Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Environmental Statement

Volume 3

Appendix 8.2 - SEP Benthic Characterisation Report

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Sheringham Shoal Extension Benthic Characterisation Report

Sheringham Extension Project
Offshore Norfolk North Sea
Volume 5 Benthic Characterisation Report
Survey Period: 10 to 19 August 2020

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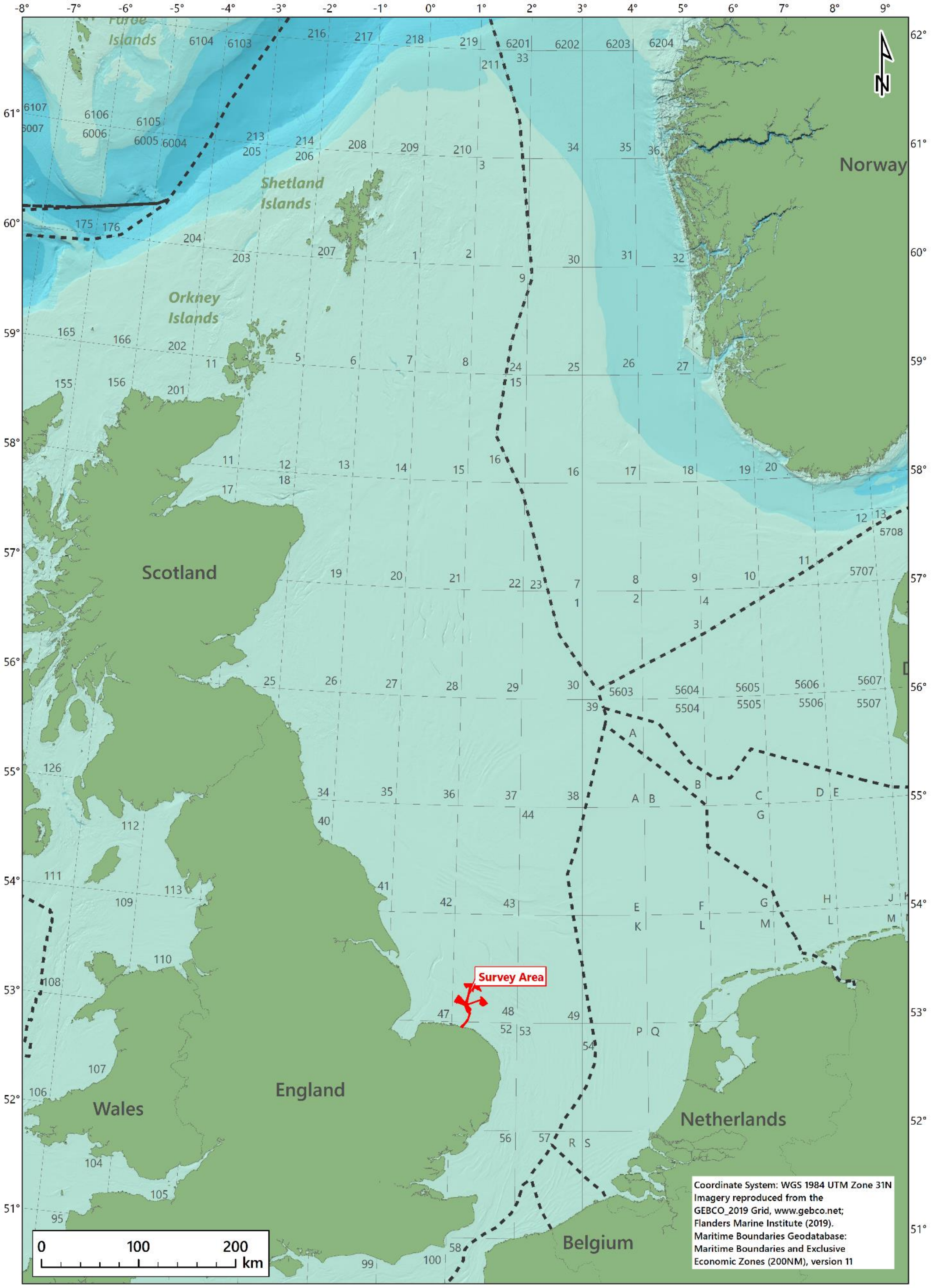
Frontispiece



Executive Summary

Introduction

Equinor New Energy Limited contracted Fugro to perform benthic characterisation surveys for the extension of the Dudgeon and Sheringham Shoal Offshore Windfarms (OWFs). The surveys were conducted onboard the DSV Curtis Marshall during the survey period 10 to 19 August 2020.

The Dudgeon Extension Project (DEP) is located to the north and southeast of the existing Dudgeon OWF, 31 km north of the Norfolk coast; Sheringham Extension Project (SEP) is located to the north and east of the existing Sheringham Shoal OWF, 17.5 km north of the Norfolk coast. Both DEP and SEP share borders with the existing operational wind farms. Offshore export cables will connect offshore substations, situated in the wind farm areas, to the shore with landfall at Weybourne on the North Norfolk Coast.

As part of the regulatory planning process, an Environmental Impact Assessment (EIA) is required to identify any potential impacts associated with the proposed developments.

This report details the results of the benthic characterisation survey in the SEP, which includes the Sheringham Shoal (SS) proposed extension and the export cable (EC) corridor.

Survey Strategy

A total of 26 environmental sampling stations was proposed in the SS proposed extension area, with acquisition of video and stills photography at each station and single grab samples for macrofaunal and particle size distribution (PSD) analysis at 17 stations, including 2 stations to also be sampled for chemical analysis.

A total of 25 environmental sampling stations was proposed along the EC corridor, with acquisition of video and stills photography at each station and single grab samples for macrofaunal and PSD analysis at 18 stations, including 3 stations to also be sampled for chemical analysis.

Triplicate samples for macrofaunal and PSD analysis were proposed at 7 stations along the EC corridor, to ground truth areas of small scale variability identified by the geophysical data and thus validate the computer algorithm underpinning the geophysical data output.

Photographic stills and video were successfully acquired at all but four of the proposed stations along the EC corridor; an additional camera station was undertaken after approval from the client representative.

Grab samples were successfully acquired at all 17 proposed grab sampling stations in the SS proposed extension survey area, with a complete suite of samples (single macrofauna and PSD) retained at 15 stations. Chemistry samples were obtained at one station.

Along the EC corridor, grab samples were acquired at all 18 proposed grab sampling stations, with complete suite of samples (single macrofauna and PSD) retained at 13 stations. Triplicate samples were obtained at four stations. Chemistry samples were obtained at the three proposed stations.

Sediment Characteristics

At stations sampled in triplicate, only sample PSDA was used in the analysis to characterise the benthos. The other samples were analysed to present the intra-station variability.

The sediment across the SEP survey area was found to be heterogenous, with varying percentages of sand, gravel and fines. Gravel and sand were predominant at most stations, gravel with percentages of up to 60.33 % and sand with percentages up to 99.98 %. Fines were poorly represented by comparison, with percentages of up to 22.13 %.

In the SS proposed extension, the seabed comprised mostly very poorly sorted coarse and mixed sediments, with coarseness ranging from coarse sand to pebbles. The Folk (BGS modified) and Folk (1954) classifications identified four sediment classes, including sandy gravel at nine stations, muddy sandy gravel at six stations, gravelly sand at one station and gravelly muddy sand at one station. Under the Wentworth (1922) description, the sediment was classified as very coarse sand at seven stations, granule at six stations, coarse sand at three stations and fine pebble at one station.

Along the EC corridor, the seabed comprised mostly very poorly sorted coarse sediment, consisting of sand and gravel; four stations comprised well sorted to moderately well sorted sand and one station comprised extremely poorly sorted mixed sediment. The Folk (BGS modified) classification identified three classes including sandy gravel at thirteen stations, sand at four stations and muddy sandy gravel at one station. Using the Folk (1954) classification, the four stations classified as sand, were classified as slightly gravelly sand, owing to their gravel content of up to 2.79 %. Under the Wentworth (1922) description, the sediments were classified as very coarse sand at eight stations, medium sand at four stations, granule at three stations, coarse sand at two stations and coarse sand at one station.

Sediment particle distribution was bimodal or polymodal at all stations except station EC_08.

Sediment Chemistry

Total hydrocarbon content (THC) values at all stations were within the range of concentrations reported from the SEA2 Area 1 survey, and therefore could be considered background.

The total n-alkanes (nC_{12} to nC_{36}) concentrations and CPI ratio were above the SEA2 Area 1 mean value at some stations. The pristane/phytane (Pr/Ph) ratio was higher than the Area 1 mean at all stations.

The total 2 to 6 ring polycyclic aromatic hydrocarbon (PAH) concentrations at all stations were within the range of the values reported from the SEA2 Area 1 survey and therefore could be considered as background. The individual US EPA 16 PAH concentrations were all below their respective effects range low (ERL) values, where available.

All metal concentrations were below the Centre for Environment, Fisheries and Aquaculture Science (Cefas) Action Level (AL) 1 and AL2, and below the respective ERL values, where available.

Macrofauna

At stations sampled in triplicate, only sample FA was used in the analysis to characterise the benthos. The other samples were analysed to present the intra-station variability.

Results of the biological analysis of the grab samples indicates a diverse infauna with abundances fairly evenly distributed across the taxa recorded. The community structure was dominated by annelids in terms of number of taxa and individuals, followed by arthropods and molluscs, whereas echinoderms were poorly represented by comparison.

The multivariate analysis identified four major groups, the largest of which comprised a community characterised by a numerical dominance of *Crepidula fornicata* and *Sabellaria spinulosa*, and a numerical abundance of solitary epifauna such as *Balanus crenatus* and *Dendrodoa grossularia*. Of the other groups, one comprised a *Lanice conchilega* dominated community, one comprised a community dominated by *Goodallia triangularis* and polychaetes, and one comprised a community characterised by *Bathyporeia elegans* and *Nephtys cirrosa*.

Two stations were different enough to be separated by the multivariate analysis and were characterised by low faunal diversity and abundance, by comparison.

The infaunal communities were found to be strongly associated with sediment type with no influence from the depth, likely owing to the minimal bathymetric range of the survey area.

The infaunal biomass was dominated by molluscs at most stations in the SS proposed extension, whereas along the EC corridor, annelids dominated the biomass at most stations, with notable contribution from arthropods.

Epifauna was well represented across the SEP survey area, with colonial epifauna being recorded at all stations Bryozoans, such as *Escharella immersa*, *Conopeum reticulum*, *Flustra foliacea* and *Bicellariella ciliata*, were the most frequently occurring across the SEP survey area.

Seabed Habitats and Biotopes

The infaunal groups identified by the multivariate analysis of the infaunal dataset were assessed in conjunction with the physical and biological characteristic of each multivariate group to identify biotopes in line with the European Nature Information System (EUNIS) habitat classification.

Results of the habitat assessment, based on video and image analysis, and detailed in Volume 2 Habitat Assessment Report, were integrated with the results of the grab sampling to provide a comprehensive habitat assessment.

Five biotopes and one biotope complex were identified and subsequently assessed in terms of ecological and conservation importance under the current marine nature conservation legislation:

1. *Flustra foliacea* and colonial ascidians on tide-swept exposed circalittoral mixed substrata (A4.1343);
2. *Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand (A5.233);
3. Polychaete-rich deep *Venus* community in offshore mixed sediments (A5.451);
4. *Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment (A5.431);
5. *Sabellaria spinulosa* on stable circalittoral mixed sediment A5.611;
6. Infralittoral coarse sediment (A5.13).

Some of the biotopes identified are part of the UK Biodiversity Action Plan (BAP) priority habitats 'Subtidal sands and gravels' and 'Sheltered muddy gravels'; some are part of Marine Conservation Zones (MCZs) broadscale habitats (BSHs) 'High energy circalittoral rock' and 'Subtidal mixed sediments' and one is listed on the Oslo and Paris (OSPAR) list of threatened and declining species and habitats.

Selected biotopes may occur in the Habitats Directive Annex I Habitats 'Sandbanks which are slightly covered by sea water all the time' and 'Reefs', however these were not applicable to this study as the survey area does not encompass sandbanks and the results of the video analysis (Volume 2 Habitat Assessment) indicated the absence of geogenic reef at most stations with only two stations having 'Low reef' resemblance.

The biotope 'Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay' (A4.231), and the broad habitat 'Infralittoral rock and other hard substrata (A3)', were recorded by the video analysis and detailed in Volume 2 Habitat Assessment.

Document Arrangement

Volume 1	Dudgeon and Sheringham Shoal Extension Field Report
Volume 2	Sheringham Shoal Extension Habitat Report
Volume 3	Dudgeon Extension Habitat Report
Volume 4	Dudgeon Extension Benthic Characterisation Report
Volume 5	**Sheringham Shoal Extension Benthic Characterisation Report**

Contents

Appendices

Figures in the Main Text

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Abbreviations

2D	Two-dimensional
AFDW	Ash free dry weight
AL1/AL2	Action Level 1/Action Level 2
BGS	British Geological Survey
BIOENV	Biological and Environmental
BS	British Standards
BSI	British Standard Institution
BSL	Below sea level
CBD	Convention on Biological Diversity
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CEMP	Coordinated Environmental Monitoring Programme
CLUSTER	Hierarchical clustering
CM	Central meridian
CPI	Carbon preference index
DEP	Dudgeon Extension Project
EC	Export cable
EcoQO	Ecological Quality Objective
EIA	Environmental Impact Assessment
EMODnet	European Marine Observation and Data Network
EOL	End of line
EPS	European Protected Species
ERL	Effect range low
EU	European Union
EUNIS	European Nature Information System
FA, FB, FC	Faunal sample A, B or C
FGBML	Fugro GB Marine Limited
FOCI	Feature of Conservation Interest
GC-FID	Gas chromatography flame ionisation detection
GC-MS	Gas chromatography mass spectrometry
ICP-MS	Inductively coupled plasma-mass spectrometry
ICP-OES	Inductively coupled plasma-optical emission spectrometry
ISO	International Organisation for Standardisation
JNCC	Joint Nature Conservation Committee
LAT	Lowest Astronomical Tide
MBES	Multibeam echosounder
MCZ	Marine Conservation Zone
MPA	Marine Protected Area
MRV	Minimum reporting value
MSFD	Marine Strategy Framework Directive
MV	Motor vessel
NERC	Natural Environment and Rural Communities
NMBAQC	North East Atlantic National Marine Biological Association Quality Control
nMDS	Non-metric multidimensional scaling
NPD	Naphthalenes, phenanthrenes and dibenzothiophenes
NS	No sample
OSPAR	Oslo and Paris Commission

OWF	Offshore wind farms
PAH	Polycyclic aromatic hydrocarbons
PC	Physico-chemical sample
PCA	Principal component analysis
PRIMERv7	Plymouth Routines in Multivariate Ecological Research version 7
PSA	Particle size analysis
PSD	Sediment particle size distribution
PSDA, PSDB, PSDC	Particle size distribution sample A, B or C
QC	Quality control
RSD	Relative standard deviation
SAC	Special Area of Conservation
SACFOR	Superabundant, Abundant, Common, Frequent, Occasional, Rare
SEA	Strategic Environmental Assessment
SEP	Sheringham Extension Project
SIMPER	Similarity Percentage
SIMPROF	Similarity Profile
SOL	Start of line
SPA	Special Protection Area
SS	Sheringham Shoal
SSS	Side scan sonar
TBT	Tributyltin
THC	Total hydrocarbon content
UCM	Unresolved complex mixture
US EPA 16	United States Environmental Protection Agency
UTC	Coordinated Universal Time
UTM	Universal Transverse Mercator
WGS84	World Geodetic System 1984
WoRMS	World Register of Marine Species

1. Introduction

1.1 General Project Description

Equinor New Energy Limited contracted Fugro to perform benthic characterisation surveys for the extension of Dudgeon and Sheringham Shoal Offshore Windfarms (OWFs). The surveys were conducted onboard the DSV Curtis Marshall during the survey period 10 to 19 August 2020.

The Dudgeon Extension Project (DEP) is located to the north and southeast of the existing Dudgeon OWF, 31 km north of the Norfolk coast. The Sheringham Extension Project (SEP) is located to the north and east of the existing Sheringham Shoal OWF, 17.5 km north of the Norfolk coast. Both DEP and SEP share borders with the existing operational wind farms. Offshore export cables will connect offshore substations, situated in the wind farm areas, to the shore, with landfall at Weybourne on the North Norfolk Coast.

As part of the regulatory planning process, an Environmental Impact Assessment (EIA) is required to identify any potential impacts associated with the proposed developments.

1.2 Scope of Work

The aim of the project was to conduct an ecological survey to inform the EIA. The benthic ecology survey was informed by the outputs of the geophysical surveys to cover the proposed wind farm extensions, interconnector cable corridors and export cable corridors. The ecological survey differentiated between SEP and DEP and this report details the results of the survey of the SEP, which includes the Sheringham Shoal (SS) proposed extension and the export cable (EC) corridor.

The aim of the study was fulfilled through the acquisition of seabed sediment samples which were subsequently analysed for particle size distribution (PSD) and benthic macrofaunal composition and biomass. Selected stations were sampled for chemical analyses which included heavy and trace metals, polychlorinated biphenyls, polycyclic aromatic hydrocarbons (PAHs), total hydrocarbon content (THC), including n-alkanes, pristane and phytane, and organotins. Seabed video was also acquired to investigate the different habitats present in the survey area and identify habitats of potential conservation importance, results of which are detailed in Volume 2 Habitat Assessment.

Appendix A outlines the guidelines for use of this report.

1.3 Environmental Legislation

The relevant environmental legislation applying to the extension projects is detailed in Volume 2 Habitat Assessment Report and summarised in Table 1.1.

Table 1.1: Summary of marine environmental legislation

Legislation	Key aims
International	
Oslo and Paris (OSPAR) Convention	Establish an area of Marine Protected Areas (MPAs)
Convention on Biological Diversity (CBD)	Conservation of biological diversity and sustainable use of its components
European	
Habitats Directive (92/43/EEC)	Conservation of natural habitats and of wild fauna and flora and protection of biodiversity through measures for protection for habitats listed in Annex I and species listed in Annex II of the Directive. Establishment of a European wide network of protected sites, known as Special Areas of Conservation (SACs)
Birds Directive (2009/147/EC)	Establishment of a network of Special Protection Areas (SPAs) for rare or vulnerable birds listed in Annex I of the Directive.
Marine Strategy Framework Directive (MSFD)(2008/56/EC)	Establish a framework for community action in the field of marine environmental policy
United Kingdom	
Marine and Coastal and Access Act 2009	Enables the designation of Marine Conservation Zones (MCZs) in England, Wales and UK offshore waters
Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations')	Transposes the requirements of Habitats Directive into UK law within 12 nautical miles; makes it an offence to kill, injure, capture or disturb European Protected Species (EPS)
Offshore Marine Conservation (Natural Habitats & c.) Regulations 2017	Transposes the requirements of Habitats Directive into UK law outside 12 nautical miles; makes it an offence to kill, injure, capture or disturb EPS
Natural Environment and Rural Communities Act 2006 (NERC)	Requires the relevant Secretary of State to compile a list of habitats and species of principal importance for the conservation of biodiversity

1.4 Regional Habitats, Species and Marine Protected Areas

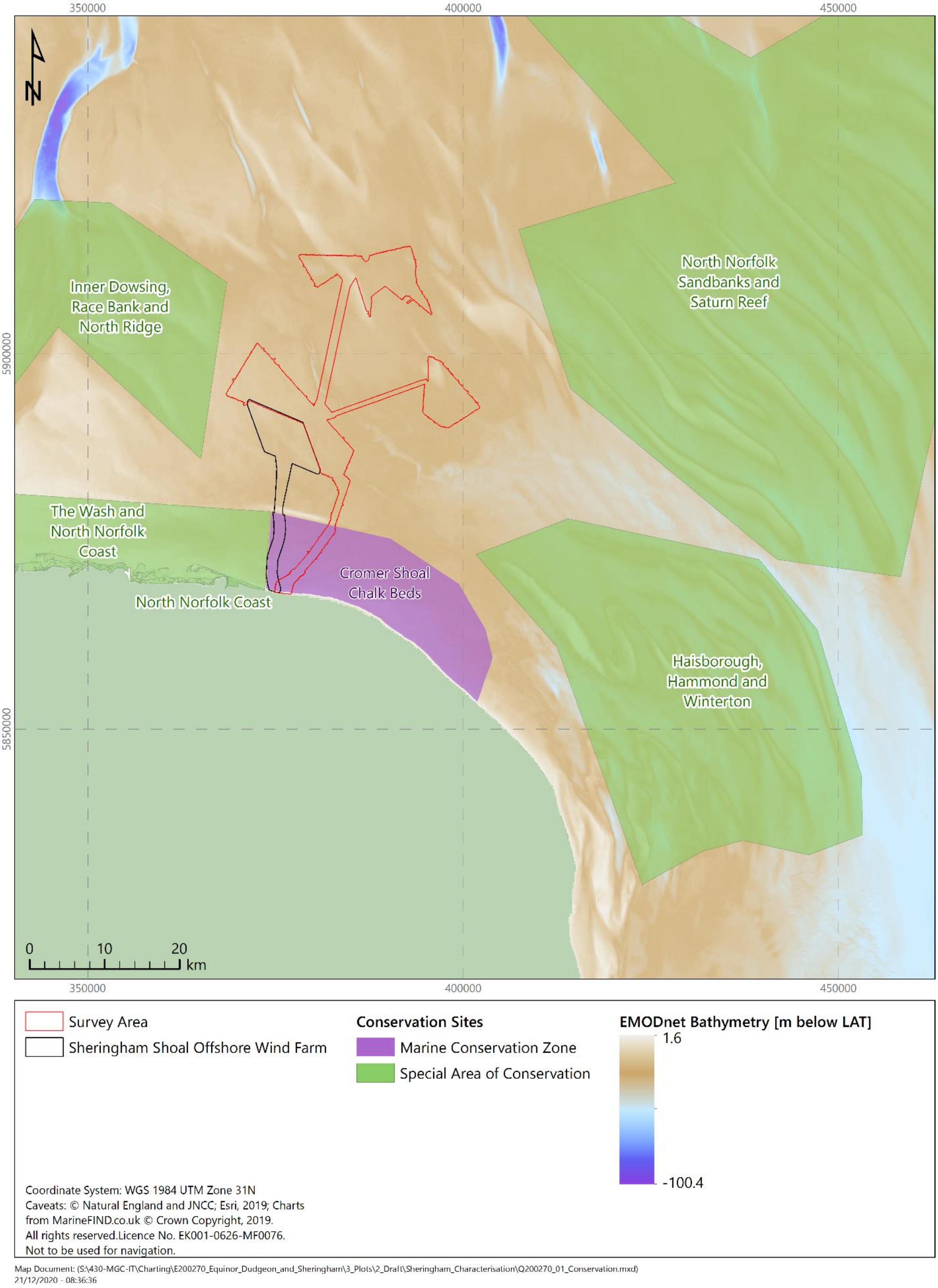
Background regional information on protected benthic habitats and species is detailed in Volume 2 Habitat Assessment Report. Figure 1.1 presents the European Nature Information System (EUNIS) habitats reported to occur in the regional context of the SEP, based on the pan-European broad-scale seabed habitat map EUSeaMap (European Marine Observation and Data Network [EMODnet], 2020).

Table 1.2 presents a summary of the protected areas within a 30 km radius of the proposed developments.

Table 1.2: Summary of nearby marine protected areas, Sheringham Extension Project

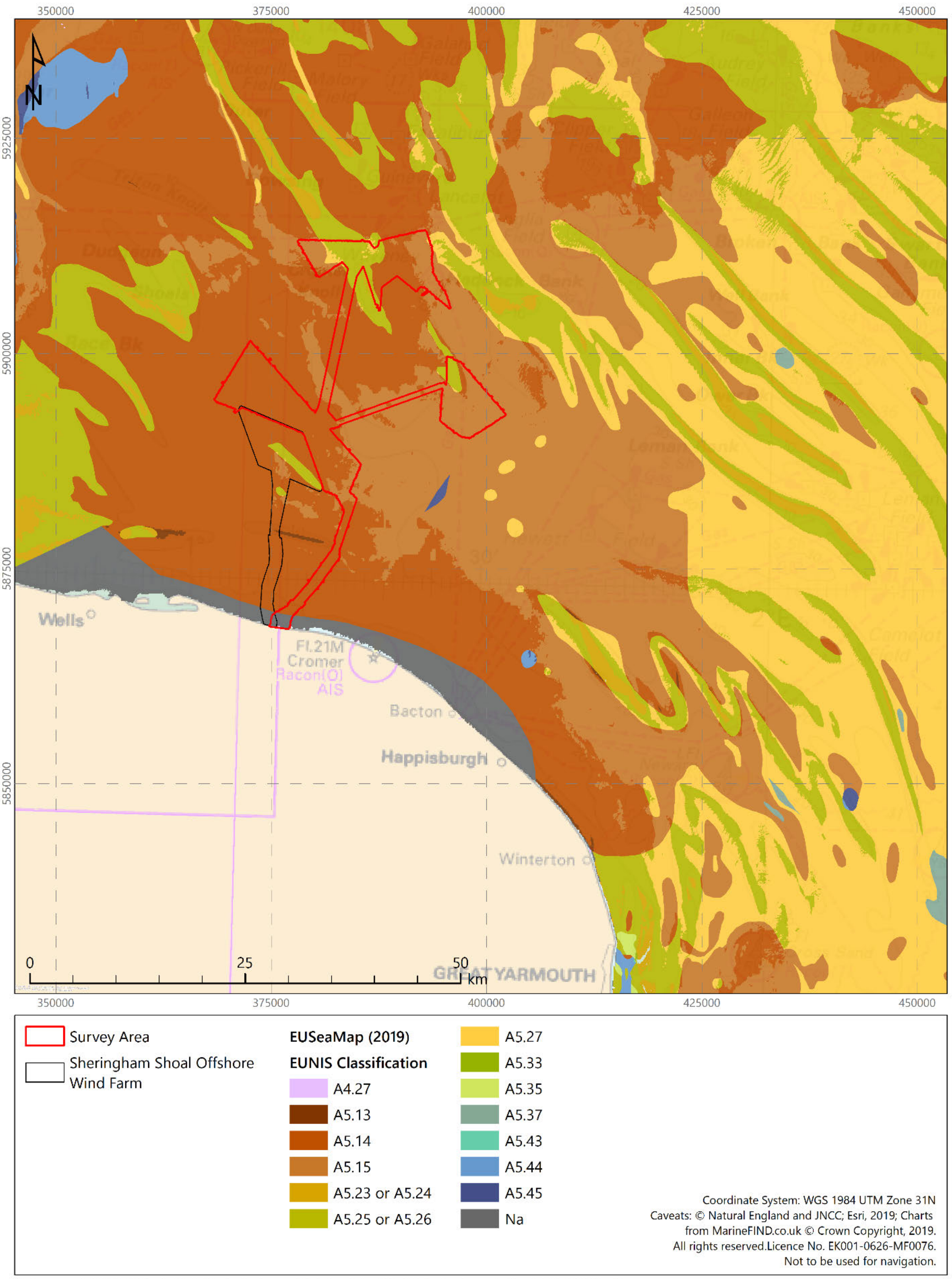
Protected Area	Status	Distance* [km]	Direction*	Protected Features
The Wash and North Norfolk Coast	SAC	1.5	SW	Habitats Directive Annex I Habitats† ■ Sandbanks which are slightly covered by sea water all the time (1110) ■ Mudflats and sandflats not covered by seawater at low tide (1140) ■ Large shallow inlets and bays (1160) ■ Reefs (1170)
Inner Dowsing Race Bank North Ridge	SAC	5	W	Habitats Directive Annex I Habitats ■ Reefs (1170) ■ Sandbanks which are slightly covered by sea water all the time (1100)
Cromer Shoal Chalk Beds	MCZ	6.7 from proposed extension; overlapped by nearshore section of export cable	S	Broadscale habitats ■ Moderate energy infralittoral rock ■ High energy infralittoral rock ■ Moderate energy circalittoral rock ■ High energy circalittoral rock ■ Subtidal coarse sediment ■ Subtidal mixed sediments ■ Subtidal sand UK BAP Priority Habitat and MCZ Habitat FOCI ■ Subtidal chalk ■ Peat and clay exposures
Haisborough, Hammond and Winterton	SAC	18.3	SE	Habitats Directive Annex I Habitats ■ Sandbanks which are slightly covered by sea water all the time (1110) ■ Reefs (1170)
North Norfolk Sandbanks and Saturn reefs	SAC	29.6	NE	Habitats Directive Annex I Habitats ■ Sandbanks which are slightly covered by sea water all the time (1110) ■ Reefs (1170)

Notes
EU =European Union
EUNIS = European Nature Information System
MCZ = Marine Conservation Zone
SAC = Special Area of Conservation
FOCI = Feature of Conservation Interest
UK BAP = UK Biodiversity Action Plan
* = Distance and direction from the nearest point of the Sheringham Shoal Extension survey area
† = Excludes saltmarshes habitats



Notes
EMODnet = European Marine Observation and Data Network
LAT = Lowest Astronomical Tide

Figure 1.1: Oslo and Paris (OSPAR) marine protected areas relevant to the survey area, Sheringham Extension Project



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Notes
EUSeaMap = European Union Sea Map
EUNIS = European Marine Observation and Data Network

Figure 1.2: EUNIS habitats reported to occur in regional context of survey area, Sheringham Extension Project

1.5 Environmental Quality Standards for Sediment Chemical Concentrations

Applicable data have been compared to the Oslo and Paris Commission (OSPAR) effects range low (ERL) concentrations (OSPAR, 2014). The ERL thresholds represent the low point (10th percentile), on a continuum of chemical concentrations over which adverse biological effects have been observed from ecotoxicological studies. The ERL thresholds are therefore indicative of concentrations below which adverse effects rarely occur (OSPAR, 2009a; 2014).

The second Strategic Environmental Assessment of the Mature Areas of the Offshore North Sea (SEA2) was conducted in 2001. The assessment focuses on “mature” areas, those that have been licenced since the North Sea was first recognised as an oil and gas region, have been extensively explored and have numerous existing fields with production/export infrastructure. The assessment involved a series a seabed surveys to describe the physical and chemical status of the sediments and identify the existing levels of contamination and their sources, as the area has already been subject to disturbance of the sediments due to oil and gas exploration and production. Minimum, maximum and mean concentrations estimated from Area 1 (Sandbanks) provide spatially comparable background concentrations for hydrocarbon data (Environment Resource Technology (Scotland) Limited [ERT], 2003).

The Centre for Environment, Fisheries and Aquaculture Science (Cefas) Guideline Action Levels for the disposal of dredged material are non-statutory guidelines for assessment of disposal of dredged materials to sea, against which reported contaminants concentrations were compared to. In general, concentrations below Cefas Action Level 1 (AL1) are of no concern, whilst concentrations above Action Level 2 (AL2) indicate that dredged material is unsuitable for disposal at sea. Values between AL1 and AL2 may require further investigatory work prior to a disposal decision (Cefas, 2003).

The potential effect of organotin concentrations, specifically tributyltin (TBT) concentrations, on benthic fauna is assessed on a six point scale (A to F) for TBT-specific biological effects (specifically imposex) in dogwhelks and other gastropods. Categories A and B indicate that the Ecological Quality Objectives (EcoQOs) are met, with increasing categories indicating a higher likelihood of adverse effects on the reproductive capability of sensitive key species. As TBT is the most toxic organotin compound to marine fauna, this considers the worst-case scenario against which conservative judgment can be made (OSPAR, 2009b).

1.6 Coordinate Reference System

All coordinates detailed in this report are referenced to World Geodetic System 1984 (WGS84) Universal Transverse Mercator (UTM) projection Zone 31N central meridian 3º East (CM 3° E). Table 1.3 provides detailed geodetic and projection parameters.

Table 1.3: Project geodetic and projection parameters, Sheringham Extension Project

Global Positioning System Geodetic Parameters	
Datum:	World Geodetic System 1984 (WGS84)
Spheroid:	World Geodetic System 1984
Semi major axis:	a = 6 378 137.000 m
Reciprocal flattening:	1/f = 298.257 223 563
Project Projection Parameters	
Grid Projection:	Universal Transverse Mercator (UTM)
UTM Zone:	31N
Central Meridian:	3° 00′ 00″ East
Latitude of Origin:	00° 00′ 00″ North
False Easting:	500 000 m
False Northing:	0 m
Scale factor on Central Meridian:	0.9996
Units:	metre

2. Survey Strategy

The benthic sampling plan was predefined by the Client and based on an analysis of multibeam echosounder (MBES) and side scan sonar (SSS) data derived from geophysical surveys of the EC corridor (September to November 2019) and the extension arrays and interconnector corridors (April to May 2020). The seabed was classified based on depth, rugosity (derived from bathymetry data) and SSS return strength.

A total of 26 environmental sampling stations was proposed within the SS proposed extension area, with acquisition of video and stills photography at each station. At 17 of the sampling stations, single grab samples for macrofaunal and PSD analysis were proposed, including 2 stations to be sampled also for chemistry analysis.

A total of 25 environmental sampling stations was proposed within the EC corridor, with acquisition of video and stills photography at each station. At 18 of the environmental sampling stations, single grab samples for macrofaunal and PSD analysis were proposed, including 3 stations to be sampled also for chemistry analysis. Triplicate samples for faunal and PSD analysis were proposed at 7 stations along the EC corridor, to ground-truth areas of small scale variability identified by the geophysical data and thus validate the computer algorithm underpinning the geophysical data output.

Table 2.1 presents details the proposed survey locations and Figure 2.1 presents the proposed survey array.

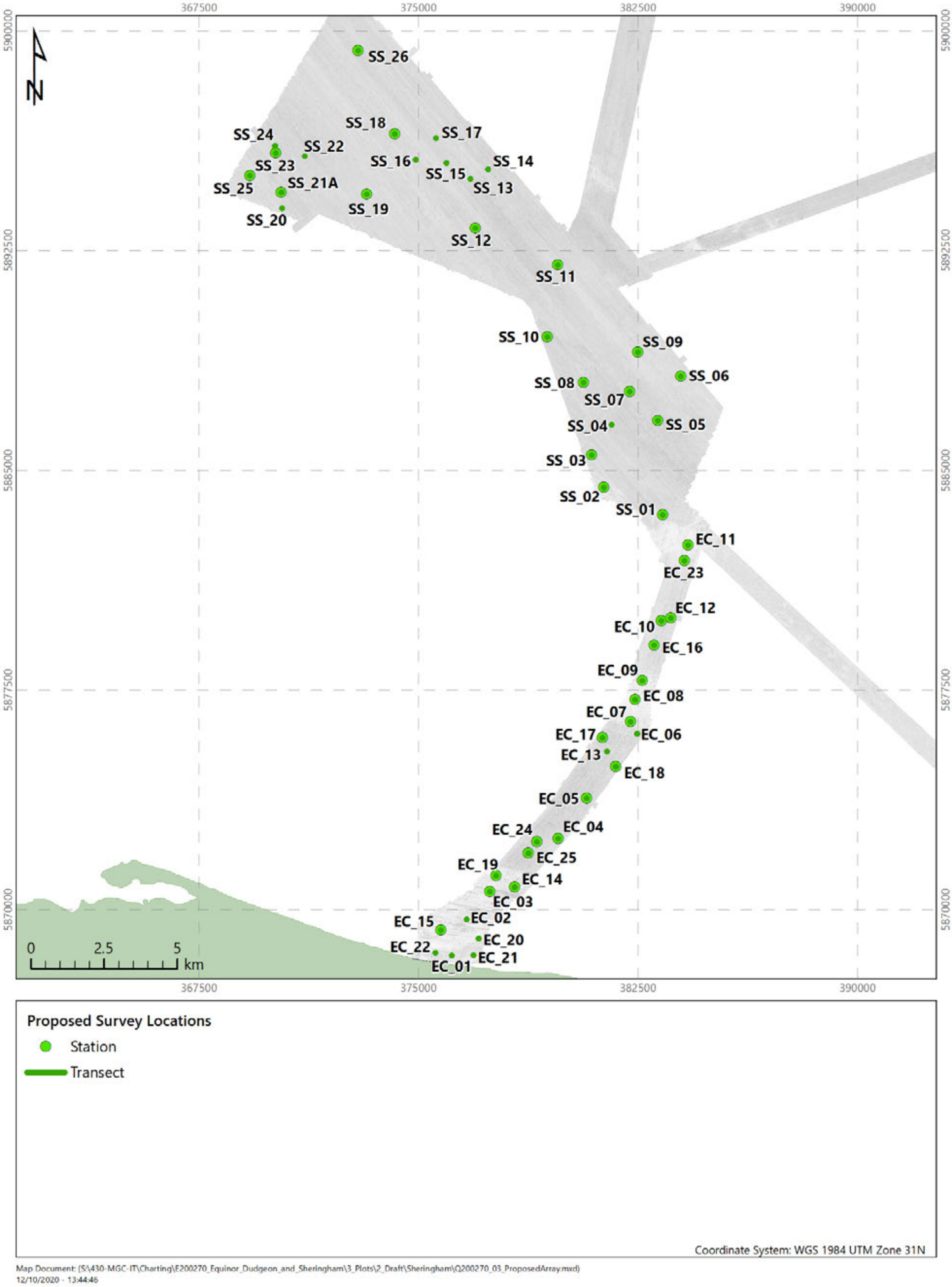
Table 2.1: Proposed sampling stations, Sheringham Extension Project

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]				
Station	**Easting**	**Northing**	**Rationale**	**Data and Sample Acquisition**
Sheringham Shoal (SS) Proposed Extension				
SS_01	383 335.3	5 883 478.9	Variable seabed with little showing on SSS	Video, stills, FA, PSDA
SS_02	381 333.6	5 884 416.0	Sand waves and ripples	Video, stills, FA, PSDA
SS_03	380 912.9	5 885 511.5	Low variability seabed	Video, stills, FA, PSDA, PC
SS_04	381 597.3	5 886 556.1	Low variability seabed with possible *Sabellaria spinulosa*	Video, stills
SS_05	383 166.3	5 886 689.7	Targeting seabed feature, small area of rippled seabed	Video, stills, FA, PSDA
SS_06	383 951.8	5 888 205.5	Targeting seabed feature, sand wave	Video, stills, FA, PSDA
SS_07	382 209.7	5 887 684.8	Variable seabed with little showing on SSS and previously sampled	Video, stills, FA, PSDA

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]				
Station	Easting	Northing	Rationale	Data and Sample Acquisition
SS_08	380 636.8	5 887 985.0	Targeting seabed feature, sand wave	Video, stills, FA, PSDA
SS_09	382 485.9	5 889 029.6	Low variability seabed close to wreck	Video, stills, FA, PSDA
SS_10	379 388.0	5 889 557.9	Low variability seabed previously sampled	Video, stills, FA, PSDA
SS_11	379 743.5	5 892 004.3	Low variability seabed	Video, stills, FA, PSDA
SS_12	376 938.5	5 893 256.2	Targeting seabed feature, patchy and variable	Video, stills, FA, PSDA
SS_13	376 770.4	5 894 949.2	Potential *Sabellaria spinulosa* area with existing records	Video, stills
SS_14	377 370.8	5 895 273.4	Low variability, previously sampled and adjacent to recorded *Sabellaria spinulosa*	Video, stills
SS_15	375 953.9	5 895 489.5	Low variability, previously sampled and recorded *Sabellaria spinulosa*	Video, stills
SS_16	374 897.3	5 895 597.6	Low variability, previously sampled and recorded *Sabellaria spinulosa*	Video, stills
SS_17	375 593.7	5 896 342.1	Low variability, previously sampled and recorded *Sabellaria spinulosa*	Video, stills
SS_18	374 188.9	5 896 486.1	Low variability seabed	Video, stills, FA, PSDA, PC
SS_19	373 222.9	5 894 426.3	Low variability seabed	Video, stills, FA, PSDA
SS_20	370 334.5	5 893 940.6	Targeting seabed feature, possible *Sabellaria spinulosa* (previous sample showed *Sabellaria spinulosa*)	Video, stills
SS_21	370 310.5	5 894 480.9	Targeting seabed feature	Video, stills, FA, PSDA
SS_22	371 103.0	5 895 717.7	Low variability seabed, adjacent to linear feature and to recorded *Sabellaria spinulosa*	Video, stills
SS_23	370 118.4	5 895 825.7	Targeting seabed feature, possible *Sabellaria spinulosa*	Video, stills, FA, PSDA
SS_24	370 094.4	5 896 077.9	Targeting seabed feature, possible *Sabellaria spinulosa*	Video, stills
SS_25	369 229.9	5 895 057.3	Low variability seabed, adjacent to linear feature	Video, stills, FA, PSDA
SS_26	372 927.8	5 899 325.9	Low variability seabed	Video, stills, FA, PSDA
Export Cable (EC) Corridor				
EC_01	376 137.5	5 868 430.4	Potential area for chalk reef; no existing records	Video, stills
EC_02	376 639.3	5 869 674.2	Targeting variable area; adjacent samples indicated cobbles	Video, stills

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]				
Station	**Easting**	**Northing**	**Rationale**	**Data and Sample Acquisition**
EC_03	378 283.7	5 870 765.3	Variable seabed, at transition to a more consistent area	Video, stills, FA, FB, FC, PSDA, PSDB, PSDC
EC_04	379 042.9	5 872 313.8	Low variability seabed	Video, stills, FA, PSDA, PC
EC_05	380 734.6	5 873 797.0	Low variability seabed, adjacent samples of mixed sediment	Video, stills, FA, PSDA
EC_06	382 464.5	5 876 008.3	Existing sample location, mixed sediments and *Sabellaria spinulosa*	Video, stills
EC_07	382 237.7	5 876 411.4	Targeting an area with multiple seabed types and an edge described as side of shoal	Video, stills, FA, FB, FC, PSDA, PSDB, PSDC, PC
EC_08	382 390.2	5 877 158.9	Targeting feature, top of shoal	Video, stills, FA, PSDA
EC_09	382 642.0	5 877 808.2	Targeting an area with multiple seabed types and an edge described as side of shoal	Video, stills, FA, FB, FC, PSDA, PSDB, PSDC
EC_10	383 290.2	5 879 858.9	Low variability seabed adjacent to feature	Video, stills, FA, PSDA
EC_11	384 200.7	5 882 432.2	Consistent area of seabed at junction of cable corridors	Video, stills, FA, PSDA
EC_12	383 617.8	5 879 951.0	Targeting feature	Video, stills, FA, PSDA
EC_13	381 442.7	5 875 396.8	Targeting linear feature	Video, stills
EC_14	377 437.7	5 870 611.4	Variable seabed; yet adjacent samples suggest sand	Video, stills, FA, FB, FC, PSDA, PSDB, PSDC
EC_15	375 756.3	5 869 290.6	Consistent seabed with no existing samples	Video, stills, FA, PSDA, PC
EC_16	383 039.3	5 879 023.8	Low variability seabed	Video, stills, FA, PSDA
EC_17	381 287.8	5 875 866.8	Low variability seabed with adjacent samples of mixed sediment	Video, stills, FA, PSDA
EC_18	381 737.9	5 874 884.4	Low variability seabed with adjacent samples of coarse sediment	Video, stills, FA, PSDA
EC_19	377 640.8	5 871 151.5	Targeting variable area and an edge/transition is indicted	Video, stills, FA, FB, FC, PSDA, PSDB, PSDC
EC_20	377 051.9	5 869 015.0	Targeting variable area with cobbles indicated from previous samples	Video, stills
EC_21	376 876.0	5 868 439.3	Targeting variable area with reef indicated from previous samples	Video, stills
EC_22	375 573.2	5 868 523.4	Targeting variable area with reef indicated from previous samples	Video, stills

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]				
Station	Easting	Northing	Rationale	Data and Sample Acquisition
EC_23	384 081.8	5 881 917.6	Targeting variable area and an edge/transition is indicted	Video, stills, FA, FB, FC, PSDA, PSDB, PSDC
EC_24	379 764.0	5 872 417.2	Assess area of mixed sediment from MCZ map	Video, stills, FA, FB, FC, PSDA, PSDB, PSDC
EC_25	378 753.7	5 871 926.7	Assess area of mixed sediment from MCZ map	Video, stills, FA, PSDA
Notes MCZ = Marine conservation zone PC = Chemistry sample FA/FB/FC = Faunal sample A, B or C PSDA/PSDB/PSDC = Particle size distribution sample A, B or C SSS = Side scan sonar				



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 2.1: Proposed survey locations overlaid on a side scan sonar mosaic, Sheringham Extension Project

3. Methods

3.1 Survey Methods

The following subsection provide summaries of survey methods, further detailed in Appendix B.1.

3.1.1 Seabed Photography

Seabed photography was acquired using a Subsea Technology and Rentals Limited SeaSpyder Telemetry camera system mounted within a purpose built camera frame, complete with a Mini IP 720-1080p high definition video camera, a Canon EOS 200D DSLR high resolution stills camera, a separate high power camera strobe and four SeaLight LED-1-DC lamps. Four lasers were set up 18.5 cm by 16.5 cm (width and height, respectively) to provide a scale. Manual position fixes were recorded for each photograph captured and positional data were overlain on the video, along with date, time, project and station information.

3.1.2 Sediment Grab Sampling

Seabed fauna and PSD samples were acquired using a 0.1 m^2 Hamon grab. Chemistry samples were acquired with a 0.1 m^2 Day grab, except for samples acquired in the Cromer Shoal Chalk Beds MCZ, where a 0.04 m^2 Shipek grab was used to minimise environmental disturbance.

3.2 Laboratory Methods

Brief analytical methodologies are described in the following subsections. Further descriptions of the analytical methodologies are detailed in Appendix B.2.

3.2.1 Sediment Characterisation

3.2.1.1 Particle Size Distribution

Sediment samples were analysed at Fugro sediment laboratory in accordance with Fugro in-house methods based on British Standards (BS) BS1377: Part 1; 2016 and part 2; 1990 and the North East Atlantic National Marine Biological Association Quality Control (NMBAQC) scheme (Mason, 2016). Analysis was by dry sieving (63000 µm to 1000 µm), and laser diffraction (< 1000 µm to < 0.98 µm). Data were expressed at 0.5 phi intervals.

3.2.2 Sediment Hydrocarbons

The sediment samples were analysed at Fugro chemistry laboratory for hydrocarbon content including total hydrocarbon content (THC), total n-alkanes (nC_{12} to nC_{36}) and polycyclic aromatic hydrocarbons (PAHs), specifically the United States Environmental Protection Agency's 16 priority PAH pollutants (US EPA 16 PAHs) and alkylated PAHs.

Samples were extracted by ultrasonication of wet sediments with mixed solvents. The sample extracts were then cleaned-up using absorption column chromatography. The extracts were analysed for THC, unresolved complex mixture (UCM), individual and total n-alkanes (nC_{12} to nC_{36}) and the subsequent carbon preference index (CPI) using gas chromatography-flame ionisation detection (GC-FID). Aromatic hydrocarbons were analysed by gas chromatography-mass spectrometry (GC-MS).

3.2.3 Sediment Metals

The sediment samples were analysed using an aqua regia digest technique. This provides a strong partial digest, releasing into solution metals associated with the fines fraction within the sediments (but does not extract all trace elements associated with the coarse fraction). As macrofaunal communities can exhibit a preference for finer sediments, the concentrations of metals released by an aqua regia digest are typically considered indicative of those influencing biological interactions.

The sediment samples underwent an aqua regia digest followed by multi-element analysis by inductively coupled plasma-mass spectrometry (ICP-MS) (arsenic, cadmium, chromium, copper, lead, lithium, mercury, nickel and zinc) or by inductively coupled plasma-optical emission spectrometry (ICP-OES) (aluminium, barium and iron).

3.2.4 Sediment Organotins

Sediment organotins were determined using Fugro's inhouse methodology.

Sediment samples were thawed, homogenised and accurately weighed into a 125 mL conical flask. A solution containing an appropriate amount of the internal standard (containing monoheptyltin, diheptyltin and tripropyltin) was added to each sample. Extraction solvent (acetic acid:methanol:water (1:1:1, v:v:v)) was added and the sample mixed again. The flasks were then capped with solvent cleaned aluminium foil and ultrasonicated for 30 minutes. The slurry was transferred to a centrifuge tube and centrifuged to separate the liquid and solid phases. The ultrasonication and centrifugation steps were repeated one further time. The two extraction solutions were combined, mixed and the pH adjusted to approximately 4.5 using a sodium hydroxide solution. The extract solution was derivatised using 5 % (w/v) sodium tetraethylborate in water solution, the solution left for 30 minutes before 5 mL of hexane was added. The solutions were mixed, left to separate and the hexane layer transferred to a 12 mL vial. The derivatisation step was repeated and a further 5 mL of hexane added. The hexane layers were combined and blown down to 1 mL.

Sample extracts are cleaned up by column chromatography using 3 % de-activated silica. The silica gel used was 70 mesh to 230 mesh, muffled at 400 °C for at least 4 hours to remove impurities and activate it then stored at 200 °C. Prior to use, silica is deactivated by the addition of distilled water. The sediment extract was added to the silica gel column, containing 5 g of adsorbent and eluted with 30 mL of hexane/dichloromethane (4:1, v:v). The eluent was reduced in volume using the evaporator to approximately 2 mL before being further reduced under a gentle stream of nitrogen to an appropriate volume approximately 1 g of activated copper powder (for removal of free sulphur) before being concentrated to 0.5 mL for analysis.

Sample extracts are analysed by GC-MS using selected ion monitoring for monobutyltin, dibutyltin, and tributyltin.

3.2.5 Sediment Macrofauna

Samples were analysed at Fugro benthic laboratory in accordance with Fugro in house quality assured procedures, which are consistent with the requirements of the NMBAQC scheme (Worsfold et al., 2010) and the relevant International Organisation for Standardisation (ISO) standards. Samples were sieved over a 1.0 mm mesh sieve and taxa were identified to the lowest possible taxonomic level. Infaunal and solitary epifauna were enumerated whereas sessile colonial epifauna was recorded as present (P).

3.2.6 Macrofaunal Biomass Analysis

Biomass was undertaken at phylum level for infaunal invertebrates from grab samples using the blotted wet weigh method; biomass was not calculated for epifauna.

3.3 Data Analysis

Summary statistics (minimum, maximum, median, mean, standard deviation) for all reported datasets were derived in Excel.

3.3.1 Sediment Particle Size Distribution Statistics

Table 3.1 summarises the sediment PSD statistics calculated using Gradistat V8 (Blott, 2010). Statistics are based on the Folk and Ward (1957) method.

The Wentworth (1922) sediment classification is based on mean sediment particle size; the Folk (BGS modified) classification (Long, 2006) is based on percentages of main sediment fractions (fines, sand and gravel). Results are reported in micron (μm) and phi (ϕ) measurement units. Phi is a logarithmic scale which allows particle size data to be expressed in unit of equal value for graphical plotting and statistical calculations.

Table 3.1: Sediment particle size distribution statistics

Statistic	Definition and Descriptor
Mean	The arithmetic mean of all the sediment particles in a sample; expressed in metric and phi units
Median	A measure of central tendency, that is the midpoint of the grain size distribution where half of the sediment grains resides above this point and half below
Mode	The peak of the frequency distribution, that is the particle size (or size range) most commonly found in the distribution
Modality	A measure of the number of peaks in the frequency distribution
Sorting	A measure of the grain size range and magnitude of their spread around the mean, presented as a coefficient and descriptor (as a range of values)
Skewness	A measure of the degree of symmetry, presented as a coefficient and descriptor (as a range of values)

3.3.2 Sediment Macrofaunal Data Rationalisation

Prior to analysis, the macrofaunal dataset was rationalised. To avoid spurious enhancement of the species list, some taxa were merged with a higher corresponding taxon identified. Damaged taxa were removed, as well as juvenile species, as they represent an ephemeral stage of the macrofaunal community and are, therefore, not representative of prevailing benthic conditions. Epifauna included solitary and sessile colonial taxa, the latter recorded as present (P).

3.3.3 Sediment Macrofaunal Univariate Analysis

Table 3.2 summarises the univariate statistics derived from Plymouth Routines in Multivariate Ecological Research (PRIMER) version 7 (v7).

Table 3.2: Macrofaunal univariate statistics

Statistic	Definition
Number of taxa (S)	Count of taxa
Abundance (N)	Count of individuals
Margalef's index of richness (d)	A measure of the number of species present for a given number of individuals (less dependent on sampling size than S and N)
Shannon-Wiener index of diversity ($H'\log_2$)	A measure of the number of taxa in a sample and the distribution of abundance across these taxa; results were assessed in line with the threshold values in Dauvin et al., (2012): ▪ High diversity ($H'\log_2 > 4.00$); ▪ Good diversity ($3.00 < H'\log_2 < 4.00$); ▪ Moderate diversity ($2.00 < H'\log_2 < 3.00$); ▪ Poor diversity ($1.00 < H'\log_2 < 2.00$); ▪ Bad diversity ($H'\log_2 < 1.00$).
Pielou's index of evenness (J')	A measure of how evenly distributed the individuals are among the different species
Simpson's index of dominance (λ)	A measure of dominance whereby its largest value corresponds to assemblages the total abundance of which is dominated by one or very few of the taxa present

3.3.4 Macrofaunal Biomass Analysis

Biomass was determined for infaunal invertebrates from grab samples to Phylum level; epifauna was not biomassed.

The macrofaunal biomass dataset (Appendix F.2) was converted to ash free dry weight (AFDW) by applying the appropriate standard corrections which provide the equivalent dry weight biomass as outlined in Eleftheriou and Basford (1989). Table 3.3 presents the corrections applied.

Table 3.3: Macrofaunal standard biomass corrections by phyla

Phyla	Standard Biomass Correction [%]
Annelida	15.5
Arthropoda	22.5
Mollusca	8.5
Echinodermata	8.0
Other Phyla	15.5

Notes
Standard biomass corrections to convert blotted wet weight to ash free dry weight, from Eleftheriou & Basford (1989)

3.3.5 Multivariate Analysis

Table 3.4 summarises the multivariate analysis undertaken for macrofaunal and sediment datasets in PRIMER v7.

Data transformation was undertaken prior to multivariate analysis to reduce skewness of data and allow optimal performance of multivariate analysis.

Table 3.4: Multivariate analysis

Analysis	Definition
CLUSTER	Hierarchical clustering analysis 'Cluster' to group samples based on the nearest neighbour sorting of a matrix of sample similarities using Bray Curtis similarity (for biological datasets) or Euclidean distance measure (for environmental datasets)
nMDS	Non-metric multi-dimensional scaling (nMDS) ordination of Bray Curtis and Euclidean Distance similarity/distance matrices
SIMPROF	Similarity profiling ('SIMPROF' algorithm), to identify statistically significant clusters; in ecological terms the statistical relevance of similarity profile testing is assessed in line with the recommendation of Clarke et al. (2008), thus defining coarser grouping can be appropriate if the resulting groups are supersets of the similarity profile clusters
SIMPER	Similarity percentage analysis ('SIMPER' algorithm), to gauge the distinctiveness of each of the multivariate groups
PCA	Principal component analysis (PCA), to identify spatial patterns and relationships between variables
BIOENV	Biological and environmental testing ('BIOENV' algorithm), to indicate relationships between physical and biological variables

3.3.6 Seabed Habitats and Biotopes Classification

Habitats and biotopes within the survey area were classified in line with the hierarchical European Nature Information System (EUNIS) habitat classification (EUNIS, 2019), which has compiled criteria for habitat identification across Europe into a single database. Table 3.5 summarises the EUNIS hierarchy, with an example of the coding system. Habitats and biotopes were classified by integrating the results of the video and still image analysis, detailed in Volume 2 Habitat Assessment Report, and the results of the grab sampling, detailed in this report. Habitats and biotopes were subsequently assessed for their ecological and conservation importance drawing upon the current marine nature conservation legislation. The correlation table prepared by the Joint Nature Conservation Committee (JNCC) translates between the EUNIS marine habitat classification and other marine habitats listed for conservation importance (JNCC, 2018) and was used to assess the biotopes importance.

Table 3.5: EUNIS (2019) biotope classification hierarchy example

Level	Example Classification Name	Example Classification Code
1. Environment	Marine habitats	A
2. Broad habitat types	Sublittoral sediments	A5
3. Main habitats	Sublittoral sand	A5.2
4. Biotope complexes	Infralittoral fine sand	A5.23
5. Biotopes	*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand	A5.233

4. Results

4.1 Field Operations

Results of the seabed photography are presented in detail in the Habitat Assessment report (Volume 2 Habitat Assessment Report).

4.1.1 Seabed Photography

Table 4.1 presents the completed video transects. Photographic stills and video were successfully acquired at all proposed stations, except stations EC_01, EC_20, EC_21 and EC_22, along the EC corridor, which were abandoned due to the presence of fishing gear. An additional camera station, namely EC_26 was undertaken after approval from the client representative.

Table 4.1: Completed video transects, Sheringham Extension Project

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]					
Station		Easting	Northing	Length [m]	Data Acquisition
Sheringham Shoal (SS) Proposed Extension					
SS_01	SOL	383 362.5	5 883 468.8	57	1 min 37 sec 7 stills
	EOL	383 318.6	5 883 504.8		
SS_02	SOL	381 343.9	5 884 387.1	57	1 min 19 sec 5 stills
	EOL	381 354.7	5 884 442.8		
SS_03	SOL	380 932.9	5 885 483.6	61	1 min 54 sec 8 stills
	EOL	380 894.8	5 885 530.6		
SS_04	SOL	381 611.3	5 886 520.5	68	1 min 36 sec 6 stills
	EOL	381 587.2	5 886 584.6		
SS_05	SOL	383 164.6	5 886 657.5	64	1 min 21 sec 7 stills
	EOL	383 163.0	5 886 721.3		
SS_06	SOL	383 926.3	5 888 184.6	63	1 min 41 sec 7 stills
	EOL	383 983.0	5 888 211.6		
SS_07	SOL	382 206.0	5 887 662.6	58	1 min 15 sec 6 stills
	EOL	382 202.3	5 887 720.4		
SS_08	SOL	380 612.9	5 887 975.4	54	1 min 32 sec 7 stills
	EOL	380 663.8	5 887 993.5		
SS_09	SOL	382 462.6	5 889 024.1	49	0 min 55 sec 6 stills
	EOL	382 506.2	5 889 002.2		
SS_10	SOL	379 356.3	5 889 546.3	64	1 min 15 sec 6 stills
	EOL	379 419.2	5 889 558.6		

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]					
Station		Easting	Northing	Length [m]	Data Acquisition
SS_11	SOL	379 717.0	5 891 968.6	73	2 min 10 sec 11 stills
	EOL	379 763.3	5 892 024.8		
SS_12	SOL	376 921.2	5 893 258.3	44	1 min 16 sec 8 stills
	EOL	376 962.1	5 893 273.5		
SS_13	SOL	376 737.3	5 894 939.0	56	1 min 24 sec 8 stills
	EOL	376 782.0	5 894 971.9		
SS_14	SOL	377 357.1	5 895 267.6	30	1 min 9 sec 6 stills
	EOL	377 386.0	5 895 260.5		
SS_15	SOL	375 952.2	5 895 448.5	62	1 min 52 sec 8 stills
	EOL	375 937.1	5 895 508.6		
SS_16	SOL	374 888.4	5 895 576.2	39	1 min 32 sec 9 stills
	EOL	374 890.1	5 895 615.5		
SS_17	SOL	375 572.4	5 896 318.2	55	1 min 30 sec 9 stills
	EOL	375 609.9	5 896 358.1		
SS_18	SOL	374 197.5	5 896 457.9	60	1 min 15 sec 8 stills
	EOL	374 177.9	5 896 514.7		
SS_19	SOL	373 219.6	5 894 394.3	47	1 min 2 sec 8 stills
	EOL	373 208.3	5 894 440.4		
SS_20	SOL	370 338.6	5 893 917.1	46	1 min 38 sec 8 stills
	EOL	370 328.7	5 893 962.2		
SS_21A	SOL	370 325.3	5 894 438.1	72	1 min 49 sec 10 stills
	EOL	370 314.8	5 894 509.0		
SS_22	SOL	371 129.5	5 895 697.4	39	1 min 25 sec 9 stills
	EOL	371 107.5	5 895 729.5		
SS_23	SOL	370 141.6	5 895 802.2	57	1 min 13 sec 8 stills
	EOL	370 097.4	5 895 838.5		
SS_24	SOL	370 115.3	5 896 034.5	65	1 min 20 sec 7 stills
	EOL	370 093.0	5 896 095.2		
SS_25	SOL	369 260.3	5 895 022.6	70	1 min 56 sec 8 stills
	EOL	369 205.9	5 895 066.5		
SS_26	SOL	372 944.7	5 899 297.4	66	1 min 26 sec 8 stills
	EOL	372 908.0	5 899 352.3		
Export Cable (EC) Corridor					
EC_02	SOL	376 649.2	5 869 674.6	41	1 min 18 sec 10 stills
	EOL	376 612.9	5 869 693.2		

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]					
Station		Easting	Northing	Length [m]	Data Acquisition
EC_03	SOL	378 242.7	5 870 764.4	61	2 min 32 sec 13 stills
	EOL	378 303.8	5 870 767.3		
EC_04	SOL	379 070.5	5 872 311.4	57	1 min 38 sec 6 stills
	EOL	379 014.6	5 872 302.9		
EC_05	SOL	380 755.2	5 873 777.7	41	2 min 04 sec 9 stills
	EOL	380 751.2	5 873 818.8		
EC_06	SOL	382 440.8	5 876 011.3	56	2 min 27 sec 7 stills
	EOL	382 496.4	5 876 004.7		
EC_07	SOL	382 215.1	5 876 420.1	59	2 min 07 sec 10 stills
	EOL	382 269.4	5 876 397.2		
EC_08	SOL	382 373.5	5 877 156.6	47	1 min 39 sec 8 stills
	EOL	382 419.7	5 877 163.2		
EC_09	SOL	382 617.8	5 877 813.4	22	1 min 1 sec 5 stills
	EOL	382 628.7	5 877 832.2		
EC_10	SOL	383 244.1	5 879 866.8	71	2 min 25 sec 10 stills
	EOL	383 312.4	5 879 847.4		
EC_11	SOL	384 209.5	5 882 423.1	42	1 min 19 sec 6 stills
	EOL	384 172.0	5 882 441.6		
EC_12	SOL	383 599.1	5 879 948.6	45	1 min 17 sec 11 stills
	EOL	383 644.1	5 879 953.6		
EC_13	SOL	381 471.7	5 875 397.7	59	2 min 24 sec 9 stills
	EOL	381 413.2	5 875 401.8		
EC_14	SOL	377 336.3	5 870 616.4	139	3 min 53 sec 11 stills
	EOL	377 474.2	5 870 635.0		
EC_15	SOL	375 779.5	5 869 281.5	56	1 min 25 sec 8 stills
	EOL	375 725.7	5 869 295.9		
EC_16	SOL	383 035.3	5 879 019.9	21	0 min 47 sec 8 stills
	EOL	383 056.1	5 879 021.3		
EC_17	SOL	381 322.4	5 875 847.2	74	1 min 53 sec 7 stills
	EOL	381 266.4	5 875 895.7		
EC_18	SOL	381 772.9	5 874 880.4	66	2 min 19 sec 9 stills
	EOL	381 707.4	5 874 881.8		
EC_19	SOL	377 661.7	5 871 139.9	43	1 min 24 sec 7 stills
	EOL	377 626.0	5 871 163.8		
EC_23	SOL	384 078.5	5 881 909.2	40	0 min 57 sec

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3° [m]					
Station		Easting	Northing	Length [m]	Data Acquisition
	EOL	384 104.8	5 881 939.3		6 stills
EC_24	SOL	379 790.3	5 872 412.4	55	2 min 1 sec 8 stills
	EOL	379 734.9	5 872 411.2		
EC_25	SOL	378 783.9	5 871 921.1	47	1 min 57 sec 6 stills
	EOL	378 736.6	5 871 920.0		
EC_26	SOL	375 233.3	5 868 469.0	206	3 min 56 sec 18 stills
	EOL	375 245.1	5 868 675.1		
	EOL	384 477.6	5 910 457.2		
Notes BSL = Below sea level SOL = Start of line EOL = End of line					

4.1.2 Grab Sampling

Grab samples were successfully acquired at all 17 proposed stations with the SS proposed extension survey area. A complete suite of samples (single macrofauna and PSD) was retained at all stations, except stations SS_12 and SS_26. At these stations, no macrofaunal samples were acquired following unsuccessful repeat sampling. Chemistry samples were obtained at one of the two proposed stations following unsuccessful sampling.

Along the EC corridor, grab samples were acquired at all 18 proposed stations. A complete suite of samples (single macrofauna and PSD) was retained at 13 stations. At stations EC_03, EC_04, EC_18, EC_24 and EC_25, no macrofaunal samples were acquired following unsuccessful repeat sampling. Triplicate samples were obtained at four of the seven proposed stations, namely EC_07, EC_09, EC_19 and EC_23. At the remaining three stations, namely EC_03, EC_14 and EC_24, low grab volumes prevented acquisition of triplicate samples for macrofauna and/or PSD analysis. Chemistry samples were acquired at the three proposed stations.

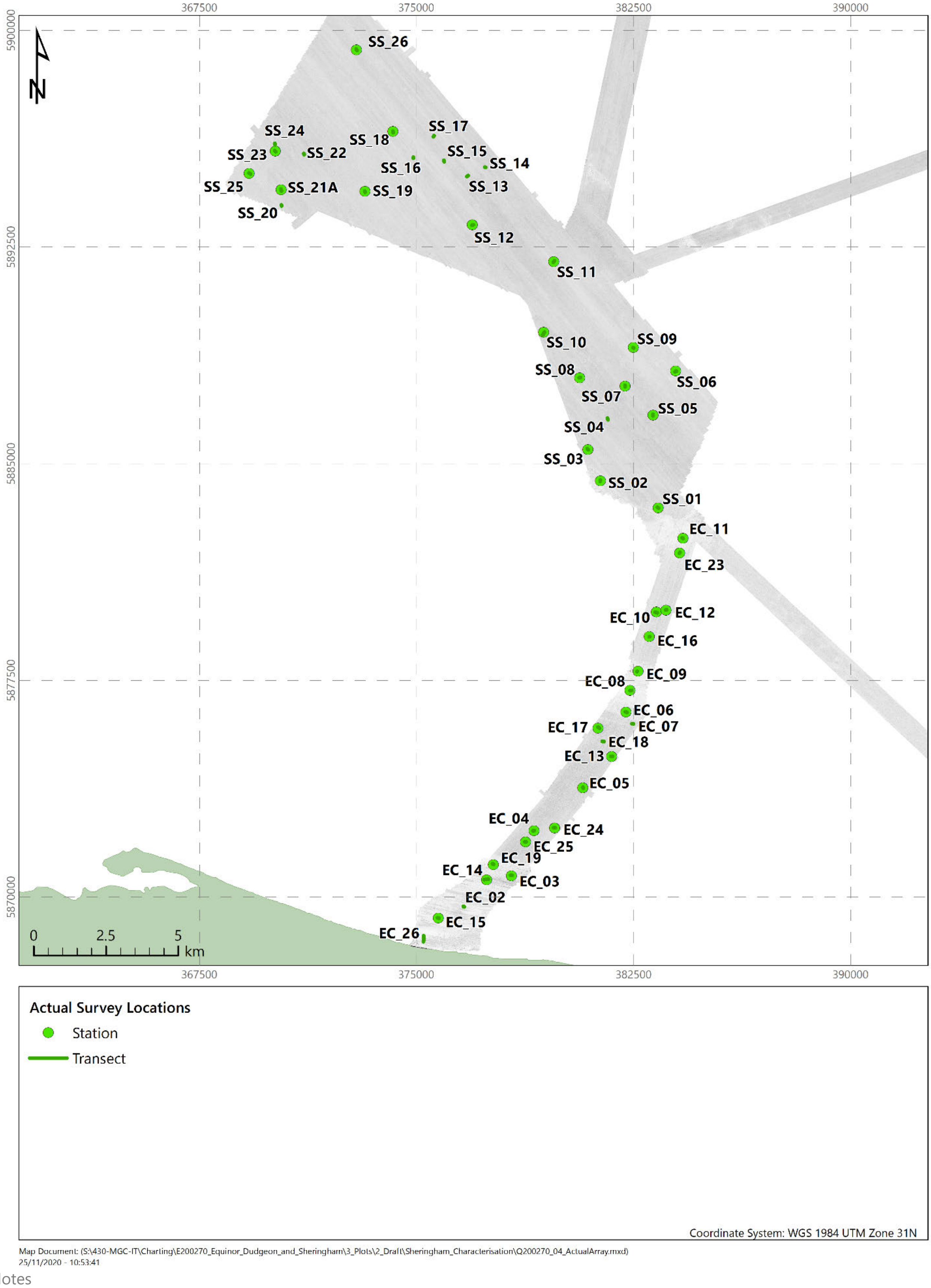
Table 4.2 presents details of the completed sampling stations and Figure 4.1 presents the actual sampling stations. Appendix B provides detailed survey logs.

Table 4.2: Completed grab sampling stations, Sheringham Extension Project

Geodetic Parameters:WGS84, UTM Zone 31N, CM 3° [m]					
Station	Easting	Northing	Offset [m]	Depth [m BSL]	Sample Acquisition
Sheringham Shoal (SS) Proposed Extension					
SS_01	383 344.7	5 883 480.8	9.6	23.0	FA, PSDA
SS_02	381 353.3	5 884 415.8	19.7	18.0	FA, PSDA
SS_03	380 914.0	5 885 494.2	17.4	18.2	FA, PSDA, PC
SS_05	383 166.9	5 886 689.2	0.8	17.3	FA, PSDA
SS_06	383 944.3	5 888 219.8	16.1	18.3	FA, PSDA
SS_07	382 200.4	5 887 694.4	13.3	17.6	FA, PSDA
SS_08	380 632.9	5 887 980.4	6.0	16.7	FA, PSDA
SS_09	382 485.9	5 889 027.7	1 9	17.7	FA, PSDA
SS_10	379 389.5	5 889 556.1	2.4	16.2	FA, PSDA
SS_11	379 732.1	5 891 995.3	14.5	17.6	FA, PSDA
SS_12	376 923.4	5 893 273.1	16.2	12.6	PSDA
SS_18	374 186.4	5 896 505.5	19.5	18.6*	FA, PSDA
SS_19	373 217.2	5 894 429.3	6.5	14.5*	FA, PSDA
SS_21	370 323.2	5 894 486.8	14.0	14.8*	FA, PSDA
SS_23	370 122.6	5 895 821.5	6.0	15.6*	FA, PSDA
SS_25	369 216.4	5 895 048.3	16.1	14.8*	FA, PSDA
SS_26	372 922.3	5 899 326.6	5.5	15.2*	PSDA
Export Cable (EC) Corridor					
EC_03	378 274.6	5 870 746.9	20.5	9.4	PSDA, PSDB, PSDC
EC_04	379 053.6	5 872 309.6	11.5	13.0	PSDA, PC
EC_05	380 741.4	5 873 793.5	7.6	15.7	FA, PSDA, PC
EC_07	382 233.7	5 876 410.7	4.1	19.5	FA, FB, FC, PSDA, PSDB, PSDC
EC_08	382 374.1	5 877 164.5	17.1	17.7	FA, PSDA
EC_09	382 648.5	5 877 828.2	21.1	16.9	FA, FB, FC, PSDA, PSDB, PSDC
EC_10	383 284.5	5 879 879.4	18.6	20.2	FA, PSDA
EC_11	384 200.9	5 882 429.5	2.7	22.0	FA, PSDA
EC_12	383 611.4	5 879 937.8	14.7	19.5	FA, PSDA
EC_14	377 414.5	5 870 612.0	23.2	8.2	FA, PSDA, PSDB
EC_15	375 757.7	5 869 284.6	6 2	8.1	FA, PSDA, PC
EC_16	383 032.4	5 879 027.5	7.8	19.5	FA, PSDA
EC_17	381 267.3	5 875 855.3	23.6	19.1	FA, PSDA
EC_18	381 736.1	5 874 877.2	7.4	16.6	PSDA
EC_19	377 645.1	5 871 138.5	13.7	11.5	FA, FB, FC, PSDA, PSDB, PSDC
EC_23	384 088.9	5 881 917.1	7.1	20.0	FA, FB, FC, PSDA, PSDB, PSDC

Geodetic Parameters:WGS84, UTM Zone 31N, CM 3° [m]					
Station	Easting	Northing	Offset [m]	Depth [m BSL]	Sample Acquisition
EC_24	379 768.0	5 872 403.2	14.5	13.5	PSDA, PSDB, PSDC
EC_25	378 764.4	5 871 922.8	11.5	13.0	PSDA

Notes
BSL = Below sea level
PC = Chemistry sample
FA/FB/FC = Faunal sample A, B or C
PSDA, PSDB, PSDC = Particle size distribution sample A, B or C
* = Depth from start of line of transect



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.1: Completed survey locations overlaid on a side scan sonar mosaic, Sheringham Extension Project

4.2 Sediment Particle Size Characterisation

Data analysis to characterise the survey area was undertaken on single samples; for stations sampled in triplicate, sample PSDA was assessed as part of the characterisation. Stations sampled in triplicate were assessed in terms of variation between the station samples to inform on the small-scale variability (Section 2).

4.2.1 Univariate Analysis

Tables 4.3 and 4.4 present a summary of the particle size characteristics and sediment particle size distribution, respectively, in the SS proposed extension, while Tables 4.5 and 4.6 present a summary of the particle size characteristics and sediment particle size distribution along the EC corridor. Appendix D presents the histograms of particle size class summary for each station.

4.2.1.1 Sheringham Shoal (SS) Proposed Extension

Gravel was present at all stations in the SS proposed extension with values ranging from 19.52 % (station SS_02) to 60.51 % (station SS_08), with a mean of 44.11 %. Sand content ranged from 34.19 % (station SS_26) to 80.48 % (station SS_02), with a mean of 53.73 %. Station SS_02 was devoid of fines and the remaining stations had a fines content ranging from 0.35 % (station SS_08) to 10.94 % (station SS_19), with a mean of 5.16 %. Four Folk (BGS modified) sediment classes were identified in the SS proposed extension, with sandy gravel typifying 9 stations and muddy sandy gravel typifying 6 stations. The remaining two stations were classified as gravelly sand and gravelly muddy sand (Table 4.3).

All stations had polymodal distributions, except station SS_02 which had a bimodal distribution. The most frequently occurring peaks in the first mode were the 427 µm sediment fraction (medium sand) and the 26 950 µm sediment fraction (coarse pebble). The most frequently occurring peaks in the second mode were the 427 µm sediment fraction (medium sand), the 19 200 µm sediment fraction (coarse pebbles), the 13 600 µm sediment fraction (medium pebble) and the 2400 µm sediment fraction (granule). The most frequently occurring peak in the third mode was the 9600 µm sediment fraction (medium pebble) (Table 4.4 and Appendix D).

The median sediment particle size was between 535 µm (coarse sand) at station SS_23 and 7162 µm (fine pebble) at station SS_26, with a mean of 1966 µm (very coarse sand). The mean particle size underpinned the Wentworth description, which identified four sediment classes, of which very coarse sand typified seven stations, granule typified six stations, coarse sand typified three stations and fine pebble typified one station (Table 4.4).

Of the 17 stations assessed, 15 had very poorly sorted sediments and 2 had poorly sorted sediments. The sediment distribution was very coarse skewed (5 stations); coarse skewed (5 stations); symmetrical (3 stations) fine skewed (3 stations) and very fine skewed (1 station) (Table 4.4).

Table 4.3: Summary of sediment particle size characteristics, Sheringham Extension Project

Station	Fractional Composition			Fines		Folk Description (BGS modified)	Folk (1954) Description
	Gravel [%]	Sand [%]	Fines [%]	Silt [%]	Clay [%]		
Sheringham Shoal (SS) Proposed Extension							
SS_01	41.34	55.66	2.99	2.23	0.77	Sandy gravel	Sandy gravel
SS_02	19.52	80.48	0.00	0.00	0.00	Gravelly sand	Gravelly sand
SS_03	54.85	42.86	2.29	1.73	0.56	Sandy gravel	Sandy gravel
SS_05	38.38	60.67	0.95	0.81	0.14	Sandy gravel	Sandy gravel
SS_06	51.72	47.73	0.54	0.48	0.06	Sandy gravel	Sandy gravel
SS_07	39.77	55.61	4.62	3.25	1.37	Sandy gravel	Sandy gravel
SS_08	60.51	39.13	0.35	0.35	0.00	Sandy gravel	Sandy gravel
SS_09	58.33	36.78	4.89	3.37	1.51	Muddy, sandy gravel	Muddy, sandy gravel
SS_10	36.59	54.33	9.08	5.93	3.15	Muddy, sandy gravel	Muddy, sandy gravel
SS_11	40.46	53.43	6.11	4.67	1.43	Muddy, sandy gravel	Muddy, sandy gravel
SS_12	55.40	41.13	3.47	2.37	1.10	Sandy gravel	Sandy gravel
SS_18	52.58	40.81	6.61	4.50	2.10	Muddy, sandy gravel	Muddy, sandy gravel
SS_19	38.94	44.12	16.94	10.94	5.99	Muddy, sandy gravel	Muddy, sandy gravel
SS_21	40.84	54.02	5.14	3.66	1.48	Sandy gravel	Sandy gravel
SS_23	29.94	56.92	13.14	8.66	4.48	Gravelly muddy sand	Gravelly muddy sand
SS_25	30.74	64.54	4.72	3.57	1.16	Sandy gravel	Sandy gravel
SS_26	59.95	34.19	5.87	3.98	1.89	Muddy, sandy gravel	Muddy, sandy gravel
Minimum	**19.52**	**34.19**	**0.00**	**0.00**	**0.00**	-	-
Maximum	**60.51**	**80.48**	**16.94**	**10.94**	**5.99**		
Median	**40.65**	**53.73**	**4.67**	**3.31**	**1.26**		
Mean	**44.11**	**50.73**	**5.16**	**3.56**	**1.60**		
Standard Deviation	**11.85**	**11.73**	**4.52**	**2.91**	**1.62**		

Notes
Fines = silt and clay content
Silt = < 4.0 phi to +8.0 phi (<62.5 μm to 3.9 μm)
Clay = < 8.0 phi to +10.0 phi (<3.9 μm to 0.98 μm)
BGS = British Geological Survey

Table 4.4: Summary of particle size distribution, Sheringham Extension Project

Station	Modality	Median [µm]	Mean Particle Size			Sorting Coefficient		Skewness	
			[µm]	[phi]	Wentworth (1922) Description	[µm]	Description	[µm]	Description
Sheringham Shoal (SS) Proposed Extension									
SS_01	Polymodal	591	1276	−0.35	Very coarse sand	5.64	Very poorly sorted	0.55	Very coarse skewed
SS_02	Bimodal	730	920	0.12	Coarse sand	2.32	Poorly sorted	0.43	Very coarse skewed
SS_03	Polymodal	3051	2960	−1.57	Granule	6.20	Very poorly sorted	−0.05	Symmetrical
SS_05	Polymodal	1245	1436	−0.52	Very coarse sand	2.78	Poorly sorted	0.21	Coarse skewed
SS_06	Polymodal	2188	2750	−1.46	Granule	4.35	Very poorly sorted	0.20	Coarse skewed
SS_07	Polymodal	856	1245	−0.32	Very coarse sand	4.58	Very poorly sorted	0.31	Very coarse skewed
SS_08	Polymodal	2932	3409	−1.77	Granule	4.17	Very poorly sorted	0.10	Symmetrical
SS_09	Polymodal	4461	3424	−1.78	Granule	7.11	Very poorly sorted	−0.27	Fine skewed
SS_10	Polymodal	691	1257	−0.33	Very coarse sand	8.85	Very poorly sorted	0.15	Coarse skewed
SS_11	Polymodal	758	1211	−0.28	Very coarse sand	6.25	Very poorly sorted	0.21	Coarse skewed
SS_12	Polymodal	3542	3205	−1.68	Granule	5.96	Very poorly sorted	−0.12	Fine skewed
SS_18	Polymodal	2711	2621	−1.39	Granule	8.94	Very poorly sorted	−0.19	Fine skewed
SS_19	Polymodal	654	720	0.47	Coarse sand	15.57	Very poorly sorted	−0.07	Symmetrical
SS_21	Polymodal	715	1648	−0.72	Very coarse sand	7.95	Very poorly sorted	0.37	Very coarse skewed
SS_23	Polymodal	535	880	0.18	Coarse sand	9.90	Very poorly sorted	0.12	Coarse skewed
SS_25	Polymodal	605	1016	−0.02	Very coarse sand	4.95	Very poorly sorted	0.41	Very coarse skewed
SS_26	Polymodal	7162	4114	−2.04	Fine pebble	9.58	Very poorly sorted	−0.43	Very fine skewed
Minimum	-	**535**	**720**	**−2.04**	-	**2.32**	-	**−0.43**	-
Maximum		**7162**	**4114**	**0.47**		**15.57**		**0.55**	
Median		**807**	**1356**	**−0.44**		**6.08**		**0.17**	
Mean		**1966**	**2005**	**−0.79**		**6.77**		**0.11**	
Standard Deviation		**1835**	**1105**	**0.82**		**3.21**		**0.27**	

Notes
Statistics based on Folk and Ward (1957) method derived in Gradistat (Blott, 2010)

4.2.1.2 Export Cable (EC) Corridor

Gravel was present at all stations along the EC corridor, with values ranging from 0.02 % (station EC_19) to 60.33 % (station EC_24), with a mean of 33.07 %. Sand content ranged from 36.81 % (station EC_24) to 99.98 % (station EC_19), with a mean of 63.59 %. Seven of the 18 stations sampled were devoid of fines, and the remaining stations had fines content ranging from 2.30 % (station EC_18) to 22.13 % (station EC_16), with a mean of 3.33 %. Three Folk (BGS modified) classes were identified, of which sandy gravel typified 13 stations, sand typified 4 stations and muddy sandy gravel typified 1 station. Under the Folk (1954) classification, the four stations classified as sand were classified as slightly gravelly sand owing to their gravel content of 2.79 % or less (Table 4.5).

Eleven stations had polymodal distributions, four stations had unimodal distributions and three stations had bimodal distributions. Of the stations with unimodal distribution, the 427 µm sediment fraction (medium sand) typified three stations and the 604 µm sediment fraction (coarse sand) typified one station. When considering the stations with polymodal distribution, the most frequently occurring peaks in the first mode were the 427 µm sediment fraction (medium sand) and the 26 950 µm sediment fraction (coarse pebble). The 427 µm sediment fraction was the most frequently occurring peak also in the second mode, whereas the 4800 µm sediment fraction (granule) was the most frequently occurring peak in the third mode (Table 4.6 and Appendix D).

The median sediment particle size ranged from 364 µm (medium sand) (station EC_15) to 7777 µm (fine pebble) (station EC_24), with a mean of 1487 µm (very coarse sand). The mean particle size underpinned the Wentworth description, which identified five sediment classes, of which very coarse sand typified eight stations, medium sand typified four stations, granule typified three stations, coarse sand typified two stations and fine pebble typified one station (Table 4.6).

Of the 18 stations assessed, 13 had very poorly sorted sediment, 2 had moderately well sorted sediment, 2 had well sorted sediment, and 1 had extremely poorly sorted sediment. The sediment distribution was very coarse skewed at 7 stations, symmetrical at 5 stations, coarse skewed at 3 stations, very fine skewed at 2 stations and fine skewed at 1 station (Table 4.6).

Table 4.5: Summary of sediment particle size characteristics, Sheringham Extension Project

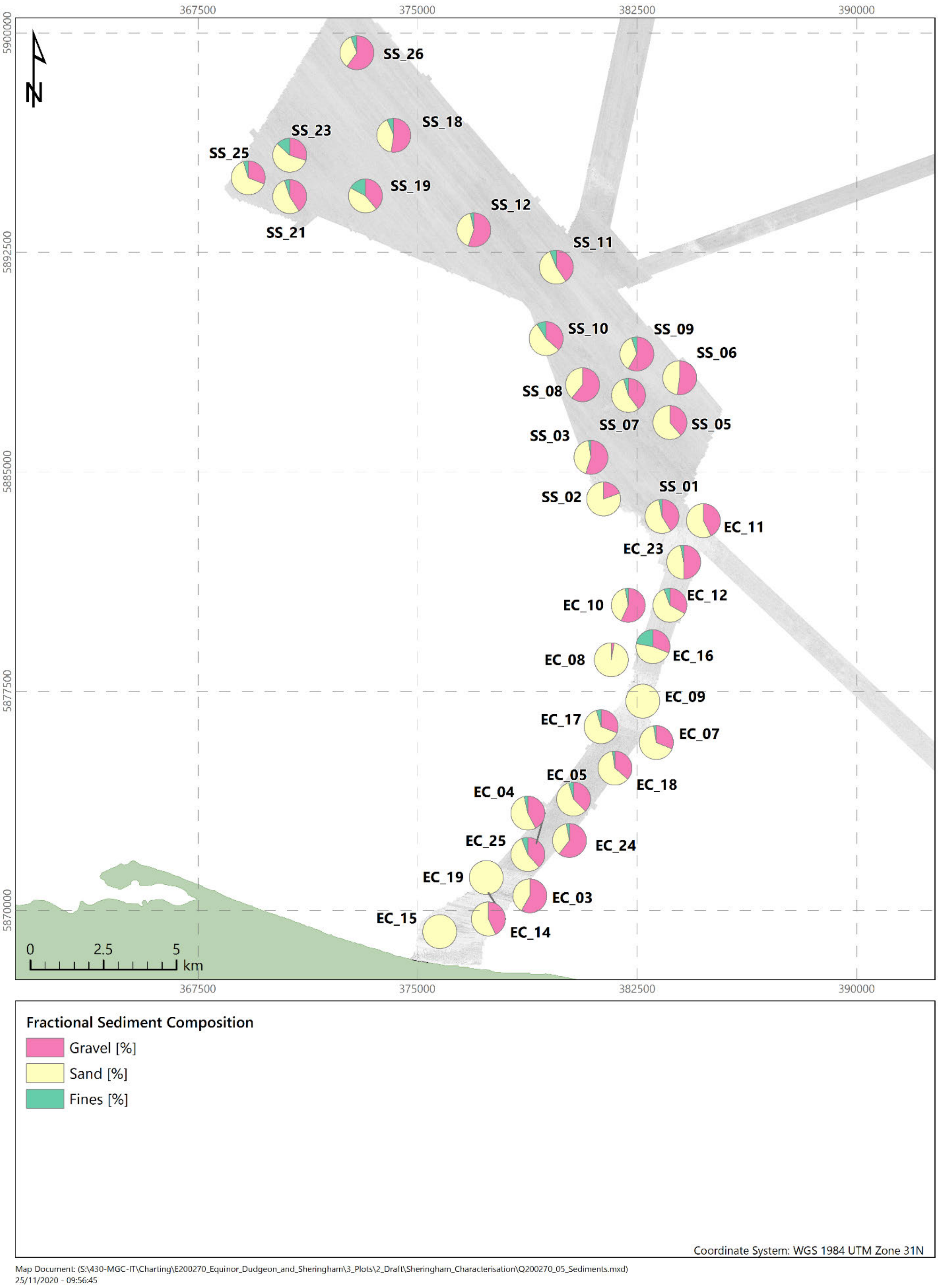
Station	Fractional Composition			Fines		Folk Description (BGS modified)	Folk (1954) Description
	Gravel [%]	Sand [%]	Fines [%]	Silt [%]	Clay [%]		
Export Cable (EC) Corridor							
EC_03	58.30	41.70	0.00	0.00	0.00	Sandy gravel	Sandy gravel
EC_04	42.35	54.11	3.55	2.62	0.92	Sandy gravel	Sandy gravel
EC_05	37.50	57.92	4.58	3.33	1.25	Sandy gravel	Sandy gravel
EC_07	31.05	66.40	2.56	1.95	0.60	Sandy gravel	Sandy gravel
EC_08	0.79	99.21	0.00	0.00	0.00	Sand	Slightly gravelly sand
EC_09	2.79	97.21	0.00	0.00	0.00	Sand	Slightly gravelly sand
EC_10	56.85	40.19	2.96	2.24	0.71	Sandy gravel	Sandy gravel
EC_11	42.67	57.33	0.00	0.00	0.00	Sandy gravel	Sandy gravel
EC_12	32.95	61.46	5.59	4.07	1.52	Sandy gravel	Sandy gravel
EC_14	43.00	57.00	0.00	0.00	0.00	Sandy gravel	Sandy gravel
EC_15	0.10	99.90	0.00	0.00	0.00	Sand	Slightly gravelly sand
EC_16	30.94	46.93	22.13	14.66	7.47	Muddy, sandy gravel	Muddy, sandy gravel
EC_17	31.04	64.46	4.50	3.43	1.07	Sandy gravel	Sandy gravel
EC_18	36.29	61.41	2.30	1.85	0.45	Sandy gravel	Sandy gravel
EC_19	0.02	99.98	0.00	0.00	0.00	Sand	Slightly gravelly sand
EC_23	49.93	47.09	2.98	2.12	0.86	Sandy gravel	Sandy gravel
EC_24	60.33	36.81	2.86	2.28	0.58	Sandy gravel	Sandy gravel
EC_25	38.48	55.50	6.02	4.25	1.77	Sandy gravel	Sandy gravel
Minimum	**0.02**	**36.81**	**0.00**	**0.00**	**0.00**	-	-
Maximum	**60.33**	**99.98**	**22.13**	**14.66**	**7.47**		
Median	**36.89**	**57.63**	**2.71**	**2.04**	**0.59**		
Mean	**33.07**	**63.59**	**3.33**	**2.38**	**0.96**		
Standard Deviation	**19.88**	**21.18**	**5.14**	**3.43**	**1.72**		

Notes
Fines = silt and clay content
Silt = < 4.0 phi to +8.0 phi (< 62.5 µm to 3.9 µm)
Clay = < 8.0 phi to +10.0 phi (< 3.9 µm to 0.98 µm)
BGS = British Geological Survey

Table 4.6: Summary of particle size distribution, Sheringham Extension Project

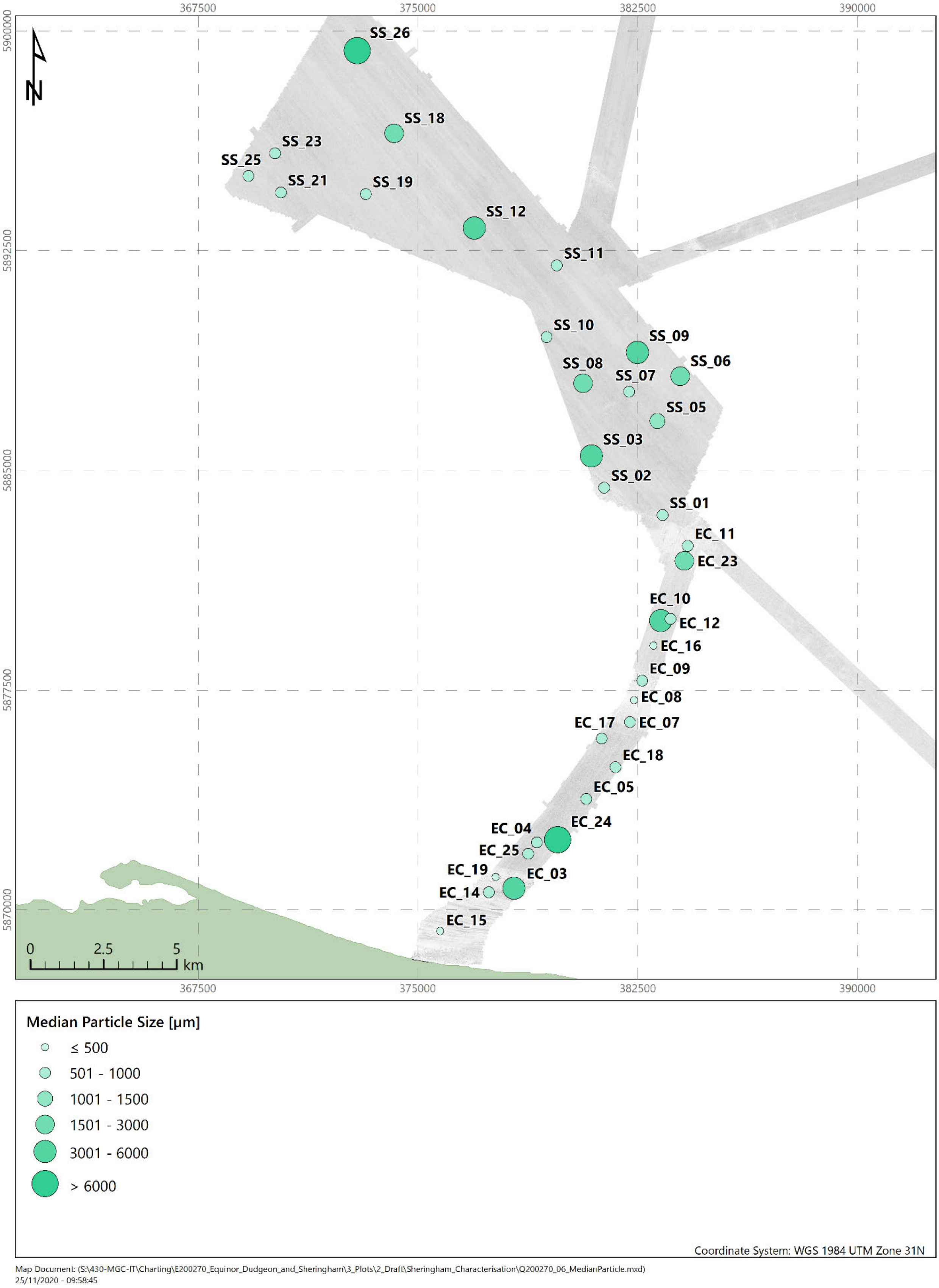
Station	Modality	Median [µm]	Mean Particle Size			Sorting Coefficient		Skewness	
			[µm]	[phi]	Wentworth (1922) Description	[µm]	Description	[µm]	Description
Export Cable (EC) Corridor									
EC_03	Polymodal	5522	3511	−1.81	Granule	5.87	Very poorly sorted	−0.31	Very fine skewed
EC_04	Polymodal	844	1518	−0.60	Very coarse sand	6.01	Very poorly sorted	0.34	Very coarse skewed
EC_05	Polymodal	704	1186	−0.25	Very coarse sand	5.66	Very poorly sorted	0.32	Very coarse skewed
EC_07	Polymodal	589	1208	−0.27	Very coarse sand	4.80	Very poorly sorted	0.56	Very coarse skewed
EC_08	Unimodal	431	432	1.21	Medium sand	1.55	Moderately well sorted	0.03	Symmetrical
EC_09	Unimodal	584	586	0.77	Coarse sand	1.55	Moderately well sorted	0.08	Symmetrical
EC_10	Polymodal	3389	2811	−1.49	Granule	5.63	Very poorly sorted	−0.15	Fine skewed
EC_11	Polymodal	651	1269	−0.34	Very coarse sand	4.49	Very poorly sorted	0.57	Very coarse skewed
EC_12	Polymodal	605	950	0.07	Coarse sand	5.05	Very poorly sorted	0.25	Coarse skewed
EC_14	Bimodal	545	1750	−0.81	Very coarse sand	7.01	Very poorly sorted	0.72	Very coarse skewed
EC_15	Unimodal	364	362	1.47	Medium sand	1.39	Well sorted	−0.02	Symmetrical
EC_16	Polymodal	434	418	1.26	Medium sand	18.40	Extremely poorly sorted	−0.10	Symmetrical
EC_17	Polymodal	591	1053	−0.07	Very coarse sand	5.44	Very poorly sorted	0.44	Very coarse skewed
EC_18	Polymodal	604	1193	−0.25	Very coarse sand	5.57	Very poorly sorted	0.51	Very coarse skewed
EC_19	Unimodal	389	381	1.39	Medium sand	1.34	Well sorted	−0.03	Symmetrical
EC_23	Bimodal	1970	2531	−1.34	Granule	6.42	Very poorly sorted	0.13	Coarse skewed
EC_24	Bimodal	7777	4367	−2.13	Fine pebble	7.28	Very poorly sorted	−0.40	Very fine skewed
EC_25	Polymodal	778	1307	−0.39	Very coarse sand	7.17	Very poorly sorted	0.19	Coarse skewed
Minimum	-	**364**	**362**	**−2.13**	-	**1.34**	-	**−0.40**	-
Maximum		**7777**	**4367**	**1.47**		**18.40**		**0.72**	
Median		**605**	**1200**	**−0.26**		**5.60**		**0.16**	
Mean		**1487**	**1491**	**−0.20**		**5.59**		**0.17**	
Standard Deviation		**2051**	**1129**	**1.09**		**3.78**		**0.32**	

Notes
Statistics based on Folk and Ward (1957) method derived in Gradistat (Blott, 2010)



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.2: Spatial distribution of major sediment fractions, Sheringham Extension Project



Notes
SS = Sheringham Shoal
EC= Export cable

Figure 4.3: Spatial distribution of median [µm] sediment particle size, Sheringham Extension Project

4.2.2 Intrastation Variability

Tables 4.7 and 4.8 present a summary of the particle size characteristics and sediment particle size distribution, respectively, of the 7 stations along the EC corridor sampled in triplicate to ground-truth areas of small scale variability identified by the geophysical data (details in Section 2).

Table 4.7: Summary of sediment particle size characteristics of triplicate samples stations, Sheringham Extension Project

Station	Fractional Composition			Fines		Folk Description (BGS modified)	Folk (1954) Description
	Gravel [%]	Sand [%]	Fines [%]	Silt [%]	Clay [%]		
Station EC_03							
EC_03	58.30	41.70	0.00	0.00	0.00	Sandy gravel	Sandy gravel
EC_03	58.57	41.43	0.00	0.00	0.00	Sandy gravel	Sandy gravel
EC_03	56.93	43.07	0.00	0.00	0.00	Sandy gravel	Sandy gravel
Mean	**57.93**	**42.07**	**0.00**	**0.00**	**0.00**	-	-
Standard Deviation	**0.878**	**0.878**	**0.00**	**0.00**	**0.00**	-	-
Station EC_07							
EC_07	31.05	66.40	2.56	1.95	0.60	Sandy gravel	Sandy gravel
EC_07	27.40	71.50	1.10	0.95	0.15	Gravelly sand	Gravelly sand
EC_07	17.62	82.38	0.00	0.00	0.00	Gravelly sand	Gravelly sand
Mean	**25.35**	**73.43**	**1.22**	**0.97**	**0.25**	-	-
Standard Deviation	**6.94**	**8.16**	**1.28**	**0.977**	**0.314**	-	-
Station EC_09							
EC_09	2.79	97.21	0.00	0.00	0.00	Sand	Slightly gravelly sand
EC_09	6.04	93.96	0.00	0.00	0.00	Gravelly sand	Gravelly sand
EC_09	0.04	99.96	0.00	0.00	0.00	Sand	Slightly gravelly sand
Mean	**2.96**	**97.04**	**0.00**	**0.00**	**0.00**	-	-
Standard Deviation	**3.00**	**3.00**	**0.00**	**0.00**	**0.00**	-	-
Station EC_14							
EC_14	43.00	57.00	0.00	0.00	0.00	Sandy gravel	Sandy gravel
EC_14	56.78	43.22	0.00	0.00	0.00	Sandy gravel	Sandy gravel
Mean	**49.89**	**50.11**	**0.00**	**0.00**	**0.00**	-	-
Standard Deviation	**9.75**	**9.75**	**0.00**	**0.00**	**0.00**	-	-

Station	Fractional Composition			Fines		Folk Description (BGS modified)	Folk (1954) Description
	Gravel [%]	Sand [%]	Fines [%]	Silt [%]	Clay [%]		
Station EC_19							
EC_19	0.02	99.98	0.00	0.00	0.00	Sand	Slightly gravelly sand
EC_19	0.12	99.88	0.00	0.00	0.00	Sand	Slightly gravelly sand
EC_19	0.04	99.96	0.00	0.00	0.00	Sand	Slightly Gravelly Sand
Mean	**0.06**	**99.94**	**0.00**	**0.00**	**0.00**	-	-
Standard Deviation	**0.056**	**0.056**	**0.00**	**0.00**	**0.00**	-	-
Station EC_23							
EC_23	49.93	47.09	2.98	2.12	0.86	Sandy gravel	Sandy gravel
EC_23	27.03	72.57	0.40	0.36	0.04	Gravelly sand	Gravelly sand
EC_23	32.39	64.86	2.74	2.21	0.53	Sandy gravel	Sandy gravel
Mean	**36.45**	**61.51**	**2.04**	**1.56**	**0.48**	-	-
Standard Deviation	**11.98**	**13.07**	**1.43**	**1.05**	**0.411**	-	-
Station EC_24							
EC_24	60.33	36.81	2.86	2.28	0.58	Sandy gravel	Sandy gravel
EC_24	49.62	45.34	5.03	3.67	1.36	Sandy gravel	Sandy gravel
EC_24	58.49	37.82	3.69	2.59	1.10	Sandy gravel	Sandy gravel
Mean	**56.15**	**39.99**	**3.86**	**2.85**	**1.01**	-	-
Standard Deviation	**5.72**	**4.66**	**1.10**	**0.730**	**0.398**	-	-

Notes

Fines = silt and clay content

Silt = < 4.0 phi to +8.0 phi (< 62.5 µm to 3.9 µm)

Clay = < 8.0 phi to +10.0 phi (< 3.9 µm to 0.98 µm)

BGS = British Geological Survey

EC = Export cable

Table 4.8: Summary of particle size distribution of triplicate samples stations, Sheringham Extension Project

Station	Modality	Median [µm]	Mean Particle Size			Sorting Coefficient		Skewness	
			[µm]	[phi]	Wentworth (1922) Description	[µm]	Description	[µm]	Description
Station EC_03									
EC_03	Polymodal	5522	3511	−1.81	Granule	5.87	Very poorly sorted	−0.31	Very fine skewed
EC_03	Polymodal	5173	3477	−1.80	Granule	6.01	Very poorly sorted	−0.27	Fine skewed
EC_03	Bimodal	10096	4273	−2.10	Fine pebble	6.28	Very poorly sorted	−0.57	Very fine skewed
Mean	-	**6930**	**3754**	**−1.90**	-	**6.06**	-	**−0.38**	-
Standard Deviation	-	**2747**	**450**	**0.168**	-	**0.209**	-	**0.162**	-
Station EC_07									
EC_07	Polymodal	589	1208	−0.27	Very coarse sand	4.80	Very poorly sorted	0.56	Very coarse skewed
EC_07	Polymodal	559	1077	−0.11	Very coarse sand	4.91	Very poorly sorted	0.60	Very coarse skewed
EC_07	Bimodal	494	707	0.50	Coarse sand	3.31	Poorly sorted	0.54	Very coarse skewed
Mean	-	**547**	**997**	**0.04**	-	**4.34**	-	**0.57**	-
Standard Deviation	-	**48.9**	**260**	**0.407**	-	**0.895**	-	**0.0304**	-
Station EC_09									
EC_09	Unimodal	584	586	0.77	Coarse sand	1.55	Moderately well sorted	0.08	Symmetrical
EC_09	Unimodal	518	536	0.90	Coarse sand	1.72	Moderately sorted	0.28	Coarse skewed
EC_09	Unimodal	434	434	1.20	Medium sand	1.43	Moderately well sorted	0.02	Symmetrical
Mean	-	**512**	**519**	**0.96**	-	**1.57**	-	**0.12**	-
Standard Deviation	-	**74.8**	**77.3**	**0.222**	-	**0.148**	-	**0.135**	-
Station EC_14									
EC_14	Bimodal	545	1750	−0.81	Very coarse sand	7.01	Very poorly sorted	0.72	Very coarse skewed
EC_14	Polymodal	4139	3271	−1.71	Granule	6.21	Very poorly sorted	−0.17	Fine skewed
Mean	-	**2342**	**2510**	**−1.26**	-	**6.61**	-	**0.27**	-
Standard Deviation	-	**2541**	**1075**	**0.638**	-	**0.564**	-	**0.628**	-

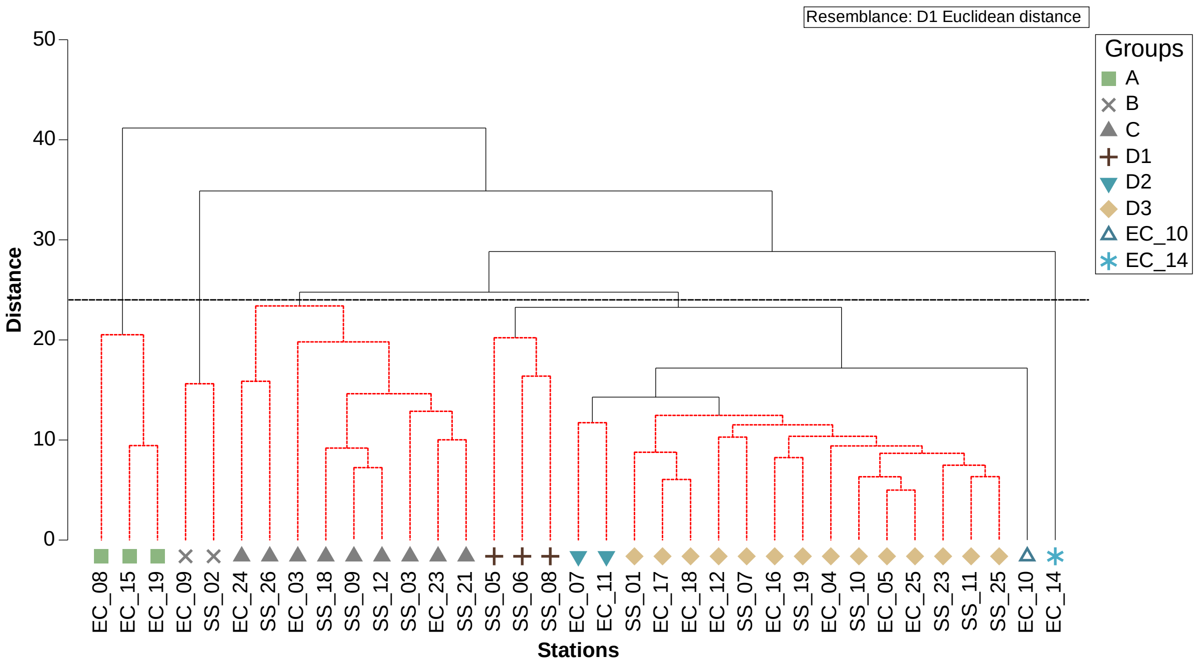
Station	Modality	Median [µm]	Mean Particle Size			Sorting Coefficient		Skewness	
			[µm]	[phi]	Wentworth (1922) Description	[µm]	Description	[µm]	Description
Station EC_19									
EC_19	Unimodal	389	381	1.39	Medium sand	1.34	Well sorted	−0.03	Symmetrical
EC_19	Unimodal	438	439	1.19	Medium sand	1.42	Moderately well sorted	0.02	Symmetrical
EC_19	Unimodal	393	391	1.36	Medium sand	1.39	Well sorted	−0.01	Symmetrical
Mean	-	**407**	**404**	**1.31**	-	**1.38**	-	**0.00**	-
Standard Deviation	-	**27.4**	**30.8**	**0.108**	-	**0.0380**	-	**0.0241**	-
Station EC_23									
EC_23	Bimodal	1970	2531	-1.34	Granule	6.42	Very poorly sorted	0.13	Coarse skewed
EC_23	Polymodal	517	1088	-0.12	Very coarse sand	4.51	Very poorly sorted	0.64	Very coarse skewed
EC_23	Polymodal	580	1216	-0.28	Very coarse sand	4.83	Very poorly sorted	0.58	Very coarse skewed
Mean	-	**1023**	**1612**	**-0.58**	-	**5.25**	-	**0.45**	-
Standard Deviation	-	**821**	**799**	**0.662**	-	**1.02**	-	**0.280**	-
Station EC_24									
EC_24	Bimodal	7777	4367	-2.13	Fine pebble	7.28	Very poorly sorted	-0.40	Very fine skewed
EC_24	Polymodal	1897	2352	-1.23	Granule	8.00	Very poorly sorted	0.01	Symmetrical
EC_24	Polymodal	5823	3540	-1.82	Granule	6.80	Very poorly sorted	-0.37	Very fine skewed
Mean	-	**5165**	**3420**	**-1.73**	-	**7.36**	-	**-0.25**	-
Standard Deviation	-	**2995**	**1013**	**0.454**	-	**0.607**	-	**0.229**	-

Notes
Statistics based on Folk and Ward (1957) method derived in Gradistat (Blott, 2010)
EC = Export cable

4.2.3 Investigation of Granulometric Similarities

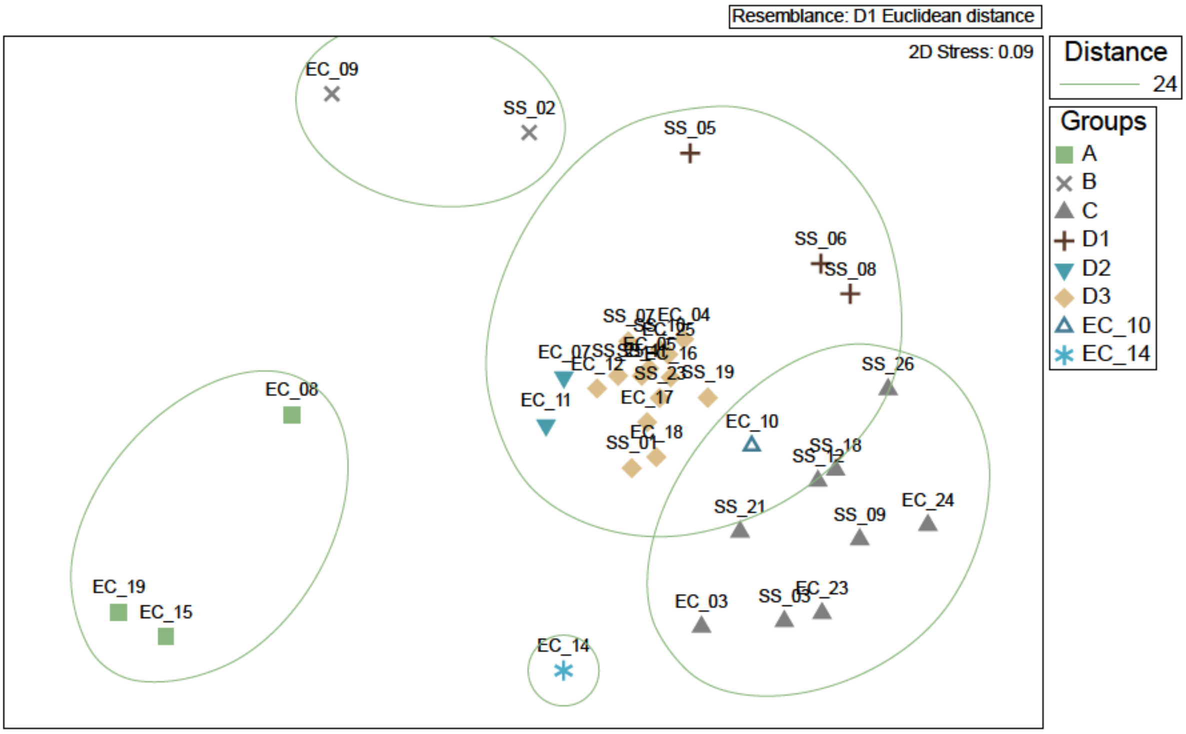
4.2.3.1 Cluster Analysis

Hierarchical clustering (Cluster) analysis, using Euclidean distance, was applied to the sediment PSD to investigate sedimentological characteristics. Data were not transformed. The SIMPROF test, undertaken in conjunction with the cluster analysis, was interpreted in ecological terms and, where appropriate, coarser groups were created (Section 3.3.5). Figure 4.4 presents the dendrogram and Figure 4.5 presents the nMDS of the Euclidean distance matrix of sediment particle size across the SEP survey area.



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.4: Dendrogram of hierarchical clustering analysis of sediment particle size, Sheringham Extension Project



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.5: nMDS ordination of hierarchical clustering analysis of sediment particle size, Sheringham Extension Project

Four multivariate groups and station EC_14, were identified at the Euclidean distance of 24, including group D that was split into further groups and station EC_10, by the SIMPROF test. Table 4.9 summarises the characteristics of the multivariate groups detailed as follow:

- Group A comprised three stations from the EC corridor; it was characterised by moderately well sorted sand (Folk BGS modified), with a mean median sediment particle size of 395 µm (medium sand), in mean water depth of 12.4 m;
- Group B comprised stations EC_09, from the EC corridor, and SS_02 from the proposed extension; it was characterised by moderately sorted gravelly sand (Folk BGS modified), with a mean median sediment particle size of 657 µm (coarse sand), in mean water depth of 17.5 m;
- Group C comprised three stations from the EC corridor and six stations from the proposed extension; it was characterised by very poorly sorted sandy gravel (Folk BGS modified), with mean median sediment particle size of 4101 µm (fine pebble), in mean water depth of 15.6 m;
- Group D1 comprised three stations from the proposed extension; it was characterised by poorly sorted sandy gravel (Folk BGS modified), with mean median sediment particle size of 2122 µm (granule), in mean water depth of 17.4 m;

- Group D2 comprised stations EC_07 and EC_11 from the EC corridor; it was characterised by very poorly sorted sandy gravel (Folk BGS modified), with a mean median sediment particle size of 620 μm (coarse sand), in mean water depth of 20.8 m;
- Group D3 comprised seven stations from the EC corridor and seven stations from the proposed extension; it was characterised by very poorly sorted muddy, sandy gravel (Folk BGS modified), with mean median sediment particle size of 661 μm (coarse sand), in mean water depth of 16.8 m;
- Station EC_10 was characterised by very poorly sorted sandy gravel (Folk BGS modified), with median sediment particle size of 3389 μm (granule), in water depth of 20.2 m;
- Station EC_14 was characterised by very poorly sorted sandy gravel (Folk BGS modified), with median sediment particle size of 545 μm (medium sand), in water depth of 8.2 m.

The sediment particle sizes mainly responsible for the separation of the multivariate groups included the 22 400 μm and the 31 500 μm particle sizes (coarse pebble), the 353.55 μm particle size (medium sand) and the 500 μm particle size (coarse sand) (Figure 4.6).

