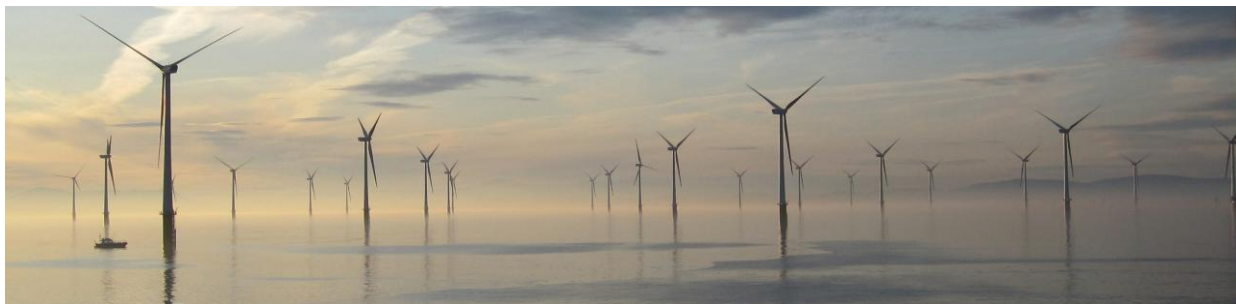




Rampion Offshore Wind Farm



ES Section 7 – Benthos and Sediment Quality - Appendix 7.2

EMU Ltd

Document 6.3.7ii

December 2012

APFP Regulation 5(2)(a)

Revision A

E.ON Climate & Renewables UK Rampion Offshore Wind Limited

Technical Report for



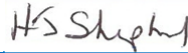
Rampion Offshore Wind Farm Zone, Benthic Survey: Technical Report 2011



Date
Report No.
Client contact
EMU contact

October 2011
11/J/1/03/1836/1222
David Watson and Alec Moore
Séamus Whyte

SIGN OFF PAGE

Document release and authorisation record			
Report No.	11/J/1/03/1836/1222		
Client Name	RSK Environment Limited		
Client Contact	David Watson Alec Moore		
EMU Limited Contact	Séamus Whyte		
Status	Date Issued		
Issue 1	16/11/11		
Issue 2	19/10/12		
This version authorised by	Name	Date	Signature
Author	Dr Nigel Thomas Séamus Whyte	18/10/12	 
Technical Checker	Dr Nigel Thomas	18/10/12	
QA Proof Reader	Heather Shepherd	18/10/12	
Project Manager	Séamus Whyte	18/10/12	
Project Director	Dr Nigel Thomas	18/10/12	

EMU Contact Details

EMU Limited

Head Office
1 Mill Court
The Sawmills
Durley
Southampton SO32 2EJ
UK

Tel: +44 (0)1489 860050
Fax: +44 (0)1489 860051
www.emulimited.com

EMU Limited

Victory House
Trafalgar Wharf
Hamilton Road
Portchester
Hampshire PO6 4PX
UK

Tel: +44 (0)2392 205500
Fax: +44 (0)2392 205550
www.emulimited.com

RSK Environment Limited Contact Details

RSK Environment Limited,
172 Chester Road,
Helsby,
Cheshire
WA6 0AR
UK

EXECUTIVE SUMMARY

EMU Limited was commissioned by RSK Environment Limited, on behalf of E.ON Climate and Renewables, to undertake subtidal and intertidal ecological surveys of the seabed habitats within, and adjacent to, the proposed turbine array site and associated cable route corridor extending approximately 40 km, at its furthest point, from the shoreline between Worthing and Shoreham-by-Sea. The survey was designed to provide baseline (characterisation) information on the proposed wind farm area, the area of possible effect, from installation and operation, surrounding the wind farm and the area along the proposed cable route. Habitats and species of conservation interest were highlighted.

Sediments were generally comprised of sands and gravelly sands with several areas of sandy gravels. Siltier sediment was recorded in the western areas of the Wind Farm Zone. Sands were recorded predominantly to the east of the Cable Route and within the central area of the Wind Farm Zone where the sands were well sorted. Sediment data compared well with predicted MESH sediments, though the distribution of siltier sediments deviated from the predicted distribution; the current study having siltier sediments in the centre and towards the west of the Zone, whilst MESH predictions indicated siltier sediments to the east. UKSeaMaps data suggested extensive areas of rock or reef within the surveyed area, which did not match with the current study data. However, some of the sedimentary material identified is relatively superficial, comprising thin layers overlaying chalk bedrock.

Eleven of the sites sampled, several located within the Zone and Cable route, supported levels of contaminants in excess of Action Level 1, for one or more metals, which may present a concern to CEFAS for the future movement of seabed sediments.

The lowest numbers of species in general were recorded from the Zone, although in the north west of the Zone several sites supported relatively large numbers of species. Similar to the numbers of species, the lowest numbers of individuals were generally recorded from the Zone, although several high abundance sites were, again, noted to the northwest. No clear pattern of biomass distribution was evident in the survey area, with a range of high and low biomass values within each of the Zone, Site and Tidal Envelope boundaries.

A total of four ecologically identifiable groups were defined from the grab data and were allocated biotopes. The majority of the sites surveyed were allocated SS.SCS.CCS.MedLumVen (*Mediomastus fragilis*, *Lumbrineris* spp. and Venerid bivalves in Circalittoral Coarse Sand or gravel), located to the outer edge of the survey area and to the north west of the Zone, and the sandy habitat community of SS.SSa.CFiSa.EpusOborApri (*Echinocyamus pusillus*, *Ophelia borealis* and *Abra prismatica* in Circalittoral Fine Sand) centred in the eastern part of the Zone with several sites located in the Cable Route and towards the east of the array in the Tidal Envelope. Less well defined biotope complexes were allocated to the remaining sites; SS.SSa.IFiSa (Infralittoral Fine Sand) in the inshore areas and an impoverished community attributed to SS.SCS.CCS (Circalittoral Coarse Sediment).

A total of 14 biotopes or biotope complex level descriptions were identified from the video analysis. The most frequently present was SS.SSa.IFiSa.IMoSa (Infralittoral Mobile Sand). The biotope complex level description of SS.SCS.CCS (Circalittoral Coarse Sediment) was also frequently encountered along with the biotope SS.SCS.CCS.PomB (*Pomatoceros triquetus* with barnacles and bryozoan crusts on unstable Circalittoral cobbles and pebbles).

Sublittoral Biogenic blue mussel (*Mytilus edulis*) Reef was recorded in the sites close inshore within the Cable Route area, with SS.SBR.SMusMytSS identified at one site. It is likely that this biotope is encouraged by emergent bedrock and superficial cobbles. Other hard ground sites were identified, with a considerable amount of chalk outcrop, and it is highly likely that further areas of both soft and hard rock outcrop occur across the near shore area.

Reefs, an Annex I habitat, were recorded within the Site, including the UK BAP priority habitats of subtidal chalk and blue mussel beds, having an important presence in inshore areas, as well as within the proposed Cable Exit Route. The blue mussel biogenic reef was recorded colonising the chalk bedrock at the most inshore sites within the Cable Route.

Sabellaria reef was tentatively identified from geophysical data in a previous study, but no reef was identified within the area during the current study.

Six protected marine fish species with regard to current nature conservation legislation were recorded. However, none of the species identified were considered to be of structural or functional importance within the biotopes.

LIST OF CONTENTS

	<i>Page No.</i>
SIGN OFF PAGE.....	I
EMU CONTACT DETAILS	I
1 INTRODUCTION	1
1.1 STUDY BACKGROUND	1
1.2 BENTHIC SURVEY OBJECTIVES	1
1.3 STUDY OVERVIEW	1
1.4 REGIONAL PHYSICAL ENVIRONMENT	2
1.5 REGIONAL BIOLOGICAL CONTEXT	5
1.6 NATURE CONSERVATION FEATURES	6
2 METHOD	8
2.1 AIMS.....	8
2.2 INTRODUCTION.....	8
2.3 SURVEY DESIGN RATIONALE	8
2.4 SEABED SAMPLING AND SURVEY	10
2.5 SEABED VIDEO.....	11
2.6 GRAB SAMPLING	12
2.7 CONTAMINANTS GRAB SAMPLING	13
2.8 EPIBENTHIC TRAWLING.....	14
2.9 LABORATORY METHODS.....	14
2.10 PARTICLE SIZE DISTRIBUTION (PSD).....	14
2.11 TOTAL ORGANIC CONTENT (LOSS ON IGNITION).....	15
2.12 MACROBENTHIC ANALYSES.....	15
2.13 DATA ANALYSES.....	16
3 RESULTS AND DISCUSSION	17
3.1 SEDIMENT PARTICLE SIZE DISTRIBUTION (PSD) DATA.....	17
3.2 SEDIMENT CONTAMINATION.....	20
3.3 MACROFAUNAL GRAB SAMPLE DATA	21
3.4 SEABED IMAGE DATA	33
3.5 2 M BEAM TRAWL DATA.....	39
3.6 FEATURES OF CONSERVATION IMPORTANCE	44
4 SUMMARY	48
4.1 PHYSICAL ENVIRONMENT	48
4.2 CONTAMINANTS	48
4.3 INFAUNAL COMMUNITIES BASED ON GRAB SAMPLES	48
4.4 COLONIAL AND ENCRUSTING EPIFAUNAL COMMUNITIES BASED ON GRAB SAMPLES	49
4.5 BIOTOPES BASED ON VIDEO SURVEYS	49
4.6 EPIBENTHIC COMMUNITIES BASED ON 2 M BEAM TRAWL SURVEYS.	50
4.7 FEATURES OF CONSERVATION IMPORTANCE	50
5 REFERENCES	51
APPENDIX A DAILY PROGRESS REPORTS	53
APPENDIX B HYPERDIGITAL CAMERA LOG.....	54
APPENDIX C GRAB LOGS AND DETAILS	55
APPENDIX D DECK PHOTOGRAPHS	56
APPENDIX E CONTAMINANTS SAMPLE LOGS	57
APPENDIX F TRAWL LOGS AND DETAILS.....	58
APPENDIX G TRAWL DECK PHOTOGRAPHS	59
APPENDIX H PARTICLE SIZE DATA (PSD)	60
APPENDIX I CLUSTER ANALYSIS OF PSD	61
APPENDIX J CONTAMINANT SAMPLE RESULTS	62
APPENDIX K SPECIES LIST FOR INFAUNAL GRAB SPECIES	63
APPENDIX L CLUSTER ANALYSIS OF INFAUNAL GRAB DATA.....	64
APPENDIX M BIOMASS DATA	65
APPENDIX N SPECIES LIST FOR EPIFAUNAL GRAB SPECIES	66
APPENDIX O VIDEO ANALYSIS DATA	67

APPENDIX P	SPECIES LIST FOR TRAWL SPECIES	68
APPENDIX Q	STONY REEF "REEFINESS" ASSESSMENT PARAMETERS	69
APPENDIX R	SABELLARIA "REEFINESS" ASSESSMENT PARAMETERS.....	70

FIGURES

FIGURE 1.1	LOCATION OF THE RAMPION OFFSHORE WIND FARM SITE AND ZONE.....	2
FIGURE 1.2	PREDICTED HABITATS FROM MESH.....	3
FIGURE 1.3	PREDICTED UKSeaMAP HABITATS (WWW.JNCC.CO.UK).....	4
FIGURE 1.4	PREDICTED HABITATS AND SEDIMENT TYPES (OSIRIS, 2010).....	4
FIGURE 2.1	RAMPION R3 SURVEY ARRAY.....	9
FIGURE 3.1	PRINCIPAL SEDIMENT COMPONENTS WITHIN THE SURVEY AREA.	17
FIGURE 3.2	DISTRIBUTION OF SEDIMENT GROUPINGS IDENTIFIED BY MULTIVARIATE CLUSTER ANALYSIS.	19
FIGURE 3.3	MDS OF SEDIMENTARY CLUSTERS	19
FIGURE 3.4	MDS OF 125 µM FRACTION.....	19
FIGURE 3.5	MDS OF 250 µM	20
FIGURE 3.6	MDS OF SILT AND CLAY FRACTION	20
FIGURE 3.7	DISTRIBUTION OF CONTAMINATED SEDIMENTS WITHIN THE SURVEY AREA.	21
FIGURE 3.8	DISTRIBUTION OF NUMBER OF ENUMERATED FAUNAL SPECIES ACROSS THE SURVEY AREA.	24
FIGURE 3.9	DISTRIBUTION OF NUMBERS OF INDIVIDUALS FROM GRAB SAMPLES ACROSS THE SURVEY AREA.	24
FIGURE 3.10	MDS OF ENUMERATED FAUNAL DATA FROM GRAB SAMPLES.....	25
FIGURE 3.11	DISTRIBUTION OF THE INFAUNAL GROUPS DERIVED FROM PRIMER ANALYSIS OF GRAB SAMPLES.	27
FIGURE 3.12	ABUNDANCE OF <i>ECHINOCYAMUS PUSILLUS</i> IN CLUSTER B.....	28
FIGURE 3.13	ABUNDANCE OF <i>POMATOCEROS LAMARCKI</i> IN CLUSTER B	28
FIGURE 3.14	ABUNDANCE OF <i>ABRA PRISMATICA</i> IN CLUSTER I.....	28
FIGURE 3.15	ABUNDANCE OF <i>MAGELONA JOHNSTONI</i> IN CLUSTER A	28
FIGURE 3.16	DISTRIBUTION OF THE INFAUNAL BIOMASS VALUES FROM GRAB SAMPLES ACROSS THE SURVEY AREA.	29
FIGURE 3.17	PCA PLOT OF FAUNAL SITES, DERIVED FROM CLUSTER ANALYSIS, OVERLAID ON THE PCA OF PHYSICAL VARIABLES. ...	30
FIGURE 3.18	MDS OF COLONIAL AND ENCRUSTING EPIFAUNAL SPECIES BASED ON GRAB SAMPLES.	31
FIGURE 3.19	DISTRIBUTION OF COLONIAL AND ENCRUSTING EPIFAUNA DERIVED FROM GRAB SAMPLES	32
FIGURE 3.20	DISTRIBUTION OF SEDIMENTARY BIOTOPES FOR THE SURVEY AREA BASED ON VIDEO DATA.....	38
FIGURE 3.21	DISTRIBUTION OF HARD GROUND BIOTOPES FOR THE SURVEY AREA BASED ON VIDEO DATA.	39
FIGURE 3.22	NUMBER OF TAXA PER 2 M BEAM TRAWL ACROSS THE SURVEY AREA.	41
FIGURE 3.23	NUMBER OF INDIVIDUALS PER 2 M BEAM TRAWL ACROSS THE SURVEY AREA.	41
FIGURE 3.24	MDS OF THE 2 M BEAM TRAWL SITES BASED ON PRESENCE/ABSENCE DATA.....	42
FIGURE 3.25	ABUNDANCE OF <i>PSAMMECHINUS MILIARIS</i> IN CLUSTER D.....	43
FIGURE 3.26	ABUNDANCE OF <i>INACHUS DORSETTENSIS</i> IN CLUSTER D	43
FIGURE 3.27	ABUNDANCE OF <i>ECHIICHTHYS VIPERA</i> IN CLUSTER C.....	43
FIGURE 3.28	ABUNDANCE OF THE GOBIIDAE IN CLUSTER A	43
FIGURE 3.29	DISTRIBUTION OF THE FAUNAL CLUSTERS DERIVED FROM THE ANALYSIS OF THE 2 M BEAM TRAWL DATA.....	44
FIGURE 3.30	HABITAT FEATURES OF CONSERVATION INTEREST, IDENTIFIED THROUGH VIDEO ANALYSIS.....	45

