consists of intertidal mud flats and saltmarsh habitats.
- The Stour and Orwell Estuaries SPA, Ramsar and Site of Special Scientific Interest (SSSI) site includes large areas of mud-flats, salt marsh and low cliffs.
- The smaller Alde-Ore Estuary is a designated Sites of Special Scientific Interest (SSSIs) due to the range of wildlife found at this site and the geological features of the area.

The Deben and Stour and Orwell Estuaries support many overwintering and migratory bird species including a population of Avocets (*Recurvirostra avosetta*), which are of European importance.

In the vicinity of the proposed intertidal search area and to the north of the Deben Estuary is a series of conservation areas consisting mainly of heath, marshes and cliffs. These areas are designated Sites of Scientific Interest (SSSIs) and part of the Suffolk Coasts and Heath Natural Area (and Suffolk coast maritime Natural Area), which is representative of the transitional zone between marine and terrestrial habitats. SSSIs are sites which preserve unique areas of wildlife habitats and geological features. SSSIs are notified and protected under the Wildlife and Countryside Act (1981).

Part of Bawdsey Cliff is a recognised geological SSSI due to the exposure of fossil-bearing Red Crag prominent along the cliff face.

F.3.2 Intertidal Species of Conservation Interest

The sea pea (*Lathyrus japonicus*) identified at the southern intertidal site is nationally scarce.

F.4 Intertidal Annex I Habitats

The habitats of both sites are dominated by coastal shingle and vegetated shingle. Coastal vegetated shingle is an ecosystem which supports a unique range of flora and fauna that are adapted to the harsh conditions which prevail at such sites. Vegetated shingle is considered rare globally and receives protection under the Annex I of the EU Habitats Directive ('*perennial vegetation of stony banks*') though neither survey area is thought to be under consideration for protection as an SAC. Several species of birds including terns, gulls and waders nest on shingle as their eggs are coloured to blend in with the shingle environment. The steep profiles, which naturally occur over time on shingle shores creates a natural sea defence.

The Suffolk shingle coast therefore receives protection in many areas. The locations at Bawdsey and the open coast of Felixstowe Ferry are recognised as significant areas for vegetated shingle. These sites and the wider area are also considered Areas of Outstanding Natural Beauty (ANOB) and Biodiversity Actions Plans (BAP) are in operation along the coast to raise awareness of vegetated shingle and monitor the geomorphologic features, and fauna and flora which are characteristic of these landscapes.

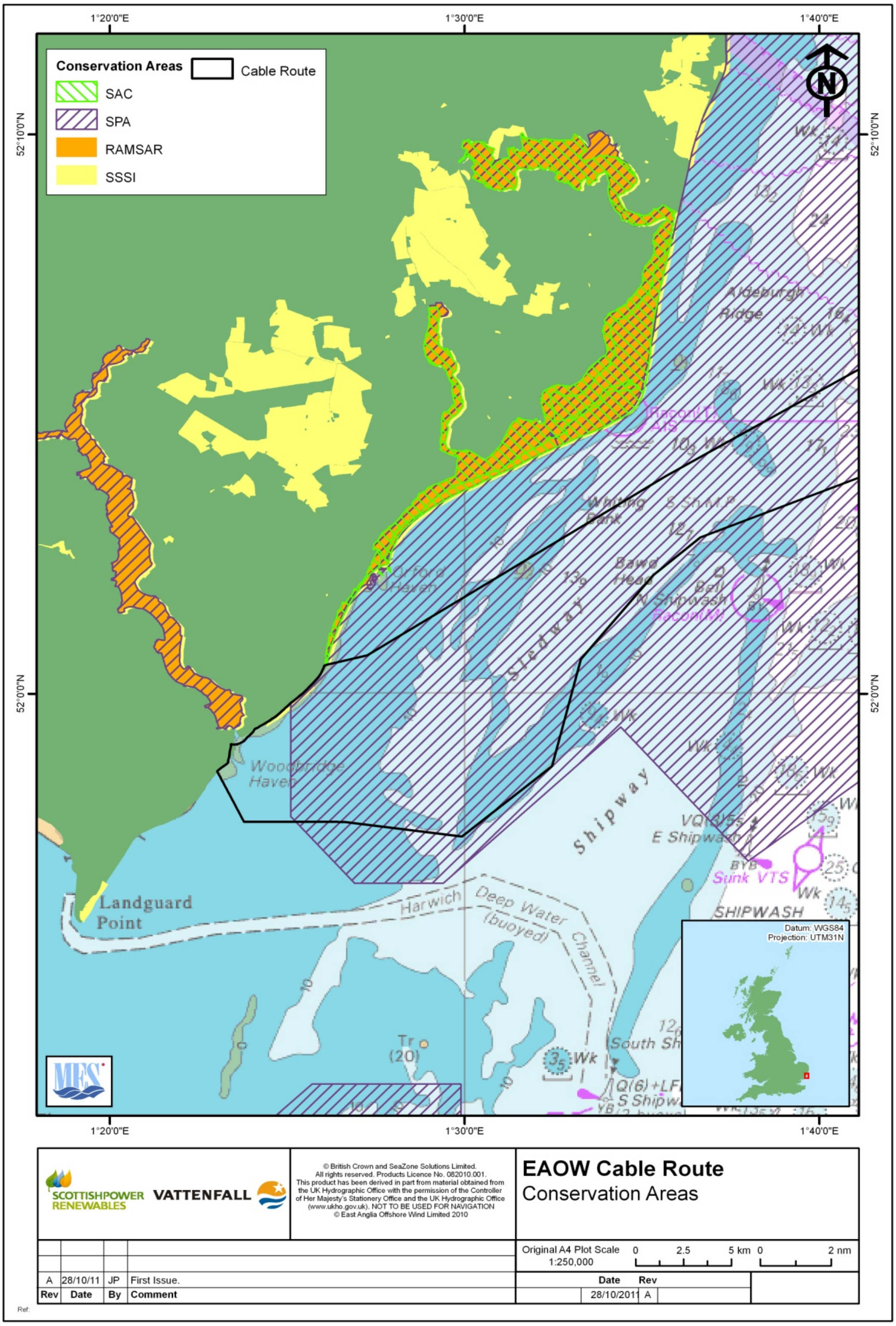


Figure 32. A schematic chart illustrating the location the EAOW cable route intertidal area and adjacent conservation areas.

G. CONCLUSIONS

G.1 Sub-tidal Environment

G.1.1 Composition of the seabed

Analysis of the data gathered from the 41 PSD samples taken from across the EAOW cable route area of search reveals that the predominant deposit type of the survey area is sand, with areas of mixed sediments distributed across the site. Localised areas dominated by gravel and finer sediments were also observed. Deposits of London clay eroded from coastal cliffs are thought to have deposited at near shore sites accounting for the fine sediments found at one site in particular.

Multivariate analysis of the PSD data reveals that the deposits found across the area can be divided into three groups consisting mainly of Gravelly Sand, Muddy Sandy Gravel and slightly Gravelly Muddy Sand. The dominant sediment type for the area was Gravelly Sand, which was distributed over the cable route study area but dominated the most easterly section of the area. Muddy Sandy Gravel was more common closer to the shore and slightly Gravelly Muddy Sand was only found within 10km of the shore.

G.1.2 Nature of the Benthos

Analysis of the benthic communities present across the site reveals that a total of 270 taxa were recorded across the EAOW cable route area. In terms of mean per-sample values this equates to 93 individuals, 20 taxa and a biomass value of 0.38 gAFDW (Ash free dry weight).

Of the major taxonomic groups present Annelida were the most abundant, accounting 47% of the relative abundance of organisms. This was followed by Mollusca and then Crustacea. Annelida also made the greatest contribution to the taxonomic richness of the study area, followed by Miscellanea, a group which includes hydroids and bryozoans. The taxonomic group which made the greatest contribution to total biomass was Mollusca.

The most abundant species found across area of search was the biogenic reef building worm *Sabellaria spinulosa*. This species was found intermittently across the site, but the sites with the highest abundance of this species were found close to shore.

Bivalve molluscs belonging to the family Mytilidae and the species *Abra alba* were also among the most abundant taxa found across the site. Comparatively high abundances of these taxa were concentrated at a small number of stations.

The taxon which was present at the greatest number of stations was NEMERTEA (ribbon worms), followed by the annelid *Spiophanes bombyx.* Bivalve molluscs belonging to the family Mytilidae were also among the taxa which occurred at the greatest number of stations.

Overall the EAOW cable route area exhibited relatively low diversity and abundance. Abundant taxa were found in high numbers at only a few selected stations.

Following multivariate analysis seven distinct faunal groups were identified. The offshore area was dominated by Faunal Groups A, C and F. Polychaetes were the dominant fauna of Group A, whilst groups C and F were characterised by polychaetes and Mytilidae. The fauna of the inshore stations appeared to be more heterogeneous with a greater number of faunal groups present than in the offshore areas. Faunal Groups D and E were the most commonly encountered faunal groups close to the shore. Faunal Group D was dominated by the Polychaetes *Spiophanes bombyx* and *Nucula*, whilst Faunal Group E was characterised by mussels, *Sabellaria spinulosa* and ACTINIARIA.

G.1.3 Conservation of the Subtidal Area

One occurrence of Annex I habitats (*Sabellaria* reef) was evident from the EAOW cable route area. This station was identified from seabed imagery. It was situated in the mid-section of the area of interest.

The EAOW cable route area intersects the Outer Thames Area Special Protected Area (SPA). The area also is adjacent to several other sites of conservation importance. One recommended Marine Conservation Zone also intersects with the EAOW cable route area.

G.2 Intertidal Environment

G.2.1 Habitat Composition

Two possible landfall locations have been put forward for possible development. However, the general ecological character of these two locations was broadly similar. The main intertidal habitat for both the northern and southern sites consisted mainly of shingle, with patches of shingle overlain with sand also present. Vegetated shingle was also evident at both sites.

The habitats of each site were classified according to the EUNIS system. The two most widespread habitats found at the landfall locations were littoral coarse sediment and upper shingle beach with open vegetation. The biota of both sites was largely limited to the vegetation supported by the shingle habitat and small localised areas of rocky shore-type communities, mainly attached to man-made structures.

The physical environment along much of this coast is highly dynamic. Erosion is occurring at a fast pace along much of this coast and was especially evident at the southern intertidal site. Both sites are heavily managed in order to decrease the rates of erosion.

G.2.2 Conservation of the Intertidal Area

The main habitats of conservation importance at this site are the areas of vegetated shingle, which is listed as an Annex I habitat under *Perennial Vegetation of Stony Banks.* The two potential landfall sites are not designated as Special Areas of Conservation (SAC) but several sites along this coast are designated, or are proposed for designation, as SACs due to the presence of this habitat.

The wider coastline of these two sites is punctuated by Sites of Scientific Interest (SSSIs) due to geological and biological features, Special Protected Areas (SPA's) and RAMSAR sites. The surrounding estuaries are noted for their importance to bird populations and also fall under several conservation designations.

Some of the vegetation associated with potential landfall locations is also considered rare, such as the sea pea (*Lathyrus japonicus).*

H. APPENDICES

Appendix Table 1. Outline of Collection and Quality Assurance Procedure

Appendix Table 2. Survey Field Notes

Appendix Table 3. Seabed Imagery Field Notes

Appendix Table 4. Particle Size Analysis Data

Appendix Table 5. Summary of the PSA Data

Appendix Table 6. Faunal Abundance Matrices

Appendix Table 7. Major Group Biomass

Appendix Table 8, Numerical Abundance, Taxonomic Richness and Biomass

Appendix Table 9. Faunal Group SIMPER Tables

Appendix Table 10. Relate and BEST Results

Appendix Table 11. Intertidal Survey Positions

Appendix Table 12. Intertidal Survey Field Notes (Southern Site)

Appendix Table 13. Intertidal Survey Field Notes (Northern Site)

Appendix Plate 1. Grab Sample Photographs

Appendix Plate 2. Contact Prints of Southern Intertidal Site Survey

Appendix Plate 3. Contact Prints of Northern Intertidal Site Survey

Appendix Plate 4. Representative Examples of the EAOW Cable Route Seabed Imagery

East Anglia Offshore Windfarm Cable Route : Benthic and Intertidal Characterisation Report
APPENDICES

Document No: ERMCAB11

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Appendix Table 1. Outline of Collection and Quality Assurance Procedure.

1. Collection of the samples was carried out by staff employed by Marine Ecological Surveys Limited. The surveys were undertaken by Lucy Georgiou BSc. (Hons), MSc and Dr Jacqueline Hill. of MESL. All of MESL's staff hold, as a minimum, a degree in the biological sciences. The benthic and intertidal surveys were conducted in August 2011.

2. All positions were checked with the ship's navigational officer at the time of collection and careful notes entered into a Field Notebook which contained the following information: station number, date, time of sample collection, position of sample, type of deposit and sample volume. This information is stored within MESL's in-house database.

3. Intertidal navigational coordinates were recorded using a Garmin hand-held GPS device accurate to within 3-4 meters. Notes relevant to each GPS point were entered into a Field Notebook, which contained the following information: way-point number, date, time, description of sediment type and biota present. This information is stored within MESL's in-house database.

4. The field staff were responsible for careful labelling of the sealed sample vessels, for addition of formalin and for collection of appropriate sub-samples.

5. A series of photographs of representative steps in the survey procedure are included in our standard survey protocol.

6. Following completion of the survey, the sealed samples were carefully checked against the field notes and transported to the MESL laboratory for analysis. In the case of the biological samples, the vessels were checked on arrival at the laboratory by our laboratory supervisors Emma Delduca B.Sc. (Hons) and Lisa Grubb BSc (Hons). Records are kept of the date of separation, date of analysis and a complete list of the macrofauna recorded in each sample. The signed Laboratory Notebook is kept as a record and can be made available to clients as required. Marine Ecological Surveys Limited is a participant in the National Marine Biological Analytical Quality Control (NMBAQC) Scheme.

7. A reference collection is kept for uniformity of analysis, and the complete sample from each station is kept preserved in alcohol for validation. Macrofauna samples are kept for 4 months following report submission, or longer on request by the client.

8. The data from the Field and Laboratory Notebooks were then compiled into final data sheets for analysis of community composition. All data are double-checked by two staff before entering to tables for analysis and are crosschecked with records from the navigational system to ensure that the positions entered into the final report are correct.

9. All signed Field Log Books, Laboratory Records and the original extracted samples of macrofauna from each sample site are available for inspection or validation following report submission.

Appendix Table 2. Summary of sampling log and navigational positions of grabs sampled with a 0.1m^2 mini-Hamon grab during the EAOW cable route survey during August 2011 and the EAOW benthic characterisation survey (suffix B and X). Navigational positions are recorded in UTM (WGS84) Zone 31 Northern. Grabs were deployed following seabed imagery analysis, station 19 could not be sampled due to the presence of *Sabellaria* reef at this station. Only two attempts could be made at station 23 (samples less then 5L) due to shipping traffic.

Station	Easting	Northing	Date	Weather Conditions	Time (GMT)	Depth (m)	Sample Volume (l)	PSD Volume (l)	Attempts
1	397581.6	5759306.3	21-Aug-11	Force 2-3	07:58	9.2	8	1	1
2	398710.2	5760886.7	21-Aug-11	Force 2-3	08:10	13.5	8	1	1
3	399881.0	5762232.6	21-Aug-11	Force 1-2	08:36	12.9	7	1	2
4	401647.5	5764580.3	21-Aug-11	Force 1-2	08:55	12.8	7	1	1
5	398257.7	5764939.1	21-Aug-11	Force 2-3	16:43	6	8	1	1
6	405690.7	5767565.8	21-Aug-11	Force 1-2	09:13	12.4	8	1	1
7	411988.9	5770254.7	21-Aug-11	Force 1-2	09:49	20.2	8	1	1
8	414283.7	5773936.2	21-Aug-11	Force 1-2	10:11	23.1	5	1	2
9	419361.0	5777210.0	21-Aug-11	Force1-2	14:05	30	9	1	1
10	433877.7	5779056.6	21-Aug-11	Force 1-2	11:47	37.4	7	1	3
11	435008.6	5781382.7	21-Aug-11	Force 2-3	12:47	42.5	8	1	2
12	437010.2	5782328.8	21-Aug-11	Force 1-2	12:30	36.4	9	1	1
13	429572.2	5778808.8	21-Aug-11	Force 1-2	11:19	32.5	8	1	1
14	431185.5	5780056.1	21-Aug-11	Force 2-3	13:07	36.3	8	1	1
15	439271.4	5782816.1	21-Aug-11	Force 1-2	12:14	42.6	8	1	1
16	397075.8	5761208.1	21-Aug-11	Force 2-3	08:21	13.7	6	1	1
17	400048.0	5764674.9	21-Aug-11	Force 2-3	16:32	17.2	6	1	1
18	417843.0	5773490.1	21-Aug-11	Force 1-2	10:32	28.6	3	0	3
20	423300.3	5777715.1	21-Aug-11	Force 1-2	13:46	30.7	7	1	1
21	394864.0	5758635.8	21-Aug-11	Force 1-2	07:44	13	5	1	2
22	403032.0	5767383.7	21-Aug-11	Force 2-3	15:55	19.5	3	0	3
23	406166.8	5769257.6	21-Aug-11	Force 2-3	15:37	16.6	4	0	2
24	408841.4	5770367.7	21-Aug-11	Force 2-3	15:24	20	3	0	3
25	410958.0	5771325.5	21-Aug-11	Force 1-2	15:07	20.7	5	1	2
26	409040.1	5768982.6	21-Aug-11	Force 1-2	09:33	20.2	6	1	1
27	391878.9	5760159.6	21-Aug-11	Force 2-3	18:51	8.2	7	1	1
28	394489.1	5763361.2	21-Aug-11	Force 2-3	17:16	8.7	10	1	1
29	426597.9	5778471.2	21-Aug-11	Force 2-3	13:29	37	8	1	2
30	417363.6	5775855.5	21-Aug-11	Force 2-3	14:19	32.5	10	1	1
31	411888.1	5773100.4	21-Aug-11	Force 2-3	14:50	22.5	8	1	1
32	392968.6	5761952.1	21-Aug-11	Force 2-3	17:00	16.7	0.5	0	3
33	392966.87	5761953.93	21-Aug-11	Force 2-3	19:08	7.8	0.5	0	3
34	392536.70	5758832.21	22-Aug-11	Force 2-4	07:23	8.2	0.5	0	3
35	399363.14	5766295.67	21-Aug-11	Force 2-3	16:20	5.6	8	1	1
36	426297.98	5776876.88	21-Aug-11	Force 1-2	10:59	32.8	8	1	1
37	391513.54	5761611.55	21-Aug-11	Force 2-3	17:52	3.3	0.5	0	3
38	389774.29	5760280.23	21-Aug-11	Force 2-3	18:17	3.2	6	1	1
39	389153.04	5759405.40	21-Aug-11	Force 2-3	18:34	2.1	10	1	1
40	392111.29	5762263.41	21-Aug-11	Force 2-3	17:33	3.3	3	0	3
492B	444974.1	5783810.2	22-Sep-10	Force 3-4 S	19:55	39.5	6	1	1
493B	449042.9	5785020.8	29-Sep-10	Force 4 SSE	19:36	52.9	8	1	1
494B	453004.8	5785050.1	29-Sep-10	Force 4 SE	19:06	51.0	8	1	1
495B	457022.1	5785017.9	29-Sep-10	Force 4 SE	18:32	44.0	6	1	2
496B	443002.6	5783997.2	22-Sep-10	Force 3-4 S	19:00	42.8	10	1	1
497B	446995.6	5782986.6	22-Sep-10	Force 4 SSW	20:27	43.8	9	1	1
498B	450996.8	5782993.3	29-Sep-10	Force 4 SSE	20:06	53.5	10	1	1
499B	454958.5	5783017.2	29-Sep-10	Force 4 SSE	20:38	52.8	9	1	1
504B	453005.5	5780994.7	29-Sep-10	Force 4 SSE	22:11	49.3	9	1	1
505B	456998.7	5781004.5	29-Sep-10	Force 4 SSE	21:16	48.0	8	1	1
764X	444996.3	5781978.5	30-Dec-10	Force 1 variable	14:15	42.7	10	1	1

Station	Sediment Description	Comments
1	Sand	
2	Sand (broken *Sabellaria* rubble)	
3	Gravelly sand	
4	Sandy gravel	
5	Fine sand	
6	Sand	
7	Gravelly sand	
8	Gravelly sand with shell and larger rocks	
9	Gravelly sand (coarse), lots of broken shell	
10	Sandy gravel	
11	Muddy sand	
12	Muddy gravelly sand	Hermit crab (Paguridae), brittle stars and small bits of *Sabellaria* rubble
13	Sand with shell fragments	
14	Coarse Sand	
15	Gravelly sand	Sand-eel
16	Muddy sand	
17	Gravelly mud	
18	Cobble, larger rock and clay	
20	Gravelly sand	Echinoderms (*Psammechinus miliaris*), Oweniidae tubes and *Sabellaria* rubble fragments
21	Sandy Mud	
22	Cobble, gravel, sand and clay	
23	Gravelly sand	
24	Cobble, gravel and sand	
25	Sandy gravel	*Psammechinus miliaris*
26	Gravelly sand	
27	Sand, gravelly mud	*Sabellaria* mostly rubble and some encrusting
28	Sandy mud	
29	Coarse Sand	
30	Gravelly mud with clay	*Psammechinus miliaris*, OPHIUROIDEA
31	Gravelly sand	
32	Cobble and gravel	
33	Cobbles and larger rock	Encrusting bryozoans
34	Hard clay	
35	Fine sand	
36	Gravelly sand	
37	Cobble, gravel and clay	
38	Cobble, gravel and muddy sand	
39	Mud	
40	Clay - compacted and hard	
492B	Gravelly Sand	
493B	Sand	
494B	Sand	
495B	Sand	
496B	Sand	
497B	Sand	
498B	Sand	
499B	Sand	
504B	Sand	
505B	Sand	
764X	Sand	

Appendix Table 3. Summary of the sampling log and navigational positons for seabed images taken during the EAOW cable route survey during August 2011 and EAOW benthic characterisation survey (sample 764). Navigational positions are recorded in UTM (WGS84) Zone 31 Northern. Additonal information includes date, time and weather conditions, depth, sediment description and comments on any fauna present.

Station/ Image	Fix	Easting	Northing	Date	Weather Conditions	Time (GMT)	Depth (m)
1A	129	397580.8	5759307.61	19-Aug-11	Force 2	12:13	10.7
1B	129	397580.8	5759307.61	19-Aug-11	Force 2	12:13	10.7
1C	129	397580.8	5759307.61	19-Aug-11	Force 2	12:13	10.7
2A	130	398710.92	5760884.48	19-Aug-11	Force 1-2	12:28	15.2
2B	130	398710.92	5760884.48	19-Aug-11	Force 1-2	12:28	15.2
2C	130	398710.92	5760884.48	19-Aug-11	Force 1-2	12:28	15.2
3A	132	399883.95	5762230.08	19-Aug-11	Force 1-2	12:53	14.7
3B	132	399883.95	5762230.08	19-Aug-11	Force 1-2	12:53	14.7
3C	132	399883.95	5762230.08	19-Aug-11	Force 1-2	12:53	14.7
3D	132	399883.95	5762230.08	19-Aug-11	Force 1-2	12:53	14.7
4A	109	401646.99	5764580.49	17-Aug-11	2-3 NNW	07:28	12.9
4B	109	401646.99	5764580.49	17-Aug-11	2-3 NNW	07:28	12.9
4C	109	401646.99	5764580.49	17-Aug-11	2-3 NNW	07:28	12.9
5A	143	398257.53	5764937.77	19-Aug-11	Force 2-3	09:33	4.5
5B	143	398257.53	5764937.77	19-Aug-11	Force 2-3	09:33	4.5
5C	143	398257.53	5764937.77	19-Aug-11	Force 2-3	09:33	4.5
6A	137	405695.55	5767564.2	19-Aug-11	Force 4-5	07:31	11.9
6B	137	405695.55	5767564.2	19-Aug-11	Force 4-5	07:31	11.9
6C	137	405695.55	5767564.2	19-Aug-11	Force 4-5	07:31	11.9
7A	110	411986.28	5770256.76	17-Aug-11	2-3 NNW	08:13	20.4
7B	110	411986.28	5770256.76	17-Aug-11	2-3 NNW	08:13	20.4
7C	110	411986.28	5770256.76	17-Aug-11	2-3 NNW	08:13	20.4
7D	110	411986.28	5770256.76	17-Aug-11	2-3 NNW	08:13	20.4
8A	111	414282.13	5773934.3	17-Aug-11	Force 2-3	08:52	23.4
8B	111	414282.13	5773934.3	17-Aug-11	Force 2-3	08:52	23.4
8C	111	414282.13	5773934.3	17-Aug-11	Force 2-3	08:52	23.4
8D	111	414282.13	5773934.3	17-Aug-11	Force 2-3	08:52	23.4
9A	122	419360.82	5777212.58	17-Aug-11	Force 2-3	13:26	30.2
9B	122	419360.82	5777212.58	17-Aug-11	Force 2-3	13:26	30.2
9C	122	419360.82	5777212.58	17-Aug-11	Force 2-3	13:26	30.2
10A	116	433882.67	5779058.9	17-Aug-11	Force 2-3	11:41	38.3
10B	116	433882.67	5779058.9	17-Aug-11	Force 2-3	11:41	38.3
10C	116	433882.67	5779058.9	17-Aug-11	Force 2-3	11:41	38.3
10D	116	433882.67	5779058.9	17-Aug-11	Force 2-3	11:41	38.3
11A	113	435009.97	5781378.81	17-Aug-11	Force 2-3	10:22	42.9
11B	113	435009.97	5781378.81	17-Aug-11	Force 2-3	10:22	42.9
11C	113	435009.97	5781378.81	17-Aug-11	Force 2-3	10:22	42.9
12A	115	437010.74	5782328.7	17-Aug-11	Force 3-4	11:15	37.1
12B	115	437010.74	5782328.7	17-Aug-11	Force 3-4	11:15	37.1
12C	115	437010.74	5782328.7	17-Aug-11	Force 3-4	11:15	37.1
12D	115	437010.74	5782328.7	17-Aug-11	Force 3-4	11:15	37.1
13A	118	429570.08	5778808.71	17-Aug-11	Force 2-3	12:22	34.7
13B	118	429570.08	5778808.71	17-Aug-11	Force 2-3	12:22	34.7
13C	118	429570.08	5778808.71	17-Aug-11	Force 2-3	12:22	34.7
14A	117	431187.73	5780054.2	17-Aug-11	Force 2-3	12:02	36.9
14B	117	431187.73	5780054.2	17-Aug-11	Force 2-3	12:02	36.9
14C	117	431187.73	5780054.2	17-Aug-11	Force 2-3	12:02	36.9
15A	114	439270.24	5782817.71	17-Aug-11	2-3 NNW	10:55	43.1
15B	114	439270.24	5782817.71	17-Aug-11	2-3 NNW	10:55	43.1
15C	114	439270.24	5782817.71	17-Aug-11	2-3 NNW	10:55	43.1

Station/ Image	Fix	Easting	Northing	Date	Weather Conditions	Time (GMT)	Depth (m)
16A	131	397076.41	5761200.53	19-Aug-11	Force 1-2	12:39	15.5
16B	131	397076.41	5761200.53	19-Aug-11	Force 1-2	12:39	15.5
16C	131	397076.41	5761200.53	19-Aug-11	Force 1-2	12:39	15.5
17A	134	400050.2	5764679.34	19-Aug-11	Force 1-2	13:13	17.2
17B	134	400050.2	5764679.34	19-Aug-11	Force 1-2	13:13	17.2
17C	134	400050.2	5764679.34	19-Aug-11	Force 1-2	13:13	17.2
18A	124	417839.16	5773488.14	17-Aug-11	Force 2-3	14:00	30.3
18B	124	417839.16	5773488.14	17-Aug-11	Force 2-3	14:00	30.3
18C	124	417839.16	5773488.14	17-Aug-11	Force 2-3	14:00	30.3
19A	123	420126.9	5774814.69	17-Aug-11	Force 2-3	13:40	30.5
19B	123	420126.9	5774814.69	17-Aug-11	Force 2-3	13:40	30.5
19C	123	420126.9	5774814.69	17-Aug-11	Force 2-3	13:40	30.5
20A	121	423298.99	5777713.85	17-Aug-11	Force 2-3	13:07	30.9
20B	121	423298.99	5777713.85	17-Aug-11	Force 2-3	13:07	30.9
20C	121	423298.99	5777713.85	17-Aug-11	Force 2-3	13:07	30.9
21A	108	394868.25	5758635.76	17-Aug-11	2-3 NNW	06:47	12.6
21B	108	394868.25	5758635.76	17-Aug-11	2-3 NNW	06:47	12.6
21C	108	394868.25	5758635.76	17-Aug-11	2-3 NNW	06:47	12.6
22A	135	403032.21	5767382.95	19-Aug-11	F3 increasing 4-5	13:32	19.4
22B	135	403032.21	5767382.95	19-Aug-11	F3 increasing 4-5	13:32	19.4
22C	135	403032.21	5767382.95	19-Aug-11	F3 increasing 4-5	13:32	19.4
23B	141	406166.82	5769263.15	19-Aug-11	Force 2-3	08:46	14.3
23C	141	406166.82	5769263.15	19-Aug-11	Force 2-3	08:46	14.3
24A	140	408846.9	5770369.93	19-Aug-11	Force 3-4	08:23	18.1
24B	140	408846.9	5770369.93	19-Aug-11	Force 3-4	08:23	18.1
24C	140	408846.9	5770369.93	19-Aug-11	Force 3-4	08:23	18.1
25A	139	410959.9	5771323.93	20-Aug-11	Force 3-4	08:07	18.7
25B	139	410959.9	5771323.93	20-Aug-11	Force 3-4	08:07	18.7
25C	139	410959.9	5771323.93	20-Aug-11	Force 3-4	08:07	18.7
26A	138	409035.09	5768985.84	20-Aug-11	Force 3-4	07:49	19.7
26B	138	409035.09	5768985.84	20-Aug-11	Force 3-4	07:49	19.7
26C	138	409035.09	5768985.84	20-Aug-11	Force 3-4	07:39	19.7
27A	146	391868.72	5760154.96	20-Aug-11	Force 3-4	10:14	7.8
27B	146	391868.72	5760154.96	20-Aug-11	Force 3-4	10:14	7.8
27C	146	391868.72	5760154.96	20-Aug-11	Force 3-4	10:14	7.8
28A	126	394496.3	5763359.24	17-Aug-11	Force 2-3	15:36	8.4
28B	126	394496.3	5763359.24	17-Aug-11	Force 2-3	15:36	8.4
28C	126	394496.3	5763359.24	17-Aug-11	Force 2-3	15:36	8.4
29A	119	426601.31	5778467.87	17-Aug-11	Force 2-3	12:35	37.4
29B	119	426601.31	5778467.87	17-Aug-11	Force 2-3	12:35	37.4
29C	119	426601.31	5778467.87	17-Aug-11	Force 2-3	12:35	37.4
30A	112	417364	5775855.06	17-Aug-11	2-3 NNW	09:14	31.8
30B	112	417364	5775855.06	17-Aug-11	2-3 NNW	09:14	31.8
30C	112	417364	5775855.06	17-Aug-11	2-3 NNW	09:14	31.8
31A	125	411888.65	5773102.52	17-Aug-11	Force 2-3	14:20	22.6
31B	125	411888.65	5773102.52	17-Aug-11	Force 2-3	14:20	22.6
31C	125	411888.65	5773102.52	17-Aug-11	Force 2-3	14:20	22.6
32A	133	399079.56	5763299.1	19-Aug-11	Force 1-2	13:04	14.2
32B	133	399079.56	5763299.1	19-Aug-11	Force 1-2	13:04	14.2
32C	133	399079.56	5763299.1	19-Aug-11	Force 1-2	13:04	14.2
33A	144	392969.66	5761955.09	20-Aug-11	Force 3-4	09:59	7.3
33B	144	392969.66	5761955.09	20-Aug-11	Force 3-4	09:59	7.3
33C	144	392969.66	5761955.09	20-Aug-11	Force 3-4	09:59	7.3
34A	128	392532.44	5758823.81	19-Aug-11	Force 2	11:50	9.3
34B	128	392532.44	5758823.81	19-Aug-11	Force 2	11:50	9.3
34C	128	392532.44	5758823.81	19-Aug-11	Force 2	11:50	9.3

