

**Consolidation and analysis of benthos data  
from the Marine Aggregate Regional Environmental Assessment (MAREA)  
of the Humber Region**

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Pears, S. & Worsfold, T.M., 2011. *Consolidation and analysis of benthos data from the Marine Aggregate Regional Environmental Assessment (MAREA) of the Humber Region*. Thomson Unicmarine Report ERMMAREA11a to ERM, February 2011.

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## Summary

This report combines data from nine macrobenthic surveys carried out between 2002 and 2009 as part of the Humber Aggregates Dredging Association (HADA) Regional Environmental Assessment (REA). Original sample analysis was carried out by at least three different companies and consisted of a total of 718 samples. It is likely that other data exist for the area that were not included. The data was consolidated and standardised and cluster analysis was carried out on the resulting data matrix. Cluster groups were then used to assign biotopes and the results were mapped.

There were 138 cluster groups identified, which were consolidated into 20 biotopes. Some of the cluster groups fitted official biotope definitions well but others had more variable biota. The western area included many mixed substrata habitats with epibiota, including some dense beds of *Sabellaria spinulosa*. Further offshore, most biotopes were clean sand communities, with some scattered patches of more muddy sediment. Details of the biotope distributions should be considered provisional due to the high variability and a tendency for more complex patterns to be noted with increased sampling intensity.

## 1. Introduction

This report provides biotope analysis of biological and sediment data from nine macrofaunal grab surveys carried out between 2002 and 2009 as part of the Humber Aggregates Dredging Association (HADA) Regional Environmental Assessment (REA). A total of 718 samples were taken from the following survey areas: Areas 448 and 449, 2007 (17 samples); Area 481, 2008 (44 samples) and 2003 (44 samples); MIRO 106, 2003 (208 samples) (Newell *et al.*, 2004); Area 480, 2008 (40 samples) and 2002 (27 samples) (Marine Ecological Surveys Limited, 2009); ALSF REC, 2009 (135 samples); Dudgeon East OWF, 2008 (53 samples); Triton Knoll OWF, 2008 (150 samples).

## 2. Methods

Field and laboratory work was carried out by other contractors and all data was supplied to Unicomarine by ERM. A summary of the numbers of samples in each survey and analysing laboratories, where available, is presented in Table 1. As far as could be established all samples were collected using 0.1m<sup>2</sup> Hamon grab and sieved through a 1mm mesh. The data from each survey was extracted and imported into the Unicorn database system, where it was combined to produce a single species abundance matrix (see below).

Project	Year	Prefix Used	Analysing laboratory	Grab Stations	Grab Samples	PSA Samples
Area 448 & 449	2007	448-481(08)	Emu Ltd	15	17	16
Area 481	2008	-	MESL	30	44	43
Area 481	2003	481(03)	MESL	30	44	42
MIRO 106	2003	MIRO-480(08)	MESL	208	208	208
Area 480	2008	-	MESL	40	40	39
Area 480	2002	480(02)	MESL	27	27	24
ALSF REC	2009	-	MESL	135	135	125
Dudgeon East OWF	2008	AR-	MESL	53	53	53
Triton Knoll OWF	2008	DE-	ARTOO	150	150	161
		TK-	(RPS)			

**Table 1. Details of the nine surveys used in the data consolidation and truncation.**

### 2.1 Data analysis

Biological data from all nine surveys were imported into the Unicorn database so that a single combined biological data matrix could be produced. Each sample label was given a prefix so that it could be identified according to which survey it came from after the consolidation process. The full list of prefixes assigned to samples is presented in Table 1. Prior to importing data into Unicorn, taxa with no recorded occurrences were removed and some taxon names were amended to make compatible with the Unicorn species list. These changes are listed in Appendix 1. As different laboratories carried out benthic analyses, the biological and PSA data required standardisation to reduce discrepancies resulting from differences in methodology, a

process sometimes called data truncation. Details of changes made to the taxon list as part of the truncation process are provided in Appendix 2. Non-native species and those of conservation value were noted.

The sediment size data on a comparable Wentworth (1922) scale were combined to create a single PSA matrix. The data from two of the surveys (Area 481, 2003 and Area 480, 2002) were excluded as they had data on a reduced scale. A summary of proportions of silt, sand and gravel in each sample was created for the combined data from all nine surveys.

### *2.1.1 Univariate analyses*

Calculations of the number of taxa (S) and individuals (N), Margalef's index (d: species richness), Pielou's index (J': evenness) and Shannon-Wiener ( $H'(\log_e)$ , diversity) were made for each sample. Colonial taxa, such as bryozoans and hydroids were excluded from the total number of individuals but included when calculating the total number of taxa.

### *2.1.2 Cluster analysis*

To obtain a measure of the degree of similarity between the fauna found, cluster analysis was carried out on the combined macrobenthic data matrix using the PRIMER program. Prior to analysis, data were square-root transformed to remove right-skewness and prevent the dominance of a small number of highly abundant taxa (Clarke and Warwick, 2001). The analysis used a group averaging cluster algorithm on a Bray-Curtis similarity matrix (Clarke & Gorley, 2006). Prior to creating the Bray-Curtis similarity matrix, four samples with no recorded fauna (CR10a, W2a, W15a and W28a from the Dudgeon East OWF survey) were removed as Bray-Curtis is undefined for samples containing no species (Clarke and Gorley, 2006).

The clustering technique compares the abundance of each taxon in each sample, with its abundance in each of the other samples. The result is a matrix of similarity indices comparing each sample with all other samples. The similarity matrix resulting from the analysis is presented diagrammatically as a dendrogram. Samples that are similar link together towards the higher end of the similarity scale and those that are less similar link towards the lower end. The scale is an index from 0% to 100% and should be viewed as a relative indicator of similarity; it does not indicate the proportion of species in common. Interpretation of the dendrogram is subjective and involves the recognition of groups or clusters of samples, which are joined at higher levels of similarity on the basis of a similar fauna. Generally, different cluster groups are recognised at below about 30% similarity but this is often modified due to the tendency for rich communities to cluster more tightly than impoverished ones.

### *2.1.3 Community structure*

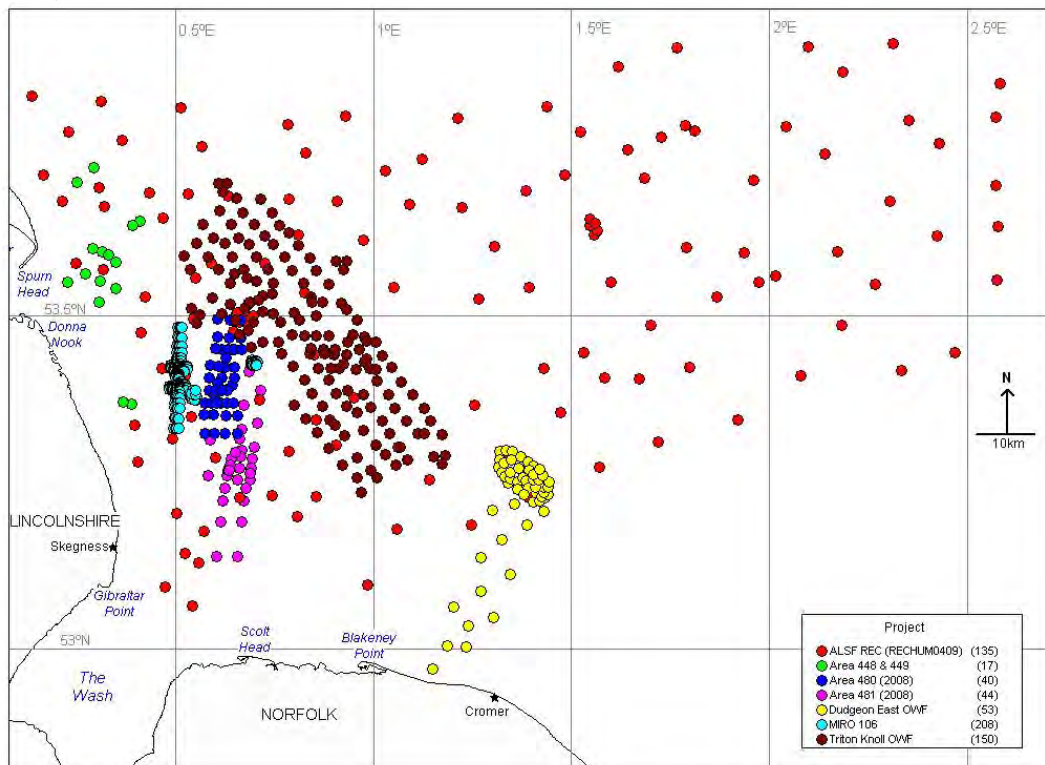
The data were examined further to determine the characteristic fauna of the communities recognised by the groupings of sites described above. Cluster groups of similar fauna were identified and the most abundant fauna in each group listed. A list of samples in each cluster group was made and the mean number of individuals of each taxon recorded in the samples assigned to each of the cluster groups was calculated and converted to numbers per m<sup>2</sup>. The resulting lists represent, in decreasing order, the numerically dominant taxa. Only the top 20 taxa are given in

each list. The report includes separate listings for those taxa that were fully enumerated in the samples and those which were not countable. The latter include taxa such as bryozoans, which are identified but recorded as present only. The list for this group is thus an average of the number of samples in which each of the listed taxa occurred, again sorted in decreasing order. The groups were then assigned to standard biotopes using the most recent classification (Connor *et al.*, 2004).

### 3. Results

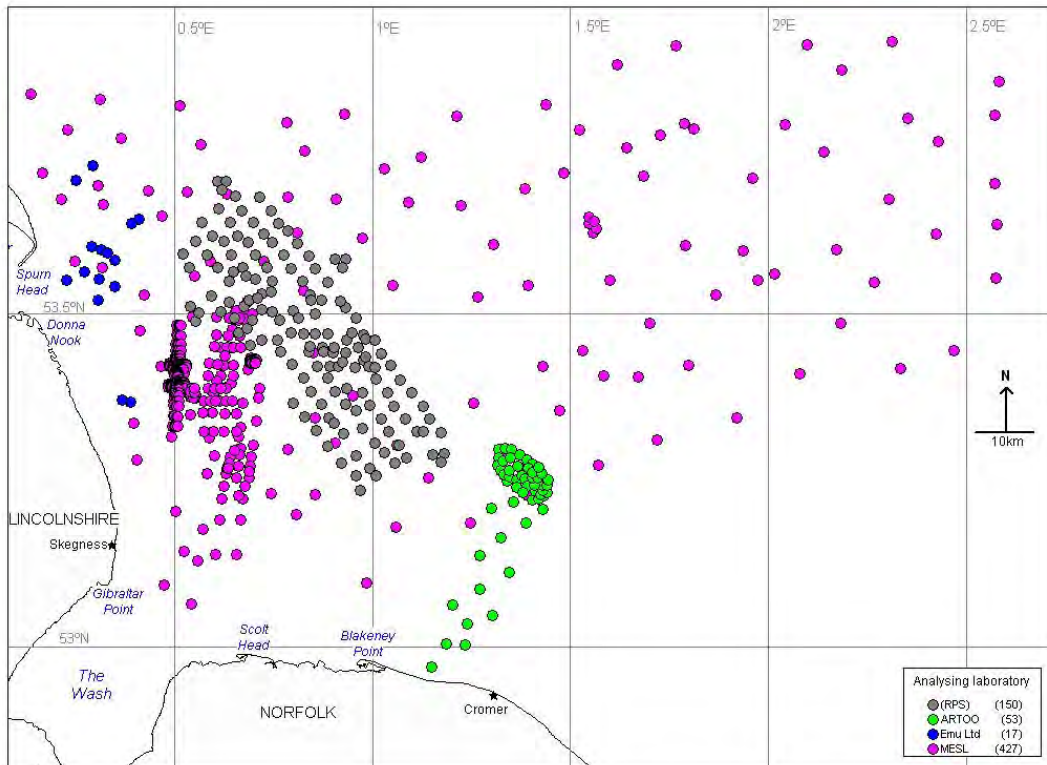
#### 3.1 Included samples

The samples for which data were included for the study were from seven different projects (Table 1; Figure 1), of which two were repeated in different years. The data included samples collected between 2002 and 2009. At least three different laboratories were involved in macrofaunal analysis (Table 1; Figure 2) but details of the analysing laboratory were unavailable for the Triton Knoll project (survey by RPS).



**Figure 1. Locations of samples included in study, with project assignments.**

A large number of samples (718) were included in the study; they are listed in Appendix 3, with positions and project details, as well as basic statistics (see below). Positions of samples included in the study are shown in each map. Sample codes are not included on the maps due to lack of space. One of the provided positions for the Triton Knoll OWF survey (Sample 160a) had a recorded latitude of 51°, which is not within the included survey area and was therefore assumed to be a transcription error and corrected to 53°.

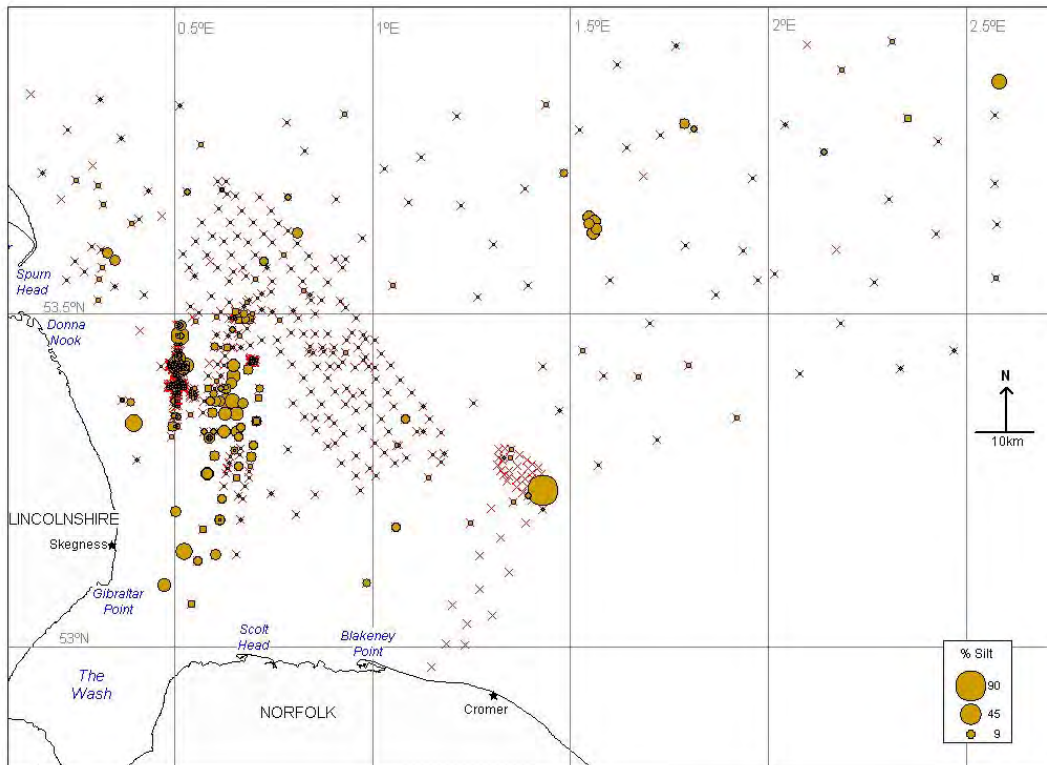


**Figure 2. Samples included in study coded for the laboratory that analysed them (RPS was survey company – analyst information unavailable).**

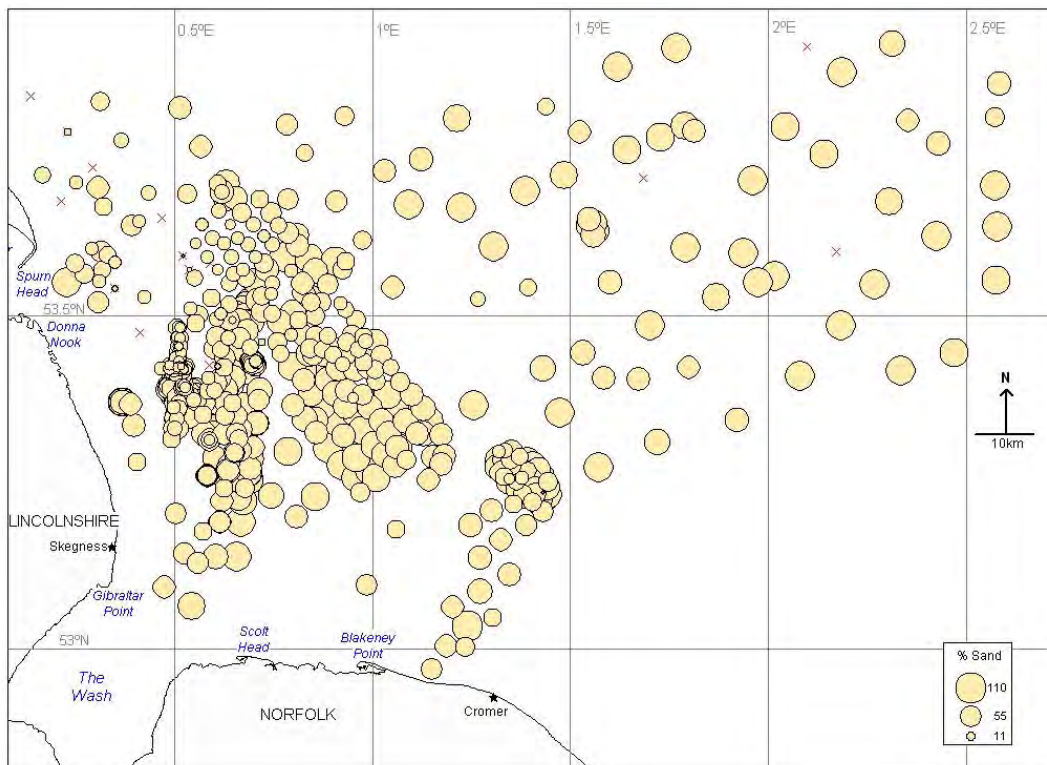
### 3.2 Particle size analysis (PSA)

The combined PSA data for the seven surveys with comparable fractions are summarised in Appendix 4. A summary for each sample, simplified to three basic fractions is provided in Appendix 3. The fractions are plotted in Figures 3-5, showing the most recent data for those stations that were repeat-sampled. Most stations had little silt (Figure 3), none with more than 50%. Moderate proportions of silt were found in some scattered offshore areas and in the MIRO survey region and Areas 480 and 481. Sand (Figure 4) was an important sediment component at nearly all stations, over 50% at many, especially offshore. Gravel (Figure 5) was widespread, particularly at some of the stations in the western part of the area, about 20-50km offshore.

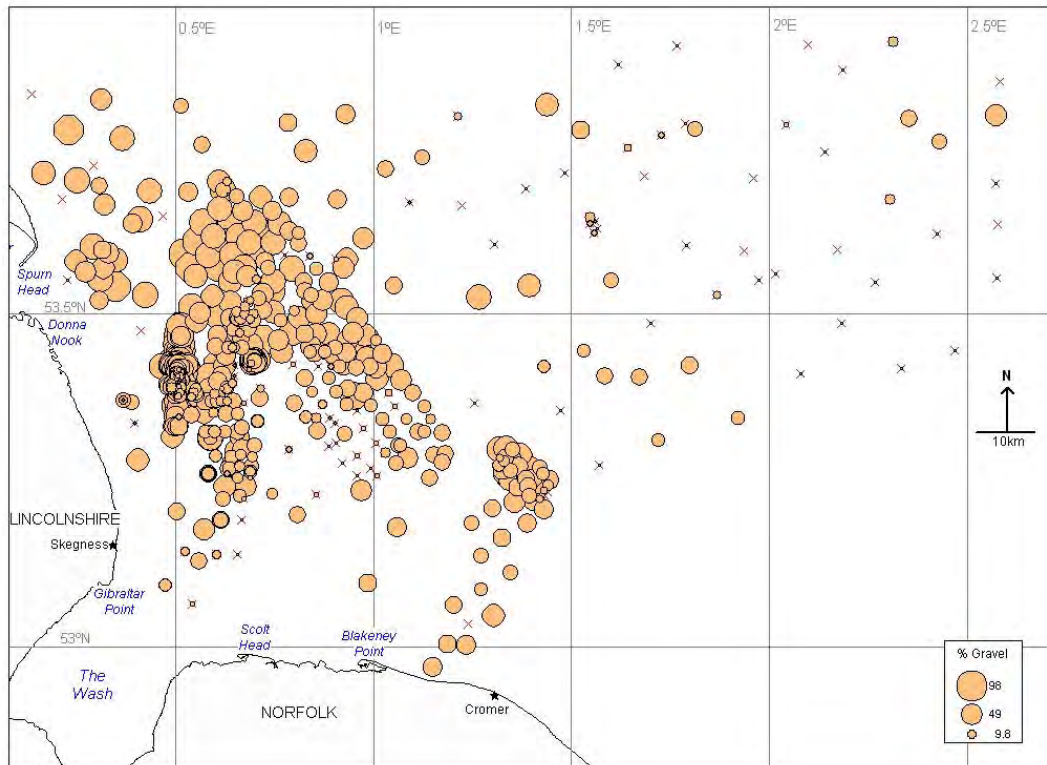




**Figure 3. Percentage of silt recorded at each station (red crosses show positions of all samples, although some may have negligible silt fractions).**



**Figure 4. Percentage of sand recorded at each station (red crosses show positions of all samples, although some may have negligible sand fractions).**



**Figure 5. Percentage of gravel recorded at each station (red crosses show positions of all samples, although some may have negligible gravel fractions).**

### 3.3 Biological data

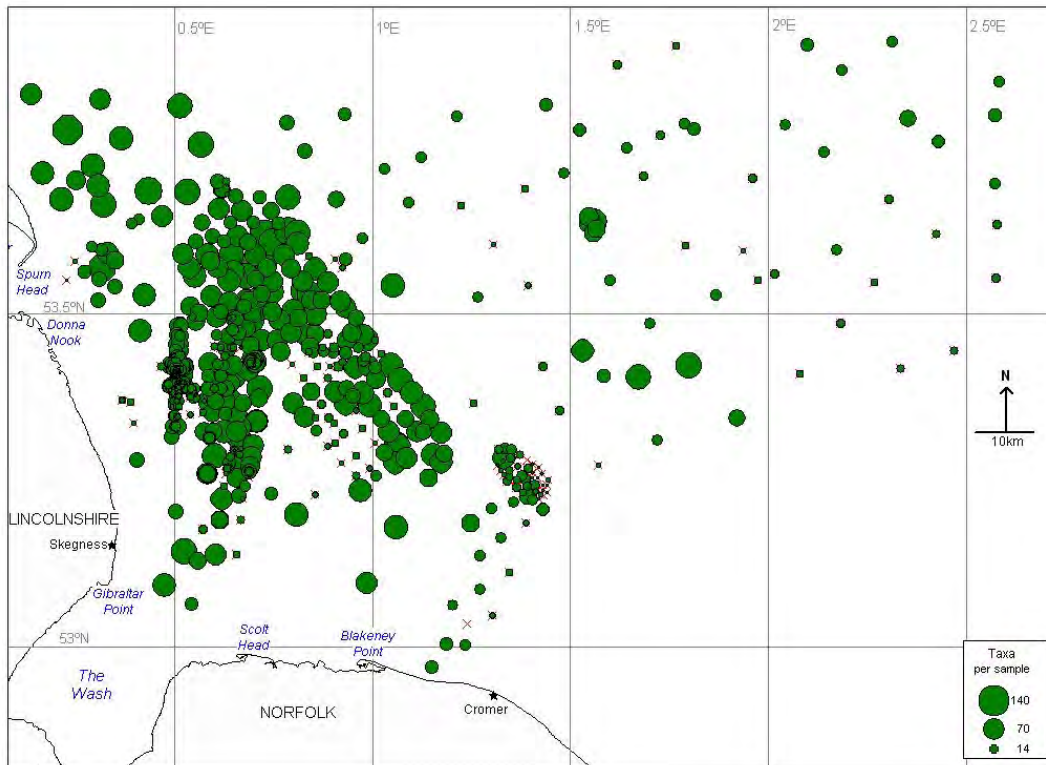
As there are 718 samples and Excel 2003 only allows a maximum of 256 columns in a single spreadsheet, the matrix spans three worksheets, with the full taxon list on all three sheets. The combined matrix is too large to include in this report but it is available electronically. Species Directory codes (Howson and Picton, 1997) are included.

Numbers of taxa (per sample) and individuals (per sample and per m<sup>2</sup>) and values of Margalef's species richness index (D), Pielou's evenness index (J') and Shannon-Wiener diversity (H'(log<sub>e</sub>)) are included in Appendix 3.

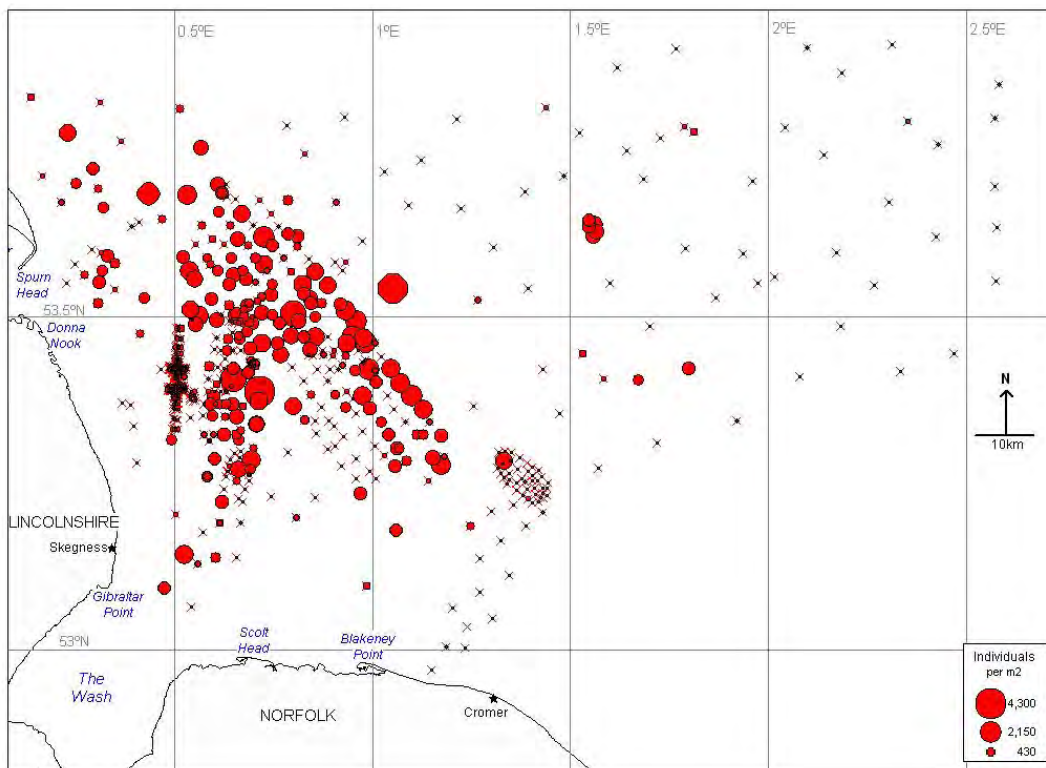
Numbers of taxa (Figure 6) ranged from 0 to 131 (mean 35.36). The highest numbers were often in the west of the study area but there was much variability throughout.

Numbers of individuals per m<sup>2</sup> (Figure 7) ranged from 0 to 42,740 (mean 3233.87). They were highest in the western part of the study area, with isolated patches of high or low numbers throughout the area.

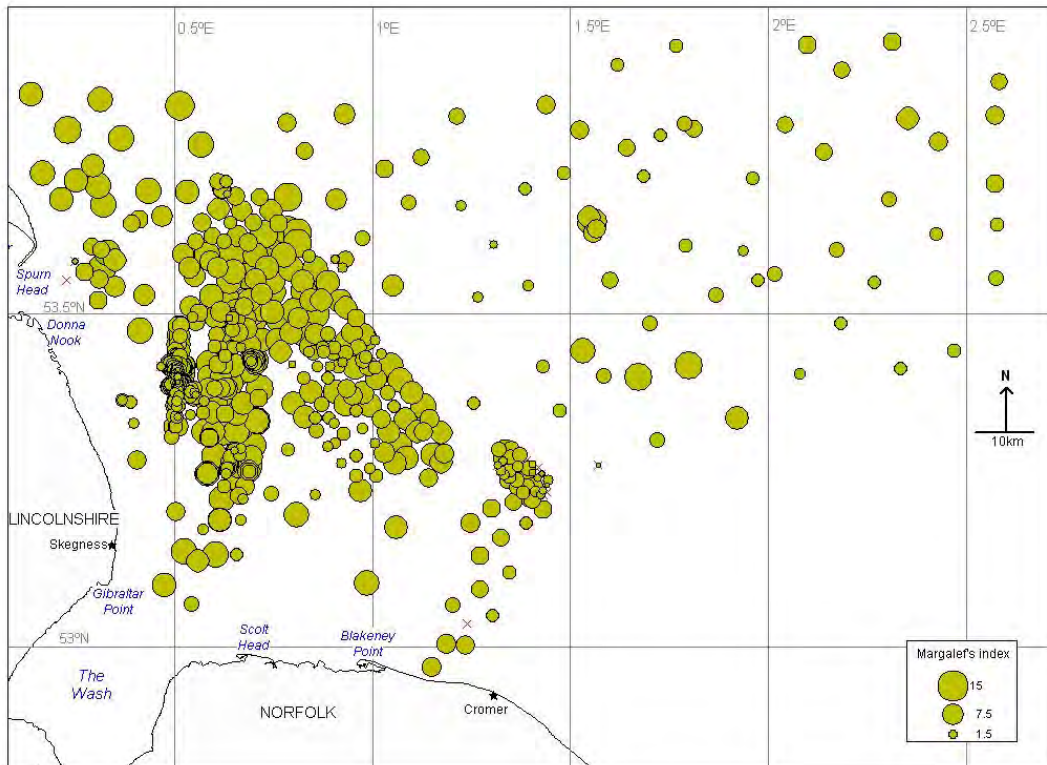
Margalef's species richness index (Figure 8) ranged from 0.558 to 14.326 (mean: 5.817). Pielou's evenness index (Figure 9) ranged from 0.148 to 1.0 (mean: 0.748). Shannon Wiener Diversity (Figure 10) ranged from 0.354 to 3.76 (mean: 2.234).



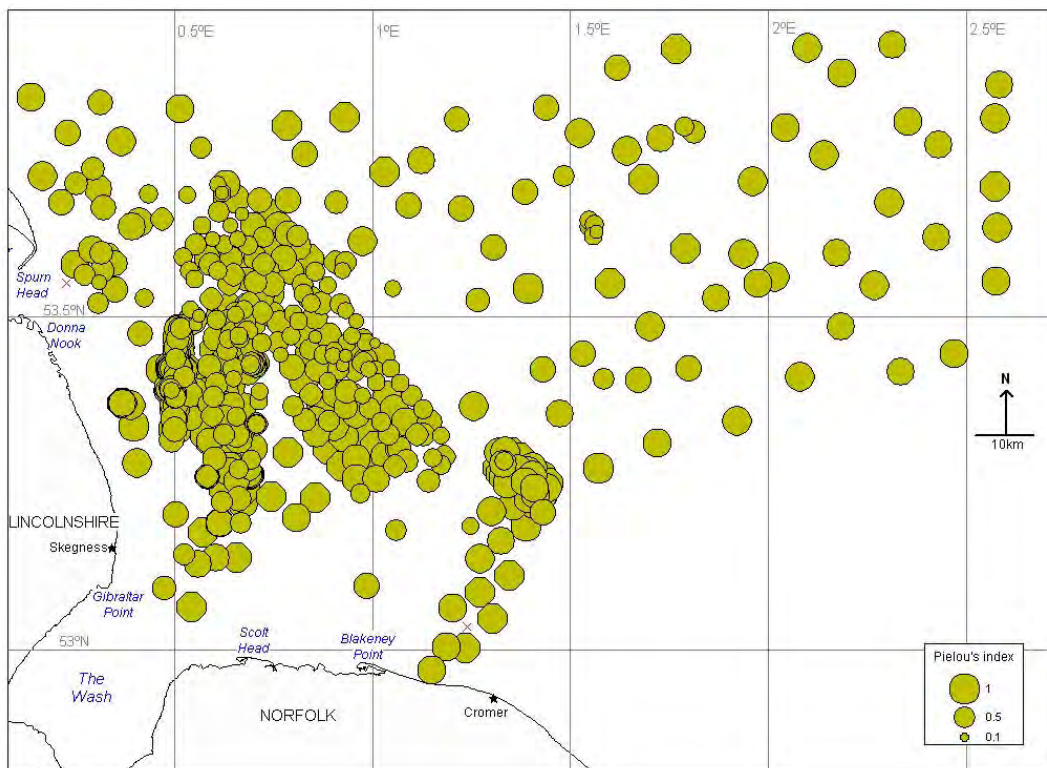
**Figure 6. Numbers of taxa recorded at each station.**



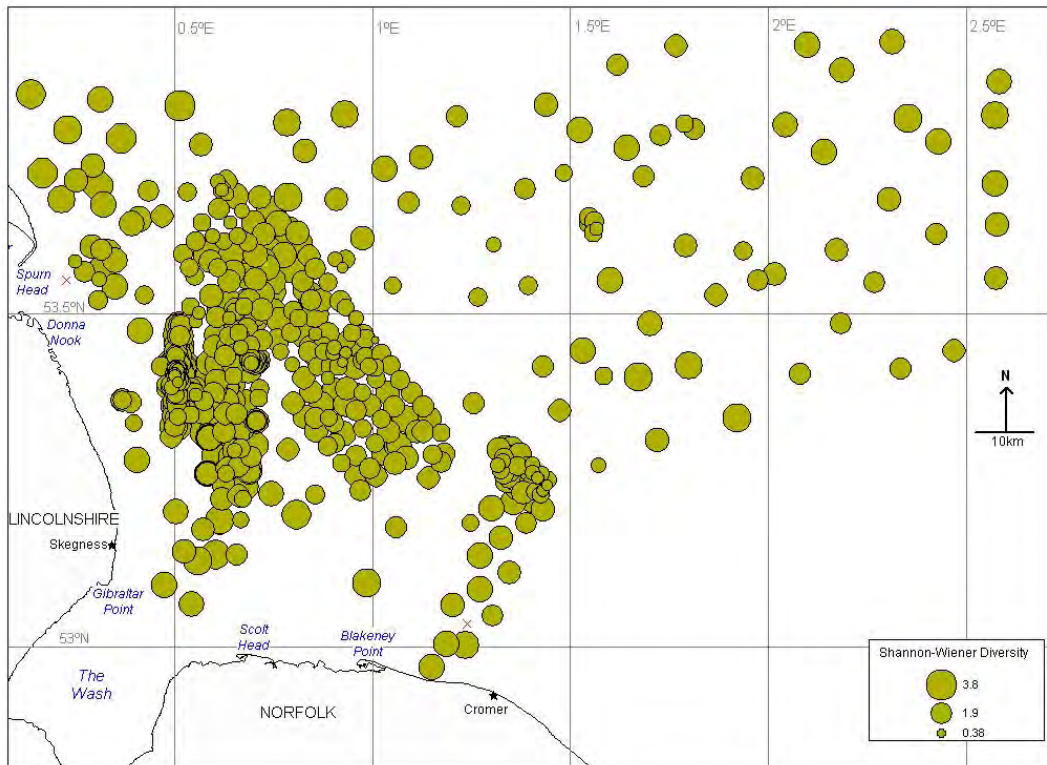
**Figure 7. Numbers of individuals recorded per m<sup>2</sup> at each station.**



**Figure 8. Values of Margalef's index (d: species richness) for each station.**



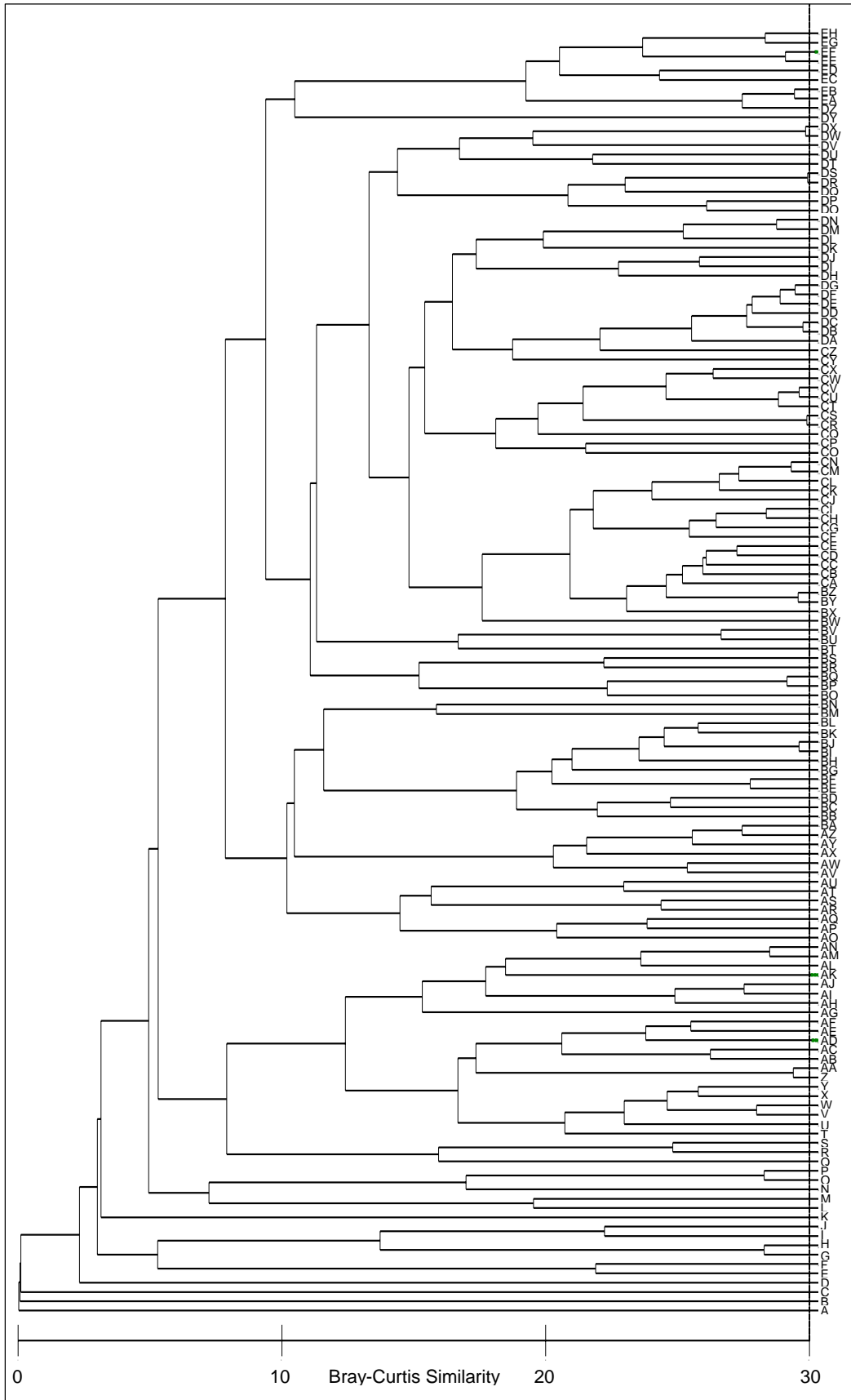
**Figure 9. Values of Pielou's index (J': evenness) for each station.**



**Figure 10. Values of Shannon-Wiener Diversity ( $H'(\log_e)$ ) recorded per  $m^2$  at each station.**

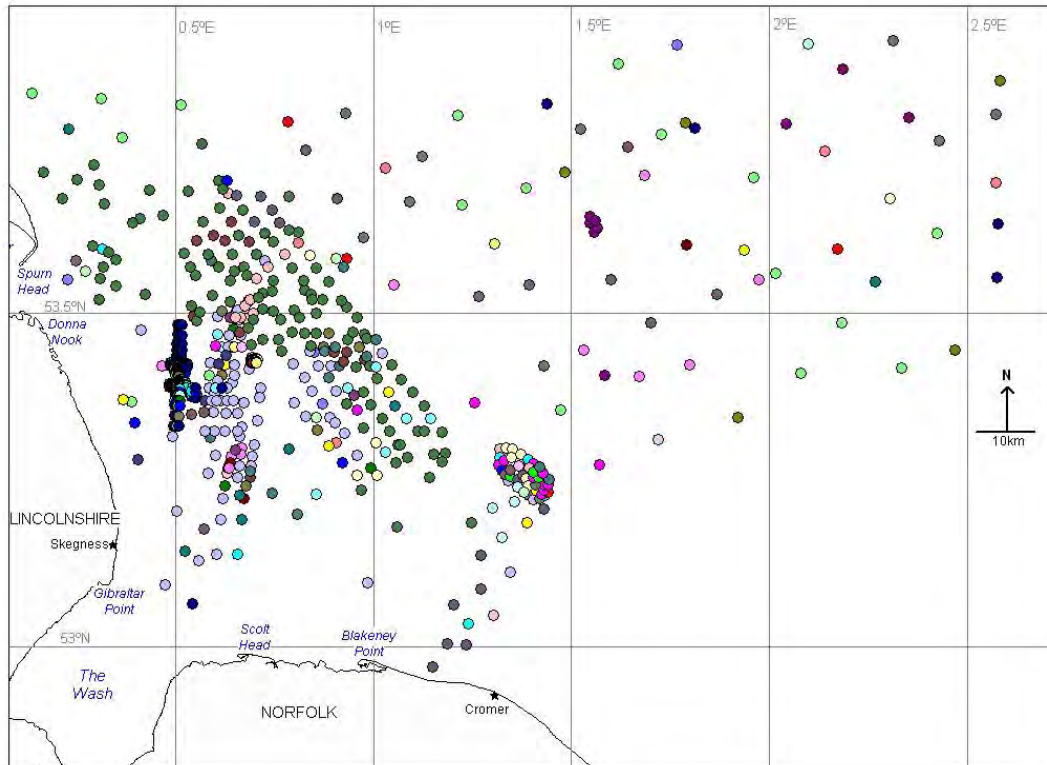
### 3.3.1 Bray Curtis similarity

Due to the large number of samples in the combined dataset the full cluster diagram is largely unreadable in both A4 and A3 page formats. It is provided in Appendix 5 for reference purposes. A reduced cluster dendrogram showing the 0-30% similarities and with each cluster group collapsed to a single branch along the 30% slice is presented in Figure 11.