Figure 4.7 presents the spatial distribution of the multivariate sediment groups across the Sheringham Shoal Extension survey area

Table 4.9: Summary of physical characteristics of multivariate sediment groups, Sheringham Extension Project

Multivariate Group	Stations	Depth [m BSL]	Median Particle Size [µm]	Fractional Composition [%]			Sorting	
				Gravel	Sand	Fines	[µm]	Description
A ■ Average distance²: 155.2	EC_08, EC_15, EC_19	12.4	395	0.30	99.70	0.00	1.43	Moderately well sorted
B ✕ Average distance²: 122.0	EC_09, SS_02	17.5	657	11.16	88.84	0.00	1.94	Moderately sorted
C ▲ Average distance²: 183.2	EC_03, EC_23, EC_24, SS_03, SS_09, SS_12, SS_18, SS_21, SS_26	15.6	4101	54.50	41.71	3.79	7.76	Very poorly sorted
D1 + Average distance²: 181.0	SS_05, SS_06, SS_08	17.4	2122	50.20	49.18	0.62	3.77	Poorly sorted
D2 ▼ Average distance²: 68.8	EC_07, EC_11	20.8	620	36.86	61.86	1.28	4.65	Very poorly sorted
D3 ◆ Average distance²: 61.4	EC_04, EC_05, EC_12, EC_16, EC_17, EC_18, EC_25, SS_01, SS_07, SS_10, SS_11, SS_19, SS_23, SS_25	16.8	661	36.24	56.17	7.59	7.79	Very poorly sorted
EC_10 △	EC_10	20.2	3389	56.85	40.19	2.96	5.63	Very poorly sorted
EC_14 ✱	EC_14	8.2	545	43.00	57.00	0.00	7.01	Very poorly sorted

Notes
Data refer to mean values in each multivariate group, except for the single stations
BSL = Below sea level
SS = Sheringham Shoal
EC = Export cable
Statistics based on Folk and Ward (1957) method derived in Gradistat (Blott, 2010)

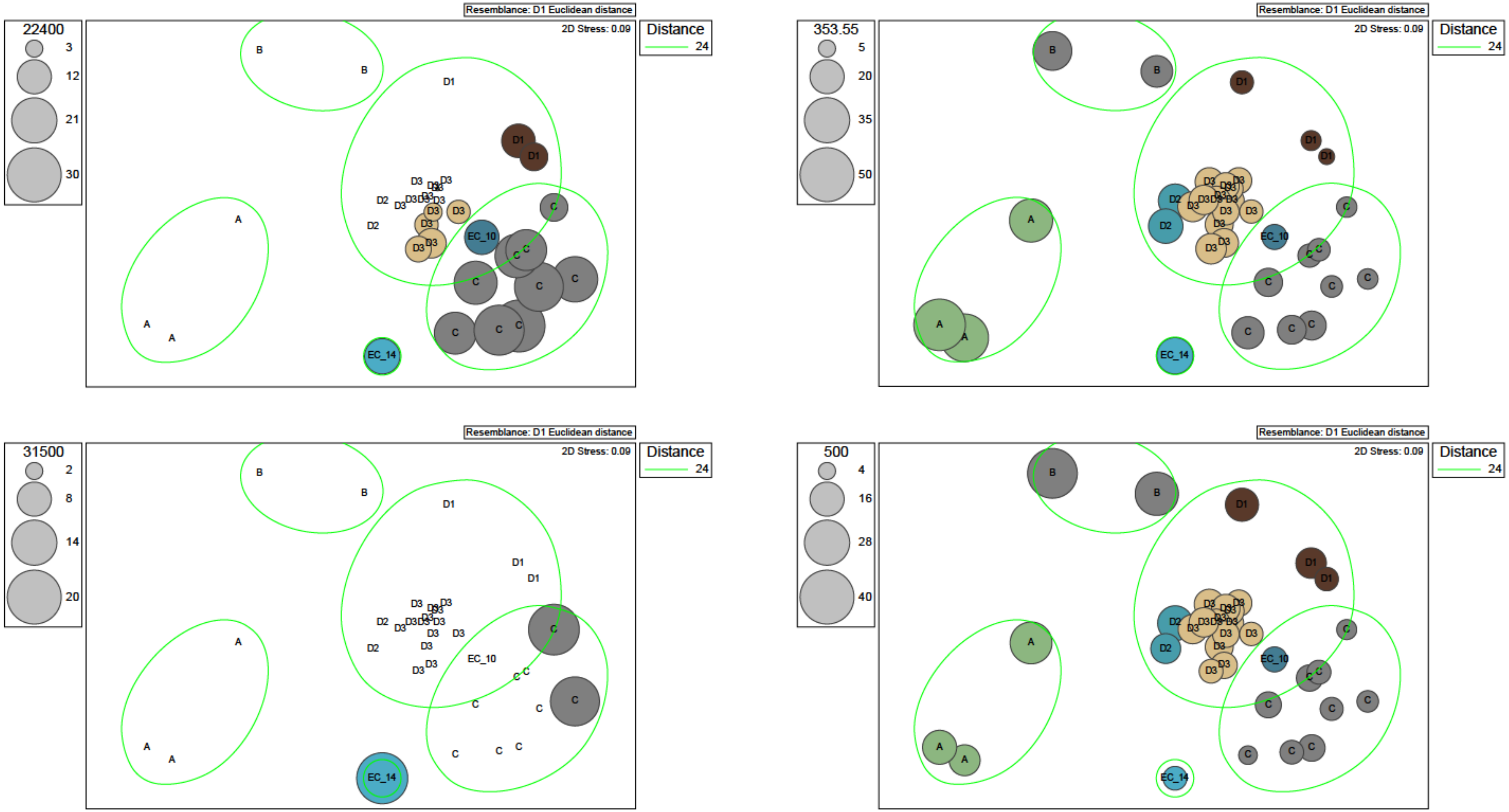
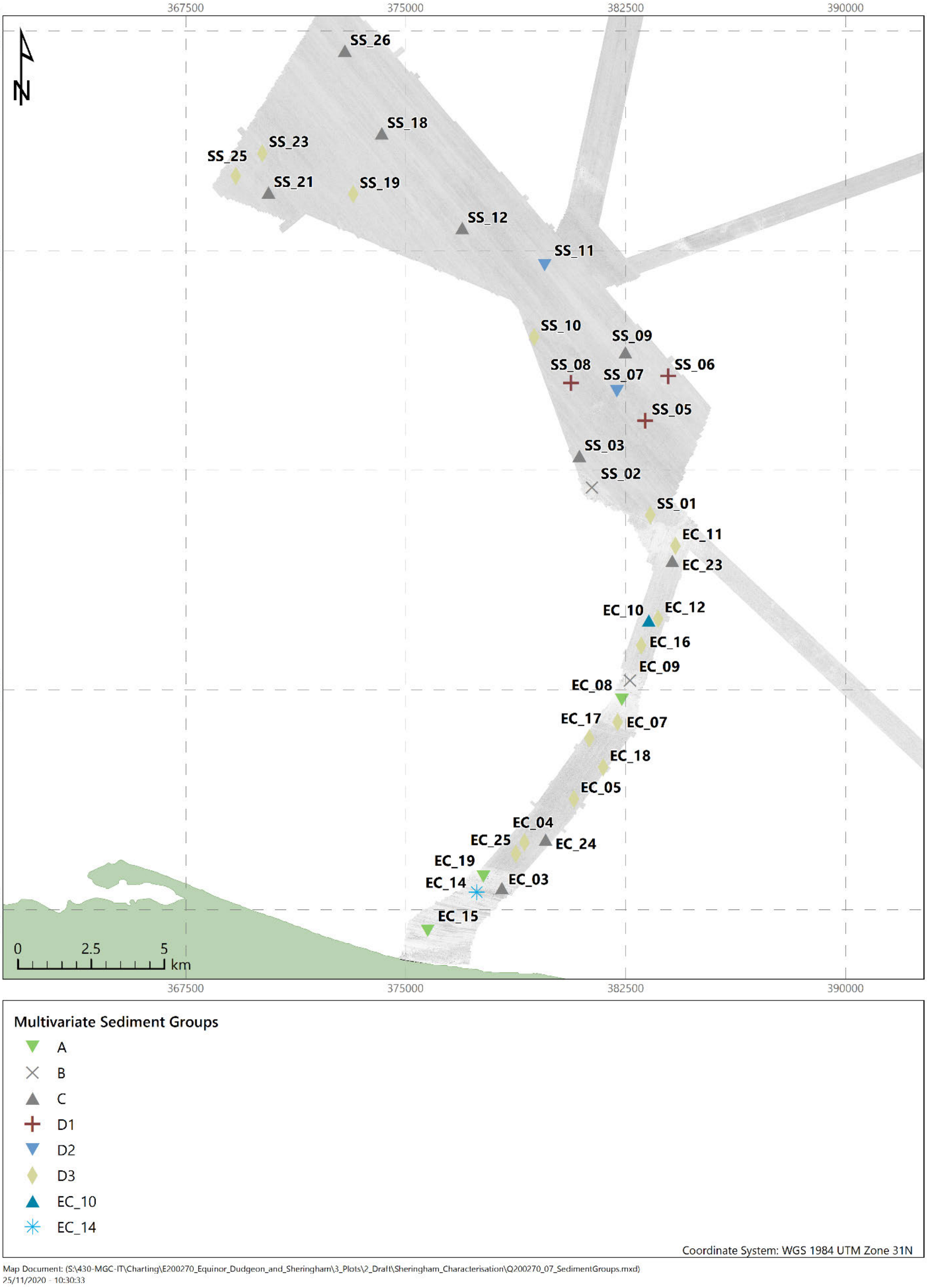


Figure 4.6: nMDS ordination of hierarchical clustering analysis of sediment particle size, with superimposed circles proportional in diameter to the percentage of sediment particle sizes responsible for the separation of the groups, Sheringham Extension Project



Notes
SS= Sheringham Shoal
EC = Export cable

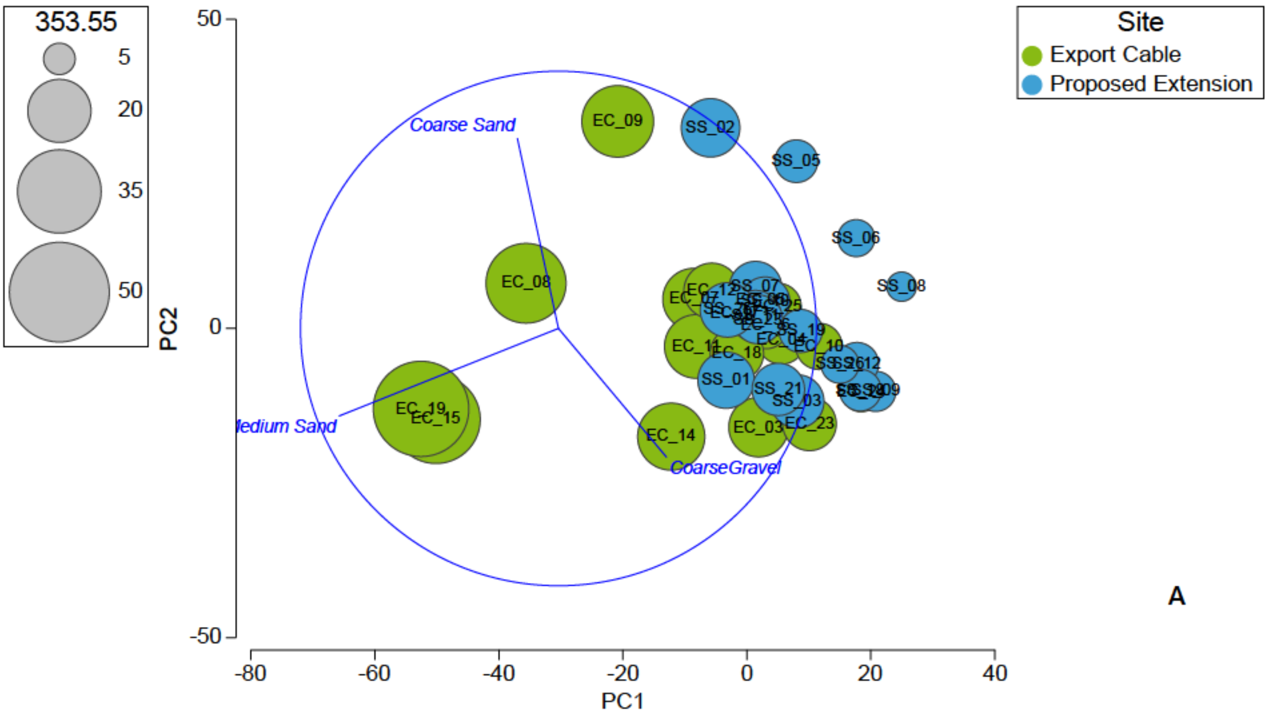
Figure 4.7: Spatial distribution of multivariate sediment groups, Sheringham Extension Project

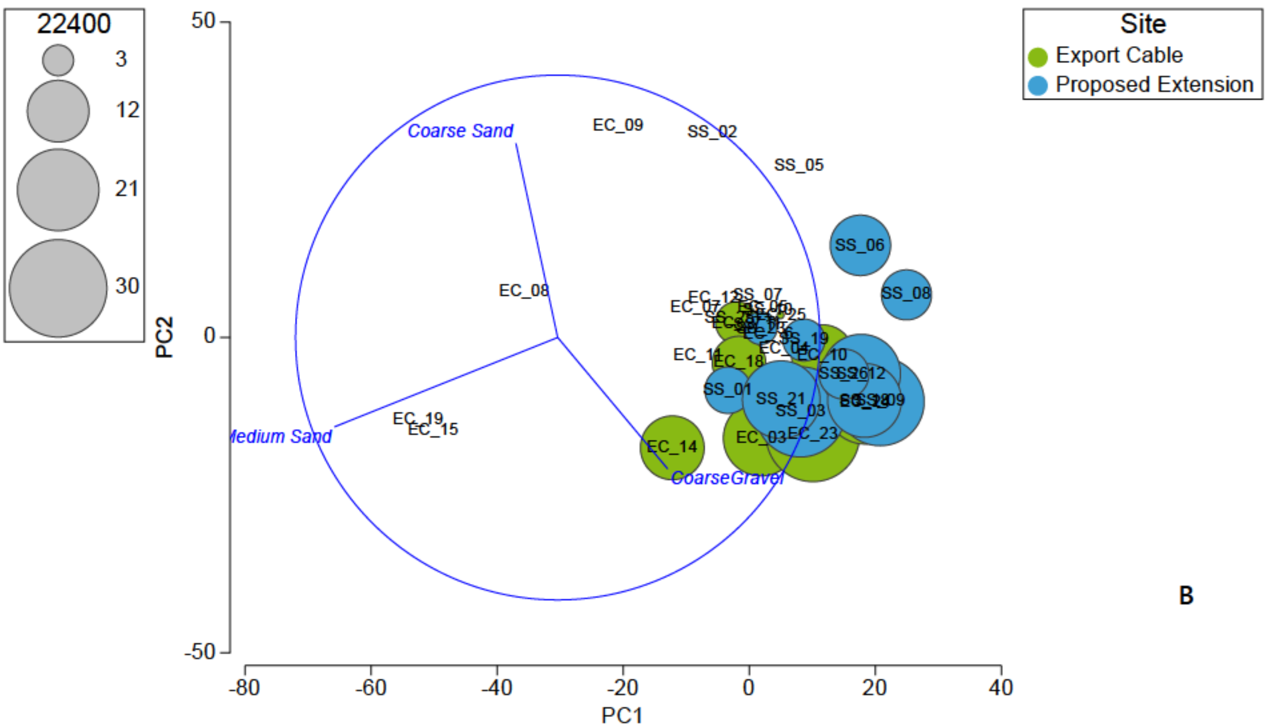
4.2.3.2 Principal Component Analysis

The principal component analysis (PCA) was used to reduce the sediment PSD across all samples into a smaller number of key variables. This highlighted the importance of the less represented grain size in accounting for grain size variations, which are critical factors in determining the associated biological communities. Data were not transformed. All data were in percentage therefore normalisation was not required.

The first two components accounted for 78.7 % of the variation, with percentage of medium sand having the largest (absolute) value along PC1 and percentage of coarse sand having the largest value along PC2. There was a distributional pattern of sediments in relation to the SS proposed extension and the EC corridor, the latter featuring coarser sediments. This is illustrated in Figure 4.8 which presents the two-dimensional (2D) representation of the PCA with superimposed circles proportional in diameter to the percentage of the 353.55 µm sediment particle size (medium sand) and the 22 400 µm sediment particle size (coarse pebbles), the latter being more represented within the proposed extension area.

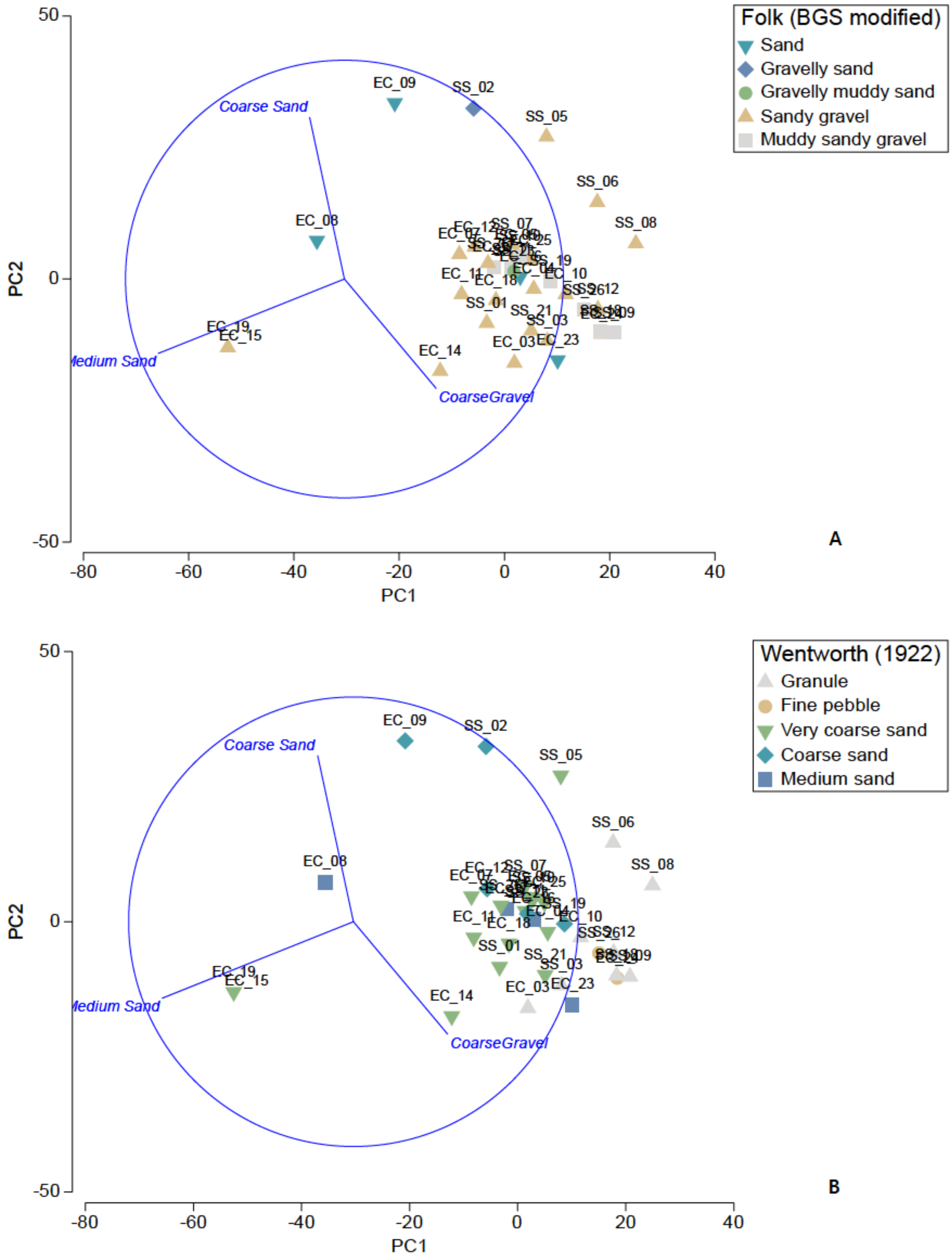
Figure 4.9 illustrates the relationship of sediment classifications and variations in sediment. Figures 4.10 and 4.11 present the results of the multivariate analysis of the data set inclusive of replicates PSDA, PSDB and PSDC illustrating the intrastation variability.





Notes
SS= Sheringham Shoal
EC = Export cable

Figure 4.8: 2D PCA of sediment composition with superimposed circles proportional in diameter to percentage of (A) 353.55 µm sediment particle size and (B) 22400 µm sediment particle size, Sheringham Extension Project

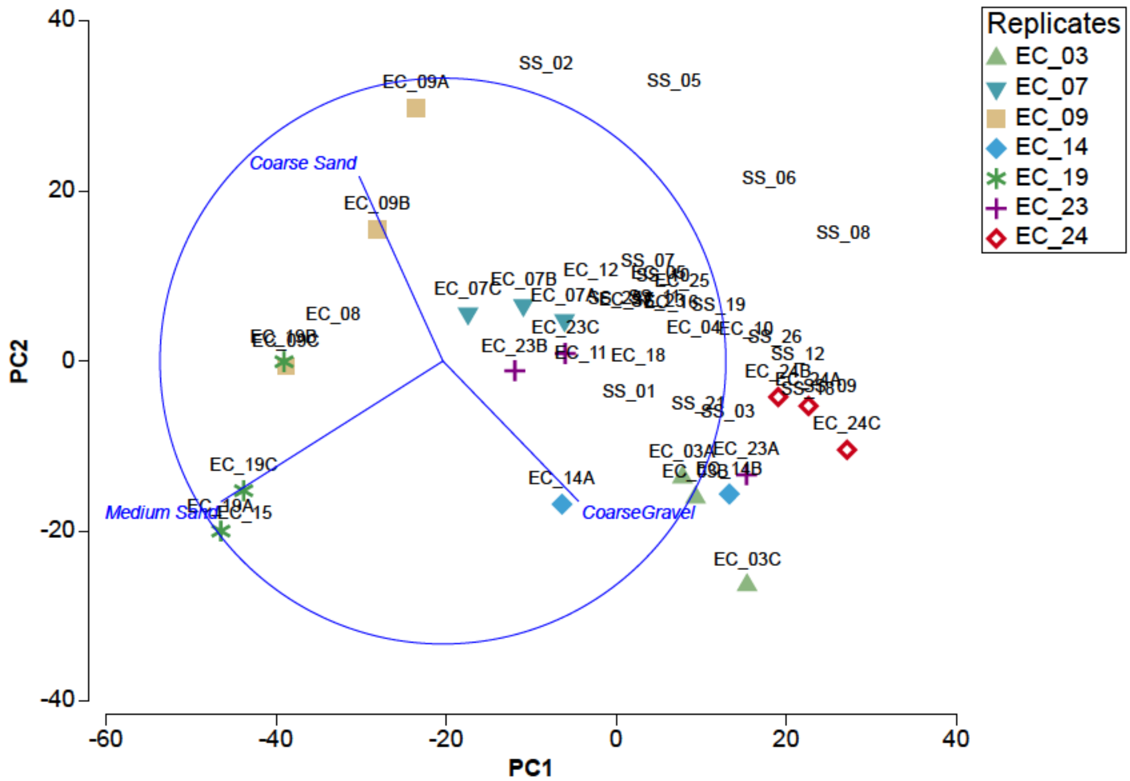


Notes

SS= Sheringham Shoal

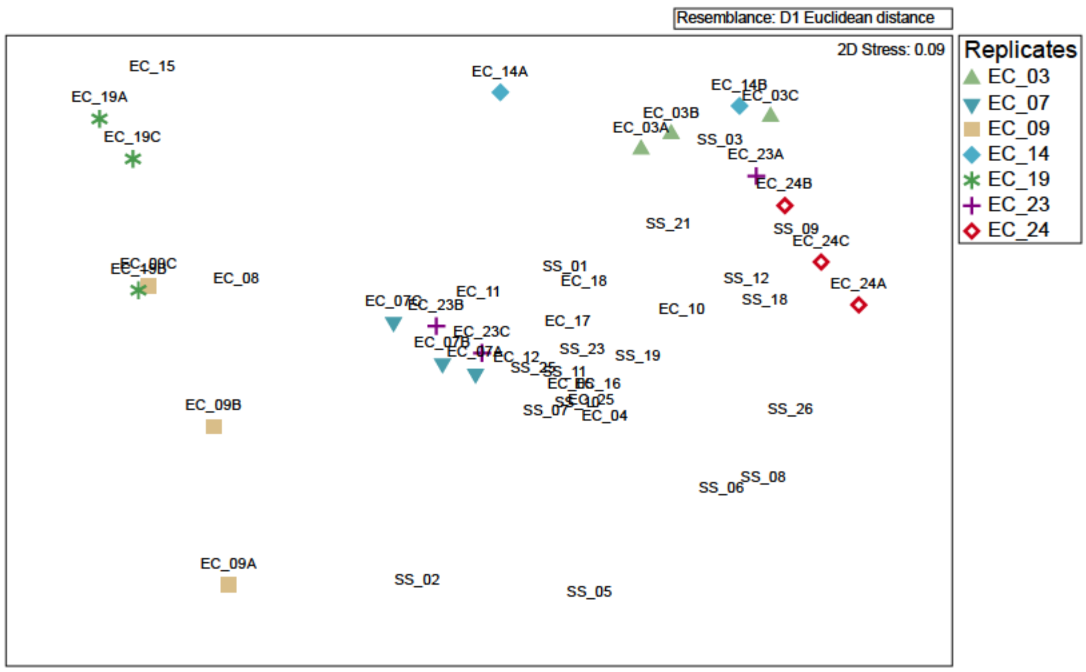
EC = Export cable

Figure 4.9: 2D PCA of sediment composition with superimposed (A) Folk (BGS) modified and (B) Wentworth (1922) sediment classifications, Sheringham Extension Project



Notes
SS= Sheringham Shoal
EC = Export cable

Figure 4.10: 2D PCA of sediment composition with superimposed triplicate stations, Sheringham Extension Project



Notes
SS= Sheringham Shoal
EC = Export cable

Figure 4.11: nMDS ordination of hierarchical clustering analysis of sediment particle size with superimposed stations sampled in triplicate, Sheringham Extension Project

4.3 Sediment Chemistry

4.3.1 Sediment Hydrocarbons

Appendix E.1 presents the gas chromatography–flame ionisation detection (GC-FID) profiles illustrating the hydrocarbon components detected in each of the sediment samples. Relative standard deviation (RSD) values have been provided to indicate the extent of variability in the dataset. For the purpose of this report, RSD of less than 30 % will be considered low variability, 30 % to 70 % will be considered moderate variability and more than 70 % will be considered high variability.

4.3.1.1 Total Hydrocarbon and n-Alkanes (nC_{12} to nC_{36}) Content

Table 4.10 presents the concentrations of total hydrocarbons, UCM, total n-alkanes and CPI ratios (nC_{12} to nC_{36}) and pristane/phytane ratios reported from the surface sediment across the Sheringham Extension Project survey area. Appendix E.2 presents the individual n-alkane concentrations for the sediments analysed across the Sheringham Extension Project survey area.

The THC values ranged from 1.2 µg/g (station EC_15) to 4.0 µg/g (station EC_04), with a mean concentration of 2.8 µg/g and moderate variability (RSD 52 %). THC values at stations EC_04, EC_05 and SS_03 were above the SEA2 Area 1 mean concentration of 1.6 µg/g.

Total n-alkanes (nC_{12} to nC_{36}) concentrations ranged from 0.07 µg/g (station EC_15) to 0.38 µg/g (station EC_04) with a mean concentration of 0.25 µg/g and moderate variability (RSD 49 %). The total n-alkane concentrations at stations EC_04, EC_05 and SS_03 were above the SEA2 Area 1 mean concentration of 0.16 µg/g.

The CPI ratio (nC_{12} to nC_{36}) ranged from 1.33 (station SS_03) to 1.63 (station EC_05) with a mean of 1.50 and low variability (RSD 10 %). The CPI ratios at all stations were above the SEA2 Area 1 mean ratio of 1.25.

The pristane/phytane (Pr/Ph) ratio ranged from 2.91 (station EC_15) to 5.01 (station EC_05) with a mean of 3.94 and low variability (RSD 19 %) and all stations were higher than the SEA2 Area 1 mean ratio of 2.51.

Table 4.10: Summary of sediment hydrocarbon analysis, Sheringham Extension Project

Station	THC*	UCM*	n-Alkanes*			CPI Ratio			Pristane*	Phytane*	Pr/Ph Ratio
			nC_{12-20}	nC_{21-36}	nC_{12-36}	nC_{12-20}	nC_{21-36}	nC_{12-36}			
EC_04	4.0	2.1	0.15	0.23	0.38	0.89	1.97	1.43	0.0410	0.0109	3.74
EC_05	3.6	1.8	0.11	0.19	0.30	0.95	2.25	1.63	0.0373	0.0074	5.01
EC_15	1.2	0.8	0.02	0.05	0.07	0.94	2.13	1.62	0.0053	0.0018	2.91
SS_03	2.4	1.4	0.10	0.14	0.25	0.87	1.85	1.33	0.0295	0.0072	4.10
Minimum	**1.2**	**0.8**	**0.02**	**0.05**	**0.07**	**0.87**	**1.85**	**1.33**	**0.0053**	**0.0018**	**2.91**
Maximum	**4.0**	**2.1**	**0.15**	**0.23**	**0.38**	**0.95**	**2.25**	**1.63**	**0.0410**	**0.0109**	**5.01**
Mean	**2.8**	**1.5**	**0.10**	**0.15**	**0.25**	**0.91**	**2.05**	**1.50**	**0.0283**	**0.0068**	**3.94**
Standard Deviation	**1.26**	**0.56**	**0.055**	**0.078**	**0.131**	**0.039**	**0.176**	**0.147**	**0.0160**	**0.00376**	**0.870**
RSD [%]	**45**	**37**	**57**	**51**	**53**	**4**	**9**	**10**	**57**	**55**	**22**
Area 1 – Sandbanks, SEA2 Survey (ERT, 2003)†											
Minimum	**0.4**	**0.1**	-	-	**0.03**	-	-	**0.77**	**0.002**	**0.001**	**1.07**
Maximum	**10.0**	**6.5**	-	-	**1.47**	-	-	**1.57**	**0.131**	**0.049**	**4.27**
Mean	**1.6**	**1.0**	-	-	**0.16**	-	-	**1.25**	**0.018**	**0.007**	**2.51**
RSD [%]	**106**	**110**	-	-	**163**	-	-	**13**	**156**	**129**	**31**

Notes
THC = Total hydrocarbon content
UCM = Unresolved complex mixture
CPI = Carbon preference index
Pr/Ph = Ratio of pristane to phytane
RSD = Relative standard deviation
SEA2 = Strategic Environmental Assessment Area 2
* = Concentrations expressed as µg/g of dry sediment
† = Minimum, maximum, mean and RSD values from Area 1 – Sandbanks in SEA2 (ERT, 2003)

Key:	Below Area 1 mean	Above Area 1 mean

4.3.1.2 Sediment Aromatic Hydrocarbon Content

The distribution and concentration of aromatic compounds in seabed sediments were analysed by GC-MS. The aromatic compounds quantified were the naphthalenes (2 ring aromatics), 3 to 6 ring PAHs and the dibenzothiophenes (sulphur containing heteroaromatics). Table 4.11 summarises the sediment total aromatic hydrocarbon concentrations, including the total 2 to 6 ring PAHs and total US EPA 16 PAHs, Table 4.12 summarises the concentrations of the individual US EPA 16 PAHs and Table 4.13 summarises the individual aromatic hydrocarbon concentrations and their alkyl homologue concentrations. The distributions of aromatic hydrocarbons are displayed as three-dimensional plots for ease of interpretation in Appendix E.3.

Total 2 to 6 ring PAH concentrations are calculated as the sum of individual PAHs, some of which were less than the minimum reporting value (MRV). Consequently, the total 2 to 6 ring PAH concentration is assigned as a less than value. However, the concentrations of the individual PAHs that were less than the MRV are unlikely to significantly influence the total 2 to 6 ring PAH concentrations. Therefore, for the purposes of this report, total 2 to 6 ring PAH, US EPA 16 PAH and total naphthalenes, phenanthrenes and dibenzothiophenes (NPD) concentrations are treated as absolute values to provide comparison between stations.

Total 2 to 6 ring PAH concentrations ranged from < 0.0180 µg/g (station EC_15) to 0.194 µg/g (station EC_04) with a mean of 0.133 µg/g and were above the SEA2 Area 1 mean concentration of 0.058 µg/g at stations EC_04, EC_05 and SS_03.

Total US EPA 16 PAH concentrations ranged from < 5.1 ng/g (station EC_15) to 52.2 ng/g (station EC_04) with a mean of 28.1 ng/g. All individual US EPA 16 PAH (Table 4.12) concentrations were below the Coordinated Environmental Monitoring Programme (CEMP) ERLs, where available.

Table 4.11: Summary of sediment aromatic hydrocarbon analysis, Sheringham Extension Project

Station	Total 2 to 6 Ring PAH*	Total US EPA 16 PAH†
EC_04	0.194	52.2
EC_05	0.179	48.9
EC_15	< 0.0180	< 5.1
SS_03	0.149	< 41.4
Minimum	**< 0.0180**	**< 5.1**
Maximum	**0.194**	**52.2**
Mean	**0.133**	**31.1**
Standard Deviation	**0.0846**	**23.7**
RSD [%]	**64**	**76**
Area 1 – Sandbanks SEA2 Survey (ERT, 2003)†		
Minimum	**0.004**	-
Maximum	**0.648**	-
Mean	**0.058**	-
RSD [%]	**190**	-

Notes
For statistical evaluation of total 2 to 6 ring PAH and total US EPA 16 PAH concentrations, < values treated as absolute values for calculating summary statistics
Total 2 to 6 ring PAH = Total 2 to 6 ring polycyclic aromatic hydrocarbons (PAH), including alkyl homologues
Total US EPA 16 PAH = Total United States Environmental Protection Agency's (US EPA) 16 polycyclic aromatic hydrocarbons
RSD = Relative standard deviation
* = Concentrations expressed as µg/g of dry sediment
† = Concentrations expressed as ng/g of dry sediment
# = Minimum, maximum and mean and RSD values from Area 1 – Sandbanks in SEA2 (ERT, 2003)

Key:	Below Area 1 mean	Above Area 1 mean

Table 4.12: Summary of United States Environmental Protection Agency (US EPA) 16 polycyclic aromatic hydrocarbon (PAH) concentrations, Sheringham Extension Project

PAH [ng/g of Dry Sediment]	EC_04	EC_05	EC_15	SS_03	CEMP Assessment Criteria (OSPAR, 2014) ERL
Naphthalene	4 2	3.7	0.2	3.5	**160**
Acenaphthylene	0.1	0.1	< 0.1	< 0.1	-
Acenaphthene	0.4	0.3	< 0.1	0.3	-
Fluorene	1.1	0.9	0.1	0.8	-
Phenanthrene	8.6	8.9	0.5	7.3	**240**
Anthracene	0.8	0.9	0.1	0.5	**85**
Fluoranthene	5.8	5.3	0.5	4.1	**600**
Pyrene	5.4	4.9	0.4	3.8	**665**
Benzo(a)anthracene	2.8	2.6	0.2	2.2	**261**
Chrysene	3 2	2.8	0.3	2.7	**384**
Benzo(b)fluoranthene	6.6	5.9	1.2	5.6	-
Benzo(k)fluoranthene	1.7	1.5	0.3	1.4	-
Benzo(a)pyrene	3.0	2.8	0.2	2.2	**430**
Indeno(1,2,3-cd)pyrene	3.1	3.0	0.4	2.4	**240**
Benzo(ghi)perylene	4.6	4.5	0.4	3.8	**85**
Dibenzo(a,h)anthracene	0.8	0.8	< 0.1	0.7	-
Total US EPA 16	**52.2**	**48.9**	**< 5.1**	**< 41.4**	-

Notes
CEMP = Coordinated environmental monitoring programme
US EPA 16 = United States Environmental Protection Agency's 16 priority polycyclic aromatic hydrocarbons
PAH = Polycyclic aromatic hydrocarbon
OSPAR = Oslo and Paris Commission
ERL = Effects range low

Key:	Below ERL	Above ERL

Table 4.13: Sediment Polycyclic Aromatic Hydrocarbon Analysis, Sheringham Extension Project

PAH	Station			
	EC_04	EC_05	EC_15	SS_03
Naphthalene (128)	4.2	3.7	0.2	3.5
C_1 128	9.8	9.3	0.5	8.1
C_2 128	14.2	12.5	0.7	11.6
C_3 128	14.7	13.7	0.8	10.8
C_4 128	8.9	9.0	0.5	5.9
TOTAL 128	**51.8**	**48.2**	**2.7**	**39.9**
Phenanthrene/anthracene (178)	9.4	9.8	0.6	7.8
C_1 178	8.8	8.8	0.5	7.3
C_2 178	8.8	8.4	0.6	7.2
C_3 178	8.3	7.8	0.7	5.9
TOTAL 178	**35.3**	**34.8**	**2.4**	**28.2**
Dibenzothiophene (184)	0.4	0.3	< 0.1	0.2
C_1 184	0.7	0.6	< 0.1	0.5
C_2 184	0.7	0.6	0.1	0.4
C_3 184	0.6	0.4	0.1	0.3
TOTAL 184	**2.4**	**1.9**	**< 0.4**	**1.4**
Fluoranthene/pyrene (202)	11.2	10.2	0.9	7.9
C_1 202	8.6	7.4	0.6	5.7
C_2 202	6.6	6.0	0.5	4.7
C_3 202	5.4	4.7	0.5	3.8
TOTAL 202	**31.8**	**28.3**	**2.5**	**22.1**
Benzanthracenes/ benzphenanthrenes (228)	9.9	8.7	1.0	7.9
C_1 228	5.4	4.7	0.5	4.2
C_2 228	6.7	6.1	0.7	5.1
TOTAL 228	**22.0**	**19.5**	**2.2**	**17.2**
m/z 252*	20.4	17.9	3.0	15.9
C_1 252	7.8	6.9	1.0	6.1
C_2 252	4.7	4.2	0.9	3.9
TOTAL 252	**32.9**	**29.0**	**4.9**	**25.9**
m/z 276†	12.4	10.9	1.3	9.2
C_1 276	3.1	3.4	0.7	2.6
C_2 276	2.5	2.5	0.9	2.0
TOTAL 276	**18.0**	**16.8**	**2.9**	**13.8**
NPD‡	**89.5**	**84.9**	**< 5.7**	**69.5**
NPD [%]	**46**	**48**	**< 32**	**47**
Total 2 to 6 ring PAH	**194**	**179**	**< 18.0**	**149**

Notes
* = m/z 252 - benzfluoranthenes/benzpyrenes/perylene
† = m/z 276 - anthanthrene/indenopyrenes/benzperylenes
‡ = NPD - naphthalenes, phenanthrenes and dibenzothiophenes (totals)
Concentrations expressed as ng/g dry sediment

4.3.2 Sediment Metals

Table 4.14 summarises the concentrations of the extractable metals in the sediment samples following an aqua regia digest. Variability in metals concentration across the survey area ranged from low (RSD < 30 % for six of the metals analysed) to moderate (RSD up to 58 % for barium). All metal concentrations were below the Cefas AL1 and AL2, and below the CEMP ERLs, where available.

Table 4.14: Summary of sediment metals analysis, Sheringham Extension Project

Station	Al	As	Ba	Cd	Cr	Cu	Fe	Hg	Li	Ni	Pb	Zn
EC_04	3650	10.5	42.0	< 0.0800	8.67	1.80	9200	< 0.0400	5.01	4.82	6.34	16.2
EC_05	4750	14.3	38.4	< 0.0800	10.2	2.06	10900	< 0.0400	5.17	5.04	9.93	18.7
EC_15	1480	9.42	4.83	< 0.0800	5.03	0.915	5460	< 0.0400	1.81	3.24	5.34	11.6
SS_03	4220	9.41	30.1	< 0.0800	10.0	1.75	10600	< 0.0400	4.68	5.13	8.34	17.7
Minimum	**1480**	**9.41**	**4.83**	-	**5.03**	**0.915**	**5460**	-	**1.81**	**3.24**	**5.34**	**11.6**
Maximum	**4750**	**14.3**	**42.0**	-	**10.2**	**2.06**	**10900**	-	**5.17**	**5.13**	**9.93**	**18.7**
Mean	**3530**	**10.9**	**28.8**	-	**8.48**	**1.63**	**9040**	-	**4.17**	**4.56**	**7.49**	**16.1**
Standard Deviation	**1440**	**2.32**	**16.8**	-	**2.39**	**0.496**	**2500**	-	**1.58**	**0.888**	**2.05**	**3.14**
RSD [%]	**41**	**21**	**58**	-	**28**	**30**	**28**	-	**38**	**19**	**27**	**20**
Cefas Action Levels*												
AL1	-	**20**	-	**0.4**	**40**	**40**	-	**0.3**	-	**20**	**50**	**130**
AL2	-	**100**	-	**5**	**400**	**400**	-	**3**	-	**200**	**500**	**800**
CEMP Assessment Criteria (OSPAR, 2014)												
ERL	-	-	-	**1.20**	**81.0**	**34.0**	-	**0.150**	-	-	**47.0**	**150**

Notes

Al = Aluminium; As = Arsenic; Ba = Barium; Cd = Cadmium; Cr = Chromium; Cu = Copper
Fe = Iron; Hg = Mercury; Li = Lithium; Ni = Nickel; Pb = Lead; Zn = Zinc

Concentrations expressed in mg/kg dry sediment

Samples were subject to an aqua regia digest

Where results were < minimum reporting value, summary statistics have been calculated using an absolute value determined by minimum reporting value / 2

Cefas = Centre for Environment, Fisheries and Aquaculture Science

OSPAR = Oslo and Paris Commission

CEMP = Coordinated environmental monitoring programme

ERL = Effects range low

* = Cefas action levels available at https://www.gov.uk/guidance/marine-licensing-sediment-analysis-and-sample-plans

Key:	Below ERL	Above ERL

4.3.3 Sediment Organotins

Table 4.15 summarises the concentrations of organotins in the sediment samples. Total organotin concentrations ranged from < 1.20 ng/g (stations EC_15 and SS_03) to < 1.37 ng/g (station EC_05), with a mean of 8.28 ng/g. The TBT concentration was < 0.400 ng/g at all stations and below the CEMP class B assessment criteria of 2 ng/g.

Table 4.15: Summary of organotins analysis, Sheringham Extension Project

Station	Monobutylin (MBT)	Dibutyltin (DBT)	Tributyltin (TBT)	Total Organotins
EC_04	0.420	< 0.400	< 0.400	< 1.22
EC_05	< 0.400	0.568	< 0.400	< 1.37
EC_15	< 0.400	< 0.400	< 0.400	< 1.20
SS_03	< 0.400	< 0.400	< 0.400	< 1.20
Minimum	**< 0.400**	**< 0.400**	-	**< 1.20**
Maximum	**0.420**	**0.568**	-	**< 1.37**
Mean	-	-	-	**1.25**
Standard Deviation	-	-	-	**0.082**
RSD [%]	-	-	-	**7**
CEMP Assessment Criteria (OSPAR, 2009b)				
Class B	-	-	**2**	-
Notes Concentrations expressed as ng/g dry weight For statistical evaluation of total organotin concentrations, < values treated as absolute values for calculating summary statistics CEMP = Coordinated environmental monitoring programme Class B = OSPAR Ecological Quality Objective threshold criteria				
Key:	Below Class B		Above Class B	

4.4 Sediment Macrofauna

The macrofauna from the grab samples included infauna and epifauna, the latter comprising sessile solitary, such as sea anemones, and colonial organisms, such as bryozoans. The infauna was assessed for species diversity, abundance and distribution. The sessile colonial epifauna was assessed for taxa composition and distribution and the solitary epifauna was assessed for species diversity, abundance and distribution. Appendix E presents full species lists of fauna and epifauna from the grab samples.

4.4.1 Phyletic Composition of Infauna

Data analysis to characterise the survey area was undertaken using replicate sample FA for all stations. Stations sampled in triplicate were assessed in terms of variation between the station samples (FA, FB and FC) to inform on the small scale variability (see Section 2).

Following rationalisation (details in Section 3.3.2), the infaunal dataset from the SEP survey area comprised 238 taxa represented by 6 053 individuals. The excluded taxa included juveniles, pelagic fauna and damaged fauna. Due to uncertainty in identification below genus level, three species of *Harmothoe*, two species of *Leiochone*, two species of *Polycirrus*, four species of *Cheirocratus* and one species of *Ericthonius* were aggregated to their respective genus.

Table 4.16 summarises the phyletic composition of the enumerated fauna from the SEP survey area; Figure 4.12 presents the phyletic composition of infaunal taxa and Figure 4.13 presents the phyletic composition of infaunal individuals across the SEP survey area.

Table 4.16: Taxonomic groups of infauna from grab samples, Sheringham Extension Project

Taxonomic Group	Number of Taxa	Composition of Taxa [%]*	Abundance	Composition of Individuals [%]*
Sheringham Shoal (SS) Proposed Extension				
Annelida	87	44.6	1500	38.9
Arthropoda	61	31.3	1117	29.0
Mollusca	39	20.0	888	23.0
Echinodermata	3	1.5	102	2.6
Other phyla	5	2.6	250	6.5
Total	**195**	**100**	**3857**	**100**
Export Cable (EC) Corridor				
Annelida	79	45.9	988	45.0
Arthropoda	58	33.7	509	23.2
Mollusca	26	15.1	431	19.6
Echinodermata	3	1.7	57	2.6
Other phyla	6	3.5	211	9.6
Total	**172**	**100**	**2196**	**100**

Notes
Macrofaunal samples were processed through a 1.0 mm mesh sieve
Other phyla included: Cnidaria, Enteropneusta, Nemertea, Phoronida, Platyhelminthes and Sipuncula

4.4.1.1 Sheringham Shoal Proposed Extension

Annelida comprised 44.6 % of the taxa recorded in the Sheringham Shoal proposed extension, followed by Arthropoda (31.3 %), Mollusca (20.0 %) and Echinodermata (1.5 %). Other phyla comprised 2.6 % of the taxa composition and included Platyhelminthes, Nemertea, Sipuncula, *Phoronis* and Enteropneusta (Table 4.16). When considering the individual stations, Annelida comprised the highest percentage of infaunal taxa at all but station SS_19, where Annelida and Arthropoda comprised equal percentages of infaunal taxa composition. Mollusca and other phyla were present at all stations, whereas Echinodermata were absent from stations SS_02, SS_05 and SS_08 (Figure 4.12).

Annelida comprised 38.9 % of the infaunal abundance, followed by Arthropoda (29.0 %), Mollusca (23.0 %) and Echinodermata (2.6 %), whereas other phyla comprised 6.5 % of the infaunal abundance (Table 4.16). When considering the individual stations, Annelida comprised the highest percentage of infaunal abundance at nine stations; Mollusca comprised the highest percentage of infaunal abundance at stations SS_01, SS_02 and SS_05; Arthropoda comprised the highest percentage of infaunal abundance at stations SS_19, SS_23 and SS_25 (Figure 4.12).

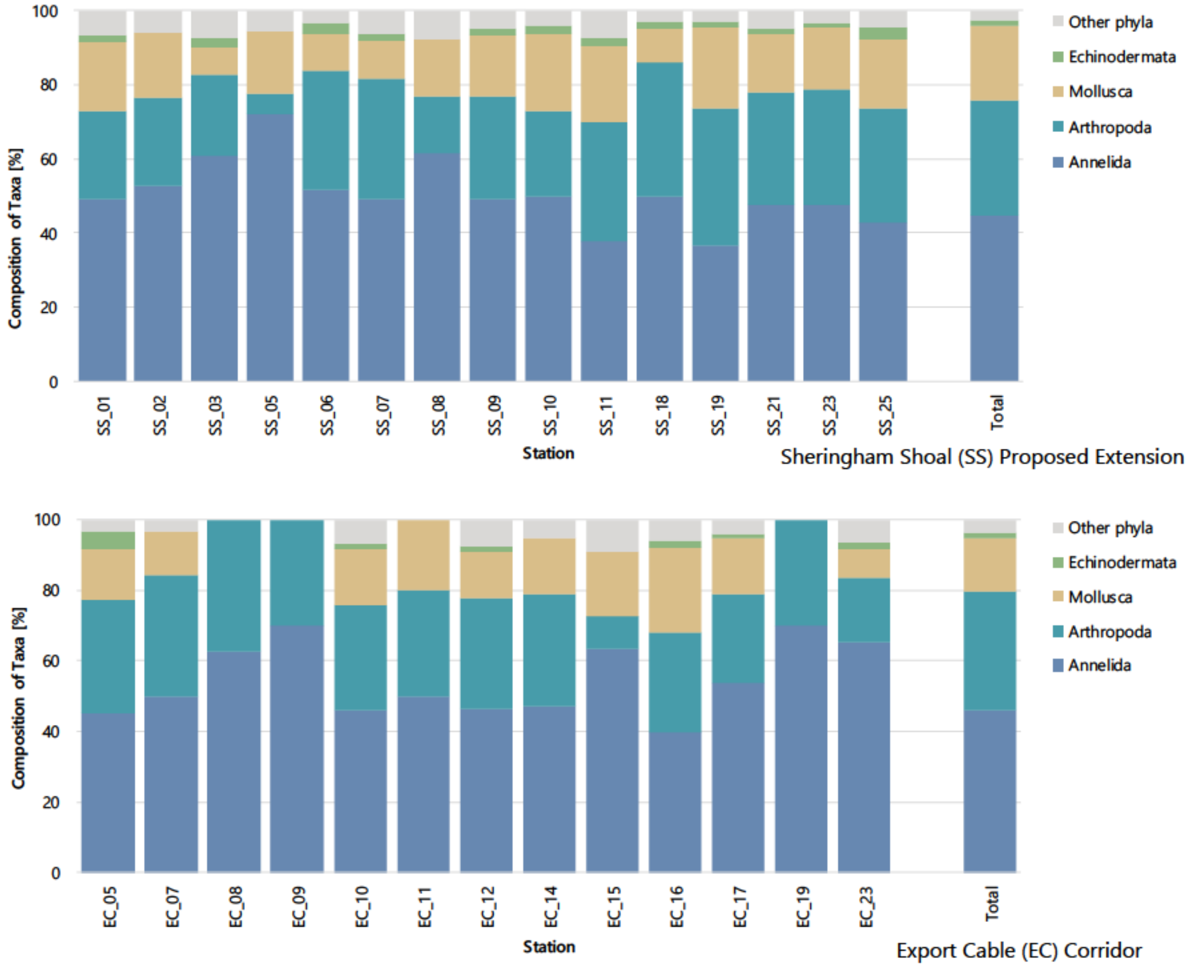


Figure 4.12: Phyletic composition of infaunal taxa, Sheringham Extension Project

4.4.1.2 Export Cable Corridor

Annelida comprised 45.9 % of the taxa recorded along the EC corridor, followed by Arthropoda (33.7 %), Mollusca (15.1 %) and Echinodermata (1.7 %). Other phyla comprised 3.5 % of the taxa composition and comprised Cnidaria, Nemertea, Sipuncula and *Phoronis* (Table 4.16). When considering the individual stations, Annelida comprised the highest percentage of infaunal taxa at all stations. Arthropoda comprised the second highest abundance at all but station EC_15, where Mollusca comprised the second highest percentage of infaunal taxa. Annelida and Arthropoda were present at all stations and were the only phyla recorded at stations EC_08, EC_09 and EC_19. Echinodermata were absent from seven stations and other phyla were absent from four stations (Figure 4.13).

Annelida comprised 45.0 % of the infaunal abundance, followed by Arthropoda (23.9 %), Mollusca (19.6 %) and Echinodermata (2.6 %), whereas other phyla comprised 9.6 % of the infaunal abundance (Table 4.16). When considering the individual stations, Annelida comprised the highest percentage of infaunal abundance at ten stations; Arthropoda comprised the highest abundance at stations EC_08 and EC_15, whereas Mollusca comprised the highest infaunal abundance at station EC_16 (Figure 4.13).

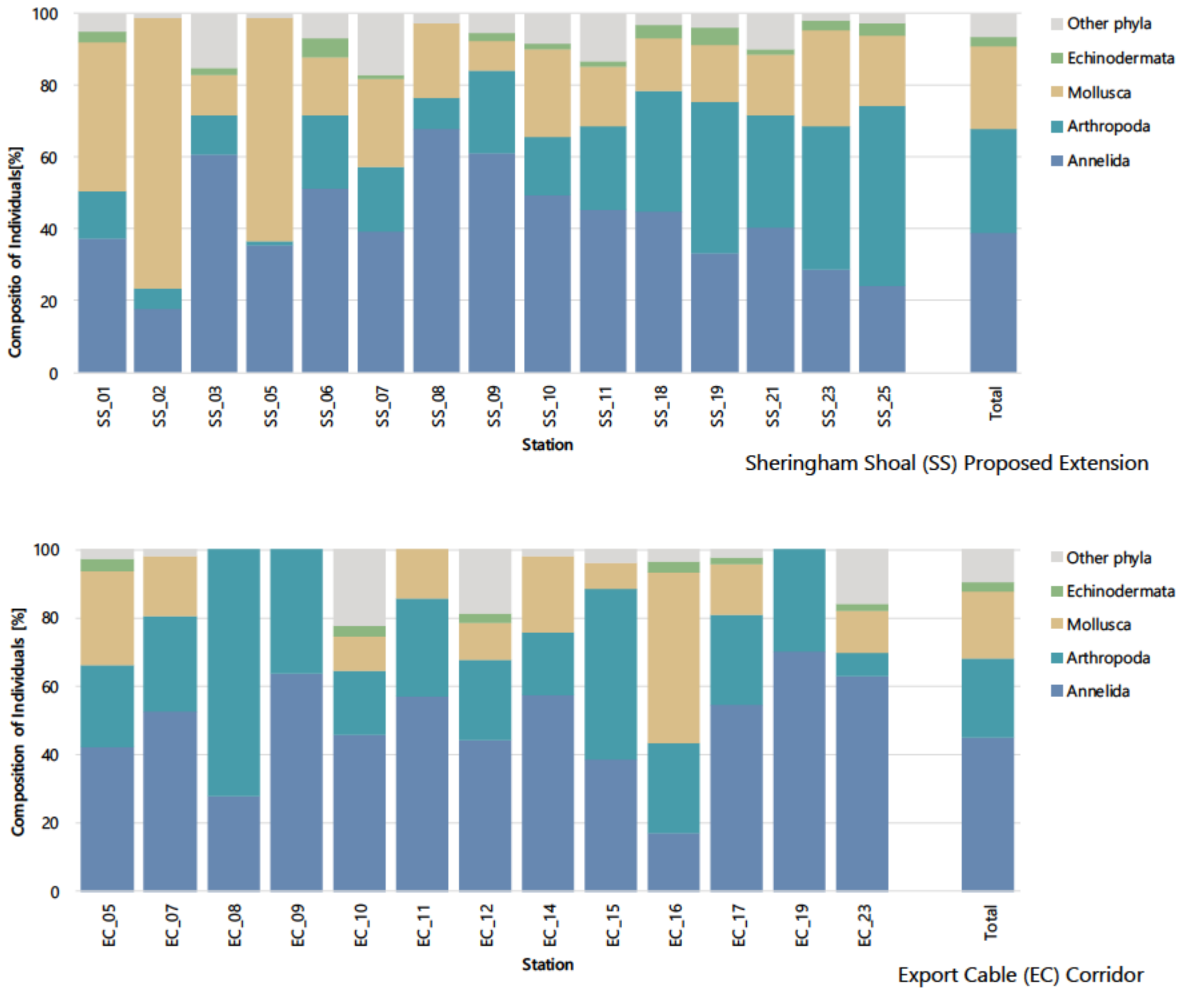


Figure 4.13: Phyletic composition of Infaunal individuals, Sheringham Extension Project

4.4.2 Community Statistics

Table 4.17 presents the results of the univariate analysis, which was undertaken on the infaunal dataset to gauge information on faunal richness (Margalef's index d), diversity (Shannon-Wiener Index $H'Log_2$), evenness (Pielou's index J') and dominance (Simpson's index λ). Results allowed assessment of biodiversity within the survey area and geographical contextualisation. Figures 4.14 and 4.15 present the spatial distribution of infaunal taxa and individuals across the SEP survey area.

Table 4.17: Infaunal community statistics (0.1 m^2), Sheringham Extension Project

Station	Numbers		Richness	Diversity	Evenness	Dominance
	Taxa	Individuals	Margalef [d]	Shannon-Wiener [H'Log$_2$]	Pielou [J']	Simpson [λ]
Sheringham Shoal (SS) Proposed Extension						
SS_01	59	436	9.54	4.21	0.715	0.127
SS_02	17	68	3.79	2.21	0.542	0.447
SS_03	41	294	7.04	3.98	0.743	0.115
SS_05	18	82	3.86	2.81	0.675	0 294
SS_06	31	74	6.97	4.29	0.867	0.087
SS_07	49	252	8.68	4.54	0.808	0.079
SS_08	13	34	3.40	3.28	0.886	0.135
SS_09	61	220	11.1	5.19	0.875	0.043
SS_10	48	180	9.05	4.71	0.843	0.063
SS_11	53	174	10.1	5.11	0.892	0.040
SS_18	64	269	11.3	5.13	0.855	0.043
SS_19	68	355	11.4	4.78	0.785	0.071
SS_21	82	322	14.0	5.57	0.875	0.032
SS_23	90	517	14.2	5.27	0.812	0.048
SS_25	91	580	14.1	5.06	0.778	0.069
Minimum	**13**	**34**	**3.40**	**2.21**	**0.542**	**0.032**
Maximum	**91**	**580**	**14.2**	**5.57**	**0.892**	**0.447**
Median	**53**	**252**	**9.54**	**4.71**	**0.812**	**0.071**
Mean	**52**	**257**	**9.24**	**4.41**	**0.797**	**0.113**
SD	**25**	**165**	**3.67**	**0.97**	**0.096**	**0.113**
Export Cable (EC) Corridor						
EC_05	62	363	10.3	4.93	0.827	0.054
EC_07	32	57	7.67	4.68	0.937	0.050
EC_08	8	18	2.42	2.06	0.685	0.395
EC_09	10	22	2.91	3.01	0.905	0.149
EC_10	74	364	12.4	5.17	0.832	0.053
EC_11	10	14	3.41	3.18	0.958	0.122
EC_12	67	352	11.3	4.81	0.793	0.067
EC_14	19	54	4.51	3.59	0.845	0.120
EC_15	11	26	3.07	2.54	0.735	0 287
EC_16	50	291	8.64	3.85	0.682	0 200
EC_17	76	413	12.5	4.87	0.779	0.074
EC_19	10	20	3.00	3.05	0.917	0.140
EC_23	49	202	9.04	4.63	0.826	0.071
Min	**8**	**14**	**2.42**	**2.06**	**0.682**	**0.050**
Max	**76**	**413**	**12.5**	**5.17**	**0.958**	**0.395**
Median	**32**	**57**	**7.67**	**3.85**	**0.827**	**0.120**
Mean	**37**	**169**	**7.01**	**3.87**	**0.825**	**0.137**
Standard deviation	**27**	**163**	**3.91**	**1.04**	**0.090**	**0.103**

4.4.2.1 Sheringham Shoal Proposed Extension

The total number of taxa ranged from 13 (station SS_08) to 91 (station SS_21), with a mean of 52. Station SS_08 also had the lowest infaunal abundance with 34 individuals, whereas the highest infaunal abundance was recorded at station SS_25 with 580 individuals. The mean number of individuals in the proposed extension was 257.

Richness reflected the infaunal abundance across the taxa recorded, with values ranging from 3.40 (station SS_08) to 14.2 (station SS_23), the latter having the second highest number of taxa and individuals.

Diversity assessed in line with the threshold outlined in Dauvin et al. (2012) (Section 3.3.3) ranged from 2.21 (moderate; station SS_02) to 5.57 (high; station SS_21). Eleven stations had high diversity; two stations had good diversity and one station had moderate diversity, with the mean diversity in the proposed extension being high, with a value of 4.71.

Evenness ranged from 0.542 (station SS_02) to 0.892 (station SS_11), with a mean of 0.797. Analysis of the species list indicated that station SS_02 had a numerical dominance of the bivalve *Goodallia triangularis*, which, with 45 individuals, represented 66 % of the infaunal abundance at this station. Evenness had an inverse relationship with dominance, which ranged from 0.032 (station SS_21) to 0.447 (station SS_02), with a mean of 0.113.

4.4.2.2 Export Cable Corridor

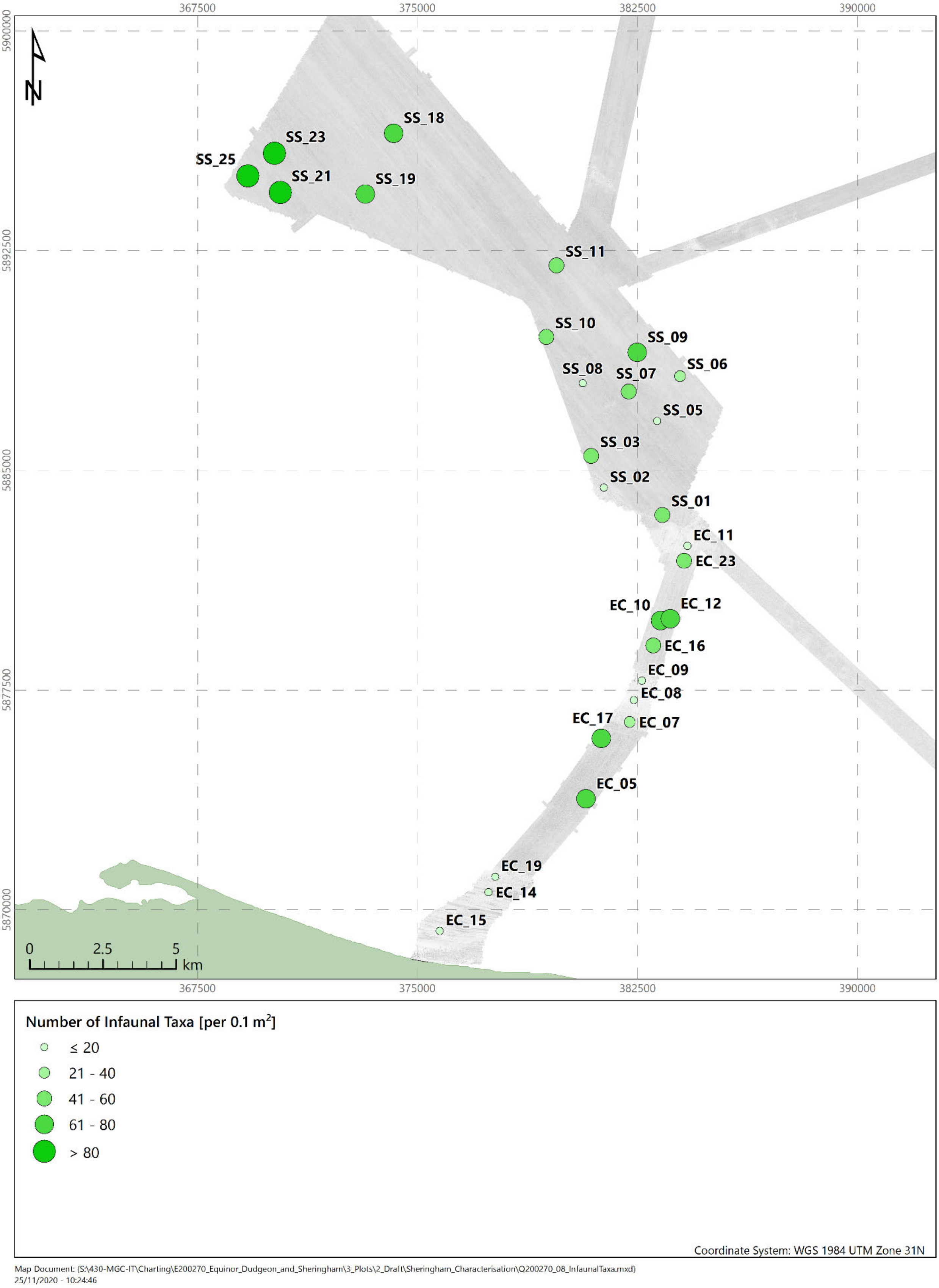
The total number of taxa ranged from 8 (station EC_08) to 76 (station EC_17), with a mean of 37. Station EC_17 also had the highest infaunal abundance with 413 individuals, whereas the lowest was recorded at station EC_11 with 14 individuals. The mean number of individuals along the export cable corridor was 167.

Richness reflected the infaunal abundance across the taxa recorded with values ranging from 2.42 (station EC_08) to 12.5 (station SS_23).

Diversity ranged from 2.06 (moderate; station EC_08) to 5.17 (high; station EC_10). Six stations had high diversity; five stations had good diversity and two stations had moderate diversity, with the mean diversity along the export cable route being good, with a value of 3.87.

Evenness ranged from 0.682 (station EC_16) to 0.958 (station EC_11), with a mean of 0.825. Analysis of the species list indicated that station EC_16 had a numerical dominance of the slipper limpet *Crepidula fornicata*, which, with 125 individuals, comprised 43 % of the infaunal abundance at this station. The high value of evenness at station EC_11 was associated with the low number of individuals across the taxa recorded.

Dominance ranged from 0.050 (station EC_07) to 0.395 (station EC_08), with a mean of 0.137 along the export cable route, confirming that infaunal abundances were fairly evenly distributed across the taxa recorded.

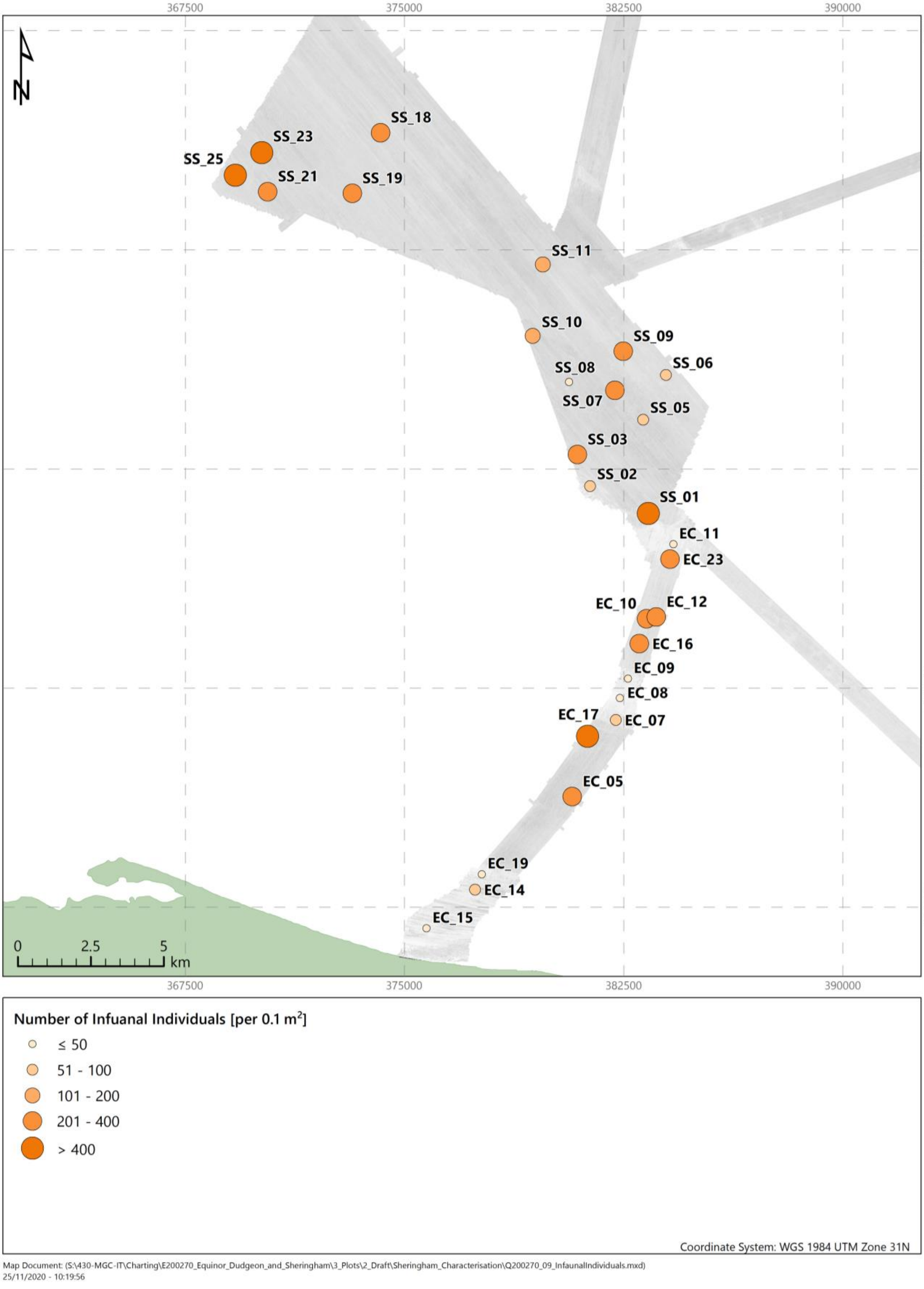


Notes

SS= Sheringham Shoal

EC = Export cable

Figure 4.14: Spatial distribution of the total number of infaunal taxa, Sheringham Extension Project



Notes

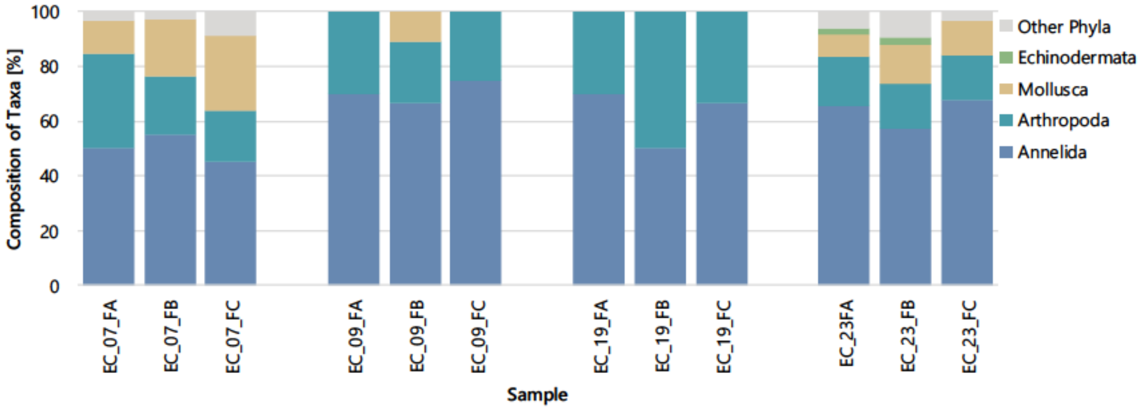
SS= Sheringham Shoal

EC = Export cable

Figure 4.15: Spatial distribution of the total number of infaunal individuals, Sheringham Extension Project

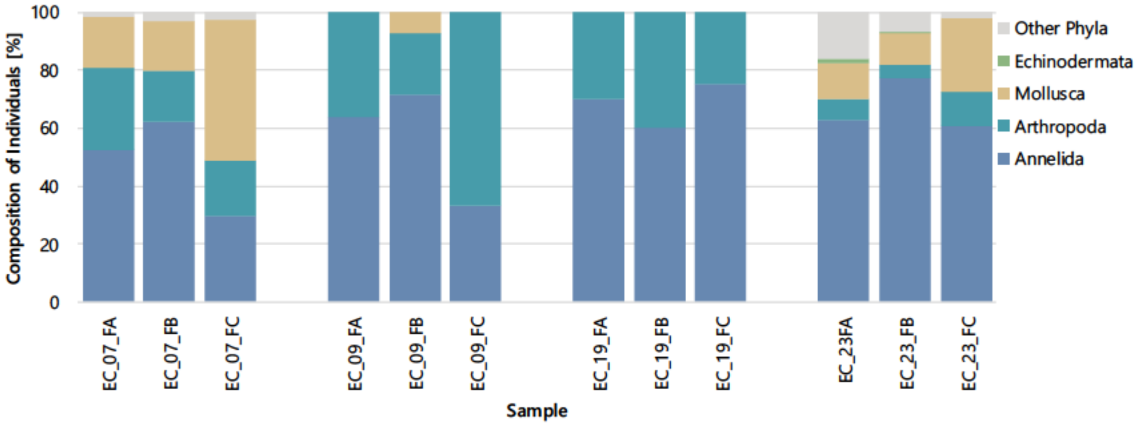
4.4.2.3 Intrastation Variability

Figures 4.16 and 4.17 present the phyletic composition of taxa and individuals, respectively, of stations sampled in triplicate to ground truth areas of small-scale variability identified by the geophysical data (details in Section 2).



Notes
SS= Sheringham Shoal
EC = Export cable

Figure 4.16: Phyletic composition of infaunal taxa at replicate samples stations, Sheringham Extension Project



Notes
SS= Sheringham Shoal
EC = Export cable

Figure 4.17: Phyletic composition of infaunal individuals at replicate samples stations, Sheringham Extension Project

Table 4.20 presents a summary of the infaunal characteristics of stations along the EC corridor sampled in triplicate.

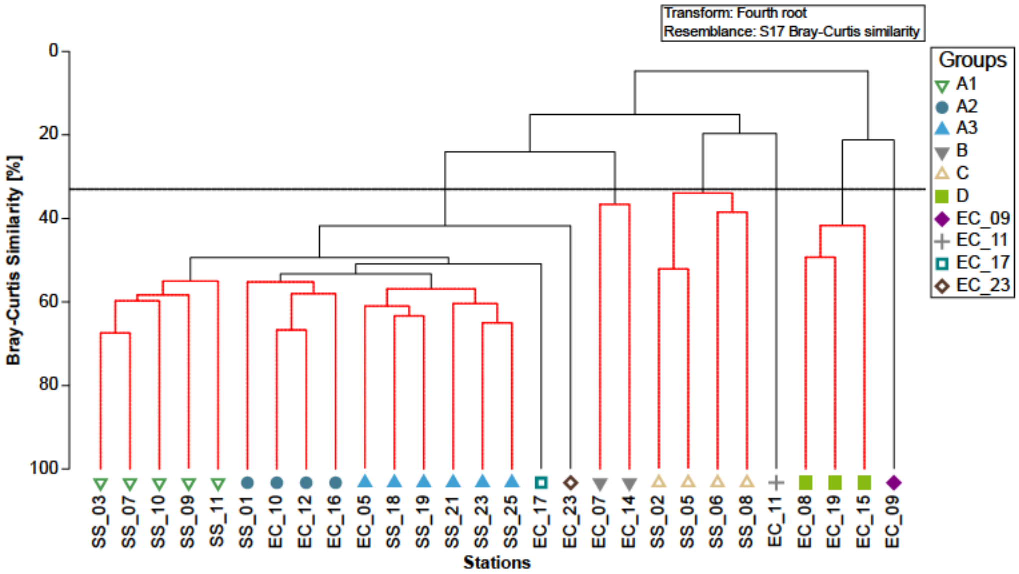
Table 4.18: Infaunal community statistics (0.1 m^2) of replicate samples stations, Sheringham Extension Project

Station	Numbers		Richness	Diversity	Evenness	Dominance
	Taxa	Individuals	Margalef [d]	Shannon-Wiener [H'Log₂]	Pielou [J']	Simpson [λ]
Station EC_07						
EC_07_FA	32	57	7.67	4.68	0.937	0.050
EC_07_FB	38	69	8.74	4.89	0.932	0.043
EC_07_FC	11	37	2.77	2.80	0.811	0.213
Mean	**27**	**54**	**6.39**	**4.13**	**0.89**	**0.100**
Standard deviation	**14**	**16**	**3.18**	**1.15**	**0.07**	**0.096**
Station EC_09						
EC_09_FA	10	22	2.91	3.01	0.905	0.149
EC_09_FB	9	14	3.03	3.04	0.959	0.133
EC_09_FC	4	12	1.21	1.42	0.709	0.486
Mean	**8**	**16**	**2.38**	**2.49**	**0.858**	**0.256**
Standard deviation	**3**	**5**	**1.02**	**0.93**	**0.131**	**0.200**
Station EC_19						
EC_19_FA	10	20	3.00	3.05	0.917	0.140
EC_19_FB	4	5	1.86	1.92	0.961	0.280
EC_19_FC	6	12	2.01	2.36	0.911	0.222
Mean	**7**	**12**	**2.29**	**2.44**	**0.930**	**0.214**
Standard deviation	**3**	**7**	**0.62**	**0.57**	**0.027**	**0.070**
Station EC_23						
EC_23_FA	49	202	9.04	4.63	0.826	0.071
EC_23_FB	42	216	7.63	3.88	0.720	0.168
EC_23_FC	31	110	6.38	3.91	0.790	0.110
Mean	**41**	**176**	**7.68**	**4.14**	**0.778**	**0.116**
Standard deviation	**9**	**58**	**1.33**	**0.43**	**0.054**	**0.049**

Notes
EC = Export cable

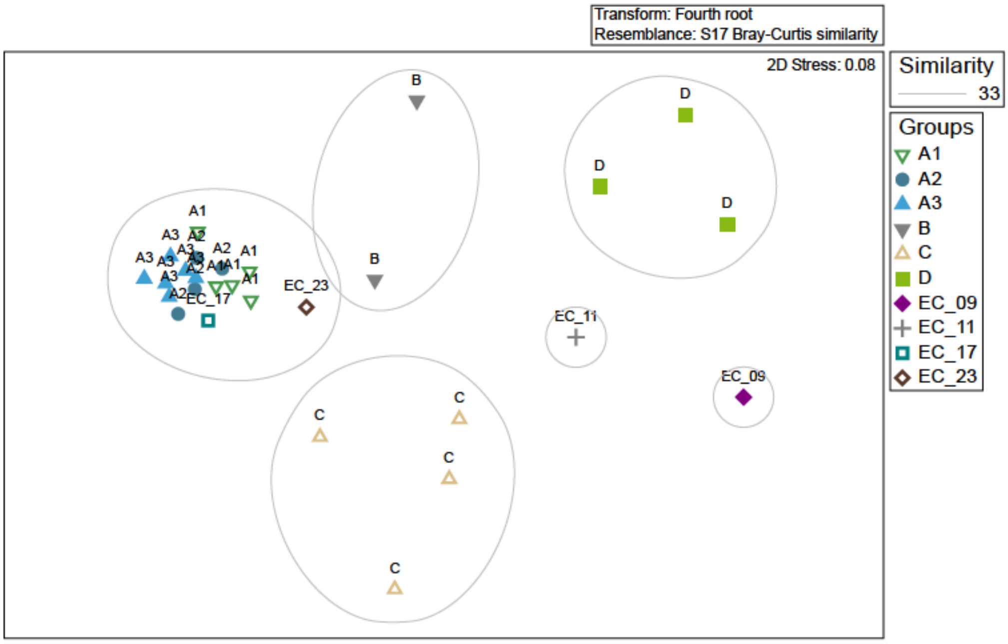
4.4.3 Investigation of Faunal Similarities

The infaunal dataset was transformed prior to multivariate analysis. A fourth root transformation provided the best assessment, down weighting the numerically dominant species and allowing more detailed interrogation of less abundant taxa and the underlying community. Faunal similarities between stations were investigated using the hierarchical clustering analysis, results of which are in Figures 4.18 and 4.19.



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.18: Dendrogram of hierarchical clustering analysis of infauna, Sheringham Extension Project



Notes
SS = Sheringham Shoal
EC = Export cable

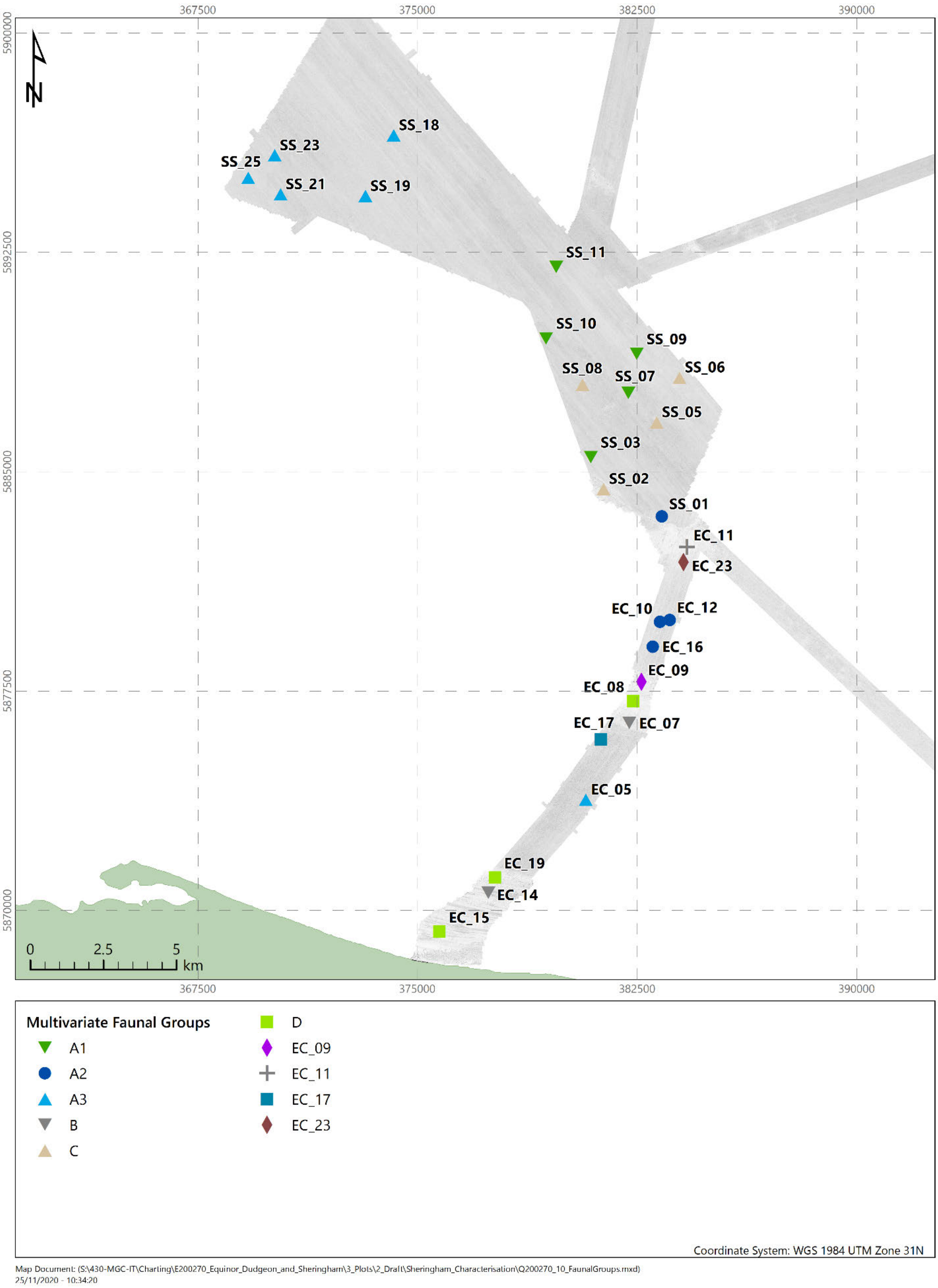
Figure 4.19: 2D nMDS plot of hierarchical clustering analysis of infauna, Sheringham Extension Project

Four groups, A, B, C and D, and two single stations, EC_09 and EC_11, were identified through the multivariate analysis at a similarity of 33 %; group A was further split by the SIMPROF test at a similarity of 54 %:

- Group A1 comprised five stations from the proposed extension; it had an average similarity of 58.2 % and comprised a mean number of 50 taxa and 224 individuals;

- Group A2 comprised three stations from the EC corridor and station SS_01 from the proposed extension; it had an average similarity of 58.1 % and comprised a mean number of 63 taxa and 361 individuals;
- Group A3 comprised station EC_05 from the EC corridor and three stations from the proposed extension; it had an average similarity of 58.9 % and a mean number of 76 taxa and 401 individuals;
- Group B comprised stations EC_07 and EC_14 from the EC corridor; it had an average similarity of 36.6 % and a mean number of 26 taxa and 56 individuals;
- Group C comprised four stations from the proposed extension; it had an average similarity of 37.7 % and a mean number of 20 taxa and 65 individuals;
- Group D comprised three stations from the EC corridor; it had an average similarity of 44.2 % and a mean number of 10 taxa and 21 individuals;
- Station EC_09 comprised 10 taxa and 22 individuals;
- Station EC_11 comprised 10 taxa and 14 individuals;
- Station EC_17 comprised 76 taxa and 413 individuals;
- Station EC_23 comprised 49 taxa and 202 individuals.

Figure 4.20 illustrates the spatial distribution of the groups identified by the multivariate analysis



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.20: Spatial distribution of multivariate faunal groups, Sheringham Extension Project

4.4.4 Characteristic Taxa from Similarity Percentage Analysis (SIMPER)

The SIMPER analysis of the multivariate groups allowed identification of taxa characterising each group, which were subsequently assessed with the environmental characteristics, providing the basis for biotope classification (details in Section 4.5). Table 4.19 present the top ten characteristic taxa identified by the SIMPER analysis at a cut off of 70 %.

Table 4.19: Top ten characterising taxa of multivariate groups following SIMPER analysis, Sheringham Extension Project

Taxa	Abundance [0.1m^2]	Frequency [%]	Taxa	Abundance [0.1m^2]	Frequency [%]
Group A1			**Group A2**		
Sabellaria spinulosa	28	100	*Crepidula fornicata*	74	100
Crepidula fornicata	27	100	*Sabellaria spinulosa*	44	100
Polycirrus	14	100	*Galathea intermedia*	13	100
Nephasoma minutum	18	100	*Amphipholis squamata*	12	100
Lanice conchilega	13	100	*Polycirrus*	11	100
Syllis variegata	7	100	*Nephasoma minutum*	11	100
Leiochone	6	100	Nemertea	9	100
Phoronis	5	100	*Ampelisca spinipes*	9	100
Unciola crenatipalma	4	100	*Lumbrineris* nr. *cingulata*	6	100
Amphipholis squamata	4	100	*Unciola crenatipalma*	4	100
Group A3			**Group B**		
Pisidia longicornis	54	100	*Lanice conchilega*	10	100
Crepidula fornicata	33	100	*Rissoa parva*	6	100
Galathea intermedia	29	100	*Sabellaria spinulosa*	5	100
Amphipholis squamata	12	100	*Spiophanes bombyx*	3	100
Sabellaria spinulosa	19	100	*Anoplodactylus petiolatus*	3	100
Polycirrus	14	100	*Achelia echinata*	2	100
Spirobranchus lamarcki	13	100	*Gastrosaccus spinifer**	2	100
Lanice conchilega	13	100	*Bathyporeia guilliamsoniana**	2	100
Rissoa parva	12	100	*Abludomelita obtusata**	2	100
Nemertea	9	100			
Group C			**Group D**		
Goodallia triangularis	25	100	*Bathyporeia elegans*	6	100
*Spio symphyta**	5	50.0	*Ophelia borealis*	2	100
Polycirrus	3	100	*Travisia forbesii*	2	100
Crepidula fornicata	3	75.0	*Spiophanes bombyx**	2	66.7
*Sphaerosyllis bulbosa**	3	50.0	*Urothoe brevicornis**	1	66.7
Nemertea	2	100	*Nephtys cirrosa*	1	100
Glycera lapidum	2	100	-	-	-
Notomastus	2	75.0	-	-	-
*Ophelia borealis**	2	50.0	-	-	-
Mediomastus fragilis	1	75.0	-	-	-

Taxa	Abundance [0.1m^2]	Frequency [%]	Taxa	Abundance [0.1m^2]	Frequency [%]
Station EC_09			**Station EC_11**		
Spio goniocephala	5	-	*Lanice conchilega*	3	-
Gastrosaccus spinifer	5	-	*Ophelia borealis*	2	-
Ophelia borealis	3	-	*Eurydice spinigera*	2	-
Nephtys longosetosa	2	-	*Spio goniocephala*	1	-
Prodajus ostendensis	2	-	*Sabellaria spinulosa*	1	-
Hesionura elongata	1	-	*Lysilla nivea*	1	-
Glycera oxycephala	1	-	*Nebalia troncosoi*	1	-
Spio symphyta	1	-	*Abludomelita obtusata*	1	-
Thoracophelia flabellifera	1	-	*Retusa obtusa*	1	-
Pontocrates arenarius	1	-	*Goodallia triangularis*	1	-
Station EC_17			**Station EC_23**		
Sabellaria spinulosa	87	-	*Sabellaria spinulosa*	39	-
Ampelisca diadema	42	-	*Crepidula fornicata*	22	-
Rissoa parva	31	-	*Golfingia elongata*	17	-
Ampelisca spinipes	24	-	*Polycirrus*	10	-
Polycirrus	20	-	Nemertea	9	-
Crepidula fornicata	16	-	*Exogone verugera*	8	-
Lanice conchilega	12	-	*Leiochone*	8	-
Eumida sanguinea	11	-	*Aphelochaeta marioni*	7	-
Lumbrineris nr. *cingulata*	11	-	*Lanice conchilega*	7	-
Achelia echinata	11	-	*Nephasoma minutum*	6	-

Notes
Abundance refers to mean values of untransformed data within each multivariate group, except for single stations
Frequency refers to percentage of occurrence within each multivariate group
SIMPER cut off for low contributions is 70 %, except for * where cut off for low contributions is 100.00 %
Taxa are listed in decreasing order of abundance

Characterising taxa of groups A1, A2 and A3 included the slipper limpet *C. fornicata*, the polychaetes *Sabellaria spinulosa* and *Polycirrus*, and the brittlestar *Amphipholis squamata*, all occurring within the top ten characterising taxa of each individual group. Other characterising taxa common to groups A1, A2 and A3 included the polychaetes *Lanice conchilega*, *Syllis variegata* and *Eumida sanguinea*, along with Nemertea, albeit not all featuring within the top ten taxa in each individual group.

Differences between the SIMPROF groups A1, A2 and A3 (details in Section 4.4.3) were associated mainly with species abundance, such as the crab *Pisidia longicornis* and the sipunculid worm *Nephasoma minutum*, less with species occurrence, such as the polychaete *Spio armata* and the amphipod *Orchomene humilis*, neither of which featured within the top ten characterising taxa. The individual stations EC_17 and EC_23, were separated by the SIMPROF test owing mainly to the absence of taxa such as *Galathea intermedia*, *Phoronis* and *Gnathia oxyuraea*, all of which were present in groups A1, A2 and A3, as well as differences in the abundance of selected taxa not featuring within the top ten characterising taxa.

For biotope classification (see Section4.5) multivariate groups A1, A2 and A3 and stations EC_17 and EC_23 were considered as one group, as the differences highlighted by the SIMPROF test were not deemed of ecological significance for biotope classification. When considered together, the A groups and stations EC_17 and EC_23 had a mean number of 64 taxa and 328 individuals.

Group B had separated mainly owing to absence of taxa. Of the characterising taxa, *L. conchilega* had the highest mean abundance of 10 individuals; *S. spinulosa* also featured amongst the top ten characterising taxa, along with *Spiophanes bombyx* and sea spiders such as *Anoplodactylus petiolatus* and *Achelia echinata*, and amphipods, such as *Bathyporeia guilliamsoniana* and *Abludomelita obtusata*.

Group C separated owing to taxa composition and abundance. Of the characterising taxa, the bivalve *Goodallia triangularis* comprised the highest mean abundance of 25 individuals; *C. fornicata* also featured within the top ten characterising taxa along with the polychaetes *Glycera lapidum* and *Polycirrus*.

Group D had the lowest number of taxa and individuals, represented by the amphipod *Bathyporeia elegans* and *Urothoe brevicornis* and the polychaetes *Ophelia borealis*, *Nephtys cirrosa* and *S. bombyx*.

Both stations EC_09 and EC_11 comprised ten taxa, of which the polychaete *Spio goniocephala* and the amphipod *Gastrosaccus spinifer*, each with 5 individuals, were the most abundant at station EC_09. At station EC_11, *L. conchilega*, with 3 individuals, was the most abundant taxon.

Station EC_09 differed from group D for taxa composition, notably the absence of *B. elegans*, *Travisia forbesii* and *N. cirrosa*, and the presence of *Nephtys longosetosa*, *Prodajus ostendensis* and *Hesionura elongata*, and difference in the abundance of *S. goniocephala* and *G. spinifer*.

Station EC_11 differed from group C for taxa composition, notably the absence of *Polycirrus*, *Glycera lapidum* and Nemertea, and differences in the abundance of L. conchilega and *G. triangularis*.

Figures 4.21 to 4.26 present the relative abundance of taxa characterising the multivariate groups.

The spatial pattern of infaunal distribution was influenced by the sediment type as indicated by the results of the BEST analysis which returned the highest value of correlation of 0.840 for the combination of the following sediment particles: 2000 µm (granule), 1400 µm (very coarse sand), 500 µm (coarse sand), 353.55 µm (medium sand) and 125 µm (fine sand).

Figure 4.27 presents the results of the multivariate analysis of the data set, inclusive of replicates FA, FB and FC, illustrating the intrastation variability.

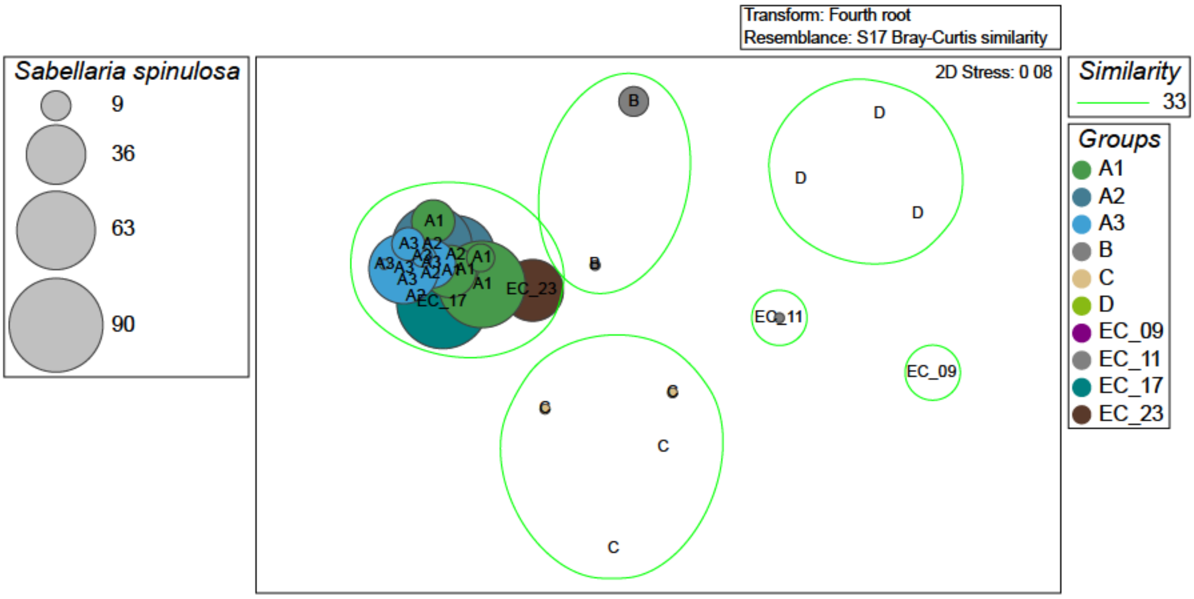


Figure 4.21: 2D nMDS plot of hierarchical clustering analysis of infauna; data with superimposed circles proportional in diameter to the abundance of *S. spinulosa*, Sheringham Extension Project

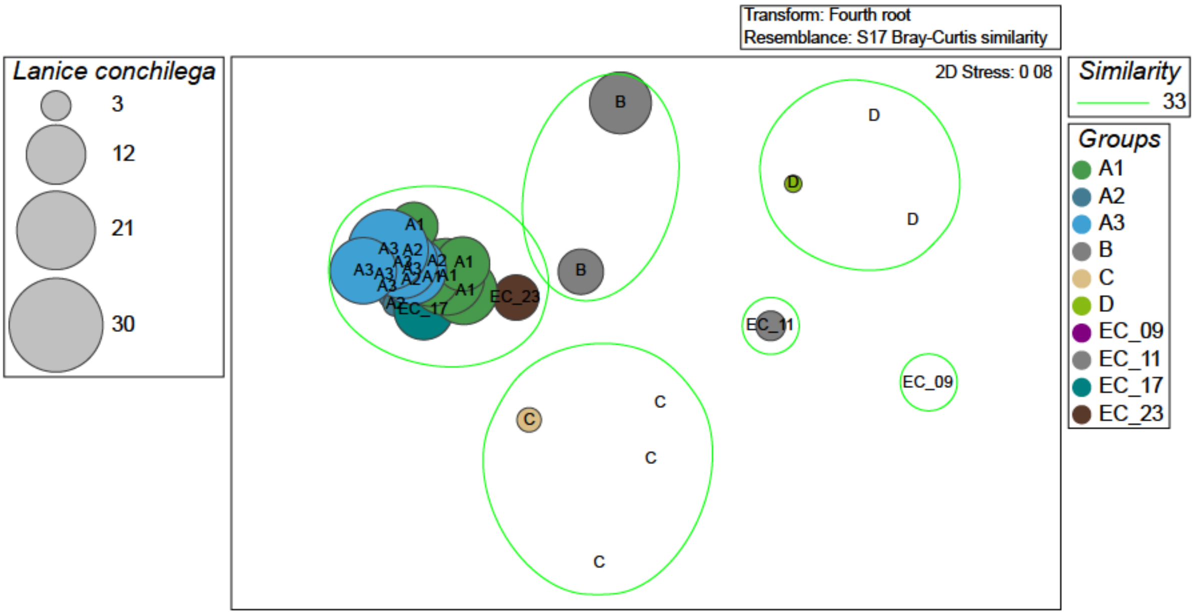
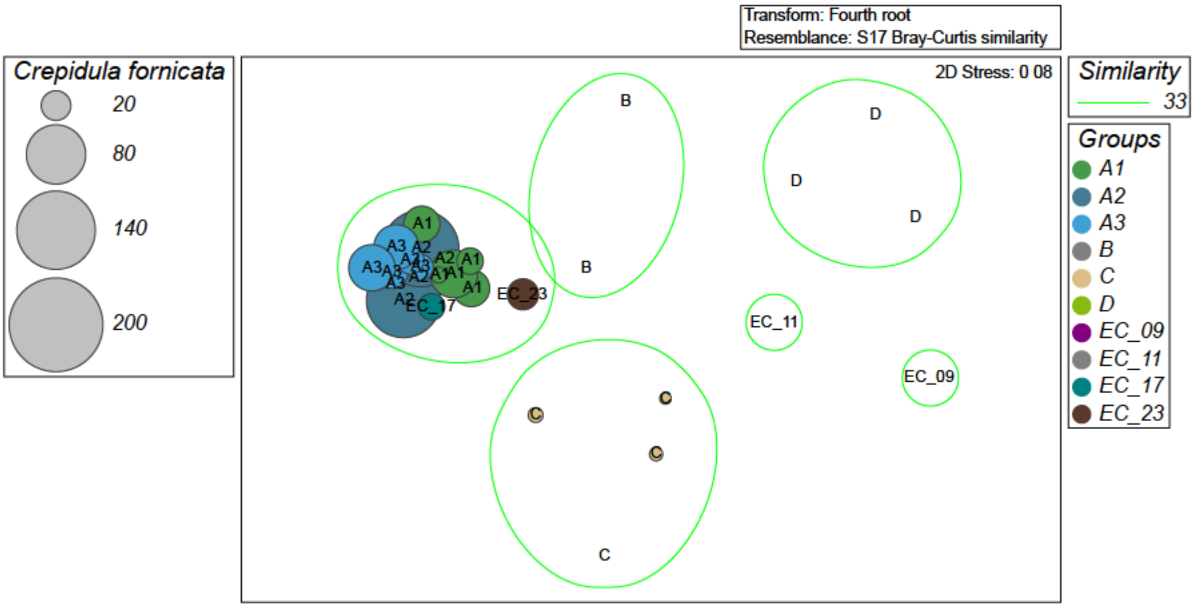


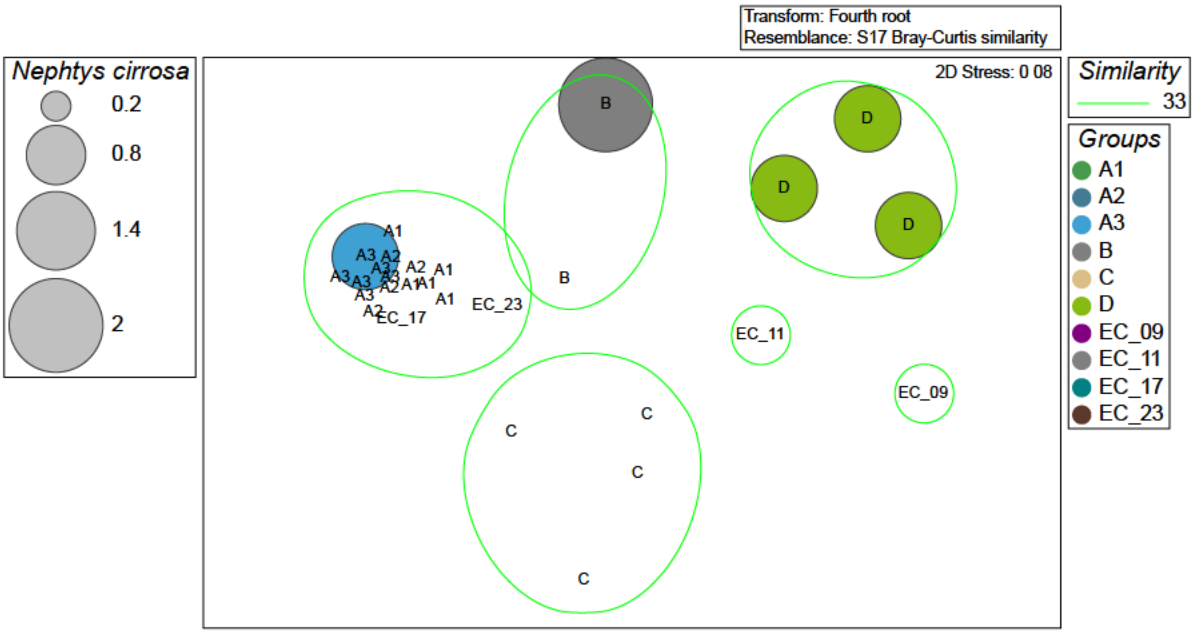
Figure 4.22: 2D nMDS plot of hierarchical clustering analysis of infauna; data with superimposed circles proportional in diamter to the abundance of *L. conchilega*, Sheringham Extension Project



Notes

EC = Export cable

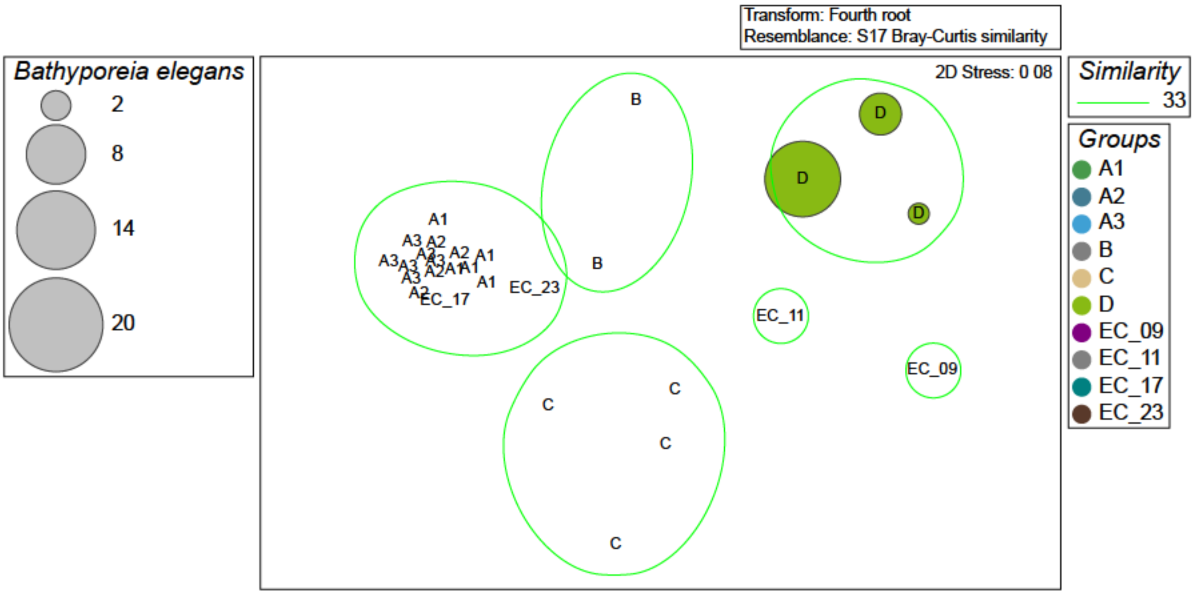
Figure 4.23: 2D nMDS plot of hierarchical clustering analysis of infauna; data with superimposed circles proportional in diamter to the abundance of *C. fornicata*, Sheringham Extension Project



Notes

EC = Export cable

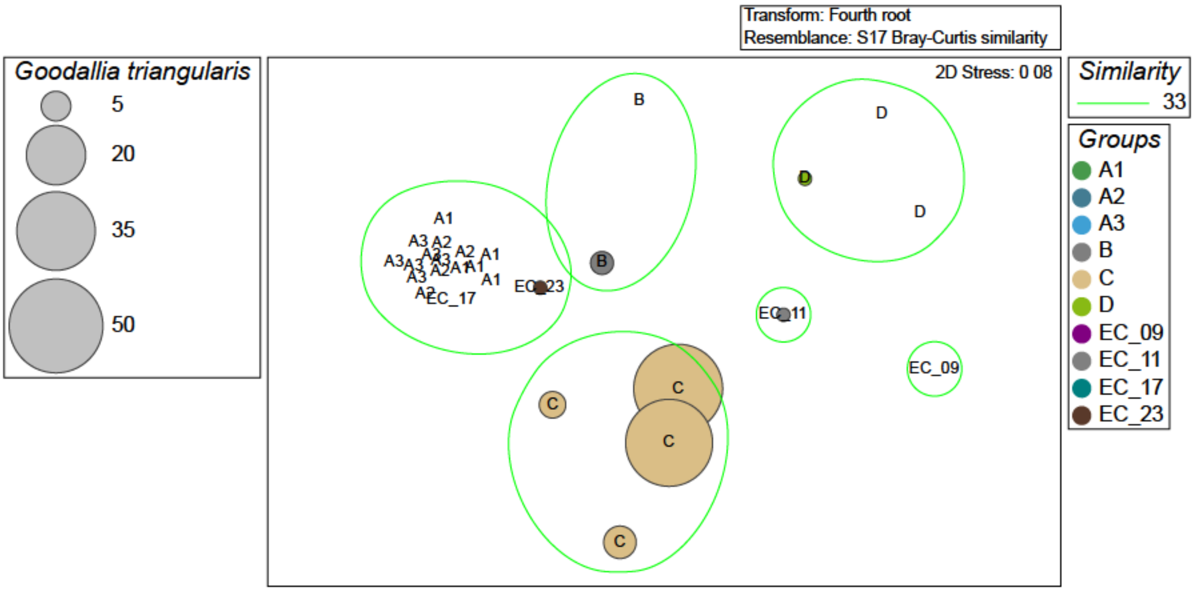
Figure 4.24: 2D nMDS plot of hierarchical clustering analysis of infauna; data with superimposed circles proportional in diameter to the abundance of *N. cirrosa*, Sheringham Extension Project



Notes

EC = Export cable

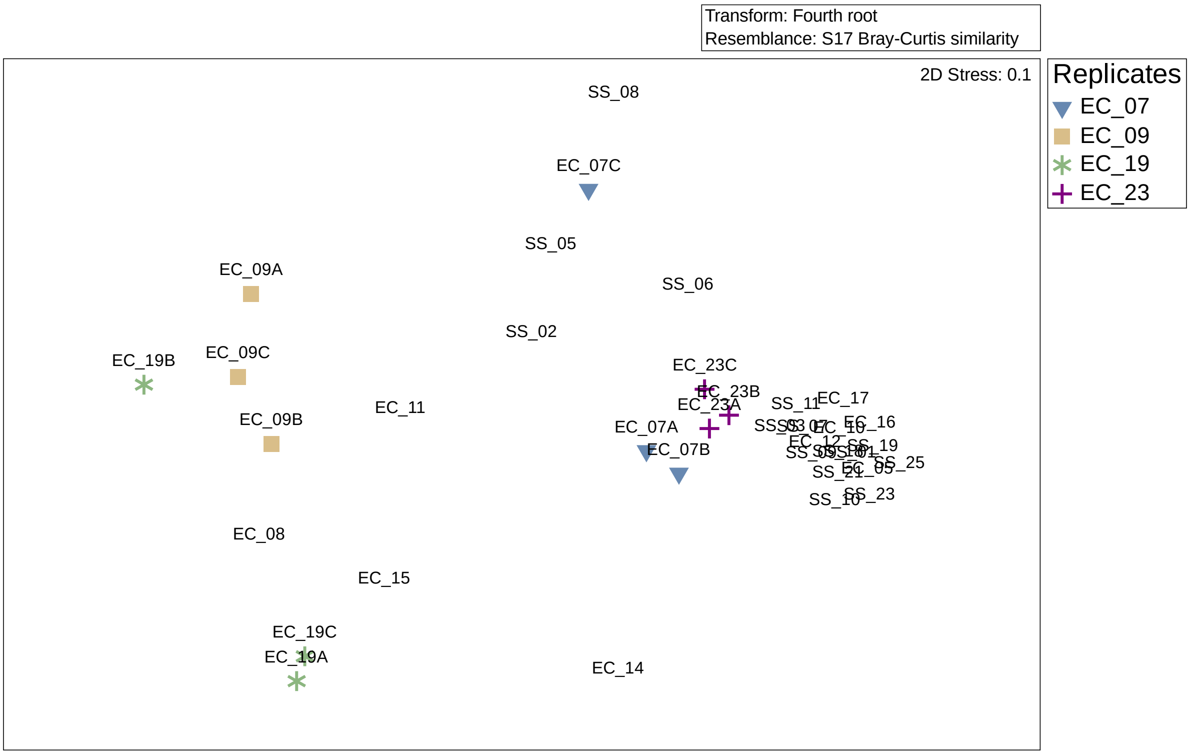
Figure 4.25: 2D nMDS plot of hierarchical clustering analysis of infauna; data with supeimposed circles proportional in diamter to the abundance of *B. elegans*, Sheringham Extension Project



Notes

EC = Export cable

Figure 4.26: 2D nMDS plot of hierarchical clustering analysis of infauna; data with supeimposed circles proportional in diamter to the abundance of *G. triangularis* Sheringham Extension Project



Notes

SS = Sheringham Shoal

EC = Export cable

Figure 4.27: nMDS ordination of hierarchical clustering analysis of infauna with superimposed stations sampled in triplicate, Sheringham Extension Project

4.4.5 Biomass

Table 4.20 presents the percentage contribution of phyla to biomass and Table 4.21: Phyletic composition of infaunal biomass per station, Sheringham Extension Project presents the biomass of major taxonomic groups at each station. Table 4.2 presents the phyletic composition of the biomass at each station and Figure 4.29 presents the total biomass across the survey area. Appendix E presents the raw data.

Mollusca comprised 83.8 % of the infaunal biomass in the SS proposed extension, followed by Annelida (9.1 %), Arthropoda (6.8 %) and Echinodermata (0.1 %). Other phyla comprised 0.3 % of the infaunal biomass.

Along the EC corridor, Mollusca comprised 71.4 % of the infaunal biomass, followed by Annelida (20.9 %), Arthropoda (7.2 %) and Echinodermata (0.1 %). Other phyla comprised 0.3 % of the infaunal biomass (Table 4.20).

Table 4.20: Taxonomic groups of macrofaunal biomass, Sheringham Extension Project

Phylum	Biomass [AFDW g/0.1 m^2]	Biomass [%]
Sheringham Shoal Proposed Extension (SS)		
Annelida	2.4833	9.1
Arthropoda	1.8561	6.8
Mollusca	22.941	83.8
Echinodermata	0.0193	0.1
Other phyla	0.0851	0.3
Total	**27.385**	**100**
Export Cable Corridor (EC)		
Annelida	2.9961	20.9
Arthropoda	1.0371	7.2
Mollusca	10.247	71.4
Echinodermata	0.0153	0.1
Other phyla	0.0531	0.4
Total	**14.349**	**100**

Table 4.21: Phyletic composition of infaunal biomass per station, Sheringham Extension Project

Station	Biomass [AFDW g/0.1m^2]					
	Annelida	Arthropoda	Mollusca	Echinodermata	Other Phyla	Total
Sheringham Shoal (SS) Proposes Extension						
SS_01	0.1807	0.0509	0.1951	0.0017	0.0073	**0.4357**
SS_02	0.0378	0.0031	0.0088	-	0.0001	**0.0498**
SS_03	0.1703	0.0248	0.1036	0.0004	0.0034	**0.3024**
SS_05	0.0355	0.0007	0.0617	-	0.0006	**0.0985**
SS_06	0.0474	0.0061	0.0926	0.0006	0.0015	**0.1482**
SS_07	0.1682	0.0511	0.0843	0.0002	0.0020	**0.3058**
SS_08	0.0040	0.0001	0.0033	-	0.0002	**0.0076**
SS_09	0.1780	0.1170	0.2270	0.0018	0.0067	**0.5305**
SS_10	0.1148	0.0504	4.3951	0.0004	0.0086	**4.5693**
SS_11	0.2064	0.0793	0.3385	0.0003	0.0115	**0.6361**
SS_18	0.2708	0.1066	1.0126	0.0013	0.0044	**1.3958**
SS_19	0.1944	0.1802	3.9770	0.0018	0.0097	**4.3631**
SS_21	0.1961	0.1400	2.0067	0.0010	0.0144	**2.3582**
SS_23	0.3106	0.3967	4.0655	0.0033	0.0085	**4.7845**
SS_25	0.3683	0.6492	6.3690	0.0066	0.0062	**7.3993**
Minimum	**0.0040**	**0.0001**	**0.0033**	**0.0002**	**0.0001**	**0.0076**
Maximum	**0.3683**	**0.6492**	**6.3690**	**0.0066**	**0.0144**	**7.3993**
Median	**0.1780**	**0.0511**	**0.2270**	**0.0011**	**0.0062**	**0.5305**
Mean	**0.1656**	**0.1237**	**1.5294**	**0.0016**	**0.0057**	**1.8256**
Standard deviation	**0.1045**	**0.1775**	**2.1117**	**0.0018**	**0.0044**	**2.3325**
Export Cable (EC) Corridor						
EC_05	0.1383	0.2108	2.4294	0.0074	0.0028	**2.7887**
EC_07	0.0432	0.0127	0.0022	-	0.0002	**0.0583**
EC_08	0.0260	0.0189	-	-	-	**0.0449**
EC_09	0.4543	0.0093	-	-	-	**0.4636**
EC_10	1.1472	0.1534	0.1083	0.0030	0.0215	**1.4334**
EC_11	0.0231	0.0017	0.0007	-	-	**0.0255**
EC_12	0.2336	0.3101	0.3674	0.0013	0.0120	**0.9245**
EC_14	0.0947	0.0039	0.0038	-	0.0002	**0.1027**
EC_15	0.1260	0.0034	0.0006	-	0.0040	**0.1340**
EC_16	0.0613	0.1375	5.1556	0.0020	0.0011	**5.3576**
EC_17	0.3882	0.1682	0.1628	0.0010	0.0095	**0.7298**
EC_19	0.0496	0.0017	-	0.0001	-	**0.0514**
EC_23	0.2104	0.0054	2.0164	0.0005	0.0018	**2.2345**
Min	**0.0231**	**0.0017**	**0.0006**	**0.0001**	**0.0002**	**0.0255**
Max	**1.1472**	**0.3101**	**5.1556**	**0.0074**	**0.0215**	**5.3576**
Median	**0.1260**	**0.0127**	**0.1356**	**0.0013**	**0.0028**	**0.4636**
Mean	**0.2305**	**0.0798**	**1.0247**	**0.0022**	**0.0059**	**1.1038**
Standard deviation	**0.3075**	**0.1038**	**1.7069**	**0.0025**	**0.0072**	**1.5634**

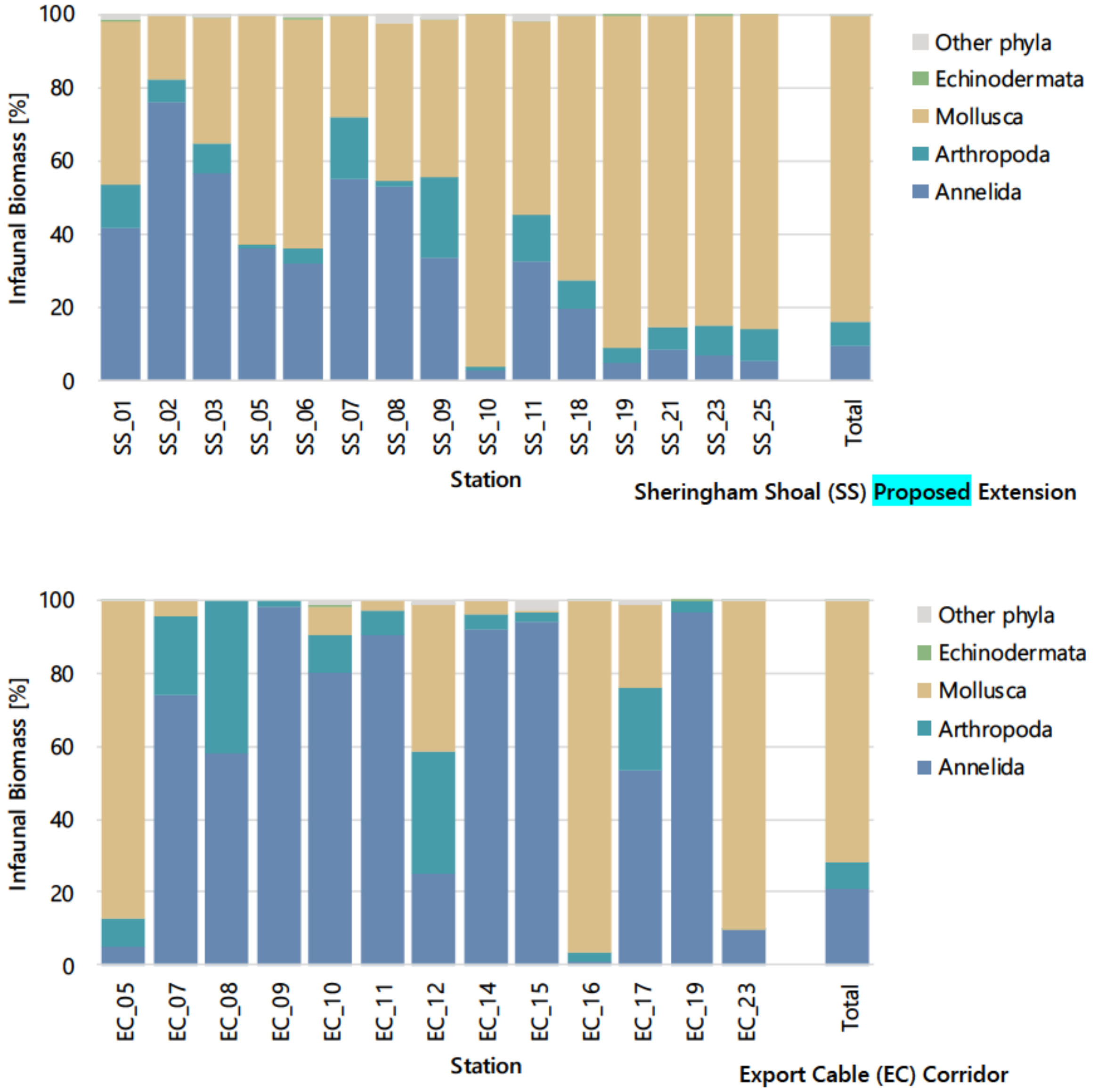


Figure 4.28: Phyletic composition of biomass, Sheringham Extension Project

In the SS proposed extension, the infaunal biomass ranged from 0.0076 AFDW g/0.1 m^2 (station SS_08) to 7.3993 AFDW g/0.1 m^2 (station SS_25), with a mean of 1.8256 AFDW g/0.1 m^2 (Table 4.21).