TABLES

TABLE 2.1	SUMMARY OF SURVEY REQUIREMENTS	10
TABLE 3.1	SUMMARY SEDIMENT CHARACTERISTICS OF THE SEDIMENT GROUPINGS.....	18
TABLE 3.2	MOST FREQUENTLY PRESENT TAXA WITHIN GRAB SAMPLES (EX. COLONIAL SPECIES)	22
TABLE 3.3	TOP 15 MOST ABUNDANT TAXA RECORDED IN GRAB SAMPLES.	23
TABLE 3.4	SUMMARY BIOLOGICAL AND PHYSICAL ATTRIBUTES OF SAMPLE GROUPS DERIVED FROM MULTIVARIATE SAMPLE SORTING OF THE FAUNAL GRAB DATA.	26
TABLE 3.5	SUMMARY BIOMASS VALUES PER CLUSTER BASED ON THE FAUNAL GRAB DATA.....	28
TABLE 3.6	MOST FREQUENTLY PRESENT SESSILE EPIFAUNA SPECIES FROM GRABS SAMPLES, ACROSS THE SURVEY AREA.....	30
TABLE 3.7	MOST FREQUENTLY PRESENT TAXA IDENTIFIED FROM THE VIDEO SURVEY	33
TABLE 3.8	SUMMARY DESCRIPTION OF BIOTOPES AND HABITATS DERIVED FROM VIDEO SURVEY.	34

TABLE 3.9	MOST FREQUENTLY RECORDED TAXA FROM THE 2M BEAM TRAWL SURVEY.....	40
TABLE 3.10	MOST ABUNDANT TAXA FROM THE 2 M BEAM TRAWL SURVEY	40

PLATES

PLATE	2.1 DROP DOWN VIDEO FRAME AND ELVIS CAMERA SYSTEM.....	11

1 INTRODUCTION

1.1 Study background

- 1.1.1 Following successful award of development rights from The Crown Estate, E.ON Climate and Renewables commissioned a series of detailed technical studies for the Rampion Round 3 offshore wind farm zone, Zone 6, located in the English Channel off the Sussex coast.
- 1.1.2 Information derived from these studies will be used to inform the Environmental Impact Assessment (EIA), with respect to predicted effects of the construction and operation of the wind farm, on the local seabed ecology and to assist in the development of mitigation measures where agreed and appropriate. This will aid in development of the Environmental Statement (ES) and will support the Developmental Consent Order (DCO) application to the Infrastructural Planning Commission (IPC), the project being a Nationally Significant Infrastructure Project (NSIP).
- 1.1.3 To address these aspects, EMU Limited (EMU) was commissioned by RSK Environment Limited, on behalf of E.ON Climate and Renewables, to undertake a series of offshore benthic ecology sampling surveys of the turbine array site and associated cable route corridor. Accordingly this document presents the survey methods used, the data collected and gives a characterisation of the subtidal environment within and around the proposed development in terms of the habitats available and their influence on associated biological communities. A separate scope of work, undertaken by RSK Environment Limited, will cover baseline data collection at the landfall.

1.2 Benthic survey objectives

- 1.2.1 The survey was designed to provide baseline (characterisation) information on the proposed Rampion Round 3 Site, containing the proposed wind farm area (the Zone), the area of possible effect (the Tidal Envelope), from installation and operation, surrounding the wind farm and the area along the proposed Cable Route.
- 1.2.2 Bathymetric data have previously identified possible sensitive areas to the north of the Rampion Site, but within the Cable Route. These included black bream nests and *Sabellaria* reef. These sites were investigated using drop-down video transects.
- 1.2.3 Within the Zone, site specific benthic sampling was undertaken to ensure adequate documentation of seabed habitat conditions and communities present.

1.3 Study overview

- 1.3.1 The proposed Rampion Round 3 offshore wind farm Site is located approximately 14km (at its nearest point) from the southeast coast of England, near the coastal ports of Brighton, Newhaven, Shoreham by-the-sea, Littlehampton and Worthing. The Site covers a total area of 271 km², of which a Zone of 167 km² is proposed containing the turbine locations (
- 1.3.2 Figure 1.1). Water depths are relatively shallow ranging from 20-64 m. Sediments are largely coarse, with occasional regions of fine sands. Waters in the region are fairly well mixed resulting in little difference between surface and bottom thermal regimes.
- 1.3.3 In relation to benthic ecological survey works to provide data informing the EIA process, a scoping report was submitted to regulatory authorities for comment.

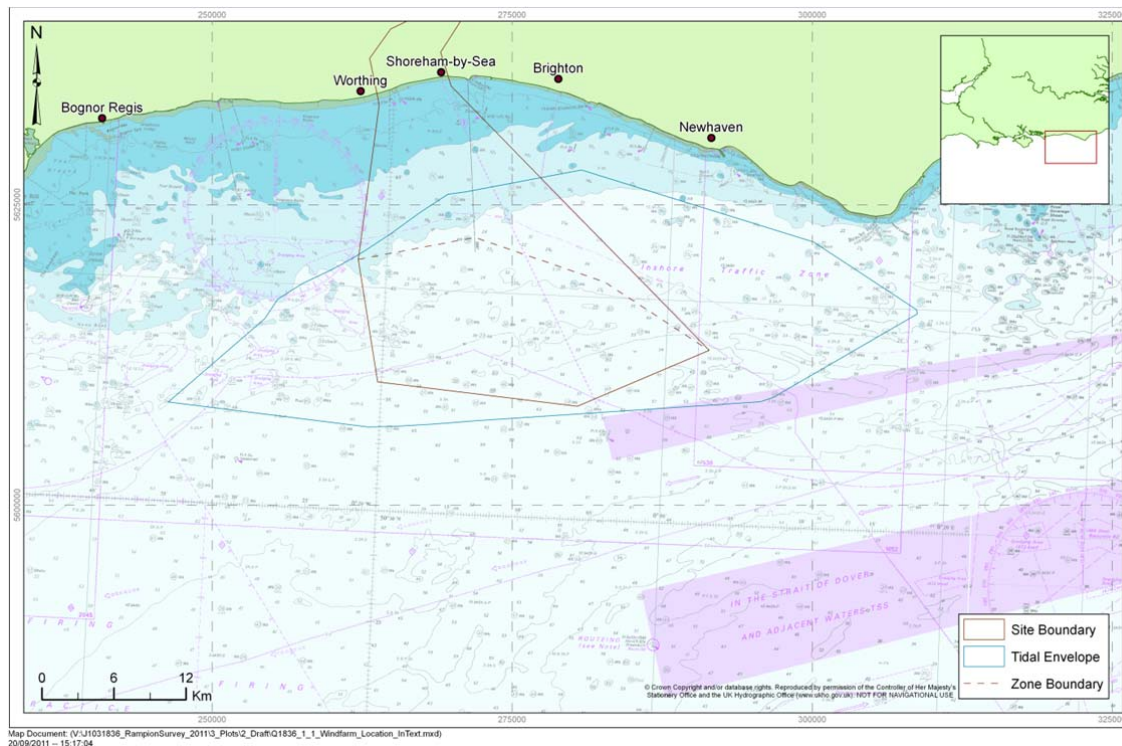


Figure 1.1 Location of the Rampion offshore wind farm Site and Zone.

1.3.4 Further to the above, specific comment on benthic ecological aspects was made by the MMO. This noted that given the hard substrata of the area, epifauna would likely constitute an important part of the benthic communities, and that scientific beam trawling would be required to assess these communities.

1.4 Regional physical environment

1.4.1 Physical information on the region is largely summarised in Natural England regional reports, Barnes *et al.* (1998), the Marine Aggregates Regional Environmental Assessment (EMU, 2010) and the data collected by the Sussex Seasearch project (Irving, 1999). Maximum water depth within the Site is 59m and water depth within the Zone ranges from 18 to 59m. Tidal currents across the Site reach a maximum of 2 knots on mean spring tides with the principal currents flooding eastwards and ebbing westwards.

1.4.2 The shallow profile is reflected in the generally well mixed water profile. Sea surface temperatures reach a peak of 16-16.5°C, with temperatures as high as 18°C having been recorded in shallow, sheltered inshore waters. Winter sea surface temperatures range from 6.5-8°C. The bottom temperatures in the region are approximately 0.5°C lower than the surface, although this difference is slightly higher in the summer indicating the effects of surface warming and calmer conditions (Uncles & Stephens, 2007). Surface and bottom salinity levels are relatively consistent throughout the year fluctuating between 34.5 (closer to the coast) and 35.0 ‰.

1.4.3 Based on existing knowledge of the relationships between the prevalent physical factors and selected hydrographical and biological data, the Mapping European Seabed Habitat (MESH) project aims to develop maps for North West European seabed habitats. These indicate the distribution of predicted or modelled habitat types although validation and refinement of classifications and boundaries is

constantly undertaken through field survey observations. The UKSeaMap project aims to further develop this mapping.

- 1.4.4 Detail of the predicted MESH habitat map covering the study area is presented in
- 1.4.5 Figure 1.2 and detail of the predicted UKSeaMap habitat map is also presented below, in Figure 1.3.
- 1.4.6 The area of the proposed Site predominantly shows mixed coarse sediments interspersed with areas of deeper sands and finer sediments. The area of predicted tidal excursion around the Zone (marked in Figure 1.2 and 1.3) is dominated by coarse sediments with occasional regions of fine sand and mud. The UKSeaMap prediction includes more rock or reef, based on presumed chalk bedrock (Irving, 1999). This is further suggested by studies indicating the presence underwater chalk features (Irving, 1999) or potential reef (Osiris, 2010) in these more inshore regions of the proposed Rampion zone.
- 1.4.7 Irving (1999) describes the presence of underwater chalk cliffs and gullies in the region, although these are more likely in the cable route within 1km of the shore, not the deeper subtidal regions of the Zone.
- 1.4.8 Both the MESH and UKSeaMap predictions place areas of sand dominated sediments in the central, deeper regions of the zone.

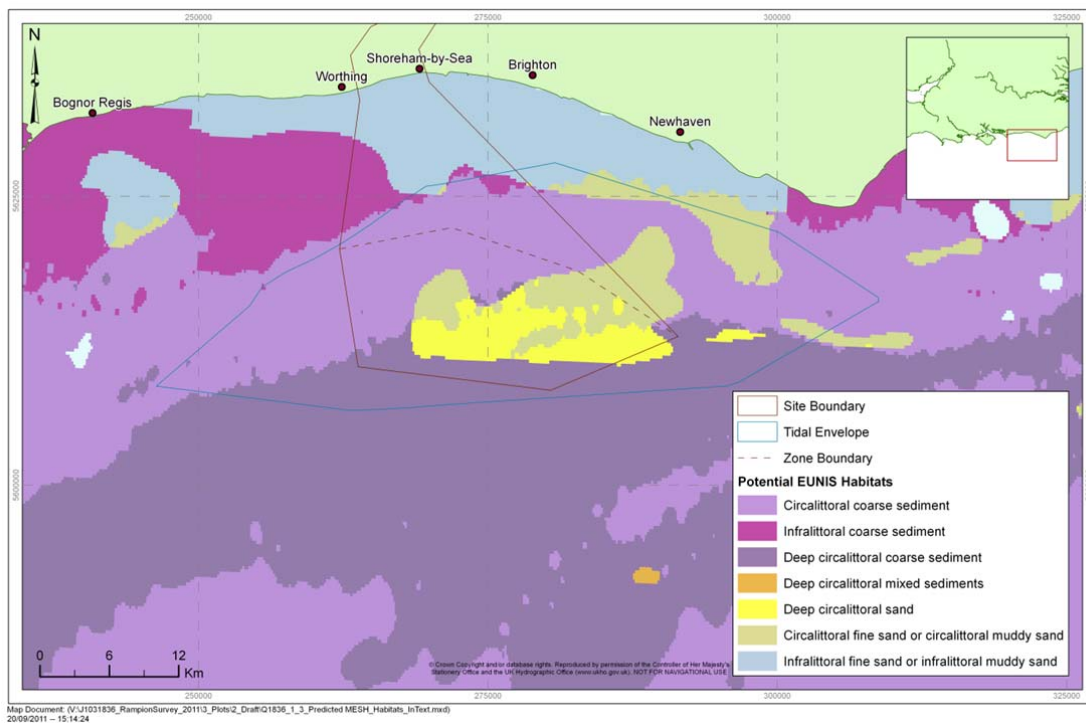


Figure 1.2 Predicted habitats from MESH

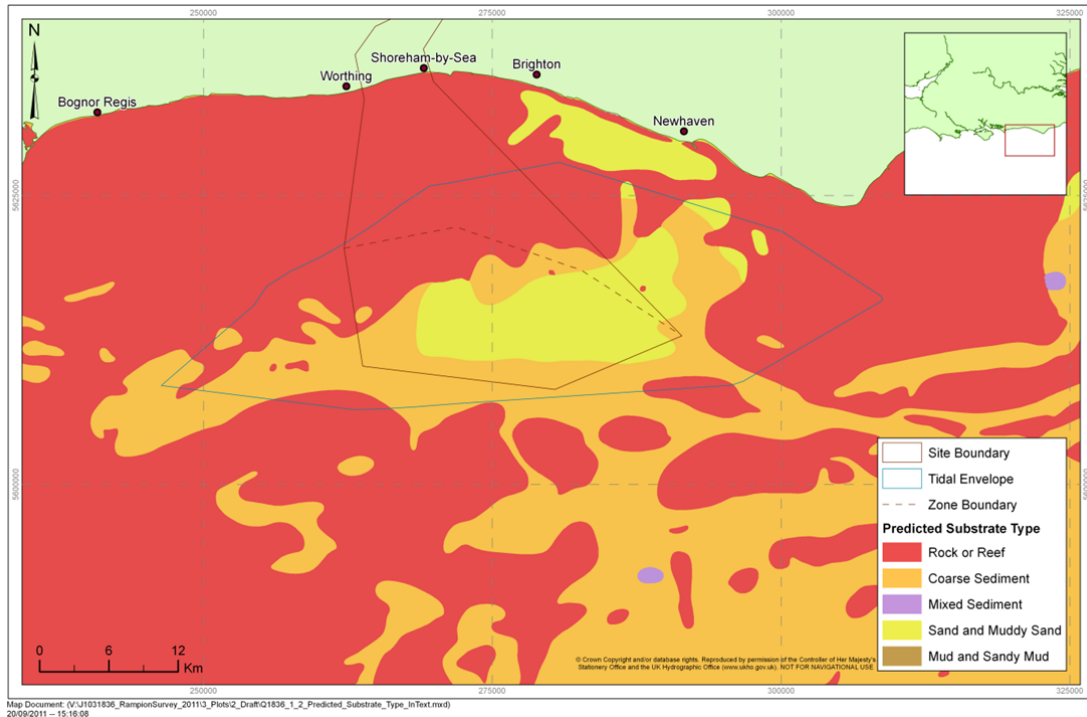


Figure 1.3 Predicted UKSeaMap habitats (www.jncc.co.uk)

1.4.9 Recent acoustic data has indicated the Site to be dominated by gravelly sand habitats with occasional outcrops of rock, (Figure 1.4). The area of the proposed cable route shows similar habitats, however the shallower coastal zones in the area of the predicted cable route show a greater prevalence of sandy gravel and sand habitats. Tentative *Sabellaria* and black bream nesting sites have also been identified in the cable route (Osiris, 2010).