**Figure 11. Cluster dendrogram showing 0-30% similarity and clusters at 30%**

The spatial distribution of cluster groups is shown in Figure 12 but the large number of cluster groups does not allow for the inclusion of a legend and many of the symbol colour differences are slight. It is nevertheless possible to see how biotopes were composed of multiple cluster groups by comparison with Figure 13. Cluster group assignments for each sample are also included in Appendix 3.



**Figure 12. Cluster group assignments for each station.**

### 3.3.2 Dominant taxa

The table of dominant taxa for each cluster group, with separate lists for average numbers of countable taxa and percentages of samples in which each non-countable taxon was found, was too large for the report but is available electronically. A summary, including only representative cluster groups for each biotope, is presented as Appendix 6. The cluster group best fitted the standard description (Connor *et al.*, 2004) was chosen in each case.

### 3.3.3 Biotope assignments

Biotope assignments for each sample are included in Appendix 3 and mapped in Figure 13. The assignments are extrapolated into a biotope map, with stations excluded, for the whole area in Figure 14; the colours are standardised for habitats (Connor *et al.*, 2004). It must be remembered that the apparent distribution of biotopes is strongly affected by sample density. Low sample density areas, such as the offshore eastern part of the study area give an artificial impression of uniformity. It is likely that the finer scale biotope distribution in these areas would be more complex. This can be seen for areas with very high sample density, such as the Dudgeon East (Figure 15) and the MIRO survey area (Figure 16). Both of these regions had high variability of biotopes within small areas.

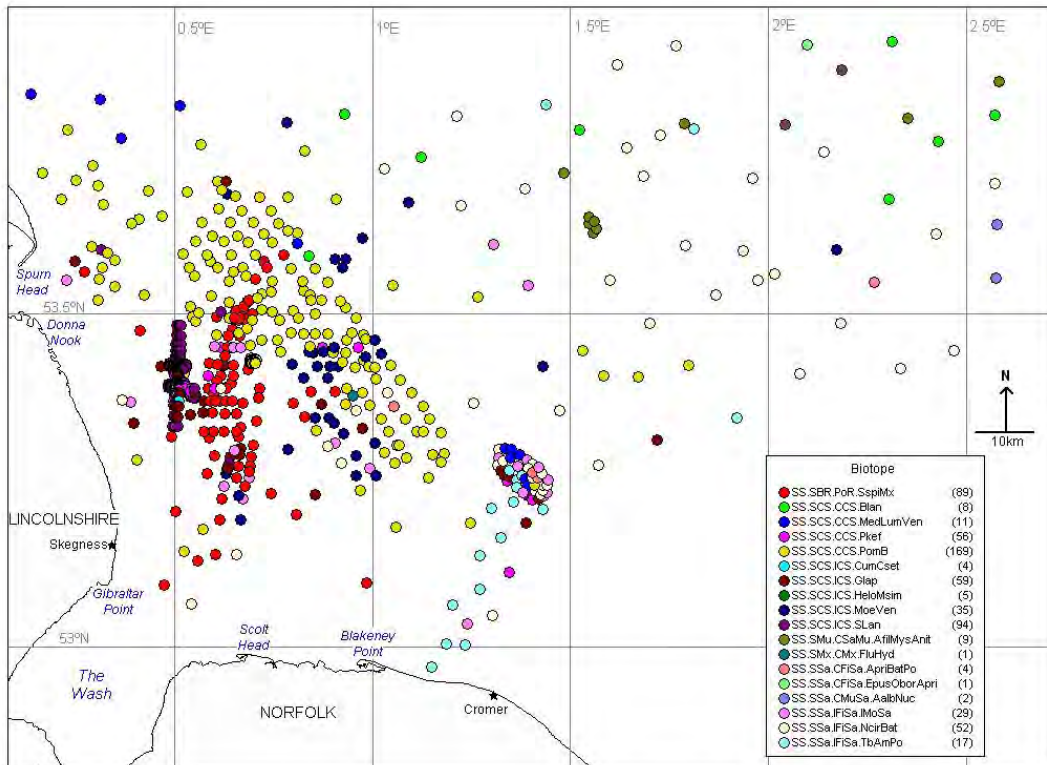


Figure 13. Biotope assignments for each station.

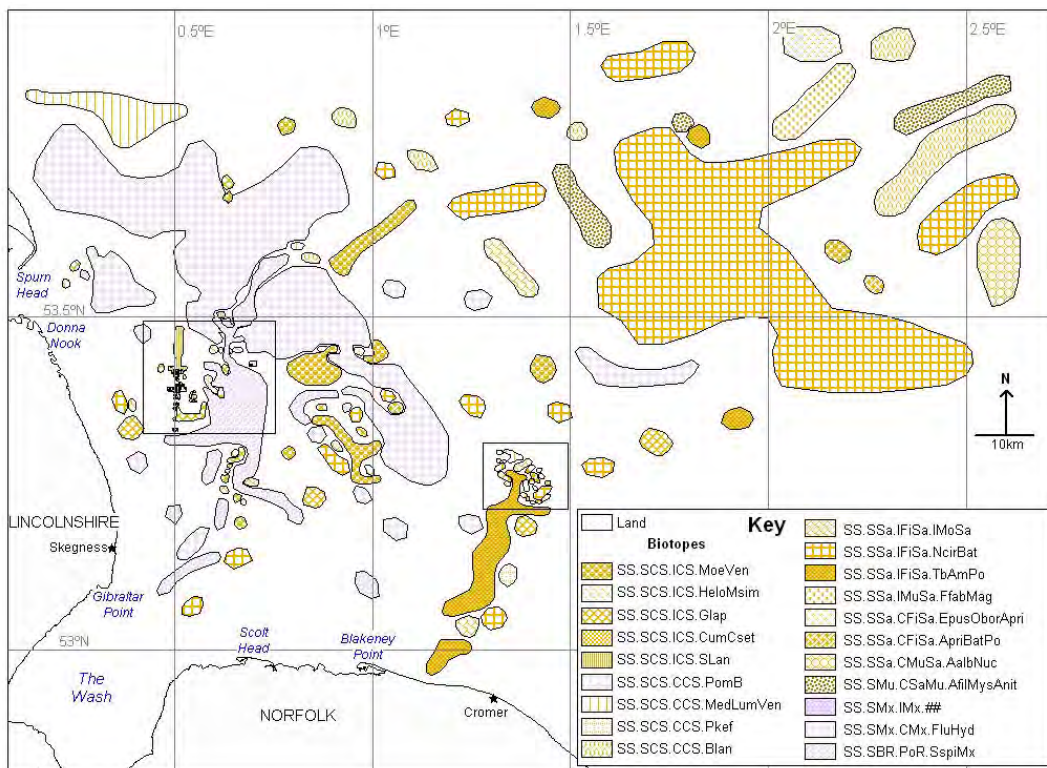


Figure 14. Extrapolated biotope map, with standard colour codes.



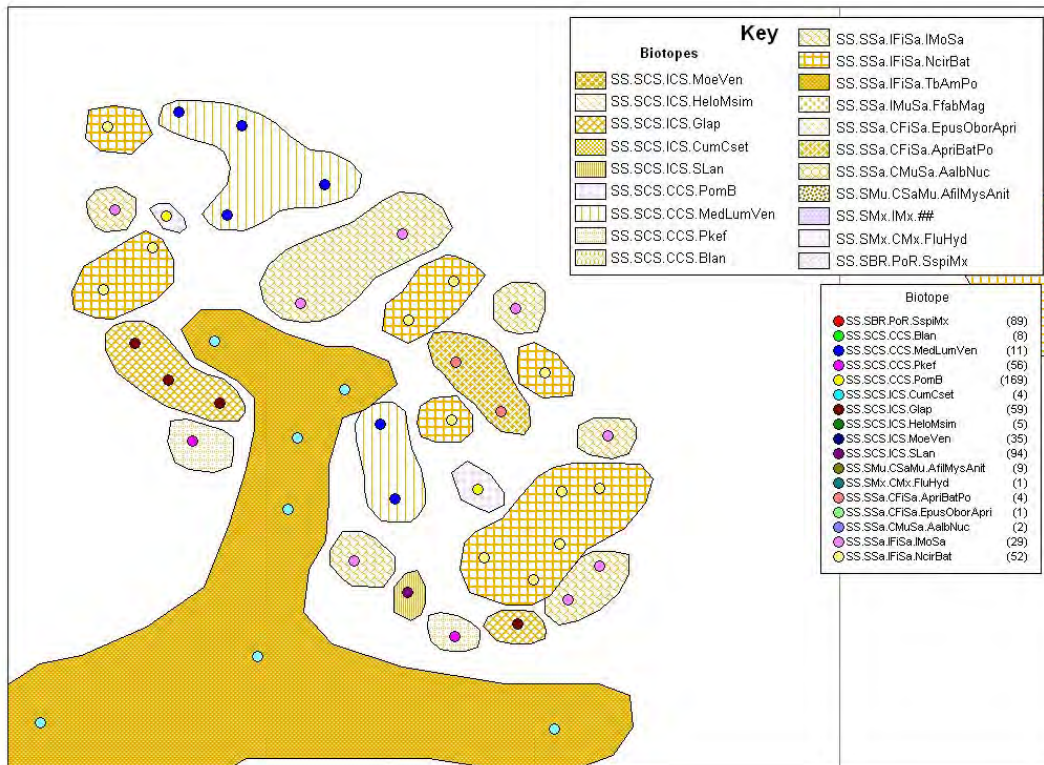


Figure 15. Biotope distribution in the Dudgeon East area.

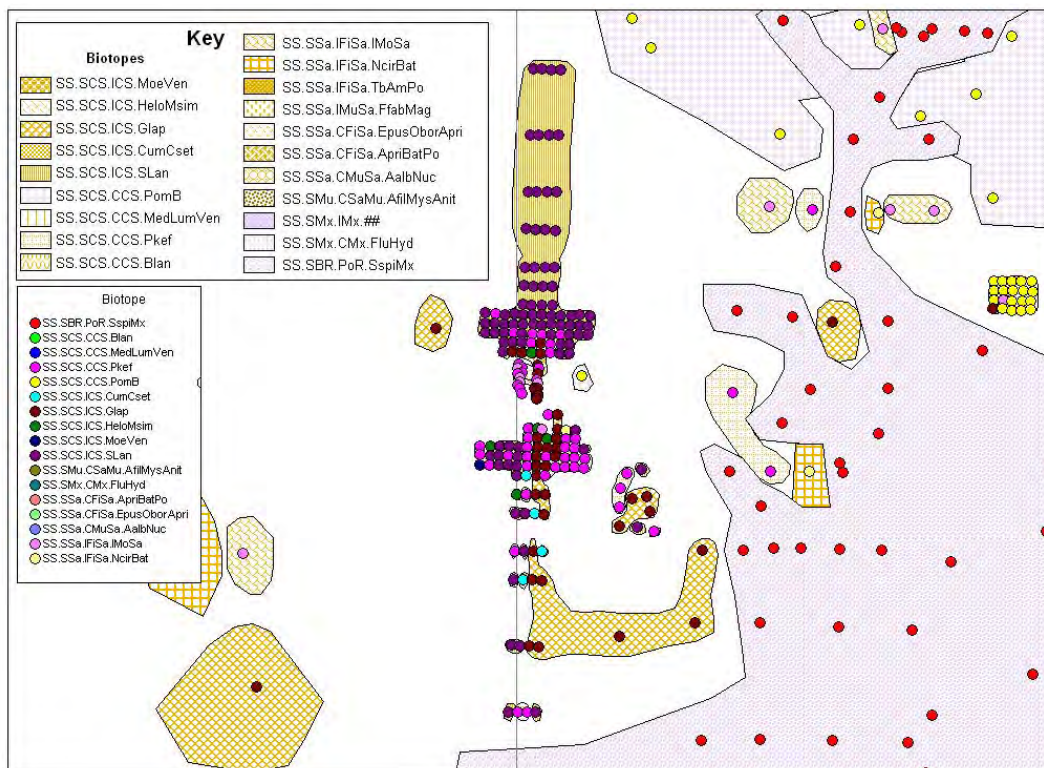


Figure 16. Biotope distribution in the MIRO survey area.

The characteristics and distributions of the recorded biotopes are discussed below. References to the ‘standard description’ are to the published biotope descriptions and representative taxon lists (Connor *et al.*, 2004).

### **SS (Sublittoral sediment)**

All of the samples from the study area fitted the above major habitat.

### **SS.SCS (Sublittoral coarse sediment)**

Both of the biotope complexes covered by this habitat complex were well represented in the study area.

### **SS.SCS.ICS (Infralittoral coarse sediment)**

All five of the infauna defined biotopes in this complex were recorded from the study area. The other two: SS.SCS.ICS.SSh (Sparse fauna on highly mobile sublittoral shingle (cobbles and pebbles) and SS.SCS.ICS.HchrEdw (*Halcampa chrysanthellum* and *Edwardsia timida* on sublittoral clean stone gravel) would have needed *in situ* records.

**SS.SCS.ICS.MoeVen** (*Moerella* spp. with venerid bivalves in infralittoral gravelly sand) was recorded for Cluster Groups AK, AW-BA, CS, CX, DD and DP. Most did not fit the standard description well and *Moerella pygmaea* was never common. The high numbers of *M. donacina* noted as ‘characterising species’ in the standard description are unlikely, however, as that species is rarely abundant in any sample and another ‘characterising species’ (*Aapseudes latreillii*) is restricted to the south west. In the study samples, the bivalve *Goodallia triangularis* was often abundant and was taken as characteristic. The biotope was scattered in patches across the study area, most commonly around the edges of the *Sabellaria spinulosa* mosaics about 50km offshore.

**SS.SCS.ICS.HeloMsim** (*Hesionura elongata* and *Microphthalmus similis* with other interstitial polychaetes in infralittoral mobile coarse sand) was recorded for Cluster Groups BN, CY and DH. It was used wherever *H. elongata* was one of the dominant species. *Microphthalmus* were never common but the samples otherwise fitted the standard description reasonably well. The biotope did not cover extensive areas but formed scattered patches within the MIRO survey area (about 20km offshore). It is possible, however, that differences in sieve mesh size would have influenced records of this biotope.

**SS.SCS.ICS.Glap** (*Glycera lapidum* in impoverished infralittoral mobile gravel and sand) was recorded for Cluster Groups K, N, AN, AO, AQ, AS, AT, BB-BH, BK, BL, BO, CO, DL and DN. These samples are scattered around the cluster plot and connected by the presence of *Glycera lapidum* agg. or *G. oxycephala* and a generally limited fauna; other fauna was variable but some of the groups fitted the standard description well. The biotope was widely recorded but did not form extensive areas and was most common about 20-50km from the shore.

**SS.SCS.ICS.CumCset** (Cumaceans and *Chaetozone setosa* in infralittoral gravelly sand) was recorded for Cluster Group DF, which was less rich than the standard description, with *Bodotria scorpioides* as the main cumacean (rather than *Iphinoe* or

*Diastylis*). The *Chaetozone* found in such habitats is *C. christiei*, which was probably described after the samples used for the standard description were analysed. The biotope was mainly scattered through the southern MIRO survey area (about 20km offshore).

**SS.SCS.ICS.SLan** (Dense *Lanice conchilega* and other polychaetes in tide-swept infralittoral sand and mixed gravelly sand) was recorded for Cluster Groups BP, BQ, CV, DA and DG. The density of *L. conchilega* was variable between samples and cluster groups but some fitted the standard description well. The biotope was most widespread in the MIRO survey area (where it was the main biotope), about 20km offshore).

#### **SS.SCS.CCS (Circalittoral coarse sediment)**

Four of the five described biotopes in this complex were recorded from the study area and the remaining one: SS.SCS.CCS.Nmix (*Neopentadactyla mixta* in circalittoral shell gravel or coarse sand) is described to be recorded *in situ* and is often associated with maerl beds.

**SS.SCS.CCS.PomB** (*Pomatoceros triqueter* with barnacles and bryozoan crusts on unstable circalittoral cobbles and pebbles) was recorded for Cluster Groups AI, BJ, BX, CA-CU, CZ, DT, DU, DW, DX and EG. There was much variation in the infauna associated with the sediments but the biotope has been characterised by its epibiota as a fundamentally hard substratum community. Most groups with large numbers of barnacles have been included. *Pomatoceros* spp. were much less common but frequent in those groups that best fitted the standard description. The biotope, in the broadest sense, occupied an extensive area that extended southeast from north of Spurn Head to a region about 50km north east of the Wash, with scattered patches elsewhere.

**SS.SCS.CCS.MedLumVen** (*Mediomastus fragilis*, *Lumbrineris* spp. and venerid bivalves in circalittoral coarse sand or gravel) was recorded for Cluster Groups BY, BZ and ED. These groups fitted the standard description well but had few venerid bivalves; others, here assigned to other biotopes, also had some features in common. The biotope, in the narrow sense, was scattered across the western part of the study area, with distinct patches to the north-east of Spurn Head and in the Dudgeon East area (about 30km off the north Norfolk coast).

**SS.SCS.CCS.Pkef** (*Protodorvillea kefersteini* and other polychaetes in impoverished circalittoral mixed gravelly sand) was recorded for Cluster Groups H, J, AV, DB, DC, DI-DK, DM, DO, DS and EB. All groups with high dominance of *P. kefersteini* have been included, some of which fitted the standard description well. The biotope was scattered across the south western part of the study area, particularly in the MIRO area.

**SS.SCS.CCS.Blan** (*Branchiostoma lanceolatum* in circalittoral coarse sand with shell gravel) was recorded for Cluster Groups CP and CW. These groups fitted the standard description reasonably well but proportions of many species were variable. The biotope was scattered across the most offshore parts of the study area.

### **SS.SSa (Sublittoral sands and muddy sands)**

A high proportion of the biotopes recorded in the study area fell into this habitat complex. Four of the five complexes were recorded, the fifth being estuarine.

#### **SS.SSa.IFiSa (Infralittoral fine sand)**

Three of the four described biotopes in this complex were recorded. The fourth: SS.SSa.IFiSa.ScupHyd (*Sertularia cupressina* and *Hydrallmania falcata* on tide-swept sublittoral sand with cobbles or pebbles) would be unlikely to be recorded from samples and may have been present as epibiota associated with other biotopes.

**SS.SSa.IFiSa.IMoSa** (Infralittoral mobile clean sand with sparse fauna) was recorded for Cluster Groups A-H, I, L, M, O, P, Z, AL, AM, AP, AR, AU, BI, BM, BR, BS, DQ, DR, DY, EA and EC, as well as for those samples that contained no fauna. All groups and samples with low numbers of taxa and individuals that did not fit into any other group were included. The biotope was scattered mainly across the inshore parts of the study area.

**SS.SSa.IFiSa.NcirBat** (*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand) was recorded for Cluster Groups Q, T, V-Y, AB-AF, AH, CR and DZ. All samples with moderate to high dominance of either *N. cirrosa* or *Bathyporeia* spp. were included and there was some variation but several groups fitted the standard description well. The biotope was scattered across the whole of the study area, particularly in a large patch about 100km offshore.

**SS.SSa.IFiSa.TbAmPo** (Semi-permanent tube-building amphipods and polychaetes in sublittoral sand) was recorded for Cluster Groups AJ, BT, EE, EF and EH. This classification was used mainly for groups with high numbers of maldanid polychaetes (*Clymenura*) and the amphipods *Ampelisca spinipes*, as well as *Urothoe* spp. There was some overlap with SS.SSa.IFiSa.NcirBat, which has been used more often for transitional communities. The biotope was distributed mainly along an elongated band stretching from the north Norfolk coast to the Dudgeon East area and also in scattered patches offshore, to the north.

#### **SS.SSa.IMuSa (Infralittoral muddy sand)**

One of the four described biotopes in this complex was recorded.

**SS.SSa.IMuSa.FfabMag** (*Fabulina fabula* and *Magelona mirabilis* with venerid bivalves and amphipods in infralittoral compacted fine muddy sand) was recorded for Cluster Group S, which fitted the standard description well. The two samples were in the offshore part of the study area, about 100km off the north Norfolk coast.

#### **SS.SSa.CFiSa (Circalittoral fine sand)**

Both of the described biotopes in this complex were recorded. They are characterised as having many *Ophelia borealis*. This species was widely recorded in the study samples but samples with many *O. borealis* but without the other characterising species have been assigned to other complexes.

**SS.SSa.CFiSa.EpusOborApri** (*Echinocyamus pusillus*, *Ophelia borealis* and *Abra prismatica* in circalittoral fine sand) was recorded for Cluster Group CQ, which fitted

the standard description reasonably well but without *A. prismatica*. The single sample in the biotope was far offshore, to the northeast of the study area.

**SS.SSa.CFiSa.ApriBatPo** (*Abra prismatica*, *Bathyporeia elegans* and polychaetes in circalittoral fine sand) was recorded for Cluster Groups U and AA, of which Group U fitted the standard description reasonably well. The biotope was found scattered in the south of the study area.

#### **SS.SSa.CMuSa (Circalittoral muddy sand)**

One of the two described biotopes in this complex was recorded.

**SS.SSa.CMuSa.AalbNuc** (*Abra alba* and *Nucula nitidosa* in circalittoral muddy sand or slightly mixed sediment) was recorded for Cluster Group R, which had similar fauna to the standard description but was relatively impoverished. The two samples in the biotope were offshore, far to the east of the study area.

#### **SS.SMu (Sublittoral cohesive mud and sandy mud communities)**

This habitat complex includes five biotope complexes, each with several biotopes. One biotope was recorded from the study area.

#### **SS.SMu.CSaMu (Circalittoral sandy mud)**

One of the six biotopes in this complex was recorded.

**SS.SMu.CSaMu.AfilMysAnit** (*Amphiura filiformis*, *Mysella bidentata* and *Abra nitida* in circalittoral sandy mud) was recorded for Cluster Groups BU and BV. Both had large numbers of *Abra alba*, which is also characteristic for other biotopes; *A. nitida* is listed in the standard description of the biotope but the species can be difficult to distinguish. Most of the other taxa were typical. The biotope was found in scattered patches, far offshore. It was associated with relatively high silt fractions.

#### **SS.SMx (Sublittoral mixed sediment)**

There are four described biotope complexes in this group, two of which were recorded from the study area.

#### **SS.SMx.IMx (Infralittoral mixed sediment)**

Cluster group DE fitted this biotope complex but none of the five described biotopes. The main epifaunal components were large numbers of sea squirts (*Dendrodoa grossularia*) and moderate numbers of porcelain crabs (*Pisidia longicornis*) and sea anemones (Actiniaria), as well as encrusting (*Electra pilosa*) and erect (*Bugula purpurocincta*) Bryozoa. The community was recorded only in 2002, in areas mapped mainly as SS.SBR.PoR.SpiMx in 2008.

#### **SS.SMx.CMx (Circalittoral mixed sediment)**

One of the six described biotopes in this complex was recorded.

**SS.SMx.CMx.FluHyd** (*Flustra foliacea* and *Hydrallmania falcata* on tide-swept circalittoral mixed sediment) was recorded for Cluster Groups BW and CG. The standard description is based on in situ records, which fit well with the recorded non-countable taxa. However, other cluster groups also had similar epibiota and the

groups assigned to this biotope were those whose infauna did not fit another described biotope. The single assigned sample (not reassigned by a later sample set) was about 50km north west of The Wash in an area of mixed biotopes.

#### **SS.SBR (Sublittoral biogenic reefs on sediment)**

One of the three biogenic reef biotope complexes was recorded.

#### **SS.SBR.PoR (Polychaete worm reefs (on sublittoral sediment))**

One of the three described tubeworm reef biotopes was found.

**SS.SBR.PoR.SspiMx** (*Sabellaria spinulosa* on stable circalittoral mixed sediment) was recorded for Cluster Groups AG, CH-CN and DV. Some of these fitted the standard description well, with high numbers of *S. spinulosa* that would have formed a reef. Others had fewer animals but were recorded as SspiMx if *S. spinulosa* was dominant. The biotope was distributed in an irregular patch stretching mainly from north to south about 20-40km off the Lincolnshire coast, with smaller patches nearby.

#### **3.3.4 Important taxa**

None of the non-native species listed by Eno *et al.* (1997) were recorded in the samples, although some should be considered cryptogenic (possibly non-native) and a few are listed as such for the Netherlands (Wolff, 2005) and Germany (Gollasch & Nehring, 2006). No protected species (Betts, 2001) or nationally rare or scarce species, as listed by Sanderson (1996) or the British Red Data book (Bratton, 1991), were found.

## **4. Discussion**

The data included in the study were collated from different sources as part of the Marine Aggregate Regional Environmental Assessment (MAREA) for the Humber region. They covered a wide area (from the mouths of The Wash and Humber to about 170km offshore) and included a very large number of samples (718). The area includes many aggregate deposits and is relatively shallow (<50m) throughout. The samples were collected over several years (2002-2009) and represented seven projects that involved benthos sampling for different purposes (although many were probably connected to aggregate extraction impacts) and for which macrofauna were analysed by at least three different laboratories. Some of the individual projects were repeated over several years. Information on project details, such as purpose, date and analysing laboratory was not available for all of the included data sets. The data collation exercise may have overlapped with similar projects carried out by the Joint Nature Conservation Committee (JNCC) and Environment Agency (EA). It is not known whether any of the data have been passed on to national or international databases (MESSH, OBIS) and it is likely that other data sets exist for the area. Unicomarine has reported on several projects in the area (Hall & Worsfold, 2004; Pears *et al.*, 2010; Unicomarine, 1996; 1998; 1999; 2000; Worsfold *et al.*, 2009) and it was not possible to determine whether they had been incorporated into the data set.

The area could be broadly divided into a western region (up to about 50km offshore) that included many samples with a high gravel component and an offshore eastern region, where sand was dominant. There was, however, much local variation within each area.

The size of the data set made analysis using PRIMER difficult and the SIMPROF technique for formal definition of cluster groups could not be used due to the large processing power that would be required. Display of the information following analysis was also difficult; the full dendrogram of the 138 cluster groups (excluding 'no fauna' samples) and plot of their spatial distribution could not be easily displayed. Cluster groups could be assigned to described biotopes following Connor *et al.* (2004) but it was noticed that not all of the groups fitted easily into biotopes and that groups assigned to the same biotope did not always cluster together into single groups at lower similarity. Twenty biotopes were identified, within ten biotope complexes. All belonged to the SS (sublittoral sediment) major habitat, with the majority divided between SCS (sublittoral coarse sediment) and SSa (sublittoral sands and muddy sands). The majority of the described non-estuarine subtidal sand and gravel biotopes were recorded. The most widespread included SS.SCS.CCS.PomB (*Pomatoceros triqueter* with barnacles and bryozoan crusts on unstable circalittoral cobbles and pebbles) across the west of the study area and SS.SSa.IFiSa.NcirBat (*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand) further offshore. Muddy habitats were much less widely recorded, with only one biotope, SS.SMu.CSaMu.AfilMysAnit (*Amphiura filiformis*, *Mysella bidentata* and *Abra nitida* in circalittoral sandy mud), recorded for the SMu (sublittoral cohesive mud and sandy mud communities) habitat; it was found in scattered patches offshore, probably where stable deep hollows were present. Two SS.SMx (Sublittoral mixed sediment) biotopes were recorded, one of which could not be assigned to a described community. Many of the coarse sediment biotopes and the following biogenic reef community were also present on mixed substrata. Biogenic reefs (SBR) were present in the form of beds of ross worms, SS.SBR.PoR.SspiMx (*Sabellaria spinulosa* on stable circalittoral mixed sediment). The density of *S. spinulosa* was variable, with the highest numbers (over 3000 per m<sup>2</sup>) about 30km off the Lincolnshire coast. The apparent distribution of biotopes was strongly affected by sample density. Areas with very high sample density had high variability of biotopes within small areas. Low sample density areas give an artificial impression of uniformity but broad biotope distributions can be seen. Many of the records conformed to those noted by Irving (1995) but coverage at that time was more limited. None of the recorded biotopes included rare species but SS.SBR.PoR.SspiMx is considered to be of conservation importance and has the potential to include species of restricted distribution.

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## Appendix 1. Taxon changes required for import into Unicorn.

### Area 448 & 449

Polychate Sp. 1	Deleted
Scalibregma cf. stenocerum	Scalibregma stenocerum
Haliclona (=cinerea)	Haliclona cinerea
Sertularella (=rugosa)	Sertularella rugosa
Styela =coriacea	Styela coriacea
Polycarpa (=pomaria)	Polycarpa pomaria
CIRRIPIEDIA	Thoracica
Thelepodinae	Terebellidae
BIVALVIA	PELECYPODA
Ascidian sp. A	ASCIDIACEA

### Changed to

### Dudgeon

Syllis cf. prolifera	Syllis prolifera (Type A)
Lumbrineris cf. latreilli	Lumbrineris latreilli (Type A)
Laonice cf. cirrata	Laonice cirrata (Type A)
Cirratulus cf. caudatus	Cirratulus caudatus (Type A)
Ampharete cf. balthica (dam)	Ampharete balthica (Type A)
Leucothoe aff. procera	Leucothoe procera (Type A)

### Triton Knoll

Athecata	Filifera
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### MIRO 106

Cerebratulus fuscus	Deleted, no data
Oerstedia dorsalis	Deleted, no data
Polynoidae	Deleted, no data
Mystides caeca	Deleted, no data
Anaitides maculata	Deleted, no data
Glycera alba	Deleted, no data
Glycera rouxii	Deleted, no data
Glyphohesione klatti	Deleted, no data
Syllis gracilis	Deleted, no data
Syllis hyalina	Deleted, no data
Syllis prolifera	Deleted, no data
Sphaerosyllis erinaceus	Deleted, no data
Sphaerosyllis tetralix	Deleted, no data
Procerastea halleziana	Deleted, no data
Nephtys hombergii	Deleted, no data
Marphysa bellii	Deleted, no data
Marphysa sanguinea	Deleted, no data
Lumbrineris	Deleted, no data
Paradoneis lyra	Deleted, no data
Laonice cirrata	Deleted, no data
Polydora flava	Deleted, no data
Scolecipis cantabra	Deleted, no data
Cirratulidae	Deleted, no data
Aphelochaeta marioni	Deleted, no data
Nicomache lumbricalis	Deleted, no data
Polygordiidae	Deleted, no data
Polygordius lacteus	Deleted, no data
Pseudopotamilla reniformis	Deleted, no data

## Appendix 1. Taxon changes required for import into Unicorn.

<i>Chirona hameri</i>	Deleted, no data
<i>Balanus improvisus</i>	Deleted, no data
CALANOIDA	Deleted, no data
OSTRACODA	Deleted, no data
<i>Apherusa ovalipes</i>	Deleted, no data
<i>Synchelidium haplocheles</i>	Deleted, no data
<i>Urothoe brevicornis</i>	Deleted, no data
<i>Hippomedon denticulatus</i>	Deleted, no data
<i>Lysianassa plumosa</i>	Deleted, no data
<i>Orchomene nanus</i>	Deleted, no data
<i>Atylus vedlomensis</i>	Deleted, no data
<i>Guerneia coalita</i>	Deleted, no data
<i>Bathyporeia pelagica</i>	Deleted, no data
Maera	Deleted, no data
<i>Maerella tenuimana</i>	Deleted, no data
<i>Gammaropsis maculata</i>	Deleted, no data
<i>Gammaropsis nitida</i>	Deleted, no data
<i>Gammaropsis palmata</i>	Deleted, no data
<i>Aora gracilis</i>	Deleted, no data
<i>Unciola crenatipalma</i>	Deleted, no data
Dyopetos	Deleted, no data
ISOPODA	Deleted, no data
<i>Anthura gracilis</i>	Deleted, no data
<i>Eurydice spinigera</i>	Deleted, no data
EPICARIDEA	Deleted, no data
<i>Akanthophoreus gracilis</i>	Deleted, no data
<i>Philoceras trispinosus</i>	Deleted, no data
<i>Callianassa subterranea</i>	Deleted, no data
<i>Corystes cassivelaunus</i>	Deleted, no data
<i>Liocarcinus</i>	Deleted, no data
<i>Liocarcinus holsatus</i>	Deleted, no data
<i>Liocarcinus marmoreus</i>	Deleted, no data
<i>Carcinus maenas</i>	Deleted, no data
<i>Skenea serpuloides</i>	Deleted, no data
<i>Graphis albida</i>	Deleted, no data
<i>Polinices pulchellus</i>	Deleted, no data
<i>Limapontia</i>	Deleted, no data
<i>Tritonia hombergii</i>	Deleted, no data
<i>Doto fragilis</i>	Deleted, no data
<i>Onchidoris (juv)</i>	Deleted, no data
Thecacera	Deleted, no data
<i>Thecacera pennigera</i>	Deleted, no data
<i>Nucula (juv)</i>	Deleted, no data
<i>Nucula hanleyi</i>	Deleted, no data
<i>Modiolus modiolus</i>	Deleted, no data
<i>Aequipecten opercularis</i>	Deleted, no data
<i>Goodallia triangularis</i>	Deleted, no data
<i>Parvicardium (juv)</i>	Deleted, no data
<i>Angulus tenuis</i>	Deleted, no data
<i>Abra prismatica</i>	Deleted, no data
<i>Alcyonidium parasiticum</i>	Deleted, no data
<i>Psammechinus miliaris</i>	Deleted, no data

## Appendix 1. Taxon changes required for import into Unicorn.

<i>Echinocyamus pusillus</i>	Deleted, no data
<i>Spatangus purpureus</i>	Deleted, no data
<i>Echinocardium cordatum</i>	Deleted, no data
ASCIDIACEA	Deleted, no data
<i>Molgula oculata</i>	Deleted, no data
<i>Minuspio cf. multibranchiata</i>	<i>Minuspio multibranchiata</i> (Type A)