When assessed on a station basis, Mollusca comprised the highest percentage of biomass at all but stations SS_02, SS_03, SS_07 and SS_08, the biomass of which was dominated by Annelida (Table 4.25). Analysis of the species list indicated that the Mollusca biomass was associated with a numerical abundance of the gastropods *C. fornicata*, *Rissoa parva*, *Onoba semicostata* and *Onchidoris bilamellata*, and the bivalves *G. triangularis*, *Nucula nucleus*, *Abra alba* and *Hiatella arctica*.

Along the EC corridor the infaunal biomass ranged from 0.0255 AFDW g/0.1 m^2 (station EC_11) to 5.357 AFDW g/0.1 m^2 (station EC_16), with a mean of 1.1038 AFDW g/0.1 m^2 (Table 4.21).

When assessed on a station basis, Annelida comprised the highest percentage of biomass at all but stations EC_05, EC_12, EC_16 and EC_23, the biomass of which was dominated by Mollusca (Figure 4.28). Analysis of the species list indicated that the Annelida biomass was associated with a numerical abundance of polychaetes such as *S. spinulosa*, *Polycirrus*, *L. conchilega*, *Lumbrineris* nr. *cingulata* and *Spirobranchus lamarcki*. Arthropoda had notable contributions at stations EC_08 and EC_12, the latter comprising large taxa such as *G. intermedia* and *Anapagurus hyndmanni*.

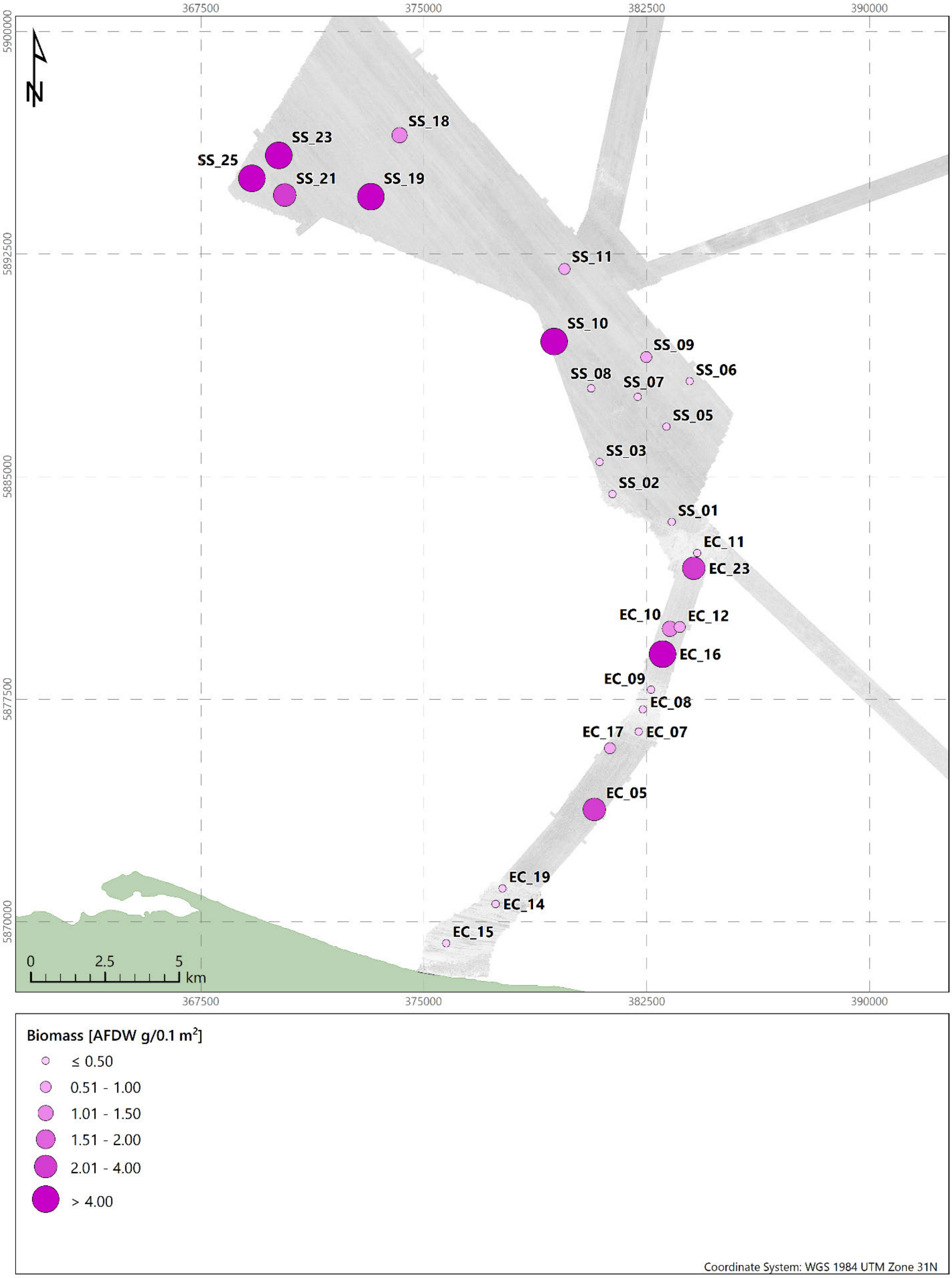
4.4.5.1 Intrastation Variability

Table 4.22 presents a summary of the infaunal characteristics of stations along the EC corridor sampled in triplicate.

Table 4.22: Phyletic composition of infaunal biomass per station, Sheringham Extension Project

Station	Biomass [AFDW g/0.1m^2]					
	Annelida	Arthropoda	Mollusca	Echinodermata	Other Phyla	Total
Station EC_07						
EC_07_FA	0.0432	0.0127	0.0022	-	0.0002	**0.0583**
EC_07_FB	0.1825	0.0083	0.0070	0.0012	0.0005	**0.1994**
EC_07_FC	0.0137	0.0095	0.0517	-	0.0003	**0.0752**
Mean	**0.0798**	**0.0101**	**0.0203**	-	**0.0003**	**0.1110**
Standard deviation	**0.0901**	**0.0023**	**0.0273**	-	**0.0001**	**0.0771**
Station EC_09						
EC_09_FA	0.4543	0.0093	-	-	-	**0.4636**
EC_09_FB	0.0133	4.9066	0.0001	-	-	**4.9200**
EC_09_FC	0.0229	0.0026	-	-	-	**0.0255**
Mean	**0.1635**	**1.6395**	-	-	-	**1.8030**
Standard deviation	**0.2519**	**2.8294**	-	-	-	**2.7082**
Station EC_19						
EC_19_FA	0.0496	0.0017	-	0.0001	-	**0.0514**
EC_19_FB	0.0402	0.0065	0.0001	-	-	**0.0469**
EC_19_FC	0.0171	0.0009	-	-	-	**0.0181**
Mean	**0.0357**	**0.0031**	-	-	-	**0.0388**
Standard deviation	**0.0167**	**0.0030**	-	-	-	**0.0181**
Station EC_23						
EC_23_FA	0.2104	0.0054	2.0164	0.0005	0.0018	**2.2345**
EC_23_FB	0.3046	1.3680	2.8886	0.0000	0.0032	**4.5644**
EC_23_FC	0.1478	0.0184	1.7944	-	0.0004	**1.9610**
Mean	**0.2210**	**0.4639**	**2.2331**	**0.0003**	**0.0018**	**2.920**
Standard deviation	**0.0789**	**0.7830**	**0.5784**	**0.0003**	**0.0014**	**1.431**

Notes
EC = Export cable



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Notes
Biomass expressed as ash free dry weight (AFDW) g/0.1 m^2
SS = Sheringham Shoal
EC = Export cable

Figure 4.29: Spatial distribution of infaunal biomass, Sheringham Extension Project

4.4.6 Epifauna

Data analysis to characterise the survey area was undertaken using sample FA for all stations. Stations sampled in triplicate were assessed in terms of variation between the station samples (FA, FB and FC) to inform on the small-scale variability (Section 2).

Following rationalisation (details in Section 3.3.2), the colonial epifaunal dataset from the SEP survey area comprised 87 taxa, of which 11 solitary and 76 colonial. The excluded taxa comprised juveniles (6 taxa) and damaged taxa. Five taxa were merged to their corresponding higher taxon.

4.4.6.1 Solitary Epifauna

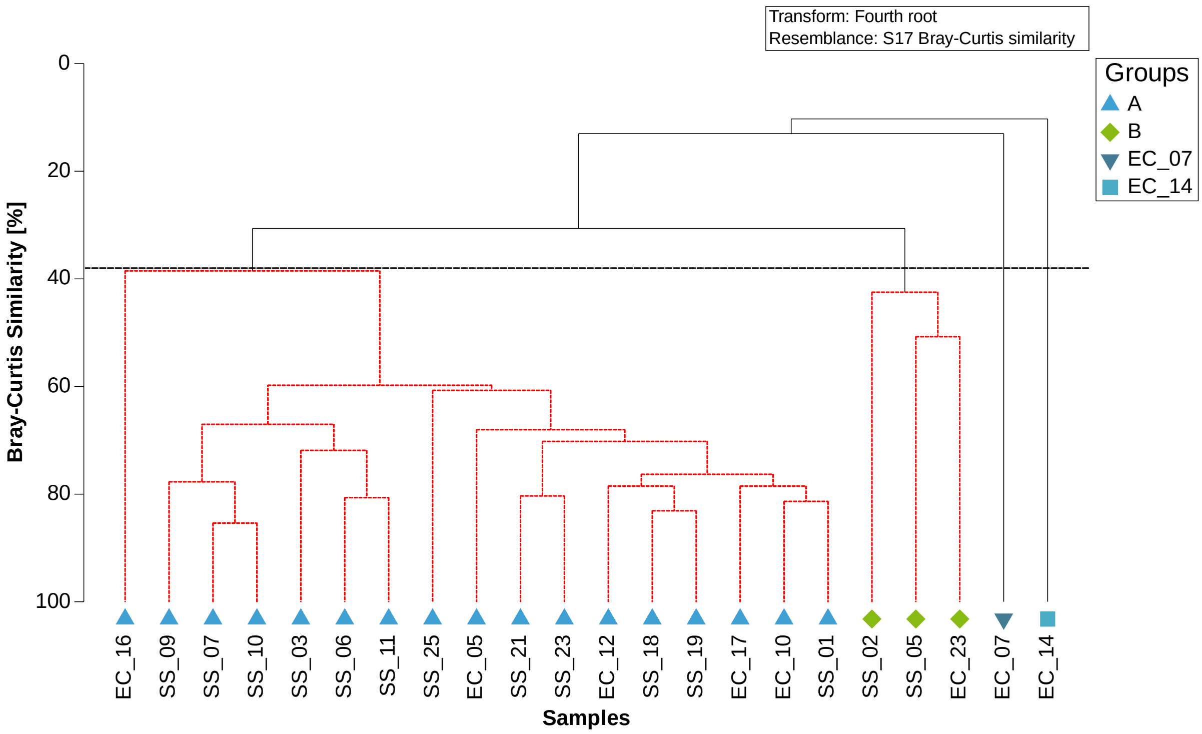
The solitary epifauna comprised sea anemones of the order Actiniaria, the barnacles *Balanus crenatus* and *Verruca stroemia*, and 11 Tunicates. Stations SS_08, EC_08, EC_09, EC_11, EC_15 and EC_19, were devoid of solitary epifauna. Table 4.23 presents community statistics of the solitary epifauna.

Table 4.23: Solitary epifaunal community statistics, Sheringham Extension Project

Station	Numbers		Richness	Diversity	Evenness	Dominance
	Taxa	Individuals	Margalef [d]	Shannon-Wiener [H'Log$_2$]	Pielou [J']	Simpson [λ]
Sheringham Shoal (SS) Proposed Extension						
SS_01	7	669	0 92	0.97	0.347	0.600
SS_02	1	1	-	-	-	-
SS_03	5	271	0.71	0.90	0.386	0.702
SS_05	2	16	0.36	0.34	0.337	0.883
SS_06	5	126	0.83	0.64	0.274	0.821
SS_07	5	534	0.64	0.79	0.341	0.764
SS_09	7	367	1.02	1.06	0.379	0.652
SS_10	6	536	0.80	0.99	0.381	0.687
SS_11	4	708	0.46	0.19	0.094	0.956
SS_18	8	627	1.09	1.25	0.417	0.498
SS_19	5	601	0.63	1.29	0.557	0.455
SS_21	5	956	0.58	1.17	0.504	0.505
SS_23	5	837	0.59	0.71	0.306	0.726
SS_25	5	4102	0.48	0.33	0.140	0.905
Minimum	**1**	**1**	**0.36**	**0.19**	**0.094**	**0.455**
Maximum	**8**	**4102**	**1.09**	**1.29**	**0.557**	**0.956**
Median	**5**	**569**	**0.64**	**0.90**	**0.347**	**0.702**
Mean	**5**	**739**	**0.70**	**0.82**	**0.343**	**0.704**
Standard Deviation	**1.84**	**1011**	**0.22**	**0.362**	**0.126**	**0.161**

Station	Numbers		Richness	Diversity	Evenness	Dominance
	Taxa	Individuals	Margalef [d]	Shannon-Wiener [H'Log2]	Pielou [J']	Simpson [λ]
Export Cable (EC) Corridor						
EC_05	7	278	1.07	0.681	0.242	0.812
EC_07	1	1	-	-	-	-
EC_10	9	665	1 23	1.75	0.551	0.353
EC_12	8	894	1.03	1.43	0.477	0.462
EC_14	2	26	0.31	0.24	0.235	0.926
EC_16	6	31	1.46	2.18	0.843	0.276
EC_17	7	764	0 90	1.39	0.495	0.524
EC_23	2	107	0 21	0.35	0.349	0.878
Minimum	**1**	**1**	**0.21**	**0.24**	**0.235**	**0.276**
Maximum	**9**	**894**	**1.46**	**2.18**	**0.843**	**0.926**
Median	**7**	**193**	**1.03**	**1.39**	**0.477**	**0.524**
Mean	**5**	**346**	**0.89**	**1.14**	**0.456**	**0.604**
Standard deviation	**3.11**	**370**	**0.463**	**0.736**	**0.211**	**0.264**

Results of the hierarchical clustering analysis (Figure 4.30) identified two multivariate groups and stations EC_07 and EC_14. The species responsible for the separation of the multivariate groups included *B. crenatus*, *Molgula manhattensis*, *Polycarpa fibrosa* and *Dendrodoa grossularia*.



Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.30: Dendrogram of hierarchical clustering analysis of solitary epifauna, Sheringham Extension Project

Notes
SS = Sheringham Shoal
EC = Export cable

Figure 4.31: nMDS of hierarchical clustering analysis of solitary epifauna with superimposed circles proportional in diameter to the abundance of taxa driving the separation of groups, Sheringham Extension Project

The spatial pattern of solitary epifauna distribution was influenced by the sediment type, as indicated by the results of the BEST analysis, which returned the highest correlation value of 0.750 at a significance level of 1 %, for the combination of the following sediment particle sizes: 31500 µm (coarse pebble), 1400 µm and 1000 µm (very coarse sand), 500 µm (coarse sand) and 353.55 µm (medium sand).

4.4.6.2 Colonial Epifauna

Table 4.24 presents the community structure of sessile colonial epifauna and Figure 4.32 illustrates the colonial epifauna community structure at single stations. Figure 4.32 presents the occurrence of the total number of colonial epifauna per station across the SEP survey area. Table 4.26 presents the top ten most frequently occurring taxa.

Table 4.24: Taxonomic groups of colonial epifauna from grab samples, Sheringham Extension Project

Taxonomic Group	Number of Taxa	Composition of Taxa [%]*
Sheringham Shoal (SS) Proposed Extension		
Porifera	2	2.9
Cnidaria	20	29.0
Bryozoa	37	53.6
Tunicata	7	10.1
Other phyla	3	4.3
Total	**69**	**100**
Export Cable (EC) Corridor		
Porifera	3	6.3
Cnidaria	8	16.7
Bryozoa	31	64.6
Tunicata	3	6.3
Other phyla	3	6.3
Total	**48**	**100**
Notes Other phyla included: Entoprocta, Folliculinidae and Spirorbidae		

Table 4.25: Colonial epifauna, Sheringham Extension Project

Station	Colonial Epifauna [no/0.1m^2]	Station	Colonial Epifauna [no/0.1m^2]
Sheringham Shoal (SS) Proposed Extension		**Export Cable (EC) Corridor**	
SS_01	37	EC_05	29
SS_02	10	EC_07	23
SS_03	18	EC_08	3
SS_05	17	EC_09	1
SS_06	16	EC_10	24
SS_07	26	EC_11	8
SS_08	3	EC_12	25
SS_09	31	EC_14	14
SS_10	25	EC_15	3
SS_11	27	EC_16	27
SS_18	28	EC_17	32
SS_19	30	EC_19	1
SS_21	32	EC_23	12
SS_23	33	-	-
SS_25	37	-	-

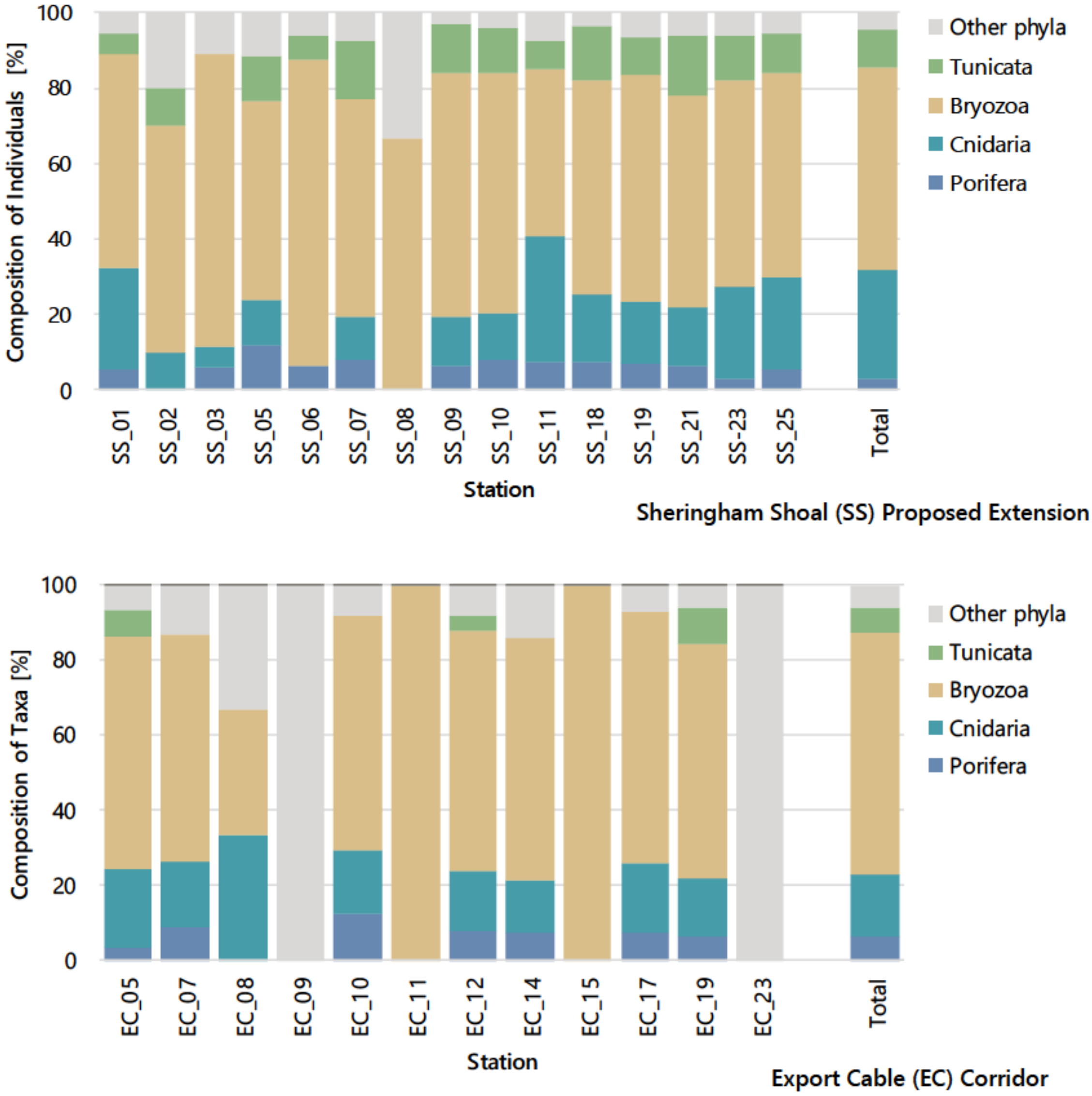


Figure 4.32: Phyletic composition of sessile colonial epifauna, Sheringham Extension Project

In the SS proposed extension, colonial epifauna was recorded at all stations, with Bryozoa comprising 53.6 % of the taxa composition, followed by Cnidaria (29.0 %), Tunicata (10.1 %) and Porifera (2.9 %). Other phyla comprised 4.3 % of the colonial epifaunal taxa and were represented by ciliate of the family Folliculinidae, Entoprocta of the *Pedicellina* and *Barentsia* genera and serpulid worms of the family Spirorbinae. Bryozoa comprised the highest percentage of taxa composition at all stations.

The total number of colonial epifauna in the SS proposed extension ranged from 3 (station SS_08) to 37 (stations SS_01 and SS_25), with the bryozoan *Escharella immersa* being the most frequently occurring taxon.

Along the EC corridor, colonial epifauna was recorded at all stations with Bryozoa comprising 64.6 % of the taxa composition, followed by Cnidaria (16.7 %), Porifera and Tunicata, each comprising 6.3 % of the taxa composition. Other phyla also comprised 6.3 % of the taxa and were represented by the family Folliculinidae and species of the genera *Pedicellina* and

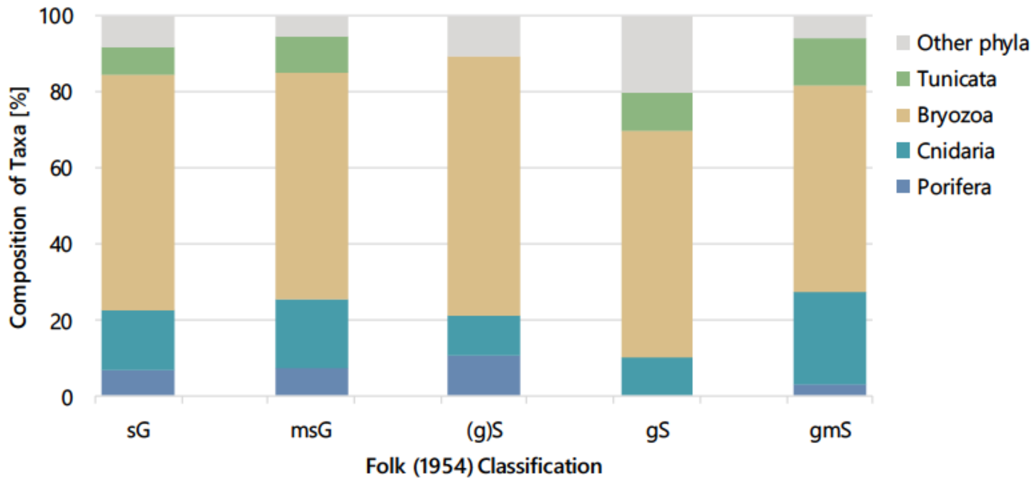
Barentsia. Bryozoa comprised the highest percentage of taxa at all but stations EC_09 and EC_23, which comprised only the family Folliculinidae.

The total number of colonial epifauna along the EC corridor ranged from 1 (stations EC_09 and EC_23) to 32 (station EC_17), with the bryozoan *Conopeum reticulum* being the most frequently occurring taxon.

Figure 4.33 presents the association between the sediment type, classified in line with Folk (1954) classification, and the occurrence of colonial epifauna across the survey area.

Table 4.26: Top ten most frequently occurring colonial epifauna, Sheringham Extension Project

Taxa	Frequency [%]	Taxa	Frequency [%]
Sheringham Shoal (SS) Proposed Extension		**Export Cable (EC) Corridor**	
Escharella immersa	93.3	*Conopeum reticulum*	76.9
Flustra foliacea	86.7	*Electra pilosa*	76.9
Pedicellina	86.7	*Escharella immersa*	69.2
Leucosolenida	80.0	Folliculinidae	69.2
Penetrantiidae (scars)	80.0	*Cliona*	61.5
Bicellariella ciliata	80.0	*Flustra foliacea*	61.5
Schizomavella	80.0	*Bicellariella ciliata*	61.5
Cliona	73.3	*Calycella syringa*	53.8
Alcyonidiidae	73.3	Sertulariidae	53.8
Amathia lendigera	73.3	Penetrantiidae (scars)	53.8



Notes
sG = Sandy gravel
msG = muddy sandy gravel
(g) = slightly gravelly sand
gS = Gravelly sand
gmS = Gravelly muddy sand

Figure 4.33: Association between colonial epifauna and sediment type, Sheringham Extension Project

4.4.6.3 Intrastation Variability

Table 4.27 presents the number of epifaunal taxa and individuals of stations sampled in triplicate to ground truth areas of small-scale variability identified by the geophysical data (details in Section 2).

Table 4.27: Colonial epifauna of replicate sample stations, Sheringham Extension Project

Station	Solitary Epifauna		Colonial Epifauna
	Taxa	Individuals	Taxa
Station EC_07			
FA	1	1	23
FB	1	117	19
FC	0	0	11
Mean	**0.7**	**39**	**18**
Standard Deviation	**0.577**	**67.3**	**6.11**
Station EC_09			
FA	0	0	1
FB	1	20	7
FC	0	0	6
Mean	**0.33**	**6.7**	**4.7**
Standard Deviation	**0.577**	**11.5**	**3.21**
Station EC_19			
FA	0	0	1
FB	**0**	**0**	**2**
FC	0	0	1
Mean	-	-	**1.3**
Standard Deviation	-	-	**0.577**
Station EC_23			
FA	2	107	12
FB	4	142	13
FC	4	200	27
Mean	**3.3**	**150**	**17**
Standard Deviation	**1.15**	**47.0**	**8.39**

Notes
EC = Export Cable
FA/FB/FC = Faunal sample A, B, C

4.5 Seabed Habitats and Biotopes

The multivariate groups identified by the hierarchical clustering analysis of the infaunal dataset (Section 4.4.3) were assessed in conjunction with the physical and biological characteristic of each multivariate group to identify biotopes in line with the EUNIS habitat classification (Section 3.3.6). Results of the habitat assessment, based on video and image analysis, and detailed in Volume 2 Habitat Assessment Report, were integrated with the results the grab sampling to provide a comprehensive habitat assessment. The video provides an overview of the seabed over a wider area and can identify isolated features. By comparison, grab sampling provides detailed information of the sediment composition and associated fauna at a single point source.

Results of the seabed video indicated the presence of the following habitats:

- 'Circalittoral mixed sediments (A5.44), and 'Sublittoral coarse sediment' (A5.1). These habitats featured mixed and coarse sediment, respectively, and were recorded at most stations. Sediment featured sand, shell fragments, pebbles and cobbles; epifauna included, but was not limited to, bryozoans (*F. foliacea*, *Crisia, Alcyonidium diaphanum, Vesicularia spinosa*), hydroid/bryozoan turfs, molluscs (*C. fornicata*, *Calliostoma zizyphinum*), echinoderms (*Asterias rubens*, *Crossaster papposus*, *Henricia* sp.), fish (Gobiidae, *Callionymus* sp. ?*Pholis gunnellus, ?Agonus cataphractus*), crustaceans (Sessilia, Paguridae, *Liocarcinus* sp., *Ebalia* sp., Caridae, Galatheoidea, *Cancer pagurus, Necora puber, Carcinus maenas*), anemones (Sagartiidae, *Urticina felina*), polychaete tubes (*L. conchilega*, *S. spinulosa,* serpulids), ascidians (*D. grossularia*, ?*Botryllus schlosseri, Clavelina lepadiformis*), hydroids (Sertulariidae *Nemertesia* sp., including *N. antennina Hydrallmania falcata*) cnidarians (Porifera, Brachyura, Polymastiidae, ?*Sycon ciliatum*, ?*Halichondria panicea,* ?*Suberites* sp., *Alcyonium digitatum)*;
- 'Sublittoral sand' (A5.2). This habitat was recorded at stations: SS_05, SS_06, SS_08 within the SS proposed extension and stations EC_08, EC_09, EC_15, EC_19 and part of EC_26 along the EC corridor. The sediment of this habitat featured sand with shell fragments; epifauna, when present included bryozoans, *C. fornicata*, barnacles, starfish and fish;
- 'Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay' (A4.231), recorded at station SS_21, and featuring areas of emergent clay. Although piddocks could not be confirmed to have been responsible for the burrows present;
- 'Infralittoral rock and other hard substrata (A3)', recorded at station EC_26, featuring rippled sand with cobbles and boulders; epifauna included red algae (*Phyllophora* sp., *Asparagopsis* sp. *Osmundea* sp.) brown algae (*Cutleria multifida*), anemones (Sagartiidae and *Urticina* sp.), *Sabella* sp. hydroid/bryozoan turfs and *A. rubens*.

Table 4.28 presents the EUNIS hierarchical structure of the biotopes identified in the SEP survey area.

Table 4.28: EUNIS classification habitats identified from the grab samples, Sheringham Extension Project

EUNIS (2019) Habitat Classification						Equivalent JNCC (2015) Classification
Environment Level 1	Broad Habitat Level 2	Habitat Level 3	Biotope Complex Level 4	Biotope Level 5	Biotope Level 6	
A Marine	A4 Circalittoral rock and other hard substrata	A4.1 Atlantic and Mediterranean high energy circalittoral rock	A4.13 Mixed faunal turf communities on circalittoral rock	A4.134 *Flustra foliacea* and colonial ascidians on tide-swept moderately wave-exposed circalittoral rock	A4.1343 *Flustra foliacea* and colonial ascidians on tide-swept exposed circalittoral mixed substrata	CR.HCR.XFa.FluCoAs.X *Flustra foliacea* and colonial ascidians on tide-swept exposed circalittoral mixed substrata
	A5 Sublittoral sediment	A5.1 Sublittoral coarse sediment	A5.13 Infralittoral coarse sediment	-	-	SS.SCS.ICS
		A5.2 Sublittoral sand	A5.23 Infralittoral fine sand	A5.233 *Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand	-	SS.SSa.IFiSa.NcirBat *Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand
		A5.4 Sublittoral mixed sediments	A5.45 Deep circalittoral mixed sediments	A5.451 Polychaete-rich deep *Venus* community in offshore mixed sediments	-	SS.SMx.OMx.PoVen Polychaete-rich deep *Venus* community in offshore mixed sediments
		A5.4 Sublittoral mixed sediments	A5.43 Infralittoral mixed sediments	A5.431 *Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment	-	SS.SMx.IMx.CreAsAn *Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment
		A5.6 Sublittoral biogenic reefs	A5.61 Sublittoral polychaete worm reefs on sediment	A5.611 *Sabellaria spinulosa* on stable circalittoral mixed sediment	-	SS.SBR.PoR.SspiMx *Sabellaria spinulosa* on stable circalittoral mixed sediment
Notes EUNIS = European Nature Information System JNCC = Joint Nature Conservation Committee						

4.5.1 Biotope Classification

Table 4.29 presents the biotope identified for each of the multivariate groups. The biotopes description is based on that from the EUNIS habitat classification.

4.5.1.1 *Crepidula fornicata* with Ascidians and Anemones on Infralittoral Coarse Mixed Sediment (A5.431)

The biotope '*Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment' (A5.431), is described as population of *C. fornicata* with ascidians and anemones in medium to coarse sand, gravel, shells, pebbles and cobbles on moderately exposed coasts. Bryozoans such as *F. foliacea* are also found along with polychaetes such as *L. conchilega*.

This biotope was assigned to multivariate group A in combination with the biotope '*Sabellaria spinulosa* on stable circalittoral mixed sediment' (A5.611) (Section 4.5.1.2). Group A was characterised by very poorly sandy gravel (Folk BGS modified), with mean median sediment particle size of 1372 µm (very coarse sand), in mean water depth of 17.8 m.

Infaunal diversity of group A was high with a mean value of 4.81; the mean evenness value of 0.807 was indicative of infaunal abundance evenly distributed across the taxa recorded. The mean infaunal biomass of group A was 2.3852 AFDW g/0.1 m^2, representing 97.2 % of the total infaunal biomass across the survey area. Characterising infaunal taxa included *C. fornicata*, the polychaetes *S. spinulosa*, *Polycirrus*, *L. conchilega*, *Syllis variegata* and *Eumida sanguinea*, and the brittlestar *A. squamata* (Table 4.29). Characterising taxa additional to those listed in Table 4.29 included *L.* nr. *cingulata*, *Spirobranchus lamarcki*, *Leiochone*, *Harmothoe* and *Ampelisca spinipes*.

Epifauna from the grab samples in group A was represented by *B. crenatus* and *D. grossularia*, along with bryozoans such as *P. fibrosa*, *E. immersa*, *E. pilosa* and *F. foliacea* and sponges of the genus *Cliona* (Table 4.29).

4.5.1.2 *Sabellaria spinulosa* on Stable Circalittoral Mixed Sediment (A5.611)

The biotope '*Sabellaria spinulosa* on stable circalittoral mixed sediment' (A5.611) is described as high abundances of *S. spinulosa* on mixed sediment. This species can form loose agglomerations of tubes forming a low-lying matrix of sand, gravel, mud and tubes on the seabed. The infauna comprises polychaete species including *L. conchilega* and amphipods of the genus *Ampelisca*. The epifauna comprises bryozoans including *F. foliacea*, calcareous tubeworms, pycnogonids and hermit crabs.

This biotope was assigned to multivariate group A in combination with '*Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment' (A5.431) (Section 4.5.1.1).

4.5.1.3 Infralittoral Coarse Sediment (A5.13)

The biotope complex 'Infralittoral coarse sediment' (A5.13) is described coarse sand, gravelly sand, shingle and gravel in the infralittoral, subject to disturbance by tidal steams and wave action. This biotope complex, reported from open coast or in tide-swept marine inlets is characterised by robust infaunal polychaetes, crustacea and venerid bivalves.

This biotope complex was assigned to multivariate group B characterised by very poorly sorted sandy gravel (Folk BGS modified), with mean median sediment particle size of 567 µm (coarse sand), in mean water depth of 13.9 m. Characterising taxa included the polychaetes *L. conchilega*, *S. spinulosa* and *S. bombyx*, the gastropod *R. parva* and the pycnogonids *Anoplodactylus petiolatus* and *Achelia echinata* (Table 4.29). Characterising taxa additional to those listed in Table 4.29 included the amphipods *Gastrosaccus spinifer*, *Bathyporeia guilliamsoniana* and *Abludomelita obtusata*.

Infaunal diversity of group B was high with a mean value of 4.14; the mean evenness value of 0.981 indicated even distribution of faunal abundance across the taxa recorded. The mean infaunal biomass of group B was 0.0805 AFDW g/0.1 m^2, representing < 1 % of the infaunal biomass across the survey area.

Epifauna from the grab samples in group B included the bryozoans *Vesicularia spinosa*, *Electra pilosa, Bicellariella ciliata*, *Escharella immersa* and *Amphisbetia distans,* and cnidarian of the family Sertulariidae (Table 4.29).

This biotope complex was assigned also to stations EC_09, which separated from its branching group D at a similarity of 22 %; and station EC_11, which separated from its branching group C at a similarity of 20 % (see Section 4.4.3).

Station EC_09 was characterised by moderately well sorted sand (Folk BGS modified), with a median sediment particle size of 584 µm (very coarse sand), at 16.9 m depth. Compared to multivariate group D, station EC_09 had coarser sediment with a gravel content of 2.79 %, whereas group D was devoid of gravel. Most abundant taxa included the polychaetes *O. borealis, N. longosetosa, S. goniocephala* and the interstitial *H. elongata*, along with the mysid *G. spinifer* and the isopod *P. ostendensis*.

Infaunal diversity of station EC_09 was high with a value of 3.01; evenness was 0.905 and biomass was 0.4636 AFDW g/0.1 m^2 representing just over 1 % of the total infaunal biomass across the survey area.

Epifauna was poorly represented and included Folliculinidae.

Station EC_11 was characterised by very poorly sorted sandy gravel (Folk BGS), with a median sediment particle size of 651 µm (coarse sand) at 22.0 m depth. Compared to multivariate group C, station EC_11 had finer sediment and was devoid of fines. Most abundant taxa included polychaetes such as *L. conchilega O. borealis, S. goniocephala, S. spinulosa,* and *Lysilla nivea* and the isopod *Eurydice spinigera*.

Epifauna was represented by bryozoans such as *V. spinosa*, *Eucratea loricata*, *C. reticulum*, *E. pilosa*, *F. foliacea* and *B. ciliata*.

4.5.1.4 Polychaete-rich Deep *Venus* Community in Offshore Mixed Sediments (A5.451)

The biotope 'Polychaete-rich deep *Venus* community in offshore mixed sediments' (A5.451) is described as a community rich in polychaetes and venerid bivalves. Typical polychaetes include, but are not limited to, *G. lapidum* and syllid species, and bivalves such as *G. triangularis*. This biotope is part of the 'Deep *Venus* Community' and the 'Boreal Off-Shore Gravel Association'.

This biotope was assigned to multivariate group C, albeit the latter was deemed an impoverished version or a transition of the biotope. Group C was characterised by poorly sorted sandy gravel (Folk BGS modified), with a mean median sediment particle size of 1774 µm (very coarse sand), in mean water depth of 17.6 m. Characterising taxa included the bivalve *G. triangularis*, polychaetes of the genus *Polycirrus*, *G. lapidum*, and *Sphaerosyllis bulbosa*, as well as Nemertea and the gastropod *C. fornicata* (Table 4.29). Characterising taxa, additional to those listed in Table 4.29, included the polychaetes *Notomastus*, *Mediomastus fragilis*, *Sphaerosyllis bulbosa*, *O. borealis* and *Spio symphyta*.

Infaunal diversity of group C was good, with a mean value of 3.15; the mean evenness value of 0.742 reflected the numerical dominance of *G. triangularis* (see also Section 4.4.2). The mean infaunal biomass of group C was 0.0760 AFDW g/0.1 m^2, representing < 1 % of the total infaunal biomass across the survey area.

Epifauna from the grab samples in group C was represented by bryozoans such as *E. immersa*, *F. foliacea* and *Schizomavella*, along with *B. crenatus* and tunicates of the family Didemnidae (Table 4.29).

4.5.1.5 *Nephtys cirrosa* and *Bathyporeia* spp. in Infralittoral Sand (A5.233)

The biotope '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (A5.233) is described as well sorted medium and fine sands characterised by *N. cirrosa* and *Bathyporeia* spp. in the shallow sublittoral to at least 30 m depth. This biotope occurs in sediments subject to physical disturbance, as a result of wave action and tidal streams. The faunal diversity of this biotope is reduced compared to less disturbed biotopes and for the most part consists of the more actively-swimming amphipods. Stochastic recruitment events in the *N. cirrosa* populations may be very important to the population size of other polychaetes present, creating a degree of variation in community composition.

This biotope was assigned to multivariate group D, characterised by moderately well sorted sand (Folk BGS modified), with mean median sediment particle size of 395 µm (medium sand), in mean water depth of 12.5 m. Characterising taxa included the polychaetes *O. borealis*, *Travisia forbesii*, *S. bombyx* and *N. cirrosa*, and the amphipods *B. elegans* and *U. brevicornis* (Table 4.29).

Infaunal diversity of group D was moderate, with a mean value of 2.55; the mean evenness value of 0.779 reflected the numerical abundance of *B. elegans* and *U. brevicornis.* The mean infaunal biomass of group D was 0.0768 AFDW g/0.1 m^2, representing < 1 % of the total infaunal biomass across the survey area.

Epifauna from grab samples was poorly represented and included the bryozoans *C. reticulum*, *E. pilosa* and cnidarians and Penetrantiidae (scars), hydroids of the family Bougainvilliidae and ciliate (Folliculinidae), none of which occurred at all stations within the multivariate group.

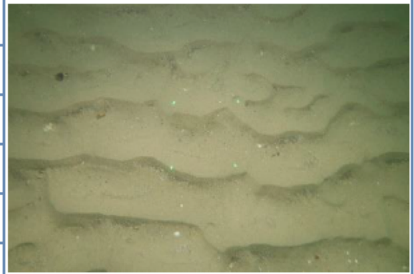
4.5.1.6 *Flustra foliacea* and Colonial Ascidians on Tide-swept Exposed Circalittoral Mixed Substrata (A4.1343)

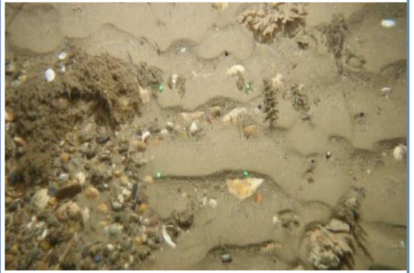
This biotope is described as circalittoral mixed substrata subject to moderately strong tidal streams, in water depth of between 10 m and 20 m. This biotope is characterised by a dense hydroid and *F. foliacea* turf, along with other scour-tolerant species, growing on the more stable boulders and cobbles which overlie coarse muddy sand and gravel. Taxa within the hydroid turf include species of Nemertesia, *Halecium halecinum* and *H. falcata*. Encrusting red algae, the polychaete *Spirobranchus triqueter* and barnacles such as *B. crenatus* may occur on cobbles and pebbles. Echinoderms such as *A. rubens* may be present on the boulders, or the coarse sediment in between. On the larger, more stable boulders, isolated sponge communities may develop, along with *A. digitatum*, ascidians such as *C. lepadiformis* and *B. schlosseri*, and molluscs such as *C. zizyphinum* and *Steromphala cineraria* (formerly *Gibbula cineraria*). Within the coarse sediment underlying boulders and cobbles, anemones such as *U. felina* may occur, along with under-boulder fauna such as terebellid worms, and crabs such as *P. longicornis* and *C. pagurus*. Red algae may occur at shallower depth.

This biotope was recorded across the entire survey area where coarse and mixed sediments occurred, as an epibiotic overlay of infaunal biotopes.

Table 4.29: Characteristics of EUNIS habitats identified from the grab samples, Sheringham Extension Project

Habitat Classification (EUNIS, 2019)	Multivariate Faunal Group	Characteristics		Characterising Taxa		Example Photograph from Video Analysis
		Physical	Biological*	Infaunal	Epifaunal†	
A5.431 *Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment A5.611 *Sabellaria spinulosa* on stable circalittoral mixed sediment	A1 ▽ (SS_03, SS_07, SS_09, SS_10, SS_11) A2 ● (SS_01, EC_10, EC_12; EC_16) A3 ▲ (SS_18, SS_19, SS_21, SS_23: SS_25; EC_05) EC_17 □, EC_23 ◇	Gravel: 41.39 %	Taxa: 64	*Crepidula fornicata*	*Balanus crenatus*	
		Sand: 54.60 %	Individuals: 328	*Sabellaria spinulosa*	*Dendrodoa grossularia*	
		Fines: 7.02 %	Richness: 10.7	*Polycirrus*	*Polycarpa fibrosa*	
		Sorting: 7.80	Diversity: 4.81	*Lanice conchilega*	*Escharella immersa*	
		Median: 1372 µm	Evenness: 0.807	*Amphipholis squamata*	*Electra pilosa*	
		Depth: 17.8 m	Biomass: 2.3852	Nemertea	*Flustra foliacea*	
		-	-	*Syllis variegata*	*Bicellariella ciliata*	SS_03
		-	-	*Eumida sanguinea*	*Cliona*	
A5.13 Infralittoral coarse sediment	B ▼ (EC_07, EC_14)	Gravel: 37.02 %	Taxa: 26	*Lanice conchilega*	*Vesicularia spinosa*	
		Sand: 61.70 %	Individuals: 56	*Rissoa parva*	*Electra pilosa*	
		Fines: 1.28 %	Richness: 6.09	*Sabellaria spinulosa*	*Bicellariella ciliata*	
		Sorting: 5.91	Diversity: 4.14	*Spiophanes bombyx*	*Escharella immersa*	
		Median: 567 µm	Evenness: 0.981	*Anoplodactylus petiolatus*	Sertulariidae	
		Depth: 13.9 m	Biomass: 0.0805	*Achelia echinata*	*Amphisbetia distans*	SS_07
A5.451 Polychaete-rich deep *Venus* community in offshore mixed sediments	C △ (SS_02, SS_05, SS_06, SS_08)	Gravel: 42.53 %	Taxa: 20	*Goodallia triangularis*	Penetrantiidae (scars)	
		Sand: 57.01 %	Individuals: 65	*Polycirrus*	*Escharella immersa*	
		Fines: 0.46 %	Richness: 4.51	Nemertea	*Balanus crenatus*	
		Sorting: 3.40	Diversity: 3.15	*Glycera lapidum*	*Flustra foliacea*	
		Median: 1774 µm	Evenness: 0.742	*Sphaerosyllis bulbosa*	*Schizomavella*	
		Depth: 17.6 m	Biomass: 0.0760	*Crepidula fornicata*	Didemnidae	SS_06

Habitat Classification (EUNIS, 2019)	Multivariate Faunal Group	Characteristics		Characterising Taxa		Example Photograph from Video Analysis
		Physical	Biological*	Infaunal	Epifaunal†	
A5.233 *Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand	D (EC_08, EC_15, EC_19)	Gravel: 0.30 %	Taxa: 10	*Bathyporeia elegans*	*Crisia aculeata*	
		Sand: 99.70 %	Individuals: 21	*Nephtys cirrosa*	*Conopeum reticulum*	
		Fines: 0.00 %	Richness: 2.83	*Ophelia borealis*	*Electra pilosa*	
		Sorting: 1.43	Diversity: 2.55	*Travisia forbesii*	Bougainvilliidae	
		Median: 395 µm	Evenness: 0.779	*Urothoe brevicornis*	Folliculinidae	
		Depth: 12.4 m	Biomass: 0.0768	*Spiophanes bombyx*	Penetrantiidae (scars)	EC_08
A5.13 Infralittoral coarse sediment	EC_09	Gravel: 2.79 %	Taxa: 10	*Spio goniocephala*	Folliculinidae	
		Sand: 97.1 %	Individuals: 22	*Gastrosaccus spinifer*	-	
		Fines: 0.00 %	Richness: 2.91	*Ophelia borealis*	-	
		Sorting: 1.55	Diversity: 3.01	*Nephtys longosetosa*	-	
		Median: 584 µm	Evenness: 0.905	*Prodajus ostendensis*	-	
		Depth: 16.9 m	Biomass: 0.4636	*Hesionura elongata*	-	EC_09

Habitat Classification (EUNIS, 2019)	Multivariate Faunal Group	Characteristics		Characterising Taxa		Example Photograph from Video Analysis
		Physical	Biological*	Infaunal	Epifaunal†	
A5.13 Infralittoral coarse sediment	EC_11 +	Gravel: 42.67 %	Taxa: 10	*Lanice conchilega*	*Vesicularia spinosa*	
		Sand: 57.33 %	Individuals: 14	*Ophelia borealis*	*Eucratea loricata*	
		Fines: 0.00 %	Richness: 3.41	*Eurydice spinigera*	*Conopeum reticulum*	
		Sorting: 4.49	Diversity: 3.18	*Spio goniocephala*	*Electra pilosa*	
		Median: 651 µm	Evenness: 0.958	*Sabellaria spinulosa*	*Flustra foliacea*	
		Depth: 22.0 m	Biomass: 0.0255	*Lysilla nivea*	*Bicellariella ciliata*	EC_11

Notes
EUNIS = European Nature Information System
Depth is in m below sea level
Median refers to sediment particle size
Biomass expressed as ash free dry weight (AFDW) in g/0.1 m^2
Characterising epifaunal taxa derived by grab samples
Richness calculated with Margalef's index (d)
Diversity calculated with Shannon-Wiener index ($H'Log_2$)
Evenness calculated with Pielou's index (J)
Multivariate groups identified by hierarchical clustering analysis of enumerated fauna
Values of each characteristic refer to mean per 0.1 m^2 within multivariate group, except for stations
Characterising infaunal taxa derived from SIMPER analysis at a cut off contribution of 70 %; except for stations EC_09 and EC_11 where the most abundant taxa are presented
*= infauna from grab samples
† = epifauna from grab samples selected in terms of most abundant (solitary organisms) and frequently occurring (colonial organisms)

4.5.2 Potential Sensitive Habitats and Species

The conservation designation of the habitats recorded across the SEP survey area are detailed in Volume 2 Habitat Assessment Report. The following sections provide a summary of the assessment results.

4.5.2.1 Annex I Stony Reef

The results of the seabed video assessment for potential stony reefs returned an overall assessment of 'Low reef' resemblance at stations EC_03 and EC_24, along the EC corridor. All other stations were assessed as 'Not a reef'. Neither of these areas fulfil the definition of the Annex I habitat stony reef.

At stations EC_26 and SS_21A, soft bedrock was observed (chalk and clay, respectively). At station SS_21A, this soft bedrock did not notably 'arise from the seafloor', but was a feature of the sediment surface overlaid with varying proportion or sand and coarse material. Therefore, it is unlikely to satisfy the criteria of Annex I reef. However, on station EC_26, there was the potential for Annex I geogenic (soft bedrock) reef to be present due to emergent chalk. On station EC_26 there was also the potential for the United Kingdom Biodiversity Action Plan (UK BAP) priority habitat 'Subtidal chalk', due to the presence of outcropping chalk observed.

4.5.2.2 Herring Spawning Grounds

A herring spawning ground assessment was carried out within the SEP survey area and along the EC corridor. Within the SEP survey area, the majority of the sediments towards the north-west were considered 'Unsuitable' as herring spawning ground. However, at the south-east end of the SEP survey area towards the EC corridor, there were areas of both 'Preferred' and 'Marginal' areas of herring spawning. At these preferential spawning areas, there was a large gravel component and very little or no mud content. Along the EC corridor the areas of 'Preferred', 'Marginal' and 'Unsuitable' spawning habitats followed the pattern of alternating coarse/mixed sediments and sand observed. Where the sediment was predominantly sand, the habitat was classed as 'Unsuitable', however where the sediment was coarse or mixed with a large gravel component, the habitats were classed as 'Preferred' or 'Marginal'. No specimens of herring (*Clupea harengus*) were recorded across the survey area. Herring are considered as a priority species in the UK BAP.

4.5.2.3 Sand Eel Preferred Grounds

A sand eel preferred grounds habitat assessment was carried out within the SEP survey area and along the EC corridor. At the SEP survey area, the majority of the areas classed as 'Unsuitable' were in the centre and the north-west of the survey area. Progressing towards the south-east, there were more 'Marginal' habitats and at the south-east corner of the SEP survey area, there was one area classed as 'Preferred' owing to the greater proportion of sand content and little or no mud content in the sediment. Along the EC corridor there were more

'Preferred' and 'Marginal' habitats due to the increased sand content of the sediments present. Specimens of sand eel (Ammodytidae) were observed in photographic data on the EC corridor. Sand eels are considered as a priority species in the UK BAP.

4.5.2.4 Other Potentially Sensitive Habitats and Species

Specimens of *Sabellaria spinulosa* were encountered within grab samples and were observed within nine stations within the SEP survey area, predominantly in the middle and south-eastern regions Additionally, *S. spinulosa* was observed from video analysis within six stations and two grab samples along the entire length EC corridor. The specimens found were either single tubes, encrusting, or very small clumps and therefore did not warrant a full assessment to confirm that the Annex I 'reef' habitat was not present.

No other Annex I habitats or Annex II species, OSPAR threatened and/or declining species and habitats or UK Biodiversity Action Plan priority habitats and species (OSPAR, 2008; JNCC & Department for Environment, Food and Rural Affairs [Defra], 2012) were observed within the survey area.

5. Discussion

5.1 Sediment Characterisation

The SEP survey area featured heterogenous sediments comprising sand, gravel and fines. Of these sediment fractions, gravel and sand were predominant at most stations, gravel with percentages of up to 60.33 % and sand with percentages up to 99.98 %. Fines were poorly represented by comparison, with percentages up to 22.13 %.

In the SS proposed extension, the seabed comprised mostly very poorly sorted coarse and mixed sediments, the coarseness of which ranged from coarse sand to pebbles. The Folk (BGS modified) and Folk (1954) classifications identified four sediment classes, including sandy gravel at nine stations, muddy sandy gravel at six stations, gravelly sand at one station and gravelly muddy sand at one station. Under the Wentworth (1922) description, the sediment was classified as very coarse sand at seven stations, granule at six stations, coarse sand at three stations and fine pebble at one station.

Along the EC corridor, the seabed comprised mostly very poorly sorted coarse sediment, consisting of sand and gravel; four stations comprised well sorted to moderately well sorted sand and one station comprised extremely poorly sorted mixed sediment. The Folk (BGS modified) classification identified three classes including sandy gravel at thirteen stations, sand at four stations and muddy sandy gravel at one station. Using the Folk (1954) classification, the four stations classified as sand under the Folk (BGS modified) classification, were classified as slightly gravelly sand owing to their gravel content of 2.79 % or less. Under the Wentworth (1922) description, the sediments were classified as very coarse sand at eight stations, medium sand at four stations, granule at three stations, coarse sand at two stations and coarse sand at one station.

All but station EC_08 had bimodal or polymodal distributions of sediment particle size indicating different sediment sources (Hein 2007). These are likely to be represented by fluvial sediment input and physical disturbance from storms, wave action, extreme tidal flows and anthropogenic activities known to occur in this area of the North Sea.

Results concur with the description of habitats known to occur offshore the Norfolk coast, with sublittoral sand, mixed sediments and coarse sediments occurring as a mosaic with some pockets of mud, the latter based on single point grab samples (Jenkins et al., 2015). These habitats are typical of this region of the southern North Sea, where sand and gravelly sand occur offshore and up to 50 km from the coast off Holderness, Lincolnshire and North Norfolk. The regional sediment distribution reflects the level of hydrodynamic forcing, including waves, with finer sediments in the deeper waters, where tidal velocities and wave stirring are reduced, and coarse and medium sands in the highly mobile nearshore zones (HR Wallingford, 2002). The heterogeneity of the seabed is enhanced by the presence of sandbanks off the Norfolk coast, which allow accumulation of different sediment types, including hard substrate, in the areas in between the sandbanks (DTI, 2001). On site observations of the grab logs indicated the presence of shell fragments, which were also observed by the seabed video and photography analysis; this is of relevance as the PSD analysis does not discern between gravel and shell fragments.

5.2 Sediment Chemistry

5.2.1 Sediment Hydrocarbons

5.2.1.1 Total and Aliphatic Hydrocarbons

Marine sediments contain hydrocarbons derived from many sources that enter the marine environment via three general processes: biosynthesis (marine and land organisms biosynthesise hydrocarbons), geochemical processes (submarine and coastal/terrestrial oil-seeps) and anthropogenic sources (Farrington & Meyer, 1975; Myers & Gunnerson, 1976). Anthropogenic hydrocarbon inputs to the marine environment include marine transportation, coastal oil refineries, accidental shipping losses, industrial and municipal waste (which includes sewage and dredged spoils). A significant contribution to the global budget enters the marine environment via urban and river run-off, atmospheric deposition (from combustion sources including PAHs) and natural seepages (Johnston, 1980; Dicks et al., 1987; North Sea Task Force [NSTF], 1993; OSPAR, 2000; 2010).

Total hydrocarbon values at stations EC_04, EC_05 and SS_03 were higher than the SEA2 Area 1 mean concentration of 1.6 µg/g (ERT, 2003). The Area 1 RSD of THC values was 106 %, demonstrating that the samples taken during the SEA2 survey had high THC variability, likely due to the patchy nature of the sediments within the survey area. The RSD of THC values during the current survey was 45 %, demonstrating moderate variability. Therefore, although the concentrations from the current survey were above the Area 1 mean, THC values from the current survey were within the range of the values reported from the SEA2 survey and can be considered as background for the region.

Biosynthesised hydrocarbons are ubiquitous in the marine environment (Harada et al., 1995; Parinos et al., 2013). Odd carbon number, long chain n-alkanes are widely distributed in the plant kingdom (Eglinton et al., 1962; Douglas & Eglinton, 1966; Bush & McInerney, 2013) as components of cuticle waxes. These are common on the surfaces of leaves, stems, flowers and pollen and their presence in sediment is indicative of terrestrial inputs from adjacent land masses. Relatively high concentrations of nC_{29}, nC_{31} and nC_{33} are therefore a common feature of many marine sediments (Farrington et al., 1977), particularly inshore marine sediments (Bouloubassi et al., 1997).

The ratio of odd to even carbon numbered normal alkanes is termed the CPI and were calculated over various chain length ranges. Elevated ratios (i.e. those > 1.00) over the nC_{12} to nC_{36} carbon range are due to the domination of the odd-chain length n-alkanes (nC_{27} to nC_{33}) and are typically associated/observed with inputs from terrestrial run-off (leaf waxes, etc.). All stations in the SEP survey had CPI (nC_{12} to nC_{36}) ratios exceeding the SEA2

(ERT, 2003) Area 1 mean ratio of 1.25, demonstrating the influence of odd-chain length n-alkanes (nC_{27} to nC_{33}) and biogenic material for most of sediment samples within the survey area.

The isoprenoidal alkanes pristane (Pr) and phytane (Ph) were reported in low concentrations in each of the sediment samples analysed. These compounds are present in significant concentrations in crude oils (Berthou & Friocourt, 1981). They may also be biosynthesised (Gunkel & Gassmann, 1980) and pristane, a breakdown product of the phytol moiety of chlorophyll is widespread in the marine ecosystem, probably being derived from zooplankton. Phytane is generally absent or present in only relatively low levels in uncontaminated natural systems (Blumer & Snyder, 1965). The Pr/Ph ratios reported at all stations were higher than the SEA2 Area 1 mean concentration of 2.51. These values suggest that the higher proportion of the pristane present in the sediments was derived from non-petrogenic sources.

5.2.1.2 Aromatic Hydrocarbons

PAHs are widely spread in the environment (Butler et al., 1984) with natural sources occurring primarily through synthesis by plants (Neff, 1979; Sims & Overcash, 1983), related to natural seeps of petroleum (National Research Council [NRC], 1983; Kennicutt et al., 1988) and to formation during natural forest and prairie fires (Youngblood & Blumer, 1975; Wakeham et al., 1979). Most of PAHs released into the environment are formed during fossil fuel combustion and anthropogenic forest and agricultural fires (Edwards, 1983; Sims & Overcash, 1983; Haritash & Kaushik, 2009). PAHs primarily enter marine sediments from atmospheric and riverine inputs and tend to adsorb to suspended inorganic and organic particulate matter, ultimately settling on the seabed where they accumulate to relatively high concentrations (Latimer & Zheng, 2003; Culotta et al., 2006).

Monitoring of aromatic hydrocarbon type and content is important due to the particularly toxic nature (mutagenic/carcinogenic) of several PAHs, particularly the heavier weight PAHs. The US EPA has identified 16 priority PAHs to be monitored (Keith, 2015) and the CEMP specifies 9 PAHs of specific concern (OSPAR, 2014), which primarily reflect inputs from anthropogenic combustion sources.

Total 2 to 6 ring PAH concentrations were higher than the SEA2 (ERT, 2003) Area 1 mean concentration of 0.058 µg/g at all but station EC_15. The Area 1 RSD of total 2 to 6 ring PAH concentrations was 190 %, demonstrating that the samples taken during the SEA2 survey had very high variability, likely due to the patchy nature of the sediments within the survey area. Total 2 to 6 ring PAH concentrations from the SEP survey area were within the range of values reported from the SEA2 Area 1 survey and therefore representative of background for the region.

The individual US EPA 16 PAH concentrations were all below the CEMP ERLs, where available.

5.2.2 Sediment Metals

5.2.2.1 Heavy and Trace Metals

Metals and metalloids occur naturally in the marine environment and are widely distributed in both dissolved and sedimentary forms. Some are essential to marine life while others have no biological function and therefore are toxic to numerous organisms at certain levels (Paez-Osuna & Ruiz-Fernandez, 1995; Boening, 1999). Metals can enter the environment via natural methods such as riverine transport, coastal discharges, geological weathering and atmospheric fallout (Brady et al., 2015). Other routes into marine sediments are from anthropogenic activities such as direct discharges from industrial activities.

Trace metal contaminants in the marine environment tend to form associations with the non-residual phases of mineral matter, such as iron and manganese oxides and hydroxides, metal sulphides, clays, organics and carbonates (Warren & Zimmerman, 1993; Dang et al., 2015; Wang et al., 2015). Non-residual trace metals are associated with more reactive and available sediment components through processes such as adsorption onto mineral surfaces and organic complexation. Metals associated with these more reactive phases are prone to various environmental interactions and transformations (physical, chemical and biological) potentially increasing their mobility and biological availability (Tessier et al., 1979; Warren & Zimmerman, 1993; Du Laing et al., 2009). Residual trace metals are defined as those that are part of the crystal structure of the component minerals and are generally unavailable to organisms (de Orte et al., 2018). Therefore, in monitoring trace metal contamination of the marine environment, it is important to distinguish the more mobile non-residual trace metals from the residual metals held tightly in the sediment lattice (Chester & Voutsinou, 1981), which are of comparatively lesser environmental significance because of their low reactivity and availability.

In this study, an analytical procedure involving the digestion of sediment in aqua regia was employed to analyse the elemental content of the sediments. The aqua regia digest releases for analysis the 'non-residual' heavy metals, which are not incorporated in the mineral matrix and are therefore potentially available for biological uptake.

The bioavailable metals concentrations in the sediments were all below their respective Cefas action levels and the CEMP ERLs indicating that these metals are unlikely to have an adverse effect on the macrofaunal communities present.

5.2.3 Sediment Organotins

Organotin compounds have historically been used in marine antifouling products; however, their use is now prohibited. Environmental monitoring conducted in the vicinity of locations where vessel maintenance was conducted identified a link between these compounds and the disruption of the reproductive capabilities of a number of gastropod species, leading to these compounds being gradually phased out of use during the 1980s and 1990s.

Since 2003, monitoring of imposex and related effects of TBT in marine snails in OSPAR Regions I, II, III and IV has been undertaken regularly. Although the overall status is improving, marine snails still show pollution effects from TBT over large parts of the OSPAR area, especially Regions II, III and IV (OSPAR, 2014). There is a clear relationship between shipping and the occurrence of imposex with levels high in the vicinity of busy shipping lanes; the situation is markedly better where there is less large vessel traffic (OSPAR, 2011).

The environmental persistence and fate of TBT is correlated to the specific characteristics of the aquatic ecosystem such as temperature, salinity, pH, suspended matter, microbial populations, flushing rates, etc. Distribution of TBT among the different environmental compartments is regulated by biological, chemical and physical mechanisms. TBT undergoes degradation to DBT, MBT and ultimately inorganic tin in the marine environment through processes such as microbial and UV degradation, becoming progressively less toxic in the process. TBT is broken down very slowly in sediments, particularly those with low oxygen content where persistence is estimated at tens of decades (Dowson et al., 1996; Gadd, 2000). Since toxicity of the organotins is maximal for the tri-substituted compounds, degradation can essentially be considered a mechanism of detoxification (OSPAR, 2005).

The TBT concentrations were all below the Class B assessment criteria under CEMP, indicating the levels present in the samples would not be expected to affect the reproductive capability of sensitive gastropod species.

5.3 Macrofaunal Communities

5.3.1 Community Structure and Composition

Results of the biological analyses indicated the presence of diverse infaunal communities, the abundance of which was fairly evenly distributed across the taxa recorded. The spatial pattern of distribution of the infaunal communities was associated with the sediment type, concurring with the current literature which report bathymetry and granulometry as the major physical variables affecting macrofauna distribution in the North Sea (Künitzer et al., 1992; Reiss et al., 2010; Callaway et al., 2002; McGlade, 2002; ICES, 2008). The sediment type is more important than depth in determining the distribution of benthic infauna where the bathymetric range is minimal (Künitzer et al., 1992), this being the case of the SEP survey area, with a bathymetric range from 9.4 m to 22.0 m. The sediment particle size impacts the biological assemblages as some functional groups have specific niche sediment requirements, thus, in muddy sand habitats, deposit feeders attain higher densities compared to suspension feeders as the resuspension of fine sediments may stress the organisms by clogging of filtering structures (Coates et al., 2016).

Results of the multivariate analysis identified two major infaunal communities, including one characterised by coarse, heterogeneous sediment, comprising fauna typical of relatively stable benthic communities, notably *S. spinulosa* and *L. conchilega* and a large proportion of solitary epifaunal species such as *B. crenatus* and *D. grossularia*. The other community was characterised by homogeneous sandy sediment, with low infaunal diversity by comparison and fauna typical of communities adapted to withstand physical disturbance as a result of strong tidal stream and/or wave action, notably the crustacean amphipods *B. elegans* and *U. brevicornis*, and selected polychaete worms, notably *N. cirrosa* and *S. bombyx*. Transitional areas between the two communities were recorded at two stations.

The sediment heterogeneity of the *S. spinulosa* and *L. conchilega* communities identified may enhance species diversity and abundance, by providing a greater number of microhabitats, including hard substrate for the settlement of epifaunal species, which increase the structural complexity of the habitat and may provide an important microhabitat for smaller fauna such as amphipods and shrimps (UK BAP, 2008). Similarly, the presence of *L. conchilega* may also contribute to the overall species diversity, of the habitat, as the tube which this polychaete builds provides structure and stability within the sediment, by reducing near-bed currents (UK BAP, 2008) and enabling the influx and establishment of other species (Connor, et al., 2004). In addition, *L. conchilega* is capable of feeding on both suspended particulate and surface deposit (Ager, 2008), which is of great ecological advantage as it enables the species to successfully compete and establish itself. The stability of *L. conchilega* communities is not permanent, and temporal changes are likely to occur due to seasonal recruitment processes as well as seasonal pattern of disturbance such as storms and harsh winters. Severe storms can cause physical disturbance by turning over the sediment and completely disrupting the community; similarly, changes in water temperature following harsh winters can wipe out *L. conchilega* communities with significant effect on the overall species diversity (McQuillian & Tillin, 2006)

The heterogeneous sediments also comprised high abundance of *C. fornicata*, which was also recorded by the seabed video. *C. fornicata* is a non-native species imported from North America (Rayment, 2008); in Europe, this species has few or no predators and can thrive on several types of hard bottoms and shellfish banks (Gofas, 2010).

The lower diversity of the sandy sediment community identified, is typical of continually disturbed environments where the substrate is subjected to tidal movement and/or wave action, resulting in the substrate being usually well-sorted due to the grading action of repetitive water movements. This results in simple and homogeneous habitats that have lower species richness and diversity than those of more complex heterogeneous sediments and, for the most part, consist of the more actively swimming amphipods and robust polychaetes characterised by flexible body structures and ability of rapid burrowing if disturbed, as well as high reproductive rates (Tillin & Garrard, 2019) The macrobenthic infauna of this community include animals which feed largely on particulate matter in/on the sand, and which are themselves preyed upon by populations of juvenile flatfish, and other infaunal predators, therefore their number is underpinned by the predator/prey interaction. Stochastic recruitment events of *N. cirrosa* populations may be very important to the population size of other polychaetes present and may therefore create a degree of variation in community composition (Tillin & Garrard, 2019).

The epifauna recorded by the grab samples was typical of those reported for the shallower sediment areas of the southern North Sea (Callaway et al., 2002; Jennings et al., 1999). Characteristic solitary epifauna included the barnacles *B. crenatus* and *V. stroemia* and the tunicates *D. grossularia*, *P. fibrosa* and *M. manhattensis*; colonial epifauna included, but was not limited to, bryozoans, notably *F. foliacea*, *E. immersa, C. reticulum* and *B. ciliata*, cnidarians, notably *Cliona*, and hydroids, notably *H. falcata*, *C. syringa*, *N. antennina* and *N. ramosa*.

Overall, the results are indicative of a dynamic area subject to a degree of physical disturbance with subsequent reworking of the sediments which prevents the establishment of permanent biotic communities. At the same time, sand grains, put into suspension by strong water movement, are key environmental factors for the establishment and survival of *S. spinulosa* (UK BAP, 2008). The presence of fines contributes to a degree of sediment compactness which allows the establishment of molluscs, which generally occur in more compacted sediment, while the presence of coarse sediment provides suitable substrate for the attachment of epifauna.

5.3.2 Infaunal Biomass

Average infaunal biomass across the entire SEP survey area was 14.9 AFDW g/0.1 m^2, in line with the literature which report an average infaunal biomass of 7 AFDWg/m^2 for the whole North Sea (Heip et al., 1992), with an increase towards the shallower southern North Sea reaching highest values south of the Dogger Bank (North Sea Task Force [NSTF], 1993).

Infaunal biomass was dominated by molluscs at most stations in the SS proposed extension, whereas along the EC corridor Annelida dominated the infaunal biomass at most stations, with notable contribution from Arthropoda.

5.4 Seabed Habitats and Biotopes

Results of the seabed video and photography (Volume 2 Habitat Assessment) reported coarse and mixed habitats across most of the SEP survey area. Characteristic epibenthic species included, but were not limited to, bryozoans, such as *F. foliacea* and *A. diaphanum*; molluscs such as *C. fornicata* and *C. zizyphinum*; anemones, such as *U. felina*; hydroids, such as *N. antennina* and *H. falcata*; and the soft coral *A. digitatum*. Other motile species included echinoderms such as *A. rubens* and *C. papposus*; the crabs *Liocarcinus* sp., *C. pagurus*, *N. puber* and *C. maenas*; and fish, including *Callionymus* sp.

Three stations in the SS proposed extension and five stations along the EC corridor featured rippled sand, with shell fragments and little or no epifauna recorded. The presence of ripples is indicative of sediment disturbance, such as that associated with hydrodynamics. Large areas of rippled sand and other un-cohesive cover comprising superficial sand and silt with various amount of gravel are ubiquitous throughout much of the North Sea (BGS, 2002).

The habitat and associated epibiotic communities recorded by the seabed video footage are comparable to those reported for the shallower sediment areas of the southern North Sea (Callaway et al., 2002; Jennings et al., 1999).

Using the physical and biological characteristics of the multivariate groups, in conjunction with the results from the seabed video footage and photography, five biotopes and one biotope complex were identified in the SEP survey area.

A combination of the biotopes '*Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment' (A5.431) and '*Sabellaria spinulosa* on stable circalittoral mixed sediment' (A5.611), was assigned to most stations that featured coarse mixed sediments, high diversity and a numerical dominance of *C. fornicata* and *S. spinulosa*.

The biotope 'Polychaete-rich deep *Venus* community in offshore mixed sediments' (A5.451) was assigned to four stations in the SS proposed extension characterised by coarse sediment with negligible percentage of fines and an infaunal community dominated by *G. triangularis* and polychaetes.

The biotope '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (A5.233) was assigned to three stations along the EC corridor, characterised by rippled sand with reduced diversity, compared to other stations, and dominated by *N. cirrosa* and *B. elegans*.

The biotope complex 'Infralittoral coarse sediment' (A5.13) was assigned at stations EC_07, EC_09, EC_11 and EC_14, along the EC corridor. These stations were found to represent transitional areas, between heterogeneous mixed and homogeneous sandy sediments, with video images indicating accumulation of coarse sediment in the troughs of sand waves, in line with the literature of the North Sea describing wave environment (Koop et al., 2019).

The biotope '*Flustra foliacea* and colonial ascidians on tide-swept exposed circalittoral mixed substrata' (A4.1343) occurred as an epibiotic overlay of sedimentary communities across the entire survey area, where coarse sediment suitable for the attachment of large epibiotic taxa occurred.

The EC stations were considered within the multivariate analysis for both the DEP and SEP benthic characterisation reports (Volume 5 and this report, respectively). Whilst they have been considered separately within the results sections of these reports, in some instance they can be further refined through consideration of both biotope assessments. Table 5.1 presents the comparison of biotopes reported at EC stations alongside a final biotope classification.

Table 5.1: Summary of Export Cable (EC) Corridor EUNIS Biotopes

Station	DEP		SEP		Mean Sediment Type	Characteristic Infaunal Taxa*	Characteristic Epifaunal Taxa†	Final EUNIS Biotope
	Group	Biotope	Group	Biotope				
EC_07, EC_14	A [●]	A5.13	B [▼]	A5.13	Gravel: 37.02 %, Sand: 61.70 %, Mud: 1.28 % Folk: BGS modified/1954 = Sandy gravel Wentworth (1922) = Very cparse sand	*Gastrosaccus spinifera*	*Vesicularia spinosa, Electra pilosa, Bicellariella ciliata. Escharella immersa*	A5.13 Infralittoral coarse sediment
EC_11	D [◆]		EC_11 [+]		Gravel: 42.67 %, Sand: 57.33 %, Mud: 0.00 % Folk: BGS modified/1954 = Sandy gravel Wentworth (1922) = Very cparse sand	*Lanice conchilega, Ophelia borealis, Eurydice spinigera*	*Vesicularia spinosa, Eucratea loricata, Conopeum reticulum, Electra pilosa, Flustra foliacea*	
EC_09	E [▼]	A5 23	EC_09 [◆]	A5.13	Gravel: 2.79 %, Sand: 97 21 %, Mud: 0.00 % Folk: BGS modified = Sand, 1954 = Slightly gravelly sand Wentworth (1922) = Coarse sand	*Spio goniocephala, Gastrosaccus spinifer, Ophelia borealis, Nephtys longosetosa*	Folliculinidae	
EC_08, EC_15, EC_19			D [■]	A5.233	Gravel: 0.30 %, Sand: 99.70 %, Mud: 0.00 % Folk: BGS modified = Sand, 1954 = Slightly gravelly sand Wentworth (1922) = Medium sand	*Bathyporeia elegans, Travisia forbesii, Ophelia borealis, Nephtys cirrosa*	NA	A5.233 *Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand
EC_10, EC_12, EC_16	B [■]B	A5.43 (poss. A5.431)	A2[●]	A5.431/ A5.611	Gravel: 40.24 %, Sand: 49.53 %, Mud: 10.23 % Folk: BGS modified/1954 = Muddy sandy gravel Wentworth (1922) = Very cparse sand	*Crepidula fornicata, Sabellaria spinulosa, Ampelisca diadema, Nephasoma minutum, Galathea intermedia, Ampelisca spinipes, Amphipholis squamata*	*Polycarpa fibrosa, Ascidiella scabra,* Actiniaria, *Verruca stroemia, Flustra foliacea, Electra pilosa*	A5.431 *Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment/ A5.611 *Sabellaria spinulosa* on stable circalittoral mixed sediment
EC_05, EC_17, EC_23			A3 [▲]	A5.431/ A5.611	Gravel: 39.49 %, Sand: 56.49 %, Mud: 4.02 % Folk: BGS modified/1954 = Sandy gravel Wentworth (1922) = Very cparse sand	*Sabellaria spinulosa, Crepidula fornicata, Polycirrus, Amphipholis squamata, Lanice conchilega, Spirobranchus lamarcki*	*Balanus crenatus, Polycarpa fibrosa, Escharella immersa, Flustra foliacea, Electra pilosa*	

Notes
DEP = Dudgeon Extension Project
SEP = Sheringham Extension Project
EUNIS = European Nature Information System
* = Most abundant taxa, present at all stations in grouping, listed from highest mean abundance
† = Characteristic epifaunal taxa present at all stations in grouping
Poss = Possibly

When considered with DEP stations, stations EC_08, EC_09 and EC_15 and EC_19 were considered within the biotope complex 'Infralittoral fine sand' (A5.23). With further consideration of the SEP macrofaunal dataset, the habitat at stations EC_08, EC_15 and EC_19 can be refined to the biotope '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (A5.233). In the latter multivariate analysis, station EC_09 was considered to be an ungrouped station, and when considered as such, this station was classified as 'infralittoral coarse sediment' (A5.13), largely due to the lack of fines fraction at this station, resulting in a Wentworth (1922) description of 'coarse sand'. When sediment at this station was considered with the paucity of taxa and low abundance reported at this station, despite the macrofaunal community grouping with that reported at more sandy sediments in the DEP, the 'Infralittoral coarse sediment' (A5.13) biotope complex was considered more appropriate than 'Infralittoral fine sand' (A5.23).

When considered with DEP stations, stations EC_05, EC_10, EC_12, EC_16. EC_17and EC_23 were considered within the biotope complex 'Infralittoral mixed sediments' (A5.43), possibly as biotope '*Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment' (A5.431). However, on further consideration of the SEP macrofaunal dataset, the habitat can be refined to a mosaic of the biotope '*Sabellaria spinulosa* on stable circalittoral mixed sediment' (A5.611) in combination with the biotope '*Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment' (A5.431), due to the elevated abundance of both *C. fornicata* and *S. spinulosa.*

The seabed video also recorded the biotope 'Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay' (A4.231), and the broad habitat 'Infralittoral rock and other hard substrata (A3)', which are detailed in Volume 2 Habitat Assessment.

The sediments observed throughout the survey area were identified as comprising the broadscale priority habitat 'subtidal sands and gravels'. However, this habitat is widely distributed and represented elsewhere in the UK Marine Protected Area (MPA) network (JNCC, 2019).

Based on the assessments performed in the Sheringham Dudgeon Extension Habitat Report (Volume 2 of this series) and the observations during this report, several sensitive habitats/species have the potential occur within the survey area (Table 5.2).

No other Annex I habitats or Annex II species, OSPAR threatened and/or declining species and habitats or UK Biodiversity Action Plan priority habitats and species (OSPAR, 2008; JNCC & Defra, 2012) were observed within the survey area.

Table 5.2: Summary of sensitive habitats/species potentially present, Sheringham Extension Project

Listed Feature		Relationship	Related Feature	
Description	Designation/Status		Description	Designation/Status
Geogenic reef	Annex I habitat; habitat FOCI	May occur	Bedrock reef	Annex I habitat; Subtidal chalk
Subtidal sands and gravels	Priority habitat; habitat FOCI Annex I habitat	Contains	Offshore subtidal sands and gravels	UK BAP priority habitat; MPA search feature
		May occur	Sandbanks which are slightly covered by sea water all the time	Annex I habitat
Peat and clay exposures with piddocks	Priority habitat	Contains	Peat and clay exposures with piddocks	UK BAP priority habitat
Subtidal chalk	Priority habitat Annex I habitat	May occur	Subtidal chalk	UK BAP priority habitat
		May occur	Reefs	Annex I habitat
Herring spawning grounds	Priority species	Contains	Herring spawning grounds	UK BAP priority species
Sand eel preferred habitat	Priority species	Contains	Sand eel preferred habitat	UK BAP priority species

Notes
FOCI = Feature of Conservation Interest
UK BAP = United Kingdom Biodiversity Action Plan
OSPAR = Oslo and Paris Commission
MPA = Marine Protected Area

6. Conclusions

The sediment across the SEP survey area was found to be heterogenous with varying percentages of sand, gravel and fines. Gravel and sand were predominant at most stations, gravel with percentages of up to 60.33 % and sand with percentages up to 99.98 %. Fines were poorly represented by comparison, with percentages of up to 22.13 %.

In the SS proposed extension, the seabed comprised mostly very poorly sorted coarse and mixed sediments. The Folk (BGS modified) and Folk (1954) classifications identified four sediment classes, including sandy gravel at nine stations, muddy sandy gravel at six stations, gravelly sand at one station and gravelly muddy sand at one station. Under the Wentworth (1922) description, the sediment was classified as very coarse sand at seven stations, granule at six stations, coarse sand at three stations and fine pebble at one station.

Along the EC corridor, the seabed comprised mostly very poorly sorted coarse sediment, consisting of sand and gravel; four stations comprised well sorted to moderately well sorted sand and one station comprised extremely poorly sorted mixed sediment. The Folk (BGS modified) classification identified three classes including sandy gravel, sand and muddy sandy gravel. Using the Folk (1954) classification, the stations classified as sand under the Folk (BGS modified) classification, were classified as slightly gravelly sand, owing to their gravel content. Under the Wentworth (1922) description, the sediments were classified as very coarse sand, medium sand, granule, coarse sand and fine pebble. Sediment particle distribution was bimodal or polymodal at all but station EC_08.

The total hydrocarbon content was low and values at all stations were within the range of values recorded in the SEA2 Area 1 regional survey. The total n-alkanes (nC_{12} to nC_{36}) concentrations and CPI ratio were above the SEA2 Area 1 mean value at some stations. The pristane/phytane (Pr/Ph) ratio was above the Area 1 mean at all stations.

The total 2 to 6 ring PAH concentrations at all stations were within the range of values recorded from the SEA2 Area 1 regional survey. The individual US EPA 16 PAH concentrations were all below the CEMP ERLs.

All metal concentrations were below the Cefas AL1 and AL2, and below the CEMP ERLs, where available.

Total organotins concentrations showed high variation across the survey area. TBT concentrations were all below the CEMP Class B assessment criteria.

Results of the biological analysis of the grab samples indicates a diverse infauna with abundances fairly evenly distributed across the taxa recorded. The community structure was dominated by annelids in terms of number of taxa and individuals followed by arthropods and molluscs, whereas echinoderms were poorly represented by comparison.

The multivariate analysis identified four major groups, the largest of which comprised a community characterised by *C. fornicata* and *S. spinulosa*, and solitary epifauna such as *B. crenatus* and *D. grossularia*. Of the other groups, one comprised a *L. conchilega* community, one comprised a community characterised by *G. triangularis* and polychaetes, and one comprised a community characterised by *B. elegans* and *N. cirrosa*. Two stations were different enough to be separated by the multivariate analysis and were characterised by low faunal diversity and abundance by comparison.

The infaunal biomass was dominated by molluscs at most stations in the SS proposed extension, whereas along the EC corridor annelids dominated the biomass at most stations, with notable contribution from the arthropods.

Epifauna was well represented across the SEP survey area, with colonial epifauna being recorded at all stations and bryozoans, being the most frequently occurring across the SEP survey area.

The infaunal groups identified by the multivariate analysis of the infaunal dataset were assessed in conjunction with the physical and biological characteristic of each multivariate group to identify biotopes in line with the EUNIS habitat classification. Results of the habitat assessment based on video and image analysis were integrated with the results the grab sampling to provide a comprehensive habitat assessment.

Five biotopes and one biotope complexes were identified:

1. *Flustra foliacea* and colonial ascidians on tide-swept exposed circalittoral mixed substrata (A4.1343);
2. *Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand (A5.233);
3. Polychaete-rich deep Venus community in offshore mixed sediments (A5.451);
4. *Crepidula fornicata* with ascidians and anemones on infralittoral coarse mixed sediment (A5.431);
5. *Sabellaria spinulosa* on stable circalittoral mixed sediment A5.611;
6. Infralittoral coarse sediment (A5.13)

Some of the biotopes identified are part of the UK BAP priority habitats 'Subtidal sands and gravels' and 'Sheltered muddy gravels'; some are part of MCZs BSHs 'High energy circalittoral rock' and 'Subtidal mixed sediments'. Selected biotopes may occur in the Habitats Directive Annex I Habitats 'Sandbanks which are slightly covered by sea water all the time' and 'Reefs' and the OSPAR list of threatened and declining habitats and species. However, these were not applicable to this study as the survey area does not encompass sandbanks and the results of the video analysis indicated the absence of geogenic reef at most stations with only two station shaving 'Low reef' resemblance.

7. References

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Appendices

Appendix A

Guidelines on Use of Report

Appendix B

Methodologies

B.1 Survey Methods

B.1.1 Sediment Grab Sampling

Sediment samples for faunal and particle size distribution (PSD) analysis were acquired using a 0.1 m^2 Hamon grab. Samples for chemical analysis were acquired with a 0.1 m^2 Day grab, except for samples acquired in the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ), where a 0.04 m^2 Shipek grab was used.

Operational procedures for grab sampling were as follows:

- The grab was prepared for operations prior to arrival on station. The Bridge communicated to the deck via a VHF radio when the vessel was steady and on location, and the grab was deployed from the crane;
- When the grab had reached the seabed (evidenced through a distinct slackening of the wire rope), a positional fix was taken;
- On recovery to the deck, the sample was inspected and deemed acceptable or not (see below for rejection criteria);
- A single grab sample was retained for faunal analysis and a sub-sample was retained for PSD analysis;
- At stations where triplicate samples were required, three grab samples were taken, each of which had a grab sample for faunal analysis and a subsample for PSD analysis;
- Deck logs were completed for each sample acquired (including details of no samples) with details of date, time, sample number, fix number, sediment type, odour and bioturbation or debris.

Samples were considered unacceptable in the following instances:

- Evidence of sediment washout caused through improper closure of grab jaws or inspection hatch;
- Sediment sample taken on an angle; where the grab jaws were not parallel to the seabed when the grab fired;
- Disruption of the sample through striking the side of the vessel;
- Samples were less than approximately 5 litres of sediment, for macrofaunal samples (unless deemed acceptable by the client representative);
- Sample was more than 25 m from the target location (unless deemed acceptable by the client representative);
- Deemed unacceptable by the client representative for any other reason.

B.1.2 Chemistry Sample Processing

Hydrocarbon samples were collected using a metal scoop to a nominal depth of 2 cm. The samples were preserved in glass jars at approximately −20 °C;

Heavy metal samples were collected using a plastic scoop to a nominal depth of 2 cm. The samples were preserved in polythene bags at approximately −20 °C

B.1.3 Macrofaunal and PSD Sample Processing

Macrofauna samples were processed as follows:

- Macrofauna samples were processed in their entirety, by opening the grab to drop the grab into a container. All supernatant water was processed along with the sediment;
- A PSD subsample was collected using a plastic scoop and placed into a polythene bag. The samples were stored at ambient temperature;
- The sample was then transferred to a sediment processing chute and washed out over a 1.0 mm mesh sieve;
- Once sieved, samples were transferred to containers labelled with details of the job number, station code and fauna code (e.g. FA) and fixed in 10 % buffered formal saline. The sample containers were then sealed, hazard labelled and stored securely on deck.

B.2 Laboratory Analysis

A sample delivery log accompanied the samples to Fugro laboratories as part of the chain of custody. Upon receipt of samples at Fugro laboratories, sample handling and labelling of each sample was inspected to ascertain correct storage in line with the sampling methods. Where samples are deemed deviating or potentially deviating from sampling methods, these are reported to the Fugro Project Manager, who will then inform the client, in line with Fugro Quality Assurance Management System.

B.2.1 Particle Size Distribution Analysis

B.2.1.1 Dry Sieve Analysis

Particle size analysis was undertaken in accordance with Fugro procedures EUAF FGBM-SED-TM-001 and EUAF-FGBM-SED-TM-002 based on BS1377: Part 1, 2016 and part 2, 1990, and the NMBAQC's scheme best practice guidance document – Particle Size Analysis (PSA) for Supporting Biological Analysis, 2016.

Representative material > 1 mm was split from the bulk subsample and oven dried at 105 °C ± 5 °C to constant weight before sieving through a series of sieves with apertures corresponding to either 0.5 phi or 1 phi intervals between 64 mm and 1 mm as described by the Wentworth scale. The weight of the sediment fraction retained on each mesh was then measured and recorded.

B.2.1.2 Laser Diffraction

Particle size analysis was undertaken in accordance with Fugro procedure EUAF-FGBM-SED-TM 006 based on the NMBAQC's scheme best practice guidance document – Particle Size Analysis for Supporting Biological Analysis; 2016 and BS ISO 13320_2009.

Representative material < 1 mm was removed from the bulk subsample for laser analysis, with a minimum of three triplicate analyses (mixed samples) or one triplicate analyses (sands) analysed using the laser sizer at either 0.5 phi intervals between < 1 mm and< 0.98 µm. Laser diffraction was carried out using a Malvern Mastersizer 2000 using a Hydro 2000G dispersion unit.

B.2.1.3 PSD Outputs and Deliverables

Sieve and laser data were subsequently merged and entered in GRADISTAT to derive statistics including cumulative percentage of each particle size passing through each sieve, percentage retained on each sieve stack, mean and median grain size, bulk sediment classes (percentage fines, sand and gravel), skewness and sorting coefficients, and Folk (1954) classification.

B.2.2 Hydrocarbon Analysis

Hydrocarbon analysis of sediments was carried out by FGBML.

B.2.2.1 General Precautions

To effectively eliminate all possible sources of hydrocarbon contamination from the analysis the following precautionary measures were taken prior to sample work-up:

- All solvents were purchased as high purity grade. Each batch was checked for purity by concentrating approximately 400 mL down to a small volume (< 1 mL) and analysing by gas chromatography (GC);
- All water used was distilled through an all glass still and dichloromethane extracted to minimise contamination from plasticisers;
- All glassware was cleaned using an acid/base machine wash. The glassware was rinsed with acetone then finally with dichloromethane prior to use;
- Procedural blanks, replicate analyses and laboratory reference material were run with each batch.

B.2.2.2 Ultrasonication Extraction for Hydrocarbons in Sediment

Sediment samples were thawed, homogenised and accurately weighed into a 250 mL conical flask. A solution containing an appropriate amount of the following internal standards was added to each sample using a microsyringe.

Aliphatic Standards	Aromatic Standards
Heptamethylnonane	D_8 Naphthalene
D_{34} Hexadecane	D_{10} Acenaphthene
D_{42} Eicosane	D_{10} Phenanthrene
Squalane	D_{10} Pyrene
	D_{12} Chrysene
	D_{12} Perylene

Methanol (50 mL) and solvent were mixed with the sediment. Dichloromethane (DCM) (60 mL) was then added and the sample mixed again. The flasks were then capped with solvent cleaned aluminium foil and ultrasonicated for 30 minutes.

After being allowed to settle the solvent was decanted through a GF-C filter paper into a 1 litre separating funnel. The extract was then partitioned with 100 mL of DCM extracted distilled water and the DCM layer run-off into a clean 500 mL round-bottomed flask. The ultrasonic extraction was repeated a further two times using 50 mL DCM and 15 minutes of ultrasonication. Each time the filtered extract was partitioned with the remaining methanol/water in the separating funnel. The DCM extracts were bulked and reduced in volume to approximately 2 mL using a rotary evaporator, then further reduced to approximately 1 mL under a gentle stream of nitrogen prior to clean-up.

Correction factors for wet/dry sediments were obtained by drying a subsample of the homogenised sediment to constant weight at 105 °C.

B.2.2.3 Clean-up of Extracts by Column Chromatography

Removal of polar material, including lipids was carried out using a silica gel column. The silica gel used was 70 to 230 mesh which was heated at 400 °C for at least 4 hours to remove impurities and residual moisture and then stored at 200 °C prior to use. The sample extract was added to the silica gel column, containing 5 g of adsorbent and eluted with 35 mL of DCM/pentane (1:2). The eluant was reduced in volume using the evaporator to approximately 2 mL, with activated copper powder (for removal of free sulphur), before being further reduced under a gentle stream of nitrogen to an appropriate volume and analysed by both gas chromatography (GC) and gas chromatography-mass spectrometry (GC MS).

	Gas Chromatography [GC]	Gas Chromatography-Mass Spectrometry [GC-MS]
Instrument	HP 6890 Series GC with 7673 autoinjector	HP 7890 Series GC with autoinjector and 5977A MSD
Column	100 %-dimethylpolysiloxane bonded fused silica, 60 m, 0.25 µm film thickness, 0.32 mm internal diameter	(5 %phenyl)-methylpolysiloxane bonded fused silica, 60 m, 0.32 µm film thickness 0.25 mm internal diameter
Carrier Gas	Hydrogen (constant flow 3.5 mL/min)	Hydrogen (constant flow 1.4 mL/min)
Injector	On–column (2 µL injection)	Splitless, 280 °C, split flow 40 mL/min, vent time 1.5 min (1 µL injection)
Oven Temperature Programme	80 °C – 2 min 80 °C to 320 °C at 18 °C/min 320 °C – 13 min 320 °C to 350 °C at 30 °C/min	60 °C – 1 min 60 °C to 180 °C at 11 °C/min 180 °C to 260 °C at 6 °C/min 260 °C to 320 °C at 6 °C/min 330 °C – 7 min
Source/Detector Temperature	350 °C (FID)	230 °C

Electron Energy		70 eV
Selected Ion Monitoring (SIM)		9 groups - 6 ions per group
Dwell Time (per ion)		0.035 second

B.2.2.4 Total Hydrocarbons by Gas Chromatography–Flame Ionisation Detection (GC-FID)

The total hydrocarbon material present was quantified using response factors calculated from the analysis of mixed oil standard solutions over an appropriate range. The unresolved complex mixture (UCM) was determined by subtracting the area of all the resolved peaks from the total hydrocarbon area and applying the total hydrocarbon response factor. The minimum reporting value (MRV) is 0.5 µg/g dry weight.

B.2.2.5 n-Alkanes, Pristane and Phytane

Calibration was undertaken using a range of n-alkane standard solutions containing the even carbon number compounds between nC_{12} and nC_{36}, and a range of suitable internal standards. Individual response factors were calculated for each of the n-alkanes present in the calibration solution. Response factors for the non-calibrated n-alkanes (and pristane and phytane) were taken to be equivalent to closely eluting compounds. The MRV of individual n-alkanes is 0.1 ng/g dry weight.

The n-alkanes between nC_{12} and nC_{36} were reported, as were the ranges between nC_{12} and nC_{20} and nC_{21} and nC_{36}. Carbon preference index (CPI) values (the ratio of odd to even carbon numbered compounds) for the same ranges were also calculated. Pristane and phytane (and associated ratio) were also determined.

B.2.2.6 Polycyclic Aromatic Hydrocarbons (PAHs)

A full range of polycyclic aromatic hydrocarbon (PAH) and alkylated PAH were quantified as specified by Department of Trade and Industry (DTI) regulations (DTI, 1993).

Calibration was undertaken using a range of PAH standard solutions, a number of alkylated PAH, dibenzothiophene and a range of suitable internal standards. Individual response factors were calculated for each of the compounds present in the calibration solution. Response factors for the non calibrated alkylated PAH were taken to be equivalent to closely related compounds. The MRV of individual and alkylated PAHs is 0.1 ng/g.

B.2.3 Organotins

Organotins were analysed in accordance with Fugro procedures EUAF-FGBM-CHEM-TM-007 and EUAF-FGBMCHEM-TM-008.

B.2.3.1 Ultrasonic Extraction Procedure

Sediment samples were thawed, homogenised and accurately weighed into a 125 mL conical flask. A solution containing an appropriate amount of the internal standard (containing monoheptyltin, diheptyltin and tripropyltin) was added to each sample. Extraction solvent (acetic acid:methanol:water (1:1:1, v:v:v)) was added and the sample mixed again. The flasks were then capped with solvent cleaned aluminium foil and ultrasonicated for 30 minutes. The slurry was transferred to a centrifuge tube and centrifuged to separate the liquid and solid phases. The ultrasonication and centrifugation steps were repeated one further time. The two extraction solutions were combined, mixed and the pH adjusted to approximately 4.5 using a sodium hydroxide solution. The extract solution was derivatised using 5 % (w/v) sodium tetraethylborate in water solution, the solution left for 30 minutes before 5 mL of hexane was added. The solutions were mixed, left to separate and the hexane layer transferred to a 12 mL vial. The derivatisation step was repeated and a further 5 mL of hexane added. The hexane layers were combined and blown down to 1 mL.

B.2.3.2 Clean-up of Sediment Extracts by Column Chromatography

Sample extracts are cleaned up by column chromatography using 3 % de-activated silica. The silica gel used was 70 mesh to 230 mesh, muffled at 400 °C for at least 4 hours to remove impurities and activate it then stored at 200 °C. Prior to use, silica is deactivated by the addition of distilled water. The sediment extract was added to the silica gel column, containing 5 g of adsorbent and eluted with 30 mL of hexane/dichloromethane (4:1, v:v). The eluent was reduced in volume using the evaporator to approximately 2 mL before being further reduced under a gentle stream of nitrogen to an appropriate volume approximately 1 g of activated copper powder (for removal of free sulphur) before being concentrated to 0.5 ml for analysis.

B.2.3.3 Gas Chromatography-Mass Spectrometry (GC-MS) Analysis of Organotins

Sample extracts are analysed by GC-MS using selected ion monitoring for monobutyl tin, dibutyl tin, and tributyl tin. The instrument parameters are shown on the following table.

	Gas Chromatography-Mass Spectrometry [GC-MS]
Instrument	ThermoFinnigan Trace GC-DSQ mass selective detector with AS3000 autoinjector
Column	(5 %phenyl)-methylpolysiloxane bonded fused silica, 30 m, 0.25 µm film thickness 0.25 mm internal diameter
Carrier Gas	Helium (constant flow 1 mL/min)
Injector	Splitless, 280 °C, split flow 50 mL/min, vent time 1.0 min (2 µL injection)
Oven Temperature Programme	60 °C – 1 min 60 °C to 240 °C at 13 °C/min 240 °C to 320 °C at 45 °C/min 320 °C – 6 min
Source/Detector Temperature	250 °C
Electron Energy	70 eV
Selected Ion Monitoring (SIM)	3 groups - 6 ions per group
Dwell Time (per ion)	0.030 second

B.2.4 Metal Analysis

Sediment samples were dried at 40 °C and then sieved to the required size fraction (2000 µm). Samples were subjected to an aqua regia microwave digestion. This acid mixture allows a partial dissolution of metals, predominately releasing those associated with the sediment fines. The resulting digests were then analysed by inductively coupled plasma–mass spectrometry (ICP-MS) for arsenic, cadmium, chromium, copper, lead, nickel, zinc, mercury and lithium; and inductively coupled plasma–optical emission spectrometry (ICP-OES) for aluminium, barium and iron.

B.2.5 Biological Analysis

Samples for faunal analysis were analysed in accordance with in house quality assured procedure EUAF-FGBM-BEN-TM-001 and are consistent with the standards for macrobenthic analysis BS EN ISO 16665:2013, BS EN 14996:2006 and BS EN 16493:2014 and the NMBAQC's own guidance document (Worsfold et al, 2010). Macrofaunal analysis was undertaken at a Fugro benthic laboratory.

B.2.5.1 Macrofauna Identification and Enumeration

Macrofaunal grab samples were initially washed over a 1 mm mesh sieve, to remove all fine sediment and fixative. This sieve was used as the working sieve at all stages of analysis, although larger sieves were available to fraction material into similar sizes for ease of processing. Faunal samples underwent initial sorting by elutriation to remove the less dense fauna. The remaining sediment residue was then be transferred to white trays and scanned for larger or heavier fauna, such as bivalve molluscs. Epifauna on rocks and stones was removed at this stage. Fauna was sorted from the sieved sample under a dissecting microscope and subsequently identified to the lowest possible taxonomic level and enumerated. All biological faunal material retained was stored in 70 % industrial denatured alcohol. A reference collection was prepared with a minimum of one individual of all species identified retained.

B.2.5.2 Macrofaunal Biomass

Biomass analysis was undertaken on the infauna from the grab samples, following identification and enumeration. The infauna from each sample was sorted into six groups, to include Annelida, Arthropoda, Mollusca, Echinodermata, Cnidaria (including only burrowing species) and other phyla. Biomass was undertaken using the wet blot method.

B.2.5.3 Benthic Infauna Quality Control

Sample analyses are subject to in-house quality control (QC) procedures, which are documented in Fugro benthic laboratory method statements. A minimum of 10 % of the faunal samples from each sample collection are selected randomly and accuracy of extraction, nomenclature and enumeration checked. Results of the QC are compared to the original analysis using Bray-Curtis similarity analysis. Samples should attain 90 % or greater similarity via this comparison. Remedial action is taken if similarity falls below this level. These levels are consistent with those required by the NMBAQC scheme.

B.2.5.4 Macrofauna Outputs and Deliverables

Provision of macrofaunal analysis (abundance and biomass) data in Excel spreadsheet. Species nomenclature is consistent with that of World Register of Marine Species (WoRMS Editorial Board, 2020). The taxonomic order is based on Species Directory codes (Howson & Picton, 1997) to give an idea of ‘evolutionary rank’.

B.3 Statistical Analysis

B.3.1 Univariate Analysis

Univariate analysis is used to extracts features of communities which are not the function of specific taxa, that is these methods are species independent. They are not sensitive to spatio-temporal variations in species composition, so that assemblages with no species in common can theoretically have equal diversities. Univariate analyses were calculated using the Plymouth Routines in Multivariate Ecological Research PRIMER version (v)7 Diverse procedure and included number of individuals (N) and taxa (S), richness employing the Margalef's index (d), diversity employing the Shannon-Wiener index (H'Log_2), evenness employing the Pielou's index (J) and dominance employing the Simpson's index (λ).

B.3.1.1 Margalef's Index of Richness

Margalef's index (d) is a measure of the number of species present for a given number of individuals. Unlike the total number of species, this index is less independent from sample size. It is expressed as:

$$d = \frac{S-1}{logN}$$

Where:

N = number of individuals;
S= number of species.

Pielou's Equitability (J')

Pielou's index of evenness (also referred to as equitability) expresses how evenly distributed the individuals are among the different taxa. In general, the higher the evenness, the more balanced the sample is, as it indicates that the individuals are evenly distributed between the taxa recorded. It is expressed as:

$$\mathrm{J}' = \frac{\mathrm{H}'}{\mathrm{Log\ S}}$$

Where:

H' = Shannon-Wiener Index;
S = total number of species.

B.3.1.2 Shannon-Wiener Diversity (H'Log_2)

The Shannon-Wiener index of diversity incorporates richness and evenness as it expresses the number of species within a sample and the distribution of abundance across these species. In mathematical information theory, which is the context in which the Shannon-Wiener formula was originally devised, the Shannon-Wiener index of diversity measures the information content of a code in which one can write infinite messages. Analogously, the use of the

Shannon-Wiener index of diversity as a measure of the diversity of a community, assumes that indefinitely samples can be taken from the community without depleting it. It is expressed as:

$$H' = -\sum_{i} P_i \operatorname{Log}(P_i)$$

Where:

Pi = proportion of the ith species.

B.3.1.3 Simpson's Index (λ)

The Simpson index has a number of forms, λ representing the probability that any two individuals from the sample, chosen at random, are from the same species. As such the index is a dominance index in the sense that its largest value corresponds to assemblages the total abundance of which is dominated by one or very few of the taxa present. It is expressed as:

$$\lambda = \left(\sum {p_i}^2\right)$$

Where:

pi = is the proportion of the total count arising from the ith species.

B.3.2 Multivariate Analysis

B.3.2.1 Pre-treatment and Transformation

In the initial stage, multivariate analysis may involve transformation of data. Transformation is applied where the sediment or fauna dataset is dominated by one or few sediment fractions or taxa, which may mask the underlying sediment or community composition. Transformation reduces the influence of those more dominant variables, with transformation ranging in severity from no transformation to the reduction of all data to presence absence only. Thus, if no transformation is applied to the data, greater emphasis is given to the most common species; a square root transformation allows the intermediate abundance species to play a role; a fourth root transformation results in a down-weighting of the dominant species, taking into much greater account the lowest abundant species, an allowing the underlying community composition to be assessed. An alternative transformation, with very similar effect to the fourth root, is the log transform log(1+y). The latter transformations are effectively equivalent in focusing attention on patterns within the whole community, mixing contribution from both common and rare species (Clarke & Warwick, 2001).

B.3.2.2 Similarity Matrices

This analysis divides sites into groupings based on a measure of similarity or distance, depending on the nature of the data. For biological data, similarity based on the Bray-Curtis matrix is recommended, and for environmental data the Euclidean distance is recommended

(Clarke & Warwick, 2001). The similarity/distance compares all samples with all other samples, producing a matrix.

B.3.2.3 Hierarchical Agglomerative Clustering (Cluster) and Similarity Profile Testing (SIMPROF)

The CLUSTER programme uses the similarity matrix to successively fuse samples into larger and larger groups according to their level of similarity. The results are displayed by means of a tree-like dendrogram with similarity (or distance) displayed on one axis and samples on the other. The similarity profile (SIMPROF) test was also performed in conjunction to cluster analysis. The test is a permutation of the null hypothesis that a set of specified samples, which are not a priori divided into groups, do not differ from each other in multivariate structure and looks for statistically significant evidence of "true" clusters in samples that is if the different sample groupings interpreted from the cluster analysis are significantly different. The results are displayed by colour convention on the dendrogram: samples connected by red lines constitute a significant group in statistical terms and cannot be separated. Conversely, samples connected by black lines, and therefore statistically different, may be interpreted as being ecologically not significantly different. The SIMPROF output was therefore always considered in terms of statistical and ecological significance, in line with Clarke et al. (2008) who indicate that, creating coarser groupings is entirely appropriate, provided that the resulting clusters are always supersets of the SIMPROF groups.

B.3.2.4 Non-metric Multidimensional Scaling (nMDS)

Non-metric Multidimensional Scaling (nMDS) uses the similarity matrix to ordinate samples in a two-dimensional plane. This attempts to construct a map of the samples in which the more similar/close two samples are, the nearer they are on the map. The extent to which these relations can be adequately represented in a two-dimensional map is expressed as the stress coefficient statistic or stress value. Stress values above 0.3 indicate near arbitrary points and the ordination should be considered unreliable. Stress values between 0.2 and 0.3 are poor representations of the data. Stress < 0.2 can show meaningful ordinations, while stress <0.1 shows a good ordination of the data, with no real prospect of misleading interpretation. The combination of clustering and ordination analysis is a very effective way of checking the adequacy and mutual consistency of both representations (Clarke & Warwick, 2001).

B.3.2.5 Similarity Percentages Analysis (SIMPER)

This analysis can be applied to the data to gauge the faunal distinctiveness of each multivariate cluster, as identified by the clustering analysis. SIMPER provides a ranked list of taxa which contributes most to the similarity within clusters and the dissimilarity between clusters.

B.3.2.6 Principal Component Analysis (PCA)

The principal component analysis (PCA) identifies multidimensional patterns in datasets; once these multidimensional patterns have been found the data are compressed by reducing the number of dimensions without loss of information. The results of a PCA are graphically represented by the principal component (PC) axes, which are linear combinations of the values for each variable and represent the perpendicular distance in a multidimensional space along which the variance is maximised. The degree to which a 2D PCA succeeds in representing the full multidimensional information is in the percentage of the total variance expressed by the first two PCs. In general, a picture which accounts for as much as 70 % to 75 % of the original variation is likely to describe the overall structure rather well (Clarke & Warwick, 2001).

B.3.2.5 Environmental and Biological Relationships

Relationships between biological and environmental variables were tested employing the BIOENV analysis (available in PRIMER v7 as BEST, which amalgamates the Bio-Env and Stepwise procedures). The BEST procedure works by superimposing the abiotic groups derived by the Euclidean distance matrix onto the biotic groups derived from the Bray-Curtis similarity matrix. The two similarity matrices are then correlated (using Spearman's correlation), to find the strength of the association between the two sets of variables. If the patterns derived by the two matrices are similar, they correlate, with a value of the correlation coefficient rho approaching 1 indicating good correlation, and a value of rho approaching 0 indicating poor correlation. Results are given in decreasing order of correlation and as single and/or combination of variables. The BEST permutation test allows testing for the significance of the correlations. The test is based on the random permutation of one set of sample labels relative to the other, prior to running the full BIOENV procedure to generate the best match rho. Another permutation of the labels is then generated and the whole BIOENV procedure repeated for up to 99 times, which is set as default within the analytical procedure. The results are graphically represented as a histogram of the simulated distribution of the test statistic Rho under the null hypothesis of “no correlation”. If Rho falls outside the simulated distribution, there is evidence to reject the null hypothesis therefore the two matrices are correlated (Clarke & Warwick, 2001).