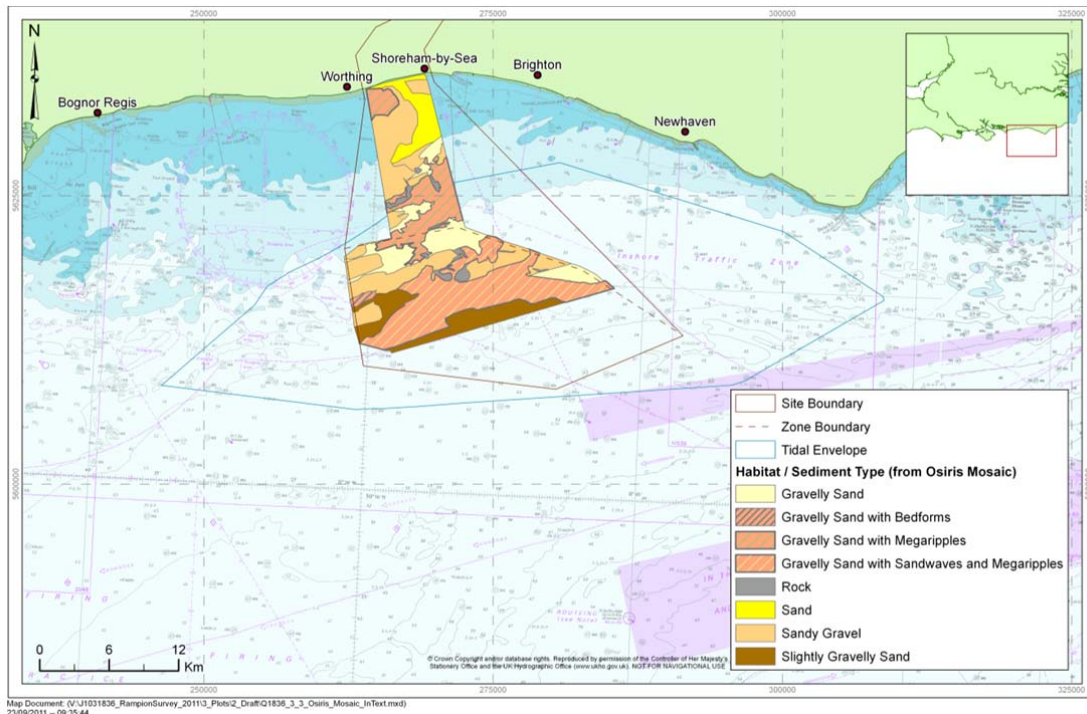


Figure 1.4 Predicted habitats and sediment types (Osiris, 2010)

1.5 Regional biological context

- 1.5.1 The sand and gravel regions anticipated in the proposed wind farm Zone are typical of the trend for particulate substrata recorded east of the Isle of Wight in this region of the English Channel (EMU, South Coast REA literature review, 2008).
- 1.5.2 Regional assessment of the sediments/habitats present in the areas surrounding the proposed Site indicate that communities typical of the wider Eastern English Channel may reasonably be expected in the zone.
- 1.5.3 Analysis of previous survey data for the West Sussex region identifies the area as being characterised by complex and patchy substrates. Previous surveys have identified mosaics of habitats, biotopes and biotope complexes, but with coarse sediment biotopes most prevalent. The regions' gravel biotopes are generally associated with palaeochannels and their adjacent areas, supporting fairly homogenous habitats. Some of the areas of sand and gravel support large numbers of the non-indigenous, invasive mollusc species, *Crepidula fornicata*.
- 1.5.4 In the West Sussex region, aggregations of *Crepidula fornicata* are common, forming the typical south coast biotope SS.SMx.IMx.CreAsAn - *Crepidula fornicata* with ascidians & anemones on infralittoral coarse mixed sediments. This biotope may, therefore, be expected in the Rampion wind farm zone (EMU, MAREA, 2010).
- 1.5.5 Subtidal regions around the proposed Rampion zone are dominated by mixed sediments, which are generally more mobile in the shallow areas, close to shore, or in the deep water regions where stronger currents may be present. The high level habitat classifications SS.SCS (Sublittoral Coarse Sediments), SS.SSa (Sublittoral Sand) and SS.SMx (Sublittoral Mixed) are common in the region off the West Sussex coast (EMU, MAREA, 2010).
- 1.5.6 The region off the West Sussex coast is known to comprise a mixture of pebbles, gravel, sand and shell (Irving, 1999), often with the presence of ripples (Osiris, 2010). These areas feature species commonly associated with such habitats including the sand mason worm *Lanice conchilega*, stalked sea squirts *Styela clava*, the finger bryozoan *Alcyonidium diaphanum* and the dahlia anemone *Urticina felina* (Irving, 1999). The biotope SS.SMp.KSwSS.LsacR – *Laminaria saccharina* and red seaweeds on infralittoral sediments (Connor *et al.*, 2004) - is expected to be present in pebble and gravel dominated regions off the Sussex coast (Irving, 1999).
- 1.5.7 Areas dominated by gravel, especially where sand stabilises the gravel (recorded throughout the Rampion zone – Osiris, 2010), show burrowing species to be prevalent. At depths greater than 6 m, the gravel surface will likely be colonised by the bryozoans *Alcyonidium diaphanum* and *Flustra foliosa*, the ascidians *Polycarpa pomaria* and *Styela clava* and the tube worm *Sabellaria spinulosa*. In addition, mobile epibenthic species such as the mollusc *Buccinum undatum*, *Hinia reticulata* and the hermit crab *Pagurus bernhardus*, are likely to be common. The biotope SS.SSa.lFiSa.ScupHyd – *Sertularia cupressina* and *Hydrallmania falcata* on tide-swept sublittoral sand with cobbles or pebbles (Connor *et al.*, 2004) is expected (Irving, 1999).
- 1.5.8 Some circalittoral gravel, coarse sands and shell gravels in the wider region have previously been assigned to the biotope SS.SCS.MedLumVen, describing *Mediomastus fragilis*, *Lumbrineris spp.* and venerid bivalves in circalittoral coarse sand or gravel. Communities associated with this biotope may be typically rich.

- 1.5.9 Areas in the region featuring cobbles, boulders or pebbles are typically characterised by robust ephemeral species colonising the hard surfaces. Typically *Pomatoceros* spp., *Balanus crenatus* and organisms more tolerant of scour action, such as *Notomastus*, will usually be present. In tide swept areas, tufts of the hydroids *Sertularia argentea* and *Hydrallmania falcata* occur. Such regions may also see significant coverage by the cheilostome bryozoan *Flustra foliacea*.
- 1.5.10 The habitat diversity of the region gives rise to a wide range of epibenthic and pelagic fish and shellfish. The region contains spawning grounds and nursery areas for commercially important species, whilst others transit through the area to the North Sea or western approaches.
- 1.5.11 The shallower, coarse sediment regions off the West Sussex coast region include nursery grounds for the lemon sole, *Microstomus kitt* and the edible crab *Cancer pagurus* (EMU, MAREA, 2010), although these areas are not subject to any specific protection measures.

1.6 Nature conservation features

- 1.6.1 Intertidal and subtidal chalk is a UK Biodiversity Action Plan (BAP) priority habitat. The undersea chalk cliffs off the Sussex coast are particularly good examples of the feature and of regional and potentially national importance, although this could be attributed more the features themselves than the communities they support (Irving, 1999).
- 1.6.2 The examples offshore at Worthing (the 'Worthing Lumps') are considered the best examples of the feature, with three distinct habitats being formed; vertical chalk bedrock, horizontal chalk with chalk cobbles and boulders/sand/flints at the cliff base.
- 1.6.3 A number of species are found to dominate specific regions, and have been described by Irving (1996). The upper surfaces commonly feature foliaceous red algae such as *Calliblepharis ciliata* and *Plocamium rubrum*.
- 1.6.4 Vertical cliff faces typically feature a faunal turf predominately composed of the hydroid *Tubularia indivisa* with other obvious species such as the bryozoans *Bugula* spp. and *Cellepora pumicosa*, the tube worm *Filograna implexa* and the black tar sponge *Dercitus bucklandi*. Upper areas of the cliff are bored by piddocks, *Barnea* spp. and *Pholas dactylus*.
- 1.6.5 The cliff base contains a mix of gravel and small boulders with few faunal species, although the lesser spotted dogfish *Scyliorhinus canicula* has been recorded from this region in large numbers during October.
- 1.6.6 The Osiris survey (2010) identified areas within the proposed cable route as potential black bream, *Spondyliosoma cantharus*, nesting sites.
- 1.6.7 *S. cantharus* is known to build circular nests in near shore gravel areas along the West Sussex coast during April and May. While these nesting sites are not greatly affected by adjacent substrate removal, they are vulnerable to sediment deposition (Natural England area report for Eastern English Channel).
- 1.6.8 Six areas (two within the proposed Rampion Zone and four within the Corridor Route) have been identified as potential *Sabellaria spinulosa* areas. *S. spinulosa* can form subtidal aggregations, stabilising cobble, pebble and sand habitats and forming a biogenic reef habitat, as defined in Annex I

of the EC Habitats Directive, and as a priority UK BAP habitat. It is important to note that it is the reef formation alone, and not the presence of the worm that is listed in these categories.

- 1.6.9 If *Sabellaria* reef is present in the mixed sediment areas of the Rampion Site, these would represent an important feature allowing for mobile and cryptic epifauna and crevice infauna to become established in areas where they would not normally be present (Natural England area report for Eastern English Channel).
- 1.6.10 No *Sabellaria* reef was identified in the regions surrounding the Rampion Site in recent benthic survey work. Low lying *Sabellaria* crust has been identified south of Worthing and in regions surrounding the Rampion zone, but this has not been classified as biogenic reef (EMU, MAREA, 2010).

2 METHOD

2.1 Aims

- 2.1.1 To undertake a characterisation study, the results of which will contribute to the marine ecology assessment and provide key environmental data for the Environmental Statement (ES).
- 2.1.2 Undertake site specific sampling, within and around the Zone (Figure 2.1) to ensure adequate coverage of seabed habitat conditions and communities present.

2.2 Introduction

- 2.2.1 EMU undertook the field sampling of subtidal habitats (Figure 2.1) and the subsequent laboratory based macroinvertebrate analysis as per the client brief. All methods employed by EMU conform with in-house operating procedures and/or ISO9001 control procedures, where appropriate, and are described below. Sediment particle distribution analysis was undertaken at EMU's UKAS accredited laboratory and included particle sizing via Malvern laser diffraction on samples containing 5%, or more, fine (silt/clay fraction <63 µm) sediments. Contaminant analysis was undertaken at UKAS accredited laboratory for the suite of chemical species as per the client brief, based on Action Level 1 as set by CEFAS.
- 2.2.2 EMU are also participants in the National Marine Biological Analytical Quality Control scheme (NMBAQC), an independent, national QC scheme designed to assess the quality of marine benthic taxonomy within UK laboratories. EMU have been participants in the scheme since 1996 and have consistently scored well in the taxonomic components of it.

2.3 Survey design rationale

- 2.3.1 Figure 2.1 shows the Rampion R3 benthic grab and beam trawl sampling array. The survey comprised a total of 59 sampling stations. Stations were selected to provide a mix of locations inside the turbine array areas, close to proposed turbines and array cables, at outside reference locations and along the proposed export cable route. Of the 59 stations:
- 20 were within the Wind Farm Zone (WF1-20);
 - 7 were within the wider Zone area (OW1-7);
 - 10 were within the Tidal excursion Envelope (TE1-10);
 - 9 were along the proposed Cable Route (CR1-9); and
 - 13 were Reference stations outside of proposed Wind Farm and Tidal Envelope areas (RE1-13).
- 2.3.2 Samples were collected for benthic faunal analysis at each station, with samples for sediment chemical analyses being collected from a subset of these stations.
- 2.3.3 In addition, a further nine areas identified as potentially sensitive habitats were sampled using photographic equipment only. These comprise:
- Three possible black bream nesting areas along the export cable route; and
 - Six areas (four within the export cable corridor, two within the Wind Farm area). These were tentatively identified as possible *Sabellaria spinulosa* areas based on results of the 2010 Osiris side-scan sonar survey.



- 2.3.4 The Marine Management Organisation (MMO) requested that a beam trawl survey be undertaken to adequately sample for epifauna, given the hard substrata of the area. It was not possible to undertake the beam trawl survey with the main benthic survey, but the MMO agreed that trawling could be undertaken at a later date.
- 2.3.5 Beam trawl sampling was undertaken at 17 sites that were selected to allow safe trawling at a mix of locations relative to the proposed development (including inside the site boundary and relative to the areas of likely effect based on the tidal envelope). Of the 17 stations:
- 4 were within the Wind Farm Zone area (WF1, 4, 5, 14);
 - 2 were within the wider Zone area (OW3, 6);
 - 4 were within the Tidal excursion Envelope (TE2, 4, 5, 8, 9);
 - 4 were along the proposed Cable Route (CR2, 6, 8, 9); and
 - 2 were Reference stations outside of proposed wind farm and tidal envelope areas (RE7, 11).

2.4 Seabed sampling and survey

- 2.4.1 The benthic grab and video survey was conducted over five days (15/04/11 – 19/04/11). Beam trawl sampling was conducted over 2 days (10/07/11 – 11/07/11). Daily progress reports for the survey period are provided in APPENDIX A. All survey work was undertaken on board EMU's bespoke benthic ecology survey vessel RV Discovery.