### Area 480 2002

<i>Leucosolenia complicata</i>	Deleted, no data
<i>Ciocalypta penicillus</i>	Deleted, no data
<i>Alcyonium digitatum</i>	Deleted, no data
TURBELLARIA	Deleted, no data
<i>Harmothoe extenuata</i>	Deleted, no data
<i>Mysta barbata</i>	Deleted, no data
<i>Mysta picta</i>	Deleted, no data
<i>Anaitides groenlandica</i>	Deleted, no data
<i>Eulalia viridis</i>	Deleted, no data
<i>Eusyllis blomstrandii</i>	Deleted, no data
<i>Orbinia sertulata</i>	Deleted, no data
<i>Aricidea minuta</i>	Deleted, no data
<i>Spiophanes kroyeri</i>	Deleted, no data
<i>Capitella capitata</i>	Deleted, no data
<i>Nicomache lumbricalis</i>	Deleted, no data
<i>Asclerocheilus intermedius</i>	Deleted, no data
<i>Owenia fusiformis</i>	Deleted, no data
<i>Thelepus cincinnatus</i>	Deleted, no data
<i>Thelepus setosus</i>	Deleted, no data
<i>Branchiomma bombyx</i>	Deleted, no data
<i>Verruca stroemia</i>	Deleted, no data
<i>Balanus crenatus</i>	Deleted, no data
Mysidae	Deleted, no data
<i>Amphilocheus manudens</i>	Deleted, no data
<i>Cressa dubia</i>	Deleted, no data
Metopa	Deleted, no data
Lysianassidae	Deleted, no data
<i>Iphimedia minuta</i>	Deleted, no data
<i>Cheirocratus assimilis</i>	Deleted, no data
<i>Caprella linearis</i>	Deleted, no data
<i>Gnathia oxyuraea</i>	Deleted, no data
<i>Astacilla longicornis</i>	Deleted, no data
<i>Iphinoe trispinosa</i>	Deleted, no data
<i>Pseudocuma longicornis</i>	Deleted, no data
<i>Eualus pusiolus</i>	Deleted, no data
<i>Hippolyte varians</i>	Deleted, no data
<i>Pandalina brevisrostris</i>	Deleted, no data
<i>Philocheras fasciatus</i>	Deleted, no data
<i>Ebalia tuberosa</i>	Deleted, no data
<i>Macropodia linaresi</i>	Deleted, no data
<i>Eurynome spinosa</i>	Deleted, no data
<i>Pirimela denticulata</i>	Deleted, no data
<i>Necora puber</i>	Deleted, no data
<i>Tonicella marmorea</i>	Deleted, no data

## Appendix 1. Taxon changes required for import into Unicorn.

Gibbula tumida	Deleted, no data
Rissoa parva	Deleted, no data
NUDIBRANCHIA	Deleted, no data
Adalaria proxima	Deleted, no data
Chlamys varia	Deleted, no data
Tellimya ferruginosa	Deleted, no data
Parvicardium scabrum	Deleted, no data
OPHIUROIDEA	Deleted, no data
Aplidium	Deleted, no data
Styela partita	Deleted, no data
Molgula occulta	Deleted, no data
Limanda limanda	Deleted, no data

## Appendix 2. Changes made to the combined data taxon list as part of the truncation process.

SDC	Taxon Name	Change
C0002	CALCAREA	Combined with PORIFERA
C0053	Leucosolenia	Combined with PORIFERA
C0133	Scypha ciliata	Combined with PORIFERA
C0350	Polymastiidae	Combined with PORIFERA
C0418	Suberites ficus (agg)	Combined with PORIFERA
C0475	Cliona	Combined with PORIFERA
C0480	Cliona celata	Combined with PORIFERA
C0526	Axinellidae	Combined with PORIFERA
C0536	Axinella	Combined with PORIFERA
C0632	Halichondria	Combined with PORIFERA
C0638	Halichondria bowerbanki	Combined with PORIFERA
C0651	Halichondria panicea	Combined with PORIFERA
C0702	Mycalidae	Combined with PORIFERA
C1078	Myxilla	Combined with PORIFERA
C1422	Haliclona cinerea	Combined with PORIFERA
D0001	ANTHOZOA	Combined with ACTINIARIA
D0166	Tubularia indivisa	Combined with Tubularia
D0167	Tubularia larynx	Combined with Tubularia
D0182	Sarsia eximia	Combined with Sarsia
D0218	Eudendrium	Combined with Eudendriidae
D0296	CONICA	Combined with LEPTOLIDA
D0351	Campanulina pumila	Combined with Campanulinidae
D0392	Halecium halecinum	Combined with Halecium
D0415	Diphasia attenuata	Combined with Diphasia
	Sertularella gaudichaudi	Combined with Sertularella
D0429	Sertularella gayi	Combined with Sertularella
D0431	Sertularella rugosa	Combined with Sertularella
D0435	Sertularia cupressina	Combined with Sertularia
D0463	Nemertesia antennina	Combined with Nemertesia
D0466	Nemertesia ramosa	Combined with Nemertesia
D0499	Rhizocaulus verticillatus	Combined with Campanulariidae
D0501	Clytia	Combined with Campanulariidae
D0502	Clytia gracilis	Combined with Campanulariidae
D0503	Clytia hemisphaerica	Combined with Campanulariidae
D0511	Laomedea	Combined with Campanulariidae
D0515	Laomedea flexuosa	Combined with Campanulariidae
D0517	Obelia	Combined with Campanulariidae
D0518	Obelia bidentata	Combined with Campanulariidae
D0519	Obelia dichotoma	Combined with Campanulariidae
D0520	Obelia geniculata	Combined with Campanulariidae
D0521	Obelia longissima	Combined with Campanulariidae
D0684	Urticina felina	Combined with ACTINIARIA
D0711	Sagartiidae	Combined with ACTINIARIA
D0714	Sagartia ornata	Combined with ACTINIARIA
D0758	Halcampa chrysanthellum	Combined with ACTINIARIA
D0759	Edwardsiidae (juv)	Changed to Edwardsiidae
F0001	PLATYHELMINTHES	Combined with TURBELLARIA
F0074	Discocelides langi	Combined with TURBELLARIA
F0089	Notoplana atomata	Combined with TURBELLARIA
G0034	Tubulanus polymorphus	Combined with NEMERTEA
G0035	Tubulanus superbus	Combined with NEMERTEA

## Appendix 2. Changes made to the combined data taxon list as part of the truncation process.

SDC	Taxon Name	Change
G0039	Cerebratulus	Combined with NEMERTEA
G0042	Cerebratulus marginatus	Combined with NEMERTEA
G0052	Lineus bilineatus	Combined with NEMERTEA
K0035	Loxosomella phascolosomata	Combined with ENTOPROCTA (P/A)
K0045	Pedicellina	Combined with ENTOPROCTA (P/A)
K0046	Pedicellina cernua	Combined with ENTOPROCTA (P/A)
K0048	Pedicellina nutans	Combined with ENTOPROCTA (P/A)
K0050	Barentsia	Combined with ENTOPROCTA (P/A)
L0009	Sagitta	Combined with CHAETOGNATHA
L0029	Spadella cephaloptera	Combined with CHAETOGNATHA
N0001	SIPUNCULA (juv)	Combined with SIPUNCULA
N0011	Golfingiidae	Combined with SIPUNCULA
N0012	Golfingia	Combined with SIPUNCULA
N0014	Golfingia elongata	Combined with SIPUNCULA
N0017	Golfingia vulgaris	Combined with SIPUNCULA
N0025	Nephasoma minutum	Combined with SIPUNCULA
N0034	Phascolion strombus	Combined with SIPUNCULA
P0046	Eunoe nodosa	Combined with Polynoidae
P0059	Harmothoe fragilis	Combined with Harmothoe
	Harmothoe pagenstecheri	Combined with Harmothoe clavigera
P0073	Harmothoe reticulata	Combined with Harmothoe
	Pholoe assimilis	Combined with Pholoe inornata (sensu petersen)
P0105	Sigalion squamosus	Combined with Sigalion mathildae
P0116	Eteone	Combined with Eteone longa (agg)
P0117	Eteone flava	Combined with Eteone longa (agg)
P0118	Eteone longa	Combined with Eteone longa (agg)
P0130	Mystides caeca	Combined with Phyllodocidae
P0133	Protomystides bidentata	Combined with Phyllodocidae
P0140	Anaitides citrina	Combined with Anaitides
P0155	Eulalia mustela (?)	Combined with Eulalia mustela
P0164	Eumida bahusiensis	Combined with Eumida
P0165	Eumida ockelmanni	Combined with Eumida
P0167	Eumida sanguinea	Combined with Eumida
P0178	Phyllodoce	Combined with Phyllodocidae
P0178	Phyllodoce (juv)	Combined with Phyllodocidae
P0254	Glyceridae (juv)	Combined with Glycera
P0255	Glycera (juv)	Combined with Glycera
	Glycera capitata	Combined with Glycera lapidum
P0275	Goniadella bobretzkii	Combined with Goniadella gracilis
P0331	Microphthalmus listensis	Changed to Microphthalmus
P0333	Microphthalmus similis	Changed to Microphthalmus
P0348	Ehlersia	Combined with Syllis
	Syllis "species A"	Combined with Syllis
	Syllis "species D"	Combined with Syllis
	Syllis "species E"	Combined with Syllis
	Syllis "species F"	Combined with Syllis
P0370	Syllis prolifera (Type A)	Combined with Syllis
P0364	Typosyllis	Combined with Syllis
P0378	Eusyllis	Combined with Eusyllis blomstrandii
P0407	Syllides benedicti	Combined with Syllides
	Syllides japonicus	Combined with Syllides

## Appendix 2. Changes made to the combined data taxon list as part of the truncation process.

SDC	Taxon Name	Change
P0423	Exogone verugera (?)	Combined with Exogone verugera
P0444	Autolytus prolifera	Combined with Autolytus
P0453	Proceraea picta	Combined with Proceraea
P0454	Proceraea prismatica	Combined with Proceraea
P0456	Procerastea halleziana	Combined with Procerastea
P0457	Procerastea nematodes	Combined with Procerastea
P0473	Nereis	Combined with nereididae
P0473	Nereis (juv)	Combined with nereididae
P0563	Marphysa	Combined with Marphysa bellii
P0582	Lumbrineris latreilli (Type A)	Combined with Lumbrineris latreilli
P0661	Orbinia	Removed, only recorded as 'present'
P0724	Atherospio	Combined with Atherospio guillei
P0731	Laonice	Combined with Laonice bahusiensis
P0734	Laonice cirrata (Type A)	Combined with Laonice bahusiensis
P0735	Laonice sarsi	Combined with Laonice bahusiensis
P0738	Malacoceros tetracerus	Combined with Malacoceros
P0739	Malacoceros vulgaris	Combined with Malacoceros
P0746	Minuspio multibranchiata (Type A)	Combined with Minuspio multibranchiata
P0748	Polydora (juv)	Combined with Polydora
P0750	Polydora caeca	Combined with Polydora caeca (agg)
P0753	Polydora cornuta	Combined with Polydora ciliata
P0762	Polydora socialis	Combined with Polydora ciliata
P0788	Spio armata	Combined with Spio
P0788	Spio armata (Type A)	Combined with Spio
P0788	Spio armata (Type B)	Combined with Spio
P0788	Spio armata (agg)	Combined with Spio
P0789	Spio decorata	Combined with Spio
P0790	Spio filicornis	Combined with Spio
P0791	Spio martinensis	Combined with Spio
	Spio goniocephala	Combined with Spio
	Aphelochoeta "species A"	Combined with Aphelochoeta
P0837	Aphelochoeta filiformis	Combined with Aphelochoeta
P0824	Aphelochoeta marioni	Combined with Aphelochoeta
P0826	Aphelochoeta multibranchiis	Combined with Aphelochoeta
P0828	Cauleriella	Combined with Cauleriella alata
P0836	Cirratulus cirratus	Combined with Cirratulus
P0838	Cirriformia	Combined with Cirriformia tentaculata
P0885	Pherusa plumosa	Combined with Pherusa
P0907	Capitella capitata	Combined with Capitella
P0921	Notomastus latericeus	Combined with Notomastus
P0958	Clymenura johnstoni	Combined with Clymenura
P0997	Ophelia	Combined with Opheliidae
P0997	Ophelia (juv)	Combined with Opheliidae
P0998	Ophelia bicornis	Combined with Opheliidae
P1021	Asclerocheilus (Type A)	Changed to Asclerocheilus
P1022	Asclerocheilus intermedius	Changed to Asclerocheilus
P1025	Scalibregma stenocerum	Changed to Scalibregma celticum
P1087	Saccocirrus major	Changed to Saccocirrus
	Saccocirrus papillocerus	Changed to Saccocirrus
P1099	TEREBELLIDA (juv)	Combined with Terebellidae
P1121	Melinna cristata	Combined with Melinna



## Appendix 2. Changes made to the combined data taxon list as part of the truncation process.

<b>SDC</b>	<b>Taxon Name</b>	<b>Change</b>
P1134	Ampharete baltica	Changed to Ampharete cf. baltica
P1134	Ampharete baltica (Type A)	Changed to Ampharete cf. baltica
P1136	Ampharete finmarchica	Combined with Ampharete finmarchia
P1179	Terebellidae (juv)	Combined with Terebellidae
P1235	Polycirrus (Type A)	Combined with Polycirrus
P1238	Polycirrus caliendrum	Combined with Polycirrus
P1242	Polycirrus medusa	Combined with Polycirrus
P1243	Polycirrus norvegicus	Combined with Polycirrus
P1244	Polycirrus plumosus	Combined with Polycirrus
P1252	Streblosoma intestinalis	Combined with Streblosoma
P1254	Thelepus cincinnatus	Combined with Thelepus
P1255	Thelepus setosus	Combined with Thelepus
P1257	Sabellidae (juv)	Combined with Sabellidae
P1267	Chone duneri	Combined with Chone
P1270	Chone infundibuliformis	Combined with Chone
P1272	Demonax branchyona	Combined with Demonax
P1273	Demonax cambrensis	Combined with Demonax
P1274	Demonax langerhansi	Combined with Demonax
P1369	Circeis spirillum	Removed as only 'present' in a single sample
P1393	Spirorbis cuneatus	Combined with Spirorbidae
P1402	OLIGOCHAETA	Combined with Tubificidae
P1487	Tubificoides	Combined with Tubificidae
Q0029	Endeis charybdaea	Changed to Endeis
Q0030	Endeis spinosa	Changed to Endeis
Q0031	Callipallenidae	Combined with Callipallene
Q0033	Callipallene brevirostris	Combined with Callipallene
Q0034	Callipallene emaciata	Combined with Callipallene
R0785	HARPACTICOIDA	Combined with COPEPODA
S0006	Nebalia bipes	Combined with Nebalia
S0008	Nebalia herbsti	Combined with Nebalia
S0038	Siriella norvegica	Combined with Syriella
S0137	Synchelidium haplocheles	Combined with Oedicerotidae
S0143	Pleustidae	Combined with Parapleustis bicuspis
S0179	Leucothoe procera (Type A)	Combined with Leucothoe procera
S0336	Tmetonyx cicada	Changed to Tmetonyx
S0337	Tmetonyx similis	Changed to Tmetonyx
S0503	Cheirocratus (female)	Combined with Cheirocratus
S0522	Melita	Combined with Melitidae
S0538	Gammaropsis	Combined with Isaeidae
S0577	Aoridae (female)	Combined with Aoridae
S0605	Corophium	Combined with Corophiidae
S0605	Corophium (juv)	Combined with Corophiidae
S0607	Apocorophium acutum	Combined with Corophiidae
S0793	Gnathia	Combined with Gnathiidae
S0793	Gnathia (female)	Combined with Gnathiidae
S0793	Gnathia (juv)	Combined with Gnathiidae
S1375	Pandalus	Combined with Pandalus montagui
S1415	Callianassa subterranea	Combined with Callianassidae
S1417	Upogebiidae	Combined with Upogebia
S1445	Paguridae (juv)	Combined with Paguridae
S1454	Pagurus (juv)	Combined with Paguridae

## Appendix 2. Changes made to the combined data taxon list as part of the truncation process.

<b>SDC</b>	<b>Taxon Name</b>	<b>Change</b>
S1512	Majidae (juv)	Combined with Majidae
S1527	Inachus leptochirus	Combined with Inachus
S1577	Liocarcinus (juv)	Combined with Liocarcinus
W0001	OPISTOBRANCHIA (Type A)	Combined with GASTROPODA
W0001	OPISTOBRANCHIA (Type B)	Combined with GASTROPODA
W0157	Gibbula	Combined with Trochidae
W0157	Gibbula (juv)	Combined with Trochidae
W0181	Calliostoma formosum	Combined with Trochidae
W0182	Calliostoma zizyphinum	Combined with Trochidae
W0334	Rissoa parva (Type A)	Combined with Rissoa parva
W0334	Rissoa parva (Type B)	Combined with Rissoa parva
W0334	Rissoa parva (Type C)	Combined with Rissoa parva
W0672	Muricidae (juv)	Combined with Muricidae
W0916	Odostomia unidentata	Combined with Odostomia
W1035	Philinidae	Combined with Philine
W1155	Pleurobranchidae (juv)	Combined with Pleurobranchidae
W1301	Goniodoris castanea	Combined with Goniodoris
W1302	Goniodoris nodosa	Combined with Goniodoris
W1320	Onchidoris	Combined with Onchidorididae
W1323	Onchidoris depressa	Combined with Onchidorididae
W1325	Onchidoris muricata	Combined with Onchidorididae
W1336	Adalaria proxima	Combined with Onchidorididae
W1467	Facelina	Changed to Facelinidae
W1471	Facelina dubia	Changed to Facelinidae
W1560	PELECYPODA (juv)	Combined with PELECYPODA
W1565	Nucula (juv)	Combined with Nuculidae (juv)
W1691	Mytilidae (juv)	Combined with Mytiidae
W1693	Mytilus	Combined with Mytiidae
W1719	Musculus	Combined with Musculus discors
W1698	Modiolus (juv)	Combined with Modiolus
W1805	Anomiidae (juv)	Combined with Anomiidae
W1812	Pododesmus	Combined with Anomiidae
W1809	Heteranomia squamula	Combined with VENEROIDA
W1884	Leptonidae	Combined with VENEROIDA
W1916	Coracuta obliquata	Combined with VENEROIDA
W1938	Cardiidae (juv)	Combined with Cardiidae
W1947	Parvicardium	Combined with Cardiidae
W1947	Parvicardium (juv)	Combined with Cardiidae
W1973	Spisula (juv)	Combined with Spisula
W1996	Ensis	Combined with Pharidae
W1996	Ensis (juv)	Combined with Pharidae
W1991	Solenidae (juv)	Combined with Pharidae
W2086	Veneridae (juv)	Combined with Veneridae
W2089	Venus verrucosa	Combined with Circomphalus casina
W2126	Dosinia (juv)	Combined with Dosinia
W2122	Venerupis (juv)	Combined with Venerupis senegalensis
	Chamelea gallina	Combined with Chamlelea striatula
W2144	Mya	Combined with Mya truncata
W2144	Mya (juv)	Combined with Mya truncata
W2149	Mya arenaria	Combined with Mya truncata
W2227	Thracia (juv)	Combined with Thracia

## Appendix 2. Changes made to the combined data taxon list as part of the truncation process.

<b>SDC</b>	<b>Taxon Name</b>	<b>Change</b>
Y0010	Bicrisia abyssicola	Combined with Crisia
Y0014	Crisia aculeata	Combined with Crisia
Y0016	Crisia denticulata	Combined with Crisia
Y0017	Crisia eburnea	Combined with Crisia
Y0092	Nolella dilatata	Combined with Nolella
Y0139	Bowerbankia gracilis	Combined with Bowerbankia
Y0382	Porella	Combined with Porella concinna
ZA0005	Phoronis muelleri	Combined with Phoronis
ZB0083	Henricia oculata	Combined with Henrica
ZB0096	Asteriidae (juv)	Combined with ASTEROIDEA
ZB0105	OPHIUROIDEA (juv)	Combined with OPHIUROIDEA
ZB0121	OPHIURIDA (juv)	Combined with OPHIUROIDEA
ZB0123	Ophiothrix	Combined with Ophiothrix fragilis
ZB0149	Amphiura (juv)	Combined with Amphiuridae
ZB0261	Thyone	Combined with HOLOTHURIOIDEA
ZB0261	Thyone (juv)	Combined with HOLOTHURIOIDEA
ZD0020	Polyclinidae	Combined with Ascidiacea (P/A)
ZD0033	Aplidium	Combined with Ascidiacea (P/A)
ZD0082	Ascidiidae (juv)	Combined with Ascidiidae
ZD0083	Asciella	Combined with Ascidiidae
ZD0083	Asciella (juv)	Combined with Ascidiidae
ZD0087	Ascidia	Combined with Ascidiidae
ZD0110	Polycarpa (juv)	Combined with Polycarpa
ZD0146	Molgula	Combined with Molgulidae (P/A)
ZD0146	Molgula (juv)	Combined with Molgulidae (P/A)
ZG0452	Callionymus lyra	Combined with Callionymus

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
448-02a	Area 448 & 449	53.7232	0.2947	90	865	8650	9.168	0.601	2.488	ce	SS.SCS.CCS.PomB	-	-	-
448-03a	Area 448 & 449	53.6008	0.2907	22	45	450	5.517	0.811	2.507	du	SS.SCS.CCS.PomB	76.36	23.46	0.17
448-04a	Area 448 & 449	53.5958	0.3147	26	116	1160	5.259	0.598	1.950	bp	SS.SCS.IC.S.Lan	39.33	59.97	0.68
448-05a	Area 448 & 449	53.5915	0.3305	75	908	9080	10.864	0.711	3.069	ce	SS.SCS.CCS.PomB	47.56	40.03	12.41
448-06a	Area 448 & 449	53.5528	0.3110	43	973	9730	6.104	0.283	1.064	ce	SS.SCS.CCS.PomB	70.20	27.13	2.66
448-07a	Area 448 & 449	53.3684	0.3906	9	16	160	2.885	0.907	1.993	am	SS.SSa.IFiSa.IMoSa	28.20	63.43	8.37
448-08a	Area 448 & 449	53.6423	0.4097	24	57	570	5.689	0.886	2.816	du	SS.SCS.CCS.PomB	75.51	24.44	0.06
448-09a	Area 448 & 449	53.6362	0.3911	24	88	880	5.137	0.823	2.615	du	SS.SCS.CCS.PomB	43.60	53.50	2.91
448-10a	Area 448 & 449	53.5640	0.2722	35	375	3750	5.737	0.544	1.934	cl	SS.SBR.PoR.SspiMx	47.32	51.25	1.43
448-11a	Area 448 & 449	53.5508	0.2290	1	1	10	-	-	-	c	SS.SSa.IFiSa.IMoSa	0.06	99.19	0.75
448-12a	Area 448 & 449	53.5420	0.3510	37	128	1280	7.420	0.771	2.784	ce	SS.SCS.CCS.PomB	91.31	6.98	1.69
448-13a	Area 448 & 449	53.5200	0.3068	38	557	5570	5.852	0.486	1.767	ce	SS.SCS.CCS.PomB	40.74	56.24	3.01
448-17a	Area 448 & 449	53.7006	0.2523	62	660	6600	9.396	0.595	2.454	ce	SS.SCS.CCS.PomB	69.85	26.62	3.52
448-22a	Area 448 & 449	53.5805	0.3488	54	541	5410	8.421	0.666	2.656	ce	SS.SCS.CCS.PomB	64.14	22.35	13.50
448-28a	Area 448 & 449	53.3711	0.3688	10	14	140	3.410	0.974	2.243	ae	SS.SSa.IFiSa.NcirBat	25.58	70.16	4.26
448-28b	Area 448 & 449	53.3710	0.3685	11	20	200	3.338	0.926	2.221	ae	SS.SSa.IFiSa.NcirBat	10.93	87.30	1.75
448-28c	Area 448 & 449	53.3712	0.3688	7	19	190	2.038	0.824	1.604	ad	SS.SSa.IFiSa.NcirBat	2.43	96.51	1.06
480(02)-05a	Area 480 (2002)	-	-	4	8	80	1.443	0.774	1.074	l	SS.SSa.IFiSa.IMoSa	73.06	24.39	2.55
480(02)-06a	Area 480 (2002)	-	-	40	168	1680	7.611	0.765	2.823	cm	SS.SBR.PoR.SspiMx	46.41	51.44	2.15
480(02)-07a	Area 480 (2002)	-	-	25	497	4970	3.866	0.357	1.148	cm	SS.SBR.PoR.SspiMx	24.77	68.06	7.17
480(02)-08a	Area 480 (2002)	-	-	37	330	3300	6.208	0.581	2.099	cm	SS.SBR.PoR.SspiMx	62.93	32.5	4.57
480(02)-09a	Area 480 (2002)	-	-	49	981	9810	6.968	0.350	1.363	cm	SS.SBR.PoR.SspiMx	70.89	26.83	2.29
480(02)-10a	Area 480 (2002)	-	-	35	179	1790	6.554	0.752	2.673	cm	SS.SBR.PoR.SspiMx	31.62	65.79	2.59
480(02)-11a	Area 480 (2002)	-	-	33	120	1200	6.684	0.818	2.861	da	SS.SCS.IC.S.Lan	66.57	32.86	0.56
480(02)-12a	Area 480 (2002)	-	-	40	479	4790	6.319	0.523	1.928	cm	SS.SBR.PoR.SspiMx	-	-	-
480(02)-13a	Area 480 (2002)	-	-	5	15	150	1.477	0.831	1.338	bg	SS.SCS.IC.S.Glap	19.8	78.78	1.42
480(02)-14a	Area 480 (2002)	-	-	36	166	1660	6.847	0.757	2.712	cm	SS.SBR.PoR.SspiMx	-	-	-
480(02)-15a	Area 480 (2002)	-	-	37	331	3310	6.205	0.617	2.227	da	SS.SCS.IC.S.Lan	48.41	50.13	1.46
480(02)-16a	Area 480 (2002)	-	-	11	24	240	3.147	0.941	2.257	bh	SS.SCS.IC.S.Glap	-	-	-
480(02)-17a	Area 480 (2002)	-	-	19	58	580	4.433	0.850	2.503	de	SS.SMx.IMx.##	69.69	29.39	0.91
480(02)-18a	Area 480 (2002)	-	-	58	287	2870	10.072	0.860	3.492	cm	SS.SBR.PoR.SspiMx	60.6	37.18	2.22
480(02)-20a	Area 480 (2002)	-	-	18	33	330	4.862	0.894	2.583	de	SS.SMx.IMx.##	37.02	50.21	12.77
480(02)-21a	Area 480 (2002)	-	-	21	237	2370	3.658	0.492	1.499	cm	SS.SBR.PoR.SspiMx	12.63	75.71	11.66
480(02)-22a	Area 480 (2002)	-	-	21	51	510	5.087	0.904	2.753	de	SS.SMx.IMx.##	66.04	30.4	3.56
480(02)-25a	Area 480 (2002)	-	-	20	1098	10980	2.714	0.228	0.684	cm	SS.SBR.PoR.SspiMx	8.24	77.2	14.57
480(02)-26a	Area 480 (2002)	-	-	29	156	1560	5.545	0.751	2.528	cm	SS.SBR.PoR.SspiMx	11.15	75.39	13.46
480(02)-27a	Area 480 (2002)	-	-	39	107	1070	8.132	0.786	2.879	cm	SS.SBR.PoR.SspiMx	19.71	60.68	19.61
480(02)-28a	Area 480 (2002)	-	-	45	436	4360	7.240	0.493	1.876	cm	SS.SBR.PoR.SspiMx	24.43	54.84	20.73
480(02)-29a	Area 480 (2002)	-	-	33	493	4930	5.161	0.277	0.969	cm	SS.SBR.PoR.SspiMx	12.74	78.49	8.77
480(02)-30a	Area 480 (2002)	-	-	43	214	2140	7.827	0.755	2.838	cm	SS.SBR.PoR.SspiMx	24.16	56.68	19.16
480(02)-31a	Area 480 (2002)	-	-	32	134	1340	6.329	0.771	2.673	cm	SS.SBR.PoR.SspiMx	16.53	64.33	19.15
480(02)-32a	Area 480 (2002)	-	-	41	273	2730	7.131	0.661	2.456	cm	SS.SBR.PoR.SspiMx	23	72.15	4.85
480(02)-33a	Area 480 (2002)	-	-	39	2404	24040	4.881	0.167	0.612	cm	SS.SBR.PoR.SspiMx	31.86	53.53	14.61
480(02)-34a	Area 480 (2002)	-	-	57	405	4050	9.327	0.623	2.518	bw	SS.SMx.CMx.FluHyd	16.39	69.73	13.88
480(08)-05a	Area 480 (2008)	53.4950	0.6063	70	1137	11370	9.807	0.456	1.938	cn	SS.SBR.PoR.SspiMx	67.91	29.67	2.42
480(08)-06a	Area 480 (2008)	53.4941	0.6373	4	19	190	1.019	0.647	0.898	dw	SS.SCS.CCS.PomB	44.06	55.24	0.70
480(08)-07a	Area 480 (2008)	53.4932	0.6660	64	319	3190	10.928	0.787	3.273	ck	SS.SBR.PoR.SspiMx	17.92	66.60	15.48

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
480(08)-08a	Area 480 (2008)	53.4682	0.6053	22	77	770	4.834	0.822	2.542	cc	SS.SCS.CCS.PomB	44.48	53.42	2.10
480(08)-09a	Area 480 (2008)	53.4669	0.6347	45	506	5060	7.067	0.435	1.655	cn	SS.SBR.PoR.SspiMx	68.07	30.40	1.53
480(08)-10a	Area 480 (2008)	53.4668	0.6647	61	736	7360	9.089	0.412	1.693	cn	SS.SBR.PoR.SspiMx	36.87	60.06	3.07
480(08)-11a	Area 480 (2008)	53.4501	0.6181	11	15	150	3.693	0.975	2.338	ds	SS.SCS.CCS.Pkef	60.14	39.21	0.65
480(08)-12a	Area 480 (2008)	53.4495	0.6332	62	619	6190	9.490	0.479	1.978	cn	SS.SBR.PoR.SspiMx	20.26	73.56	6.18
480(08)-13a	Area 480 (2008)	53.4500	0.6494	11	18	180	3.460	0.890	2.135	ap	SS.SSa.IFiSa.IMoSa	13.43	86.02	0.55
480(08)-14a	Area 480 (2008)	53.4261	0.5880	73	565	5650	11.362	0.646	2.773	cn	SS.SBR.PoR.SspiMx	-	-	-
480(08)-15a	Area 480 (2008)	53.4233	0.6264	23	39	390	6.005	0.915	2.868	bo	SS.SCS.ICS.Glap	57.25	41.89	0.86
480(08)-17a	Area 480 (2008)	53.4066	0.5865	35	84	840	7.674	0.843	2.997	do	SS.SCS.CCS.Pkef	71.67	27.33	1.00
480(08)-18a	Area 480 (2008)	53.4073	0.6176	31	56	560	7.453	0.926	3.179	ch	SS.SBR.PoR.SspiMx	44.17	53.66	2.17
480(08)-20a	Area 480 (2008)	53.3993	0.6059	61	343	3430	10.278	0.593	2.438	cn	SS.SBR.PoR.SspiMx	42.12	53.71	4.17
480(08)-21a	Area 480 (2008)	53.3968	0.6448	48	146	1460	9.431	0.825	3.194	cn	SS.SBR.PoR.SspiMx	11.01	74.62	14.37
480(08)-22a	Area 480 (2008)	53.3879	0.5851	37	126	1260	7.444	0.864	3.121	cn	SS.SBR.PoR.SspiMx	48.56	44.47	6.97
480(08)-23a	Area 480 (2008)	53.3875	0.6303	47	154	1540	9.133	0.702	2.703	cn	SS.SBR.PoR.SspiMx	14.75	73.36	11.89
480(08)-25a	Area 480 (2008)	53.3795	0.5979	76	1085	10850	10.731	0.515	2.230	cn	SS.SBR.PoR.SspiMx	11.73	79.91	8.36
480(08)-26a	Area 480 (2008)	53.3697	0.6135	72	536	5360	11.298	0.633	2.707	cn	SS.SBR.PoR.SspiMx	11.39	75.84	12.77
480(08)-27a	Area 480 (2008)	53.3693	0.6292	66	560	5600	10.272	0.665	2.787	cn	SS.SBR.PoR.SspiMx	10.95	63.58	25.47
480(08)-28a	Area 480 (2008)	53.3692	0.6460	81	993	9930	11.593	0.661	2.904	cn	SS.SBR.PoR.SspiMx	31.24	43.68	25.08
480(08)-29a	Area 480 (2008)	53.3518	0.5972	58	728	7280	8.649	0.559	2.270	cn	SS.SBR.PoR.SspiMx	12.50	76.27	11.23
480(08)-30a	Area 480 (2008)	53.3509	0.6287	35	379	3790	5.726	0.612	2.177	cn	SS.SBR.PoR.SspiMx	33.11	48.53	18.36
480(08)-31a	Area 480 (2008)	53.3502	0.6581	69	1227	12270	9.561	0.474	2.006	cn	SS.SBR.PoR.SspiMx	20.30	57.45	22.25
480(08)-32a	Area 480 (2008)	53.3241	0.5975	52	258	2580	9.184	0.837	3.308	cn	SS.SBR.PoR.SspiMx	19.86	75.43	4.71
480(08)-33a	Area 480 (2008)	53.3239	0.6261	85	999	9990	12.162	0.522	2.321	cn	SS.SBR.PoR.SspiMx	21.83	61.80	16.37
480(08)-34a	Area 480 (2008)	53.3233	0.6564	69	567	5670	10.725	0.729	3.085	cn	SS.SBR.PoR.SspiMx	32.21	52.84	14.95
480(08)-39a	Area 480 (2008)	53.3239	0.5736	58	267	2670	10.202	0.842	3.420	cn	SS.SBR.PoR.SspiMx	21.50	73.45	5.05
480(08)-40a	Area 480 (2008)	53.3519	0.5714	11	18	180	3.460	0.936	2.245	bd	SS.SCS.ICS.Glap	56.80	42.36	0.84
480(08)-41a	Area 480 (2008)	53.3691	0.5742	6	9	90	2.276	0.936	1.677	at	SS.SCS.ICS.Glap	36.63	62.87	0.50
480(08)-42a	Area 480 (2008)	53.3691	0.5905	92	829	8290	13.541	0.696	3.148	cn	SS.SBR.PoR.SspiMx	20.60	69.13	10.27
480(08)-43a	Area 480 (2008)	53.3695	0.6027	50	177	1770	9.466	0.841	3.289	cn	SS.SBR.PoR.SspiMx	20.75	65.54	13.71
480(08)-44a	Area 480 (2008)	53.3879	0.6014	16	24	240	4.720	0.964	2.672	ds	SS.SCS.CCS.Pkef	62.43	37.17	0.40
480(08)-45a	Area 480 (2008)	53.3878	0.6170	26	59	590	6.131	0.939	3.060	ah	SS.SSa.IFiSa.NcirBat	2.88	92.19	4.93
480(08)-46a	Area 480 (2008)	53.4075	0.6483	99	3251	32510	12.119	0.314	1.444	cn	SS.SBR.PoR.SspiMx	2.05	75.26	22.69
480(08)-47a	Area 480 (2008)	53.4235	0.6486	65	835	8350	9.513	0.521	2.173	cn	SS.SBR.PoR.SspiMx	2.45	80.97	16.58
480(08)-48a	Area 480 (2008)	53.4246	0.6102	25	71	710	5.630	0.883	2.841	dv	SS.SBR.PoR.SspiMx	91.94	6.61	1.45
480(08)-49a	Area 480 (2008)	53.4366	0.6276	15	56	560	3.478	0.746	2.019	dv	SS.SBR.PoR.SspiMx	43.48	55.56	0.96
480(08)-50a	Area 480 (2008)	53.4500	0.6668	3	3	30	1.820	1.000	1.099	b	SS.SSa.IFiSa.IMoSa	29.56	68.92	1.52
480(08)-51a	Area 480 (2008)	53.4508	0.6012	12	18	180	3.806	0.946	2.351	m	SS.SSa.IFiSa.IMoSa	35.94	56.67	7.39
481(03)-01a	Area 481 (2003)	-	-	28	60	600	6.594	0.863	2.877	cj	SS.SBR.PoR.SspiMx	31.5	66.3	2.2
481(03)-02a	Area 481 (2003)	-	-	51	180	1800	9.628	0.828	3.257	cj	SS.SBR.PoR.SspiMx	41.5	55.6	2.9
481(03)-03a	Area 481 (2003)	-	-	16	140	1400	3.035	0.510	1.415	dh	SS.SCS.ICS.HeloMsim	8.1	91.9	0.1
481(03)-04a	Area 481 (2003)	-	-	25	69	690	5.668	0.870	2.802	cj	SS.SBR.PoR.SspiMx	24.5	74.3	1.2
481(03)-05a	Area 481 (2003)	-	-	20	58	580	4.679	0.716	2.146	cj	SS.SBR.PoR.SspiMx	26.6	72.4	1
481(03)-06a	Area 481 (2003)	-	-	16	60	600	3.664	0.803	2.225	dh	SS.SCS.ICS.HeloMsim	13.9	86	0.1
481(03)-07a	Area 481 (2003)	-	-	10	17	170	3.177	0.919	2.115	br	SS.SSa.IFiSa.IMoSa	13.7	86.2	0.1
481(03)-08a	Area 481 (2003)	-	-	11	12	120	4.024	0.988	2.369	bb	SS.SCS.ICS.Glap	20.2	79.7	0.3
481(03)-09a	Area 481 (2003)	-	-	21	39	390	5.459	0.927	2.821	cj	SS.SBR.PoR.SspiMx	24.2	73.9	1.9
481(03)-10a	Area 481 (2003)	-	-	11	35	350	2.813	0.833	1.997	di	SS.SCS.CCS.Pkef	24.1	75.7	0.2