Appendix C

Logs

C.1 Survey Log

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
11/08/2020	16:28:03	EC_14	Video	SOL	12	8.6	377 437.7	5 870 611.4	377 336.3	5 870 616.4	101.5	-
11/08/2020	16:30:31	EC_14	Still	200270_EC_14_01	13	-	377 437.7	5 870 611.4	377 418.1	5 870 616.7	20.4	-
11/08/2020	16:30:38	EC_14	Still	200270_EC_14_02	14	-	377 437.7	5 870 611.4	377 421.9	5 870 615.6	16.4	-
11/08/2020	16:30:45	EC_14	Still	200270_EC_14_03	15	-	377 437.7	5 870 611.4	377 426.5	5 870 614.4	11.6	-
11/08/2020	16:30:52	EC_14	Still	200270_EC_14_04	16	-	377 437.7	5 870 611.4	377 431.1	5 870 615.1	7.5	-
11/08/2020	16:31:00	EC_14	Still	200270_EC_14_05	17	-	377 437.7	5 870 611.4	377 436.7	5 870 616.9	5.6	-
11/08/2020	16:31:08	EC_14	Still	200270_EC_14_06	18	-	377 437.7	5 870 611.4	377 441.2	5 870 618.1	7.5	-
11/08/2020	16:31:20	EC_14	Still	200270_EC_14_07	19	-	377 437.7	5 870 611.4	377 449.1	5 870 619.0	13.6	-
11/08/2020	16:31:27	EC_14	Still	200270_EC_14_08	20	-	377 437.7	5 870 611.4	377 454.3	5 870 621.6	19.4	-
11/08/2020	16:31:32	EC_14	Still	200270_EC_14_09	21	-	377 437.7	5 870 611.4	377 458.5	5 870 623.7	24.1	-
11/08/2020	16:31:41	EC_14	Still	200270_EC_14_10	22	-	377 437.7	5 870 611.4	377 464.0	5 870 627.0	30.5	-
11/08/2020	16:31:51	EC_14	Still	200270_EC_14_11	23	-	377 437.7	5 870 611.4	377 469.8	5 870 631.7	37.9	-
11/08/2020	16:31:59	EC_14	Video	EOL	24	7.8	377 437.7	5 870 611.4	377 474.2	5 870 635.0	43.4	-
11/08/2020	17:31:49	EC_14	HG	FA/PSDA	25	8.2	377 437.7	5 870 611.4	377 414.5	5 870 612.0	23.2	-
11/08/2020	17:36:45	EC_14	HG	NS	26	8.2	377 437.7	5 870 611.4	377 419.1	5 870 612.3	18.6	-
11/08/2020	17:46:23	EC_14	HG	NS	27	8.0	377 437.7	5 870 611.4	377 423.2	5 870 631.1	24.5	-
11/08/2020	18:15:54	EC_14	HG	NS	28	8.2	377 437.7	5 870 611.4	377 434.9	5 870 604.4	7.6	-
11/08/2020	18:16:45	EC_14	HG	PSDB	29	8.2	377 437.7	5 870 611.4	377 423.6	5 870 593.6	22.8	-
11/08/2020	18:16:45	EC_14	HG	NS	No fix	8.1	377 437.7	5 870 611.4	-	-	-	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
11/08/2020	18:32:50	EC_14	HG	NS	30	8.1	377 437.7	5 870 611.4	377 433.0	5 870 617.9	8.0	-
11/08/2020	19:10:42	EC_14	HG	NS	31	8.3	377 437.7	5 870 611.4	377 433.7	5 870 611.8	4.1	-
11/08/2020	19:38:49	EC_03	Video	SOL	32	9.3	378 283.7	5 870 765.3	378 242.7	5 870 764.4	41.1	-
11/08/2020	19:39:13	EC_03	Still	200270_EC_03_01	33	-	378 283.7	5 870 765.3	378 255.2	5 870 766.2	28.6	-
11/08/2020	19:39:21	EC_03	Still	200270_EC_03_02	34	-	378 283.7	5 870 765.3	378 258.5	5 870 766.4	25.2	-
11/08/2020	19:39:31	EC_03	Still	200270_EC_03_03	35	-	378 283.7	5 870 765.3	378 262.7	5 870 767.2	21.2	-
11/08/2020	19:39:37	EC_03	Still	200270_EC_03_04	36	-	378 283.7	5 870 765.3	378 265.4	5 870 767.2	18.4	-
11/08/2020	19:39:44	EC_03	Still	200270_EC_03_05	37	-	378 283.7	5 870 765.3	378 268.4	5 870 767.2	15.5	-
11/08/2020	19:39:50	EC_03	Still	200270_EC_03_06	38	-	378 283.7	5 870 765.3	378 271.3	5 870 767.2	12.5	-
11/08/2020	19:39:57	EC_03	Still	200270_EC_03_07	39	-	378 283.7	5 870 765.3	378 274.3	5 870 767.3	9.6	-
11/08/2020	19:40:11	EC_03	Still	200270_EC_03_08	40	-	378 283.7	5 870 765.3	378 280.3	5 870 767.2	4.0	-
11/08/2020	19:40:29	EC_03	Still	200270_EC_03_09	41	-	378 283.7	5 870 765.3	378 287.3	5 870 767.2	4.0	-
11/08/2020	19:40:40	EC_03	Still	200270_EC_03_10	42	-	378 283.7	5 870 765.3	378 291.0	5 870 766.7	7.4	-
11/08/2020	19:40:56	EC_03	Still	200270_EC_03_11	43	-	378 283.7	5 870 765.3	378 295.4	5 870 766.8	11.7	-
11/08/2020	19:41:06	EC_03	Still	200270_EC_03_12	44	-	378 283.7	5 870 765.3	378 297.8	5 870 766.8	14.2	-
11/08/2020	19:41:21	EC_03	Still	200270_EC_03_13	45	-	378 283.7	5 870 765.3	378 301.5	5 870 767.1	17.8	-
11/08/2020	19:41:34	EC_03	Video	EOL	46	9.8	378 283.7	5 870 765.3	378 303.8	5 870 767.3	20.2	-
11/08/2020	19:49:24	EC_03	HG	NS	47	9.5	378 283.7	5 870 765.3	378 272.8	5 870 767.2	11.1	-
11/08/2020	19:55:58	EC_03	HG	NS	48	9.5	378 283.7	5 870 765.3	378 270.8	5 870 776.4	17.1	-
11/08/2020	20:03:18	EC_03	HG	PSDA	49	9.4	378 283.7	5 870 765.3	378 274.6	5 870 746.9	20.5	-
11/08/2020	20:29:26	EC_03	HG	NS	50	10.1	378 283.7	5 870 765.3	378 290.8	5 870 754.8	12.6	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
11/08/2020	20:51:24	EC_03	HG	NS	51	10.0	378 283.7	5 870 765.3	378 297.4	5 870 768.4	14.0	-
11/08/2020	20:56:17	EC_03	HG	NS	52	10.1	378 283.7	5 870 765.3	378 266.0	5 870 764.7	17.8	-
11/08/2020	21:00:43	EC_03	HG	PSDB	53	10.0	378 283.7	5 870 765.3	378 290.9	5 870 748.4	18.3	-
11/08/2020	21:13:20	EC_03	HG	PSDC	54	9.8	378 283.7	5 870 765.3	378 290.7	5 870 757.1	10.7	-
11/08/2020	21:31:52	EC_19	Video	SOL	55	11.4	377 640.8	5 871 151.5	377 661.7	5 871 139.9	24.0	-
11/08/2020	21:32:28	EC_19	Still	200270_EC_19_001	56	-	377 640.8	5 871 151.5	377 645.3	5 871 150.8	4.6	-
11/08/2020	21:32:33	EC_19	Still	200270_EC_19_002	57	-	377 640.8	5 871 151.5	377 642.8	5 871 151.5	2.0	-
11/08/2020	21:32:41	EC_19	Still	200270_EC_19_003	58	-	377 640.8	5 871 151.5	377 640.3	5 871 154.3	2.8	-
11/08/2020	21:32:48	EC_19	Still	200270_EC_19_004	59	-	377 640.8	5 871 151.5	377 637.7	5 871 155.9	5.4	-
11/08/2020	21:32:55	EC_19	Still	200270_EC_19_005	60	-	377 640.8	5 871 151.5	377 635.4	5 871 157.7	8.2	-
11/08/2020	21:33:01	EC_19	Still	200270_EC_19_006	61	-	377 640.8	5 871 151.5	377 633.4	5 871 158.8	10.4	-
11/08/2020	21:33:12	EC_19	Still	200270_EC_19_007	62	-	377 640.8	5 871 151.5	377 629.8	5 871 161.0	14.5	-
11/08/2020	21:33:28	EC_19	Video	EOL	63	11.4	377 640.8	5 871 151.5	377 626.0	5 871 163.8	19.2	-
11/08/2020	21:41:51	EC_19	HG	FA/PDSA	64	11.5	377 640.8	5 871 151.5	377 645.1	5 871 138.5	13.7	-
11/08/2020	21:59:11	EC_19	HG	FB/PSDB	65	11.4	377 640.8	5 871 151.5	377 651.8	5 871 144.3	13.2	-
11/08/2020	22:13:28	EC_19	HG	FC/PSDC	66	11.4	377 640.8	5 871 151.5	377 652.5	5 871 148.2	12.2	-
11/08/2020	23:24:03	EC_25	Video	SOL	67	13.0	378 753.7	5 871 926.7	378 783.9	5 871 921.1	30.7	-
11/08/2020	23:24:24	EC_25	Still	200270_EC_25_001	68	-	378 753.7	5 871 926.7	378 776.0	5 871 921.7	22.9	-
11/08/2020	23:24:40	EC_25	Still	200270_EC_25_002	69	-	378 753.7	5 871 926.7	378 769.2	5 871 923.1	15.9	-
11/08/2020	23:24:55	EC_25	Still	200270_EC_25_003	70	-	378 753.7	5 871 926.7	378 761.9	5 871 924.6	8.5	-
11/08/2020	23:25:12	EC_25	Still	200270_EC_25_004	71	-	378 753.7	5 871 926.7	378 754.1	5 871 924.5	2.2	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
11/08/2020	23:25:30	EC_25	Still	200270_EC_25_005	72	-	378 753.7	5 871 926.7	378 745.6	5 871 923.6	8.7	-
11/08/2020	23:25:57	EC_25	Still	200270_EC_25_006	73	-	378 753.7	5 871 926.7	378 737.9	5 871 923.1	16.2	-
11/08/2020	23:26:13	EC_25	Video	EOL	74	13.0	378 753.7	5 871 926.7	378 736.6	5 871 920.0	18.4	-
11/08/2020	23:38:18	EC_25	HG	PSDA	75	13.0	378 753.7	5 871 926.7	378 764.4	5 871 922.8	11.5	-
11/08/2020	23:46:24	EC_25	HG	NS	76	13.0	378 753.7	5 871 926.7	378 754.2	5 871 918.3	8.4	-
11/08/2020	23:54:23	EC_25	HG	NS	77	13.0	378 753.7	5 871 926.7	378 763.5	5 871 925.3	10.0	-
12/08/2020	00:08:17	EC_25	HG	NS	78	13.0	378 753.7	5 871 926.7	378 771.4	5 871 925.0	17.8	-
12/08/2020	00:34:13	EC_04	Video	SOL	79	13.0	379 042.9	5 872 313.8	379 070.5	5 872 311.4	27.7	-
12/08/2020	00:34:33	EC_04	Still	200270_EC_04_001	80	-	379 042.9	5 872 313.8	379 058.9	5 872 311.4	16.1	-
12/08/2020	00:34:45	EC_04	Still	200270_EC_04_002	81	-	379 042.9	5 872 313.8	379 052.0	5 872 308.8	10.4	-
12/08/2020	00:34:57	EC_04	Still	200270_EC_04_003	82	-	379 042.9	5 872 313.8	379 045.3	5 872 306.2	8.0	-
12/08/2020	00:35:12	EC_04	Still	200270_EC_04_004	83	-	379 042.9	5 872 313.8	379 035.6	5 872 304.3	12.0	-
12/08/2020	00:35:27	EC_04	Still	200270_EC_04_005	84	-	379 042.9	5 872 313.8	379 026.1	5 872 304.5	19.3	-
12/08/2020	00:35:37	EC_04	Still	200270_EC_04_006	85	-	379 042.9	5 872 313.8	379 020.7	5 872 304.1	24.2	-
12/08/2020	00:35:52	EC_04	Video	EOL	86	13.0	379 042.9	5 872 313.8	379 014.6	5 872 302.9	30.3	-
12/08/2020	00:47:27	EC_04	HG	PSDA	87	13.0	379 042.9	5 872 313.8	379 053.6	5 872 309.6	11.5	-
12/08/2020	00:54:16	EC_04	HG	NS	88	13.0	379 042.9	5 872 313.8	379 056.9	5 872 317.0	14.3	-
12/08/2020	01:01:46	EC_04	HG	NS	89	13.0	379 042.9	5 872 313.8	379 041.4	5 872 317.4	3.8	-
12/08/2020	01:21:48	EC_24	Video	SOL	90	13.5	379 764.0	5 872 417.2	379 790.3	5 872 412.4	26.7	-
12/08/2020	01:21:59	EC_24	Still	200270_EC_24_001	91	-	379 764.0	5 872 417.2	379 783.6	5 872 413.3	20.0	-
12/08/2020	01:22:14	EC_24	Still	200270_EC_24_002	92	-	379 764.0	5 872 417.2	379 775.6	5 872 411.6	12.8	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	01:22:23	EC_24	Still	200270_EC_24_003	93	-	379 764.0	5 872 417.2	379 770.6	5 872 411.5	8.8	-
12/08/2020	01:22:33	EC_24	Still	200270_EC_24_004	94	-	379 764.0	5 872 417.2	379 764.9	5 872 411.1	6.1	-
12/08/2020	01:22:41	EC_24	Still	200270_EC_24_005	95	-	379 764.0	5 872 417.2	379 760.6	5 872 410.9	7.1	-
12/08/2020	01:22:53	EC_24	Still	200270_EC_24_006	96	-	379 764.0	5 872 417.2	379 754.6	5 872 411.6	11.0	-
12/08/2020	01:23:05	EC_24	Still	200270_EC_24_007	97	-	379 764.0	5 872 417.2	379 748.5	5 872 412.0	16.4	-
12/08/2020	01:23:18	EC_24	Still	200270_EC_24_008	98	-	379 764.0	5 872 417.2	379 742.7	5 872 411.9	22.0	-
12/08/2020	01:23:47	EC_24	Video	EOL	99	13.5	379 764.0	5 872 417.2	379 734.9	5 872 411.2	29.7	-
12/08/2020	01:31:18	EC_24	HG	PSDA	100	13.5	379 764.0	5 872 417.2	379 768.0	5 872 403.2	14.5	-
12/08/2020	01:43:00	EC_24	HG	PSDB	101	13.5	379 764.0	5 872 417.2	379 769.6	5 872 412.3	7.5	-
12/08/2020	01:50:07	EC_24	HG	NS	102	13.5	379 764.0	5 872 417.2	379 770.2	5 872 423.6	8.8	-
12/08/2020	02:18:13	EC_24	HG	PSDC	103	13.5	379 764.0	5 872 417.2	379 771.0	5 872 413.7	7.8	-
12/08/2020	02:45:52	EC_05	Video	SOL	104	15.7	380 734.6	5 873 797.0	380 755.2	5 873 777.7	28.2	-
12/08/2020	02:46:09	EC_05	Still	200270_EC_05_001	105	-	380 734.6	5 873 797.0	380 750.6	5 873 785.4	19.8	-
12/08/2020	02:46:23	EC_05	Still	200270_EC_05_002	106	-	380 734.6	5 873 797.0	380 747.5	5 873 793.6	13.3	-
12/08/2020	02:46:29	EC_05	Still	200270_EC_05_003	107	-	380 734.6	5 873 797.0	380 744.6	5 873 795.7	10.1	-
12/08/2020	02:46:38	EC_05	Still	200270_EC_05_004	108	-	380 734.6	5 873 797.0	380 741.8	5 873 797.8	7.2	-
12/08/2020	02:46:49	EC_05	Still	200270_EC_05_005	109	-	380 734.6	5 873 797.0	380 739.4	5 873 801.6	6.7	-
12/08/2020	02:47:02	EC_05	Still	200270_EC_05_006	110	-	380 734.6	5 873 797.0	380 739.4	5 873 806.8	11.0	-
12/08/2020	02:47:11	EC_05	Still	200270_EC_05_007	111	-	380 734.6	5 873 797.0	380 740.1	5 873 809.4	13.6	-
12/08/2020	02:47:21	EC_05	Still	200270_EC_05_008	112	-	380 734.6	5 873 797.0	380 741.7	5 873 812.0	16.7	-
12/08/2020	02:47:36	EC_05	Still	200270_EC_05_009	113	-	380 734.6	5 873 797.0	380 747.1	5 873 816.6	23.3	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	02:47:46	EC_05	Video	EOL	114	15.7	380 734.6	5 873 797.0	380 751.2	5 873 818.8	27.5	-
12/08/2020	02:57:27	EC_05	HG	FA/PSDA	115	15.7	380 734.6	5 873 797.0	380 741.4	5 873 793.5	7.6	-
12/08/2020	03:24:34	EC_18	Video	SOL	116	16.6	381 737.9	5 874 884.4	381 772.9	5 874 880.4	35.2	-
12/08/2020	03:24:55	EC_18	Still	200270_EC_18_001	117	-	381 737.9	5 874 884.4	381 760.9	5 874 882.9	23.0	-
12/08/2020	03:25:11	EC_18	Still	200270_EC_18_002	118	-	381 737.9	5 874 884.4	381 750.3	5 874 884.5	12.4	-
12/08/2020	03:25:17	EC_18	Still	200270_EC_18_003	119	-	381 737.9	5 874 884.4	381 745.5	5 874 884.8	7.5	-
12/08/2020	03:25:26	EC_18	Still	200270_EC_18_004	120	-	381 737.9	5 874 884.4	381 740.4	5 874 884.0	2.5	-
12/08/2020	03:25:34	EC_18	Still	200270_EC_18_005	121	-	381 737.9	5 874 884.4	381 735.9	5 874 885.0	2.1	-
12/08/2020	03:25:43	EC_18	Still	200270_EC_18_006	122	-	381 737.9	5 874 884.4	381 730.9	5 874 885.0	7.0	-
12/08/2020	03:25:51	EC_18	Still	200270_EC_18_007	123	-	381 737.9	5 874 884.4	381 726.5	5 874 885.2	11.5	-
12/08/2020	03:26:08	EC_18	Still	200270_EC_18_008	124	-	381 737.9	5 874 884.4	381 718.9	5 874 885.2	19.1	-
12/08/2020	03:26:21	EC_18	Still	200270_EC_18_009	125	-	381 737.9	5 874 884.4	381 714.3	5 874 884.4	23.6	-
12/08/2020	03:26:42	EC_18	Video	EOL	126	16.6	381 737.9	5 874 884.4	381 707.4	5 874 881.8	30.6	-
12/08/2020	03:37:11	EC_18	HG	PSDA	127	16.6	381 737.9	5 874 884.4	381 736.1	5 874 877.2	7.4	-
12/08/2020	03:44:52	EC_18	HG	NS	128	16.6	381 737.9	5 874 884.4	381 738.2	5 874 876.6	7.8	-
12/08/2020	03:53:40	EC_18	HG	NS	130	16.6	381 737.9	5 874 884.4	381 744.1	5 874 890.9	9.0	-
12/08/2020	04:17:47	EC_13	Video	SOL	131	17.6	381 442.7	5 875 396.8	381 471.7	5 875 397.7	29.1	-
12/08/2020	04:18:04	EC_13	Still	200270_EC_13_001	132	-	381 442.7	5 875 396.8	381 459.4	5 875 398.1	16.8	-
12/08/2020	04:18:12	EC_13	Still	200270_EC_13_002	133	-	381 442.7	5 875 396.8	381 454.1	5 875 398.1	11.5	-
12/08/2020	04:18:18	EC_13	Still	200270_EC_13_003	134	-	381 442.7	5 875 396.8	381 449.7	5 875 398.1	7.1	-
12/08/2020	04:18:25	EC_13	Still	200270_EC_13_004	135	-	381 442.7	5 875 396.8	381 444.9	5 875 398.4	2.8	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	04:18:33	EC_13	Still	200270_EC_13_005	136	-	381 442.7	5 875 396.8	381 440.5	5 875 398.0	2.5	-
12/08/2020	04:18:42	EC_13	Still	200270_EC_13_006	137	-	381 442.7	5 875 396.8	381 435.8	5 875 399.3	7.3	-
12/08/2020	04:18:53	EC_13	Still	200270_EC_13_007	138	-	381 442.7	5 875 396.8	381 429.8	5 875 400.0	13.3	-
12/08/2020	04:19:06	EC_13	Still	200270_EC_13_008	139	-	381 442.7	5 875 396.8	381 422.7	5 875 401.4	20.5	-
12/08/2020	04:19:14	EC_13	Still	200270_EC_13_009	140	-	381 442.7	5 875 396.8	381 418.4	5 875 401.2	24.7	-
12/08/2020	04:19:23	EC_13	Video	EOL	141	17.6	381 442.7	5 875 396.8	381 413.2	5 875 401.8	29.8	-
12/08/2020	04:37:44	EC_17	Video	SOL	142	19.1	381 287.8	5 875 866.8	381 322.4	5 875 847.2	39.8	-
12/08/2020	04:38:10	EC_17	Still	200270_EC_17_001	143	-	381 287.8	5 875 866.8	381 300.8	5 875 850.3	21.0	-
12/08/2020	04:38:25	EC_17	Still	200270_EC_17_002	144	-	381 287.8	5 875 866.8	381 290.5	5 875 857.9	9.3	-
12/08/2020	04:38:33	EC_17	Still	200270_EC_17_003	145	-	381 287.8	5 875 866.8	381 285.9	5 875 862.4	4.8	-
12/08/2020	04:38:42	EC_17	Still	200270_EC_17_004	146	-	381 287.8	5 875 866.8	381 281.9	5 875 868.2	6.1	-
12/08/2020	04:38:54	EC_17	Still	200270_EC_17_005	147	-	381 287.8	5 875 866.8	381 278.1	5 875 877.7	14.6	-
12/08/2020	04:39:04	EC_17	Still	200270_EC_17_006	148	-	381 287.8	5 875 866.8	381 275.2	5 875 884.4	21.7	-
12/08/2020	04:39:12	EC_17	Still	200270_EC_17_007	149	-	381 287.8	5 875 866.8	381 272.1	5 875 889.7	27.8	-
12/08/2020	04:39:25	EC_17	Video	EOL	150	19.1	381 287.8	5 875 866.8	381 266.4	5 875 895.7	36.0	-
12/08/2020	04:50:36	EC_17	HG	FA/PSDA	151	19.1	381 287.8	5 875 866.8	381 267.3	5 875 855.3	23.6	-
12/08/2020	05:25:17	EC_06	Video	SOL	152	19.7	382 464.5	5 876 008.3	382 440.8	5 876 011.3	24.0	-
12/08/2020	05:26:02	EC_06	Still	200270_EC_06_001	154	-	382 464.5	5 876 008.3	382 451.4	5 876 009.9	13.3	-
12/08/2020	05:26:28	EC_06	Still	200270_EC_06_002	155	-	382 464.5	5 876 008.3	382 461.0	5 876 008.0	3.5	-
12/08/2020	05:26:37	EC_06	Still	200270_EC_06_003	156	-	382 464.5	5 876 008.3	382 465.0	5 876 007.4	1.0	-
12/08/2020	05:26:53	EC_06	Still	200270_EC_06_004	157	-	382 464.5	5 876 008.3	382 472.9	5 876 007.6	8.4	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	05:27:04	EC_06	Still	200270_EC_06_005	158	-	382 464.5	5 876 008.3	382 479.0	5 876 006.5	14.5	-
12/08/2020	05:27:11	EC_06	Still	200270_EC_06_006	159	-	382 464.5	5 876 008.3	382 482.6	5 876 006.5	18.1	-
12/08/2020	05:27:22	EC_06	Still	200270_EC_06_007	160	-	382 464.5	5 876 008.3	382 488.7	5 876 006.1	24.2	-
12/08/2020	05:27:39	EC_06	Video	EOL	161	19.7	382 464.5	5 876 008.3	382 496.4	5 876 004.7	32.0	-
12/08/2020	05:49:43	EC_07	Video	SOL	162	19.1	382 237.7	5 876 411.4	382 215.1	5 876 420.1	24.2	-
12/08/2020	05:49:56	EC_07	Still	200270_EC_07_001	163	-	382 237.7	5 876 411.4	382 219.7	5 876 418.6	19.4	-
12/08/2020	05:50:04	EC_07	Still	200270_EC_07_002	164	-	382 237.7	5 876 411.4	382 223.2	5 876 417.2	15.6	-
12/08/2020	05:50:18	EC_07	Still	200270_EC_07_003	165	-	382 237.7	5 876 411.4	382 228.0	5 876 415.6	10.6	-
12/08/2020	05:50:23	EC_07	Still	200270_EC_07_004	166	-	382 237.7	5 876 411.4	382 229.5	5 876 414.9	9.0	-
12/08/2020	05:50:32	EC_07	Still	200270_EC_07_005	167	-	382 237.7	5 876 411.4	382 234.0	5 876 412.6	3.9	-
12/08/2020	05:50:42	EC_07	Still	200270_EC_07_006	168	-	382 237.7	5 876 411.4	382 239.3	5 876 411.0	1.6	-
12/08/2020	05:50:51	EC_07	Still	200270_EC_07_007	169	-	382 237.7	5 876 411.4	382 244.1	5 876 409.4	6.6	-
12/08/2020	05:51:06	EC_07	Still	200270_EC_07_008	170	-	382 237.7	5 876 411.4	382 253.4	5 876 404.4	17.2	-
12/08/2020	05:51:11	EC_07	Still	200270_EC_07_009	171	-	382 237.7	5 876 411.4	382 256.3	5 876 403.0	20.4	-
12/08/2020	05:51:21	EC_07	Still	200270_EC_07_010	172	-	382 237.7	5 876 411.4	382 261.0	5 876 400.4	25.8	-
12/08/2020	05:51:39	EC_07	Video	EOL	173	19.1	382 237.7	5 876 411.4	382 269.4	5 876 397.2	34.8	-
12/08/2020	05:58:25	EC_07	HG	NS	174	19.1	382 237.7	5 876 411.4	382 228.2	5 876 433.3	23.8	-
12/08/2020	06:05:17	EC_07	HG	PSDA	175	19.5	382 237.7	5 876 411.4	382 233.7	5 876 410.7	4.1	-
12/08/2020	06:10:39	EC_07	HG	PSDB	176	19.5	382 237.7	5 876 411.4	382 240.9	5 876 414.5	4.4	-
12/08/2020	06:21:37	EC_07	HG	PSDC/FA	177	19.4	382 237.7	5 876 411.4	382 236.9	5 876 395.1	16.4	-
12/08/2020	06:35:38	EC_07	HG	FB	178	19.6	382 237.7	5 876 411.4	382 237.1	5 876 397.6	13.9	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	07:26:24	EC_07	HG	FC	179	19.9	382 237.7	5 876 411.4	382 228.5	5 876 394.5	19.4	-
12/08/2020	07:32:56	EC_07	HG	NS	180	19.5	382 237.7	5 876 411.4	382 231.2	5 876 401.3	12.0	-
12/08/2020	08:05:20	EC_08	Video	SOL	181	17.3	382 390.2	5 877 158.9	382 373.5	5 877 156.6	16.9	-
12/08/2020	08:05:35	EC_08	Still	200270_EC_08_001	182	-	382 390.2	5 877 158.9	382382.3	5 877 158.1	8.0	-
12/08/2020	08:05:42	EC_08	Still	200270_EC_08_002	183	-	382 390.2	5 877 158.9	382 385.6	5 877 159.0	4.7	-
12/08/2020	08:05:53	EC_08	Still	200270_EC_08_003	184	-	382 390.2	5 877 158.9	382 390.0	5 877 160.4	1.5	-
12/08/2020	08:05:58	EC_08	Still	200270_EC_08_004	185	-	382 390.2	5 877 158.9	382 391.9	5 877 161.0	2.6	-
12/08/2020	08:06:10	EC_08	Still	200270_EC_08_005	186	-	382 390.2	5 877 158.9	382 398.7	5 877 162.1	9.0	-
12/08/2020	08:06:21	EC_08	Still	200270_EC_08_006	187	-	382 390.2	5 877 158.9	382 405.6	5 877 162.3	15.7	-
12/08/2020	08:06:29	EC_08	Still	200270_EC_08_007	188	-	382 390.2	5 877 158.9	382 409.8	5 877 162.6	19.9	-
12/08/2020	08:06:39	EC_08	Still	200270_EC_08_008	189	-	382 390.2	5 877 158.9	382 414.5	5 877 162.9	24.5	-
12/08/2020	08:06:53	EC_08	Video	EOL	190	17.3	382 390.2	5 877 158.9	382 419.7	5 877 163.2	29.8	-
12/08/2020	08:14:16	EC_08	HG	FA/PSDA	191	17.7	382 390.2	5 877 158.9	382374.1	5 877 164.5	17.1	-
12/08/2020	10:27:05	EC_02	Video	SOL	192	9.5	376 639.3	5 869 674.2	376 649.2	5 869 674.6	9.9	-
12/08/2020	10:27:14	EC_02	Still	200270_EC_02_001	193	-	376 639.3	5 869 674.2	376 643.3	5 869 676.9	4.8	-
12/08/2020	10:27:19	EC_02	Still	200270_EC_02_002	194	-	376 639.3	5 869 674.2	376 640.4	5 869 678.5	4.4	-
12/08/2020	10:27:23	EC_02	Still	200270_EC_02_003	195	-	376 639.3	5 869 674.2	376 638.3	5 869 680.3	6.2	-
12/08/2020	10:27:27	EC_02	Still	200270_EC_02_004	196	-	376 639.3	5 869 674.2	376 634.8	5 869 681.6	8.7	-
12/08/2020	10:27:31	EC_02	Still	200270_EC_02_005	197	-	376 639.3	5 869 674.2	376 633.0	5 869 682.5	10.4	-
12/08/2020	10:27:36	EC_02	Still	200270_EC_02_006	198	-	376 639.3	5 869 674.2	376 630.1	5 869 684.2	13.6	-
12/08/2020	10:27:40	EC_02	Still	200270_EC_02_007	199	-	376 639.3	5 869 674.2	376 627.4	5 869 684.6	15.8	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	10:27:44	EC_02	Still	200270_EC_02_008	200	-	376 639.3	5 869 674.2	376 624.6	5 869 685.6	18.7	-
12/08/2020	10:27:49	EC_02	Still	200270_EC_02_009	201	-	376 639.3	5 869 674.2	376 622.9	5 869 687.6	21.2	-
12/08/2020	10:27:59	EC_02	Still	200270_EC_02_010	203	-	376 639.3	5 869 674.2	376 618.0	5 869 690.3	26.7	-
12/08/2020	10:28:11	EC_02	Video	EOL	204	9.5	376 639.3	5 869 674.2	376 612.9	5 869 693.2	32.6	-
12/08/2020	11:38:31	EC_15	Video	SOL	205	8.1	375 756.3	5 869 290.6	375 779.5	5 869 281.5	24.9	-
12/08/2020	11:38:56	EC_15	Still	200270_EC_15_001	206	-	375 756.3	5 869 290.6	375 762.3	5 869 286.7	7.1	-
12/08/2020	11:39:04	EC_15	Still	200270_EC_15_002	207	-	375 756.3	5 869 290.6	375 757.3	5 869 287.3	3.5	-
12/08/2020	11:39:14	EC_15	Still	200270_EC_15_003	208	-	375 756.3	5 869 290.6	375 752.0	5 869 287.9	5.1	-
12/08/2020	11:39:22	EC_15	Still	200270_EC_15_004	209	-	375 756.3	5 869 290.6	375 747.9	5 869 288.7	8.7	-
12/08/2020	11:39:27	EC_15	Still	200270_EC_15_005	210	-	375 756.3	5 869 290.6	375 744.7	5 869 289.2	11.8	-
12/08/2020	11:39:34	EC_15	Still	200270_EC_15_006	211	-	375 756.3	5 869 290.6	375 740.4	5 869 291.3	16.0	-
12/08/2020	11:39:48	EC_15	Still	200270_EC_15_007	212	-	375 756.3	5 869 290.6	375 732.4	5 869 293.9	24.2	-
12/08/2020	11:39:53	EC_15	Still	200270_EC_15_008	213	-	375 756.3	5 869 290.6	375 729.9	5 869 294.9	26.8	-
12/08/2020	11:40:01	EC_15	Video	EOL	214	8.1	375 756.3	5 869 290.6	375 725.7	5 869 295.9	31.1	-
12/08/2020	11:46:20	EC_15	HG	NS	215	8.1	375 756.3	5 869 290.6	375 754.8	5 869 281.0	9.8	-
12/08/2020	11:50:47	EC_15	HG	FA/PSDA	216	8.1	375 756.3	5 869 290.6	375 757.7	5 869 284.6	6.2	-
12/08/2020	11:59:28	EC_15	HG	NS	217	8.1	375 756.3	5 869 290.6	375 759.2	5 869 278.9	12.1	-
12/08/2020	13:26:54	EC_15	SG	PC	218	7.5	375 756.3	5 869 290.6	375 743.6	5 869 292.7	12.9	-
12/08/2020	14:03:26	EC_26	Video	SOL	219	2.8	-	-	375 233.3	5 868 469.0	-	-
12/08/2020	14:04:20	EC_26	Still	200270_EC_26_001	220	-	-	-	375 248.6	5 868 493.4	-	-
12/08/2020	14:04:23	EC_26	Still	200270_EC_26_002	221	-	-	-	375 249.3	5 868 495.4	-	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	14:04:33	EC_26	Still	200270_EC_26_003	222	-	-	-	375 251.8	5 868 502.6	-	-
12/08/2020	14:04:43	EC_26	Still	200270_EC_26_004	223	-	-	-	375 253.8	5 868 511.1	-	-
12/08/2020	14:04:55	EC_26	Still	200270_EC_26_005	224	-	-	-	375 253.9	5 868 520.6	-	-
12/08/2020	14:05:08	EC_26	Still	200270_EC_26_006	225	-	-	-	375 253.1	5 868 531.6	-	-
12/08/2020	14:05:17	EC_26	Still	200270_EC_26_007	226	-	-	-	375 252.6	5 868 539.7	-	-
12/08/2020	14:05:26	EC_26	Still	200270_EC_26_008	227	-	-	-	375 251.4	5 868 547.2	-	-
12/08/2020	14:05:41	EC_26	Still	200270_EC_26_009	228	-	-	-	375 248.6	5 868 559.2	-	-
12/08/2020	14:05:49	EC_26	Still	200270_EC_26_010	229	-	-	-	375 246.9	5 868 565.6	-	-
12/08/2020	14:05:56	EC_26	Still	200270_EC_26_011	230	-	-	-	375 246.5	5 868 571.4	-	-
12/08/2020	14:06:05	EC_26	Still	200270_EC_26_012	231	-	-	-	375 246.4	5 868 578.8	-	-
12/08/2020	14:06:16	EC_26	Still	200270_EC_26_013	232	-	-	-	375 243.8	5 868 588.3	-	-
12/08/2020	14:06:25	EC_26	Still	200270_EC_26_014	233	-	-	-	375 243.1	5 868 597.0	-	-
12/08/2020	14:06:45	EC_26	Still	200270_EC_26_015	234	-	-	-	375 244.7	5 868 617.2	-	-
12/08/2020	14:06:59	EC_26	Still	200270_EC_26_016	235	-	-	-	375 248.4	5 868 632.5	-	-
12/08/2020	14:07:10	EC_26	Still	200270_EC_26_017	236	-	-	-	375 249.3	5 868 644.1	-	-
12/08/2020	14:07:30	EC_26	Still	200270_EC_26_018	237	-	-	-	375 246.7	5 868 663.1	-	-
12/08/2020	14:07:44	EC_26	Video	EOL	238	5.5	-	-	375 245.1	5 868 675.1	-	-
12/08/2020	14:48:17	EC_04	SG	NS	239	11.2	379 042.9	5 872 313.8	379 061.4	5 872 316.4	18.7	-
12/08/2020	14:57:28	EC_04	SG	PC	240	12.3	379 042.9	5 872 313.8	379 048.7	5 872 298.6	16.3	-
12/08/2020	15:29:34	EC_05	SG	NS	241	15.6	380 734.6	5 873 797.0	380 742.0	5 873 813.7	18.3	Shipek grab location

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
												relocated from EC_07 to EC_05
12/08/2020	15:36:22	EC_05	SG	PC	242	15.6	380 734.6	5 873 797.0	380 731.4	5 873 796.9	3.1	-
12/08/2020	18:12:16	EC_09	Video	SOL	243	15.8	382 642.0	5 877 808.2	382 617.8	5 877 813.4	24.7	-
12/08/2020	18:12:31	EC_09	Still	200270_EC_09_001	244	-	382 642.0	5 877 808.2	382 626.8	5 877 818.0	18.1	-
12/08/2020	18:12:37	EC_09	Still	200270_EC_09_002	245	-	382 642.0	5 877 808.2	382 629.6	5 877 817.3	15.4	-
12/08/2020	18:12:42	EC_09	Still	200270_EC_09_003	246	-	382 642.0	5 877 808.2	382 631.9	5 877 816.5	13.1	-
12/08/2020	18:12:50	EC_09	Still	200270_EC_09_004	247	-	382 642.0	5 877 808.2	382 634.3	5 877 816.2	11.1	-
12/08/2020	18:12:55	EC_09	Still	200270_EC_09_005	248	-	382 642.0	5 877 808.2	382 635.0	5 877 815.7	10.3	-
12/08/2020	18:13:31	EC_09	Video	EOL	249	15.8	382 642.0	5 877 808.2	382 628.7	5 877 832.2	27.5	-
12/08/2020	18:21:53	EC_09	HG	FA/PSDA	250	16.9	382 642.0	5 877 808.2	382 648.5	5 877 828.2	21.1	-
12/08/2020	18:51:01	EC_09	HG	FB/PSDB	251	16.9	382 642.0	5 877 808.2	382 639.9	5 877 830.3	22.2	-
12/08/2020	19:33:53	EC_09	HG	FC/PSDC	252	16.9	382 642.0	5 877 808.2	382 639.9	5 877 823.9	15.8	-
12/08/2020	19:59:26	EC_16	Video	SOL	253	19.2	383 039.3	5 879 023.8	383 035.3	5 879 019.9	5.6	-
12/08/2020	19:59:34	EC_16	Still	200270_EC_16_001	254	-	383 039.3	5 879 023.8	383 039.4	5 879 020.2	3.6	-
12/08/2020	19:59:40	EC_16	Still	200270_EC_16_002	255	-	383 039.3	5 879 023.8	383 041.9	5 879 020.7	4.0	-
12/08/2020	19:59:44	EC_16	Still	200270_EC_16_003	256	-	383 039.3	5 879 023.8	383 043.4	5 879 021.1	4.9	-
12/08/2020	19:59:50	EC_16	Still	200270_EC_16_004	257	-	383 039.3	5 879 023.8	383 045.4	5 879 021.6	6.5	-
12/08/2020	19:59:57	EC_16	Still	200270_EC_16_005	258	-	383 039.3	5 879 023.8	383 047.2	5 879 022.1	8.1	-
12/08/2020	20:00:03	EC_16	Still	200270_EC_16_006	259	-	383 039.3	5 879 023.8	383 048.6	5 879 022.5	9.4	-
12/08/2020	20:00:11	EC_16	Still	200270_EC_16_007	260	-	383 039.3	5 879 023.8	383 051.0	5 879 022.4	11.8	-
12/08/2020	20:00:16	EC_16	Still	200270_EC_16_008	261	-	383 039.3	5 879 023.8	383 053.2	5 879 022.0	14.1	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	20:00:23	EC_16	Video	EOL	262	19.5	383 039.3	5 879 023.8	383 056.1	5 879 021.3	17.0	-
12/08/2020	20:08:31	EC_16	HG	FA/PSDA	263	19.5	383 039.3	5 879 023.8	383 032.4	5 879 027.5	7.8	-
12/08/2020	20:18:39	EC_16	HG	NS	264	19.4	383 039.3	5 879 023.8	383 041.0	5 879 026.2	2.9	-
12/08/2020	20:24:50	EC_16	HG	NS	265	19.4	383 039.3	5 879 023.8	383 026.0	5 879 033.6	16.5	-
12/08/2020	20:48:38	EC_10	Video	SOL	266	20.2	383 290.2	5 879 858.9	383 244.1	5 879 866.8	46.8	-
12/08/2020	20:49:27	EC_10	Still	200270_EC_10_001	267	-	383 290.2	5 879 858.9	383 269.6	5 879 870.0	23.4	-
12/08/2020	20:49:33	EC_10	Still	200270_EC_10_002	268	-	383 290.2	5 879 858.9	383 273.1	5 879 868.2	19.5	-
12/08/2020	20:49:48	EC_10	Still	200270_EC_10_003	269	-	383 290.2	5 879 858.9	383 282.2	5 879 862.7	8.9	-
12/08/2020	20:49:55	EC_10	Still	200270_EC_10_004	270	-	383 290.2	5 879 858.9	383 285.6	5 879 860.2	4.8	-
12/08/2020	20:50:02	EC_10	Still	200270_EC_10_005	271	-	383 290.2	5 879 858.9	383 288.6	5 879 858.2	1.8	-
12/08/2020	20:50:09	EC_10	Still	200270_EC_10_006	272	-	383 290.2	5 879 858.9	383 291.3	5 879 856.1	3.0	-
12/08/2020	20:50:18	EC_10	Still	200270_EC_10_007	273	-	383 290.2	5 879 858.9	383 295.8	5 879 854.2	7.3	-
12/08/2020	20:50:28	EC_10	Still	200270_EC_10_008	274	-	383 290.2	5 879 858.9	383 300.1	5 879 852.1	12.0	-
12/08/2020	20:50:39	EC_10	Still	200270_EC_10_009	275	-	383 290.2	5 879 858.9	383 304.8	5 879 850.6	16.8	-
12/08/2020	20:50:51	EC_10	Still	200270_EC_10_010	276	-	383 290.2	5 879 858.9	383 308.7	5 879 849.2	20.9	-
12/08/2020	20:51:08	EC_10	Video	EOL	277	20.2	383 290.2	5 879 858.9	383 312.4	5 879 847.4	25.0	-
12/08/2020	20:57:55	EC_10	HG	NS	278	20.2	383 290.2	5 879 858.9	383 284.2	5 879 876.6	18.6	-
12/08/2020	21:05:20	EC_10	HG	FA/PSDA	279	20.2	383 290.2	5 879 858.9	383 284.5	5 879 879.4	21.2	-
12/08/2020	21:36:30	EC_12	Video	SOL	280	19.7	383 617.8	5 879 951.0	383 599.1	5 879 948.6	18.8	-
12/08/2020	21:36:51	EC_12	Still	200270_EC_12_001	281	-	383 617.8	5 879 951.0	383 613.2	5 879 949.5	4.9	-
12/08/2020	21:36:55	EC_12	Still	200270_EC_12_002	282	-	383 617.8	5 879 951.0	383 615.6	5 879 949.3	2.8	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	21:37:00	EC_12	Still	200270_EC_12_003	283	-	383 617.8	5 879 951.0	383 618.6	5 879 949.6	1.6	-
12/08/2020	21:37:03	EC_12	Still	200270_EC_12_004	284	-	383 617.8	5 879 951.0	383 620.2	5 879 950.0	2.6	-
12/08/2020	21:37:09	EC_12	Still	200270_EC_12_005	285	-	383 617.8	5 879 951.0	383 624.1	5 879 950.4	6.3	-
12/08/2020	21:37:13	EC_12	Still	200270_EC_12_006	286	-	383 617.8	5 879 951.0	383 626.7	5 879 950.6	8.9	-
12/08/2020	21:37:18	EC_12	Still	200270_EC_12_007	287	-	383 617.8	5 879 951.0	383 629.4	5 879 951.3	11.7	-
12/08/2020	21:37:23	EC_12	Still	200270_EC_12_008	288	-	383 617.8	5 879 951.0	383 632.1	5 879 951.7	14.3	-
12/08/2020	21:37:28	EC_12	Still	200270_EC_12_009	289	-	383 617.8	5 879 951.0	383 634.8	5 879 951.9	17.0	-
12/08/2020	21:37:37	EC_12	Still	200270_EC_12_010	290	-	383 617.8	5 879 951.0	383 638.9	5 879 952.4	21.1	-
12/08/2020	21:37:41	EC_12	Still	200270_EC_12_011	291	-	383 617.8	5 879 951.0	383 640.5	5 879 952.8	22.8	-
12/08/2020	21:37:51	EC_12	Video	EOL	292	19.7	383 617.8	5 879 951.0	383 644.1	5 879 953.6	26.4	-
12/08/2020	21:43:15	EC_12	HG	NS	293	19.5	383 617.8	5 879 951.0	383 618.0	5 879 960.3	9.3	-
12/08/2020	21:47:10	EC_12	HG	FA/PSDA	294	19.5	383 617.8	5 879 951.0	383 611.4	5 879 937.8	14.7	-
12/08/2020	21:53:43	EC_12	HG	NS	295	19.5	383 617.8	5 879 951.0	383 622.1	5 879 961.1	11.0	-
12/08/2020	22:36:45	EC_23	Video	SOL	296	19.9	384 081.8	5 881 917.6	384 078.5	5 881 909.2	9.0	-
12/08/2020	22:37:02	EC_23	Still	200270_EC_23_001	297	-	384 081.8	5 881 917.6	384 088.4	5 881 917.8	6.5	-
12/08/2020	22:37:11	EC_23	Still	200270_EC_23_002	298	-	384 081.8	5 881 917.6	384 093.5	5 881 923.6	13.1	-
12/08/2020	22:37:16	EC_23	Still	200270_EC_23_003	299	-	384 081.8	5 881 917.6	384 095.6	5 881 927.2	16.8	-
12/08/2020	22:37:22	EC_23	Still	200270_EC_23_004	300	-	384 081.8	5 881 917.6	384 097.7	5 881 931.0	20.8	-
12/08/2020	22:37:26	EC_23	Still	200270_EC_23_005	301	-	384 081.8	5 881 917.6	384 098.9	5 881 932.3	22.5	-
12/08/2020	22:37:30	EC_23	Still	200270_EC_23_006	302	-	384 081.8	5 881 917.6	384 099.9	5 881 934.1	24.5	-
12/08/2020	22:37:46	EC_23	Video	EOL	303	19.9	384 081.8	5 881 917.6	384 104.8	5 881 939.3	31.6	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/08/2020	23:55:17	EC_23	HG	FA/PSDA	304	20.0	384 081.8	5 881 917.6	384 088.9	5 881 917.1	7.1	-
13/08/2020	00:14:15	EC_23	HG	FB/PSDB	305	20.0	384 081.8	5 881 917.6	384 082.7	5 881 919.0	1.6	-
13/08/2020	00:30:33	EC_23	HG	FC/PSDC	306	20.0	384 081.8	5 881 917.6	384 078.8	5 881 918.0	3.0	-
13/08/2020	01:06:39	EC_11	Video	SOL	307	22.0	384 200.7	5 882 432.2	384 209.5	5 882 423.1	12.7	-
13/08/2020	01:06:44	EC_11	Still	200270_EC_11_001	308	-	384 200.7	5 882 432.2	384 207.7	5 882 423.8	11.0	-
13/08/2020	01:06:55	EC_11	Still	200270_EC_11_002	309	-	384 200.7	5 882 432.2	384 202.6	5 882 426.3	6.2	-
13/08/2020	01:07:01	EC_11	Still	200270_EC_11_003	310	-	384 200.7	5 882 432.2	384 199.5	5 882 428.3	4.1	-
13/08/2020	01:07:15	EC_11	Still	200270_EC_11_004	311	-	384 200.7	5 882 432.2	384 190.7	5 882 432.6	10.0	-
13/08/2020	01:07:26	EC_11	Still	200270_EC_11_005	312	-	384 200.7	5 882 432.2	384 184.2	5 882 435.5	16.8	-
13/08/2020	01:07:36	EC_11	Still	200270_EC_11_006	313	-	384 200.7	5 882 432.2	384 179.1	5 882 437.4	22.1	-
13/08/2020	01:07:52	EC_11	Video	EOL	314	22.0	384 200.7	5 882 432.2	384 172.0	5 882 441.6	30.1	-
13/08/2020	01:15:57	EC_11	HG	FA/PSDA	315	22.0	384 200.7	5 882 432.2	384 200.9	5 882 429.5	2.7	-
13/08/2020	01:23:45	EC_11	HG	NS	316	22.0	384 200.7	5 882 432.2	384 195.0	5 882 415.0	18.2	-
13/08/2020	01:28:03	EC_11	HG	NS	317	22.0	384 200.7	5 882 432.2	384 222.0	5 882 426.3	22.2	-
13/08/2020	02:00:57	SS_01	Video	SOL	318	23.0	383 335.3	5 883 478.9	383 362.5	5 883 468.8	29.0	-
13/08/2020	02:01:15	SS_01	Still	200270_SS_01_001	319	-	383 335.3	5 883 478.9	383 353.1	5 883 473.2	18.7	-
13/08/2020	02:01:26	SS_01	Still	200270_SS_01_002	320	-	383 335.3	5 883 478.9	383 348.4	5 883 476.7	13.3	-
13/08/2020	02:01:35	SS_01	Still	200270_SS_01_003	321	-	383 335.3	5 883 478.9	383 344.2	5 883 480.1	9.0	-
13/08/2020	02:01:48	SS_01	Still	200270_SS_01_004	322	-	383 335.3	5 883 478.9	383 338.8	5 883 485.9	7.8	-
13/08/2020	02:02:06	SS_01	Still	200270_SS_01_005	323	-	383 335.3	5 883 478.9	383 330.0	5 883 492.8	14.8	-
13/08/2020	02:02:14	SS_01	Still	200270_SS_01_006	324	-	383 335.3	5 883 478.9	383 327.3	5 883 495.0	17.9	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
13/08/2020	02:02:24	SS_01	Still	200270_SS_01_007	325	-	383 335.3	5 883 478.9	383 324.4	5 883 498.4	22.3	-
13/08/2020	02:02:45	SS_01	Video	EOL	326	23.0	383 335.3	5 883 478.9	383 318.6	5 883 504.8	30.7	-
13/08/2020	02:10:07	SS_01	HG	FA/PSDA	327	23.0	383 335.3	5 883 478.9	383 344.7	5 883 480.8	9.6	-
13/08/2020	02:38:23	SS_02	Video	SOL	328	18.0	381 333.6	5 884 416.0	381 343.9	5 884 387.1	30.7	-
13/08/2020	02:38:49	SS_02	Still	200270_SS_02_001	329	-	381 333.6	5 884 416.0	381 330.1	5 884 399.6	16.8	-
13/08/2020	02:39:04	SS_02	Still	200270_SS_02_002	330	-	381 333.6	5 884 416.0	381 338.4	5 884 411.0	7.0	-
13/08/2020	02:39:14	SS_02	Still	200270_SS_02_003	331	-	381 333.6	5 884 416.0	381 342.3	5 884 418.9	9.1	-
13/08/2020	02:39:25	SS_02	Still	200270_SS_02_004	332	-	381 333.6	5 884 416.0	381 344.0	5 884 428.4	16.2	-
13/08/2020	02:39:33	SS_02	Still	200270_SS_02_005	333	-	381 333.6	5 884 416.0	381 347.0	5 884 435.0	23.2	-
13/08/2020	02:39:46	SS_02	Video	EOL	334	18.0	381 333.6	5 884 416.0	381 354.7	5 884 442.8	34.0	-
13/08/2020	02:52:17	SS_02	HG	FA/PSDA	335	18.0	381 333.6	5 884 416.0	381 353.3	5 884 415.8	19.7	-
13/08/2020	03:30:21	SS_03	Video	SOL	336	18.2	380 912.9	5 885 511.5	380 932.9	5 885 483.6	34.3	-
13/08/2020	03:30:40	SS_03	Still	200270_SS_03_001	337	-	380 912.9	5 885 511.5	380 925.7	5 885 495.0	20.9	-
13/08/2020	03:30:49	SS_03	Still	200270_SS_03_002	338	-	380 912.9	5 885 511.5	380 922.2	5 885 499.6	15.1	-
13/08/2020	03:30:58	SS_03	Still	200270_SS_03_003	339	-	380 912.9	5 885 511.5	380 919.2	5 885 504.3	9.5	-
13/08/2020	03:31:07	SS_03	Still	200270_SS_03_004	340	-	380 912.9	5 885 511.5	380 914.8	5 885 507.5	4.5	-
13/08/2020	03:31:23	SS_03	Still	200270_SS_03_005	341	-	380 912.9	5 885 511.5	380 907.6	5 885 513.6	5.7	-
13/08/2020	03:31:34	SS_03	Still	200270_SS_03_006	342	-	380 912.9	5 885 511.5	380 902.4	5 885 518.6	12.8	-
13/08/2020	03:31:48	SS_03	Still	200270_SS_03_007	343	-	380 912.9	5 885 511.5	380 898.4	5 885 524.3	19.3	-
13/08/2020	03:32:08	SS_03	Still	200270_SS_03_008	344	-	380 912.9	5 885 511.5	380 895.8	5 885 529.4	24.8	-
13/08/2020	03:32:19	SS_03	Video	EOL	345	18.2	380 912.9	5 885 511.5	380 894.8	5 885 530.6	26.3	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
13/08/2020	03:39:05	SS_03	HG	FA/PSDA	346	18.2	380 912.9	5 885 511.5	380 914.0	5 885 494.2	17.4	-
13/08/2020	04:13:34	SS_04	Video	SOL	347	17.0	381 597.3	5 886 556.1	381 611.3	5 886 520.5	38.3	-
13/08/2020	04:13:59	SS_04	Still	200270_SS_04_001	348	-	381 597.3	5 886 556.1	381 608.0	5 886 539.2	20.0	-
13/08/2020	04:14:11	SS_04	Still	200270_SS_04_002	349	-	381 597.3	5 886 556.1	381 605.5	5 886 548.4	11.2	-
13/08/2020	04:14:18	SS_04	Still	200270_SS_04_003	350	-	381 597.3	5 886 556.1	381 603.4	5 886 553.7	6.6	-
13/08/2020	04:14:29	SS_04	Still	200270_SS_04_004	351	-	381 597.3	5 886 556.1	381 599.5	5 886 561.4	5.7	-
13/08/2020	04:14:45	SS_04	Still	200270_SS_04_005	352	-	381 597.3	5 886 556.1	381 593.7	5 886 571.3	15.6	-
13/08/2020	04:14:55	SS_04	Still	200270_SS_04_006	353	-	381 597.3	5 886 556.1	381 590.8	5 886 576.5	21.4	-
13/08/2020	04:15:15	SS_04	Video	EOL	354	17.0	381 597.3	5 886 556.1	381 587.2	5 886 584.6	30.2	-
13/08/2020	05:27:53	SS_05	Video	SOL	356	17.3	383 166.3	5 886 689.7	383 164.6	5 886 657.5	32.3	-
13/08/2020	05:28:06	SS_05	Still	200270_SS_05_001	357	-	383 166.3	5 886 689.7	383 168.6	5 886 665.0	24.9	-
13/08/2020	05:28:16	SS_05	Still	200270_SS_05_002	358	-	383 166.3	5 886 689.7	383 169.9	5 886 672.2	17.9	-
13/08/2020	05:28:25	SS_05	Still	200270_SS_05_003	359	-	383 166.3	5 886 689.7	383 170.8	5 886 679.9	10.8	-
13/08/2020	05:28:35	SS_05	Still	200270_SS_05_004	360	-	383 166.3	5 886 689.7	383 169.6	5 886 688.6	3.5	-
13/08/2020	05:28:49	SS_05	Still	200270_SS_05_005	361	-	383 166.3	5 886 689.7	383 167.9	5 886 699.8	10.2	-
13/08/2020	05:28:59	SS_05	Still	200270_SS_05_006	362	-	383 166.3	5 886 689.7	383 166.9	5 886 706.9	17.1	-
13/08/2020	05:29:10	SS_05	Still	200270_SS_05_007	363	-	383 166.3	5 886 689.7	383 165.7	5 886 714.0	24.3	-
13/08/2020	05:29:26	SS_05	Video	EOL	364	17.3	383 166.3	5 886 689.7	383 163.0	5 886 721.3	31.7	-
13/08/2020	05:35:45	SS_05	HG	FA/PSDA	365	17.3	383 166.3	5 886 689.7	383 166.9	5 886 689.2	0.8	-
13/08/2020	05:42:02	SS_05	HG	NS	366	17.4	383 166.3	5 886 689.7	383 160.1	5 886 692.8	7.0	-
13/08/2020	05:47:01	SS_05	HG	NS	367	17.1	383 166.3	5 886 689.7	383 147.6	5 886 693.2	19.0	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
13/08/2020	06:19:02	SS_06	Video	SOL	368	17.7	383 951.8	5 888 205.5	383 926.3	5 888 184.6	33.0	-
13/08/2020	06:19:24	SS_06	Still	200270_SS_06_001	369	-	383 951.8	5 888 205.5	383 935.8	5 888 191.2	21.5	-
13/08/2020	06:19:42	SS_06	Still	200270_SS_06_002	370	-	383 951.8	5 888 205.5	383 947.4	5 888 197.0	9.6	-
13/08/2020	06:19:49	SS_06	Still	200270_SS_06_003	371	-	383 951.8	5 888 205.5	383 952.1	5 888 199.0	6.5	-
13/08/2020	06:19:55	SS_06	Still	200270_SS_06_004	372	-	383 951.8	5 888 205.5	383 954.9	5 888 201.0	5.5	-
13/08/2020	06:20:06	SS_06	Still	200270_SS_06_005	373	-	383 951.8	5 888 205.5	383 961.1	5 888 205.3	9.3	-
13/08/2020	06:20:23	SS_06	Still	200270_SS_06_006	374	-	383 951.8	5 888 205.5	383 970.1	5 888 207.6	18.4	-
13/08/2020	06:20:32	SS_06	Still	200270_SS_06_007	375	-	383 951.8	5 888 205.5	383 974.2	5 888 209.2	22.7	-
13/08/2020	06:20:55	SS_06	Video	EOL	376	17.7	383 951.8	5 888 205.5	383 983.0	5 888 211.6	31.8	-
13/08/2020	06:30:38	SS_06	HG	FA/PSDA	377	18.3	383 951.8	5 888 205.5	383 944.3	5 888 219.8	16.1	-
13/08/2020	07:20:15	SS_09	Video	SOL	378	17.3	382 485.9	5 889 029.6	382 462.6	5 889 024.1	24.0	-
13/08/2020	07:20:33	SS_09	Still	200270_SS_09_001	379	-	382 485.9	5 889 029.6	382 478.5	5 889 017.2	14.4	-
13/08/2020	07:20:39	SS_09	Still	200270_SS_09_002	380	-	382 485.9	5 889 029.6	382 483.9	5 889 016.3	13.5	-
13/08/2020	07:20:44	SS_09	Still	200270_SS_09_003	381	-	382 485.9	5 889 029.6	382 488.2	5 889 016.0	13.8	-
13/08/2020	07:20:46	SS_09	Still	200270_SS_09_004	382	-	382 485.9	5 889 029.6	382 489.3	5 889 015.5	14.5	-
13/08/2020	07:20:55	SS_09	Still	200270_SS_09_005	383	-	382 485.9	5 889 029.6	382 496.8	5 889 015.2	18.0	-
13/08/2020	07:21:10	SS_09	Still	200270_SS_09_006	384	-	382 485.9	5 889 029.6	382 503.3	5 889 008.6	27.3	-
13/08/2020	07:21:22	SS_09	Video	EOL	385	17.3	382 485.9	5 889 029.6	382 506.2	5 889 002.2	34.2	-
13/08/2020	07:30:53	SS_09	HG	FA/PSDA	386	17.7	382 485.9	5 889 029.6	382 485.9	5 889 027.7	1.9	-
13/08/2020	07:53:14	SS_07	Video	SOL	387	17.0	382 209.7	5 887 684.8	382 206.0	5 887 662.6	22.5	-
13/08/2020	07:53:29	SS_07	Still	200270_SS_07_001	388	-	382 209.7	5 887 684.8	382 199.1	5 887 676.0	13.8	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
13/08/2020	07:53:35	SS_07	Still	200270_SS_07_002	389	-	382 209.7	5 887 684.8	382 199.1	5 887 680.3	11.5	-
13/08/2020	07:53:44	SS_07	Still	200270_SS_07_003	390	-	382 209.7	5 887 684.8	382 201.2	5 887 686.3	8.7	-
13/08/2020	07:53:52	SS_07	Still	200270_SS_07_004	391	-	382 209.7	5 887 684.8	382 203.7	5 887 691.1	8.7	-
13/08/2020	07:54:01	SS_07	Still	200270_SS_07_005	392	-	382 209.7	5 887 684.8	382 205.4	5 887 697.2	13.1	-
13/08/2020	07:54:10	SS_07	Still	200270_SS_07_006	393	-	382 209.7	5 887 684.8	382 205.0	5 887 702.6	18.3	-
13/08/2020	07:54:34	SS_07	Video	EOL	394	17.0	382 209.7	5 887 684.8	382 202.3	5 887 720.4	36.3	-
13/08/2020	08:04:11	SS_07	HG	FA/PSDA	395	17.6	382 209.7	5 887 684.8	382 200.4	5 887 694.4	13.3	-
13/08/2020	08:48:03	SS_08	Video	SOL	396	17.8	380 636.8	5 887 985.0	380 612.9	5 887 975.4	25.7	-
13/08/2020	08:48:16	SS_08	Still	200270_SS_08_001	397	-	380 636.8	5 887 985.0	380 620.2	5 887 979.2	17.5	-
13/08/2020	08:48:22	SS_08	Still	200270_SS_08_002	398	-	380 636.8	5 887 985.0	380 624.2	5 887 982.6	12.8	-
13/08/2020	08:48:31	SS_08	Still	200270_SS_08_003	399	-	380 636.8	5 887 985.0	380 629.2	5 887 984.8	7.5	-
13/08/2020	08:48:42	SS_08	Still	200270_SS_08_004	400	-	380 636.8	5 887 985.0	380 637.2	5 887 986.0	1.1	-
13/08/2020	08:48:53	SS_08	Still	200270_SS_08_005	401	-	380 636.8	5 887 985.0	380 643.6	5 887 987.3	7.2	-
13/08/2020	08:49:04	SS_08	Still	200270_SS_08_006	402	-	380 636.8	5 887 985.0	380 649.6	5 887 988.8	13.4	-
13/08/2020	08:49:20	SS_08	Still	200270_SS_08_007	403	-	380 636.8	5 887 985.0	380 657.7	5 887 992.4	22.2	-
13/08/2020	08:49:41	SS_08	Video	EOL	404	17.8	380 636.8	5 887 985.0	380 663.8	5 887 993.5	28.3	-
13/08/2020	08:54:43	SS_08	HG	FA/PSDA	405	16.7	380 636.8	5 887 985.0	380 632.9	5 887 980.4	6.0	-
13/08/2020	09:23:12	SS_10	Video	SOL	406	16.2	379 388.0	5 889 557.9	379 356.3	5 889 546.3	33.8	-
13/08/2020	09:23:37	SS_10	Still	200270_SS_10_001	407	-	379 388.0	5 889 557.9	379 378.1	5 889 550.6	12.4	-
13/08/2020	09:23:48	SS_10	Still	200270_SS_10_002	408	-	379 388.0	5 889 557.9	379 386.3	5 889 552.6	5.6	-
13/08/2020	09:23:55	SS_10	Still	200270_SS_10_003	409	-	379 388.0	5 889 557.9	379 391.3	5 889 553.7	5.4	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
13/08/2020	09:24:04	SS_10	Still	200270_SS_10_004	410	-	379 388.0	5 889 557.9	379 397.0	5 889 555.1	9.4	-
13/08/2020	09:24:14	SS_10	Still	200270_SS_10_005	411	-	379 388.0	5 889 557.9	379 404.2	5 889 557.5	16.2	-
13/08/2020	09:24:22	SS_10	Still	200270_SS_10_006	412	-	379 388.0	5 889 557.9	379 408.4	5 889 558.9	20.4	-
13/08/2020	09:24:38	SS_10	Video	EOL	413	16.2	379 388.0	5 889 557.9	379 419.2	5 889 558.6	31.2	-
13/08/2020	09:29:44	SS_10	HG	NS	414	16.1	379 388.0	5 889 557.9	379 369.3	5 889 553.5	19.3	-
13/08/2020	09:34:44	SS_10	HG	FA/PSDA	415	16.2	379 388.0	5 889 557.9	379 389.5	5 889 556.1	2.4	-
13/08/2020	10:03:50	SS_11	Video	SOL	416	17.6	379 743.5	5 892 004.3	379 717.0	5 891 968.6	44.5	-
13/08/2020	10:04:14	SS_11	Still	200270_SS_11_001	417	-	379 743.5	5 892 004.3	379 727.7	5 891 993.5	19.2	-
13/08/2020	10:04:24	SS_11	Still	200270_SS_11_002	418	-	379 743.5	5 892 004.3	379 735.7	5 892 001.3	8.5	-
13/08/2020	10:04:29	SS_11	Still	200270_SS_11_003	419	-	379 743.5	5 892 004.3	379 738.6	5 892 004.5	4.9	-
13/08/2020	10:04:34	SS_11	Still	200270_SS_11_004	420	-	379 743.5	5 892 004.3	379 740.8	5 892 007.4	4.2	-
13/08/2020	10:04:44	SS_11	Still	200270_SS_11_005	421	-	379 743.5	5 892 004.3	379 744.5	5 892 011.4	7.1	-
13/08/2020	10:04:51	SS_11	Still	200270_SS_11_006	422	-	379 743.5	5 892 004.3	379 746.8	5 892 014.3	10.5	-
13/08/2020	10:04:58	SS_11	Still	200270_SS_11_007	423	-	379 743.5	5 892 004.3	379 748.7	5 892 015.8	12.6	-
13/08/2020	10:05:12	SS_11	Still	200270_SS_11_008	424	-	379 743.5	5 892 004.3	379 750.6	5 892 015.5	13.2	-
13/08/2020	10:05:22	SS_11	Still	200270_SS_11_009	425	-	379 743.5	5 892 004.3	379 751.8	5 892 015.3	13.7	-
13/08/2020	10:05:41	SS_11	Still	200270_SS_11_010	426	-	379 743.5	5 892 004.3	379 754.0	5 892 018.1	17.3	-
13/08/2020	10:06:03	SS_11	Still	200270_SS_11_011	427	-	379 743.5	5 892 004.3	379 759.9	5 892 023.0	24.9	-
13/08/2020	10:06:13	SS_11	Video	EOL	428	17.6	379 743.5	5 892 004.3	379 763.3	5 892 024.8	28.5	-
13/08/2020	10:11:51	SS_11	HG	FA/PSDA	429	17.6	379 743.5	5 892 004.3	379 732.1	5 891 995.3	14.5	-
16/08/2020	11:56:59	SS_12	Video	SOL	430	13.1	376 938.5	5 893 256.2	376 921.2	5 893 258.3	17.5	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	11:57:21	SS_12	Still	200270_SS_12_001	431	-	376 938.5	5 893 256.2	376 925.6	5 893 256.0	12.9	-
16/08/2020	11:57:29	SS_12	Still	200270_SS_12_002	432	-	376 938.5	5 893 256.2	376 930.3	5 893 260.3	9.2	-
16/08/2020	11:57:37	SS_12	Still	200270_SS_12_003	433	-	376 938.5	5 893 256.2	376 935.5	5 893 266.1	10.4	-
16/08/2020	11:57:46	SS_12	Still	200270_SS_12_004	434	-	376 938.5	5 893 256.2	376 942.2	5 893 272.0	16.3	-
16/08/2020	11:57:49	SS_12	Still	200270_SS_12_005	435	-	376 938.5	5 893 256.2	376 945.4	5 893 274.0	19.1	-
16/08/2020	11:57:54	SS_12	Still	200270_SS_12_006	436	-	376 938.5	5 893 256.2	376 948.3	5 893 274.4	20.7	-
16/08/2020	11:57:58	SS_12	Still	200270_SS_12_007	437	-	376 938.5	5 893 256.2	376 951.6	5 893 273.2	21.4	-
16/08/2020	11:58:03	SS_12	Still	200270_SS_12_008	438	-	376 938.5	5 893 256.2	376 953.9	5 893 272.0	22.1	-
16/08/2020	11:58:19	SS_12	Video	EOL	439	13.2	376 938.5	5 893 256.2	376 962.1	5 893 273.5	29.2	-
16/08/2020	12:08:02	SS_12	HG	NS	440	12.6	376 938.5	5 893 256.2	376 922.3	5 893 255.5	16.2	-
16/08/2020	12:19:10	SS_12	HG	PSDA	441	12.6	376 938.5	5 893 256.2	376 923.4	5 893 273.1	22.7	-
16/08/2020	12:24:47	SS_12	HG	NS	442	12.6	376 938.5	5 893 256.2	376 928.4	5 893 252.2	10.9	-
16/08/2020	12:49:21	SS_14	Video	SOL	443	16.0	377 370.8	5 895 273.4	377 357.1	5 895 267.6	14.9	-
16/08/2020	12:49:36	SS_14	Still	200270_SS_14_001	444	-	377 370.8	5 895 273.4	377 362.8	5 895 271.5	8.2	-
16/08/2020	12:49:45	SS_14	Still	200270_SS_14_002	445	-	377 370.8	5 895 273.4	377 365.0	5 895 271.4	6.1	-
16/08/2020	12:49:52	SS_14	Still	200270_SS_14_003	446	-	377 370.8	5 895 273.4	377 367.3	5 895 270.8	4.3	-
16/08/2020	12:50:03	SS_14	Still	200270_SS_14_004	447	-	377 370.8	5 895 273.4	377 371.0	5 895 269.5	3.9	-
16/08/2020	12:50:18	SS_14	Still	200270_SS_14_005	448	-	377 370.8	5 895 273.4	377376.0	5 895 264.6	10.2	-
16/08/2020	12:50:28	SS_14	Still	200270_SS_14_006	449	-	377 370.8	5 895 273.4	377382.1	5 895 262.6	15.6	-
16/08/2020	12:50:35	SS_14	Video	EOL	450	16.0	377 370.8	5 895 273.4	377 386.0	5 895 260.5	19.9	-
16/08/2020	13:07:50	SS_13	Video	SOL	451	16.9	376 770.4	5 894 949.2	376 737.3	5 894 939.0	34.6	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	13:08:19	SS_13	Still	200270_SS_13_001	452	-	376 770.4	5 894 949.2	376 751.3	5 894 950.5	19.2	-
16/08/2020	13:08:23	SS_13	Still	200270_SS_13_002	453	-	376 770.4	5 894 949.2	376 752.8	5 894 951.4	17.8	-
16/08/2020	13:08:28	SS_13	Still	200270_SS_13_003	454	-	376 770.4	5 894 949.2	376 755.4	5 894 953.1	15.6	-
16/08/2020	13:08:38	SS_13	Still	200270_SS_13_004	455	-	376 770.4	5 894 949.2	376 760.9	5 894 957.3	12.5	-
16/08/2020	13:08:48	SS_13	Still	200270_SS_13_005	456	-	376 770.4	5 894 949.2	376 767.6	5 894 961.0	12.2	-
16/08/2020	13:08:54	SS_13	Still	200270_SS_13_006	457	-	376 770.4	5 894 949.2	376 771.1	5 894 962.7	13.5	-
16/08/2020	13:08:59	SS_13	Still	200270_SS_13_007	458	-	376 770.4	5 894 949.2	376 773.2	5 894 963.8	14.8	-
16/08/2020	13:09:03	SS_13	Still	200270_SS_13_008	459	-	376 770.4	5 894 949.2	376 776.1	5 894 964.0	15.8	-
16/08/2020	13:09:19	SS_13	Video	EOL	460	16.9	376 770.4	5 894 949.2	376 782.0	5 894 971.9	25.5	-
16/08/2020	13:20:05	SS_15	Video	SOL	461	15.9	375 953.9	5 895 489.5	375 952.2	5 895 448.5	41.0	-
16/08/2020	13:21:10	SS_15	Still	200270_SS_15_001	462	-	375 953.9	5 895 489.5	375 956.3	5 895 471.3	18.4	-
16/08/2020	13:21:15	SS_15	Still	200270_SS_15_002	463	-	375 953.9	5 895 489.5	375 954.9	5 895 474.4	15.2	-
16/08/2020	13:21:19	SS_15	Still	200270_SS_15_003	464	-	375 953.9	5 895 489.5	375 953.1	5 895 477.6	12.0	-
16/08/2020	13:21:25	SS_15	Still	200270_SS_15_004	465	-	375 953.9	5 895 489.5	375 951.2	5 895 481.6	8.4	-
16/08/2020	13:21:31	SS_15	Still	200270_SS_15_005	466	-	375 953.9	5 895 489.5	375 949.4	5 895 486.1	5.7	-
16/08/2020	13:21:36	SS_15	Still	200270_SS_15_006	467	-	375 953.9	5 895 489.5	375 947.7	5 895 489.8	6.2	-
16/08/2020	13:21:47	SS_15	Still	200270_SS_15_007	468	-	375 953.9	5 895 489.5	375 943.6	5 895 498.1	13.4	-
16/08/2020	13:21:51	SS_15	Still	200270_SS_15_008	469	-	375 953.9	5 895 489.5	375 942.9	5 895 500.8	15.7	-
16/08/2020	13:22:02	SS_15	Video	EOL	470	15.9	375 953.9	5 895 489.5	375 937.1	5 895 508.6	25.4	-
16/08/2020	13:38:11	SS_17	Video	SOL	471	16.3	375 593.7	5 896 342.1	375 572.4	5 896 318.2	32.0	-
16/08/2020	13:38:38	SS_17	Still	200270_SS_17_001	472	-	375 593.7	5 896 342.1	375 587.0	5 896 330.3	13.5	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	13:38:44	SS_17	Still	200270_SS_17_002	473	-	375 593.7	5 896 342.1	375 589.1	5 896 332.8	10.3	-
16/08/2020	13:38:50	SS_17	Still	200270_SS_17_003	474	-	375 593.7	5 896 342.1	375 591.2	5 896 335.2	7.3	-
16/08/2020	13:38:55	SS_17	Still	200270_SS_17_004	475	-	375 593.7	5 896 342.1	375 592.8	5 896 337.1	5.1	-
16/08/2020	13:39:01	SS_17	Still	200270_SS_17_005	476	-	375 593.7	5 896 342.1	375 594.3	5 896 340.5	1.7	-
16/08/2020	13:39:11	SS_17	Still	200270_SS_17_006	477	-	375 593.7	5 896 342.1	375 597.0	5 896 345.5	4.8	-
16/08/2020	13:39:17	SS_17	Still	200270_SS_17_007	478	-	375 593.7	5 896 342.1	375 599.4	5 896 348.8	8.8	-
16/08/2020	13:39:25	SS_17	Still	200270_SS_17_008	479	-	375 593.7	5 896 342.1	375 602.4	5 896 352.0	13.3	-
16/08/2020	13:39:35	SS_17	Still	200270_SS_17_009	480	-	375 593.7	5 896 342.1	375 605.4	5 896 355.7	18.0	-
16/08/2020	13:39:47	SS_17	Video	EOL	481	16.2	375 593.7	5 896 342.1	375 609.9	5 896 358.1	22.7	-
16/08/2020	13:55:23	SS_16	Video	SOL	482	16.0	374 897.3	5 895 597.6	374 888.4	5 895 576.2	23.2	-
16/08/2020	13:55:39	SS_16	Still	200270_SS_16_001	483	-	374 897.3	5 895 597.6	374 890.0	5 895 582.4	16.8	-
16/08/2020	13:55:44	SS_16	Still	200270_SS_16_002	484	-	374 897.3	5 895 597.6	374 890.5	5 895 583.9	15.3	-
16/08/2020	13:55:49	SS_16	Still	200270_SS_16_003	485	-	374 897.3	5 895 597.6	374 890.8	5 895 585.6	13.7	-
16/08/2020	13:55:55	SS_16	Still	200270_SS_16_004	486	-	374 897.3	5 895 597.6	374 891.2	5 895 588.7	10.8	-
16/08/2020	13:55:00	SS_16	Still	200270_SS_16_005	487	-	374 897.3	5 895 597.6	374 891.7	5 895 593.4	7.0	-
16/08/2020	13:56:27	SS_16	Still	200270_SS_16_006	488	-	374 897.3	5 895 597.6	374 893.4	5 895 603.9	7.4	-
16/08/2020	13:56:33	SS_16	Still	200270_SS_16_007	489	-	374 897.3	5 895 597.6	374 893.3	5 895 605.7	9.1	-
16/08/2020	13:56:37	SS_16	Still	200270_SS_16_008	490	-	374 897.3	5 895 597.6	374 892.8	5 895 606.8	10.2	-
16/08/2020	13:56:52	SS_16	Still	200270_SS_16_009		-	374 897.3	5 895 597.6	374 891.4	5 895 611.2	14.8	-
16/08/2020	13:57:01	SS_16	Video	EOL	491	16.0	374 897.3	5 895 597.6	374 890.1	5 895 615.5	19.2	-
16/08/2020	14:21:57	SS_19	Video	SOL	492	15.5	373 222.9	5 894 426.3	373 219.6	5 894 394.3	32.1	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	14:22:15	SS_19	Still	200270_SS_19_001	493	-	373 222.9	5 894 426.3	373 215.4	5 894 404.8	22.7	-
16/08/2020	14:22:27	SS_19	Still	200270_SS_19_002	494	-	373 222.9	5 894 426.3	373 213.5	5 894 413.8	15.6	-
16/08/2020	14:22:31	SS_19	Still	200270_SS_19_003	495	-	373 222.9	5 894 426.3	373 212.9	5 894 417.3	13.4	-
16/08/2020	14:22:39	SS_19	Still	200270_SS_19_004	496	-	373 222.9	5 894 426.3	373 212.0	5 894 422.0	11.7	-
16/08/2020	14:22:43	SS_19	Still	200270_SS_19_005	497	-	373 222.9	5 894 426.3	373 211.2	5 894 424.4	11.9	-
16/08/2020	14:22:48	SS_19	Still	200270_SS_19_006	498	-	373 222.9	5 894 426.3	373 210.1	5 894 427.6	12.9	-
16/08/2020	14:22:52	SS_19	Still	200270_SS_19_007	499	-	373 222.9	5 894 426.3	373 210.7	5 894 430.5	12.9	-
16/08/2020	14:23:00	SS_19	Still	200270_SS_19_008	500	-	373 222.9	5 894 426.3	373 209.5	5 894 436.0	16.6	-
16/08/2020	14:23:08	SS_19	Video	EOL	501	15.5	373 222.9	5 894 426.3	373 208.3	5 894 440.4	20.3	-
16/08/2020	14:30:24	SS_19	HG	NS	502	-	373 222.9	5 894 426.3	373 222.0	5 894 414.8	11.5	-
16/08/2020	14:38:03	SS_19	HG	FA/PSDA	503	-	373 222.9	5 894 426.3	373 217.2	5 894 429.3	6.5	-
16/08/2020	14:49:43	SS_19	HG	NS	504	-	373 222.9	5 894 426.3	373 224.0	5 894 422.4	4.0	-
16/08/2020	15:12:53	SS_20	Video	SOL	505	14.5	370 334.5	5 893 940.6	370 338.6	5 893 917.1	23.8	-
16/08/2020	15:13:20	SS_20	Still	200270_SS_20_001	506	-	370 334.5	5 893 940.6	370 337.0	5 893 936.3	5.0	-
16/08/2020	15:13:32	SS_20	Still	200270_SS_20_002	507	-	370 334.5	5 893 940.6	370 335.6	5 893 941.8	1.6	-
16/08/2020	15:13:34	SS_20	Still	200270_SS_20_003	508	-	370 334.5	5 893 940.6	370 336.1	5 893 942.7	2.6	-
16/08/2020	15:13:39	SS_20	Still	200270_SS_20_004	509	-	370 334.5	5 893 940.6	370 335.7	5 893 945.1	4.7	-
16/08/2020	15:13:47	SS_20	Still	200270_SS_20_005	510	-	370 334.5	5 893 940.6	370 335.1	5 893 948.0	7.4	-
16/08/2020	15:13:56	SS_20	Still	200270_SS_20_006	511	-	370 334.5	5 893 940.6	370 333.9	5 893 950.9	10.3	-
16/08/2020	15:14:00	SS_20	Still	200270_SS_20_007	512	-	370 334.5	5 893 940.6	370 334.1	5 893 952.5	11.9	-
16/08/2020	15:14:25	SS_20	Still	200270_SS_20_008	513	-	370 334.5	5 893 940.6	370 329.9	5 893 959.1	19.0	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	15:14:35	SS_20	Video	EOL	514	14.5	370 334.5	5 893 940.6	370 328.7	5 893 962.2	22.4	-
16/08/2020	15:39:47	SS_21	Video	SOL	515	14.2	370 310.5	5 894 480.9	370 322.2	5 894 455.3	28.2	-
16/08/2020		SS_21	Still	200270_SS_21_001	No fix	-	370 310.5	5 894 480.9	-	-	-	-
16/08/2020		SS_21	Still	200270_SS_21_002	No fix	-	370 310.5	5 894 480.9	-	-	-	-
16/08/2020		SS_21	Still	200270_SS_21_003	No fix	-	370 310.5	5 894 480.9	-	-	-	-
16/08/2020		SS_21	Still	200270_SS_21_004	No fix	-	370 310.5	5 894 480.9	-	-	-	-
16/08/2020	15:40:31	SS_21	Video	EOL	516	14.2	370 310.5	5 894 480.9	370 302.1	5 894 482.4	8.5	-
16/08/2020	15:59:24	SS_21A	Video	SOL	517	14.2	370 310.5	5 894 480.9	370 325.3	5 894 438.1	45.4	Video re-run
16/08/2020	15:59:58	SS_21A	Still	200270_SS_21A_001	518	-	370 310.5	5 894 480.9	370 321.2	5 894 452.7	30.2	-
16/08/2020	16:00:04	SS_21A	Still	200270_SS_21A_002	519	-	370 310.5	5 894 480.9	370 321.5	5 894 455.8	27.4	-
16/08/2020	16:00:08	SS_21A	Still	200270_SS_21A_003	520	-	370 310.5	5 894 480.9	370 321.3	5 894 457.8	25.6	-
16/08/2020	16:00:18	SS_21A	Still	200270_SS_21A_004	521	-	370 310.5	5 894 480.9	370 321.6	5 894 464.3	19.9	-
16/08/2020	16:00:30	SS_21A	Still	200270_SS_21A_005	522	-	370 310.5	5 894 480.9	370 320.4	5 894 473.7	12.2	-
16/08/2020	16:00:37	SS_21A	Still	200270_SS_21A_006	523	-	370 310.5	5 894 480.9	370 319.9	5 894 478.7	9.7	-
16/08/2020	16:00:41	SS_21A	Still	200270_SS_21A_007	524	-	370 310.5	5 894 480.9	370 319.0	5 894 480.7	8.5	-
16/08/2020	16:00:46	SS_21A	Still	200270_SS_21A_008	525	-	370 310.5	5 894 480.9	370 317.5	5 894 483.6	7.5	-
16/08/2020	16:00:55	SS_21A	Still	200270_SS_21A_009	526	-	370 310.5	5 894 480.9	370 315.7	5 894 490.4	10.8	-
16/08/2020	16:01:09	SS_21A	Still	200270_SS_21A_010	527	-	370 310.5	5 894 480.9	370 316.3	5 894 500.2	20.2	-
16/08/2020	16:01:19	SS_21A	Video	EOL	528	14.2	370 310.5	5 894 480.9	370 314.8	5 894 509.0	28.4	-
16/08/2020	16:07:30	SS_21	HG	FA/PSDA	529	-	370 310.5	5 894 480.9	370 323.2	5 894 486.8	14.0	-
16/08/2020	17:17:41	SS_25	Video	SOL	530	14.8	369 229.9	5 895 057.3	369 260.3	5 895 022.6	46.1	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	17:18:05	SS_25	Still	200270_SS_25_001	531	-	369 229.9	5 895 057.3	369 255.5	5 895 036.7	32.9	-
16/08/2020	17:18:24	SS_25	Still	200270_SS_25_002	532	-	369 229.9	5 895 057.3	369 241.7	5 895 043.9	17.9	-
16/08/2020	17:18:28	SS_25	Still	200270_SS_25_003	533	-	369 229.9	5 895 057.3	369 238.2	5 895 046.3	13.8	-
16/08/2020	17:18:32	SS_25	Still	200270_SS_25_004	534	-	369 229.9	5 895 057.3	369 236.3	5 895 047.7	11.5	-
16/08/2020	17:18:38	SS_25	Still	200270_SS_25_005	535	-	369 229.9	5 895 057.3	369 232.6	5 895 050.7	7.1	-
16/08/2020	17:18:47	SS_25	Still	200270_SS_25_006	536	-	369 229.9	5 895 057.3	369 226.6	5 895 055.1	3.9	-
16/08/2020	17:18:52	SS_25	Still	200270_SS_25_007	537	-	369 229.9	5 895 057.3	369 224.5	5 895 057.3	5.4	-
16/08/2020	17:19:10	SS_25	Still	200270_SS_25_008	538	-	369 229.9	5 895 057.3	369 214.9	5 895 062.0	15.7	-
16/08/2020	17:19:41	SS_25	Video	EOL	539	14.8	369 229.9	5 895 057.3	369 205.9	5 895 066.5	25.7	-
16/08/2020	17:25:19	SS_25	HG	FA/PSDA	540	-	369 229.9	5 895 057.3	369 216.4	5 895 048.3	16.1	-
16/08/2020	17:50:41	SS_24	Video	SOL	541	15.6	370 094.4	5 896 077.9	370 115.3	5 896 034.5	48.2	-
16/08/2020	17:51:17	SS_24	Still	200270_SS_24_001	542	-	370 094.4	5 896 077.9	370 108.2	5 896 060.9	21.9	-
16/08/2020	17:51:21	SS_24	Still	200270_SS_24_002	543	-	370 094.4	5 896 077.9	370 107.5	5 896 064.5	18.7	-
16/08/2020	17:51:25	SS_24	Still	200270_SS_24_003	544	-	370 094.4	5 896 077.9	370 106.2	5 896 068.8	14.9	-
16/08/2020	17:51:35	SS_24	Still	200270_SS_24_004	545	-	370 094.4	5 896 077.9	370 103.1	5 896 076.1	8.9	-
16/08/2020	17:51:43	SS_24	Still	200270_SS_24_005	546	-	370 094.4	5 896 077.9	370 099.9	5 896 083.4	7.8	-
16/08/2020	17:51:48	SS_24	Still	200270_SS_24_006	547	-	370 094.4	5 896 077.9	370 097.7	5 896 085.9	8.7	-
16/08/2020	17:51:57	SS_24	Still	200270_SS_24_007	548	-	370 094.4	5 896 077.9	370 093.2	5 896 090.7	12.8	-
16/08/2020	17:52:05	SS_24	Video	EOL	549	15.6	370 094.4	5 896 077.9	370 093.0	5 896 095.2	17.4	-
16/08/2020	18:09:15	SS_23	Video	SOL	550	15.6	370 118.4	5 895 825.7	370 141.6	5 895 802.2	33.0	-
16/08/2020	18:09:32	SS_23	Still	200270_SS_23_001	551	-	370 118.4	5 895 825.7	370 128.7	5 895 812.6	16.7	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	18:09:37	SS_23	Still	200270_SS_23_002	552	-	370 118.4	5 895 825.7	370 125.5	5 895 815.1	12.8	-
16/08/2020	18:09:42	SS_23	Still	200270_SS_23_003	553	-	370 118.4	5 895 825.7	370 122.2	5 895 818.0	8.6	-
16/08/2020	18:09:50	SS_23	Still	200270_SS_23_004	554	-	370 118.4	5 895 825.7	370 118.7	5 895 820.8	4.9	-
16/08/2020	18:09:55	SS_23	Still	200270_SS_23_005	555	-	370 118.4	5 895 825.7	370 116.0	5 895 822.7	3.9	-
16/08/2020	18:10:07	SS_23	Still	200270_SS_23_006	556	-	370 118.4	5 895 825.7	370 108.1	5 895 828.9	10.8	-
16/08/2020	18:10:14	SS_23	Still	200270_SS_23_007	557	-	370 118.4	5 895 825.7	370 104.7	5 895 832.1	15.1	-
16/08/2020	18:10:26	SS_23	Still	200270_SS_23_008	558	-	370 118.4	5 895 825.7	370 100.3	5 895 836.2	20.9	-
16/08/2020	18:10:33	SS_23	Video	EOL	559	15.6	370 118.4	5 895 825.7	370 097.4	5 895 838.5	24.5	-
16/08/2020	18:15:39	SS_23	HG	FA/PSDA	560	-	370 118.4	5 895 825.7	370 122.6	5 895 821.5	6.0	-
16/08/2020	18:42:14	SS_22	Video	SOL	561	15.0	371 103.0	5 895 717.7	371 129.5	5 895 697.4	33.4	-
16/08/2020	18:42:38	SS_22	Still	200270_SS_22_001	562	-	371 103.0	5 895 717.7	371 119.4	5 895 714.8	16.7	-
16/08/2020	18:42:43	SS_22	Still	200270_SS_22_002	563	-	371 103.0	5 895 717.7	371 116.0	5 895 716.7	13.0	-
16/08/2020	18:42:49	SS_22	Still	200270_SS_22_003	564	-	371 103.0	5 895 717.7	371 112.8	5 895 719.2	9.9	-
16/08/2020	18:42:58	SS_22	Still	200270_SS_22_004	565	-	371 103.0	5 895 717.7	371 109.5	5 895 722.5	8.1	-
16/08/2020	18:43:05	SS_22	Still	200270_SS_22_005	566	-	371 103.0	5 895 717.7	371 107.5	5 895 725.1	8.7	-
16/08/2020	18:43:12	SS_22	Still	200270_SS_22_006	567	-	371 103.0	5 895 717.7	371 106.8	5 895 727.0	10.0	-
16/08/2020	18:43:24	SS_22	Still	200270_SS_22_007	568	-	371 103.0	5 895 717.7	371 105.7	5 895 728.3	10.9	-
16/08/2020	18:43:30	SS_22	Still	200270_SS_22_008	569	-	371 103.0	5 895 717.7	371 105.2	5 895 728.3	10.8	-
16/08/2020	18:43:36	SS_22	Still	200270_SS_22_009	570	-	371 103.0	5 895 717.7	371 105.4	5 895 728.6	11.1	-
16/08/2020	18:43:44	SS_22	Video	EOL	571	15.0	371 103.0	5 895 717.7	371 107.5	5 895 729.5	12.6	-
16/08/2020	19:19:29	SS_26	Video	SOL	572	15.1	372 927.8	5 899 325.9	372 944.7	5 899 297.4	33.1	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	19:19:52	SS_26	Still	200270_SS_26_001	573	-	372 927.8	5 899 325.9	372 935.0	5 899 315.3	12.8	-
16/08/2020	19:19:56	SS_26	Still	200270_SS_26_002	574	-	372 927.8	5 899 325.9	372 932.4	5 899 319.0	8.3	-
16/08/2020	19:20:02	SS_26	Still	200270_SS_26_003	575	-	372 927.8	5 899 325.9	372 930.3	5 899 322.6	4.2	-
16/08/2020	19:20:11	SS_26	Still	200270_SS_26_004	576	-	372 927.8	5 899 325.9	372 927.3	5 899 328.8	2.9	-
16/08/2020	19:20:19	SS_26	Still	200270_SS_26_005	577	-	372 927.8	5 899 325.9	372 924.8	5 899 333.5	8.1	-
16/08/2020	19:20:25	SS_26	Still	200270_SS_26_006	578	-	372 927.8	5 899 325.9	372 922.4	5 899 336.5	11.9	-
16/08/2020	19:20:32	SS_26	Still	200270_SS_26_007	579	-	372 927.8	5 899 325.9	372 919.1	5 899 340.1	16.7	-
16/08/2020	19:20:41	SS_26	Still	200270_SS_26_008	580	-	372 927.8	5 899 325.9	372 914.9	5 899 344.4	22.5	-
16/08/2020	19:21:00	SS_26	Video	EOL	581	15.1	372 927.8	5 899 325.9	372 908.0	5 899 352.3	33.0	-
16/08/2020	19:28:08	SS_26	HG	NS	582	-	372 927.8	5 899 325.9	372 918.2	5 899 330.1	10.5	-
16/08/2020	19:32:28	SS_26	HG	NS	583	-	372 927.8	5 899 325.9	372 918.4	5 899 315.9	13.8	-
16/08/2020	19:37:00	SS_26	HG	PSDA	584	-	372 927.8	5 899 325.9	372 922.3	5 899 326.6	5.5	-
16/08/2020	20:06:03	SS_18	Video	SOL	585	15.2	374 188.9	5 896 486.1	374 197.5	5 896 457.9	29.5	-
16/08/2020	20:06:19	SS_18	Still	200270_SS_18_001	586	-	374 188.9	5 896 486.1	374 190.6	5 896 467.5	18.7	-
16/08/2020	20:06:24	SS_18	Still	200270_SS_18_002	587	-	374 188.9	5 896 486.1	374 188.0	5 896 471.2	15.0	-
16/08/2020	20:06:31	SS_18	Still	200270_SS_18_003	588	-	374 188.9	5 896 486.1	374 185.7	5 896 476.6	10.1	-
16/08/2020	20:06:37	SS_18	Still	200270_SS_18_004	589	-	374 188.9	5 896 486.1	374 183.9	5 896 481.6	6.8	-
16/08/2020	20:06:43	SS_18	Still	200270_SS_18_005	590	-	374 188.9	5 896 486.1	374 182.5	5 896 486.1	6.4	-
16/08/2020	20:06:49	SS_18	Still	200270_SS_18_006	591	-	374 188.9	5 896 486.1	374 181.3	5 896 491.2	9.1	-
16/08/2020	20:06:59	SS_18	Still	200270_SS_18_007	592	-	374 188.9	5 896 486.1	374 179.6	5 896 499.0	15.8	-
16/08/2020	20:07:09	SS_18	Still	200270_SS_18_008	593	-	374 188.9	5 896 486.1	374 178.7	5 896 505.9	22.2	-

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]												
Date	Time [UTC]	Station	Type	Sample Rep/ Still No.	Fix No.	Water Depth [m BSL]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/08/2020	20:07:23	SS_18	Video	EOL	594	15.2	374 188.9	5 896 486.1	374 177.9	5 896 514.7	30.6	-
16/08/2020	20:13:52	SS_18	HG	FA/PSDA	595	-	374 188.9	5 896 486.1	374 186.4	5 896 505.5	19.5	-
16/08/2020	20:48:23	SS_18	HG	NS	596	-	374 188.9	5 896 486.1	374 172.3	5 896 498.0	20.4	-
16/08/2020	21:17:29	SS_18	HG	NS	597	-	374 188.9	5 896 486.1	374 186.7	5 896 509.6	23.5	-
16/08/2020	21:21:09	SS_18	HG	NS	598	-	374 188.9	5 896 486.1	374 182.0	5 896 492.7	9.5	-
18/08/2020	15:51:25	SS_03	DG	PC	1190	18.6	380 912.9	5 885 511.5	380 928.5	5 885 502.9	17.8	-

Notes
UTC = Coordinated Universal Time
BSL = Below sea level
SOL = Start of line
EOL = End of line
HG = Hamon grab
FA/FB/FC = Faunal sample A, B or C
PSDA/PSDB/PSDC = Particle size distribution sample A, B or C
NS = No sample
SG = Shipek grab
PC = Chemistry sample
DG = Day grab

C.2 Grab Log

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)		Comments (fauna, smell, bioturbation, debris)
						Sediment Type	Sediment Description	
11/08/2020	17:31:49	EC_14	FA/PSDA	25	4	gS	Gravelly sand	-
11/08/2020	17:36:45	EC_14	NS	26	0	-	-	-
11/08/2020	17:46:23	EC_14	NS	27	2	gS	Gravelly sand	-
11/08/2020	18:15:54	EC_14	NS	28	0	-	-	Did not trigger
11/08/2020	18:16:45	EC_14	NS	29	1	gS	Gravelly sand	-
11/08/2020	18:16:45	EC_14	PSDB	No fix	2	gS	Gravelly sand	-
11/08/2020	18:32:50	EC_14	NS	30	1	-	Sand	Added weight
11/08/2020	19:10:42	EC_14	NS	31	< 1	-	-	Moved location
11/08/2020	19:49:24	EC_03	NS	47	0	-	-	-
11/08/2020	19:55:58	EC_03	NS	48	0	-	-	-
11/08/2020	20:03:18	EC_03	PSDA	49	2	gS	Gravelly sand	Changed to back-up Hamon grab
11/08/2020	20:29:26	EC_03	NS	50	< 1	gS	Gravelly sand	Changed back to original grab
11/08/2020	20:51:24	EC_03	NS	51	0	-	-	-
11/08/2020	20:56:17	EC_03	NS	52	0	-	-	-
11/08/2020	21:00:43	EC_03	PSDB	53	1	gS	Gravelly sand	-
11/08/2020	21:13:20	EC_03	PSDC	54	2	gS	Gravelly sand	-
11/08/2020	21:41:51	EC_19	FA/PSDA	64	6	S	Sand with shell fragments	-
11/08/2020	21:59:11	EC_19	FB/PSDB	65	5	S	Sand with shell fragments	-
11/08/2020	22:13:28	EC_19	FC/PSDC	66	5	S	Sand with shell fragments	-
11/08/2020	23:38:18	EC_25	PSDA	75	2	gS	Gravelly sand	Very coarse, different from all other gravelly sand samples

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)		Comments (fauna, smell, bioturbation, debris)
						Sediment Type	Sediment Description	
11/08/2020	23:46:24	EC_25	NS	76	<1	gS	Gravelly sand	Very coarse, different from all other gravelly sand samples
12/08/2020	23:54:23	EC_25	NS	77	2	gS	Gravelly sand	Crab
12/08/2020	00:08:17	EC_25	NS	78	1	gS	Gravelly sand	Shore crab, squat lobster, slipper limpet
12/08/2020	00:47:27	EC_04	PSDA	87	2	gS	Gravelly sand	Crab
12/08/2020	00:54:16	EC_04	NS	88	2	gS	Gravelly sand	-
12/08/2020	01:01:46	EC_04	NS	89	2	gS	Gravelly sand	-
12/08/2020	01:31:18	EC_24	PSDA	100	2	sG	Sandy gravel	Slipper limpet
12/08/2020	01:43:00	EC_24	PSDB	101	2	gS	Gravelly sand	-
12/08/2020	01:50:07	EC_24	NS	102	< 1	gS	Gravelly sand	-
12/08/2020	02:18:13	EC_24	PSDC	103	2	gS	Gravelly sand	-
12/08/2020	02:57:27	EC_05	FA/PSDA	115	4	sG	Sandy gravel	Crabs
12/08/2020	03:37:11	EC_18	PSDA	127	2	gS	Gravelly sand	-
12/08/2020	03:44:52	EC_18	NS	128	2	gS	Gravelly sand	-
12/08/2020	03:53:40	EC_18	NS	130	2	gS	Gravelly sand	-
12/08/2020	04:50:36	EC_17	FA/PSDA	151	5	(g)S	Slightly gravelly sand	*Sabellaria* fragments
12/08/2020	05:58:25	EC_07	NS	174	3	(g)S	Slightly gravelly sand	Out of target tolerance
12/08/2020	06:05:17	EC_07	PSDA	175	3	(g)S	Slightly gravelly sand	-
12/08/2020	06:10:39	EC_07	PSDB	176	3	(g)S	Slightly gravelly sand	-
12/08/2020	06:21:37	EC_07	FA/PSDC	177	5	(g)S	Slightly gravelly sand	-
12/08/2020	06:35:38	EC_07	FB	178	4	(g)S	Slightly gravelly sand	-
12/08/2020	07:26:24	EC_07	FC	179	3	gS	Gravelly sand	-
12/08/2020	07:32:56	EC_07	NS	180	2	gS	Gravelly sand	-

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)		Comments (fauna, smell, bioturbation, debris)
						Sediment Type	Sediment Description	
12/08/2020	08:14:16	EC_08	FA/PSDA	191	6	S	Sand with shell fragments	-
12/08/2020	11:46:20	EC_15	NS	215	1	S	Sand with shell fragments	-
12/08/2020	11:50:47	EC_15	FA/PSDA	216	4	S	Sand with shell fragments	-
12/08/2020	11:59:28	EC_15	NS	217	< 1	S	Sand	-
12/08/2020	13:26:54	EC_15	PC	218	5	gS	Gravelly sand	Shipek
12/08/2020	14:48:17	EC_04	NS	239	< 1	gS	Gravelly sand	Shipek
12/08/2020	14:57:28	EC_04	PC	240	3	gS	Gravelly sand	Shipek HMA1, HCA1
12/08/2020	15:29:34	EC_05	NS	241	< 1	gS	Gravelly sand	Shipek
12/08/2020	15:36:22	EC_05	PC	242	3	gS	Gravelly sand	Shipek HMA1, HCA1
12/08/2020	18:21:53	EC_09	FA/PSDA	250	6	S	Sand with shell fragments	-
12/08/2020	18:51:01	EC_09	FB/PSDB	251	6	S	Sand with shell fragments	Crab
12/08/2020	19:33:53	EC_09	FC/PSDC	252	6	S	Sand with shell fragments	-
12/08/2020	20:08:31	EC_16	FA/PSDA	263	4	mS	Muddy sand with shell fragments	Lumps of clay
12/08/2020	20:18:39	EC_16	NS	264	2	msG	Muddy sandy gravel	-
12/08/2020	20:24:50	EC_16	NS	265	2	msG	Muddy sandy gravel	-
12/08/2020	20:57:55	EC_10	NS	278	3	(g)mS	Slightly gravelly muddy sand with shell fragments	-
12/08/2020	21:05:20	EC_10	FA/PSDA	279	5	(g)mS	Slightly gravelly muddy sand with shell fragments	-
12/08/2020	21:43:15	EC_12	NS	293	< 1	(g)mS	Slightly gravelly muddy sand with shell fragments	-
12/08/2020	21:47:10	EC_12	FA/PSDA	294	4	(g)mS	Slightly gravelly muddy sand with shell fragments	-
12/08/2020	21:53:43	EC_12	NS	295	3	(g)mS	Slightly gravelly muddy sand with shell fragments	-
13/08/2020	23:55:17	EC_23	FA/PSDA	304	5	gS	Gravelly sand	Fragments of *Sabellaria*
13/08/2020	00:14:15	EC_23	FB/PSDB	305	6	gS	Gravelly sand	*Liocarcinus* sp.

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)		Comments (fauna, smell, bioturbation, debris)
						Sediment Type	Sediment Description	
13/08/2020	00:30:33	EC_23	FC/PSDC	306	6	gS	Gravelly sand	-
13/08/2020	01:15:57	EC_11	FA/PSDA	315	4	gS	Gravelly sand with shell fragments	-
13/08/2020	01:23:45	EC_11	NS	316	1	gS	Gravelly sand with shell fragments	-
13/08/2020	01:28:03	EC_11	NS	317	0	-	-	-
13/08/2020	02:10:07	SS_01	FA/PSDA	327	5	gS	Gravelly sand with shell fragments	Fragments of *Sabellaria*
13/08/2020	02:52:17	SS_02	FA/PSDA	335	8	S	Sand with shell fragments	Two 10 L buckets
13/08/2020	03:39:05	SS_03	FA/PSDA	346	5	gS	Gravelly sand	*Sabellaria*
13/08/2020	05:35:45	SS_05	FA/PSDA	365	4	gS	Gravelly sand	-
13/08/2020	05:42:02	SS_05	NS	366	4	gS	Gravelly sand	-
13/08/2020	05:47:01	SS_05	NS	367	4	gS	Gravelly sand	-
13/08/2020	06:30:38	SS_06	FA/PSDA	377	5	gS	Gravelly sand with shell fragments	-
13/08/2020	07:30:53	SS_09	FA/PSDA	386	5	msG	Muddy gravelly sand	-
13/08/2020	08:04:11	SS_07	FA/PSDA	395	5	gS	Gravelly sand	-
13/08/2020	08:54:43	SS_08	FA/PSDA	405	5	sG	Sandy gravel	2 x 10L buckets
13/08/2020	09:29:44	SS_10	NS	414	2	(g)mS	Slightly gravelly muddy sand	-
13/08/2020	09:34:44	SS_10	FA/PSDA	415	6	(g)mS	Slightly gravelly muddy sand	-
13/08/2020	10:11:51	SS_11	FA/PSDA	429	6	(g)mS	Slightly gravelly muddy sand	Fragments of *Sabellaria* and polychaetes
16/08/2020	12:08:02	SS_12	NS	440	< 1	(g)mS	Slightly gravelly muddy sand	-
16/08/2020	12:19:10	SS_12	PSDA	441	2	(g)mS	Slightly gravelly muddy sand	-
16/08/2020	12:24:47	SS_12	NS	442	2	(g)mS	Slightly gravelly muddy sand	-
16/08/2020	14:30:24	SS_19	NS	502	2	(g)mS	Slightly gravelly muddy sand	Sun star
16/08/2020	14:38:03	SS_19	FA/PSDA	503	4	(g)mS	Slightly gravelly muddy sand	Clay lumps, cobbles and shell fragments

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)		Comments (fauna, smell, bioturbation, debris)
						Sediment Type	Sediment Description	
16/08/2020	14:49:43	SS_19	NS	504	1	(g)mS	Slightly gravelly muddy sand	-
16/08/2020	16:07:30	SS_21	FA/PSDA	529	5	(g)mS	Slightly gravelly muddy sand	Crab
16/08/2020	17:25:19	SS_25	FA/PSDA	540	5	(g)mS	Slightly gravelly muddy sand	Cobbles and shell fragments
16/08/2020	18:15:39	SS_23	FA/PSDA	560	6	(g)mS	Slightly gravelly muddy sand	Anoxic patches
16/08/2020	19:28:08	SS_26	NS	582	2	(g)mS	Slightly gravelly muddy sand	Stone in jaw
16/08/2020	19:32:28	SS_26	NS	583	2	(g)mS	Slightly gravelly muddy sand	Stone in jaw
16/08/2020	19:37:00	SS_26	PSDA	584	2	(g)mS	Slightly gravelly muddy sand	Shell fragments
16/08/2020	20:13:52	SS_18	FA/PSDA	595	5	(g)mS	Slightly gravelly muddy sand	Shell fragments
16/08/2020	20:48:23	SS_18	NS	596	0		-	Day grab- cobble in jaw
16/08/2020	21:17:29	SS_18	NS	597	0		-	Day grab- cobble in jaw
16/08/2020	21:21:09	SS_18	NS	598	0		-	Day grab- Cobble in jaw
18/08/2020	15:51:25	SS_03	PC	1190	3	gS	Gravelly sand	Cobbles and shell fragments

Notes
UTC = Coordinated Universal Time
FA/FB/FC = Faunal sample A, B or C
PSDA/PSDB/PSDC = Particle size distribution sample A, B or C
NS = No sample
PC = Chemistry sample

Appendix D

Sediment Particle Size and Grab Sample Photographs

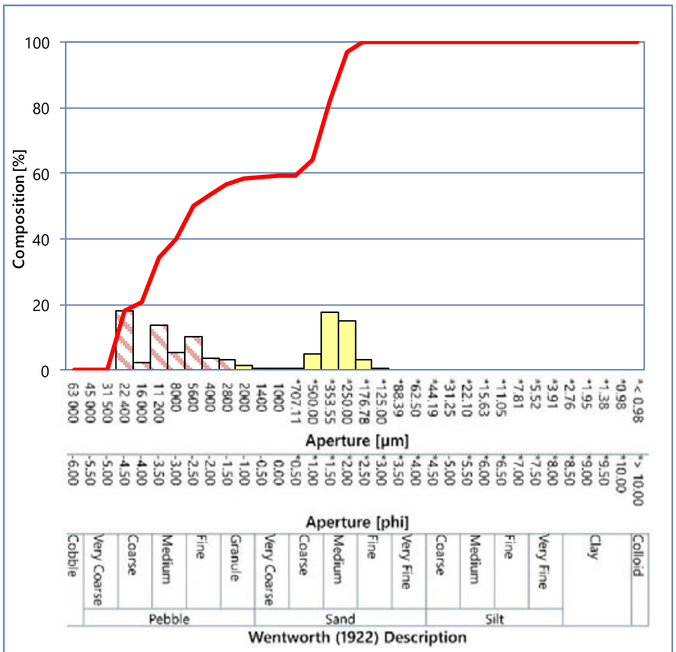
STATION: EC_03_PSDA

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	18.04	18.04
16 000	-4.00	2.49	20.53
11 200	-3.50	13.83	34.35
8000	-3.00	5.46	39.82
5600	-2.50	10.02	49.84
4000	-2.00	3.79	53.63
2800	-1.50	3.08	56.71
2000	-1.00	1.58	58.30
1400	-0.50	0.66	58.96
1000	0.00	0.25	59.21
*707.11	*0.50	0.13	59.34
*500.00	*1.00	4.76	64.10
*353.55	*1.50	17.78	81.88
*250.00	*2.00	15.09	96.96
*176.78	*2.50	3.01	99.97
*125.00	*3.00	0.03	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		**100.00**	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	13600	Medium pebble
Median [µm]†	5522	Fine pebble
Median [phi]†	-2.47	
Mean [µm]†‡	3511	Granule
Mean [phi]†‡	-1.81	
Sorting [µm]‡	5.87	Very poorly sorted
Sorting [phi]‡	2.55	
Skewness [µm]‡	-0.31	Very fine skewed
Skewness [phi]‡	0.31	
Gravel [%]#	58.30	Sandy gravel
Sand [%]#	41.70	
Fines [%]#	0.00	

Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

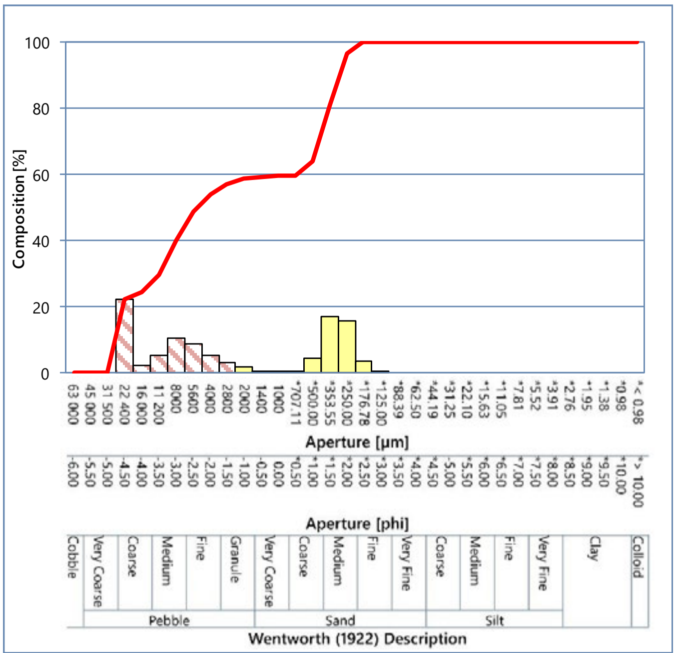
STATION: EC_03_PSDB

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	22.16	22.16
16 000	-4.00	2.35	24.51
11 200	-3.50	5.12	29.62
8000	-3.00	10.35	39.97
5600	-2.50	8.80	48.77
4000	-2.00	5.22	53.99
2800	-1.50	2.92	56.91
2000	-1.00	1.66	58.57
1400	-0.50	0.65	59.22
1000	0.00	0.27	59.49
*707.11	*0.50	0.09	59.58
*500.00	*1.00	4.19	63.77
*353.55	*1.50	17.13	80.90
*250.00	*2.00	15.65	96.55
*176.78	*2.50	3.40	99.96
*125.00	*3.00	0.04	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	5173	Fine pebble
Median [phi]†	-2.37	
Mean [µm]†‡	3477	Granule
Mean [phi]†‡	-1.80	
Sorting [µm]‡	6.01	Very poorly sorted
Sorting [phi]‡	2.59	
Skewness [µm]‡	-0.27	Fine skewed
Skewness [phi]‡	0.27	
Gravel [%]#	58.57	Sandy gravel
Sand [%]#	41.43	
Fines [%]#	0.00	

Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

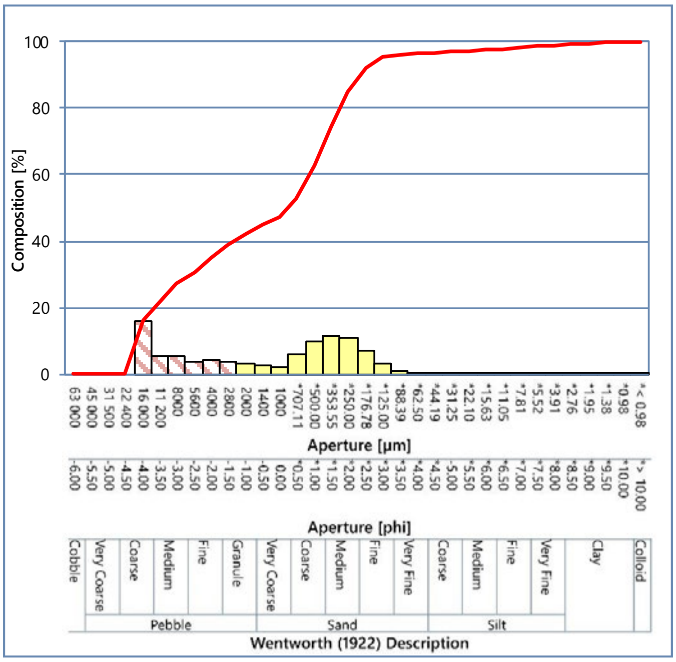
STATION: EC_04_PSDA

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	16.10	16.10
11 200	-3.50	5.53	21.63
8000	-3.00	5.38	27.01
5600	-2.50	3.76	30.77
4000	-2.00	4.43	35.20
2800	-1.50	3.93	39.13
2000	-1.00	3.22	42.35
1400	-0.50	2.69	45.04
1000	0.00	2.04	47.08
*707.11	*0.50	5.97	53.05
*500.00	*1.00	9.51	62.56
*353.55	*1.50	11.68	74.24
*250.00	*2.00	10.79	85.03
*176.78	*2.50	7.24	92.27
*125.00	*3.00	3.26	95.53
*88.39	*3.50	0.81	96.34
*62.50	*4.00	0.11	96.45
*44.19	*4.50	0.24	96.69
*31.25	*5.00	0.36	97.06
*22.10	*5.50	0.32	97.38
*15.63	*6.00	0.26	97.64
*11.05	*6.50	0.28	97.92
*7.81	*7.00	0.35	98.27
*5.52	*7.50	0.40	98.68
*3.91	*8.00	0.40	99.08
*2.76	*8.50	0.34	99.41
*1.95	*9.00	0.25	99.66
*1.38	*9.50	0.17	99.83
*0.98	*10.00	0.12	99.95
*< 0.98	*> 10.00	0.05	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	19200	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	844	Coarse sand
Median [phi]†	0.24	
Mean [µm]†‡	1518	Very coarse sand
Mean [phi]†‡	-0.60	
Sorting [µm]‡	6.01	Very poorly sorted
Sorting [phi]‡	2.59	
Skewness [µm]‡	0.34	Very coarse skewed
Skewness [phi]‡	-0.34	
Gravel [%]#	42.35	Sandy gravel
Sand [%]#	54.11	
Fines [%]#	3.55	

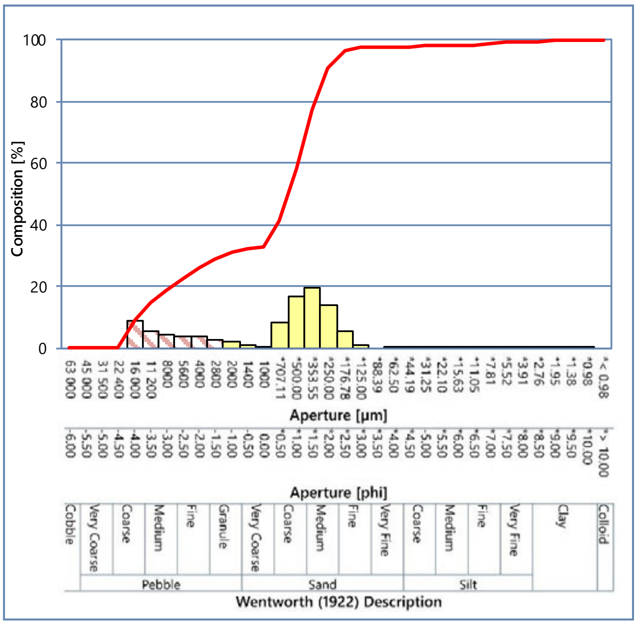
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0 98 µm) at 0 5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_05_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	6.62	6.62
11 200	-3.50	7.73	14.35
8000	-3.00	5.66	20.00
5600	-2.50	5.06	25.06
4000	-2.00	4.82	29.88
2800	-1.50	4.27	34.15
2000	-1.00	3.34	37.50
1400	-0.50	2.70	40.19
1000	0.00	2.36	42.56
*707.11	*0.50	7.29	49.85
*500.00	*1.00	10.45	60.31
*353.55	*1.50	11.68	71.99
*250.00	*2.00	10.52	82.51
*176.78	*2.50	7.53	90.04
*125.00	*3.00	3.93	93.96
*88.39	*3.50	1.26	95.22
*62.50	*4.00	0.20	95.42
*44.19	*4.50	0.19	95.61
*31.25	*5.00	0.38	95.99
*22.10	*5.50	0.42	96.42
*15.63	*6.00	0.39	96.80
*11.05	*6.50	0.40	97.20
*7.81	*7.00	0.48	97.68
*5.52	*7.50	0.54	98.22
*3.91	*8.00	0.53	98.75
*2.76	*8.50	0.44	99.20
*1.95	*9.00	0.32	99.52
*1.38	*9.50	0.22	99.74
*0.98	*10.00	0.15	99.89
*< 0.98	*> 10.00	0.11	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	13600	Medium pebble
Mode 3 [µm]†	4800	Fine pebble
Median [µm]†	704	Coarse sand
Median [phi]†	0.51	
Mean [µm]†‡	1186	Very coarse sand
Mean [phi]†‡	-0.25	
Sorting [µm]‡	5.66	Very poorly sorted
Sorting [phi]‡	2.50	
Skewness [µm]‡	0.32	Very coarse skewed
Skewness [phi]‡	-0.32	
Gravel [%]#	37.50	Sandy gravel
Sand [%]#	57.92	
Fines [%]#	4.58	

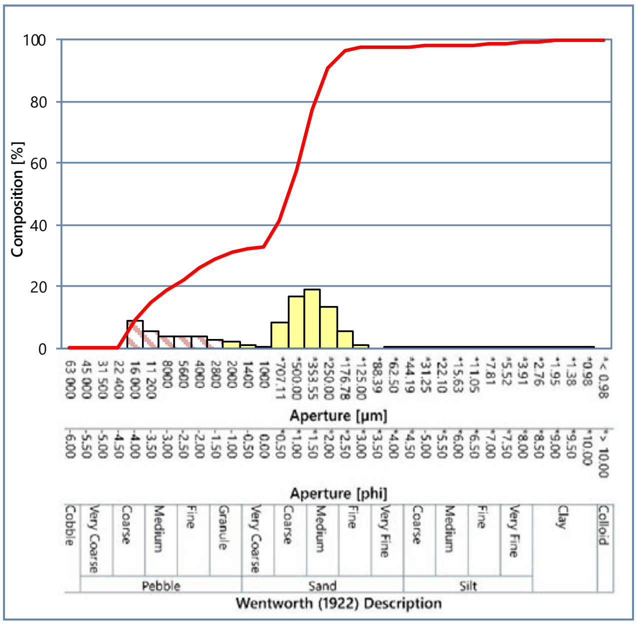
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_07_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	9.09	9.09
11 200	-3.50	5.54	14.64
8000	-3.00	4.13	18.77
5600	-2.50	3.67	22.44
4000	-2.00	3.67	26.11
2800	-1.50	2.90	29.01
2000	-1.00	2.04	31.05
1400	-0.50	1.13	32.18
1000	0.00	0.66	32.84
*707.11	*0.50	8.34	41.17
*500.00	*1.00	16.79	57.97
*353.55	*1.50	19.34	77.30
*250.00	*2.00	13.68	90.98
*176.78	*2.50	5.60	96.59
*125.00	*3.00	0.84	97.43
*88.39	*3.50	0.00	97.43
*62.50	*4.00	0.01	97.44
*44.19	*4.50	0.28	97.73
*31.25	*5.00	0.30	98.03
*22.10	*5.50	0.17	98.20
*15.63	*6.00	0.13	98.33
*11.05	*6.50	0.20	98.53
*7.81	*7.00	0.28	98.80
*5.52	*7.50	0.31	99.11
*3.91	*8.00	0.29	99.40
*2.76	*8.50	0.24	99.64
*1.95	*9.00	0.19	99.82
*1.38	*9.50	0.14	99.97
*0.98	*10.00	0.03	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	19200	Coarse pebble
Mode 3 [µm]†	4800	Fine pebble
Median [µm]†	589	Coarse sand
Median [phi]†	0.76	
Mean [µm]†‡	1208	Very coarse sand
Mean [phi]†‡	-0.27	
Sorting [µm]‡	4.80	Very poorly sorted
Sorting [phi]‡	2.26	
Skewness [µm]‡	0.56	Very coarse skewed
Skewness [phi]‡	-0.56	
Gravel [%]#	31.05	Sandy gravel
Sand [%]#	66.40	
Fines [%]#	2.56	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

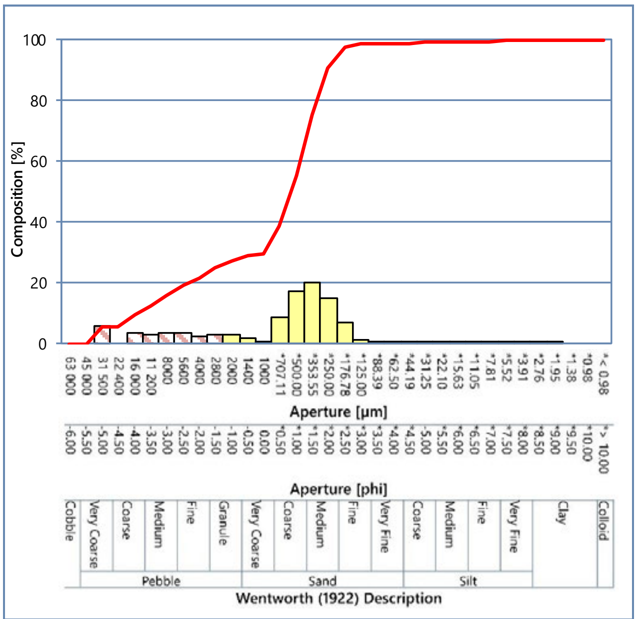
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_07_PSDB

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	5.73	5.73
22 400	-4.50	0.00	5.73
16 000	-4.00	3.59	9.32
11 200	-3.50	3.08	12.40
8000	-3.00	3.22	15.61
5600	-2.50	3.49	19.10
4000	-2.00	2.54	21.64
2800	-1.50	3.04	24.68
2000	-1.00	2.72	27.40
1400	-0.50	1.58	28.97
1000	0.00	0.81	29.78
*707.11	*0.50	8.66	38.43
*500.00	*1.00	17.03	55.47
*353.55	*1.50	20.03	75.50
*250.00	*2.00	15.07	90.56
*176.78	*2.50	6.94	97.51
*125.00	*3.00	1.38	98.89
*88.39	*3.50	0.00	98.89
*62.50	*4.00	0.01	98.90
*44.19	*4.50	0.13	99.03
*31.25	*5.00	0.15	99.18
*22.10	*5.50	0.06	99.25
*15.63	*6.00	0.00	99.25
*11.05	*6.50	0.08	99.33
*7.81	*7.00	0.17	99.50
*5.52	*7.50	0.19	99.69
*3.91	*8.00	0.17	99.85
*2.76	*8.50	0.13	99.98
*1.95	*9.00	0.02	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	38250	Very coarse pebble
Mode 3 [µm]†	19200	Coarse pebble
Median [µm]†	559	Coarse sand
Median [phi]†	0.84	
Mean [µm]†‡	1077	Very coarse sand
Mean [phi]†‡	-0.11	
Sorting [µm]‡	4.91	Very poorly sorted
Sorting [phi]‡	2.30	
Skewness [µm]‡	0.60	Very coarse skewed
Skewness [phi]‡	-0.60	
Gravel [%]#	27.40	Gravelly sand
Sand [%]#	71.50	
Fines [%]#	1.10	

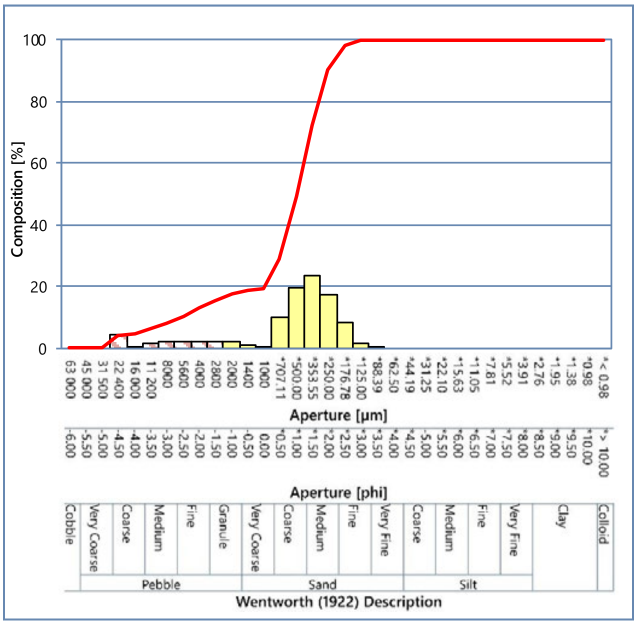
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_07_PSDC