Station/ Image	Fix	Easting	Northing	Date	Weather Conditions	Time (GMT)	Depth (m)
35A	142	399362.76	5766291.36	19-Aug-11	Force 2-3	09:19	4.2
35B	142	399362.76	5766291.36	19-Aug-11	Force 2-3	09:19	4.2
35C	142	399362.76	5766291.36	19-Aug-11	Force 2-3	09:19	4.2
36A	120	426299.4	5776874.48	17-Aug-11	2-3 NNW	12:49	33.6
36B	120	426299.4	5776874.48	17-Aug-11	2-3 NNW	12:49	33.6
36C	120	426299.4	5776874.48	17-Aug-11	2-3 NNW	12:49	33.6
37A	147	391513.92	5761612.23	20-Aug-11	Force 2-3	10:35	2.4
37B	147	391513.92	5761612.23	20-Aug-11	Force 2-3	10:35	2.4
37C	147	391513.92	5761612.23	20-Aug-11	Force 2-3	10:35	2.4
38A	149	389774	5760280.22	20-Aug-11	Force 2-3	11:26	3.1
38B	149	389774	5760280.22	20-Aug-11	Force 2-3	11:26	3.1
38C	149	389774	5760280.22	20-Aug-11	Force 2-3	11:26	3.1
39A	150	389152.31	5759408.17	20-Aug-11	Force 2-3	11:50	0.8
39B	150	389152.31	5759408.17	20-Aug-11	Force 2-3	11:50	0.8
39C	150	389152.31	5759408.17	20-Aug-11	Force 2-3	11:50	0.8
40A	148	392112.15	5762264.03	20-Aug-11	Force 2-3	11:04	2.8
40B	148	392112.15	5762264.03	20-Aug-11	Force 2-3	11:04	2.8
40C	148	392112.15	5762264.03	20-Aug-11	Force 2-3	11:04	2.8
764A	1744	444993.29	5781949.43	30-Dec-10	Force 1 variable	13:56	42.2
764B	1744	444998.20	5781973.81	30-Dec-10	Force 1 variable	14:00	42.2
764C	1744	444993.68	5781971.23	30-Dec-10	Force 1 variable	14:00	42.2
764D	1744	444989.64	5781971.39	30-Dec-10	Force 1 variable	14:01	42.2
764E	1744	444994.59	5781972.14	30-Dec-10	Force 1 variable	14:02	42.2
764F	1744	444999.35	5781970.38	30-Dec-10	Force 1 variable	14:03	42.2
764G	1744	445004.23	5781968.44	30-Dec-10	Force 1 variable	14:03	42.2

Station/ Image	Sediment Description	Comments
1A	Coarse sand and broken shell	
1B	Sand with broken shell	
1C	Sand with broken shell	
2A	Sand and shell fragments	
2B	Shell fragments in sand	
2C	Sand and shell fragments	
3A	Sand and bits of shell	
3B	Sand	Possibly *Alcyonidium* (poor visibility)
3C	Sand	
3D	Sand and shell	
4A	No visibility	
4B	No Vis - fines visible on landing	
4C	No Vis - fines visible on landing	
5A	Sand	
5B	Sand	
5C	Sand	
6A	Sand and shell	
6B	Sand	
6C	Sand and shell (poor vis)	
7A	No visibility	
7B	No vis - fines landing	
7C	No vis - fines landing	
7D	No visibility	
8A	Shelly sand (some gravel)	
8B	Shelly sand (some gravel)	
8C	Shelly sand (sporadic cobbles)	
8D	Shelly sand (sporadic cobbles)	
9A	Sandy (shell fragments)	
9B	Sandy (shell fragments)	
9C	Sandy (shell fragments)	
10A	Sand with shell	
10B	Sand with shell	
10C	Sand with shell	
10D	Sand with shell	Hermit crab (Paguridae)
11A	Sand and small quantity of shell	
11B	Sand	
11C	Sand	
12A	Sand, some shell and scattered pebbles, sand ripples	*Asterias* sp.
12B	Sand and shell	
12C	Sand and shell	
12D	Sand and shell	
13A	Sand and shell	
13B	Sand and shell, some cobble	
13C	Sand and shell	
14A	Sand and shell	
14B	Sand and shell	
14C	Sand and larger shell fragments	Possibly white weed
15A	Sand, some shell	
15B	Sand, some shell	
15C	Sand, some shell	
16A	Shell fragments and sand	
16B	Sand and shell (poor vis)	
16C	Sand and shell (poor vis)	
17A	Sand	
17B	Sand (quite fine)	
17C	Sand (quite fine)	
18A	Gravel and large boulder clay	
18B	Gravelly mud and large boulder clay	
18C	Gravelly mud, some shell	Gastropod shell - possibly dead.
19A	Sabellaria reef	

Station/ Image	Sediment Description	Comments
19B	Sabellaria reef patch	
19C	Sabellaria reef	
20A	Sand, pebble and gravel	
20B	Sand and gravel	Hermit crab (Paguridae)
20C	Sand and gravel	Hermit crab (possibly)
21A	Flat fine mud	
21B	No visibility	
21C	No visibility	
22A	Sand and some shell fragments	
22B	Sand	
22C	Sand (poor vis)	
23B	Sand (poor visibility)	
23C	Sand (poor visibility)	
24A	Gravelly sand	
24B	Gravelly sand	
24C	Gravelly mud/sand	
25A	Gravelly, sand	
25B	Gravelly sand	
25C	Gravelly sand	
26A	Gravelly, sand	
26B	Gravelly, sand	
26C	Gravelly, sand	
27A	Sand (low visibility)	
27B	Sand (low visibility)	
27C	Sand (low visibility)	
28A	No visibility - fine silt suspended by current	
28B	No visibility - fine silt suspended by current	
28C	No visibility - fine silt suspended by current	
29A	Sand	
29B	Sand	
29C	Sand	
30A	Sand (low visibility)	
30B	No visibility	
30C	No vis	
31A	Sand and fines - poor visibility	
31B	Sand and fines - poor visibility	
31C	Sand and fines - poor visibility	
32A	Poor visibility - sand	
32B	Poor visibility - sand	
32C	Poor visibility - sand	
33A	Sand	
33B	Sand	
33C	Sand	
34A	No visibility	
34B	No visibility	Possibly some weed
34C	No visibility	
35A	Sand (poor visibility in turbid waters)	
35B	Sand	
35C	Sand	
36A	Sand, some shell	
36B	Sand and shell	White weed and two anemones
36C	Sand	
37A	Sandy/clay	
37B	Sandy/clay	
37C	Sandy/clay	
38A	Sand (poor vis)	
38B	Sand (poor vis)	
38C	Sand (poor vis)	
39A	Sand	
39B	Sand	

Station/ Image	Sediment Description	Comments
39C	Sand	
40A	Clay (probably from shore erosion)	
40B	Clay	
40C	Clay	
764A	Sand	
764B	Sand ripples, burrows, silt	
764C	Sand, silt	
764D	Sand	
764E	Sand, silt	
764F	Sand, silt,	Paguridae
764G	Sand ripples, silt	

Appendix Table 4. Table summarising the Particle Size Distribution (PSD) of the sediment deposits taken during the EAOW Calble route survey . The sieve apertures are in accordance with the Wentworth scale and are shown in µm. Data are expressed as percentage retained.

Station	31500	1600	8000	4000	2000	1000	500	250	125	63	PAN
1	0.0	0.0	0.0	0.3	1.0	1.8	4.9	50.8	39.6	0.1	1.4
2	0.0	0.0	0.4	3.8	4.0	11.3	35.6	11.1	31.2	0.6	2.2
3	0.0	21.8	4.9	3.3	1.4	3.3	8.1	30.7	21.3	0.4	4.7
4	11.7	9.8	23.1	12.3	6.3	2.4	1.3	11.0	21.0	0.2	1.0
5	0.0	0.0	0.0	0.0	0.0	0.1	0.6	27.6	70.1	0.3	1.3
6	0.0	0.0	1.1	3.5	4.8	8.1	15.9	51.1	13.8	0.5	1.2
7	0.0	0.0	4.6	1.3	1.5	6.4	51.3	33.6	0.4	0.1	0.8
8	0.0	6.7	20.2	7.9	4.4	5.3	16.1	34.7	3.5	0.6	0.6
9	0.0	0.0	2.0	10.9	20.4	26.4	29.0	6.4	3.4	0.4	1.2
10	0.0	0.0	4.3	6.8	11.0	15.3	32.5	26.6	2.2	0.3	1.1
11	0.0	0.8	2.2	2.7	2.7	2.5	14.9	43.8	23.9	0.1	6.5
12	0.0	0.0	3.8	12.8	5.7	3.1	2.7	26.9	16.3	0.1	28.6
13	0.0	4.5	2.3	1.9	1.4	3.1	28.2	51.2	6.1	0.2	1.2
14	0.0	0.0	0.0	0.2	0.4	1.6	27.4	68.7	0.7	0.0	0.9
15	0.0	2.6	8.6	7.8	6.1	5.1	11.7	52.2	4.4	0.1	1.4
16	0.0	0.0	0.1	0.6	0.4	0.4	0.5	22.7	61.0	0.5	13.7
17	0.0	0.0	6.5	5.5	3.6	2.1	3.8	7.3	59.2	0.5	11.6
20	0.0	0.0	11.2	4.7	2.4	3.1	8.3	32.7	33.1	0.3	4.2
21	0.0	6.1	0.0	0.2	0.0	0.0	0.1	16.7	49.5	0.7	26.7
25	0.0	30.7	22.5	9.6	5.6	4.1	9.1	12.4	3.6	0.7	1.8
26	0.0	13.1	11.9	12.6	8.8	7.9	13.4	10.6	14.9	0.2	6.4
27	0.0	0.0	10.2	12.8	6.4	4.5	4.2	17.1	19.8	0.7	24.5
28	0.0	0.0	0.1	0.4	0.2	0.3	0.7	8.4	74.7	0.6	14.7
29	0.0	1.5	0.5	2.2	5.5	8.1	23.7	49.4	8.1	0.1	1.0
30	0.0	0.0	1.7	7.6	4.1	4.0	8.6	13.1	15.2	0.4	45.3
31	0.0	9.5	32.1	11.1	7.8	8.8	17.2	11.1	1.3	0.3	0.7
35	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.5	95.9	0.1	1.3
36	0.0	5.0	7.2	4.5	3.1	4.8	14.7	36.0	22.3	0.1	2.3
38	40.7	11.4	21.4	16.1	2.8	1.1	2.3	1.8	1.3	0.1	1.0
39	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.4	9.6	9.3	80.1
492	0.0	0.0	8.2	2.4	0.9	0.8	3.7	65.7	16.6	0.5	1.2
493	0.0	0.0	0.4	0.3	0.2	0.7	8.5	86.4	2.2	0.1	1.3
494	0.0	0.0	0.1	0.1	0.6	2.9	37.2	57.4	0.7	0.0	1.1
495	0.0	15.6	2.7	1.9	1.1	0.8	2.0	68.6	6.0	0.1	1.0
496	0.0	0.2	1.4	2.6	1.4	3.4	28.2	58.0	2.3	0.4	2.1
497	0.0	0.0	0.1	0.2	2.1	25.4	57.8	12.6	0.5	0.1	1.1
498	0.0	0.0	0.0	0.1	0.3	0.9	13.4	83.2	0.7	0.0	1.4
499	0.0	0.0	0.0	0.1	0.1	0.4	1.5	88.7	7.7	0.1	1.4
504	0.0	0.1	0.5	0.4	0.5	1.0	5.2	87.5	3.7	0.1	1.0
505	0.0	0.0	1.1	1.7	1.7	1.5	4.0	81.7	5.8	0.3	2.2
764	0.0	0.0	0.5	0.6	0.5	0.3	5.9	87.9	2.7	0.0	1.4

Appendix Table 5. Table summarising the percentage silt (<0.063mm), sand (0.063mm-<2mm) and gravel (≥2mm) of the samples taken during the EAOW cable route and EAOW zone surveys.

Station	Gravel	Sand	Silt
1	1.3	97.3	1.4
2	8.1	89.7	2.2
3	31.4	63.9	4.7
4	63.2	35.8	1.0
5	0.1	98.7	1.3
6	9.5	89.3	1.2
7	7.4	91.8	0.8
8	39.2	60.2	0.6
9	33.3	65.6	1.2
10	22.1	76.8	1.1
11	8.4	85.2	6.5
12	22.3	49.2	28.6
13	10.1	88.7	1.2
14	0.6	98.5	0.9
15	25.1	73.5	1.4
16	1.1	85.2	13.7
17	15.6	72.9	11.6
20	18.4	77.4	4.2
21	6.3	67.0	26.7
25	68.4	29.9	1.8
26	46.5	47.1	6.4
27	29.4	46.2	24.5
28	0.7	84.7	14.7
29	9.6	89.5	1.0
30	13.4	41.3	45.3
31	60.5	38.7	0.7
35	0.0	98.7	1.3
36	19.9	77.8	2.3
38	92.3	6.6	1.0
39	0.2	19.7	80.1
492	11.5	87.3	1.2
493	0.9	97.8	1.3
494	0.8	98.1	1.1
495	21.4	77.6	1.0
496	5.6	92.2	2.1
497	2.5	96.4	1.1
498	0.4	98.2	1.4
499	0.2	98.4	1.4
504	1.5	97.5	1.0
505	4.5	93.3	2.2
764	1.7	96.9	1.4

Appendix Table 6. Data matrix of taxon identified from 39 grab samples over the EAOW cable corridor and additional 11 stations from the EAOW benthic characterisation study. Samples were acquired with a 0.1m2 mini-Hamon grab following analysis of seabed imagery. Station 19 was not sampled due to the presence of *Sabellaria* reef at this site and the reef edge being unidentifiable. Organisms were identified to species level where appropriate. Colonial organisms are represented with a P (present).

SDC	Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13
	Astrorhiza	-	-	-	-	-	-	-	-	-	-	-	-	-
C0001	PORIFERA	-	-	-	-	-	-	P	-	-	-	-	-	-
C0133	*Scypha ciliata*	-	-	-	-	-	-	P	-	P	-	-	-	-
D0163	*Tubularia*	-	-	-	-	-	-	-	-	-	-	P	-	-
D0216	FILIFERA	-	-	-	-	-	-	-	-	-	-	-	-	-
D0218	*Eudendrium*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0240	*Leuckartiara octona*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0390	*Halecium*	P	-	-	-	-	-	-	-	-	-	-	-	-
D0409	*Abietinaria abietina*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0424	*Hydrallmania falcata*	-	-	-	-	-	-	-	-	P	-	-	-	-
D0427	*Sertularella*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0433	*Sertularia*	P	-	-	P	-	-	-	-	P	-	P	-	-
D0447	Plumulariidae	-	-	-	-	-	-	-	-	-	-	-	-	-
D0491	Campanulariidae	-	-	-	-	-	-	-	-	-	-	-	-	-
D0501	*Clytia*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0511	*Laomedea*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0517	*Obelia*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0597	*Alcyonium digitatum*	-	-	-	-	-	-	-	-	-	-	-	-	-
D0662	ACTINIARIA	-	-	-	-	-	-	1	-	-	-	-	-	-
F0002	TURBELLARIA	-	-	-	-	-	-	-	-	-	-	1	-	-
G0001	NEMERTEA	-	-	1	1	-	3	1	1	3	4	2	6	2
HD0001	NEMATODA	1	-	1	-	-	-	6	1	4	14	-	-	-
L0001	CHAETOGNATHA	-	-	-	-	-	-	-	-	3	-	-	-	-
N0011	Golfingiidae	-	-	-	-	-	-	-	-	-	-	-	-	-
N0017	*Golfingia vulgaris*	-	-	-	-	-	-	-	-	-	-	-	-	-
N0034	*Phascolion strombus*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0015	*Pisione remota*	-	-	-	-	-	-	2	-	2	27	-	-	-
P0017	*Aphroditidae*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0025	Polynoidae	-	-	-	-	-	-	-	-	-	-	-	-	-
P0049	*Gattyana cirrhosa*	-	-	-	-	-	-	-	-	-	-	-	-	-
	Harmothoe clavigera	-	-	-	-	-	-	-	-	-	-	-	-	-
	Malmgreniella	-	-	-	-	-	-	-	-	-	-	-	-	-
P0051	*Malmgreniella andreapolis*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0066	*Malmgreniella ljungmani*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0080	*Lepidonotus*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0082	*Lepidonotus squamatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0092	*Pholoe baltica (sensu petersen)*	-	-	-	-	-	-	-	-	-	-	1	-	-
P0094	*Pholoe inornata (sensu peterse*	-	-	-	-	-	-	-	-	-	-	-	-	-
	Pholoe assimilis	-	-	-	-	-	-	-	-	-	-	-	-	-
P0118	*Eteone longa*	-	-	-	-	-	-	-	-	-	-	1	-	-
P0122	*Hesionura elongata*	-	-	-	-	-	-	1	-	-	9	-	-	-
P0145	*Anaitides mucosa*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0146	*Anaitides rosea*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0155	*Eulalia mustela*	-	-	-	-	-	-	1	-	-	-	-	-	-
P0156	*Eulalia ornata*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0163	*Eumida*	-	-	-	-	-	-	-	-	-	-	1	-	-
P0164	*Eumida bahusiensis*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0167	*Eumida sanguinea*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0255	*Glycera*	-	-	-	-	-	-	-	-	5	4	-	-	-
P0260	*Glycera lapidum*	-	1	-	-	-	-	1	-	5	3	-	1	-
P0262	*Glycera oxycephala*	1	-	-	-	-	-	-	1	-	-	-	-	-
P0265	*Glycera tridactyla*	-	-	-	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13
P0268	*Glycinde nordmanni*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0271	*Goniada maculata*	-	-	-	-	-	1	1	-	-	-	-	-	-
P0291	*Sphaerodorum gracilis*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0319	*Podarkeopsis capensis*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0333	*Microphthalmus similis*	-	2	-	-	-	-	-	-	-	-	-	-	-
P0358	*Syllis* (Type E)	-	-	-	-	-	-	-	-	-	20	-	-	-
P0358	*Syllis* (Type H)	-	-	-	-	-	-	-	-	-	-	-	-	1
P0349	*Syllis cornuta*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0405	*Streptosyllis websteri*	-	-	-	-	1	-	-	-	-	3	-	-	-
P0421	*Exogone hebes*	-	-	-	-	-	-	-	-	-	-	-	1	-
P0422	*Exogone naidina*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0423	*Exogone verugera*	-	-	-	-	-	-	-	-	1	-	-	-	-
P0425	*Sphaerosyllis bulbosa*	-	-	-	-	-	-	6	2	268	3	-	-	-
P0430	*Sphaerosyllis taylori*	-	-	-	-	-	-	2	-	-	-	-	-	-
P0434	*Autolytus*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0458	Nereididae	-	-	-	-	-	-	-	-	7	-	-	-	-
P0475	*Eunereis longissima*	-	-	-	-	-	-	1	-	2	1	-	-	-
P0494	*Nephtys*	1	-	-	-	1	1	-	-	-	-	-	-	1
P0496	*Nephtys caeca*	-	-	-	-	-	-	-	-	-	-	1	-	-
P0498	*Nephtys cirrosa*	1	-	-	-	-	-	-	-	-	-	-	-	-
P0499	*Nephtys hombergii*	-	-	1	-	-	-	-	-	-	-	-	-	-
P0553	Eunicidae	-	-	-	-	-	-	-	-	-	-	-	-	-
P0563	*Marphysa*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0564	*Marphysa bellii*	-	-	-	-	-	-	-	-	-	-	1	5	-
P0566	*Marphysa sanguinea*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0569	Lumbrineridae	-	-	-	-	-	-	-	-	-	-	-	-	-
	Lumbrineris cingulata	-	-	-	2	-	-	-	-	-	2	-	-	-
P0613	*Ophryotrocha*	-	-	-	-	-	-	-	-	1	-	-	-	-
P0638	*Protodorvillea kefersteini*	-	-	-	-	-	-	-	-	-	2	-	-	-
P0642	*Schistomeringos neglecta*	-	-	-	-	-	-	-	1	-	-	-	-	-
P0672	*Scoloplos armiger*	2	-	-	-	-	-	-	-	-	-	-	1	-
P0674	Paraonidae	-	-	-	-	3	-	-	-	-	-	-	-	-
P0677	*Aricidea minuta*	-	-	3	-	1	-	-	-	-	-	-	-	-
P0678	*Aricidea wassi*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0699	*Paradoneis lyra*	-	-	-	-	-	-	2	-	-	-	-	-	-
P0704	*Paraonis fulgens*	-	-	-	-	2	-	-	-	-	-	-	-	-
P0718	*Poecilochaetus serpens*	-	-	-	-	-	-	-	-	-	1	9	2	-
P0723	*Aonides paucibranchiata*	-	-	-	-	-	-	2	1	1	6	-	1	1
P0733	*Laonice bahusiensis*	-	-	-	-	-	-	-	-	-	1	-	-	-
P0739	*Malacoceros vulgaris*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0750	*Polydora caeca*	-	-	2	-	-	-	1	-	-	-	-	-	-
P0751	*Polydora caulleryi*	-	-	2	-	-	-	3	-	-	-	-	-	-
P0752	*Polydora ciliata*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0774	*Pseudopolydora pulchra*	-	-	-	-	-	-	-	-	-	-	1	-	-
P0776	*Pygospio elegans*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0779	*Scolelepis bonnieri*	-	-	-	-	1	-	-	-	-	-	-	-	-
P0787	*Spio*	-	-	-	1	-	-	-	-	-	-	-	-	-
P0790	*Spio filicornis*	-	-	-	-	-	-	-	-	-	-	20	-	-
	Spio goniocephala	-	-	-	1	-	-	-	-	-	-	-	-	-
P0794	*Spiophanes bombyx*	1	1	-	3	-	-	-	-	-	-	37	3	2
P0823	*Aphelochaeta*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0824	*Aphelochaeta marioni*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0829	*Caulleriella alata*	-	-	-	-	-	-	-	-	-	-	2	-	-
P0831	*Chaetozone zetlandica*	-	-	-	-	-	-	-	-	1	1	-	-	-
P0839	*Cirriformia tentaculata*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0840	*Dodecaceria*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0846	*Tharyx killariensis*	-	-	-	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13
P0881	*Flabelligera affinis*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0889	*Macrochaeta*	-	-	-	-	-	-	3	-	11	-	-	-	-
P0919	*Mediomastus fragilis*	-	-	-	-	-	-	-	-	-	-	14	5	2
P0921	*Notomastus latericeus*	-	-	-	-	-	-	-	-	1	2	3	-	-
P0927	*Pseudonotomastus southerni*	-	-	-	1	-	-	2	2	3	1	-	-	-
P0955	*Clymenura*	-	-	-	-	-	-	-	1	-	-	-	-	-
P0971	*Praxillella affinis*	-	-	-	-	-	-	-	-	-	-	-	-	-
P0978	*Micromaldane ornithochaeta*	-	-	-	-	-	-	-	1	-	-	-	-	-
P0997	*Ophelia*	-	-	-	-	-	3	-	-	-	-	-	-	-
P0999	*Ophelia borealis*	5	-	-	-	-	8	4	1	-	-	-	1	-
P1007	*Travisia forbesii*	2	-	-	-	-	-	-	-	-	-	-	-	-
P1027	*Scalibregma inflatum*	-	-	-	2	-	-	-	-	-	-	4	-	-
P1062	*Polygordius*	-	-	-	-	-	-	-	-	16	-	-	-	-
P1069	*Protodrilus*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1086	*Saccocirrus*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1098	*Owenia fusiformis*	-	-	-	-	-	-	-	-	-	-	1	1	-
P1107	*Lagis koreni*	-	-	-	-	-	-	-	-	-	-	24	-	-
P1117	*Sabellaria spinulosa*	-	2	-	-	-	-	-	2	-	2	-	4	-
P1118	Ampharetidae	-	-	-	-	-	-	-	-	-	-	1	-	-
P1138	*Ampharete grubei*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1139	*Ampharete lindstroemi*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1141	*Amphicteis*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1142	*Amphicteis gunneri*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1175	*Terebellides stroemi*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1179	Terebellidae	-	-	2	-	-	-	-	-	-	-	-	2	-
P1195	*Lanice conchilega*	-	-	-	2	-	-	-	-	-	-	3	-	-
P1232	*Lysilla* (Type A)	-	-	-	-	-	-	-	-	-	-	-	-	-
P1233	*Lysilla loveni*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1235	*Polycirrus*	-	-	-	6	-	-	4	2	-	2	-	-	5
P1254	*Thelepus cincinnatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1324	Serpulidae	-	-	-	-	-	-	1	-	-	-	-	-	-
P1339	*Pomatoceros*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1340	*Pomatoceros lamarcki*	-	-	-	-	-	-	-	1	-	-	-	-	-
P1469	*Limnodriloides*	-	-	-	-	-	-	-	-	-	-	-	-	-
P1490	*Tubificoides benedii*	-	1	-	-	-	-	-	1	-	-	2	-	-
P1498	*Tubificoides pseudogaster*	-	-	-	-	-	-	-	-	-	-	-	3	-
P1524	*Grania*	-	-	1	-	-	-	-	-	-	3	-	-	-
	Amothella longipes	-	-	-	-	-	-	-	-	-	-	-	-	-
Q0005	*Nymphon brevirostre*	-	-	-	-	-	-	-	-	-	-	-	-	-
Q0015	*Achelia echinata*	-	-	-	-	-	-	-	-	-	-	-	-	-
Q0033	*Callipallene brevirostris*	-	-	-	-	-	-	-	-	-	-	-	-	-
Q0044	*Anoplodactylus petiolatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
Q0045	*Anoplodactylus pygmaeus*	-	-	-	-	-	-	-	-	-	-	-	-	-
	CIRRIPEDIA	-	-	-	-	-	-	-	1	-	-	-	-	-
R0041	*Verruca stroemia*	-	-	-	-	-	-	-	-	-	-	-	-	-
R0077	*Balanus crenatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
R0142	COPEPODA	-	-	-	-	-	-	1	-	2	-	-	-	1
S0044	*Gastrosaccus spinifer*	-	-	-	-	-	1	-	-	1	-	-	1	-
S0107	*Apherusa ovalipes*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0159	*Amphilochus neapolitanus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0213	*Stenothoe marina*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0247	*Urothoe brevicornis*	-	-	-	-	-	-	-	-	-	-	-	1	-
S0248	*Urothoe elegans*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0257	*Harpinia pectinata*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0296	*Hippomedon denticulatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0330	*Socarnes erythrophthalmus*	-	-	-	-	-	-	-	-	9	-	-	-	-
S0337	*Tmetonyx similis*	-	-	-	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13
S0397	*Liljeborgia pallida*	-	-	-	-	-	-	-	-	1	-	-	-	-
S0411	*Atylus guttatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0412	*Atylus swammerdamei*	-	-	-	-	-	-	-	-	1	-	-	-	-
S0423	*Ampelisca*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0429	*Ampelisca diadema*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0438	*Ampelisca spinipes*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0452	*Bathyporeia elegans*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0503	*Cheirocratus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0521	*Maerella tenuimana*	-	-	-	-	-	-	-	-	-	1	-	-	-
S0541	*Gammaropsis maculata*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0577	*Aoridae*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0579	*Aora gracilis*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0616	*Corophium volutator*	-	-	-	-	-	-	-	-	-	-	-	1	-
S0619	*Siphonoecetes striatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0622	*Unciola planipes*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0628	*Dyopedos monacanthus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0651	*Pariambus typicus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0854	*Eurydice pulchra*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0855	*Eurydice spinigera*	-	-	-	-	-	-	1	-	-	-	-	-	-
S0856	*Eurydice truncata*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0947	*Zenobiana prismatica*	-	-	-	-	-	-	-	-	-	-	-	-	-
S0995	*Bopyridae*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1142	*Tanaopsis graciloides*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1175	*Apseudes latreillii*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1197	*Bodotria scorpioides*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1208	*Eudorella truncatula*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1258	*Diastyloides serrata*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1276	DECAPODA	-	-	-	-	-	-	-	-	-	-	-	-	-
S1360	*Thoralus cranchii*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1385	*Crangon crangon*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1390	*Philocheras trispinosus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1415	*Callianassa subterranea*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1449	*Anapagurus laevis*	-	-	-	-	-	-	-	-	-	-	-	1	-
S1482	*Pisidia longicornis*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1555	*Atelecyclus rotundatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1559	*Thia scutellata*	-	-	-	-	-	-	-	-	-	-	-	-	-
S1577	*Liocarcinus*	-	-	-	-	-	-	-	-	1	-	1	-	-
W0053	*Leptochiton asellus*	-	-	-	-	-	-	-	-	-	-	-	-	-
W0088	GASTROPODA	-	-	-	-	-	-	-	-	-	-	-	-	-
W0421	*Tornus subcarinatus*	-	-	-	-	-	-	-	-	-	-	-	-	-
W0418	*Caecum glabrum*	-	-	-	-	-	-	-	-	5	-	-	-	-
W0491	*Polinices pulchellus*	-	-	-	-	-	-	-	-	-	-	1	-	-
W0549	*Epitonium clathrus*	-	-	-	-	-	-	-	-	-	-	-	-	-
W0702	*Buccinidae*	-	-	-	-	-	-	-	-	-	-	-	-	-
W0908	*Odostomia*	-	-	-	-	-	-	-	-	-	-	-	-	-
W1243	NUDIBRANCHIA	-	2	-	-	-	-	-	-	5	1	-	-	-
W1320	*Onchidoris*	-	-	-	-	-	-	-	-	-	-	-	-	-
W1569	*Nucula nitidosa*	-	-	-	-	-	-	-	-	-	-	-	-	-
W1570	*Nucula nucleus*	-	-	-	-	-	-	-	-	-	-	-	-	-
W1691	Mytilidae	-	3	15	2	-	2	196	30	24	1	-	-	6
W1702	*Modiolus modiolus*	-	-	-	-	-	-	-	-	-	-	-	-	-
W1768	Pectinidae	-	-	-	-	-	-	-	-	-	-	-	-	-
W1805	Anomiidae	-	-	-	-	-	-	-	-	-	-	-	-	-
W1906	*Kurtiella bidentata*	-	-	-	-	-	-	2	-	-	-	8	-	-
W1929	*Goodallia triangularis*	-	-	-	-	-	-	1	-	-	-	-	-	1
W1973	*Spisula*	-	-	-	-	-	-	-	-	-	-	-	1	-
W1975	*Spisula elliptica*	-	-	-	-	-	-	-	-	-	-	1	-	-