Table 2.1 Summary of survey requirements

Sampling techniques	No. stations	Purpose
Seabed digital video and stills photography taken at each grab station	59	Collection of seabed images to inform habitat and epifaunal community assessment prior to grab deployment.
0.1m ² Hamon grab	59 (single replicates)	Collection of quantitative sediment samples for faunal and sediment analysis, for habitat and community assessment. Total Organic Content (TOC) samples were also collected at each station.
0.1m ² Day / 0.04m ² Shipek grab	24	Collection of seabed sediment samples for chemical analyses.
Video Transect only	1	Hard substrate / reef station not suitable for grab sampling.
<i>Sabellaria spinulosa</i> video	6	Extended video transects across areas identified from side-scan sonar, as being potential <i>Sabellaria</i> sites, for the assessment of presence / extent of 'reef' in the area.
Black Bream video transects	3	Extended video transects across areas considered to be potential Black Bream nesting sites.

- 2.4.2 Sample positioning including grabs, trawls and seabed video was achieved using EMU's Hemisphere Crescent V100 DGPS which has a stated horizontal accuracy of <0.6 m (95% confidence). Navigation and position recording was achieved using Trimble's HYDROPro software version 2.30.844.
- 2.4.3 A 10 m radius was placed around all positions, within which all samples were expected to be achieved. Additional to point targets, six sites were allocated as video only transects for the assessment of *Sabellaria spinulosa*. A further three sites were allocated as video transects for the assessment of Black Bream nesting sites. At a subsample of the main point target positions, chemical sampling was also undertaken.
- 2.4.4 Four sites were relocated during the survey:
- CR1 was relocated approximately 150m to the west due to the presence of dense amounts of fishing gear on the site;
 - CR4 was also moved due to the presence of fishing gear but was moved again to become site CR4.2 as the substrate was too hard for grab deployment at CR4.1;
 - TE1 was moved approximately 300m to the north of the target site, due to fishing gear in the area; and
 - TE2 was moved 100m to the south again due to the presence of fixed fishing gear.

2.5 Seabed video

- 2.5.1 On arrival at each sample station, a digital video camera mounted within a drop down frame (Plate 2.1) was deployed. A minimum of 5 minutes seabed video footage was collected at each station together with a minimum of 5 photographic stills. Alternative camera angles were used on the frame where the visibility was too low to allow the normal oblique angle to provide suitable footage. Additionally where visibility was extremely low, a duplicate camera was housed in EMU's in-house Extreme Low Visibility System frame (ELViS) as seen in Plate 2.1.

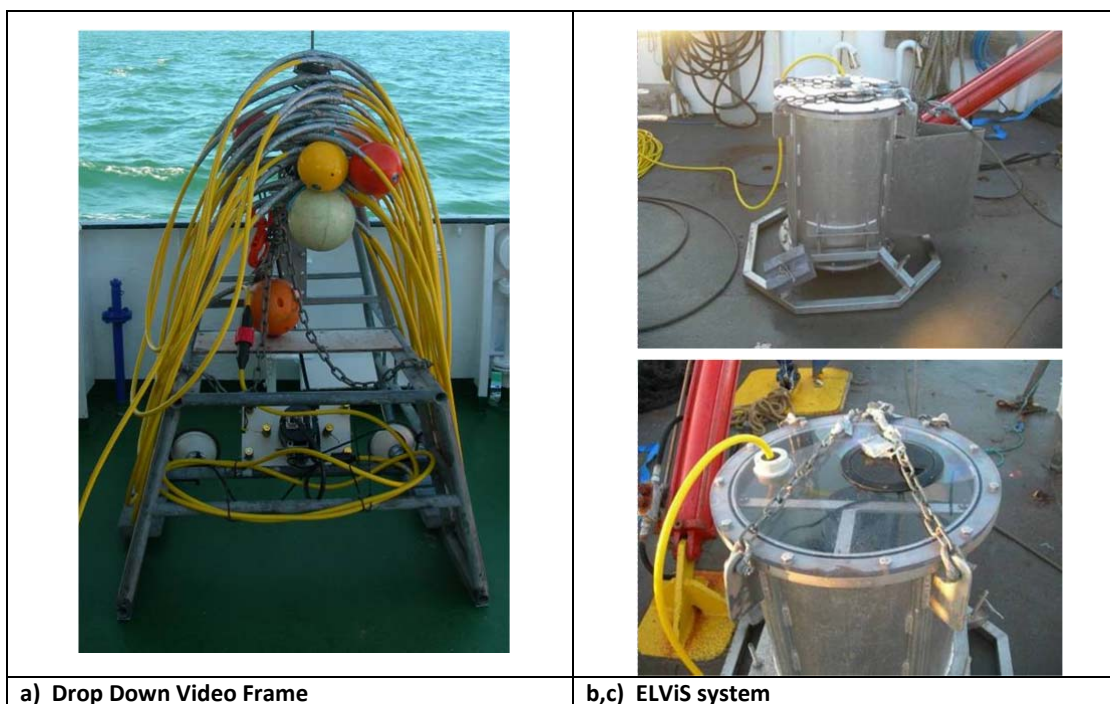


PLATE 2.1 DROP DOWN VIDEO FRAME AND ELViS CAMERA SYSTEM

2.5.2 The video equipment comprised the following components:

- Kongsberg OE14-208 new generation digital stills colour camera. Stills images are framed using real time video;
- Drop down/towed video frame with adjustable weight system, or ELViS low visibility camera system;
- Subsea camera telemetry cable system (200m);
- Bespoke topside control unit (comprising a 400GB Hard Disk Drive (HDD) incorporating a DVD recorder for use as the primary video recording system, 15" LCD monitor, with GPS Overlay); and
- Mini-DV player and full screen colour monitor for simultaneous backup.

2.5.3 Observer records were collated throughout each deployment including substrate type and conspicuous epifauna. Review of the video data also allowed assessment of the sites prior to grab deployment.

2.5.4 Positions for the video survey were logged at the beginning and the end of each drop, and at each static image location, and overlaid on the video footage to ensure accurate geo-referencing.

2.5.5 Seabed video logs are provided in APPENDIX B.

2.6 Grab sampling

2.6.1 Following recovery of the seabed video, a quantitative seabed sample was collected using a 0.1 m² mini-Hamon grab.

2.6.2 The position of each sample was fixed at the time when the winch wire went slack indicating that the grab was on the seabed. Upon retrieval of the grab sample on board the vessel, excess water was drained from the sample through a 1 mm sieve and the sample checked to ensure adequate quality. Samples of 5 litres and above were considered acceptable. Samples with a volume less than this were generally rejected and the station re-sampled up to a maximum of 3 times. Where samples of < 5 litres were continually achieved, then best judgement was used to accept samples of lesser quantity.

2.6.3 Once a sample had been accepted it was emptied into a hopper and photographed. The sediment was also described and any conspicuous fauna were recorded (APPENDIX C).

2.6.4 A representative minimum volume of 500 ml sub-sample was then taken for Particle Size Determination (PSD) analysis. Each sub-sample was placed into a strong labelled plastic bag and stored frozen prior to analysis.

2.6.5 The remaining sediment was then gently washed over a 1 mm sieve with the material retained on the sieve transferred into a pre-labelled bucket with lid and preserved with 4% buffered formaldehyde/seawater solution. Buckets were clearly labelled outside plus an extra water proof label with details of date, project number, sample ID and a unique lab reference was added to the preserved sample. These were then stored for return to EMU benthic laboratories for taxonomic analysis.

2.6.6 Faunal grab sampling was successful at 55 out of the 59 sites. At the sites where no faunal samples were achieved, this was due to the presence of hard substrata. Samples at these sites were either of surface scrapings only, or failed attempts due to cobbles holding the jaws open.

- 2.6.7 Grabs were not attempted, after discussions with the client representative, where obviously impenetrable hard ground was observed from the pre-sampling video footage.
- 2.6.8 Of those sites where fauna was obtained, there were a further 3 sites at which PSD and TOC were not acquired, making a total of 52 successful sites. Repeated attempts were made at the sites, but the nature of the substrate precluded successful sampling. The approach in these situations is that if only one poor sample is achieved, the faunal sample takes precedence over a PSD sample. Field logs reflect the attempts made and decisions taken on sample retention where these problems occurred.
- 2.6.9 Grab sample logs are presented in APPENDIX C. APPENDIX D presents a photo log of the grab samples.

2.7 Contaminants grab sampling

- 2.7.1 Additional seabed sediment samples were collected for chemical analyses. The sediment contaminants targeted were as follows:
- Metals - Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Mercury (Hg), Nickel (Ni), Lead (Pb), Tin (Sn), Barium (Ba), Aluminium (Al), Zinc (Zn), Vanadium (Vn), and Iron (Fe);
 - Total petroleum hydrocarbons (TPH); and
 - Total organic carbon.
- 2.7.2 Sampling of undisturbed sediments was achieved using a 0.1 m² Day Grab with stainless steel bucket. Prior to deployment at each station the metal sample bucket of the grab was cleaned with Pentane to ensure that there would be no cross contamination. Where the Day Grab was unsuitable, or unsuccessful, the 0.04 m² Shipek Grab was used to ensure sample failure could not be attributed to the equipment and/or the nature of the substrate.
- 2.7.3 Upon retrieval of each sample, the sediment was sub-sampled and carefully placed within pre-treated labelled glass sample jars or plastic pots, depending upon the chemical analyses to be undertaken. Samples were stored frozen prior to the laboratory testing.
- 2.7.4 The samples were subsequently submitted to the Environment Agency National Laboratory Service.
- 2.7.5 Of the 24 contaminant sites originally listed, 23 samples were taken in the field. However, some of the proposed contaminants sampling sites had to be reallocated in the field due to unsuitable sediment.
- 2.7.6 Where the sediment was found to be too coarse to take a suitable contaminants sample, the contaminants site was changed to the nearest site, providing it was still within the same zone (e.g. if CR1 was too coarse, it would be swapped with another CR site).
- 2.7.7 RE2 was allocated as a chemical sampling station but due to the nature of the seabed being extremely hard ground, the site was moved to site RE3. However, this ground was also extremely coarse and no chemical samples were achieved.
- 2.7.8 At two of the sites, WF5 and WF15, a sample for hydrocarbons was taken, but continued grab deployments failed to achieve further substrate samples. Therefore, no sample was gathered for analyses of metals at these two sites.
- 2.7.9 The contaminant grab logs are presented in Appendix E.

2.8 Epibenthic trawling

- 2.8.1 A 2 m CEFAS-style scientific beam trawl with a 5 mm cod-end mesh was towed for a distance of 500 m into the tide. Time and co-ordinates were recorded when the trawl began “fishing” on the seabed, i.e. the trawl had commenced. The catch was released from the trawl into a trawl sorting tray to be photographed (as shown in Appendix G) and then processed. The processing of the samples was carried out as per the survey specifications addendum document (RSK Environmental Ltd, 2011).
- 2.8.2 The volume of the substrate material (cobbles/macroalgae/shell material etc.) and percentage coverage of encrusting biota on the boulder/cobble fraction were estimated first.
- 2.8.3 As much of the biota as possible was processed on-board, and then returned to the sea. All fish, shellfish and motile invertebrates were enumerated by species; extra details were recorded for;
- Elasmobranch fish: total length/disc width; sex;
 - Commercial fish: total length; and
 - Commercial shellfish: size measurements as appropriate (e.g. carapace length/width for lobsters/edible crabs respectively, shell height for whelks); sex as appropriate (crabs and lobsters).
- 2.8.4 Attached (e.g. bryozoans and hydroids) and non-attached (e.g. drift *Flustra foliacea*) sessile epibiota was noted separately. Attached sessile biota was identified, as far as possible, on-board using identification guides and standard keys, with abundance/coverage noted using the SACFOR scale. Any organism that was not readily identified in the field was stored in labelled site-specific buckets, fixed with formaldehyde solution and taken ashore to be identified in the EMU laboratory.
- 2.8.5 A total of 17 successful beam trawl samples were collected. The 2 m beam trawl logs are presented in Appendix F. A photo log of the trawl samples is presented in Appendix G.

2.9 Laboratory methods

- 2.9.1 Upon return to EMU laboratories, data were entered into the UNICORN database system following EMU’s in house method for the use of the UNICORN database (EMU MET/44). UNICORN is a dedicated and bespoke laboratory database system which facilitates sample and data management. All samples are logged into this system for tracking and for the attribution of various metadata to assess Analytical Quality Control (AQC) procedures. The bespoke design of EMU’s system incorporates a GIS feature allowing the distribution of physical and biological features to be immediately presented.

2.10 Particle Size Distribution (PSD)

- 2.10.1 PSD analysis was undertaken at EMU’s Sediment laboratory. The procedure employed EMU’s In House Methods for the Determination of Particle Size Distribution and Associated Analysis (EMU MET/01) based on BS1377: Parts 1 – 3: 1990, and EMU’s In House Methods for the Determination of Particle Size Distribution by Malvern Mastersizer Micro Laser Diffraction (EMU MET/02) based on BS13320: 2009. The latter method was used when the fine fraction of sediment (<63 µm) comprised >5% of the total sample by weight. Representative sub-samples of each sediment sample were oven dried to constant weight at 105 ±5°C before routinely wet sieving to remove silt and clay-sized particles of <63 µm (unless there was no sample cohesion after drying, where dry sieve analysis only was undertaken). The remaining coarser material was again oven dried to constant weight at 105 ±5°C followed by dry sieving through a series of mesh apertures corresponding to either 1 units as

described by the Wentworth scale. The weight of the sediment fraction retained on each mesh was subsequently measured and recorded and merged with the laser diffraction data where appropriate.

2.11 Total organic content (Loss On Ignition)

2.11.1 Total Organic Content (TOC) via Loss on Ignition analysis was undertaken at EMU's sediment laboratory. The procedure employed EMU's In House Methods for the Determination of the Mass Loss on Ignition (EMU MET/01) based on BS1377: 1990 Part 3. Representative sub-samples of each sediment sample were oven dried at $50 \pm 5^\circ\text{C}$ and weighed to constant mass. The sample was subsequently subjected to ignition in a muffle furnace at $440 \pm 25^\circ\text{C}$ for four hours. The organic matter content (TOC) was then calculated as the loss in mass.

2.12 Macrobenthic analyses

2.12.1 Analysis of macrobenthic fauna from grab and beam trawl samples was undertaken by EMU employing EMU's In-House Methods for the Processing, Identification, Enumeration and recording of Marine Benthic Macro invertebrates (EMU MET/07). All procedures conformed to EMU's In House Quality Control Methods.

2.12.2 Macrofaunal grab samples were re-sieved over a 1 mm mesh to remove all remaining fine sediment and fixative. Fauna were sorted from the sediment by elutriation and subsequent examination upon a white tray, with the resultant extracted sediment then sorted by hand under a binocular microscope. Residual sediment fractions were retained following sorting for future Quality Control (QC) auditing.

2.12.3 Macro-invertebrates collected from the grab samples were identified to species level, where possible, and enumerated. The faunal material was subsequently stored in 70% Industrial Denatured Alcohol (IDA). Epifaunal samples were stored in 50% IDA. A faunal reference collection was prepared with one individual of each species identified retained. This allows future checks on taxonomic classification when assessing comparative monitoring data. Colonial, encrusting epifaunal species were also identified to species level where possible and were given a P (present) value. Sessile epifauna from the 2 m beam trawl samples were recorded on a presence/absence basis only.