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	4.35	4.35
16 000	-4.00	0.31	4.66
11 200	-3.50	1.53	6.19
8000	-3.00	2.00	8.19
5600	-2.50	2.48	10.66
4000	-2.00	2.39	13.06
2800	-1.50	2.25	15.31
2000	-1.00	2.31	17.62
1400	-0.50	1.10	18.72
1000	0.00	0.51	19.23
*707.11	*0.50	9.98	29.21
*500.00	*1.00	19.93	49.14
*353.55	*1.50	23.39	72.53
*250.00	*2.00	17.66	90.19
*176.78	*2.50	8.22	98.42
*125.00	*3.00	1.58	99.99
*88.39	*3.50	0.01	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	26950	Coarse pebble
Mode 3 [µm]†	-	-
Median [µm]†	494	Medium sand
Median [phi]†	1.02	
Mean [µm]†‡	707	Coarse sand
Mean [phi]†‡	0.50	
Sorting [µm]‡	3.31	Poorly sorted
Sorting [phi]‡	1.73	
Skewness [µm]‡	0.54	Very coarse skewed
Skewness [phi]‡	-0.54	
Gravel [%]#	17.62	Gravelly sand
Sand [%]#	82.38	
Fines [%]#	0.00	

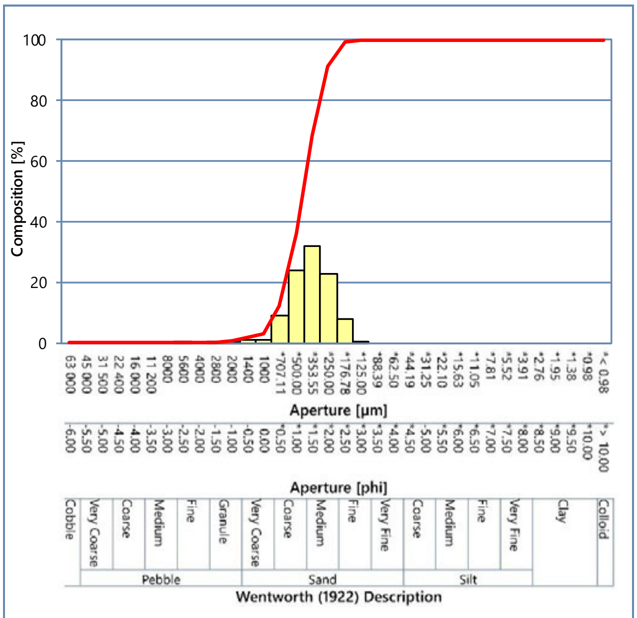
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_08_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
> 63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.07	0.07
4000	-2.00	0.00	0.07
2800	-1.50	0.22	0.29
2000	-1.00	0.50	0.79
1400	-0.50	0.99	1.78
1000	0.00	1.18	2.96
*707.11	*0.50	9.30	12.26
*500.00	*1.00	24.11	36.37
*353.55	*1.50	32.05	68.42
*250.00	*2.00	23.05	91.47
*176.78	*2.50	7.94	99.41
*125.00	*3.00	0.59	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	-	-
Mode 3 [µm]†	-	-
Median [µm]†	431	Medium sand
Median [phi]†	1.21	
Mean [µm]†‡	432	Medium sand
Mean [phi]†‡	1.21	
Sorting [µm]‡	1.55	Moderately well sorted
Sorting [phi]‡	0.64	
Skewness [µm]‡	0.03	Symmetrical
Skewness [phi]‡	-0.03	
Gravel [%]#	0.79	Sand
Sand [%]#	99.21	
Fines [%]#	0.00	

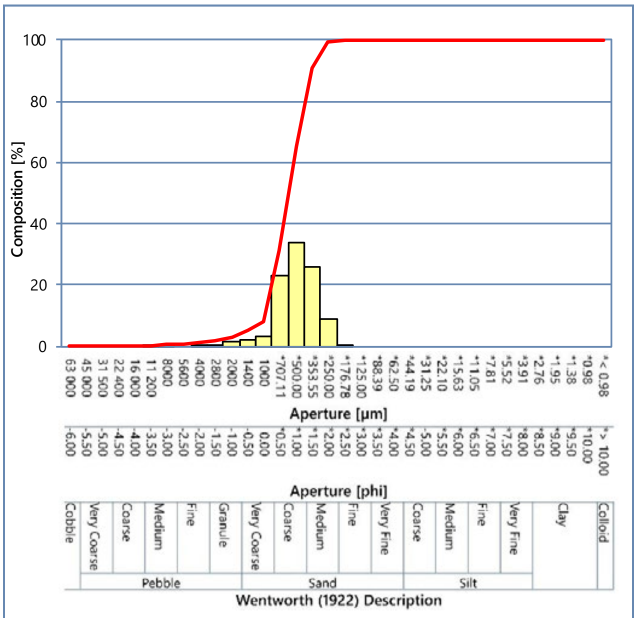
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_09_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.28	0.28
8000	-3.00	0.19	0.47
5600	-2.50	0.00	0.47
4000	-2.00	0.51	0.98
2800	-1.50	0.50	1.48
2000	-1.00	1.31	2.79
1400	-0.50	2.25	5.04
1000	0.00	3.00	8.04
*707.11	*0.50	23.15	31.19
*500.00	*1.00	33.96	65.14
*353.55	*1.50	25.81	90.96
*250.00	*2.00	8.61	99.56
*176.78	*2.50	0.44	100.00
*125.00	*3.00	0.00	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	604	Coarse sand
Mode 2 [µm]†	-	-
Mode 3 [µm]†	-	-
Median [µm]†	584	Coarse sand
Median [phi]†	0.78	
Mean [µm]†‡	586	Coarse sand
Mean [phi]†‡	0.77	
Sorting [µm]‡	1.55	Moderately well sorted
Sorting [phi]‡	0.64	
Skewness [µm]‡	0.08	Symmetrical
Skewness [phi]‡	-0.08	
Gravel [%]#	2.79	Sand
Sand [%]#	97.21	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

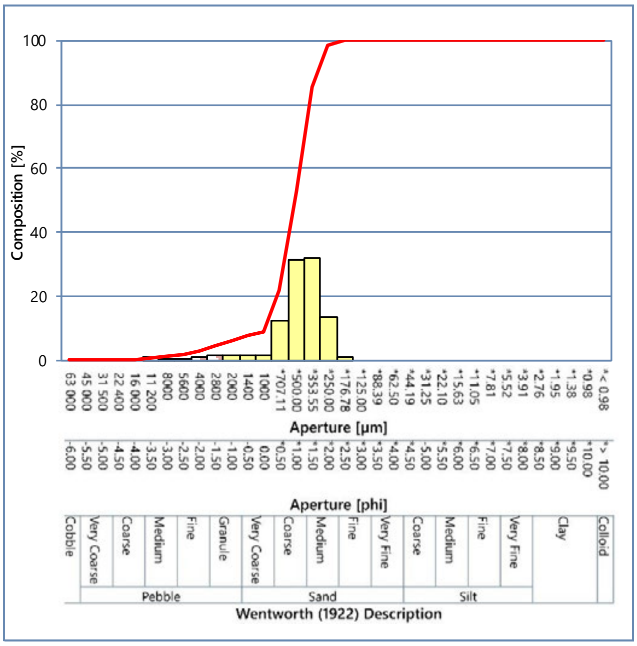
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_09_PSDB

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.86	0.86
8000	-3.00	0.40	1.26
5600	-2.50	0.54	1.80
4000	-2.00	1.25	3.05
2800	-1.50	1.40	4.45
2000	-1.00	1.59	6.04
1400	-0.50	1.55	7.59
1000	0.00	1.54	9.13
*707.11	*0.50	12.67	21.80
*500.00	*1.00	31.36	53.16
*353.55	*1.50	32.25	85.41
*250.00	*2.00	13.29	98.70
*176.78	*2.50	1.30	100.00
*125.00	*3.00	0.00	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	-	-
Mode 3 [µm]†	-	-
Median [µm]†	518	Coarse sand
Median [phi]†	0.95	
Mean [µm]†‡	536	Coarse sand
Mean [phi]†‡	0.90	
Sorting [µm]‡	1.72	Moderately sorted
Sorting [phi]‡	0.78	
Skewness [µm]‡	0.28	Coarse skewed
Skewness [phi]‡	-0.28	
Gravel [%]#	6.04	Gravelly sand
Sand [%]#	93.96	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

= Description based on BGS modified Folk classification (Long, 2006)

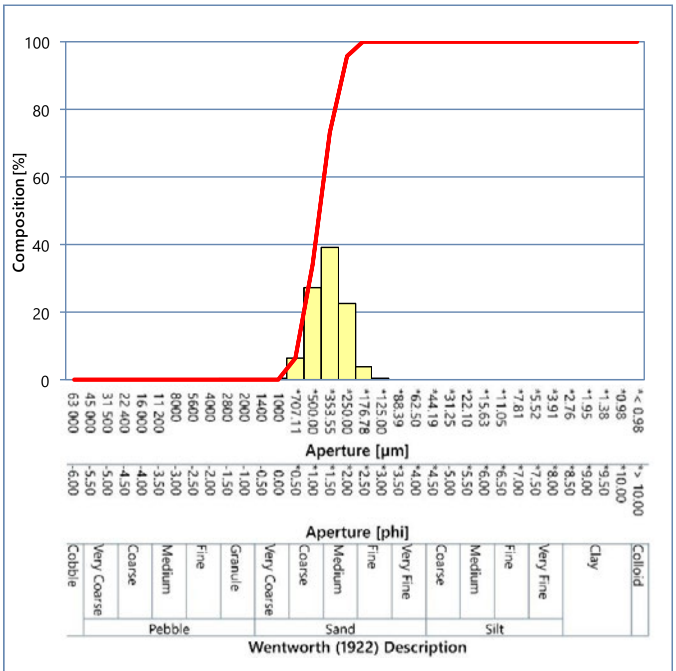
STATION: EC_09_PSDC

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.02	0.02
2000	-1.00	0.02	0.04
1400	-0.50	0.07	0.11
1000	0.00	0.08	0.19
*707.11	*0.50	6.55	6.75
*500.00	*1.00	27.34	34.08
*353.55	*1.50	39.14	73.23
*250.00	*2.00	22.60	95.82
*176.78	*2.50	4.16	99.98
*125.00	*3.00	0.02	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	-	-
Mode 3 [µm]†	-	-
Median [µm]†	434	Medium sand
Median [phi]†	1.20	
Mean [µm]‡	434	Medium sand
Mean [phi]‡	1.20	
Sorting [µm]‡	1.43	Moderately well sorted
Sorting [phi]‡	0.51	
Skewness [µm]‡	0.02	Symmetrical
Skewness [phi]‡	-0.02	
Gravel [%]#	0.04	Sand
Sand [%]#	99.96	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

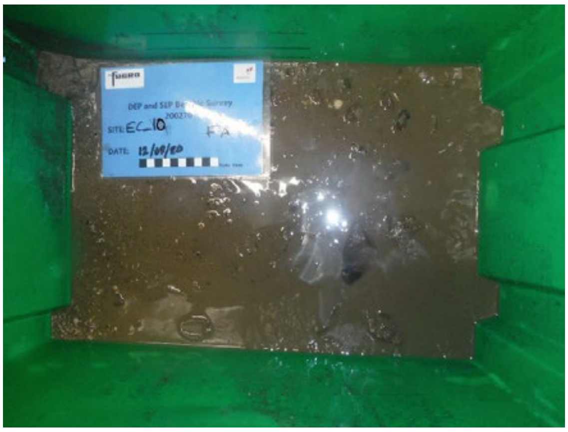
* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

= Description based on BGS modified Folk classification (Long, 2006)

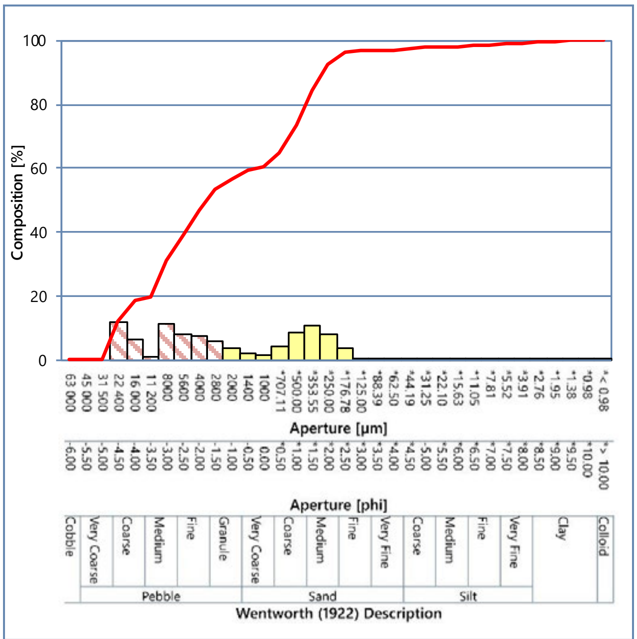
STATION: EC_10_PSDA



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	12.17	12.17
16 000	-4.00	6.41	18.58
11 200	-3.50	1.28	19.86
8000	-3.00	11.34	31.20
5600	-2.50	8.36	39.56
4000	-2.00	7.57	47.13
2800	-1.50	6.18	53.31
2000	-1.00	3.54	56.85
1400	-0.50	2.33	59.18
1000	0.00	1.53	60.71
*707.11	*0.50	4.25	64.96
*500.00	*1.00	8.64	73.59
*353.55	*1.50	10.79	84.38
*250.00	*2.00	8.31	92.69
*176.78	*2.50	3.66	96.35
*125.00	*3.00	0.64	96.98
*88.39	*3.50	0.00	96.98
*62.50	*4.00	0.06	97.04
*44.19	*4.50	0.31	97.36
*31.25	*5.00	0.32	97.68
*22.10	*5.50	0.22	97.90
*15.63	*6.00	0.19	98.09
*11.05	*6.50	0.24	98.33
*7.81	*7.00	0.30	98.64
*5.52	*7.50	0.33	98.97
*3.91	*8.00	0.32	99.29
*2.76	*8.50	0.26	99.55
*1.95	*9.00	0.19	99.74
*1.38	*9.50	0.13	99.87
*0.98	*10.00	0.08	99.96
*< 0.98	*> 10.00	0.04	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	9600	Medium pebble
Mode 3 [µm]†	427	Medium sand
Median [µm]†	3389	Granule
Median [phi]†	-1.76	
Mean [µm]†‡	2811	Granule
Mean [phi]†‡	-1.49	
Sorting [µm]‡	5.63	Very poorly sorted
Sorting [phi]‡	2.49	
Skewness [µm]‡	-0.15	Fine skewed
Skewness [phi]‡	0.15	
Gravel [%]#	56.85	Sandy gravel
Sand [%]#	40.19	
Fines [%]#	2.96	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

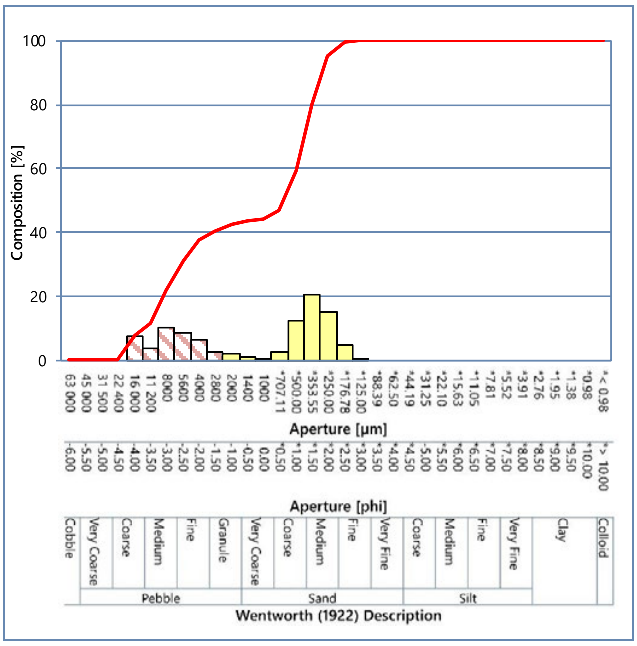
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_11_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	7.82	7.82
11 200	-3.50	3.92	11.74
8000	-3.00	10.42	22.16
5600	-2.50	8.85	31.01
4000	-2.00	6.67	37.68
2800	-1.50	2.90	40.58
2000	-1.00	2.09	42.67
1400	-0.50	1.06	43.73
1000	0.00	0.65	44.38
*707.11	*0.50	2.68	47.05
*500.00	*1.00	12.31	59.37
*353.55	*1.50	20.42	79.78
*250.00	*2.00	15.34	95.12
*176.78	*2.50	4.69	99.81
*125.00	*3.00	0.19	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	9600	Medium pebble
Mode 3 [µm]†	19200	Coarse pebble
Median [µm]†	651	Coarse sand
Median [phi]†	0.62	
Mean [µm]†‡	1269	Very coarse sand
Mean [phi]†‡	-0.34	
Sorting [µm]‡	4.49	Very poorly sorted
Sorting [phi]‡	2.17	
Skewness [µm]‡	0.57	Very coarse skewed
Skewness [phi]‡	-0.57	
Gravel [%]#	42.67	Sandy gravel
Sand [%]#	57.33	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

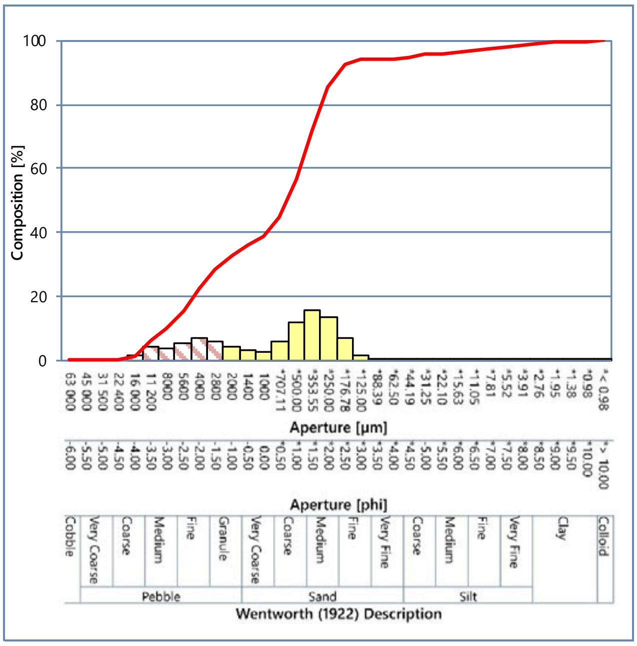
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_12_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	1.44	1.44
11 200	-3.50	4.53	5.97
8000	-3.00	3.92	9.89
5600	-2.50	5.60	15.49
4000	-2.00	7.16	22.65
2800	-1.50	5.72	28.37
2000	-1.00	4.58	32.95
1400	-0.50	3.30	36.25
1000	0.00	2.45	38.70
*707.11	*0.50	6.00	44.70
*500.00	*1.00	11.82	56.52
*353.55	*1.50	15.56	72.08
*250.00	*2.00	13.31	85.39
*176.78	*2.50	6.96	92.35
*125.00	*3.00	1.81	94.16
*88.39	*3.50	0.13	94.29
*62.50	*4.00	0.12	94.41
*44.19	*4.50	0.52	94.93
*31.25	*5.00	0.57	95.50
*22.10	*5.50	0.41	95.91
*15.63	*6.00	0.34	96.25
*11.05	*6.50	0.43	96.67
*7.81	*7.00	0.56	97.24
*5.52	*7.50	0.63	97.87
*3.91	*8.00	0.61	98.48
*2.76	*8.50	0.51	98.99
*1.95	*9.00	0.38	99.37
*1.38	*9.50	0.26	99.63
*0.98	*10.00	0.18	99.82
*< 0.98	*> 10.00	0.18	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	4800	Fine pebble
Mode 3 [µm]†	13600	Medium pebble
Median [µm]†	605	Coarse sand
Median [phi]†	0.72	
Mean [µm]†‡	950	Coarse sand
Mean [phi]†‡	0.07	
Sorting [µm]‡	5.05	Very poorly sorted
Sorting [phi]‡	2.34	
Skewness [µm]‡	0.25	Coarse skewed
Skewness [phi]‡	-0.25	
Gravel [%]#	32.95	Sandy gravel
Sand [%]#	61.46	
Fines [%]#	5.59	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

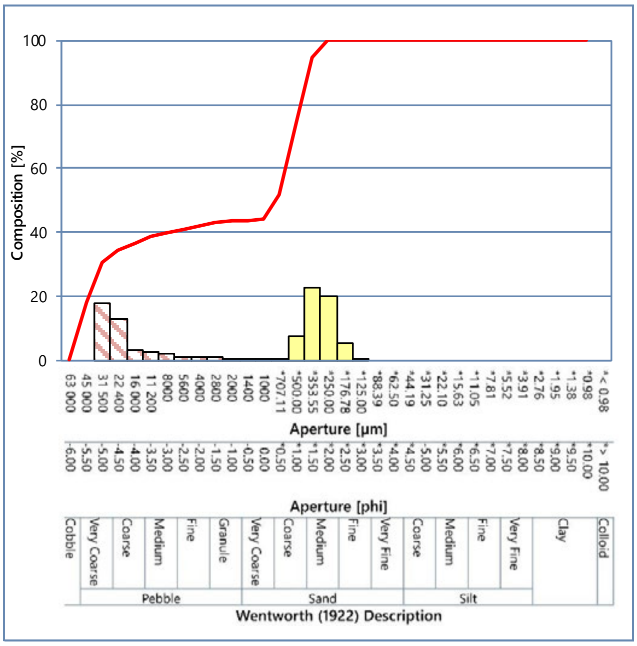
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_14_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	17.95	17.95
22 400	-4.50	12.87	30.82
16 000	-4.00	3.46	34.28
11 200	-3.50	2.59	36.87
8000	-3.00	2.06	38.93
5600	-2.50	0.95	39.88
4000	-2.00	1.30	41.18
2800	-1.50	1.07	42.25
2000	-1.00	0.74	43.00
1400	-0.50	0.47	43.46
1000	0.00	0.30	43.76
*707.11	*0.50	0.41	44.17
*500.00	*1.00	7.74	51.91
*353.55	*1.50	22.66	74.57
*250.00	*2.00	20.12	94.69
*176.78	*2.50	5.18	99.87
*125.00	*3.00	0.13	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	38250	Very coarse pebble
Mode 3 [µm]†	-	-
Median [µm]†	545	Coarse sand
Median [phi]†	0.88	
Mean [µm]†‡	1750	Very coarse sand
Mean [phi]†‡	-0.81	
Sorting [µm]‡	7.01	Very poorly sorted
Sorting [phi]‡	2.81	
Skewness [µm]‡	0.72	Very coarse skewed
Skewness [phi]‡	-0.72	
Gravel [%]#	43.00	Sandy gravel
Sand [%]#	57.00	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

= Description based on BGS modified Folk classification (Long, 2006)

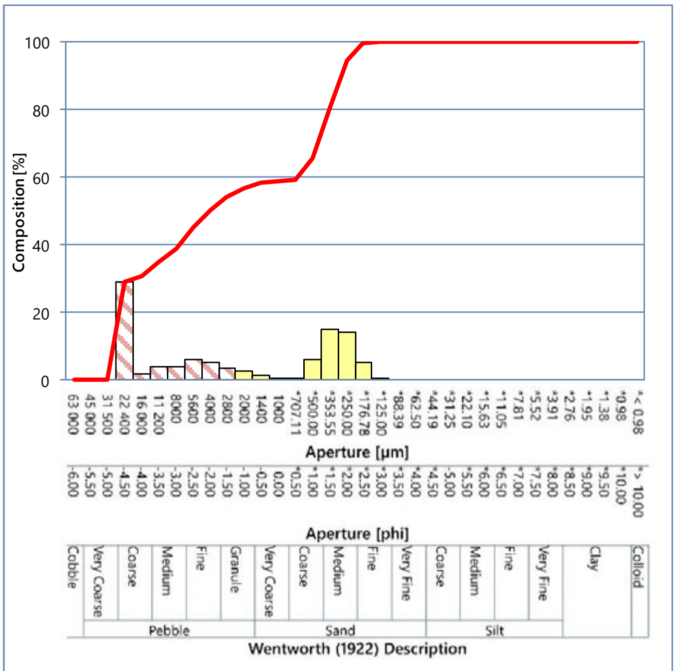
STATION: EC_14_PSDB

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	29.27	29.27
16 000	-4.00	1.67	30.94
11 200	-3.50	4.07	35.02
8000	-3.00	4.00	39.02
5600	-2.50	6.16	45.18
4000	-2.00	5.36	50.54
2800	-1.50	3.60	54.14
2000	-1.00	2.64	56.78
1400	-0.50	1.49	58.26
1000	0.00	0.63	58.89
*707.11	*0.50	0.56	59.45
*500.00	*1.00	6.02	65.47
*353.55	*1.50	14.88	80.35
*250.00	*2.00	14.19	94.54
*176.78	*2.50	5.11	99.65
*125.00	*3.00	0.35	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	6800	Fine pebble
Median [µm]†	4139	Fine pebble
Median [phi]†	-2.05	
Mean [µm]†‡	3271	Granule
Mean [phi]†‡	-1.71	
Sorting [µm]‡	6.21	Very poorly sorted
Sorting [phi]‡	2.64	
Skewness [µm]‡	-0.17	Fine skewed
Skewness [phi]‡	0.17	
Gravel [%]#	56.78	Sandy gravel
Sand [%]#	43.22	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

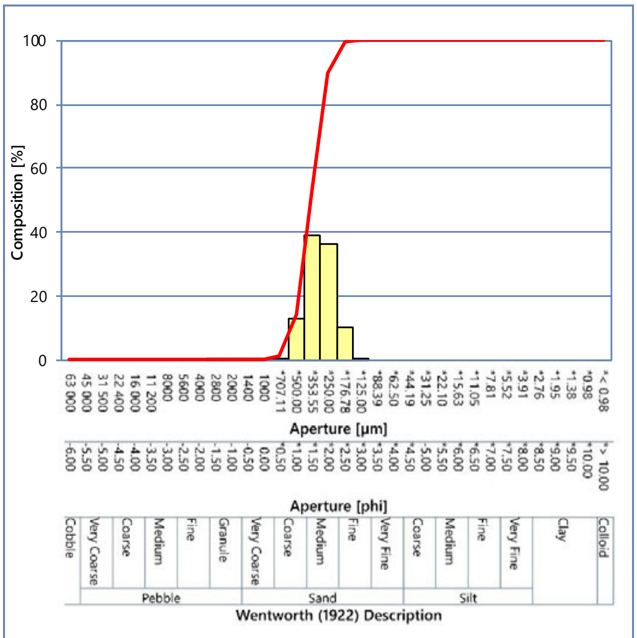
\# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_15_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.07	0.07
2000	-1.00	0.03	0.10
1400	-0.50	0.10	0.20
1000	0.00	0.16	0.36
*707.11	*0.50	0.71	1.08
*500.00	*1.00	13.17	14.24
*353.55	*1.50	39.18	53.42
*250.00	*2.00	36.19	89.61
*176.78	*2.50	10.07	99.68
*125.00	*3.00	0.32	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	-	-
Mode 3 [µm]†	-	-
Median [µm]†	364	Medium sand
Median [phi]†	1.46	
Mean [µm]†‡	362	Medium sand
Mean [phi]†‡	1.47	
Sorting [µm]‡	1.39	Well sorted
Sorting [phi]‡	0.47	
Skewness [µm]‡	-0.02	Symmetrical
Skewness [phi]‡	0.02	
Gravel [%]#	0.10	Sand
Sand [%]#	99.90	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

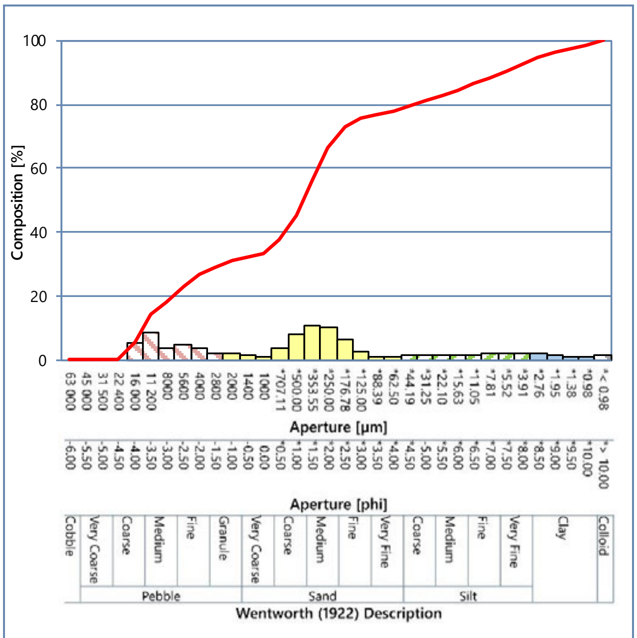
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_16_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	5.61	5.61
11 200	-3.50	8.63	14.24
8000	-3.00	3.81	18.05
5600	-2.50	4.95	23.00
4000	-2.00	3.86	26.86
2800	-1.50	2.08	28.94
2000	-1.00	2.00	30.94
1400	-0.50	1.43	32.36
1000	0.00	1.18	33.55
*707.11	*0.50	4.03	37.57
*500.00	*1.00	7.96	45.54
*353.55	*1.50	10.85	56.39
*250.00	*2.00	10.12	66.50
*176.78	*2.50	6.39	72.89
*125.00	*3.00	2.73	75.62
*88.39	*3.50	1.10	76.73
*62.50	*4.00	1.14	77.87
*44.19	*4.50	1.58	79.45
*31.25	*5.00	1.74	81.19
*22.10	*5.50	1.69	82.88
*15.63	*6.00	1.68	84.56
*11.05	*6.50	1.79	86.35
*7.81	*7.00	1.96	88.31
*5.52	*7.50	2.11	90.41
*3.91	*8.00	2.12	92.53
*2.76	*8.50	1.93	94.46
*1.95	*9.00	1.59	96.05
*1.38	*9.50	1.23	97.28
*0.98	*10.00	0.97	98.26
*< 0.98	*> 10.00	1.74	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	5	Very fine silt
Mode 3 [µm]†	2400	Granule
Median [µm]†	434	Medium sand
Median [phi]†	1.21	
Mean [µm]†‡	418	Medium sand
Mean [phi]†‡	1.26	
Sorting [µm]‡	18.40	Extremely poorly sorted
Sorting [phi]‡	4.20	
Skewness [µm]‡	-0.10	Symmetrical
Skewness [phi]‡	0.10	
Gravel [%]#	30.94	Muddy, sandy gravel
Sand [%]#	46.93	
Fines [%]#	22.13	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

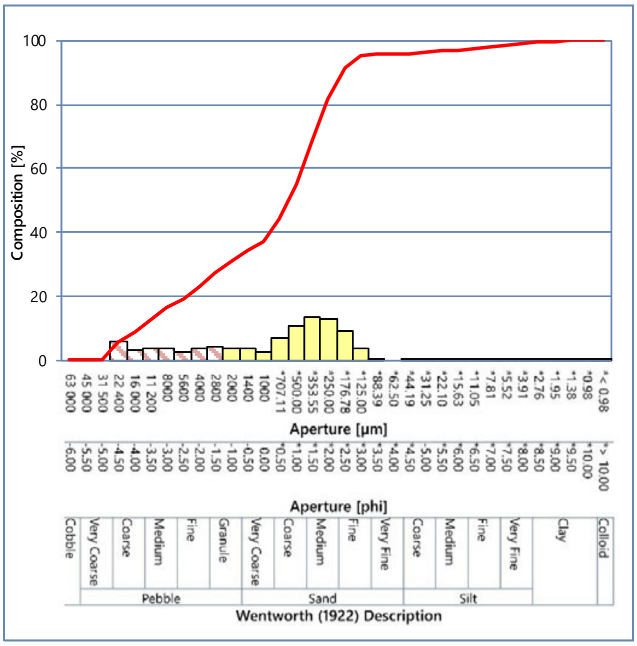
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_17_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	5.69	5.69
16 000	-4.00	3.31	9.00
11 200	-3.50	3.88	12.88
8000	-3.00	3.87	16.75
5600	-2.50	2.68	19.43
4000	-2.00	3.52	22.95
2800	-1.50	4.17	27.12
2000	-1.00	3.92	31.04
1400	-0.50	3.51	34.55
1000	0.00	2.61	37.16
*707.11	*0.50	7.28	44.44
*500.00	*1.00	10.76	55.21
*353.55	*1.50	13.48	68.69
*250.00	*2.00	13.24	81.92
*176.78	*2.50	9.23	91.16
*125.00	*3.00	3.88	95.03
*88.39	*3.50	0.47	95.50
*62.50	*4.00	0.00	95.50
*44.19	*4.50	0.19	95.69
*31.25	*5.00	0.53	96.23
*22.10	*5.50	0.48	96.70
*15.63	*6.00	0.35	97.05
*11.05	*6.50	0.36	97.42
*7.81	*7.00	0.47	97.88
*5.52	*7.50	0.53	98.42
*3.91	*8.00	0.52	98.93
*2.76	*8.50	0.42	99.36
*1.95	*9.00	0.30	99.66
*1.38	*9.50	0.20	99.85
*0.98	*10.00	0.12	99.98
*< 0.98	*> 10.00	0.02	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	26950	Coarse pebble
Mode 3 [µm]†	3400	Granule
Median [µm]†	591	Coarse sand
Median [phi]†	0.76	
Mean [µm]†‡	1053	Very coarse sand
Mean [phi]†‡	-0.07	
Sorting [µm]‡	5.44	Very poorly sorted
Sorting [phi]‡	2.44	
Skewness [µm]‡	0.44	Very coarse skewed
Skewness [phi]‡	-0.44	
Gravel [%]#	31.04	Sandy gravel
Sand [%]#	64.46	
Fines [%]#	4.50	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

= Description based on BGS modified Folk classification (Long, 2006)

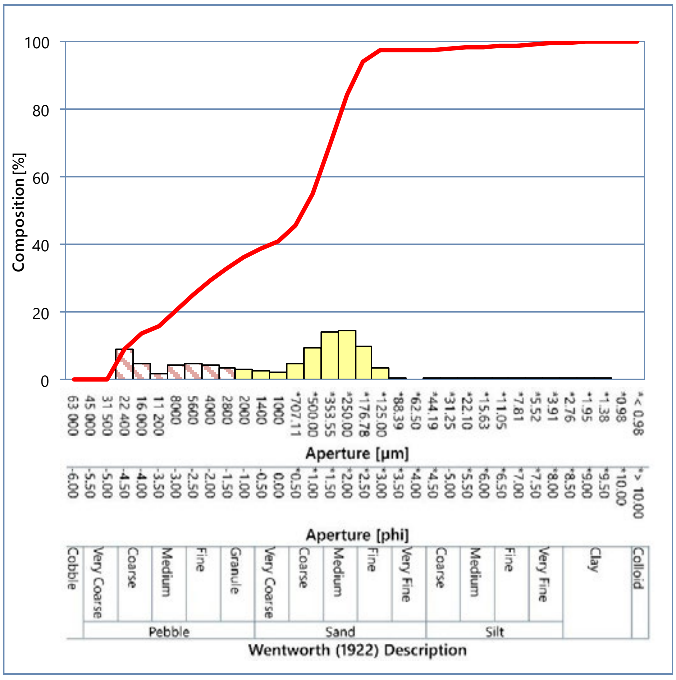
STATION: EC_18_PSDA

No available photo

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	9.07	9.07
16 000	-4.00	4.87	13.95
11 200	-3.50	1.99	15.94
8000	-3.00	4.53	20.46
5600	-2.50	4.71	25.18
4000	-2.00	4.23	29.41
2800	-1.50	3.68	33.09
2000	-1.00	3.20	36.29
1400	-0.50	2.57	38.85
1000	0.00	2.10	40.95
*707.11	*0.50	4.71	45.66
*500.00	*1.00	9.56	55.22
*353.55	*1.50	14.27	69.49
*250.00	*2.00	14.82	84.31
*176.78	*2.50	9.80	94.11
*125.00	*3.00	3.36	97.47
*88.39	*3.50	0.22	97.70
*62.50	*4.00	0.00	97.70
*44.19	*4.50	0.07	97.77
*31.25	*5.00	0.36	98.12
*22.10	*5.50	0.30	98.42
*15.63	*6.00	0.16	98.58
*11.05	*6.50	0.15	98.73
*7.81	*7.00	0.23	98.96
*5.52	*7.50	0.30	99.26
*3.91	*8.00	0.29	99.55
*2.76	*8.50	0.23	99.78
*1.95	*9.00	0.16	99.95
*1.38	*9.50	0.05	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	302	Medium sand
Mode 2 [µm]†	26950	Coarse pebble
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	604	Coarse sand
Median [phi]†	0.73	
Mean [µm]†‡	1193	Very coarse sand
Mean [phi]†‡	-0.25	
Sorting [µm]‡	5.57	Very poorly sorted
Sorting [phi]‡	2.48	
Skewness [µm]‡	0.51	Very coarse skewed
Skewness [phi]‡	-0.51	
Gravel [%]#	36.29	Sandy gravel
Sand [%]#	61.41	
Fines [%]#	2.30	

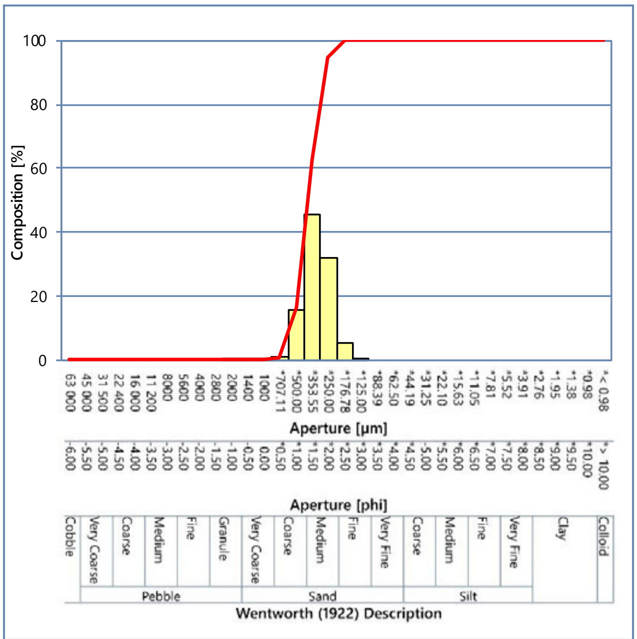
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_19_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.02	0.02
1400	-0.50	0.01	0.03
1000	0.00	0.02	0.05
*707.11	*0.50	0.82	0.87
*500.00	*1.00	15.92	16.79
*353.55	*1.50	45.71	62.49
*250.00	*2.00	32.16	94.65
*176.78	*2.50	5.32	99.97
*125.00	*3.00	0.03	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	-	-
Mode 3 [µm]†	-	-
Median [µm]†	389	Medium sand
Median [phi]†	1.36	
Mean [µm]†‡	381	Medium sand
Mean [phi]†‡	1.39	
Sorting [µm]‡	1.34	Well sorted
Sorting [phi]‡	0.43	
Skewness [µm]‡	-0.03	Symmetrical
Skewness [phi]‡	0.03	
Gravel [%]#	0.02	Sand
Sand [%]#	99.98	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

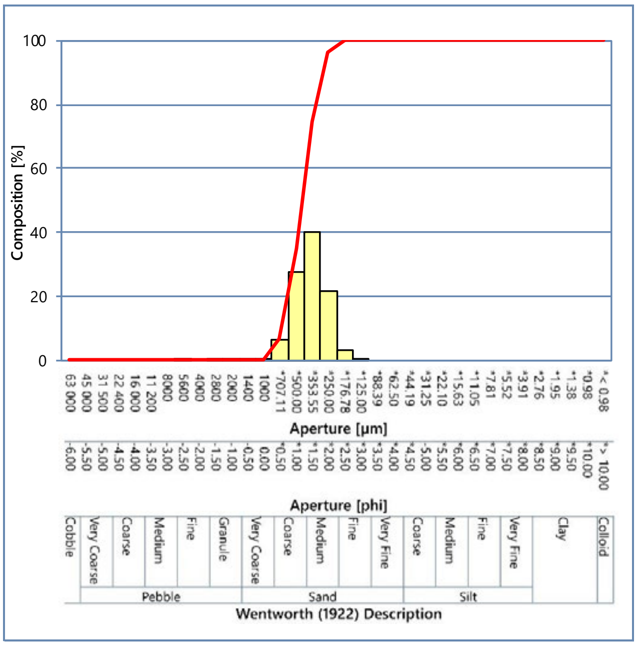
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_19_PSDB

FRACTIONAL DATA

Aperture [μm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.05	0.05
4000	-2.00	0.00	0.05
2800	-1.50	0.04	0.09
2000	-1.00	0.03	0.12
1400	-0.50	0.03	0.16
1000	0.00	0.07	0.23
*707.11	*0.50	6.73	6.96
*500.00	*1.00	27.83	34.79
*353.55	*1.50	39.95	74.74
*250.00	*2.00	21.78	96.52
*176.78	*2.50	3.47	99.99
*125.00	*3.00	0.01	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [μm]†	427	Medium sand
Mode 2 [μm]†	-	-
Mode 3 [μm]†	-	-
Median [μm]†	438	Medium sand
Median [phi]†	1.19	
Mean [μm]†‡	439	Medium sand
Mean [phi]†‡	1.19	
Sorting [μm]‡	1.42	Moderately well sorted
Sorting [phi]‡	0.51	
Skewness [μm]‡	0.02	Symmetrical
Skewness [phi]‡	-0.02	
Gravel [%]#	0.12	Sand
Sand [%]#	99.88	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 μm - 1000 μm) and Laser Diffraction* (< 1000 μm - < 0.98 μm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

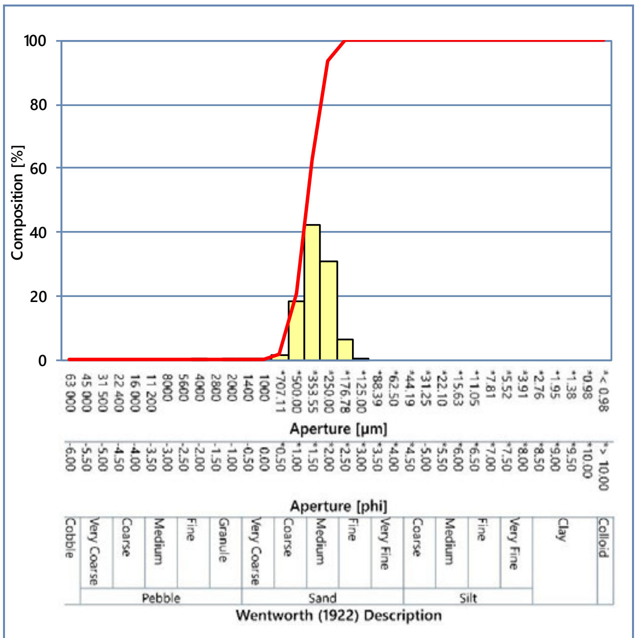
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_19_PSDC

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.02	0.02
2800	-1.50	0.00	0.02
2000	-1.00	0.02	0.04
1400	-0.50	0.05	0.09
1000	0.00	0.08	0.17
*707.11	*0.50	1.77	1.94
*500.00	*1.00	18.68	20.62
*353.55	*1.50	42.30	62.92
*250.00	*2.00	30.77	93.70
*176.78	*2.50	6.23	99.93
*125.00	*3.00	0.07	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	-	-
Mode 3 [µm]†	-	-
Median [µm]†	393	Medium sand
Median [phi]†	1.35	
Mean [µm]†‡	391	Medium sand
Mean [phi]†‡	1.36	
Sorting [µm]‡	1.39	Well sorted
Sorting [phi]‡	0.47	
Skewness [µm]‡	-0.01	Symmetrical
Skewness [phi]‡	0.01	
Gravel [%]#	0.04	Sand
Sand [%]#	99.96	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

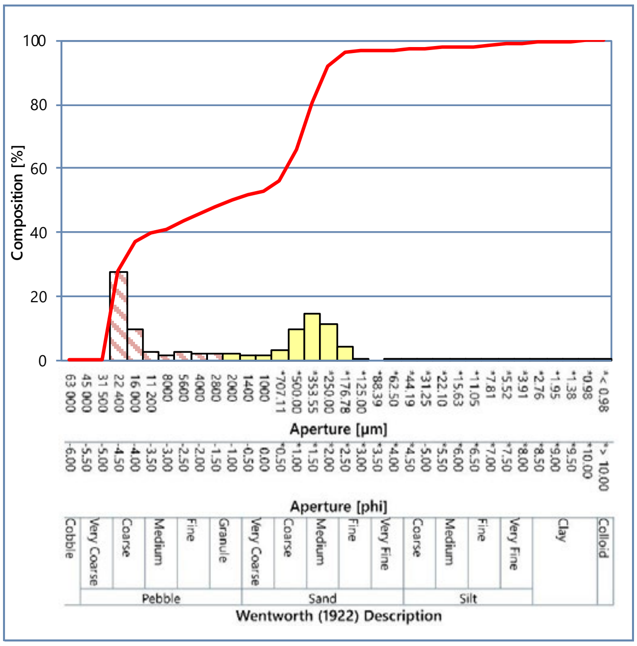
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_23_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	27.74	27.74
16 000	-4.00	9.53	37.27
11 200	-3.50	2.48	39.75
8000	-3.00	1.43	41.18
5600	-2.50	2.68	43.86
4000	-2.00	2.16	46.02
2800	-1.50	1.90	47.91
2000	-1.00	2.01	49.93
1400	-0.50	1.75	51.68
1000	0.00	1.37	53.05
*707.11	*0.50	3.31	56.36
*500.00	*1.00	9.76	66.12
*353.55	*1.50	14.40	80.52
*250.00	*2.00	11.41	91.93
*176.78	*2.50	4.53	96.46
*125.00	*3.00	0.55	97.01
*88.39	*3.50	0.00	97.01
*62.50	*4.00	0.01	97.02
*44.19	*4.50	0.28	97.30
*31.25	*5.00	0.32	97.62
*22.10	*5.50	0.19	97.81
*15.63	*6.00	0.14	97.95
*11.05	*6.50	0.21	98.16
*7.81	*7.00	0.30	98.46
*5.52	*7.50	0.34	98.81
*3.91	*8.00	0.33	99.14
*2.76	*8.50	0.29	99.43
*1.95	*9.00	0.22	99.65
*1.38	*9.50	0.16	99.81
*0.98	*10.00	0.12	99.94
*< 0.98	*> 10.00	0.06	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	-	-
Median [µm]†	1970	Very coarse sand
Median [phi]†	-0.98	
Mean [µm]†‡	2531	Granule
Mean [phi]†‡	-1.34	
Sorting [µm]‡	6.42	Very poorly sorted
Sorting [phi]‡	2.68	
Skewness [µm]‡	0.13	Coarse skewed
Skewness [phi]‡	-0.13	
Gravel [%]#	49.93	Sandy gravel
Sand [%]#	47.09	
Fines [%]#	2.98	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

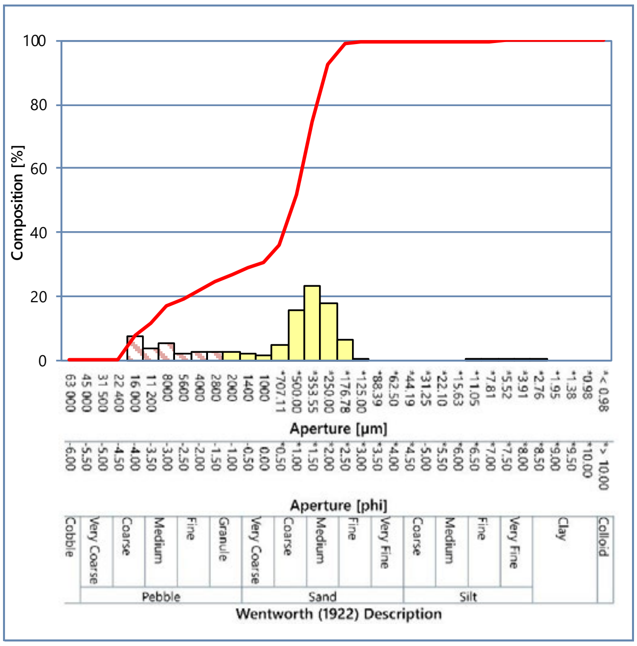
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_23_PSDB

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	7.79	7.79
11 200	-3.50	3.85	11.64
8000	-3.00	5.19	16.83
5600	-2.50	2.39	19.22
4000	-2.00	2.75	21.97
2800	-1.50	2.43	24.39
2000	-1.00	2.63	27.03
1400	-0.50	2.19	29.21
1000	0.00	1.59	30.80
*707.11	*0.50	5.07	35.88
*500.00	*1.00	15.66	51.54
*353.55	*1.50	23.15	74.69
*250.00	*2.00	17.87	92.56
*176.78	*2.50	6.51	99.08
*125.00	*3.00	0.52	99.60
*88.39	*3.50	0.00	99.60
*62.50	*4.00	0.00	99.60
*44.19	*4.50	0.00	99.60
*31.25	*5.00	0.00	99.60
*22.10	*5.50	0.00	99.60
*15.63	*6.00	0.00	99.60
*11.05	*6.50	0.04	99.64
*7.81	*7.00	0.11	99.75
*5.52	*7.50	0.12	99.87
*3.91	*8.00	0.09	99.96
*2.76	*8.50	0.04	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	19200	Coarse pebble
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	517	Coarse sand
Median [phi]†	0.95	
Mean [µm]†‡	1088	Very coarse sand
Mean [phi]†‡	-0.12	
Sorting [µm]‡	4.51	Very poorly sorted
Sorting [phi]‡	2.17	
Skewness [µm]‡	0.64	Very coarse skewed
Skewness [phi]‡	-0.64	
Gravel [%]#	27.03	Gravelly sand
Sand [%]#	72.57	
Fines [%]#	0.40	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

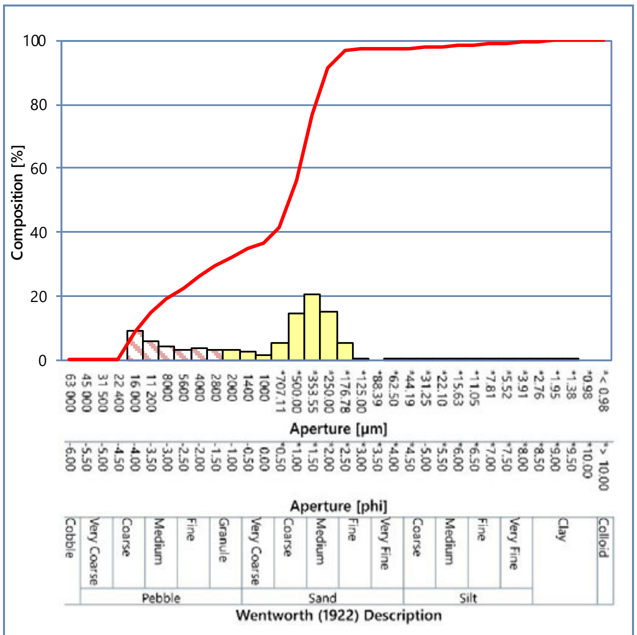
= Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_23_PSDC

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	9.00	9.00
11 200	-3.50	6.01	15.01
8000	-3.00	4.35	19.36
5600	-2.50	2.98	22.34
4000	-2.00	3.81	26.14
2800	-1.50	3.24	29.39
2000	-1.00	3.01	32.39
1400	-0.50	2.41	34.81
1000	0.00	1.74	36.55
*707.11	*0.50	5.14	41.69
*500.00	*1.00	14.57	56.26
*353.55	*1.50	20.42	76.68
*250.00	*2.00	14.98	91.65
*176.78	*2.50	5.17	96.83
*125.00	*3.00	0.42	97.24
*88.39	*3.50	0.00	97.24
*62.50	*4.00	0.02	97.26
*44.19	*4.50	0.36	97.62
*31.25	*5.00	0.36	97.99
*22.10	*5.50	0.17	98.15
*15.63	*6.00	0.11	98.27
*11.05	*6.50	0.21	98.47
*7.81	*7.00	0.32	98.79
*5.52	*7.50	0.36	99.15
*3.91	*8.00	0.32	99.47
*2.76	*8.50	0.25	99.73
*1.95	*9.00	0.18	99.90
*1.38	*9.50	0.10	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	19200	Coarse pebble
Mode 3 [µm]†	4800	Fine pebble
Median [µm]†	580	Coarse sand
Median [phi]†	0.79	
Mean [µm]†‡	1216	Very coarse sand
Mean [phi]†‡	-0.28	
Sorting [µm]‡	4.83	Very poorly sorted
Sorting [phi]‡	2.27	
Skewness [µm]‡	0.58	Very coarse skewed
Skewness [phi]‡	-0.58	
Gravel [%]#	32.39	Sandy gravel
Sand [%]#	64.86	
Fines [%]#	2.74	

Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: EC_24_PSDA

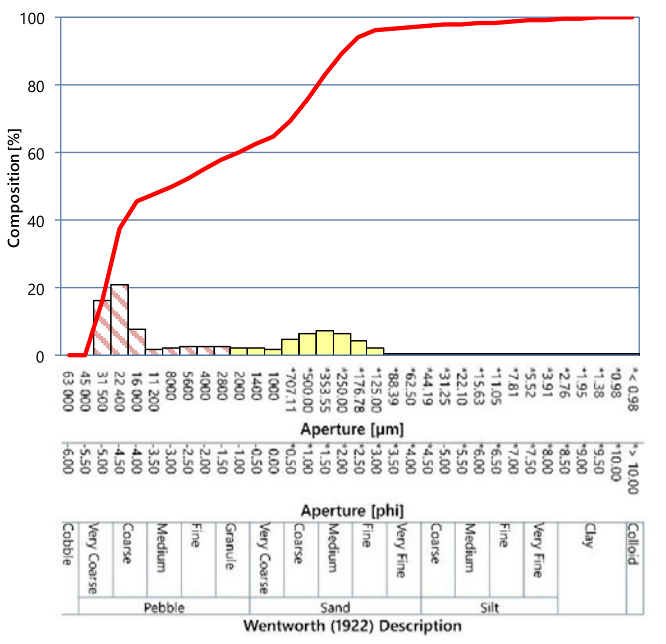
No photo available

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	16.51	16.51
22 400	-4.50	21.17	37.68
16 000	-4.00	7.94	45.62
11 200	-3.50	1.99	47.62
8000	-3.00	2.15	49.77
5600	-2.50	2.91	52.67
4000	-2.00	2.58	55.25
2800	-1.50	2.61	57.86
2000	-1.00	2.47	60.33
1400	-0.50	2.43	62.76
1000	0.00	2.05	64.80
*707.11	*0.50	4.66	69.46
*500.00	*1.00	6.40	75.86
*353.55	*1.50	7.20	83.06
*250.00	*2.00	6.48	89.54
*176.78	*2.50	4.46	94.01
*125.00	*3.00	2.19	96.20
*88.39	*3.50	0.71	96.90
*62.50	*4.00	0.24	97.14
*44.19	*4.50	0.28	97.43
*31.25	*5.00	0.36	97.78
*22.10	*5.50	0.32	98.10
*15.63	*6.00	0.26	98.37
*11.05	*6.50	0.25	98.62
*7.81	*7.00	0.27	98.88
*5.52	*7.50	0.28	99.16
*3.91	*8.00	0.26	99.42
*2.76	*8.50	0.22	99.64
*1.95	*9.00	0.16	99.80
*1.38	*9.50	0.11	99.91
*0.98	*10.00	0.07	99.98
*< 0.98	*> 10.00	0.02	100.00
Total		**100.00**	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	-	-
Median [µm]†	7777	Fine pebble
Median [phi]†	-2.96	
Mean [µm]†‡	4367	Fine pebble
Mean [phi]†‡	-2.13	
Sorting [µm]‡	7.28	Very poorly sorted
Sorting [phi]‡	2.86	
Skewness [µm]‡	-0.40	Very fine skewed
Skewness [phi]‡	0.40	
Gravel [%]#	60.33	Sandy gravel
Sand [%]#	36.81	
Fines [%]#	2.86	

Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

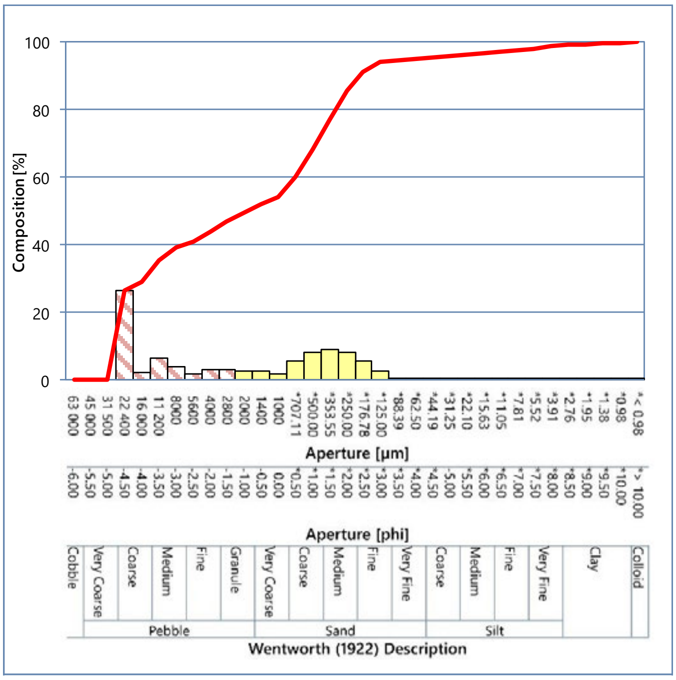
STATION: EC_24_PSDB

No photo available

FRACTIONAL DATA

Aperture [μm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	26.72	26.72
16 000	-4.00	2.24	28.96
11 200	-3.50	6.36	35.32
8000	-3.00	3.88	39.20
5600	-2.50	1.73	40.93
4000	-2.00	3.04	43.97
2800	-1.50	2.95	46.92
2000	-1.00	2.70	49.62
1400	-0.50	2.52	52.15
1000	0.00	2.05	54.20
*707.11	*0.50	5.80	60.00
*500.00	*1.00	8.08	68.08
*353.55	*1.50	9.19	77.27
*250.00	*2.00	8.31	85.57
*176.78	*2.50	5.68	91.25
*125.00	*3.00	2.70	93.95
*88.39	*3.50	0.79	94.74
*62.50	*4.00	0.23	94.97
*44.19	*4.50	0.34	95.31
*31.25	*5.00	0.47	95.78
*22.10	*5.50	0.47	96.25
*15.63	*6.00	0.43	96.68
*11.05	*6.50	0.45	97.13
*7.81	*7.00	0.49	97.62
*5.52	*7.50	0.52	98.14
*3.91	*8.00	0.50	98.64
*2.76	*8.50	0.42	99.06
*1.95	*9.00	0.32	99.38
*1.38	*9.50	0.23	99.61
*0.98	*10.00	0.17	99.79
*< 0.98	*> 10.00	0.21	100.00
Total		**100.00**	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [μm]†	26950	Coarse pebble
Mode 2 [μm]†	427	Medium sand
Mode 3 [μm]†	13600	Medium pebble
Median [μm]†	1897	Very coarse sand
Median [phi]†	-0.92	
Mean [μm]†‡	2352	Granule
Mean [phi]†‡	-1.23	
Sorting [μm]‡	8.00	Very poorly sorted
Sorting [phi]‡	3.00	
Skewness [μm]‡	0.01	Symmetrical
Skewness [phi]‡	-0.01	
Gravel [%]#	49.62	Sandy gravel
Sand [%]#	45.34	
Fines [%]#	5.03	

Notes
Particle Size Distribution by Dry Sieving (63 000 μm - 1000 μm) and Laser Diffraction* (< 1000 μm - < 0.98 μm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

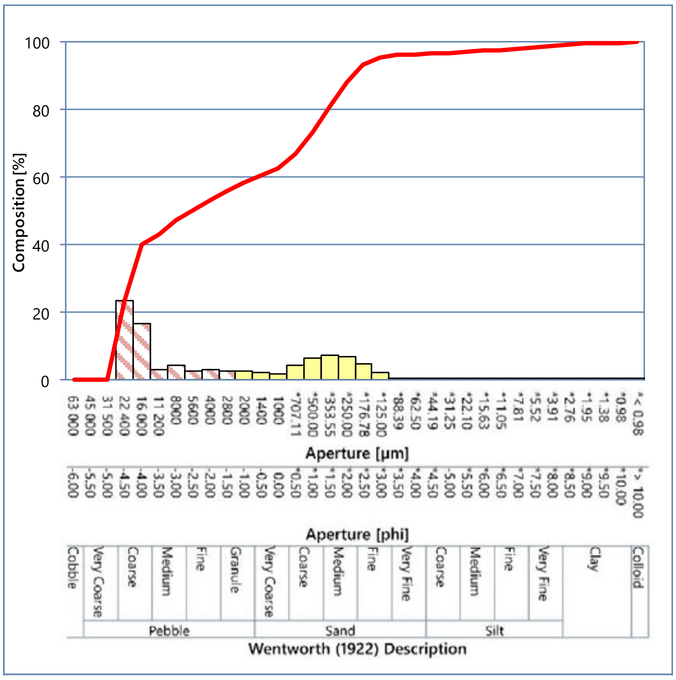
STATION: EC_24_PSDC

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	23.38	23.38
16 000	-4.00	16.87	40.25
11 200	-3.50	3.04	43.29
8000	-3.00	4.30	47.58
5600	-2.50	2.71	50.30
4000	-2.00	3.11	53.41
2800	-1.50	2.52	55.93
2000	-1.00	2.56	58.49
1400	-0.50	2.19	60.68
1000	0.00	1.91	62.59
*707.11	*0.50	4.46	67.05
*500.00	*1.00	6.41	73.46
*353.55	*1.50	7.56	81.01
*250.00	*2.00	7.08	88.10
*176.78	*2.50	5.00	93.10
*125.00	*3.00	2.42	95.51
*88.39	*3.50	0.68	96.19
*62.50	*4.00	0.12	96.31
*44.19	*4.50	0.20	96.51
*31.25	*5.00	0.32	96.83
*22.10	*5.50	0.32	97.16
*15.63	*6.00	0.28	97.44
*11.05	*6.50	0.30	97.74
*7.81	*7.00	0.36	98.10
*5.52	*7.50	0.40	98.50
*3.91	*8.00	0.40	98.90
*2.76	*8.50	0.35	99.25
*1.95	*9.00	0.27	99.52
*1.38	*9.50	0.19	99.71
*0.98	*10.00	0.14	99.85
*< 0.98	*> 10.00	0.15	100.00
Total		**100.00**	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	5823	Fine pebble
Median [phi]†	-2.54	
Mean [µm]†‡	3540	Granule
Mean [phi]†‡	-1.82	
Sorting [µm]‡	6.80	Very poorly sorted
Sorting [phi]‡	2.76	
Skewness [µm]‡	-0.37	Very fine skewed
Skewness [phi]‡	0.37	
Gravel [%]#	58.49	Sandy gravel
Sand [%]#	37.82	
Fines [%]#	3.69	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

\# = Description based on BGS modified Folk classification (Long, 2006)

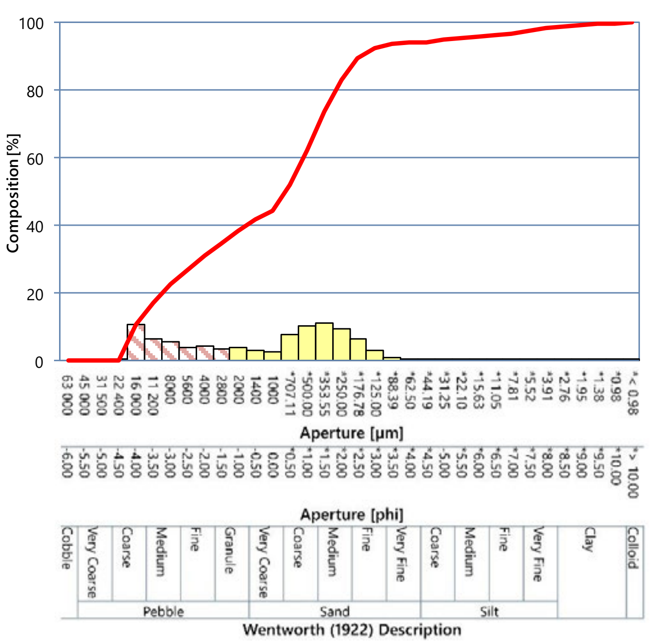
STATION: EC_25_PSDA

No photo available

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.15	0.15
16 000	-4.00	10.71	10.86
11 200	-3.50	6.44	17.30
8000	-3.00	5.60	22.90
5600	-2.50	4.04	26.94
4000	-2.00	4.33	31.27
2800	-1.50	3.38	34.65
2000	-1.00	3.83	38.48
1400	-0.50	3.17	41.65
1000	0.00	2.81	44.45
*707.11	*0.50	7.67	52.12
*500.00	*1.00	10.35	62.47
*353.55	*1.50	11.14	73.61
*250.00	*2.00	9.53	83.14
*176.78	*2.50	6.34	89.48
*125.00	*3.00	3.10	92.58
*88.39	*3.50	1.04	93.62
*62.50	*4.00	0.36	93.98
*44.19	*4.50	0.39	94.36
*31.25	*5.00	0.49	94.85
*22.10	*5.50	0.49	95.34
*15.63	*6.00	0.47	95.81
*11.05	*6.50	0.51	96.32
*7.81	*7.00	0.60	96.92
*5.52	*7.50	0.66	97.58
*3.91	*8.00	0.65	98.23
*2.76	*8.50	0.57	98.80
*1.95	*9.00	0.44	99.23
*1.38	*9.50	0.31	99.54
*0.98	*10.00	0.22	99.76
*< 0.98	*> 10.00	0.24	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	19200	Coarse pebble
Mode 3 [µm]†	4800	Fine pebble
Median [µm]†	778	Coarse sand
Median [phi]†	0.36	
Mean [µm]†‡	1307	Very coarse sand
Mean [phi]†‡	-0.39	
Sorting [µm]†	7.17	Very poorly sorted
Sorting [phi]†	2.84	
Skewness [µm]‡	0.19	Coarse skewed
Skewness [phi]‡	-0.19	
Gravel [%]#	38.48	Sandy gravel
Sand [%]#	55.50	
Fines [%]#	6.02	

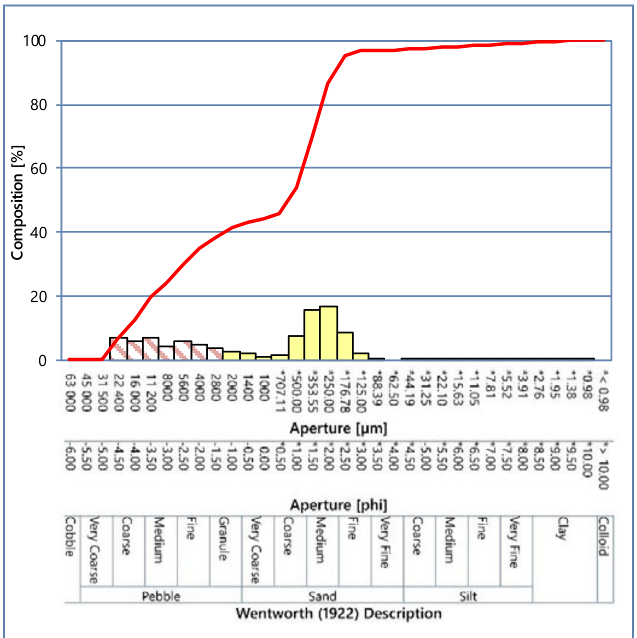
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_01_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	6.83	6.83
16 000	-4.00	5.71	12.54
11 200	-3.50	6.98	19.52
8000	-3.00	4.34	23.85
5600	-2.50	6.20	30.05
4000	-2.00	4.72	34.76
2800	-1.50	3.72	38.49
2000	-1.00	2.86	41.34
1400	-0.50	1.95	43.29
1000	0.00	1.11	44.40
*707.11	*0.50	1.55	45.96
*500.00	*1.00	7.82	53.77
*353.55	*1.50	15.96	69.73
*250.00	*2.00	16.58	86.31
*176.78	*2.50	8.81	95.12
*125.00	*3.00	1.87	96.99
*88.39	*3.50	0.02	97.01
*62.50	*4.00	0.00	97.01
*44.19	*4.50	0.20	97.20
*31.25	*5.00	0.42	97.62
*22.10	*5.50	0.28	97.90
*15.63	*6.00	0.15	98.05
*11.05	*6.50	0.18	98.23
*7.81	*7.00	0.29	98.52
*5.52	*7.50	0.36	98.88
*3.91	*8.00	0.35	99.23
*2.76	*8.50	0.30	99.53
*1.95	*9.00	0.22	99.75
*1.38	*9.50	0.16	99.91
*0.98	*10.00	0.09	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	302	Medium sand
Mode 2 [µm]†	26950	Coarse pebble
Mode 3 [µm]†	13600	Medium pebble
Median [µm]†	591	Coarse sand
Median [phi]†	0.76	
Mean [µm]†‡	1276	Very coarse sand
Mean [phi]†‡	-0.35	
Sorting [µm]‡	5.64	Very poorly sorted
Sorting [phi]‡	2.50	
Skewness [µm]‡	0.55	Very coarse skewed
Skewness [phi]‡	-0.55	
Gravel [%]#	41.34	Sandy gravel
Sand [%]#	55.66	
Fines [%]#	2.99	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

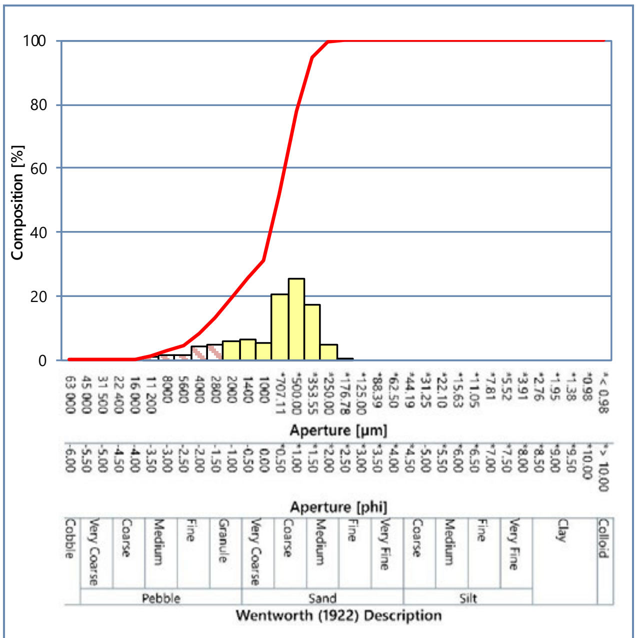
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_02_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	1.09	1.09
8000	-3.00	1.70	2.79
5600	-2.50	1.65	4.44
4000	-2.00	4.04	8.48
2800	-1.50	4.94	13.43
2000	-1.00	6.09	19.52
1400	-0.50	6.31	25.83
1000	0.00	5.33	31.16
*707.11	*0.50	20.76	51.92
*500.00	*1.00	25.68	77.60
*353.55	*1.50	17.19	94.79
*250.00	*2.00	5.04	99.83
*176.78	*2.50	0.17	100.00
*125.00	*3.00	0.00	100.00
*88.39	*3.50	0.00	100.00
*62.50	*4.00	0.00	100.00
*44.19	*4.50	0.00	100.00
*31.25	*5.00	0.00	100.00
*22.10	*5.50	0.00	100.00
*15.63	*6.00	0.00	100.00
*11.05	*6.50	0.00	100.00
*7.81	*7.00	0.00	100.00
*5.52	*7.50	0.00	100.00
*3.91	*8.00	0.00	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	604	Coarse sand
Mode 2 [µm]†	2400	Granule
Mode 3 [µm]†	-	-
Median [µm]†	730	Coarse sand
Median [phi]†	0.45	
Mean [µm]†‡	920	Coarse sand
Mean [phi]†‡	0.12	
Sorting [µm]‡	2.32	Poorly sorted
Sorting [phi]‡	1.21	
Skewness [µm]‡	0.43	Very coarse skewed
Skewness [phi]‡	-0.43	
Gravel [%]#	19.52	Gravelly sand
Sand [%]#	80.48	
Fines [%]#	0.00	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

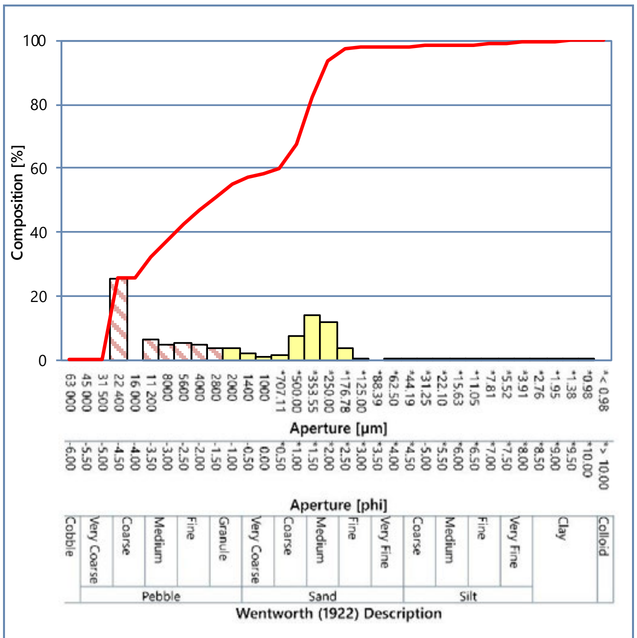
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_03_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	25.71	25.71
16 000	-4.00	0.00	25.71
11 200	-3.50	6.32	32.03
8000	-3.00	5.03	37.06
5600	-2.50	5.38	42.44
4000	-2.00	4.59	47.03
2800	-1.50	3.90	50.94
2000	-1.00	3.91	54.85
1400	-0.50	2.23	57.08
1000	0.00	1.32	58.40
*707.11	*0.50	1.63	60.03
*500.00	*1.00	7.73	67.76
*353.55	*1.50	14.28	82.04
*250.00	*2.00	11.68	93.72
*176.78	*2.50	3.75	97.46
*125.00	*3.00	0.23	97.70
*88.39	*3.50	0.00	97.70
*62.50	*4.00	0.01	97.71
*44.19	*4.50	0.28	97.99
*31.25	*5.00	0.31	98.30
*22.10	*5.50	0.15	98.45
*15.63	*6.00	0.08	98.53
*11.05	*6.50	0.14	98.67
*7.81	*7.00	0.23	98.90
*5.52	*7.50	0.27	99.18
*3.91	*8.00	0.26	99.44
*2.76	*8.50	0.22	99.65
*1.95	*9.00	0.16	99.82
*1.38	*9.50	0.11	99.93
*0.98	*10.00	0.07	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	13600	Medium pebble
Median [µm]†	3051	Granule
Median [phi]†	-1.61	
Mean [µm]†‡	2960	Granule
Mean [phi]†‡	-1.57	
Sorting [µm]‡	6.20	Very poorly sorted
Sorting [phi]‡	2.63	
Skewness [µm]‡	-0.05	Symmetrical
Skewness [phi]‡	0.05	
Gravel [%]#	54.85	Sandy gravel
Sand [%]#	42.86	
Fines [%]#	2.29	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

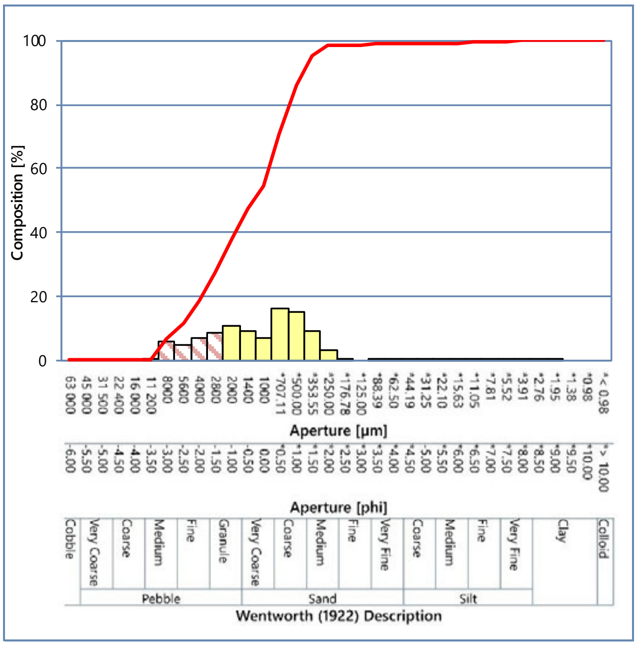
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_05_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.45	0.45
8000	-3.00	6.13	6.58
5600	-2.50	4.87	11.45
4000	-2.00	7.21	18.66
2800	-1.50	8.82	27.48
2000	-1.00	10.90	38.38
1400	-0.50	9.13	47.50
1000	0.00	7.15	54.65
*707.11	*0.50	16.39	71.04
*500.00	*1.00	15.08	86.12
*353.55	*1.50	9.14	95.26
*250.00	*2.00	3.18	98.44
*176.78	*2.50	0.31	98.75
*125.00	*3.00	0.00	98.75
*88.39	*3.50	0.09	98.83
*62.50	*4.00	0.21	99.05
*44.19	*4.50	0.12	99.16
*31.25	*5.00	0.00	99.17
*22.10	*5.50	0.01	99.18
*15.63	*6.00	0.09	99.27
*11.05	*6.50	0.15	99.41
*7.81	*7.00	0.16	99.57
*5.52	*7.50	0.16	99.73
*3.91	*8.00	0.13	99.86
*2.76	*8.50	0.09	99.95
*1.95	*9.00	0.05	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	854	Coarse sand
Mode 2 [µm]†	2400	Granule
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	1245	Very coarse sand
Median [phi]†	-0.32	
Mean [µm]†‡	1436	Very coarse sand
Mean [phi]†‡	-0.52	
Sorting [µm]‡	2.78	Poorly sorted
Sorting [phi]‡	1.48	
Skewness [µm]‡	0.21	Coarse skewed
Skewness [phi]‡	-0.21	
Gravel [%]#	38.38	Sandy gravel
Sand [%]#	60.67	
Fines [%]#	0.95	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

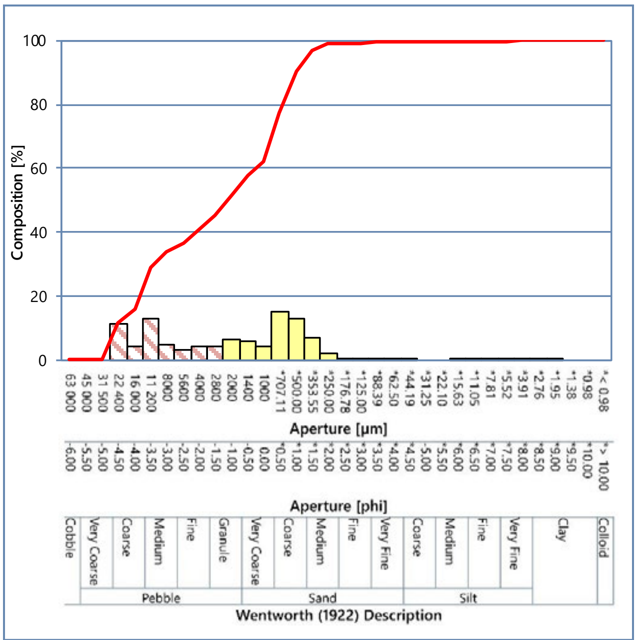
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_06_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	11.56	11.56
16 000	-4.00	4.53	16.09
11 200	-3.50	12.93	29.02
8000	-3.00	4.62	33.64
5600	-2.50	3.07	36.71
4000	-2.00	4.07	40.78
2800	-1.50	4.51	45.29
2000	-1.00	6.43	51.72
1400	-0.50	6.15	57.87
1000	0.00	4.11	61.98
*707.11	*0.50	15.33	77.32
*500.00	*1.00	12.79	90.11
*353.55	*1.50	6.89	97.00
*250.00	*2.00	2.01	99.01
*176.78	*2.50	0.12	99.13
*125.00	*3.00	0.02	99.15
*88.39	*3.50	0.17	99.32
*62.50	*4.00	0.14	99.46
*44.19	*4.50	0.02	99.47
*31.25	*5.00	0.00	99.47
*22.10	*5.50	0.00	99.47
*15.63	*6.00	0.05	99.52
*11.05	*6.50	0.10	99.62
*7.81	*7.00	0.11	99.73
*5.52	*7.50	0.11	99.84
*3.91	*8.00	0.10	99.94
*2.76	*8.50	0.06	99.99
*1.95	*9.00	0.01	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	854	Coarse sand
Mode 2 [µm]†	13600	Medium pebble
Mode 3 [µm]†	26950	Coarse pebble
Median [µm]†	2188	Granule
Median [phi]†	-1.13	
Mean [µm]†‡	2750	Granule
Mean [phi]†‡	-1.46	
Sorting [µm]‡	4.35	Very poorly sorted
Sorting [phi]‡	2.12	
Skewness [µm]‡	0.20	Coarse skewed
Skewness [phi]‡	-0.20	
Gravel [%]#	51.72	Sandy gravel
Sand [%]#	47.73	
Fines [%]#	0.54	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

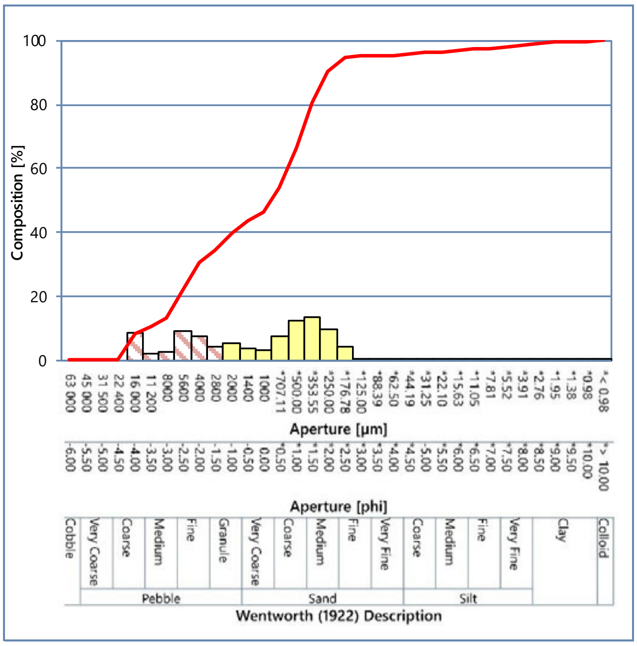
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_07_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	8.64	8.64
11 200	-3.50	1.92	10.56
8000	-3.00	2.67	13.23
5600	-2.50	9.44	22.67
4000	-2.00	7.77	30.43
2800	-1.50	4.13	34.56
2000	-1.00	5.21	39.77
1400	-0.50	3.83	43.60
1000	0.00	2.95	46.56
*707.11	*0.50	7.69	54.24
*500.00	*1.00	12.44	66.68
*353.55	*1.50	13.80	80.48
*250.00	*2.00	9.92	90.40
*176.78	*2.50	4.16	94.56
*125.00	*3.00	0.69	95.25
*88.39	*3.50	0.00	95.25
*62.50	*4.00	0.13	95.38
*44.19	*4.50	0.44	95.83
*31.25	*5.00	0.43	96.25
*22.10	*5.50	0.30	96.55
*15.63	*6.00	0.28	96.83
*11.05	*6.50	0.35	97.18
*7.81	*7.00	0.45	97.63
*5.52	*7.50	0.50	98.13
*3.91	*8.00	0.50	98.63
*2.76	*8.50	0.44	99.07
*1.95	*9.00	0.34	99.41
*1.38	*9.50	0.24	99.66
*0.98	*10.00	0.17	99.83
*< 0.98	*> 10.00	0.17	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	6800	Fine pebble
Mode 3 [µm]†	19200	Coarse pebble
Median [µm]†	856	Coarse sand
Median [phi]†	0.22	
Mean [µm]†‡	1245	Very coarse sand
Mean [phi]†‡	-0.32	
Sorting [µm]‡	4.58	Very poorly sorted
Sorting [phi]‡	2.20	
Skewness [µm]‡	0.31	Very coarse skewed
Skewness [phi]‡	-0.31	
Gravel [%]#	39.77	Sandy gravel
Sand [%]#	55.61	
Fines [%]#	4.62	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

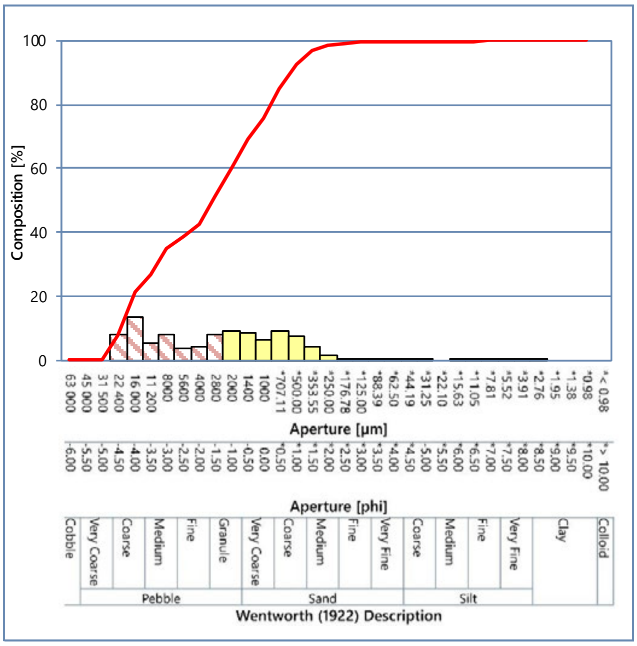
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_08_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	7.94	7.94
16 000	-4.00	13.66	21.60
11 200	-3.50	5.46	27.06
8000	-3.00	7.95	35.01
5600	-2.50	3.60	38.62
4000	-2.00	4.21	42.83
2800	-1.50	8.24	51.07
2000	-1.00	9.44	60.51
1400	-0.50	8.58	69.09
1000	0.00	6.63	75.72
*707.11	*0.50	9.35	85.07
*500.00	*1.00	7.60	92.67
*353.55	*1.50	4.33	97.00
*250.00	*2.00	1.70	98.70
*176.78	*2.50	0.49	99.19
*125.00	*3.00	0.20	99.39
*88.39	*3.50	0.15	99.55
*62.50	*4.00	0.10	99.65
*44.19	*4.50	0.03	99.68
*31.25	*5.00	0.01	99.69
*22.10	*5.50	0.00	99.69
*15.63	*6.00	0.04	99.73
*11.05	*6.50	0.07	99.80
*7.81	*7.00	0.07	99.87
*5.52	*7.50	0.07	99.94
*3.91	*8.00	0.06	100.00
*2.76	*8.50	0.00	100.00
*1.95	*9.00	0.00	100.00
*1.38	*9.50	0.00	100.00
*0.98	*10.00	0.00	100.00
*< 0.98	*> 10.00	0.00	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	19200	Coarse pebble
Mode 2 [µm]†	2400	Granule
Mode 3 [µm]†	854	Coarse sand
Median [µm]†	2932	Granule
Median [phi]†	-1.55	
Mean [µm]†‡	3409	Granule
Mean [phi]†‡	-1.77	
Sorting [µm]‡	4.17	Very poorly sorted
Sorting [phi]‡	2.06	
Skewness [µm]‡	0.10	Symmetrical
Skewness [phi]‡	-0.10	
Gravel [%]#	60.51	Sandy gravel
Sand [%]#	39.13	
Fines [%]#	0.35	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

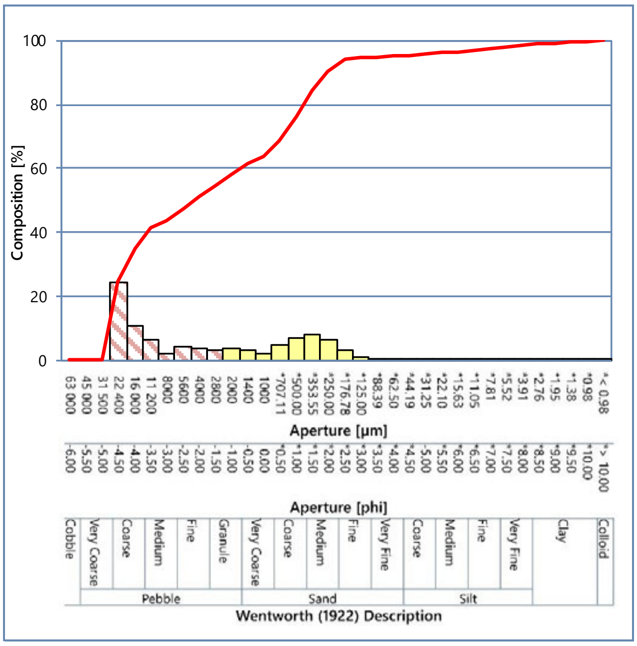
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_09_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	24.59	24.59
16 000	-4.00	10.55	35.14
11 200	-3.50	6.37	41.51
8000	-3.00	1.98	43.49
5600	-2.50	4.10	47.59
4000	-2.00	3.56	51.16
2800	-1.50	3.36	54.52
2000	-1.00	3.81	58.33
1400	-0.50	3.17	61.50
1000	0.00	2.39	63.90
*707.11	*0.50	4.90	68.80
*500.00	*1.00	7.28	76.09
*353.55	*1.50	8.11	84.20
*250.00	*2.00	6.41	90.61
*176.78	*2.50	3.34	93.94
*125.00	*3.00	0.94	94.88
*88.39	*3.50	0.07	94.95
*62.50	*4.00	0.17	95.11
*44.19	*4.50	0.38	95.49
*31.25	*5.00	0.39	95.88
*22.10	*5.50	0.33	96.21
*15.63	*6.00	0.33	96.54
*11.05	*6.50	0.40	96.94
*7.81	*7.00	0.49	97.42
*5.52	*7.50	0.54	97.96
*3.91	*8.00	0.53	98.49
*2.76	*8.50	0.46	98.94
*1.95	*9.00	0.35	99.30
*1.38	*9.50	0.25	99.55
*0.98	*10.00	0.19	99.73
*< 0.98	*> 10.00	0.27	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	6800	Fine pebble
Median [µm]†	4461	Fine pebble
Median [phi]†	-2.16	
Mean [µm]†‡	3424	Granule
Mean [phi]†‡	-1.78	
Sorting [µm]‡	7.11	Very poorly sorted
Sorting [phi]‡	2.83	
Skewness [µm]‡	-0.27	Fine skewed
Skewness [phi]‡	0.27	
Gravel [%]#	58.33	Muddy, sandy gravel
Sand [%]#	36.78	
Fines [%]#	4.89	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

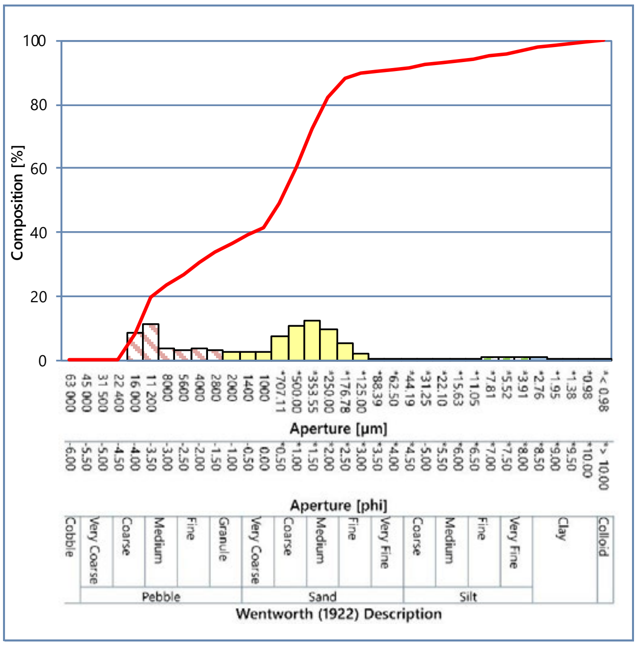
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_10_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	8.59	8.59
11 200	-3.50	11.40	19.99
8000	-3.00	3.66	23.65
5600	-2.50	3.07	26.73
4000	-2.00	3.84	30.57
2800	-1.50	3.13	33.69
2000	-1.00	2.89	36.59
1400	-0.50	2.66	39.24
1000	0.00	2.45	41.69
*707.11	*0.50	7.59	49.28
*500.00	*1.00	11.01	60.30
*353.55	*1.50	12.25	72.55
*250.00	*2.00	9.89	82.44
*176.78	*2.50	5.47	87.91
*125.00	*3.00	1.92	89.83
*88.39	*3.50	0.54	90.37
*62.50	*4.00	0.55	90.92
*44.19	*4.50	0.76	91.68
*31.25	*5.00	0.73	92.41
*22.10	*5.50	0.60	93.01
*15.63	*6.00	0.57	93.58
*11.05	*6.50	0.67	94.25
*7.81	*7.00	0.80	95.05
*5.52	*7.50	0.89	95.94
*3.91	*8.00	0.91	96.85
*2.76	*8.50	0.84	97.70
*1.95	*9.00	0.70	98.40
*1.38	*9.50	0.54	98.93
*0.98	*10.00	0.42	99.35
*< 0.98	*> 10.00	0.65	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	13600	Medium pebble
Mode 3 [µm]†	4800	Fine pebble
Median [µm]†	691	Coarse sand
Median [phi]†	0.53	
Mean [µm]†‡	1257	Very coarse sand
Mean [phi]†‡	-0.33	
Sorting [µm]‡	8.85	Very poorly sorted
Sorting [phi]‡	3.15	
Skewness [µm]‡	0.15	Coarse skewed
Skewness [phi]‡	-0.15	
Gravel [%]#	36.59	Muddy, sandy gravel
Sand [%]#	54.33	
Fines [%]#	9.08	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

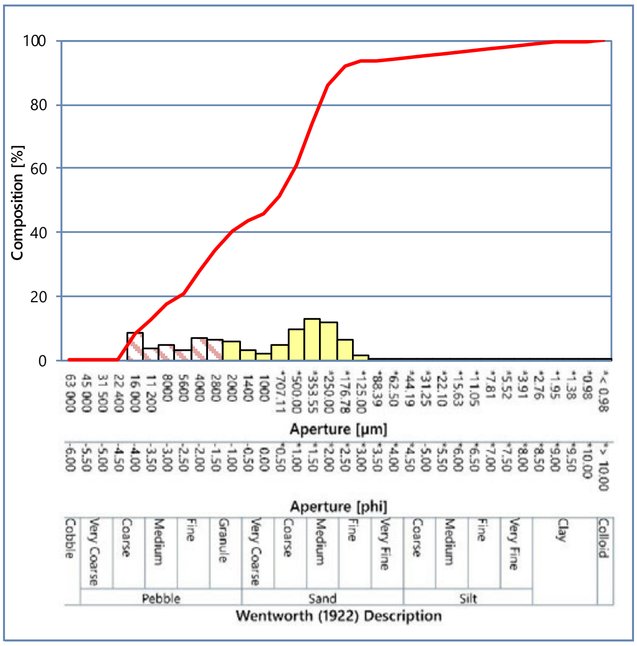
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_11_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	8.60	8.60
11 200	-3.50	3.99	12.58
8000	-3.00	4.99	17.57
5600	-2.50	3.28	20.85
4000	-2.00	7.12	27.97
2800	-1.50	6.49	34.46
2000	-1.00	6.00	40.46
1400	-0.50	3.17	43.63
1000	0.00	2.34	45.97
*707.11	*0.50	5.04	51.01
*500.00	*1.00	9.87	60.88
*353.55	*1.50	13.26	74.14
*250.00	*2.00	11.66	85.79
*176.78	*2.50	6.25	92.05
*125.00	*3.00	1.65	93.70
*88.39	*3.50	0.06	93.76
*62.50	*4.00	0.13	93.89
*44.19	*4.50	0.60	94.49
*31.25	*5.00	0.69	95.18
*22.10	*5.50	0.54	95.73
*15.63	*6.00	0.46	96.18
*11.05	*6.50	0.51	96.69
*7.81	*7.00	0.61	97.30
*5.52	*7.50	0.65	97.95
*3.91	*8.00	0.62	98.57
*2.76	*8.50	0.50	99.07
*1.95	*9.00	0.36	99.43
*1.38	*9.50	0.24	99.67
*0.98	*10.00	0.16	99.83
*< 0.98	*> 10.00	0.17	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	19200	Coarse pebble
Mode 3 [µm]†	4800	Fine pebble
Median [µm]†	758	Coarse sand
Median [phi]†	0.40	
Mean [µm]†‡	1211	Very coarse sand
Mean [phi]†‡	-0.28	
Sorting [µm]‡	6.25	Very poorly sorted
Sorting [phi]‡	2.64	
Skewness [µm]‡	0.21	Coarse skewed
Skewness [phi]‡	-0.21	
Gravel [%]#	40.46	Muddy, sandy gravel
Sand [%]#	53.43	
Fines [%]#	6.11	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

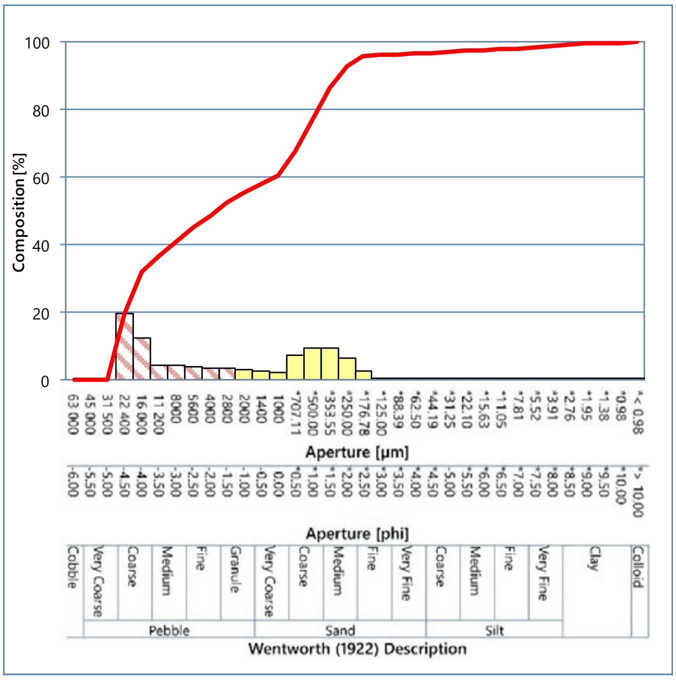
STATION: SS_12_PSDA

No available photo

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	19.59	19.59
16 000	-4.00	12.45	32.05
11 200	-3.50	4.53	36.58
8000	-3.00	4.63	41.21
5600	-2.50	3.96	45.17
4000	-2.00	3.63	48.80
2800	-1.50	3.53	52.33
2000	-1.00	3.08	55.40
1400	-0.50	2.78	58.18
1000	0.00	2.34	60.52
*707.11	*0.50	7.19	67.71
*500.00	*1.00	9.57	77.28
*353.55	*1.50	9.34	86.63
*250.00	*2.00	6.39	93.02
*176.78	*2.50	2.78	95.80
*125.00	*3.00	0.55	96.35
*88.39	*3.50	0.00	96.35
*62.50	*4.00	0.18	96.53
*44.19	*4.50	0.34	96.87
*31.25	*5.00	0.29	97.16
*22.10	*5.50	0.21	97.38
*15.63	*6.00	0.21	97.59
*11.05	*6.50	0.26	97.85
*7.81	*7.00	0.32	98.17
*5.52	*7.50	0.36	98.53
*3.91	*8.00	0.37	98.90
*2.76	*8.50	0.34	99.24
*1.95	*9.00	0.27	99.51
*1.38	*9.50	0.20	99.71
*0.98	*10.00	0.14	99.85
*< 0.98	*> 10.00	0.15	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	604	Coarse sand
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	3542	Granule
Median [phi]†	-1.82	
Mean [µm]†‡	3205	Granule
Mean [phi]†‡	-1.68	
Sorting [µm]‡	5.96	Very poorly sorted
Sorting [phi]‡	2.58	
Skewness [µm]‡	-0.12	Fine skewed
Skewness [phi]‡	0.12	
Gravel [%]#	55.40	Sandy gravel
Sand [%]#	41.13	
Fines [%]#	3.47	

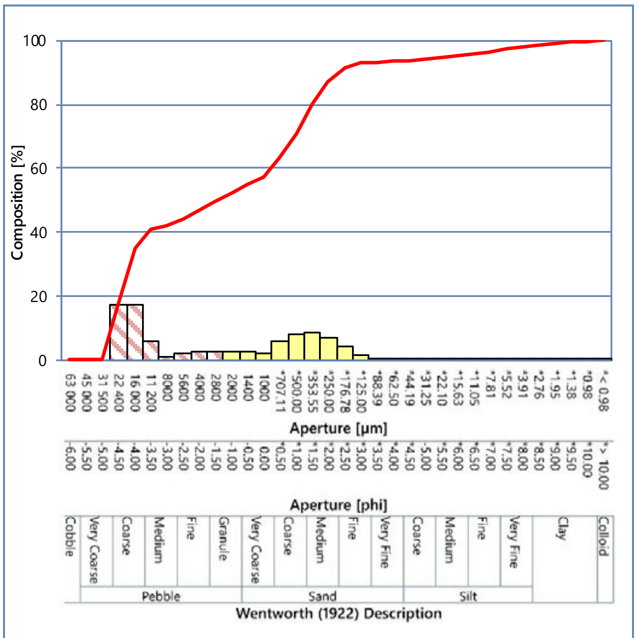
Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_18_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	17.24	17.24
16 000	-4.00	17.50	34.74
11 200	-3.50	6.03	40.77
8000	-3.00	1.05	41.82
5600	-2.50	2.27	44.09
4000	-2.00	2.70	46.79
2800	-1.50	2.93	49.72
2000	-1.00	2.86	52.58
1400	-0.50	2.65	55.23
1000	0.00	2.26	57.49
*707.11	*0.50	5.71	63.20
*500.00	*1.00	7.87	71.07
*353.55	*1.50	8.72	79.79
*250.00	*2.00	7.27	87.06
*176.78	*2.50	4.26	91.31
*125.00	*3.00	1.55	92.87
*88.39	*3.50	0.30	93.17
*62.50	*4.00	0.22	93.39
*44.19	*4.50	0.46	93.85
*31.25	*5.00	0.54	94.40
*22.10	*5.50	0.50	94.89
*15.63	*6.00	0.48	95.38
*11.05	*6.50	0.54	95.91
*7.81	*7.00	0.63	96.54
*5.52	*7.50	0.68	97.22
*3.91	*8.00	0.68	97.90
*2.76	*8.50	0.60	98.50
*1.95	*9.00	0.47	98.97
*1.38	*9.50	0.35	99.32
*0.98	*10.00	0.27	99.59
*< 0.98	*> 10.00	0.41	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	19200	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	2400	Granule
Median [µm]†	2711	Granule
Median [phi]†	-1.44	
Mean [µm]†‡	2621	Granule
Mean [phi]†‡	-1.39	
Sorting [µm]‡	8.94	Very poorly sorted
Sorting [phi]‡	3.16	
Skewness [µm]‡	-0.19	Fine skewed
Skewness [phi]‡	0.19	
Gravel [%]#	52.58	Muddy, sandy gravel
Sand [%]#	40.81	
Fines [%]#	6.61	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

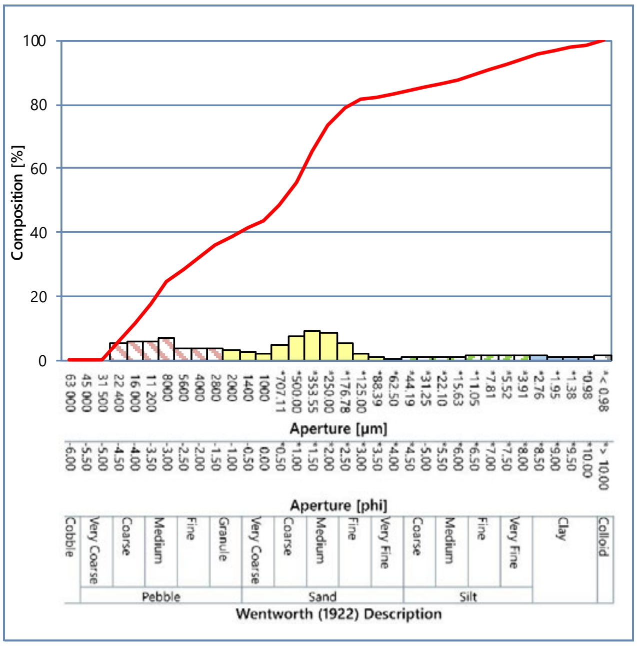
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_19_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	5.59	5.59
16 000	-4.00	6.11	11.70
11 200	-3.50	5.80	17.51
8000	-3.00	7.29	24.80
5600	-2.50	3.80	28.60
4000	-2.00	3.53	32.13
2800	-1.50	3.73	35.86
2000	-1.00	3.08	38.94
1400	-0.50	2.50	41.44
1000	0.00	2.12	43.57
*707.11	*0.50	4.74	48.30
*500.00	*1.00	7.54	55.84
*353.55	*1.50	9.35	65.19
*250.00	*2.00	8.52	73.71
*176.78	*2.50	5.45	79.16
*125.00	*3.00	2.34	81.50
*88.39	*3.50	0.82	82.32
*62.50	*4.00	0.74	83.06
*44.19	*4.50	1.09	84.15
*31.25	*5.00	1.25	85.41
*22.10	*5.50	1.23	86.64
*15.63	*6.00	1.22	87.86
*11.05	*6.50	1.33	89.19
*7.81	*7.00	1.50	90.69
*5.52	*7.50	1.65	92.33
*3.91	*8.00	1.67	94.01
*2.76	*8.50	1.53	95.54
*1.95	*9.00	1.27	96.81
*1.38	*9.50	0.99	97.80
*0.98	*10.00	0.79	98.59
*< 0.98	*> 10.00	1.41	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	9600	Medium pebble
Mode 3 [µm]†	19200	Coarse pebble
Median [µm]†	654	Coarse sand
Median [phi]†	0.61	
Mean [µm]†‡	720	Coarse sand
Mean [phi]†‡	0.47	
Sorting [µm]‡	15.57	Very poorly sorted
Sorting [phi]‡	3.96	
Skewness [µm]‡	-0.07	Symmetrical
Skewness [phi]‡	0.07	
Gravel [%]#	38.94	Muddy, sandy gravel
Sand [%]#	44.12	
Fines [%]#	16.94	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

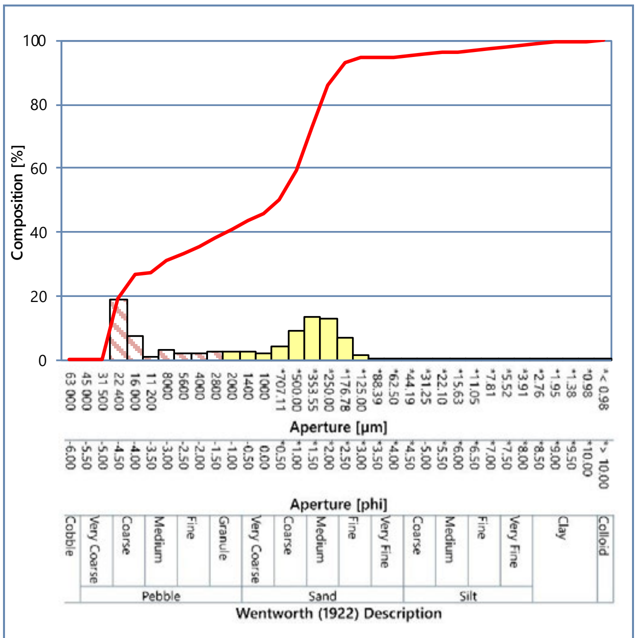
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_21_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	19.07	19.07
16 000	-4.00	7.66	26.72
11 200	-3.50	0.83	27.56
8000	-3.00	3.40	30.95
5600	-2.50	2.30	33.25
4000	-2.00	2.05	35.30
2800	-1.50	2.75	38.05
2000	-1.00	2.79	40.84
1400	-0.50	2.71	43.55
1000	0.00	2.26	45.81
*707.11	*0.50	4.33	50.14
*500.00	*1.00	9.29	59.43
*353.55	*1.50	13.77	73.20
*250.00	*2.00	12.90	86.10
*176.78	*2.50	7.03	93.14
*125.00	*3.00	1.70	94.84
*88.39	*3.50	0.01	94.85
*62.50	*4.00	0.01	94.86
*44.19	*4.50	0.37	95.23
*31.25	*5.00	0.55	95.78
*22.10	*5.50	0.42	96.19
*15.63	*6.00	0.33	96.53
*11.05	*6.50	0.39	96.92
*7.81	*7.00	0.50	97.42
*5.52	*7.50	0.56	97.97
*3.91	*8.00	0.54	98.52
*2.76	*8.50	0.47	98.98
*1.95	*9.00	0.36	99.35
*1.38	*9.50	0.26	99.61
*0.98	*10.00	0.19	99.80
*< 0.98	*> 10.00	0.20	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	26950	Coarse pebble
Mode 2 [µm]†	427	Medium sand
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	715	Coarse sand
Median [phi]†	0.48	
Mean [µm]†‡	1648	Very coarse sand
Mean [phi]†‡	-0.72	
Sorting [µm]‡	7.95	Very poorly sorted
Sorting [phi]‡	2.99	
Skewness [µm]‡	0.37	Very coarse skewed
Skewness [phi]‡	-0.37	
Gravel [%]#	40.84	Sandy gravel
Sand [%]#	54.02	
Fines [%]#	5.14	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

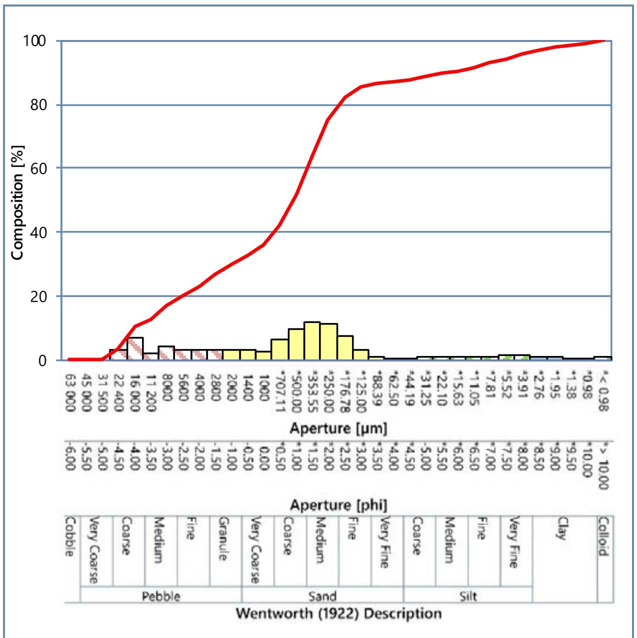
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_23_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	3.38	3.38
16 000	-4.00	7.05	10.43
11 200	-3.50	2.12	12.54
8000	-3.00	4.35	16.89
5600	-2.50	3.28	20.17
4000	-2.00	3.08	23.24
2800	-1.50	3.37	26.62
2000	-1.00	3.32	29.94
1400	-0.50	3.07	33.01
1000	0.00	2.80	35.82
*707.11	*0.50	6.34	42.16
*500.00	*1.00	9.75	51.91
*353.55	*1.50	11.98	63.89
*250.00	*2.00	11.13	75.02
*176.78	*2.50	7.38	82.40
*125.00	*3.00	3.21	85.61
*88.39	*3.50	0.84	86.45
*62.50	*4.00	0.41	86.86
*44.19	*4.50	0.77	87.63
*31.25	*5.00	0.99	88.62
*22.10	*5.50	0.97	89.59
*15.63	*6.00	0.95	90.54
*11.05	*6.50	1.04	91.58
*7.81	*7.00	1.21	92.79
*5.52	*7.50	1.35	94.15
*3.91	*8.00	1.38	95.52
*2.76	*8.50	1.24	96.77
*1.95	*9.00	1.00	97.77
*1.38	*9.50	0.75	98.52
*0.98	*10.00	0.57	99.10
*< 0.98	*> 10.00	0.90	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	19200	Coarse pebble
Mode 3 [µm]†	9600	Medium pebble
Median [µm]†	535	Coarse sand
Median [phi]†	0.90	
Mean [µm]†‡	880	Coarse sand
Mean [phi]†‡	0.18	
Sorting [µm]‡	9.90	Very poorly sorted
Sorting [phi]‡	3.31	
Skewness [µm]‡	0.12	Coarse skewed
Skewness [phi]‡	-0.12	
Gravel [%]#	29.94	Gravelly muddy sand
Sand [%]#	56.92	
Fines [%]#	13.14	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

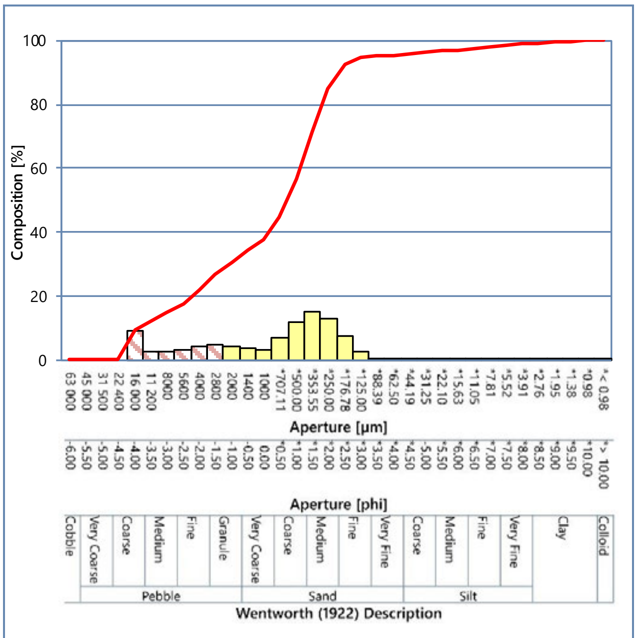
= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_25_PSDA

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	9.41	9.41
11 200	-3.50	2.51	11.92
8000	-3.00	2.75	14.67
5600	-2.50	2.98	17.65
4000	-2.00	4.24	21.88
2800	-1.50	4.73	26.61
2000	-1.00	4.13	30.74
1400	-0.50	3.80	34.54
1000	0.00	3.08	37.62
*707.11	*0.50	7.04	44.66
*500.00	*1.00	11.90	56.55
*353.55	*1.50	14.94	71.49
*250.00	*2.00	13.17	84.66
*176.78	*2.50	7.70	92.35
*125.00	*3.00	2.56	94.91
*88.39	*3.50	0.26	95.18
*62.50	*4.00	0.10	95.28
*44.19	*4.50	0.48	95.76
*31.25	*5.00	0.53	96.30
*22.10	*5.50	0.38	96.67
*15.63	*6.00	0.30	96.97
*11.05	*6.50	0.36	97.33
*7.81	*7.00	0.47	97.81
*5.52	*7.50	0.53	98.33
*3.91	*8.00	0.51	98.84
*2.76	*8.50	0.43	99.27
*1.95	*9.00	0.31	99.58
*1.38	*9.50	0.21	99.80
*0.98	*10.00	0.14	99.94
*< 0.98	*> 10.00	0.06	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]†	427	Medium sand
Mode 2 [µm]†	19200	Coarse pebble
Mode 3 [µm]†	3400	Granule
Median [µm]†	605	Coarse sand
Median [phi]†	0.72	
Mean [µm]†‡	1016	Very coarse sand
Mean [phi]†‡	-0.02	
Sorting [µm]‡	4.95	Very poorly sorted
Sorting [phi]‡	2.31	
Skewness [µm]‡	0.41	Very coarse skewed
Skewness [phi]‡	-0.41	
Gravel [%]#	30.74	Sandy gravel
Sand [%]#	64.54	
Fines [%]#	4.72	

Notes

Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals

* = Determinand not included in UKAS Accreditation

† = Particle size expressed in accordance with Wentworth (1922) scale

‡ = Statistics calculated using Folk and Ward (1957) method

= Description based on BGS modified Folk classification (Long, 2006)