SDC	Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13
W2006	*Phaxas pellucidus*	-	-	-	-	-	-	-	-	-	-	2	-	-
W2023	*Moerella pygmaea*	-	-	-	-	-	-	-	-	-	-	-	-	-
W2058	*Abra*	-	-	-	-	-	-	-	-	-	-	148	-	-
W2059	*Abra alba*	-	-	-	-	-	-	-	-	-	-	299	-	-
W2062	*Abra prismatica*	-	-	-	-	-	-	-	-	-	-	-	-	-
W2179	*Barnea*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0013	*Crisia*	-	-	-	-	-	-	P	P	P	-	-	-	-
Y0073	*Alcyonidium*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0076	*Alcyonidium diaphanum*	-	-	P	P	-	-	-	-	-	-	-	-	-
Y0080	*Alcyonidium mytili*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0081	*Alcyonidium parasiticum*	-	-	-	-	-	-	-	-	-	-	-	P	-
Y0096	*Anguinella palmata*	-	P	P	-	-	-	-	-	-	-	-	-	-
Y0131	*Vesicularia spinosa*	-	-	-	-	-	-	-	P	-	-	-	-	-
	Setosella vulnerata	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0172	*Conopeum reticulum*	-	-	P	P	-	-	-	P	-	-	-	-	-
Y0177	*Electra monostachys*	-	-	P	P	-	-	-	-	-	-	-	-	-
Y0178	*Electra pilosa*	-	-	-	P	-	-	P	P	-	-	-	P	-
Y0182	*Aspidelectra melolontha*	-	-	P	P	-	-	-	P	-	-	-	-	P
Y0187	*Flustra foliacea*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0222	*Amphiblestrum auritum*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0240	*Bugula*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0246	*Bugula plumosa*	-	-	-	-	-	-	-	-	P	-	-	-	-
Y0256	*Bicellariella ciliata*	-	-	-	-	-	-	-	-	P	-	-	-	-
Y0323	*Puellina praecox*	-	-	-	-	-	-	-	P	-	-	-	-	-
Y0364	*Escharella immersa*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0370	*Escharella ventricosa*	-	-	-	-	-	-	-	-	-	-	-	-	-
Y0467	*Schizomavella*	-	-	-	P	-	-	-	-	-	-	-	-	-
ZA0003	*Phoronis*	-	-	-	-	-	-	-	-	-	-	-	1	-
ZB0018	ASTEROIDEA	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0100	*Asterias rubens*	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0105	OPHIUROIDEA	-	1	-	-	-	-	-	-	-	1	23	-	-
ZB0161	*Amphipholis squamata*	-	-	-	-	-	-	1	-	5	-	-	-	-
ZB0165	Ophiuridae	-	-	-	-	-	-	-	-	-	-	-	1	-
ZB0168	*Ophiura albida*	-	-	-	-	-	-	-	-	-	-	4	1	-
ZB0167	*Ophiocten affinis*	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0181	ECHINOIDEA	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0193	*Psammechinus miliaris*	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0212	*Echinocyamus pusillus*	-	-	-	-	-	-	-	-	3	1	-	8	-
ZB0213	SPATANGOIDA	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0219	*Spatangus purpureus*	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0223	*Echinocardium cordatum*	-	-	-	-	-	-	-	-	-	-	-	-	-
ZB0225	*Echinocardium pennatifidum*	-	-	-	-	-	-	-	-	-	-	-	-	1
ZB0291	*Leptosynapta*	-	-	-	-	-	-	-	-	6	-	-	-	-
ZD0002	ASCIDIACEA	-	-	-	-	-	-	-	-	1	-	-	-	-
ZD0041	Didemnidae	-	-	-	-	-	-	P	-	-	-	-	-	-
	Branchiostoma lanceolatum	-	-	-	-	-	-	-	-	-	2	-	-	-
ZG0291	*Agonus cataphractus*	-	-	-	-	-	-	-	-	-	-	-	-	-
ZG0443	*Ammodytes marinus*	-	-	-	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	14	15	16	17	18	20	21	22	23	24
	Astrorhiza	-	-	-	-	-	-	-	-	-	-
C0001	PORIFERA	-	-	-	-	-	-	-	-	-	-
C0133	*Scypha ciliata*	-	-	-	-	-	-	-	-	-	-
D0163	*Tubularia*	-	-	-	-	-	-	-	-	-	-
D0216	FILIFERA	-	-	-	-	-	-	-	-	-	-
D0218	*Eudendrium*	-	-	-	-	-	-	-	-	-	-
D0240	*Leuckartiara octona*	-	-	-	-	-	-	-	-	-	P
D0390	*Halecium*	-	-	-	P	-	-	-	-	-	-
D0409	*Abietinaria abietina*	-	-	-	-	-	-	-	P	-	-
D0424	*Hydrallmania falcata*	-	-	-	-	-	-	-	-	-	-
D0427	*Sertularella*	-	-	-	-	-	-	-	-	-	-
D0433	*Sertularia*	-	-	-	P	P	P	-	-	P	P
D0447	Plumulariidae	-	-	-	-	-	-	-	P	-	-
D0491	Campanulariidae	-	-	-	-	-	-	-	-	-	P
D0501	*Clytia*	-	-	-	P	-	-	-	-	-	-
D0511	*Laomedea*	-	-	-	-	P	-	-	-	-	-
D0517	*Obelia*	-	-	-	P	-	-	-	-	-	-
D0597	*Alcyonium digitatum*	-	-	-	-	P	-	-	-	-	-
D0662	ACTINIARIA	-	-	-	-	16	5	-	-	-	-
F0002	TURBELLARIA	-	-	-	-	-	-	-	-	-	-
G0001	NEMERTEA	-	4	-	2	-	7	1	1	1	1
HD0001	NEMATODA	-	-	-	-	-	1	-	-	-	1
L0001	CHAETOGNATHA	-	-	-	-	-	-	-	-	-	-
N0011	Golfingiidae	-	-	-	-	-	1	-	-	-	-
N0017	*Golfingia vulgaris*	-	-	-	-	-	-	1	-	-	-
N0034	*Phascolion strombus*	-	-	-	-	-	-	-	-	-	-
P0015	*Pisione remota*	-	-	-	-	-	-	-	-	-	-
P0017	Aphroditidae	-	-	-	1	-	-	-	-	-	-
P0025	Polynoidae	-	-	-	-	-	-	-	-	-	-
P0049	*Gattyana cirrhosa*	-	-	-	-	-	1	-	-	-	-
	Harmothoe clavigera	-	-	-	1	-	-	-	-	-	-
	Malmgreniella	-	-	-	-	-	-	-	-	-	-
P0051	*Malmgreniella andreapolis*	-	-	-	-	-	-	-	-	-	-
P0066	*Malmgreniella ljungmani*	-	-	-	-	1	-	-	-	-	-
P0080	*Lepidonotus*	-	-	-	-	1	-	-	-	-	-
P0082	*Lepidonotus squamatus*	-	-	-	-	1	-	-	-	-	-
P0092	*Pholoe baltica (sensu petersen*	-	-	-	-	-	1	-	-	-	-
P0094	*Pholoe inornata (sensu peterse*	-	-	-	2	-	1	-	-	-	-
	Pholoe assimilis	-	-	-	-	-	-	-	-	-	-
P0118	*Eteone longa*	1	-	-	-	-	-	-	-	-	-
P0122	*Hesionura elongata*	-	-	-	-	-	-	-	-	-	-
P0145	*Anaitides mucosa*	-	-	-	-	-	-	-	-	-	-
P0146	*Anaitides rosea*	-	-	-	-	-	-	-	1	-	-
P0155	*Eulalia mustela*	-	-	-	-	-	-	-	-	-	-
P0156	*Eulalia ornata*	-	-	-	-	-	-	-	-	-	-
P0163	*Eumida*	-	-	-	-	-	-	-	-	-	-
P0164	*Eumida bahusiensis*	-	-	-	-	-	1	-	-	-	-
P0167	*Eumida sanguinea*	-	-	-	3	-	-	-	-	-	-
P0255	*Glycera*	-	2	-	-	-	-	-	-	-	-
P0260	*Glycera lapidum*	-	-	-	-	-	7	-	-	-	-
P0262	*Glycera oxycephala*	2	-	-	-	-	-	-	-	1	-
P0265	*Glycera tridactyla*	-	-	-	-	-	-	-	-	-	-
P0268	*Glycinde nordmanni*	-	-	-	-	-	1	-	-	-	-
P0271	*Goniada maculata*	-	-	-	-	1	-	1	-	-	1
P0291	*Sphaerodorum gracilis*	-	-	-	-	-	-	-	-	-	-
P0319	*Podarkeopsis capensis*	-	-	-	-	-	-	-	-	-	-
P0333	*Microphthalmus similis*	-	-	-	-	-	-	-	-	-	-
P0358	*Syllis* (Type E)	-	-	-	-	-	-	-	-	-	-
P0358	*Syllis* (Type H)	-	-	-	-	-	-	-	-	-	-
P0349	*Syllis cornuta*	-	-	-	-	-	2	-	-	-	-
P0405	*Streptosyllis websteri*	-	-	-	-	-	-	-	-	-	-
P0421	*Exogone hebes*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	14	15	16	17	18	20	21	22	23	24
P0422	*Exogone naidina*	-	-	-	-	-	1	-	-	-	-
P0423	*Exogone verugera*	-	-	-	-	-	4	-	-	-	2
P0425	*Sphaerosyllis bulbosa*	-	-	-	-	-	-	-	-	-	-
P0430	*Sphaerosyllis taylori*	-	1	-	-	-	-	-	-	-	-
P0434	*Autolytus*	-	-	-	2	-	1	-	-	-	-
P0458	Nereididae	-	-	-	1	-	-	-	-	-	-
P0475	*Eunereis longissima*	-	-	-	-	-	-	-	1	-	-
P0494	*Nephtys*	1	-	-	-	-	-	-	-	-	-
P0496	*Nephtys caeca*	-	-	-	-	-	-	-	-	-	-
P0498	*Nephtys cirrosa*	-	-	-	-	-	-	-	-	-	-
P0499	*Nephtys hombergii*	-	-	-	-	-	-	1	-	-	-
P0553	Eunicidae	-	1	-	-	-	-	-	-	-	-
P0563	*Marphysa*	-	-	-	-	-	2	-	-	-	-
P0564	*Marphysa bellii*	-	-	-	-	-	1	-	-	-	-
P0566	*Marphysa sanguinea*	-	-	-	-	-	1	-	-	-	-
P0569	Lumbrineridae	-	1	-	-	-	-	-	-	-	-
	Lumbrineris cingulata	-	1	-	1	10	5	-	-	-	-
P0613	*Ophryotrocha*	-	-	-	-	-	-	-	-	-	-
P0638	*Protodorvillea kefersteini*	-	-	-	-	-	-	-	-	-	-
P0642	*Schistomeringos neglecta*	-	-	-	-	-	-	-	-	-	-
P0672	*Scoloplos armiger*	-	-	-	1	-	-	-	-	-	-
P0674	Paraonidae	-	-	-	-	-	-	-	-	-	-
P0677	*Aricidea minuta*	-	-	-	1	-	-	-	-	-	-
P0678	*Aricidea wassi*	-	-	-	1	-	-	-	-	-	-
P0699	*Paradoneis lyra*	-	-	-	-	-	3	-	-	-	1
P0704	*Paraonis fulgens*	-	-	-	-	-	-	-	-	-	-
P0718	*Poecilochaetus serpens*	-	-	-	-	-	18	-	-	-	-
P0723	*Aonides paucibranchiata*	-	2	-	-	-	2	-	-	-	-
P0733	*Laonice bahusiensis*	-	-	-	-	-	-	-	-	-	-
P0739	*Malacoceros vulgaris*	-	-	-	-	-	-	-	-	-	-
P0750	*Polydora caeca*	-	-	-	-	-	-	-	-	-	-
P0751	*Polydora caulleryi*	-	-	-	1	-	3	-	-	-	7
P0752	*Polydora ciliata*	-	-	-	-	-	-	-	-	-	-
P0774	*Pseudopolydora pulchra*	-	-	-	-	-	-	-	-	-	-
P0776	*Pygospio elegans*	-	-	-	-	-	-	-	-	-	-
P0779	*Scolelepis bonnieri*	-	-	-	-	-	-	-	-	-	-
P0787	*Spio*	-	-	-	-	-	-	-	-	-	-
P0790	*Spio filicornis*	-	-	-	-	-	-	-	-	-	-
	Spio goniocephala	-	-	-	-	-	-	-	-	-	-
P0794	*Spiophanes bombyx*	-	-	1	90	-	1	11	41	-	-
P0823	*Aphelochaeta*	-	-	-	-	-	-	-	-	-	-
P0824	*Aphelochaeta marioni*	-	-	-	-	-	-	-	-	-	-
P0829	*Caulleriella alata*	-	-	-	2	-	-	-	-	-	-
P0831	*Chaetozone zetlandica*	-	1	-	-	1	3	-	1	-	1
P0839	*Cirriformia tentaculata*	-	-	-	-	-	-	-	-	-	-
P0840	*Dodecaceria*	-	-	-	-	1	-	-	-	-	-
P0846	*Tharyx killariensis*	-	-	-	-	-	-	1	-	-	-
P0881	*Flabelligera affinis*	-	-	-	-	-	5	-	-	-	-
P0889	*Macrochaeta*	-	-	-	-	-	-	-	-	-	-
P0919	*Mediomastus fragilis*	-	1	-	-	2	1	-	-	-	5
P0921	*Notomastus latericeus*	1	-	-	-	-	2	-	-	-	-
P0927	*Pseudonotomastus southerni*	-	3	-	-	-	-	-	-	-	-
P0955	*Clymenura*	-	-	-	-	-	27	-	-	-	1
P0971	*Praxillella affinis*	-	-	-	-	-	1	-	-	-	-
P0978	*Micromaldane ornithochaeta*	-	-	-	-	-	-	-	-	-	-
P0997	*Ophelia*	-	-	-	-	-	-	-	-	-	-
P0999	*Ophelia borealis*	3	2	-	-	-	-	-	-	-	-
P1007	*Travisia forbesii*	-	-	-	-	-	-	-	-	-	-
P1027	*Scalibregma inflatum*	-	-	-	-	-	-	1	1	7	-
P1062	*Polygordius*	-	-	-	-	-	-	-	-	-	-
P1069	*Protodrilus*	-	-	-	-	-	-	-	-	-	-
P1086	*Saccocirrus*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	14	15	16	17	18	20	21	22	23	24
P1098	*Owenia fusiformis*	-	-	-	1	-	-	-	-	-	-
P1107	*Lagis koreni*	-	-	-	1	-	5	3	-	-	-
P1117	*Sabellaria spinulosa*	-	-	-	185	-	45	-	-	-	-
P1118	Ampharetidae	-	-	-	-	1	-	-	-	-	-
P1138	*Ampharete grubei*	-	-	-	-	-	-	-	-	-	-
P1139	*Ampharete lindstroemi*	-	-	-	-	-	1	-	-	-	-
P1141	*Amphicteis*	-	-	-	-	-	-	-	-	-	-
P1142	*Amphicteis gunneri*	-	-	-	-	-	-	-	-	-	-
P1175	*Terebellides stroemi*	-	-	-	-	1	-	-	-	-	-
P1179	Terebellidae	-	-	-	-	-	-	-	-	-	-
P1195	*Lanice conchilega*	-	-	-	6	-	2	-	1	-	1
P1232	*Lysilla* (Type A)	-	-	-	-	-	-	-	-	-	-
P1233	*Lysilla loveni*	-	-	-	-	-	-	-	-	-	-
P1235	*Polycirrus*	-	5	-	-	-	1	-	-	-	-
P1254	*Thelepus cincinnatus*	-	-	-	-	-	-	-	-	-	-
P1324	Serpulidae	-	-	-	-	-	-	-	-	-	-
P1339	*Pomatoceros*	-	-	-	-	-	-	-	-	-	-
P1340	*Pomatoceros lamarcki*	-	-	-	-	3	1	-	-	-	6
P1469	*Limnodriloides*	-	-	-	2	-	-	-	-	-	-
P1490	*Tubificoides benedii*	-	-	-	-	-	-	-	-	-	-
P1498	*Tubificoides pseudogaster*	-	-	-	-	-	-	-	-	-	-
P1524	*Grania*	-	-	-	-	-	-	-	-	-	-
	Amothella longipes	-	-	-	-	-	-	-	-	-	-
Q0005	*Nymphon brevirostre*	-	-	-	3	-	-	-	-	-	-
Q0015	*Achelia echinata*	-	-	-	3	-	-	-	-	-	-
Q0033	*Callipallene brevirostris*	-	-	-	-	-	-	-	-	-	-
Q0044	*Anoplodactylus petiolatus*	-	-	-	7	-	-	-	1	-	-
Q0045	*Anoplodactylus pygmaeus*	-	-	-	-	-	-	-	-	-	-
	CIRRIPEDIA	-	-	-	-	-	-	-	-	-	-
R0041	*Verruca stroemia*	-	-	-	-	1	-	-	-	-	-
R0077	*Balanus crenatus*	-	-	-	-	-	-	-	-	-	-
R0142	COPEPODA	-	-	-	-	-	-	-	-	-	-
S0044	*Gastrosaccus spinifer*	3	-	-	-	-	-	-	-	-	-
S0107	*Apherusa ovalipes*	-	-	-	-	-	1	-	-	-	-
S0159	*Amphilochus neapolitanus*	-	-	-	1	-	-	-	-	-	-
S0213	*Stenothoe marina*	-	-	-	-	-	-	-	-	-	-
S0247	*Urothoe brevicornis*	-	2	-	-	-	-	-	-	-	-
S0248	*Urothoe elegans*	-	-	-	2	-	12	-	1	-	-
S0257	*Harpinia pectinata*	-	-	-	3	-	-	-	-	-	-
S0296	*Hippomedon denticulatus*	-	-	-	-	-	-	-	-	-	-
S0330	*Socarnes erythrophthalmus*	-	-	-	-	-	-	-	-	-	-
S0337	*Tmetonyx similis*	-	1	-	-	-	-	-	-	-	-
S0397	*Liljeborgia pallida*	-	-	-	-	-	-	-	-	-	-
S0411	*Atylus guttatus*	-	-	-	-	-	-	-	-	-	-
S0412	*Atylus swammerdamei*	-	-	-	-	-	-	-	-	-	-
S0423	*Ampelisca*	-	-	-	-	-	-	-	-	-	-
S0429	*Ampelisca diadema*	-	-	-	-	2	-	-	-	-	-
S0438	*Ampelisca spinipes*	-	-	-	10	-	14	1	2	-	1
S0452	*Bathyporeia elegans*	-	-	-	-	-	-	-	-	-	-
S0503	*Cheirocratus*	-	-	-	-	-	-	-	-	-	-
S0521	*Maerella tenuimana*	-	1	-	-	-	-	-	-	-	-
S0541	*Gammaropsis maculata*	-	-	-	-	-	1	-	-	-	-
S0577	*Aoridae*	-	-	-	-	-	2	-	-	-	-
S0579	*Aora gracilis*	-	-	-	-	-	-	-	-	-	-
S0616	*Corophium volutator*	-	-	-	-	-	-	-	-	-	-
S0619	*Siphonoecetes striatus*	-	-	-	-	-	-	-	-	-	-
S0622	*Unciola planipes*	-	-	-	-	-	-	-	-	-	-
S0628	*Dyopedos monacanthus*	-	-	-	1	-	-	-	-	-	-
S0651	*Pariambus typicus*	-	-	-	-	-	-	-	-	-	-
S0854	*Eurydice pulchra*	-	-	-	-	-	1	-	-	-	-
S0855	*Eurydice spinigera*	-	-	-	-	-	-	-	-	-	-
S0856	*Eurydice truncata*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	14	15	16	17	18	20	21	22	23	24
S0947	*Zenobiana prismatica*	-	-	-	-	-	-	-	-	-	-
S0995	*Bopyridae*	-	-	-	-	-	-	-	-	-	-
S1142	*Tanaopsis graciloides*	-	-	-	-	-	-	-	-	-	-
S1175	*Apseudes latreillii*	-	-	-	-	-	-	-	-	-	1
S1197	*Bodotria scorpioides*	-	-	-	-	-	3	-	-	-	-
S1208	*Eudorella truncatula*	-	-	-	-	-	-	-	-	-	-
S1258	*Diastyloides serrata*	-	-	-	-	-	-	1	-	-	-
S1276	DECAPODA	-	-	-	-	-	-	-	-	-	-
S1360	*Thoralus cranchii*	-	-	-	-	-	-	1	-	-	-
S1385	*Crangon crangon*	-	-	-	-	-	-	-	-	-	-
S1390	*Philocheras trispinosus*	-	-	-	-	-	-	-	-	-	-
S1415	*Callianassa subterranea*	-	-	-	-	-	1	-	-	-	-
S1449	*Anapagurus laevis*	-	-	-	-	-	-	-	-	-	-
S1482	*Pisidia longicornis*	-	-	-	-	1	2	-	-	-	2
S1555	*Atelecyclus rotundatus*	-	-	-	-	-	-	-	-	-	-
S1559	*Thia scutellata*	-	-	-	-	-	-	-	-	-	-
S1577	*Liocarcinus*	-	-	-	-	-	-	-	-	-	-
W0053	*Leptochiton asellus*	-	-	-	1	-	-	-	-	-	-
W0088	GASTROPODA	-	-	-	-	-	-	-	-	-	-
W0421	*Tornus subcarinatus*	-	-	-	-	1	-	-	-	-	-
W0418	*Caecum glabrum*	-	-	-	-	-	-	-	-	-	-
W0491	*Polinices pulchellus*	-	-	-	-	-	-	-	-	-	-
W0549	*Epitonium clathrus*	-	-	-	-	-	1	-	-	-	-
W0702	*Buccinidae*	-	-	-	-	-	-	-	-	-	-
W0908	*Odostomia*	-	-	-	-	-	-	-	-	-	-
W1243	NUDIBRANCHIA	-	-	-	-	-	-	-	-	-	-
W1320	*Onchidoris*	-	-	-	-	-	-	-	-	-	-
W1569	*Nucula nitidosa*	-	-	-	-	-	-	3	-	-	-
W1570	*Nucula nucleus*	-	-	5	72	-	-	-	2	-	-
W1691	Mytilidae	-	1	-	6	20	2	-	1	11	-
W1702	*Modiolus modiolus*	-	-	-	-	-	-	-	-	-	-
W1768	Pectinidae	-	-	-	1	-	-	-	-	-	-
W1805	Anomiidae	-	-	-	-	-	-	-	-	-	-
W1906	*Kurtiella bidentata*	-	-	-	-	-	-	-	-	-	-
W1929	*Goodallia triangularis*	-	7	-	-	-	-	-	-	-	-
W1973	*Spisula*	-	1	-	-	-	1	-	-	-	-
W1975	*Spisula elliptica*	-	1	-	-	-	-	-	-	-	-
W2006	*Phaxas pellucidus*	-	-	-	-	-	-	-	-	-	-
W2023	*Moerella pygmaea*	-	-	-	-	-	-	-	-	-	-
W2058	*Abra*	1	2	-	-	1	-	-	-	-	1
W2059	*Abra alba*	1	-	-	11	-	-	-	-	-	-
W2062	*Abra prismatica*	-	-	-	-	-	-	-	-	-	-
W2179	*Barnea*	-	-	-	-	-	-	-	-	-	-
Y0013	*Crisia*	-	-	-	-	-	-	-	-	-	-
Y0073	*Alcyonidium*	-	-	-	-	-	-	-	-	-	-
Y0076	*Alcyonidium diaphanum*	-	-	-	-	-	-	-	-	-	-
Y0080	*Alcyonidium mytili*	-	-	P	P	-	-	-	-	-	-
Y0081	*Alcyonidium parasiticum*	-	-	-	-	-	-	-	-	-	-
Y0096	*Anguinella palmata*	-	-	P	P	-	-	-	-	P	-
Y0131	*Vesicularia spinosa*	-	-	P	-	-	-	-	-	-	-
	Setosella vulnerata	-	P	-	-	-	-	-	-	-	-
Y0172	*Conopeum reticulum*	-	P	P	-	-	-	P	-	-	P
Y0177	*Electra monostachys*	-	P	-	P	-	P	-	-	-	P
Y0178	*Electra pilosa*	-	-	P	P	P	-	-	-	-	P
Y0182	*Aspidelectra melolontha*	-	P	P	P	-	P	P	-	-	-
Y0187	*Flustra foliacea*	-	-	P	-	-	-	P	-	-	-
Y0222	*Amphiblestrum auritum*	-	-	-	-	-	-	-	-	-	-
Y0240	*Bugula*	-	-	-	-	-	-	-	-	-	-
Y0246	*Bugula plumosa*	-	-	-	-	-	-	-	-	-	-
Y0256	*Bicellariella ciliata*	-	-	-	-	-	-	-	-	-	-
Y0323	*Puellina praecox*	-	P	-	-	-	-	-	-	-	-
Y0364	*Escharella immersa*	-	-	-	-	-	-	-	-	-	P

SDC	Taxon	14	15	16	17	18	20	21	22	23	24
Y0370	*Escharella ventricosa*	-	-	-	-	-	-	-	-	-	-
Y0467	*Schizomavella*	-	-	-	-	P	P	-	-	-	P
ZA0003	*Phoronis*	-	-	-	-	1	-	-	-	-	-
ZB0018	ASTEROIDEA	-	-	-	1	-	-	-	-	-	-
ZB0100	*Asterias rubens*	-	-	-	-	-	-	-	-	-	-
ZB0105	OPHIUROIDEA	1	5	-	-	-	8	-	-	-	1
ZB0161	*Amphipholis squamata*	-	-	-	-	-	-	-	-	-	-
ZB0165	*Ophiuridae*	-	-	-	-	-	3	-	-	-	-
ZB0168	*Ophiura albida*	-	-	-	5	-	-	-	-	-	-
ZB0167	*Ophiocten affinis*	-	1	-	-	-	-	-	-	-	-
ZB0181	ECHINOIDEA	-	-	-	-	-	-	-	-	-	-
ZB0193	*Psammechinus miliaris*	-	-	-	-	1	2	-	-	-	-
ZB0212	*Echinocyamus pusillus*	-	-	-	-	-	5	-	-	-	-
ZB0213	SPATANGOIDA	-	-	-	-	-	-	-	-	-	-
ZB0219	*Spatangus purpureus*	-	-	-	-	-	-	-	-	-	-
ZB0223	*Echinocardium cordatum*	-	-	-	-	-	-	-	-	-	-
ZB0225	*Echinocardium pennatifidum*	-	-	-	-	-	-	-	-	-	-
ZB0291	*Leptosynapta*	-	-	-	-	-	-	-	-	-	-
ZD0002	ASCIDIACEA	-	-	-	-	-	-	-	-	-	-
ZD0041	Didemnidae	-	-	-	-	-	-	-	-	-	-
	Branchiostoma lanceolatum	-	-	-	-	-	-	-	-	-	-
ZG0291	*Agonus cataphractus*	-	-	-	1	-	-	-	-	-	-
ZG0443	*Ammodytes marinus*	-	1	-	-	-	-	-	-	-	-

SDC	Taxon	25	26	27	28	29	30	31	32	33	34
	Astrorhiza	-	-	-	-	-	-	-	1	-	-
C0001	PORIFERA	-	-	-	-	-	-	-	-	-	-
C0133	*Scypha ciliata*	-	-	-	-	-	-	-	-	-	-
D0163	*Tubularia*	P	-	-	-	-	-	-	P	-	-
D0216	FILIFERA	-	P	-	-	-	-	-	-	-	-
D0218	*Eudendrium*	-	-	P	-	-	-	-	-	P	-
D0240	*Leuckartiara octona*	-	-	-	-	-	-	-	-	-	-
D0390	*Halecium*	-	-	-	P	-	-	-	P	P	-
D0409	*Abietinaria abietina*	-	-	-	-	-	-	-	-	-	-
D0424	*Hydrallmania falcata*	-	-	-	-	-	-	-	-	-	-
D0427	*Sertularella*	-	-	-	-	-	-	-	-	P	-
D0433	*Sertularia*	P	P	-	-	-	-	-	P	P	-
D0447	Plumulariidae	-	-	-	-	-	-	-	-	-	-
D0491	Campanulariidae	-	-	-	-	-	-	-	P	-	-
D0501	*Clytia*	-	-	-	-	-	-	-	-	-	-
D0511	*Laomedea*	-	-	-	-	-	-	-	-	-	-
D0517	*Obelia*	-	-	-	-	-	-	-	-	-	-
D0597	*Alcyonium digitatum*	-	-	-	-	-	-	-	-	-	-
D0662	ACTINIARIA	1	2	16	-	-	2	-	3	38	-
F0002	TURBELLARIA	-	-	-	-	-	-	-	-	-	-
G0001	NEMERTEA	4	6	1	1	3	2	-	-	6	-
HD0001	NEMATODA	1	-	1	-	-	2	1	1	6	1
L0001	CHAETOGNATHA	-	-	-	-	-	-	-	-	-	-
N0011	Golfingiidae	-	-	-	-	-	-	-	-	-	-
N0017	*Golfingia vulgaris*	2	-	1	-	-	-	-	-	-	-
N0034	*Phascolion strombus*	-	-	-	-	-	-	-	-	-	-
P0015	*Pisione remota*	-	-	-	-	4	-	6	-	-	-
P0017	Aphroditidae	-	-	-	-	-	-	-	-	-	-
P0025	Polynoidae	1	-	4	-	-	1	-	-	-	-
P0049	*Gattyana cirrhosa*	-	-	-	-	-	-	-	-	-	-
	Harmothoe clavigera	-	-	-	-	-	-	-	-	-	-
	Malmgreniella	-	-	-	-	-	-	-	-	-	-
P0051	*Malmgreniella andreapolis*	-	-	-	-	-	-	-	-	-	-
P0066	*Malmgreniella ljungmani*	-	-	-	-	-	-	-	-	-	-
P0080	*Lepidonotus*	-	-	-	-	-	-	-	1	-	-
P0082	*Lepidonotus squamatus*	-	-	-	-	-	-	-	-	3	-
P0092	*Pholoe baltica (sensu petersen*	-	1	-	-	-	-	-	-	-	-
P0094	*Pholoe inornata (sensu peterse*	-	-	1	-	-	-	-	3	-	-
	Pholoe assimilis	-	-	-	-	-	1	-	-	1	-
P0118	*Eteone longa*	-	-	-	-	-	-	-	-	-	-
P0122	*Hesionura elongata*	-	-	-	-	1	-	1	-	-	-
P0145	*Anaitides mucosa*	-	-	-	-	1	-	-	-	-	-
P0146	*Anaitides rosea*	-	-	-	-	-	-	-	-	-	-
P0155	*Eulalia mustela*	-	-	-	-	-	-	-	-	-	-
P0156	*Eulalia ornata*	-	-	6	-	-	-	-	-	-	-
P0163	*Eumida*	-	-	2	-	-	-	-	-	-	-
P0164	*Eumida bahusiensis*	-	-	-	-	-	-	-	-	-	-
P0167	*Eumida sanguinea*	-	-	3	-	-	-	-	1	-	-
P0255	*Glycera*	-	-	-	-	2	-	-	-	-	-
P0260	*Glycera lapidum*	-	2	1	-	-	2	-	-	-	-
P0262	*Glycera oxycephala*	-	-	-	-	-	-	-	-	-	-
P0265	*Glycera tridactyla*	-	-	-	-	-	-	-	-	-	-
P0268	*Glycinde nordmanni*	-	-	-	-	-	-	-	-	-	-
P0271	*Goniada maculata*	-	-	-	1	-	2	-	-	-	-
P0291	*Sphaerodorum gracilis*	-	-	1	-	-	-	-	-	-	-
P0319	*Podarkeopsis capensis*	-	-	-	-	-	1	-	-	-	-
P0333	*Microphthalmus similis*	-	-	-	-	-	-	-	-	-	-
P0358	*Syllis* (Type E)	-	-	-	-	-	-	-	-	-	-
P0358	*Syllis* (Type H)	-	-	-	-	-	-	-	-	-	-
P0349	*Syllis cornuta*	-	-	-	-	-	-	-	-	-	-
P0405	*Streptosyllis websteri*	-	-	-	-	-	-	-	-	-	-
P0421	*Exogone hebes*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	25	26	27	28	29	30	31	32	33	34
P0422	*Exogone naidina*	2	-	-	-	-	-	-	-	-	-
P0423	*Exogone verugera*	1	-	2	-	-	1	-	-	-	-
P0425	*Sphaerosyllis bulbosa*	-	-	-	-	-	-	1	-	-	-
P0430	*Sphaerosyllis taylori*	-	-	-	-	-	-	-	-	-	-
P0434	*Autolytus*	2	-	1	-	-	-	-	7	4	-
P0458	Nereididae	-	-	2	-	-	-	2	1	1	-
P0475	*Eunereis longissima*	-	-	3	-	-	1	-	-	-	-
P0494	*Nephtys*	-	-	1	-	-	-	-	-	-	-
P0496	*Nephtys caeca*	1	2	-	-	-	-	-	-	-	-
P0498	*Nephtys cirrosa*	-	-	-	-	-	-	-	-	-	-
P0499	*Nephtys hombergii*	-	-	-	2	-	-	-	-	-	-
P0553	Eunicidae	-	-	-	-	-	-	-	-	-	-
P0563	*Marphysa*	-	-	-	-	-	-	-	-	-	-
P0564	*Marphysa bellii*	-	-	-	-	-	3	-	-	-	-
P0566	*Marphysa sanguinea*	-	-	1	-	-	-	-	-	-	-
P0569	Lumbrineridae	-	-	-	-	-	-	-	-	-	-
	Lumbrineris cingulata	2	4	3	-	-	5	-	-	-	-
P0613	*Ophryotrocha*	-	-	-	-	-	-	-	-	-	-
P0638	*Protodorvillea kefersteini*	1	-	-	-	-	-	1	-	-	-
P0642	*Schistomeringos neglecta*	-	-	-	-	-	-	-	-	-	-
P0672	*Scoloplos armiger*	-	2	-	1	-	2	-	-	-	-
P0674	Paraonidae	-	-	-	-	-	-	-	-	-	-
P0677	*Aricidea minuta*	-	-	-	-	-	-	-	-	-	-
P0678	*Aricidea wassi*	-	-	-	-	-	-	-	-	-	-
P0699	*Paradoneis lyra*	1	-	-	-	1	3	-	-	-	-
P0704	*Paraonis fulgens*	-	-	-	-	-	-	-	-	-	-
P0718	*Poecilochaetus serpens*	-	-	-	-	-	1	-	-	-	-
P0723	*Aonides paucibranchiata*	1	-	-	-	3	1	2	-	-	-
P0733	*Laonice bahusiensis*	2	1	-	-	-	-	-	-	-	-
P0739	*Malacoceros vulgaris*	-	-	-	-	-	-	-	-	-	-
P0750	*Polydora caeca*	-	-	4	-	-	-	-	1	-	1
P0751	*Polydora caulleryi*	2	2	2	-	-	-	-	3	1	-
P0752	*Polydora ciliata*	-	-	-	-	-	-	-	-	1	-
P0774	*Pseudopolydora pulchra*	-	-	-	-	-	-	-	-	-	-
P0776	*Pygospio elegans*	-	-	-	-	-	-	-	-	-	-
P0779	*Scolelepis bonnieri*	-	-	-	-	-	-	-	-	-	-
P0787	*Spio*	-	-	-	1	-	-	-	-	-	-
P0790	*Spio filicornis*	-	-	-	-	-	-	-	-	-	-
	Spio goniocephala	-	-	-	-	-	-	-	-	-	-
P0794	*Spiophanes bombyx*	-	5	1	3	-	2	-	-	1	-
P0823	*Aphelochaeta*	-	-	1	-	-	-	-	-	-	-
P0824	*Aphelochaeta marioni*	-	1	-	-	-	-	-	-	-	-
P0829	*Caulleriella alata*	-	1	-	-	1	1	-	-	-	-
P0831	*Chaetozone zetlandica*	2	2	-	-	-	9	-	-	-	-
P0839	*Cirriformia tentaculata*	-	-	-	-	-	-	-	1	-	-
P0840	*Dodecaceria*	-	-	-	-	-	-	-	-	-	-
P0846	*Tharyx killariensis*	-	-	-	-	-	-	-	-	1	-
P0881	*Flabelligera affinis*	-	-	-	-	-	-	-	-	-	-
P0889	*Macrochaeta*	-	-	-	-	-	-	-	-	-	-
P0919	*Mediomastus fragilis*	3	11	5	-	-	7	-	-	1	-
P0921	*Notomastus latericeus*	-	1	1	-	-	-	-	-	-	-
P0927	*Pseudonotomastus southerni*	-	-	-	-	5	-	10	-	-	-
P0955	*Clymenura*	6	1	-	-	-	-	-	-	-	-
P0971	*Praxillella affinis*	12	4	-	-	-	-	-	-	-	-
P0978	*Micromaldane ornithochaeta*	-	-	-	-	-	-	-	-	-	-
P0997	*Ophelia*	-	-	-	-	-	-	-	-	-	-
P0999	*Ophelia borealis*	-	-	-	-	-	-	-	-	-	-
P1007	*Travisia forbesii*	-	-	-	-	-	-	-	-	-	-
P1027	*Scalibregma inflatum*	-	2	-	-	-	7	-	-	-	-
P1062	*Polygordius*	-	-	-	-	-	-	-	-	-	-
P1069	*Protodrilus*	-	-	-	-	1	-	-	-	-	-
P1086	*Saccocirrus*	-	-	-	-	-	-	1	-	-	-