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
481(03)-11a	Area 481 (2003)	-	-	3	3	30	1.820	1.000	1.099	e	SS.SSa.IFiSa.IMoSa	7.3	92.7	0.1
481(03)-12a	Area 481 (2003)	-	-	22	49	490	5.396	0.899	2.780	dj	SS.SCS.CCS.Pkef	26.7	71.2	2.1
481(03)-13a	Area 481 (2003)	-	-	4	4	40	2.164	1.000	1.386	bb	SS.SCS.ICCS.Glap	4.9	95.1	0.1
481(03)-14a	Area 481 (2003)	-	-	14	20	200	4.340	0.978	2.580	dj	SS.SCS.CCS.Pkef	12.8	87.2	0.1
481(03)-15a	Area 481 (2003)	-	-	1	1	10	-	-	-	k	SS.SCS.ICCS.Glap	73.7	26.3	0.1
481(03)-16a	Area 481 (2003)	-	-	25	142	1420	4.843	0.697	2.242	cj	SS.SBR.PoR.SspiMx	37.6	60.8	1.6
481(03)-17a	Area 481 (2003)	-	-	7	8	80	2.885	0.980	1.906	aq	SS.SCS.ICCS.Glap	6	94	0.1
481(03)-18a	Area 481 (2003)	-	-	8	18	180	2.422	0.941	1.956	q	SS.SSa.IFiSa.NcirBat	0.4	99.5	0.1
481(03)-19a	Area 481 (2003)	-	-	14	47	470	3.376	0.778	2.052	df	SS.SCS.ICCS.CumCset	15.7	83.3	1
481(03)-20a	Area 481 (2003)	-	-	8	14	140	2.652	0.852	1.772	ab	SS.SSa.IFiSa.NcirBat	8.5	91.5	0.1
481(03)-21a	Area 481 (2003)	-	-	38	122	1220	7.702	0.845	3.072	cj	SS.SBR.PoR.SspiMx	36.7	61	2.3
481(03)-22a	Area 481 (2003)	-	-	50	209	2090	9.172	0.820	3.208	cj	SS.SBR.PoR.SspiMx	30	69.4	0.6
481(03)-23a	Area 481 (2003)	-	-	27	86	860	5.837	0.797	2.626	cj	SS.SBR.PoR.SspiMx	10.5	88.1	1.4
481(03)-24a	Area 481 (2003)	-	-	57	373	3730	9.457	0.607	2.452	cj	SS.SBR.PoR.SspiMx	20.5	77.2	2.3
481(03)-24b	Area 481 (2003)	-	-	55	403	4030	9.002	0.656	2.629	cj	SS.SBR.PoR.SspiMx	18.2	79.9	1.9
481(03)-24c	Area 481 (2003)	-	-	55	432	4320	8.899	0.687	2.751	cj	SS.SBR.PoR.SspiMx	39.4	59.3	1.3
481(03)-25a	Area 481 (2003)	-	-	10	24	240	2.832	0.925	2.131	dj	SS.SCS.CCS.Pkef	21.1	78.8	0.1
481(03)-25b	Area 481 (2003)	-	-	13	24	240	3.776	0.897	2.300	dj	SS.SCS.CCS.Pkef	39.6	60.4	0.1
481(03)-25c	Area 481 (2003)	-	-	10	16	160	3.246	0.910	2.096	dj	SS.SCS.CCS.Pkef	23.5	76.1	0.4
481(03)-26a	Area 481 (2003)	-	-	15	41	410	3.770	0.816	2.210	di	SS.SCS.CCS.Pkef	22.8	77.2	0.1
481(03)-26b	Area 481 (2003)	-	-	11	17	170	3.530	0.884	2.119	di	SS.SCS.CCS.Pkef	14.5	85.5	0.1
481(03)-26c	Area 481 (2003)	-	-	6	17	170	1.765	0.921	1.650	di	SS.SCS.CCS.Pkef	36.1	63.9	0.1
481(03)-27a	Area 481 (2003)	-	-	4	4	40	2.164	1.000	1.386	aq	SS.SCS.ICCS.Glap	18.9	80.9	0.2
481(03)-27b	Area 481 (2003)	-	-	8	11	110	2.919	0.971	2.020	bl	SS.SCS.ICCS.Glap	20.2	79.7	0.1
481(03)-27c	Area 481 (2003)	-	-	5	5	50	2.485	1.000	1.609	bm	SS.SSa.IFiSa.IMoSa	18.3	81.7	0.1
481(03)-28a	Area 481 (2003)	-	-	14	42	420	3.478	0.891	2.351	cj	SS.SBR.PoR.SspiMx	38	60.7	1.3
481(03)-28b	Area 481 (2003)	-	-	18	53	530	4.282	0.821	2.374	cj	SS.SBR.PoR.SspiMx	42.6	56.1	1.3
481(03)-28c	Area 481 (2003)	-	-	27	36	360	7.255	0.969	3.193	cj	SS.SBR.PoR.SspiMx	48.1	50.8	1.1
481(03)-29a	Area 481 (2003)	-	-	30	101	1010	6.284	0.903	3.072	cj	SS.SBR.PoR.SspiMx	45.7	53	1.3
481(03)-29b	Area 481 (2003)	-	-	28	60	600	6.594	0.944	3.145	cj	SS.SBR.PoR.SspiMx	40.6	58	1.4
481(03)-29c	Area 481 (2003)	-	-	34	68	680	7.821	0.921	3.248	cj	SS.SBR.PoR.SspiMx	49	49.5	1.5
481(03)-30a	Area 481 (2003)	-	-	30	92	920	6.413	0.856	2.912	cj	SS.SBR.PoR.SspiMx	47.3	50.3	2.4
481(03)-30b	Area 481 (2003)	-	-	28	92	920	5.971	0.829	2.762	cj	SS.SBR.PoR.SspiMx	-	-	-
481(03)-30c	Area 481 (2003)	-	-	26	81	810	5.689	0.835	2.721	cj	SS.SBR.PoR.SspiMx	46	51.9	2.1
481(08)-01a	Area 481 (2008)	53.3299	0.6662	68	408	4080	11.146	0.803	3.390	cn	SS.SBR.PoR.SspiMx	25.49	65.10	9.41
481(08)-02a	Area 481 (2008)	53.3162	0.6634	92	689	6890	13.925	0.813	3.678	cn	SS.SBR.PoR.SspiMx	43.65	47.61	8.74
481(08)-03a	Area 481 (2008)	53.2986	0.6672	6	11	110	2.085	0.960	1.720	ao	SS.SCS.ICCS.Glap	42.88	56.24	0.88
481(08)-04a	Area 481 (2008)	53.3028	0.6988	69	367	3670	11.515	0.845	3.577	cn	SS.SBR.PoR.SspiMx	28.41	61.70	9.89
481(08)-05a	Area 481 (2008)	53.2853	0.6947	69	1867	18670	9.028	0.442	1.870	cn	SS.SBR.PoR.SspiMx	14.89	73.36	11.75
481(08)-06a	Area 481 (2008)	53.2892	0.6658	10	17	170	3.177	0.956	2.201	ao	SS.SCS.ICCS.Glap	15.55	83.45	1.00
481(08)-07a	Area 481 (2008)	53.2857	0.6420	14	28	280	3.901	0.918	2.423	ao	SS.SCS.ICCS.Glap	24.74	74.64	0.62
481(08)-08a	Area 481 (2008)	53.2765	0.6393	29	115	1150	5.901	0.875	2.947	bq	SS.SCS.ICCS.SLan	31.56	66.91	1.53
481(08)-09a	Area 481 (2008)	53.2715	0.6627	73	1468	14680	9.874	0.467	2.005	cn	SS.SBR.PoR.SspiMx	14.10	76.97	8.93
481(08)-10a	Area 481 (2008)	53.2715	0.6921	63	621	6210	9.640	0.552	2.287	cn	SS.SBR.PoR.SspiMx	28.32	68.18	3.50
481(08)-11a	Area 481 (2008)	53.2595	0.6292	4	4	40	2.164	1.000	1.386	ax	SS.SCS.ICCS.MoeVen	5.12	94.47	0.41
481(08)-12a	Area 481 (2008)	53.2547	0.6580	65	378	3780	10.784	0.733	3.061	cn	SS.SBR.PoR.SspiMx	17.23	75.93	6.84
481(08)-13a	Area 481 (2008)	53.2540	0.6900	1	2	20	-	-	-	ar	SS.SSa.IFiSa.IMoSa	3.29	96.06	0.65

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
481(08)-14a	Area 481 (2008)	53.2408	0.6249	11	15	150	3.693	0.961	2.303	bs	SS.SSa.IFiSa.IMoSa	55.09	44.28	0.63
481(08)-15a	Area 481 (2008)	53.2406	0.6786	25	38	380	6.598	0.956	3.077	ch	SS.SBR.PoR.SspiMx	48.24	51.29	0.47
481(08)-16a	Area 481 (2008)	53.2221	0.6208	77	1076	10760	10.887	0.539	2.341	cn	SS.SBR.PoR.SspiMx	28.41	61.40	10.19
481(08)-17a	Area 481 (2008)	53.2221	0.6738	4	4	40	2.164	1.000	1.386	o	SS.SSa.IFiSa.IMoSa	4.72	94.74	0.54
481(08)-18a	Area 481 (2008)	53.1901	0.6665	12	74	740	2.556	0.489	1.216	ak	SS.SCS.ICs.MoeVen	0.10	98.21	1.69
481(08)-19a	Area 481 (2008)	53.1384	0.6031	72	549	5490	11.255	0.817	3.495	cn	SS.SBR.PoR.SspiMx	11.19	75.91	12.90
481(08)-20a	Area 481 (2008)	53.1384	0.6560	9	19	190	2.717	0.929	2.041	ae	SS.SSa.IFiSa.NcirBat	1.23	97.89	0.88
481(08)-21a	Area 481 (2008)	53.3663	0.6735	52	320	3200	8.841	0.810	3.200	cn	SS.SBR.PoR.SspiMx	2.82	84.37	12.81
481(08)-22a	Area 481 (2008)	53.4165	0.6861	79	797	7970	11.675	0.692	3.023	cn	SS.SBR.PoR.SspiMx	3.70	85.00	11.30
481(08)-23a	Area 481 (2008)	53.3889	0.7158	105	4274	42740	12.440	0.343	1.595	cn	SS.SBR.PoR.SspiMx	8.94	83.50	7.56
481(08)-24a	Area 481 (2008)	53.3395	0.7065	81	1341	13410	11.109	0.472	2.073	cn	SS.SBR.PoR.SspiMx	18.89	73.23	7.88
481(08)-24b	Area 481 (2008)	53.3395	0.7064	73	1181	11810	10.178	0.413	1.770	cn	SS.SBR.PoR.SspiMx	22.75	71.21	6.04
481(08)-24c	Area 481 (2008)	53.3395	0.7063	86	1139	11390	12.077	0.581	2.590	cn	SS.SBR.PoR.SspiMx	19.42	69.98	10.60
481(08)-25a	Area 481 (2008)	53.2944	0.6521	18	25	250	5.281	0.906	2.619	cf	SS.SCS.CCS.PomB	46.45	45.92	7.63
481(08)-25b	Area 481 (2008)	53.2945	0.6519	3	4	40	1.443	0.946	1.040	aq	SS.SCS.ICs.Glap	-	-	-
481(08)-25c	Area 481 (2008)	53.2944	0.6516	12	12	120	4.427	1.000	2.485	au	SS.SSa.IFiSa.IMoSa	47.64	52.28	0.08
481(08)-26a	Area 481 (2008)	53.2626	0.6891	21	28	280	6.002	0.975	2.967	ci	SS.SBR.PoR.SspiMx	13.62	85.76	0.62
481(08)-26b	Area 481 (2008)	53.2628	0.6893	42	132	1320	8.397	0.789	2.948	ci	SS.SBR.PoR.SspiMx	15.39	84.03	0.58
481(08)-26c	Area 481 (2008)	53.2627	0.6895	14	42	420	3.478	0.850	2.244	ci	SS.SBR.PoR.SspiMx	23.91	75.16	0.93
481(08)-27a	Area 481 (2008)	53.2681	0.6347	21	43	430	5.317	0.877	2.671	bq	SS.SCS.ICs.SLan	24.03	74.51	1.46
481(08)-27b	Area 481 (2008)	53.2680	0.6344	9	11	110	3.336	0.977	2.146	ao	SS.SCS.ICs.Glap	32.37	67.15	0.48
481(08)-27c	Area 481 (2008)	53.2679	0.6355	12	20	200	3.672	0.922	2.290	ao	SS.SCS.ICs.Glap	39.01	60.44	0.55
481(08)-28a	Area 481 (2008)	53.1915	0.6148	52	284	2840	9.028	0.862	3.404	cn	SS.SBR.PoR.SspiMx	35.51	63.50	0.99
481(08)-28b	Area 481 (2008)	53.1915	0.6146	54	288	2880	9.359	0.836	3.336	cn	SS.SBR.PoR.SspiMx	30.36	59.08	10.56
481(08)-28c	Area 481 (2008)	53.1914	0.6148	55	265	2650	9.678	0.833	3.339	cn	SS.SBR.PoR.SspiMx	30.36	56.22	13.42
481(08)-29a	Area 481 (2008)	53.3132	0.5884	25	54	540	6.017	0.878	2.828	ci	SS.SBR.PoR.SspiMx	65.68	34.30	0.02
481(08)-29b	Area 481 (2008)	53.3132	0.5883	34	119	1190	6.905	0.862	3.040	ci	SS.SBR.PoR.SspiMx	23.42	62.42	14.16
481(08)-29c	Area 481 (2008)	53.3132	0.5882	29	126	1260	5.790	0.776	2.615	ci	SS.SBR.PoR.SspiMx	76.11	18.35	5.54
481(08)-30a	Area 481 (2008)	53.2605	0.5820	58	747	7470	8.615	0.580	2.356	cn	SS.SBR.PoR.SspiMx	22.02	62.02	15.96
481(08)-30b	Area 481 (2008)	53.2605	0.5820	67	612	6120	10.286	0.648	2.724	cn	SS.SBR.PoR.SspiMx	28.52	55.86	15.62
481(08)-30c	Area 481 (2008)	53.2604	0.5820	48	400	4000	7.844	0.691	2.674	cn	SS.SBR.PoR.SspiMx	34.32	48.56	17.12
AR-01a	ALSF REC	53.8300	0.1391	75	284	2840	9.913	0.864	3.491	bz	SS.SCS.CCS.MedLumVen	-	-	-
AR-02a	ALSF REC	53.8223	0.3125	71	189	1890	10.111	0.701	2.797	bz	SS.SCS.CCS.MedLumVen	51.64	46.66	1.70
AR-03a	ALSF REC	53.8127	0.5127	96	362	3620	13.239	0.855	3.738	bz	SS.SCS.CCS.MedLumVen	29.37	68.28	2.35
AR-04a	ALSF REC	53.7870	0.7832	39	56	560	6.211	0.936	3.051	cx	SS.SCS.ICs.MoeVen	39.51	59.79	0.69
AR-05a	ALSF REC	53.7964	1.2138	22	72	720	4.910	0.669	2.068	w	SS.SSa.IFiSa.NcirBat	8.87	90.00	1.13
AR-06a	ALSF REC	53.8140	1.4377	31	120	1200	6.266	0.722	2.478	bt	SS.SSa.IFiSa.TbAmPo	57.63	39.20	3.17
AR-07a	ALSF REC	53.8751	1.6182	14	48	480	3.358	0.764	2.016	w	SS.SSa.IFiSa.NcirBat	0.49	98.24	1.27
AR-08a	ALSF REC	53.9031	1.7666	11	13	130	3.509	0.929	2.138	x	SS.SSa.IFiSa.NcirBat	0.34	97.49	2.17
AR-09a	ALSF REC	53.9049	2.0971	31	73	730	5.827	0.895	2.915	cq	SS.SSa.CFiSa.EpusOborApri	-	-	-
AR-10a	ALSF REC	53.9086	2.3123	25	66	660	5.728	0.824	2.652	cw	SS.SCS.CCS.Blan	12.95	83.93	3.12
AR-11a	ALSF REC	53.7761	0.2314	131	1570	15700	12.230	0.715	3.226	bx	SS.SCS.CCS.PomB	91.74	8.26	0.00
AR-12a	ALSF REC	53.7116	0.1664	85	186	1860	10.142	0.926	3.692	ce	SS.SCS.CCS.PomB	62.24	35.72	2.04
AR-13a	ALSF REC	53.6723	0.2147	90	264	2640	9.864	0.783	3.151	ce	SS.SCS.CCS.PomB	-	-	-
AR-14a	ALSF REC	53.6640	0.3206	102	698	6980	11.301	0.665	2.869	ce	SS.SCS.CCS.PomB	52.82	44.08	3.11
AR-15a	ALSF REC	53.6851	0.4357	115	2419	24190	11.295	0.430	1.932	ce	SS.SCS.CCS.PomB	67.43	30.69	1.88
AR-16a	ALSF REC	53.6802	0.6333	4	5	50	1.243	0.865	0.950	ax	SS.SCS.ICs.MoeVen	0.62	98.49	0.89

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
AR-17a	ALSF REC	53.6761	0.7861	93	539	5390	12.719	0.734	3.227	ce	SS.SCS.CCS.PomB	41.57	52.66	5.77
AR-18a	ALSF REC	53.7454	0.8292	37	197	1970	5.300	0.719	2.421	ct	SS.SCS.CCS.PomB	59.20	39.64	1.16
AR-19a	ALSF REC	53.6728	0.9093	44	260	2600	7.553	0.613	2.305	ct	SS.SCS.CCS.PomB	42.41	56.77	0.81
AR-20a	ALSF REC	53.6635	1.2237	10	42	420	2.140	0.713	1.567	w	SS.SSa.IFiSa.NcirBat	0.00	98.98	1.02
AR-21a	ALSF REC	53.6883	1.3843	11	40	400	2.711	0.752	1.804	w	SS.SSa.IFiSa.NcirBat	0.05	98.95	1.00
AR-22a	ALSF REC	53.7490	1.6405	23	48	480	5.425	0.915	2.829	cr	SS.SSa.IFiSa.NcirBat	6.73	92.59	0.69
AR-23a	ALSF REC	53.7782	1.8121	32	333	3330	5.337	0.593	2.054	bt	SS.SSa.IFiSa.TbAmPo	30.40	65.08	4.52
AR-24a	ALSF REC	53.7851	2.0422	20	40	400	4.880	0.871	2.565	s	SS.SSa.IMuSa.FfabMag	3.36	94.95	1.69
AR-25a	ALSF REC	53.7938	2.3511	44	133	1330	8.384	0.850	3.177	bu	SS.SMu.CSaMu.AfilMysAnit	30.71	62.27	7.02
AR-26a	ALSF REC	53.8499	2.5826	23	96	960	4.820	0.814	2.552	bv	SS.SMu.CSaMu.AfilMysAnit	0.00	72.25	27.75
AR-27a	ALSF REC	53.7994	2.5718	34	83	830	6.563	0.916	3.114	cw	SS.SCS.CCS.Blan	50.47	48.71	0.83
AR-28a	ALSF REC	53.5784	0.2483	4	10	100	0.869	0.865	0.950	bg	SS.SCS.IC.S.Glap	54.23	45.34	0.43
AR-29a	ALSF REC	53.5693	0.3193	111	701	7010	12.209	0.656	2.884	ce	SS.SCS.CCS.PomB	56.93	40.51	2.56
AR-30a	ALSF REC	53.5799	0.5910	63	379	3790	7.242	0.624	2.360	ce	SS.SCS.CCS.PomB	-	-	-
AR-31a	ALSF REC	53.5788	0.7252	117	1637	16370	13.783	0.580	2.687	cn	SS.SBR.PoR.SspiMx	40.50	49.88	9.62
AR-32a	ALSF REC	53.4217	0.4675	12	24	240	1.573	1.000	1.792	ao	SS.SCS.IC.S.Glap	73.42	26.02	0.56
AR-33a	ALSF REC	53.3900	0.6293	53	103	1030	6.689	0.870	3.015	ci	SS.SBR.PoR.SspiMx	24.32	72.61	3.07
AR-34a	ALSF REC	53.3736	0.7117	61	1655	16550	6.072	0.395	1.513	cn	SS.SBR.PoR.SspiMx	36.36	57.64	6.00
AR-35a	ALSF REC	53.4425	0.8489	20	20	200	4.673	0.953	2.580	dp	SS.SCS.IC.S.MoeVen	39.27	59.63	1.10
AR-36a	ALSF REC	53.3366	0.3962	4	4	40	2.164	1.000	1.386	k	SS.SCS.IC.S.Glap	2.54	65.59	31.87
AR-37a	ALSF REC	53.2878	0.6015	96	870	8700	11.524	0.652	2.849	cn	SS.SBR.PoR.SspiMx	17.71	70.43	11.86
AR-38a	ALSF REC	53.3447	0.8560	10	15	150	2.954	0.904	1.987	ay	SS.SCS.IC.S.MoeVen	12.89	86.36	0.75
AR-39a	ALSF REC	53.3035	1.0612	109	1040	10400	12.092	0.629	2.793	ce	SS.SCS.CCS.PomB	27.53	69.34	3.13
AR-40a	ALSF REC	53.3666	1.2552	10	17	170	2.824	0.888	1.952	ac	SS.SSa.IFiSa.NcirBat	0.31	98.40	1.28
AR-41a	ALSF REC	53.4208	1.4308	14	55	550	3.244	0.787	2.077	cs	SS.SCS.IC.S.MoeVen	17.93	81.05	1.02
AR-42a	ALSF REC	53.4452	1.5315	80	307	3070	10.128	0.731	2.981	ca	SS.SCS.CCS.PomB	21.62	74.23	4.15
AR-43a	ALSF REC	53.4859	1.7000	19	40	400	4.337	0.914	2.590	cr	SS.SSa.IFiSa.NcirBat	1.54	97.76	0.70
AR-44a	ALSF REC	53.5284	1.8665	25	37	370	3.877	0.799	2.163	cr	SS.SSa.IFiSa.NcirBat	9.13	89.99	0.88
AR-45a	ALSF REC	53.5604	2.0155	16	24	240	4.091	0.885	2.336	w	SS.SSa.IFiSa.NcirBat	0.32	98.84	0.84
AR-46a	ALSF REC	53.5965	2.1720	21	50	500	4.346	0.819	2.368	cx	SS.SCS.IC.S.MoeVen	-	-	-
AR-47a	ALSF REC	53.6204	2.4230	13	34	340	3.403	0.806	2.067	w	SS.SSa.IFiSa.NcirBat	0.12	98.73	1.15
AR-48a	ALSF REC	53.6344	2.5764	15	31	310	3.786	0.917	2.419	r	SS.SSa.CMuSa.AalbNuc	0.00	98.57	1.43
AR-49a	ALSF REC	53.5539	2.5746	15	28	280	3.901	0.873	2.305	r	SS.SSa.CMuSa.AalbNuc	0.20	96.73	3.07
AR-50a	ALSF REC	53.2031	0.5022	38	159	1590	6.116	0.749	2.595	cn	SS.SBR.PoR.SspiMx	35.25	52.20	12.55
AR-51a	ALSF REC	53.1770	0.5717	15	60	600	2.442	0.975	2.338	cu	SS.SCS.CCS.PomB	51.11	42.95	5.94
AR-52a	ALSF REC	53.1432	0.5253	101	1810	18100	10.932	0.537	2.373	bx	SS.SCS.CCS.PomB	10.21	60.05	29.75
AR-53a	ALSF REC	53.1296	0.5599	50	226	2260	8.671	0.824	3.192	cn	SS.SBR.PoR.SspiMx	32.79	57.17	10.04
AR-54a	ALSF REC	53.0922	0.4737	82	867	8670	9.460	0.660	2.756	cn	SS.SBR.PoR.SspiMx	18.05	61.46	20.49
AR-55a	ALSF REC	53.0641	0.5426	29	27	270	4.551	0.957	2.654	ah	SS.SSa.IFiSa.NcirBat	3.96	89.80	6.25
AR-56a	ALSF REC	53.2285	0.8544	7	10	100	2.171	0.946	1.696	aq	SS.SCS.IC.S.Glap	3.98	95.19	0.83
AR-57a	ALSF REC	53.0966	0.9857	75	327	3270	10.190	0.783	3.205	cn	SS.SBR.PoR.SspiMx	38.75	53.52	7.74
AR-58a	ALSF REC	53.1792	1.0598	88	832	8320	8.923	0.487	2.003	ce	SS.SCS.CCS.PomB	45.94	44.09	9.96
AR-59a	ALSF REC	53.1863	1.2470	54	361	3610	6.623	0.366	1.350	ce	SS.SCS.CCS.PomB	26.45	69.45	4.09
AR-60a	ALSF REC	53.2275	1.3923	54	150	1500	7.983	0.853	3.167	cv	SS.SCS.IC.S.SLan	26.53	68.40	5.07
AR-61a	ALSF REC	53.2735	1.5704	4	15	150	0.739	0.988	1.085	ac	SS.SSa.IFiSa.NcirBat	0.00	99.14	0.86
AR-62a	ALSF REC	53.3106	1.7181	20	44	440	3.964	0.864	2.396	co	SS.SCS.IC.S.Glap	20.16	78.53	1.31
AR-63a	ALSF REC	53.3443	1.9187	44	81	810	8.875	0.892	3.291	aj	SS.SSa.IFiSa.TbAmPo	24.80	72.05	3.15



**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
AR-64a	ALSF REC	53.4102	2.0795	9	22	220	2.588	0.902	1.981	w	SS.SSa.IFiSa.NcirBat	0.20	98.82	0.98
AR-65a	ALSF REC	53.4186	2.3329	12	29	290	2.970	0.821	1.968	w	SS.SSa.IFiSa.NcirBat	0.89	96.98	2.12
AR-66a	ALSF REC	53.4449	2.4684	12	23	230	3.508	0.858	2.133	t	SS.SSa.IFiSa.NcirBat	1.58	96.29	2.13
AR-68a	ALSF REC	53.6826	0.5322	109	2003	20030	9.471	0.368	1.579	ce	SS.SCS.CCS.PomB	43.46	51.63	4.91
AR-69a	ALSF REC	53.4052	1.6718	95	600	6000	12.350	0.739	3.237	ca	SS.SCS.CCS.PomB	31.07	65.47	3.46
AR-70a	ALSF REC	53.5432	1.3936	7	5	50	2.485	1.000	1.609	f	SS.SSa.IFiSa.IMoSa	60.85	38.69	0.45
AR-71a	ALSF REC	53.6718	2.3047	16	25	250	4.349	0.919	2.488	cp	SS.SCS.CCS.Blan	11.41	87.93	0.65
AR-72a	ALSF REC	53.6024	1.7902	11	16	160	3.607	0.976	2.339	af	SS.SSa.IFiSa.NcirBat	0.16	98.45	1.40
AR-73a	ALSF REC	53.4494	0.6447	14	21	210	4.270	0.960	2.533	af	SS.SSa.IFiSa.NcirBat	10.35	88.17	1.48
AR-74a	ALSF REC	53.4932	0.6465	13	23	230	3.508	0.893	2.219	dq	SS.SSa.IFiSa.IMoSa	90.35	9.12	0.53
AR-75a	ALSF REC	53.4922	0.6539	44	183	1830	6.719	0.683	2.446	ck	SS.SBR.PoR.SspiMx	18.45	79.33	2.22
AR-76a	ALSF REC	53.4920	0.6884	117	499	4990	14.326	0.836	3.760	cn	SS.SBR.PoR.SspiMx	9.96	78.19	11.85
AR-77a	ALSF REC	53.4768	0.6450	26	55	550	3.993	0.580	1.644	ag	SS.SBR.PoR.SspiMx	23.53	71.28	5.20
AR-78a	ALSF REC	53.5027	0.6553	82	1338	13380	10.140	0.343	1.478	cn	SS.SBR.PoR.SspiMx	13.44	80.05	6.51
AR-79a	ALSF REC	53.4912	0.6627	53	185	1850	9.769	0.896	3.540	ck	SS.SBR.PoR.SspiMx	22.42	70.58	7.00
AR-80a	ALSF REC	53.5003	0.6754	62	556	5560	9.493	0.688	2.828	ck	SS.SBR.PoR.SspiMx	14.84	77.07	8.08
AR-81a	ALSF REC	53.4927	0.6790	66	683	6830	8.887	0.546	2.226	ck	SS.SBR.PoR.SspiMx	21.02	69.20	9.78
AR-82a	ALSF REC	53.5004	0.6966	56	158	1580	9.876	0.817	3.214	ck	SS.SBR.PoR.SspiMx	11.95	83.75	4.30
AR-83a	ALSF REC	53.5054	0.6557	101	890	8900	11.927	0.641	2.826	cn	SS.SBR.PoR.SspiMx	-	-	-
AR-84a	ALSF REC	53.6358	1.5466	65	987	9870	8.412	0.413	1.685	bu	SS.SMu.CSaMu.AfilMysAnit	5.94	81.10	12.96
AR-85a	ALSF REC	53.6219	1.5578	53	1185	11850	6.782	0.376	1.462	bu	SS.SMu.CSaMu.AfilMysAnit	5.62	77.53	16.85
AR-86a	ALSF REC	53.6455	1.5467	64	834	8340	8.326	0.434	1.753	bu	SS.SMu.CSaMu.AfilMysAnit	12.11	71.48	16.41
AR-87a	ALSF REC	53.6277	1.5649	53	1113	11130	6.130	0.245	0.927	bu	SS.SMu.CSaMu.AfilMysAnit	0.43	85.25	14.32
AR-88a	ALSF REC	53.6395	1.5596	97	1448	14480	10.030	0.408	1.756	bu	SS.SMu.CSaMu.AfilMysAnit	2.52	80.66	16.82
AR-89a	ALSF REC	53.1990	0.8068	90	234	2340	10.265	0.851	3.439	ci	SS.SBR.PoR.SspiMx	30.79	68.17	1.04
AR-90a	ALSF REC	53.2297	0.7439	29	24	240	4.405	0.935	2.532	ci	SS.SBR.PoR.SspiMx	16.68	81.27	2.05
AR-91a	ALSF REC	53.5566	0.5499	86	1375	13750	8.165	0.401	1.642	ce	SS.SCS.CCS.PomB	62.94	35.38	1.68
AR-93a	ALSF REC	53.7771	1.5230	27	57	570	6.183	0.890	2.901	cw	SS.SCS.CCS.Blan	37.70	61.30	1.00
AR-94a	ALSF REC	53.7351	1.1216	22	71	710	4.692	0.808	2.461	cw	SS.SCS.CCS.Blan	27.30	72.00	0.70
AR-95a	ALSF REC	53.6220	0.8111	109	1063	10630	13.202	0.539	2.443	ce	SS.SCS.CCS.PomB	21.52	65.86	12.63
AR-96a	ALSF REC	53.2541	1.1419	53	208	2080	6.183	0.594	2.094	ce	SS.SCS.CCS.PomB	32.16	64.30	3.54
AR-97a	ALSF REC	53.4755	0.4135	87	361	3610	11.547	0.684	2.896	cn	SS.SBR.PoR.SspiMx	-	-	-
AR-98a	ALSF REC	53.5293	0.4243	82	746	7460	8.012	0.416	1.661	ce	SS.SCS.CCS.PomB	72.90	26.38	0.72
AR-99a	ALSF REC	53.7545	0.5656	110	1317	13170	10.998	0.536	2.351	ce	SS.SCS.CCS.PomB	32.16	64.30	3.54
AR-100a	ALSF REC	53.6051	1.3064	4	11	110	1.251	0.746	1.034	z	SS.SSa.IFiSa.IMoSa	0.37	98.75	0.88
AR-101a	ALSF REC	53.7694	1.7275	14	22	220	2.912	0.795	1.832	w	SS.SSa.IFiSa.NcirBat	5.02	94.10	0.89
AR-102a	ALSF REC	53.7599	2.4276	28	77	770	6.216	0.818	2.726	cw	SS.SCS.CCS.Blan	26.02	72.52	1.46
AR-103a	ALSF REC	53.6968	2.5704	25	41	410	5.924	0.938	2.940	v	SS.SSa.IFiSa.NcirBat	1.23	97.56	1.21
AR-104a	ALSF REC	53.5483	2.2666	10	12	120	2.817	0.917	1.907	u	SS.SSa.CFiSa.ApriBatPo	0.53	98.55	0.92
AR-105a	ALSF REC	53.7039	1.9598	15	35	350	3.375	0.918	2.355	w	SS.SSa.IFiSa.NcirBat	0.00	99.07	0.93
AR-106a	ALSF REC	53.5501	1.9720	10	18	180	2.768	0.853	1.874	y	SS.SSa.IFiSa.NcirBat	0.19	98.80	1.01
AR-107a	ALSF REC	53.4076	1.5833	35	142	1420	4.036	0.503	1.531	ai	SS.SCS.CCS.PomB	30.73	68.19	1.08
AR-108a	ALSF REC	53.5263	1.2647	21	216	2160	2.232	0.626	1.606	cu	SS.SCS.CCS.PomB	68.97	30.57	0.46
AR-109a	ALSF REC	53.2835	1.3323	78	1470	14700	7.679	0.436	1.765	ca	SS.SCS.CCS.PomB	33.82	64.04	2.14
AR-110a	ALSF REC	53.6140	0.9737	22	35	350	4.500	0.885	2.508	cs	SS.SCS.ICS.MoeVen	53.21	46.46	0.33
AR-111a	ALSF REC	53.4957	0.5463	13	17	170	2.471	0.900	1.871	dt	SS.SCS.CCS.PomB	-	-	-
AR-113a	ALSF REC	53.6676	1.0921	22	48	480	3.875	0.739	2.048	cs	SS.SCS.ICS.MoeVen	1.75	97.20	1.04

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
AR-114a	ALSF REC	53.8664	2.1849	22	53	530	5.037	0.870	2.648	s	SS.SSa.IMuSa.FfabMag	0.09	97.51	2.41
AR-115a	ALSF REC	53.7437	2.1389	22	48	480	5.425	0.899	2.780	v	SS.SSa.IFiSa.NcirBat	1.27	93.42	5.32
AR-116a	ALSF REC	53.4856	2.1831	14	31	310	2.912	0.804	1.927	w	SS.SSa.IFiSa.NcirBat	0.54	98.57	0.90
AR-118a	ALSF REC	53.4229	1.7985	103	950	9500	12.251	0.711	3.160	ca	SS.SCS.CCS.PomB	34.78	61.13	4.10
AR-119a	ALSF REC	53.7116	1.4818	20	93	930	3.530	0.481	1.364	bv	SS.SMu.CSaMu.AfilMysAnit	0.74	91.22	8.04
AR-120a	ALSF REC	53.5504	1.5996	22	37	370	4.985	0.949	2.794	cr	SS.SSa.IFiSa.NcirBat	28.59	70.68	0.73
AR-121a	ALSF REC	53.3556	1.4713	14	30	300	3.822	0.827	2.183	w	SS.SSa.IFiSa.NcirBat	1.03	97.35	1.62
AR-122a	ALSF REC	53.7186	1.0291	24	44	440	6.078	0.934	2.967	v	SS.SSa.IFiSa.NcirBat	33.05	66.03	0.92
AR-123a	ALSF REC	53.7997	0.9285	29	51	510	7.121	0.933	3.143	cw	SS.SCS.CCS.Blan	44.98	51.99	3.03
AR-124a	ALSF REC	53.3053	0.9047	10	7	70	2.569	0.976	1.748	al	SS.SSa.IFiSa.IMoSa	0.76	98.03	1.21
AR-125a	ALSF REC	53.3767	0.9513	38	44	440	6.606	0.930	3.028	cg	SS.SMx.CMx.FluHyd	80.34	19.33	0.33
AR-126a	ALSF REC	53.4106	0.5258	54	271	2710	8.033	0.536	2.052	cz	SS.SCS.CCS.PomB	66.27	32.72	1.01
AR-127a	ALSF REC	53.3486	0.5411	8	16	160	2.164	0.785	1.527	bd	SS.SCS.IC.S.Glap	32.16	64.30	3.54
AR-128a	ALSF REC	53.6926	0.3064	86	360	3600	11.723	0.832	3.535	ce	SS.SCS.CCS.PomB	32.16	64.30	3.54
AR-129a	ALSF REC	53.7645	0.3644	90	170	1700	11.488	0.885	3.623	bz	SS.SCS.CCS.MedLumVen	66.03	32.29	1.68
AR-131a	ALSF REC	53.6466	0.4698	73	362	3620	7.298	0.559	2.117	ce	SS.SCS.CCS.PomB	-	-	-
AR-132a	ALSF REC	53.3149	0.4918	37	669	6690	3.843	0.666	2.169	cn	SS.SBR.PoR.SspiMx	54.66	42.29	3.05
AR-133a	ALSF REC	53.2802	0.4062	37	55	550	6.488	0.883	2.909	cf	SS.SCS.CCS.PomB	56.22	41.98	1.81
AR-134a	ALSF REC	53.2266	0.6628	37	72	720	5.144	0.675	2.118	ak	SS.SCS.IC.S.MoeVen	20.10	78.24	1.66
AR-135a	ALSF REC	53.2961	0.7864	12	16	160	3.246	0.950	2.187	ak	SS.SCS.IC.S.MoeVen	5.14	93.97	0.89
AR-136a	ALSF REC	53.5345	0.8257	103	899	8990	11.615	0.443	1.941	ce	SS.SCS.CCS.PomB	32.16	64.30	3.54
AR-137a	ALSF REC	53.5430	1.0517	89	4032	40320	8.070	0.314	1.327	ca	SS.SCS.CCS.PomB	34.00	63.52	2.48
AR-138a	ALSF REC	53.7065	1.6848	14	13	130	2.729	0.958	1.992	y	SS.SSa.IFiSa.NcirBat	-	-	-
AR-139a	ALSF REC	53.7862	1.7876	24	166	1660	4.499	0.464	1.473	bv	SS.SMu.CSaMu.AfilMysAnit	0.12	87.71	12.18
AR-140a	ALSF REC	53.5953	1.9365	6	9	90	2.276	0.882	1.581	ad	SS.SSa.IFiSa.NcirBat	0.00	99.48	0.52
DE-CR1a	Dudgeon East OWF	53.2180	1.3549	20	40	400	5.151	0.940	2.816	ee	SS.SSa.IFiSa.TbAmPo	52.32	41.31	2.41
DE-CR2a	Dudgeon East OWF	53.2081	1.3010	23	44	440	5.814	0.893	2.800	ee	SS.SSa.IFiSa.TbAmPo	33.64	65.02	0.00
DE-CR3a	Dudgeon East OWF	53.1860	1.3878	7	8	80	2.885	0.980	1.906	n	SS.SCS.IC.S.Glap	40.25	56.85	0.00
DE-CR4a	Dudgeon East OWF	53.1637	1.3231	21	41	410	5.386	0.817	2.486	ee	SS.SSa.IFiSa.TbAmPo	38.27	60.92	0.00
DE-CR5a	Dudgeon East OWF	53.1372	1.2700	25	62	620	5.815	0.906	2.917	eh	SS.SSa.IFiSa.TbAmPo	28.28	70.78	0.00
DE-CR6a	Dudgeon East OWF	53.1113	1.3442	11	17	170	3.530	0.943	2.262	eb	SS.SCS.CCS.Pkef	28.69	68.02	0.00
DE-CR7a	Dudgeon East OWF	53.0865	1.2713	19	25	250	5.592	0.966	2.844	ef	SS.SSa.IFiSa.TbAmPo	21.06	77.42	0.00
DE-CR8a	Dudgeon East OWF	53.0468	1.3026	7	9	90	2.731	0.971	1.889	dz	SS.SSa.IFiSa.NcirBat	56.31	42.20	0.00
DE-CR9a	Dudgeon East OWF	53.0623	1.2023	18	43	430	4.520	0.849	2.453	eh	SS.SSa.IFiSa.TbAmPo	34.28	63.11	0.00
DE-CR10a	Dudgeon East OWF	53.0342	1.2384	0	0	0	-	-	-	NF	SS.SSa.IFiSa.IMoSa	0.00	109.61	0.00
DE-CR11a	Dudgeon East OWF	53.0033	1.2327	23	35	350	6.188	0.965	3.025	eh	SS.SSa.IFiSa.TbAmPo	46.11	50.63	0.00
DE-CR12a	Dudgeon East OWF	53.0050	1.1852	31	88	880	6.700	0.870	2.986	eh	SS.SSa.IFiSa.TbAmPo	37.67	61.30	0.00
DE-CR13a	Dudgeon East OWF	52.9690	1.1481	29	67	670	6.659	0.859	2.893	eh	SS.SSa.IFiSa.TbAmPo	45.12	52.61	0.00
DE-W1a	Dudgeon East OWF	53.2968	1.3175	15	29	290	4.158	0.884	2.393	dz	SS.SSa.IFiSa.NcirBat	74.54	23.03	0.00
DE-W2a	Dudgeon East OWF	53.2844	1.3195	0	0	0	-	-	-	NF	SS.SSa.IFiSa.IMoSa	8.05	91.95	0.00
DE-W3a	Dudgeon East OWF	53.2725	1.3166	3	4	40	1.443	0.946	1.040	ac	SS.SSa.IFiSa.NcirBat	18.08	81.93	0.00
DE-W4a	Dudgeon East OWF	53.2645	1.3244	4	5	50	1.864	0.961	1.332	k	SS.SCS.IC.S.Glap	36.94	63.07	0.00
DE-W5a	Dudgeon East OWF	53.2500	1.3389	16	32	320	4.328	0.873	2.420	eb	SS.SCS.CCS.Pkef	41.03	57.97	0.00
DE-W6a	Dudgeon East OWF	53.2590	1.3328	6	11	110	2.085	0.960	1.720	bg	SS.SCS.IC.S.Glap	56.30	41.26	0.00
DE-W7a	Dudgeon East OWF	53.2556	1.3457	12	20	200	3.672	0.922	2.290	bk	SS.SCS.IC.S.Glap	79.80	18.27	0.00
DE-W8a	Dudgeon East OWF	53.2649	1.3443	12	20	200	3.672	0.922	2.290	ef	SS.SSa.IFiSa.TbAmPo	30.42	68.60	0.00
DE-W9a	Dudgeon East OWF	53.2787	1.3289	4	7	70	1.542	0.832	1.154	ac	SS.SSa.IFiSa.NcirBat	15.79	84.09	0.00