STATION: SS_26_PSDA

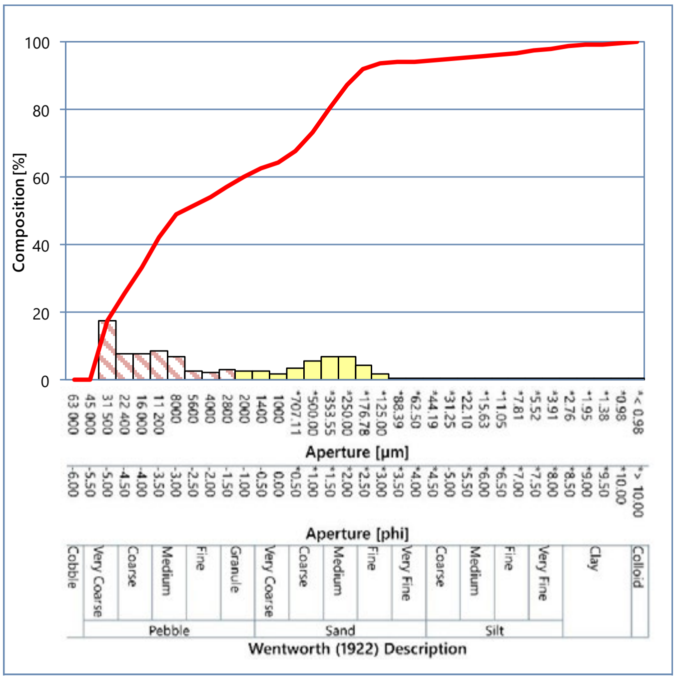
No available photo

No available photo

FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	17.67	17.67
22 400	-4.50	7.91	25.58
16 000	-4.00	7.81	33.38
11 200	-3.50	8.86	42.24
8000	-3.00	6.96	49.21
5600	-2.50	2.56	51.77
4000	-2.00	2.28	54.04
2800	-1.50	3.13	57.17
2000	-1.00	2.77	59.95
1400	-0.50	2.58	62.53
1000	0.00	1.96	64.49
*707.11	*0.50	3.47	67.96
*500.00	*1.00	5.51	73.47
*353.55	*1.50	7.18	80.65
*250.00	*2.00	6.86	87.51
*176.78	*2.50	4.47	91.98
*125.00	*3.00	1.76	93.74
*88.39	*3.50	0.29	94.03
*62.50	*4.00	0.10	94.13
*44.19	*4.50	0.37	94.51
*31.25	*5.00	0.50	95.00
*22.10	*5.50	0.45	95.45
*15.63	*6.00	0.41	95.86
*11.05	*6.50	0.46	96.32
*7.81	*7.00	0.55	96.87
*5.52	*7.50	0.62	97.49
*3.91	*8.00	0.63	98.11
*2.76	*8.50	0.56	98.67
*1.95	*9.00	0.45	99.12
*1.38	*9.50	0.33	99.45
*0.98	*10.00	0.24	99.68
*< 0.98	*> 10.00	0.32	100.00
Total		100.00	-

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

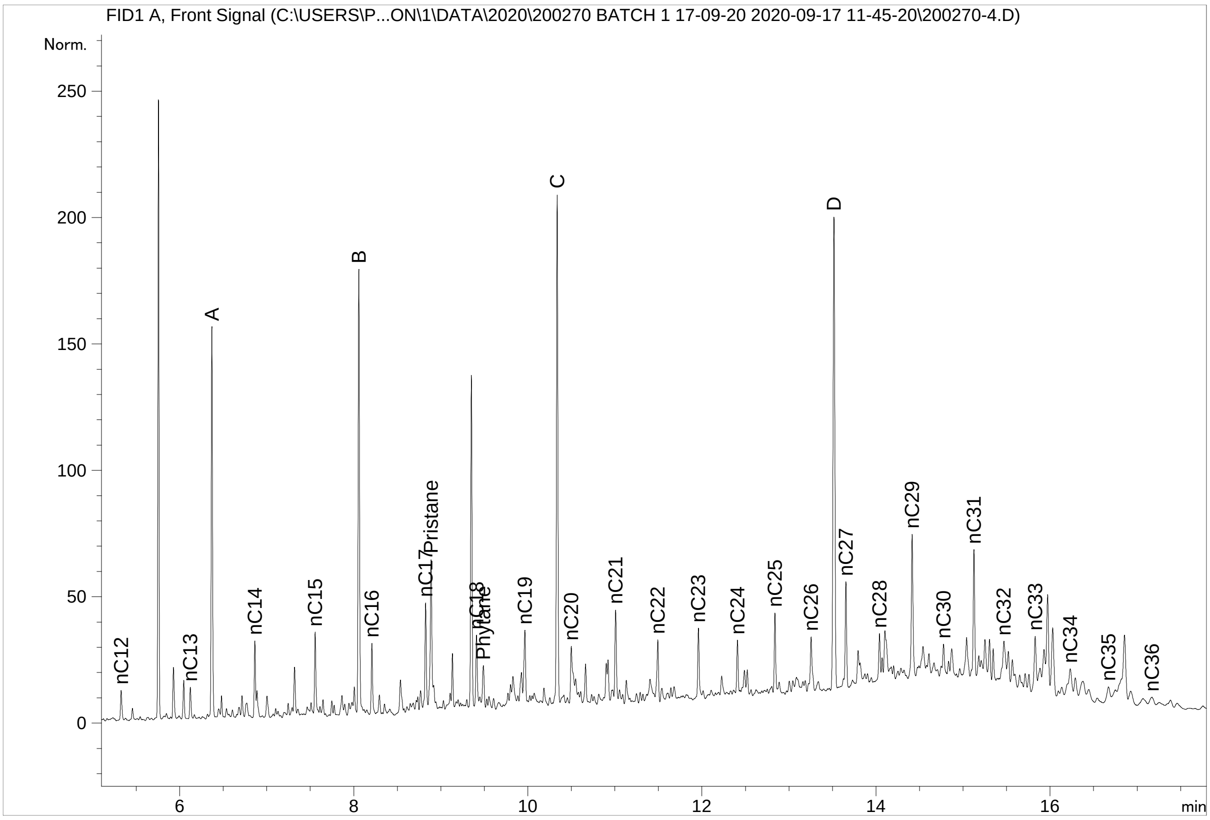
Mode 1 [µm]†	38250	Very coarse pebble
Mode 2 [µm]†	13600	Medium pebble
Mode 3 [µm]†	427	Medium sand
Median [µm]†	7162	Fine pebble
Median [phi]†	-2.84	
Mean [µm]†‡	4114	Fine pebble
Mean [phi]†‡	-2.04	
Sorting [µm]‡	9.58	Very poorly sorted
Sorting [phi]‡	3.26	
Skewness [µm]‡	-0.43	Very fine skewed
Skewness [phi]‡	0.43	
Gravel [%]#	59.95	Muddy, sandy gravel
Sand [%]#	34.19	
Fines [%]#	5.87	

Notes
Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction* (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals
* = Determinand not included in UKAS Accreditation
† = Particle size expressed in accordance with Wentworth (1922) scale
‡ = Statistics calculated using Folk and Ward (1957) method
# = Description based on BGS modified Folk classification (Long, 2006)

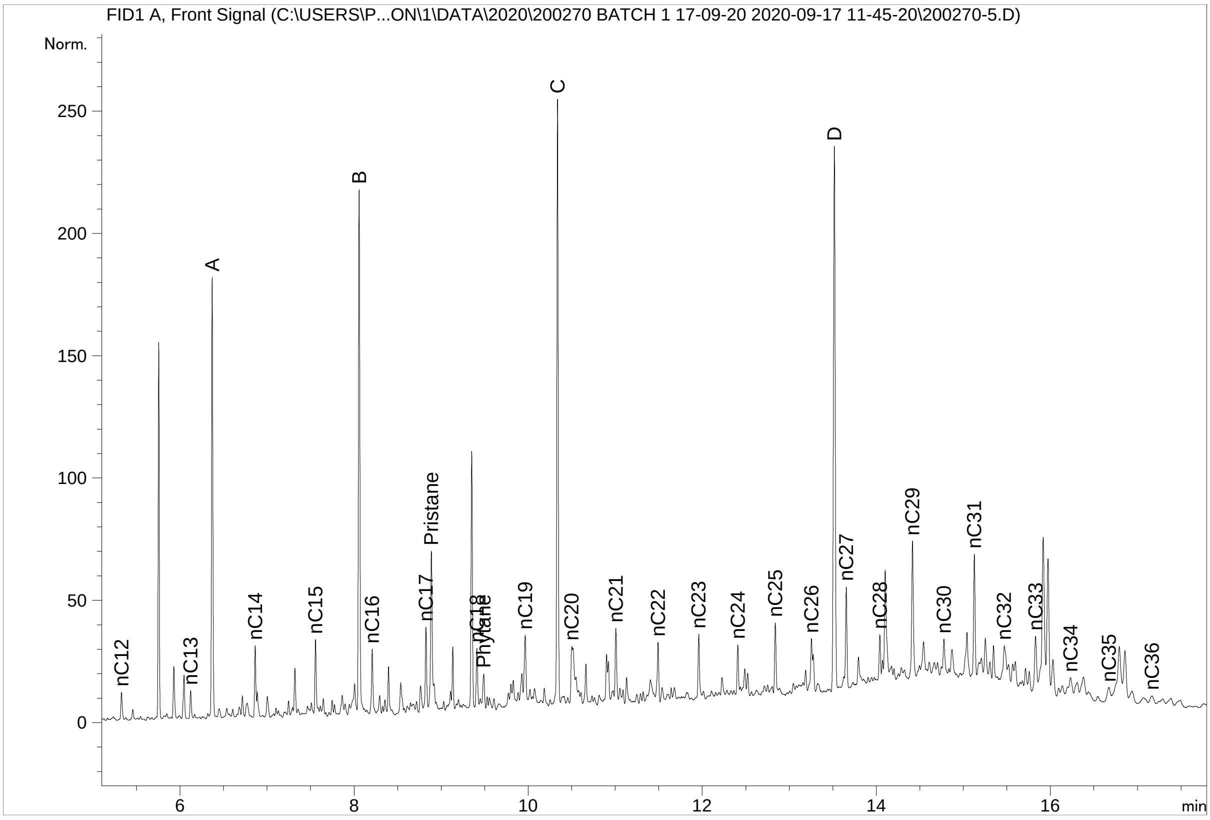
Appendix E

Chemistry Information

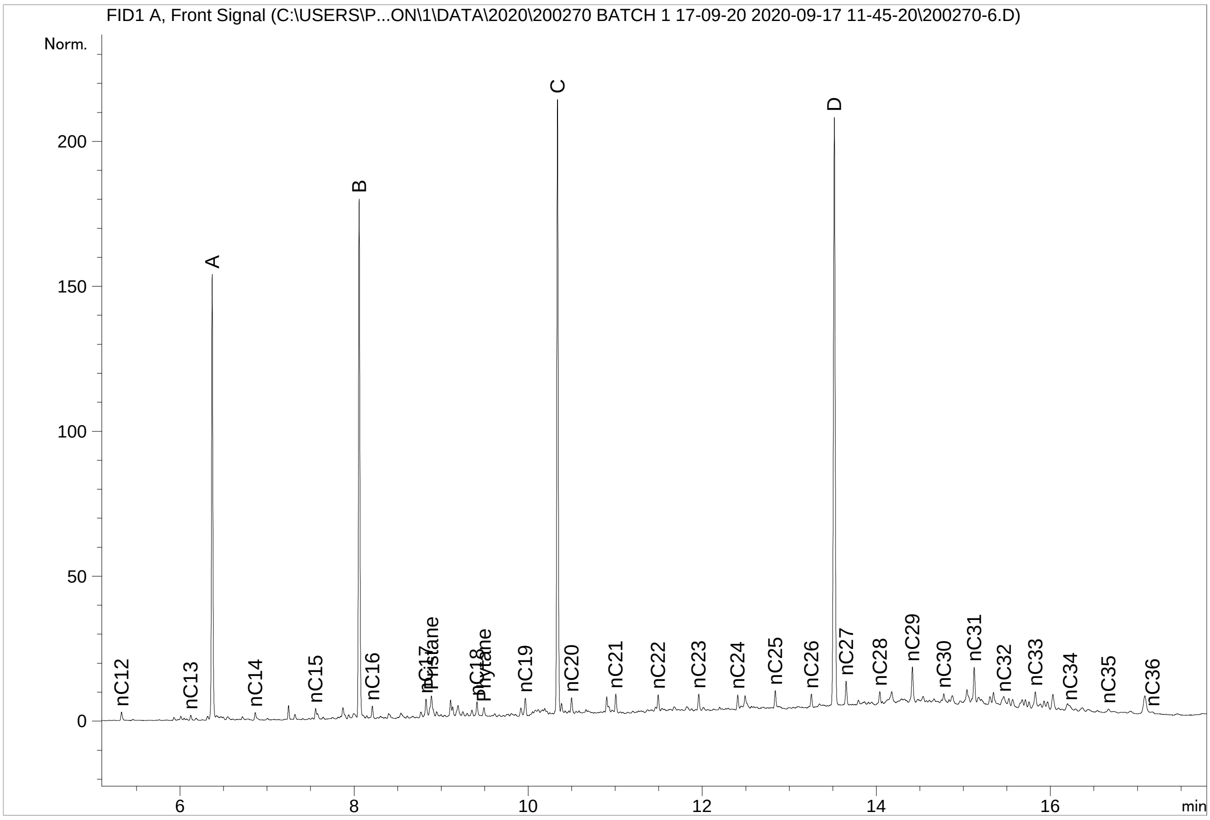
E.1 Gas Chromatography Traces



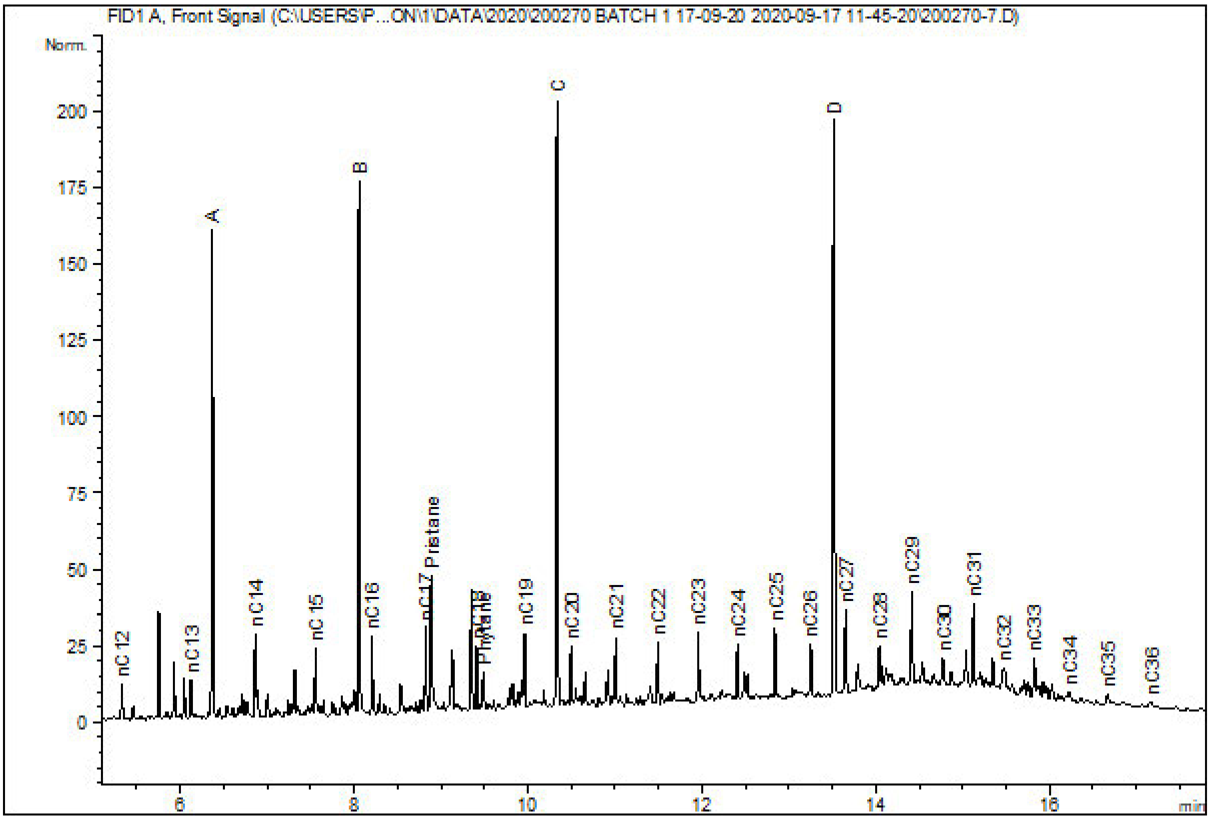
Station EC_04



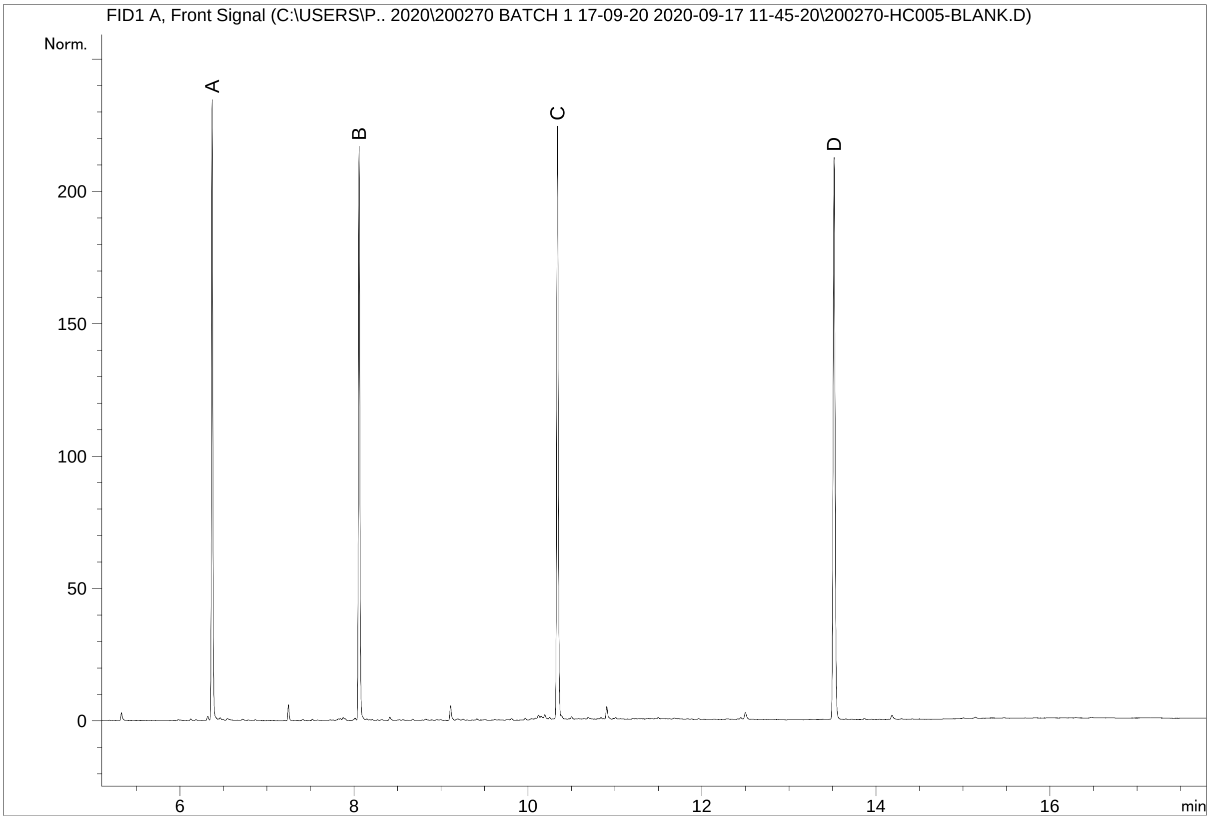
Station EC_05



Station EC_15



Station SS_03


FID1 A, Front Signal (C:\USERS\P.. 2020\200270 BATCH 1 17-09-20 2020-09-17 11-45-20\200270-HC005-BLANK.D)
Norm.
200
150
100
50
0
A
B
C
D
6
8
10
12
14
16
min

Blank

E.2 Individual n-Alkanes

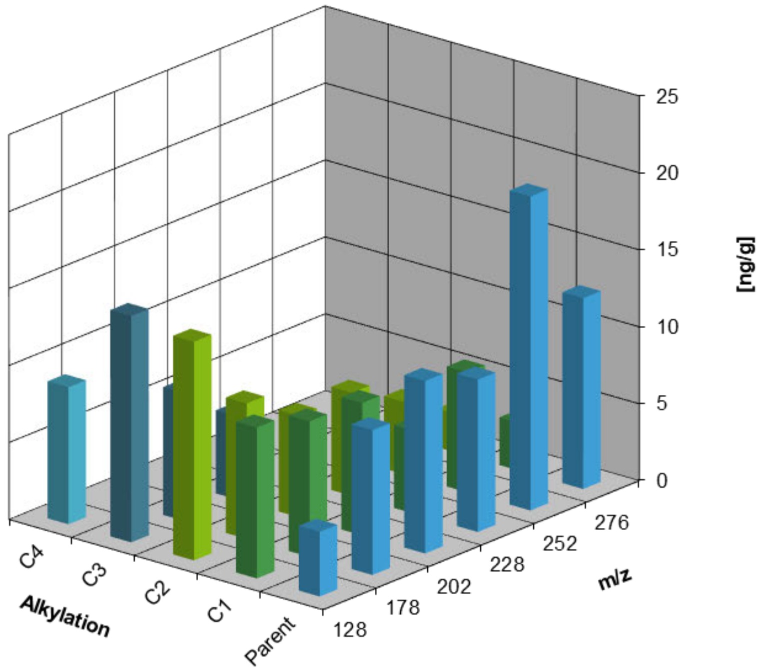
n-Alkane [ng/g]	Station			
	EC_04	EC_05	EC_15	SS_03
nC_{12}	7.1	5.8	1.9	6.5
nC_{13}	7.4	5.6	1.1	7.0
nC_{14}	16.6	13.8	1.6	14.9
nC_{15}	19.0	14.9	2.4	11.8
nC_{16}	16.7	13.9	2.3	14.5
nC_{17}	24.1	16.1	3.7	14.6
nC_{18}	16.8	11.4	2.8	10.7
nC_{19}	18.6	15.1	3.7	15.4
nC_{20}	20.3	9.5	3.0	9.4
nC_{21}	18.3	13.8	3.1	10.3
nC_{22}	14.2	12.2	2.8	11.7
nC_{23}	14.3	11.7	3.0	11.6
nC_{24}	9.9	8.9	2.5	9.0
nC_{25}	15.3	13.7	3.0	11.9
nC_{26}	11.8	9.3	2.3	9.1
nC_{27}	21.6	19.1	4.3	14.1
nC_{28}	9.6	8.0	2.1	6.5
nC_{29}	35.9	32.5	7.5	19.0
nC_{30}	7.4	6.7	1.6	4.5
nC_{31}	27.0	24.2	6.8	14.6
nC_{32}	12.5	6.3	2.1	3.6
nC_{33}	14.4	13.5	3.3	7.0
nC_{34}	8.5	4.1	1.4	2.9
nC_{35}	6.9	4.0	1.1	3.0
nC_{36}	4.1	3.4	0.4	2.2
Total n-Alkane [µg/g]	**0.378**	**0.297**	**0.070**	**0.246**
Pristane [ng/g]	**41.0**	**37.3**	**5.3**	**29.5**
Phytane [ng/g]	**11.0**	**7.5**	**1.8**	**7.2**

Notes
Individual n-alkane, pristane and phytane concentrations expressed as ng/g of dry sediment
Total n-alkane concentrations expressed as µg/g of dry sediment

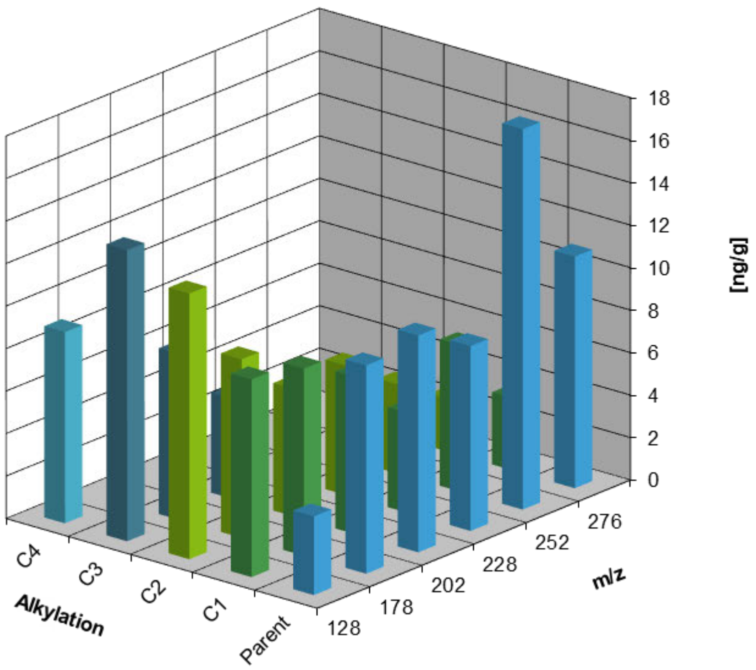
E.3 Distribution of Aromatic Hydrocarbons

The layout of the three-dimensional plots are as follows:

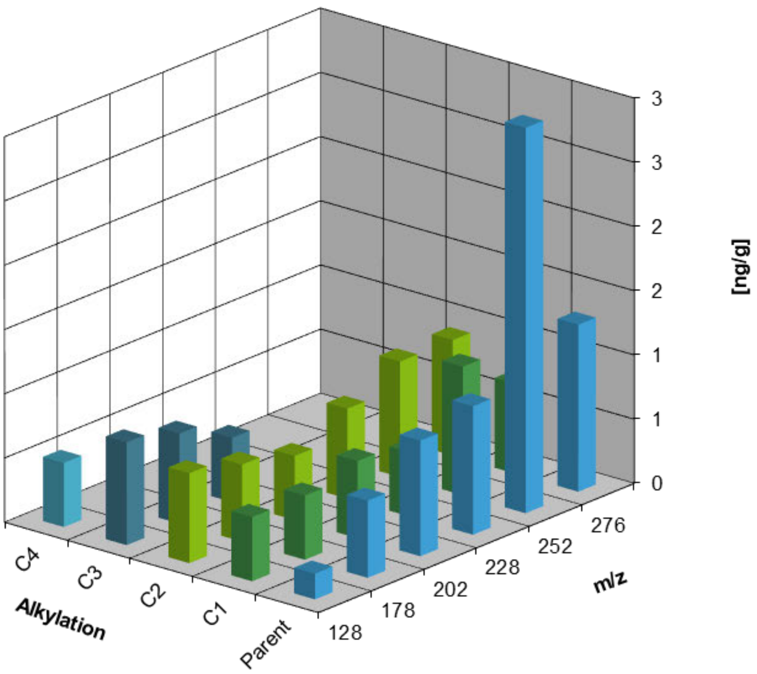
- Naphthalenes (molecular mass 128, 142, 156, 170, 184);
- Phenanthrenes/anthracenes (molecular mass 178, 192, 206, 220);
- Fluoranthenes/pyrenes (molecular mass 202, 216, 230, 244);
- Chrysene/benzanthracenes (molecular mass 228, 242, 256);
- Benzfluoranthenes/benzpyrenes/perylenes (molecular mass 252, 266, 280);
- Anthanthrenes/indenopyrenes/benzoperylenes (molecular mass 276, 290, 304).



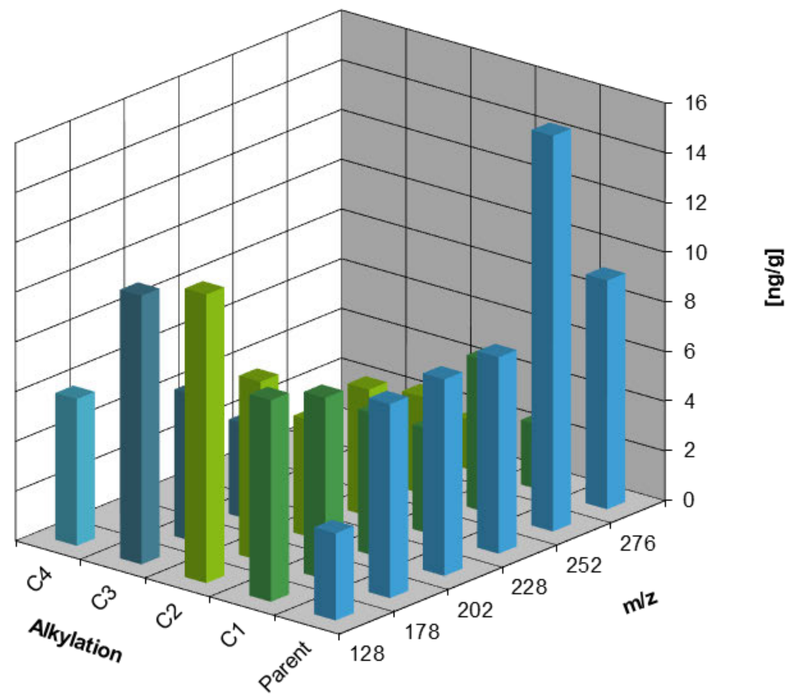
Station EC_04



Station EC_05



Station EC_15



Station SS_03

Appendix F

Macrofaunal Analysis

F.1 Macrofaunal Abundance

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
CNIDARIA												
Edwardsiidae	-	D0759	100665	Andres,-1881	-	-	-	-	-	-	-	-
PLATYHELMINTHES	-	F0001	793	Minot,-1876	-	-	-	-	-	-	-	-
NEMERTEA	-	G0001	152391	-	4	1	2	-	-	-	-	-
SIPUNCULA												
Golfingia-elongata	-	N0014	175026	(Keferstein,-1862)	-	-	-	-	-	-	-	-
Golfingia-vulgaris	-	N0017	410724	(de-Blainville,-1827)	-	-	-	-	-	-	-	-
Nephasoma-minutum	-	N0025	136060	(Keferstein,-1862)	-	-	-	-	-	-	-	-
Thysanocardia-procera	-	N0028	136063	(Möbius,-1875)	-	-	-	-	-	-	-	-
ANNELIDA												
Gattyana-cirrhosa	-	P0049	130749	(Pallas,-1766)	-	-	-	-	-	-	-	-
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	**9**	-	-	-	-	-	-	-
Lepidonotus-squamatus	-	P0082	130801	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Pholoe-baltica	-	P0091	130599	Örsted,-1843	-	1	1	-	-	-	-	-
Pholoe-inornata	-	P0092	130601	Johnston,-1839	5	-	1	-	-	-	-	-
Eteone-longa	agg.	P0118	130616	(Fabricius,-1780)	-	-	-	-	-	-	-	-
Hesionura-elongata	-	P0122	130649	(Southern,-1914)	-	-	-	-	-	1	-	-
Hypereteone-foliosa	-	P0124	152250	(Quatrefages,-1865)	-	-	-	-	-	-	-	-
Phyllodoce-maculata	-	P0144	334510	(Linnaeus,-1767)	-	-	2	-	-	-	-	-
Eulalia-bilineata	-	P0152	130624	(Johnston,-1840)	-	-	-	-	-	-	-	-
Eulalia-expusilla	-	P0153	130625	Pleijel,-1987	-	-	-	-	-	-	-	-
Eulalia-mustela	-	P0155	130631	Pleijel,-1987	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Eulalia-viridis	-	P0161	130639	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Eumida	Type-1	P0163	129446	Malmgren,-1865	1	-	-	-	-	-	-	-
Eumida-bahusiensis	-	P0164	130641	Bergstrom,-1914	-	-	-	-	-	-	-	-
Eumida-sanguinea	agg.	P0167	130644	(Örsted,-1843)	6	-	1	-	-	-	-	-
Glycera-lapidum	-	P0260	130123	Quatrefages,-1866	-	-	-	-	-	-	-	-
Glycera-oxycephala	-	P0262	130126	Ehlers,-1887	-	-	-	-	1	1	-	-
Sphaerodorum-gracilis	-	P0291	131100	(Rathke,-1843)	-	-	-	-	-	-	-	-
Psamathe-fusca	-	P0305	152249	Johnston,-1836	-	-	-	-	-	-	-	-
Nereimyra-punctata	-	P0311	130185	(Müller,-1788)	-	-	-	-	-	-	-	-
Syllis-licheri	-	P0358	238263	Ravara,-San-Martín-&-Moreira,-2004	-	-	-	-	-	-	-	-
Syllis-westheidei	-	P0358	131461	San-Martín,-1984	-	-	-	-	-	-	-	-
Syllis-armillaris	-	P0365-	131415	(O.F.-Müller,-1776)	3	-	-	-	-	-	-	-
Syllis-variegata	-	P0371	131458	Grube,-1860	3	1	3	-	-	-	-	-
Amblyosyllis-spectabilis	-	P0375	1258721	(Johnston-in-Baird,-1861)	-	-	-	-	-	-	-	-
Eusyllis-blomstrandi	-	P0380	131290	Malmgren,-1867	1	1	-	-	-	-	-	-
Odontosyllis-fulgurans	-	P0387	131327	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-	-	-	-	-
Streptodonta-pterochaeta	-	P0391	238207	(Southern,-1914)	-	-	-	-	-	-	-	-
Synmerosyllis-lamelligera	-	P0398	761617	(Saint-Joseph,-1887)	-	-	-	-	-	-	-	-
Syllides-japonicus	-	P0406	131410	Imajima,-1966	-	-	-	-	-	-	-	-
Parexogone-hebes	-	P0421	757970	(Webster-&-Benedict,-1884)	1	-	-	-	-	-	-	-
Exogone-naidina	-	P0422	327985	Örsted,-1845	-	-	1	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Exogone-verugera	-	P0423	333456	(Claparède,-1868)	-	1	-	2	-	-	-	-
Sphaerosyllis-bulbosa	-	P0425	131379	Southern,-1914	-	-	-	-	-	-	-	-
Sphaerosyllis-cf.-*taylori*	-	P0430	131394	Perkins,-1981	-	-	-	-	-	-	-	-
Proceraea-scapularis	-	P0442	238179	(Claparède,-1864)	-	-	-	-	-	-	-	-
Myrianida	-	P0449	129659	Milne-Edwards,-1845	-	-	1	-	-	-	-	-
Rullierinereis-ancornunezi	-	P0458	492034	Núñez-&-Brito,-2006	1	-	1	-	-	-	-	-
Eunereis-longissima	-	P0475	130375	(Johnston,-1840)	-	-	-	-	-	-	-	-
Nephtys-caeca	-	P0496	130355	(Fabricius,-1780)	-	-	-	-	-	-	-	-
Nephtys-cirrosa	-	P0498	130357	Ehlers,-1868	-	-	-	-	1	-	2	-
Nephtys-hombergii	-	P0499	130359	Savigny-in-Lamarck,-1818	-	-	-	-	-	-	-	-
Nephtys-longosetosa	-	P0503	130364	Örsted,-1842	-	-	-	-	-	2	-	-
Lumbrineris-nr.-*cingulata*	-	P0572	129337	Blainville,-1828	1	2	4	-	-	-	-	-
Scoletoma-magnidentata	-	P0583	152260	(Winsnes,-1981)	-	-	-	-	-	-	-	-
Protodorvillea-kefersteini	-	P0638	130041	(McIntosh,-1869)	2	-	-	-	-	-	-	-
Schistomeringos-neglecta	-	P0642	130044	(Fauvel,-1923)	-	-	-	-	-	-	-	-
Scoloplos-armiger	-	P0672	130537	(Müller,-1776)	3	-	-	-	-	-	-	-
Poecilochaetus-serpens	-	P0718	130711	Allen,-1904	-	1	1	-	-	-	-	-
Aonides-paucibranchiata	-	P0723	131107	Southern,-1914	-	-	-	-	-	-	-	-
Laonice-bahusiensis	-	P0733	131127	Söderström,-1920	-	-	-	-	-	-	-	-
Dipolydora-sp.-A	-	P0748	129611	Verrill,-1881	3	1	2	-	-	-	-	-
Dipolydora-caulleryi	-	P0751	131116	(Mesnil,-1897)	2	-	-	-	-	-	-	-
Polydora-ciliata	agg.	P0752	131141	(Johnston,-1838)	-	-	-	-	-	-	-	-
Dipolydora-flava	-	P0754	131118	(Claparède,-1870)	4	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Dipolydora-saintjosephi	-	P0761	131123	(Eliason,-1920)	-	-	-	-	-	-	-	-
Pseudopolydora-pulchra	-	P0774	131169	(Carazzi,-1893)	-	-	-	-	-	-	-	-
Pygospio-elegans	-	P0776	131170	Claparède,-1863	-	-	-	-	-	-	-	-
Scolelepis-bonnieri	-	P0779	131171	(Mesnil,-1896)	-	-	-	-	-	-	-	-
Scolelepis-foliosa	-	P0781	334741	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-	-	-	-	-
Spio-symphyta	-	P0787	596189	Meißner,-Bick-&-Bastrop,-2011	-	-	-	1	-	1	1	-
Spio-goniocephala	-	P0787	131184	Thulin,-1957	-	1	-	-	1	5	2	1
Spio-armata	-	P0788	131180	(Thulin,-1957)	4	-	-	-	-	-	-	-
Spiophanes-bombyx	agg.	P0794	131187	(Claparède,-1870)	-	4	-	-	-	-	-	-
Magelona-mirabilis	-	P0807	130271	(Johnston,-1865)	-	-	-	-	-	-	-	-
Aphelochaeta-sp.-A	-	P0823	129240	Blake,-1991	-	-	2	-	-	-	-	-
Aphelochaeta	Type-2	P0823	129240	Blake,-1991	-	-	-	-	-	-	-	-
Aphelochaeta-marioni	-	P0824	129938	(Saint-Joseph,-1894)	-	-	-	-	-	-	-	-
Caulleriella-alata	-	P0829	129943	(Southern,-1914)	-	1	-	-	-	-	-	-
Chaetozone-zetlandica	-	P0831	336485	McIntosh,-1911	-	-	1	-	-	-	-	-
Chaetozone-christiei	-	P0832-	152217	Chambers,-2000	-	-	-	-	-	-	-	-
Cirratulus-incertus	-	P0835	129961	McIntosh,-1916	-	-	1	-	-	-	-	-
Cirriformia-tentaculata	-	P0839	129964	(Montagu,-1808)	-	-	-	-	-	-	-	-
Dodecaceria	-	P0840	129246	Örsted,-1843	-	-	-	-	-	-	-	-
Mediomastus-fragilis	-	P0919	129892	Rasmussen,-1973	2	-	1	1	-	-	-	-
Notomastus	-	P0920	129220	M.-Sars,-1851	-	1	-	-	-	-	-	1
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	**1**	**2**	**2**	**3**	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Euclymene-oerstedii	-	P0964	130294	(Claparède,-1863)	1	-	-	-	-	-	-	-
Praxillella-affinis	-	P0971	130322	(M.-Sars-in-G.O.-Sars,-1872)	-	-	-	-	-	-	-	-
Micromaldane-ornithochaeta	-	P0978	130310	Mesnil,-1897	-	-	-	-	-	-	-	-
Thoracophelia-flabellifera	-	P0996	339492	Ziegelmeier,-1955	-	-	-	-	-	1	3	-
Ophelia-borealis	-	P0999	130491	Quatrefages,-1866	-	-	1	-	1	3	1	2
Travisia-forbesii	-	P1007	130512	Johnston,-1840	-	-	-	-	1	-	1	-
Scalibregma-celticum	-	P1026	130979	Mackie,-1991	4	-	-	-	-	-	-	-
Scalibregma-inflatum	-	P1027	130980	Rathke,-1843	3	-	-	-	-	-	-	-
Galathowenia-oculata	-	P1093	146950	(Zachs,-1923)	-	-	-	-	-	-	-	-
Sabellaria-spinulosa	-	P1117	130867	(Leuckart,-1849)	24	1	7	-	-	-	-	-
Ampharete-baltica	-	P1134	129776	Eliason,-1955	-	-	-	-	-	-	-	-
Anobothrus-gracilis	-	P1147	129789	(Malmgren,-1866)	-	-	-	-	-	-	-	-
Pista-maculata	-	P1187	868065	(Dalyell,-1853)	-	-	-	-	-	-	-	-
Eupolymnia-nesidensis	-	P1190	131490	(Delle-Chiaje,-1828)	-	-	-	-	-	-	-	-
Lanice-conchilega	-	P1195	131495	(Pallas,-1766)	2	7	3	-	-	-	-	-
Neoamphitrite-figulus	-	P1206	131504	(Dalyell,-1853)	-	-	-	-	-	-	-	-
Nicolea-venustula	-	P1210	131507	(Montagu,-1819)	2	-	-	-	-	-	-	-
Phisidia-aurea	-	P1215	131513	Southward,-1956	-	-	-	-	-	-	-	-
Lysilla-nivea	-	P1234	131501	Langerhans,-1884	-	2	2	-	-	-	-	-
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	**47**	**3**	**5**	**4**	**-**	**-**	**-**	**-**
Thelepus-cincinnatus	-	P1254	131543	(Fabricius,-1780)	2	-	-	-	-	-	-	-
Parasabella-cambrensis	-	P1273	530920	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Parasabella-torulis	-	P1276	530937	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-
Pseudopotamilla-cf.-reniformis	-	P1316	130963	(Bruguière,-1789)	1	-	-	-	-	-	-	-
Sabella-pavonina	-	P1320	130967	Savigny,-1822	-	-	-	-	-	-	-	-
Hydroides-norvegica	-	P1334	131009	Gunnerus,-1768	-	-	-	-	-	-	-	-
Spirobranchus-lamarcki	-	P1340	560033	(Quatrefages,-1866)	15	-	-	-	-	-	-	-
Tubificoides	-	P1487	137393	Lastočkin,-1937	-	-	-	-	-	-	-	-
ARTHROPODA												
Nymphon-brevirostre	-	Q0005	150520	Hodge,-1863	3	-	-	-	-	-	-	-
Achelia-echinata	-	Q0015	134599	Hodge,-1864	2	2	1	-	-	-	-	-
Callipallene-brevirostris	-	Q0033	134643	(Johnston,-1837)	-	-	-	-	-	-	-	-
Anoplodactylus-petiolatus	-	Q0044	134723	(Krøyer,-1844)	-	3	1	-	-	-	-	-
Pycnogonum-litorale	-	Q0051	239867	(Strøm,-1762)	-	-	-	-	-	-	-	-
Nebalia-reboredae	-	S0005	459311	Moreira-&-Urgorri,-2009	-	-	-	-	-	-	-	-
Nebalia-troncosoi	-	S0005	388222	Moreira,-Cacabelos-&-Dominguez,-2003	-	-	-	-	-	-	-	-
Gastrosaccus-spinifer	-	S0044	120020	(Goës,-1864)	-	1	1	5	11	5	-	-
Apherusa-bispinosa	-	S0102	102160	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Pontocrates	Type-B	S0132	101702	Boeck,-1871	-	-	-	-	-	-	-	-
Pontocrates-arenarius	-	S0135	102918	(Spence-Bate,-1858)	-	-	-	-	-	1	-	-
Synchelidium-maculatum	-	S0138	102928	Stebbing,-1906	-	-	-	-	-	-	-	-
Parapleustes-bicuspis	-	S0146	103008	(Krøyer,-1838)	-	-	-	-	-	-	-	-
Amphilochus-manudens	-	S0158	101967	Spence-Bate,-1862	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Apolochus-neapolitanus	-	S0159	236495	(Della-Valle,-1893)	-	-	-	-	-	-	-	-
Leucothoe-incisa	-	S0177	102460	Robertson,-1892	-	-	1	-	-	-	-	-
Leucothoe-procera	-	S0179	102466	Spence-Bate,-1857	1	-	-	-	-	-	-	-
Colomastix-pusilla	-	S0183	102076	Grube,-1861	-	-	-	-	-	-	-	-
Stenothoe-marina	-	S0213	103166	(Spence-Bate,-1857)	1	-	-	-	-	-	-	-
Urothoe-brevicornis	-	S0247	103226	Spence-Bate,-1862	-	-	-	-	1	-	-	-
Urothoe-elegans	-	S0248	103228	Spence-Bate,-1857	3	-	-	-	-	-	-	-
Urothoe-marina	-	S0249	103233	(Spence-Bate,-1857)	-	1	5	2	-	-	-	-
Phoxocephalus-holbolli	-	S0269	102989	(Krøyer,-1842)	-	-	1	-	-	-	-	-
Acidostoma-neglectum	-	S0272	102495	Dahl,-1964	-	-	-	-	-	-	-	-
Orchomene-humilis	-	S0320	102665	(Costa,-1853)	-	-	-	-	-	-	-	-
Tryphosa-nana	-	S0321	102748	(Krøyer,-1846)	-	-	-	-	-	-	-	8
Tmetonyx-similis	-	S0337	102742	(G.O.-Sars,-1891)	-	-	-	-	-	-	-	-
Iphimedia-minuta	-	S0380	102345	G.O.-Sars,-1883	-	-	-	-	-	-	-	-
Iphimedia-nexa	-	S0381	102346	Myers-&-McGrath,-in-Myers,-McGrath-&-Costello,-1987	-	-	-	-	-	-	-	-
Iphimedia-obesa	-	S0382	102347	Rathke,-1843	-	-	-	-	-	-	-	-
Nototropis-guttatus	-	S0411	488957	Costa,-1853	1	-	-	-	-	-	-	-
Nototropis-vedlomensis	-	S0413	179538	(Spence-Bate-&-Westwood,-1862)	-	-	-	-	-	-	-	-
Ampelisca-diadema	-	S0429	101896	(Costa,-1853)	6	1	1	-	-	-	-	-
Ampelisca-spinipes	-	S0438	101928	Boeck,-1861	-	1	-	-	-	-	-	-
Bathyporeia-elegans	-	S0452	103058	Watkin,-1938	-	-	-	-	1	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Bathyporeia-guilliamsoniana	-	S0454	103060	(Spence-Bate,-1857)	-	2	-	-	-	-	-	-
Abludomelita-obtusata	-	S0498	102788	(Montagu,-1813)	-	2	-	-	-	-	-	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	**4**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Othomaera-othonis	-	S0519	534781	(H.-Milne-Edwards,-1830)	-	-	-	-	-	-	-	-
Maerella-tenuimana	-	S0521	102831	(Spence-Bate,-1862)	-	-	-	-	-	-	-	-
Megamphopus-cornutus	-	S0539	102377	Norman,-1869	1	-	-	-	-	-	-	-
Gammaropsis-maculata	-	S0541	102364	(Johnston,-1828)	-	-	-	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	**3**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Leptocheirus-hirsutimanus	-	S0588	102036	(Spence-Bate,-1862)	-	1	-	-	-	-	-	-
Leptocheirus-pectinatus	-	S0589	102039	(Norman,-1869)	1	-	-	-	-	-	-	-
Monocorophium-acherusicum	-	S0606	225814	(Costa,-1853)	3	-	-	-	-	-	-	-
Crassicorophium-crassicorne	-	S0611	397383	(Bruzelius,-1859)	-	-	-	-	-	-	-	-
Centraloecetes-kroyeranus	-	S0618	1059646	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Unciola-crenatipalma	-	S0621	102057	(Spence-Bate,-1862)	9	-	-	-	-	-	-	-
Caprella-linearis	-	S0646	101839	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Phtisica-marina	-	S0657	101864	Slabber,-1769	-	1	-	-	-	-	-	-
Pseudoprotella-phasma	-	S0659	101871	(Montagu,-1804)	-	-	-	-	-	-	-	-
Gnathia-oxyuraea	-	S0793	118995	(Lilljeborg,-1855)	1	1	1	-	-	-	-	-
Gnathia-dentata	-	S0794	118990	(G.-O.-Sars,-1872)	1	-	-	-	-	-	-	-
Eurydice-spinigera	-	S0855	148637	Hansen,-1890	-	-	-	-	-	-	2	-
Prodajus-ostendensis	-	S0978	148638	Gilson,-1909	-	-	-	-	-	2	-	-
Pseudoparatanais-batei	-	S1140	136457	(Sars,-1882)	-	-	-	-	-	-	-	-
Bodotria-scorpioides	-	S1197	110445	(Montagu,-1804)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Eualus-pusiolus	-	S1345	107507	(Krøyer,-1841)	-	-	-	-	-	-	-	-
Hippolyte-varians	-	S1350	107518	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Eualus-cranchii	-	S1360	156083	(Leach,-1817-[in-Leach,-1815-1875])	2	-	-	-	-	-	-	-
Processa-edulis-crassipes	-	S1364	108336	Nouvel-&-Holthuis,-1957	-	-	-	-	-	-	-	-
Pandalina-brevirostris	-	S1374	107647	(Rathke,-1843)	-	-	-	-	-	-	-	-
Pandalus-montagui	-	S1377	107651	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Crangon-crangon	-	S1385	107552	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Philocheras-fasciatus	-	S1388	107559	(Risso,-1816)	-	-	-	-	-	-	-	-
Axius-stirhynchus	-	S1407	107722	Leach,-1816	-	-	-	-	-	-	-	-
Anapagurus-hyndmanni	-	S1448	107217	(Bell,-1845)	1	-	-	-	-	-	-	-
Pagurus-bernhardus	-	S1457	107232	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Pagurus-cuanensis	-	S1460	107235	Bell,-1845-[in-Bell,-1844-1853]	-	-	-	-	-	-	-	-
Galathea-intermedia	-	S1472	107150	Lilljeborg,-1851	17	-	-	-	-	-	-	-
Pisidia-longicornis	-	S1482	107188	(Linnaeus,-1767)	26	-	-	-	-	-	-	-
Ebalia-tumefacta	-	S1509	107302	(Montagu,-1808)	1	-	-	-	-	-	-	-
Inachus-leptochirus	-	S1527	107330	Leach,-1817-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Macropodia-rostrata	-	S1532	107345	(Linnaeus,-1761)	-	-	-	-	-	-	-	-
Pirimela-denticulata	-	S1562	107278	(Montagu,-1808)	-	-	-	-	-	-	-	-
Cancer-pagurus	-	S1566	107276	Linnaeus,-1758	-	-	-	-	-	-	-	-
Liocarcinus-depurator	-	S1580	107387	(Linnaeus,-1758)	-	-	-	-	-	-	1	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Liocarcinus-holsatus	-	S1581	107388	(Fabricius,-1798)	-	-	-	-	-	-	-	-
COLLEMBOLA	-	T0000	118086	-	-	-	-	-	-	-	-	-
MOLLUSCA												
Leptochiton-asellus	-	W0053	140199	(Gmelin,-1791)	-	-	1	-	-	-	-	-
Gibbula-tumida	-	W0161	141799	(Montagu,-1803)	1	-	-	-	-	-	-	-
Steromphala-cineraria	-	W0163	1039839	(Linnaeus,-1758)	4	-	-	-	-	-	-	-
Calliostoma-zizyphinum	-	W0182	141767	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Lacuna-crassior	-	W0287	140167	(Montagu,-1803)	-	-	-	-	-	-	-	-
Rissoa-parva	-	W0334	141365	(da-Costa,-1778)	8	5	1	-	-	-	-	-
Crisilla-semistriata	-	W0348	141280	(Montagu,-1808)	-	-	-	-	-	-	-	-
Manzonia-crassa	-	W0361	141291	(Kanmacher,-1798)	-	-	-	-	-	-	-	-
Onoba-semicostata	-	W0371	141320	(Montagu,-1803)	11	-	-	-	-	-	-	-
Tornus-subcarinatus	-	W0421	141690	(Montagu,-1803)	-	-	-	-	-	-	-	-
Crepidula-fornicata	-	W0439	138963	(Linnaeus,-1758)	43	-	-	-	-	-	-	-
Lamellaria-latens	-	W0469	140172	(O.-F.-Müller,-1776)	-	-	-	-	-	-	-	-
Ocenebra-erinaceus	-	W0685	140405	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Buccinum-undatum	-	W0708	138878	Linnaeus,-1758	-	-	-	-	-	-	-	-
Tritia-incrassata	-	W0747	876825	(Strøm,-1768)	-	-	-	-	-	-	-	-
Propebela-rufa	-	W0819	367570	(Montagu,-1803)	-	-	1	-	-	-	-	-
Noemiamea-dolioliformis	-	W0956	140973	(Jeffreys,-1848)	-	-	-	-	-	-	-	-
Retusa-obtusa	-	W1077	141134	(Montagu,-1803)	-	-	1	-	-	-	-	-
Dendronotus	-	W1266	137885	Alder-&-Hancock,-1845	1	-	-	-	-	-	-	-
Doto	-	W1270	137916	Oken,-1815	-	1	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Goniodoris-nodosa	-	W1302	140033	(Montagu,-1808)	2	1	-	-	-	-	-	-
Onchidoris-bilamellata	-	W1322	150457	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Nucula-hanleyi	-	W1568	140588	Winckworth,-1931	-	-	-	-	-	-	-	-
Nucula-nucleus	-	W1570	140590	(Linnaeus,-1758)	10	-	-	1	-	-	-	-
Mytilus-edulis	-	W1695	140480	Linnaeus,-1758	-	-	-	-	-	-	-	-
Modiolus-modiolus	-	W1702	140467	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Modiolula-phaseolina	-	W1708	140461	(Philippi,-1844)	-	-	-	-	-	-	-	-
Musculus-subpictus	-	W1718	506128	(Cantraine,-1835)	-	-	-	-	-	-	-	-
Aequipecten-opercularis	-	W1773	140687	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Heteranomia-squamula	-	W1809	138749	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Lucinoma-borealis	-	W1829	140283	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Kurtiella-bidentata	-	W1906	345281	(Montagu,-1803)	-	-	-	-	-	-	-	-
Goodallia-triangularis	-	W1929	138831	(Montagu,-1803)	-	3	5	15	-	-	1	-
Laevicardium-crassum	-	W1959	139004	(Gmelin,-1791)	-	-	-	-	-	-	-	-
Spisula-elliptica	-	W1975	140300	(T.-Brown,-1827)	-	-	-	2	-	-	-	-
Ensis	-	W1996	138333	Schumacher,-1817	-	-	-	-	-	-	-	-
Macomangulus-tenuis	-	W2012	878470	(da-Costa,-1778)	-	-	-	-	-	-	-	-
Fabulina-fabula	-	W2019	146907	(Gmelin,-1791)	-	-	-	-	-	-	-	-
Abra-alba	-	W2059	141433	(W.-Wood,-1802)	20	-	1	-	-	-	-	-
Abra-prismatica	-	W2062	141436	(Montagu,-1808)	-	-	1	-	-	-	-	-
Timoclea-ovata	-	W2104	141929	(Pennant,-1777)	-	-	-	-	-	-	-	-
Venerupis-corrugata	-	W2124	181364	(Gmelin,-1791)	-	-	-	-	-	-	-	-
Hiatella-arctica	-	W2166	140103	(Linnaeus,-1767)	-	-	1	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
PHORONIDA												
Phoronis	-	ZA0003	128545	Wright,-1856	6	-	-	-	-	-	-	-
ECHINODERMATA												
Crossaster-papposus	-	ZB0075	124154	(Linnaeus,-1767)	1	-	-	-	-	-	-	-
Ophiothrix-fragilis	-	ZB0124	125131	(Abildgaard-in-O.F.-Müller,-1789)	-	-	-	-	-	-	-	-
Amphipholis-squamata	-	ZB0161	125064	(Delle-Chiaje,-1828)	11	-	-	-	-	-	-	-
Ophiura-albida	-	ZB0168	124913	Forbes,-1839	1	-	-	-	-	-	-	-
Leptosynapta	-	ZB0291	123449	Verrill,-1867	-	-	-	-	-	-	-	-
ENTEROPNEUSTA	-	ZC0012	1820	Gegenbaur,-1870	-	-	-	1	-	-	-	-
The-following-taxa-(highlighted-in-bold)-were-merged-for-statistical-analysis												
Harmothoe	-	P0050	129491	Kinberg,-1856	9	-	-	-	-	-	-	-
Harmothoe-clavigera	-	P0050	130760	(M.-Sars,-1863)	-	-	-	-	-	-	-	-
Harmothoe-extenuata	-	P0058	130762	(Grube,-1840)	-	-	-	-	-	-	-	-
Harmothoe-impar	-	P0065	130770	(Johnston,-1839)	-	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	9	-	-	-	-	-	-	-
Leiochone	-	P0955	146991	Grube,-1868	1	-	1	-	-	-	-	-
Leiochone-tricirrata	-	P0955	328694	Bellan-&-Reys,-1967	-	-	-	-	-	-	-	-
Leiochone-johnstoni	-	P0958	221095	McIntosh,-1915	-	2	1	3	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	1	2	2	3	-	-	-	-
Polycirrus	-	P1235	129710	Grube,-1850	4	-	2	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Polycirrus-denticulatus	-	P1239	131527	Saint-Joseph,-1894	34	3	2	3	-	-	-	-
Polycirrus-medusa	-	P1242	131531	Grube,-1850	9	-	1	1	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	47	3	5	4	-	-	-	-
Cheirocratus	-	S0503	101669	Norman,-1867	-	-	-	-	-	-	-	-
Cheirocratus	female	S0503	101669	Norman,-1867	1	-	-	-	-	-	-	-
Cheirocratus-robustus	-	S0503	102797	G.O.-Sars,-1894	-	-	-	-	-	-	-	-
Cheirocratus-assimilis	-	S0504	102794	(Lilljeborg,-1852)	-	-	-	-	-	-	-	-
Cheirocratus-intermedius	-	S0505	102795	G.O.-Sars,-1894	-	-	-	-	-	-	-	-
Cheirocratus-sundevallii	-	S0506	102798	(Rathke,-1843)	3	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	4	-	-	-	-	-	-	-
Ericthonius	female	S0561	101567	H.-Milne-Edwards,-1830	2	-	-	-	-	-	-	-
Ericthonius-punctatus	-	S0564	102408	(Spence-Bate,-1857)	1	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	3	-	-	-	-	-	-	-
Taxa below have been removed from main data prior analysis												
JUVENILES												
SIPUNCULA	juv.	N0001	1268	Stephen,-1964	-	-	-	-	-	-	-	-
Golfingiidae	juv.	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	-	-	-	1
Nephtyidae	juv.	P0490	956	Grube,-1850	-	-	-	-	-	-	-	-
Cirriformia	juv.	P0838	129245	Hartman,-1936	-	1	-	-	-	-	-	-
Sabellidae	juv.	P1257	985	Latreille,-1825	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Achelia	juv.	Q0014	134568	Hodge,-1864	1	-	-	-	-	-	1	-
Gnathia	praniza	S0793	118437	Leach,-1814	-	-	-	-	-	-	-	-
DECAPODA	megalopa	S1276	1130	Latreille,-1802	-	-	-	-	-	-	-	-
CARIDEA	juv.	S1293	106674	Dana,-1852	-	-	-	-	-	-	-	-
Hippolytidae	juv.	S1334	106777	Spence-Bate,-1888	-	-	-	-	-	-	-	-
Processa	juv.	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	1	-	-	-	-	-	-	-
Philocheras	juv.	S1386	107010	Stebbing,-1900	1	-	-	-	-	-	-	-
Upogebia	juv.	S1418	107079	Leach,-1814-[in-Leach,-1813-1815]	1	-	-	-	-	-	-	-
Paguridae	juv.	S1445	106738	Latreille,-1802	-	-	-	-	-	-	-	-
BRACHYURA	larva	S1485	106673	Latreille,-1802	-	-	-	-	-	-	-	-
Majidae	juv.	S1512	106760	Samouelle,-1819	-	-	-	-	-	-	-	-
Inachus	juv.	S1525	106905	Weber,-1795	-	-	-	-	-	-	-	-
Macropodia	juv.	S1529	205077	Leach,-1814-[in-Leach,-1813-1815]	-	-	1	-	-	-	-	-
Liocarcinus	juv.	S1577	106925	Stimpson,-1871	-	-	-	-	-	-	-	-
GASTROPODA	juv.	W0088	101	Cuvier,-1795	2	-	-	-	-	-	-	-
Cantharidinae	juv.	W0140	382171	Gray,-1857	-	-	-	-	-	-	-	-
Trivia	juv.	W0457	138582	Gray,-1837	-	-	-	-	-	-	-	-
NUDIBRANCHIA	juv.	W1243	1762	Cuvier,-1817	-	-	-	-	-	-	-	-
CLADOBRANCHIA	juv.	W1243	827889	-	-	-	-	-	-	-	-	-
Goniodorididae	juv.	W1299	174	H.-Adams-&-A.-Adams,-1854	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Onchidorididae	juv.	W1319	175	Gray,-1827	-	-	-	-	-	-	-	-
Nucula	juv.	W1565	138262	Lamarck,-1799	-	9	8	-	-	-	-	-
Mytilidae	juv.	W1691	211	Rafinesque,-1815	-	-	1	-	-	-	-	-
Mytilus	juv.	W1693	138228	Linnaeus,-1758	-	2	-	-	-	-	-	-
Modiolus	juv.	W1698	138223	Lamarck,-1799	-	-	-	-	-	-	-	-
PECTINOIDEA	juv.	W1767	151320	Rafinesque,-1815	-	-	-	-	-	-	-	-
Anomiidae	juv.	W1805	214	Rafinesque,-1815	-	-	2	-	-	-	-	-
Spisula	juv.	W1973	138159	Gray,-1837	-	1	-	-	-	-	-	-
Ensis	juv.	W1996	138333	Schumacher,-1817	-	-	-	-	-	-	-	-
Abra	juv.	W2058	138474	Lamarck,-1818	6	1	-	-	-	-	-	-
Myidae	juv.	W2142	247	Lamarck,-1809	-	-	-	-	-	-	-	-
ASTEROIDEA	juv.	ZB0018	123080	de-Blainville,-1830	-	-	-	-	-	-	-	-
Solasteridae	juv.	ZB0070	123143	Viguier,-1878	-	-	-	-	-	-	-	-
OPHIUROIDEA	juv.	ZB0105	123084	Gray,-1840	-	-	1	-	-	-	-	-
Ophiuridae	juv.	ZB0165	123200	Müller-&-Troschel,-1840	-	-	-	-	-	-	-	-
PELAGIC-FAUNA												
CHAETOGNATHA	-	L0001	2081	-	-	-	-	-	-	-	-	-
FISH	-	-	-	-	-	-	1	-	-	-	-	-
PISCES	juv.	ZE0000	11676	-	-	-	-	-	-	-	-	-
Liparis-liparis	-	ZG0296	127219	(Linnaeus,-1766)	-	-	-	-	-	-	-	-
DAMAGED-FAUNA												
Golfingiidae	-	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	-	-	-	-
Polynoinae	-	P0025	155091	Kinberg,-1856	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Eumida	-	P0163	129446	Malmgren,-1865	-	-	-	-	-	-	-	-
Syllis	-	P0358	129680	Lamarck,-1818	-	1	-	-	-	-	-	-
Nereididae	-	P0458	22496	Blainville,-1818	-	-	-	-	-	-	-	-
Spionidae	-	P0720	913	Grube,-1850	-	-	-	-	-	-	-	-
Dipolydora	-	P0748	129611	Verrill,-1881	-	-	-	-	-	-	-	-
Chaetozone	-	P0832	129242	Malmgren,-1867	2	-	-	-	-	-	-	-
Maldanidae	-	P0938	923	Malmgren,-1867	-	-	-	1	-	-	-	-
Euclymeninae	-	P0951	152232	Arwidsson,-1906	-	-	-	-	-	-	-	-
Ampharete	-	P1133	129155	Malmgren,-1866	-	-	-	-	-	-	-	-
Serpulidae	-	P1324	988	Rafinesque,-1815	2	-	-	-	-	-	-	-
Spirobranchus	-	P1339	129582	Blainville,-1818	-	-	-	-	-	-	-	-
Nymphon	-	Q0004	134591	Fabricius,-1794	-	-	-	-	-	-	-	-
Callipallene	-	Q0032	134581	Flynn,-1929	-	-	-	-	-	-	-	-
MYSIDA	-	S0025	149668	Boas,-1883	-	-	-	-	1	-	-	-
Mysidae	-	S0031	119822	Haworth,-1825	1	1	-	-	-	-	-	-
AMPHIPODA	-	S0097	1135	Latreille,-1816	-	-	-	-	-	-	-	-
Urothoe	-	S0246	101789	Dana,-1852	-	-	-	-	-	-	-	-
Ampeliscidae	-	S0422	101364	Krøyer,-1842	1	-	-	-	-	-	-	-
Ampelisca	-	S0423	101445	Krøyer,-1842	-	-	-	-	-	-	-	-
Caprellidae	-	S0639	101361	Leach,-1814	-	-	-	-	-	-	-	-
CARIDEA	-	S1293	106674	Dana,-1852	-	-	-	-	-	-	-	-
Hippolytidae	-	S1334	106777	Spence-Bate,-1888	7	-	-	-	-	-	-	-
Eualus	-	S1342	106986	Thallwitz,-1891	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC
Processa	-	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Pagurus	-	S1454	106854	Fabricius,-1775	-	-	-	-	-	-	-	-
Liocarcinus	-	S1577	106925	Stimpson,-1871	-	-	-	-	-	-	-	-
GASTROPODA	-	W0088	101	Cuvier,-1795	-	-	-	-	-	-	-	-
NUDIBRANCHIA	-	W1243	1762	Cuvier,-1817	-	-	-	-	-	-	-	-
Abra	-	W2058	138474	Lamarck,-1818								

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
CNIDARIA												
Edwardsiidae	-	D0759	100665	Andres,-1881	-	-	1	-	-	-	-	-
PLATYHELMINTHES	-	F0001	793	Minot,-1876	-	-	-	-	-	-	-	-
NEMERTEA	-	G0001	152391	-	12	-	4	-	1	3	7	12
SIPUNCULA												
Golfingia-elongata	-	N0014	175026	(Keferstein,-1862)	6	-	6	-		2	2	6
Golfingia-vulgaris	-	N0017	410724	(de-Blainville,-1827)	-	-	-	-	-	-	-	-
Nephasoma-minutum	-	N0025	136060	(Keferstein,-1862)	5	-	27	-		5	1	5
Thysanocardia-procera	-	N0028	136063	(Möbius,-1875)	1	-	-	-	-	-	-	1
ANNELIDA												
Gattyana-cirrhosa	-	P0049	130749	(Pallas,-1766)	3	-	-	-	-	1	2	3
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	**2**	-	**6**	-	-	**4**	**3**	**2**
Lepidonotus-squamatus	-	P0082	130801	(Linnaeus,-1758)	-	-	2	-	-	-	1	-
Pholoe-baltica	-	P0091	130599	Örsted,-1843	1	-	-	-	-	-	2	1
Pholoe-inornata	-	P0092	130601	Johnston,-1839	5	-	4	-	-	-	5	5
Eteone-longa	agg.	P0118	130616	(Fabricius,-1780)	1	-	1	1	-	-	2	1
Hesionura-elongata	-	P0122	130649	(Southern,-1914)	-	-	-	-	-	-	-	-
Hypereteone-foliosa	-	P0124	152250	(Quatrefages,-1865)	-	-	-	-	-	-	-	-
Phyllodoce-maculata	-	P0144	334510	(Linnaeus,-1767)	5	-	-	-	-	-	-	5
Eulalia-bilineata	-	P0152	130624	(Johnston,-1840)	1	-	-	-	-	-	-	1
Eulalia-expusilla	-	P0153	130625	Pleijel,-1987	-	-	1	-	-	-	-	-
Eulalia-mustela	-	P0155	130631	Pleijel,-1987	-	-	-	-	-	-	-	-
Eulalia-viridis	-	P0161	130639	(Linnaeus,-1767)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Eumida	Type-1	P0163	129446	Malmgren,-1865	-	-	-	-	-	-	-	-
Eumida-bahusiensis	-	P0164	130641	Bergstrom,-1914	2	-	-	-	-	-	-	2
Eumida-sanguinea	agg.	P0167	130644	(Örsted,-1843)	5	-	4	-	-	2	11	5
Glycera-lapidum	-	P0260	130123	Quatrefages,-1866	-	-	-	-	-	-	2	-
Glycera-oxycephala	-	P0262	130126	Ehlers,-1887	-	-	-	-	-	-	-	-
Sphaerodorum-gracilis	-	P0291	131100	(Rathke,-1843)	-	-	-	-	-	-	-	-
Psamathe-fusca	-	P0305	152249	Johnston,-1836	-	-	-	-	-	-	1	
Nereimyra-punctata	-	P0311	130185	(Müller,-1788)	-	-	-	-	-	-	-	-
Syllis-licheri	-	P0358	238263	Ravara,-San-Martín-&-Moreira,-2004	-	-	-	-	-	-	-	-
Syllis-westheidei	-	P0358	131461	San-Martín,-1984	-	-	-	-	-	-	-	-
Syllis-armillaris	-	P0365-	131415	(O.F.-Müller,-1776)	2	-	5	-	-	-	-	2
Syllis-variegata	-	P0371	131458	Grube,-1860	6	-	5	-	-	1	6	6
Amblyosyllis-spectabilis	-	P0375	1258721	(Johnston-in-Baird,-1861)	-	-	-	-	-	-	1	
Eusyllis-blomstrandi	-	P0380	131290	Malmgren,-1867	1	-	-	-	-	-	4	1
Odontosyllis-fulgurans	-	P0387	131327	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-	-	-	2	-
Streptodonta-pterochaeta	-	P0391	238207	(Southern,-1914)	-	-	-	-	-	-		-
Synmerosyllis-lamelligera	-	P0398	761617	(Saint-Joseph,-1887)	1	-	-	-	-	-	1	1
Syllides-japonicus	-	P0406	131410	Imajima,-1966	-	-	-	-	-	-		-
Parexogone-hebes	-	P0421	757970	(Webster-&-Benedict,-1884)	-	-	-	-	-	-	1	-
Exogone-naidina	-	P0422	327985	Örsted,-1845	-	-	-	-	-	-	-	-
Exogone-verugera	-	P0423	333456	(Claparède,-1868)	1	-	1	-	-	-	2	1

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Sphaerosyllis-bulbosa	-	P0425	131379	Southern,-1914	-	-	-	-	-	-	-	-
*Sphaerosyllis-*cf.*-taylori*	-	P0430	131394	Perkins,-1981	-	-	-	-	-	-	-	-
Proceraea-scapularis	-	P0442	238179	(Claparède,-1864)	-	-	-	-	-	-	8	-
Myrianida	-	P0449	129659	Milne-Edwards,-1845	2	-	1	-	-	3	-	2
Rullierinereis-ancornunezi	-	P0458	492034	Núñez-&-Brito,-2006	-	-	-	-	-		-	
Eunereis-longissima	-	P0475	130375	(Johnston,-1840)	1	-	-	-	-	1	-	1
Nephtys-caeca	-	P0496	130355	(Fabricius,-1780)	3	-	1	-	-	3	-	3
Nephtys-cirrosa	-	P0498	130357	Ehlers,-1868	-	-	-	2	1	-	-	-
Nephtys-hombergii	-	P0499	130359	Savigny-in-Lamarck,-1818	-	-	-	-	1	-	-	-
Nephtys-longosetosa	-	P0503	130364	Örsted,-1842	-	-	-	-	-	-	-	
*Lumbrineris-*nr.*-cingulata*	-	P0572	129337	Blainville,-1828	9	-	7	-	-	6	11	9
Scoletoma-magnidentata	-	P0583	152260	(Winsnes,-1981)	-	-	-	-	-	-	-	-
Protodorvillea-kefersteini	-	P0638	130041	(McIntosh,-1869)	1	-	-	-	-	-	2	1
Schistomeringos-neglecta	-	P0642	130044	(Fauvel,-1923)	-	-	-	-	-	-	1	-
Scoloplos-armiger	-	P0672	130537	(Müller,-1776)	-	-				1	2	
Poecilochaetus-serpens	-	P0718	130711	Allen,-1904	2	-	2	-	-	-	3	2
Aonides-paucibranchiata	-	P0723	131107	Southern,-1914	-	-	-	-	-	-	5	-
Laonice-bahusiensis	-	P0733	131127	Söderström,-1920	-	-	-	-	-	-	1	-
*Dipolydora-*sp.-A	-	P0748	129611	Verrill,-1881	-	-	-	-	-	-	-	-
Dipolydora-caulleryi	-	P0751	131116	(Mesnil,-1897)	6	-	3	-	-	2	1	6
Polydora-ciliata	agg.	P0752	131141	(Johnston,-1838)	-	-	-	-	-	-	-	-
Dipolydora-flava	-	P0754	131118	(Claparède,-1870)	1	-	1	-	-	-	-	1
Dipolydora-saintjosephi	-	P0761	131123	(Eliason,-1920)	-	-	-	-	-	1	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Pseudopolydora-pulchra	-	P0774	131169	(Carazzi,-1893)	1	-	-	-	-	-	-	1
Pygospio-elegans	-	P0776	131170	Claparède,-1863	5	-	-	-	-	-	-	5
Scolelepis-bonnieri	-	P0779	131171	(Mesnil,-1896)	-	-	-	-	-	-	-	-
Scolelepis-foliosa	-	P0781	334741	(Audouin-&-Milne-Edwards,-1833)	-	-	-	1	-	-	1	-
Spio-symphyta	-	P0787	596189	Meißner,-Bick-&-Bastrop,-2011	-	-	-	-	-	-	-	-
Spio-goniocephala	-	P0787	131184	Thulin,-1957	-	1	-	-	-	-	-	-
Spio-armata	-	P0788	131180	(Thulin,-1957)	9	-	5			3	2	9
Spiophanes-bombyx	agg.	P0794	131187	(Claparède,-1870)	-	-	-	2	4	-	-	-
Magelona-mirabilis	-	P0807	130271	(Johnston,-1865)	-	-	-	-	-	-	-	-
Aphelochaeta-sp.-A	-	P0823	129240	Blake,-1991	-	-	-	-	-	-	-	-
Aphelochaeta	Type-2	P0823	129240	Blake,-1991	-	-	-	-	-	-	-	-
Aphelochaeta-marioni	-	P0824	129938	(Saint-Joseph,-1894)	-	-	1	-	-	-	-	-
Caulleriella-alata	-	P0829	129943	(Southern,-1914)	-	-	2	-	-	-	1	-
Chaetozone-zetlandica	-	P0831	336485	McIntosh,-1911	2	-	1	-	-	-	-	2
Chaetozone-christiei	-	P0832-	152217	Chambers,-2000	-	-	-	1	1	-	-	-
Cirratulus-incertus	-	P0835	129961	McIntosh,-1916	-	-	-	-	-	-	-	-
Cirriformia-tentaculata	-	P0839	129964	(Montagu,-1808)	-	-	-	-	-	-	-	-
Dodecaceria	-	P0840	129246	Örsted,-1843	-	-	3	-	-	-	-	-
Mediomastus-fragilis	-	P0919	129892	Rasmussen,-1973	5	-	4	-	-	2	5	5
Notomastus	-	P0920	129220	M.-Sars,-1851	1	-	2	-	-	-	-	1
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	**5**	-	**4**	-	-	-	**4**	**5**
Euclymene-oerstedii	-	P0964	130294	(Claparède,-1863)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Praxillella-affinis	-	P0971	130322	(M.-Sars-in-G.O.-Sars,-1872)	2	-	2	-	-	1	-	2
Micromaldane-ornithochaeta	-	P0978	130310	Mesnil,-1897	-	-	-	-	-	-	-	-
Thoracophelia-flabellifera	-	P0996	339492	Ziegelmeier,-1955	-	-	-	-	-	-	-	-
Ophelia-borealis	-	P0999	130491	Quatrefages,-1866	-	2	-	-	1	-	-	-
Travisia-forbesii	-	P1007	130512	Johnston,-1840	-	-	-	-	1	-	-	-
Scalibregma-celticum	-	P1026	130979	Mackie,-1991	-	-	-	-	-	-	1	-
Scalibregma-inflatum	-	P1027	130980	Rathke,-1843	-	-	1	-	-	-	2	-
Galathowenia-oculata	-	P1093	146950	(Zachs,-1923)	2	-		-	-	1	1	2
Sabellaria-spinulosa	-	P1117	130867	(Leuckart,-1849)	42	1	64	9	-	5	87	42
Ampharete-baltica	-	P1134	129776	Eliason,-1955	-	-	-	-	-	-	1	-
Anobothrus-gracilis	-	P1147	129789	(Malmgren,-1866)	-	-	-	-	-	-	-	-
Pista-maculata	-	P1187	868065	(Dalyell,-1853)	-	-	-	-	-	-	-	-
Eupolymnia-nesidensis	-	P1190	131490	(Delle-Chiaje,-1828)	-	-	-	-	-	-	-	-
Lanice-conchilega	-	P1195	131495	(Pallas,-1766)	19	3	3	13	1	2	12	19
Neoamphitrite-figulus	-	P1206	131504	(Dalyell,-1853)	-	-	-	-	-	-	-	-
Nicolea-venustula	-	P1210	131507	(Montagu,-1819)	-	-	-	-	-	-	3	-
Phisidia-aurea	-	P1215	131513	Southward,-1956	-	-	-	-	-	-	-	-
Lysilla-nivea	-	P1234	131501	Langerhans,-1884		1	2	-	-	-	-	-
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	**12**	-	**9**	-	-	**3**	**20**	**12**
Thelepus-cincinnatus	-	P1254	131543	(Fabricius,-1780)	-	-	-	-	-	-	1	-
Parasabella-cambrensis	-	P1273	530920	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Parasabella-torulis	-	P1276	530937	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-
Pseudopotamilla-cf.-reniformis	-	P1316	130963	(Bruguière,-1789)	-	-	1	-	-	1	-	-
Sabella-pavonina	-	P1320	130967	Savigny,-1822	-	-	-	1	-	-	2	-
Hydroides-norvegica	-	P1334	131009	Gunnerus,-1768	-	-	-		-	-		-
Spirobranchus-lamarcki	-	P1340	560033	(Quatrefages,-1866)	-	-	7	1	-	7	2	-
Tubificoides	-	P1487	137393	Lastočkin,-1937	-	-	-	-	-	-	-	-
ARTHROPODA												
Nymphon-brevirostre	-	Q0005	150520	Hodge,-1863	4	-	-	-	-	-	5	4
Achelia-echinata	-	Q0015	134599	Hodge,-1864	2	-	1	2	-	-	11	2
Callipallene-brevirostris	-	Q0033	134643	(Johnston,-1837)	-	-	-	-	-	1	-	-
Anoplodactylus-petiolatus	-	Q0044	134723	(Krøyer,-1844)	-	-	2	2	-	-	2	-
Pycnogonum-litorale	-	Q0051	239867	(Strøm,-1762)	-	-	-	-	-	-	1	-
Nebalia-reboredae	-	S0005	459311	Moreira-&-Urgorri,-2009	-	-	-	-	-	-	-	-
Nebalia-troncosoi	-	S0005	388222	Moreira,-Cacabelos-&-Dominguez,-2003	-	1	-	-	-	-	-	-
Gastrosaccus-spinifer	-	S0044	120020	(Goës,-1864)	-	-	1	3	-	-	-	-
Apherusa-bispinosa	-	S0102	102160	(Spence-Bate,-1857)	-	-	-		-	-	-	-
Pontocrates	Type-B	S0132	101702	Boeck,-1871	-	-	-	1	-	-	-	-
Pontocrates-arenarius	-	S0135	102918	(Spence-Bate,-1858)	-	-	-	-	-	-	-	-
Synchelidium-maculatum	-	S0138	102928	Stebbing,-1906	-	-	-	-	-	-	-	-
Parapleustes-bicuspis	-	S0146	103008	(Krøyer,-1838)	-	-	-	-	-	-	1	-
Amphilochus-manudens	-	S0158	101967	Spence-Bate,-1862	-	-	-	-	-	-	-	-
Apolochus-neapolitanus	-	S0159	236495	(Della-Valle,-1893)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Leucothoe-incisa	-	S0177	102460	Robertson,-1892	-	-	-	-	-	-	-	-
Leucothoe-procera	-	S0179	102466	Spence-Bate,-1857	-	-	-	-	-	-	-	-
Colomastix-pusilla	-	S0183	102076	Grube,-1861	-	-	-	-	-	-	-	-
Stenothoe-marina	-	S0213	103166	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Urothoe-brevicornis	-	S0247	103226	Spence-Bate,-1862	-	-	-	-	-	-	-	-
Urothoe-elegans	-	S0248	103228	Spence-Bate,-1857	1	-	-	-	-	12	2	1
Urothoe-marina	-	S0249	103233	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Phoxocephalus-holbolli	-	S0269	102989	(Krøyer,-1842)	-	-	-	-	-	-	-	-
Acidostoma-neglectum	-	S0272	102495	Dahl,-1964	-	-	-	-	-	-	-	-
Orchomene-humilis	-	S0320	102665	(Costa,-1853)	4	-	1	-	-	2	-	4
Tryphosa-nana	-	S0321	102748	(Krøyer,-1846)	-	-	-	-	-	-	-	-
Tmetonyx-similis	-	S0337	102742	(G.O.-Sars,-1891)	1	-	1	-	-	-	-	1
Iphimedia-minuta	-	S0380	102345	G.O.-Sars,-1883	-	-	-	-	-	-	-	-
Iphimedia-nexa	-	S0381	102346	Myers-&-McGrath,-in-Myers,-McGrath-&-Costello,-1987	-	-	-	-	-	-	-	-
Iphimedia-obesa	-	S0382	102347	Rathke,-1843	-	-	1	-	-	-	-	-
Nototropis-guttatus	-	S0411	488957	Costa,-1853	-	-		-	-	-	-	-
Nototropis-vedlomensis	-	S0413	179538	(Spence-Bate-&-Westwood,-1862)	-	-	-	-	-	-	-	-
Ampelisca-diadema	-	S0429	101896	(Costa,-1853)	11	-	35	-	-	4	42	11
Ampelisca-spinipes	-	S0438	101928	Boeck,-1861	10	-	21	-	-	3	24	10
Bathyporeia-elegans	-	S0452	103058	Watkin,-1938	-	-	-	-	13	-	-	-
Bathyporeia-guilliamsoniana	-	S0454	103060	(Spence-Bate,-1857)	-	-	-	1	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Abludomelita-obtusata	-	S0498	102788	(Montagu,-1813)	-	1	-	1	-	-	2	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	**1**	-	**1**	-	-	**7**	-	**1**
Othomaera-othonis	-	S0519	534781	(H.-Milne-Edwards,-1830)	3	-	-	-	-	7	-	3
Maerella-tenuimana	-	S0521	102831	(Spence-Bate,-1862)	-	-	1	-	-	1	-	-
Megamphopus-cornutus	-	S0539	102377	Norman,-1869	-	-		-	-	-	-	-
Gammaropsis-maculata	-	S0541	102364	(Johnston,-1828)	-	-	1	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	-	-	-	-	-	-	-	-
Leptocheirus-hirsutimanus	-	S0588	102036	(Spence-Bate,-1862)	1	-	-	-	-	-	2	1
Leptocheirus-pectinatus	-	S0589	102039	(Norman,-1869)	-	-	-	-	-	1	-	-
Monocorophium-acherusicum	-	S0606	225814	(Costa,-1853)	-	-	-	-	-	-	-	-
Crassicorophium-crassicorne	-	S0611	397383	(Bruzelius,-1859)	-	-	-	-	-	-	-	-
Centraloecetes-kroyeranus	-	S0618	1059646	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Unciola-crenatipalma	-	S0621	102057	(Spence-Bate,-1862)	5	-	4	-	-	3	2	5
Caprella-linearis	-	S0646	101839	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Phtisica-marina	-	S0657	101864	Slabber,-1769	1	-	-	-	-	-	-	1
Pseudoprotella-phasma	-	S0659	101871	(Montagu,-1804)	3	-	1	-	-	-	1	3
Gnathia-oxyuraea	-	S0793	118995	(Lilljeborg,-1855)	2	-	2	-	-	-	-	2
Gnathia-dentata	-	S0794	118990	(G.-O.-Sars,-1872)	-	-	1	-	-	-	-	-
Eurydice-spinigera	-	S0855	148637	Hansen,-1890	-	2	-	-	-	-	-	-
Prodajus-ostendensis	-	S0978	148638	Gilson,-1909	-	-	-	-	-	-	-	-
Pseudoparatanais-batei	-	S1140	136457	(Sars,-1882)	1	-	-	-	-	-	-	1
Bodotria-scorpioides	-	S1197	110445	(Montagu,-1804)	-	-	-	-	-	-	1	
Eualus-pusiolus	-	S1345	107507	(Krøyer,-1841)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Hippolyte-varians	-	S1350	107518	Leach,-1814-[in-Leach,-1813-1815]	1	-	1	-	-	-	1	1
Eualus-cranchii	-	S1360	156083	(Leach,-1817-[in-Leach,-1815-1875])	1	-	-	-	-	2	-	1
Processa-edulis-crassipes	-	S1364	108336	Nouvel-&-Holthuis,-1957	-	-	-	-	-	-	-	-
Pandalina-brevirostris	-	S1374	107647	(Rathke,-1843)	-	-	-	-	-	2	-	-
Pandalus-montagui	-	S1377	107651	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Crangon-crangon	-	S1385	107552	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Philocheras-fasciatus	-	S1388	107559	(Risso,-1816)	-	-	-	-	-	-	-	-
Axius-stirhynchus	-	S1407	107722	Leach,-1816	-	-	-	-	-	-	1	
Anapagurus-hyndmanni	-	S1448	107217	(Bell,-1845)	-	-	2	-	-	-	4	
Pagurus-bernhardus	-	S1457	107232	(Linnaeus,-1758)	-	-	-	-	-	-	1	
Pagurus-cuanensis	-	S1460	107235	Bell,-1845-[in-Bell,-1844-1853]	-	-	1	-	-	-	-	-
Galathea-intermedia	-	S1472	107150	Lilljeborg,-1851	9	-	4	-	-	24		9
Pisidia-longicornis	-	S1482	107188	(Linnaeus,-1767)	5	-	-	-	-	7	3	5
Ebalia-tumefacta	-	S1509	107302	(Montagu,-1808)	1	-	-	-	-	-	-	1
Inachus-leptochirus	-	S1527	107330	Leach,-1817-[in-Leach,-1815-1875]	1	-	1	-	-	-	-	1
Macropodia-rostrata	-	S1532	107345	(Linnaeus,-1761)	-	-	1	-	-	-	-	-
Pirimela-denticulata	-	S1562	107278	(Montagu,-1808)	1	-	-	-	-	-	3	1
Cancer-pagurus	-	S1566	107276	Linnaeus,-1758	-	-	-	-	-	-	-	-
Liocarcinus-depurator	-	S1580	107387	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Liocarcinus-holsatus	-	S1581	107388	(Fabricius,-1798)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
COLLEMBOLA	-	T0000	118086	-	-	-	-	-	-	-	-	-
MOLLUSCA												
Leptochiton-asellus	-	W0053	140199	(Gmelin,-1791)	3	-	1		-	1		3
Gibbula-tumida	-	W0161	141799	(Montagu,-1803)	2	-	4		-	2	1	2
Steromphala-cineraria	-	W0163	1039839	(Linnaeus,-1758)	5	-	-	-	-	4	2	5
Calliostoma-zizyphinum	-	W0182	141767	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Lacuna-crassior	-	W0287	140167	(Montagu,-1803)	-	-	-	4	-	-	2	-
Rissoa-parva	-	W0334	141365	(da-Costa,-1778)	1	-	3	7	-	1	31	1
Crisilla-semistriata	-	W0348	141280	(Montagu,-1808)	-	-	-	-	-	-	-	-
Manzonia-crassa	-	W0361	141291	(Kanmacher,-1798)	-	-	-	-	-	-	-	-
Onoba-semicostata	-	W0371	141320	(Montagu,-1803)	-	-	-	-	-	-	-	-
Tornus-subcarinatus	-	W0421	141690	(Montagu,-1803)	-	-	-	-	-	-	-	-
Crepidula-fornicata	-	W0439	138963	(Linnaeus,-1758)	15	-	21	-	-	125	16	15
Lamellaria-latens	-	W0469	140172	(O.-F.-Müller,-1776)	-	-	-	-	-	-	-	-
Ocenebra-erinaceus	-	W0685	140405	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Buccinum-undatum	-	W0708	138878	Linnaeus,-1758	-	-	-	-	-	-	-	-
Tritia-incrassata	-	W0747	876825	(Strøm,-1768)	-	-	1	-	-	-	-	-
Propebela-rufa	-	W0819	367570	(Montagu,-1803)	-	-	-	-	-	-	-	-
Noemiamea-dolioliformis	-	W0956	140973	(Jeffreys,-1848)	-	-	-	-	-	-	-	-
Retusa-obtusa	-	W1077	141134	(Montagu,-1803)	-	1	-	-	-	-	-	-
Dendronotus	-	W1266	137885	Alder-&-Hancock,-1845	-	-	-	-	-	-	1	-
Doto	-	W1270	137916	Oken,-1815	1	-	2	-	-	1	3	1
Goniodoris-nodosa	-	W1302	140033	(Montagu,-1808)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Onchidoris-bilamellata	-	W1322	150457	(Linnaeus,-1767)	1	-	1	-	-	3	-	1
Nucula-hanleyi	-	W1568	140588	Winckworth,-1931	-	-	-	-	-		-	-
Nucula-nucleus	-	W1570	140590	(Linnaeus,-1758)	1	-	-	-	-	1	-	1
Mytilus-edulis	-	W1695	140480	Linnaeus,-1758							1	
Modiolus-modiolus	-	W1702	140467	(Linnaeus,-1758)	1							1
Modiolula-phaseolina	-	W1708	140461	(Philippi,-1844)								
Musculus-subpictus	-	W1718	506128	(Cantraine,-1835)								
Aequipecten-opercularis	-	W1773	140687	(Linnaeus,-1758)								
Heteranomia-squamula	-	W1809	138749	(Linnaeus,-1758)								
Lucinoma-borealis	-	W1829	140283	(Linnaeus,-1767)						1		
Kurtiella-bidentata	-	W1906	345281	(Montagu,-1803)						1		
Goodallia-triangularis	-	W1929	138831	(Montagu,-1803)		1			1			
Laevicardium-crassum	-	W1959	139004	(Gmelin,-1791)								
Spisula-elliptica	-	W1975	140300	(T.-Brown,-1827)	1						2	1
Ensis	-	W1996	138333	Schumacher,-1817								
Macomangulus-tenuis	-	W2012	878470	(da-Costa,-1778)					1			
Fabulina-fabula	-	W2019	146907	(Gmelin,-1791)				1				
Abra-alba	-	W2059	141433	(W.-Wood,-1802)	2		1			4	1	2
Abra-prismatica	-	W2062	141436	(Montagu,-1808)								
Timoclea-ovata	-	W2104	141929	(Pennant,-1777)								
Venerupis-corrugata	-	W2124	181364	(Gmelin,-1791)							1	
Hiatella-arctica	-	W2166	140103	(Linnaeus,-1767)	3		3			1	1	3
PHORONIDA												

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Phoronis	-	ZA0003	128545	Wright, 1856	57		27	1				57
ECHINODERMATA												
Crossaster papposus	-	ZB0075	124154	(Linnaeus, 1767)								
Ophiothrix fragilis	-	ZB0124	125131	(Abildgaard in O.F. Müller, 1789)								
Amphipholis squamata	-	ZB0161	125064	(Delle Chiaje, 1828)	12		11			10	7	12
Ophiura albida	-	ZB0168	124913	Forbes, 1839								
Leptosynapta	-	ZB0291	123449	Verrill, 1867								
ENTEROPNEUSTA	-	ZC0012	1820	Gegenbaur, 1870								
The following taxa (highlighted in bold) were merged for statistical analysis												
Harmothoe	-	P0050	129491	Kinberg, 1856	2	-	3	-	-	-	3	-
Harmothoe clavigera	-	P0050	130760	(M. Sars, 1863)	-	-	-	-	-	4	-	-
Harmothoe extenuata	-	P0058	130762	(Grube, 1840)	-	-	1	-	-	-	-	-
Harmothoe impar	-	P0065	130770	(Johnston, 1839)	-	-	2	-	-	-	-	-
merged as:	-	-	-	-	-	-	-	-	-	-	-	-
Harmothoe	-	**P0050**	**129491**	**Kinberg, 1856**	2	-	6	-	-	4	3	-
Leiochone	-	P0955	146991	Grube, 1868	2	-	-	-	-	-	4	-
Leiochone tricirrata	-	P0955	328694	Bellan & Reys, 1967	3	-	4	-	-	-	-	-
Leiochone johnstoni	-	P0958	221095	McIntosh, 1915	-	-	-	-	-	-	-	-
merged as:	-	-	-	-	-	-	-	-	-	-	-	-
Leiochone	-	**P0955**	**146991**	**Grube, 1868**	5	-	4	-	-	-	4	-
Polycirrus	-	P1235	129710	Grube, 1850	2	-	4	-	-	1	3	-
Polycirrus denticulatus	-	P1239	131527	Saint-Joseph, 1894	10	-	5	-	-	2	17	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Polycirrus-medusa	-	P1242	131531	Grube,-1850	-	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	12	-	9	-	-	3	20	-
Cheirocratus	-	S0503	101669	Norman,-1867	-	-	-	-	-	-	-	-
Cheirocratus	female	S0503	101669	Norman,-1867	1	-	1	-	-	5	-	-
Cheirocratus-robustus	-	S0503	102797	G.O.-Sars,-1894	-	-	-	-	-	-	-	-
Cheirocratus-assimilis	-	S0504	102794	(Lilljeborg,-1852)	-	-	-	-	-	-	-	-
Cheirocratus-intermedius	-	S0505	102795	G.O.-Sars,-1894	-	-	-	-	-	2	-	-
Cheirocratus-sundevallii	-	S0506	102798	(Rathke,-1843)	-	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	1	-	1	-	-	7	-	-
Ericthonius	female	S0561	101567	H.-Milne-Edwards,-1830	-	-	-	-	-	-	-	-
Ericthonius-punctatus	-	S0564	102408	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	-	-	-	-	-	-	-	-
Taxa-below-have-been-removed-from-main-data-matrix-prior analysis												
JUVENILES												
SIPUNCULA	juv.	N0001	1268	Stephen,-1964	-	-	-	-	-	-	2	-
Golfingiidae	juv.	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	-	-	-	-
Nephtyidae	juv.	P0490	956	Grube,-1850	-	-	1	-	-	-	-	-
Cirriformia	juv.	P0838	129245	Hartman,-1936	-	-	-	-	-	-	-	-
Sabellidae	juv.	P1257	985	Latreille,-1825	-	-	-	-	-	-	-	-
Achelia	juv.	Q0014	134568	Hodge,-1864	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Gnathia	praniza	S0793	118437	Leach,-1814	-	-	-	-	-	1	-	-
DECAPODA	megalopa	S1276	1130	Latreille,-1802	-	-	1	-	-	-	-	-
CARIDEA	juv.	S1293	106674	Dana,-1852	-	-	-	-	-	-	-	-
Hippolytidae	juv.	S1334	106777	Spence-Bate,-1888	-	-	-	-	-	-	-	-
Processa	juv.	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Philocheras	juv.	S1386	107010	Stebbing,-1900	-	-	-	-	-	-	-	-
Upogebia	juv.	S1418	107079	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	1	-	-
Paguridae	juv.	S1445	106738	Latreille,-1802	-	-	-	-	-	-	-	-
BRACHYURA	larva	S1485	106673	Latreille,-1802	-	-	-	-	-	-	-	-
Majidae	juv.	S1512	106760	Samouelle,-1819	-	-	-	-	-	-	-	-
Inachus	juv.	S1525	106905	Weber,-1795	-	-	-	-	-	-	-	-
Macropodia	juv.	S1529	205077	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Liocarcinus	juv.	S1577	106925	Stimpson,-1871	-	-	-	-	-	-	-	-
GASTROPODA	juv.	W0088	101	Cuvier,-1795	-	-	-	-	-	-	-	-
Cantharidinae	juv.	W0140	382171	Gray,-1857	-	-	-	-	-	-	-	-
Trivia	juv.	W0457	138582	Gray,-1837	-	-	-	-	-	-	-	-
NUDIBRANCHIA	juv.	W1243	1762	Cuvier,-1817	-	-	-	-	-	-	-	-
CLADOBRANCHIA	juv.	W1243	827889	-	-	-	-	-	-	-	-	-
Goniodorididae	juv.	W1299	174	H.-Adams-&-A.-Adams,-1854	-	-	-	-	-	-	2	-
Onchidorididae	juv.	W1319	175	Gray,-1827	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Nucula	juv.	W1565	138262	Lamarck,-1799	-	-	-	-	-	-	-	-
Mytilidae	juv.	W1691	211	Rafinesque,-1815	-	-	-	4	1	-	-	-
Mytilus	juv.	W1693	138228	Linnaeus,-1758	-	-	-	-	-	-	-	-
Modiolus	juv.	W1698	138223	Lamarck,-1799	-	-	-	-	-	-	-	-
PECTINOIDEA	juv.	W1767	151320	Rafinesque,-1815	-	-	-	-	-	-	-	-
Anomiidae	juv.	W1805	214	Rafinesque,-1815	-	-	-	-	-	-	1	-
Spisula	juv.	W1973	138159	Gray,-1837	2	2	1	-	-	-	3	-
Ensis	juv.	W1996	138333	Schumacher,-1817	-	-	-	-	-	-	-	-
Abra	juv.	W2058	138474	Lamarck,-1818	-	-	-	-	-	-	2	-
Myidae	juv.	W2142	247	Lamarck,-1809	5	-	12	-	-	4	8	-
ASTEROIDEA	juv.	ZB0018	123080	de-Blainville,-1830	-	-	-	-	-	-	1	-
Solasteridae	juv.	ZB0070	123143	Viguier,-1878	-	-	-	-	-	-	-	-
OPHIUROIDEA	juv.	ZB0105	123084	Gray,-1840	-	-	-	-	-	-	-	1
Ophiuridae	juv.	ZB0165	123200	Müller-&-Troschel,-1840	1	-	1	-	-	3	-	-
PELAGIC-FAUNA												
CHAETOGNATHA	-	L0001	2081	-	-	-	-	-	-	-	1	-
FISH	-	-	-	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
PISCES	juv.	ZE0000	11676	-	-	-	-	-	-	-	-	-
Liparis-liparis	-	ZG0296	127219	(Linnaeus,-1766)	-	-	-	-	-	-	-	-
DAMAGED-FAUNA												
Golfingiidae	-	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	-	-	-	-
Polynoinae	-	P0025	155091	Kinberg,-1856	-	-	-	-	-	-	-	-
Eumida	-	P0163	129446	Malmgren,-1865	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Syllis	-	P0358	129680	Lamarck,-1818	-	-	-	-	-	-	-	-
Nereididae	-	P0458	22496	Blainville,-1818	-	-	-	-	-	-	-	-
Spionidae	-	P0720	913	Grube,-1850	-	-	-	-	-	-	-	-
Dipolydora	-	P0748	129611	Verrill,-1881	-	-	-	-	-	-	-	-
Chaetozone	-	P0832	129242	Malmgren,-1867	-	-	-	-	-	-	-	-
Maldanidae	-	P0938	923	Malmgren,-1867	-	-	-	-	-	-	-	-
Euclymeninae	-	P0951	152232	Arwidsson,-1906	-	-	-	-	-	-	-	-
Ampharete	-	P1133	129155	Malmgren,-1866	-	-	-	-	-	-	-	-
Serpulidae	-	P1324	988	Rafinesque,-1815	-	-	-	-	-	-	-	-
Spirobranchus	-	P1339	129582	Blainville,-1818	1	-	-	-	-	-	-	-
Nymphon	-	Q0004	134591	Fabricius,-1794	-	-	-	-	-	-	-	-
Callipallene	-	Q0032	134581	Flynn,-1929	-	-	-	-	-	-	-	-
MYSIDA	-	S0025	149668	Boas,-1883	-	-	-	-	-	-	-	-
Mysidae	-	S0031	119822	Haworth,-1825	-	-	-	-	-	-	-	-
AMPHIPODA	-	S0097	1135	Latreille,-1816	-	-	-	-	-	-	-	-
Urothoe	-	S0246	101789	Dana,-1852	-	-	-	-	-	-	-	-
Ampeliscidae	-	S0422	101364	Krøyer,-1842	-	1	-	-	-	-	-	-
Ampelisca	-	S0423	101445	Krøyer,-1842	-	-	-	-	-	-	-	-
Caprellidae	-	S0639	101361	Leach,-1814	-	-	-	-	-	-	-	-
CARIDEA	-	S1293	106674	Dana,-1852	-	-	-	-	-	-	-	-
Hippolytidae	-	S1334	106777	Spence-Bate,-1888	-	-	-	-	-	-	-	-
Eualus	-	S1342	106986	Thallwitz,-1891	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA
Processa	-	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Pagurus	-	S1454	106854	Fabricius,-1775	-	-	-	-	-	-	-	-
Liocarcinus	-	S1577	106925	Stimpson,-1871	-	-	-	-	-	-	-	-
GASTROPODA	-	W0088	101	Cuvier,-1795	-	-	-	-	-	-	-	-
NUDIBRANCHIA	-	W1243	1762	Cuvier,-1817	-	-	-	-	-	-	-	-
Abra	-	W2058	138474	Lamarck,-1818	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
CNIDARIA												
Edwardsiidae	-	D0759	100665	Andres,-1881	-	-	-	-	-	-	-	-
PLATYHELMINTHES	-	F0001	793	Minot,-1876	-	-	-	-	-	1	-	-
NEMERTEA	-	G0001	152391	-	-	-	9	5	-	15	1	4
SIPUNCULA												
Golfingia-elongata	-	N0014	175026	(Keferstein,-1862)	-	-	17	3	-	-	-	-
Golfingia-vulgaris	-	N0017	410724	(de-Blainville,-1827)	-	-		1	-	-	-	-
Nephasoma-minutum	-	N0025	136060	(Keferstein,-1862)	-	-	6	6	2	5	-	40
Thysanocardia-procera	-	N0028	136063	(Möbius,-1875)	-	-	-	-	-	-	-	-
ANNELIDA												
Gattyana-cirrhosa	-	P0049	130749	(Pallas,-1766)	-	-	-	-	1	3	-	-
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	-	-	**1**	-	-	**3**	-	**2**
Lepidonotus-squamatus	-	P0082	130801	(Linnaeus,-1758)	-	-	1	-	-	2	-	-
Pholoe-baltica	-	P0091	130599	Örsted,-1843	-	-	-	-	1	-	-	-
Pholoe-inornata	-	P0092	130601	Johnston,-1839	-	-	3	3	-	7	-	2
Eteone-longa	agg.	P0118	130616	(Fabricius,-1780)	-	-	1		1	-	-	1
Hesionura-elongata	-	P0122	130649	(Southern,-1914)	-	-	-	-	-	-	-	-
Hypereteone-foliosa	-	P0124	152250	(Quatrefages,-1865)	-	-	-	-	-	-	-	-
Phyllodoce-maculata	-	P0144	334510	(Linnaeus,-1767)	-	-	-	3	-	1	-	1
Eulalia-bilineata	-	P0152	130624	(Johnston,-1840)	-	-	-	1	-	2	-	-
Eulalia-expusilla	-	P0153	130625	Pleijel,-1987	-	-	1		-		-	-
Eulalia-mustela	-	P0155	130631	Pleijel,-1987	-	-	-	-	-	-	1	-
Eulalia-viridis	-	P0161	130639	(Linnaeus,-1767)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Eumida	Type-1	P0163	129446	Malmgren,-1865	-	-	-	-	-	-	-	-
Eumida-bahusiensis	-	P0164	130641	Bergstrom,-1914	-	-	3	-	-	-	-	3
Eumida-sanguinea	agg.	P0167	130644	(Örsted,-1843)	-	-	3	3	1	6	-	3
Glycera-lapidum	-	P0260	130123	Quatrefages,-1866	-	-	2	1	1	-	1	-
Glycera-oxycephala	-	P0262	130126	Ehlers,-1887	-	-	-	-	-	-	1	-
Sphaerodorum-gracilis	-	P0291	131100	(Rathke,-1843)	-	-	-	-	-	1	-	-
Psamathe-fusca	-	P0305	152249	Johnston,-1836	-	-	-	-	-	-	-	-
Nereimyra-punctata	-	P0311	130185	(Müller,-1788)	-	-	-	-	-	-	-	1
Syllis-licheri	-	P0358	238263	Ravara,-San-Martín-&-Moreira,-2004	-	-	-	-	-	-	-	-
Syllis-westheidei	-	P0358	131461	San-Martín,-1984	-	-	-	-	-	-	-	-
Syllis-armillaris	-	P0365-	131415	(O.F.-Müller,-1776)	-	-	3	6	1	5	-	3
Syllis-variegata	-	P0371	131458	Grube,-1860	-	-	3	6		10	-	11
Amblyosyllis-spectabilis	-	P0375	1258721	(Johnston-in-Baird,-1861)	-	-	-	-	-	-	-	-
Eusyllis-blomstrandi	-	P0380	131290	Malmgren,-1867	-	-	-	-	1	2		
Odontosyllis-fulgurans	-	P0387	131327	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-	-	-	-	-
Streptodonta-pterochaeta	-	P0391	238207	(Southern,-1914)	-	-	-	-	-	-	-	-
Synmerosyllis-lamelligera	-	P0398	761617	(Saint-Joseph,-1887)	-	-	-	-	-	-	-	-
Syllides-japonicus	-	P0406	131410	Imajima,-1966	-	-	-	-	-	-	-	-
Parexogone-hebes	-	P0421	757970	(Webster-&-Benedict,-1884)	-	-	-	-	-	1	-	-
Exogone-naidina	-	P0422	327985	Örsted,-1845	-	-	1	-	-	-	-	-
Exogone-verugera	-	P0423	333456	(Claparède,-1868)	-	-	8	5	2	1		1
Sphaerosyllis-bulbosa	-	P0425	131379	Southern,-1914	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Sphaerosyllis-cf.-taylori	-	P0430	131394	Perkins,-1981	-	-	-	-	-	-	1	
Proceraea-scapularis	-	P0442	238179	(Claparède,-1864)	-	-	-	-	-	-	-	-
Myrianida	-	P0449	129659	Milne-Edwards,-1845	-	-	-	-	-	-	-	-
Rullierinereis-ancornunezi	-	P0458	492034	Núñez-&-Brito,-2006	-	-	-	-	1		-	-
Eunereis-longissima	-	P0475	130375	(Johnston,-1840)	-	-	-	-	-	-	-	-
Nephtys-caeca	-	P0496	130355	(Fabricius,-1780)	-	-	-	-	-	-	-	-
Nephtys-cirrosa	-	P0498	130357	Ehlers,-1868	-	-	-	-	-	-	-	-
Nephtys-hombergii	-	P0499	130359	Savigny-in-Lamarck,-1818	-	-	-	-	-	-	-	-
Nephtys-longosetosa	-	P0503	130364	Örsted,-1842	-	-	1	-	1	-	-	
Lumbrineris-nr.-*cingulata*	-	P0572	129337	Blainville,-1828	-	-	1	3	1	2	-	2
Scoletoma-magnidentata	-	P0583	152260	(Winsnes,-1981)	-	-	-	-	-	-	-	
Protodorvillea-kefersteini	-	P0638	130041	(McIntosh,-1869)	-	-	-	-	-	1	-	1
Schistomeringos-neglecta	-	P0642	130044	(Fauvel,-1923)	-	-	-	-	-	-	-	-
Scoloplos-armiger	-	P0672	130537	(Müller,-1776)	-	-	-	-	-	3	-	-
Poecilochaetus-serpens	-	P0718	130711	Allen,-1904	-	-	1		1	-	-	1
Aonides-paucibranchiata	-	P0723	131107	Southern,-1914	-	-	1	2		-	-	-
Laonice-bahusiensis	-	P0733	131127	Söderström,-1920	-	-	-	-	-	-	-	-
Dipolydora-sp.-A	-	P0748	129611	Verrill,-1881	-	-	3	-	-	2	-	3
Dipolydora-caulleryi	-	P0751	131116	(Mesnil,-1897)	-	-	-	1	-	1	-	-
Polydora-ciliata	agg.	P0752	131141	(Johnston,-1838)	-	-	-	-	-	-	-	-
Dipolydora-flava	-	P0754	131118	(Claparède,-1870)	-	-	2	-	-	-	-	1
Dipolydora-saintjosephi	-	P0761	131123	(Eliason,-1920)	-	-		-	-	-	-	-
Pseudopolydora-pulchra	-	P0774	131169	(Carazzi,-1893)	-	-		-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Pygospio-elegans	-	P0776	131170	Claparède,-1863	-	-	5	-	-	-	-	-
Scolelepis-bonnieri	-	P0779	131171	(Mesnil,-1896)	-	-		-	-	-	-	-
Scolelepis-foliosa	-	P0781	334741	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-	-	-	-	-
Spio-symphyta	-	P0787	596189	Meißner,-Bick-&-Bastrop,-2011	-	-	-	-	-	-	-	-
Spio-goniocephala	-	P0787	131184	Thulin,-1957	-	-	1	1	-	-	-	-
Spio-armata	-	P0788	131180	(Thulin,-1957)	-	-			-	2	-	-
Spiophanes-bombyx	agg.	P0794	131187	(Claparède,-1870)	-	1	1	1	1	-	-	-
Magelona-mirabilis	-	P0807	130271	(Johnston,-1865)	-	1	-		-	-	-	-
Aphelochaeta-sp.-A	-	P0823	129240	Blake,-1991	-	-	-	1	-	-	-	-
Aphelochaeta	Type-2	P0823	129240	Blake,-1991	-	-	-	-	-	2	-	-
Aphelochaeta-marioni	-	P0824	129938	(Saint-Joseph,-1894)	-	-	7	-	-	-	-	-
Caulleriella-alata	-	P0829	129943	(Southern,-1914)	-	-	-	-	-	-	-	-
Chaetozone-zetlandica	-	P0831	336485	McIntosh,-1911	-	-	-	-	1	-	-	-
Chaetozone-christiei	-	P0832-	152217	Chambers,-2000	-	-	-	-	-	-	-	-
Cirratulus-incertus	-	P0835	129961	McIntosh,-1916	-	-	-	-	-	-	-	-
Cirriformia-tentaculata	-	P0839	129964	(Montagu,-1808)	-	-	-	1	-	5	-	-
Dodecaceria	-	P0840	129246	Örsted,-1843	-	-	-	-	-	-	-	-
Mediomastus-fragilis	-	P0919	129892	Rasmussen,-1973	-	-	1	6	2	-	-	6
Notomastus	-	P0920	129220	M.-Sars,-1851	-	-	3	9	3	-	3	4
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	-	-	**8**	**4**	**10**	**1**		**4**
Euclymene-oerstedii	-	P0964	130294	(Claparède,-1863)	-	-	-	-	-	-	-	-
Praxillella-affinis	-	P0971	130322	(M.-Sars-in-G.O.-Sars,-1872)	-	-	1	1	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Micromaldane-ornithochaeta	-	P0978	130310	Mesnil,-1897	-	-	-	-	-	-	-	-
Thoracophelia-flabellifera	-	P0996	339492	Ziegelmeier,-1955	1	-	-	-	-	-	-	-
Ophelia-borealis	-	P0999	130491	Quatrefages,-1866	2	4	3	-	-	-	2	-
Travisia-forbesii	-	P1007	130512	Johnston,-1840	-	3	-	-	-	-	-	-
Scalibregma-celticum	-	P1026	130979	Mackie,-1991	-	-	-	-	-	2	-	2
Scalibregma-inflatum	-	P1027	130980	Rathke,-1843	-	-	-	-	-	-	-	-
Galathowenia-oculata	-	P1093	146950	(Zachs,-1923)	-	-	-	-	-	2	-	1
Sabellaria-spinulosa	-	P1117	130867	(Leuckart,-1849)	-	-	39	83	21	65	1	77
Ampharete-baltica	-	P1134	129776	Eliason,-1955	-	-	-	-	-	-	-	-
Anobothrus-gracilis	-	P1147	129789	(Malmgren,-1866)	-	-	-	-	-	-	-	-
Pista-maculata	-	P1187	868065	(Dalyell,-1853)	-	-	-	-	-	1	-	-
Eupolymnia-nesidensis	-	P1190	131490	(Delle-Chiaje,-1828)	-	-	-	-	-	-	-	-
Lanice-conchilega	-	P1195	131495	(Pallas,-1766)	-	-	7	12	4	9	-	15
Neoamphitrite-figulus	-	P1206	131504	(Dalyell,-1853)	-	-	-	-	-	-	-	-
Nicolea-venustula	-	P1210	131507	(Montagu,-1819)	-	-	-	-	-	-	-	-
Phisidia-aurea	-	P1215	131513	Southward,-1956	-	-	-	-	-	-	-	-
Lysilla-nivea	-	P1234	131501	Langerhans,-1884	-	-	1	2	3		1	5
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	-	-	**10**	**9**	**9**	**18**	**1**	**25**
Thelepus-cincinnatus	-	P1254	131543	(Fabricius,-1780)	-	-	-	-	-	-	-	-
Parasabella-cambrensis	-	P1273	530920	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-
Parasabella-torulis	-	P1276	530937	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Pseudopotamilla-cf.-reniformis	-	P1316	130963	(Bruguière,-1789)	-	-	-	-	-	-	-	-
Sabella-pavonina	-	P1320	130967	Savigny,-1822	-	-	-	-	-	-	-	-
Hydroides-norvegica	-	P1334	131009	Gunnerus,-1768	-	-	-	-	-	-	-	-
Spirobranchus-lamarcki	-	P1340	560033	(Quatrefages,-1866)	-	-	1	3	-	2	-	3
Tubificoides	-	P1487	137393	Lastočkin,-1937	-	-	-	-	-	-	-	-
ARTHROPODA												
Nymphon-brevirostre	-	Q0005	150520	Hodge,-1863	-	-	-	-	-	1	-	-
Achelia-echinata	-	Q0015	134599	Hodge,-1864	-	-	-	-	-	10	1	1
Callipallene-brevirostris	-	Q0033	134643	(Johnston,-1837)	-	-	1	-	-	-	-	-
Anoplodactylus-petiolatus	-	Q0044	134723	(Krøyer,-1844)	-	-	-	-	-	1	-	-
Pycnogonum-litorale	-	Q0051	239867	(Strøm,-1762)	-	-	-	-	-	-	-	-
Nebalia-reboredae	-	S0005	459311	Moreira-&-Urgorri,-2009	-	-	-	-	-	-	-	-
Nebalia-troncosoi	-	S0005	388222	Moreira,-Cacabelos-&-Dominguez,-2003	-	-	-	-	-	-	-	-
Gastrosaccus-spinifer	-	S0044	120020	(Goës,-1864)	-	-	-	1	-	-	-	-
Apherusa-bispinosa	-	S0102	102160	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Pontocrates	Type-B	S0132	101702	Boeck,-1871	-	-	-	-	-	-	-	-
Pontocrates-arenarius	-	S0135	102918	(Spence-Bate,-1858)	-	-	-	-	-	-	-	-
Synchelidium-maculatum	-	S0138	102928	Stebbing,-1906	-	-	-	-	-	-	-	-
Parapleustes-bicuspis	-	S0146	103008	(Krøyer,-1838)	-	-	1	-	-	2	-	-
Amphilochus-manudens	-	S0158	101967	Spence-Bate,-1862	-	-	-	-	-	-	-	-
Apolochus-neapolitanus	-	S0159	236495	(Della-Valle,-1893)	-	-	-	-	-	-	-	-
Leucothoe-incisa	-	S0177	102460	Robertson,-1892	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Leucothoe-procera	-	S0179	102466	Spence-Bate,-1857	-	-	-	-	-	-	-	-
Colomastix-pusilla	-	S0183	102076	Grube,-1861	-	-	-	-	-	-	-	-
Stenothoe-marina	-	S0213	103166	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Urothoe-brevicornis	-	S0247	103226	Spence-Bate,-1862	-	-	-	-	-	-	-	-
Urothoe-elegans	-	S0248	103228	Spence-Bate,-1857	-	-	-	-	-	10	-	2
Urothoe-marina	-	S0249	103233	(Spence-Bate,-1857)	-	-	3	3	8	-	1	-
Phoxocephalus-holbolli	-	S0269	102989	(Krøyer,-1842)	-	-	-	-	-	-	-	-
Acidostoma-neglectum	-	S0272	102495	Dahl,-1964	-	-	-	-	-	-	-	-
Orchomene-humilis	-	S0320	102665	(Costa,-1853)	-	-	-	-	-	4	-	-
Tryphosa-nana	-	S0321	102748	(Krøyer,-1846)	-	-	1	-	-	-	-	-
Tmetonyx-similis	-	S0337	102742	(G.O.-Sars,-1891)	-	-	-	-	-	-	-	-
Iphimedia-minuta	-	S0380	102345	G.O.-Sars,-1883	-	-	-	-	-	-	-	-
Iphimedia-nexa	-	S0381	102346	Myers-&-McGrath,-in-Myers,-McGrath-&-Costello,-1987	-	-	-	-	-	-	-	-
Iphimedia-obesa	-	S0382	102347	Rathke,-1843	-	-	-	-	-	-	-	-
Nototropis-guttatus	-	S0411	488957	Costa,-1853	-	-	-	-	-	-	-	-
Nototropis-vedlomensis	-	S0413	179538	(Spence-Bate-&-Westwood,-1862)	-	-	-	-	-	-	-	-
Ampelisca-diadema	-	S0429	101896	(Costa,-1853)	-	1	-	-	-	-	1	2
Ampelisca-spinipes	-	S0438	101928	Boeck,-1861	-	-	2		1	3		13
Bathyporeia-elegans	-	S0452	103058	Watkin,-1938	-	2	-	-	-	-	-	-
Bathyporeia-guilliamsoniana	-	S0454	103060	(Spence-Bate,-1857)	-	-		1	-	-	-	-
Abludomelita-obtusata	-	S0498	102788	(Montagu,-1813)	-	-	2	-	2	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	-	-	-	-	-	-	-	-
Othomaera-othonis	-	S0519	534781	(H.-Milne-Edwards,-1830)	-	-	-	-	-	-	-	-
Maerella-tenuimana	-	S0521	102831	(Spence-Bate,-1862)	-	-	-	-	-	-	-	-
Megamphopus-cornutus	-	S0539	102377	Norman,-1869	-	-	-	-	-	-	-	-
Gammaropsis-maculata	-	S0541	102364	(Johnston,-1828)	-	-	-	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	-	-	-	-	-	-	-	-
Leptocheirus-hirsutimanus	-	S0588	102036	(Spence-Bate,-1862)	-	-	-	-	-	-	-	2
Leptocheirus-pectinatus	-	S0589	102039	(Norman,-1869)	-	-	-	-	-	-	-	-
Monocorophium-acherusicum	-	S0606	225814	(Costa,-1853)	-	-	-	-	-	-	-	-
Crassicorophium-crassicorne	-	S0611	397383	(Bruzelius,-1859)	-	-	-	-	-	-	-	-
Centraloecetes-kroyeranus	-	S0618	1059646	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Unciola-crenatipalma	-	S0621	102057	(Spence-Bate,-1862)	-	-	2	2	1	3		2
Caprella-linearis	-	S0646	101839	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Phtisica-marina	-	S0657	101864	Slabber,-1769	-	-	-	-	-	-	-	-
Pseudoprotella-phasma	-	S0659	101871	(Montagu,-1804)	-	-	-	1	-	1	-	-
Gnathia-oxyuraea	-	S0793	118995	(Lilljeborg,-1855)	-	-	-	-	-	2	-	9
Gnathia-dentata	-	S0794	118990	(G.-O.-Sars,-1872)	-	-	-	-	-	-	-	-
Eurydice-spinigera	-	S0855	148637	Hansen,-1890	1	-	-	-	-	-	1	-
Prodajus-ostendensis	-	S0978	148638	Gilson,-1909	-	-	-	-	-	-	-	-
Pseudoparatanais-batei	-	S1140	136457	(Sars,-1882)	-	-	-	-	-	1	-	-
Bodotria-scorpioides	-	S1197	110445	(Montagu,-1804)	-	-	1	-	-	-	-	-
Eualus-pusiolus	-	S1345	107507	(Krøyer,-1841)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Hippolyte-varians	-	S1350	107518	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Eualus-cranchii	-	S1360	156083	(Leach,-1817-[in-Leach,-1815-1875])	-	-	-	-	-	-	-	-
Processa-edulis-crassipes	-	S1364	108336	Nouvel-&-Holthuis,-1957	-	-	-	-	-	-	-	1
Pandalina-brevirostris	-	S1374	107647	(Rathke,-1843)	-	-	-	-	-	-	-	-
Pandalus-montagui	-	S1377	107651	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Crangon-crangon	-	S1385	107552	(Linnaeus,-1758)	1	-	-	-	-	-	-	-
Philocheras-fasciatus	-	S1388	107559	(Risso,-1816)	-	-	-	-	-	-	-	-
Axius-stirhynchus	-	S1407	107722	Leach,-1816	-	-	-	-	-	-	-	-
Anapagurus-hyndmanni	-	S1448	107217	(Bell,-1845)	-	-	-	-	-	-	-	-
Pagurus-bernhardus	-	S1457	107232	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Pagurus-cuanensis	-	S1460	107235	Bell,-1845-[in-Bell,-1844-1853]	-	-	-	-	-	1	-	-
Galathea-intermedia	-	S1472	107150	Lilljeborg,-1851	-	-	-	-	-	14		1
Pisidia-longicornis	-	S1482	107188	(Linnaeus,-1767)	-	-	-	1	1	5	-	-
Ebalia-tumefacta	-	S1509	107302	(Montagu,-1808)	-	-	-	-	-	-	-	-
Inachus-leptochirus	-	S1527	107330	Leach,-1817-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Macropodia-rostrata	-	S1532	107345	(Linnaeus,-1761)	-	-	-	-	-	-	-	-
Pirimela-denticulata	-	S1562	107278	(Montagu,-1808)	-	-	-	-	-	-	-	-
Cancer-pagurus	-	S1566	107276	Linnaeus,-1758	-	-	-	-	-	-	-	-
Liocarcinus-depurator	-	S1580	107387	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Liocarcinus-holsatus	-	S1581	107388	(Fabricius,-1798)	-	-	-	1	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
COLLEMBOLA	-	T0000	118086	-	-	-	1	-	-	-	-	-
MOLLUSCA												
Leptochiton-asellus	-	W0053	140199	(Gmelin,-1791)	-	-	-	-	-	3	-	-
Gibbula-tumida	-	W0161	141799	(Montagu,-1803)	-	-	-	-	-	-	-	1
Steromphala-cineraria	-	W0163	1039839	(Linnaeus,-1758)	-	-	-	-	-	1	-	-
Calliostoma-zizyphinum	-	W0182	141767	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Lacuna-crassior	-	W0287	140167	(Montagu,-1803)	-	-	-	-	-	-	-	-
Rissoa-parva	-	W0334	141365	(da-Costa,-1778)	-	-	-	-	-	24	3	-
Crisilla-semistriata	-	W0348	141280	(Montagu,-1808)	-	-	-	-	-	-	-	-
Manzonia-crassa	-	W0361	141291	(Kanmacher,-1798)	-	-	-	-	-	-	-	-
Onoba-semicostata	-	W0371	141320	(Montagu,-1803)	-	-	-	-	-	-	-	-
Tornus-subcarinatus	-	W0421	141690	(Montagu,-1803)	-	-	-	-	-	-	-	-
Crepidula-fornicata	-	W0439	138963	(Linnaeus,-1758)	-	-	22	18	24	133	3	31
Lamellaria-latens	-	W0469	140172	(O.-F.-Müller,-1776)	-	-	-	-	-	-	-	-
Ocenebra-erinaceus	-	W0685	140405	(Linnaeus,-1758)	-	-	-	1	-	-	-	-
Buccinum-undatum	-	W0708	138878	Linnaeus,-1758	-	-	-	-	-	1	-	-
Tritia-incrassata	-	W0747	876825	(Strøm,-1768)	-	-	-	1	-		-	-
Propebela-rufa	-	W0819	367570	(Montagu,-1803)	-	-	-	-	-	1	-	-
Noemiamea-dolioliformis	-	W0956	140973	(Jeffreys,-1848)	-	-	-	-	-	-	-	-
Retusa-obtusa	-	W1077	141134	(Montagu,-1803)	-	-	-	-	-	-	-	-
Dendronotus	-	W1266	137885	Alder-&-Hancock,-1845	-	-	-	-	-	-	-	-
Doto	-	W1270	137916	Oken,-1815	-	-	-	-	-	-	-	-
Goniodoris-nodosa	-	W1302	140033	(Montagu,-1808)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Onchidoris-bilamellata	-	W1322	150457	(Linnaeus,-1767)	-	-	-	1	1	1	-	-
Nucula-hanleyi	-	W1568	140588	Winckworth,-1931	-	-	-	-	-	-	-	-
Nucula-nucleus	-	W1570	140590	(Linnaeus,-1758)	-	-	1	-	-	9	-	-
Mytilus-edulis	-	W1695	140480	Linnaeus,-1758	-	-	-	-	-	-	-	-
Modiolus-modiolus	-	W1702	140467	(Linnaeus,-1758)	-	-	-	1	-	-	-	-
Modiolula-phaseolina	-	W1708	140461	(Philippi,-1844)	-	-	-	-	-	-	-	-
Musculus-subpictus	-	W1718	506128	(Cantraine,-1835)	-	-	-	-	-	-	-	-
Aequipecten-opercularis	-	W1773	140687	(Linnaeus,-1758)	-	-	-	-	-	1	-	-
Heteranomia-squamula	-	W1809	138749	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Lucinoma-borealis	-	W1829	140283	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Kurtiella-bidentata	-	W1906	345281	(Montagu,-1803)	-	-	-	-	-	1	-	-
Goodallia-triangularis	-	W1929	138831	(Montagu,-1803)	-	-	1	1	1	-	45	-
Laevicardium-crassum	-	W1959	139004	(Gmelin,-1791)	-	-	-	-		-	-	-
Spisula-elliptica	-	W1975	140300	(T.-Brown,-1827)	-	-	-	-	2	-	-	1
Ensis	-	W1996	138333	Schumacher,-1817	-	-	-	-	-	-	-	-
Macomangulus-tenuis	-	W2012	878470	(da-Costa,-1778)	-	-	-	-	-	-	-	-
Fabulina-fabula	-	W2019	146907	(Gmelin,-1791)	-	-	-	-	-	-	-	-
Abra-alba	-	W2059	141433	(W.-Wood,-1802)	-	-	-	-	-	6	-	-
Abra-prismatica	-	W2062	141436	(Montagu,-1808)	-	-	1	-	-			
Timoclea-ovata	-	W2104	141929	(Pennant,-1777)	-	-	-	-	-	-	-	-
Venerupis-corrugata	-	W2124	181364	(Gmelin,-1791)	-	-	-	-	-	-	-	-
Hiatella-arctica	-	W2166	140103	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
PHORONIDA												