SDC	Taxon	25	26	27	28	29	30	31	32	33	34
P1098	*Owenia fusiformis*	1	1	-	-	-	4	-	-	-	-
P1107	*Lagis koreni*	-	2	-	-	-	4	-	-	-	-
P1117	*Sabellaria spinulosa*	-	-	136	-	-	-	-	31	12	4
P1118	Ampharetidae	-	-	-	-	-	-	-	-	-	-
P1138	*Ampharete grubei*	-	-	-	-	-	-	-	-	-	-
P1139	*Ampharete lindstroemi*	-	1	1	-	-	6	-	-	-	-
P1141	*Amphicteis*	-	-	-	-	-	-	-	-	-	-
P1142	*Amphicteis gunneri*	-	-	-	-	-	-	-	-	-	-
P1175	*Terebellides stroemi*	-	-	-	-	-	-	-	-	-	-
P1179	Terebellidae	-	-	-	-	-	-	-	-	-	-
P1195	*Lanice conchilega*	-	9	-	-	-	2	-	-	1	-
P1232	*Lysilla* (Type A)	-	-	-	-	-	-	-	-	-	-
P1233	*Lysilla loveni*	-	1	-	-	-	-	-	-	-	-
P1235	*Polycirrus*	4	3	3	-	1	-	5	-	-	-
P1254	*Thelepus cincinnatus*	-	-	-	-	-	1	-	-	-	-
P1324	Serpulidae	1	-	-	-	-	-	5	1	-	-
P1339	*Pomatoceros*	-	-	-	-	-	-	-	-	-	-
P1340	*Pomatoceros lamarcki*	32	3	-	-	-	-	-	1	-	-
P1469	*Limnodriloides*	-	-	-	-	-	-	-	-	-	-
P1490	*Tubificoides benedii*	-	-	-	-	-	-	-	-	1	-
P1498	*Tubificoides pseudogaster*	-	-	-	-	-	-	-	-	-	-
P1524	*Grania*	2	-	-	-	-	-	-	-	-	-
	Amothella longipes	-	-	-	-	-	-	-	-	-	-
Q0005	*Nymphon brevirostre*	-	-	-	-	-	-	-	-	-	-
Q0015	*Achelia echinata*	-	-	-	-	-	-	-	-	5	-
Q0033	*Callipallene brevirostris*	-	-	-	-	-	-	-	-	1	-
Q0044	*Anoplodactylus petiolatus*	-	1	-	-	-	-	-	2	-	-
Q0045	*Anoplodactylus pygmaeus*	-	-	-	-	-	-	-	-	-	-
	CIRRIPEDIA	-	-	-	-	-	-	-	-	7	-
R0041	*Verruca stroemia*	-	-	-	-	-	-	-	-	-	-
R0077	*Balanus crenatus*	-	-	1	-	-	-	-	-	1	-
R0142	COPEPODA	-	-	-	-	-	-	-	1	-	-
S0044	*Gastrosaccus spinifer*	-	-	-	-	-	-	-	-	-	-
S0107	*Apherusa ovalipes*	-	-	-	-	-	-	-	-	-	-
S0159	*Amphilochus neapolitanus*	-	-	-	-	-	-	-	-	-	-
S0213	*Stenothoe marina*	9	-	-	-	-	-	-	1	-	-
S0247	*Urothoe brevicornis*	-	-	-	-	-	-	-	-	-	-
S0248	*Urothoe elegans*	-	-	-	-	-	-	-	-	-	-
S0257	*Harpinia pectinata*	-	-	-	-	-	-	-	1	-	-
S0296	*Hippomedon denticulatus*	-	-	-	-	-	-	-	-	-	-
S0330	*Socarnes erythrophthalmus*	-	-	-	-	-	-	-	-	-	-
S0337	*Tmetonyx similis*	-	-	-	-	-	-	-	-	-	-
S0397	*Liljeborgia pallida*	-	-	-	-	-	-	-	-	-	-
S0411	*Atylus guttatus*	-	-	-	-	-	-	-	-	-	-
S0412	*Atylus swammerdamei*	-	-	-	-	-	-	-	-	-	-
S0423	*Ampelisca*	-	-	2	-	-	-	-	-	-	-
S0429	*Ampelisca diadema*	-	-	-	-	-	-	-	-	-	-
S0438	*Ampelisca spinipes*	3	13	4	-	-	7	-	-	-	-
S0452	*Bathyporeia elegans*	-	-	-	11	-	-	-	-	-	-
S0503	*Cheirocratus*	-	-	-	-	-	-	-	-	-	-
S0521	*Maerella tenuimana*	-	-	-	-	-	-	-	-	-	-
S0541	*Gammaropsis maculata*	-	-	-	-	-	-	-	-	-	-
S0577	*Aoridae*	1	-	-	-	-	-	-	-	-	-
S0579	*Aora gracilis*	-	-	-	-	-	-	-	-	-	-
S0616	*Corophium volutator*	-	-	-	-	-	-	-	-	-	-
S0619	*Siphonoecetes striatus*	-	-	1	-	-	-	-	-	-	-
S0622	*Unciola planipes*	-	-	-	-	-	-	-	-	-	-
S0628	*Dyopedos monacanthus*	4	-	-	-	-	-	-	-	-	-
S0651	*Pariambus typicus*	-	-	-	-	-	-	-	-	-	-
S0854	*Eurydice pulchra*	-	-	-	-	-	-	-	-	-	-
S0855	*Eurydice spinigera*	-	-	-	-	-	-	-	-	-	-
S0856	*Eurydice truncata*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	25	26	27	28	29	30	31	32	33	34
S0947	*Zenobiana prismatica*	-	-	1	-	-	-	-	-	-	-
S0995	*Bopyridae*	-	-	-	-	-	-	-	-	-	-
S1142	*Tanaopsis graciloides*	-	-	2	-	-	-	-	-	-	-
S1175	*Apseudes latreillii*	1	-	-	-	-	-	-	-	-	-
S1197	*Bodotria scorpioides*	-	-	-	-	-	-	-	-	-	-
S1208	*Eudorella truncatula*	-	-	-	-	-	-	-	-	-	-
S1258	*Diastyloides serrata*	-	-	-	-	-	-	-	-	-	-
S1276	DECAPODA	-	-	-	-	-	-	-	-	-	-
S1360	*Thoralus cranchii*	-	-	-	-	-	-	-	-	-	-
S1385	*Crangon crangon*	-	-	-	-	-	-	-	-	-	-
S1390	*Philocheras trispinosus*	-	-	-	-	-	-	-	-	-	-
S1415	*Callianassa subterranea*	-	-	-	-	-	-	-	-	-	-
S1449	*Anapagurus laevis*	-	-	-	-	-	-	-	-	-	-
S1482	*Pisidia longicornis*	5	-	-	-	-	-	-	-	-	-
S1555	*Atelecyclus rotundatus*	-	-	-	-	-	-	-	-	-	-
S1559	*Thia scutellata*	-	-	-	-	-	-	-	-	-	-
S1577	*Liocarcinus*	-	-	-	-	-	-	-	-	-	-
W0053	*Leptochiton asellus*	5	3	-	-	-	-	-	-	-	-
W0088	GASTROPODA	-	-	-	-	-	-	-	-	-	1
W0421	*Tornus subcarinatus*	-	-	-	-	-	-	-	-	-	-
W0418	*Caecum glabrum*	-	-	-	-	-	-	-	-	-	-
W0491	*Polinices pulchellus*	-	-	-	-	-	-	-	-	-	-
W0549	*Epitonium clathrus*	-	-	-	-	-	-	-	-	-	-
W0702	*Buccinidae*	-	-	-	-	-	-	-	1	1	-
W0908	*Odostomia*	1	-	-	-	-	-	-	-	-	-
W1243	NUDIBRANCHIA	-	-	-	-	-	-	-	-	-	-
W1320	*Onchidoris*	-	-	1	-	-	-	-	-	5	-
W1569	*Nucula nitidosa*	-	-	-	27	-	-	-	-	-	-
W1570	*Nucula nucleus*	-	3	-	7	-	-	-	-	-	-
W1691	Mytilidae	15	-	1	-	7	-	5	52	30	3
W1702	*Modiolus modiolus*	-	-	-	-	-	-	-	-	-	-
W1768	Pectinidae	-	-	-	-	-	-	-	-	-	-
W1805	Anomiidae	-	-	-	-	-	-	-	-	-	-
W1906	*Kurtiella bidentata*	-	5	-	-	-	-	-	-	-	-
W1929	*Goodallia triangularis*	-	-	-	-	-	-	-	-	-	-
W1973	*Spisula*	-	-	-	-	-	-	-	-	-	-
W1975	*Spisula elliptica*	-	-	-	-	-	-	-	-	-	-
W2006	*Phaxas pellucidus*	-	-	-	-	-	-	-	-	-	-
W2023	*Moerella pygmaea*	-	-	-	-	-	-	-	-	-	-
W2058	*Abra*	-	6	-	-	-	-	-	-	-	-
W2059	*Abra alba*	4	4	-	-	-	6	-	-	-	-
W2062	*Abra prismatica*	-	-	-	-	-	-	-	-	-	-
W2179	*Barnea*	-	-	-	-	-	-	-	-	-	-
Y0013	*Crisia*	-	-	-	P	-	-	-	-	P	-
Y0073	*Alcyonidium*	-	-	-	-	-	-	-	-	-	-
Y0076	*Alcyonidium diaphanum*	-	-	-	-	-	-	-	-	-	P
Y0080	*Alcyonidium mytili*	-	-	-	-	-	-	-	-	-	-
Y0081	*Alcyonidium parasiticum*	-	-	-	-	-	-	-	-	P	-
Y0096	*Anguinella palmata*	-	-	-	-	-	-	-	-	P	-
Y0131	*Vesicularia spinosa*	-	-	-	-	-	-	-	-	-	-
	Setosella vulnerata	-	-	-	-	-	-	-	-	-	-
Y0172	*Conopeum reticulum*	-	-	P	-	-	-	-	P	P	-
Y0177	*Electra monostachys*	P	-	P	-	-	-	P	P	P	-
Y0178	*Electra pilosa*	-	-	-	-	-	-	-	P	P	P
Y0182	*Aspidelectra melolontha*	-	-	P	-	P	-	-	-	-	-
Y0187	*Flustra foliacea*	-	-	P	-	-	-	-	P	P	-
Y0222	*Amphiblestrum auritum*	-	-	-	-	-	-	-	-	-	-
Y0240	*Bugula*	-	-	-	-	-	-	-	-	-	-
Y0246	*Bugula plumosa*	-	-	-	-	-	-	-	-	-	-
Y0256	*Bicellariella ciliata*	-	-	-	-	-	-	-	P	P	-
Y0323	*Puellina praecox*	-	-	-	-	-	-	-	-	-	-
Y0364	*Escharella immersa*	-	-	-	-	-	-	P	-	-	-

SDC	Taxon	25	26	27	28	29	30	31	32	33	34
Y0370	*Escharella ventricosa*	-	-	-	-	-	-	-	-	-	-
Y0467	*Schizomavella*	P	P	-	-	-	P	-	-	-	-
ZA0003	*Phoronis*	-	-	2	-	-	-	-	-	-	-
ZB0018	ASTEROIDEA	-	-	-	-	-	-	-	-	-	-
ZB0100	*Asterias rubens*	-	-	-	-	-	-	-	-	-	-
ZB0105	OPHIUROIDEA	8	5	2	-	-	6	1	-	-	-
ZB0161	*Amphipholis squamata*	-	-	6	-	-	-	-	-	-	-
ZB0165	*Ophiuridae*	-	-	-	1	-	-	-	-	-	-
ZB0168	*Ophiura albida*	-	2	-	-	-	23	-	-	-	-
ZB0167	*Ophiocten affinis*	-	-	-	-	-	-	-	-	-	-
ZB0181	ECHINOIDEA	-	2	-	-	-	-	-	-	-	-
ZB0193	*Psammechinus miliaris*	4	-	-	-	-	2	-	-	-	-
ZB0212	*Echinocyamus pusillus*	-	-	-	-	-	-	-	-	-	-
ZB0213	SPATANGOIDA	-	-	-	-	-	-	-	-	-	-
ZB0219	*Spatangus purpureus*	-	-	-	-	-	-	-	-	-	-
ZB0223	*Echinocardium cordatum*	-	-	-	1	-	-	-	-	-	-
ZB0225	*Echinocardium pennatifidum*	-	-	-	-	-	-	-	-	-	-
ZB0291	*Leptosynapta*	-	-	-	-	-	-	-	-	-	-
ZD0002	ASCIDIACEA	-	-	-	-	-	-	-	6	21	5
ZD0041	Didemnidae	-	-	-	-	-	-	-	-	-	-
	Branchiostoma lanceolatum	-	-	-	-	-	-	-	-	-	-
ZG0291	*Agonus cataphractus*	-	-	-	-	-	-	-	-	-	-
ZG0443	*Ammodytes marinus*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	35	36	37	38	39	40	492B	493B	494B	495B
	Astrorhiza	-	-	-	-	-	-	-	-	-	-
C0001	PORIFERA	-	-	-	-	-	-	-	-	-	-
C0133	*Scypha ciliata*	-	-	-	-	-	-	-	-	-	-
D0163	*Tubularia*	-	-	-	-	-	-	-	-	-	-
D0216	FILIFERA	-	-	-	-	-	-	-	-	-	-
D0218	*Eudendrium*	-	-	-	-	-	-	-	-	-	-
D0240	*Leuckartiara octona*	-	-	-	-	-	-	-	-	-	-
D0390	*Halecium*	-	-	-	-	-	P	-	-	-	-
D0409	*Abietinaria abietina*	-	-	-	-	-	-	-	-	-	-
D0424	*Hydrallmania falcata*	-	-	-	-	-	-	-	-	-	-
D0427	*Sertularella*	-	-	-	-	-	P	-	-	-	-
D0433	*Sertularia*	-	P	-	-	-	-	-	-	-	-
D0447	Plumulariidae	-	-	-	-	-	-	-	-	-	-
D0491	Campanulariidae	-	-	-	-	-	-	P	-	-	-
D0501	*Clytia*	-	-	-	-	-	-	-	-	-	-
D0511	*Laomedea*	-	-	-	-	-	-	-	-	-	-
D0517	*Obelia*	-	-	-	-	-	-	-	-	-	-
D0597	*Alcyonium digitatum*	-	P	-	-	-	-	-	-	-	-
D0662	ACTINIARIA	-	-	-	1	-	-	-	-	-	-
F0002	TURBELLARIA	-	-	-	-	-	-	-	1	-	-
G0001	NEMERTEA	-	2	-	-	-	1	3	-	-	-
HD0001	NEMATODA	-	1	-	1	-	1	-	-	-	-
L0001	CHAETOGNATHA	-	-	-	-	-	-	-	-	-	-
N0011	Golfingiidae	-	-	-	-	-	-	-	-	-	-
N0017	*Golfingia vulgaris*	-	-	-	-	-	-	-	-	-	-
N0034	*Phascolion strombus*	-	1	-	-	-	-	-	-	-	-
P0015	*Pisione remota*	-	-	-	-	-	-	-	-	-	-
P0017	Aphroditidae	-	-	-	-	-	-	-	-	-	-
P0025	Polynoidae	-	1	-	-	-	2	-	-	-	-
P0049	*Gattyana cirrhosa*	-	-	-	-	-	-	-	-	-	-
	Harmothoe clavigera	-	-	-	-	-	-	-	-	-	-
	Malmgreniella	-	-	-	-	-	-	-	-	-	-
P0051	*Malmgreniella andreapolis*	-	-	-	-	-	-	-	2	-	-
P0066	*Malmgreniella ljungmani*	-	-	-	-	-	-	-	-	-	-
P0080	*Lepidonotus*	-	-	-	-	-	2	-	-	-	-
P0082	*Lepidonotus squamatus*	-	-	1	-	-	3	-	-	-	-
P0092	*Pholoe baltica (sensu petersen*	-	-	-	-	-	-	-	-	-	-
P0094	*Pholoe inornata (sensu peterse*	-	-	-	-	-	-	-	-	-	-
	Pholoe assimilis	-	-	-	-	-	-	-	-	-	-
P0118	*Eteone longa*	-	-	-	-	-	-	-	-	-	1
P0122	*Hesionura elongata*	-	-	-	-	-	-	-	-	-	-
P0145	*Anaitides mucosa*	-	-	-	-	-	-	-	-	-	-
P0146	*Anaitides rosea*	-	-	-	-	-	-	-	-	-	-
P0155	*Eulalia mustela*	-	-	-	-	-	-	-	-	-	-
P0156	*Eulalia ornata*	-	-	-	-	-	-	-	-	-	-
P0163	*Eumida*	-	-	-	-	-	-	-	-	-	-
P0164	*Eumida bahusiensis*	-	-	-	-	-	-	-	-	-	-
P0167	*Eumida sanguinea*	-	-	-	-	-	-	-	-	-	-
P0255	*Glycera*	-	-	-	-	-	-	-	-	1	-
P0260	*Glycera lapidum*	-	1	-	-	-	-	-	-	-	-
P0262	*Glycera oxycephala*	-	-	-	-	-	-	-	-	-	-
P0265	*Glycera tridactyla*	-	-	-	1	-	-	-	-	-	-
P0268	*Glycinde nordmanni*	-	-	-	-	-	-	-	-	-	-
P0271	*Goniada maculata*	-	-	-	-	-	-	-	-	-	-
P0291	*Sphaerodorum gracilis*	-	-	-	-	-	-	-	-	-	-
P0319	*Podarkeopsis capensis*	-	-	-	-	-	-	-	-	-	1
P0333	*Microphthalmus similis*	-	-	-	-	-	-	-	-	-	-
P0358	*Syllis* (Type E)	-	2	-	-	-	-	-	-	-	-
P0358	*Syllis* (Type H)	-	-	-	-	-	-	-	-	-	-
P0349	*Syllis cornuta*	-	-	-	-	-	-	-	-	-	-
P0405	*Streptosyllis websteri*	-	-	-	-	-	-	-	-	-	-
P0421	*Exogone hebes*	-	1	-	-	-	-	-	-	-	-

SDC	Taxon	35	36	37	38	39	40	492B	493B	494B	495B
P0422	*Exogone naidina*	-	-	-	-	-	-	-	-	-	-
P0423	*Exogone verugera*	-	6	-	-	-	-	-	-	-	-
P0425	*Sphaerosyllis bulbosa*	1	-	-	-	-	-	-	-	-	-
P0430	*Sphaerosyllis taylori*	-	-	-	-	-	-	-	-	-	-
P0434	*Autolytus*	-	-	-	-	-	3	-	-	-	-
P0458	Nereididae	-	2	-	-	-	1	-	-	-	-
P0475	*Eunereis longissima*	-	-	-	-	-	-	-	-	-	-
P0494	*Nephtys*	-	-	-	-	-	-	5	1	-	-
P0496	*Nephtys caeca*	-	1	-	-	-	-	-	-	-	-
P0498	*Nephtys cirrosa*	-	-	-	-	-	-	1	2	2	1
P0499	*Nephtys hombergii*	-	-	-	-	3	-	-	-	-	-
P0553	Eunicidae	-	-	-	-	-	-	-	-	-	-
P0563	*Marphysa*	-	-	-	-	-	-	-	-	-	-
P0564	*Marphysa bellii*	-	1	-	-	-	-	-	-	-	-
P0566	*Marphysa sanguinea*	-	-	-	-	-	-	-	-	-	-
P0569	Lumbrineridae	-	-	-	-	-	-	-	-	-	-
	Lumbrineris cingulata	-	-	-	-	-	-	-	-	-	-
P0613	*Ophryotrocha*	-	-	-	-	-	-	-	-	-	-
P0638	*Protodorvillea kefersteini*	-	-	-	-	-	-	-	-	-	-
P0642	*Schistomeringos neglecta*	-	-	-	-	-	-	-	-	-	-
P0672	*Scoloplos armiger*	-	-	-	-	2	-	-	-	-	-
P0674	Paraonidae	-	-	-	-	-	-	-	-	-	-
P0677	*Aricidea minuta*	-	-	-	-	1	-	-	-	-	-
P0678	*Aricidea wassi*	-	-	-	-	1	-	-	-	-	-
P0699	*Paradoneis lyra*	-	1	-	-	-	-	-	-	-	-
P0704	*Paraonis fulgens*	-	-	-	-	-	-	-	-	-	-
P0718	*Poecilochaetus serpens*	-	2	-	-	-	-	-	-	-	-
P0723	*Aonides paucibranchiata*	-	2	-	-	-	-	1	-	-	-
P0733	*Laonice bahusiensis*	-	-	-	-	-	-	-	-	-	-
P0739	*Malacoceros vulgaris*	-	-	-	-	-	1	-	-	-	-
P0750	*Polydora caeca*	-	-	-	-	-	-	-	-	-	-
P0751	*Polydora caulleryi*	-	-	-	1	-	2	-	-	-	-
P0752	*Polydora ciliata*	-	-	-	-	-	-	-	-	-	-
P0774	*Pseudopolydora pulchra*	-	-	-	-	-	-	-	-	-	-
P0776	*Pygospio elegans*	-	-	-	-	2	-	-	-	-	-
P0779	*Scolelepis bonnieri*	-	-	-	-	-	-	-	-	-	-
P0787	*Spio*	-	-	-	-	-	-	-	-	-	-
P0790	*Spio filicornis*	-	-	-	-	-	-	-	-	-	-
	Spio goniocephala	-	-	-	-	-	-	-	-	-	-
P0794	*Spiophanes bombyx*	1	-	-	1	24	-	3	-	-	1
P0823	*Aphelochaeta*	-	-	-	-	-	-	-	-	-	-
P0824	*Aphelochaeta marioni*	-	-	-	-	1	-	-	-	-	-
P0829	*Caulleriella alata*	-	1	-	-	-	-	-	-	-	-
P0831	*Chaetozone zetlandica*	-	1	-	-	-	-	-	-	-	-
P0839	*Cirriformia tentaculata*	-	-	-	-	-	-	-	-	-	-
P0840	*Dodecaceria*	-	-	-	-	-	-	-	-	-	-
P0846	*Tharyx killariensis*	-	-	-	-	-	-	-	-	-	-
P0881	*Flabelligera affinis*	-	-	-	-	-	-	-	-	-	-
P0889	*Macrochaeta*	-	-	-	-	-	-	-	-	-	-
P0919	*Mediomastus fragilis*	-	1	-	10	-	2	-	-	-	-
P0921	*Notomastus latericeus*	-	-	-	-	-	-	-	-	-	-
P0927	*Pseudonotomastus southerni*	-	-	-	-	-	-	-	-	-	-
P0955	*Clymenura*	-	7	-	-	-	-	-	-	-	-
P0971	*Praxillella affinis*	-	3	-	-	-	-	-	-	-	-
P0978	*Micromaldane ornithochaeta*	-	-	-	-	-	-	-	-	-	-
P0997	*Ophelia*	-	-	-	-	-	-	-	-	-	1
P0999	*Ophelia borealis*	-	1	-	-	-	-	1	-	-	1
P1007	*Travisia forbesii*	-	-	-	-	-	-	-	-	-	-
P1027	*Scalibregma inflatum*	-	-	-	1	-	-	-	-	-	-
P1062	*Polygordius*	-	-	-	-	-	-	-	-	-	-
P1069	*Protodrilus*	-	-	-	-	-	-	-	-	-	-
P1086	*Saccocirrus*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	35	36	37	38	39	40	492B	493B	494B	495B
P1098	*Owenia fusiformis*	-	-	-	-	-	-	-	-	-	-
P1107	*Lagis koreni*	-	-	-	-	-	-	-	-	-	-
P1117	*Sabellaria spinulosa*	-	2	7	75	-	2	-	-	-	-
P1118	Ampharetidae	-	-	-	-	-	1	-	-	-	-
P1138	*Ampharete grubei*	-	-	-	1	-	2	-	-	-	-
P1139	*Ampharete lindstroemi*	-	-	-	-	-	-	-	-	-	-
P1141	*Amphicteis*	-	-	-	-	-	1	-	-	-	-
P1142	*Amphicteis gunneri*	-	-	-	1	-	-	-	-	-	-
P1175	*Terebellides stroemi*	-	-	-	-	-	-	-	-	-	-
P1179	Terebellidae	-	-	-	-	-	-	-	-	-	-
P1195	*Lanice conchilega*	-	-	-	1	-	-	-	-	-	-
P1232	*Lysilla* (Type A)	-	1	-	-	-	-	-	-	-	-
P1233	*Lysilla loveni*	-	-	-	-	-	-	-	-	-	-
P1235	*Polycirrus*	-	-	-	-	-	-	2	1	-	3
P1254	*Thelepus cincinnatus*	-	1	-	-	-	-	-	-	-	-
P1324	Serpulidae	-	-	-	-	-	-	-	-	-	-
P1339	*Pomatoceros*	-	1	-	-	-	-	-	-	-	-
P1340	*Pomatoceros lamarcki*	-	8	-	-	-	2	-	-	-	-
P1469	*Limnodriloides*	-	-	-	-	-	-	-	-	-	-
P1490	*Tubificoides benedii*	-	-	-	1	-	-	-	-	-	-
P1498	*Tubificoides pseudogaster*	-	-	-	-	-	-	-	-	-	-
P1524	*Grania*	-	1	-	-	-	-	-	-	-	-
	Amothella longipes	-	-	-	-	-	1	-	-	-	-
Q0005	*Nymphon brevirostre*	-	-	-	-	-	-	-	-	-	-
Q0015	*Achelia echinata*	-	-	-	1	-	10	-	-	-	-
Q0033	*Callipallene brevirostris*	-	-	-	-	-	1	-	-	-	-
Q0044	*Anoplodactylus petiolatus*	-	-	-	1	-	-	-	-	-	-
Q0045	*Anoplodactylus pygmaeus*	-	-	-	-	-	5	-	-	-	-
	CIRRIPEDIA	-	-	-	-	-	-	-	-	-	-
R0041	*Verruca stroemia*	-	-	-	-	-	1	-	-	-	-
R0077	*Balanus crenatus*	-	-	-	288	-	-	-	-	-	-
R0142	COPEPODA	-	-	-	-	-	-	-	-	-	-
S0044	*Gastrosaccus spinifer*	-	-	-	-	-	-	-	-	-	-
S0107	*Apherusa ovalipes*	-	-	-	-	-	-	-	-	-	-
S0159	*Amphilochus neapolitanus*	-	-	-	-	-	-	-	-	-	-
S0213	*Stenothoe marina*	-	-	-	-	-	-	-	-	-	-
S0247	*Urothoe brevicornis*	-	-	-	-	-	-	3	-	-	-
S0248	*Urothoe elegans*	-	-	-	-	-	-	-	-	-	-
S0257	*Harpinia pectinata*	-	1	-	-	-	-	-	-	-	-
S0296	*Hippomedon denticulatus*	-	-	-	-	-	-	1	-	-	-
S0330	*Socarnes erythrophthalmus*	-	-	-	-	-	-	-	-	-	-
S0337	*Tmetonyx similis*	-	-	-	-	-	-	-	-	-	-
S0397	*Liljeborgia pallida*	-	-	-	-	-	-	-	-	-	-
S0411	*Atylus guttatus*	-	-	-	1	-	-	-	-	-	-
S0412	*Atylus swammerdamei*	-	-	-	-	-	-	-	-	-	-
S0423	*Ampelisca*	-	1	-	-	-	-	-	-	-	-
S0429	*Ampelisca diadema*	-	-	-	-	-	-	-	-	-	-
S0438	*Ampelisca spinipes*	-	-	-	-	-	-	-	-	-	-
S0452	*Bathyporeia elegans*	-	-	-	-	-	1	-	-	-	-
S0503	*Cheirocratus*	-	-	1	-	-	-	-	-	-	-
S0521	*Maerella tenuimana*	-	-	-	-	-	-	-	-	-	-
S0541	*Gammaropsis maculata*	-	-	-	-	-	-	-	-	-	-
S0577	*Aoridae*	-	-	-	-	-	8	-	-	-	-
S0579	*Aora gracilis*	-	-	-	-	-	5	-	-	-	-
S0616	*Corophium volutator*	-	-	-	-	-	-	-	-	-	-
S0619	*Siphonoecetes striatus*	-	-	-	-	-	-	-	-	-	-
S0622	*Unciola planipes*	-	-	-	-	-	-	-	2	-	-
S0628	*Dyopedos monacanthus*	-	-	-	-	-	1	-	-	-	-
S0651	*Pariambus typicus*	-	1	-	-	-	-	-	-	-	-
S0854	*Eurydice pulchra*	-	-	-	-	-	-	-	-	-	-
S0855	*Eurydice spinigera*	-	-	-	-	-	-	-	-	-	-
S0856	*Eurydice truncata*	-	1	-	-	-	-	-	-	-	-