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
DE-W10a	Dudgeon East OWF	53.2504	1.3649	12	16	160	3.967	0.976	2.426	eh	SS.SSa.IFiSa.TbAmPo	63.29	34.56	0.00
DE-W11a	Dudgeon East OWF	53.2989	1.3354	23	44	440	5.814	0.908	2.846	ed	SS.SCS.CCS.MedLumVen	68.99	28.22	0.00
DE-W12a	Dudgeon East OWF	53.2969	1.3510	19	35	350	5.063	0.944	2.781	ed	SS.SCS.CCS.MedLumVen	29.31	65.15	3.61
DE-W13a	Dudgeon East OWF	53.2837	1.3475	16	24	240	4.720	0.959	2.658	ed	SS.SCS.CCS.MedLumVen	45.19	47.79	4.15
DE-W14a	Dudgeon East OWF	53.2882	1.3716	13	18	180	4.152	0.965	2.476	ed	SS.SCS.CCS.MedLumVen	56.42	39.80	0.00
DE-W15a	Dudgeon East OWF	53.2808	1.3911	0	0	0	-	-	-	NF	SS.SSa.IFiSa.IMoSa	0.00	99.99	0.00
DE-W16a	Dudgeon East OWF	53.2739	1.4039	3	6	60	1.116	0.921	1.011	ac	SS.SSa.IFiSa.NcirBat	0.00	100.00	0.00
DE-W17a	Dudgeon East OWF	53.2681	1.3927	15	28	280	4.201	0.903	2.444	dz	SS.SSa.IFiSa.NcirBat	61.96	35.52	0.00
DE-W18a	Dudgeon East OWF	53.2705	1.3656	7	11	110	2.502	0.908	1.768	ec	SS.SSa.IFiSa.IMoSa	40.05	57.95	0.00
DE-W19a	Dudgeon East OWF	53.2577	1.3768	20	25	250	5.903	0.982	2.942	ef	SS.SSa.IFiSa.TbAmPo	70.89	27.07	0.00
DE-W20a	Dudgeon East OWF	53.2525	1.3854	25	75	750	5.559	0.862	2.774	ed	SS.SCS.CCS.MedLumVen	33.72	65.54	0.00
DE-W21a	Dudgeon East OWF	53.2415	1.3893	14	18	180	4.498	0.978	2.582	ed	SS.SCS.CCS.MedLumVen	36.23	63.43	0.00
DE-W22a	Dudgeon East OWF	53.2399	1.3626	15	20	200	4.673	0.969	2.623	ee	SS.SSa.IFiSa.TbAmPo	39.30	59.54	0.00
DE-W23a	Dudgeon East OWF	53.2322	1.3791	11	14	140	3.789	0.961	2.305	ea	SS.SSa.IFiSa.IMoSa	51.20	48.31	0.00
DE-W24a	Dudgeon East OWF	53.2209	1.4042	21	44	440	5.285	0.945	2.877	eb	SS.SCS.CCS.Pkef	51.43	47.65	0.00
DE-W25a	Dudgeon East OWF	53.2327	1.4115	7	11	110	2.502	0.856	1.666	ad	SS.SSa.IFiSa.NcirBat	45.12	54.07	0.00
DE-W26a	Dudgeon East OWF	53.2228	1.4198	1	1	10	-	-	-	be	SS.SCS.ICs.Glap	9.45	90.66	0.00
DE-W27a	Dudgeon East OWF	53.2072	1.4291	27	100	1000	5.646	0.763	2.514	eh	SS.SSa.IFiSa.TbAmPo	43.07	53.64	1.68
DE-W28a	Dudgeon East OWF	53.2265	1.4322	0	0	0	-	-	-	NF	SS.SSa.IFiSa.IMoSa	0.00	99.99	0.00
DE-W29a	Dudgeon East OWF	53.2294	1.4238	4	6	60	1.674	0.959	1.330	ac	SS.SSa.IFiSa.NcirBat	0.00	100.00	0.00
DE-W30a	Dudgeon East OWF	53.2314	1.4402	1	1	10	-	-	-	a	SS.SSa.IFiSa.IMoSa	0.00	99.99	0.00
DE-W31a	Dudgeon East OWF	53.2348	1.4303	2	2	20	1.443	1.000	0.693	ac	SS.SSa.IFiSa.NcirBat	7.59	2.42	89.99
DE-W32a	Dudgeon East OWF	53.2426	1.4308	1	1	10	-	-	-	ac	SS.SSa.IFiSa.NcirBat	0.00	100.00	0.00
DE-W33a	Dudgeon East OWF	53.2430	1.4401	2	6	60	0.558	0.918	0.637	ac	SS.SSa.IFiSa.NcirBat	16.18	83.81	0.00
DE-W34a	Dudgeon East OWF	53.2509	1.4422	4	5	50	1.864	0.961	1.332	dy	SS.SSa.IFiSa.IMoSa	46.31	51.94	0.00
DE-W35a	Dudgeon East OWF	53.2428	1.4098	19	43	430	4.786	0.844	2.485	eg	SS.SCS.CCS.PomB	38.35	58.36	0.00
DE-W36a	Dudgeon East OWF	53.2532	1.4033	1	1	10	-	-	-	ac	SS.SSa.IFiSa.NcirBat	37.01	61.07	0.00
DE-W37a	Dudgeon East OWF	53.2545	1.4156	2	2	20	1.443	1.000	0.693	aa	SS.SSa.CFiSa.ApriBatPo	0.00	100.00	0.00
DE-W38a	Dudgeon East OWF	53.2618	1.4044	3	6	60	1.116	0.921	1.011	aa	SS.SSa.CFiSa.ApriBatPo	0.00	100.00	0.00
DE-W39a	Dudgeon East OWF	53.2602	1.4267	3	10	100	0.869	0.991	1.089	ac	SS.SSa.IFiSa.NcirBat	21.17	77.46	0.00
DE-W40a	Dudgeon East OWF	53.2697	1.4193	1	1	10	-	-	-	dy	SS.SSa.IFiSa.IMoSa	28.76	70.68	0.00
MIRO-01a	MIRO 106	53.4836	0.5065	38	157	1570	5.340	0.702	2.339	dg	SS.SCS.ICs.SLan	58.50	38.98	2.52
MIRO-02a	MIRO 106	53.4836	0.5102	42	101	1010	6.934	0.878	3.069	dg	SS.SCS.ICs.SLan	72.46	25.77	1.77
MIRO-03a	MIRO 106	53.4833	0.5139	51	368	3680	6.940	0.596	2.226	dg	SS.SCS.ICs.SLan	78.85	16.47	4.68
MIRO-04a	MIRO 106	53.4835	0.5177	36	300	3000	5.260	0.543	1.864	dg	SS.SCS.ICs.SLan	67.82	18.93	13.25
MIRO-05a	MIRO 106	53.4680	0.5053	39	163	1630	7.067	0.861	3.107	dg	SS.SCS.ICs.SLan	81.13	18.23	0.64
MIRO-06a	MIRO 106	53.4678	0.5089	33	124	1240	5.601	0.617	2.055	dg	SS.SCS.ICs.SLan	62.93	34.27	2.80
MIRO-07a	MIRO 106	53.4678	0.5131	23	73	730	3.962	0.657	1.898	dg	SS.SCS.ICs.SLan	46.37	18.80	34.83
MIRO-08a	MIRO 106	53.4678	0.5167	43	150	1500	6.386	0.726	2.537	dg	SS.SCS.ICs.SLan	64.48	30.52	5.00
MIRO-09a	MIRO 106	53.4545	0.5045	42	226	2260	6.457	0.638	2.288	dg	SS.SCS.ICs.SLan	80.21	18.11	1.68
MIRO-10a	MIRO 106	53.4544	0.5080	35	73	730	5.128	0.888	2.785	dg	SS.SCS.ICs.SLan	85.90	13.70	0.40
MIRO-11a	MIRO 106	53.4544	0.5120	42	102	1020	6.487	0.806	2.769	dg	SS.SCS.ICs.SLan	87.69	10.90	1.41
MIRO-12a	MIRO 106	53.4543	0.5159	37	117	1170	6.090	0.835	2.841	dg	SS.SCS.ICs.SLan	72.33	25.52	2.15
MIRO-13a	MIRO 106	53.4455	0.5039	30	99	990	5.223	0.734	2.361	dg	SS.SCS.ICs.SLan	70.37	27.30	2.33
MIRO-14a	MIRO 106	53.4453	0.5077	41	137	1370	6.707	0.751	2.650	dg	SS.SCS.ICs.SLan	65.28	33.41	1.31
MIRO-15a	MIRO 106	53.4454	0.5115	49	199	1990	7.557	0.858	3.187	dg	SS.SCS.ICs.SLan	73.44	24.65	1.91
MIRO-16a	MIRO 106	53.4451	0.5154	38	170	1700	6.425	0.802	2.829	dg	SS.SCS.ICs.SLan	79.53	19.18	1.29

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
MIRO-17a	MIRO 106	53.4365	0.5034	33	368	3680	4.739	0.487	1.640	dg	SS.SCS.ICS.SLan	74.26	24.72	1.02
MIRO-18a	MIRO 106	53.4364	0.5072	27	107	1070	4.494	0.754	2.330	dg	SS.SCS.ICS.SLan	65.91	32.40	1.69
MIRO-19a	MIRO 106	53.4364	0.5113	33	75	750	6.948	0.886	3.041	dg	SS.SCS.ICS.SLan	65.74	31.34	2.92
MIRO-20a	MIRO 106	53.4363	0.5149	18	62	620	3.877	0.851	2.411	dg	SS.SCS.ICS.SLan	68.94	27.47	3.59
MIRO-21a	MIRO 106	53.4320	0.5028	26	52	520	4.556	0.870	2.562	dg	SS.SCS.ICS.SLan	61.77	30.82	7.41
MIRO-22a	MIRO 106	53.4320	0.5067	26	108	1080	4.485	0.717	2.216	dg	SS.SCS.ICS.SLan	65.57	31.51	2.92
MIRO-23a	MIRO 106	53.4317	0.5106	29	64	640	5.771	0.913	2.939	dg	SS.SCS.ICS.SLan	62.21	16.80	20.99
MIRO-24a	MIRO 106	53.4320	0.5143	27	87	870	5.150	0.851	2.704	dg	SS.SCS.ICS.SLan	72.55	25.35	2.10
MIRO-25a	MIRO 106	53.4275	0.5026	17	41	410	3.770	0.840	2.274	dg	SS.SCS.ICS.SLan	57.61	40.58	1.81
MIRO-26a	MIRO 106	53.4274	0.5060	28	74	740	5.344	0.875	2.781	dg	SS.SCS.ICS.SLan	72.89	26.11	1.00
MIRO-27a	MIRO 106	53.4274	0.5102	43	86	860	6.735	0.919	3.155	dg	SS.SCS.ICS.SLan	77.86	21.39	0.75
MIRO-28a	MIRO 106	53.4274	0.5141	26	77	770	5.065	0.890	2.792	dg	SS.SCS.ICS.SLan	76.01	19.34	4.65
MIRO-29a	MIRO 106	53.4255	0.4874	34	94	940	6.163	0.871	2.934	dg	SS.SCS.ICS.SLan	85.67	13.89	0.44
MIRO-30a	MIRO 106	53.4254	0.4914	24	147	1470	4.208	0.712	2.201	dc	SS.SCS.CCS.Pkef	62.39	36.99	0.62
MIRO-31a	MIRO 106	53.4252	0.4952	21	83	830	3.395	0.701	1.944	dg	SS.SCS.ICS.SLan	67.07	31.95	0.98
MIRO-32a	MIRO 106	53.4253	0.4990	28	84	840	4.514	0.827	2.518	dg	SS.SCS.ICS.SLan	57.60	40.21	2.19
MIRO-33a	MIRO 106	53.4251	0.5024	28	58	580	5.172	0.849	2.626	dg	SS.SCS.ICS.SLan	76.10	23.38	0.52
MIRO-34a	MIRO 106	53.4252	0.5062	25	64	640	5.049	0.883	2.731	dg	SS.SCS.ICS.SLan	44.89	18.02	37.09
MIRO-35a	MIRO 106	53.4251	0.5101	34	70	700	6.355	0.895	2.983	dg	SS.SCS.ICS.SLan	84.23	13.98	1.79
MIRO-36a	MIRO 106	53.4249	0.5139	29	126	1260	4.135	0.644	1.959	dg	SS.SCS.ICS.SLan	54.54	13.72	31.74
MIRO-37a	MIRO 106	53.4248	0.5176	38	89	890	6.684	0.861	2.957	dg	SS.SCS.ICS.SLan	92.66	7.32	0.02
MIRO-38a	MIRO 106	53.4250	0.5218	29	86	860	5.163	0.885	2.812	dg	SS.SCS.ICS.SLan	75.30	22.43	2.27
MIRO-39a	MIRO 106	53.4250	0.5253	23	71	710	4.457	0.900	2.696	dg	SS.SCS.ICS.SLan	71.39	25.06	3.55
MIRO-40a	MIRO 106	53.4248	0.5292	33	156	1560	5.347	0.833	2.776	dg	SS.SCS.ICS.SLan	57.32	36.70	5.98
MIRO-41a	MIRO 106	53.4231	0.4875	36	183	1830	5.759	0.696	2.391	dg	SS.SCS.ICS.SLan	58.30	39.34	2.36
MIRO-42a	MIRO 106	53.4231	0.4911	30	217	2170	4.647	0.667	2.173	dg	SS.SCS.ICS.SLan	70.93	28.62	0.45
MIRO-43a	MIRO 106	53.4229	0.4951	27	160	1600	4.335	0.698	2.188	dg	SS.SCS.ICS.SLan	62.51	35.66	1.83
MIRO-44a	MIRO 106	53.4229	0.4988	24	93	930	3.971	0.796	2.344	dg	SS.SCS.ICS.SLan	47.19	50.12	2.69
MIRO-45a	MIRO 106	53.4229	0.5025	30	95	950	5.709	0.818	2.695	dg	SS.SCS.ICS.SLan	53.20	20.64	26.16
MIRO-46a	MIRO 106	53.4230	0.5067	23	39	390	4.367	0.848	2.404	dg	SS.SCS.ICS.SLan	60.99	23.24	15.77
MIRO-47a	MIRO 106	53.4227	0.5099	20	40	400	4.608	0.913	2.640	dg	SS.SCS.ICS.SLan	69.75	14.14	16.11
MIRO-48a	MIRO 106	53.4228	0.5140	28	101	1010	4.767	0.785	2.461	dg	SS.SCS.ICS.SLan	56.40	42.89	0.71
MIRO-49a	MIRO 106	53.4227	0.5174	34	135	1350	5.708	0.846	2.847	dg	SS.SCS.ICS.SLan	65.57	32.40	2.03
MIRO-50a	MIRO 106	53.4225	0.5213	26	88	880	5.137	0.828	2.630	dg	SS.SCS.ICS.SLan	88.60	11.18	0.22
MIRO-51a	MIRO 106	53.4225	0.5251	30	64	640	4.328	0.876	2.579	dg	SS.SCS.ICS.SLan	81.12	17.28	1.60
MIRO-52a	MIRO 106	53.4225	0.5287	32	82	820	6.808	0.910	3.124	dg	SS.SCS.ICS.SLan	52.97	22.41	24.62
MIRO-53a	MIRO 106	53.4209	0.4873	37	156	1560	6.139	0.792	2.747	dg	SS.SCS.ICS.SLan	79.12	20.67	0.21
MIRO-54a	MIRO 106	53.4209	0.4910	41	142	1420	5.852	0.821	2.792	dg	SS.SCS.ICS.SLan	60.34	35.99	3.67
MIRO-55a	MIRO 106	53.4208	0.4948	25	76	760	4.618	0.834	2.540	dg	SS.SCS.ICS.SLan	70.53	28.35	1.12
MIRO-56a	MIRO 106	53.4207	0.4986	12	12	120	3.219	0.953	2.095	dm	SS.SCS.CCS.Pkef	62.31	37.69	0.00
MIRO-57a	MIRO 106	53.4206	0.5022	23	38	380	4.948	0.913	2.689	dg	SS.SCS.ICS.SLan	47.13	50.13	2.74
MIRO-58a	MIRO 106	53.4207	0.5061	11	41	410	2.154	0.796	1.750	dc	SS.SCS.CCS.Pkef	69.31	30.13	0.56
MIRO-59a	MIRO 106	53.4204	0.5099	12	36	360	3.070	0.875	2.174	dc	SS.SCS.CCS.Pkef	73.90	25.73	0.37
MIRO-60a	MIRO 106	53.4205	0.5137	37	86	860	6.959	0.941	3.262	dg	SS.SCS.ICS.SLan	37.48	22.96	39.56
MIRO-61a	MIRO 106	53.4205	0.5176	28	73	730	5.594	0.855	2.751	dc	SS.SCS.CCS.Pkef	68.55	30.51	0.94
MIRO-62a	MIRO 106	53.4203	0.5210	31	70	700	4.472	0.907	2.716	dg	SS.SCS.ICS.SLan	81.65	16.54	1.81
MIRO-63a	MIRO 106	53.4203	0.5249	28	99	990	5.223	0.803	2.585	dg	SS.SCS.ICS.SLan	85.08	11.90	3.02

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
MIRO-64a	MIRO 106	53.4203	0.5286	39	90	900	5.778	0.877	2.890	dg	SS.SCS.ICS.SLan	75.25	19.58	5.17
MIRO-65a	MIRO 106	53.4187	0.4949	33	118	1180	5.869	0.837	2.819	dg	SS.SCS.ICS.SLan	53.92	43.93	2.15
MIRO-66a	MIRO 106	53.4186	0.4984	21	31	310	3.786	0.924	2.438	dg	SS.SCS.ICS.SLan	74.47	24.99	0.54
MIRO-67a	MIRO 106	53.4185	0.5021	15	58	580	2.709	0.566	1.405	dg	SS.SCS.ICS.SLan	61.96	37.41	0.63
MIRO-68a	MIRO 106	53.4183	0.5059	10	12	120	2.817	0.952	1.979	dk	SS.SCS.CCS.Pkef	36.05	62.77	1.18
MIRO-69a	MIRO 106	53.4183	0.5097	4	4	40	2.164	1.000	1.386	bf	SS.SCS.ICS.Glap	44.37	54.59	1.04
MIRO-70a	MIRO 106	53.4180	0.5133	27	83	830	4.752	0.734	2.270	dc	SS.SCS.CCS.Pkef	58.50	40.93	0.57
MIRO-71a	MIRO 106	53.4181	0.5174	30	55	550	5.989	0.903	2.906	dg	SS.SCS.ICS.SLan	59.52	38.30	2.18
MIRO-72a	MIRO 106	53.4181	0.5210	28	105	1050	4.942	0.867	2.755	dg	SS.SCS.ICS.SLan	42.14	41.28	16.58
MIRO-73a	MIRO 106	53.4163	0.4945	28	54	540	4.763	0.856	2.564	dg	SS.SCS.ICS.SLan	58.83	36.18	4.99
MIRO-74a	MIRO 106	53.4164	0.4983	9	8	80	2.885	0.980	1.906	dn	SS.SCS.ICS.Glap	61.17	38.29	0.54
MIRO-75a	MIRO 106	53.4160	0.5021	5	4	40	2.164	1.000	1.386	dn	SS.SCS.ICS.Glap	25.47	73.03	1.50
MIRO-76a	MIRO 106	53.4161	0.5058	3	3	30	1.820	1.000	1.099	bn	SS.SCS.ICS.HeloMsim	9.18	88.01	2.81
MIRO-77a	MIRO 106	53.4159	0.5097	2	4	40	0.721	1.000	0.693	be	SS.SCS.ICS.Glap	2.88	94.24	2.88
MIRO-78a	MIRO 106	53.4160	0.5134	9	11	110	3.336	0.977	2.146	dk	SS.SCS.CCS.Pkef	57.64	41.58	0.78
MIRO-79a	MIRO 106	53.4159	0.5171	24	76	760	4.849	0.866	2.676	dg	SS.SCS.ICS.SLan	65.22	32.55	2.23
MIRO-80a	MIRO 106	53.4158	0.5208	33	80	800	5.933	0.867	2.856	dg	SS.SCS.ICS.SLan	70.29	28.63	1.08
MIRO-81a	MIRO 106	53.4133	0.5006	1	1	10	-	-	-	j	SS.SCS.CCS.Pkef	40.33	58.42	1.25
MIRO-82a	MIRO 106	53.4126	0.5021	11	19	190	3.396	0.899	2.156	dc	SS.SCS.CCS.Pkef	73.14	26.16	0.70
MIRO-83a	MIRO 106	53.4123	0.5006	5	6	60	2.232	0.970	1.561	f	SS.SSa.IFiSa.IMoSa	20.63	78.07	1.30
MIRO-84a	MIRO 106	53.4114	0.5022	6	11	110	2.085	0.860	1.540	db	SS.SCS.CCS.Pkef	49.23	49.49	1.28
MIRO-85a	MIRO 106	53.4111	0.5004	14	27	270	3.944	0.907	2.394	dc	SS.SCS.CCS.Pkef	52.73	46.36	0.91
MIRO-86a	MIRO 106	53.4100	0.5010	2	2	20	1.443	1.000	0.693	g	SS.SSa.IFiSa.IMoSa	21.10	77.49	1.41
MIRO-87a	MIRO 106	53.4091	0.5011	1	1	10	-	-	-	i	SS.SSa.IFiSa.IMoSa	17.17	81.34	1.49
MIRO-88a	MIRO 106	53.4085	0.5006	8	29	290	2.079	0.580	1.206	db	SS.SCS.CCS.Pkef	55.09	44.09	0.82
MIRO-89a	MIRO 106	53.4076	0.5013	6	18	180	1.384	0.803	1.292	db	SS.SCS.CCS.Pkef	20.12	78.45	1.43
MIRO-90a	MIRO 106	53.4064	0.5019	2	2	20	1.443	1.000	0.693	j	SS.SCS.CCS.Pkef	15.72	82.58	1.70
MIRO-91a	MIRO 106	53.4132	0.5082	7	9	90	2.731	0.941	1.831	dn	SS.SCS.ICS.Glap	67.19	32.81	0.00
MIRO-92a	MIRO 106	53.4124	0.5087	4	5	50	1.864	0.961	1.332	j	SS.SCS.CCS.Pkef	15.45	84.02	0.53
MIRO-93a	MIRO 106	53.4110	0.5084	3	4	40	1.443	0.946	1.040	n	SS.SCS.ICS.Glap	22.71	75.57	1.72
MIRO-94a	MIRO 106	53.4097	0.5081	5	5	50	2.485	1.000	1.609	h	SS.SCS.CCS.Pkef	33.83	65.72	0.45
MIRO-95a	MIRO 106	53.4088	0.5082	2	1	10	-	-	-	d	SS.SSa.IFiSa.IMoSa	33.87	65.10	1.03
MIRO-96a	MIRO 106	53.4077	0.5070	8	10	100	3.040	0.949	1.973	be	SS.SCS.ICS.Glap	3.16	96.06	0.78
MIRO-97a	MIRO 106	53.4076	0.5084	3	4	40	1.443	0.946	1.040	be	SS.SCS.ICS.Glap	33.49	66.13	0.38
MIRO-98a	MIRO 106	53.4069	0.5081	3	4	40	1.443	0.946	1.040	be	SS.SCS.ICS.Glap	34.81	63.36	1.83
MIRO-99a	MIRO 106	53.4059	0.5086	3	5	50	1.243	0.865	0.950	be	SS.SCS.ICS.Glap	18.83	79.50	1.67
MIRO-100a	MIRO 106	53.4052	0.5079	5	5	50	2.485	1.000	1.609	be	SS.SCS.ICS.Glap	12.59	85.85	1.56
MIRO-101a	MIRO 106	53.4014	0.5125	4	7	70	1.542	0.921	1.277	h	SS.SCS.CCS.Pkef	1.67	96.45	1.88
MIRO-102a	MIRO 106	53.4014	0.5163	3	3	30	1.820	1.000	1.099	be	SS.SCS.ICS.Glap	27.16	70.77	2.07
MIRO-103a	MIRO 106	53.3981	0.5045	12	79	790	2.289	0.749	1.796	dc	SS.SCS.CCS.Pkef	1.23	97.86	0.91
MIRO-104a	MIRO 106	53.3981	0.5083	2	6	60	0.558	0.918	0.637	bn	SS.SCS.ICS.HeloMsim	2.15	97.15	0.70
MIRO-105a	MIRO 106	53.3979	0.5101	7	6	60	1.674	0.959	1.330	dr	SS.SSa.IFiSa.IMoSa	19.04	79.17	1.79
MIRO-106a	MIRO 106	53.3978	0.5163	6	11	110	2.085	0.934	1.673	bf	SS.SCS.ICS.Glap	32.26	64.01	3.73
MIRO-107a	MIRO 106	53.3977	0.5198	4	4	40	2.164	1.000	1.386	ad	SS.SSa.IFiSa.NcirBat	33.01	65.17	1.82
MIRO-108a	MIRO 106	53.3977	0.5234	25	105	1050	4.512	0.765	2.365	dg	SS.SCS.ICS.SLan	51.89	46.75	1.36
MIRO-109a	MIRO 106	53.3959	0.5046	22	53	530	5.037	0.891	2.712	dc	SS.SCS.CCS.Pkef	36.94	61.67	1.39
MIRO-110a	MIRO 106	53.3958	0.5082	7	6	60	2.232	0.970	1.561	bf	SS.SCS.ICS.Glap	34.07	64.14	1.79

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
MIRO-111a	MIRO 106	53.3957	0.5122	3	4	40	1.443	0.946	1.040	bn	SS.SCS.ICS.HeloMsim	38.35	60.39	1.26
MIRO-112a	MIRO 106	53.3957	0.5159	11	19	190	3.057	0.905	2.083	bl	SS.SCS.ICS.Glap	41.57	56.89	1.54
MIRO-113a	MIRO 106	53.3957	0.5195	12	33	330	3.146	0.897	2.229	dc	SS.SCS.CCS.Pkef	73.91	25.20	0.89
MIRO-114a	MIRO 106	53.3956	0.5233	26	163	1630	4.515	0.727	2.311	dc	SS.SCS.CCS.Pkef	78.62	20.28	1.10
MIRO-115a	MIRO 106	53.3939	0.4855	16	106	1060	2.788	0.840	2.216	dc	SS.SCS.CCS.Pkef	52.36	47.15	0.49
MIRO-116a	MIRO 106	53.3939	0.4894	20	392	3920	2.847	0.575	1.661	cy	SS.SCS.ICS.HeloMsim	14.53	83.77	1.70
MIRO-117a	MIRO 106	53.3939	0.4932	37	187	1870	6.500	0.764	2.716	dg	SS.SCS.ICS.SLan	42.06	55.47	2.47
MIRO-118a	MIRO 106	53.3938	0.4969	33	283	2830	5.314	0.701	2.409	dg	SS.SCS.ICS.SLan	54.38	43.35	2.27
MIRO-119a	MIRO 106	53.3937	0.5006	22	84	840	4.740	0.839	2.594	dg	SS.SCS.ICS.SLan	46.58	48.97	4.45
MIRO-120a	MIRO 106	53.3936	0.5044	21	60	600	4.885	0.791	2.409	dc	SS.SCS.CCS.Pkef	36.73	61.06	2.21
MIRO-121a	MIRO 106	53.3935	0.5083	9	28	280	2.401	0.764	1.678	bl	SS.SCS.ICS.Glap	23.61	73.33	3.06
MIRO-122a	MIRO 106	53.3934	0.5119	8	21	210	2.299	0.831	1.727	bl	SS.SCS.ICS.Glap	19.79	78.22	1.99
MIRO-123a	MIRO 106	53.3934	0.5157	8	17	170	2.471	0.885	1.840	bl	SS.SCS.ICS.Glap	42.79	55.61	1.60
MIRO-124a	MIRO 106	53.3935	0.5194	16	80	800	3.423	0.844	2.339	dc	SS.SCS.CCS.Pkef	64.71	34.50	0.79
MIRO-125a	MIRO 106	53.3933	0.5231	22	96	960	4.382	0.822	2.504	dc	SS.SCS.CCS.Pkef	67.49	31.51	1.00
MIRO-126a	MIRO 106	53.3932	0.5269	44	108	1080	7.475	0.828	2.967	dg	SS.SCS.ICS.SLan	80.29	19.58	0.13
MIRO-127a	MIRO 106	53.3918	0.4854	32	306	3060	5.067	0.704	2.395	dc	SS.SCS.CCS.Pkef	43.92	54.65	1.43
MIRO-128a	MIRO 106	53.3916	0.4894	38	268	2680	4.829	0.531	1.771	dg	SS.SCS.ICS.SLan	51.09	43.90	5.01
MIRO-129a	MIRO 106	53.3916	0.4930	28	155	1550	4.362	0.662	2.075	dg	SS.SCS.ICS.SLan	33.53	62.33	4.14
MIRO-130a	MIRO 106	53.3916	0.4967	21	70	700	4.237	0.798	2.351	dc	SS.SCS.CCS.Pkef	49.52	49.27	1.21
MIRO-131a	MIRO 106	53.3914	0.5004	33	157	1570	5.933	0.797	2.736	dg	SS.SCS.ICS.SLan	52.42	44.98	2.60
MIRO-132a	MIRO 106	53.3914	0.5042	24	122	1220	4.788	0.781	2.483	dc	SS.SCS.CCS.Pkef	39.08	59.97	0.95
MIRO-133a	MIRO 106	53.3912	0.5081	10	19	190	3.057	0.875	2.014	bh	SS.SCS.ICS.Glap	3.04	95.14	1.82
MIRO-134a	MIRO 106	53.3913	0.5118	9	16	160	2.885	0.862	1.895	dc	SS.SCS.CCS.Pkef	36.75	62.20	1.05
MIRO-135a	MIRO 106	53.3913	0.5156	10	14	140	3.031	0.894	1.965	bl	SS.SCS.ICS.Glap	49.05	50.05	0.90
MIRO-136a	MIRO 106	53.3912	0.5191	14	60	600	3.175	0.803	2.118	dc	SS.SCS.CCS.Pkef	63.85	35.68	0.47
MIRO-137a	MIRO 106	53.3910	0.5231	19	77	770	4.144	0.874	2.572	dc	SS.SCS.CCS.Pkef	68.24	30.96	0.80
MIRO-138a	MIRO 106	53.3910	0.5272	23	81	810	4.324	0.887	2.658	dc	SS.SCS.CCS.Pkef	69.86	29.72	0.42
MIRO-139a	MIRO 106	53.3894	0.4851	22	33	330	4.290	0.892	2.472	dd	SS.SCS.ICS.MoeVen	23.65	73.18	3.17
MIRO-140a	MIRO 106	53.3893	0.4890	20	73	730	4.195	0.867	2.554	dc	SS.SCS.CCS.Pkef	11.96	86.44	1.60
MIRO-141a	MIRO 106	53.3893	0.4929	24	386	3860	3.694	0.333	1.044	dg	SS.SCS.ICS.SLan	23.85	72.96	3.19
MIRO-142a	MIRO 106	53.3892	0.4966	20	164	1640	3.333	0.667	1.928	dg	SS.SCS.ICS.SLan	32.28	63.85	3.87
MIRO-143a	MIRO 106	53.3892	0.5002	30	237	2370	4.572	0.668	2.177	dg	SS.SCS.ICS.SLan	43.13	51.49	5.38
MIRO-144a	MIRO 106	53.3891	0.5043	19	66	660	4.296	0.835	2.460	dc	SS.SCS.CCS.Pkef	34.27	63.50	2.23
MIRO-145a	MIRO 106	53.3890	0.5079	9	14	140	3.031	0.894	1.965	dl	SS.SCS.ICS.Glap	30.75	65.28	3.97
MIRO-146a	MIRO 106	53.3890	0.5116	6	10	100	2.171	0.836	1.498	bf	SS.SCS.ICS.Glap	17.61	79.57	2.82
MIRO-147a	MIRO 106	53.3889	0.5156	21	82	820	4.312	0.898	2.689	dc	SS.SCS.CCS.Pkef	41.97	56.02	2.01
MIRO-148a	MIRO 106	53.3888	0.5193	19	100	1000	3.909	0.868	2.557	dc	SS.SCS.CCS.Pkef	58.57	40.28	1.15
MIRO-149a	MIRO 106	53.3888	0.5232	18	44	440	4.492	0.926	2.677	dc	SS.SCS.CCS.Pkef	55.21	43.84	0.95
MIRO-150a	MIRO 106	53.3887	0.5268	15	73	730	3.030	0.813	2.145	dc	SS.SCS.CCS.Pkef	64.69	34.77	0.54
MIRO-151a	MIRO 106	53.3870	0.4999	40	246	2460	5.994	0.649	2.290	dg	SS.SCS.ICS.SLan	38.12	57.67	4.21
MIRO-152a	MIRO 106	53.3868	0.5039	15	27	270	3.944	0.930	2.455	df	SS.SCS.ICS.CumCset	29.17	63.70	7.13
MIRO-153a	MIRO 106	53.3868	0.5078	7	14	140	2.274	0.860	1.673	dl	SS.SCS.ICS.Glap	37.32	60.14	2.54
MIRO-154a	MIRO 106	53.3868	0.5115	12	37	370	3.046	0.857	2.129	dc	SS.SCS.CCS.Pkef	30.25	69.00	0.75
MIRO-155a	MIRO 106	53.3825	0.4999	13	300	3000	2.104	0.617	1.583	cy	SS.SCS.ICS.HeloMsim	2.12	97.62	0.26
MIRO-156a	MIRO 106	53.3824	0.5037	22	66	660	4.296	0.870	2.563	dc	SS.SCS.CCS.Pkef	34.22	63.54	2.24
MIRO-157a	MIRO 106	53.3823	0.5075	12	30	300	3.234	0.882	2.191	bl	SS.SCS.ICS.Glap	38.75	58.80	2.45