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Phoronis	-	ZA0003	128545	Wright,-1856	-	-	-	-	-	1	-	1
ECHINODERMATA												
Crossaster-papposus	-	ZB0075	124154	(Linnaeus,-1767)	-	-	-	-	-	-	-	-
Ophiothrix-fragilis	-	ZB0124	125131	(Abildgaard-in-O.F.-Müller,-1789)	-	-	-	-	-	-	-	-
Amphipholis-squamata	-	ZB0161	125064	(Delle-Chiaje,-1828)	-	-	4	1	-	13	-	5
Ophiura-albida	-	ZB0168	124913	Forbes,-1839	-	-	-	-	-	-	-	-
Leptosynapta	-	ZB0291	123449	Verrill,-1867	-	-	-	-	-	-	-	-
ENTEROPNEUSTA	-	ZC0012	1820	Gegenbaur,-1870	-	-	-	-	-	-	-	-
The-following-taxa-(highlighted-in-bold)-were-merged-for-statistical-analysis												
Harmothoe	-	P0050	129491	Kinberg,-1856	-	-	1	-	-	3	-	1
Harmothoe-clavigera	-	P0050	130760	(M.-Sars,-1863)	-	-	-	-	-	-	-	-
Harmothoe-extenuata	-	P0058	130762	(Grube,-1840)	-	-	-	-	-	-	-	-
Harmothoe-impar	-	P0065	130770	(Johnston,-1839)	-	-	-	-	-	-	-	1
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	-	-	1	-	-	3	-	2
Leiochone	-	P0955	146991	Grube,-1868	-	-	8	3	8	1	-	4
Leiochone-tricirrata	-	P0955	328694	Bellan-&-Reys,-1967	-	-	-	1	-	-	-	-
Leiochone-johnstoni	-	P0958	221095	McIntosh,-1915	-	-	-	-	2	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	-	-	8	4	10	1	-	4
Polycirrus	-	P1235	129710	Grube,-1850	-	-	2		3	4	1	5
Polycirrus-denticulatus	-	P1239	131527	Saint-Joseph,-1894	-	-	8	9	5	14	-	17

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Polycirrus-medusa	-	P1242	131531	Grube,-1850	-	-	-	-	1	-	-	3
merged-as:	-	-	-	-	-	-	-	-	-	-	-	
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	-	-	10	9	9	18	1	25
Cheirocratus	-	S0503	101669	Norman,-1867	-	-	-	-	-	-	-	-
Cheirocratus	female	S0503	101669	Norman,-1867	-	-	-	-	-	-	-	-
Cheirocratus-robustus	-	S0503	102797	G.O.-Sars,-1894	-	-	-	-	-	-	-	-
Cheirocratus-assimilis	-	S0504	102794	(Lilljeborg,-1852)	-	-	-	-	-	-	-	-
Cheirocratus-intermedius	-	S0505	102795	G.O.-Sars,-1894	-	-	-	-	-	-	-	-
Cheirocratus-sundevallii	-	S0506	102798	(Rathke,-1843)	-	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	-	-	-	-	-	-	-	-
Ericthonius	female	S0561	101567	H.-Milne-Edwards,-1830	-	-	-	-	-	-	-	-
Ericthonius-punctatus	-	S0564	102408	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	-	-	-	-	-	-	-	-
Taxa-below-have-been-removed-from-main-data-matrix-to-facilitate-analysis												
JUVENILES												
SIPUNCULA	juv.	N0001	1268	Stephen,-1964	-	-	-	-	-	7	-	-
Golfingiidae	juv.	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	-	-	-	-
Nephtyidae	juv.	P0490	956	Grube,-1850	-	-	-	-	-	-	-	-
Cirriformia	juv.	P0838	129245	Hartman,-1936	-	-	-	-	-	-	-	-
Sabellidae	juv.	P1257	985	Latreille,-1825	-	-	-	-	-	-	-	-
Achelia	juv.	Q0014	134568	Hodge,-1864	-	-	-	-	-	-	-	4

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Gnathia	praniza	S0793	118437	Leach,-1814	-	-	-	1	-	-	-	-
DECAPODA	megalopa	S1276	1130	Latreille,-1802	-	-	-	-	-	-	-	-
CARIDEA	juv.	S1293	106674	Dana,-1852	-	-	-	-	-	-	-	-
Hippolytidae	juv.	S1334	106777	Spence-Bate,-1888	-	-	-	-	-	-	-	-
Processa	juv.	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Philocheras	juv.	S1386	107010	Stebbing,-1900	-	-	-	-	-	-	-	-
Upogebia	juv.	S1418	107079	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	2	-	-
Paguridae	juv.	S1445	106738	Latreille,-1802	-	-	-	-	-	-	-	-
BRACHYURA	larva	S1485	106673	Latreille,-1802	-	-	-	-	-	-	-	-
Majidae	juv.	S1512	106760	Samouelle,-1819	-	-	-	-	-	-	-	-
Inachus	juv.	S1525	106905	Weber,-1795	-	-	-	-	-	-	-	2
Macropodia	juv.	S1529	205077	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Liocarcinus	juv.	S1577	106925	Stimpson,-1871	-	-	-	-	-	-	-	-
GASTROPODA	juv.	W0088	101	Cuvier,-1795	-	-	-	-	-	1	-	-
Cantharidinae	juv.	W0140	382171	Gray,-1857	-	-	-	-	-	-	-	-
Trivia	juv.	W0457	138582	Gray,-1837	-	-	-	-	-	-	-	-
NUDIBRANCHIA	juv.	W1243	1762	Cuvier,-1817	-	-	-	-	-	2	-	-
CLADOBRANCHIA	juv.	W1243	827889	-	-	-	-	-	-		-	-
Goniodorididae	juv.	W1299	174	H.-Adams-&-A.-Adams,-1854	-	-	-	-	-	-	-	-
Onchidorididae	juv.	W1319	175	Gray,-1827	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Nucula	juv.	W1565	138262	Lamarck,-1799	-	-	-	1	-	1	-	-
Mytilidae	juv.	W1691	211	Rafinesque,-1815	-	-	-	-	-	1	-	-
Mytilus	juv.	W1693	138228	Linnaeus,-1758	-	-	-	-	-		-	-
Modiolus	juv.	W1698	138223	Lamarck,-1799	-	-	-	-	-	1	-	-
PECTINOIDEA	juv.	W1767	151320	Rafinesque,-1815	-	-	-	-	-	-	-	1
Anomiidae	juv.	W1805	214	Rafinesque,-1815	1				1	-	-	3
Spisula	juv.	W1973	138159	Gray,-1837	-	-	-	-	-	-	-	-
Ensis	juv.	W1996	138333	Schumacher,-1817	-	-	-	-	-	-	-	-
Abra	juv.	W2058	138474	Lamarck,-1818	-	-	6	3	4	6	-	7
Myidae	juv.	W2142	247	Lamarck,-1809	-	-	-	-	-	-	-	-
ASTEROIDEA	juv.	ZB0018	123080	de-Blainville,-1830	-	-	-	-	-	-	-	-
Solasteridae	juv.	ZB0070	123143	Viguier,-1878	-	-	1	-	-	4	-	-
OPHIUROIDEA	juv.	ZB0105	123084	Gray,-1840	-	-	1	-	-	-	-	-
Ophiuridae	juv.	ZB0165	123200	Müller-&-Troschel,-1840	-	-	-	-	-	-	-	-
PELAGIC-FAUNA												
CHAETOGNATHA	-	L0001	2081	-	-	-	-	-	-	-	-	-
FISH	-	-	-	-	-	-	-	-	-	-	-	-
PISCES	juv.	ZE0000	11676	-	-	-	-	-	-	-	-	-
Liparis-liparis	-	ZG0296	127219	(Linnaeus,-1766)	-	-	-	-	-	-	-	-
DAMAGED-FAUNA												
Golfingiidae	-	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	-	5	-	-
Polynoinae	-	P0025	155091	Kinberg,-1856	-	-	-	-	-	-	-	-
Eumida	-	P0163	129446	Malmgren,-1865	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Syllis	-	P0358	129680	Lamarck,-1818	-	-	-	-	-	-	-	-
Nereididae	-	P0458	22496	Blainville,-1818	-	-	1	-	-	-	-	-
Spionidae	-	P0720	913	Grube,-1850	-	-	-	-	-	-	-	-
Dipolydora	-	P0748	129611	Verrill,-1881	-	-	-	-	-	-	-	1
Chaetozone	-	P0832	129242	Malmgren,-1867	-	-	3	-	-	-	-	-
Maldanidae	-	P0938	923	Malmgren,-1867	-	-	-	-	-	-	-	-
Euclymeninae	-	P0951	152232	Arwidsson,-1906	-	-	-	-	-	-	-	-
Ampharete	-	P1133	129155	Malmgren,-1866	-	-	-	-	-	-	-	-
Serpulidae	-	P1324	988	Rafinesque,-1815	-	-	-	-	-	-	-	-
Spirobranchus	-	P1339	129582	Blainville,-1818	-	-	-	-	-	1	-	-
Nymphon	-	Q0004	134591	Fabricius,-1794	-	-	-	-	-	-	-	-
Callipallene	-	Q0032	134581	Flynn,-1929	-	-	-	-	-	-	-	-
MYSIDA	-	S0025	149668	Boas,-1883	-	-	-	-	-	-	-	-
Mysidae	-	S0031	119822	Haworth,-1825	-	-	-	-	-	-	-	-
AMPHIPODA	-	S0097	1135	Latreille,-1816	-	-	-	-	-	-	-	-
Urothoe	-	S0246	101789	Dana,-1852	-	-	-	-	-	-	-	-
Ampeliscidae	-	S0422	101364	Krøyer,-1842	-	-	-	-	-	1	-	2
Ampelisca	-	S0423	101445	Krøyer,-1842	-	-	-	-	-	-	-	-
Caprellidae	-	S0639	101361	Leach,-1814	-	-	-	-	-	-	-	1
CARIDEA	-	S1293	106674	Dana,-1852	-	-	-	-	-	-	-	-
Hippolytidae	-	S1334	106777	Spence-Bate,-1888	-	-	-	-	-	-	-	-
Eualus	-	S1342	106986	Thallwitz,-1891	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA
Processa	-	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-	-	1	-	-
Pagurus	-	S1454	106854	Fabricius,-1775	-	-	-	-	-	-	-	-
Liocarcinus	-	S1577	106925	Stimpson,-1871	-	-	-	-	-	-	-	-
GASTROPODA	-	W0088	101	Cuvier,-1795	-	-	-	-	-	-	-	-
NUDIBRANCHIA	-	W1243	1762	Cuvier,-1817	-	-	-	-	-	-	-	-
Abra	-	W2058	138474	Lamarck,-1818	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
CNIDARIA												
Edwardsiidae	-	D0759	100665	Andres,-1881	-	-	-	-	-	-	-	-
PLATYHELMINTHES	-	F0001	793	Minot,-1876	-	-	-	-	-	-	-	-
NEMERTEA	-	G0001	152391	-	1	5	8	1	3	-	8	8
SIPUNCULA												
Golfingia-elongata	-	N0014	175026	(Keferstein,-1862)	-	-	-	-	-	-	-	-
Golfingia-vulgaris	-	N0017	410724	(de-Blainville,-1827)	-	-	-	-	-	-	-	-
Nephasoma-minutum	-	N0025	136060	(Keferstein,-1862)	-	-	33	-	5	7	3	-
Thysanocardia-procera	-	N0028	136063	(Möbius,-1875)	-	-	-	-	-	-	-	-
ANNELIDA												
Gattyana-cirrhosa	-	P0049	130749	(Pallas,-1766)	-	-	-	-	3	-	2	2
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	-	-	**3**	-	**1**	**1**	-	**2**
Lepidonotus-squamatus	-	P0082	130801	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Pholoe-baltica	-	P0091	130599	Örsted,-1843	-	-	1	-	3	-	-	-
Pholoe-inornata	-	P0092	130601	Johnston,-1839	-	-	1	-	-	1	-	-
Eteone-longa	agg.	P0118	130616	(Fabricius,-1780)	-	-	2	-	2	3	2	-
Hesionura-elongata	-	P0122	130649	(Southern,-1914)	-	-	-	-	-	-	-	-
Hypereteone-foliosa	-	P0124	152250	(Quatrefages,-1865)	1	-	-	-	-	-	-	-
Phyllodoce-maculata	-	P0144	334510	(Linnaeus,-1767)	-	-	-	-	-	1	-	1
Eulalia-bilineata	-	P0152	130624	(Johnston,-1840)	-	-	-	-	1	1	-	-
Eulalia-expusilla	-	P0153	130625	Pleijel,-1987	-	-	-	-	-	-	-	-
Eulalia-mustela	-	P0155	130631	Pleijel,-1987	-	-	-	-	-	-	-	-
Eulalia-viridis	-	P0161	130639	(Linnaeus,-1767)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Eumida	Type-1	P0163	129446	Malmgren,-1865	-	-	-	-	-	-	-	-
Eumida-bahusiensis	-	P0164	130641	Bergstrom,-1914	-	-	2	-	-	-	-	-
Eumida-sanguinea	agg.	P0167	130644	(Örsted,-1843)	-	2	-	-	7	4	3	4
Glycera-lapidum	-	P0260	130123	Quatrefages,-1866	2	1	-	3	-	-	-	-
Glycera-oxycephala	-	P0262	130126	Ehlers,-1887	1	-	-	-	-	-	-	-
Sphaerodorum-gracilis	-	P0291	131100	(Rathke,-1843)	-	-	-	-	-	-	-	-
Psamathe-fusca	-	P0305	152249	Johnston,-1836	-	-	-	-	-	-	-	-
Nereimyra-punctata	-	P0311	130185	(Müller,-1788)	-	-	-	-	-	-	-	-
Syllis-licheri	-	P0358	238263	Ravara,-San-Martín-&-Moreira,-2004	-	1	-	-	-	-	-	-
Syllis-westheidei	-	P0358	131461	San-Martín,-1984	-	-	-	-	-	-	-	-
Syllis-armillaris	-	P0365-	131415	(O.F.-Müller,-1776)	-	-	2	-	1	1	2	1
Syllis-variegata	-	P0371	131458	Grube,-1860	-	-	8	-	7	4	5	5
Amblyosyllis-spectabilis	-	P0375	1258721	(Johnston-in-Baird,-1861)	-	-	-	-	-	-	-	-
Eusyllis-blomstrandi	-	P0380	131290	Malmgren,-1867	2	-	-	-	-	-	-	-
Odontosyllis-fulgurans	-	P0387	131327	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-	-	-	-	-
Streptodonta-pterochaeta	-	P0391	238207	(Southern,-1914)	-	1	-	1	-	-	-	-
Synmerosyllis-lamelligera	-	P0398	761617	(Saint-Joseph,-1887)	-	-	-	-	-	-	-	-
Syllides-japonicus	-	P0406	131410	Imajima,-1966	1	-	-	-	-	-	-	-
Parexogone-hebes	-	P0421	757970	(Webster-&-Benedict,-1884)	-	-	-	2	-	-	-	1
Exogone-naidina	-	P0422	327985	Örsted,-1845	-	-	-	-	-	-	-	-
Exogone-verugera	-	P0423	333456	(Claparède,-1868)	1	-	1	-	-	-	2	1
Sphaerosyllis-bulbosa	-	P0425	131379	Southern,-1914	4	-	-	9	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Sphaerosyllis-cf.-taylori	-	P0430	131394	Perkins,-1981	-	-	-	-	-	-	-	-
Proceraea-scapularis	-	P0442	238179	(Claparède,-1864)	-	-	-	-	-	-	-	-
Myrianida	-	P0449	129659	Milne-Edwards,-1845	-	-	-	-	-	-	-	-
Rullierinereis-ancornunezi	-	P0458	492034	Núñez-&-Brito,-2006	-	-	-	-	-	-	-	-
Eunereis-longissima	-	P0475	130375	(Johnston,-1840)	-	1	-	-	-	-	-	-
Nephtys-caeca	-	P0496	130355	(Fabricius,-1780)	-	-	1	-	2	-	2	2
Nephtys-cirrosa	-	P0498	130357	Ehlers,-1868	-	-	-	-	-	-	-	-
Nephtys-hombergii	-	P0499	130359	Savigny-in-Lamarck,-1818	-	-	-	-	-	-	-	-
Nephtys-longosetosa	-	P0503	130364	Örsted,-1842	-	-	-	-	-	-	-	-
Lumbrineris-nr.-*cingulata*	-	P0572	129337	Blainville,-1828	-	-	1	-	4	3	4	2
Scoletoma-magnidentata	-	P0583	152260	(Winsnes,-1981)	-	1	-	-	-	-	-	-
Protodorvillea-kefersteini	-	P0638	130041	(McIntosh,-1869)	-	-	-	-	-	-	-	4
Schistomeringos-neglecta	-	P0642	130044	(Fauvel,-1923)	5	-	-	-	-	-	-	-
Scoloplos-armiger	-	P0672	130537	(Müller,-1776)	-	-	-	-	1	-	-	1
Poecilochaetus-serpens	-	P0718	130711	Allen,-1904	-	-	8	-	4	2	14	1
Aonides-paucibranchiata	-	P0723	131107	Southern,-1914	-	1	2	2	1	-	1	-
Laonice-bahusiensis	-	P0733	131127	Söderström,-1920	-	-	-	-	-	-	-	-
Dipolydora-sp.-A	-	P0748	129611	Verrill,-1881	-	-	1	-	7	4	3	2
Dipolydora-caulleryi	-	P0751	131116	(Mesnil,-1897)	-	-	-	-	-	-	-	-
Polydora-ciliata	agg.	P0752	131141	(Johnston,-1838)	-	-	-	-	-	-	-	-
Dipolydora-flava	-	P0754	131118	(Claparède,-1870)	-	-	6	-	1	2	-	-
Dipolydora-saintjosephi	-	P0761	131123	(Eliason,-1920)	-	-	-	-	-	2	-	1
Pseudopolydora-pulchra	-	P0774	131169	(Carazzi,-1893)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Pygospio-elegans	-	P0776	131170	Claparède,-1863	-	-	-	-	-	-	-	-
Scolelepis-bonnieri	-	P0779	131171	(Mesnil,-1896)	-	-	-	-	-	-	-	-
Scolelepis-foliosa	-	P0781	334741	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-	-	-	-	-
Spio-symphyta	-	P0787	596189	Meißner,-Bick-&-Bastrop,-2011	-	18	-	3	-	-	-	-
Spio-goniocephala	-	P0787	131184	Thulin,-1957	-	-	-	-	-	-	-	-
Spio-armata	-	P0788	131180	(Thulin,-1957)	-	-	-	-	-	-	-	8
Spiophanes-bombyx	agg.	P0794	131187	(Claparède,-1870)	-	-	-	-	-	-	-	-
Magelona-mirabilis	-	P0807	130271	(Johnston,-1865)	-	-	-	-	-	-	-	-
Aphelochaeta-sp.-A	-	P0823	129240	Blake,-1991	-	-	-	-	-	-	-	1
Aphelochaeta	Type-2	P0823	129240	Blake,-1991	-	-	-	-	-	1	-	-
Aphelochaeta-marioni	-	P0824	129938	(Saint-Joseph,-1894)	-	-	-	-	-	-	-	-
Caulleriella-alata	-	P0829	129943	(Southern,-1914)	-	-	-	-	-	-	-	2
Chaetozone-zetlandica	-	P0831	336485	McIntosh,-1911	-	-	1	-	-	1	-	1
Chaetozone-christiei	-	P0832-	152217	Chambers,-2000	-	-	-	-	-	-	-	-
Cirratulus-incertus	-	P0835	129961	McIntosh,-1916	-	-	-	-	-	-	-	2
Cirriformia-tentaculata	-	P0839	129964	(Montagu,-1808)	-	-	-	-	-	-	-	-
Dodecaceria	-	P0840	129246	Örsted,-1843	-	-	-	-	1	-	-	1
Mediomastus-fragilis	-	P0919	129892	Rasmussen,-1973	2	1	3	1	1	-	-	2
Notomastus	-	P0920	129220	M.-Sars,-1851	1	3	-	-	3	-	1	-
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	-	**1**	**5**	-	**8**	**5**	**8**	**12**
Euclymene-oerstedii	-	P0964	130294	(Claparède,-1863)	-	-	-	-	-	-	-	-
Praxillella-affinis	-	P0971	130322	(M.-Sars-in-G.O.-Sars,-1872)	-	-	2	-	-	-	1	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Micromaldane-ornithochaeta	-	P0978	130310	Mesnil,-1897	-	-	-	-	2	-	-	-
Thoracophelia-flabellifera	-	P0996	339492	Ziegelmeier,-1955	-	-	-	-	-	-	-	-
Ophelia-borealis	-	P0999	130491	Quatrefages,-1866	2	-	-	-	-	-	-	-
Travisia-forbesii	-	P1007	130512	Johnston,-1840	-	-	-	-	-	-	-	-
Scalibregma-celticum	-	P1026	130979	Mackie,-1991	-	-	-	-	1	1	-	4
Scalibregma-inflatum	-	P1027	130980	Rathke,-1843	-	-	-	-	1	-	-	1
Galathowenia-oculata	-	P1093	146950	(Zachs,-1923)	-	-	-	-	-	-	-	-
Sabellaria-spinulosa	-	P1117	130867	(Leuckart,-1849)	-	1	8	-	28	19	8	24
Ampharete-baltica	-	P1134	129776	Eliason,-1955	-	-	-	-	-	-	-	2
Anobothrus-gracilis	-	P1147	129789	(Malmgren,-1866)	-	-	-	-	1	-	-	-
Pista-maculata	-	P1187	868065	(Dalyell,-1853)	-	-	-	-	1	-	1	-
Eupolymnia-nesidensis	-	P1190	131490	(Delle-Chiaje,-1828)	-	-	-	-	-	1	-	-
Lanice-conchilega	-	P1195	131495	(Pallas,-1766)	-	2	20	-	11	8	10	16
Neoamphitrite-figulus	-	P1206	131504	(Dalyell,-1853)	-	-	-	-	-	-	-	-
Nicolea-venustula	-	P1210	131507	(Montagu,-1819)	-	1	-	-	-	-	1	-
Phisidia-aurea	-	P1215	131513	Southward,-1956	-	1	-	-	-	-	-	-
Lysilla-nivea	-	P1234	131501	Langerhans,-1884	2	-	2	-	-	-	1	-
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	**5**	**2**	**13**	**2**	**18**	**8**	**8**	**11**
Thelepus-cincinnatus	-	P1254	131543	(Fabricius,-1780)	-	-	-	-	-	-	-	1
Parasabella-cambrensis	-	P1273	530920	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-
Parasabella-torulis	-	P1276	530937	(Knight-Jones-&-Walker,-1985)	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Pseudopotamilla-cf.-reniformis	-	P1316	130963	(Bruguière,-1789)	-	-	1	-	1	-	-	1
Sabella-pavonina	-	P1320	130967	Savigny,-1822	-	-	-	-	-	1	-	-
Hydroides-norvegica	-	P1334	131009	Gunnerus,-1768	-	-	-	-	2	1	-	-
Spirobranchus-lamarcki	-	P1340	560033	(Quatrefages,-1866)	-	-	5	-	10	14	-	2
Tubificoides	-	P1487	137393	Lastočkin,-1937	-	-	-	-	-	-	-	-
ARTHROPODA	-	-		-	-	-	-	-	-	-	-	-
Nymphon-brevirostre	-	Q0005	150520	Hodge,-1863	-	-	-	-	1	-	1	3
Achelia-echinata	-	Q0015	134599	Hodge,-1864	-	1	-	-	1	-	1	4
Callipallene-brevirostris	-	Q0033	134643	(Johnston,-1837)	-	2	-	-	-	-	1	1
Anoplodactylus-petiolatus	-	Q0044	134723	(Krøyer,-1844)	-	-	-	-	-	-	1	1
Pycnogonum-litorale	-	Q0051	239867	(Strøm,-1762)	-	-	-	-	-	-	-	-
Nebalia-reboredae	-	S0005	459311	Moreira-&-Urgorri,-2009	-	-	-	-	-	-	-	-
Nebalia-troncosoi	-	S0005	388222	Moreira,-Cacabelos-&-Dominguez,-2003	-	-	-	-	-	-	-	-
Gastrosaccus-spinifer	-	S0044	120020	(Goës,-1864)	-	-	1	-	-	-	1	-
Apherusa-bispinosa	-	S0102	102160	(Spence-Bate,-1857)	-	1	-	-	-	-	-	-
Pontocrates	Type-B	S0132	101702	Boeck,-1871	-	-	-	-	-	-	-	-
Pontocrates-arenarius	-	S0135	102918	(Spence-Bate,-1858)	-	-	-	-	-	-	-	-
Synchelidium-maculatum	-	S0138	102928	Stebbing,-1906	-	-	-	2	-	-	2	-
Parapleustes-bicuspis	-	S0146	103008	(Krøyer,-1838)	-	-	-	-	-	-	-	-
Amphilochus-manudens	-	S0158	101967	Spence-Bate,-1862	-	-	-	-	-	-	-	-
Apolochus-neapolitanus	-	S0159	236495	(Della-Valle,-1893)	-	-	-	-	-	-	-	-
Leucothoe-incisa	-	S0177	102460	Robertson,-1892	-	1	1	-	-	1	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Leucothoe-procera	-	S0179	102466	Spence-Bate,-1857	-	-	-	-	-	-	-	-
Colomastix-pusilla	-	S0183	102076	Grube,-1861	-	-	-	-	-	-	-	-
Stenothoe-marina	-	S0213	103166	(Spence-Bate,-1857)	1	-	-	-	-	-	-	2
Urothoe-brevicornis	-	S0247	103226	Spence-Bate,-1862	-	-	-	-	-	-	-	-
Urothoe-elegans	-	S0248	103228	Spence-Bate,-1857	-	-	1	-	-	1	-	1
Urothoe-marina	-	S0249	103233	(Spence-Bate,-1857)	-	-	-	-	-	-	1	-
Phoxocephalus-holbolli	-	S0269	102989	(Krøyer,-1842)	-	-	-	-	-	-	-	-
Acidostoma-neglectum	-	S0272	102495	Dahl,-1964	-	-	-	-	-	-	-	-
Orchomene-humilis	-	S0320	102665	(Costa,-1853)	-	-	-	-	-	-	-	-
Tryphosa-nana	-	S0321	102748	(Krøyer,-1846)	-	-	-	-	-	-	-	-
Tmetonyx-similis	-	S0337	102742	(G.O.-Sars,-1891)	-	-	1	-	1	-	-	1
Iphimedia-minuta	-	S0380	102345	G.O.-Sars,-1883	-	-	-	-	-	-	-	-
Iphimedia-nexa	-	S0381	102346	Myers-&-McGrath,-in-Myers,-McGrath-&-Costello,-1987	-	-	-	-	-	-	-	-
Iphimedia-obesa	-	S0382	102347	Rathke,-1843	-	1	-	-	-	-	-	-
Nototropis-guttatus	-	S0411	488957	Costa,-1853	-	-	-	-	-	-	-	-
Nototropis-vedlomensis	-	S0413	179538	(Spence-Bate-&-Westwood,-1862)	-	1	-	1	-	-	-	-
Ampelisca-diadema	-	S0429	101896	(Costa,-1853)	-	1	3	-	3	-	-	5
Ampelisca-spinipes	-	S0438	101928	Boeck,-1861	-	4	10	-	6	-	7	3
Bathyporeia-elegans	-	S0452	103058	Watkin,-1938	-	-	-	-	-	-	-	-
Bathyporeia-guilliamsoniana	-	S0454	103060	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Abludomelita-obtusata	-	S0498	102788	(Montagu,-1813)	-	-	-	-	-	-	-	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	-	-	**3**	-	**2**	**2**	-	**5**

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Othomaera-othonis	-	S0519	534781	(H.-Milne-Edwards,-1830)	-	-	-	-	2	-	-	1
Maerella-tenuimana	-	S0521	102831	(Spence-Bate,-1862)	-	-	1	-	-	-	-	-
Megamphopus-cornutus	-	S0539	102377	Norman,-1869	-	-	-	-	-	-	-	-
Gammaropsis-maculata	-	S0541	102364	(Johnston,-1828)	-	-	-	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Leptocheirus-hirsutimanus	-	S0588	102036	(Spence-Bate,-1862)	-	-	6	-	-	2	1	1
Leptocheirus-pectinatus	-	S0589	102039	(Norman,-1869)	-	-	1	-	1	-	-	-
Monocorophium-acherusicum	-	S0606	225814	(Costa,-1853)	-	-	2	-	-	-	-	3
Crassicorophium-crassicorne	-	S0611	397383	(Bruzelius,-1859)	-	-	-	-	-	-	-	-
Centraloecetes-kroyeranus	-	S0618	1059646	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
Unciola-crenatipalma	-	S0621	102057	(Spence-Bate,-1862)	-	-	3	-	7	3	4	5
Caprella-linearis	-	S0646	101839	(Linnaeus,-1767)	-	-	-	-	-	-	3	-
Phtisica-marina	-	S0657	101864	Slabber,-1769	-	2	-	-	-	-	-	6
Pseudoprotella-phasma	-	S0659	101871	(Montagu,-1804)	-	-	3	-	-	-	2	1
Gnathia-oxyuraea	-	S0793	118995	(Lilljeborg,-1855)	-	-	1	-	2	3	1	1
Gnathia-dentata	-	S0794	118990	(G.-O.-Sars,-1872)	-	-	-	-	-	-	-	-
Eurydice-spinigera	-	S0855	148637	Hansen,-1890	-	1	-	-	1	-	-	-
Prodajus-ostendensis	-	S0978	148638	Gilson,-1909	-	-	-	-	-	-	-	-
Pseudoparatanais-batei	-	S1140	136457	(Sars,-1882)	-	-	-	-	1	-	-	-
Bodotria-scorpioides	-	S1197	110445	(Montagu,-1804)	-	-	-	-	-	-	-	-
Eualus-pusiolus	-	S1345	107507	(Krøyer,-1841)	-	-	-	-	-	1	-	-
Hippolyte-varians	-	S1350	107518	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Eualus-cranchii	-	S1360	156083	(Leach,-1817-[in-Leach,-1815-1875])	-	-	-	-	-	-	-	1
Processa-edulis-crassipes	-	S1364	108336	Nouvel-&-Holthuis,-1957	-	-	-	-	-	-	-	-
Pandalina-brevirostris	-	S1374	107647	(Rathke,-1843)	-	-	-	-	-	-	-	1
Pandalus-montagui	-	S1377	107651	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	-	-	-	-
Crangon-crangon	-	S1385	107552	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Philocheras-fasciatus	-	S1388	107559	(Risso,-1816)	-	-	-	-	-	-	-	-
Axius-stirhynchus	-	S1407	107722	Leach,-1816	-	-	-	-	-	-	-	-
Anapagurus-hyndmanni	-	S1448	107217	(Bell,-1845)	-	-	-	-	1	2	1	1
Pagurus-bernhardus	-	S1457	107232	(Linnaeus,-1758)	-	-	-	-	1	-	-	-
Pagurus-cuanensis	-	S1460	107235	Bell,-1845-[in-Bell,-1844-1853]	-	-	-	-	2	1	2	1
Galathea-intermedia	-	S1472	107150	Lilljeborg,-1851	-	-	7	-	11	1	7	15
Pisidia-longicornis	-	S1482	107188	(Linnaeus,-1767)	-	-	1	-	8	12	4	27
Ebalia-tumefacta	-	S1509	107302	(Montagu,-1808)	-	-	-	-	-	-	-	-
Inachus-leptochirus	-	S1527	107330	Leach,-1817-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Macropodia-rostrata	-	S1532	107345	(Linnaeus,-1761)	-	-	-	-	-	-	-	-
Pirimela-denticulata	-	S1562	107278	(Montagu,-1808)	-	-	-	-	-	-	-	-
Cancer-pagurus	-	S1566	107276	Linnaeus,-1758	-	-	-	-	-	-	-	-
Liocarcinus-depurator	-	S1580	107387	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Liocarcinus-holsatus	-	S1581	107388	(Fabricius,-1798)	-	-	-	-	-	-	-	-
COLLEMBOLA	-	T0000	118086	-	-	-	-	-	-	-	-	-
MOLLUSCA	-	-		-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Leptochiton-asellus	-	W0053	140199	(Gmelin,-1791)	-	-	-	-	2	1	-	-
Gibbula-tumida	-	W0161	141799	(Montagu,-1803)	-	-	2	-	1	1	-	-
Steromphala-cineraria	-	W0163	1039839	(Linnaeus,-1758)	-	-	-	-	-	-	1	-
Calliostoma-zizyphinum	-	W0182	141767	(Linnaeus,-1758)	-	-	-	-	1	-	-	-
Lacuna-crassior	-	W0287	140167	(Montagu,-1803)	-	-	-	-	-	-	-	-
Rissoa-parva	-	W0334	141365	(da-Costa,-1778)	-	-	-	-	2	1	-	17
Crisilla-semistriata	-	W0348	141280	(Montagu,-1808)	-	-	-	-	-	-	-	-
Manzonia-crassa	-	W0361	141291	(Kanmacher,-1798)	-	-	-	-	-	-	-	-
Onoba-semicostata	-	W0371	141320	(Montagu,-1803)	-	-	-	-	-	-	-	-
Tornus-subcarinatus	-	W0421	141690	(Montagu,-1803)	-	-	-	-	1	-	-	-
Crepidula-fornicata	-	W0439	138963	(Linnaeus,-1758)	4	5	52	-	6	30	16	16
Lamellaria-latens	-	W0469	140172	(O.-F.-Müller,-1776)	-	-	-	-	-	1	-	-
Ocenebra-erinaceus	-	W0685	140405	(Linnaeus,-1758)	-	-	-	-	-	-	1	-
Buccinum-undatum	-	W0708	138878	Linnaeus,-1758	-	-	-	-	-	-	1	-
Tritia-incrassata	-	W0747	876825	(Strøm,-1768)	-	-	-	-	-	1	1	-
Propebela-rufa	-	W0819	367570	(Montagu,-1803)	-	-	-	-	-	-	-	-
Noemiamea-dolioliformis	-	W0956	140973	(Jeffreys,-1848)	-	-	-	-	1	-	-	-
Retusa-obtusa	-	W1077	141134	(Montagu,-1803)	-	-	-	-	-	-	-	-
Dendronotus	-	W1266	137885	Alder-&-Hancock,-1845	-	-	-	-	-	-	-	-
Doto	-	W1270	137916	Oken,-1815	-	-	-	-	-	-	3	-
Goniodoris-nodosa	-	W1302	140033	(Montagu,-1808)	-	-	-	-	-	-	-	-
Onchidoris-bilamellata	-	W1322	150457	(Linnaeus,-1767)	-	-	6	-	-	5	2	-
Nucula-hanleyi	-	W1568	140588	Winckworth,-1931	-	-	-	1	-	-	1	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Nucula-nucleus	-	W1570	140590	(Linnaeus,-1758)	-	-	1	-	2	-	-	1
Mytilus-edulis	-	W1695	140480	Linnaeus,-1758	-	-	-	-	-	-	-	-
Modiolus-modiolus	-	W1702	140467	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Modiolula-phaseolina	-	W1708	140461	(Philippi,-1844)	-	-	-	-	1	-	-	-
Musculus-subpictus	-	W1718	506128	(Cantraine,-1835)	-	-	-	-	-	-	-	-
Aequipecten-opercularis	-	W1773	140687	(Linnaeus,-1758)	-	-	-	-	-	-	-	-
Heteranomia-squamula	-	W1809	138749	(Linnaeus,-1758)	-	-	-	-	-	-	1	-
Lucinoma-borealis	-	W1829	140283	(Linnaeus,-1767)	-	-	-	-	-	-	-	1
Kurtiella-bidentata	-	W1906	345281	(Montagu,-1803)	-	-	-	-	-	-	-	-
Goodallia-triangularis	-	W1929	138831	(Montagu,-1803)	43	4	-	6	-	-	-	-
Laevicardium-crassum	-	W1959	139004	(Gmelin,-1791)	-	-	-	-	1	-	-	-
Spisula-elliptica	-	W1975	140300	(T.-Brown,-1827)	4	3	-	-	-	-	-	-
Ensis	-	W1996	138333	Schumacher,-1817	-	-	-	-	-	-	-	-
Macomangulus-tenuis	-	W2012	878470	(da-Costa,-1778)	-	-	-	-	-	-	-	-
Fabulina-fabula	-	W2019	146907	(Gmelin,-1791)	-	-	-	-	-	-	-	-
Abra-alba	-	W2059	141433	(W.-Wood,-1802)	-	-	-	-	-	1	-	1
Abra-prismatica	-	W2062	141436	(Montagu,-1808)	-	-	-	-	-	-	-	-
Timoclea-ovata	-	W2104	141929	(Pennant,-1777)	-	-	-	-	-	1	1	-
Venerupis-corrugata	-	W2124	181364	(Gmelin,-1791)	-	-	-	-	-	-	-	-
Hiatella-arctica	-	W2166	140103	(Linnaeus,-1767)	-	-	1	-	-	2	1	3
PHORONIDA												
Phoronis	-	ZA0003	128545	Wright,-1856	-	-	2	-	4	8	11	1
ECHINODERMATA												

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Crossaster papposus	-	ZB0075	124154	(Linnaeus, 1767)	-	-	-	-	-	-	-	-
Ophiothrix fragilis	-	ZB0124	125131	(Abildgaard in O.F. Müller, 1789)	-	-	-	-	-	-	-	-
Amphipholis squamata	-	ZB0161	125064	(Delle Chiaje, 1828)	-	4	3	-	5	3	3	10
Ophiura albida	-	ZB0168	124913	Forbes, 1839	-	-	-	-	-	-	-	-
Leptosynapta	-	ZB0291	123449	Verrill, 1867	-	-	-	-	-	-	-	-
ENTEROPNEUSTA	-	ZC0012	1820	Gegenbaur, 1870	-	-	-	-	-	-	1	-
The following taxa (highlighted in bold) were merged for statistical analysis												
Harmothoe	-	P0050	129491	Kinberg, 1856	-	-	3	-	-	-	-	1
Harmothoe clavigera	-	P0050	130760	(M. Sars, 1863)	-	-	-	-	-	-	-	1
Harmothoe extenuata	-	P0058	130762	(Grube, 1840)	-	-	-	-	-	-	-	-
Harmothoe impar	-	P0065	130770	(Johnston, 1839)	-	-	-	-	1	1	-	-
merged as:	-	-		-	-	-	-	-	-	-	-	-
Harmothoe	-	**P0050**	**129491**	**Kinberg, 1856**	-	-	3	-	1	1	-	2
Leiochone	-	P0955	146991	Grube, 1868	-	1	2	-	6	5	5	5
Leiochone tricirrata	-	P0955	328694	Bellan & Reys, 1967	-	-	-	-	-	-	-	1
Leiochone johnstoni	-	P0958	221095	McIntosh, 1915	-	-	3	-	2	-	3	6
merged as:	-	-		-	-	-	-	-	-	-	-	-
Leiochone	-	**P0955**	**146991**	**Grube, 1868**	-	1	5	-	8	5	8	12
Polycirrus	-	P1235	129710	Grube, 1850	2	1	2	2	4	3	6	3
Polycirrus denticulatus	-	P1239	131527	Saint-Joseph, 1894	-	-	7	-	14	5	-	8
Polycirrus medusa	-	P1242	131531	Grube, 1850	3	1	4	-	-	-	2	-
merged as:	-	-		-	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	5	2	13	2	18	8	8	11
Cheirocratus	-	S0503	101669	Norman,-1867	-	-	-	-	-	-	-	1
Cheirocratus	female	S0503	101669	Norman,-1867	-	-	1	-	2	-	-	2
Cheirocratus-robustus	-	S0503	102797	G.O.-Sars,-1894	-	-	-	-	-	-	-	-
Cheirocratus-assimilis	-	S0504	102794	(Lilljeborg,-1852)	-	-	2	-	-	1	-	-
Cheirocratus-intermedius	-	S0505	102795	G.O.-Sars,-1894	-	-	-	-	-	-	-	-
Cheirocratus-sundevallii	-	S0506	102798	(Rathke,-1843)	-	-	-	-	-	1	-	2
merged-as:	-	-		-	-	-	-	-	-	-	-	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	-	-	3	-	2	2	-	5
Ericthonius	female	S0561	101567	H.-Milne-Edwards,-1830	-	-	-	-	-	-	-	-
Ericthonius-punctatus	-	S0564	102408	(Spence-Bate,-1857)	-	-	-	-	-	-	-	-
merged-as:	-	-		-	-	-	-	-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	-	-	-	-	-	-	-	-
Taxa-below-have-been-removed-from-main-data-matrix-prior analysis												
JUVENILES												
SIPUNCULA	juv.	N0001	1268	Stephen,-1964	-	-	-	-	3	7	-	8
Golfingiidae	juv.	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	-	-	-	-
Nephtyidae	juv.	P0490	956	Grube,-1850	-	-	-	-	-	-	-	-
Cirriformia	juv.	P0838	129245	Hartman,-1936	-	-	-	-	-	-	-	-
Sabellidae	juv.	P1257	985	Latreille,-1825	-	-	-	-	-	-	-	-
Achelia	juv.	Q0014	134568	Hodge,-1864	-	-	-	-	4	-	-	1
Gnathia	praniza	S0793	118437	Leach,-1814	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
DECAPODA	megalopa	S1276	1130	Latreille,-1802	-	-	-	-	-	-	-	-
CARIDEA	juv.	S1293	106674	Dana,-1852	-	-	-	-	1	-	-	-
Hippolytidae	juv.	S1334	106777	Spence-Bate,-1888	-	1	-	-	-	-	-	-
Processa	juv.	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-
Philocheras	juv.	S1386	107010	Stebbing,-1900	-	-	-	-	-	-	-	-
Upogebia	juv.	S1418	107079	Leach,-1814-[in-Leach,-1813-1815]	-	-	1	-	-	-	1	1
Paguridae	juv.	S1445	106738	Latreille,-1802	1	-	-	-	1	-	3	-
BRACHYURA	larva	S1485	106673	Latreille,-1802	-	-	-	-	-	-	-	-
Majidae	juv.	S1512	106760	Samouelle,-1819	-	-	-	-	-	-	1	-
Inachus	juv.	S1525	106905	Weber,-1795	-	-	-	-	-	-	-	2
Macropodia	juv.	S1529	205077	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	-	1	-	1	1
Liocarcinus	juv.	S1577	106925	Stimpson,-1871	-	1	-	-	-	-	-	-
GASTROPODA	juv.	W0088	101	Cuvier,-1795	-	-	1	-	-	4	4	2
Cantharidinae	juv.	W0140	382171	Gray,-1857	-	-	-	-	-	-	-	-
Trivia	juv.	W0457	138582	Gray,-1837	-	-	-	-	-	-	-	2
NUDIBRANCHIA	juv.	W1243	1762	Cuvier,-1817	3	-	-	-	-	-	-	-
CLADOBRANCHIA	juv.	W1243	827889	-	-	-	-	-	1	-	-	-
Goniodorididae	juv.	W1299	174	H.-Adams-&-A.-Adams,-1854	-	-	-	-	1	-	1	-
Onchidorididae	juv.	W1319	175	Gray,-1827	-	-	-	-	-	-	-	-
Nucula	juv.	W1565	138262	Lamarck,-1799	-	-	-	-	-	-	-	1

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Mytilidae	juv.	W1691	211	Rafinesque,-1815	-	-	-	-	-	-	-	-
Mytilus	juv.	W1693	138228	Linnaeus,-1758	-	-	-	-	-	-	-	-
Modiolus	juv.	W1698	138223	Lamarck,-1799	-	-	-	-	-	-	-	-
PECTINOIDEA	juv.	W1767	151320	Rafinesque,-1815	-	-	2	-	4	6	-	2
Anomiidae	juv.	W1805	214	Rafinesque,-1815	3	22	3	4	2	-	6	-
Spisula	juv.	W1973	138159	Gray,-1837	3	4	-	-	-	-	1	-
Ensis	juv.	W1996	138333	Schumacher,-1817	-	-	-	-	-	-	-	1
Abra	juv.	W2058	138474	Lamarck,-1818	-	1	8	-	9	16	9	25
Myidae	juv.	W2142	247	Lamarck,-1809	-	-	-	-	-	-	-	-
ASTEROIDEA	juv.	ZB0018	123080	de-Blainville,-1830	-	-	-	-	1	-	-	-
Solasteridae	juv.	ZB0070	123143	Viguier,-1878	-	-	-	-	2	-	1	4
OPHIUROIDEA	juv.	ZB0105	123084	Gray,-1840	-	-	-	-	-	-	-	1
Ophiuridae	juv.	ZB0165	123200	Müller-&-Troschel,-1840	-	-	-	-	-	-	-	-
PELAGIC-FAUNA												
CHAETOGNATHA	-	L0001	2081	-	-	-	-	-	-	-	-	-
FISH	-	-		-	-	-	-	1	-	-	-	-
PISCES	juv.	ZE0000	11676	-	-	-	-	-	-	-	-	-
Liparis-liparis	-	ZG0296	127219	(Linnaeus,-1766)	-	-	-	-	-	-	-	-
DAMAGED-FAUNA												
Golfingiidae	-	N0011	2032	Stephen-&-Edmonds,-1972	-	-	-	-	3	4	2	1
Polynoinae	-	P0025	155091	Kinberg,-1856	-	-	-	-	-	-	-	1
Eumida	-	P0163	129446	Malmgren,-1865	-	-	-	-	-	-	-	1
Syllis	-	P0358	129680	Lamarck,-1818	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Nereididae	-	P0458	22496	Blainville,-1818	-	-	-	-	-	-	-	-
Spionidae	-	P0720	913	Grube,-1850	-	-	-	-	-	-	-	1
Dipolydora	-	P0748	129611	Verrill,-1881	-	-	-	-	-	-	-	-
Chaetozone	-	P0832	129242	Malmgren,-1867	-	-	-	-	-	-	-	-
Maldanidae	-	P0938	923	Malmgren,-1867	-	-	3	-	-	-	-	-
Euclymeninae	-	P0951	152232	Arwidsson,-1906	-	-	-	-	-	1	-	-
Ampharete	-	P1133	129155	Malmgren,-1866	-	-	-	-	-	-	-	-
Serpulidae	-	P1324	988	Rafinesque,-1815	-	-	1	-	-	1	-	1
Spirobranchus	-	P1339	129582	Blainville,-1818	-	-	-	-	-	-	-	-
Nymphon	-	Q0004	134591	Fabricius,-1794	-	-	-	-	-	-	1	1
Callipallene	-	Q0032	134581	Flynn,-1929	1	-	-	-	-	-	-	-
MYSIDA	-	S0025	149668	Boas,-1883	-	-	-	-	-	-	-	-
Mysidae	-	S0031	119822	Haworth,-1825	-	-	-	-	-	-	-	-
AMPHIPODA	-	S0097	1135	Latreille,-1816	-	-	-	-	-	-	-	1
Urothoe	-	S0246	101789	Dana,-1852	-	-	-	-	-	-	-	-
Ampeliscidae	-	S0422	101364	Krøyer,-1842	-	-	-	-	-	-	-	-
Ampelisca	-	S0423	101445	Krøyer,-1842	-	-	-	-	-	-	-	-
Caprellidae	-	S0639	101361	Leach,-1814	-	-	-	-	-	-	-	3
CARIDEA	-	S1293	106674	Dana,-1852	-	-	-	-	-	-	-	-
Hippolytidae	-	S1334	106777	Spence-Bate,-1888	-	-	-	-	-	-	-	-
Eualus	-	S1342	106986	Thallwitz,-1891	-	-	-	-	-	-	2	-
Processa	-	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphialD	Authority	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA
Pagurus	-	S1454	106854	Fabricius,-1775	-	-	-	-	-	-	-	-
Liocarcinus	-	S1577	106925	Stimpson,-1871	-	-	-	-	-	-	-	-
GASTROPODA	-	W0088	101	Cuvier,-1795	-	-	-	-	-	-	-	-
NUDIBRANCHIA	-	W1243	1762	Cuvier,-1817	-	-	-	-	-	-	-	3
Abra	-	W2058	138474	Lamarck,-1818	-	-	-	-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
CNIDARIA	-	-		-	-	-	-	-
Edwardsiidae	-	D0759	100665	Andres,-1881	-	-	-	-
PLATYHELMINTHES	-	F0001	793	Minot,-1876	-	3	1	1
NEMERTEA	-	G0001	152391	-	8	16	8	8
SIPUNCULA	-	-		-	-	-	-	-
Golfingia-elongata	-	N0014	175026	(Keferstein,-1862)	-	-	-	-
Golfingia-vulgaris	-	N0017	410724	(de-Blainville,-1827)	-	-	-	-
Nephasoma-minutum	-	N0025	136060	(Keferstein,-1862)	-	11	-	4
Thysanocardia-procera	-	N0028	136063	(Möbius,-1875)	-	-	-	-
ANNELIDA	-	-		-	-	-	-	-
Gattyana-cirrhosa	-	P0049	130749	(Pallas,-1766)	-	3	4	4
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	**3**	-	**6**	**11**
Lepidonotus-squamatus	-	P0082	130801	(Linnaeus,-1758)	3	-	-	4
Pholoe-baltica	-	P0091	130599	Örsted,-1843	1	2	-	2
Pholoe-inornata	-	P0092	130601	Johnston,-1839	3	4	3	5
Eteone-longa	agg.	P0118	130616	(Fabricius,-1780)	-	3	-	-
Hesionura-elongata	-	P0122	130649	(Southern,-1914)	-	-	-	-
Hypereteone-foliosa	-	P0124	152250	(Quatrefages,-1865)	-	-	1	-
Phyllodoce-maculata	-	P0144	334510	(Linnaeus,-1767)	-	5	2	2
Eulalia-bilineata	-	P0152	130624	(Johnston,-1840)	1	-	-	1
Eulalia-expusilla	-	P0153	130625	Pleijel,-1987	-	-	2	-
Eulalia-mustela	-	P0155	130631	Pleijel,-1987	-	-	-	-
Eulalia-viridis	-	P0161	130639	(Linnaeus,-1767)	1	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Eumida	Type-1	P0163	129446	Malmgren,-1865	-	-	-	-
Eumida-bahusiensis	-	P0164	130641	Bergstrom,-1914	-	2	-	-
Eumida-sanguinea	agg.	P0167	130644	(Örsted,-1843)	4	4	2	2
Glycera-lapidum	-	P0260	130123	Quatrefages,-1866	-	-	1	1
Glycera-oxycephala	-	P0262	130126	Ehlers,-1887	-	-	-	-
Sphaerodorum-gracilis	-	P0291	131100	(Rathke,-1843)	-	-	-	1
Psamathe-fusca	-	P0305	152249	Johnston,-1836	-	-	-	1
Nereimyra-punctata	-	P0311	130185	(Müller,-1788)	-	-	-	-
Syllis-licheri	-	P0358	238263	Ravara,-San-Martín-&-Moreira,-2004	-	-	-	-
Syllis-westheidei	-	P0358	131461	San-Martín,-1984	-	2	1	-
Syllis-armillaris	-	P0365-	131415	(O.F.-Müller,-1776)	9	-	1	3
Syllis-variegata	-	P0371	131458	Grube,-1860	7	1	2	1
Amblyosyllis-spectabilis	-	P0375	1258721	(Johnston-in-Baird,-1861)	-	-	1	1
Eusyllis-blomstrandi	-	P0380	131290	Malmgren,-1867	-	1	1	-
Odontosyllis-fulgurans	-	P0387	131327	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-
Streptodonta-pterochaeta	-	P0391	238207	(Southern,-1914)	-	-	-	-
Synmerosyllis-lamelligera	-	P0398	761617	(Saint-Joseph,-1887)	-	-	-	-
Syllides-japonicus	-	P0406	131410	Imajima,-1966	-	-	-	-
Parexogone-hebes	-	P0421	757970	(Webster-&-Benedict,-1884)	-	1	-	2
Exogone-naidina	-	P0422	327985	Örsted,-1845	-	-	-	-
Exogone-verugera	-	P0423	333456	(Claparède,-1868)	-	-	1	-
Sphaerosyllis-bulbosa	-	P0425	131379	Southern,-1914	-	-	-	-
Sphaerosyllis-cf.-taylori	-	P0430	131394	Perkins,-1981	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Proceraea-scapularis	-	P0442	238179	(Claparède,-1864)	-	-	-	3
Myrianida	-	P0449	129659	Milne-Edwards,-1845	-	2	6	7
Rullierinereis-ancornunezi	-	P0458	492034	Núñez-&-Brito,-2006	-	-	-	-
Eunereis-longissima	-	P0475	130375	(Johnston,-1840)	-	1	1	-
Nephtys-caeca	-	P0496	130355	(Fabricius,-1780)	1	-	1	1
Nephtys-cirrosa	-	P0498	130357	Ehlers,-1868	-	-	1	-
Nephtys-hombergii	-	P0499	130359	Savigny-in-Lamarck,-1818	-	-	-	-
Nephtys-longosetosa	-	P0503	130364	Örsted,-1842	-	-	-	-
Lumbrineris-nr.-*cingulata*	-	P0572	129337	Blainville,-1828	1	3	4	-
Scoletoma-magnidentata	-	P0583	152260	(Winsnes,-1981)	-	-	-	-
Protodorvillea-kefersteini	-	P0638	130041	(McIntosh,-1869)	-	5	2	5
Schistomeringos-neglecta	-	P0642	130044	(Fauvel,-1923)	-	-	-	-
Scoloplos-armiger	-	P0672	130537	(Müller,-1776)	-	1	7	-
Poecilochaetus-serpens	-	P0718	130711	Allen,-1904	-	-	-	1
Aonides-paucibranchiata	-	P0723	131107	Southern,-1914	-	2	1	-
Laonice-bahusiensis	-	P0733	131127	Söderström,-1920	-	-	-	-
Dipolydora-sp.-A	-	P0748	129611	Verrill,-1881	-	3	4	2
Dipolydora-caulleryi	-	P0751	131116	(Mesnil,-1897)	1	-	1	4
Polydora-ciliata	agg.	P0752	131141	(Johnston,-1838)	-	-	3	-
Dipolydora-flava	-	P0754	131118	(Claparède,-1870)	-	12	2	-
Dipolydora-saintjosephi	-	P0761	131123	(Eliason,-1920)	1	-	-	-
Pseudopolydora-pulchra	-	P0774	131169	(Carazzi,-1893)	-	-	-	-
Pygospio-elegans	-	P0776	131170	Claparède,-1863	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Scolelepis-bonnieri	-	P0779	131171	(Mesnil,-1896)	-	-	-	-
Scolelepis-foliosa	-	P0781	334741	(Audouin-&-Milne-Edwards,-1833)	-	-	-	-
Spio-symphyta	-	P0787	596189	Meißner,-Bick-&-Bastrop,-2011	-	-	-	-
Spio-goniocephala	-	P0787	131184	Thulin,-1957	-	-	-	-
Spio-armata	-	P0788	131180	(Thulin,-1957)	3	6	4	4
Spiophanes-bombyx	agg.	P0794	131187	(Claparède,-1870)	-	-	-	-
Magelona-mirabilis	-	P0807	130271	(Johnston,-1865)	-	-	-	-
Aphelochaeta-sp.-A	-	P0823	129240	Blake,-1991	-	-	-	-
Aphelochaeta	Type-2	P0823	129240	Blake,-1991	-	-	-	-
Aphelochaeta-marioni	-	P0824	129938	(Saint-Joseph,-1894)	-	1	1	-
Caulleriella-alata	-	P0829	129943	(Southern,-1914)	1	1	-	1
Chaetozone-zetlandica	-	P0831	336485	McIntosh,-1911	-	3	-	3
Chaetozone-christiei	-	P0832-	152217	Chambers,-2000	-	-	-	-
Cirratulus-incertus	-	P0835	129961	McIntosh,-1916	-	-	1	-
Cirriformia-tentaculata	-	P0839	129964	(Montagu,-1808)	-	-	-	-
Dodecaceria	-	P0840	129246	Örsted,-1843	2	2	2	3
Mediomastus-fragilis	-	P0919	129892	Rasmussen,-1973	2	1	1	4
Notomastus	-	P0920	129220	M.-Sars,-1851	-	2	-	-
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	**1**	**3**	-	**6**
Euclymene-oerstedii	-	P0964	130294	(Claparède,-1863)	-	1	9	-
Praxillella-affinis	-	P0971	130322	(M.-Sars-in-G.O.-Sars,-1872)	-	1	2	-
Micromaldane-ornithochaeta	-	P0978	130310	Mesnil,-1897	-	1	-	-
Thoracophelia-flabellifera	-	P0996	339492	Ziegelmeier,-1955	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Ophelia-borealis	-	P0999	130491	Quatrefages,-1866	-	-	-	-
Travisia-forbesii	-	P1007	130512	Johnston,-1840	-	-	-	-
Scalibregma-celticum	-	P1026	130979	Mackie,-1991	-	1	-	1
Scalibregma-inflatum	-	P1027	130980	Rathke,-1843	-	1	-	3
Galathowenia-oculata	-	P1093	146950	(Zachs,-1923)	-	-	-	-
Sabellaria-spinulosa	-	P1117	130867	(Leuckart,-1849)	50	4	11	1
Ampharete-baltica	-	P1134	129776	Eliason,-1955	-	-	-	-
Anobothrus-gracilis	-	P1147	129789	(Malmgren,-1866)	-	-	-	-
Pista-maculata	-	P1187	868065	(Dalyell,-1853)	1	-	5	3
Eupolymnia-nesidensis	-	P1190	131490	(Delle-Chiaje,-1828)	-	-	-	-
Lanice-conchilega	-	P1195	131495	(Pallas,-1766)	3	17	22	15
Neoamphitrite-figulus	-	P1206	131504	(Dalyell,-1853)	-	1	-	-
Nicolea-venustula	-	P1210	131507	(Montagu,-1819)	2	-	1	3
Phisidia-aurea	-	P1215	131513	Southward,-1956	-	-	-	-
Lysilla-nivea	-	P1234	131501	Langerhans,-1884	-	-	-	-
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	**12**	**5**	**2**	**6**
Thelepus-cincinnatus	-	P1254	131543	(Fabricius,-1780)	1	-	1	1
Parasabella-cambrensis	-	P1273	530920	(Knight-Jones-&-Walker,-1985)	-	-	-	1
Parasabella-torulis	-	P1276	530937	(Knight-Jones-&-Walker,-1985)	-	1	1	-
Pseudopotamilla-cf.-reniformis	-	P1316	130963	(Bruguière,-1789)	-	1	-	-
Sabella-pavonina	-	P1320	130967	Savigny,-1822	-	-	-	-
Hydroides-norvegica	-	P1334	131009	Gunnerus,-1768	-	-	1	-
Spirobranchus-lamarcki	-	P1340	560033	(Quatrefages,-1866)	4	20	20	18

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Tubificoides	-	P1487	137393	Lastočkin,-1937	-	-	4	2
ARTHROPODA	-	-		-	**-**	**-**	**-**	**-**
Nymphon-brevirostre	-	Q0005	150520	Hodge,-1863	-	1	3	4
Achelia-echinata	-	Q0015	134599	Hodge,-1864	3	6	15	13
Callipallene-brevirostris	-	Q0033	134643	(Johnston,-1837)	-	-	15	22
Anoplodactylus-petiolatus	-	Q0044	134723	(Krøyer,-1844)	-	1	1	-
Pycnogonum-litorale	-	Q0051	239867	(Strøm,-1762)	-	-	-	-
Nebalia-reboredae	-	S0005	459311	Moreira-&-Urgorri,-2009	-	1	-	-
Nebalia-troncosoi	-	S0005	388222	Moreira,-Cacabelos-&-Dominguez,-2003	-	-	-	-
Gastrosaccus-spinifer	-	S0044	120020	(Goës,-1864)	-	-	-	-
Apherusa-bispinosa	-	S0102	102160	(Spence-Bate,-1857)	-	-	-	1
Pontocrates	Type-B	S0132	101702	Boeck,-1871	-	-	-	-
Pontocrates-arenarius	-	S0135	102918	(Spence-Bate,-1858)	-	-	-	-
Synchelidium-maculatum	-	S0138	102928	Stebbing,-1906	-	-	-	-
Parapleustes-bicuspis	-	S0146	103008	(Krøyer,-1838)	-	-	-	-
Amphilochus-manudens	-	S0158	101967	Spence-Bate,-1862	-	-	-	1
Apolochus-neapolitanus	-	S0159	236495	(Della-Valle,-1893)	-	-	1	-
Leucothoe-incisa	-	S0177	102460	Robertson,-1892	-	-	-	-
Leucothoe-procera	-	S0179	102466	Spence-Bate,-1857	-	-	-	-
Colomastix-pusilla	-	S0183	102076	Grube,-1861	-	-	-	1
Stenothoe-marina	-	S0213	103166	(Spence-Bate,-1857)	1	3	2	1
Urothoe-brevicornis	-	S0247	103226	Spence-Bate,-1862	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Urothoe-elegans	-	S0248	103228	Spence-Bate,-1857	4	12	4	1
Urothoe-marina	-	S0249	103233	(Spence-Bate,-1857)	-	-	-	-
Phoxocephalus-holbolli	-	S0269	102989	(Krøyer,-1842)	-	-	-	-
Acidostoma-neglectum	-	S0272	102495	Dahl,-1964	-	-	1	-
Orchomene-humilis	-	S0320	102665	(Costa,-1853)	-	-	-	-
Tryphosa-nana	-	S0321	102748	(Krøyer,-1846)	4	2	-	-
Tmetonyx-similis	-	S0337	102742	(G.O.-Sars,-1891)	-	-	-	-
Iphimedia-minuta	-	S0380	102345	G.O.-Sars,-1883	-	-	4	-
Iphimedia-nexa	-	S0381	102346	Myers-&-McGrath,-in-Myers,-McGrath-&-Costello,-1987	1	-	1	1
Iphimedia-obesa	-	S0382	102347	Rathke,-1843	-	1	5	-
Nototropis-guttatus	-	S0411	488957	Costa,-1853	-	-	-	-
Nototropis-vedlomensis	-	S0413	179538	(Spence-Bate-&-Westwood,-1862)	-	-	-	-
Ampelisca-diadema	-	S0429	101896	(Costa,-1853)	7	1	1	1
Ampelisca-spinipes	-	S0438	101928	Boeck,-1861	2	4	-	-
Bathyporeia-elegans	-	S0452	103058	Watkin,-1938	-	-	-	-
Bathyporeia-guilliamsoniana	-	S0454	103060	(Spence-Bate,-1857)	-	-	-	-
Abludomelita-obtusata	-	S0498	102788	(Montagu,-1813)	-	-	1	-
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	**1**	**3**	**5**	**16**
Othomaera-othonis	-	S0519	534781	(H.-Milne-Edwards,-1830)	1	1	4	1
Maerella-tenuimana	-	S0521	102831	(Spence-Bate,-1862)	-	-	-	1
Megamphopus-cornutus	-	S0539	102377	Norman,-1869	-	1	-	1
Gammaropsis-maculata	-	S0541	102364	(Johnston,-1828)	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	-	-	-	-
Leptocheirus-hirsutimanus	-	S0588	102036	(Spence-Bate,-1862)	-	3	-	-
Leptocheirus-pectinatus	-	S0589	102039	(Norman,-1869)	-	-	-	-
Monocorophium-acherusicum	-	S0606	225814	(Costa,-1853)	1	-	3	7
Crassicorophium-crassicorne	-	S0611	397383	(Bruzelius,-1859)	-	2	-	-
Centraloecetes-kroyeranus	-	S0618	1059646	(Spence-Bate,-1857)	-	-	-	-
Unciola-crenatipalma	-	S0621	102057	(Spence-Bate,-1862)	3	-	-	-
Caprella-linearis	-	S0646	101839	(Linnaeus,-1767)	-	2	1	6
Phtisica-marina	-	S0657	101864	Slabber,-1769	2	2	12	14
Pseudoprotella-phasma	-	S0659	101871	(Montagu,-1804)	-	1	2	3
Gnathia-oxyuraea	-	S0793	118995	(Lilljeborg,-1855)	5	5	6	2
Gnathia-dentata	-	S0794	118990	(G.-O.-Sars,-1872)	1	-	-	-
Eurydice-spinigera	-	S0855	148637	Hansen,-1890	-	-	-	-
Prodajus-ostendensis	-	S0978	148638	Gilson,-1909	-	-	-	-
Pseudoparatanais-batei	-	S1140	136457	(Sars,-1882)	-	-	-	-
Bodotria-scorpioides	-	S1197	110445	(Montagu,-1804)	1	-	-	-
Eualus-pusiolus	-	S1345	107507	(Krøyer,-1841)	1	-	-	1
Hippolyte-varians	-	S1350	107518	Leach,-1814-[in-Leach,-1813-1815]	3	2	2	2
Eualus-cranchii	-	S1360	156083	(Leach,-1817-[in-Leach,-1815-1875])	8	-	2	20
Processa-edulis-crassipes	-	S1364	108336	Nouvel-&-Holthuis,-1957	-	-	-	-
Pandalina-brevirostris	-	S1374	107647	(Rathke,-1843)	1	-	1	-
Pandalus-montagui	-	S1377	107651	Leach,-1814-[in-Leach,-1813-1815]	-	-	-	1
Crangon-crangon	-	S1385	107552	(Linnaeus,-1758)	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Philocheras-fasciatus	-	S1388	107559	(Risso,-1816)	1	-	-	-
Axius-stirhynchus	-	S1407	107722	Leach,-1816	-	1	-	-
Anapagurus-hyndmanni	-	S1448	107217	(Bell,-1845)	4	-	-	-
Pagurus-bernhardus	-	S1457	107232	(Linnaeus,-1758)	-	-	-	-
Pagurus-cuanensis	-	S1460	107235	Bell,-1845-[in-Bell,-1844-1853]	1	3	2	2
Galathea-intermedia	-	S1472	107150	Lilljeborg,-1851	32	25	39	43
Pisidia-longicornis	-	S1482	107188	(Linnaeus,-1767)	61	17	70	124
Ebalia-tumefacta	-	S1509	107302	(Montagu,-1808)	-	1	-	-
Inachus-leptochirus	-	S1527	107330	Leach,-1817-[in-Leach,-1815-1875]	-	-	-	1
Macropodia-rostrata	-	S1532	107345	(Linnaeus,-1761)	-	-	-	-
Pirimela-denticulata	-	S1562	107278	(Montagu,-1808)	-	-	1	1
Cancer-pagurus	-	S1566	107276	Linnaeus,-1758	1	-	1	-
Liocarcinus-depurator	-	S1580	107387	(Linnaeus,-1758)	-	-	-	-
Liocarcinus-holsatus	-	S1581	107388	(Fabricius,-1798)	-	-	-	-
COLLEMBOLA	-	T0000	118086	-	-	-	-	-
MOLLUSCA	-	-		-	**-**	**-**	**-**	**-**
Leptochiton-asellus	-	W0053	140199	(Gmelin,-1791)	2	-	1	1
Gibbula-tumida	-	W0161	141799	(Montagu,-1803)	-	1	-	-
Steromphala-cineraria	-	W0163	1039839	(Linnaeus,-1758)	2	1	4	4
Calliostoma-zizyphinum	-	W0182	141767	(Linnaeus,-1758)	-	-	-	-
Lacuna-crassior	-	W0287	140167	(Montagu,-1803)	-	-	3	-
Rissoa-parva	-	W0334	141365	(da-Costa,-1778)	2	16	8	19
Crisilla-semistriata	-	W0348	141280	(Montagu,-1808)	1	-	-	1

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Manzonia-crassa	-	W0361	141291	(Kanmacher,-1798)	1	-	3	-
Onoba-semicostata	-	W0371	141320	(Montagu,-1803)	4	1	30	9
Tornus-subcarinatus	-	W0421	141690	(Montagu,-1803)	-	-	-	-
Crepidula-fornicata	-	W0439	138963	(Linnaeus,-1758)	24	17	46	49
Lamellaria-latens	-	W0469	140172	(O.-F.-Müller,-1776)	-	1	1	3
Ocenebra-erinaceus	-	W0685	140405	(Linnaeus,-1758)	-	-	-	5
Buccinum-undatum	-	W0708	138878	Linnaeus,-1758	-	-	-	-
Tritia-incrassata	-	W0747	876825	(Strøm,-1768)	1	1	1	-
Propebela-rufa	-	W0819	367570	(Montagu,-1803)	-	-	-	-
Noemiamea-dolioliformis	-	W0956	140973	(Jeffreys,-1848)	-	-	-	-
Retusa-obtusa	-	W1077	141134	(Montagu,-1803)	-	-	-	-
Dendronotus	-	W1266	137885	Alder-&-Hancock,-1845	-	-	3	1
Doto	-	W1270	137916	Oken,-1815	-	-	-	1
Goniodoris-nodosa	-	W1302	140033	(Montagu,-1808)	-	1	-	1
Onchidoris-bilamellata	-	W1322	150457	(Linnaeus,-1767)	-	5	1	7
Nucula-hanleyi	-	W1568	140588	Winckworth,-1931	-	-	-	-
Nucula-nucleus	-	W1570	140590	(Linnaeus,-1758)	2	1	5	-
Mytilus-edulis	-	W1695	140480	Linnaeus,-1758	1	-	-	1
Modiolus-modiolus	-	W1702	140467	(Linnaeus,-1758)	-	-	-	1
Modiolula-phaseolina	-	W1708	140461	(Philippi,-1844)	-	-	-	-
Musculus-subpictus	-	W1718	506128	(Cantraine,-1835)	1	-	-	-
Aequipecten-opercularis	-	W1773	140687	(Linnaeus,-1758)	-	-	-	-
Heteranomia-squamula	-	W1809	138749	(Linnaeus,-1758)	-	-	-	-

Taxon	Qualifier	SDC	AphialD	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Lucinoma-borealis	-	W1829	140283	(Linnaeus,-1767)	1	-	2	-
Kurtiella-bidentata	-	W1906	345281	(Montagu,-1803)	-	-	-	-
Goodallia-triangularis	-	W1929	138831	(Montagu,-1803)	-	-	-	-
Laevicardium-crassum	-	W1959	139004	(Gmelin,-1791)	-	-	-	-
Spisula-elliptica	-	W1975	140300	(T.-Brown,-1827)	-	-	-	-
Ensis	-	W1996	138333	Schumacher,-1817	-	5	-	-
Macomangulus-tenuis	-	W2012	878470	(da-Costa,-1778)	-	-	-	-
Fabulina-fabula	-	W2019	146907	(Gmelin,-1791)	-	-	-	-
Abra-alba	-	W2059	141433	(W.-Wood,-1802)	4	-	28	2
Abra-prismatica	-	W2062	141436	(Montagu,-1808)	1	-	-	-
Timoclea-ovata	-	W2104	141929	(Pennant,-1777)	-	1	-	1
Venerupis-corrugata	-	W2124	181364	(Gmelin,-1791)	-	-	-	-
Hiatella-arctica	-	W2166	140103	(Linnaeus,-1767)	8	3	2	8
PHORONIDA								
Phoronis	-	ZA0003	128545	Wright,-1856	6	2	2	3
ECHINODERMATA								
Crossaster-papposus	-	ZB0075	124154	(Linnaeus,-1767)	-	-	-	-
Ophiothrix-fragilis	-	ZB0124	125131	(Abildgaard-in-O.F.-Müller,-1789)	-	-	-	1
Amphipholis-squamata	-	ZB0161	125064	(Delle-Chiaje,-1828)	18	5	14	16
Ophiura-albida	-	ZB0168	124913	Forbes,-1839	-	-	-	-
Leptosynapta	-	ZB0291	123449	Verrill,-1867	-	-	-	2
ENTEROPNEUSTA	-	ZC0012	1820	Gegenbaur,-1870	-	-	-	-
Harmothoe	-	P0050	129491	Kinberg,-1856	-	-	3	6

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Harmothoe-clavigera	-	P0050	130760	(M.-Sars,-1863)	-	-	2	-
Harmothoe-extenuata	-	P0058	130762	(Grube,-1840)	1	-	-	4
Harmothoe-impar	-	P0065	130770	(Johnston,-1839)	2	-	1	1
merged-as:	-	-		-	-	-	-	-
Harmothoe	-	**P0050**	**129491**	**Kinberg,-1856**	3	-	6	11
Leiochone	-	P0955	146991	Grube,-1868	1	-	-	4
Leiochone-tricirrata	-	P0955	328694	Bellan-&-Reys,-1967	-	3	-	-
Leiochone-johnstoni	-	P0958	221095	McIntosh,-1915	-	-	-	2
merged-as:	-	-		-	-	-	-	-
Leiochone	-	**P0955**	**146991**	**Grube,-1868**	1	3	-	6
-	-	-		-	-	-	-	-
Polycirrus	-	P1235	129710	Grube,-1850	1	1	1	-
Polycirrus-denticulatus	-	P1239	131527	Saint-Joseph,-1894	10	4	1	4
Polycirrus-medusa	-	P1242	131531	Grube,-1850	1	-	-	2
merged-as:	-	-		-	-	-	-	-
Polycirrus	-	**P1235**	**129710**	**Grube,-1850**	12	5	2	6
Cheirocratus	-	S0503	101669	Norman,-1867	-	-	1	1
Cheirocratus	female	S0503	101669	Norman,-1867	-	-	2	10
Cheirocratus-robustus	-	S0503	102797	G.O.-Sars,-1894	-	-	1	-
Cheirocratus-assimilis	-	S0504	102794	(Lilljeborg,-1852)	-	2	-	1
Cheirocratus-intermedius	-	S0505	102795	G.O.-Sars,-1894	-	-	-	-
Cheirocratus-sundevallii	-	S0506	102798	(Rathke,-1843)	1	1	1	4
merged-as:	-	-		-	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Cheirocratus	-	**S0503**	**101669**	**Norman,-1867**	1	3	5	16
Ericthonius	female	S0561	101567	H.-Milne-Edwards,-1830	-	-	-	-
Ericthonius-punctatus	-	S0564	102408	(Spence-Bate,-1857)	-	-	-	-
merged-as:	-	-		-	-	-	-	-
Ericthonius	-	**S0561**	**101567**	**H.-Milne-Edwards,-1830**	-	-	-	-
JUVENILES								
SIPUNCULA	juv.	N0001	1268	Stephen,-1964	-	-	1	-
Golfingiidae	juv.	N0011	2032	Stephen-&-Edmonds,-1972	4	-	-	5
Nephtyidae	juv.	P0490	956	Grube,-1850	-	1	2	1
Cirriformia	juv.	P0838	129245	Hartman,-1936	-	-	1	-
Sabellidae	juv.	P1257	985	Latreille,-1825	-	-	-	-
Achelia	juv.	Q0014	134568	Hodge,-1864	-	-	2	-
Gnathia	praniza	S0793	118437	Leach,-1814	1	3	2	1
DECAPODA	megalopa	S1276	1130	Latreille,-1802	-	-	-	-
CARIDEA	juv.	S1293	106674	Dana,-1852	-	1	1	-
Hippolytidae	juv.	S1334	106777	Spence-Bate,-1888	1	-	-	-
Processa	juv.	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-
Philocheras	juv.	S1386	107010	Stebbing,-1900	-	-	-	-
Upogebia	juv.	S1418	107079	Leach,-1814-[in-Leach,-1813-1815]	2	-	-	-
Paguridae	juv.	S1445	106738	Latreille,-1802	-	-	1	-
BRACHYURA	larva	S1485	106673	Latreille,-1802	-	1	2	-
Majidae	juv.	S1512	106760	Samouelle,-1819	-	-	-	1
Inachus	juv.	S1525	106905	Weber,-1795	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Macropodia	juv.	S1529	205077	Leach,-1814-[in-Leach,-1813-1815]	-	4	1	-
Liocarcinus	juv.	S1577	106925	Stimpson,-1871	-	1	1	-
GASTROPODA	juv.	W0088	101	Cuvier,-1795	-	-	-	-
Cantharidinae	juv.	W0140	382171	Gray,-1857	5	4	7	11
Trivia	juv.	W0457	138582	Gray,-1837	-	-	-	1
NUDIBRANCHIA	juv.	W1243	1762	Cuvier,-1817	-	-	-	-
CLADOBRANCHIA	juv.	W1243	827889	-	-	-	-	8
Goniodorididae	juv.	W1299	174	H.-Adams-&-A.-Adams,-1854	-	-	-	1
Onchidorididae	juv.	W1319	175	Gray,-1827	-	1	1	-
Nucula	juv.	W1565	138262	Lamarck,-1799	1	-	-	-
Mytilidae	juv.	W1691	211	Rafinesque,-1815	-	-	-	2
Mytilus	juv.	W1693	138228	Linnaeus,-1758	-	-	2	-
Modiolus	juv.	W1698	138223	Lamarck,-1799	-	-	-	-
PECTINOIDEA	juv.	W1767	151320	Rafinesque,-1815	-	-	-	-
Anomiidae	juv.	W1805	214	Rafinesque,-1815	1	5	2	3
Spisula	juv.	W1973	138159	Gray,-1837	-	-	-	-
Ensis	juv.	W1996	138333	Schumacher,-1817	-	-	-	-
Abra	juv.	W2058	138474	Lamarck,-1818	2	-	-	-
Myidae	juv.	W2142	247	Lamarck,-1809	30	22	55	35
ASTEROIDEA	juv.	ZB0018	123080	de-Blainville,-1830	-	-	-	-
Solasteridae	juv.	ZB0070	123143	Viguier,-1878	-	1	-	-
OPHIUROIDEA	juv.	ZB0105	123084	Gray,-1840	1	-	5	3
Ophiuridae	juv.	ZB0165	123200	Müller-&-Troschel,-1840	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
PELAGIC-FAUNA								
CHAETOGNATHA	-	L0001	2081	-	-	-	-	-
FISH	-	-		-	**-**	**-**	**-**	**-**
PISCES	juv.	ZE0000	11676	-	-	-	1	-
Liparis-liparis	-	ZG0296	127219	(Linnaeus,-1766)	-	-	-	1
DAMAGED-FAUNA								
Golfingiidae	-	N0011	2032	Stephen-&-Edmonds,-1972	-	6	-	-
Polynoinae	-	P0025	155091	Kinberg,-1856	2	6	1	16
Eumida	-	P0163	129446	Malmgren,-1865	-	-	-	-
Syllis	-	P0358	129680	Lamarck,-1818	-	-	-	-
Nereididae	-	P0458	22496	Blainville,-1818	-	-	-	-
Spionidae	-	P0720	913	Grube,-1850	-	-	-	-
Dipolydora	-	P0748	129611	Verrill,-1881	-	-	-	-
Chaetozone	-	P0832	129242	Malmgren,-1867	-	-	-	-
Maldanidae	-	P0938	923	Malmgren,-1867	-	-	-	-
Euclymeninae	-	P0951	152232	Arwidsson,-1906	-	-	-	-
Ampharete	-	P1133	129155	Malmgren,-1866	-	-	-	-
Serpulidae	-	P1324	988	Rafinesque,-1815	-	-	1	-
Spirobranchus	-	P1339	129582	Blainville,-1818	3	-	7	-
Nymphon	-	Q0004	134591	Fabricius,-1794	-	-	-	-
Callipallene	-	Q0032	134581	Flynn,-1929	1	1	1	-
MYSIDA	-	S0025	149668	Boas,-1883	-	-	-	1
Mysidae	-	S0031	119822	Haworth,-1825	-	-	-	-

Taxon	Qualifier	SDC	AphiaID	Authority	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
AMPHIPODA	-	S0097	1135	Latreille,-1816	-	-	-	-
Urothoe	-	S0246	101789	Dana,-1852	-	-	-	-
Ampeliscidae	-	S0422	101364	Krøyer,-1842	-	-	-	-
Ampelisca	-	S0423	101445	Krøyer,-1842	-	-	-	-
Caprellidae	-	S0639	101361	Leach,-1814	-	-	-	1
CARIDEA	-	S1293	106674	Dana,-1852	1	-	2	4
Hippolytidae	-	S1334	106777	Spence-Bate,-1888	-	-	-	2
Eualus	-	S1342	106986	Thallwitz,-1891	-	-	-	-
Processa	-	S1362	107054	Leach,-1815-[in-Leach,-1815-1875]	-	-	-	-
Pagurus	-	S1454	106854	Fabricius,-1775	-	-	-	-
Liocarcinus	-	S1577	106925	Stimpson,-1871	-	1	-	-
GASTROPODA	-	W0088	101	Cuvier,-1795	-	-	3	-
NUDIBRANCHIA	-	W1243	1762	Cuvier,-1817	-	-	1	-
Abra	-	W2058	138474	Lamarck,-1818	-	2	-	-

Notes
SDC = Species directory code
FA = Faunal sample A

F.2 Macrofaunal Biomass (Blotted Wet Weight)

Taxon	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC_10 FA	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA
CNIDARIA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POLYCHAETA	0.8922	0.2788	1.1774	0.0885	0.1676	2.9311	0.0855	0.1477	7.4013	0.149	1.507	0.6111	0.813	0.3958	2.5047
OLIGOCHAETA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRUSTACEA	0.9368	0.0564	0.0368	0.042	0.084	0.0412	21.8071	0.0115	0.6817	0.0077	1.3784	0.0173	0.0152	0.6113	0.7477
MOLLUSCA	28.5814	0.0259	0.082	0.608	-	-	0.0015	-	1.2746	0.0082	4.3227	0.0452	0.0067	60.6536	1.9158
ECHINODERMATA	0.0921	-	0.0148	-	-	-	-	-	0.037	-	0.0167	-	-	0.0246	0.0127
OTHER	0.0181	0.0013	0.0031	0.0022	-	-	-	-	0.1385	-	0.0775	0.0013	0.0257	0.0074	0.061

Notes
Blotted wet weight (g)

Taxon	EC_19 FA	EC_19 FB	EC_19 FC	EC_23 FA	EC_23 FB	EC_23 FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA	SS_08 FA	SS_09 FA	SS_10 FA
CNIDARIA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POLYCHAETA	0.3202	0.2596	0.1106	1.3577	1 9653	0.9538	1.1661	0.2438	1.0984	0.2289	0.3061	1.085	0.0258	1.1485	0.7409
OLIGOCHAETA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRUSTACEA	0.0077	0.0291	0.0042	0.0239	6.08	0.0816	0.226	0.0137	0.1103	0.003	0.027	0 2272	0.0005	0.5199	0.2238
MOLLUSCA	-	0.0013	-	23.7218	33.9833	21.1107	2.2951	0.1038	1.2185	0.7262	1.0893	0 9913	0.0384	2.6702	51.7072
ECHINODERMATA	0.0009	-	-	0.0067	0.0006	-	0.021	-	0.0045	-	0.0079	0.0028	-	0.0222	0.005
OTHER	-	-	-	0.0118	0.0205	0.0025	0.0474	0.0008	0.0221	0.0038	0.0094	0.0129	0.0012	0.0435	0.0554

Notes
Blotted wet weight (g)

Taxon	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
CNIDARIA	-	-	-	-	-	-
POLYCHAETA	1.3319	1.7473	1.2542	1.265	2.0034	2.3757
OLIGOCHAETA	-	-	-	-	0.0004	0.0002
CRUSTACEA	0.3526	0.4737	0.8011	0.6224	1.7629	2.8854
MOLLUSCA	3.9829	11.9134	46.7885	23.6081	47.8294	74.9296
ECHINODERMATA	0.0036	0.0167	0.0224	0.012	0.0416	0.0819
OTHER	0.0741	0.0283	0.0623	0.0929	0.0547	0.0401

Notes
Blotted wet weight (g)

F.3 Epifauna

Taxon	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC10 FA
CILIOPHORA	-	-	-	-	-	-	-	-	-	-	-	-
Folliculinidae	–	1692	Dons, 1914	P	P	P	P	P	P	P	P	P
PORIFERA	**C0001**	**558**	**Grant, 1836**	-	-	-	-	-	-	-	-	-
Leucosolenida	C0049	131591	Hartman, 1958	-	P	P	-	-	-	-	-	P
Suberitidae	C0387	131676	Schmidt, 1870	-	-	-	-	-	-	-	-	P
Cliona	C0475	132026	Grant, 1826	P	P		P	-	-	-	P	P
CNIDARIA				-	-	-	-	-	-	-	-	-
Tubularia	D0163	117258	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Corynidae	D0171	1599	Johnston, 1836	-	-	-	-	-	-	-	-	-
Eudendrium	D0218	117093	Ehrenberg, 1834	-	-	-	-	-	-	-	-	-
Bougainvilliidae	D0246	1594	Lütken, 1850	-	-	-	-	P	-	-	-	-
Leptothecata (Campanulinida)	D0297	13552	Cornelius, 1992	-	-	-	-	-	-	-	-	-
Leptothecata (Campanulinidae)	D0344	13552	Cornelius, 1992	-	-	-	-	-	-	-	-	-
Calycella syringa	D0348	117402	Linnaeus, 1767	P	P	P	-	-	-	-	-	P
Haleciidae	D0389	1608	Hincks, 1868	P	-	-	-	-	-	-	-	
Sertulariidae	D0407	1614	Lamouroux, 1812	P	P	P	P	-	-	-	-	P
Abietinaria abietina	D0409	117870	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Diphasia	D0413	117228	Agassiz, 1862	-	-	-	-	-	-	-	-	-
Hydrallmania falcata	D0424	117890	Linnaeus, 1758	P	P	P	-	-	-	-	-	P
Sertularella polyzonias	D0430	117906	Linnaeus, 1758	-	-	-	-	-	-	-	-	
Amphisbetia distans	D0445	1341823	Lamouroux, 1816	P	P	P	-	-	-	-	-	
Kirchenpaueria pinnata	D0455	117674	Linnaeus, 1758	-	-	-	-	-	-	-	-	

Taxon	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC10 FA
Nemertesia antennina	D0463	117809	Linnaeus, 1758	-	-	-	-	-	-	-	-	
Nemertesia ramosa	D0466	117815	Lamarck, 1816	-	-	-	-	-	-	-	-	
Plumularia setacea	D0469	117824	Linnaeus, 1758	-	-	-	-	-	-	-	-	
Campanulariidae	D0491	1606	Johnston, 1836	P	-	-	P	-	-	P	-	P
Clytia hemisphaerica	D0503	117368	Linnaeus, 1767	-	-	-	-	-	-	-	-	-
ACTINIARIA	D0662	1360	–	4	-	-	-	-	-	-	-	1
ENTOPROCTA				-	-	-	-	-	-	-	-	-
Pedicellina	K0045	111796	Sars, 1835	P	P	P	-	-	-	-	-	P
Barentsia	K0050	111795	Hincks, 1880	-	P	P	-	-	-	-	-	-
ANNELIDA				-	-	-	-	-	-	-	-	-
Spirorbinae	P1362	989	Chamberlin, 1919	-	-	-	-	-	-	-	-	-
ARTHROPODA				-	-	-	-	-	-	-	-	-
Verruca stroemia	R0041	106257	O.F. Müller, 1776	1	-	-	-	-	-	-	-	1
Balanus crenatus	R0077	106215	Bruguière, 1789	13	-	117	-	-	-	20	-	290
BRYOZOA				-	-	-	-	-	-	-	-	-
Crisia aculeata	Y0014	111690	Hassall, 1841	P	P	P	P	-	-	-	-	-
Crisia eburnea	Y0017	111696	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Tubuliporidae	Y0026	110814	Johnston, 1837	-	-	-	-	-	-	-	-	-
Plagioecia patina	Y0041	111719	Lamarck, 1816	-	-	-	-	-	-	-	-	P
Alcyonidiidae	Y0072	110783	Johnston, 1837	P	-	-	P	-	-	P	-	-
Alcyonidium diaphanum	Y0076	111597	Hudson, 1778	-	-	P	-	-	-	-	-	-
Alcyonidium parasiticum	Y0081	111604	Fleming, 1828	-	P	P	-	-	-	-	-	-
Penetrantiidae (scars)	Y0126	110797	Silén, 1946	P	P	-	-	P		P	P	P

Taxon	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC10 FA
Vesicularia spinosa	Y0131	111669	Linnaeus, 1758	-	P	P	-	-	-	-	-	-
Amathia lendigera	Y0135	111659	Linnaeus, 1758	P	P	P	P	-	-	-	-	-
Amathia	Y0137	111022	Lamouroux, 1812	-	-	-	-	-	-	-	-	-
Amathia gracilis	Y0139	851589	Leidy, 1855	-	P	-	-	-	-	-	-	-
Amathia imbricata	Y0141	851593	Adams, 1800	-	-	-	-	-	-	-	-	-
Amathia pustulosa	Y0142	851599	Ellis & Solander, 1786	P	-	-	-	-	-	-	-	P
Scruparia ambigua	Y0161	111539	d'Orbigny, 1841	-	-	-	-	-	-	-	-	-
Eucratea loricata	Y0165	111361	Linnaeus, 1758	-	P	P	-	-	-	-	-	-
Conopeum reticulum	Y0172	111351	Linnaeus, 1767	P	P	-	P	-	-	-	-	P
Electra pilosa	Y0178	111355	Linnaeus, 1767	P	P	P	-	-	-	P	P	P
Flustra foliacea	Y0187	111367	Linnaeus, 1758	P	P	P	-	-	-	-	-	P
Calloporidae	Y0200	110733	Norman, 1903	-	-	-	-	-	-	-	-	-
Callopora dumerilii	Y0204	111196	Audouin, 1826	P	-	-	-	-	-	-	-	P
Amphiblestrum auritum	Y0222	111186	Hincks, 1877	P	-	-	-	-	-	-	-	P
Bugulina flabellata	Y0243	834002	Thompson in Gray, 1848	P	-	-	-	-	-	-	-	-
Bugulina fulva	Y0244	834010	Ryland, 1960	-	-	-	-	-	-	-	-	-
Crisularia plumosa	Y0246	834039	Pallas, 1766	P		P	-	-	-	-	-	-
Bicellariella ciliata	Y0256	111147	Linnaeus, 1758	P	P	-	P	-	-	-	-	P
Candidae (*Cradoscrupocellaria/ Scrupocellaria*)	–	738968	Vieira, Spencer Jones & Winston, 2013	-	-	-	P	-	-	-	P	P
Cradoscrupocellaria (=reptans/ellisi)	–	738968	Vieira, Spencer Jones & Winston, 2013	P	P	-	-	-	-	-	-	-
Scrupocellaria scruposa	Y0279	111250	Linnaeus, 1758	-	-	-	-	-	-	-	-	P

Taxon	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC10 FA
Cribrilina punctata/Collarina balzaci	Y0310/ Y0314	111314/111 310	Hassall, 1841/Audouin, 1826	-	-	-	-	-	-	-	-	-
Cribrilinidae	Y0315	110742	Hincks, 1879	-	-	-	-	-	-	-	-	-
Puellina	Y0315	110897	Jullien, 1886	-	-	-	-	-	-	P	-	-
Celleporella hyalina	Y0337	111397	Linnaeus, 1767	-	P	-		-	-	-	-	-
Chorizopora brongniartii	Y0344	111304	Audouin, 1826	P		-		-	-	-	-	P
Escharella immersa	Y0364	111484	Fleming, 1828	P	P	P	P	-	-	P	P	P
Escharina johnstoni	Y0440	111518	Quelch, 1884	-	-	-	-	-	-	-	-	-
Schizomavella	Y0467	110829	Canu & Bassler, 1917	P	-	-	-	-	-	-	-	P
Microporella ciliata	Y0480	111421	Pallas, 1766	-	-	-	-	-	-	-	-	-
Fenestrulina	Y0482	110941	Jullien, 1888	-	-	-	-	-	-	-	-	-
Fenestrulina delicia	Y0482	408266	Winston, Hayward & Craig, 2000	P	-	-	-	-	-	-	-	P
Turbicellepora avicularis	Y0504	111285	Hincks, 1860	-	-	-	-	-	-	-	-	-
Schizotheca fissa	Y0530	111473	Busk, 1856	-	-	-	-	-	-	-	-	-
TUNICATA				-	-	-	-	-	-	-	-	-
ASCIDIACEA (colonial)	ZD0002	1839	Blainville, 1824	P	-	-	-	-	-	-	-	-
ASCIDIACEA (=*Perophora listeri*)	ZD0002	1839	Blainville, 1824	P	-	-	-	-	-	-	-	-
Polyclinidae	ZD0020	103441	Milne Edwards, 1841	-	-	-	-	-	-	-	-	-
Polyclinidae (=*Polyclinum aurantium*)	ZD0020	103441	Milne Edwards, 1841	-	-	-	-	-	-	-	-	-
Didemnidae	ZD0041	103439	Giard, 1872	-	-	P						-
Ascidiella scabra	ZD0085	103719	Müller, 1776	-	-	-	-	-	-	-	-	2
Styelidae (*Botryllus/Botrylloides*)	ZD0100	103450	Sluiter, 1895	-	-	-	-	-	-	-	-	

Taxon	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC10 FA
Polycarpa fibrosa	ZD0112	103902	Stimpson, 1852	1	-	-	-	-	-	-	-	60
Polycarpa pomaria	ZD0115	103909	Savigny, 1816	-	-	-	-	-	-	-	-	52
Dendrodoa grossularia	ZD0120	103882	Van Beneden, 1846	250	1	-	-	-	-	-	-	256
Botrylloides leachii	ZD0128	250081	Savigny, 1816	-	-	-	-	-	-	-	-	
Microcosmus claudicans	ZD0133	103837	Savigny, 1816	-	-	-	-	-	-	-	-	2
Molgula complanata	ZD0149	103776	Alder & Hancock, 1870	3		-	-	-	-	-	-	
Molgula manhattensis	ZD0151	103788	De Kay, 1843	6		-	-	-	-	-	-	1
Eugyra arenosa	ZD0159	103764	Alder & Hancock, 1848			-	-	-	-	-	-	
Number of taxa				**36**	**24**	**20**	**11**	**3**	**1**	**8**	**6**	**33**
Taxa below have been removed from main data matrix to facilitate analysis												
JUVENILES												
ACTINIARIA (juv.)	D0662	1360	–	-	-	-	-	-	-	-	-	-
ASCIDIACEA (juv.)	ZD0002	1839	Blainville, 1824	81	21	7	-	-	-	-	2	74
Ascidiidae (juv.)	ZD0082	103443	Herdman, 1882	15	-	-	-	-	-	-	-	-
Molgula (juv)	ZD0146	103509	Forbes, 1848	-	-	-	-	-	-	-	-	-
SESSILIA (juv.)		106033	Lamarck, 1818	1	-	-	-	-	-	-	-	-
DAMAGED FAUNA												
Sertularella (dam)	D0427	117233	Gray, 1848	-	-	-	-	-	-	-	-	P
Plumulariidae (dam)	D0447	1613	McCrady, 1859	-	-	-	-	-	-	-	-	-
Nemertesia (dam)	D0462	117195	Lamouroux, 1812	-	-	-	-	-	-	-	-	-
Crisiidae (dam)	Y0004	110806	Johnston, 1838	P	-	-	-	-	-	-	-	-
Crisia (dam)	Y0013	111032	Lamouroux, 1812	-	-	-	-	-	-	P	-	-
CTENOSTOMATIDA (dam)	Y0070	110723	Busk, 1852	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC10 FA
Membraniporoidea (dam)	Y0167	153579	Busk, 1854	-	P	-	-	-	-	-	-	-
Bugulidae (dam)	Y0239	110731	Gray, 1848	-	-	-	-	-	-	-	-	-
ASCIDIACEA (dam)	ZD0002	1839	Blainville, 1824	18	-	-	-	-	-	-	-	-
Polycarpa (dam)	ZD0110	103538	Heller, 1877	2	-	-	-	-	-	-	-	1
Molgula (dam)	ZD0146	103509	Forbes, 1848	9	-	-	-	-	-	-	-	-
The following taxa were merged for statistical analysis												
Haleciidae	D0389	1608	Hincks, 1868	P	-	-	-	-	-	-	-	-
Halecium	D0390	117103	Oken, 1815	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Haleciidae	**D0389**	**1608**	**Hincks, 1868**	P	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-
Diphasia	D0413	117228	Agassiz, 1862	-	-	-	-	-	-	-	-	-
Diphasia rosacea	D0420	117883	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Diphasia	**D0413**	**117228**	**Agassiz, 1862**	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-
Sertularia	D0433	117234	Linnaeus, 1758	-	-	P	P	-	-	-	-	P
Sertulariidae	D0407	1614	Lamouroux, 1812	P	P	P	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Sertulariidae	**D0407**	**1614**	**Lamouroux, 1812**	P	P	P	P	-	-	-	-	P
				-	-	-	-	-	-	-	-	-
Campanulariidae	D0491	1606	Johnston, 1836	-	-	-	-	-	-	-	-	-
Campanulariidae (Obeliinae)	D0491	1606	Johnston, 1836	-	-	-	P	-	-	-	-	P

Taxon	SDC	AphialD	Authority	EC_05 FA	EC_07 FA	EC_07 FB	EC_07 FC	EC_0 _FA	EC_09 FA	EC_09 FB	EC_09 FC	EC10 FA
Clytia	D0501	117030	Lamouroux, 1812	P	-	-	-	-	-	P	-	-
merged as:				-	-	-	-	-	-	-	-	-
Campanulariidae	**D0491**	**1606**	**Johnston, 1836**	P	-	-	P	-	-	P	-	P
				-	-	-	-	-	-	-	-	-
Didemnidae	ZD0041	103439	Giard, 1872	-	-	P	-	-	-	-	-	-
Diplosoma	ZD0058	103457	Macdonald, 1859	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Didemnidae	**ZD0041**	**103439**	**Giard, 1872**	-	-	P	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA	EC_19 FB	EC_19 FC
CILIOPHORA	-	-	-	-	-	-	-	-	-	-	-	-
Folliculinidae	–	1692	Dons, 1914	-	P	P	-	-	P	P	P	P
PORIFERA	**C0001**	**558**	**Grant, 1836**	-	P	-	-	P	P	-	-	-
Leucosolenida	C0049	131591	Hartman, 1958	-	P	-	-	P	P	-	-	-
Suberitidae	C0387	131676	Schmidt, 1870	-	-	-	-	-	-	-	-	-
Cliona	C0475	132026	Grant, 1826	-	P	P		P	P	-	-	-
CNIDARIA	-	-	-	-	-	-	-	-	-	-	-	-
Tubularia	D0163	117258	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Corynidae	D0171	1599	Johnston, 1836	-	-	-	-	-	-	-	-	-
Eudendrium	D0218	117093	Ehrenberg, 1834	-	-	-	-	-	-	-	-	-
Bougainvilliidae	D0246	1594	Lütken, 1850	-	-	-	-	-	-	-	-	-
Leptothecata (Campanulinida)	D0297	13552	Cornelius, 1992	-	-	-	-	-	-	-	-	-
Leptothecata (Campanulinidae)	D0344	13552	Cornelius, 1992	-	-	-	-	-	-	-	-	-
Calycella syringa	D0348	117402	Linnaeus, 1767	-	P	-	-	P	P	-	-	-
Haleciidae	D0389	1608	Hincks, 1868	-	-	-	-	P	P	-	-	-
Sertulariidae	D0407	1614	Lamouroux, 1812	-	P	P	-	P	P	-	-	-
Abietinaria abietina	D0409	117870	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Diphasia	D0413	117228	Agassiz, 1862	-	-	-	-	-	P	-	-	-
Hydrallmania falcata	D0424	117890	Linnaeus, 1758	-	P		-	P	P	-	-	-
Sertularella polyzonias	D0430	117906	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Amphisbetia distans	D0445	1341823	Lamouroux, 1816	-	-	P	-	-	-	-	-	-
Kirchenpaueria pinnata	D0455	117674	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Nemertesia antennina	D0463	117809	Linnaeus, 1758	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA	EC_19 FB	EC_19 FC
Nemertesia ramosa	D0466	117815	Lamarck, 1816	-	-	-	-	-	-	-	-	-
Plumularia setacea	D0469	117824	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Campanulariidae	D0491	1606	Johnston, 1836	-	P	-	-	P	-	-	-	-
Clytia hemisphaerica	D0503	117368	Linnaeus, 1767	-		-	-	-	-	-	-	-
ACTINIARIA	D0662	1360	–	-	3	1	-	1	10	-	-	-
ENTOPROCTA				-	-	-	-	-	-	-	-	-
Pedicellina	K0045	111796	Sars, 1835	-	P	P	-	P	P	-	-	-
Barentsia	K0050	111795	Hincks, 1880	-	-	-	-	P	-	-	-	-
ANNELIDA				-	-	-	-	-	-	-	-	-
Spirorbinae	P1362	989	Chamberlin, 1919	-	-	-	-	-	-	-	-	-
ARTHROPODA				-	-	-	-	-	-	-	-	-
Verruca stroemia	R0041	106257	O.F. Müller, 1776	-	5	-	-	5	-	-	-	-
Balanus crenatus	R0077	106215	Bruguière, 1789	-	293	-	-	-	152	-	-	-
BRYOZOA				-	-	-	-	-	-	-	-	-
Crisia aculeata	Y0014	111690	Hassall, 1841	-	P	-	P	P	P	-	-	-
Crisia eburnea	Y0017	111696	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Tubuliporidae	Y0026	110814	Johnston, 1837	-	-	-	-	-	-	-	-	-
Plagioecia patina	Y0041	111719	Lamarck, 1816	-	-	-	-	P	-	-	-	-
Alcyonidiidae	Y0072	110783	Johnston, 1837	-	P	P	-	P	P	-	-	-
Alcyonidium diaphanum	Y0076	111597	Hudson, 1778	-	P	P	-	-	P	-	-	-
Alcyonidium parasiticum	Y0081	111604	Fleming, 1828	-	-	-	-	-	-	-	-	-
Penetrantiidae (scars)	Y0126	110797	Silén, 1946	-	P	-	-	P	P	-	-	-
Vesicularia spinosa	Y0131	111669	Linnaeus, 1758	P	-	P	-	-	P	-	-	-

Taxon	SDC	AphiaID	Authority	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA	EC_19 FB	EC_19 FC
Amathia lendigera	Y0135	111659	Linnaeus, 1758	-	-	-	-	P	P	-	-	-
Amathia	Y0137	111022	Lamouroux, 1812	-	-	-	-	-	P	-	-	-
Amathia gracilis	Y0139	851589	Leidy, 1855	-	-	-	-	-	-	-	-	-
Amathia imbricata	Y0141	851593	Adams, 1800	-	-	-	-	-	-	-	-	-
Amathia pustulosa	Y0142	851599	Ellis & Solander, 1786	-	-	-	-	-	-	-	-	-
Scruparia ambigua	Y0161	111539	d'Orbigny, 1841	-	P	-	-	-	-	-	-	-
Eucratea loricata	Y0165	111361	Linnaeus, 1758	P	-	-	-	-	P	-	-	-
Conopeum reticulum	Y0172	111351	Linnaeus, 1767	P	P	P	P	P	P	-	-	-
Electra pilosa	Y0178	111355	Linnaeus, 1767	P	P	P	P	P	P	-	-	-
Flustra foliacea	Y0187	111367	Linnaeus, 1758	P	P	-	-	P	P	-	-	-
Calloporidae	Y0200	110733	Norman, 1903	-	P	-	-	P	P	-	-	-
Callopora dumerilii	Y0204	111196	Audouin, 1826	-	P	-	-	-	-	-	-	-
Amphiblestrum auritum	Y0222	111186	Hincks, 1877	-	P	-	-	P	P	-	-	-
Bugulina flabellata	Y0243	834002	Thompson in Gray, 1848	-	-	-	-	-	-	-	-	-
Bugulina fulva	Y0244	834010	Ryland, 1960	-	-	-	-	-	-	-	-	-
Crisularia plumosa	Y0246	834039	Pallas, 1766	-	-	-	-	-	P	-	-	-
Bicellariella ciliata	Y0256	111147	Linnaeus, 1758	P	P	P		P	P	-	-	-
Candidae (*Cradoscrupocellaria/Scrupocellaria*)	–	738968	Vieira, Spencer Jones & Winston, 2013	-	-	-	-	P	P	-	-	-
Cradoscrupocellaria (=reptans/ellisi)	–	738968	Vieira, Spencer Jones & Winston, 2013	-	-	-	-	-	-	-	-	-
Scrupocellaria scruposa	Y0279	111250	Linnaeus, 1758	-	P	P		P	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA	EC_19 FB	EC_19 FC
Cribrilina punctata/Collarina balzaci	Y0310/ Y0314	111314/1 11310	Hassall, 1841/Audouin, 1826	-	-	-	-	-	-	-	-	-
Cribrilinidae	Y0315	110742	Hincks, 1879	-	-	-	-	-	-	-	-	-
Puellina	Y0315	110897	Jullien, 1886	-	-		-		-	-	-	-
Celleporella hyalina	Y0337	111397	Linnaeus, 1767	-	-	P	-		-	-	P	-
Chorizopora brongniartii	Y0344	111304	Audouin, 1826	-	-	-	-	P	P	-	-	-
Escharella immersa	Y0364	111484	Fleming, 1828	P	P	P	-	P	P	-	-	-
Escharina johnstoni	Y0440	111518	Quelch, 1884	-	-	-	-	-	-	-	-	-
Schizomavella	Y0467	110829	Canu & Bassler, 1917	P	P	-	-	P	P	-	-	-
Microporella ciliata	Y0480	111421	Pallas, 1766	-	-	-	-	P	-	-	-	-
Fenestrulina	Y0482	110941	Jullien, 1888	-	-	-	-		-	-	-	-
Fenestrulina delicia	Y0482	408266	Winston, Hayward & Craig, 2000	-	P	-	-	P	P	-	-	-
Turbicellepora avicularis	Y0504	111285	Hincks, 1860	-	-	-	-	-		-	-	-
Schizotheca fissa	Y0530	111473	Busk, 1856	-	-	-	-	-		-	-	-
TUNICATA				-	-	-	-	-		-	-	-
ASCIDIACEA (colonial)	ZD0002	1839	Blainville, 1824	-	-	-	-	-	P	-	-	-
ASCIDIACEA (=*Perophora listeri*)	ZD0002	1839	Blainville, 1824	-	-	-	-	-	P	-	-	-
Polyclinidae	ZD0020	103441	Milne Edwards, 1841	-	-	-	-	-	-	-	-	-
Polyclinidae (=*Polyclinum aurantium*)	ZD0020	103441	Milne Edwards, 1841	-	-	-	-	-	-	-	-	-
Didemnidae	ZD0041	103439	Giard, 1872	-	P	-	-	-	P	-	-	-
Ascidiella scabra	ZD0085	103719	Müller, 1776	-	6	-	-	3	20	-	-	-
Styelidae (*Botryllus/Botrylloides*)	ZD0100	103450	Sluiter, 1895	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA	EC_19 FB	EC_19 FC
Polycarpa fibrosa	ZD0112	103902	Stimpson, 1852	-	7	-	-	5	23	-	-	-
Polycarpa pomaria	ZD0115	103909	Savigny, 1816	-	23	-	-	-	1	-	-	-
Dendrodoa grossularia	ZD0120	103882	Van Beneden, 1846	-	531	-	-	-	530	-	-	-
Botrylloides leachii	ZD0128	250081	Savigny, 1816	-	-	-	-	-	-	-	-	-
Microcosmus claudicans	ZD0133	103837	Savigny, 1816	-	-	-	-	3	-	-	-	-
Molgula complanata	ZD0149	103776	Alder & Hancock, 1870	-	26	-	-	14	-	-	-	-
Molgula manhattensis	ZD0151	103788	De Kay, 1843	-	-	25	-	-	28	-	-	-
Eugyra arenosa	ZD0159	103764	Alder & Hancock, 1848	-	-	-	-	-	-	-	-	-
Number of taxa				**8**	**34**	**16**	**3**	**34**	**40**	**1**	**2**	**1**
Taxa below have been removed from main data matrix prior analysis												
JUVENILES												
ACTINIARIA (juv.)	D0662	1360	–	-	-	-	-	-	-	-	-	-
ASCIDIACEA (juv.)	ZD0002	1839	Blainville, 1824	-	54	37	-	-	96	-	-	-
Ascidiidae (juv.)	ZD0082	103443	Herdman, 1882	-	-	-	-	-	9	-	-	-
Molgula (juv)	ZD0146	103509	Forbes, 1848	-	-	-	-	-	-	-	-	-
SESSILIA (juv.)		106033	Lamarck, 1818	-	-	1	-	-	-	-	-	-
DAMAGED-FAUNA												
Sertularella (dam)	D0427	117233	Gray, 1848	-	P	-	-	P	P	-	-	-
Plumulariidae (dam)	D0447	1613	McCrady, 1859	-	-	-	-	-	-	-	-	-
Nemertesia (dam)	D0462	117195	Lamouroux, 1812	-	-	-	-	-	-	-	-	-
Crisiidae (dam)	Y0004	110806	Johnston, 1838	-	P	-	-	-	-	-	-	-
Crisia (dam)	Y0013	111032	Lamouroux, 1812	-	-	-	-	-	P	-	-	-
CTENOSTOMATIDA (dam)	Y0070	110723	Busk, 1852	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA	EC_19 FB	EC_19 FC
Membraniporoidea (dam)	Y0167	153579	Busk, 1854	-	-	P	-	-	-	-	-	-
Bugulidae (dam)	Y0239	110731	Gray, 1848	-	-	-	-	-	-	-	-	-
ASCIDIACEA (dam)	ZD0002	1839	Blainville, 1824	-	46	-	-	-	-	-	-	-
Polycarpa (dam)	ZD0110	103538	Heller, 1877	-	-	-	-	1	-	-	-	-
Molgula (dam)	ZD0146	103509	Forbes, 1848	-	5	5	-	1	3	-	-	-
The following taxa were merged for statistical analysis												
Haleciidae	D0389	1608	Hincks, 1868	-	-	-	-	P	P	-	-	-
Halecium	D0390	117103	Oken, 1815	-	-	-	-	-	P	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Haleciidae	**D0389**	**1608**	**Hincks, 1868**	-	-	-	-	P	P	-	-	-
Diphasia	D0413	117228	Agassiz, 1862	-	-	-	-		P	-	-	-
Diphasia rosacea	D0420	117883	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Diphasia	**D0413**	**117228**	**Agassiz, 1862**	-	-	-	-	-	P	-	-	-
Sertularia	D0433	117234	Linnaeus, 1758	-	P	P	-	P	P	-	-	-
Sertulariidae	D0407	1614	Lamouroux, 1812	-	P	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Sertulariidae	**D0407**	**1614**	**Lamouroux, 1812**	-	P	P	-	P	P	-	-	-
Campanulariidae	D0491	1606	Johnston, 1836	-	-	-	-	-	-	-	-	-
Campanulariidae (Obeliinae)	D0491	1606	Johnston, 1836	-	P	-	-	-	-	-	-	-
Clytia	D0501	117030	Lamouroux, 1812	-	-	-	-	P	-	-	-	-
merged as:				-	-	-	-		-	-	-	-
Campanulariidae	**D0491**	**1606**	**Johnston, 1836**	-	P	-	-	P	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_11 FA	EC_12 FA	EC_14 FA	EC_15 FA	EC_16 FA	EC_17 FA	EC_19 FA	EC_19 FB	EC_19 FC
Didemnidae	ZD0041	103439	Giard, 1872	-	P	-	-		P	-	-	-
Diplosoma	ZD0058	103457	Macdonald, 1859	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Didemnidae	**ZD0041**	**103439**	**Giard, 1872**	-	P	-	-	-	P	-	-	-