SDC	Taxon	35	36	37	38	39	40	492B	493B	494B	495B
S0947	*Zenobiana prismatica*	-	-	-	-	-	-	-	-	-	-
S0995	*Bopyridae*	-	1	-	-	-	-	-	-	-	-
S1142	*Tanaopsis graciloides*	-	-	-	-	-	-	-	-	-	-
S1175	*Apseudes latreillii*	-	-	-	-	-	-	-	-	-	-
S1197	*Bodotria scorpioides*	-	-	-	-	-	-	-	-	-	-
S1208	*Eudorella truncatula*	-	-	-	-	1	-	-	-	-	-
S1258	*Diastyloides serrata*	-	-	-	-	-	-	-	-	-	-
S1276	DECAPODA	-	-	-	-	-	-	2	-	-	-
S1360	*Thoralus cranchii*	-	-	-	-	-	4	-	-	-	-
S1385	*Crangon crangon*	-	-	-	1	-	-	-	-	-	-
S1390	*Philocheras trispinosus*	-	-	-	-	-	-	-	-	-	-
S1415	*Callianassa subterranea*	-	1	-	-	-	-	-	-	-	-
S1449	*Anapagurus laevis*	-	-	-	-	-	-	-	-	-	-
S1482	*Pisidia longicornis*	-	-	-	-	-	-	-	-	-	-
S1555	*Atelecyclus rotundatus*	-	-	-	-	-	-	-	-	-	-
S1559	*Thia scutellata*	-	-	-	-	-	-	-	4	-	-
S1577	*Liocarcinus*	-	-	-	-	-	-	-	-	-	-
W0053	*Leptochiton asellus*	-	4	-	-	-	-	-	-	-	-
W0088	GASTROPODA	-	-	-	-	-	-	-	-	-	-
W0421	*Tornus subcarinatus*	-	-	-	-	-	-	-	-	-	-
W0418	*Caecum glabrum*	-	-	-	-	-	-	-	-	-	-
W0491	*Polinices pulchellus*	-	-	-	-	-	-	1	1	-	-
W0549	*Epitonium clathrus*	-	-	-	-	-	-	-	-	-	-
W0702	*Buccinidae*	-	-	-	-	-	-	-	-	-	-
W0908	*Odostomia*	-	-	-	-	-	-	-	-	-	-
W1243	NUDIBRANCHIA	-	1	-	-	-	1	-	-	-	-
W1320	*Onchidoris*	-	-	-	6	-	-	-	-	-	-
W1569	*Nucula nitidosa*	-	-	-	-	8	5	-	-	-	-
W1570	*Nucula nucleus*	-	-	-	-	-	1	-	-	-	-
W1691	Mytilidae	-	-	-	40	-	13	-	-	-	-
W1702	*Modiolus modiolus*	-	-	-	1	-	-	-	-	-	-
W1768	Pectinidae	-	-	-	-	-	-	-	-	-	-
W1805	Anomiidae	-	1	-	-	-	-	-	-	-	-
W1906	*Kurtiella bidentata*	-	-	-	-	-	-	-	-	-	-
W1929	*Goodallia triangularis*	-	-	-	-	-	-	-	-	-	-
W1973	*Spisula*	-	-	-	-	-	-	4	1	-	2
W1975	*Spisula elliptica*	-	-	-	-	-	-	-	1	1	-
W2006	*Phaxas pellucidus*	-	-	-	-	-	-	-	-	-	-
W2023	*Moerella pygmaea*	-	-	-	-	-	-	-	1	-	-
W2058	*Abra*	-	-	-	-	-	-	-	-	-	-
W2059	*Abra alba*	-	-	-	-	-	-	-	1	-	-
W2062	*Abra prismatica*	-	-	-	-	-	-	-	1	-	-
W2179	*Barnea*	-	-	-	-	-	4	-	-	-	-
Y0013	*Crisia*	-	-	-	-	-	-	-	-	-	-
Y0073	*Alcyonidium*	-	-	-	P	-	-	-	-	-	-
Y0076	*Alcyonidium diaphanum*	-	-	-	P	-	-	-	-	-	-
Y0080	*Alcyonidium mytili*	-	-	-	-	-	P	-	-	-	-
Y0081	*Alcyonidium parasiticum*	-	-	-	-	-	-	-	-	-	-
Y0096	*Anguinella palmata*	-	-	P	P	-	P	-	-	-	-
Y0131	*Vesicularia spinosa*	-	-	-	-	-	-	-	-	-	-
	Setosella vulnerata	-	-	-	-	-	-	-	-	-	-
Y0172	*Conopeum reticulum*	-	P	P	P	-	-	-	-	-	P
Y0177	*Electra monostachys*	-	-	-	P	-	P	-	-	-	-
Y0178	*Electra pilosa*	-	-	P	P	-	-	-	-	-	-
Y0182	*Aspidelectra melolontha*	-	-	-	-	-	-	-	P	-	P
Y0187	*Flustra foliacea*	-	-	-	-	-	-	-	-	-	-
Y0222	*Amphiblestrum auritum*	-	-	-	P	-	P	-	-	-	-
Y0240	*Bugula*	-	-	-	P	-	-	-	-	-	-
Y0246	*Bugula plumosa*	-	-	-	-	-	-	-	-	-	-
Y0256	*Bicellariella ciliata*	-	-	-	-	-	P	-	-	-	-
Y0323	*Puellina praecox*	-	-	-	-	-	-	-	-	-	-
Y0364	*Escharella immersa*	-	P	-	-	-	P	-	-	-	-

SDC	Taxon	35	36	37	38	39	40	492B	493B	494B	495B
Y0370	*Escharella ventricosa*	-	P	-	-	-	-	-	-	-	-
Y0467	*Schizomavella*	-	P	-	P	-	P	-	-	-	-
ZA0003	*Phoronis*	-	-	-	-	-	-	-	-	-	-
ZB0018	ASTEROIDEA	-	-	-	-	-	-	-	-	-	-
ZB0100	*Asterias rubens*	-	1	-	-	-	-	-	-	-	-
ZB0105	OPHIUROIDEA	-	-	-	1	-	2	-	2	2	-
ZB0161	*Amphipholis squamata*	-	1	1	-	-	1	-	-	-	-
ZB0165	*Ophiuridae*	-	-	-	-	-	-	-	-	-	-
ZB0168	*Ophiura albida*	-	5	-	-	1	-	-	-	-	-
ZB0167	*Ophiocten affinis*	-	-	-	-	-	-	9	3	-	-
ZB0181	ECHINOIDEA	-	-	-	-	-	-	-	-	-	-
ZB0193	*Psammechinus miliaris*	-	-	-	-	-	-	-	-	-	-
ZB0212	*Echinocyamus pusillus*	-	2	-	-	-	-	-	-	-	1
ZB0213	SPATANGOIDA	-	-	-	-	-	-	3	-	-	-
ZB0219	*Spatangus purpureus*	-	-	-	-	-	-	-	1	-	-
ZB0223	*Echinocardium cordatum*	-	-	-	-	-	-	-	-	-	-
ZB0225	*Echinocardium pennatifidum*	-	-	-	-	-	-	-	-	-	-
ZB0291	*Leptosynapta*	-	-	-	-	-	-	-	-	-	-
ZD0002	ASCIDIACEA	-	-	1	7	-	25	-	1	-	-
ZD0041	Didemnidae	-	-	-	-	-	-	-	-	-	-
	Branchiostoma lanceolatum	-	-	-	-	-	-	-	-	-	-
ZG0291	*Agonus cataphractus*	-	-	-	-	-	-	-	-	-	-
ZG0443	*Ammodytes marinus*	-	-	-	-	-	-	-	-	-	-

SDC	Taxon	496B	497B	498B	499B	504B	505B	764X
	Astrorhiza	-	-	-	-	-	-	-
C0001	PORIFERA	-	-	-	-	-	-	-
C0133	*Scypha ciliata*	-	-	-	-	-	-	-
D0163	*Tubularia*	-	-	-	-	-	-	-
D0216	FILIFERA	-	-	-	-	-	-	-
D0218	*Eudendrium*	-	-	-	-	-	-	-
D0240	*Leuckartiara octona*	-	-	-	-	-	-	-
D0390	*Halecium*	-	-	-	-	-	-	-
D0409	*Abietinaria abietina*	-	-	-	-	-	-	-
D0424	*Hydrallmania falcata*	-	-	-	-	-	-	-
D0427	*Sertularella*	-	-	-	-	-	-	-
D0433	*Sertularia*	-	-	-	-	P	-	-
D0447	Plumulariidae	-	-	-	-	-	-	-
D0491	Campanulariidae	-	-	-	-	-	-	-
D0501	*Clytia*	-	-	-	-	-	-	-
D0511	*Laomedea*	-	-	-	-	-	-	-
D0517	*Obelia*	-	-	-	-	-	-	-
D0597	*Alcyonium digitatum*	-	-	-	-	-	-	-
D0662	ACTINIARIA	-	-	-	-	-	-	-
F0002	TURBELLARIA	-	-	-	-	-	-	-
G0001	NEMERTEA	-	4	-	-	1	-	-
HD0001	NEMATODA	-	8	-	-	-	-	-
L0001	CHAETOGNATHA	-	-	-	-	-	-	-
N0011	Golfingiidae	-	-	-	-	-	-	-
N0017	*Golfingia vulgaris*	-	-	-	-	-	-	-
N0034	*Phascolion strombus*	-	-	-	-	-	-	-
P0015	*Pisione remota*	-	13	-	-	-	-	-
P0017	Aphroditidae	-	-	-	-	-	-	-
P0025	Polynoidae	-	-	-	-	-	-	-
P0049	*Gattyana cirrhosa*	-	-	-	-	-	-	-
	Harmothoe clavigera	-	-	-	-	-	-	-
	Malmgreniella	-	-	-	-	-	-	-
P0051	*Malmgreniella andreapolis*	-	-	-	-	-	-	-
P0066	*Malmgreniella ljungmani*	-	-	-	-	-	-	-
P0080	*Lepidonotus*	-	-	-	-	-	-	-
P0082	*Lepidonotus squamatus*	-	-	-	-	-	-	-
P0092	*Pholoe baltica (sensu petersen*	-	-	-	-	-	-	-
P0094	*Pholoe inornata (sensu peterse*	-	-	-	-	-	-	-
	Pholoe assimilis	-	-	-	-	-	-	-
P0118	*Eteone longa*	-	-	-	-	-	-	-
P0122	*Hesionura elongata*	-	2	-	-	-	-	-
P0145	*Anaitides mucosa*	-	-	-	-	-	-	-
P0146	*Anaitides rosea*	-	-	-	-	-	-	-
P0155	*Eulalia mustela*	-	-	-	-	-	-	-
P0156	*Eulalia ornata*	-	-	-	-	-	-	-
P0163	*Eumida*	-	-	-	-	-	-	-
P0164	*Eumida bahusiensis*	-	-	-	-	-	-	-
P0167	*Eumida sanguinea*	-	-	-	-	-	-	-
P0255	*Glycera*	-	1	-	-	-	-	1
P0260	*Glycera lapidum*	-	-	-	-	-	-	-
P0262	*Glycera oxycephala*	1	-	-	-	-	-	-
P0265	*Glycera tridactyla*	-	-	-	-	-	-	-
P0268	*Glycinde nordmanni*	-	-	-	-	-	-	-
P0271	*Goniada maculata*	-	-	-	-	-	-	-
P0291	*Sphaerodorum gracilis*	-	-	-	-	-	-	-
P0319	*Podarkeopsis capensis*	-	-	-	-	-	-	-
P0333	*Microphthalmus similis*	-	-	-	-	-	-	-
P0358	*Syllis* (Type E)	-	1	-	-	-	-	-
P0358	*Syllis* (Type H)	-	-	-	-	-	-	-
P0349	*Syllis cornuta*	-	-	-	-	-	-	-
P0405	*Streptosyllis websteri*	-	-	-	-	-	-	-
P0421	*Exogone hebes*	-	-	-	-	-	-	-

SDC	Taxon	496B	497B	498B	499B	504B	505B	764X
P0422	*Exogone naidina*	-	-	-	-	-	-	-
P0423	*Exogone verugera*	-	-	-	-	-	-	-
P0425	*Sphaerosyllis bulbosa*	-	-	-	-	-	-	-
P0430	*Sphaerosyllis taylori*	-	-	-	-	-	-	-
P0434	*Autolytus*	-	-	-	-	-	-	-
P0458	Nereididae	-	-	-	-	-	-	-
P0475	*Eunereis longissima*	-	-	-	-	-	-	-
P0494	*Nephtys*	1	-	-	1	-	-	-
P0496	*Nephtys caeca*	-	-	-	-	1	-	1
P0498	*Nephtys cirrosa*	-	-	1	2	1	3	-
P0499	*Nephtys hombergii*	-	-	-	-	-	-	-
P0553	Eunicidae	-	-	-	-	-	-	-
P0563	*Marphysa*	-	-	-	-	-	-	-
P0564	*Marphysa bellii*	-	-	-	-	-	-	-
P0566	*Marphysa sanguinea*	-	-	-	-	-	-	-
P0569	Lumbrineridae	-	-	-	-	-	-	-
	Lumbrineris cingulata	-	-	-	-	-	-	-
P0613	*Ophryotrocha*	-	-	-	-	-	-	-
P0638	*Protodorvillea kefersteini*	-	-	-	-	-	-	-
P0642	*Schistomeringos neglecta*	-	-	-	-	-	-	-
P0672	*Scoloplos armiger*	-	-	-	-	-	-	-
P0674	Paraonidae	-	-	-	-	-	-	-
P0677	*Aricidea minuta*	-	-	-	-	-	-	-
P0678	*Aricidea wassi*	-	-	-	-	-	-	-
P0699	*Paradoneis lyra*	-	-	-	-	-	-	-
P0704	*Paraonis fulgens*	-	-	-	-	-	-	-
P0718	*Poecilochaetus serpens*	-	-	-	-	-	-	-
P0723	*Aonides paucibranchiata*	-	4	-	-	-	-	-
P0733	*Laonice bahusiensis*	-	-	-	-	-	-	-
P0739	*Malacoceros vulgaris*	-	-	-	-	-	-	-
P0750	*Polydora caeca*	-	-	-	-	-	-	-
P0751	*Polydora caulleryi*	-	-	-	-	-	-	-
P0752	*Polydora ciliata*	-	-	-	-	-	-	-
P0774	*Pseudopolydora pulchra*	-	-	-	-	-	-	-
P0776	*Pygospio elegans*	-	-	-	-	-	-	-
P0779	*Scolelepis bonnieri*	-	-	-	1	-	-	-
P0787	*Spio*	-	-	-	-	-	-	-
P0790	*Spio filicornis*	1	1	-	-	-	-	-
	Spio goniocephala	-	-	-	-	-	-	-
P0794	*Spiophanes bombyx*	2	-	-	3	2	5	-
P0823	*Aphelochaeta*	-	-	-	-	-	-	-
P0824	*Aphelochaeta marioni*	-	-	-	-	-	-	-
P0829	*Caulleriella alata*	-	-	-	-	-	-	-
P0831	*Chaetozone zetlandica*	-	-	-	-	-	-	-
P0839	*Cirriformia tentaculata*	-	-	-	-	-	-	-
P0840	*Dodecaceria*	-	-	-	-	-	-	-
P0846	*Tharyx killariensis*	-	-	-	-	-	-	-
P0881	*Flabelligera affinis*	-	-	-	-	-	-	-
P0889	*Macrochaeta*	-	-	-	-	-	-	-
P0919	*Mediomastus fragilis*	-	-	-	-	-	-	-
P0921	*Notomastus latericeus*	-	-	-	-	-	-	-
P0927	*Pseudonotomastus southerni*	-	2	-	-	-	-	-
P0955	*Clymenura*	-	-	-	-	-	-	-
P0971	*Praxillella affinis*	-	-	-	-	-	-	-
P0978	*Micromaldane ornithochaeta*	-	-	-	-	-	-	-
P0997	*Ophelia*	-	-	-	-	1	1	-
P0999	*Ophelia borealis*	-	-	-	-	-	8	3
P1007	*Travisia forbesii*	-	-	-	-	-	-	-
P1027	*Scalibregma inflatum*	1	-	-	-	-	-	-
P1062	*Polygordius*	-	5	-	-	-	-	-
P1069	*Protodrilus*	-	-	-	-	-	-	-
P1086	*Saccocirrus*	-	-	-	-	-	-	-

SDC	Taxon	496B	497B	498B	499B	504B	505B	764X
P1098	*Owenia fusiformis*	-	-	-	-	-	1	-
P1107	*Lagis koreni*	-	-	-	-	-	-	-
P1117	*Sabellaria spinulosa*	-	-	-	-	-	11	-
P1118	Ampharetidae	-	-	-	-	-	-	-
P1138	*Ampharete grubei*	-	-	-	-	-	-	-
P1139	*Ampharete lindstroemi*	-	-	-	-	-	-	-
P1141	*Amphicteis*	-	-	-	-	-	-	-
P1142	*Amphicteis gunneri*	-	-	-	-	-	-	-
P1175	*Terebellides stroemi*	-	-	-	-	-	-	-
P1179	Terebellidae	-	-	-	-	-	-	-
P1195	*Lanice conchilega*	-	-	-	-	-	-	-
P1232	*Lysilla* (Type A)	-	-	-	-	-	-	-
P1233	*Lysilla loveni*	-	-	-	-	-	-	-
P1235	*Polycirrus*	6	-	-	-	3	-	-
P1254	*Thelepus cincinnatus*	-	-	-	-	-	-	-
P1324	Serpulidae	-	-	-	-	-	-	-
P1339	*Pomatoceros*	-	-	-	-	-	-	-
P1340	*Pomatoceros lamarcki*	-	-	-	-	-	-	-
P1469	*Limnodriloides*	-	-	-	-	-	-	-
P1490	*Tubificoides benedii*	-	-	-	-	-	-	-
P1498	*Tubificoides pseudogaster*	-	-	-	-	-	-	-
P1524	*Grania*	1	-	-	-	-	-	-
	Amothella longipes	-	-	-	-	-	-	-
Q0005	*Nymphon brevirostre*	-	-	-	-	-	-	-
Q0015	*Achelia echinata*	-	-	-	-	-	-	-
Q0033	*Callipallene brevirostris*	-	-	-	-	-	-	-
Q0044	*Anoplodactylus petiolatus*	-	-	-	-	-	-	-
Q0045	*Anoplodactylus pygmaeus*	-	-	-	-	-	-	-
	CIRRIPEDIA	-	-	-	-	-	-	-
R0041	*Verruca stroemia*	-	-	-	-	-	-	-
R0077	*Balanus crenatus*	-	-	-	-	-	-	-
R0142	COPEPODA	-	-	-	-	-	-	-
S0044	*Gastrosaccus spinifer*	-	-	-	-	-	-	2
S0107	*Apherusa ovalipes*	-	-	-	-	-	-	-
S0159	*Amphilochus neapolitanus*	-	-	-	-	-	-	-
S0213	*Stenothoe marina*	-	-	-	-	-	-	-
S0247	*Urothoe brevicornis*	-	-	-	-	-	-	-
S0248	*Urothoe elegans*	-	-	-	-	-	-	-
S0257	*Harpinia pectinata*	-	-	-	-	-	-	-
S0296	*Hippomedon denticulatus*	-	-	-	-	-	-	-
S0330	*Socarnes erythrophthalmus*	-	-	-	-	-	-	-
S0337	*Tmetonyx similis*	-	-	-	-	-	-	-
S0397	*Liljeborgia pallida*	-	-	-	-	-	-	-
S0411	*Atylus guttatus*	-	-	-	-	-	-	-
S0412	*Atylus swammerdamei*	-	-	-	-	-	-	-
S0423	*Ampelisca*	-	-	-	-	-	-	-
S0429	*Ampelisca diadema*	-	-	-	-	-	-	-
S0438	*Ampelisca spinipes*	-	-	-	-	-	-	-
S0452	*Bathyporeia elegans*	-	-	-	-	-	-	-
S0503	*Cheirocratus*	-	-	-	-	-	-	-
S0521	*Maerella tenuimana*	-	-	-	-	1	-	-
S0541	*Gammaropsis maculata*	-	-	-	-	-	-	-
S0577	*Aoridae*	-	-	-	-	-	-	-
S0579	*Aora gracilis*	-	-	-	-	-	-	-
S0616	*Corophium volutator*	-	-	-	-	-	-	-
S0619	*Siphonoecetes striatus*	-	-	-	-	-	-	-
S0622	*Unciola planipes*	-	-	-	-	-	-	-
S0628	*Dyopedos monacanthus*	-	-	-	-	-	-	-
S0651	*Pariambus typicus*	-	-	-	-	-	-	-
S0854	*Eurydice pulchra*	-	-	-	-	-	-	-
S0855	*Eurydice spinigera*	-	-	-	-	-	-	-
S0856	*Eurydice truncata*	-	-	-	-	-	-	-

SDC	Taxon	496B	497B	498B	499B	504B	505B	764X
S0947	*Zenobiana prismatica*	-	-	-	-	-	-	-
S0995	*Bopyridae*	-	-	-	-	-	-	-
S1142	*Tanaopsis graciloides*	-	-	-	-	-	-	-
S1175	*Apseudes latreillii*	-	-	-	-	-	-	-
S1197	*Bodotria scorpioides*	-	-	-	-	-	-	-
S1208	*Eudorella truncatula*	-	-	-	-	-	-	-
S1258	*Diastyloides serrata*	-	-	-	-	-	-	-
S1276	DECAPODA	-	-	-	-	-	-	-
S1360	*Thoralus cranchii*	-	-	-	-	-	-	-
S1385	*Crangon crangon*	-	-	-	-	-	-	-
S1390	*Philocheras trispinosus*	-	-	-	-	-	1	-
S1415	*Callianassa subterranea*	-	-	-	-	-	-	-
S1449	*Anapagurus laevis*	-	-	-	-	-	-	-
S1482	*Pisidia longicornis*	-	-	-	-	-	-	-
S1555	*Atelecyclus rotundatus*	-	-	-	-	-	-	-
S1559	*Thia scutellata*	-	-	-	-	-	-	-
S1577	*Liocarcinus*	-	-	-	-	-	-	-
W0053	*Leptochiton asellus*	-	-	-	-	-	-	-
W0088	GASTROPODA	-	-	-	-	-	-	-
W0421	*Tornus subcarinatus*	-	-	-	-	-	-	-
W0418	*Caecum glabrum*	-	-	-	-	-	-	-
W0491	*Polinices pulchellus*	-	-	2	-	-	-	-
W0549	*Epitonium clathrus*	-	-	-	-	-	-	-
W0702	*Buccinidae*	-	-	-	-	-	-	-
W0908	*Odostomia*	-	-	-	-	-	-	-
W1243	NUDIBRANCHIA	-	-	-	-	-	-	-
W1320	*Onchidoris*	-	-	-	-	-	-	-
W1569	*Nucula nitidosa*	-	-	-	-	-	-	-
W1570	*Nucula nucleus*	-	-	-	-	-	-	-
W1691	Mytilidae	-	-	-	-	-	-	-
W1702	*Modiolus modiolus*	-	-	-	-	-	-	-
W1768	Pectinidae	-	-	-	-	-	-	-
W1805	Anomiidae	-	-	-	-	-	-	-
W1906	*Kurtiella bidentata*	-	-	-	-	-	-	-
W1929	*Goodallia triangularis*	-	-	-	-	-	-	-
W1973	*Spisula*	2	-	-	-	13	1	1
W1975	*Spisula elliptica*	-	-	2	-	-	-	-
W2006	*Phaxas pellucidus*	-	-	-	-	-	-	-
W2023	*Moerella pygmaea*	-	-	1	-	-	-	-
W2058	*Abra*	-	-	-	-	-	-	-
W2059	*Abra alba*	-	-	-	-	-	-	-
W2062	*Abra prismatica*	-	-	-	-	-	-	-
W2179	*Barnea*	-	-	-	-	-	-	-
Y0013	*Crisia*	-	-	-	-	-	-	-
Y0073	*Alcyonidium*	-	-	-	-	-	-	-
Y0076	*Alcyonidium diaphanum*	-	-	-	-	P	-	-
Y0080	*Alcyonidium mytili*	-	-	-	-	-	-	-
Y0081	*Alcyonidium parasiticum*	-	-	-	-	-	-	-
Y0096	*Anguinella palmata*	-	-	-	-	-	-	-
Y0131	*Vesicularia spinosa*	-	-	-	-	-	-	-
	Setosella vulnerata	-	-	-	-	-	-	-
Y0172	*Conopeum reticulum*	-	-	-	-	-	-	-
Y0177	*Electra monostachys*	-	-	-	-	-	-	-
Y0178	*Electra pilosa*	-	-	-	-	-	-	-
Y0182	*Aspidelectra melolontha*	P	-	-	-	P	-	-
Y0187	*Flustra foliacea*	-	-	-	-	-	-	-
Y0222	*Amphiblestrum auritum*	-	-	-	-	-	-	-
Y0240	*Bugula*	-	-	-	-	-	-	-
Y0246	*Bugula plumosa*	-	-	-	-	-	-	-
Y0256	*Bicellariella ciliata*	-	-	-	-	-	-	-
Y0323	*Puellina praecox*	-	-	-	-	-	-	-
Y0364	*Escharella immersa*	-	-	-	-	-	-	-

SDC	Taxon	496B	497B	498B	499B	504B	505B	764X
Y0370	*Escharella ventricosa*	-	-	-	-	-	-	-
Y0467	*Schizomavella*	-	-	-	-	-	-	-
ZA0003	*Phoronis*	-	-	-	-	-	-	-
ZB0018	ASTEROIDEA	-	-	-	-	-	-	-
ZB0100	*Asterias rubens*	-	-	-	-	-	-	-
ZB0105	OPHIUROIDEA	-	-	-	-	1	-	-
ZB0161	*Amphipholis squamata*	-	-	-	-	-	-	-
ZB0165	*Ophiuridae*	-	-	-	-	-	-	-
ZB0168	*Ophiura albida*	-	-	-	-	-	-	1
ZB0167	*Ophiocten affinis*	1	-	7	-	-	2	-
ZB0181	ECHINOIDEA	-	-	-	-	-	-	-
ZB0193	*Psammechinus miliaris*	-	-	-	-	-	-	-
ZB0212	*Echinocyamus pusillus*	-	-	-	1	-	-	9
ZB0213	SPATANGOIDA	-	-	-	3	10	-	-
ZB0219	*Spatangus purpureus*	-	-	-	-	-	-	-
ZB0223	*Echinocardium cordatum*	-	-	-	-	-	-	-
ZB0225	*Echinocardium pennatifidum*	-	-	-	-	-	-	-
ZB0291	*Leptosynapta*	-	-	-	-	-	-	-
ZD0002	ASCIDIACEA	-	-	-	-	-	-	-
ZD0041	Didemnidae	-	-	-	-	-	-	-
	Branchiostoma lanceolatum	-	-	-	-	-	-	-
ZG0291	*Agonus cataphractus*	-	-	-	-	-	-	-
ZG0443	*Ammodytes marinus*	-	-	-	-	-	-	-

Appendix Table 7. Major group biomass data for each station sampled with a 0.1m^2 mini-Hamon grab during the EAOW cable route survey during August 2011. Biomass data has been converted from blotted wet weight to ash free dry weight (gAFDW) using conversion factors standardised by Eleftheriou & Basford (1989).

Station	Annelida	Crustacea	Echinodermata	Mollusca	Miscellaenous
1	0.0132	0.0000	0.0000	0.0000	0.0003
2	0.0004	0.0000	0.0000	0.0002	0.0000
3	0.1076	0.0000	0.0000	0.0005	0.0000
4	0.0337	0.0000	0.0000	0.0001	0.0004
5	0.0036	0.0000	0.0000	0.0000	0.0000
6	0.0419	0.0032	0.0000	0.0001	0.0003
7	0.0538	0.0001	0.0000	0.0042	0.0007
8	0.0530	0.0000	0.0000	0.0006	0.0000
9	0.0957	0.0132	0.0094	0.0005	0.0002
10	0.0153	0.0001	0.0017	0.0002	0.0003
11	0.8136	0.0010	0.0332	2.4509	0.0113
12	0.1514	0.0209	0.0408	0.0001	0.0024
13	0.0143	0.0000	0.2831	0.0004	0.0003
14	0.0137	0.0133	0.0002	0.0054	0.0000
15	0.0332	0.0019	0.0044	0.0536	0.0668
16	0.0003	0.0000	0.0000	0.0310	0.0000
17	0.0802	0.0283	0.0456	0.6140	0.1621
18	0.0473	0.0009	0.0027	0.0005	0.3638
20	0.2416	0.1194	1.1791	0.0033	0.0889
21	0.0272	0.0059	0.0000	0.0028	0.0007
22	0.0543	0.0118	0.0000	0.0009	0.0004
23	0.0263	0.0000	0.0000	0.0001	0.0006
24	0.0086	0.0029	0.0002	0.0001	0.0030
25	0.2458	0.0187	0.5562	0.0159	0.0113
26	0.1268	0.0174	0.0142	0.0415	0.0074
27	0.7577	0.0035	0.0011	0.0003	0.0946
28	0.0141	0.0029	0.9456	0.1286	0.0209
29	0.0037	0.0000	0.0000	0.0001	0.0019
30	0.1713	0.0424	0.9458	0.0002	0.1941
31	0.1891	0.0000	0.0000	0.0001	0.0001
32	0.0060	0.0002	0.0000	0.0008	0.0189
33	0.0055	0.0000	0.0000	0.0015	0.1132
34	0.0057	0.0000	0.0000	0.0001	0.1034
35	0.0143	0.0000	0.0000	0.0000	0.0000
36	0.1931	0.1120	0.0871	0.0044	0.0101
37	0.0041	0.0001	0.0007	0.0000	0.0044
38	0.0648	0.0426	0.0001	0.0103	0.0137
39	0.0625	0.0001	0.0000	0.0022	0.0025
40	0.0130	0.0210	0.0004	0.0397	0.1877
492B	0.0228	0.0069	0.0014	0.0102	0.0221
493B	0.0063	0.0258	0.0072	4.8899	0.0032
494B	0.0109	0.0000	0.0003	0.0011	0.0000
495B	0.0216	0.0000	0.0019	0.0116	0.0000
496B	0.0139	0.0000	0.0003	0.0016	0.0000
497B	0.0294	0.0000	0.0000	0.0000	0.0025
498B	0.0416	0.0000	0.0012	0.0029	0.0000
499B	0.0417	0.0000	0.0000	0.0086	0.0000
504B	0.0119	0.0002	0.0059	0.1041	0.0001
505B	0.1180	0.0004	0.0009	0.0017	0.0000
764X	0.0419	0.0030	0.0002	0.0150	0.0000
Total	**4.1677**	**0.5200**	**4.1709**	**8.4618**	**1.5145**

Appendix Table 8. Summary of abundance (N), taxonomic richness (S) and biomass (B) of samples collected with a $0.1m^2$ mini-Hamon grab during the EAOW cable route survey in August 2011 and EAOW benthic characterisation (sufffix B and X). Biomass is converted to Ash Free Dry Weight (gAFDW) from blotted wet weight using conversion factors standarised by Eleftheriou & Basford (1989).

Station	Abundance (N)	Taxonomic Richess (S)	Biomass (B) (g AFDW)
1	16	10	0.0135
2	14	9	0.0007
3	33	14	0.1080
4	28	17	0.0342
5	9	6	0.0036
6	19	7	0.0455
7	252	31	0.0589
8	55	22	0.0536
9	404	36	0.1189
10	118	27	0.0176
11	618	31	3.3099
12	54	25	0.2155
13	24	12	0.2980
14	14	9	0.0326
15	52	28	0.1599
16	13	9	0.0313
17	441	44	0.9303
18	72	25	0.4152
20	227	55	1.6323
21	29	15	0.0367
22	56	14	0.0673
23	22	6	0.0270
24	41	24	0.0147
25	151	40	0.8478
26	117	38	0.2073
27	232	43	0.8572
28	58	13	1.1121
29	31	13	0.0056
30	118	32	1.3538
31	43	15	0.1894
32	129	30	0.0259
33	161	35	0.1203
34	17	8	0.1092
35	2	2	0.0143
36	79	45	0.4068
37	14	8	0.0093
38	451	31	0.1315
39	44	10	0.0673
40	124	42	0.2618
492B	40	15	0.0634
493B	27	18	4.9323
494B	6	4	0.0122
495B	14	11	0.0351
496B	17	10	0.0157
497B	41	10	0.0318
498B	13	5	0.0457
499B	11	6	0.0503
504B	37	13	0.1222
505B	33	9	0.1210
764X	20	8	0.0601
Total	**4641**	**990**	**18.8349**

Appendix Table 9. Table summarising the key species that contributed to the similarity within the faunal groups identified through multivariate analysis on Bray-Curtis similarity of square root transformed benthic abundance data recorded in the samples from the Cable Route survey. The dissimilarity between faunal groups is also shown. Similarity cut off for both the similarity and dissimilrity table is 75%.