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
MIRO-158a	MIRO 106	53.3823	0.5111	8	13	130	2.729	0.958	1.992	bl	SS.SCS.ICS.Glap	11.14	86.69	2.17
MIRO-159a	MIRO 106	53.3780	0.4995	24	292	2920	3.523	0.518	1.578	dg	SS.SCS.ICS.SLan	39.71	56.11	4.18
MIRO-160a	MIRO 106	53.3779	0.5034	18	228	2280	2.947	0.480	1.360	dg	SS.SCS.ICS.SLan	59.84	38.64	1.52
MIRO-161a	MIRO 106	53.3778	0.5073	18	26	260	4.297	0.940	2.545	df	SS.SCS.ICS.CumCset	7.82	90.71	1.47
MIRO-162a	MIRO 106	53.3776	0.5109	8	22	220	2.265	0.713	1.484	bc	SS.SCS.ICS.Glap	21.40	77.54	1.06
MIRO-163a	MIRO 106	53.3689	0.4990	13	58	580	2.709	0.813	2.021	dc	SS.SCS.CCS.Pkef	49.03	46.31	4.66
MIRO-164a	MIRO 106	53.3689	0.5029	36	164	1640	6.079	0.745	2.583	dg	SS.SCS.ICS.SLan	57.37	41.61	1.02
MIRO-165a	MIRO 106	53.3688	0.5066	8	20	200	2.337	0.922	1.917	bl	SS.SCS.ICS.Glap	52.83	46.34	0.83
MIRO-166a	MIRO 106	53.3688	0.5102	19	48	480	4.391	0.895	2.587	df	SS.SCS.ICS.CumCset	62.40	37.23	0.37
MIRO-167a	MIRO 106	53.3622	0.4988	25	76	760	5.080	0.880	2.760	dg	SS.SCS.ICS.SLan	73.23	26.18	0.59
MIRO-168a	MIRO 106	53.3621	0.5025	22	53	530	4.786	0.886	2.653	df	SS.SCS.ICS.CumCset	63.85	35.09	1.06
MIRO-169a	MIRO 106	53.3621	0.5062	10	35	350	2.531	0.769	1.772	bk	SS.SCS.ICS.Glap	46.69	53.14	0.17
MIRO-170a	MIRO 106	53.3619	0.5100	10	28	280	2.701	0.862	1.985	bl	SS.SCS.ICS.Glap	64.86	34.44	0.70
MIRO-171a	MIRO 106	53.3465	0.4977	22	111	1110	4.034	0.746	2.235	dg	SS.SCS.ICS.SLan	52.04	45.59	2.37
MIRO-172a	MIRO 106	53.3465	0.5014	22	84	840	4.514	0.788	2.398	dg	SS.SCS.ICS.SLan	43.21	49.10	7.69
MIRO-173a	MIRO 106	53.3463	0.5052	10	17	170	3.177	0.956	2.201	bl	SS.SCS.ICS.Glap	66.37	33.14	0.49
MIRO-174a	MIRO 106	53.3462	0.5090	7	18	180	1.384	0.830	1.336	bh	SS.SCS.ICS.Glap	5.55	89.58	4.87
MIRO-175a	MIRO 106	53.3306	0.4966	37	132	1320	5.939	0.853	2.902	dg	SS.SCS.ICS.SLan	42.16	46.62	11.22
MIRO-176a	MIRO 106	53.3306	0.5004	20	119	1190	3.557	0.670	1.936	dc	SS.SCS.CCS.Pkef	67.03	32.16	0.81
MIRO-177a	MIRO 106	53.3306	0.5042	18	56	560	3.726	0.866	2.401	dc	SS.SCS.CCS.Pkef	40.66	57.72	1.62
MIRO-178a	MIRO 106	53.3306	0.5077	49	145	1450	7.435	0.868	3.158	dg	SS.SCS.ICS.SLan	36.73	59.91	3.36
MIRO-179a	MIRO 106	53.3737	0.5547	15	68	680	3.081	0.854	2.254	dc	SS.SCS.CCS.Pkef	38.58	60.02	1.40
MIRO-180a	MIRO 106	53.3784	0.5530	3	5	50	1.243	0.865	0.950	be	SS.SCS.ICS.Glap	27.40	71.01	1.59
MIRO-181a	MIRO 106	53.3748	0.5409	10	21	210	2.956	0.939	2.161	bl	SS.SCS.ICS.Glap	10.90	88.09	1.01
MIRO-182a	MIRO 106	53.3794	0.5411	14	21	210	3.942	0.962	2.467	dc	SS.SCS.CCS.Pkef	50.20	48.86	0.94
MIRO-183a	MIRO 106	53.3746	0.5483	24	62	620	5.088	0.895	2.765	dg	SS.SCS.ICS.SLan	64.19	33.20	2.61
MIRO-184a	MIRO 106	53.3813	0.5461	18	34	340	3.970	0.894	2.420	bl	SS.SCS.ICS.Glap	13.15	78.92	7.93
MIRO-185a	MIRO 106	53.3874	0.5442	14	40	400	3.253	0.807	2.070	dc	SS.SCS.CCS.Pkef	29.96	69.85	0.19
MIRO-186a	MIRO 106	53.3839	0.5415	17	93	930	2.868	0.668	1.762	dc	SS.SCS.CCS.Pkef	36.72	62.44	0.84
MIRO-187a	MIRO 106	53.3818	0.5521	6	17	170	1.765	0.938	1.681	bl	SS.SCS.ICS.Glap	27.68	71.07	1.25
MIRO-188a	MIRO 106	53.3883	0.5499	22	123	1230	4.156	0.820	2.496	dg	SS.SCS.ICS.SLan	17.02	80.16	2.82
MIRO-189a	MIRO 106	53.4330	0.6908	25	78	780	4.132	0.691	2.034	cb	SS.SCS.CCS.PomB	50.70	48.36	0.94
MIRO-190a	MIRO 106	53.4331	0.6943	57	461	4610	6.522	0.414	1.539	cb	SS.SCS.CCS.PomB	38.77	60.21	1.02
MIRO-191a	MIRO 106	53.4330	0.6980	72	273	2730	10.874	0.734	3.029	cb	SS.SCS.CCS.PomB	41.60	56.63	1.77
MIRO-192a	MIRO 106	53.4330	0.7016	70	307	3070	9.429	0.776	3.111	cb	SS.SCS.CCS.PomB	56.13	42.44	1.43
MIRO-193a	MIRO 106	53.4330	0.7057	52	239	2390	6.391	0.546	1.955	cb	SS.SCS.CCS.PomB	77.17	21.42	1.41
MIRO-194a	MIRO 106	53.4309	0.6906	21	41	410	3.501	0.778	2.053	bj	SS.SCS.CCS.PomB	59.53	39.99	0.48
MIRO-195a	MIRO 106	53.4310	0.6946	31	57	570	5.936	0.914	2.940	cb	SS.SCS.CCS.PomB	44.64	53.48	1.88
MIRO-196a	MIRO 106	53.4308	0.6981	40	115	1150	7.376	0.794	2.844	cb	SS.SCS.CCS.PomB	30.07	68.35	1.58
MIRO-197a	MIRO 106	53.4308	0.7023	67	322	3220	9.005	0.638	2.534	cb	SS.SCS.CCS.PomB	50.89	46.83	2.28
MIRO-198a	MIRO 106	53.4306	0.7061	64	231	2310	9.555	0.758	3.008	cb	SS.SCS.CCS.PomB	73.94	25.33	0.73
MIRO-199a	MIRO 106	53.4285	0.6907	32	145	1450	4.421	0.420	1.318	cb	SS.SCS.CCS.PomB	64.80	33.96	1.24
MIRO-200a	MIRO 106	53.4286	0.6945	10	36	360	2.232	0.709	1.558	bi	SS.SSa.IFiSa.IMoSa	55.19	44.31	0.50
MIRO-201a	MIRO 106	53.4284	0.6980	45	379	3790	6.400	0.496	1.818	cb	SS.SCS.CCS.PomB	29.09	69.57	1.34
MIRO-202a	MIRO 106	53.4284	0.7019	50	361	3610	6.453	0.521	1.909	cb	SS.SCS.CCS.PomB	43.00	55.42	1.58
MIRO-203a	MIRO 106	53.4283	0.7056	75	366	3660	9.996	0.620	2.539	cb	SS.SCS.CCS.PomB	50.61	47.85	1.54
MIRO-204a	MIRO 106	53.4265	0.6905	9	25	250	2.485	0.738	1.621	bl	SS.SCS.ICS.Glap	7.18	91.19	1.63

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
MIRO-205a	MIRO 106	53.4265	0.6942	17	119	1190	2.720	0.442	1.167	bj	SS.SCS.CCS.PomB	65.08	33.02	1.90
MIRO-206a	MIRO 106	53.4261	0.6977	12	54	540	2.507	0.761	1.824	bj	SS.SCS.CCS.PomB	50.18	49.12	0.70
MIRO-207a	MIRO 106	53.4262	0.7017	26	108	1080	4.272	0.718	2.185	cb	SS.SCS.CCS.PomB	42.08	56.76	1.16
MIRO-208a	MIRO 106	53.4262	0.7054	57	289	2890	6.883	0.570	2.102	cb	SS.SCS.CCS.PomB	40.55	58.54	0.91
TK-01a	Triton Knoll OWF	53.6373	0.5686	46	405	4050	6.163	0.400	1.456	ce	SS.SCS.CCS.PomB	79.11	20.75	0.14
TK-02a	Triton Knoll OWF	53.6575	0.6119	72	680	6800	8.740	0.491	1.993	ce	SS.SCS.CCS.PomB	66.76	32.63	0.61
TK-03a	Triton Knoll OWF	53.6764	0.6550	37	65	650	6.468	0.878	2.925	ct	SS.SCS.CCS.PomB	26.97	72.86	0.16
TK-04a	Triton Knoll OWF	53.5897	0.5215	68	961	9610	8.008	0.438	1.763	ce	SS.SCS.CCS.PomB	97.30	2.68	0.03
TK-05a	Triton Knoll OWF	53.6088	0.5528	36	192	1920	4.755	0.527	1.718	cd	SS.SCS.CCS.PomB	82.63	17.36	0.02
TK-06a	Triton Knoll OWF	53.6168	0.5963	42	326	3260	5.357	0.294	1.019	cd	SS.SCS.CCS.PomB	66.57	33.40	0.03
TK-07a	Triton Knoll OWF	53.6369	0.6402	31	383	3830	3.362	0.299	0.910	cd	SS.SCS.CCS.PomB	83.66	16.22	0.13
TK-08a	Triton Knoll OWF	53.6554	0.6701	75	1538	15380	7.495	0.249	1.001	ce	SS.SCS.CCS.PomB	47.72	52.06	0.21
TK-09a	Triton Knoll OWF	53.6751	0.7160	34	141	1410	5.456	0.693	2.309	ct	SS.SCS.CCS.PomB	56.98	42.94	0.08
TK-10a	Triton Knoll OWF	53.5695	0.5380	77	1765	17650	8.026	0.406	1.667	ce	SS.SCS.CCS.PomB	95.45	4.46	0.09
TK-11a	Triton Knoll OWF	53.5889	0.5821	87	432	4320	11.865	0.757	3.247	ce	SS.SCS.CCS.PomB	76.42	23.20	0.38
TK-12a	Triton Knoll OWF	53.6089	0.6264	35	211	2110	4.298	0.418	1.330	cd	SS.SCS.CCS.PomB	74.15	25.69	0.16
TK-13a	Triton Knoll OWF	53.6170	0.6583	75	1224	12240	7.736	0.334	1.346	ce	SS.SCS.CCS.PomB	76.65	23.22	0.12
TK-14a	Triton Knoll OWF	53.6369	0.6999	29	89	890	5.347	0.781	2.513	ct	SS.SCS.CCS.PomB	65.84	34.05	0.11
TK-15a	Triton Knoll OWF	53.6550	0.7442	51	119	1190	8.370	0.907	3.366	ct	SS.SCS.CCS.PomB	45.00	54.93	0.07
TK-17a	Triton Knoll OWF	53.5698	0.6098	68	753	7530	7.246	0.411	1.600	ce	SS.SCS.CCS.PomB	82.43	17.27	0.29
TK-18a	Triton Knoll OWF	53.5893	0.6429	97	735	7350	12.273	0.617	2.720	ce	SS.SCS.CCS.PomB	70.93	28.60	0.48
TK-19a	Triton Knoll OWF	53.6078	0.6871	49	406	4060	6.160	0.458	1.666	cd	SS.SCS.CCS.PomB	68.25	31.67	0.08
TK-20a	Triton Knoll OWF	53.6209	0.7270	119	2131	21310	12.917	0.488	2.245	ce	SS.SCS.CCS.PomB	78.60	21.09	0.30
TK-21a	Triton Knoll OWF	53.6358	0.7627	34	76	760	6.004	0.908	2.993	ct	SS.SCS.CCS.PomB	63.68	35.71	0.61
TK-22a	Triton Knoll OWF	53.5264	0.5939	74	982	9820	9.725	0.572	2.412	ce	SS.SCS.CCS.PomB	56.80	42.01	1.19
TK-24a	Triton Knoll OWF	53.5493	0.6378	81	958	9580	10.488	0.548	2.350	ce	SS.SCS.CCS.PomB	63.75	35.93	0.32
TK-25a	Triton Knoll OWF	53.5641	0.6479	87	1310	13100	10.170	0.574	2.472	ce	SS.SCS.CCS.PomB	64.88	34.00	1.13
TK-26a	Triton Knoll OWF	53.5694	0.6734	103	660	6600	14.325	0.785	3.568	ce	SS.SCS.CCS.PomB	72.70	26.74	0.55
TK-27a	Triton Knoll OWF	53.5881	0.7051	76	665	6650	10.308	0.626	2.642	ce	SS.SCS.CCS.PomB	76.85	22.79	0.35
TK-28a	Triton Knoll OWF	53.6076	0.7481	114	858	8580	14.213	0.761	3.483	ce	SS.SCS.CCS.PomB	67.55	31.62	0.83
TK-29a	Triton Knoll OWF	53.6243	0.7867	114	830	8300	13.241	0.708	3.186	ce	SS.SCS.CCS.PomB	42.24	57.10	0.65
TK-30a	Triton Knoll OWF	53.5028	0.6175	36	77	770	7.367	0.911	3.185	cv	SS.SCS.IC.S.SLan	77.88	22.06	0.06
TK-31a	Triton Knoll OWF	53.5170	0.6386	76	499	4990	10.945	0.673	2.849	ce	SS.SCS.CCS.PomB	60.93	38.51	0.57
TK-33a	Triton Knoll OWF	53.5169	0.6824	103	946	9460	13.864	0.675	3.082	cn	SS.SBR.PoR.SspiMx	12.71	83.97	3.31
TK-34a	Triton Knoll OWF	53.5563	0.6796	101	1065	10650	11.620	0.644	2.840	ce	SS.SCS.CCS.PomB	51.21	47.79	1.01
TK-35a	Triton Knoll OWF	53.5517	0.7051	48	270	2700	7.681	0.616	2.329	ck	SS.SBR.PoR.SspiMx	10.26	86.34	3.39
TK-36a	Triton Knoll OWF	53.5690	0.7341	58	237	2370	9.510	0.699	2.777	ck	SS.SBR.PoR.SspiMx	25.77	71.96	2.27
TK-37a	Triton Knoll OWF	53.5880	0.7766	72	253	2530	10.120	0.706	2.856	ck	SS.SBR.PoR.SspiMx	0.00	97.39	2.61
TK-38a	Triton Knoll OWF	53.6066	0.8100	82	390	3900	12.571	0.821	3.555	by	SS.SCS.CCS.MedLumVen	32.51	66.31	1.18
TK-39a	Triton Knoll OWF	53.4933	0.6516	54	291	2910	8.108	0.696	2.681	ck	SS.SBR.PoR.SspiMx	20.37	76.59	3.04
TK-40a	Triton Knoll OWF	53.5113	0.6760	38	347	3470	6.155	0.423	1.528	ck	SS.SBR.PoR.SspiMx	12.46	85.67	1.87
TK-41a	Triton Knoll OWF	53.5215	0.6878	55	433	4330	8.895	0.563	2.258	ck	SS.SBR.PoR.SspiMx	8.96	89.05	1.99
TK-42a	Triton Knoll OWF	53.5301	0.7195	48	420	4200	7.781	0.703	2.720	ce	SS.SCS.CCS.PomB	52.94	45.01	2.05
TK-43a	Triton Knoll OWF	53.5499	0.7479	75	624	6240	11.498	0.704	3.038	ce	SS.SCS.CCS.PomB	68.75	30.69	0.55
TK-44a	Triton Knoll OWF	53.5682	0.7949	66	319	3190	11.275	0.787	3.297	ce	SS.SCS.CCS.PomB	73.56	25.79	0.65
TK-45a	Triton Knoll OWF	53.5872	0.8386	10	15	150	3.323	0.960	2.211	cp	SS.SCS.CCS.Blan	5.47	94.49	0.04
TK-46a	Triton Knoll OWF	53.4723	0.6613	42	423	4230	6.780	0.382	1.426	cd	SS.SCS.CCS.PomB	10.61	89.21	0.18



**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
TK-47a	Triton Knoll OWF	53.4913	0.6979	91	905	9050	13.220	0.798	3.600	ce	SS.SCS.CCS.PomB	26.84	71.66	1.50
TK-48a	Triton Knoll OWF	53.5068	0.7218	71	1323	13230	9.739	0.549	2.340	ce	SS.SCS.CCS.PomB	40.42	57.53	2.05
TK-49a	Triton Knoll OWF	53.5241	0.7110	71	330	3300	12.071	0.829	3.536	ce	SS.SCS.CCS.PomB	29.99	68.86	1.16
TK-50a	Triton Knoll OWF	53.5341	0.7447	96	1014	10140	13.725	0.754	3.441	ce	SS.SCS.CCS.PomB	76.37	23.11	0.52
TK-51a	Triton Knoll OWF	53.6868	0.6208	40	577	5770	6.134	0.396	1.460	ce	SS.SCS.CCS.PomB	27.19	70.37	2.44
TK-52a	Triton Knoll OWF	53.5485	0.8247	70	1706	17060	9.272	0.481	2.046	ce	SS.SCS.CCS.PomB	35.15	63.78	1.07
TK-53a	Triton Knoll OWF	53.5677	0.8554	77	1471	14710	10.420	0.442	1.920	ce	SS.SCS.CCS.PomB	23.79	74.99	1.22
TK-54a	Triton Knoll OWF	53.4528	0.6904	55	1067	10670	7.745	0.441	1.768	ce	SS.SCS.CCS.PomB	63.80	35.53	0.67
TK-55a	Triton Knoll OWF	53.4776	0.6837	51	724	7240	7.593	0.512	2.013	ce	SS.SCS.CCS.PomB	31.36	68.57	0.07
TK-57a	Triton Knoll OWF	53.5028	0.7467	63	744	7440	9.377	0.754	3.126	ce	SS.SCS.CCS.PomB	58.35	39.93	1.71
TK-58a	Triton Knoll OWF	53.4908	0.7650	76	797	7970	11.226	0.677	2.932	ce	SS.SCS.CCS.PomB	22.43	73.43	4.14
TK-60a	Triton Knoll OWF	53.5044	0.8009	86	3385	33850	10.459	0.382	1.703	ce	SS.SCS.CCS.PomB	15.03	82.71	2.26
TK-61a	Triton Knoll OWF	53.5292	0.8415	101	1336	13360	13.894	0.645	2.976	ce	SS.SCS.CCS.PomB	28.58	69.10	2.32
TK-62a	Triton Knoll OWF	53.5479	0.8869	72	1474	14740	9.732	0.362	1.547	ce	SS.SCS.CCS.PomB	45.01	54.36	0.63
TK-64a	Triton Knoll OWF	53.4605	0.7203	75	1741	17410	9.917	0.461	1.991	ce	SS.SCS.CCS.PomB	91.10	8.77	0.13
TK-65a	Triton Knoll OWF	53.4601	0.7609	67	900	9000	9.702	0.562	2.362	ce	SS.SCS.CCS.PomB	46.82	51.78	1.40
TK-66a	Triton Knoll OWF	53.4725	0.7943	67	1358	13580	9.149	0.417	1.753	ce	SS.SCS.CCS.PomB	75.98	23.59	0.43
TK-67a	Triton Knoll OWF	53.4933	0.8141	54	1190	11900	7.484	0.383	1.528	ce	SS.SCS.CCS.PomB	55.69	43.88	0.43
TK-68a	Triton Knoll OWF	53.5209	0.8457	64	925	9250	9.224	0.437	1.818	ce	SS.SCS.CCS.PomB	53.16	46.39	0.45
TK-69a	Triton Knoll OWF	53.5208	0.8723	53	499	4990	8.370	0.589	2.337	ce	SS.SCS.CCS.PomB	49.27	50.60	0.12
TK-70a	Triton Knoll OWF	53.4438	0.7685	64	1422	14220	8.678	0.307	1.276	ce	SS.SCS.CCS.PomB	59.20	40.45	0.36
TK-72a	Triton Knoll OWF	53.4704	0.8253	75	828	8280	11.014	0.715	3.087	ce	SS.SCS.CCS.PomB	39.07	60.27	0.65
TK-73a	Triton Knoll OWF	53.4710	0.8547	56	1858	18580	7.307	0.220	0.884	ce	SS.SCS.CCS.PomB	48.38	51.25	0.36
TK-74a	Triton Knoll OWF	53.4996	0.8564	85	702	7020	12.817	0.688	3.058	ce	SS.SCS.CCS.PomB	50.03	49.25	0.71
TK-76a	Triton Knoll OWF	53.5094	0.9316	67	1921	19210	8.729	0.313	1.318	ce	SS.SCS.CCS.PomB	63.09	36.65	0.26
TK-77a	Triton Knoll OWF	53.5195	0.9178	68	884	8840	9.876	0.484	2.041	ce	SS.SCS.CCS.PomB	72.14	27.59	0.27
TK-78a	Triton Knoll OWF	53.4238	0.7976	4	19	190	1.019	0.742	1.028	az	SS.SCS.IC.S.MoeVen	3.64	96.33	0.03
TK-79a	Triton Knoll OWF	53.4431	0.8398	9	25	250	2.485	0.875	1.923	az	SS.SCS.IC.S.MoeVen	20.36	79.61	0.03
TK-80a	Triton Knoll OWF	53.4512	0.8424	56	1228	12280	7.732	0.493	1.985	ce	SS.SCS.CCS.PomB	49.34	50.41	0.24
TK-81a	Triton Knoll OWF	53.4504	0.8736	10	16	160	3.246	0.875	2.014	av	SS.SCS.CCS.Pkef	60.09	39.70	0.22
TK-82a	Triton Knoll OWF	53.4705	0.8870	16	33	330	4.290	0.839	2.325	dx	SS.SCS.CCS.PomB	59.80	40.08	0.11
TK-85a	Triton Knoll OWF	53.4939	0.9597	46	2123	21230	5.874	0.256	0.982	ce	SS.SCS.CCS.PomB	51.19	48.58	0.24
TK-86a	Triton Knoll OWF	53.4037	0.8271	11	24	240	3.147	0.887	2.127	az	SS.SCS.IC.S.MoeVen	33.96	66.00	0.05
TK-87a	Triton Knoll OWF	53.4220	0.8596	10	38	380	2.474	0.701	1.613	az	SS.SCS.IC.S.MoeVen	1.31	98.68	0.01
TK-88a	Triton Knoll OWF	53.4436	0.8771	19	244	2440	3.274	0.441	1.299	aw	SS.SCS.IC.S.MoeVen	20.18	79.80	0.03
TK-89a	Triton Knoll OWF	53.4422	0.9016	22	195	1950	3.983	0.341	1.053	cd	SS.SCS.CCS.PomB	59.61	40.30	0.09
TK-90a	Triton Knoll OWF	53.4503	0.9027	18	124	1240	3.527	0.359	1.038	aw	SS.SCS.IC.S.MoeVen	27.64	72.34	0.02
TK-91a	Triton Knoll OWF	53.4609	0.9341	63	1686	16860	8.344	0.377	1.561	ce	SS.SCS.CCS.PomB	51.57	48.22	0.21
TK-92a	Triton Knoll OWF	53.4718	0.9474	62	2026	20260	8.012	0.353	1.456	ce	SS.SCS.CCS.PomB	50.94	48.83	0.22
TK-93a	Triton Knoll OWF	53.4694	0.9776	69	1883	18830	9.018	0.435	1.843	ce	SS.SCS.CCS.PomB	58.44	41.21	0.35
TK-94a	Triton Knoll OWF	53.3653	0.8011	67	1537	15370	8.995	0.495	2.083	cn	SS.SBR.PoR.SspiMx	30.57	68.44	0.99
TK-95a	Triton Knoll OWF	53.3840	0.8439	56	415	4150	9.124	0.580	2.336	cn	SS.SBR.PoR.SspiMx	16.03	83.73	0.25
TK-96a	Triton Knoll OWF	53.4033	0.8873	13	78	780	2.754	0.354	0.909	aw	SS.SCS.IC.S.MoeVen	22.20	77.77	0.03
TK-97a	Triton Knoll OWF	53.4208	0.8931	6	16	160	1.803	0.830	1.488	az	SS.SCS.IC.S.MoeVen	5.32	94.68	0.00
TK-98a	Triton Knoll OWF	53.4215	0.9149	18	97	970	3.716	0.522	1.509	aw	SS.SCS.IC.S.MoeVen	24.68	75.30	0.02
TK-99a	Triton Knoll OWF	53.4277	0.9234	12	274	2740	1.960	0.217	0.539	cd	SS.SCS.CCS.PomB	69.51	30.46	0.03
TK-100a	Triton Knoll OWF	53.4416	0.9328	29	395	3950	4.181	0.215	0.700	cd	SS.SCS.CCS.PomB	45.29	52.13	2.58

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
TK-101a	Triton Knoll OWF	53.4491	0.9639	20	30	300	4.998	0.967	2.794	av	SS.SCS.CCS.Pkef	64.83	35.14	0.04
TK-102a	Triton Knoll OWF	53.4623	0.9831	95	2317	23170	9.809	0.394	1.711	ce	SS.SCS.CCS.PomB	69.19	30.58	0.22
TK-103a	Triton Knoll OWF	53.4601	1.0061	11	264	2640	1.793	0.148	0.354	aw	SS.SCS.ICCS.MoeVen	15.45	84.51	0.03
TK-104a	Triton Knoll OWF	53.3456	0.8301	70	469	4690	8.942	0.595	2.395	cn	SS.SBR.PoR.SspiMx	19.10	80.48	0.43
TK-105a	Triton Knoll OWF	53.3643	0.8724	16	20	200	4.340	0.978	2.580	an	SS.SCS.ICCS.Glap	9.56	90.36	0.08
TK-106a	Triton Knoll OWF	53.3833	0.9051	76	424	4240	9.587	0.757	3.089	cn	SS.SBR.PoR.SspiMx	21.76	78.08	0.15
TK-107a	Triton Knoll OWF	53.4193	0.9563	79	703	7030	9.763	0.575	2.401	ce	SS.SCS.CCS.PomB	30.57	69.28	0.15
TK-108a	Triton Knoll OWF	53.4304	0.9774	28	88	880	4.690	0.583	1.803	cd	SS.SCS.CCS.PomB	56.90	42.40	0.70
TK-109a	Triton Knoll OWF	53.4213	0.9912	69	2052	20520	6.687	0.340	1.342	ce	SS.SCS.CCS.PomB	36.34	63.50	0.17
TK-110a	Triton Knoll OWF	53.4351	0.9838	18	95	950	3.294	0.644	1.785	aw	SS.SCS.ICCS.MoeVen	47.22	52.74	0.04
TK-111a	Triton Knoll OWF	53.4409	1.0234	9	24	240	2.203	0.806	1.675	az	SS.SCS.ICCS.MoeVen	44.36	55.60	0.04
TK-112a	Triton Knoll OWF	53.3251	0.8574	23	63	630	4.586	0.817	2.447	dx	SS.SCS.CCS.PomB	35.15	64.76	0.09
TK-113a	Triton Knoll OWF	53.3443	0.8903	14	65	650	2.875	0.547	1.402	az	SS.SCS.ICCS.MoeVen	2.52	97.44	0.05
TK-114a	Triton Knoll OWF	53.3637	0.9332	77	659	6590	9.398	0.644	2.660	ce	SS.SCS.CCS.PomB	23.64	75.78	0.57
TK-115a	Triton Knoll OWF	53.3879	0.9354	45	125	1250	6.420	0.642	2.224	cc	SS.SCS.CCS.PomB	35.17	64.70	0.13
TK-116a	Triton Knoll OWF	53.3824	0.9758	82	1866	18660	9.029	0.326	1.380	ce	SS.SCS.CCS.PomB	44.52	55.21	0.26
TK-117a	Triton Knoll OWF	53.4018	1.0082	62	865	8650	7.837	0.396	1.578	ce	SS.SCS.CCS.PomB	54.23	45.61	0.17
TK-118a	Triton Knoll OWF	53.4205	1.0052	31	234	2340	3.666	0.466	1.419	cc	SS.SCS.CCS.PomB	51.81	48.04	0.14
TK-119a	Triton Knoll OWF	53.4226	1.0463	95	1749	17490	10.178	0.387	1.683	ce	SS.SCS.CCS.PomB	62.09	37.57	0.35
TK-120a	Triton Knoll OWF	53.3356	0.9039	9	15	150	2.216	0.908	1.767	az	SS.SCS.ICCS.MoeVen	1.92	98.04	0.04
TK-121a	Triton Knoll OWF	53.3634	0.9925	92	1091	10910	9.578	0.539	2.273	ce	SS.SCS.CCS.PomB	22.40	76.82	0.78
TK-122a	Triton Knoll OWF	53.3819	1.0369	16	25	250	4.349	0.910	2.464	ad	SS.SSa.IFiSa.NcirBat	7.19	92.76	0.06
TK-123a	Triton Knoll OWF	53.4011	1.0689	98	1940	19400	10.303	0.397	1.733	ce	SS.SCS.CCS.PomB	49.52	49.91	0.57
TK-124a	Triton Knoll OWF	53.3012	0.8871	7	9	90	2.276	0.936	1.677	ad	SS.SSa.IFiSa.NcirBat	0.02	99.96	0.02
TK-125a	Triton Knoll OWF	53.3200	0.9270	16	31	310	3.786	0.964	2.545	az	SS.SCS.ICCS.MoeVen	29.06	70.84	0.10
TK-126a	Triton Knoll OWF	53.3550	0.9598	8	12	120	2.817	0.917	1.907	ac	SS.SSa.IFiSa.NcirBat	0.19	99.74	0.07
TK-127a	Triton Knoll OWF	53.3275	0.9738	10	5	50	2.485	1.000	1.609	as	SS.SCS.ICCS.Glap	3.13	96.83	0.04
TK-128a	Triton Knoll OWF	53.3429	1.0223	48	599	5990	6.567	0.442	1.662	ce	SS.SCS.CCS.PomB	23.43	76.40	0.17
TK-129a	Triton Knoll OWF	53.3621	1.0537	11	21	210	2.956	0.888	2.046	u	SS.SSa.CFiSa.ApriBatPo	2.92	97.02	0.05
TK-130a	Triton Knoll OWF	53.3818	1.0988	87	2185	21850	9.234	0.481	2.056	ce	SS.SCS.CCS.PomB	32.57	66.25	1.18
TK-131a	Triton Knoll OWF	53.2757	0.9226	6	8	80	1.924	0.928	1.494	ab	SS.SSa.IFiSa.NcirBat	1.05	98.91	0.04
TK-132a	Triton Knoll OWF	53.2876	0.9597	11	17	170	2.824	0.876	1.925	az	SS.SCS.ICCS.MoeVen	4.68	95.28	0.04
TK-133a	Triton Knoll OWF	53.3061	1.0055	6	8	80	1.924	0.969	1.560	ba	SS.SCS.ICCS.MoeVen	4.27	95.68	0.05
TK-134a	Triton Knoll OWF	53.3229	1.0395	75	822	8220	9.089	0.542	2.237	ce	SS.SCS.CCS.PomB	24.09	75.11	0.80
TK-135a	Triton Knoll OWF	53.3416	1.0833	49	77	770	8.518	0.871	3.170	cc	SS.SCS.CCS.PomB	16.66	74.52	8.82
TK-136a	Triton Knoll OWF	53.3611	1.1273	94	1765	17650	10.835	0.458	2.019	ce	SS.SCS.CCS.PomB	20.70	77.58	1.73
TK-137a	Triton Knoll OWF	53.2566	0.9597	13	22	220	3.559	0.864	2.146	ba	SS.SCS.ICCS.MoeVen	1.44	98.51	0.05
TK-138a	Triton Knoll OWF	53.2687	0.9927	8	10	100	2.606	0.943	1.834	p	SS.SSa.IFiSa.IMoSa	1.28	98.69	0.03
TK-139a	Triton Knoll OWF	53.2922	1.0303	52	155	1550	7.535	0.813	2.978	cc	SS.SCS.CCS.PomB	12.52	86.38	1.09
TK-140a	Triton Knoll OWF	53.3033	1.0676	79	563	5630	10.895	0.626	2.661	ce	SS.SCS.CCS.PomB	20.27	78.79	0.93
TK-141a	Triton Knoll OWF	53.3226	1.1109	69	506	5060	8.512	0.576	2.298	ce	SS.SCS.CCS.PomB	32.15	67.23	0.62
TK-142a	Triton Knoll OWF	53.3418	1.1434	58	259	2590	6.658	0.690	2.508	cc	SS.SCS.CCS.PomB	12.10	87.29	0.61
TK-143a	Triton Knoll OWF	53.2347	0.9697	84	975	9750	9.154	0.450	1.870	ce	SS.SCS.CCS.PomB	49.70	49.74	0.55
TK-144a	Triton Knoll OWF	53.2569	1.0094	22	35	350	3.656	0.818	2.159	ba	SS.SCS.ICCS.MoeVen	4.07	95.91	0.02
TK-145a	Triton Knoll OWF	53.2762	1.0575	81	885	8850	9.284	0.550	2.288	ce	SS.SCS.CCS.PomB	25.47	73.14	1.39
TK-146a	Triton Knoll OWF	53.2836	1.0851	74	529	5290	9.727	0.606	2.501	ce	SS.SCS.CCS.PomB	47.45	51.75	0.80
TK-147a	Triton Knoll OWF	53.3231	1.1293	46	506	5060	6.424	0.594	2.206	ce	SS.SCS.CCS.PomB	21.37	76.34	2.30

**Appendix 3. Summary of sample details, including positions, basic statistics and basic PSA fractions.**

Sample	Project Name	Latitude	Longitude	Total No. Taxa	Total Individuals per grab	Total Individuals per m <sup>2</sup>	Margalef's Species Richness (D)	Pielou's Evenness (J')	Shannon Wiener Diversity H'(loge)	Cluster	Biotope	%Gravel	% Sand	% Silt
TK-148a	Triton Knoll OWF	53.3214	1.1728	73	997	9970	8.400	0.366	1.491	ce	SS.SCS.CCS.PomB	32.32	66.75	0.92
TK-149a	Triton Knoll OWF	53.6987	0.6098	43	1153	11530	4.681	0.315	1.111	ce	SS.SCS.CCS.PomB	60.41	39.43	0.16
TK-150a	Triton Knoll OWF	53.6994	0.6299	13	39	390	3.003	0.849	2.110	bl	SS.SCS.ICS.Glap	10.22	89.74	0.04
TK-151a	Triton Knoll OWF	53.6865	0.6197	48	978	9780	5.374	0.253	0.920	ce	SS.SCS.CCS.PomB	71.22	28.49	0.28
TK-152a	Triton Knoll OWF	53.5109	0.5416	66	1558	15580	7.618	0.363	1.469	ce	SS.SCS.CCS.PomB	72.86	26.52	0.62
TK-153a	Triton Knoll OWF	53.4885	0.5535	60	1277	12770	6.711	0.239	0.930	ce	SS.SCS.CCS.PomB	55.50	41.17	3.33
TK-154a	Triton Knoll OWF	53.5016	0.5610	56	1989	19890	6.056	0.219	0.844	ce	SS.SCS.CCS.PomB	53.49	45.31	1.20
TK-155a	Triton Knoll OWF	53.5816	0.9049	6	19	190	1.698	0.558	1.000	ay	SS.SCS.ICS.MoeVen	4.75	95.21	0.03
TK-156a	Triton Knoll OWF	53.5821	0.9336	31	152	1520	4.777	0.517	1.664	cx	SS.SCS.ICS.MoeVen	56.22	43.69	0.08
TK-157a	Triton Knoll OWF	53.5698	0.9252	8	52	520	1.772	0.316	0.657	aw	SS.SCS.ICS.MoeVen	50.52	49.46	0.02
TK-158a	Triton Knoll OWF	53.2885	1.1530	82	1225	12250	9.422	0.419	1.769	ce	SS.SCS.CCS.PomB	32.48	66.15	1.36
TK-159a	Triton Knoll OWF	53.2896	1.1799	49	250	2500	6.701	0.549	1.998	ce	SS.SCS.CCS.PomB	31.48	66.96	1.57
TK-160a	Triton Knoll OWF	53.2771	1.1730	77	1914	19140	8.337	0.460	1.912	ce	SS.SCS.CCS.PomB	30.72	68.22	1.07
<b>MAX</b>				131	4274	42740	14.326	1.000	3.760			97.30	109.61	89.99
<b>MIN</b>				0	0	0	0.558	0.148	0.354			0.00	2.42	0.00
<b>MEAN</b>				35.36	323.39	3233.87	5.817	0.748	2.234			37.71	58.98	3.23