2.12.4 EMU undertook QC checks on a representative number of whole samples, as well as the entire reference collection in compliance with internal analytical QC criteria.

2.12.5 Faunal biomass analysis was based on a wet-blot method with estimates of ash-free dry weight made after Eleftheriou & Basford (1989) and detailed in EMU MET/07 for the processing and analysis of macroinvertebrate samples. Faunal samples were separated into infaunal and epifaunal species, the former only being included in the analysis. The retained infauna were then separated into the following major taxa:

- Polychaeta
- Crustacea
- Echinodermata
- Mollusca
- Others

2.12.6 The divided fauna were then placed on pre-weighed and labelled sheets of absorbent paper and blot dried before being transferred to a suitable container on a tared balance. The weight of the fauna was then measured to 0.0001 g and recorded on the *Species Identification Record* form. Weighed fauna were then returned to the original vial under IMS and held in storage.

2.12.7 From these data, estimates of weight in g ash-free dry weight were made using the following conversion factors (Eleftheriou & Basford, 1989):

- Polychaeta 15.5%
- Crustacea 22.5%
- Echinodermata 8.0%
- Mollusca 8.5%
- Others 15.5%

2.13 Data analyses

2.13.1 Video data was reviewed using the SACFOR scale to record species abundance to support a pen picture of seabed habitats and associated communities throughout the video transect. In addition, a series of seabed images was selected that best represent habitat and community conditions at that station for detailed analysis. These images were scored as to species abundance for classification analysis and assessment of epibenthic communities. These datasets were used to also characterise the local sediment variability and identify sites where replicate sampling during subsequent monitoring surveys may be warranted.

2.13.2 Data drawn from the faunal and sediment analyses were analysed to describe community and seabed sediment structure and distribution and to elucidate relationships between faunal assemblages and physical variables. The PRIMER suite of statistical routines was employed to investigate community structure and relationships with abiotic factors with the following analyses being used as a minimum;

- Cluster analysis with MDS
- SIMPER
- ANOSIM
- BIO-ENV & RELATE
- Univariate measures
- Outputs / Deliverables

2.13.3 The characterisations included definition of the different types of habitats present and the animal communities that are associated with them. Community structure was investigated supported by industry standard statistical multivariate routines (PRIMER v6.0) and biological relationships with the physical environment and processes assessed to help explain the key physical influences on seabed fauna.

2.13.4 Biotopes were defined from a synthesis of the physical and biological data and compared to the UK Marine Habitat Classification system (Connor *et al.*, 2004). Classified biotopes, including infaunal and overlying epifaunal biotopes were mapped throughout the zone with the extents of the boundaries interpolated using available acoustic data drawn from the geophysical surveys. Biotopes, as well as individual species, were the principal biological unit for appraisal of the predicted effects of wind farm construction and operation, and the assessment will draw upon known intolerance and recovery attributes. Biotopes represented specific combinations of physical conditions (habitats) and the species that characterised those sets of conditions and have been extensively reviewed by MarLin (www.marlin.ac.uk) as to their sensitivity characteristics to various factors. MarLin was therefore a principal data source underpinning the ecological assessments and reducing the uncertainties associated with such assessments.

3 RESULTS AND DISCUSSION

3.1 Sediment Particle Size Distribution (PSD) data

3.1.1 Full results of the sediment particle size distribution (PSD) analysis are presented in Appendix H. Figure 3.1 presents the distribution of principal sediment components (%gravel, %sand and %silt and clay) at each sampling station.

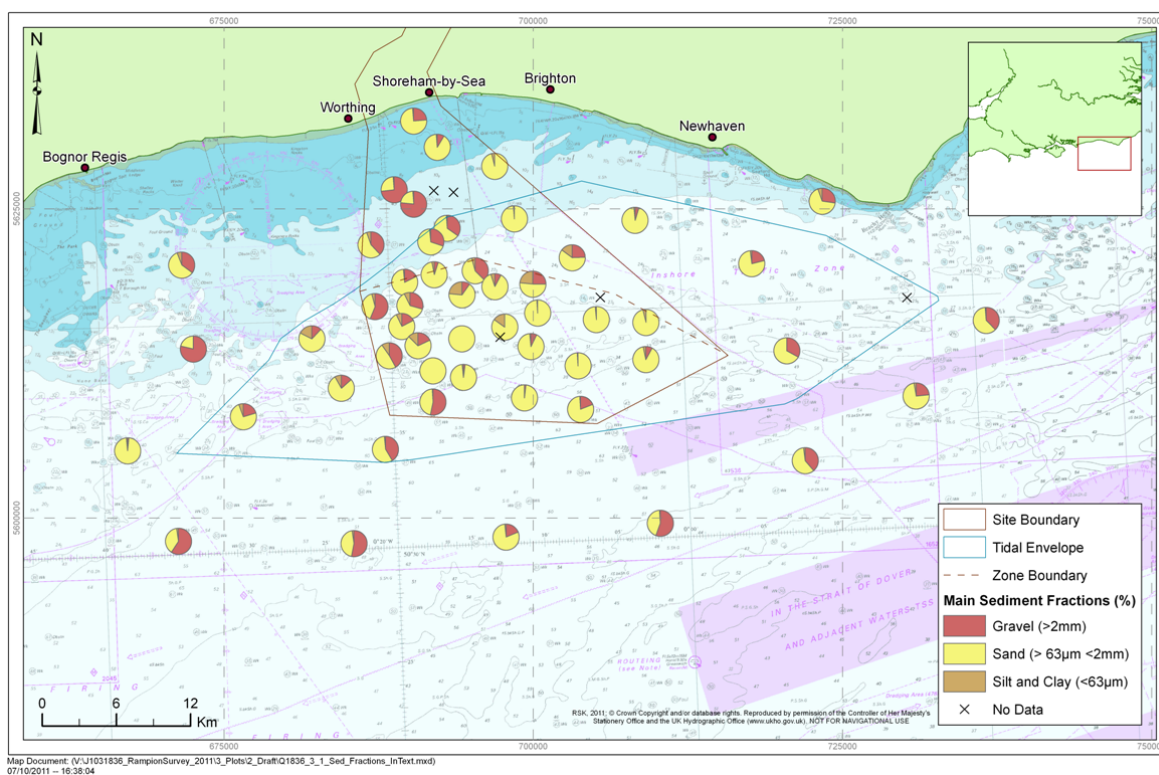
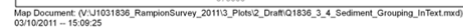


Figure 3.1 Principal sediment components within the survey area.

- 3.1.2 **APPENDIX IA** further breakdown of the sediment has been established through the PRIMER analysis of the full sediment composition (phi units) per site (Cluster outputs in APPENDIX I). This analysis using untransformed data resulted in five groups with Euclidian distance ranging between 20 and 40. These have been plotted on the site array in Figure 3.2 and summarised in Table 3.1.
- 3.1.3 Sediments were generally comprised of sands and gravelly sands with several areas of sandy gravels. The derived clusters comprised two with very high percentages of sand (1 and 2), with the lowest sorting values, i.e., the most well sorted sediments, found in cluster 1. The remaining clusters were a combination of gravel, sand and silt, with cluster 5 predominantly gravel, cluster 3 with a significant silt component and cluster 4 comprising gravelly sand with little silt.
- 3.1.4 The sites from cluster 5 clearly fall to the west of the array including sites within the Cable Route corridor, the main Zone and both the Tidal Envelope and the Reference Areas. The siltier sediments of cluster 3 demonstrated a relatively well defined distribution pattern, occurring inshore and generally to the west of the area, often in close proximity to some of the cluster 5 sites. Sites from cluster 5 were found in all of the potential impact zones.
- 3.1.5 The sites from cluster 4, which comprised of the generally sandy sediments with a relatively large gravel component, were largely absent from the inshore areas, particularly the Cable Route area, but covered a large part of the Zone and most of the Tidal Envelope and Reference areas to the east of the region. Cluster 2 in contrast was located almost exclusively within the Cable Route area, particularly to the east of this part of the survey area where the sandier sediments were recorded.
- 3.1.6 The final group (1), which comprised of the most well sorted sands, was predominantly found within the Zone, only one site occurring to the furthest west of the region.

Table 3.1 Summary sediment characteristics of the sediment groupings.

Sediment Group	No. samples	Mean % gravel	Mean % sand	Mean % silt	Mean sorting
1	7	<1	98	1	0.388
2	5	8	90	2	1.188
3	13	26	64	10	3.159
4	18	17	79	3	1.691
5	9	61	37	3	2.875



3.1.7 The individual sediment fractions that contributed to the different groupings are illustrated in Figure 3.3 to Figure 3.6, with Figure 3.3 illustrating the MDS interpretation of the clusters. Figure 3.4 illustrates the importance of the fine sand fraction (125 μm) to cluster 2, occurring as a gradient from cluster 2 to 3, 4, 5 and 1. The coarser sand fraction (250 μm) was most important to sites from cluster 1, as indicated in Figure 3.5, while silts clearly contributed to the separation of cluster 3 (Figure 3.6).



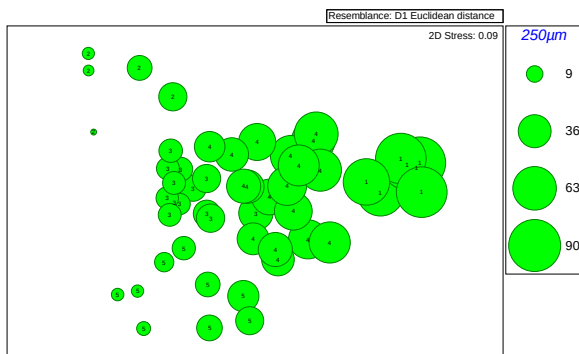


Figure 3.5 MDS of 250 µm

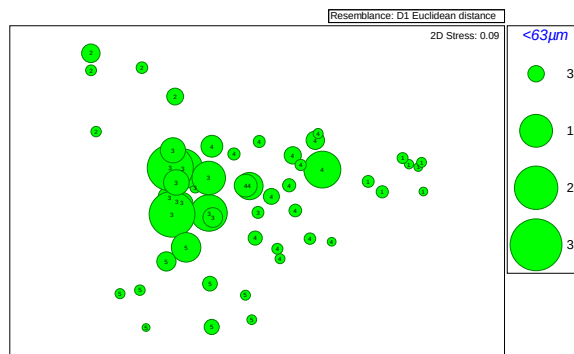


Figure 3.6 MDS of Silt and Clay fraction

- 3.1.8 The results of the sediment sample analyses, therefore, appear to generally agree with the predicted range and distribution of sediments described for the MESH habitats in the area overall (see
- 3.1.9 Figure 1.3) (i.e. inshore fine sands to the east and coarser sediments to the west). The central areas of the Zone match with the predicted deep circalittoral sand and the peripheral areas match with the deep circalittoral coarse sediments. The only areas which do not match well are the areas where siltier sediments were recorded, which MESH indicated occurring further to the east, while the current data suggest they exist in the centre and towards the west of the array. The UKSeaMaps data (see
- 3.1.10 Figure 1.4) in contrast suggest extensive areas of rock or reef, which clearly do not match with the current data. However, some of the sedimentary material identified is relatively superficial, comprising thin layers overlaying chalk (Appendix O).

3.2 Sediment contamination

- 3.2.1 APPENDIX J presents the levels of contaminants found at a selected range of sites from the survey area. These levels of contaminants were compared to the CEFAS guideline Action levels (1 and 2) and exceedance of these values, at these sites, has been plotted in Figure 3.3. All values were adjusted for 1% Carbon content.
- 3.2.2 No value of any metals, or other contamination substances measured, exceeded Action Level 2, suggesting these sites would not present any concern for seabed disturbance. However, 11 of the sites sampled supported levels of contaminants in excess of Action Level 1, for one or more metals, specifically Arsenic, at all eleven sites, and Chromium, at four of the sites. These may present a concern to CEFAS for the future movement of seabed sediments, particularly as several of these fell within the Zone and Cable route (
- 3.2.3 Figure 3.7).

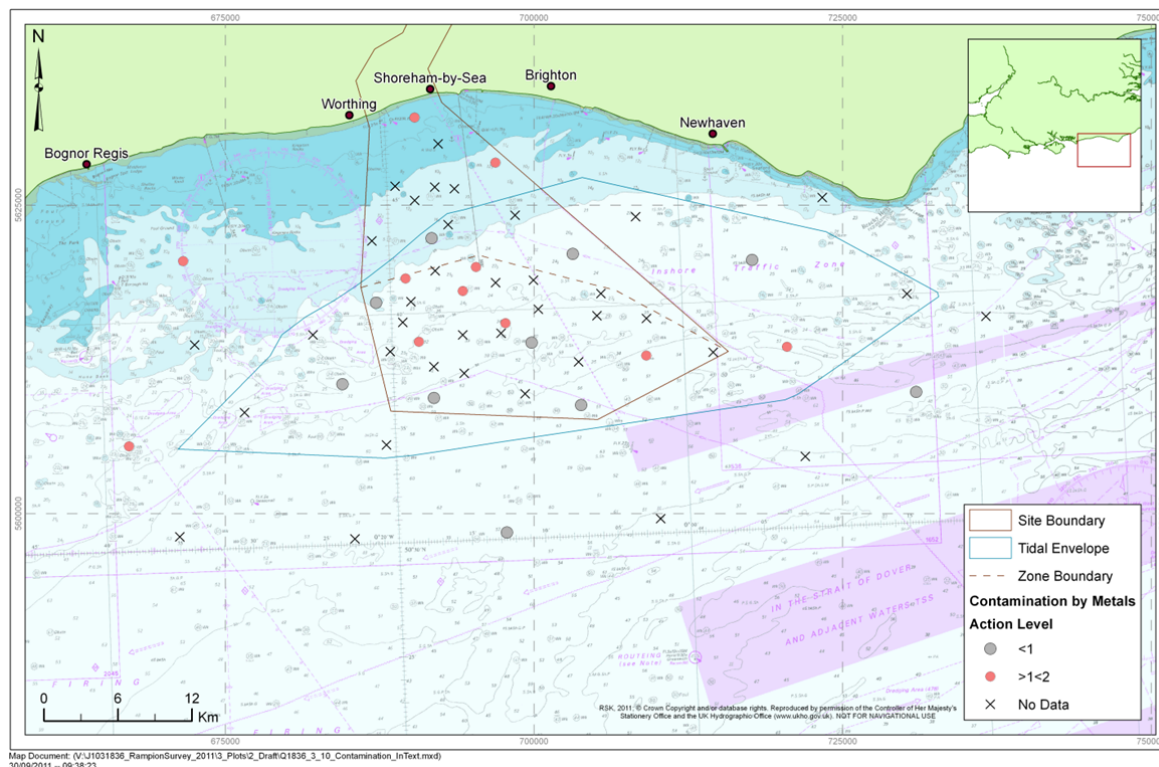


Figure 3.7 Distribution of contaminated sediments within the survey area.