Group Faunal Group A
Average similarity: 19.25

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Spiophanes bombyx	0.96	3.42	0.73	17.76	17.76
Nephtys cirrosa	0.69	2.82	0.59	14.65	32.41
Ophelia borealis	0.9	2.33	0.47	12.09	44.5
Polycirrus	0.81	1.85	0.42	9.6	54.1
Nephtys	0.58	1.84	0.53	9.55	63.65
Spisula	0.78	1.62	0.51	8.41	72.06
NEMERTEA	0.58	0.88	0.36	4.55	76.61

Group Faunal Group B
Average similarity: 29.55

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Sabellaria spinulosa	2.02	19.19	3.39	64.93	64.93
Mytilidae	1.15	6.1	0.58	20.63	85.55

Group Faunal Group C
Average similarity: 31.23

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pseudonotomastus southerni	1.76	4.64	2.06	14.85	14.85
Mytilidae	3.91	4.5	1.02	14.42	29.27
Aonides paucibranchiata	1.55	4.18	2.19	13.4	42.67
NEMERTEA	1.43	3.18	1.23	10.18	52.85
Pisione remota	2.01	3.12	0.8	9.99	62.84
Polycirrus	1.29	2.51	0.96	8.04	70.89
NEMATODA	1.63	2.23	0.89	7.15	78.04

Group Faunal Group D
Average similarity: 22.98

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Spiophanes bombyx	3.06	14.11	1.63	61.42	61.42
Nucula nucleus	1.05	2.63	0.45	11.46	72.88
Nucula nitidosa	1.63	2.34	0.47	10.19	83.07

Group Faunal Group E
Average similarity: 27.85

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Mytilidae	4.36	6.31	1.48	22.66	22.66
Sabellaria spinulosa	6.34	5.47	1.03	19.65	42.31
ACTINIARIA	2.41	2.21	0.71	7.94	50.24
ASCIDIACEA	2.1	1.68	0.59	6.03	56.28
Polydora caulleryi	1.08	1.41	1.41	5.05	61.32
Mediomastus fragilis	1.32	1.26	0.88	4.53	65.85
Autolytus	1.26	1.21	0.82	4.36	70.21
NEMATODA	0.92	0.93	0.92	3.32	73.53
Nereididae	0.77	0.86	0.91	3.09	76.63

Group Faunal Group F
Average similarity: 34.42

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Mediomastus fragilis	1.99	2.78	1.77	8.08	8.08
NEMERTEA	1.82	2.54	6.09	7.38	15.46
Pomatoceros lamarcki	2.28	2.27	0.98	6.58	22.04
Chaetozone zetlandica	1.59	2.17	5.48	6.3	28.34
OPHIUROIDEA	1.89	2.08	1.27	6.05	34.39
Ampelisca spinipes	2.12	2.04	1.2	5.93	40.32
Clymenura	2.05	1.71	1.16	4.98	45.29
Exogone verugera	1.31	1.5	1.18	4.36	49.66
Paradoneis lyra	1.08	1.35	1.26	3.91	53.56
NEMATODA	0.9	1.28	1.25	3.71	57.28
Polydora caulleryi	1.2	1.07	0.75	3.12	60.4
Lumbrineris cingulata	1.31	1.06	0.76	3.09	63.48
Praxillella affinis	1.37	0.91	0.7	2.64	66.12
Lanice conchilega	1.14	0.89	0.77	2.59	68.71
Glycera lapidum	1.08	0.77	0.77	2.24	70.95
ACTINIARIA	1.01	0.74	0.76	2.14	73.09
Abra alba	1.07	0.68	0.48	1.98	75.07

Group Faunal Group G
Average similarity: 39.58

Species	**Av.Abund**	**Av.Sim**	**Sim/SD**	**Contrib%**	**Cum.%**
Mytilidae	3.59	30.41	#######	76.83	76.83

DISSIMILARITY Benthic Abundance

Faunal Group A & Faunal Group B
Average dissimilarity = 93.53

Species	Faunal Group A Av.Abund	Faunal Group B Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Sabellaria spinulosa	0.33	2.02	9.54	2.02	10.19	10.19
ASCIDIACEA	0.06	1.08	5.22	1.12	5.58	15.78
Mytilidae	0.33	1.15	5.16	1.26	5.51	21.29
Ophelia borealis	0.9	0	4.22	0.81	4.51	25.8
Spiophanes bombyx	0.96	0.33	3.98	1.2	4.25	30.05
Polycirrus	0.81	0	3.61	0.78	3.86	33.91
Nephtys cirrosa	0.69	0	3.52	0.98	3.76	37.67
Spisula	0.78	0	3.22	0.77	3.44	41.11
Ophiocten affinis	0.61	0	2.74	0.57	2.93	44.03
Nephtys	0.58	0	2.64	0.95	2.83	46.86
OPHIUROIDEA	0.3	0.33	2.29	0.77	2.44	49.3
NEMERTEA	0.58	0	2.21	0.72	2.37	51.67
Microphthalmus similis	0	0.47	2.12	0.67	2.27	53.94
NUDIBRANCHIA	0	0.47	2.12	0.67	2.27	56.21
Echinocyamus pusillus	0.49	0	2.09	0.5	2.24	58.44
SPATANGOIDA	0.41	0	1.83	0.45	1.96	60.4
Lepidonotus squamatus	0	0.33	1.78	0.66	1.91	62.31
Cheirocratus	0	0.33	1.78	0.66	1.91	64.22
Amphipholis squamata	0	0.33	1.78	0.66	1.91	66.12
NEMATODA	0.06	0.33	1.69	0.7	1.81	67.93
Polydora caeca	0	0.33	1.58	0.67	1.68	69.62
GASTROPODA	0	0.33	1.58	0.67	1.68	71.3
Glycera lapidum	0.06	0.33	1.55	0.7	1.66	72.96
Tubificoides benedii	0	0.33	1.5	0.67	1.6	74.57
Gastrosaccus spinifer	0.32	0	1.48	0.52	1.59	76.15

Faunal Group A & Faunal Group G
Average dissimilarity = 92.07

Species	**Faunal Group A** Av.Abund	**Faunal Group G** Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	0.33	3.59	14.24	2.86	15.47	15.47
Scalibregma inflatum	0.15	1.32	6.5	0.96	7.06	22.53
Spiophanes bombyx	0.96	0	3.85	1.14	4.18	26.71
Ophelia borealis	0.9	0	3.83	0.8	4.16	30.87
NEMERTEA	0.58	1	3.69	1.88	4.01	34.88
Aricidea minuta	0	0.87	3.3	0.95	3.58	38.46
Polycirrus	0.81	0	3.29	0.77	3.58	42.03
Nephtys cirrosa	0.69	0	3.16	0.98	3.43	45.47
Spisula	0.78	0	2.95	0.77	3.2	48.67
Terebellidae	0.09	0.71	2.71	0.95	2.94	51.61
Polydora caeca	0	0.71	2.69	0.95	2.92	54.53
Polydora caulleryi	0	0.71	2.69	0.95	2.92	57.45
Ophiocten affinis	0.61	0	2.49	0.57	2.7	60.16
Glycera oxycephala	0.21	0.5	2.49	0.96	2.7	62.86
Nephtys	0.58	0	2.4	0.93	2.61	65.47
NEMATODA	0.06	0.5	1.95	0.94	2.11	67.59
Grania	0.06	0.5	1.94	0.94	2.11	69.69
Echinocyamus pusillus	0.49	0	1.91	0.5	2.07	71.76
Nephtys hombergii	0	0.5	1.9	0.95	2.07	73.83
SPATANGOIDA	0.41	0	1.67	0.44	1.81	75.64

Faunal Group B & Faunal Group G
Average dissimilarity = 85.50

Species	Faunal Group B Av.Abund	Faunal Group G Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	1.15	3.59	13.03	2.12	15.24	15.24
Sabellaria spinulosa	2.02	0	10.9	2.5	12.75	27.99
Scalibregma inflatum	0	1.32	8.08	0.91	9.45	37.44
ASCIDIACEA	1.08	0	5.79	1.09	6.77	44.21
NEMERTEA	0	1	5.3	5.26	6.2	50.41
Aricidea minuta	0	0.87	3.89	0.91	4.54	54.96
Polydora caeca	0.33	0.71	3.43	1.08	4.01	58.96

Polydora caulleryi	0	0.71	3.17	0.91	3.71	62.68
Terebellidae	0	0.71	3.17	0.91	3.71	66.39
Glycera oxycephala	0	0.5	3.05	0.91	3.57	69.96
NEMATODA	0.33	0.5	2.5	0.9	2.92	72.88
Microphthalmus similis	0.47	0	2.3	0.64	2.69	75.57

Faunal Group A & Faunal Group C
Average dissimilarity = 89.92

Species	Faunal Group A Av.Abund	Faunal Group C Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	0.33	3.91	7.61	1.04	8.46	8.46
Pisione remota	0	2.01	4.74	1.14	5.27	13.73
Pseudonotomastus southerni	0.06	1.76	4.27	1.58	4.75	18.48
Sphaerosyllis bulbosa	0	2.87	4.16	0.69	4.63	23.11
Aonides paucibranchiata	0.19	1.55	3.38	1.7	3.76	26.87
NEMATODA	0.06	1.63	3.36	1.17	3.74	30.61
NEMERTEA	0.58	1.43	2.74	1.25	3.05	33.66
Polycirrus	0.81	1.29	2.69	1.2	2.99	36.65
Ophelia borealis	0.9	0.55	2.27	0.94	2.53	39.18
Spiophanes bombyx	0.96	0	2.17	1.08	2.42	41.6
Hesionura elongata	0	0.93	2.17	1.1	2.41	44.01
Glycera	0.13	1.01	2.05	1.23	2.28	46.29
Spisula	0.78	0.13	1.72	0.76	1.92	48.21
Nephtys cirrosa	0.69	0	1.68	0.95	1.87	50.08
Ophiocten affinis	0.61	0.13	1.51	0.63	1.67	51.75
Polygordius	0	0.78	1.49	0.55	1.66	53.41
OPHIUROIDEA	0.3	0.53	1.48	0.81	1.65	55.06
Nephtys	0.58	0	1.34	0.87	1.49	56.55
Echinocyamus pusillus	0.49	0.34	1.34	0.62	1.49	58.04
Syllis (Type E)	0	0.68	1.31	0.52	1.46	59.5
Sabellaria spinulosa	0.33	0.35	1.29	0.6	1.44	60.94
Goodallia triangularis	0.06	0.46	1.04	0.52	1.16	62.1
Serpulidae	0	0.4	1.03	0.47	1.15	63.25
SPATANGOIDA	0.41	0	0.94	0.43	1.04	64.29
Glycera lapidum	0.06	0.62	0.94	0.78	1.04	65.33
Nereididae	0	0.51	0.92	0.56	1.02	66.35
Macrochaeta	0	0.63	0.85	0.56	0.94	67.3
Gastrosaccus spinifer	0.32	0.13	0.82	0.56	0.91	68.21
Glycera oxycephala	0.21	0.13	0.75	0.57	0.84	69.05
Spisula elliptica	0.21	0.13	0.73	0.54	0.81	69.86
Ophelia	0.3	0	0.71	0.51	0.79	70.65
Lumbrineris cingulata	0.09	0.3	0.71	0.6	0.79	71.44
Paradoneis lyra	0	0.3	0.7	0.56	0.78	72.22
Protodorvillea kefersteini	0	0.3	0.66	0.56	0.73	72.95
Mediomastus fragilis	0.23	0.13	0.65	0.51	0.72	73.67
Urothoe brevicornis	0.17	0.18	0.65	0.5	0.72	74.39
Chaetozone zetlandica	0	0.38	0.64	0.72	0.71	75.1

Faunal Group B & Faunal Group C
Average dissimilarity = 90.33

Species	Faunal Group B Av.Abund	Faunal Group C Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	1.15	3.91	7.39	0.99	8.18	8.18
Pisione remota	0	2.01	5.34	1.13	5.91	14.09
Pseudonotomastus southerni	0	1.76	4.99	1.64	5.52	19.62
Sabellaria spinulosa	2.02	0.35	4.6	1.51	5.09	24.71
Sphaerosyllis bulbosa	0	2.87	4.5	0.69	4.98	29.69
Aonides paucibranchiata	0	1.55	4.22	2.14	4.67	34.35
NEMERTEA	0	1.43	3.73	1.55	4.13	38.49
Polycirrus	0	1.29	3.46	1.38	3.83	42.32
NEMATODA	0.33	1.63	3.46	1.13	3.83	46.15
ASCIDIACEA	1.08	0.13	2.87	1.02	3.17	49.33
Hesionura elongata	0	0.93	2.44	1.11	2.7	52.02
Glycera	0	1.01	2.38	1.18	2.63	54.66
Polygordius	0	0.78	1.67	0.54	1.84	56.5
OPHIUROIDEA	0.33	0.53	1.59	0.83	1.77	58.27
NUDIBRANCHIA	0.47	0.4	1.5	0.81	1.66	59.92
Syllis (Type E)	0	0.68	1.45	0.52	1.6	61.53
Glycera lapidum	0.33	0.62	1.42	0.98	1.57	63.1
Ophelia borealis	0	0.55	1.3	0.76	1.44	64.54

Amphipholis squamata	0.33	0.4	1.26	0.82	1.4	65.94
Microphthalmus similis	0.47	0	1.21	0.64	1.34	67.28
Serpulidae	0	0.4	1.17	0.46	1.29	68.57
Goodallia triangularis	0	0.46	1.06	0.47	1.17	69.74
Nereididae	0	0.51	1.01	0.55	1.12	70.87
Tubificoides benedii	0.33	0.13	1.01	0.7	1.11	71.98
Polydora caeca	0.33	0.13	0.96	0.69	1.06	73.04
Lepidonotus squamatus	0.33	0	0.95	0.63	1.05	74.09
Cheirocratus	0.33	0	0.95	0.63	1.05	75.14

Faunal Group G & Faunal Group C
Average dissimilarity = 82.53

	Faunal Group G	Faunal Group C				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	3.59	3.91	6.93	1.31	8.4	8.4
Pisione remota	0	2.01	5.01	1.12	6.07	14.47
Pseudonotomastus southerni	0	1.76	4.67	1.64	5.66	20.13
Sphaerosyllis bulbosa	0	2.87	4.32	0.68	5.24	25.37
Aonides paucibranchiata	0	1.55	3.96	2.14	4.8	30.17
Scalibregma inflatum	1.32	0	3.61	0.87	4.37	34.54
Polycirrus	0	1.29	3.26	1.36	3.95	38.49
NEMATODA	0.5	1.63	3.13	1.09	3.79	42.27
Hesionura elongata	0	0.93	2.29	1.09	2.77	45.05
Glycera	0	1.01	2.24	1.17	2.72	47.77
Aricidea minuta	0.87	0	2.01	0.89	2.43	50.2
NEMERTEA	1	1.43	1.77	1.34	2.14	52.34
Polydora caulleryi	0.71	0.22	1.72	0.93	2.09	54.43
Polydora caeca	0.71	0.13	1.65	0.91	2	56.42
Terebellidae	0.71	0	1.64	0.89	1.98	58.41
Polygordius	0	0.78	1.57	0.54	1.9	60.31
Syllis (Type E)	0	0.68	1.38	0.51	1.67	61.98
Glycera oxycephala	0.5	0.13	1.33	0.87	1.61	63.59
Grania	0.5	0.22	1.32	0.98	1.6	65.2
OPHIUROIDEA	0	0.53	1.28	0.65	1.55	66.74
Ophelia borealis	0	0.55	1.23	0.75	1.49	68.24
Nephtys hombergii	0.5	0	1.16	0.89	1.4	69.64
Serpulidae	0	0.4	1.09	0.45	1.32	70.96
Goodallia triangularis	0	0.46	1.01	0.46	1.22	72.19
Nereididae	0	0.51	0.96	0.55	1.16	73.35
Glycera lapidum	0	0.62	0.92	0.72	1.12	74.47
Macrochaeta	0	0.63	0.88	0.55	1.06	75.53

Faunal Group A & Faunal Group D
Average dissimilarity = 91.26

	Faunal Group A	Faunal Group D				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Spiophanes bombyx	0.96	3.06	8.78	1.33	9.62	9.62
Nucula nitidosa	0	1.63	5.23	0.85	5.73	15.35
Nucula nucleus	0	1.05	4.59	0.77	5.03	20.38
Ophelia borealis	0.9	0	3.9	0.73	4.28	24.66
Polycirrus	0.81	0	3.33	0.72	3.65	28.31
Nephtys cirrosa	0.69	0	3.31	0.82	3.62	31.93
Spisula	0.78	0	2.97	0.72	3.25	35.19
NEMERTEA	0.58	0.5	2.61	0.96	2.86	38.05
Ophiocten affinis	0.61	0	2.55	0.52	2.79	40.84
Nephtys	0.58	0	2.45	0.85	2.69	43.53
Nephtys hombergii	0	0.69	2.27	0.93	2.49	46.02
Echinocyamus pusillus	0.49	0	1.95	0.47	2.13	48.15
Mytilidae	0.33	0.17	1.74	0.55	1.9	50.06
SPATANGOIDA	0.41	0	1.7	0.42	1.86	51.92
Bathyporeia elegans	0	0.55	1.68	0.44	1.84	53.76
Scoloplos armiger	0.15	0.4	1.63	0.67	1.78	55.54
Scalibregma inflatum	0.15	0.33	1.51	0.71	1.65	57.19
OPHIUROIDEA	0.3	0	1.49	0.44	1.63	58.83
Gastrosaccus spinifer	0.32	0	1.37	0.48	1.51	60.33
Ampelisca spinipes	0	0.4	1.35	0.68	1.48	61.82
Ophelia	0.3	0	1.31	0.49	1.44	63.26
Goniada maculata	0.06	0.33	1.25	0.68	1.37	64.63
Sphaerosyllis bulbosa	0	0.17	1.23	0.41	1.34	65.97
Spisula elliptica	0.21	0	1.2	0.39	1.32	67.29

Sabellaria spinulosa	0.33	0	1.08	0.32	1.19	68.48
Glycera oxycephala	0.21	0	1.03	0.43	1.13	69.61
Lagis koreni	0	0.29	1.02	0.44	1.12	70.73
Polinices pulchellus	0.21	0	0.93	0.38	1.01	71.74
Ophiura albida	0.13	0.17	0.88	0.53	0.96	72.7
Lanice conchilega	0.09	0.17	0.84	0.47	0.92	73.62
Pygospio elegans	0	0.24	0.79	0.44	0.87	74.49
Glycera	0.13	0	0.76	0.32	0.83	75.32

Faunal Group B & Faunal Group D
Average dissimilarity = 95.83

Species	Faunal Group B Av.Abund	Faunal Group D Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Spiophanes bombyx	0.33	3.06	11.82	1.55	12.34	12.34
Sabellaria spinulosa	2.02	0	11.56	1.59	12.06	24.4
ASCIDIACEA	1.08	0	6.12	0.98	6.39	30.79
Nucula nitidosa	0	1.63	6.03	0.86	6.3	37.08
Mytilidae	1.15	0.17	5.84	1.08	6.1	43.18
Nucula nucleus	0	1.05	5.63	0.77	5.88	49.06
Nephtys hombergii	0	0.69	2.63	0.93	2.74	51.8
Microphthalmus similis	0.47	0	2.38	0.61	2.49	54.29
NUDIBRANCHIA	0.47	0	2.38	0.61	2.49	56.77
Lepidonotus squamatus	0.33	0	2.11	0.58	2.21	58.98
Cheirocratus	0.33	0	2.11	0.58	2.21	61.18
Amphipholis squamata	0.33	0	2.11	0.58	2.21	63.39
Bathyporeia elegans	0	0.55	1.92	0.43	2.01	65.4
NEMERTEA	0	0.5	1.89	0.96	1.97	67.37
NEMATODA	0.33	0	1.79	0.61	1.87	69.24
Polydora caeca	0.33	0	1.79	0.61	1.87	71.11
GASTROPODA	0.33	0	1.79	0.61	1.87	72.98
Glycera lapidum	0.33	0	1.68	0.61	1.76	74.74
Tubificoides benedii	0.33	0	1.68	0.61	1.76	76.49

Faunal Group G & Faunal Group D
Average dissimilarity = 91.89

Species	Faunal Group G Av.Abund	Faunal Group D Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	3.59	0.17	16.96	2.04	18.46	18.46
Spiophanes bombyx	0	3.06	12.25	1.9	13.33	31.79
Scalibregma inflatum	1.32	0.33	7.48	0.83	8.14	39.93
Nucula nitidosa	0	1.63	5.59	0.84	6.08	46.01
Nucula nucleus	0	1.05	5	0.77	5.44	51.45
Aricidea minuta	0.87	0.17	3.64	0.92	3.96	55.41
NEMERTEA	1	0.5	3.19	0.84	3.47	58.88
Polydora caeca	0.71	0	2.92	0.86	3.18	62.06
Polydora caulleryi	0.71	0	2.92	0.86	3.18	65.24
Terebellidae	0.71	0	2.92	0.86	3.18	68.42
Nephtys hombergii	0.5	0.69	2.91	1.09	3.17	71.59
Glycera oxycephala	0.5	0	2.87	0.8	3.13	74.72
NEMATODA	0.5	0	2.07	0.86	2.25	76.97

Faunal Group C & Faunal Group D
Average dissimilarity = 96.57

Species	Faunal Group C Av.Abund	Faunal Group D Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	3.91	0.17	8.03	1.02	8.32	8.32
Spiophanes bombyx	0	3.06	6.85	1.48	7.1	15.42
Pisione remota	2.01	0	4.96	1.08	5.14	20.55
Pseudonotomastus southerni	1.76	0	4.62	1.51	4.79	25.34
Sphaerosyllis bulbosa	2.87	0.17	4.24	0.7	4.39	29.73
Aonides paucibranchiata	1.55	0	3.91	1.89	4.05	33.78
NEMATODA	1.63	0	3.56	1.11	3.69	37.47
Nucula nitidosa	0	1.63	3.37	0.81	3.49	40.96
Polycirrus	1.29	0	3.21	1.31	3.33	44.29
NEMERTEA	1.43	0.5	2.74	1.1	2.83	47.13
Nucula nucleus	0	1.05	2.56	0.81	2.65	49.78
Hesionura elongata	0.93	0	2.26	1.06	2.35	52.12
Glycera	1.01	0	2.22	1.13	2.3	54.42
Polygordius	0.78	0	1.56	0.53	1.61	56.03

Nephtys hombergii	0	0.69	1.45	0.88	1.5	57.53
Syllis (Type E)	0.68	0	1.36	0.52	1.4	58.94
OPHIUROIDEA	0.53	0	1.26	0.65	1.3	60.24
Ophelia borealis	0.55	0	1.21	0.74	1.26	61.5
Bathyporeia elegans	0	0.55	1.1	0.42	1.14	62.64
Serpulidae	0.4	0	1.08	0.45	1.12	63.76
Goodallia triangularis	0.46	0	0.99	0.47	1.03	64.78
Nereididae	0.51	0	0.95	0.55	0.98	65.76
Glycera lapidum	0.62	0	0.91	0.73	0.94	66.7
Macrochaeta	0.63	0	0.86	0.56	0.89	67.59
Ampelisca spinipes	0	0.4	0.86	0.65	0.89	68.48
Scoloplos armiger	0	0.4	0.83	0.64	0.86	69.35
Sabellaria spinulosa	0.35	0	0.83	0.53	0.86	70.2
Chaetozone zetlandica	0.38	0.17	0.81	0.77	0.84	71.04
Eunereis longissima	0.43	0.17	0.81	0.82	0.83	71.87
Goniada maculata	0.13	0.33	0.78	0.72	0.81	72.68
Paradoneis lyra	0.3	0	0.73	0.54	0.76	73.45
Scalibregma inflatum	0	0.33	0.72	0.66	0.74	74.19
Protodorvillea kefersteini	0.3	0	0.68	0.55	0.71	74.89
Lagis koreni	0	0.29	0.64	0.42	0.66	75.55

Faunal Group A & Faunal Group E
Average dissimilarity = 94.59

Species	Faunal Group A Av.Abund	Faunal Group E Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Sabellaria spinulosa	0.33	6.34	8.49	1.5	8.98	8.98
Mytilidae	0.33	4.36	6.98	1.6	7.38	16.35
ACTINIARIA	0	2.41	4.21	1.06	4.45	20.81
Balanus crenatus	0	2.71	3.92	0.46	4.14	24.95
ASCIDIACEA	0.06	2.1	3.37	1.06	3.56	28.51
Spiophanes bombyx	0.96	1.78	2.53	0.84	2.67	31.18
Mediomastus fragilis	0.23	1.32	2.01	1.28	2.12	33.31
Autolytus	0	1.26	1.99	1.12	2.11	35.41
Achelia echinata	0	1.16	1.67	0.94	1.77	37.18
Polydora caulleryi	0	1.08	1.65	1.67	1.74	38.92
Lumbrineris cingulata	0.09	0.84	1.55	0.62	1.64	40.56
Nucula nucleus	0	1.36	1.52	0.48	1.61	42.17
Ophelia borealis	0.9	0	1.43	0.8	1.51	43.69
NEMATODA	0.06	0.92	1.42	1.11	1.5	45.19
NEMERTEA	0.58	0.84	1.37	1.02	1.45	46.64
Polycirrus	0.81	0.25	1.35	0.84	1.42	48.07
Onchidoris	0	0.81	1.22	0.76	1.29	49.35
Spisula	0.78	0	1.18	0.75	1.25	50.6
Pomatoceros lamarcki	0	0.59	1.16	0.78	1.23	51.83
Nereididae	0	0.77	1.15	1.46	1.21	53.04
Nephtys cirrosa	0.69	0	1.12	1	1.19	54.22
Lepidonotus squamatus	0	0.64	1.11	0.85	1.17	55.4
Anoplodactylus petiolatus	0	0.72	1.02	0.8	1.07	56.47
Ophiocten affinis	0.61	0	0.95	0.59	1.01	57.48
Lepidonotus	0	0.49	0.92	0.85	0.97	58.45
OPHIUROIDEA	0.3	0.55	0.91	0.91	0.97	59.41
Nephtys	0.58	0.14	0.91	0.9	0.96	60.38
Pholoe inornata (*sensu* petersen)	0	0.59	0.89	0.73	0.94	61.32
Lanice conchilega	0.09	0.64	0.88	0.85	0.93	62.25
Eumida sanguinea	0	0.64	0.87	0.85	0.92	63.16
Ampelisca spinipes	0	0.74	0.85	0.62	0.9	64.07
Echinocyamus pusillus	0.49	0	0.74	0.49	0.78	64.85
Abra alba	0.13	0.47	0.67	0.53	0.71	65.56
Polynoidae	0	0.49	0.67	0.62	0.7	66.26
Amphipholis squamata	0	0.49	0.66	0.58	0.7	66.96
Polydora caeca	0	0.43	0.65	0.62	0.69	67.65
SPATANGOIDA	0.41	0	0.64	0.44	0.68	68.33
CIRRIPEDIA	0	0.38	0.62	0.4	0.66	68.99
Phoronis	0.06	0.34	0.62	0.65	0.65	69.64
Aoridae	0	0.4	0.6	0.4	0.64	70.28
Harpinia pectinata	0	0.39	0.55	0.63	0.58	70.86
Ampharetidae	0	0.29	0.54	0.6	0.58	71.44
Verruca stroemia	0	0.29	0.54	0.6	0.58	72.01
Buccinidae	0	0.29	0.52	0.62	0.55	72.56
Gastrosaccus spinifer	0.32	0	0.51	0.52	0.54	73.1
Ampharete grubei	0	0.34	0.51	0.61	0.54	73.63

Ophiura albida	0.13	0.32	0.49	0.55	0.52	74.15
Ophelia	0.3	0	0.48	0.52	0.51	74.66
Anoplodactylus pygmaeus	0	0.32	0.48	0.4	0.5	75.16

Faunal Group B & Faunal Group E
Average dissimilarity = 85.18

Species	Faunal Group B Av.Abund	Faunal Group E Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Sabellaria spinulosa	2.02	6.34	7.58	1.61	8.89	8.89
Mytilidae	1.15	4.36	6.32	1.41	7.41	16.31
ACTINIARIA	0	2.41	4.59	1.05	5.39	21.7
Balanus crenatus	0	2.71	4.2	0.45	4.93	26.62
ASCIDIACEA	1.08	2.1	3.34	1.3	3.93	30.55
Spiophanes bombyx	0.33	1.78	2.24	0.63	2.63	33.17
Mediomastus fragilis	0	1.32	2.23	1.29	2.62	35.79
Autolytus	0	1.26	2.15	1.1	2.53	38.32
Achelia echinata	0	1.16	1.8	0.92	2.11	40.43
Polydora caulleryi	0	1.08	1.77	1.63	2.08	42.51
Lumbrineris cingulata	0	0.84	1.67	0.58	1.96	44.47
Nucula nucleus	0	1.36	1.61	0.47	1.89	46.36
NEMATODA	0.33	0.92	1.36	0.99	1.59	47.95
Onchidoris	0	0.81	1.31	0.75	1.53	49.49
NEMERTEA	0	0.84	1.28	0.86	1.5	50.99
Pomatoceros lamarcki	0	0.59	1.27	0.76	1.49	52.48
Nereididae	0	0.77	1.23	1.44	1.45	53.93
Lepidonotus squamatus	0.33	0.64	1.22	1.01	1.43	55.36
Anoplodactylus petiolatus	0	0.72	1.09	0.79	1.28	56.64
Amphipholis squamata	0.33	0.49	1.02	0.85	1.19	57.83
Lepidonotus	0	0.49	1	0.84	1.18	59.01
OPHIUROIDEA	0.33	0.55	0.96	0.99	1.13	60.14
Pholoe inornata (*sensu* petersen)	0	0.59	0.96	0.71	1.13	61.27
Polydora caeca	0.33	0.43	0.94	0.87	1.1	62.37
Eumida sanguinea	0	0.64	0.93	0.84	1.09	63.46
Ampelisca spinipes	0	0.74	0.9	0.61	1.06	64.53
NUDIBRANCHIA	0.47	0.14	0.88	0.75	1.03	65.56
Lanice conchilega	0	0.64	0.87	0.8	1.03	66.58
Microphthalmus similis	0.47	0	0.8	0.66	0.94	67.52
Tubificoides benedii	0.33	0.29	0.73	0.81	0.86	68.38
Polynoidae	0	0.49	0.71	0.61	0.84	69.22
CIRRIPEDIA	0	0.38	0.68	0.4	0.79	70.01
Aoridae	0	0.4	0.65	0.4	0.76	70.77
Phoronis	0	0.34	0.64	0.61	0.76	71.52
Glycera lapidum	0.33	0.14	0.63	0.73	0.74	72.27
Cheirocratus	0.33	0	0.6	0.65	0.71	72.97
Ampharetidae	0	0.29	0.6	0.59	0.7	73.67
Verruca stroemia	0	0.29	0.6	0.59	0.7	74.37
Harpinia pectinata	0	0.39	0.59	0.62	0.7	75.07

Faunal Group G & Faunal Group E
Average dissimilarity = 84.24

Species	Faunal Group G Av.Abund	Faunal Group E Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Sabellaria spinulosa	0	6.34	9.01	1.49	10.7	10.7
ACTINIARIA	0	2.41	4.39	1.04	5.21	15.91
Balanus crenatus	0	2.71	4.05	0.45	4.81	20.72
ASCIDIACEA	0	2.1	3.52	1.02	4.17	24.9
Mytilidae	3.59	4.36	3.17	1.37	3.76	28.66
Scalibregma inflatum	1.32	0.14	2.32	0.94	2.75	31.41
Spiophanes bombyx	0	1.78	2.15	0.59	2.55	33.96
Mediomastus fragilis	0	1.32	2.15	1.27	2.55	36.51
Autolytus	0	1.26	2.07	1.09	2.46	38.97
Achelia echinata	0	1.16	1.73	0.91	2.06	41.03
Lumbrineris cingulata	0	0.84	1.59	0.58	1.89	42.91
Nucula nucleus	0	1.36	1.57	0.46	1.86	44.77
Aricidea minuta	0.87	0.14	1.38	0.94	1.64	46.41
Polydora caulleryi	0.71	1.08	1.29	1.07	1.53	47.94
NEMERTEA	1	0.84	1.28	1.19	1.52	49.46
Onchidoris	0	0.81	1.26	0.74	1.5	50.96
Polydora caeca	0.71	0.43	1.26	1.08	1.49	52.45
Pomatoceros lamarcki	0	0.59	1.21	0.75	1.44	53.89