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
AR-02a	26.52	12.94	12.18	11.80	15.93	11.73	4.85	2.36	1.70
AR-03a	11.04	9.96	8.37	8.02	7.74	15.52	30.71	6.28	2.35
AR-04a	21.08	10.16	8.27	9.81	16.79	31.75	1.21	0.22	0.69
AR-05a	0.71	5.27	2.89	3.08	2.79	11.01	71.89	1.23	1.13
AR-06a	44.46	7.96	5.21	2.68	5.35	16.94	12.96	1.26	3.17
AR-07a	0.00	0.06	0.43	2.50	12.43	48.68	32.88	1.75	1.27
AR-08a	0.07	0.15	0.12	0.50	2.00	75.11	18.86	1.02	2.17
AR-10a	0.42	4.58	7.95	11.83	13.45	25.90	28.41	4.34	3.12
AR-11a	87.73	2.60	1.42	1.19	1.34	3.50	2.01	0.21	0.00
AR-12a	39.30	15.30	7.65	4.89	6.51	13.55	6.34	4.43	2.04
AR-14a	35.52	10.29	7.02	4.55	11.09	18.06	7.76	2.61	3.11
AR-15a	50.73	10.56	6.13	5.85	7.75	9.73	6.07	1.28	1.88
AR-16a	0.00	0.05	0.57	2.84	30.46	63.37	1.74	0.07	0.89
AR-17a	7.32	17.29	16.95	12.88	10.91	10.49	12.56	5.82	5.77
AR-18a	30.98	17.12	11.10	9.17	10.19	15.93	3.76	0.59	1.16
AR-19a	7.43	17.33	17.65	13.23	10.30	6.73	23.27	3.25	0.81
AR-20a	0.00	0.00	0.00	0.29	1.72	57.70	38.75	0.52	1.02
AR-21a	0.00	0.01	0.04	0.35	1.32	70.47	26.59	0.22	1.00
AR-22a	0.10	3.51	3.12	3.67	11.47	45.26	31.39	0.80	0.69
AR-23a	5.72	9.63	15.05	14.62	15.03	14.50	17.99	2.94	4.52
AR-24a	1.15	1.36	0.85	1.31	2.95	17.66	67.90	5.12	1.69
AR-25a	9.47	12.75	8.49	6.25	3.40	9.37	38.20	5.04	7.02
AR-26a	0.00	0.00	0.00	0.04	0.13	0.17	19.90	52.01	27.75
AR-27a	30.23	11.09	9.14	8.85	9.77	18.07	10.72	1.30	0.83
AR-28a	25.13	19.13	9.97	4.58	8.81	22.52	9.13	0.29	0.43
AR-29a	40.36	8.93	7.64	7.67	7.92	16.10	6.90	1.92	2.56
AR-31a	10.80	18.62	11.09	5.87	4.81	20.67	15.28	3.25	9.62
AR-32a	31.49	23.31	18.62	6.74	9.40	9.22	0.50	0.17	0.56
AR-33a	18.51	3.53	2.28	4.94	4.29	10.28	50.57	2.53	3.07
AR-34a	25.79	5.70	4.87	4.64	3.72	13.72	31.81	3.76	6.00
AR-35a	19.00	6.50	13.78	17.63	14.01	17.42	10.14	0.44	1.10
AR-36a	0.19	1.72	0.63	0.43	0.57	33.89	29.20	1.50	31.87
AR-37a	3.67	8.09	5.96	3.61	3.29	10.96	46.20	6.36	11.86
AR-38a	0.14	2.57	10.18	12.71	18.32	44.20	10.80	0.34	0.75
AR-39a	5.09	6.67	15.77	5.26	16.55	43.14	4.09	0.30	3.13
AR-40a	0.00	0.03	0.28	0.60	0.50	54.08	42.41	0.82	1.28
AR-41a	8.29	4.60	5.04	7.08	14.75	25.37	32.77	1.07	1.02
AR-42a	11.72	7.16	2.74	1.59	1.23	31.76	37.79	1.86	4.15
AR-43a	0.00	0.13	1.41	6.42	15.18	51.12	24.78	0.26	0.70
AR-44a	1.56	3.29	4.28	6.59	9.59	47.61	25.73	0.48	0.88
AR-45a	0.00	0.00	0.32	2.35	10.70	50.06	35.19	0.53	0.84
AR-47a	0.00	0.02	0.10	0.04	0.17	34.41	62.77	1.34	1.15
AR-48a	0.00	0.00	0.00	0.04	0.22	22.54	68.16	7.61	1.43
AR-49a	0.00	0.12	0.07	0.22	0.22	3.70	86.17	6.41	3.07
AR-50a	21.68	8.28	5.30	3.37	2.77	15.97	27.23	2.85	12.55
AR-51a	11.18	18.62	21.31	12.37	5.16	5.06	15.30	5.06	5.94
AR-52a	3.45	3.80	2.96	3.14	8.32	24.60	15.46	8.51	29.75
AR-53a	22.79	5.64	4.36	6.16	6.74	14.46	24.80	5.01	10.04
AR-54a	7.05	5.47	5.53	2.89	3.54	22.00	28.69	4.34	20.49
AR-55a	1.45	2.14	0.36	0.49	0.42	1.57	81.74	5.58	6.25

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
AR-56a	0.00	0.40	3.59	13.48	41.16	36.36	4.05	0.14	0.83
AR-57a	24.65	7.86	6.24	5.64	5.40	18.81	19.60	4.07	7.74
AR-58a	24.84	10.92	10.19	5.14	3.57	9.46	23.68	2.25	9.96
AR-59a	10.07	9.09	7.29	4.22	2.56	47.71	13.05	1.92	4.09
AR-60a	8.71	10.15	7.67	5.54	10.59	29.62	19.57	3.08	5.07
AR-61a	0.00	0.00	0.00	0.08	1.31	89.42	8.14	0.19	0.86
AR-62a	6.13	6.11	7.92	11.64	11.23	31.01	23.43	1.22	1.31
AR-63a	10.14	8.72	5.93	4.31	5.28	18.23	42.50	1.74	3.15
AR-64a	0.00	0.05	0.14	0.65	8.98	70.93	16.80	1.47	0.98
AR-65a	0.70	0.15	0.04	0.08	0.23	1.53	87.83	7.31	2.12
AR-66a	0.92	0.39	0.27	0.24	0.34	5.52	84.97	5.22	2.13
AR-68a	26.30	9.57	7.58	10.53	13.14	2.61	22.77	2.59	4.91
AR-69a	14.02	10.57	6.48	4.54	6.02	24.30	27.30	3.32	3.46
AR-70a	36.53	17.89	6.43	3.32	3.13	11.51	20.16	0.57	0.45
AR-71a	7.75	2.53	1.13	1.64	42.14	37.10	6.34	0.71	0.65
AR-72a	0.00	0.02	0.14	0.69	3.30	69.99	23.11	1.36	1.40
AR-73a	0.35	2.52	7.48	10.57	13.65	47.76	15.12	1.07	1.48
AR-74a	23.82	35.64	30.89	6.96	0.60	0.33	1.03	0.21	0.53
AR-75a	9.62	3.87	4.95	3.30	2.23	18.17	53.22	2.41	2.22
AR-76a	4.95	2.21	2.79	2.51	2.38	31.18	38.65	3.46	11.85
AR-77a	19.70	2.12	1.71	1.69	1.37	12.65	51.73	3.84	5.20
AR-78a	2.57	5.18	5.70	2.41	3.15	23.92	45.38	5.19	6.51
AR-79a	1.62	8.54	12.26	6.84	5.72	26.33	29.13	2.55	7.00
AR-80a	4.03	5.37	5.44	4.65	5.34	21.95	38.17	6.97	8.08
AR-81a	7.32	9.25	4.45	3.13	3.61	24.12	33.59	4.75	9.78
AR-82a	3.04	6.10	2.81	3.05	3.61	40.39	32.91	3.79	4.30
AR-84a	0.96	0.33	4.65	1.50	8.26	16.43	49.61	5.30	12.96
AR-85a	3.09	1.34	1.19	2.18	1.71	12.74	56.89	4.00	16.85
AR-86a	4.87	4.55	2.69	2.87	3.65	4.71	51.18	9.07	16.41
AR-87a	0.05	0.09	0.29	0.25	1.01	6.28	74.03	3.68	14.32
AR-88a	0.45	1.11	0.96	2.09	1.85	4.56	64.38	7.78	16.82
AR-89a	8.69	12.74	9.36	6.22	4.75	44.15	12.32	0.73	1.04
AR-90a	7.76	4.86	4.06	3.59	2.06	12.35	60.81	2.45	2.05
AR-91a	32.31	20.16	10.47	6.73	5.51	11.95	10.13	1.06	1.68
AR-93a	23.52	7.93	6.25	8.88	13.22	20.24	18.38	0.57	1.00
AR-94a	6.70	10.80	9.80	17.99	16.07	17.78	18.91	1.25	0.70
AR-95a	6.79	9.31	5.42	7.48	9.79	8.46	29.96	10.16	12.63
AR-96a	15.80	7.44	8.92	9.01	5.98	19.47	28.24	1.61	3.54
AR-98a	52.85	12.98	7.07	5.78	6.50	10.70	3.02	0.39	0.72
AR-99a	15.80	7.44	8.92	9.01	5.98	19.47	28.24	1.61	3.54
AR-100a	0.00	0.00	0.37	2.39	40.15	51.34	4.76	0.11	0.88
AR-101a	1.57	1.54	1.90	2.69	10.94	61.38	18.35	0.74	0.89
AR-102a	2.99	9.81	13.22	11.71	20.16	27.55	11.45	1.65	1.46
AR-103a	0.31	0.50	0.41	0.68	2.10	73.86	18.82	2.11	1.21
AR-104a	0.00	0.00	0.53	1.00	10.15	53.58	32.99	0.84	0.92
AR-105a	0.00	0.00	0.00	0.05	2.99	40.15	53.46	2.42	0.93
AR-106a	0.00	0.10	0.09	0.33	2.64	72.57	22.73	0.53	1.01
AR-107a	19.02	9.07	2.64	1.14	1.58	37.80	26.53	1.14	1.08
AR-108a	33.72	23.10	12.15	8.20	5.97	8.70	7.40	0.31	0.46
AR-109a	17.71	9.24	6.88	5.21	3.75	8.96	42.43	3.68	2.14

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
AR-110a	26.43	20.13	6.65	1.56	3.80	32.66	8.21	0.23	0.33
AR-113a	0.00	0.14	1.61	12.29	19.02	48.21	17.07	0.61	1.04
AR-114a	0.00	0.00	0.09	0.53	1.20	13.80	77.31	4.67	2.41
AR-115a	0.03	0.71	0.53	0.81	2.71	37.33	50.85	1.72	5.32
AR-116a	0.00	0.00	0.54	2.63	79.33	15.86	0.76	0.00	0.90
AR-118a	12.40	13.74	8.64	3.77	3.98	9.06	40.39	3.92	4.10
AR-119a	0.00	0.11	0.64	1.13	2.16	7.79	77.49	2.65	8.04
AR-120a	9.37	11.86	7.35	4.57	5.91	45.89	13.81	0.50	0.73
AR-121a	0.25	0.53	0.25	0.30	1.12	72.55	22.07	1.31	1.62
AR-122a	0.43	5.23	27.39	15.27	6.12	11.17	31.40	2.07	0.92
AR-123a	8.08	18.00	18.90	14.41	7.09	13.28	14.07	3.15	3.03
AR-124a	0.00	0.06	0.71	1.83	56.97	38.76	0.18	0.29	1.21
AR-125a	52.17	22.41	5.76	1.84	0.76	2.22	13.38	1.12	0.33
AR-126a	46.86	13.69	5.72	9.44	13.28	6.99	2.61	0.40	1.01
AR-127a	15.80	7.44	8.92	9.01	5.98	19.47	28.24	1.61	3.54
AR-128a	15.80	7.44	8.92	9.01	5.98	19.47	28.24	1.61	3.54
AR-129a	55.20	6.00	4.83	4.33	6.65	16.57	3.71	1.02	1.68
AR-132a	12.39	22.70	19.56	9.11	4.63	6.67	18.76	3.12	3.05
AR-133a	37.16	10.32	8.74	4.92	4.97	21.72	9.79	0.59	1.81
AR-134a	9.22	7.16	3.72	2.38	2.93	46.70	24.67	1.56	1.66
AR-135a	1.68	2.70	0.76	0.68	2.02	64.27	26.44	0.56	0.89
AR-136a	15.80	7.44	8.92	9.01	5.98	19.47	28.24	1.61	3.54
AR-137a	17.47	7.81	8.72	8.94	5.87	8.53	39.01	1.16	2.48
AR-139a	0.00	0.07	0.05	0.38	2.06	16.30	58.36	10.60	12.18
AR-140a	0.00	0.00	0.00	0.17	2.32	80.29	16.42	0.27	0.52
448-03a	57.87	12.24	6.25	3.28	2.51	12.65	4.89	0.13	0.17
448-04a	9.71	20.58	9.04	3.09	3.91	41.71	10.61	0.65	0.68
448-05a	34.67	7.07	5.82	5.19	4.41	16.41	10.49	3.53	12.41
448-06a	55.29	10.58	4.33	2.67	3.42	17.43	3.11	0.50	2.66
448-07a	18.78	4.76	4.66	6.04	10.79	22.32	22.90	1.38	8.37
448-08a	54.56	13.15	7.80	5.32	7.90	10.68	0.39	0.15	0.06
448-09a	19.23	15.95	8.42	12.38	12.09	17.29	10.16	1.58	2.91
448-10a	36.88	8.30	2.14	0.67	2.27	31.84	15.31	1.16	1.43
448-11a	0.00	0.02	0.04	0.08	3.67	84.23	11.15	0.06	0.75
448-12a	77.99	9.28	4.04	2.06	1.74	2.23	0.69	0.26	1.69
448-13a	12.46	20.32	7.96	4.00	4.14	34.95	11.37	1.78	3.01
448-17a	50.54	11.93	7.38	3.98	3.89	11.28	5.38	2.09	3.52
448-22a	47.16	10.64	6.34	4.39	4.46	5.92	5.26	2.32	13.50
448-28a	14.33	7.47	3.78	2.32	2.23	37.19	26.56	1.86	4.26
448-28b	7.95	1.18	1.80	1.66	2.08	45.53	36.28	1.75	1.75
448-28c	0.38	1.08	0.97	1.55	2.96	60.67	30.84	0.49	1.06
481(08)-01a	13.34	7.01	5.14	5.32	6.71	20.28	25.64	7.15	9.41
481(08)-02a	34.10	5.78	3.77	3.87	4.66	17.79	16.59	4.70	8.74
481(08)-03a	31.53	8.40	2.95	3.53	10.60	34.26	7.07	0.78	0.88
481(08)-04a	14.99	8.46	4.96	3.02	4.60	18.92	29.10	6.06	9.89
481(08)-05a	2.70	4.66	7.53	9.44	9.92	16.54	31.03	6.43	11.75
481(08)-06a	0.81	4.81	9.93	21.32	28.39	29.20	4.03	0.51	1.00
481(08)-07a	8.88	3.90	11.96	23.98	31.68	14.83	3.66	0.49	0.62
481(08)-08a	1.53	9.26	20.77	19.93	19.57	22.86	4.03	0.52	1.53
481(08)-09a	5.85	4.75	3.50	5.56	13.46	23.43	29.38	5.14	8.93

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
481(08)-10a	11.22	5.54	11.56	13.91	12.34	24.68	14.80	2.45	3.50
481(08)-11a	0.03	0.33	4.76	31.22	43.11	19.05	1.02	0.07	0.41
481(08)-12a	7.11	4.99	5.13	6.53	17.00	28.43	19.39	4.58	6.84
481(08)-13a	0.01	0.67	2.61	8.15	31.67	54.13	1.91	0.20	0.65
481(08)-14a	37.94	9.66	7.49	7.14	4.84	13.77	15.88	2.65	0.63
481(08)-15a	24.60	16.23	7.41	6.90	7.69	12.82	22.81	1.07	0.47
481(08)-16a	4.97	8.47	14.97	10.58	8.16	12.57	22.14	7.95	10.19
481(08)-17a	0.20	1.24	3.28	6.75	29.15	53.41	5.29	0.14	0.54
481(08)-18a	0.00	0.02	0.08	0.17	0.41	2.34	93.12	2.17	1.69
481(08)-19a	4.49	3.19	3.51	4.41	5.77	9.97	47.00	8.76	12.90
481(08)-20a	0.13	0.20	0.90	2.52	10.61	50.92	33.22	0.62	0.88
481(08)-21a	0.42	0.73	1.67	8.29	10.81	22.84	32.40	10.03	12.81
481(08)-22a	1.83	1.10	0.77	1.74	1.92	23.11	54.56	3.67	11.30
481(08)-23a	3.77	3.38	1.79	4.22	4.22	10.74	58.65	5.67	7.56
481(08)-24a	8.57	6.41	3.91	2.86	5.61	30.79	28.85	5.12	7.88
481(08)-24b	11.97	5.07	5.71	4.14	5.21	30.96	26.35	4.55	6.04
481(08)-24c	10.91	3.31	5.20	4.03	4.31	30.55	26.80	4.29	10.60
481(08)-25a	29.63	11.06	5.76	2.40	2.12	18.49	18.08	4.83	7.63
481(08)-25c	25.40	15.67	6.57	2.02	3.54	33.92	11.36	1.44	0.08
481(08)-26a	2.69	5.03	5.90	12.66	35.99	32.16	4.35	0.60	0.62
481(08)-26b	7.91	3.83	3.65	8.71	39.40	27.15	8.00	0.77	0.58
481(08)-26c	4.79	9.12	10.00	11.55	22.97	30.20	9.73	0.71	0.93
481(08)-27a	0.18	1.80	22.05	27.97	11.09	29.82	4.62	1.01	1.46
481(08)-27b	0.16	3.17	29.04	31.58	15.25	18.88	1.31	0.13	0.48
481(08)-27c	1.86	14.41	22.74	16.98	14.86	25.75	2.69	0.16	0.55
481(08)-28a	10.26	12.00	13.25	12.34	12.13	16.30	16.71	6.02	0.99
481(08)-28b	15.32	7.15	7.89	9.40	9.26	13.24	20.05	7.13	10.56
481(08)-28c	11.99	8.83	9.54	9.43	10.41	14.50	15.69	6.19	13.42
481(08)-29a	60.56	2.32	2.80	5.56	6.92	10.24	9.12	2.46	0.02
481(08)-29b	10.00	8.65	4.77	5.58	8.00	22.78	20.38	5.68	14.16
481(08)-29c	70.38	2.99	2.74	3.37	3.36	5.56	4.22	1.84	5.54
481(08)-30a	9.13	7.42	5.47	3.52	4.08	17.20	30.21	7.01	15.96
481(08)-30b	17.54	6.38	4.60	2.96	3.82	18.49	25.16	5.43	15.62
481(08)-30c	26.44	4.49	3.39	2.46	2.97	14.42	23.78	4.93	17.12
DE-CR1a	29.31	18.09	4.92	3.64	4.38	20.24	12.63	0.42	2.41
DE-CR2a	13.61	12.81	7.22	5.16	6.13	35.34	18.33	0.06	0.00
DE-CR3a	16.12	17.83	6.30	4.01	4.98	27.86	19.65	0.35	0.00
DE-CR4a	14.00	16.33	7.94	4.68	6.47	33.54	16.18	0.05	0.00
DE-CR5a	13.65	9.47	5.16	4.04	5.62	38.89	22.06	0.17	0.00
DE-CR6a	11.60	12.57	4.52	4.81	9.83	43.34	10.04	0.00	0.00
DE-CR7a	5.52	12.26	3.28	4.60	6.84	41.18	24.59	0.21	0.00
DE-CR8a	30.31	18.23	7.77	5.60	12.73	20.89	2.98	0.00	0.00
DE-CR9a	19.78	11.05	3.45	3.65	7.63	30.41	20.56	0.86	0.00
DE-CR10a	0.00	0.00	0.00	0.00	0.13	60.28	49.12	0.08	0.00
DE-CR11a	23.41	15.94	6.76	4.06	5.05	24.61	15.20	1.71	0.00
DE-CR12a	21.41	10.76	5.50	3.55	4.15	20.64	28.58	4.38	0.00
DE-CR13a	40.87	0.73	3.52	5.43	6.34	21.77	18.96	0.11	0.00
DE-W1a	29.77	35.17	9.60	3.53	3.22	6.09	10.12	0.07	0.00
DE-W2a	0.00	3.63	4.42	2.64	5.39	61.31	22.61	0.00	0.00
DE-W3a	0.00	2.86	15.22	5.76	20.64	43.95	11.55	0.03	0.00

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
DE-W4a	0.00	14.66	22.28	6.91	17.13	31.58	7.45	0.00	0.00
DE-W5a	13.74	20.99	6.30	4.26	5.16	22.65	25.02	0.88	0.00
DE-W6a	17.50	9.32	29.48	8.83	20.59	9.98	1.86	0.00	0.00
DE-W7a	45.18	25.96	8.66	3.63	4.39	8.14	2.11	0.00	0.00
DE-W8a	6.75	16.26	7.41	4.35	4.79	18.45	39.48	1.53	0.00
DE-W9a	1.76	8.19	5.84	3.49	6.02	47.42	26.90	0.26	0.00
DE-W10a	34.88	19.96	8.45	4.77	4.56	9.38	15.82	0.03	0.00
DE-W11a	25.01	30.31	13.67	4.01	3.45	5.91	14.74	0.11	0.00
DE-W12a	7.26	13.13	8.92	4.99	4.93	18.05	35.38	1.80	3.61
DE-W13a	18.67	21.20	5.32	4.14	8.25	22.32	12.57	0.51	4.15
DE-W14a	33.39	17.90	5.13	4.38	5.43	13.34	16.57	0.08	0.00
DE-W15a	0.00	0.00	0.00	0.00	0.70	67.96	31.33	0.00	0.00
DE-W16a	0.00	0.00	0.00	0.00	2.21	60.62	37.06	0.11	0.00
DE-W17a	39.46	17.65	4.85	3.73	4.19	13.01	14.49	0.10	0.00
DE-W18a	14.62	17.20	8.23	4.48	4.86	20.79	26.66	1.16	0.00
DE-W19a	61.67	6.45	2.77	4.11	4.34	11.09	7.49	0.04	0.00
DE-W20a	12.64	13.53	7.55	4.67	4.85	19.61	33.65	2.76	0.00
DE-W21a	19.78	12.60	3.85	3.35	4.53	22.41	29.22	3.92	0.00
DE-W22a	11.47	14.70	13.13	4.91	5.16	27.01	21.78	0.68	0.00
DE-W23a	27.78	17.35	6.07	5.06	7.73	21.92	13.35	0.25	0.00
DE-W24a	11.81	24.79	14.83	6.37	13.29	22.06	5.90	0.03	0.00
DE-W25a	13.02	20.06	12.04	5.60	7.11	32.62	8.72	0.02	0.00
DE-W26a	0.00	0.00	9.45	1.77	8.79	70.48	9.61	0.01	0.00
DE-W27a	16.75	18.89	7.43	3.96	4.93	26.65	17.14	0.96	1.68
DE-W28a	0.00	0.00	0.00	0.00	1.54	72.35	26.10	0.00	0.00
DE-W29a	0.00	0.00	0.00	0.00	0.31	61.86	37.83	0.00	0.00
DE-W30a	0.00	0.00	0.00	0.00	0.86	71.12	28.01	0.00	0.00
DE-W31a	0.00	1.16	6.43	0.52	0.35	0.33	0.47	0.75	89.99
DE-W32a	0.00	0.00	0.00	0.19	54.75	44.99	0.07	0.00	0.00
DE-W33a	0.02	7.59	8.57	3.57	7.96	54.71	17.57	0.00	0.00
DE-W34a	24.90	16.68	4.73	4.02	5.10	20.41	22.17	0.24	0.00
DE-W35a	19.24	14.58	4.53	4.16	5.82	21.55	25.97	0.86	0.00
DE-W36a	17.30	14.38	5.33	4.23	5.08	18.95	32.38	0.43	0.00
DE-W37a	0.00	0.00	0.00	0.00	0.52	62.70	36.78	0.00	0.00
DE-W38a	0.00	0.00	0.00	0.00	1.99	68.71	29.30	0.00	0.00
DE-W39a	8.28	7.45	5.44	3.18	4.92	48.34	20.91	0.11	0.00
DE-W40a	11.31	10.31	7.14	5.16	5.99	30.67	28.44	0.42	0.00
480(08)-05a	53.09	6.26	8.56	4.88	8.06	7.66	4.90	4.17	2.42
480(08)-06a	20.84	16.22	7.00	0.90	2.19	42.01	8.41	1.73	0.70
480(08)-07a	0.97	4.05	12.90	9.20	13.04	14.08	13.05	17.23	15.48
480(08)-08a	20.69	14.07	9.72	4.11	10.06	21.98	9.98	7.29	2.10
480(08)-09a	46.96	16.74	4.37	0.91	1.68	13.20	9.86	4.75	1.53
480(08)-10a	5.92	15.72	15.23	3.02	5.41	31.08	15.12	5.43	3.07
480(08)-11a	26.90	15.99	17.25	10.57	24.77	2.92	0.52	0.43	0.65
480(08)-12a	5.89	7.51	6.86	2.47	3.96	21.74	27.05	18.34	6.18
480(08)-13a	0.67	2.83	9.93	8.33	36.88	38.04	2.11	0.66	0.55
480(08)-15a	23.42	20.09	13.74	2.43	2.90	19.03	10.95	6.58	0.86
480(08)-17a	56.58	5.58	9.51	10.82	13.06	2.83	0.49	0.13	1.00
480(08)-18a	25.29	9.87	9.01	5.29	10.23	18.42	11.37	8.35	2.17
480(08)-20a	18.77	9.73	13.62	6.85	9.99	16.01	12.46	8.40	4.17



**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
480(08)-21a	0.40	3.39	7.22	4.73	7.32	17.80	21.16	23.61	14.37
480(08)-22a	22.72	12.99	12.85	4.59	7.73	13.63	10.27	8.25	6.97
480(08)-23a	6.35	2.93	5.47	4.85	8.38	15.82	32.86	11.45	11.89
480(08)-25a	1.62	3.35	6.76	5.58	15.07	27.56	17.47	14.23	8.36
480(08)-26a	4.33	4.81	2.25	3.01	10.95	20.88	29.81	11.19	12.77
480(08)-27a	5.83	2.36	2.76	2.75	6.22	13.23	22.20	19.18	25.47
480(08)-28a	19.61	6.23	5.40	2.32	4.89	12.47	9.62	14.38	25.08
480(08)-29a	4.14	3.15	5.21	6.27	14.67	26.30	17.53	11.50	11.23
480(08)-30a	25.08	4.30	3.73	2.59	6.08	10.36	14.81	14.69	18.36
480(08)-31a	17.36	1.12	1.82	4.67	8.88	14.95	14.70	14.25	22.25
480(08)-32a	6.62	5.63	7.61	8.56	20.71	15.63	21.15	9.38	4.71
480(08)-33a	5.91	8.86	7.06	3.96	7.15	21.75	14.71	14.23	16.37
480(08)-34a	21.58	5.00	5.63	3.38	6.21	14.14	15.52	13.59	14.95
480(08)-39a	1.48	7.60	12.42	5.19	11.67	32.66	18.04	5.89	5.05
480(08)-40a	10.40	22.01	24.39	8.57	14.05	15.70	2.78	1.26	0.84
480(08)-41a	10.20	9.63	16.80	13.19	34.77	13.78	0.80	0.33	0.50
480(08)-42a	1.89	6.46	12.25	6.35	14.88	22.53	11.37	14.00	10.27
480(08)-43a	12.50	4.30	3.95	4.44	15.01	22.21	10.49	13.39	13.71
480(08)-44a	5.85	22.86	33.72	16.08	18.65	1.93	0.24	0.27	0.40
480(08)-45a	0.00	0.14	2.74	4.36	22.80	54.32	6.38	4.33	4.93
480(08)-46a	0.00	0.47	1.58	3.45	6.58	19.66	26.57	19.00	22.69
480(08)-47a	1.08	0.87	0.50	1.11	5.97	23.32	34.48	16.09	16.58
480(08)-48a	18.45	44.01	29.48	0.07	0.17	0.66	2.23	3.48	1.45
480(08)-49a	23.14	11.51	8.83	3.69	8.83	27.41	10.59	5.04	0.96
480(08)-50a	0.00	0.02	29.54	67.11	0.08	0.62	0.42	0.69	1.52
480(08)-51a	18.29	8.45	9.20	6.32	11.62	21.49	9.17	8.07	7.39
MIRO-01a	37.31	11.00	10.19	6.55	9.79	16.07	5.89	0.68	2.52
MIRO-02a	43.01	15.37	14.08	7.20	6.15	9.18	2.82	0.42	1.77
MIRO-03a	59.20	12.10	7.55	3.37	3.45	6.52	2.77	0.36	4.68
MIRO-04a	51.24	9.65	6.93	3.82	3.75	7.10	3.78	0.48	13.25
MIRO-05a	51.20	18.72	11.21	4.16	4.61	6.22	2.72	0.52	0.64
MIRO-06a	42.07	11.37	9.49	6.44	7.35	13.50	6.57	0.41	2.80
MIRO-07a	26.59	11.66	8.12	3.71	3.02	4.94	6.86	0.27	34.83
MIRO-08a	42.29	11.72	10.47	6.56	6.49	11.20	5.36	0.91	5.00
MIRO-09a	50.75	17.09	12.37	4.15	3.87	5.67	3.67	0.75	1.68
MIRO-10a	66.46	10.85	8.59	3.51	4.07	4.29	1.77	0.06	0.40
MIRO-11a	78.18	4.64	4.87	3.25	2.75	2.94	1.60	0.36	1.41
MIRO-12a	53.34	9.83	9.16	4.97	5.03	10.00	5.37	0.15	2.15
MIRO-13a	37.18	19.79	13.40	5.54	6.07	11.85	3.38	0.46	2.33
MIRO-14a	45.46	8.38	11.44	6.28	9.00	12.23	5.75	0.15	1.31
MIRO-15a	54.36	9.36	9.72	6.05	6.82	8.00	3.19	0.59	1.91
MIRO-16a	59.82	12.38	7.33	3.18	2.98	7.22	5.28	0.52	1.29
MIRO-17a	43.12	18.83	12.31	9.32	9.50	4.12	1.69	0.09	1.02
MIRO-18a	40.43	15.54	9.94	6.43	9.00	9.44	7.37	0.16	1.69
MIRO-19a	48.28	8.80	8.66	7.01	7.65	9.85	6.64	0.19	2.92
MIRO-20a	45.54	12.65	10.75	5.93	6.60	10.11	4.06	0.77	3.59
MIRO-21a	39.41	13.70	8.66	6.24	7.76	8.79	7.55	0.48	7.41
MIRO-22a	44.61	11.28	9.68	5.53	8.37	8.62	8.62	0.37	2.92
MIRO-23a	43.03	11.74	7.44	4.35	4.47	2.70	4.97	0.31	20.99
MIRO-24a	43.55	15.49	13.51	5.30	5.87	9.43	4.63	0.12	2.10

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
MIRO-25a	26.50	15.53	15.58	11.40	12.71	11.16	5.18	0.13	1.81
MIRO-26a	46.30	14.95	11.64	5.67	7.02	8.91	4.19	0.32	1.00
MIRO-27a	59.51	9.12	9.23	7.14	6.84	4.35	2.71	0.35	0.75
MIRO-28a	55.47	13.78	6.76	4.05	3.80	5.20	6.06	0.23	4.65
MIRO-29a	47.17	25.36	13.14	8.47	3.67	0.84	0.66	0.25	0.44
MIRO-30a	27.32	18.96	16.11	18.89	14.16	3.51	0.33	0.10	0.62
MIRO-31a	44.38	12.47	10.22	8.20	10.93	10.80	1.90	0.12	0.98
MIRO-32a	29.29	15.25	13.06	8.66	10.74	14.06	5.94	0.81	2.19
MIRO-33a	55.10	13.18	7.82	7.11	7.78	6.28	2.15	0.06	0.52
MIRO-34a	24.18	11.95	8.76	3.46	4.50	5.07	4.47	0.52	37.09
MIRO-35a	65.52	11.80	6.91	3.67	3.08	3.76	3.32	0.15	1.79
MIRO-36a	44.97	4.86	4.71	2.91	2.96	3.89	3.03	0.93	31.74
MIRO-37a	76.37	9.21	7.08	2.61	2.02	2.11	0.52	0.06	0.02
MIRO-38a	55.19	12.03	8.08	8.39	6.52	4.28	3.12	0.12	2.27
MIRO-39a	52.93	9.27	9.19	6.15	5.49	8.12	5.18	0.12	3.55
MIRO-40a	33.18	11.93	12.21	5.89	6.60	16.28	7.18	0.75	5.98
MIRO-41a	20.49	22.99	14.82	18.10	13.40	4.80	2.88	0.16	2.36
MIRO-42a	40.40	16.55	13.98	13.04	10.32	4.42	0.64	0.20	0.45
MIRO-43a	35.52	15.67	11.32	8.51	14.98	10.39	1.70	0.08	1.83
MIRO-44a	20.09	13.84	13.26	11.18	13.90	17.44	7.38	0.22	2.69
MIRO-45a	37.85	8.14	7.21	3.97	4.79	7.90	2.98	1.00	26.16
MIRO-46a	39.02	12.88	9.09	5.78	7.39	6.35	3.29	0.43	15.77
MIRO-47a	52.24	11.27	6.24	2.90	2.36	4.85	3.44	0.59	16.11
MIRO-48a	37.38	8.88	10.14	10.88	21.55	8.16	2.14	0.16	0.71
MIRO-49a	46.34	8.63	10.60	6.28	7.90	12.74	5.35	0.13	2.03
MIRO-50a	47.01	22.29	19.30	8.36	1.05	0.46	0.88	0.43	0.22
MIRO-51a	64.93	9.07	7.12	5.26	5.17	4.65	2.13	0.07	1.60
MIRO-52a	28.77	13.34	10.86	5.69	5.36	8.19	2.80	0.37	24.62
MIRO-53a	42.98	24.32	11.82	9.95	6.39	3.57	0.61	0.15	0.21
MIRO-54a	37.03	13.83	9.48	5.22	7.86	19.76	3.07	0.08	3.67
MIRO-55a	48.82	13.60	8.11	4.69	9.07	11.70	2.57	0.32	1.12
MIRO-56a	28.00	20.12	14.19	10.19	13.45	13.05	1.00	0.00	0.00
MIRO-57a	19.01	13.43	14.69	7.98	12.51	22.13	6.71	0.80	2.74
MIRO-58a	39.41	17.91	11.99	5.17	9.37	12.87	2.60	0.12	0.56
MIRO-59a	52.18	11.65	10.07	4.67	9.33	10.49	1.23	0.01	0.37
MIRO-60a	22.19	7.39	7.90	3.94	5.19	9.04	4.63	0.16	39.56
MIRO-61a	37.53	17.66	13.36	13.08	11.86	4.33	1.05	0.19	0.94
MIRO-62a	69.30	6.36	5.99	4.37	4.63	4.59	2.70	0.25	1.81
MIRO-63a	28.08	28.80	28.20	7.66	0.39	0.42	2.21	1.22	3.02
MIRO-64a	59.66	9.18	6.41	3.62	3.90	7.94	4.03	0.09	5.17
MIRO-65a	31.78	11.83	10.31	7.04	15.17	17.35	4.24	0.13	2.15
MIRO-66a	58.06	9.02	7.39	4.35	8.56	11.13	0.88	0.07	0.54
MIRO-67a	35.53	15.95	10.48	5.41	11.36	17.21	3.34	0.09	0.63
MIRO-68a	23.02	3.04	9.99	7.75	33.48	19.96	1.48	0.10	1.18
MIRO-69a	19.28	14.35	10.74	5.17	21.82	25.54	2.02	0.04	1.04
MIRO-70a	24.61	17.77	16.12	9.65	13.03	16.49	1.67	0.09	0.57
MIRO-71a	41.40	10.01	8.11	10.27	12.67	12.62	2.37	0.37	2.18
MIRO-72a	21.07	11.21	9.86	7.42	9.39	13.09	10.01	1.37	16.58
MIRO-73a	30.48	18.85	9.50	5.73	10.41	13.46	6.43	0.15	4.99
MIRO-74a	32.02	11.57	17.58	11.41	12.36	13.17	1.30	0.05	0.54

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
MIRO-75a	0.00	7.47	18.00	16.43	26.99	26.31	3.24	0.06	1.50
MIRO-76a	0.24	1.01	7.93	8.00	50.11	28.38	1.41	0.11	2.81
MIRO-77a	0.00	0.35	2.53	6.63	42.86	42.50	2.24	0.01	2.88
MIRO-78a	19.85	22.70	15.09	6.95	13.48	19.65	1.41	0.09	0.78
MIRO-79a	44.63	10.09	10.50	7.60	8.95	9.98	5.52	0.50	2.23
MIRO-80a	49.12	12.33	8.84	6.20	7.57	9.53	5.21	0.12	1.08
MIRO-81a	14.71	10.04	15.58	11.78	24.52	20.51	1.60	0.01	1.25
MIRO-82a	51.57	12.54	9.03	4.63	9.09	10.35	1.97	0.12	0.70
MIRO-83a	0.00	3.57	17.06	19.25	31.86	25.13	1.79	0.04	1.30
MIRO-84a	19.77	16.42	13.04	9.08	16.15	21.12	3.02	0.12	1.28
MIRO-85a	19.82	12.01	20.90	9.50	13.69	19.61	3.47	0.09	0.91
MIRO-86a	0.00	2.57	18.53	18.57	30.36	26.17	2.30	0.09	1.41
MIRO-87a	0.00	1.63	15.54	18.05	34.35	27.11	1.79	0.04	1.49
MIRO-88a	19.06	18.37	17.66	9.74	13.64	17.54	2.98	0.19	0.82
MIRO-89a	0.00	1.63	18.49	20.84	32.76	22.85	1.86	0.14	1.43
MIRO-90a	0.07	1.52	14.13	22.37	37.19	20.79	2.18	0.05	1.70
MIRO-91a	24.31	23.35	19.53	4.79	10.61	15.08	2.32	0.01	0.00
MIRO-92a	0.00	4.26	11.19	14.62	33.17	32.32	3.65	0.26	0.53
MIRO-93a	0.00	1.51	21.20	15.30	30.88	27.03	2.28	0.08	1.72
MIRO-94a	7.39	12.08	14.36	8.70	27.98	25.09	3.89	0.06	0.45
MIRO-95a	10.65	11.25	11.97	7.39	28.92	23.93	4.60	0.26	1.03
MIRO-96a	0.00	0.13	3.03	6.33	43.96	39.93	5.61	0.23	0.78
MIRO-97a	15.29	2.90	15.30	14.50	34.78	14.85	1.95	0.05	0.38
MIRO-98a	10.20	7.11	17.50	11.71	28.63	17.68	4.83	0.51	1.83
MIRO-99a	4.40	3.58	10.85	13.26	42.52	20.78	2.89	0.05	1.67
MIRO-100a	0.00	0.91	11.68	26.50	44.90	12.58	1.74	0.13	1.56
MIRO-101a	0.00	0.00	1.67	15.93	52.46	27.27	0.75	0.04	1.88
MIRO-102a	2.56	8.17	16.43	10.61	22.40	29.78	7.92	0.06	2.07
MIRO-103a	0.00	0.00	1.23	15.95	64.03	16.91	0.94	0.03	0.91
MIRO-104a	0.00	0.00	2.15	24.86	57.88	14.12	0.27	0.02	0.70
MIRO-105a	2.94	5.49	10.61	16.56	29.82	30.03	2.62	0.14	1.79
MIRO-106a	4.42	9.86	17.98	9.13	11.66	31.34	11.44	0.44	3.73
MIRO-107a	9.83	11.43	11.75	6.85	11.31	28.65	17.60	0.76	1.82
MIRO-108a	32.18	11.74	7.97	4.81	9.65	24.17	8.01	0.11	1.36
MIRO-109a	8.67	10.53	17.74	14.41	20.31	21.54	5.13	0.28	1.39
MIRO-110a	18.25	6.10	9.72	12.85	24.34	23.73	3.11	0.11	1.79
MIRO-111a	22.53	5.54	10.28	9.15	21.62	25.20	4.25	0.17	1.26
MIRO-112a	5.10	9.97	26.50	17.79	13.57	18.13	7.23	0.17	1.54
MIRO-113a	41.51	17.39	15.01	8.74	10.25	4.04	2.11	0.06	0.89
MIRO-114a	28.55	30.72	19.35	6.70	8.42	3.43	1.49	0.24	1.10
MIRO-115a	9.92	21.40	21.04	20.63	15.94	7.55	2.92	0.11	0.49
MIRO-116a	0.00	3.20	11.33	26.77	47.79	8.31	0.71	0.19	1.70
MIRO-117a	8.70	15.91	17.45	16.54	11.82	18.55	8.11	0.45	2.47
MIRO-118a	13.66	20.53	20.19	12.92	14.99	10.57	4.19	0.68	2.27
MIRO-119a	13.94	15.41	17.23	12.04	11.00	11.41	14.27	0.25	4.45
MIRO-120a	6.10	11.12	19.51	14.94	17.70	21.46	6.51	0.45	2.21
MIRO-121a	5.37	4.98	13.26	16.03	22.93	28.58	5.63	0.16	3.06
MIRO-122a	0.47	1.70	17.62	21.87	30.76	21.40	3.95	0.24	1.99
MIRO-123a	13.90	11.64	17.25	9.33	14.38	19.90	11.93	0.07	1.60
MIRO-124a	21.82	24.81	18.08	10.93	12.93	8.91	1.56	0.17	0.79