3.3 Macrofaunal grab sample data

3.3.1 APPENDIX K presents species abundance data for each grab sample.

3.3.2 A total of 399 macrofaunal species represented by 4,289 individuals were recorded from the grab sample array (including individuals recorded as present). The principal taxonomic groups present were the Annelida with 115 species, the Crustacea and Bryozoa with 57 species each, Mollusca with 41, the Cnidaria with 24, the Porifera with 11 and the Echinodermata with nine species. The remaining taxonomic groups, including Sipuncula, Nemertea, Ascidiacea and Turbellaria comprised five or less species each.

3.3.3 The top ten most frequently occurring of the enumerated taxa derived from the grab samples are listed in Table 3.2. The ten taxa with the greatest mean abundance are listed in Table 3.3.

Table 3.2 Most frequently present taxa within grab samples (ex. colonial species)

Most frequently occurring species	Frequency (% of samples)	Mean abundance (0.1m ²)
NEMERTEA	71%	1.71
<i>Abra prismatica</i>	58%	3.07
<i>Echinocyamus pusillus</i>	58%	6.36
<i>Notomastus</i> sp.	55%	2.78
<i>Ophiura albida</i>	51%	2.33
<i>Lumbrineris cingulata</i>	49%	2.36
<i>Glycera lapidum</i>	45%	1.05
<i>Nephtys cirrosa</i>	45%	0.84
<i>Polycirrus</i> sp.	44%	1.20
<i>Ophelia borealis</i>	40%	1.51
<i>Caulleriella alata</i>	35%	0.76
<i>Spisula elliptica</i>	35%	0.91
<i>Abra alba</i>	35%	3.11
<i>Sabellaria spinulosa</i>	31%	2.13
<i>Pomatoceros lamarcki</i>	31%	2.73

3.3.4 The most frequently occurring taxa were by no means ubiquitous with the most frequently recorded (Nemertea) only present in 71% of samples. Although nine of the top 15 taxa were polychaetes, the echinoderms were also well represented along with the molluscs, the former represented by *Echinocyamus pusillus* and the latter by *Abra prismatica*. Mean abundances were low overall, to some extent due to the relatively low frequency of occurrence of most species.

3.3.5 The species supporting the highest mean abundance (Table 3.3) was *Echinocyamus pusillus* followed by the polychaete *Magelona johnstoni*, the latter occurring infrequently but at the greatest maximum abundance of 267 individuals per 0.1 m². Although not occurring frequently or in a great overall abundance, several other species occurred at maximum abundances in excess of 20 per 0.1 m² including the polychaete *Magelona filiformis*, the bivalve *Mysella bidentata* and the crustacean *Bathyporeia elegans*.

Table 3.3 Top 15 most abundant taxa recorded in grab samples.

Most abundant species	Abundance (0.1m ²)	Maximum abundance (0.1m ²)
<i>Echinocyamus pusillus</i>	6.36	56
<i>Magelona johnstoni</i>	5.67	267
<i>Abra alba</i>	3.11	66
<i>Abra prismatica</i>	3.07	26
<i>Notomastus</i> sp.	2.78	16
<i>Pomatoceros lamarcki</i>	2.73	39
<i>Lumbrineris cingulata</i>	2.36	27
<i>Ophiura albida</i>	2.33	30
<i>Sabellaria spinulosa</i>	2.13	29
NEMERTEA	1.71	9
<i>Ophelia borealis</i>	1.51	15
<i>Mediomastus fragilis</i>	1.40	23
<i>Spiophanes bombyx</i>	1.22	16
<i>Polycirrus</i> sp.	1.20	6
<i>Glycera lapidum</i>	1.05	9

3.3.6

3.3.7 Figure 3.8 and Figure 3.9 illustrate the distribution of the total number of species and total abundance in grab samples across the survey area respectively. Species variety ranged from two species per 0.1 m² (station WF12) to 51 species per 0.1 m² (station TE8). Abundance varied between two individuals per 0.1 m² (station WF12) to 360 individuals per 0.1 m² (station TE1).

3.3.8 The lowest numbers of species in general were recorded from within the Zone, although in the north west of the Zone several sites supported relatively large numbers of species.

3.3.9 Similar to the numbers of species, the lowest numbers of individuals were generally recorded from within the Zone, although several high abundance sites were noted to the northwest.

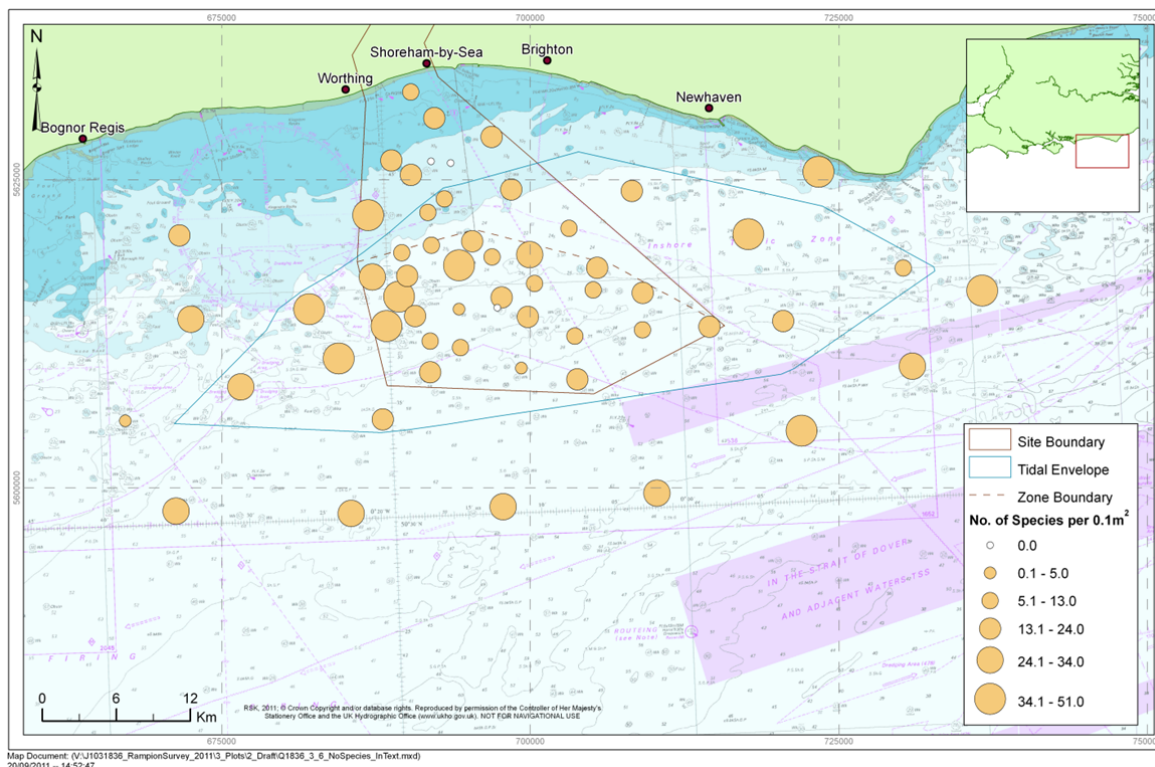


Figure 3.8 Distribution of number of enumerated faunal species across the survey area.

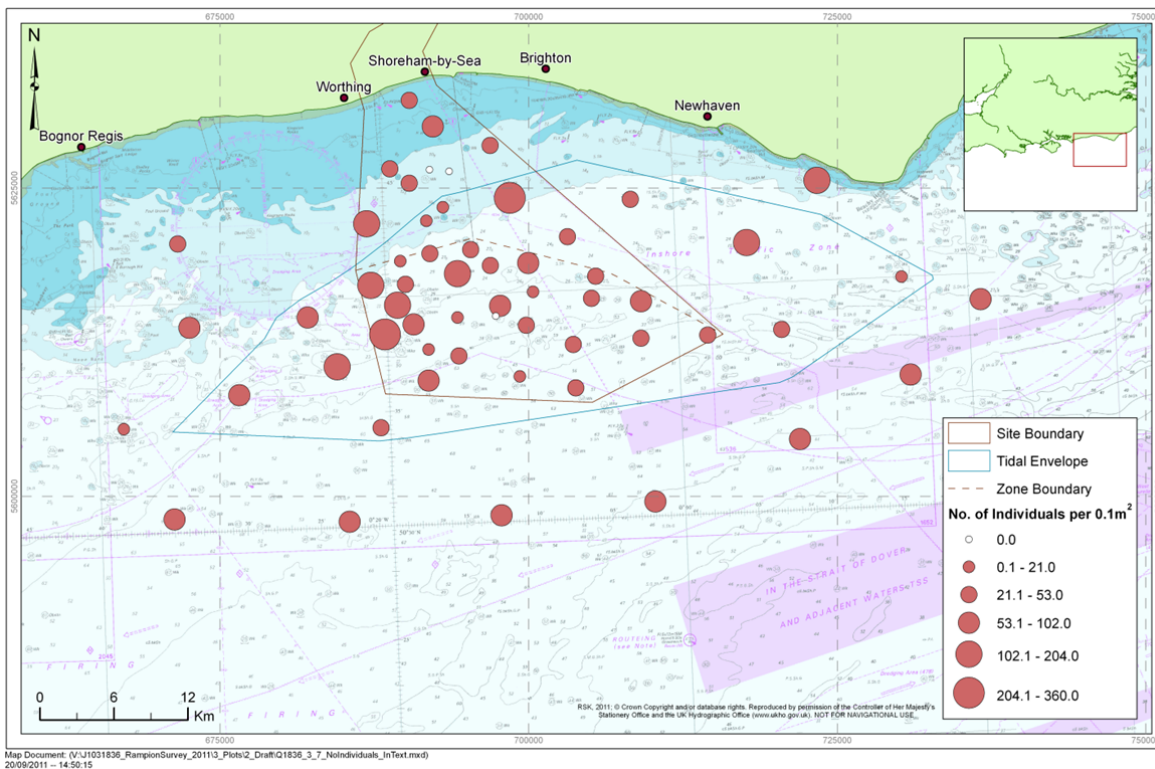


Figure 3.9 Distribution of numbers of individuals from grab samples across the survey area.

Transform: Fourth root
Resemblance: S17 Bray Curtis similarity

2D Stress: 0.2

groups 4th

- ▲ a
- ▼ b
- ◆ i
- * j

3.3.11 An initial SIMPROF analysis suggested that cluster B could be broken down into several smaller groups, but after consideration of their ecological basis it was decided to merge them into one coherent group with a within cluster similarity in excess of 30% in keeping with the other clusters identified. A total of four ecologically identifiable clusters were defined and are summarised in Table 3.4, along with associated community structure measures and average physical conditions

3.3.13 It is evident that there is a degree of species overlap with the sandier community found in Cluster I. This cluster supported a smaller range of species, although mean abundance was similar. The dominant species are typically recorded in sandy communities and is best described by the biotope

SS.SSa.CFiSa.EpusOborApri (*Echinocyamus pusillus*, *Ophelia borealis* and *Abra prismatica* in circalittoral fine sand). This cluster of sites was centred in the eastern part of the Zone (

3.3.14 Figure 3.11) with several sites in the Cable Route and towards the east of the array in the Tidal Envelope. The importance of *Abra prismatica* to the separation of this cluster is illustrated in Figure 3.14.

Table 3.4 Summary biological and physical attributes of sample groups derived from multivariate sample sorting of the faunal grab data.

Sample group	Main characterising species (bold = >5% contribution to similarity) with abundance 0.1m ²		Diversity Indices*		Physical factors	
			Index	Values	Factor	Values
A n = 4 38%	<i>Magelona johnstoni</i>	72.0	S	17.5	Gravel	8%
	<i>Magelona filiformis</i>	9.3	N	128.8	Sand	90%
	<i>Bathyporeia elegans</i>	7.3	d	3.73	Silt	2%
	<i>Bathyporeia guilliamsoniana</i>	5.0	J	0.715	Md(mm)	0.174
	<i>Polycirrus</i>	3.5	H	1.98	Sorting	1.270
					Depth	12.2
B n = 23 34%	<i>Echinocyamus pusillus</i>	12.3	S	34.0	Gravel	36.7%
	<i>Pomatoceros lamarcki</i>	6.2	N	100.7	Sand	56.8%
	<i>Notomastus</i>	5.8	d	7.26	Silt	6.5%
	<i>Abra alba</i>	5.4	J	0.855	Md(mm)	3.126
	<i>Lumbrineris cingulata</i>	5.1	H	2.98	Sorting	2.740
	<i>Sabellaria spinulosa</i>	3.8			Depth	35.1
	<i>Mediomastus fragilis</i>	3.2				
	NEMERTEA	2.8				
I n = 20 28%	<i>Abra prismatica</i>	6.5	S	25.8	Gravel	13%
	<i>Ophiura albida</i>	3.3	N	114.7	Sand	84%
	<i>Echinocyamus pusillus</i>	2.5	d	5.49	Silt	3%
	<i>Abra alba</i>	1.8	J	0.785	Md(mm)	0.514
	<i>Ophelia borealis</i>	1.7	H	2.48	Sorting	1.390
	<i>Nephtys cirrosa</i>	1.2			Depth	39.9
	NEMERTEA	1.1				
J n = 5 24%	<i>Ophelia borealis</i>	7.8	S	13.0	Gravel	22%
	<i>Spisula elliptica</i>	2.0	N	28.8	Sand	75%
			d	3.49	Silt	3%
			J	0.833	Md(mm)	0.372
			H	2.05	Sorting	2.028
					Depth	37

* No. of species (S), No. of individuals (N), Margalef's Diversity Index (d), Pielou's Evenness (J), Shannon Diversity index (H)

- 3.3.15 The inshore sites to the east of the Cable Route corridor, corresponding to Cluster A, supported the most sandy sediments, with a fauna typically comprising mobile crustacean species, such as *Bathyporeia* spp. and the relatively robust *Magelona* species, which were the dominants for these sites, although all of the contributing species tended to be inconsistently present (see Figure 3.15 for *Magelona johnstoni*). No clear fit to any biotope was possible with this species assemblage, although the higher level SS.SSa.IFiSa classification was appropriate (Infralittoral Fine Sand).
- 3.3.16 The final cluster (J) appears to represent an intermediate community between B and I, with a much reduced diversity and abundance of individuals. The fauna are typical of coarse sands, including the robust venerid bivalve, *Spisula elliptica*, and the disturbance tolerant polychaete, *Ophelia borealis*. Both of these species were also recorded in abundance at several sites included within clusters I and B. The sites from this cluster were recorded scattered over the area in all zones, with the exception of the Cable Route area. The most representative biotope is SS.SSa.CCS (Circalittoral Coarse Sand).