Taxon	SDC	AphiaID	Authority	EC_23 FA	EC_23 FB	EC_2 _FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA
CILIOPHORA	-	-	-	-	-	-	-	-	-	-	-	-
Folliculinidae	–	1692	Dons, 1914	-	P	-	P	P	P	P	-	P
PORIFERA	**C0001**	**558**	**Grant, 1836**	-	-	-	P	-	P	P	P	P
Leucosolenida	C0049	131591	Hartman, 1958	P	P	P	P	-	-	P	P	P
Suberitidae	C0387	131676	Schmidt, 1870	-	-	-	-	-	-	-	-	-
Cliona	C0475	132026	Grant, 1826	P	P	P	P	-	P	P	-	P
CNIDARIA	-	-	-									
Tubularia	D0163	117258	Linnaeus, 1758	-	-	-	-	-	-	P	-	-
Corynidae	D0171	1599	Johnston, 1836	-	-	P	-	-	-	-	-	-
Eudendrium	D0218	117093	Ehrenberg, 1834	-	-	-	-	-	-	-	-	-
Bougainvilliidae	D0246	1594	Lütken, 1850	-	-	-	-	-	-	-	-	-
Leptothecata (Campanulinida)	D0297	13552	Cornelius, 1992	-	-	-	-	-	-	-	-	-
Leptothecata (Campanulinidae)	D0344	13552	Cornelius, 1992	-	-	P	P	-	-	-	-	-
Calycella syringa	D0348	117402	Linnaeus, 1767	P	-	P	P	-	-	P	-	-
Haleciidae	D0389	1608	Hincks, 1868	-	-	-	P	-	-	-	-	-
Sertulariidae	D0407	1614	Lamouroux, 1812	-	-	P	P	-	-	-	-	P
Abietinaria abietina	D0409	117870	Linnaeus, 1758	-	-	-	P	-	-	-	-	-
Diphasia	D0413	117228	Agassiz, 1862	-	-	P	P	-	-	-	-	-
Hydrallmania falcata	D0424	117890	Linnaeus, 1758	-	-	P	P	-	-	-	-	P
Sertularella polyzonias	D0430	117906	Linnaeus, 1758	-	-	-	P	-	-	-	-	-
Amphisbetia distans	D0445	1341823	Lamouroux, 1816	-	-	-	-	-	P	-	-	-
Kirchenpaueria pinnata	D0455	117674	Linnaeus, 1758	-	-	-	P	-	-	-	-	P
Nemertesia antennina	D0463	117809	Linnaeus, 1758	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_23 FA	EC_23 FB	EC_2 _FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA
Nemertesia ramosa	D0466	117815	Lamarck, 1816	-	-	-	-	-	-	-	-	-
Plumularia setacea	D0469	117824	Linnaeus, 1758	-	-	-	-	P	-	-	-	-
Campanulariidae	D0491	1606	Johnston, 1836	-	-	-	P	-	-	-	-	-
Clytia hemisphaerica	D0503	117368	Linnaeus, 1767	-	-	-	-	-	-	-	-	-
ACTINIARIA	D0662	1360	–	-	-	-	-	-	-	-	-	-
ENTOPROCTA				-	-	-	-	-	-	-	-	-
Pedicellina	K0045	111796	Sars, 1835	-	-	-	P	-	P	P	P	P
Barentsia	K0050	111795	Hincks, 1880	-	-	-	-	-	-	-	-	-
ANNELIDA				-	-	-	-	-	-	-	-	-
Spirorbinae	P1362	989	Chamberlin, 1919	-	-	-	-	P	-	-	-	-
ARTHROPODA				-	-	-	-	-	-	-	-	-
Verruca stroemia	R0041	106257	O.F. Müller, 1776	-	2	-	1	-	-	-	-	16
Balanus crenatus	R0077	106215	Bruguière, 1789	100	134	196	163	1	25	15	114	465
BRYOZOA				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Crisia aculeata	Y0014	111690	Hassall, 1841	-	-	P	P	-	-	-	-	P
Crisia eburnea	Y0017	111696	Linnaeus, 1758	-	-	-	-	-	-	-	-	-
Tubuliporidae	Y0026	110814	Johnston, 1837	-	-	-	-	-	-	-	P	P
Plagioecia patina	Y0041	111719	Lamarck, 1816	-	-	P	P	-	-	-	P	-
Alcyonidiidae	Y0072	110783	Johnston, 1837	P	-	P	P	-	P	-	-	P
Alcyonidium diaphanum	Y0076	111597	Hudson, 1778	-	-	P	-	-	P	-	-	-
Alcyonidium parasiticum	Y0081	111604	Fleming, 1828	-	-	P	-	-	-	-	-	-
Penetrantiidae (scars)	Y0126	110797	Silén, 1946	-	-	P	P	P	-	P	P	-
Vesicularia spinosa	Y0131	111669	Linnaeus, 1758	-	-	P	P	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_23 FA	EC_23 FB	EC_2 _FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA
Amathia lendigera	Y0135	111659	Linnaeus, 1758	P	-	-	P	P	P	-	-	-
Amathia	Y0137	111022	Lamouroux, 1812	-	-	-	-	-	-	-	-	-
Amathia gracilis	Y0139	851589	Leidy, 1855	-	-	-	-	-	-	-	-	-
Amathia imbricata	Y0141	851593	Adams, 1800	-	-	-	-	-	-	-	-	-
Amathia pustulosa	Y0142	851599	Ellis & Solander, 1786	-	-	-	-	-	-	-	-	-
Scruparia ambigua	Y0161	111539	d'Orbigny, 1841	-	-	-	-	-	-	-	-	-
Eucratea loricata	Y0165	111361	Linnaeus, 1758	P	-	P	-	-	-	-	-	-
Conopeum reticulum	Y0172	111351	Linnaeus, 1767	P	P	P	P	-	P	-	-	P
Electra pilosa	Y0178	111355	Linnaeus, 1767	P	P	P	P	-	P	P	-	P
Flustra foliacea	Y0187	111367	Linnaeus, 1758	P	P	P	P	-	P	P	P	P
Calloporidae	Y0200	110733	Norman, 1903	-	-	P	P	-	P	-	P	P
Callopora dumerilii	Y0204	111196	Audouin, 1826	-	-	-	P	-	-	-	-	-
Amphiblestrum auritum	Y0222	111186	Hincks, 1877	P	P	-	P	-	-	-	P	-
Bugulina flabellata	Y0243	834002	Thompson in Gray, 1848	-	-	-	-	-	-	-	-	-
Bugulina fulva	Y0244	834010	Ryland, 1960	-	-	-	-	-	-	-	-	-
Crisularia plumosa	Y0246	834039	Pallas, 1766	-	-	-	-	-	-	-	-	-
Bicellariella ciliata	Y0256	111147	Linnaeus, 1758	-	P	P	P	-	P	-	P	P
Candidae (*Cradoscrupocellaria/Scrupocellaria*)	–	738968	Vieira, Spencer Jones & Winston, 2013	-	-	P	P	-	-	-	-	-
Cradoscrupocellaria (=reptans/ellisi)	–	738968	Vieira, Spencer Jones & Winston, 2013	-	-	P	-	-	-	-	-	P
Scrupocellaria scruposa	Y0279	111250	Linnaeus, 1758	-	-	-	P	P	P	-	-	-

Taxon	SDC	AphiaID	Authority	EC_23 FA	EC_23 FB	EC_2 _FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA
Cribrilina punctata/Collarina balzaci	Y0310/ Y0314	111314/1 11310	Hassall, 1841/Audouin, 1826	-	-	-	-	P	-	-	-	-
Cribrilinidae	Y0315	110742	Hincks, 1879	-	-	-	-	P	-	-	-	-
Puellina	Y0315	110897	Jullien, 1886	-	-	-	-	-	-	-	P	-
Celleporella hyalina	Y0337	111397	Linnaeus, 1767	-	-	-	-	-	-	-	-	-
Chorizopora brongniartii	Y0344	111304	Audouin, 1826	P	P	-	P	-	P	P	P	P
Escharella immersa	Y0364	111484	Fleming, 1828	P	P	P	P	-	P	P	P	P
Escharina johnstoni	Y0440	111518	Quelch, 1884	-	-	-	-	P	-	P	-	-
Schizomavella	Y0467	110829	Canu & Bassler, 1917	-	P	P	P	-	P	P	P	P
Microporella ciliata	Y0480	111421	Pallas, 1766	-	P	-	P	-	P	-	-	P
Fenestrulina	Y0482	110941	Jullien, 1888	-	-	-	P	-	-	P	-	-
Fenestrulina delicia	Y0482	408266	Winston, Hayward & Craig, 2000	-	P	P	P	-	P	-	P	P
Turbicellepora avicularis	Y0504	111285	Hincks, 1860	-	-	-	-	-	-	P	-	P
Schizotheca fissa	Y0530	111473	Busk, 1856	-	-	-	-	-	-	-	P	-
TUNICATA				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
ASCIDIACEA (colonial)	ZD0002	1839	Blainville, 1824	-	-	-	-	P	-	-	-	-
ASCIDIACEA (=*Perophora listeri*)	ZD0002	1839	Blainville, 1824	-	-	P	P	-	-	P	-	-
Polyclinidae	ZD0020	103441	Milne Edwards, 1841	-	-	-	-	-	-	-	-	P
Polyclinidae (=*Polyclinum aurantium*)	ZD0020	103441	Milne Edwards, 1841	-	-	-	-	-	-	-	-	P
Didemnidae	ZD0041	103439	Giard, 1872	-	-	-	P	-	-	P	P	P
Ascidiella scabra	ZD0085	103719	Müller, 1776	-	-	-	1	-	2	-	2	12
Styelidae (*Botryllus/Botrylloides*)	ZD0100	103450	Sluiter, 1895	-	-	-	-	-	-	-	-	P

Taxon	SDC	AphiaID	Authority	EC_23 FA	EC_23 FB	EC_2 _FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA
Polycarpa fibrosa	ZD0112	103902	Stimpson, 1852	7	2	1	9	-	17	-	4	32
Polycarpa pomaria	ZD0115	103909	Savigny, 1816	-	-	-	2	-	-	-	-	-
Dendrodoa grossularia	ZD0120	103882	Van Beneden, 1846	-	4	2	492	-	225	1	4	9
Botrylloides leachii	ZD0128	250081	Savigny, 1816	-	-	-	-	-	-	-	-	-
Microcosmus claudicans	ZD0133	103837	Savigny, 1816	-	-	-	-	-	-	-	-	-
Molgula complanata	ZD0149	103776	Alder & Hancock, 1870	-	-	1	-	-	2	-	2	-
Molgula manhattensis	ZD0151	103788	De Kay, 1843	-	-	-	1	-	-	-	-	-
Eugyra arenosa	ZD0159	103764	Alder & Hancock, 1848	-	-	-	-	-	-	-	-	-
Number of taxa				**14**	**17**	**31**	**45**	**11**	**24**	**20**	**22**	**32**
Taxa below have been removed from main data matrix prior analysis												
JUVENILES												
ACTINIARIA (juv.)	D0662	1360	–	-	-	-	-	-	-	-	-	1
ASCIDIACEA (juv.)	ZD0002	1839	Blainville, 1824	16	23	30	29	-	72	-	11	21
Ascidiidae (juv.)	ZD0082	103443	Herdman, 1882	-	-	-	-	-	-	-	-	-
Molgula (juv)	ZD0146	103509	Forbes, 1848	-	-	-	-	-	-	-	-	-
SESSILIA (juv.)		106033	Lamarck, 1818	-	4	-	-	-	-	-	-	-
DAMAGED-FAUNA												
Sertularella (dam)	D0427	117233	Gray, 1848	-	-	-	P	-	-	-	-	-
Plumulariidae (dam)	D0447	1613	McCrady, 1859	-	-	-	-	-	-	-	-	-
Nemertesia (dam)	D0462	117195	Lamouroux, 1812	-	-	-	-	-	-	-	-	-
Crisiidae (dam)	Y0004	110806	Johnston, 1838	-	P	-	-	-	-	-	-	-
Crisia (dam)	Y0013	111032	Lamouroux, 1812	-	-	-	-	-	P	-	-	-
CTENOSTOMATIDA (dam)	Y0070	110723	Busk, 1852	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_23 FA	EC_23 FB	EC_2 _FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA
Membraniporoidea (dam)	Y0167	153579	Busk, 1854	-	-	-	-	-	-	-	-	-
Bugulidae (dam)	Y0239	110731	Gray, 1848	-	-	-	-	-	-	-	-	-
ASCIDIACEA (dam)	ZD0002	1839	Blainville, 1824	-	-	-	-	-	-	-	-	16
Polycarpa (dam)	ZD0110	103538	Heller, 1877	-	-	-	-	-	-	-	-	-
Molgula (dam)	ZD0146	103509	Forbes, 1848	-	-	-	-	-	-	-	-	-
The following taxa were merged for statistical analysis												
Haleciidae	D0389	1608	Hincks, 1868	-	-	-	P	-	-	-	-	-
Halecium	D0390	117103	Oken, 1815	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Haleciidae	**D0389**	**1608**	**Hincks, 1868**	-	-	-	P	-	-	-	-	-
Diphasia	D0413	117228	Agassiz, 1862	-	-	P	P	-	-	-	-	-
Diphasia rosacea	D0420	117883	Linnaeus, 1758	-	-	-	P	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Diphasia	**D0413**	**117228**	**Agassiz, 1862**	-	-	P	P	-	-	-	-	-
Sertularia	D0433	117234	Linnaeus, 1758	-	-	P	P	-	-	-	-	P
Sertulariidae	D0407	1614	Lamouroux, 1812	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Sertulariidae	**D0407**	**1614**	**Lamouroux, 1812**	-	-	P	P	-	-	-	-	P
Campanulariidae	D0491	1606	Johnston, 1836	-	-	-	-	-	-	-	-	-
Campanulariidae (Obeliinae)	D0491	1606	Johnston, 1836	-	-	-	P	-	-	-	-	-
Clytia	D0501	117030	Lamouroux, 1812	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Campanulariidae	**D0491**	**1606**	**Johnston, 1836**	-	-	-	P	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	EC_23 FA	EC_23 FB	EC_2 _FC	SS_01 FA	SS_02 FA	SS_03 FA	SS_05 FA	SS_06 FA	SS_07 FA
Didemnidae	ZD0041	103439	Giard, 1872	-	-	-	P	-	-	P	P	P
Diplosoma	ZD0058	103457	Macdonald, 1859	-	-	-	-	-	-	-	-	-
merged as:				-	-	-	-	-	-	-	-	-
Didemnidae	**ZD0041**	**103439**	**Giard, 1872**	-	-	-	P	-	-	P	P	P

Taxon	SDC	AphiaID	Authority	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
CILIOPHORA	-	-	-	-	-	-	-	-	-	-	-	-
Folliculinidae	–	1692	Dons,-1914	-	-	-	P	-	P	P	P	P
PORIFERA	**C0001**	**558**	**Grant,-1836**	-	P	-	P	P	P	-	P	P
Leucosolenida	C0049	131591-	Hartman,-1958	-	P	P	P	P	P	P	P	P
Suberitidae	C0387	131676	Schmidt,-1870	-	-	-	-	-	-	-	-	-
Cliona	C0475	132026	Grant,-1826	-	P	P	P	P	P	P	-	P
CNIDARIA	-	-	-	-	-	-	-	-	-	-	-	-
Tubularia	D0163	117258-	Linnaeus,-1758	-	-	-	-	-	-	-	-	-
Corynidae	D0171	1599	Johnston,-1836	-	-	-	-	-	P	-	-	-
Eudendrium	D0218	117093	Ehrenberg,-1834	-	-	-	-	P	P	P	P	P
Bougainvilliidae	D0246	1594	Lütken,-1850	-	P	-	-	-	-	-	-	-
Leptothecata-(Campanulinida)	D0297	13552	Cornelius,-1992	-	P	P	-	-	-	-	-	-
Leptothecata-(Campanulinidae)	D0344	13552	Cornelius,-1992	-	-	-	-	-	-	-	-	-
Calycella-syringa	D0348	117402	Linnaeus,-1767	-	-	-	P	P	P	-	P	P
Haleciidae	D0389	1608	Hincks,-1868	-	-	-	-	-	-	P	P	P
Sertulariidae	D0407	1614	Lamouroux,-1812	-	P	P	P	P	P	P	P	P
Abietinaria-abietina	D0409	117870	Linnaeus,-1758	-	-	-	-	-	-	-	-	P
Diphasia	D0413	117228	Agassiz,-1862	-	-	-	P	-	-	-	-	P
Hydrallmania-falcata	D0424	117890	Linnaeus,-1758	-	P	-	P	P	P	P	P	P
Sertularella-polyzonias	D0430	117906-	Linnaeus,-1758	-	-	-	P	-	-	-	-	-
Amphisbetia-distans	D0445	1341823- -	Lamouroux,-1816	-	-	-	-	-	-	P	P	-
Kirchenpaueria-pinnata	D0455	117674-	Linnaeus,-1758	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Nemertesia-antennina	D0463	117809-	Linnaeus,-1758	-	-	-	P	-	-	-	-	P
Nemertesia-ramosa	D0466	117815-	Lamarck,-1816	-	-	-	-	-	-	-	P	-
Plumularia-setacea	D0469	117824	Linnaeus,-1758	-	-	-	P	-	-	-	-	-
Campanulariidae	D0491	1606	Johnston,-1836	-	-	P	P	P	-	-	P	P
Clytia-hemisphaerica	D0503	117368	Linnaeus,-1767	-	-	-	P	-	-	-	-	-
ACTINIARIA	D0662	1360	–	-	-	-	-	1	2	1	4	-
ENTOPROCTA				-	-	-	-	-	-	-	-	-
Pedicellina	K0045	111796	Sars,-1835	-	P	P	P	P	P	P	P	P
Barentsia	K0050	111795	Hincks,-1880	-	-	-	-	-	-	-	-	-
ANNELIDA				-	-	-	-	-	-	-	-	-
Spirorbinae	P1362	989	Chamberlin,-1919	P	-	-	-	-	-	-	-	-
ARTHROPODA				-	-	-	-	-	-	-	-	-
Verruca-stroemia	R0041	106257	O.F.-Müller,-1776	-	11	28	-	3	2	4	3	-
Balanus-crenatus	R0077	106215	Bruguière,-1789	-	292	441	692	390	330	602	702	3899
BRYOZOA				-	-	-	-	-	-	-	-	-
Crisia-aculeata	Y0014	111690	Hassall,-1841	-	P	P	P	-	P	P	P	P
Crisia-eburnea	Y0017	111696-	Linnaeus,-1758	-	P	-	-	-	-	-	-	-
Tubuliporidae	Y0026	110814	Johnston,-1837	-	P	P	-	P	P	-	-	-
Plagioecia-patina	Y0041	111719	Lamarck,-1816	-	P	P	-	P	P	-	-	-
Alcyonidiidae	Y0072	110783	Johnston,-1837	-	P	P	P	P	P	P	P	P
Alcyonidium-diaphanum	Y0076	111597	Hudson,-1778	-	-	-	P	-	-	P	P	P
Alcyonidium-parasiticum	Y0081	111604	Fleming,-1828	-	P	-	-	P	-	-	-	-
Penetrantiidae-(scars)	Y0126	110797	Silén,-1946	P	P	-	P	P	P	P	P	P

Taxon	SDC	AphiaID	Authority	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Vesicularia-spinosa	Y0131	111669	Linnaeus,-1758	-	-	-	-	-	-	-	-	-
Amathia-lendigera	Y0135	111659	Linnaeus,-1758	-	P	P	P	P	P	P	P	P
Amathia	Y0137	111022	Lamouroux,-1812	-	-	-	-	-	-	-	-	-
Amathia-gracilis	Y0139	851589	Leidy,-1855	-	-	-	P	-	-	-	-	P
Amathia-imbricata	Y0141	851593	Adams,-1800	-	-	P	-	-	-	P	-	-
Amathia-pustulosa	Y0142	851599	Ellis-&-Solander,-1786	-	-	-	-	-	-	-	-	-
Scruparia-ambigua	Y0161	111539-	d'Orbigny,-1841	-	-	-	-	-	-	-	-	-
Eucratea-loricata	Y0165	111361	Linnaeus,-1758	-	-	-	-	-	-	-	-	-
Conopeum-reticulum	Y0172	111351	Linnaeus,-1767	-	P	P	-	-	P	P	P	P
Electra-pilosa	Y0178	111355	Linnaeus,-1767	-	P	P	P	-	P	P	P	P
Flustra-foliacea	Y0187	111367	Linnaeus,-1758	-	P	P	P	P	P	P	P	P
Calloporidae	Y0200	110733	Norman,-1903	-	P	P	-	-	-	P	-	P
Callopora-dumerilii	Y0204	111196	Audouin,-1826	-	-	-	-	-	P	-	P	-
Amphiblestrum-auritum	Y0222	111186	Hincks,-1877	-	P	-	-	P	P	-	-	P
Bugulina-flabellata	Y0243	834002	Thompson-in-Gray,-1848	-	-	-	-	-	-	-	-	P
Bugulina-fulva-	Y0244	834010	Ryland,-1960	-	-	-	-	P	-	P	-	-
Crisularia-plumosa	Y0246	834039	Pallas,-1766	-	-	-	-	P	-	-	-	P
Bicellariella-ciliata	Y0256	111147	Linnaeus,-1758	-	P	P	P	P	P	P	P	P
Candidae-(*Cradoscrupocellaria/Scrupocellaria*)	–	738968	Vieira,-Spencer-Jones-&-Winston,-2013	-	P	-	-	P	P	P	P	-
Cradoscrupocellaria-(=reptans/110llisii)	–	738968	Vieira,-Spencer-Jones-&-Winston,-2013	-	-	P	-	-	P	-	P	-
Scrupocellaria-scruposa	Y0279	111250	Linnaeus,-1758	-	P	P	-	-	P	-	P	P

Taxon	SDC	AphiaID	Authority	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Cribrilina-punctata/Collarina-balzaci	Y0310/ Y0314	111314/1 11310	Hassall,-1841/Audouin,-1826	-	-	-	-	-	-	-	P	P
Cribrilinidae	Y0315	110742-	Hincks,-1879	-	-	-	-	-	-	-	-	-
Puellina	Y0315	110897-	Jullien,-1886	-	-	-	-	-	-	-	-	-
Celleporella-hyalina	Y0337	111397	Linnaeus,-1767	-	-	-	-	-	-	-	-	-
Chorizopora-brongniartii	Y0344	111304	Audouin,-1826	-	P	P	-	P	-	P	P	P
Escharella-immersa	Y0364	111484	Fleming,-1828	P	P	P	P	P	P	P	P	P
Escharina-johnstoni	Y0440	111518	Quelch,-1884	-	-	-	-	-	-	-	-	-
Schizomavella	Y0467	110829	Canu-&-Bassler,-1917	-	P	P	P	P	P	P	-	P
Microporella-ciliata	Y0480	111421	Pallas,-1766	-	-	-	-	-	-	P	-	-
Fenestrulina	Y0482	110941	Jullien,-1888	-	-	-	-	-	-	-	P	-
Fenestrulina-delicia	Y0482	408266	Winston,-Hayward-&-Craig,-2000	-	P	-	P	P	P	P	P	P
Turbicellepora-avicularis	Y0504	111285	Hincks,-1860	-	-	-	-	-	-	-	-	-
Schizotheca-fissa	Y0530	111473	Busk,-1856	-	-	-	-	-	-	-	-	-
TUNICATA				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
ASCIDIACEA-(colonial)	ZD0002	1839	Blainville,-1824	-	P	P	P	-	-	P	-	-
ASCIDIACEA-(=*Perophora-listeri*)	ZD0002	1839	Blainville,-1824	-	-	-	P	P	P	P	P	P
Polyclinidae	ZD0020	103441	Milne-Edwards,-1841	-	P	P	-	P	-	-	P	-
Polyclinidae-(=*Polyclinum-aurantium*)	ZD0020	103441	Milne-Edwards,-1841	-	-	-	-	-	-	-	-	-
Didemnidae	ZD0041	103439-	Giard,-1872	-	P	P	-	P	P	P	P	P
Ascidiella-scabra	ZD0085	103719	Müller,-1776	-	4	2	3	-	-	36	-	34

Taxon	SDC	AphiaID	Authority	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Styelidae (*Botryllus/Botrylloides*)	ZD0100	103450	Sluiter, 1895	-	P	-	-	-	P	P	P	P
Polycarpa fibrosa	ZD0112	103902	Stimpson, 1852	-	48	42	9	14	34	-	-	-
Polycarpa pomaria	ZD0115	103909	Savigny, 1816	-	-	-	-	2	-	-	-	-
Dendrodoa grossularia	ZD0120	103882	Van Beneden, 1846	-	-	2	4	208	233	313	126	164
Botrylloides leachii	ZD0128	250081	Savigny, 1816	-	-	-	-	P	-	P	-	P
Microcosmus claudicans	ZD0133	103837	Savigny, 1816	-	-	-	-	-	-	-	-	-
Molgula complanata	ZD0149	103776	Alder & Hancock, 1870	-	9	21	-	8	-	-	-	4
Molgula manhattensis	ZD0151	103788	De Kay, 1843	-	2	-	-	1	-	-	2	1
Eugyra arenosa	ZD0159	103764	Alder & Hancock, 1848	-	1	-	-	-	-	-	-	-
Number of taxa				**3**	**39**	**31**	**32**	**37**	**36**	**37**	**39**	**43**
Taxa below have been removed from main data matrix prior analysis												
JUVENILES												
ACTINIARIA (juv.)	D0662	1360	–	-	-	-	-	-	-	1	-	15
ASCIDIACEA (juv.)	ZD0002	1839	Blainville, 1824	-	365	124	62	99	290	33	23	38
Ascidiidae (juv.)	ZD0082	103443	Herdman, 1882	-	-	-	-	6	5	-	15	-
Molgula (juv)	ZD0146	103509	Forbes, 1848	-	33	1	-	-	-	-	-	5
SESSILIA (juv.)	-	106033	Lamarck, 1818	-	-	-	-	-	-	-	-	-
DAMAGED FAUNA												
Sertularella (dam)	D0427	117233	Gray, 1848	-	-	P	-	-	P	P	P	P
Plumulariidae (dam)	D0447	1613	McCrady, 1859	-	P	-	P	-	-	-	-	P
Nemertesia (dam)	D0462	117195	Lamouroux, 1812	-	-	-	-	-	-	P	-	P
Crisiidae (dam)	Y0004	110806	Johnston, 1838	-	-	-	-	P	-	-	P	-
Crisia (dam)	Y0013	111032	Lamouroux, 1812	-	-	P	-	P	-	P	-	P

Taxon	SDC	AphiaID	Authority	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
CTENOSTOMATIDA (dam)	Y0070	110723	Busk, 1852	-	P	P	-	-	-	-	-	-
Membraniporoidea (dam)	Y0167	153579	Busk, 1854	-	-	-	-	-	-	-	-	-
Bugulidae (dam)	Y0239	110731	Gray, 1848	-	-	-	-	-	-	P	-	-
ASCIDIACEA (dam)	ZD0002	1839	Blainville, 1824	-	-	-	-	-	2	-	4	-
Polycarpa (dam)	ZD0110	103538	Heller, 1877	-	8	-	-	1	-	-	-	-
Molgula (dam)	ZD0146	103509	Forbes, 1848	-	-	-	-	-	-	-	-	-
The following taxa were merged for statistical analysis												
Haleciidae	D0389	1608	Hincks, 1868	-	-	-	-	-	-	-	-	P
Halecium	D0390	117103	Oken, 1815	-	-	-	-	-	-	P	P	P
merged as:	-	-	-	-	-	-	-	-	-	-	-	-
Haleciidae	**D0389**	**1608**	**Hincks, 1868**	-	-	-	-	-	-	P	P	P
Diphasia	D0413	117228	Agassiz, 1862	-	-	-	-	-	-	-	-	P
Diphasia rosacea	D0420	117883	Linnaeus, 1758	-	-	-	P	-	-	-	-	-
merged as:	-	-	-	-	-	-	-	-	-	-	-	-
Diphasia	**D0413**	**117228**	**Agassiz, 1862**	-	-	-	P	-	-	-	-	P
Sertularia	D0433	117234	Linnaeus, 1758	-	P	P	P	P	P	P	P	P
Sertulariidae	D0407	1614	Lamouroux, 1812	-	-	-	-	P	-	-	-	-
merged as:	-	-	-	-	-	-	-	-	-	-	-	-
Sertulariidae	**D0407**	**1614**	**Lamouroux, 1812**	-	P	P	P	P	P	P	P	P
Campanulariidae	D0491	1606	Johnston, 1836	-	-	P	-	P	-	-	-	P
Campanulariidae (Obeliinae)	D0491	1606	Johnston, 1836	-	-	-	P	-	-	-	-	-
Clytia	D0501	117030	Lamouroux, 1812	-	-	-	-	P	-	-	P	-
merged as:	-	-	-	-	-	-	-	-	-	-	-	-

Taxon	SDC	AphiaID	Authority	SS_08 FA	SS_09 FA	SS_10 FA	SS_11 FA	SS_18 FA	SS_19 FA	SS_21 FA	SS_23 FA	SS_25 FA
Campanulariidae	**D0491**	**1606**	**Johnston,-1836**	-	-	P	P	P	-	-	P	P
Didemnidae	ZD0041	103439-	Giard,-1872	-	P	P	-	P	P	P	P	P
Diplosoma	ZD0058	103457	Macdonald,-1859	-	-	-	-	-	-	-	-	P
merged-as:	-	-	-	-	-	-	-	-	-	-	-	-
Didemnidae	**ZD0041**	**103439-**	**Giard,-1872**	-	P	P	-	P	P	P	P	P

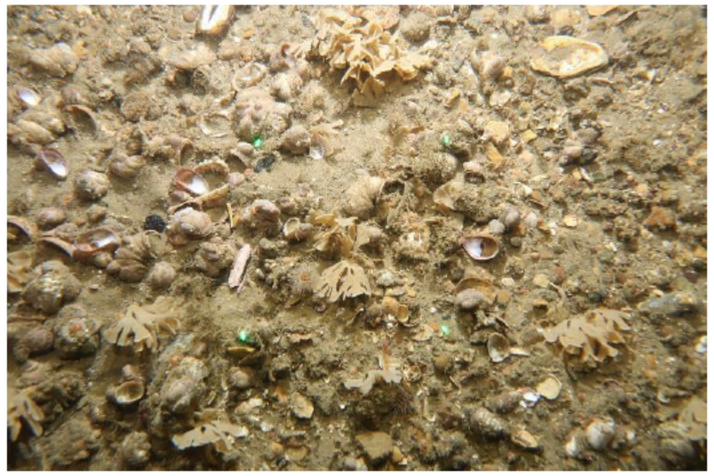
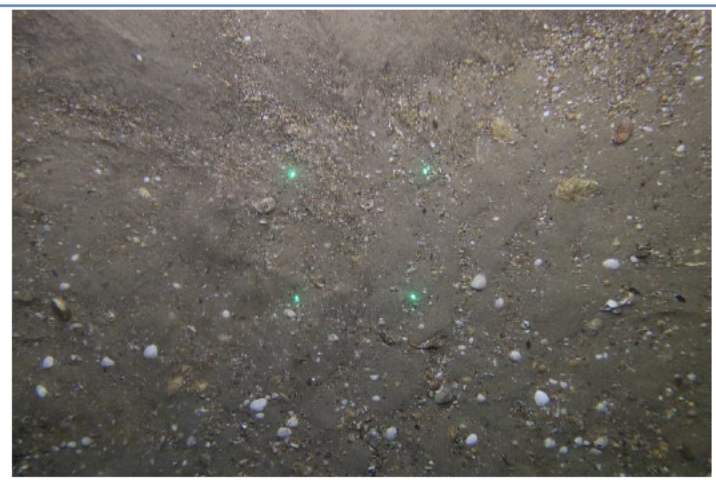
Notes
SDC = Species directory code

Appendix G

Video Data Analysis

G.1 Video and Photographic Log

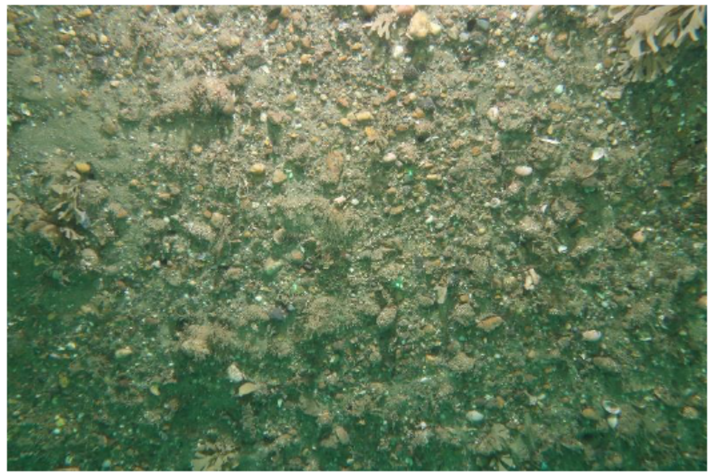
G.1.1 Sheringham Shoal

Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
SS_01	SOL	383 361.37	5 883 469.23	Coarse sediment (sand, shell fragments, pebbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*)	1 – 5 %	O	
	EOL	383 319.44	5 883 504.33		Hermit crab (Paguridae)	P	P	
					Anemone (Actiniaria)	P	P	
					Starfish (*Asterias rubens*)	2	F	
					Faunal turf (Hydrozoa/Bryozoa)	1 – 5 %	O	
					Anemone (*Urticina* sp.)	3	O	
					Edible crab (*Cancer pagurus*)	1	F	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Anemone (Sagartiidae)	P	P	
					Sea squirts (Ascidiacea)	P	P	
					Sea squirt (*Dendrodoa grossularia*)	P	P	
					Barnacles (Sessilia)	P	P	
					Common sunstar (*Crossaster papposus*)	1	F	
					Tube worm (*Sabella* sp.)	P	P	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Faunal tube (*Lanice conchilega*)	P	P	
					Shrimp (Caridea)	P	P	
					Faunal tube (?*Sabellaria spinulosa*)	< 1 %	R	
					Encrusting sponge (Porifera)	< 1 %	R	
SS_02	SOL	381 343.09	5 884 387.49	Rippled sand, shell fragments, pebbles) Sublittoral coarse sediment (A5.1)	No visible fauna			
	EOL	381 352.27	5 884 441.22					

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_03	SOL	380 931.94	5 885 485.48	Coarse sediment (sand, shell fragments, pebbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Starfish (Asteroidea)	P	P	
					Goby (Gobiidae)	P	P	
					Hermit crab (Paguridae)	P	P	
					Anemone (Sagartiidae)	P	P	
					Faunal tubes (Serpulidae)	P	P	
					Sea squirts (Ascidiacea)	P	P	
					Sea squirts(?*Dendrodoa grossularia*)	P	P	
	EOL	380 895.10	5 885 530.53		Common sunstar (*Crossaster papposus*)	2	F	
					Encrusting sponge (Porifera)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
					Swimming crab (*Liocarcinus* sp.)	1	O	
					Nut crab (*Ebalia* sp.)	P	P	
					Anemone (*Sagartiidae*)	P	P	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Crab (Brachyura)	P	P	
					Sponge (Polymastiidae)	< 1 %	R	
					Shrimp (Caridae)	P	P	
					Faunal tubes (?*Sabellaria spinulosa*)	< 1 %	R	
					Sponge (?*Sycon ciliatum*)	< 1 %	R	
SS_04	SOL	381 610.84	5 886 522.64	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Common sunstar (*Crossaster papposus*)	3	F	
					Squat lobster (Galatheoidea)	P	P	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Topshell (Trochoidea)	P	P	
					Starfish (Asteroidea)	2	O	
					Swimming crab (*Liocarcinus* sp.)	3	O	
					Slipper limpets (*Crepidula fornicata*)	20 – 39 %	C	
					Barnacles (Sessilia)	P	P	
	EOL	381 587.95	5 886 583.63		Dragonet (*Callionymus* sp.)	P	P	
					Hermit crab (Paguridae)	P	P	
					Nut crab (*Ebalia* sp.)	P	P	
					Sponge (Demospongiae)	< 1 %	R	
					Shrimp (Caridea)	P	P	
					Anemone (Sagartiidae)	P	P	
					Faunal tubes (Serpulidae)	P	P	
					Faunal tubes (*Lanice conchilega*)	P	P	
					Faunal burrows	P	P	

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_05	SOL	383 165.59	5 886 658.99	Sand with shell fragments Sublittoral sand (A5.2)	Bryozoan (Flustridae) Slipper limpets (*Crepidula fornicata*) Barnacles (Sessilia)	< 1 % < 1 % P	R R P	
	EOL	383 163.00	5 886 720.81					
SS_06	SOL	383 926.51	5 888 184.83	Sand with shell fragments Sublittoral sand (A5.2)	Bryozoan (Flustridae)	< 1 %	R	
		383 971.86	5 888 208.06					
		383 971.86	5 888 208.06	Coarse sediment (sand, shell fragments, pebbles and cobbles) Sublittoral coarse sediment (A5.1)	Faunal tubes (Serpulidae) Common sunstar (*Crossaster papposus*) Bryozoan (Flustridae) Barnacles (Sessilia)	P 1 < 1 % P	P F R P	
	EOL	383 981.92	5 888 211.58					

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_07	SOL	382 203.15	5 887 666.12	Coarse sediment (sand, shell fragments, pebbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae) Common sunstar (*Crossaster papposus*) Shrimp (Caridea) Sponge (Porifera) Faunal turf (Hydrozoa/Bryozoa) Slipper limpets (*Crepidula fornicata*) Squat lobster (Galatheoidea) Faunal tubes (Serpulidae) Faunal tubes (*Lanice conchilega*) Anemone (*Urticina* sp.) Painted topshell (*Calliostoma zizyphinum*)	< 1 % 1 P < 1 % < 1 % < 1 % P P P P 1	R F P R R R P P P P R	
	EOL	382 203.07	5 887 718.97					
SS_08	SOL	380 614.83	5 887 975.83	Rippled sand with shell fragments. Patch of gravel and pebbles Sublittoral sand (A5.2)	Slipper limpets (*Crepidula fornicata*) Fish (Pisces) Dragonet (*Callionymus* sp.) Barnacles (Sessilia) Faunal turf (Hydrozoa/Bryozoa)	< 1 % 1 P P < 1 %	R O P P R	
	EOL	380 663.16	5 887 993.07					
SS_09	SOL	382 471.79	5 889 019.79	Coarse sediment (sand, shell fragments, pebbles, cobbles) Circalittoral mixed sediments (A5.44)	Bryozoan (Flustridae inc. *Flustra foliacea*) Faunal tubes (Serpulidae) Faunal turf (Hydrozoa/Bryozoa) Sponge (?*Sycon ciliatum*) Barnacles (Sessilia) Possible nut crab (?*Ebalia* sp.) Slipper limpets (*Crepidula fornicata*) Common sunstar (*Crossaster papposus*) Painted topshell (*Calliostoma zizyphinum*) Sponge (Polymastiidae) Faunal tubes (?*Sabellaria spinulosa*) Faunal burrows	1 – 5 % P 1 – 5 % < 1 % P P < 1 % 1 P < 1 % < 1 % P	O P O R P P R F P R R P	
	EOL	382 505.55	5 889 003.41					

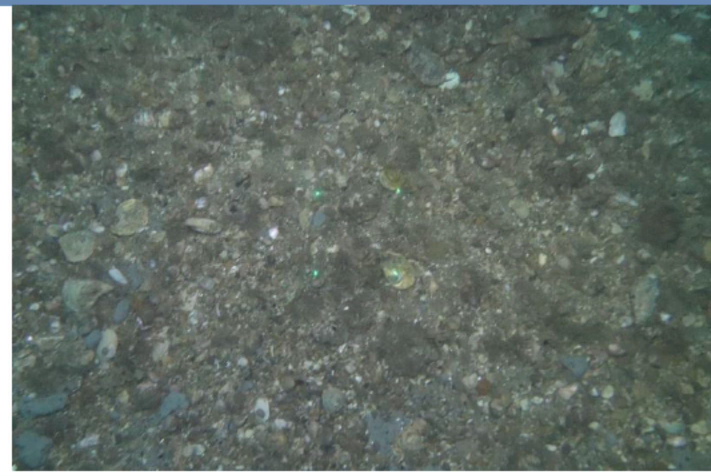
Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_10	SOL	379 358.75	5 889 456.89	Coarse sediment (sand, shell fragments, pebbles, cobbles) Circalittoral mixed sediments (A5.44)	Bryozoan (Flustridae inc. *Flustra foliacea*)	1 – 5 %	O	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
					Sponge (?Polymastiidae)	< 1 %	R	
					Nut crab (*Ebalia* sp.)	P	P	
					Faunal tubes (Serpulidae)	P	P	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Anemone (*Urticina* sp.)	1	R	
					Anemone (Sagartiidae)	P	P	
	EOL	379 418.34	5 889 558.73		Shrimp (Caridea)	P	P	
					Squat lobster (Galatheoidea)	P	P	
					Goby (Gobiidae)	P	P	
					Possible hydroid (?Tubulariidae)	P	P	
					Faunal tube (*Lanice conchilega*)	P	P	
					Faunal tubes (?*Sabellaria spinulosa*)	< 1 %	R	
					Faunal burrows	P	P	
S_11	SOL	379 716.66	5 891 971.42	Coarse sediment (sand, shell fragments, pebbles, cobbles) Circalittoral mixed sediments (A5.44)	Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Nut crab (*Ebalia* sp.)	P	P	
					Faunal turf (Hydrozoa/Bryozoa)	1 – 5 %	O	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Squat lobster (Galatheoidea)	P	P	
					Barnacles (Sessilia)	P	P	
					Starfish (*Asterias rubens*)	2	F	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Faunal tube (*Lanice conchilega*)	P	P	
	EOL	379 762.36	5 892 024.12		Hydroid (*Nemertesia* sp.)	< 1 %	R	
					Goby (Gobiidae)	P	P	
					Anemone (Actiniaria)	P	P	
					Sea squirt (Ascidiacea)	P	P	
					Hydroid (?Sertulariidae)	< 1 %	R	
					Faunal tubes (?*Sabellaria spinulosa*)	< 1 %	R	
					Hermit crab (Paguridae)	P	P	
					Faunal burrows	P	P	

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_12	SOL	376 914.28	5 893 252.95	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Anemone (*Urticina* sp.)	4	O	
					Faunal tubes (Serpulidae)	P	P	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
	EOL	376 960.68	5 893 273.42		Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Sponge (Porifera)	< 1 %	R	
					Crab (Brachyura)	P	P	
					Sponge (Porifera)	< 1 %	R	
SS_13	SOL	376 738.69	5 894 941.65	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Anemone (*Urticina* sp.)	9	F	
					Squat lobster (Galatheoidea)	P	P	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Sponge (Polymastiidae)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Faunal tubes (Serpulidae)	P	P	
	EOL	376 781.32	5 894 970.43		Possible spider crab (?Inachidae)	P	P	
					Nut crab (*Ebalia* sp.)	P	P	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Anemone (Sagartiidae)	P	P	
					Sea squirts (Ascidiacea: ?*Dendrodoa grossularia*)	P	P	
					Sponge (?*Sycon ciliatum*)	< 1 %	R	
					Faunal burrows	P	P	
SS_14	SOL	377 357.74	5 895 268.44	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Anemone (*Urticina* sp.)	3	F	
					Squat lobster (Galatheoidea)	P	P	
	EOL	377 385.00	5 895 261.40		Sponge (?*Sycon ciliatum*)	< 1 %	R	
					Hydroid (?Sertulariidae)	< 1 %	R	
					Sea squirts (Ascidiacea: ?*Dendrodoa grossularia*)	P	P	
					Hydroid (?*Hydrallmania falcata*)	< 1 %	R	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_15	SOL	375 953.10	5 895 448.07	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*) Anemone (*Urticina* sp.) Slipper limpets (*Crepidula fornicata*) Squat lobster (Galatheoidea) Faunal tubes (Serpulidae) Barnacles (Sessilia) Faunal turf (Hydrozoa/Bryozoa) Sea squirts (Ascidiacea: ?*Dendrodoa grossularia*) Painted topshell (*Calliostoma zizyphinum*) Common sunstar (*Crossaster papposus*) Faunal tubes (?*Sabellaria spinulosa*) Faunal burrows	< 1 % 7 < 1 % P P P 1 – 5 % P P 1 < 1 % P	R F R P P P O P P F R P	
	EOL	375 937.90	5 895 507.83					
SS_16	SOL	374 888.65	5 895 577.40	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*) Anemone (*Urticina* sp.) Sea squirts (*Clavelina lepadiformis*) Faunal turf (Hydrozoa/Bryozoa) Squat lobster (Galatheoidea) Faunal tubes (Serpulidae) Common sunstar (*Crossaster papposus*) Goby (Gobiidae) Bryozoan (Bugulidae) Sea squirts (Ascidiacea) Sea squirts (?*Dendrodoa grossularia*) Sponge (?*Sycon ciliatum*) Slipper limpets (*Crepidula fornicata*) Barnacles (Sessilia) Brown crab (*Cancer pagurus*) Hydroid (?Sertulariidae) Possible spider crab (?Inachidae) Faunal burrows	< 1 % 27 P 5 – 9 % P P 2 P < 1 % P P < 1 % < 1 % P P < 1 % P P	R F P F P P F P R P P R R P P R P P	
	EOL	374 890.51	5 895 613.69					

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_17	SOL	375 574.31	5 896 320.26	Coarse sediment (sand, shell fragments, pebbles and cobbles) Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Anemone (*Urticina* sp.)	23	F	
					Squat lobster (Galatheoidea)	P	P	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Goby (Gobiidae)	P	P	
					Sea squirts (*Clavelina lepadiformis*)	P	P	
					Possible sea squirts (?Ascidiacea)	P	P	
					Sea squirts (?*Dendrodoa grossularia*)	P	P	
					Faunal turf (Hydrozoa/Bryozoa)	1 – 5 %	O	
					Dragonet (*Callionymus* sp.)	P	P	
					Barnacles (Sessilia)	P	P	
					Sponge (Demospongiae)	< 1 %	R	
					Faunal tubes (Serpulidae)	P	P	
	EOL	375 608.98	5 896 357.97		Pogge (*Agonus cataphractus*)	1	O	
					Bryozoan (?*Crisia* sp.)	< 1 %	R	
					Common sunstar (*Crossaster papposus*)	1	F	
					Faunal tube (*Lanice conchilega*)	P	P	
					Possible Butterfish (?*Pholis gunnellus*)	1	O	
					Shrimp (Caridea)	P	P	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Bryozoan (Bugulidae)	< 1 %	R	
					Topshell (Trochoidea)	P	P	
					Faunal tubes (?*Sabellaria spinulosa*)	< 1 %	R	
					Faunal burrows	P	P	
SS_18	SOL	374 196.84	5 896 459.23	Coarse sediment (sand, shell fragments, pebbles, cobbles) Circalittoral mixed sediments (A5.44)	Anemone (*Urticina* sp.)	7	F	
					Anemone (Actiniaria)	P	P	
					Faunal tubes (Serpulidae)	P	P	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	1 – 5 %	O	
					Faunal tube (*Lanice conchilega*)	P	P	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Sea squirts (?*Botryllus schlosseri*)	P	P	
					Sea squirts (?*Dendrodoa grossularia*)	P	P	
					Common sunstar (*Crossaster papposus*)	2	F	
					Sponge (Porifera)	< 1 %	R	
					Faunal turf (Hydrozoa/Bryozoa)	1 – 5 %	O	
	EOL	374 177.81	5 896 513.13		Sea squirts (*Clavelina lepadiformis*)	P	P	
					Squat lobster (Galatheoidea)	P	P	
					Barnacles (Sessilia)	P	P	
					Shrimp (Caridea)	P	P	
					Hydroid (*Nemertesia antennina*)	< 1 %	R	
					Starfish (*Henricia* sp.)	1	O	
					Spider crab (Inachinae)	P	P	
					Brittlestar (*Ophiura* sp.)	P	P	
					Hydroid (?Sertulariidae)	< 1 %	R	
					Faunal tubes (?*Sabellaria spinulosa*)	< 1 %	R	
					Faunal burrows	P	P	

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_19	SOL	373 218.82	5 894 396.34	Coarse sediment (sand, shell fragments, pebbles, cobbles) Circalittoral mixed sediments (A5.44)	Anemone (*Urticina* sp.) Bryozoan (Flustridae inc. *Flustra foliacea*) Bryozoan (Bugulidae) Sea squirts (*Clavelina lepadiformis*) Faunal turf (Hydrozoa/Bryozoa) Sea squirts (?*Dendrodoa grossularia*) Barnacles (Sessilia) Faunal tubes (Serpulidae) Goby (Gobiidae) Slipper limpets (*Crepidula fornicata*) Squat lobster (Galatheoidea) Sponge (?*Sycon ciliatum*) Faunal tube (*Lanice conchilega*) Topshell (Trocoidea) Crab (*Liocarcinus* sp.) Faunal tubes (?*Sabellaria* spinulosa) Faunal burrows	6 1 – 5 % < 1 % P 5 – 9 % P P P P < 1 % P < 1 % P P 2 < 1 % P	F O R P F P P P P R P R P P O P P	
	EOL	373 208.45	5 894 439.97					
SS_20	SOL	370 338.57	5 893 918.62	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Faunal turf (Hydrozoa/Bryozoa) Bryozoan (Flustridae inc. *Flustra foliacea*) Starfish (*Asterias rubens*) Encrusting sponge (?*Halichondria panicea*) Slipper limpets (*Crepidula fornicata*) Sponge (?*Sycon ciliatum*) Sea squirts (Ascidiacea) Sea squirts (?*Dendrodoa grossularia*) Faunal tube (*Lanice conchilega*) Faunal tubes (Serpulidae) Anemone (*Urticina* sp.) Barnacles (Sessilia) Painted topshell (*Calliostoma zizyphinum*) Sea squirts (*Clavelina lepadiformis*) Common sunstar (*Crossaster papposus*) Squat lobster (Galatheoidea) Topshell (Trochoidea) Anemone (Actiniaria) Hydroid (*Nemertesia antennina*) Hydroid (*Hydrallmania falcata*) Faunal burrows	1 – 5 % < 1 % 1 < 1 % < 1 % < 1 % P P P P 4 P P P 1 P P P < 1 % < 1 % P	O R F R R R P P P P O P P P F P P P R R P	
	EOL	370 328.43	5 893 961.59					

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_21A	SOL	370 325.73	5 894 439.75	Mixed sediment (sand, shell fragments, pebbles, cobbles, clay clasts) Circalittoral mixed sediments (A5.44)	Anemone (*Urticina* sp.) Common sunstar (*Crossaster papposus*) Bryozoan (Flustridae) Faunal turf (Hydrozoa/Bryozoa)	4 1 < 1 % < 1 %	F C R R	
	-	370 321.59	5 894 448.91					
	-	370 321.59	5 894 448.91	Mixed sediment (sand, shell fragments, pebbles, areas of emergent clay) Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay (A4.231)	Bryozoan (Flustridae inc. *Flustra foliacea*) Velvet swimming crab (*Necora puber*) Brown crab (*Cancer pagurus*) Faunal turf (Hydrozoa/Bryozoa) Bryozoan (?*Alcyonidium diaphanum*) Anemone (Sagartiidae) Swimming crab (*Liocarcinus* sp.) Encrusting sponge (Porifera) Sea squirts (Ascidiacea) Sea squirts (?*Dendrodoa grossularia*) Slipper limpets (*Crepidula fornicata*) Possible piddock burrows (?Bivalvia)	< 1 % 2 1 < 1 % < 1 % P 2 < 1 % P P < 1 % P	R O F R R P O R P P R P	
	-	370320 26	5 894 475.49					
	-	370 320.26	5 894 475.49	Coarse sediment (sand, shell fragments, pebbles, cobbles, clay clasts) Circalittoral mixed sediments (A5.44)	Bryozoan (Flustridae inc. *Flustra foliacea*) Encrusting sponge (Porifera) Slipper limpets (*Crepidula fornicata*) Faunal turf (Hydrozoa/Bryozoa) Sea squirts (Ascidiacea) Sea squirts (?*Dendrodoa grossularia*) Sea squirts (*Clavelina lepadiformis*) Spider crab (Inachidae) Spider crab (Inachinae) Faunal tubes (Serpulidae) Anemone (Actiniaria) Squat lobster (Galatheoidea) Common sunstar (*Crossaster papposus*) Barnacles (Sessilia) Anemone (*Urticina* sp.) Anemone (Sagartiidae) Hydroid (*Hydrallmania falcata*) Possible clingfish (?*Lepadogaster* sp.) Faunal tubes (*Lanice conchilega* Bryozoan (?*Alcyonidium diaphanum*) Sponge (?*Sycon ciliatum*) Possible hydroid (?*Nemertesia* sp.)	< 1 % < 1 % < 1 % 1 – 5 % P P P P P P P P 2 P 5 P < 1 % P P < 1 % < 1 % < 1 %	R R R O P P P P P P P P F P F P R P P R R R	
	EOL	370 315.90	5 894 507.55					

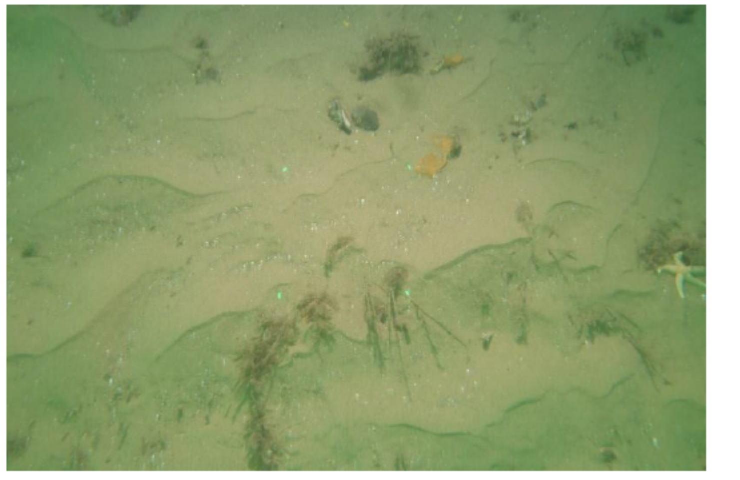
Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_22	SOL	371 118.69	5 895 701.24	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Anemone (Actiniaria) Anemone (*Urticina* sp.) Faunal tubes (Serpulidae) Sponge (?*Sycon ciliatum*) Common sunstar (*Crossaster papposus*) Sea squirts (*Clavelina lepadiformis*) Encrusting sponge (Porifera) Bryozoan (Flustridae inc. *Flustra foliacea*) Slipper limpets (*Crepidula fornicata*) Squat lobster (Galatheoidea) Faunal tube (*Lanice conchilega*) Barnacles (Sessilia) Faunal turf (Hydrozoa/Bryozoa) Anemone (Sagartiidae) Hydroid (*Nemertesia antennina*) Sea squirts (Ascidiacea) Sea squirts (?*Dendrodoa grossularia*) Hydroid (*Hydrallmania falcata*) Brown crab (*Cancer pagurus*) Goby (Gobiidae) Spider crab (Inachinae) Hydroid (?Sertulariidae) Topshell (Trochoidea)	P 8 P < 1 % 3 P < 1 % < 1 % < 1 % P P P 1 – 5 % P < 1 % P P < 1 % 1 P P < 1 % P	P F P R F P R R R P P P O P R P P R F P P R P	
	EOL	371 101.74	5 895 737.91					
SS_23	SOL	370 138.44	5 895 803.02	Coarse sediment (sand, shell fragments, pebbles, cobbles) Circalittoral mixed sediments (A5.44)	Anemone (*Urticina* sp.) Anemones (Actiniaria) Common sunstar (*Crossaster papposus*) Faunal tubes (Serpulidae) Faunal turf (Hydrozoa/Bryozoa) Slipper limpets (*Crepidula fornicata*) Squat lobster (Galatheoidea) Encrusting sponge (Porifera) Sea squirts (*Clavelina lepadiformis*) Barnacles (Sessilia) Faunal tube (*Lanice conchilega*) Sea squirts (?*Dendrodoa grossularia*) Sea squirts (Ascidiacea) Anemone (Sagartiidae) Topshell (Trochoidea) Sponge (Porifera) Possible sea slug (?Nudibranchia) Bryozoan (*Alcyonidium diaphanum*) Hermit crab (Paguridae) Spider crab (Inachinae) Possible pogge (*Agonus cataphractus*)	17 P 4 P 5 – 9 % < 1 % P < 1 % P P P P P P P P P < 1 % P P 1	F P F P F R P R P P P P P P P P P R P P O	
	EOL	370 098.51	5 895 838.11					

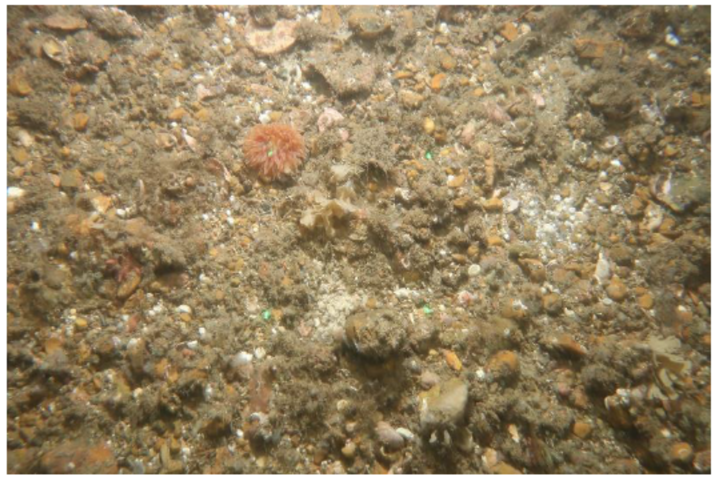
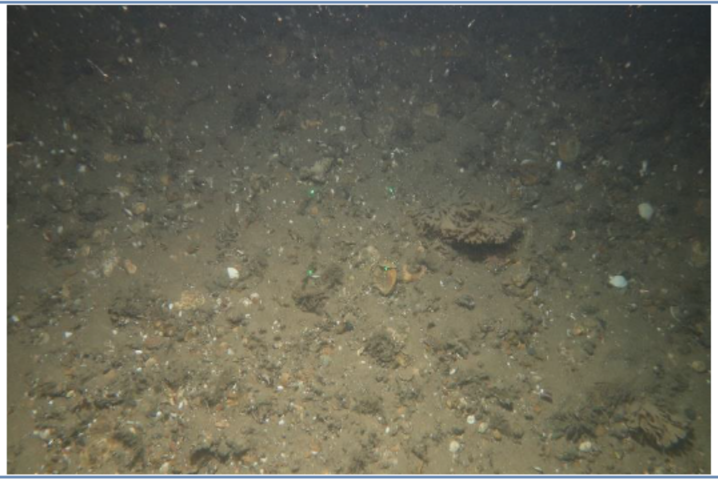
Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_24	SOL	370 115.17	5 896 036.01	Mixed sediment (sand, shell fragments, pebbles, cobbles, areas of emergent clay) Circalittoral mixed sediments (A5.44)	Anemone (*Urticina* sp.) Anemone (Sagartiidae) Slipper limpets (*Crepidula fornicata*) Faunal turf (Hydrozoa/Bryozoa) Encrusting sponge (Porifera) Bryozoan (Flustridae inc. *Flustra foliacea*) Sponge (?*Sycon ciliatum*) Hydroid (*Nemertesia antennina*) Sea squirts (*Clavelina lepadiformis*) Sea squirt (Ascidiacea) Sea squirt (?*Dendrodoa grossularia*) Faunal tubes (Serpulidae) Possible sea slug (?Nudibranchia) Sponge (?*Suberites* sp.) Barnacles (Sessilia) Faunal tube (*Lanice conchilega*) Common sunstar (*Crossaster papposus*) Brown crab (*Cancer pagurus*) Bryozoan (*Alcyonidium diaphanum*) Squat lobster (Galatheoidea) Spider crab (Inachidae)	10 P < 1 % 1 – 5 % < 1 % < 1 % < 1 % < 1 % P P P P P P P P 4 1 < 1 % P P	F P R O R R R R P P P P P P P P F F R P P	
	EOL	370 092.99	5 896 094.29					
SS_25	SOL	369 258.97	5 895 023.49	Coarse sediment (sand, shell fragments, pebbles, cobbles) Sublittoral coarse sediment (A5.1)	Common sunstar (*Crossaster papposus*) Encrusting sponge (Porifera) Bryozoan (*Alcyonidium diaphanum*) Slipper limpets (*Crepidula fornicata*) Faunal tubes (Serpulidae) Faunal turf (Hydrozoa/Bryozoa) Spider crab (Inachinae) Spider crab (Inachidae) Hydroid (*Nemertesia antennina*) Goby (Gobiidae) Faunal tube (*Lanice conchilega*) Topshell (Trochoidea) Barnacles (Sessilia) Sea squirts (Ascidiacea) Sea squirts (?*Dendrodoa grossularia*) Anemone (*Urticina* sp.) Shrimp (Caridea) Anemone (Sagartiidae) Bryozoan (Flustridae inc. *Flustra foliacea*) Faunal burrows	6 < 1 % < 1 % < 1 % P < 1 % P P < 1 % P P P P P P 4 P P < 1 % P	F R R R P R P P R P P P P P P O P P R P	
	EOL	369-206.44	5-895-066.76					

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
SS_26	SOL	372 943.64	5 899 298.79	Coarse sediment (sand, shell fragments, pebbles, cobbles) Circalittoral mixed sediments (A5.44)	Anemone (Actiniaria) Crab (*Cancer pagurus*) Bryozoan (Flustridae inc. *Flustra foliacea*) Anemone (*Urticina* sp.) Faunal turf (Hydrozoa/Bryozoa) Sea squirts (?*Dendrodoa grossularia*) Sea squirts (*Clavelina lepadiformis*) Faunal tubes (Serpulidae) Slipper limpets (*Crepidula fornicata*) Squat lobster (Galatheoidea) Spider crab (Inachidae) Fish (Scorpaeniformes) Faunal tube (*Lanice conchilega*) Swimming crab (*Liocarcinus* sp.) Anemone (Actiniaria) Hydroid (*Hydrallmania falcata*) Barnacles (Sessilia)	P 2 < 1 % 13 < 1 % P P P < 1 % P P 1 P P P < 1 % P	P F R F R P P P R P P O P P P R P	
	EOL	372 908.45	5 899 351.98					

Notes
* = Abundance using the Superabundant, abundant, common, frequent, occasional and rare (semi-quantitative abundance scale)
SOL = Start of line
EOL = End of line
P = Present

G.1.2 Export Cable Corridor

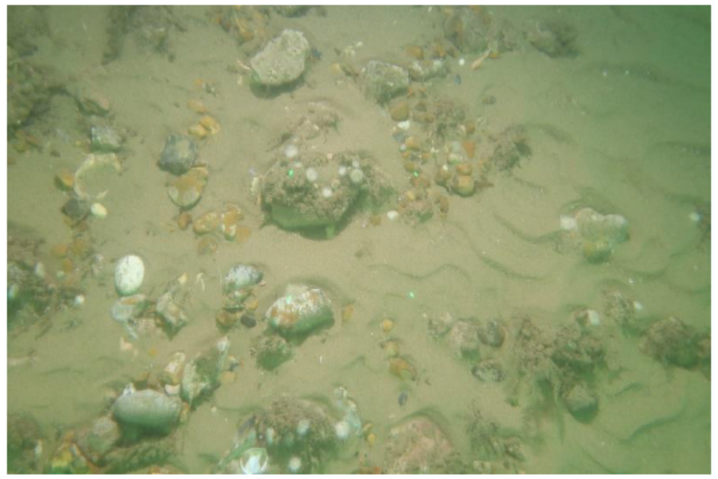
Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS Classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
EC_02	SOL	376 649.2	5 869 674.6	Rippled sand with shell fragments and pebbles and occasional cobbles Sublittoral coarse sediment (A5.1)	Starfish (*Asterias rubens*)	57	F	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Anemone (*Urticina* sp.)	2	O	
					Bryozoan (*Alcyonidium diaphanum*)	< 1 %	R	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Red algae (Rhodophyta)	< 1 %	R	
					Encrusting bryozoans (Bryozoa)	< 1 %	R	
					Hydroid (*Nemertesia antennina*)	< 1 %	R	
	EOL	376 612.9	5 869 693.2		Anemone (Actiniaria)	P	P	
					Coralline algae (Corallinaceae)	< 1 %	R	
					Fish (Pisces)	P	P	
EC_03	SOL	378 242.7	5 870 764.4	Rippled sand with shells, pebbles and occasional cobbles Sublittoral coarse sediment (A5.1)	Starfish (*Asterias rubens*)	6	O	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Bryozoan (*Vesicularia spinosa*)	< 1 %	R	
					Anemone (*Sagartia* sp.)	> 700	A	
					Anemone (*Urticina felina*)	2	O	
					Anemones (*Urticina* sp.)	63	F	
					Sea squirt (Ascidiacea)	< 1 %	R	
					Bryozoan (*Alcyonidium diaphanum*)	< 1 %	R	
					Sponge (Porifera)	< 1 %	R	
					Goby (Gobiidae)	P	P	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
					Ross worm (*Sabellaria spinulosa*)	< 1 %	R	
					Dragonet (*Callionymus* sp.)	2	O	
					Crab (*Carcinus maenas*)	1	O	
					Hermit crab (Paguridae)	P	P	
					Common sunstar (*Crossaster papposus*)	1	F	
	EOL	378 303.8	5 870 767.3		Edible crab (*Cancer pagurus*)	2	F	
					Spider crab (Inachidae)	P	P	
					Crab (*Necora puber*)	1	O	
					Coralline algae (Corallinaceae)	< 1 %	R	
					Bryozoan (*Flustra foliacea*)	< 1 %	R	
					Red algae (Rhodophyta)	< 1 %	R	
					Soft coral (*Alcyonium digitatum*)	< 1 %	R	

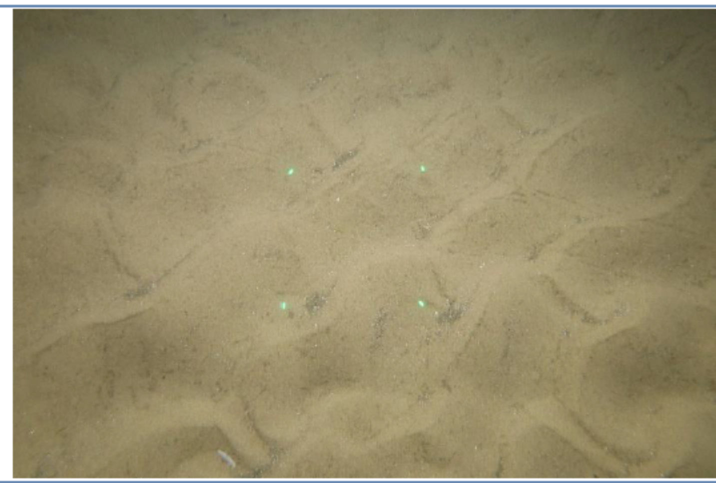
Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS Classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
EC_04	SOL	379 070.5	5 872 311.4	Sandy gravel with cobbles and occasional boulders Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*) Faunal turf (Hydrozoa/Bryozoa) Sea squirt (?*Dendrodoa grossularia*) Brittlestars (Ophiuroidea) Common sunstar (*Crossaster papposus*) Sea squirt (*Clavelina lepadiformis*) Anemone (*Urticina* sp.) Encrusting bryozoans (Bryozoa) Coralline algae (Corallinaceae) Spider crab (Inachidae) Sea squirts (Ascidiacea) Hydroid (*Hydrallmania falcata*) Squat lobster (Galatheoidea) Encrusting sponges (Porifera) Nut crab (*Ebalia* sp.) Anemone (Sagartiidae) Faunal tubes (Serpulidae) Ross worm (*Sabellaria spinulosa*) Sea squirts (Didemnidae)	< 1 % 10 19 % P P 1 P 12 < 1 % < 1 % P P < 1 % P < 1 % P P < 1 % < 1 % P	R C O P F P O R R P P R P R P P R R P	
	EOL	379 014.6	5 872 302.9					
EC_05	SOL	380 755.2	5 873 777.7	Sandy gravel with exposed low-lying clay and occasional cobbles Circalittoral mixed sediments (A5.44)	Bryozoan (Flustridae inc. *Flustra foliacea*) Faunal turf (Hydrozoa/Bryozoa) Anemone (*Urticina* sp.) Slipper limpet (*Crepidula fornicata*) Faunal tubes (Serpulidae) Brittlestars (Ophiuroidea) Fish (Pisces)	< 1 % < 1 % 16 < 1 % P P P	R R O R P P P	
	EOL	380 751.2	5 873 818.8					
EC_06	SOL	382 440.8	5 876 011.3	Sandy gravel with exposed low-lying clay and occasional cobbles Circalittoral mixed sediments (A5.44)	Bryozoan (Flustridae inc. *Flustra foliacea*) Faunal turf (Hydrozoa/Bryozoa) Encrusting bryozoans (Bryozoa) Faunal tubes (Serpulidae) Common sunstar (*Crossaster papposus*) Bryozoan (*Vesicularia spinosa*) Bryozoan (*Alcyonidium diaphanum*) Anemone (*Urticina* sp.) Starfish (*Henricia* sp.)	< 1 % < 1 % < 1 % P 1 < 1 % < 1 % 10 1	R R R P F R R O R	
	EOL	382 496.4	5 876 004.7					

Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed-Sediment-Notes-and-EUNIS-Classification	Conspicuous-Species	Counts-or-Percentage-Cover	Estimated-Abundance*	Representative-Image
EC_07	SOL	382 215.1	5 876 420.1	Rippled sand with shell, pebbles and occasional cobbles Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*) Faunal turf (Hydrozoa/Bryozoa) Bryozoan (*Vesicularia spinosa*) Hydroid (*Hydrallmania falcata*) Bryozoan (*Alcyonidium diaphanum*) Brittlestars (Ophiuroidea) Hydroid (*Nemertesia antennina*) Anemone (*Urticina felina*) Anemone (*Urticina* sp.) Common sunstar (*Crossaster papposus*)	< 1 % 1 5 % < 1 % < 1 % < 1 % P < 1 % 2 4 2	R O R R R P R O O O	
	EOL	382 269.4	5 876 397.2					
EC_08	SOL	382 373.5	5 877 156.6	Rippled sand with shell fragments and a small patch of gravelly sand Sublittoral sand (A5.2)	No visible fauna			
	EOL	382 419.7	5 877 163.2					
EC_09	SOL	382 617.8	5 877 813.4	Rippled sand with shell fragments Sublittoral sand (A5.2)	No visible fauna			
	EOL	382 628.7	5 877 832.2					

Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS Classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
EC_10	SOL	383 244.1	5 879 866.8	Sandy gravel with occasional cobbles Sublittoral coarse sediment (A5.1)	Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Faunal turf (Hydrozoa/Bryozoa)	1 5 %	O	
					Faunal tubes (Serpulidae)	P	P	
					Encrusting bryozoans (Bryozoa)	< 1 %	R	
					Sea squirt (?*Dendrodoa grossularia*)	P	P	
					Bryozoan (*Alcyonidium diaphanum*)	< 1 %	R	
					Sponge (*Sycon ciliatum*)	P	P	
					Anemones (*Urticina* sp.)	13	F	
					Edible crab (*Cancer pagurus*)	1	F	
	EOL	383 312.4	5 879 847.4		Anemone (Actiniaria)	P	P	
					Hydroid (*Nemertesia antennina*)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
					Comon sunstar (*Crossaster papposus*)	1	F	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Sea squirt (Ascidiacea)	P	P	
					Crab (*Macropodia* sp.)	P	P	
					Ross worm (*Sabellaria spinulosa*)	< 1 %	R	
					Sea slug (Nudibranchia)	P	P	
					Sponge (Porifera)	< 1 %	R	
					Starfish (*Asterias rubens*)	1	O	
					Goby (Gobiidae)	P	P	
EC_11	SOL	384 209.5	5 882 423.1	Rippled sand with shell fragments and a varying proportion of gravel Sublittoral coarse sediment (A5.1)	Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Bryozoan (*Vesicularia spinosa*)	< 1 %	R	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
	EOL	384 172.0	5 882 441.6		Barnacles (Sessilia)	P	P	
					Anemones (*Urticina* sp.)	9	F	
					Anemone (*Sagartia* sp.)	P	P	

Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS Classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
EC_12	SOL	383 599.1	5 879 948.6	Sandy gravel with occasional cobbles Circalittoral mixed sediments (A5.44)	Faunal turf (Hydrozoa/Bryozoa)	1 5 %	O	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	1 5 %	O	
					Anemone (*Sagartia* sp.)	P	P	
					Anemone (Sagartiidae)	P	P	
					Slipper limpet (*Crepidula fornicata*)	< 1 %	R	
					Sea squirt (?*Pyura* sp.)	P	P	
					Ross worm (*Sabellaria spinulosa*)	< 1 %	R	
					Hermit crab (Paguridae)	P	P	
					Sea squirt (?*Dendrodoa grossularia*)	P	P	
					Spider crab (*Macropodia* sp.)	P	P	
					Bryozoan (*Alcyonidium diaphanum*)	< 1 %	R	
					Sea squirt (Ascidiacea)	P	P	
					Faunal tubes (Sabellidae)	P	P	
					Encrusting sponge (Porifera)	< 1 %	R	
					Encrusting bryozoan (Bryozoa)	< 1 %	R	
					Hydroid (*Hydrallmania falcata*)	< 1 %	R	
	EOL	383 644.1	5 879 953.6		Hydroid (*Nemertesia antennina*)	< 1 %	R	
					Sunstar (*Crossaster papposus*)	1	F	
					Hydroid (*Sertulariidae*)	< 1 %	R	
					Painted topshell (*Calliostoma zizyphinum*)	P	P	
					Anemones (*Urticina* sp.)	3	O	
					Shrimp (Caridea)	P	P	
					Starfish (*Asterias rubens*)	1	O	
EC_13	SOL	381 471.7	5 875 397.7	Sandy gravel with occasional cobbles Circalittoral mixed sediments (A5.44)	Faunal turf (Hydrozoa/Bryozoa)	5 9 %	F	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Anemone (Sagartiidae)	P	P	
					Slipper limpet (*Crepidula fornicata*)	< 1 %	R	
					Sea squirt (?*Dendrodoa grossularia*)	P	P	
					Bryozoan (*Alcyonidium diaphanum*)	< 1 %	R	
					Spider crab (Inachidae)	P	P	
					Anemones (*Urticina* sp.)	5	O	
					Anemone (*Urtcina felina*)	3	O	
					Brittlestars (Ophiuroidea)	P	P	
					Starfish (*Asterias rubens*)	1	O	
					Ross worm (*Sabellaria spinulosa*)	< 1 %	R	
	EOL	381 413.2	5 875 401.8		Hydroid (*Thuiaria thuja*)	< 1 %	R	
					Goby (Gobiidae)	P	P	
					Dragonet (*Callionymus* sp.)	1	O	
					Flatfish (Pleuronectiformes)	1	F	
					Common sunstar (*Crossaster papposus*)	2	F	
					Starfish (*Henricia* sp.)	1	O	

Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		**Easting**	**Northing**	**Detailed Sediment Notes and EUNIS Classification**	**Conspicuous Species**	**Counts or Percentage Cover**	**Estimated Abundance***	**Representative Image**
EC_14	SOL	377 336.3	5 870 616.4	Rippled sand with occasional cobbles and boulders Sublittoral coarse sediment (A5.1)	Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Soft coral (*Alcyonium digitatum*)	< 1 %	R	
					Edible crab (*Cancer pagurus*)	1	O	
					Starfish (*Asterias rubens*)	33	F	
					Anemone (*Metridium* sp.)	1	R	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Bryozoan (*Alcyonidium diaphanum*)	< 1 %	R	
					Encrusting sponge (Porifera)	< 1 %	R	
					Anemones (*Urticina* sp.)	18	F	
					Anemone (*Sagartia* sp.)	P	P	
	EOL	377 474.2	5 870 635.0		Sea squirt (Ascidiacea)	P	P	
					Sponge (Porifera)	< 1 %	R	
					Coralline algae (Corallinaceae)	< 1 %	R	
					Barnacles (Sessilia)	P	P	
					Encrusting bryozoan (Bryozoa)	< 1 %	R	
					Faunal tubes (Serpulidae)	P	P	
					Comon sunstar (*Crossaster papposus*)	1	O	
EC_15	SOL	375 779.5	5 869 281.5	Rippled sand with occasional cobbles Sublittoral sand (A5.2)	Faunal turf (Hydrozoa/Bryozoa)	< 1 %	R	
					Anemone (Sagartiidae)	3	O	
					Bryozoan (*Alcyonidium diaphanum*)	< 1 %	R	
					Coralline algae (Corallinaceae)	< 1 %	R	
					Anemones (*Urticina* sp.)	1	O	
					Barnacles (Sessilia)	P	P	
					Faunal tubes (Serpulidae)	P	P	
	EOL	375 725.7	5 869 295.9		Anemone (*Metridium* sp.)	6	F	
					Dragonet (*Callionymus* sp.)	1	O	
					Starfish (*Asterias rubens*)	1	O	
					Hermit crab (Paguridae)	P	P	
					Fish (Pisces)	1	O	
EC_16	SOL	383 035.3	5 879 019.9	Sandy gravel with occasional cobbles Circalittoral mixed sediments (A5.44)	Faunal turf (Hydrozoa/Bryozoa)	1 5 %	O	
					Bryozoan (Flustridae inc. *Flustra foliacea*)	< 1 %	R	
					Slipper limpets (*Crepidula fornicata*)	< 1 %	R	
					Anemones (*Urticina* sp.)	5	F	
					Anemone (*Urticina felina*)	1	O	
					Faunal tubes (Serpulidae)	P	P	
					Barnacles (Sessilia)	P	P	
					Sea squirt (?*Dendrodoa grossularia*)	P	P	
					Anemone (*Sagartia* sp.)	P	P	
	EOL	383 056.1	5 879 021.3		Hydroid (*Hydrallmania falcata*)	< 1 %	R	
					Encrusting bryozoan (Bryozoa)	< 1 %	R	
					Sea squirt (*Pyura/Polycrpa* sp.)	P	P	
					Goby (Gobiidae)	P	P	
					Faunal tubes (*Lanice conchilega*)	P	P	
					Ross worm (*Sabellaria spinulosa*)	< 1 %	R	
					Anemone (Sagartiidae)	P	P	
					Shrimp (Caridea)	P	P	
					Starfish (*Henricia* sp.)	1	O	

Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS Classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
EC_17	SOL EOL	381 322.4 381 266.4	5 875 847.2 5 875 895.7	Sandy gravel with occasional cobbles Circalittoral mixed sediments (A5.44)	Faunal turf (Hydrozoa/Bryozoa) Bryozoan (Flustridae inc. *Flustra foliacea*) Sponge (*Amphilectus fucorum*) Anemone (Sagartiidae) Faunal tubes (*Lanice conchilega*) Hydroid (*Nemertesia antennina*) Swimming crab (*Liocarcinus depurator*) Slipper limpets (*Crepidula fornicata*) Encrusting sponge (Porifera) Bryozoan (*Alcyonidium diaphanum*) Hermit crab (Paguridae) Shrimp (Caridea) Sea squirt (Didemnidae) Sunstar (*Crossaster papposus*) Starfish (*Asterias rubens*) Anemone (*Urticina* sp.)	10 19 % < 1 % < 1 % P P < 1 % 1 < 1 % < 1 % < 1 % P P P 1 1 3	C R R P P R O R R R P P P F O O	
EC_18	SOL EOL	381 772.9 381 707.4	5 874 880.4 5 874 881.8	Sandy gravel with occasional cobbles Circalittoral mixed sediments (A5.44)	Faunal turf (Hydrozoa/Bryozoa) Bryozoan (Flustridae inc. *Flustra foliacea*) Slipper limpets (*Crepidula fornicata*) Anemone (*Sagartia* sp.) Anemone (Sagartiidae) Sea squirt (?*Dendrodoa grossularia*) Hydroid (*Nemertesia antennina*) Sandeels (Ammodytidae) Faunal tubes (Serpulidae) Encrusting sponges (Porifera) Draonet (*Callionymus* sp.) Hermit crab (Paguridae) Faunal tube (Sabellidae) Anemones (*Urticina* sp.) Lemon sole (*Microstomus kitt*) Hydroid (*Hydrallmania falcata*) Mackerel (*Scomber scombrus*) Sunstar (*Crossaster papposus*) Starfish (*Asterias rubens*)	5 9 % 1 5 % < 1 % P P P < 1 % P P < 1 % P P P 14 1 < 1 % 1 1 1	F O R P P P R P P R P P P F F R F F O	
EC_19	SOL EOL	377 661.7 377 626.0	5 871 139.9 5 871 163.8	Rippled sand with shell fragments Sublittoral sand (A5.2)	Starfish (*Asterias rubens*) Fish (Pisces)	4 2	F O	

Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS Classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
EC_23	SOL EOL	384 078.5 384 104.8	5 881 909.2 5 881 939.3	Rippled sand with a varying proportion of gravel and occasional cobbles Sublittoral coarse sediment (A5.1)	Faunal turf (Hydrozoa/Bryozoa) Bryozoan (Flustridae inc. *Flustra foliacea*) Slipper limpets (*Crepidula fornicata*) Anemone (Sagartiidae) Sea slug (Nudibranchia) Hermit crab (Paguridae) Barnacles (Sessilia) Anemones (*Urticina* sp.) Edible crab (*Cancer pagurus*)	< 1 % < 1 % < 1 % P P P P 1 1	R R R P P P P O F	
EC_24	SOL EOL	379 790.3 379 734.9	5 872 412.4 5 872 411.2	Sandy gravel with cobbles Small areas of exposed low lying dark substrate (peat) Circalittoral mixed sediments (A5.44)	Faunal turf (Hydrozoa/Bryozoa) Bryozoan (Flustridae inc. *Flustra foliacea*) Barnacles (Sessilia) Slipper limpets (*Crepidula fornicata*) Faunal tubes (Serpulidae) Sea squirt (?*Dendrodoa grossularia*) Anemones (*Urticina* sp.) Anemone (Sagartiidae) Encrusting bryozoan (Bryozoa) Spider crab (Macropodia sp.) Squat lobster (Galatheoidea) Encrusting sponge (Porifera) Faunal tubes (*Lanice conchilega*) Edible crab (*Cancer pagurus*) Common sunstar (*Crossaster papposus*)	< 1 % < 1 % P < 1 % P P 19 P < 1 % P P < 1 % P 4 2	R R P R P P F P R P P R P F F	
EC_25	SOL EOL	378 783.9 378 736.6	5 871 921.1 5 871 920.0	Gravel with cobbles Circalittoral mixed sediments (A5.44)	Faunal turf (Hydrozoa/Bryozoa) Bryozoan (Flustridae inc. *Flustra foliacea*) Common sunstar (*Crossaster papposus*) Faunal tubes (Serpulidae) Encrusting bryozoan (Bryozoa) Slipper limpets (*Crepidula fornicata*) Sea squirt (?*Dendrodoa grossularia*) Anemones (*Urticina* sp.) Coralline algae (Corallinaceae) Sea squirt (*Clavelina lapediformis*) Swimming crab (*Liocarcinus* sp.) Painted topshell (*Calliostoma zizyphinum*) Starfish (*Asterias rubens*) Edible crab (*Cancer pagurus*)	< 1 % < 1 % 3 P < 1 % < 1 % P 34 < 1 % P P P 3 1	R R F P R R P F R P P P O F	

Geodetic Parameters: WGS 1984, UTM Zone 31N, CM 3°E [m]								
Station/ Transect		Easting	Northing	Detailed Sediment Notes and EUNIS Classification	Conspicuous Species	Counts or Percentage Cover	Estimated Abundance*	Representative Image
EC_26	SOL	375 233.3 375 247.4	5 868 469.0 5 868 564.1	Rippled sand with exposed chalk and cobbles and boulders Infralittoral rock and other hard substrata (A3)	Starfish (*Asterias rubens*) Red algae (Rhodophycota) Faunal turf (Hydrozoa/Bryozoa) Tube building worm (*Sabella* sp.) Anemone (Sagartiidae) Brown algae (*Cutleria multifida*) Anemones (*Urticina* sp.) Red algae (*Phyllophora* sp.) Anemone (*Sagartia* sp.) Red algae (*Asparagopsis* sp.) Red algae (*Osmundea* sp.) Goby (Gobiidae)	3 1 5 % < 1 % P P < 1 % 1 < 1 % P P P	O O R P P P O R P P P	
		375 247.4 375 242.9	5 868 564.1 5 868 601.1	Rippled sand with a varying proportion of gravel and cobbles and boulders Sublittoral coarse sediment (A5.1)	Starfish (*Asterias rubens*) Faunal tubes (Serpulidae) Red algae (Rhodophycota) Faunal turf (Hydrozoa/Bryozoa) Goby (Gobiidae)	4 P < 1 % < 1 % P	F P R R P	
	EOL	375 242.9 375 245.1	5 868 601.1 5 868 675.1	Rippled sand with a varying proportion of gravel Sublittoral sand (A5.2)	Starfish (*Asterias rubens*)	3	O	

Notes
* = Abundance using the Superabundant, abundant, common, frequent, occasional and rare (semi-quantitative abundance scale)
SOL = Start of line
EOL = End of line
P = Present

G.2 Stony Reef Assessment

G.2.1 Sheringham Shoal

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_01	1	383 353.1	5 883 473.2	0	Flat seabed	< 80	
	2	383 348.4	5 883 476.7	0	Flat seabed	< 80	
	3	383 344.2	5 883 480.1	0	Flat seabed	< 80	
	4	383 338.8	5 883 485.9	0	Flat seabed	< 80	
	5	383 330.0	5 883 492.8	0	Flat seabed	< 80	
	6	383 327.3	5 883 495.0	0	Flat seabed	< 80	
	7	383 324.4	5 883 498.4	0	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**
SS_03	1	380 925.7	5 885 495.0	0	Flat seabed	< 80	
	2	380 922.2	5 885 499.6	0	Flat seabed	< 80	
	3	380 919.2	5 885 504.3	0	Flat seabed	< 80	
	4	380 914.8	5 885 507.5	0	Flat seabed	< 80	
	5	380 907.6	5 885 513.6	0	Flat seabed	< 80	
	6	380 902.4	5 885 518.6	0	Flat seabed	< 80	
	7	380 898.4	5 885 524.3	0	Flat seabed	< 80	
	8	380 895.8	5 885 529.4	0	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_04	1	381 608.0	5 886 539.2	0	Flat seabed	< 80	
	2	381 605.5	5 886 548.4	0	Flat seabed	< 80	
	3	381 603.4	5 886 553.7	0	Flat seabed	< 80	
	4	381 599.5	5 886 561.4	1	Flat seabed	< 80	
	5	381 593.7	5 886 571.3	0	Flat seabed	< 80	
	6	381 590.8	5 886 576.5	0	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**
SS_06	1	383 935.8	5 888 191.2	0	Flat seabed	< 80	
	2	383 947.4	5 888 197.0	0	Flat seabed	< 80	
	3	383 952.1	5 888 199.0	0	Flat seabed	< 80	
	4	383 954.9	5 888 201.0	0	Flat seabed	< 80	
	5	383 961.1	5 888 205.3	0	Flat seabed	< 80	
	6	383 970.1	5 888 207.6	0	Flat seabed	< 80	
	7	383 974.2	5 888 209.2	5	< 64	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_07	1	382 199.1	5 887 676.0	0	Flat seabed	< 80	
	2	382 199.1	5 887 680.3	0	Flat seabed	< 80	
	3	382 201.2	5 887 686.3	0	Flat seabed	< 80	
	4	382 203.7	5 887 691.1	0	Flat seabed	< 80	
	5	382 205.4	5 887 697.2	0	Flat seabed	< 80	
	6	382 205.0	5 887 702.6	0	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**
SS_09	1	382 478.5	5 889 017.2	0	Flat seabed	< 80	
	2	382 483.9	5 889 016.3	5	Flat seabed	< 80	
	3	382 488.2	5 889 016.0	2	Flat seabed	< 80	
	4	382 489.3	5 889 015.5	5	Flat seabed	< 80	
	5	382 496.8	5 889 015.2	3	Flat seabed	< 80	
	6	382 503.3	5 889 008.6	10	< 64	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_10	1	379 378.1	5 889 550.6	0	Flat seabed	< 80	
	2	379 386.3	5 889 552.6	1	Flat seabed	< 80	
	3	379 391.3	5 889 553.7	4	Flat seabed	< 80	
	4	379 397.0	5 889 555.1	1	Flat seabed	< 80	
	5	379 404.2	5 889 557.5	6	< 64	< 80	
	6	379 408.4	5 889 558.9	10	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**
SS_11	1	379 727.7	5 891 993.5	0	Flat seabed	< 80	
	2	379 735.7	5 892 001.3	0	Flat seabed	< 80	
	3	379 738.6	5 892 004.5	3	Flat seabed	< 80	
	4	379 740.8	5 892 007.4	0	Flat seabed	< 80	
	5	379 744.5	5 892 011.4	0	Flat seabed	< 80	
	6	379 746.8	5 892 014.3	0	Flat seabed	< 80	
	7	379 748.7	5 892 015.8	0	Flat seabed	< 80	
	8	379 750.6	5 892 015.5	4	Flat seabed	< 80	
	9	379 751.8	5 892 015.3	2	Flat seabed	< 80	
	10	379 754.0	5 892 018.1	1	Flat seabed	< 80	
	11	379 759.9	5 892 023.0	1	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_12	1	376 925.6	5 893 256.0	6	Flat seabed	< 80	
	2	376 930.3	5 893 260.3	5	Flat seabed	< 80	
	3	376 935.5	5 893 266.1	2	Flat seabed	< 80	
	4	376 942.2	5 893 272.0	0	Flat seabed	< 80	
	5	376 945.4	5 893 274.0	1	Flat seabed	< 80	
	6	376 948.3	5 893 274.4	0	Flat seabed	< 80	
	7	376 951.6	5 893 273.2	0	Flat seabed	< 80	
	8	376 953.9	5 893 272.0	2	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**
SS_13	1	376 751.3	5 894 950.5	2	Flat seabed	< 80	
	2	376 752.8	5 894 951.4	3	< 64	< 80	
	3	376 755.4	5 894 953.1	3	< 64	< 80	
	4	376 760.9	5 894 957.3	0	Flat seabed	< 80	
	5	376 767.6	5 894 961.0	0	Flat seabed	< 80	
	6	376 771.1	5 894 962.7	4	Flat seabed	< 80	
	7	376 773.2	5 894 963.8	8	< 64	< 80	
	8	376 776.1	5 894 964.0	0	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_14	1	377 362.8	5 895 271.5	0	Flat seabed	< 80	
	2	377 365.0	5 895 271.4	1	Flat seabed	< 80	
	3	377 367.3	5 895 270.8	0	Flat seabed	< 80	
	4	377 371.0	5 895 269.5	1	Flat seabed	< 80	
	5	377 376.0	5 895 264.6	0	Flat seabed	< 80	
	6	377 382.1	5 895 262.6	0	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**
SS_15	1	375 956.3	5 895 471.3	0	Flat seabed	< 80	
	2	375 954.9	5 895 474.4	5	Flat seabed	< 80	
	3	375 953.1	5 895 477.6	9	< 64	< 80	
	4	375 951.2	5 895 481.6	13	< 64	< 80	
	5	375 949.4	5 895 486.1	8	< 64	< 80	
	6	375 947.7	5 895 489.8	5	< 64	< 80	
	7	375 943.6	5 895 498.1	0	Flat seabed	< 80	
	8	375 942.9	5 895 500.8	2	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall-Reefiness
		Easting [m]	Northing [m]				
SS_16	1	374 890.0	5 895 582.4	3	Flat seabed	< 80	
	2	374 890.5	5 895 583.9	5	< 64	< 80	
	3	374 890.8	5 895 585.6	3	Flat seabed	< 80	
	4	374 891.2	5 895 588.7	7	Flat seabed	< 80	
	5	374 891.7	5 895 593.4	3	Flat seabed	< 80	
	6	374 893.4	5 895 603.9	4	Flat seabed	< 80	
	7	374 893.3	5 895 605.7	6	< 64	< 80	
	8	374 892.8	5 895 606.8	10	< 64	< 80	
	9	374 891.4	5 895 611.2	8	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**
SS_17	1	375 587.0	5 896 330.3	8	< 64	< 80	
	2	375 589.1	5 896 332.8	8	< 64	< 80	
	3	375 591.2	5 896 335.2	7	< 64	< 80	
	4	375 592.8	5 896 337.1	4	Flat seabed	< 80	
	5	375 594.3	5 896 340.5	7	< 64	< 80	
	6	375 597.0	5 896 345.5	5	Flat seabed	< 80	
	7	375 599.4	5 896 348.8	6	Flat seabed	< 80	
	8	375 602.4	5 896 352.0	7	Flat seabed	< 80	
	9	375 605.4	5 896 355.7	4	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall-Reefiness
		Easting [m]	Northing [m]				
SS_18	1	374 190.6	5 896 467.5	3	< 64	< 80	
	2	374 188.0	5 896 471.2	3	< 64	< 80	
	3	374 185.7	5 896 476.6	2	< 64	< 80	
	4	374 183.9	5 896 481.6	3	Flat seabed	< 80	
	5	374 182.5	5 896 486.1	2	Flat seabed	< 80	
	6	374 181.3	5 896 491.2	3	< 64	< 80	
	7	374 179.6	5 896 499.0	3	Flat seabed	< 80	
	8	374 178.7	5 896 505.9	3	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**
SS_19	1	373 215.4	5 894 404.8	1	Flat seabed	< 80	
	2	373 213.5	5 894 413.8	2	Flat seabed	< 80	
	3	373 212.9	5 894 417.3	3	Flat seabed	< 80	
	4	373 212.0	5 894 422.0	5	Flat seabed	< 80	
	5	373 211.2	5 894 424.4	6	< 64	< 80	
	6	373 210.1	5 894 427.6	6	Flat seabed	< 80	
	7	373 210.7	5 894 430.5	4	< 64	< 80	
	8	373 209.5	5 894 436.0	6	< 64	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall-Reefiness
		Easting [m]	Northing [m]				
SS_20	1	370 337.0	5 893 936.3	0	Flat seabed	< 80	
	2	370 335.6	5 893 941.8	0	Flat seabed	< 80	
	3	370 336.1	5 893 942.7	2	Flat seabed	< 80	
	4	370 335.7	5 893 945.1	0	Flat seabed	< 80	
	5	370 335.1	5 893 948.0	0	Flat seabed	< 80	
	6	370 333.9	5 893 950.9	0	Flat seabed	< 80	
	7	370 334.1	5 893 952.5	0	Flat seabed	< 80	
	8	370 329.9	5 893 959.1	1	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**
SS_21A	1	370 321.2	5 894 452.7	1	Flat seabed	< 80	
	2	370 321.5	5 894 455.8	0	Flat seabed	< 80	
	3	370 321.3	5 894 457.8	0	Flat seabed	< 80	
	4	370 321.6	5 894 464.3	0	Flat seabed	< 80	
	5	370 320.4	5 894 473.7	0	Flat seabed	< 80	
	6	370 319.9	5 894 478.7	0	Flat seabed	< 80	
	7	370 319.0	5 894 480.7	0	Flat seabed	< 80	
	8	370 317.5	5 894 483.6	1	Flat seabed	< 80	
	9	370 315.7	5 894 490.4	0	Flat seabed	< 80	
	10	370 316.3	5 894 500.2	1	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall-Reefiness
		Easting [m]	Northing [m]				
SS_22	1	371 119.4	5 895 714.8	2	Flat seabed	< 80	
	2	371 116.0	5 895 716.7	2	Flat seabed	< 80	
	3	371 112.8	5 895 719.2	0	Flat seabed	< 80	
	4	371 109.5	5 895 722.5	1	Flat seabed	< 80	
	5	371 107.5	5 895 725.1	0	Flat seabed	< 80	
	6	371 106.8	5 895 727.0	0	Flat seabed	< 80	
	7	371 105.7	5 895 728.3	0	Flat seabed	< 80	
	8	371 105.2	5 895 728.3	0	Flat seabed	< 80	
	9	371 105.4	5 895 728.6	1	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_23	1	370 128.7	5 895 812.6	2	Flat seabed	< 80	
	2	370 125.5	5 895 815.1	0	Flat seabed	< 80	
	3	370 122.2	5 895 818.0	1	Flat seabed	< 80	
	4	370 118.7	5 895 820.8	0	Flat seabed	< 80	
	5	370 116.0	5 895 822.7	4	Flat seabed	< 80	
	6	370 108.1	5 895 828.9	0	Flat seabed	< 80	
	7	370 104.7	5 895 832.1	0	Flat seabed	< 80	
	8	370 100.3	5 895 836.2	0	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**
SS_24	1	370 108.2	5 896 060.9	0	Flat seabed	< 80	
	2	370 107.5	5 896 064.5	0	Flat seabed	< 80	
	3	370 106.2	5 896 068.8	0	Flat seabed	< 80	
	4	370 103.1	5 896 076.1	0	Flat seabed	< 80	
	5	370 099.9	5 896 083.4	0	Flat seabed	< 80	
	6	370 097.7	5 896 085.9	0	Flat seabed	< 80	
	7	370 093.2	5 896 090.7	1	Flat seabed	< 80	
	Mean			**0**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
SS_25	1	369 255.5	5 895 036.7	0	Flat seabed	< 80	
	2	369 241.7	5 895 043.9	0	Flat seabed	< 80	
	3	369 238.2	5 895 046.3	0	Flat seabed	< 80	
	4	369 236.3	5 895 047.7	0	Flat seabed	< 80	
	5	369 232.6	5 895 050.7	3	Flat seabed	< 80	
	6	369 226.6	5 895 055.1	1	Flat seabed	< 80	
	7	369 224.5	5 895 057.3	0	Flat seabed	< 80	
	8	369 214.9	5 895 062.0	1	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**
SS_26	1	372 935.0	5 899 315.3	4	< 64	< 80	
	2	372 932.4	5 899 319.0	4	Flat seabed	< 80	
	3	372 930.3	5 899 322.6	5	Flat seabed	< 80	
	4	372 927.3	5 899 328.8	5	< 64	< 80	
	5	372 924.8	5 899 333.5	14	Flat seabed	< 80	
	6	372 922.4	5 899 336.5	8	Flat seabed	< 80	
	7	372 919.1	5 899 340.1	5	Flat seabed	< 80	
	8	372 914.9	5 899 344.4	3	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**
Key:	Not a Reef				Low Reef		

G.2.2 Export Cable Corridor

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_02	1	376 643.3	5 869 676.9	1	Flat seabed	< 80	
	2	376 640.4	5 869 678.5	2	Flat seabed	< 80	
	3	376 638.3	5 869 680.3	7	< 64	< 80	
	4	376 634.8	5 869 681.6	1	< 64	< 80	
	5	376 633.0	5 869 682.5	1	< 64	< 80	
	6	376 630.1	5 869 684.2	1	Flat seabed	< 80	
	7	376 627.4	5 869 684.6	1	Flat seabed	< 80	
	8	376 624.6	5 869 685.6	3	Flat seabed	< 80	
	9	376 622.9	5 869 687.6	0	Flat seabed	< 80	
	10	376 618.0	5 869 690.3	0	Flat seabed	< 80	
	Mean			**< 10**	**Flat seabed**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_03	1	378 255.2	5 870 766.2	0	Flat seabed	< 80	
	2	378 258.5	5 870 766.4	1	Flat seabed	< 80	
	3	378 262.7	5 870 767.2	12	< 64	< 80	
	4	378 265.4	5 870 767.2	1	Flat seabed	< 80	
	5	378 268.4	5 870 767.2	12	Flat seabed	< 80	
	6	378 271.3	5 870 767.2	7	Flat seabed	< 80	
	7	378 274.3	5 870 767.3	32	< 64	< 80	
	8	378 280.3	5 870 767.2	6	Flat seabed	< 80	
	9	378 287.3	5 870 767.2	15	Flat seabed	< 80	
	10	378 291.0	5 870 766.7	35	< 64	< 80	
	11	378 295.4	5 870 766.8	14	< 64	< 80	
	12	378 297.8	5 870 766.8	7	< 64	< 80	
	13	378 301.5	5 870 767.1	2	< 64	< 80	
	Mean			**10 - 40**	**< 64**	**< 80**	**Low Reef**
EC_04	1	379 058.9	5 872 311.4	2	< 64	< 80	
	2	379 052.0	5 872 308.8	3	< 64	< 80	
	3	379 045.3	5 872 306.2	5	< 64	< 80	
	4	379 035.6	5 872 304.3	2	< 64	< 80	
	5	379 026.1	5 872 304.5	4	< 64	< 80	
	6	379 020.7	5 872 304.1	3	< 64	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_05	1	200270_EC_05_001	380 750.6	5 873 785.4			
	2	200270_EC_05_002	380 747.5	5 873 793.6	3	< 64	
	3	200270_EC_05_003	380 744.6	5 873 795.7	3	< 64	
	4	200270_EC_05_004	380 741.8	5 873 797.8	4	< 64	
	5	200270_EC_05_005	380 739.4	5 873 801.6	5	< 64	
	6	200270_EC_05_006	380 739.4	5 873 806.8	4	< 64	
	7	200270_EC_05_007	380 740.1	5 873 809.4	2	< 64	
	8	200270_EC_05_008	380 741.7	5 873 812.0	7	< 64	
	9	200270_EC_05_009	380 747.1	5 873 816.6	8	< 64	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**
EC_06	1	382 451.4	5 876 009.9				
	2	382 461.0	5 876 008.0	2	< 64	< 80	
	3	382 465.0	5 876 007.4				
	4	382 472.9	5 876 007.6	1	Flat seabed	< 80	
	5	382 479.0	5 876 006.5	1	Flat seabed	< 80	
	6	382 482.6	5 876 006.5	2	Flat seabed	< 80	
	7	382 488.7	5 876 006.1	1	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_07	1	382 219.7	5 876 418.6	1	Flat seabed	< 80	
	2	382 223.2	5 876 417.2	0	Flat seabed	< 80	
	3	382 228.0	5 876 415.6	1	Flat seabed	< 80	
	4	382 229.5	5 876 414.9	0	Flat seabed	< 80	
	5	382 234.0	5 876 412.6	0	Flat seabed	< 80	
	6	382 239.3	5 876 411.0	0	Flat seabed	< 80	
	7	382 244.1	5 876 409.4	0	Flat seabed	< 80	
	8	382 253.4	5 876 404.4	1	Flat seabed	< 80	
	9	382 256.3	5 876 403.0	0	Flat seabed	< 80	
	10	382 261.0	5 876 400.4	0	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**
EC_08	1	382 382.3	5 877 158.1	0	Flat seabed	< 80	
	2	382 385.6	5 877 159.0	0	Flat seabed	< 80	
	3	382 390.0	5 877 160.4	0	Flat seabed	< 80	
	4	382 391.9	5 877 161.0	0	Flat seabed	< 80	
	5	382 398.7	5 877 162.1	0	Flat seabed	< 80	
	6	382 405.6	5 877 162.3	0	Flat seabed	< 80	
	7	382 409.8	5 877 162.6	0	Flat seabed	< 80	
	8	382 414.5	5 877 162.9	0	Flat seabed	< 80	
	Mean			**0**	**< 64**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_09	1	382 626.8	5 877 818.0	0	Flat seabed	< 80	
	2	382 629.6	5 877 817.3	0	Flat seabed	< 80	
	3	382 631.9	5 877 816.5	0	Flat seabed	< 80	
	4	382 634.3	5 877 816.2	0	Flat seabed	< 80	
	Mean			**0**	**< 64**	**< 80**	**Not a Reef**
EC_10	1	383 269.6	5 879 870.0	3	Flat seabed	< 80	
	2	383 273.1	5 879 868.2	3	< 64	< 80	
	3	383 282.2	5 879 862.7	1	Flat seabed	< 80	
	4	383 285.6	5 879 860.2	1	Flat seabed	< 80	
	5	383 288.6	5 879 858.2	1	Flat seabed	< 80	
	6	383 291.3	5 879 856.1	4	< 64	< 80	
	7	383 295.8	5 879 854.2	5	< 64	< 80	
	8	383 300.1	5 879 852.1	2	< 64	< 80	
	9	383 304.8	5 879 850.6	3	< 64	< 80	
	10	383 308.7	5 879 849.2	1	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**
EC_11	1	384 207.7	5 882 423.8	0	Flat seabed	< 80	
	2	384 202.6	5 882 426.3	0	Flat seabed	< 80	
	3	384 199.5	5 882 428.3	0	Flat seabed	< 80	
	4	384 190.7	5 882 432.6	0	Flat seabed	< 80	
	5	384 184.2	5 882 435.5	0	Flat seabed	< 80	
	6	384 179.1	5 882 437.4	4	< 64	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_12	1	377 362.8	5 895 271.5	0	Flat seabed	< 80	
	2	383 613.2	5 879 949.5				
	3	383 615.6	5 879 949.3	3	< 64	< 80	
	4	383 618.6	5 879 949.6	3	< 64	< 80	
	5	383 620.2	5 879 950.0	1	Flat seabed	< 80	
	6	383 624.1	5 879 950.4	1	Flat seabed	< 80	
	7	383 626.7	5 879 950.6	1	Flat seabed	< 80	
	8	383 629.4	5 879 951.3	1	Flat seabed	< 80	
	9	383 632.1	5 879 951.7	0	Flat seabed	< 80	
	10	383 634.8	5 879 951.9	1	Flat seabed	< 80	
	11	383 638.9	5 879 952.4	2	< 64	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**
EC_13	1	381 459.4	5 875 398.1	1	Flat seabed	< 80	
	2	381 454.1	5 875 398.1	0	Flat seabed	< 80	
	3	381 449.7	5 875 398.1	3	< 64	< 80	
	4	381 444.9	5 875 398.4	2	< 64	< 80	
	5	381 440.5	5 875 398.0	1	Flat seabed	< 80	
	6	381 435.8	5 875 399.3	1	Flat seabed	< 80	
	7	381 429.8	5 875 400.0	7	< 64	< 80	
	8	381 422.7	5 875 401.4	3	< 64	< 80	
	9	381 418.4	5 875 401.2	1	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**

Geodetic-Parameters:-WGS84,-UTM-Zone-31N,-CM-3°E-[m]							
Transect	Still	Still-Coordinates		Cobble/Boulders-Cover [%]	Mean-Elevation [mm]	Epifauna-Cover [%]	Overall-Reefiness
		Easting [m]	Northing [m]				
EC_14	1	377 418.1	5 870 616.7	2	Flat-seabed	< 80	
	2	377 421.9	5 870 615.6	18	< 64	< 80	
	3	377 426.5	5 870 614.4	22	< 64	< 80	
	4	377 431.1	5 870 615.1	8	< 64	< 80	
	5	377 436.7	5 870 616.9	1	Flat-seabed	< 80	
	6	377 441.2	5 870 618.1	1	Flat-seabed	< 80	
	7	377 449.1	5 870 619.0	7	< 64	< 80	
	8	377 454.3	5 870 621.6	15	< 64	< 80	
	9	377 458.5	5 870 623.7	8	< 64	< 80	
	10	377 464.0	5 870 627.0	7	< 64	< 80	
	11	377 469.8	5 870 631.7	16	< 64	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not-a-Reef**
EC_15	1	375 762.3	5 869 286.7	4	< 64	< 80	
	2	375 757.3	5 869 287.3	10	< 64	< 80	
	3	375 752.0	5 869 287.9	0	Flat-seabed	< 80	
	4	375 747.9	5 869 288.7	1	Flat-seabed	< 80	
	5	375 744.7	5 869 289.2	1	Flat-seabed	< 80	
	6	375 740.4	5 869 291.3	0	Flat-seabed	< 80	
	7	375 732.4	5 869 293.9	22	< 64	< 80	
	8	375 729.9	5 869 294.9	18	< 64	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not-a-Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_16	1	383 039.4	5 879 020.2	1	Flat seabed	< 80	
	2	383 041.9	5 879 020.7	1	< 64	< 80	
	3	383 043.4	5 879 021.1	2	< 64	< 80	
	4	383 045.4	5 879 021.6	6	< 64	< 80	
	5	383 047.2	5 879 022.1	3	< 64	< 80	
	6	383 048.6	5 879 022.5	8	< 64	< 80	
	7	383 051.0	5 879 022.4	3	< 64	< 80	
	8	383 053.2	5 879 022.0	3	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**
EC_17	1	381 300.8	5 875 850.3	0	Flat seabed	< 80	
	2	381 290.5	5 875 857.9	0	Flat seabed	< 80	
	3	381 285.9	5 875 862.4	0	Flat seabed	< 80	
	4	381 281.9	5 875 868.2	0	Flat seabed	< 80	
	5	381 278.1	5 875 877.7	0	Flat seabed	< 80	
	6	381 275.2	5 875 884.4	0	Flat seabed	< 80	
	7	381 272.1	5 875 889.7	0	Flat seabed	< 80	
	Mean			**0**	**< 64**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_18	1	381 760.9	5 874 882.9	2	Flat seabed	< 80	
	2	381 750.3	5 874 884.5	0	Flat seabed	< 80	
	3	381 745.5	5 874 884.8	0	Flat seabed	< 80	
	4	381 740.4	5 874 884.0	1	Flat seabed	< 80	
	5	381 735.9	5 874 885.0	2	Flat seabed	< 80	
	6	381 730.9	5 874 885.0	2	Flat seabed	< 80	
	7	381 726.5	5 874 885.2	2	Flat seabed	< 80	
	8	381 718.9	5 874 885.2	1	Flat seabed	< 80	
	9	381 714.3	5 874 884.4	0	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**
EC_19	1	377 645.3	5 871 150.8	0	Flat seabed	< 80	
	2	377 642.8	5 871 151.5	0	Flat seabed	< 80	
	3	377 640.3	5 871 154.3	0	Flat seabed	< 80	
	4	377 637.7	5 871 155.9	0	Flat seabed	< 80	
	5	377 635.4	5 871 157.7	0	Flat seabed	< 80	
	6	377 633.4	5 871 158.8	0	Flat seabed	< 80	
	7	377 629.8	5 871 161.0	0	Flat seabed	< 80	
	Mean			**0**	**< 64**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_23	1	384 088.4	5 881 917.8	1	Flat seabed	< 80	
	2	384 093.5	5 881 923.6	1	Flat seabed	< 80	
	3	384 095.6	5 881 927.2	1	Flat seabed	< 80	
	4	384 097.7	5 881 931.0	1	Flat seabed	< 80	
	5	384 098.9	5 881 932.3	1	Flat seabed	< 80	
	6	384 099.9	5 881 934.1	0	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**
EC_24	1	379 783.6	5 872 413.3	12	Flat seabed	< 80	
	2	379 775.6	5 872 411.6	15	Flat seabed	< 80	
	3	379 770.6	5 872 411.5	9	< 64	< 80	
	4	379 764.9	5 872 411.1	13	< 64	< 80	
	5	379 760.6	5 872 410.9	14	< 64	< 80	
	6	379 754.6	5 872 411.6	18	< 64	< 80	
	7	379 748.5	5 872 412.0	12	< 64	< 80	
	8	379 742.7	5 872 411.9	9	< 64	< 80	
	Mean			**10 40**	**< 64**	**< 80**	**Low Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_25	1	378 776.0	5 871 921.7	7	Flat seabed	< 80	
	2	378 769.2	5 871 923.1	6	Flat seabed	< 80	
	3	378 761.9	5 871 924.6	9	< 64	< 80	
	4	378 754.1	5 871 924.5	5	< 64	< 80	
	5	378 745.6	5 871 923.6	7	Flat seabed	< 80	
	6	378 737.9	5 871 923.1	9	Flat seabed	< 80	
	Mean			**< 10**	**< 64**	**< 80**	**Not a Reef**

Geodetic Parameters: WGS84, UTM Zone 31N, CM 3°E [m]							
Transect	Still	Still Coordinates		Cobble/Boulders Cover [%]	Mean Elevation [mm]	Epifauna Cover [%]	Overall Reefiness
		Easting [m]	Northing [m]				
EC_26	1	375 248.6	5 868 493.4	24	64 mm – 5 m	< 80	-
	2	375 249.3	5 868 495.4	-	-	-	-
	3	375 251.8	5 868 502.6	1	< 64	< 80	-
	4	375 253.8	5 868 511.1	8	< 64	< 80	-
	5	375 253.9	5 868 520.6	9	< 64	< 80	-
	6	375 253.1	5 868 531.6	17	64 mm – 5 m	< 80	-
	7	375 252.6	5 868 539.7	1	Flat seabed	< 80	-
	8	375 251.4	5 868 547.2	21	64 mm – 5 m	< 80	-
	9	375 248.6	5 868 559.2	31	64 mm – 5 m	< 80	-
	Mean			**10 - 40**	**< 64 mm**	**< 80**	**"Other geogenic reef"**
	10	375 246.9	5 868 565.6	1	Flat seabed	< 80	-
	11	375 246.5	5 868 571.4	5	< 64 mm	< 80	-
	12	375 246.4	5 868 578.8	6	< 64 mm	< 80	-
	13	375 243.8	5 868 588.3	8	< 64 mm	< 80	-
	14	375 243.1	5 868 597.0	3	< 64 mm	< 80	-
	15	375 244.7	5 868 617.2	0	Flat seabed	< 80	-
	16	375 248.4	5 868 632.5	0	Flat seabed	< 80	-
	17	375 249.3	5 868 644.1	0	Flat seabed	< 80	-
	18	375 246.7	5 868 663.1	0	Flat seabed	< 80	-
	Mean			**< 10**	**< 64 mm**	**< 80**	**Not a Reef**
Key:	Not a Reef				Low Reef		