NEMATODA	0.5	0.92	1.21	0.91	1.43	55.32
Nereididae	0	0.77	1.19	1.42	1.41	56.73
Lepidonotus squamatus	0	0.64	1.16	0.83	1.37	58.1
Terebellidae	0.71	0	1.12	0.91	1.33	59.43
Anoplodactylus petiolatus	0	0.72	1.05	0.78	1.25	60.68
Lepidonotus	0	0.49	0.96	0.83	1.14	61.82
Pholoe inornata (*sensu* petersen)	0	0.59	0.93	0.71	1.1	62.92
Eumida sanguinea	0	0.64	0.9	0.83	1.07	63.98
Glycera oxycephala	0.5	0	0.88	0.9	1.04	65.03
Ampelisca spinipes	0	0.74	0.88	0.6	1.04	66.07
Lanice conchilega	0	0.64	0.85	0.78	1.01	67.08
Nephtys hombergii	0.5	0	0.79	0.91	0.94	68.02
Grania	0.5	0	0.79	0.91	0.94	68.96
OPHIUROIDEA	0	0.55	0.79	0.82	0.94	69.9
Polynoidae	0	0.49	0.69	0.6	0.82	70.71
Amphipholis squamata	0	0.49	0.68	0.56	0.81	71.52
CIRRIPEDIA	0	0.38	0.65	0.39	0.77	72.29
Aoridae	0	0.4	0.62	0.39	0.74	73.03
Phoronis	0	0.34	0.62	0.6	0.73	73.76
Harpinia pectinata	0	0.39	0.57	0.61	0.68	74.44
Ampharetidae	0	0.29	0.57	0.59	0.68	75.12

Faunal Group C & Faunal Group E
Average dissimilarity = 87.34

Species	Faunal Group C Av.Abund	Faunal Group E Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Sabellaria spinulosa	0.35	6.34	6.64	1.41	7.6	7.6
Mytilidae	3.91	4.36	4.43	1.28	5.08	12.67
ACTINIARIA	0.13	2.41	3.11	1.03	3.56	16.24
Balanus crenatus	0	2.71	3.09	0.45	3.54	19.77
Sphaerosyllis bulbosa	2.87	0	2.63	0.62	3.01	22.78
ASCIDIACEA	0.13	2.1	2.59	1.02	2.97	25.75
Pisione remota	2.01	0	2.45	1.16	2.8	28.56
Pseudonotomastus southerni	1.76	0	2.23	1.87	2.55	31.11
Aonides paucibranchiata	1.55	0	1.92	2.44	2.2	33.31
Spiophanes bombyx	0	1.78	1.71	0.59	1.96	35.27
Autolytus	0	1.26	1.53	1.12	1.76	37.02
Mediomastus fragilis	0.13	1.32	1.52	1.22	1.75	38.77
Polycirrus	1.29	0.25	1.52	1.32	1.75	40.52
NEMATODA	1.63	0.92	1.52	1.18	1.74	42.25
NEMERTEA	1.43	0.84	1.33	1.24	1.53	43.78
Achelia echinata	0	1.16	1.32	0.92	1.51	45.29
Nucula nucleus	0	1.36	1.25	0.47	1.44	46.73
Polydora caulleryi	0.22	1.08	1.23	1.53	1.41	48.14
Lumbrineris cingulata	0.3	0.84	1.2	0.69	1.37	49.51
Glycera	1.01	0	1.15	1.2	1.31	50.82
Hesionura elongata	0.93	0	1.13	1.04	1.29	52.11
Nereididae	0.51	0.77	1.01	1.44	1.15	53.27
Onchidoris	0	0.81	0.95	0.75	1.09	54.36
OPHIUROIDEA	0.53	0.55	0.87	0.95	0.99	55.35
Pomatoceros lamarcki	0.13	0.59	0.85	0.82	0.97	56.32
Lepidonotus squamatus	0	0.64	0.84	0.82	0.96	57.28
Polygordius	0.78	0	0.82	0.56	0.94	58.22
Anoplodactylus petiolatus	0	0.72	0.8	0.78	0.91	59.14
Syllis (Type E)	0.68	0	0.75	0.49	0.86	59.99
Amphipholis squamata	0.4	0.49	0.73	0.76	0.84	60.83
Ampelisca spinipes	0	0.74	0.7	0.61	0.8	61.63
Pholoe inornata (*sensu* petersen)	0	0.59	0.69	0.73	0.79	62.42
Eumida sanguinea	0	0.64	0.69	0.83	0.79	63.21
Lepidonotus	0	0.49	0.68	0.82	0.78	63.99
Lanice conchilega	0	0.64	0.66	0.78	0.75	64.74
Ophelia borealis	0.55	0	0.65	0.74	0.74	65.48
Glycera lapidum	0.62	0.14	0.63	0.82	0.73	66.21
Serpulidae	0.4	0.14	0.63	0.6	0.72	66.93
CIRRIPEDIA	0.13	0.38	0.6	0.51	0.69	67.62
Macrochaeta	0.63	0	0.56	0.55	0.64	68.26
Polydora caeca	0.13	0.43	0.56	0.68	0.64	68.9
Eunereis longissima	0.43	0.25	0.55	0.82	0.63	69.53
Goodallia triangularis	0.46	0	0.54	0.48	0.61	70.14
Polynoidae	0	0.49	0.53	0.61	0.61	70.75
Chaetozone zetlandica	0.38	0.14	0.48	0.75	0.55	71.3

Aoridae	0	0.4	0.47	0.4	0.54	71.84
NUDIBRANCHIA	0.4	0.14	0.46	0.67	0.53	72.37
Phoronis	0	0.34	0.44	0.61	0.51	72.87
Harpinia pectinata	0	0.39	0.43	0.61	0.49	73.37
Abra alba	0	0.47	0.43	0.4	0.49	73.86
Tubificoides benedii	0.13	0.29	0.42	0.68	0.48	74.34
COPEPODA	0.3	0.14	0.41	0.67	0.47	74.8
Ampharetidae	0	0.29	0.4	0.59	0.46	75.26

Faunal Group D & Faunal Group E
Average dissimilarity = 93.90

Species	Faunal Group D Av.Abund	Faunal Group E Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Sabellaria spinulosa	0	6.34	8.86	1.5	9.44	9.44
Mytilidae	0.17	4.36	7.38	1.58	7.86	17.3
Spiophanes bombyx	3.06	1.78	4.64	1.3	4.94	22.24
ACTINIARIA	0	2.41	4.31	1.04	4.59	26.83
Balanus crenatus	0	2.71	3.98	0.46	4.24	31.07
ASCIDIACEA	0	2.1	3.45	1.03	3.68	34.75
Nucula nucleus	1.05	1.36	2.7	0.92	2.88	37.63
Nucula nitidosa	1.63	0.32	2.46	0.88	2.62	40.25
Mediomastus fragilis	0	1.32	2.11	1.28	2.25	42.5
Autolytus	0	1.26	2.03	1.1	2.16	44.66
Achelia echinata	0	1.16	1.7	0.92	1.81	46.48
Polydora caulleryi	0	1.08	1.68	1.62	1.79	48.26
Lumbrineris cingulata	0	0.84	1.56	0.58	1.66	49.93
NEMATODA	0	0.92	1.49	1.12	1.59	51.52
Onchidoris	0	0.81	1.24	0.75	1.32	52.84
NEMERTEA	0.5	0.84	1.22	0.96	1.3	54.13
Ampelisca spinipes	0.4	0.74	1.21	0.92	1.29	55.42
Pomatoceros lamarcki	0	0.59	1.19	0.76	1.27	56.69
Nereididae	0	0.77	1.17	1.43	1.24	57.93
Lepidonotus squamatus	0	0.64	1.14	0.84	1.21	59.14
Anoplodactylus petiolatus	0.17	0.72	1.08	0.87	1.15	60.29
Nephtys hombergii	0.69	0	1.03	0.9	1.09	61.39
Bathyporeia elegans	0.55	0.14	0.94	0.53	1	62.39
Lepidonotus	0	0.49	0.94	0.83	1	63.39
Pholoe inornata (*sensu* petersen)	0	0.59	0.91	0.71	0.97	64.36
Lanice conchilega	0.17	0.64	0.89	0.87	0.95	65.31
Eumida sanguinea	0	0.64	0.88	0.84	0.94	66.25
OPHIUROIDEA	0	0.55	0.78	0.83	0.83	67.08
Polynoidae	0	0.49	0.68	0.62	0.72	67.8
Amphipholis squamata	0	0.49	0.67	0.57	0.71	68.52
Polydora caeca	0	0.43	0.66	0.61	0.7	69.22
Scoloplos armiger	0.4	0.14	0.65	0.73	0.69	69.91
Goniada maculata	0.33	0.14	0.64	0.7	0.68	70.59
CIRRIPEDIA	0	0.38	0.64	0.4	0.68	71.27
Thoralus cranchii	0.17	0.29	0.62	0.57	0.66	71.93
Aoridae	0	0.4	0.61	0.4	0.65	72.59
Phoronis	0	0.34	0.61	0.61	0.64	73.23
Scalibregma inflatum	0.33	0.14	0.58	0.75	0.62	73.85
Harpinia pectinata	0	0.39	0.56	0.62	0.6	74.45
Ampharetidae	0	0.29	0.56	0.59	0.6	75.04

Faunal Group A & Faunal Group F
Average dissimilarity = 91.95

Species	Faunal Group A Av.Abund	Faunal Group F Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomatoceros lamarcki	0	2.28	3.75	1.28	4.08	4.08
Mediomastus fragilis	0.23	1.99	3.11	1.49	3.38	7.46
Ampelisca spinipes	0	2.12	2.97	1.84	3.23	10.69
Clymenura	0	2.05	2.81	1.63	3.05	13.74
Chaetozone zetlandica	0	1.59	2.42	2.3	2.63	16.37
OPHIUROIDEA	0.3	1.89	2.41	1.94	2.62	18.99
Polydora caulleryi	0	1.2	2.22	0.82	2.42	21.41
Exogone verugera	0	1.31	2.14	1.41	2.32	23.73
Ophiura albida	0.13	1.41	2.12	0.83	2.3	26.03
NEMERTEA	0.58	1.82	2.07	1.93	2.25	28.28
Praxillella affinis	0	1.37	1.84	1.1	2	30.28
Sabellaria spinulosa	0.33	1.35	1.76	0.7	1.91	32.19

Lanice conchilega	0.09	1.14	1.74	1.14	1.89	34.08
Paradoneis lyra	0	1.08	1.68	1.72	1.83	35.91
Lumbrineris cingulata	0.09	1.31	1.68	1.29	1.82	37.74
Abra alba	0.13	1.07	1.53	1.04	1.66	39.4
Polycirrus	0.81	0.79	1.51	0.92	1.64	41.04
Spiophanes bombyx	0.96	0.78	1.49	1.04	1.62	42.66
Ophelia borealis	0.9	0.17	1.45	0.79	1.57	44.24
Leptochiton asellus	0	0.99	1.42	0.98	1.54	45.78
Pisidia longicornis	0	0.84	1.41	0.85	1.54	47.32
NEMATODA	0.06	0.9	1.41	1.46	1.53	48.85
Mytilidae	0.33	0.88	1.37	0.71	1.49	50.34
Glycera lapidum	0.06	1.08	1.36	1.33	1.48	51.82
Poecilochaetus serpens	0.09	1.11	1.33	0.87	1.45	53.27
ACTINIARIA	0	1.01	1.26	1.33	1.37	54.64
Echinocyamus pusillus	0.49	0.61	1.2	0.77	1.3	55.95
Spisula	0.78	0.17	1.19	0.73	1.29	57.24
Lagis koreni	0	0.94	1.19	0.96	1.29	58.53
Nephtys cirrosa	0.69	0	1.13	0.91	1.23	59.76
Scalibregma inflatum	0.15	0.68	1.08	0.73	1.17	60.93
Abra	0.06	0.57	1.07	0.72	1.17	62.1
Aonides paucibranchiata	0.19	0.8	1.03	1.21	1.12	63.22
Psammechinus miliaris	0	0.8	1.01	0.93	1.1	64.32
Ampharete lindstroemi	0	0.74	1	0.76	1.09	65.41
Owenia fusiformis	0.13	0.67	0.96	0.89	1.05	66.46
Ophiocten affinis	0.61	0	0.96	0.55	1.04	67.5
Marphysa bellii	0.14	0.62	0.94	0.9	1.02	68.52
Nephtys	0.58	0	0.92	0.83	1	69.51
Goniada maculata	0.06	0.4	0.85	0.7	0.92	70.44
Nephtys caeca	0.13	0.57	0.83	0.96	0.91	71.34
Scoloplos armiger	0.15	0.47	0.77	0.74	0.84	72.18
Caulleriella alata	0	0.5	0.74	0.98	0.81	72.99
Polynoidae	0	0.5	0.73	0.98	0.79	73.78
Apseudes latreillii	0	0.33	0.71	0.63	0.77	74.55
Stenothoe marina	0	0.5	0.65	0.44	0.71	75.26

Faunal Group B & Faunal Group F
Average dissimilarity = 94.24

Species	Faunal Group B Av.Abund	Faunal Group F Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomatoceros lamarcki	0	2.28	4.1	1.25	4.35	4.35
Mediomastus fragilis	0	1.99	3.64	1.59	3.86	8.21
Sabellaria spinulosa	2.02	1.35	3.64	1.67	3.86	12.07
Ampelisca spinipes	0	2.12	3.2	1.84	3.39	15.46
Clymenura	0	2.05	3.02	1.63	3.21	18.67
NEMERTEA	0	1.82	2.86	5.51	3.04	21.71
Chaetozone zetlandica	0	1.59	2.62	2.29	2.78	24.49
OPHIUROIDEA	0.33	1.89	2.52	1.82	2.67	27.16
Polydora caulleryi	0	1.2	2.46	0.79	2.61	29.77
Exogone verugera	0	1.31	2.33	1.37	2.48	32.25
Mytilidae	1.15	0.88	2.29	1.17	2.43	34.68
Ophiura albida	0	1.41	2.26	0.79	2.4	37.07
Praxillella affinis	0	1.37	1.96	1.08	2.08	39.16
Lanice conchilega	0	1.14	1.92	1.13	2.04	41.2
ASCIDIACEA	1.08	0	1.91	0.97	2.03	43.23
Paradoneis lyra	0	1.08	1.83	1.67	1.95	45.18
Lumbrineris cingulata	0	1.31	1.8	1.28	1.91	47.08
Abra alba	0	1.07	1.61	0.95	1.71	48.79
Pisidia longicornis	0	0.84	1.55	0.83	1.65	50.44
Leptochiton asellus	0	0.99	1.52	0.96	1.61	52.05
Glycera lapidum	0.33	1.08	1.4	1.27	1.49	53.54
Poecilochaetus serpens	0	1.11	1.39	0.84	1.48	55.02
ACTINIARIA	0	1.01	1.34	1.31	1.42	56.44
Lagis koreni	0	0.94	1.26	0.94	1.34	57.78
Spiophanes bombyx	0.33	0.78	1.22	0.97	1.3	59.08
NEMATODA	0.33	0.9	1.21	1.07	1.28	60.36
Abra	0	0.57	1.17	0.69	1.24	61.6
Aonides paucibranchiata	0	0.8	1.14	1.27	1.21	62.81
Psammechinus miliaris	0	0.8	1.08	0.91	1.14	63.96
Ampharete lindstroemi	0	0.74	1.07	0.75	1.13	65.09
Polycirrus	0	0.79	1.06	0.86	1.13	66.22
Scalibregma inflatum	0	0.68	1.05	0.64	1.12	67.33

Owenia fusiformis	0	0.67	1.01	0.84	1.07	68.4
Goniada maculata	0	0.4	0.94	0.67	0.99	69.4
Marphysa bellii	0	0.62	0.91	0.85	0.97	70.37
NUDIBRANCHIA	0.47	0.17	0.91	0.72	0.96	71.33
Nephtys caeca	0	0.57	0.87	0.94	0.92	72.25
Microphthalmus similis	0.47	0	0.81	0.61	0.86	73.11
Caulleriella alata	0	0.5	0.8	0.97	0.85	73.96
Apseudes latreillii	0	0.33	0.79	0.61	0.84	74.8
Echinocyamus pusillus	0	0.61	0.79	0.69	0.83	75.63

Faunal Group G & Faunal Group F
Average dissimilarity = 90.12

Species	Faunal Group G Av.Abund	Faunal Group F Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	3.59	0.88	5.06	1.42	5.61	5.61
Pomatoceros lamarcki	0	2.28	3.91	1.24	4.34	9.96
Mediomastus fragilis	0	1.99	3.47	1.6	3.86	13.81
Ampelisca spinipes	0	2.12	3.08	1.8	3.42	17.23
Clymenura	0	2.05	2.91	1.59	3.23	20.46
OPHIUROIDEA	0	1.89	2.79	2.05	3.1	23.56
Chaetozone zetlandica	0	1.59	2.51	2.25	2.79	26.34
Scalibregma inflatum	1.32	0.68	2.31	0.84	2.57	28.91
Exogone verugera	0	1.31	2.23	1.36	2.47	31.39
Ophiura albida	0	1.41	2.18	0.78	2.42	33.8
Polydora caulleryi	0.71	1.2	1.92	0.76	2.14	35.94
Praxillella affinis	0	1.37	1.9	1.06	2.11	38.05
Lanice conchilega	0	1.14	1.84	1.11	2.04	40.09
Paradoneis lyra	0	1.08	1.75	1.67	1.95	42.04
Lumbrineris cingulata	0	1.31	1.74	1.26	1.93	43.97
Abra alba	0	1.07	1.55	0.94	1.72	45.7
Sabellaria spinulosa	0	1.35	1.51	0.58	1.67	47.37
Pisidia longicornis	0	0.84	1.48	0.82	1.64	49.01
Leptochiton asellus	0	0.99	1.47	0.94	1.63	50.64
Glycera lapidum	0	1.08	1.42	1.3	1.57	52.21
Aricidea minuta	0.87	0	1.38	0.85	1.53	53.74
Poecilochaetus serpens	0	1.11	1.35	0.82	1.5	55.24
ACTINIARIA	0	1.01	1.3	1.29	1.44	56.68
Lagis koreni	0	0.94	1.22	0.93	1.36	58.04
Polydora caeca	0.71	0	1.12	0.85	1.25	59.29
Terebellidae	0.71	0	1.12	0.85	1.25	60.53
Abra	0	0.57	1.11	0.67	1.23	61.77
Aonides paucibranchiata	0	0.8	1.1	1.25	1.23	63
NEMERTEA	1	1.82	1.07	1.46	1.18	64.18
Spiophanes bombyx	0	0.78	1.07	0.82	1.18	65.36
Psammechinus miliaris	0	0.8	1.05	0.9	1.16	66.52
Ampharete lindstroemi	0	0.74	1.03	0.74	1.15	67.67
Polycirrus	0	0.79	1.03	0.85	1.14	68.81
NEMATODA	0.5	0.9	0.99	0.89	1.1	69.91
Owenia fusiformis	0	0.67	0.98	0.83	1.08	70.99
Grania	0.5	0.4	0.91	0.93	1.01	72
Glycera oxycephala	0.5	0	0.89	0.82	0.99	72.99
Goniada maculata	0	0.4	0.89	0.66	0.98	73.97
Marphysa bellii	0	0.62	0.88	0.84	0.98	74.95
Nephtys caeca	0	0.57	0.84	0.93	0.93	75.88

Faunal Group C & Faunal Group F
Average dissimilarity = 84.92

Species	Faunal Group C Av.Abund	Faunal Group F Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Mytilidae	3.91	0.88	4.14	0.93	4.88	4.88
Pomatoceros lamarcki	0.13	2.28	2.71	1.24	3.19	8.07
Sphaerosyllis bulbosa	2.87	0	2.6	0.61	3.06	11.13
Pisione remota	2.01	0	2.43	1.1	2.86	13.99
Mediomastus fragilis	0.13	1.99	2.35	1.58	2.76	16.75
Ampelisca spinipes	0	2.12	2.32	1.69	2.73	19.49
Pseudonotomastus southerni	1.76	0	2.22	1.66	2.61	22.1
Clymenura	0.13	2.05	2.08	1.42	2.45	24.54
OPHIUROIDEA	0.53	1.89	1.77	1.6	2.08	26.63
Ophiura albida	0	1.41	1.65	0.78	1.94	28.57
Polydora caulleryi	0.22	1.2	1.56	0.86	1.84	30.41

Exogone verugera	0.13	1.31	1.54	1.33	1.81	32.22
Chaetozone zetlandica	0.38	1.59	1.48	1.34	1.74	33.96
Praxillella affinis	0	1.37	1.47	1.07	1.73	35.69
Sabellaria spinulosa	0.35	1.35	1.39	0.71	1.64	37.33
NEMATODA	1.63	0.9	1.39	1.22	1.64	38.97
Lanice conchilega	0	1.14	1.35	1.11	1.59	40.56
Polycirrus	1.29	0.79	1.33	1.09	1.57	42.13
Lumbrineris cingulata	0.3	1.31	1.3	1.3	1.54	43.66
Abra alba	0	1.07	1.19	0.94	1.41	45.07
Glycera	1.01	0	1.14	1.14	1.34	46.41
Glycera lapidum	0.62	1.08	1.13	1.3	1.33	47.73
Aonides paucibranchiata	1.55	0.8	1.12	0.94	1.32	49.06
Leptochiton asellus	0	0.99	1.12	0.95	1.32	50.38
Hesionura elongata	0.93	0	1.12	1	1.32	51.7
Paradoneis lyra	0.3	1.08	1.08	1.44	1.28	52.97
Poecilochaetus serpens	0.13	1.11	1.08	0.84	1.27	54.24
Pisidia longicornis	0	0.84	1.05	0.86	1.23	55.47
ACTINIARIA	0.13	1.01	0.99	1.27	1.17	56.65
Lagis koreni	0	0.94	0.96	0.94	1.13	57.77
NEMERTEA	1.43	1.82	0.93	1.21	1.1	58.87
Syllis (Type E)	0.68	0.24	0.91	0.61	1.07	59.94
Abra	0.18	0.57	0.85	0.76	1	60.94
Spiophanes bombyx	0	0.78	0.82	0.84	0.97	61.91
Psammechinus miliaris	0	0.8	0.82	0.92	0.96	62.87
Polygordius	0.78	0	0.81	0.55	0.96	63.83
Ampharete lindstroemi	0	0.74	0.8	0.76	0.94	64.77
Scalibregma inflatum	0	0.68	0.77	0.64	0.91	65.68
Owenia fusiformis	0	0.67	0.75	0.84	0.88	66.56
Echinocyamus pusillus	0.34	0.61	0.73	0.86	0.86	67.42
Ophelia borealis	0.55	0.17	0.69	0.81	0.82	68.24
Marphysa bellii	0	0.62	0.68	0.86	0.8	69.03
Nereididae	0.51	0.24	0.67	0.69	0.79	69.83
Nephtys caeca	0	0.57	0.64	0.94	0.76	70.58
Goniada maculata	0.13	0.4	0.62	0.71	0.74	71.32
Serpulidae	0.4	0.17	0.61	0.56	0.71	72.03
Caulleriella alata	0.13	0.5	0.6	0.91	0.7	72.73
Polynoidae	0	0.5	0.57	0.96	0.68	73.41
Grania	0.22	0.4	0.57	0.77	0.68	74.09
Macrochaeta	0.63	0	0.55	0.54	0.65	74.74
Scoloplos armiger	0	0.47	0.54	0.68	0.63	75.37

Faunal Group D & Faunal Group F
Average dissimilarity = 92.43

Species	Faunal Group D Av.Abund	Faunal Group F Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Spiophanes bombyx	3.06	0.78	4.02	1.11	4.35	4.35
Pomatoceros lamarcki	0	2.28	3.86	1.23	4.17	8.52
Mediomastus fragilis	0	1.99	3.42	1.55	3.7	12.23
Clymenura	0	2.05	2.86	1.59	3.1	15.32
OPHIUROIDEA	0	1.89	2.75	2.02	2.98	18.3
Ampelisca spinipes	0.4	2.12	2.69	1.6	2.91	21.21
Nucula nitidosa	1.63	0	2.38	0.78	2.58	23.78
Polydora caulleryi	0	1.2	2.3	0.78	2.49	26.28
Chaetozone zetlandica	0.17	1.59	2.23	1.69	2.41	28.69
Exogone verugera	0	1.31	2.2	1.34	2.38	31.06
Ophiura albida	0.17	1.41	2.16	0.83	2.33	33.4
NEMERTEA	0.5	1.82	1.97	1.62	2.13	35.53
Praxillella affinis	0	1.37	1.87	1.08	2.02	37.55
Nucula nucleus	1.05	0.29	1.74	0.83	1.89	39.44
Paradoneis lyra	0	1.08	1.73	1.62	1.87	41.31
Lanice conchilega	0.17	1.14	1.72	1.08	1.86	43.17
Lumbrineris cingulata	0	1.31	1.71	1.28	1.85	45.02
NEMATODA	0	0.9	1.53	1.47	1.65	46.67
Abra alba	0	1.07	1.53	0.95	1.65	48.33
Sabellaria spinulosa	0	1.35	1.49	0.6	1.61	49.93
Pisidia longicornis	0	0.84	1.46	0.82	1.58	51.51
Leptochiton asellus	0	0.99	1.44	0.96	1.56	53.07
Glycera lapidum	0	1.08	1.39	1.32	1.51	54.58
Poecilochaetus serpens	0	1.11	1.33	0.84	1.44	56.02
Lagis koreni	0.29	0.94	1.31	0.96	1.42	57.44
ACTINIARIA	0	1.01	1.28	1.31	1.38	58.82

Mytilidae	0.17	0.88	1.21	0.66	1.31	60.14
Scalibregma inflatum	0.33	0.68	1.2	0.85	1.29	61.43
Abra	0	0.57	1.1	0.68	1.19	62.62
Aonides paucibranchiata	0	0.8	1.09	1.27	1.18	63.79
Psammechinus miliaris	0	0.8	1.03	0.92	1.11	64.9
Nephtys hombergii	0.69	0	1.02	0.85	1.11	66.01
Ampharete lindstroemi	0	0.74	1.01	0.75	1.1	67.11
Polycirrus	0	0.79	1.01	0.87	1.1	68.21
Owenia fusiformis	0	0.67	0.96	0.85	1.04	69.24
Goniada maculata	0.33	0.4	0.93	0.77	1.01	70.25
Scoloplos armiger	0.4	0.47	0.92	0.85	1	71.25
Marphysa bellii	0	0.62	0.87	0.86	0.94	72.19
Nephtys caeca	0	0.57	0.82	0.95	0.89	73.08
Bathyporeia elegans	0.55	0	0.79	0.41	0.85	73.93
Urothoe elegans	0.17	0.58	0.76	0.59	0.83	74.76
Caulleriella alata	0	0.5	0.76	0.97	0.82	75.58

Faunal Group E & Faunal Group F
Average dissimilarity = 81.15

Species	Faunal Group E Av.Abund	Faunal Group F Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Sabellaria spinulosa	6.34	1.35	5.26	1.33	6.49	6.49
Mytilidae	4.36	0.88	3.89	1.37	4.79	11.28
Balanus crenatus	2.71	0	2.5	0.45	3.08	14.36
ACTINIARIA	2.41	1.01	2.17	1.01	2.67	17.03
ASCIDIACEA	2.1	0	2.07	1	2.56	19.58
Pomatoceros lamarcki	0.59	2.28	1.85	1.24	2.28	21.86
Clymenura	0	2.05	1.8	1.44	2.22	24.09
Ampelisca spinipes	0.74	2.12	1.75	1.52	2.16	26.24
Spiophanes bombyx	1.78	0.78	1.6	0.71	1.97	28.21
OPHIUROIDEA	0.55	1.89	1.44	1.67	1.77	29.98
Ophiura albida	0.32	1.41	1.38	0.83	1.7	31.68
Chaetozone zetlandica	0.14	1.59	1.33	1.86	1.64	33.31
Lumbrineris cingulata	0.84	1.31	1.24	1.06	1.53	34.84
Praxillella affinis	0	1.37	1.22	1.08	1.5	36.34
Nucula nucleus	1.36	0.29	1.21	0.55	1.5	37.84
Mediomastus fragilis	1.32	1.99	1.2	1.31	1.48	39.32
Exogone verugera	0.2	1.31	1.2	1.39	1.47	40.79
NEMERTEA	0.84	1.82	1.15	1.47	1.42	42.21
Abra alba	0.47	1.07	1.12	1.04	1.38	43.59
Autolytus	1.26	0.4	1.11	1.06	1.37	44.96
Achelia echinata	1.16	0	1.07	0.92	1.31	46.28
Lanice conchilega	0.64	1.14	1.03	1.15	1.27	47.54
Paradoneis lyra	0	1.08	1.03	1.83	1.27	48.81
Polydora caulleryi	1.08	1.2	0.94	0.99	1.16	49.97
Leptochiton asellus	0.14	0.99	0.93	1.01	1.14	51.11
Poecilochaetus serpens	0	1.11	0.9	0.8	1.11	52.21
Glycera lapidum	0.14	1.08	0.89	1.25	1.1	53.31
Pisidia longicornis	0.14	0.84	0.82	1	1.01	54.32
Lagis koreni	0.14	0.94	0.81	1	1	55.32
Onchidoris	0.81	0	0.77	0.74	0.94	56.26
Polycirrus	0.25	0.79	0.72	0.92	0.89	57.15
Psammechinus miliaris	0.14	0.8	0.71	1.02	0.88	58.03
Nereididae	0.77	0.24	0.71	1.34	0.87	58.9
Aonides paucibranchiata	0	0.8	0.71	1.29	0.87	59.78
Scalibregma inflatum	0.14	0.68	0.68	0.72	0.84	60.62
Anoplodactylus petiolatus	0.72	0.17	0.67	0.85	0.83	61.44
Ampharete lindstroemi	0.14	0.74	0.67	0.81	0.83	62.27
Lepidonotus squamatus	0.64	0	0.66	0.81	0.81	63.08
Polynoidae	0.49	0.5	0.66	1.09	0.81	63.89
Abra	0.14	0.57	0.64	0.76	0.79	64.68
Owenia fusiformis	0.14	0.67	0.62	0.88	0.76	65.44
Aoridae	0.4	0.4	0.61	0.67	0.75	66.19
NEMATODA	0.92	0.9	0.6	0.91	0.74	66.93
Pholoe inornata (*sensu* petersen)	0.59	0.17	0.58	0.79	0.71	67.64
Marphysa bellii	0	0.62	0.56	0.87	0.69	68.33
Eumida sanguinea	0.64	0	0.56	0.82	0.69	69.02
Stenothoe marina	0.14	0.5	0.55	0.57	0.68	69.7
Lepidonotus	0.49	0	0.53	0.81	0.65	70.35
Nephtys caeca	0	0.57	0.53	0.94	0.65	71
Urothoe elegans	0.2	0.58	0.52	0.57	0.65	71.65

Caulleriella alata	0.2	0.5	0.52	1.04	0.64	72.29
Amphipholis squamata	0.49	0.17	0.51	0.68	0.63	72.92
Echinocyamus pusillus	0	0.61	0.5	0.69	0.62	73.54
Goniada maculata	0.14	0.4	0.49	0.78	0.6	74.14
Scoloplos armiger	0.14	0.47	0.48	0.77	0.59	74.72
Dyopedos monacanthus	0.29	0.33	0.46	0.71	0.57	75.29

Apendix Table 10. The results of RELATE and BEST analyses to identify relationships between the sediment and infauna from the EAOW cable route data; and subsequently, to find the combination of sediment parameters that correlated most highly with the patterns observed in the infaunal communities.