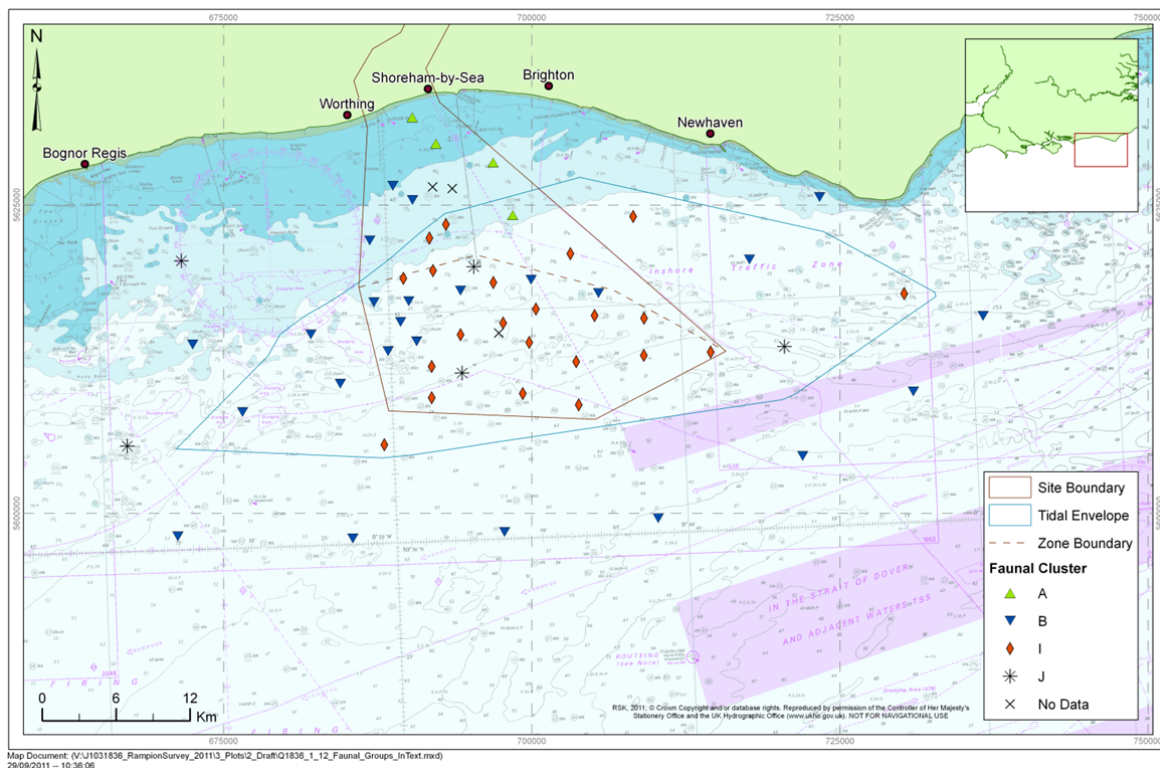


Figure 3.11 Distribution of the infaunal groups derived from PRIMER analysis of grab samples.

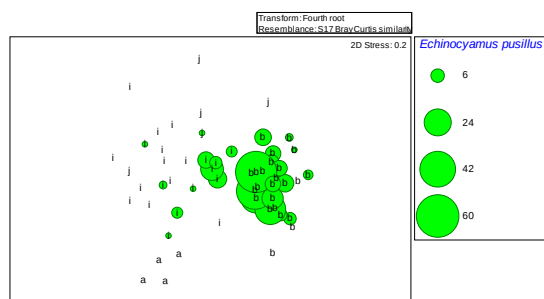


Figure 3.12 Abundance of *Echinocyamus pusillus* in Cluster B

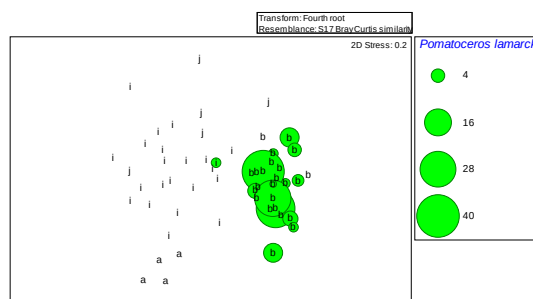


Figure 3.13 Abundance of *Pomatoceros lamarcki* in Cluster B

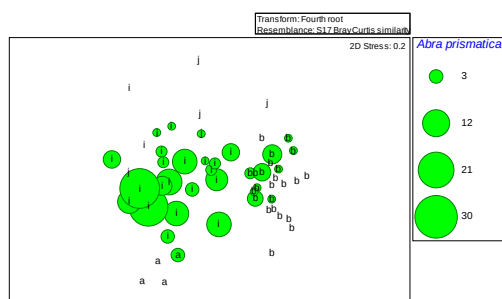


Figure 3.14 Abundance of *Abra prismatica* in Cluster I

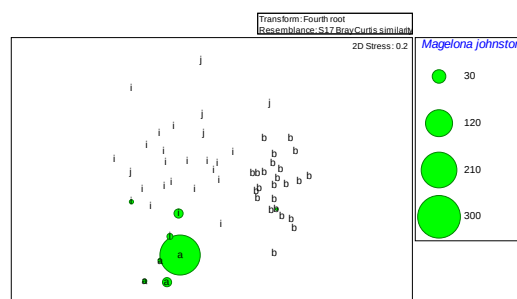


Figure 3.15 Abundance of *Magelona johnstoni* in Cluster A

3.3.17 Biomass at each site is expressed in Figure 3.16 based on data included in APPENDIX M.. The biomass in each of the clusters has also been summarised in Table 3.5.

Table 3.5 Summary biomass values per cluster based on the faunal grab data.

Cluster	(mean and sd)	Polychaeta	Crustacea	Molluscs	Echinoderms	Others	Total
A	Mean	0.895	0.057	0.314	14.685	0.002	15.952
	sd	0.981	0.060	0.412	14.790	0.003	15.492
B	Mean	0.897	1.325	4.086	0.654	0.379	7.340
	Sd	0.768	2.582	10.922	0.598	1.691	11.296
I	Mean	0.219	0.042	0.553	4.204	0.007	5.026
	sd	0.398	0.157	0.792	11.910	0.011	12.172
J	Mean	0.107	0.014	0.191	0.639	0.001	0.952
	sd	0.055	0.020	0.222	0.943	0.001	0.955

3.3.18 Maximum biomass was recorded in Cluster A with the minimum in Cluster J. However the variability of the biomass values was particularly high with both the Mollusca and Echinodermata distorting the values recorded. This is most likely to be due to one or two high biomass value individuals recorded in single samples. No clear pattern of biomass distribution is evident in the area (

3.3.19 Figure 3.16), with a range of high and low biomass values in each of the zones.

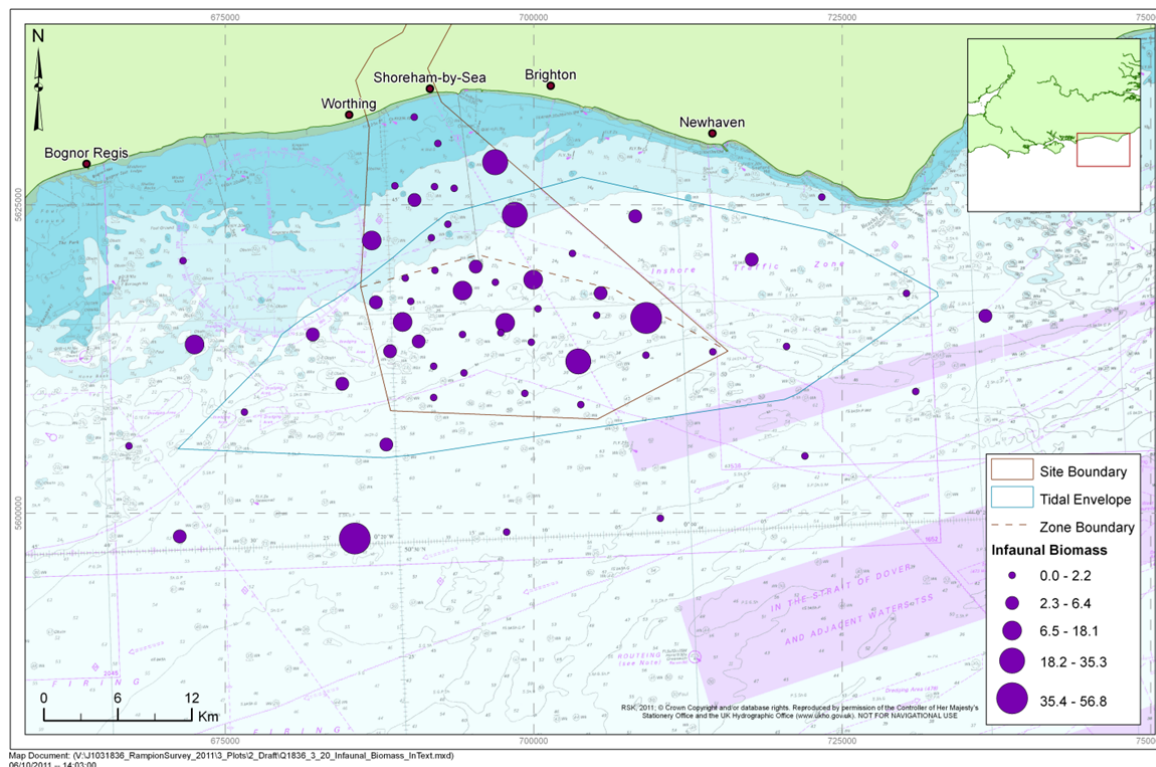


Figure 3.16 Distribution of the infaunal biomass values from grab samples across the survey area.

- 3.3.20 Overall relationship of the faunal groups and physical factors were considered through both BIOENV and PCA. The BIOENV analysis indicated that three variables, % Sand, Sorting and Depth represented 0.376 of the variation, which is relatively low. The PCA plot in
- 3.3.21 Figure 3.17 represents this relationship, illustrated on the basis of individual sites, those within Cluster I most related to the Sand vector and the reciprocal of the Sorting vector, generally in deeper waters, while the sites from cluster B have responded more to the coarser sediments and to some degree the presence of the silt and clay fraction.

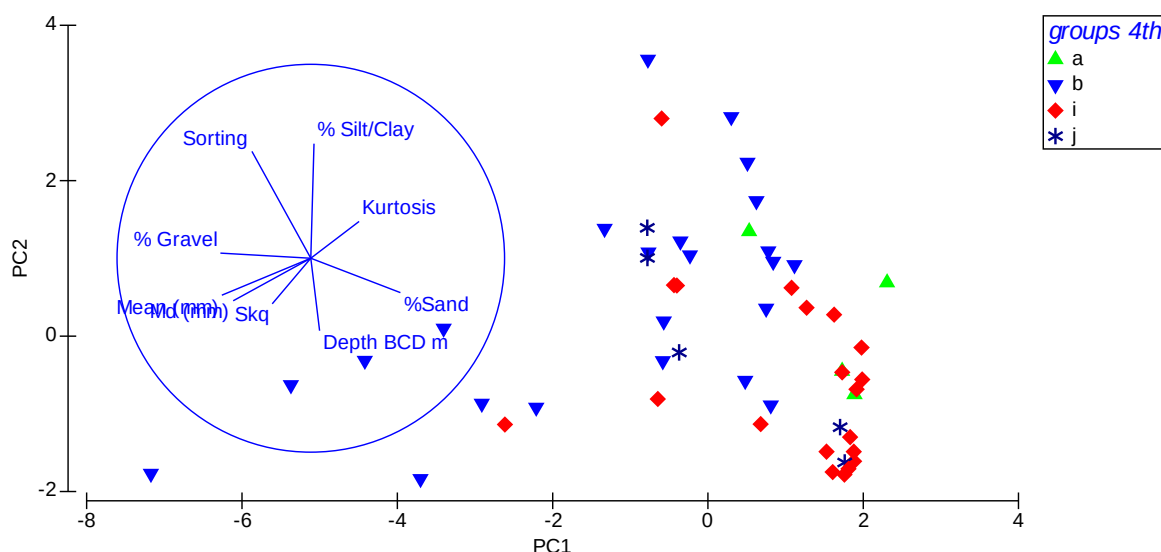


Figure 3.17 PCA plot of faunal sites, derived from cluster analysis, overlaid on the PCA of physical variables.

Epifauna from grab analysis

- 3.3.22 The colonial and encrusting epifauna from the grab survey were analysed independently using PRIMER analysis, based on presence absence data. The most frequently occurring species have been summarised in Table 3.6. A full summary of the fauna is included in Appendix N, with the MDS plot of site groupings based on faunal similarity in Figure 3.18.
- 3.3.23 The most frequently occurring species was the Bryozoan, *Schizomavella auriculata*, with several other Bryozoa, Hydrozoa and sponges occurring in more than 25% of the sites. The colonial epifauna in general were less frequently present than the infaunal species.

Table 3.6 Most frequently present sessile epifauna species from grabs samples, across the survey area.

Most frequently occurring species	Frequency (% of samples)
<i>Schizomavella auriculata</i>	62%
<i>Aspidelectra melolontha</i>	44%
<i>Escharella immersa</i>	40%
<i>Hydrallmania falcata</i>	33%
PORIFERA	27%
<i>Electra pilosa</i>	27%
<i>Cliona</i> spp. (agg.)	25%

Most frequently occurring species	Frequency (% of samples)
<i>Escharella ventricosa</i>	25%
<i>Epizoanthus couchii</i>	22%
Tubuliporidae	20%
<i>Disporella hispida</i>	20%
<i>Halecium</i> spp.	18%
<i>Sertularia</i> spp.	18%
<i>Conopeum reticulum</i>	18%
<i>Chorizopora brongniartii</i>	18%

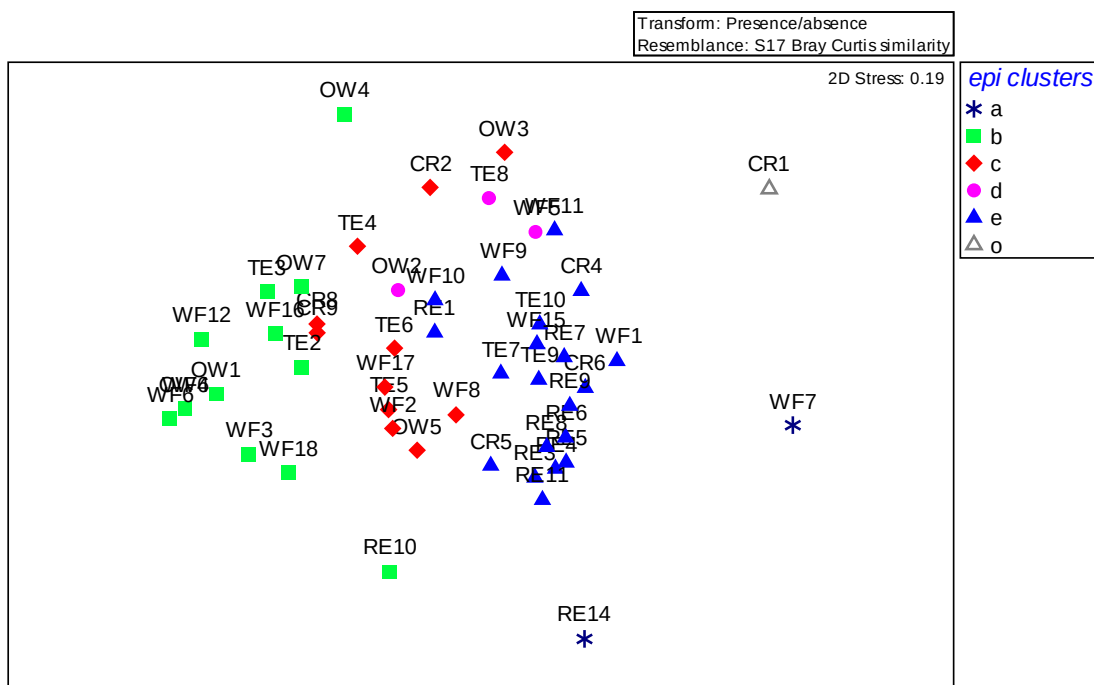


Figure 3.18 MDS of colonial and encrusting epifaunal species based on grab samples.