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
MIRO-125a	26.86	25.53	15.10	7.30	13.37	9.29	1.42	0.13	1.00
MIRO-126a	61.37	11.46	7.46	3.39	3.51	6.42	5.97	0.29	0.13
MIRO-127a	0.55	16.77	26.60	24.11	16.43	9.94	3.23	0.94	1.43
MIRO-128a	12.57	21.75	16.77	13.19	13.28	11.74	5.35	0.34	5.01
MIRO-129a	6.49	13.69	13.35	17.54	20.19	16.01	7.46	1.13	4.14
MIRO-130a	14.53	18.66	16.33	12.61	14.71	18.54	3.23	0.18	1.21
MIRO-131a	17.50	19.39	15.53	13.05	12.28	8.06	11.03	0.56	2.60
MIRO-132a	11.11	11.56	16.41	16.25	15.52	19.53	8.16	0.51	0.95
MIRO-133a	0.00	0.12	2.92	13.51	44.65	31.75	4.97	0.26	1.82
MIRO-134a	13.15	7.35	16.25	18.75	21.81	17.39	4.14	0.11	1.05
MIRO-135a	12.17	17.24	19.64	8.92	10.35	23.71	7.04	0.03	0.90
MIRO-136a	21.76	21.80	20.29	9.22	15.43	9.36	1.65	0.02	0.47
MIRO-137a	30.45	22.78	15.01	6.44	12.02	9.94	2.48	0.08	0.80
MIRO-138a	44.51	14.09	11.26	6.77	9.99	9.43	3.39	0.14	0.42
MIRO-139a	5.29	7.60	10.76	10.16	9.94	37.36	13.20	2.52	3.17
MIRO-140a	0.73	4.20	7.03	20.56	51.50	11.69	2.17	0.52	1.60
MIRO-141a	3.63	6.97	13.25	14.23	27.98	22.26	7.43	1.06	3.19
MIRO-142a	2.19	12.11	17.98	18.79	19.25	14.20	11.37	0.24	3.87
MIRO-143a	7.92	15.49	19.72	16.55	10.87	8.50	15.05	0.52	5.38
MIRO-144a	3.20	8.94	22.13	19.90	16.73	14.13	12.27	0.47	2.23
MIRO-145a	0.81	9.04	20.90	15.81	14.66	25.48	8.58	0.75	3.97
MIRO-146a	3.87	3.91	9.83	10.63	20.37	38.76	9.65	0.16	2.82
MIRO-147a	9.34	13.32	19.31	14.54	19.25	15.59	6.29	0.35	2.01
MIRO-148a	18.25	17.86	22.46	11.34	15.72	10.56	2.22	0.44	1.15
MIRO-149a	16.84	20.33	18.04	10.32	14.40	15.62	3.37	0.13	0.95
MIRO-150a	43.27	10.49	10.93	7.30	9.62	13.87	3.75	0.23	0.54
MIRO-151a	9.94	12.12	16.06	11.21	7.69	20.81	17.04	0.92	4.21
MIRO-152a	2.55	8.60	18.02	16.04	14.31	21.49	11.71	0.15	7.13
MIRO-153a	9.53	7.08	20.71	18.91	16.55	18.48	5.75	0.45	2.54
MIRO-154a	2.68	7.10	20.47	27.71	23.30	13.70	4.27	0.02	0.75
MIRO-155a	0.00	0.45	1.67	27.73	61.07	7.86	0.86	0.10	0.26
MIRO-156a	3.78	14.61	15.83	16.84	19.46	15.55	11.61	0.08	2.24
MIRO-157a	6.59	16.04	16.12	12.13	14.38	21.63	10.35	0.31	2.45
MIRO-158a	0.79	1.94	8.41	15.14	21.23	33.11	17.06	0.15	2.17
MIRO-159a	15.81	9.71	14.19	11.23	3.98	27.25	12.80	0.85	4.18
MIRO-160a	3.55	25.03	31.26	15.30	9.13	7.45	6.61	0.15	1.52
MIRO-161a	0.61	3.36	3.85	2.82	3.70	54.35	29.66	0.18	1.47
MIRO-162a	9.84	5.90	5.66	2.32	2.80	55.49	16.47	0.46	1.06
MIRO-163a	25.39	8.89	14.75	28.07	9.90	4.31	3.52	0.51	4.66
MIRO-164a	24.73	15.99	16.65	12.00	10.90	7.91	10.70	0.10	1.02
MIRO-165a	19.41	18.51	14.91	6.45	6.27	23.86	9.65	0.11	0.83
MIRO-166a	29.61	19.54	13.25	5.11	5.95	13.65	12.28	0.24	0.37
MIRO-167a	58.01	1.74	13.48	6.87	9.22	7.22	2.74	0.13	0.59
MIRO-168a	45.15	7.62	11.08	7.12	9.05	11.95	6.57	0.40	1.06
MIRO-169a	10.24	17.11	19.34	6.69	5.28	31.38	9.75	0.04	0.17
MIRO-170a	40.84	13.90	10.12	3.09	4.38	21.28	5.52	0.17	0.70
MIRO-171a	26.46	12.05	13.53	10.28	11.02	17.37	6.56	0.36	2.37
MIRO-172a	20.42	10.23	12.56	6.57	14.77	13.51	13.01	1.24	7.69
MIRO-173a	34.85	20.42	11.10	4.93	6.11	15.33	6.71	0.06	0.49
MIRO-174a	0.00	2.08	3.47	2.51	6.68	71.02	8.79	0.58	4.87

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
MIRO-175a	17.21	7.54	17.41	9.47	6.46	19.35	10.12	1.22	11.22
MIRO-176a	23.10	19.85	24.08	11.71	13.32	3.71	2.99	0.43	0.81
MIRO-177a	15.02	6.00	19.64	12.84	16.75	13.02	14.51	0.60	1.62
MIRO-178a	12.24	12.26	12.23	5.24	5.84	15.95	32.33	0.55	3.36
MIRO-179a	13.14	7.67	17.77	21.37	21.73	14.62	2.13	0.17	1.40
MIRO-180a	0.24	2.69	24.47	23.54	21.10	22.82	3.46	0.09	1.59
MIRO-181a	1.02	4.67	5.21	5.50	9.88	56.58	16.02	0.11	1.01
MIRO-182a	18.30	11.15	20.75	14.71	15.99	15.30	2.75	0.11	0.94
MIRO-183a	27.54	18.14	18.51	10.11	7.24	10.60	4.97	0.28	2.61
MIRO-184a	0.40	2.95	9.80	9.89	7.42	42.67	18.39	0.55	7.93
MIRO-185a	2.79	9.68	17.49	17.42	18.14	29.18	4.84	0.27	0.19
MIRO-186a	13.03	8.62	15.07	29.69	20.58	10.61	1.47	0.09	0.84
MIRO-187a	8.28	7.68	11.72	9.03	16.49	42.13	3.31	0.11	1.25
MIRO-188a	4.74	4.76	7.52	7.48	9.50	48.66	14.38	0.14	2.82
MIRO-189a	24.30	14.84	11.56	6.94	4.12	16.66	20.45	0.19	0.94
MIRO-190a	12.74	10.26	15.77	9.22	4.01	9.71	37.07	0.20	1.02
MIRO-191a	20.57	10.08	10.95	5.79	4.02	9.20	37.05	0.57	1.77
MIRO-192a	33.10	14.52	8.51	4.77	3.68	7.33	26.51	0.15	1.43
MIRO-193a	70.94	3.46	2.77	2.38	2.04	3.42	13.03	0.55	1.41
MIRO-194a	35.76	12.61	11.16	5.34	3.49	18.24	12.87	0.05	0.48
MIRO-195a	14.28	14.60	15.76	9.03	4.80	14.98	24.49	0.18	1.88
MIRO-196a	7.57	8.19	14.31	12.55	5.53	9.39	40.51	0.37	1.58
MIRO-197a	33.37	10.02	7.50	4.93	3.94	13.73	23.51	0.72	2.28
MIRO-198a	58.98	9.01	5.95	3.49	3.01	4.45	14.18	0.20	0.73
MIRO-199a	49.16	9.13	6.51	4.44	5.68	15.85	7.64	0.35	1.24
MIRO-200a	31.23	12.72	11.24	8.43	6.68	16.99	12.10	0.11	0.50
MIRO-201a	5.41	8.82	14.86	11.99	7.69	21.15	28.15	0.59	1.34
MIRO-202a	11.22	12.74	19.04	9.52	4.70	8.14	32.77	0.29	1.58
MIRO-203a	26.08	12.43	12.10	6.30	4.49	7.81	28.63	0.62	1.54
MIRO-204a	0.47	2.22	4.49	9.94	34.46	42.54	4.16	0.09	1.63
MIRO-205a	42.98	12.58	9.52	4.41	3.98	18.54	5.85	0.24	1.90
MIRO-206a	25.56	14.48	10.14	7.89	6.51	21.31	13.31	0.10	0.70
MIRO-207a	14.46	14.29	13.33	7.35	5.37	17.94	25.66	0.44	1.16
MIRO-208a	12.76	11.88	15.91	8.35	4.99	10.81	34.10	0.29	0.91
TK-01a	65.68	7.45	5.99	5.30	6.63	7.37	1.17	0.28	0.14
TK-02a	55.72	5.48	5.56	6.04	11.49	10.58	3.26	1.26	0.61
TK-03a	6.76	9.26	10.95	12.31	11.57	41.82	6.77	0.39	0.16
TK-04a	94.15	1.83	1.31	0.89	0.58	0.83	0.31	0.07	0.03
TK-05a	66.11	9.45	7.07	5.42	5.56	5.86	0.45	0.07	0.02
TK-06a	44.90	11.61	10.06	7.18	8.18	16.65	1.20	0.19	0.03
TK-07a	74.53	5.50	3.62	3.94	5.56	5.60	0.91	0.21	0.13
TK-08a	33.52	7.13	7.08	7.70	8.88	29.20	5.83	0.46	0.21
TK-09a	38.47	10.91	7.60	6.62	7.60	23.80	4.58	0.34	0.08
TK-10a	92.69	1.61	1.16	0.93	0.94	1.55	0.88	0.15	0.09
TK-11a	58.32	10.03	8.06	5.46	5.26	9.04	2.85	0.59	0.38
TK-12a	54.06	15.08	5.01	2.12	4.06	17.92	1.36	0.23	0.16
TK-13a	62.87	6.91	6.87	6.20	5.35	8.81	2.60	0.27	0.12
TK-14a	50.49	8.79	6.56	6.47	7.99	17.50	1.90	0.20	0.11
TK-15a	10.23	13.49	21.27	19.45	13.81	16.62	4.62	0.42	0.07
TK-16a	76.85	7.36	5.19	3.45	2.34	2.62	1.41	0.41	0.37

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
TK-17a	70.03	7.09	5.32	4.15	3.97	6.21	2.43	0.50	0.29
TK-18a	54.77	9.64	6.51	3.86	5.52	13.09	5.23	0.91	0.48
TK-19a	47.94	12.85	7.46	6.02	9.63	13.99	1.80	0.23	0.08
TK-20a	66.02	7.15	5.43	4.47	3.16	8.36	4.47	0.63	0.30
TK-21a	41.93	11.74	10.01	8.91	9.72	13.96	2.38	0.74	0.61
TK-22a	40.54	9.80	6.46	5.90	6.57	14.28	13.18	2.08	1.19
TK-24a	42.03	14.23	7.49	3.36	5.24	17.38	9.27	0.69	0.32
TK-25a	51.28	7.69	5.91	3.66	5.46	16.27	7.07	1.53	1.13
TK-26a	58.11	7.94	6.66	3.98	3.33	17.19	1.41	0.83	0.55
TK-27a	69.40	3.50	3.96	5.16	5.93	9.21	1.92	0.58	0.35
TK-28a	56.22	6.82	4.50	4.91	6.22	11.92	6.79	1.79	0.83
TK-29a	21.54	12.07	8.63	6.71	6.78	32.77	9.45	1.38	0.65
TK-30a	58.60	11.82	7.46	6.54	6.14	5.82	3.13	0.44	0.06
TK-31a	42.17	11.63	7.13	4.14	3.41	23.78	6.32	0.85	0.57
TK-32a	25.96	7.63	23.73	18.55	11.82	6.13	3.08	1.42	1.69
TK-33a	3.39	3.90	5.43	4.55	4.48	27.76	42.64	4.54	3.31
TK-34a	37.48	7.18	6.54	6.74	9.02	27.85	2.81	1.38	1.01
TK-35a	1.29	3.40	5.57	3.54	7.01	62.75	8.70	4.35	3.39
TK-36a	14.50	6.01	5.26	5.02	5.83	22.53	34.52	4.06	2.27
TK-37a	0.00	0.00	0.00	0.07	0.69	66.85	25.38	4.40	2.61
TK-38a	2.57	11.37	18.57	20.33	11.85	5.43	24.86	3.84	1.18
TK-39a	6.35	8.50	5.52	2.01	1.29	46.70	22.94	3.66	3.04
TK-40a	2.46	5.18	4.82	6.19	7.68	52.73	16.09	2.98	1.87
TK-41a	1.36	3.08	4.51	3.50	4.53	65.43	12.70	2.89	1.99
TK-42a	41.67	6.46	4.81	4.24	6.51	19.29	12.36	2.62	2.05
TK-43a	67.73	0.69	0.34	0.76	2.72	15.71	10.10	1.40	0.55
TK-44a	68.14	3.03	2.40	2.19	3.23	13.59	5.80	0.98	0.65
TK-45a	0.00	0.72	4.75	12.02	26.40	54.81	1.04	0.23	0.04
TK-46a	0.97	2.58	7.07	12.65	30.27	42.50	3.36	0.42	0.18
TK-47a	16.25	5.73	4.87	4.32	6.25	36.32	20.63	4.14	1.50
TK-48a	29.18	5.96	5.28	5.84	9.45	28.06	11.69	2.49	2.05
TK-49a	8.42	11.39	10.18	7.77	7.82	30.07	20.43	2.77	1.16
TK-50a	66.57	5.75	4.05	3.21	4.11	9.41	5.49	0.90	0.52
TK-51a	10.56	8.21	8.42	7.68	7.64	38.18	12.98	3.89	2.44
TK-52a	17.52	9.07	8.56	11.91	23.04	18.26	8.60	1.98	1.07
TK-53a	7.40	8.85	7.54	5.65	5.92	23.77	36.01	3.63	1.22
TK-54a	42.67	14.16	6.97	4.18	3.85	13.49	12.84	1.16	0.67
TK-55a	14.18	9.06	8.13	4.25	5.80	23.42	31.66	3.44	0.07
TK-56a	92.71	1.13	0.71	0.86	1.23	1.72	1.12	0.34	0.17
TK-57a	49.47	5.23	3.66	4.21	6.64	17.44	9.32	2.31	1.71
TK-58a	10.68	5.73	6.02	7.44	10.43	24.61	25.76	5.18	4.14
TK-59a	72.29	3.10	2.62	2.56	4.11	7.82	5.20	1.45	0.84
TK-60a	8.27	3.32	3.45	3.64	6.53	34.94	32.29	5.31	2.26
TK-61a	13.27	7.83	7.47	8.15	12.46	24.19	20.05	4.26	2.32
TK-62a	20.90	13.38	10.73	8.35	6.60	26.48	11.77	1.15	0.63
TK-63a	82.03	2.95	1.23	1.31	1.61	3.10	6.61	0.77	0.39
TK-64a	88.36	1.56	1.19	1.47	1.57	3.36	2.03	0.34	0.13
TK-65a	34.41	6.45	5.95	5.25	5.27	16.84	21.24	3.17	1.40
TK-66a	67.04	4.97	3.97	2.90	3.11	11.74	5.12	0.71	0.43
TK-67a	43.14	6.99	5.55	6.05	10.67	18.89	7.33	0.95	0.43

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

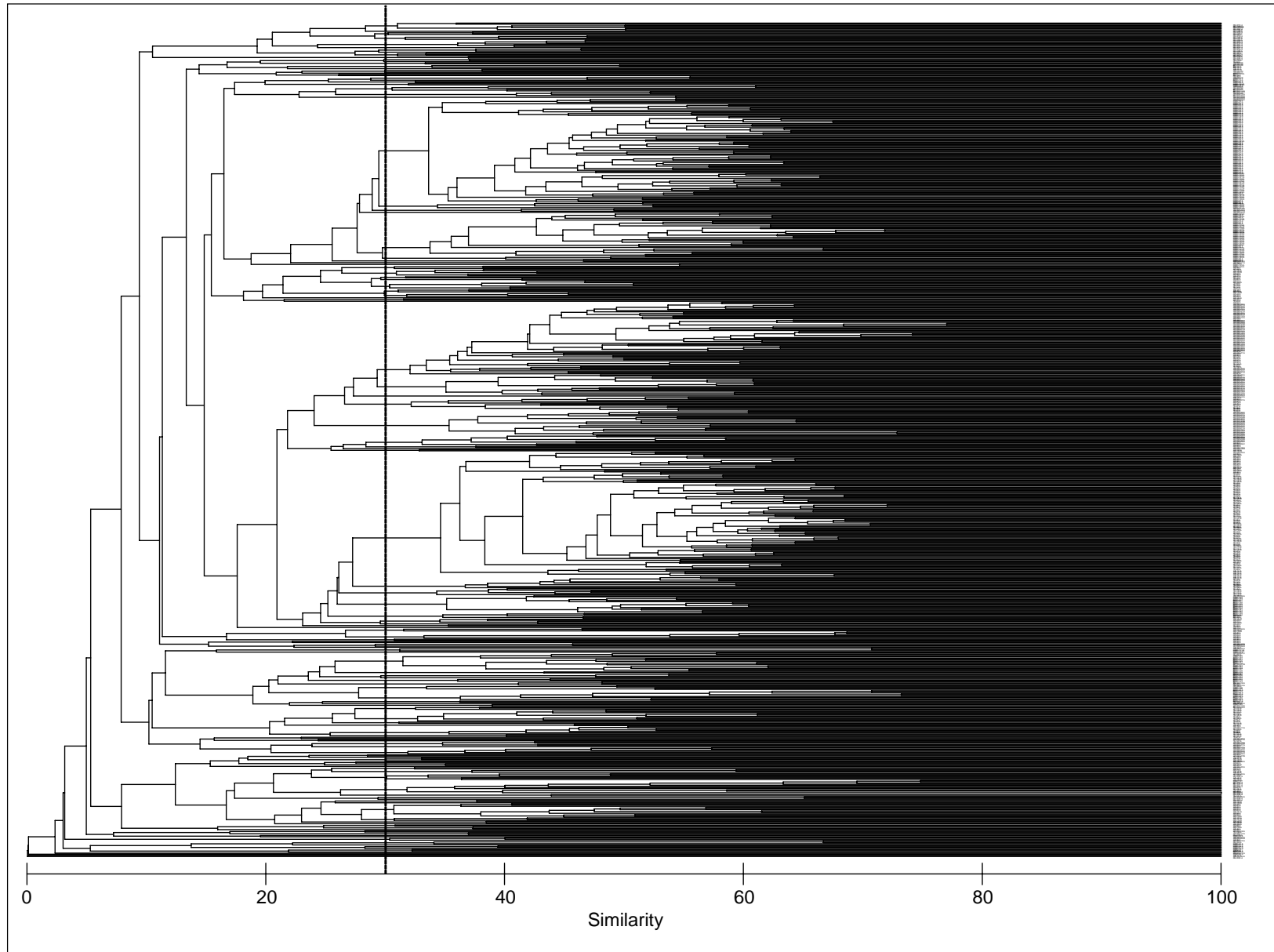
Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
TK-68a	16.83	22.66	13.67	8.21	7.53	13.44	15.46	1.75	0.45
TK-69a	21.90	14.86	12.52	8.94	9.76	26.67	4.81	0.43	0.12
TK-70a	44.48	8.32	6.40	5.71	4.18	23.98	6.10	0.47	0.36
TK-71a	53.54	7.90	5.26	4.17	4.61	10.96	12.28	0.94	0.33
TK-72a	22.68	8.26	8.13	8.72	11.42	14.83	23.35	1.95	0.65
TK-73a	33.10	8.77	6.51	7.02	8.19	25.87	9.35	0.82	0.36
TK-74a	23.75	14.01	12.28	8.68	7.62	19.33	11.56	2.07	0.71
TK-75a	47.10	18.31	8.55	4.93	3.35	16.32	1.07	0.32	0.07
TK-76a	51.02	6.50	5.58	3.84	3.99	16.33	11.98	0.51	0.26
TK-77a	61.52	5.92	4.71	3.99	3.02	10.97	8.92	0.69	0.27
TK-78a	0.26	1.00	2.39	3.46	5.95	80.50	6.23	0.18	0.03
TK-79a	11.71	4.40	4.25	3.74	3.56	68.32	3.86	0.13	0.03
TK-80a	32.60	8.09	8.66	8.58	7.08	24.45	9.66	0.64	0.24
TK-81a	37.88	11.21	10.99	8.30	8.01	18.85	4.08	0.46	0.22
TK-82a	40.98	10.55	8.28	7.00	7.11	21.55	4.10	0.32	0.11
TK-83a	8.65	7.44	11.89	15.02	12.15	40.65	3.03	0.15	1.03
TK-84a	66.31	7.89	5.75	3.37	2.10	7.19	6.92	0.34	0.13
TK-85a	33.08	10.28	7.82	6.52	6.17	28.18	7.04	0.66	0.24
TK-86a	11.60	13.61	8.74	3.53	1.73	42.35	17.63	0.77	0.05
TK-87a	0.00	0.15	1.16	4.08	13.24	76.08	5.18	0.09	0.01
TK-88a	0.70	3.23	16.24	21.01	16.85	35.43	6.39	0.12	0.03
TK-89a	36.31	13.05	10.25	5.79	4.20	20.50	9.53	0.28	0.09
TK-90a	6.39	10.14	11.11	11.38	10.26	47.32	3.26	0.12	0.02
TK-91a	41.08	4.68	5.81	5.56	4.10	28.40	9.58	0.57	0.21
TK-92a	29.26	12.17	9.52	6.91	6.22	16.63	18.26	0.81	0.22
TK-93a	41.19	9.91	7.34	5.22	5.54	13.83	15.67	0.95	0.35
TK-94a	20.54	7.08	2.95	1.70	2.50	31.91	30.32	2.01	0.99
TK-95a	11.62	2.63	1.78	3.79	3.46	45.39	29.39	1.69	0.25
TK-96a	0.24	2.86	19.10	27.48	16.33	26.89	6.87	0.21	0.03
TK-97a	0.00	0.84	4.48	9.26	17.41	65.50	2.32	0.19	0.00
TK-98a	0.63	4.35	19.70	31.66	30.58	11.21	1.75	0.10	0.02
TK-99a	55.55	8.05	5.91	3.63	4.23	15.99	6.43	0.17	0.03
TK-100a	16.29	17.02	11.98	9.34	8.70	25.28	6.22	2.60	2.58
TK-101a	38.94	13.75	12.14	6.76	7.68	15.75	4.70	0.24	0.04
TK-102a	60.17	4.85	4.18	3.01	3.16	8.68	14.98	0.76	0.22
TK-103a	5.16	1.23	9.06	26.24	30.42	24.42	3.31	0.13	0.03
TK-104a	5.92	7.81	5.37	6.02	7.01	22.56	42.69	2.20	0.43
TK-105a	0.34	2.38	6.84	14.32	18.03	34.05	23.62	0.35	0.08
TK-106a	11.62	4.85	5.30	4.53	2.67	26.87	42.35	1.66	0.15
TK-107a	11.39	11.23	7.95	4.49	3.27	30.58	29.87	1.06	0.15
TK-108a	37.97	10.05	8.88	6.60	7.17	21.63	5.72	1.28	0.70
TK-109a	25.23	6.05	5.06	5.98	5.19	25.73	25.64	0.95	0.17
TK-110a	31.05	7.49	8.69	10.88	23.32	16.54	1.86	0.15	0.04
TK-111a	36.34	3.59	4.43	3.96	8.05	39.26	4.21	0.12	0.04
TK-112a	14.57	12.94	7.64	5.38	6.26	25.04	27.03	1.05	0.09
TK-113a	0.13	0.85	1.53	1.82	2.01	79.24	14.04	0.33	0.05
TK-114a	7.13	8.79	7.71	7.27	6.65	21.81	37.26	2.80	0.57
TK-115a	10.60	16.25	8.32	2.48	1.58	32.16	27.04	1.44	0.13
TK-116a	26.02	12.35	6.15	4.31	2.12	15.13	32.06	1.59	0.26
TK-117a	35.81	11.65	6.77	6.31	3.94	4.44	29.80	1.12	0.17

**Appendix 4. Combined particle size data for the seven surveys with comparable fractions.**

Station	Sieve Fraction (mm)								
	>8	4	2	1	0.5	0.25	0.125	0.063	<0.063
TK-118a	23.07	19.51	9.23	4.11	2.64	24.26	16.37	0.66	0.14
TK-119a	46.78	7.59	7.72	6.84	4.69	12.47	12.69	0.87	0.35
TK-120a	0.03	0.37	1.52	2.36	5.11	60.84	29.49	0.23	0.04
TK-121a	11.80	4.62	5.98	6.11	5.19	20.53	41.34	3.63	0.78
TK-122a	1.61	1.53	4.05	8.33	7.62	58.64	17.77	0.41	0.06
TK-123a	31.08	7.63	10.81	8.71	6.13	10.58	22.79	1.70	0.57
TK-124a	0.00	0.00	0.02	0.27	2.98	89.90	6.56	0.26	0.02
TK-125a	4.73	7.66	16.68	10.35	9.44	21.72	28.03	1.29	0.10
TK-126a	0.00	0.00	0.19	0.29	2.00	64.00	33.13	0.33	0.07
TK-127a	0.16	0.91	2.07	4.00	7.85	83.79	1.07	0.12	0.04
TK-128a	2.45	5.37	15.61	16.15	16.06	27.27	15.69	1.23	0.17
TK-129a	0.09	0.87	1.96	2.46	3.39	76.65	14.14	0.39	0.05
TK-130a	22.83	4.76	4.99	4.75	4.87	18.30	34.48	3.85	1.18
TK-131a	0.07	0.27	0.71	0.97	1.36	88.87	7.46	0.24	0.04
TK-132a	0.00	0.97	3.70	14.12	26.01	51.47	3.51	0.17	0.04
TK-133a	0.44	0.82	3.01	5.08	13.34	73.23	3.81	0.21	0.05
TK-134a	2.39	8.37	13.33	9.84	9.95	31.51	21.82	2.00	0.80
TK-135a	4.55	2.89	9.23	8.76	6.81	15.75	33.67	9.52	8.82
TK-136a	10.77	5.78	4.15	4.40	4.03	14.13	49.30	5.72	1.73
TK-137a	0.01	0.22	1.20	10.38	30.42	47.34	9.90	0.47	0.05
TK-138a	0.00	0.16	1.12	1.96	5.51	85.46	5.54	0.22	0.03
TK-139a	2.15	4.44	5.93	5.74	5.12	27.38	44.49	3.66	1.09
TK-140a	4.52	6.12	9.64	7.36	6.12	22.79	39.30	3.21	0.93
TK-141a	7.87	10.18	14.09	8.86	6.86	18.99	29.04	3.49	0.62
TK-142a	2.18	5.78	4.14	4.20	3.56	42.16	33.62	3.75	0.61
TK-143a	37.23	6.14	6.34	5.66	4.77	22.80	15.11	1.40	0.55
TK-144a	0.15	1.09	2.82	5.54	11.18	60.90	17.88	0.40	0.02
TK-145a	12.23	5.70	7.55	7.25	7.07	24.52	30.82	3.48	1.39
TK-146a	33.38	7.09	6.99	8.08	8.66	19.60	13.83	1.58	0.80
TK-147a	5.30	7.67	8.40	8.01	8.69	30.18	26.14	3.31	2.30
TK-148a	12.02	9.17	11.14	7.90	6.28	21.44	28.76	2.36	0.92
TK-149a	43.71	7.17	9.53	6.84	7.75	20.92	3.39	0.53	0.16
TK-150a	0.47	2.41	7.33	18.42	35.49	34.72	0.94	0.18	0.04
TK-151a	52.80	10.65	7.78	6.41	7.14	12.33	2.17	0.44	0.28
TK-152a	60.66	7.20	5.00	5.02	5.06	11.56	4.01	0.88	0.62
TK-153a	32.15	13.53	9.82	7.30	10.77	14.95	4.99	3.16	3.33
TK-154a	33.95	11.55	7.98	6.45	6.78	23.34	7.05	1.70	1.20
TK-155a	0.14	1.23	3.39	5.83	17.99	63.61	7.59	0.19	0.03
TK-156a	31.96	12.38	11.88	9.77	10.78	16.97	5.94	0.22	0.08
TK-157a	45.19	2.55	2.78	5.17	11.02	28.19	4.85	0.23	0.02
TK-158a	12.32	9.10	11.06	8.38	8.25	26.42	20.75	2.36	1.36
TK-159a	16.03	8.26	7.19	9.46	10.06	29.30	15.90	2.24	1.57
TK-160a	10.58	10.30	9.84	8.73	10.57	35.40	11.44	2.07	1.07
TK-middle north a	59.09	7.38	6.01	4.25	2.96	17.05	2.95	0.24	0.07
TK-SWa	28.01	7.99	6.33	5.75	8.72	25.17	14.04	2.53	1.46



**Appendix 5. Cluster dendrogram for the full range of 714 samples (4 samples with no fauna excluded).**





## Appendix 6. The 20 most abundant countable taxa for those cluster groups considered most representative of their assigned biotopes, with the percentage of samples in which each non-countable taxon was recorded.

Group	CG (1 Sample)	CQ (1 Sample)	CW (6 Samples)	DE (3 Samples)	DF (6 Samples)	DI (2 Samples)	DY (2 Samples)	EF (3 Samples)								
Samples	AR-125a	AR-09a	AR-10a,AR-102a,AR-123a,AR-27a,AR-93a,AR-94a	480(02)-17a, 480(02)-20a, 480(02)-22a	MIRO-152a, MIRO-161a, MIRO-166a, MIRO-168a, 481(03)-19a	481(03)-03a, 481(03)-06a	DE-W34a, DE-W40a	DE-CR7a, DE-W19a, DE-W8a								
	Av/vm <sup>2</sup>	Av/vm <sup>2</sup>	Av/vm <sup>2</sup>	Av/vm <sup>2</sup>	Av/vm <sup>2</sup>	Av/vm <sup>2</sup>	Av/vm <sup>2</sup>	Av/vm <sup>2</sup>								
1	Leptocheirus hirsutimanus	50	Notomastus	100	Notomastus	67	Dendroica grossularia	83	Scotoplanes armiger	46	Sphaerostylis bulbosa	5/5	Clymenura	10	Amphiscia spiripes	27
2	Dendroica grossularia	50	Ophelia borealis	100	Ophelia borealis	63	Albra alba	47	NEMERTEA	39	Mesonura elongata	80	Urothoe marina	10	Clymenura	20
3	Polycirrus	40	NEMATODA	80	Polycirrus	57	Aonides paucibranchiata	43	Chaetozone zelandica	36	Aonides paucibranchiata	60	Euclymene oerstedii	5	Eumida	13
4	Sphaeranes bombyx	40	Sphaeranes marina	70	Lagis kureni	40	Apheloclella	33	Lanice conchilegia	34	Enchytraeidae	60	Urothoe elegans	5	Glythia sayurata	13
5	Bodotria scopioides	30	Echinocyamus pusillus	40	Goddalia triangularis	40	Pisidia longicornis	30	Glycera lapidum	24	Microgrimalmus	30	Aonides paucibranchiata	10	Leuconia bahusensis	10
6	Eumida	30	Sabellaria spinulosa	30	NEMATODA	30	Protodorvillea kefersteini	27	Aonides paucibranchiata	20	Streptosyllis bidentata	35	Spio	10	Leuconia bahusensis	10
7	Leucothoe incisa	20	ACTINARIA	20	Glycera lapidum	20	ACTINARIA	17	ACTINARIA	20	Brania (Type A)	30	Spio	10	Leuconia bahusensis	10
8	NEMATODA	10	TURBELLARIA	20	Sphaeranes bombyx	20	Scotoplanes armiger	17	Albra alba	18	NEMERTEA	15	Lanice conchilegia	10	Spio	10
9	SIPUNCULA	10	NEMERTEA	20	NEMERTEA	18	Molgula marthamensis	17	Pholoe inornata (sensu petersen)	16	Phyllolococidae	15	Euclymene oerstedii	7	Urothoe elegans	7
10	Pholoe ballica (sensu petersen)	10	Magdora peterseni	20	Protodorvillea kefersteini	13	Nepheys caudery	13	Nepheys caeca	16	Lanice bahusensis	10	Urothoe elegans	7	Abudomedella obtusata	7
11	Styllis comata	10	Veruca stromia	20	Pista cristata	13	Harmothoe	10	Protodorvillea kefersteini	16	Macrochaeta helgolandica	10	Macrochaeta obtusata	7	Melta palmata	7
12	Austrolyta	10	Branchiostoma elegans	20	Branchiostoma lanceolatum	13	Lumbinaria strellei	10	Scotoplanes armiger	12	Protodius	10	Leptocheirus hirsutimanus	7	Leptocheirus hirsutimanus	7
13	Aonides paucibranchiata	10	Leptocheirus hirsutimanus	20	Polynoidae	20	Polycirrus	12	Bodotria scopioides	10	Polycirrus	10	Bodotria scopioides	7	Bodotria scopioides	7
14	Spio	10	Pisidia longicornis	20	Aonides paucibranchiata	12	Eunereis longissima	7	Eunereis longissima	10	Sabellidae	10	Bodotria scopioides	7	Bodotria scopioides	7
15	Notomastus	10	Polinoce puchetus	20	Mediomastus fragilis	12	Mediomastus fragilis	7	Glycera alba	8	CHAETOGNATHA	5	Glythia intermedia	7	Glythia intermedia	7
16	Owenia fusiformis	10	Dossina	20	Dossina	12	Chaerocastus sundevallii	7	Exogone hebes	6	Malmgrenella jurgmani	5	OPHUROIDEA	7	OPHUROIDEA	7
17	Sabellaria spinulosa	10	Amphipholis squamata	20	Echinocyamus pusillus	10	Echinocyamus pusillus	7	Jugliera minus	7	Spio	6	Pholoe inornata (sensu petersen)	5	NEMERTEA	3
18	Polycirrus	10	Sabellaria cirrhosa	10	Spio	10	NEMERTEA	3	Sphaeranes bombyx	6	Pseudomyrionides limbata	5	Polynoidae	3	Polynoidae	3
19	Anoplodactylus petiolatus	10	Anatides mucosa	10	Urothoe marina	10	NEMATODA	6	Notomastus	6	Glycera oxycephala	5	Anatides mucosa	3	Anatides mucosa	3
20	OBSPICUA	10	Chaetozone zelandica	10	Exogone hebes	6	Pholoe inornata (sensu petersen)	3	Urothoe elegans	6	Sphaerostylis taylora	5	Exogone hebes	3	Exogone hebes	3
	<b>non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>	<b>% non-countable taxa</b>
1	Halecium	100	Sertularia	100	Bogarivittia	17	Electra pilosa	100	Bugula purpurinica	60	Bugula purpurinica	60				
2	Diphasia	100	Acyonium dilatatum	100	Phallia quadrata	100	Bugula purpurinica	100	Abietina abietina	20	Abietina abietina	20				
3	Hydrallmania falcata	100	Acyonium daphanum	100	Hydrallmania falcata	17	ENTOPROCTA	67	Acyonium daphanum	20	Acyonium daphanum	20				
4	Sertularia	100	Electra pilosa	100	Sertularia	17	Vesicularia spinosa	67	Conopeum reticulum	20	Vesicularia spinosa	20				
5	Campanulariidae	100	Electra pilosa	100	Acyonium parasiticum	17	Bicellariella ciliata	67	Flustra foliacea	20	Flustra foliacea	20				
6	Acyonium daphanum	100	Electra pilosa	100	Abietina abietina	33	Abietina abietina	33	Scrupocellaria reptans	20	Scrupocellaria reptans	20				
7	Vesicularia spinosa	100			Campanulariidae	33	Campanulariidae	33								
8	Conopeum reticulum	100			Flustra foliacea	33	Flustra foliacea	33								
9	Flustra foliacea	100			Scrupocellaria reptans	33	Scrupocellaria reptans	33								
10	Bugula plumosa	100														
11	Bicellariella ciliata	100														
12	Crotalina punctata	100														
13																
14																
15																
16																
17																
18																
19																
20																
	<b>Biotope assignment</b>	<b>SS.SMx.CMx.FlUxHyd</b>	<b>Biotope assignment</b>	<b>SS.SSa.CFISa.Epus.Oxov.Apr</b>	<b>Biotope assignment</b>	<b>SS.SCS.CCS.Blan</b>	<b>Biotope assignment</b>	<b>SS.SMx.IMx.#</b>	<b>Biotope assignment</b>	<b>SS.SCS.IC3.Cum.Cset</b>	<b>Biotope assignment</b>	<b>SS.SCS.IC3.Helo.Mxm</b>	<b>Biotope assignment</b>	<b>SS.SSa.IFISa.IMsSa</b>	<b>Biotope assignment</b>	<b>SS.SSa.IFISa.TbUmPo</b>
		38		31		27.5		25		18		16		2.5		17
		440		730		675		473		402		1000		30		233