RELATE

Parameters

Rank correlation method: Spearman

Sample statistic (Rho): **0.476**
Significance level of sample statistic: **0.1 %**
Number of permutations: **999**
Number of permuted statistics greater than or equal to Rho: **0**

BEST

Variables

1	31500
2	1600
3	8000
4	4000
5	2000
6	1000
7	500
8	250
9	125
10	63
11	PAN

Best results

No.Vars	Correlations	Selections
5	0.494	6,8-11
4	0.494	6,8,9,11
5	0.494	5,6,8,9,11
5	0.494	4,6,8,9,11
5	0.49	5,8-11
4	0.49	5,8,9,11
4	0.49	8-11
3	0.49	8,9,11
5	0.49	4,5,8,9,11
4	0.49	4,8,9,11

Appendix Table 11. Summary of log and navigational positions of intertidal camera walkover during the EAOW cable route survey, August 2011. Navigational positions are recorded in UTM (WGS84) Zone 31 Northern.

Waypoint	Original Waypoint	Latitude	Longitude	Elevation	Date	Time
P01	P01	51.975868754	1.382122524	3.490478516	18-Aug-11	1:01:31AM
P03	P03	51.975560719	1.382414382	-2.036987305	18-Aug-11	1:10:27AM
P04	P04	51.975784851	1.383100944	-7.564575195	18-Aug-11	1:12:31AM
P05	1	51.975828102	1.383527499	-6.363037109	18-Aug-11	1:18:08AM
P06	P06	51.976302853	1.384666767	-2.27734375	18-Aug-11	1:22:16AM
P07	P07	51.977270544	1.386378016	-2.758056641	18-Aug-11	1:30:29AM
P08	P08	51.977540944	1.387075726	-4.200073242	18-Aug-11	1:34:18AM
P09	P09	51.977235004	1.387064662	-4.200073242	18-Aug-11	1:35:13AM
P10	P10	51.977666672	1.388486316	-7.804931641	18-Aug-11	1:38:14AM
P11	P11	51.977810254	1.387158372	-2.517700195	18-Aug-11	1:41:27AM
P12	P12	51.979087070	1.388729643	-1.075683594	18-Aug-11	1:46:13AM
P13	P13	51.979170134	1.388615901	-2.758056641	18-Aug-11	1:48:40AM
P14	P14	51.979500046	1.389015131	-5.401733398	18-Aug-11	1:51:49AM
P15	P15	51.980176046	1.389122000	-6.122680664	18-Aug-11	1:54:45AM
P16	P16	51.980523979	1.389114289	-5.641967773	18-Aug-11	1:56:54AM
P17	P17	51.980802091	1.389179919	-2.758056641	18-Aug-11	2:00:37AM
P18	P18	51.980813155	1.389148654	-4.200073242	18-Aug-11	2:08:12AM
P19	P19	51.980587095	1.388939777	-5.401733398	18-Aug-11	2:10:14AM
P20	P20	51.980154924	1.388425380	9.258300781	18-Aug-11	2:20:12AM
P21	P21	51.979459394	1.388161099	3.25012207	18-Aug-11	2:24:55AM
P22	P22	51.979314219	1.388590755	9.017944336	18-Aug-11	2:27:08AM
P23	10	51.979243895	1.388102509	3.490478516	18-Aug-11	2:32:03AM
P24	P24	51.979200309	1.388090188	3.730834961	18-Aug-11	2:32:43AM
P25	P25	51.978218369	1.387159629	2.76953125	18-Aug-11	2:43:11AM
P26	11	51.977576986	1.386325127	-5.641967773	18-Aug-11	2:50:59AM
P27	P27	51.977602132	1.386325546	2.288818359	18-Aug-11	2:51:59AM
P28	P28	51.976920851	1.385053173	-4.200073242	18-Aug-11	2:56:26AM
P29	P29	51.976123229	1.383543340	-13.57275391	18-Aug-11	3:00:30AM
P30	P30	51.983878165	1.389251500	6.614746094	18-Aug-11	3:23:28AM
P31	P31	51.984280832	1.389329368	-4.440429688	18-Aug-11	3:26:35AM
P32	P32	51.984034153	1.389449816	-6.122680664	18-Aug-11	3:29:26AM
W01	W01	52.008084767	1.432653414	-0.354736328	18-Aug-11	6:07:04AM
W02	W02	52.008090466	1.432684679	0.366210938	18-Aug-11	6:07:55AM
W03	W03	52.006314425	1.430428354	0.846923828	18-Aug-11	6:27:13AM
W04	W04	52.005912093	1.430862369	-11.16955566	18-Aug-11	6:35:07AM
W05	W05	51.988571109	1.398398671	-6.363037109	18-Aug-11	7:11:14AM
W06	W06	51.996092191	1.410394935	-17.89868164	18-Aug-11	7:53:03AM
W07	W07	51.992573468	1.409602677	-3.238647461	19-Aug-11	1:26:46AM
W08		51.992573468	1.409602677	-3.238647461	19-Aug-11	1:26:46AM
W09	W09	51.992802965	1.409831923	-5.641967773	19-Aug-11	1:33:05AM
W10						
W11	W11	51.993111167	1.410884103	0.606567383	19-Aug-11	1:39:45AM
W12	W12	51.993515259	1.411399841	0.606567383	19-Aug-11	1:43:24AM
W13	W13	51.993732601	1.411613664	16.22790527	19-Aug-11	1:45:46AM
W14	W14	51.993882135	1.412630975	-1.075683594	19-Aug-11	1:48:35AM
W15	W15	51.994391000	1.413285434	2.288818359	19-Aug-11	1:51:01AM
W16	W16	51.994592501	1.413475955	2.048583984	19-Aug-11	1:52:19AM
W17	W17	51.994725270	1.414198224	19.83276367	19-Aug-11	1:53:36AM
W18	W18	51.995113101	1.414664928	5.172729492	19-Aug-11	1:55:43AM
W19	W19	51.995305214	1.414844804	14.78588867	19-Aug-11	1:57:46AM
W20	W20	51.995479222	1.415668493	1.087158203	19-Aug-11	2:00:03AM
W21	W21	51.995876860	1.416078871	-17.1776123	19-Aug-11	2:01:46AM
W22	W22	51.996108619	1.416350696	3.25012207	19-Aug-11	2:03:45AM

Waypoint	Original Waypoint	Latitude	Longitude	Elevation	Date	Time
W23	W23	51.998057161	1.420156751	-0.595092773	19-Aug-11	2:10:00AM
W24	W24	52.000430664	1.424045954	-0.835449219	19-Aug-11	2:17:04AM
W25	W25	52.001058217	1.424900405	8.537353516	19-Aug-11	2:20:44AM
W26	W26	52.001235662	1.424793452	20.31335449	19-Aug-11	2:25:42AM
W27	W27	52.002025573	1.425784025	6.614746094	19-Aug-11	2:30:53AM
W28	W28	52.001911243	1.426198930	-2.517700195	19-Aug-11	2:34:26AM
W29	W29	52.002823446	1.426970400	-26.06982422	19-Aug-11	2:42:07AM
W30	W30	52.002877509	1.427812697	-4.921020508	19-Aug-11	2:46:14AM
W31	W31	52.003313871	1.427516229	-6.363037109	19-Aug-11	2:51:17AM
W32	W32	52.003832879	1.428857250	-3.959594727	19-Aug-11	2:56:28AM
W33	W33	52.005229304	1.429522689	-8.526000977	19-Aug-11	3:08:49AM
W34	W34	52.004945073	1.429772051	-3.959594727	19-Aug-11	3:11:36AM
W35	W35	52.005528873	1.429826031	-3.479003906	19-Aug-11	3:15:20AM
W36	W36	52.001465242	1.425294857	-8.766235352	19-Aug-11	3:23:55AM
W37	W37	52.005615123	1.430557854	-7.804931641	19-Aug-11	3:42:48AM

Appendix Table 12. Field notes detailing the walkover camera sampling positions and descriptions of the photos taken including biological habitat characteristics of the southern site. This survey was carried out on 18 Aug 2011 beginning at 06.45 with a low tide time of 08.30.

Waypoint	Station No/ GPS coordinates	Habitat type(s)	Species present	Notes/ Photos taken
WP1	SW corner High Tide	Shingle	No flora or fauna	Approach GPS Shingle View up and down beach
WP2	SW corner Mid Point	Sand overlain by small shingle	No flora or fauna	GPS photo
WP3	SW corner Low W mark	Sand overlain with shingle	No flora or fauna	GPS photo
WP4	Cont. of P3	Sand overlain with shingle	No flora or fauna	GPS photo
WP5	Low Tide 06.14	Beach returns to shingle and sand only fine layer	No flora or fauna	GPS photo 2nd photo of dug up sand
WP6	LWM	Shingle and fine layer of sand	No flora or fauna	GPS photo
WP7	LWM	Area of muddy sandy shingle. Thin anoxic layer - deposition site	*Enteromorpha sp.*	GPS photo
WP8	Edge of spur shingle bank to low tide. Low tide 06.40 GMT	Shingle	No flora or fauna	GPS photo
WP9	Edge of spur. Low tide 06.40 GMT	Shingle	Some *Enteromorpha sp.*	GPS photo
WP10	Edge of spur. Low tide 06.40 GMT	Shingle	No flora or fauna	GPS photo
WP11	Inner edge of spur. Low tide 06.40 GMT	Shingle with larger cobbles	No flora or fauna	GPS photo
WP12	LW	Shingle	No flora or fauna	GPS photo
WP13	Cont. of sand strip. Mid-low beach	Shingle -under thin layer of sand.	No flora or fauna	GPS photo
WP14	LW	Shingle	No flora or fauna	GPS photo 2nd photo towards sea defence- large boulders
WP15	LWM	Pebbles	No flora or fauna	GPS photo
WP16		Mud/Shingle larger rocks deposition area	*Enteromorpha* sp. No fauna or burrow holes.	GPS photo *Porphyra* sp. 2nd photo of muddy/shingle and larger rock site
WP17		Where WP.16 ends and shingle and sea defence wall starts.	*Enteromorpha* sp.	GPS photo (only of general site)
WP18	LWM	Boulder wall	*Fucus spiralis, Enteromorpha* sp., *Porphyra* sp. , *Elminius modestus* - approx 10cm (max). All attached to boulders at high water mark.	GPS photo (N. pic)
WP19	NW of site	Pebbles finish and sea defence wall begins.	No flora or fauna	GPS photo 2nd photo of sea defence wall
WP20		Gravel- start of vegetated area near sea wall SW of site.	*Crambe maritima*	GPS photo 2nd photo vegetation and area photos
WP21		Shingle	Grasses	GPS photo
WP22	Mid shore	Shingle	No flora or fauna	GPS photo
WP23		Shingle	Some vegetation in area, *Crambe maritima* , grasses.	GPS photo
WP24		Shingle	Some vegetation in area, *Crambe maritima* .	GPS photo 2nd photo out to sea
WP25		Shingle	No flora or fauna	GPS photo 2nd photo of lagoons
WP26	End of vegetation section- South section. Lagoon area - not part of lagoon	Shingle Water, shingle edge	Some vegetation, *Crambe maritima*, Filamentous green algae	GPS photo, x2 and lagoon. No GPS photo taken
WP27	Small strand line (Mid)	Shingle	No flora or fauna. Washed up seaweed -dried out.	GPS photo 2nd photo seaward of sandbanks
WP28	Mid shore	Shingle	No flora or fauna	GPS Photo
WP29	Mid shore	Shingle	No flora or fauna	GPS photo 2nd photo access point next to beach huts. Photo of EA sign and gravel path of sea wall.
WP30	Start of site from Northern end	Man-made seawall and platforms. Small beach island area not accessable. Groynes and boulder sea defence.	Green algae covering steps.	GPS photos taken
WP31		Seawall	Green algae on sea defence structure.	GPS photo 2nd photo of sea defence.
WP32	Area in front of sea wall (at low tide) between 2 groynes.	Shingle- some deposited sand.	No flora or fauna	GPS photo

Appendix Table 13. Field notes detailing the walkover camera sampling positions and descriptions of the photos taken including biological habitat characteristics of the northern site. This survey was carried out on 18-19 Aug 2011 beginning at 11.00 with a low tide time of 08.30.

Waypoint	Date	Station No/ GPS coordinates	Habitat type(s)	Species present	Notes/ Photos taken
WP1	18-Aug-11	Access point	N/A Close to site but not in it	N/A	GPS photo and of coastal erosion warning sign.
WP2	18-Aug-11	Cliff erosion			GPS photo
WP3	18-Aug-11	Parking near Marello Tower			
WP4	18-Aug-11	Beach access near Morello Tower			GPS photo
WP5	18-Aug-11		N/A	N/A	GPS photo and private 'No Access' sign.
WP6	18-Aug-11	Private access, x2 photos	N/A	N/A	Bawdsey Manor and MOD near transmitter.
WP7	18-Aug-11	North site start by mast pictures	N/A	*N/A*	Site photos T Mast and NE
WP8	19-Aug-11	Low shore at 6.30	Sand and shingle	No flora or fauna. No tubes or burrows evident.	Sediment photo
WP9	19-Aug-11	Mid shore	Shingle	No flora or fauna.	Sediment photo and bank.
WP10	19-Aug-11	High shore	Shingle/Pebbles	Edge of vegetated shingle.	Sediment photo
WP11	19-Aug-11	Low shore at 6.40. Groynes	Sand and shingle	No flora or fauna	Sediment and dug sand. Mixed sediment
WP12	19-Aug-11	Mid shore	Shingle	No flora or fauna	Sediment photo
WP13	19-Aug-11	High shore	Shingle and pebbles	Some strand vegetation starts. *Crambe maritima*	Sediment photo
WP14	19-Aug-11	Low shore at 6.50	Sand on top mixed and shingle/pebbles.	No flora or fauna	Sediment photo
WP15	19-Aug-11	Mid shore	Shingle	No flora or fauna	Sediment photo
WP16	19-Aug-11	High shore and strand	Shingle and pebbles	No flora or fauna	Sediment photo
WP17	19-Aug-11	Low shore at 6.55, MOD starts	Shingle and sand mixed	No flora or fauna	Sediment photo
WP18	19-Aug-11	Mid shore	Shingle	No flora or fauna	Sediment photo
WP19	19-Aug-11	High shore and strand	Shingle and pebbles	Vegetation starts	Sediment and vegetation.
WP20	19-Aug-11	Low shore at 06.58 GMT	Shingle, pebbles and sand mix	No flora or fauna	Sediment photo
WP21	19-Aug-11	Mid shore	Shingle	No flora or fauna	Sediment photo
WP22	19-Aug-11	High shore	Shingle and pebbles	No flora or fauna	Sediment photo and MOD fence.
WP23	19-Aug-11	Low shore at 07.08	Shingle and sand	No flora or fauna	Sediment photo
WP24	19-Aug-11	Low shore at 08.15	Change to consolidated grey sediment (land?)	No fauna or bore holes. *Enteromorpha* sp.	Sediment photos x2, x1 dug sediment, vista to NE.
WP25	19-Aug-11		N/A	N/A	Old groyne structures and start of erosion.
WP26	19-Aug-11	High shore	Pebble	Last of vegetation.	Sediment and grey x2 sediment (land).
WP27	19-Aug-11	Cliff edge			To show sediment that is deposited on low shore.
WP28	19-Aug-11	Low shore at 07.32	Grey sediment (land) and sand.	*Enteromorpha* sp. , *Porphyra* sp.	Sediment photo, Shore general, Back to eroding clliff, Piddock holes (very few) and dead.
WP29	19-Aug-11	General			Erosion and shore
WP30	19-Aug-11	Low shore at 07.45	Grey sediment and sand.	Piddocks, *Enteromorpha* sp., *Porphyra* sp.	Photo Jackie Hill looking at piddocks. No snails or limpets, sparse piddock holes with some empty shells
WP31	19-Aug-11	High shore	Eroding cliff		Fresh water input, agricultural land behind x2 (feeds the *Enteromorpha* sp.)
WP32	19-Aug-11	Low shore at 07.55	Artificial structure on sediment and sand	*Fucus spiralis* C, *Enteromorpha* sp. C , *Porphyra* sp. O , Barnacles C , *Chthamalus* C, *Patella* (yellow) F, *Elminius modestus* C , *Mytilus edulis* O	
WP33	19-Aug-11		End of grey sediment		Pill boxes approx. 5m per 3/4 months Olympic grass.
WP34	19-Aug-11	Lowshore at 08.07	Grey land sediment aand sand	Piddocks, *Enteromorpha* sp., *Porphyra* sp.	Sediment and shore line.
WP35	19-Aug-11	Mid shore	Sand small strip at end of bay.	No flora or fauna	Sediment photo
WP36	19-Aug-11	Mid shore, sand starts here	Sand strip starts (small) and widens out until most of the shore at WP35. Still some shingle next to the grey mud shore line.	No flora or fauna	x2 Sand and diggings
WP37	19-Aug-11	Seawall	Artificial seawall surrounded by sand	*Fucus spiralis* , *Enteromorpha* sp., *Porphyra* sp. , No barnacles	Rock and edge of rock and sand


ERMCAB0811 01.JPG


ERMCAB0811 02.JPG


ERMCAB0811 03.JPG


ERMCAB0811 04.JPG


ERMCAB0811 05.JPG

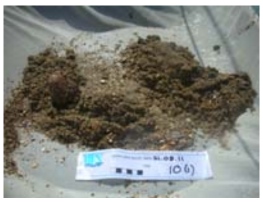

ERMCAB0811 06.JPG


ERMCAB0811 07.JPG


ERMCAB0811 08(1).JPG


ERMCAB0811 08(2).JPG


ERMCAB0811 09.JPG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ERMCAB0811 10(2).JPG


ERMCAB0811 10(3).JPG


ERMCAB0811 11.JPG


ERMCAB0811 12.JPG


ERMCAB0811 13 .JPG


ERMCAB0811 14.JPG


ERMCAB0811 15.JPG


ERMCAB0811 16.JPG


ERMCAB0811 17.JPG


ERMCAB0811 18(2).JPG


ERMCAB0811 18(3).JPG


ERMCAB0811 20.JPG


ERMCAB0811 21(1).JPG


ERMCAB0811 21(2).JPG


ERMCAB0811 22(1).JPG


ERMCAB0811 22(2).JPG


ERMCAB0811 22(3).JPG


ERMCAB0811 23(1).JPG


ERMCAB0811 23(2).JPG


ERMCAB0811 24(1).JPG


ERMCAB0811 24(2).JPG


ERMCAB0811 24(3).JPG


ERMCAB0811 25(1).JPG


ERMCAB0811 25(2).JPG

Appendix Plate 1. Grab sample photographs from the EAOW cable route survey and the relevant EAOW ZEA survey stations.


ERMCAB0811 26.JPG


ERMCAB0811 27.JPG


ERMCAB0811 28.JPG


ERMCAB0811 29.JPG


ERMCAB0811 30.JPG


ERMCAB0811 31.JPG


ERMCAB0811 32(2).JPG


ERMCAB0811 32(3).JPG


ERMCAB0811 33(3).JPG


ERMCAB0811 34.JPG


ERMCAB0811 35.JPG


ERMCAB0811 36.JPG


ERMCAB0811 37(2).JPG

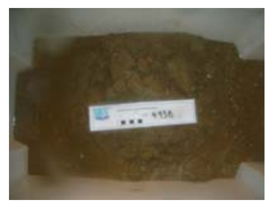

ERMCAB0811 38.JPG


ERMCAB0811 39.JPG


ERMCAB0811 40(1).JPG


ERMCAB0811 40(2).JPG


ERMEA10810 492B.JPG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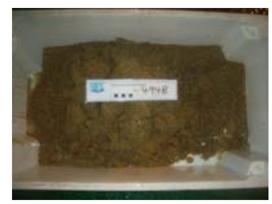
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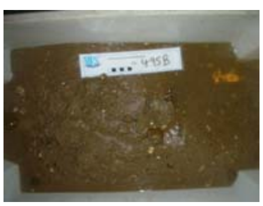
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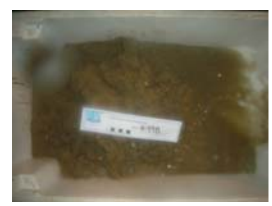
ERMEA10810 496B.JPG


ERMEA10810 497B.JPG


ERMEA10810 498B.JPG


ERMEA10810 499B.JPG


ERMEA10810 504B.JPG


ERMEA10810 505B.JPG


ERMEA10810 764X.JPG

Appendix Plate 1. Grab sample photographs from the EAOW cable route survey and the relevant EAOW ZEA survey stations.


EAOW Intertidal South Ferry Jetty


EAOW Intertidal South P1


EAOW Intertidal South P1 - access point 3


EAOW Intertidal South P1 - access point 1


EAOW Intertidal South P1 - access point 2


EAOW Intertidal South P1 - view


EAOW Intertidal South P2


EAOW Intertidal South P2 - view 1


EAOW Intertidal South P2 - view 1 rotated


EAOW Intertidal South P3


EAOW Intertidal South P3 - below surface


EAOW Intertidal South P4


EAOW Intertidal South P5


EAOW Intertidal South P6


EAOW Intertidal South P7


EAOW Intertidal South P8


EAOW Intertidal South P9


EAOW Intertidal South P10


EAOW Intertidal South P11


EAOW Intertidal South P12


EAOW Intertidal South P13

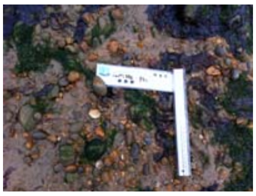

EAOW Intertidal South P14


EAOW Intertidal South P14-2


EAOW Intertidal South P15

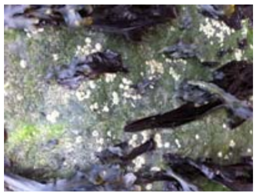

EAOW Intertidal South P15-2

Appendix Plate 2. Contact prints of the Southern intertidal survey site taken during the intertidal walk-over survey, August 2011. Waypoint numbers (`P') correspond to notes presented in Appendix Table 12.


EAOW Intertidal South P16


EAOW Intertidal South P16 - view 1


EAOW Intertidal South P17 - view 1


EAOW Intertidal South P17 - view 2


EAOW Intertidal South P18


EAOW Intertidal South P19


EAOW Intertidal South P19-2


EAOW Intertidal South P19-view


EAOW Intertidal South P20-1


EAOW Intertidal South P20-2


EAOW Intertidal South P20-3


EAOW Intertidal South P20-4


EAOW Intertidal South P21


EAOW Intertidal South P22


EAOW Intertidal South P22-flora 1


EAOW Intertidal South P22-flora 2


EAOW Intertidal South P22-flora 3


EAOW Intertidal South P22-flora 4


EAOW Intertidal South P23


EAOW Intertidal South P23 - view 1


EAOW Intertidal South P23 - view 2


EAOW Intertidal South P23 - view 3


EAOW Intertidal South P24


EAOW Intertidal South P24 - view


EAOW Intertidal South P25

Appendix Plate 2 cont. Contact prints of the Southern intertidal survey site taken during the intertidal walk-over survey, August 2011. Waypoint numbers (`P') correspond to notes presented in Appendix Table 12.


EAOW Intertidal South P25 - view


EAOW Intertidal South P26


EAOW Intertidal South P26 - ponds


EAOW Intertidal South P26 - view 1


EAOW Intertidal South P26 - view 2


EAOW Intertidal South P27


EAOW Intertidal South P27 - view


EAOW Intertidal South P28


EAOW Intertidal South P29


EAOW Intertidal South P29 - 2


EAOW Intertidal South P29 - access


EAOW Intertidal South P30 1


EAOW Intertidal South P30 - 2


EAOW Intertidal South P31


EAOW Intertidal South P32

EAOW Intertidal South P32 - view 1


EAOW Intertidal South P32 - view 2

Appendix Plate 2 cont. Contact prints of the Southern intertidal survey site taken during the intertidal walk-over survey, August 2011. Waypoint numbers (`P') correspond to notes presented in Appendix Table 12.


EAOW Intertidal North - view from access point


EAOW Intertidal North -cliff face and clay deposit


EAOW Interidal North - access point Martello tower

EAOW Intertidal North - Bawdsey Manor private pr…


EAOW Intertidal North - Bawdsey Manor private pr…


EAOW Intertidal North - Bawdsey Manor private pr…


EAOW Intertidal North - entry from Bawdsey Ferry 1


EAOW Intertidal North - entry from Bawdsey Ferry 2


EAOW Intertidal North - entry from Bawdsey Ferry 3


EAOW Intertidal North - entry from Bawdsey Ferry 4


EAOW Intertidal North - entry from Bawdsey Ferry 5


EAOW Intertidal North - old coastal defences


EAOW Intertidal North - W7

EAOW Intertidal North - W34


EAOW Intertidal North - W34 - view 1


EAOW Intertidal North - W34 - view 2


EAOW Intertidal North - W34 - view 3


EAOW Intertidal North - W34 - view 4

EAOW Intertidal North W1 - East Lane 1

EAOW Intertidal North W1 - East Lane 2


EAOW Intertidal North W2 - coastal erosion5


EAOW Intertidal North W2 - coastal erosion 1


EAOW Intertidal North W2 - coastal erosion 2


EAOW Intertidal North W2 - coastal erosion 3


EAOW Intertidal North W2 - coastal erosion 4

Appendix Plate 3. Contact prints of the Northern intertidal survey site taken during the intertidal walk-over survey, August 2011. Waypoint numbers (`W') correspond to notes presented in Appendix Table 13.


EAOW Intertidal North W3 - Site parking


EAOW Intertidal North W6 - private property


EAOW Intertidal North W8


EAOW Intertidal North W9

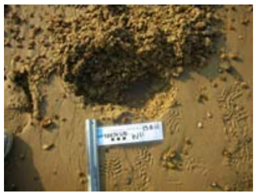

EAOW Intertidal North W10


EAOW Intertidal North W10 - view 1


EAOW Intertidal North W10 - view 2


EAOW Intertidal North W10 - view 3


EAOW Intertidal North W11


EAOW Intertidal North W11 - sub surface


EAOW Intertidal North W12


EAOW Intertidal North W13


EAOW Intertidal North W14


EAOW Intertidal North W15


EAOW Intertidal North W16


EAOW Intertidal North W17


EAOW Intertidal North W17 - view


EAOW Intertidal North W18


EAOW Intertidal North W19


EAOW Intertidal North W19 - view


EAOW Intertidal North W20


EAOW Intertidal North W21


EAOW Intertidal North W22


EAOW Intertidal North W22 - MOD fence


EAOW Intertidal North W23

Appendix Plate 3 cont. Contact prints of the Northern intertidal survey site taken during the intertidal walk-over survey, August 2011. Waypoint numbers (`W') correspond to notes presented in Appendix Table 13.


EAOW Intertidal North W24


EAOW Intertidal North W24 - dug


EAOW Intertidal North W24 - view 1


EAOW Intertidal North W25 - 1


EAOW Intertidal North W25 - 2


EAOW Intertidal North W25 - 3


EAOW Intertidal North W26


EAOW Intertidal North W27 - 1


EAOW Intertidal North W27 - 2


EAOW Intertidal North W27 - 3


EAOW Intertidal North W27 - 41


EAOW Intertidal North W28

EAOW Intertidal North W28 - 2

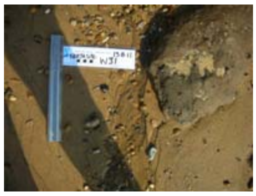

EAOW Intertidal North W28 view 1

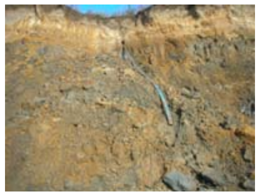

EAOW Intertidal North W29 - view erosion


EAOW Intertidal North W30 - sampling 1


EAOW Intertidal North W30 - sampling 2


EAOW Intertidal North W30 - sampling 3


EAOW Intertidal North W31


EAOW Intertidal North W31 - erosion + FW input 1


EAOW Intertidal North W32


EAOW Intertidal North W32 - view 1

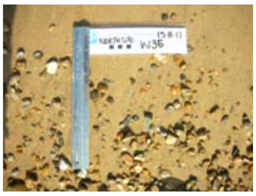

EAOW Intertidal North W32 - view 2


EAOW Intertidal North W32 - view 3

EAOW Intertidal North W32 - view 4

Appendix Plate 3 cont. Contact prints of the Northern intertidal survey site taken during the intertidal walk-over survey, August 2011. Waypoint numbers (`W') correspond to notes presented in Appendix Table 13.

EAOW Intertidal North W35



EAOW Intertidal North W36

EAOW Intertidal North W36 - subsurface

EAOW Intertidal North W36 - view

EAOW Intertidal North W37

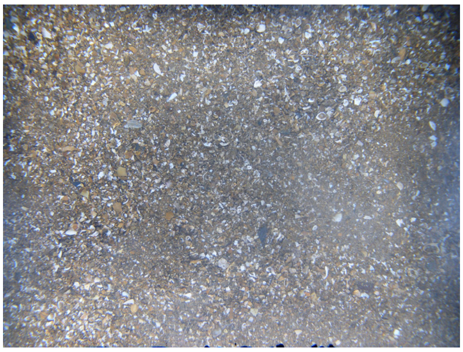
EAOW Intertidal North W37 - view 1

EAOW Intertidal North W37 - view 2

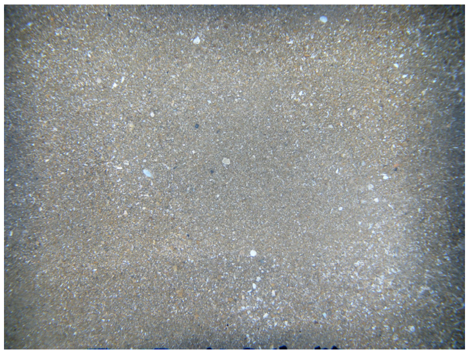
EAOW Intertidal North W37 - view 3

Appendix Plate 3 cont. Contact prints of the Northern intertidal survey site taken during the intertidal walk-over survey, August 2011. Waypoint numbers (`W') correspond to notes presented in Appendix Table 13.

Appendix Plate 4. Examples of the seabed imagery acquired from across the area of interest.



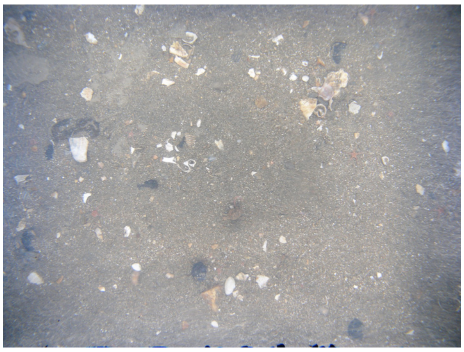
Station 9



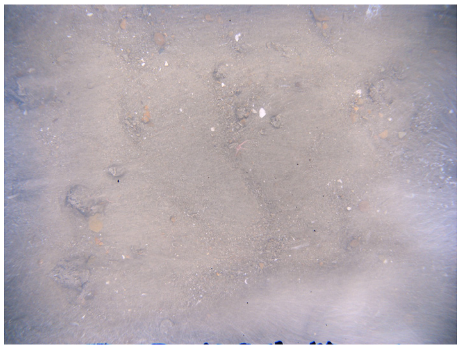
Station 29

Station 13

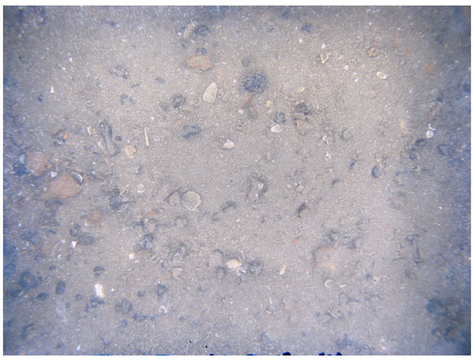
Station 36



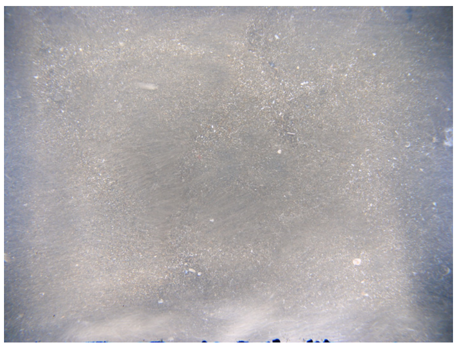
Station 11



Station 12



Station 20



Station 10

Appendix 10.3 Ends Here