3.3.24 The outcome of the epifauna multivariate analysis resulted in three major clusters B, C and E, with two smaller clusters, A and D plus an outlier, as shown spatially in Figure 3.19. The division between the major groups is largely attributable to the absence of the Bryozoan *Aspidelectra melolontha* from group E, the absence of *Schizomavella auriculata* from group B in combination with a low diversity, with Cluster C transitional between the two.

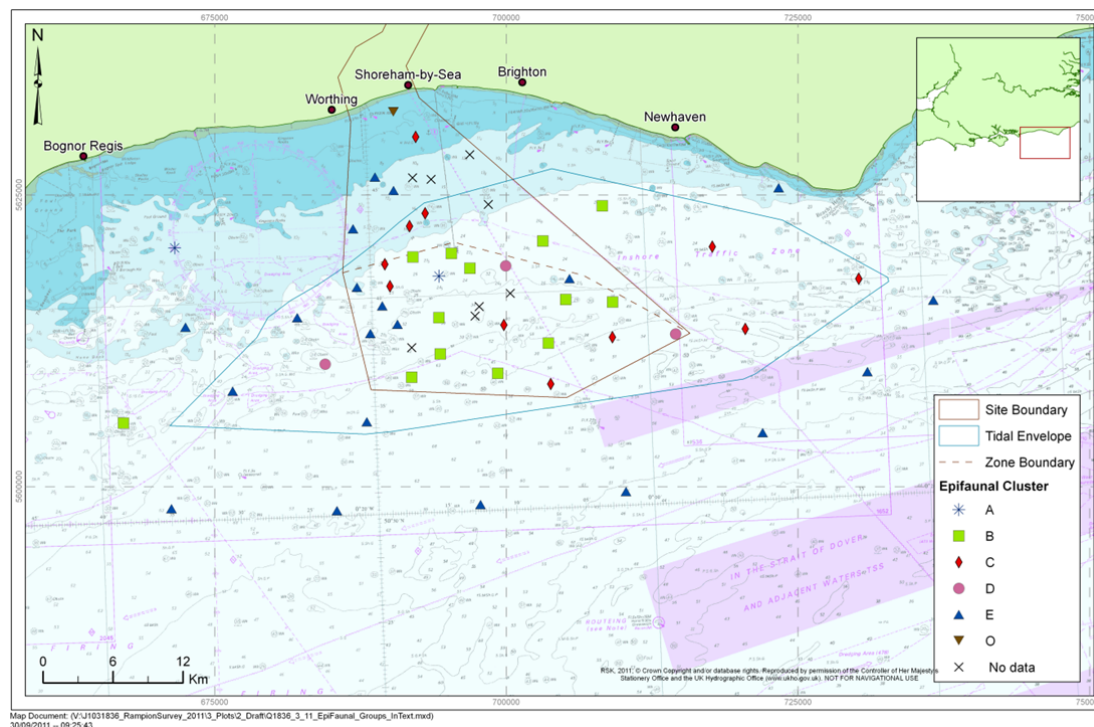


Figure 3.19 Distribution of colonial and encrusting epifauna derived from grab samples.

- 3.3.25 The distribution of the different clusters is illustrated in Fig. 3.19. In general the high diversity sites from Cluster E (mean 17), which supported *Schizomavella auriculata*, *Pomatoceros* spp., *Escharella immersa* and *Epizoanthus couchii*, were recorded in the peripheral areas of the survey, as well as the western parts of the Zone and Cable Route. These correspond with the sites related to the coarser sediments found in infaunal cluster B. The raised diversity within this group is apparently in response to the presence of the coarser sediment fraction, including gravels, which the encrusting species are able to exploit.
- 3.3.26 Epifaunal Cluster B in contrast supported a very low diversity encrusting epifauna, with a mean of 3 species, the most characteristic of which was *Aspidelectra melolontha*. This species is generally associated with brackish conditions but has been recorded previously in the eastern Channel in association with *Conopeum reticulum* and *Electra monostachys*. The sites from this cluster were associated with the Zone, with a few sites scattered to the north east and west, corresponding with the infaunal Cluster I.
- 3.3.27 Cluster C supported an intermediate community between Clusters B and E, with a mean of 7 species, the most frequent species including *Schizomavella auriculata*, *Aspidelectra melolontha* and *Conopeum reticulum*. These sites also fall spatially between the other two clusters occurring between them in the north west region of the Zone and Cable route and on the south east region of the Zone and Tidal Envelope. This cluster did not correspond with any infaunal group.
- 3.3.28 The two smaller encrusting epifauna clusters did not show any particular distributional pattern. Cluster A supported a mean of 2.5 species, with only the encrusting coralline algae characteristic. Cluster D supported slightly more species (6) with the Hydrozoa in more evidence, particularly the most characteristic *Halecium* spp..

3.4 Seabed image data

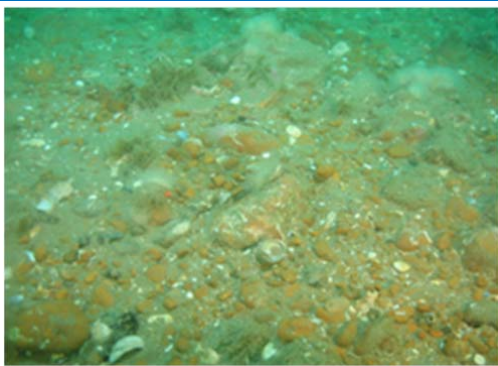
- 3.4.1 Data from the video analysis are included in Appendix O comprising a summary table of species recorded on the SACFOR scale per site, in addition to a summary description, on a site by site basis, with representative images included.
- 3.4.2 The most frequently occurring taxa are listed in Table 3.7. The most frequently recorded taxa were the Paguridae, with the mixed Bryozoan and Hydrozoan turf also recorded frequently. Of the individual species identified the echinoderms *Asterias rubens* and *Ophiura albida* were recorded in 63% and 59% of samples respectively. Other species of note included *Aequipecten opercularis*, the queen scallop, which was recorded in 23% of the samples.
- 3.4.3 The most abundant taxa or species groups based on the frequency of occurrence of the individuals at SACFOR scale Common (C) or above were the Algae in general, the Actinaria and *Mytilus edulis*.
- 3.4.4 The following data is a summary of the derived biotopes. A total of 14 biotopes or biotope complex level descriptions were identified. The most frequently present was SS.SSa.IFiSa.IMoSa, (Infralittoral Mobile sand). It should be noted that some of the biotopes derived do not fit well with the existing classification because of limitation with respect to Infralittoral habitats and Circalittoral habitats, i.e. descriptions only exist for biotopes in one or the other, whereas they clearly exist in both depth ranges. The SS.SSa.IFiSa.IMoSa biotope is an example of this as it was clearly within the circalittoral zone but the current classification only exists for the Infralittoral.
- 3.4.5 The habitat level description of SS.SCS.CCS (Circalittoral Coarse Sediment) was also frequently encountered along with the biotope SS.SCS.CCS.PomB (*Pomatoceros triqueter* with barnacles and bryozoan crusts on unstable circalittoral cobbles and pebbles). Brief descriptions are given for each of these habitats and biotopes (Table 3.8) with illustrations taken from the video records.

Table 3.7 Most frequently present taxa identified from the video survey

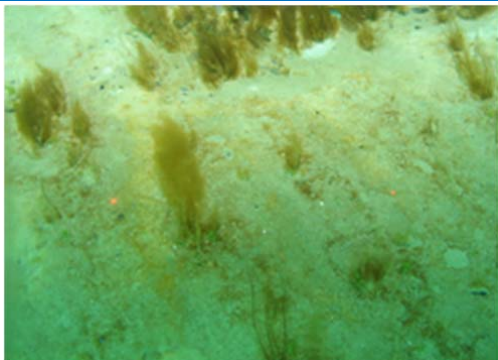
Most frequently occurring species	Frequenct (% of samples)
Hydroid/Bryzoan mixed substrate	67%
Paguridae	65%
<i>Asterias rubens</i>	63%
<i>Ophiura albida</i>	59%
<i>Pomatoceros</i> spp.	38%
Bryzoa crust	27%
<i>Aequipecten opercularis</i>	23%
<i>Psammechinus miliaris</i>	23%
ACTINARIA	21%
<i>Urticina</i> sp.	20%

Table 3.8 Summary description of Biotopes and Habitats derived from video survey.

Biotope	Characterisation	Image
SS.SCS.CCS. Circalittoral Coarse Sediment	Tide-swept circalittoral coarse sands, gravel and shingle generally in depths of over 15-20m. This habitat, as with shallower coarse sediments, may be characterised by robust infaunal polychaetes, mobile crustacea and bivalves.	
SS.SCS.CCS.PomB <i>Pomatoceros triqueter</i> with barnacles and bryozoan crusts on unstable circalittoral cobbles and pebbles	This biotope is characterised by a few ubiquitous robust and/or fast growing ephemeral species which are able to colonise pebbles and unstable cobbles and slates which are regularly moved by wave and tidal action. The main cover organisms tend to be restricted to calcareous tube worms such as <i>Pomatoceros triqueter</i> (or <i>P.lamarcki</i>), small barnacles including <i>Balanus crenatus</i> and <i>Balanus balanus</i> , and a few bryozoan and coralline algal crusts.	
SS.SCS.ICS.SSh Sparse fauna on highly mobile sublittoral shingle (cobbles and pebbles)	Sublittoral clean shingle and pebble habitats with a lack of conspicuous fauna. Unstable, rounded pebbles and stones (as opposed to sub-angular cobbles, which are often found lying on or embedded in other sediment) that are strongly affected by tidal steams and/or wave action can support few animals and are consequently faunally impoverished. Appropriate for both infralittoral and circalittoral habitats. Appropriate for both infralittoral and circalittoral habitats.	

Biotope	Characterisation	Image
SS.SMx.CMx Circalittoral Mixed Sediment	Mixed (heterogeneous) sediment habitats in the circalittoral zone (generally below 15-20m) including well mixed muddy gravelly sands or very poorly sorted mosaics of shell, cobbles and pebbles embedded in or lying upon mud, sand or gravel.	
SS.SMx.CMx.FluHyd <i>Flustra foliacea</i> and <i>Hydrallmania falcata</i> on tide-swept circalittoral mixed sediment	This biotope represents part of a transition between sand-scoured circalittoral rock where the epifauna is conspicuous enough to be considered as a biotope and a sediment biotope where an infaunal sample is required to characterise it and is possibly best considered an epibiotic overlay. <i>Flustra foliacea</i> and the hydroid <i>Hydrallmania falcata</i> characterise this biotope. This image also illustrates one of the associated species <i>Alcyonium digitatum</i> .	
SS.SMx.IMx Infralittoral Mixed sediment	Shallow mixed (heterogeneous) sediments in fully marine or near fully marine conditions, supporting various animal-dominated communities, with relatively low proportions of seaweeds. This habitat may include well mixed muddy gravelly sands or very poorly sorted mosaics of shell, cobbles and pebbles embedded in mud, sand or gravel.	
SS.SMx.IMx.CreAsAn <i>Crepidula fornicata</i> with ascidians and anemones on infralittoral coarse mixed sediment	Medium-coarse sands with gravel, shells, pebbles and cobbles on moderately exposed coasts may support populations of the slipper limpet <i>Crepidula fornicata</i> with ascidians and anemones. <i>C.fornicata</i> is common in this biotope. Anemones such as <i>Urticina felina</i> and <i>Alcyonium digitatum</i> and ascidians such as <i>Styela clava</i> are typically found in this biotope. The sediments in this example of the biotope were subject to apparent sand inundation.	

Biotope	Characterisation	Image
SS.SSa.IFiSa Infralittoral fine sand	Clean sands which occur in shallow water, either on the open coast or in tide-swept channels of marine inlets. The habitat typically lacks a significant seaweed component and is characterised by robust fauna, particularly amphipods (<i>Bathyporeia</i>) and robust polychaetes including <i>Nephtys cirrosa</i> and <i>Lanice conchilega</i> .	
SS.SSa.IFiSa.IMoSa Infralittoral mobile clean sand with sparse fauna	Medium to fine sandy sediment in shallow water, often formed into dunes, on exposed or tide-swept coasts often contains very little infauna due to the mobility of the substratum.	
SS.SSa.IMuSa Infralittoral muddy sand	Non-cohesive muddy sand (with 5% to 20% silt/clay) in the infralittoral zone, extending from the extreme lower shore down to more stable circalittoral zone at about 15-20 m.	
SS.SBR.SMus Sublittoral mussel beds (on sublittoral sediment) and SS.SBR.SMusMytSS Mytilus edulis beds on sublittoral sediment	Shallow sublittoral mixed sediment, in fully marine coastal habitats or sometimes in variable salinity conditions in the outer regions of estuaries, are characterised by beds of the common mussel <i>Mytilus edulis</i> . Two levels were identified including sites with poor examples and several good examples of mussel beds.	

Biotope	Characterisation	Image
IR.HIR.Ksed Sediment-affected or disturbed kelp and seaweed communities	Infralittoral rock habitats, subject to disturbance through mobility of the substratum (boulders or cobbles) or abrasion/covering by nearby coarse sediments or suspended particulate matter (sand).	
CR.HCR.XFa Mixed faunal turf communities	This biotope complex occurs on wave-exposed circalittoral bedrock and boulders, subject to tidal streams ranging from strong to moderately strong. This complex is characterised by its diverse range of hydroids bryozoans and sponges forming an often dense, mixed faunal turf. The image indicates the occurrence of isolated boulders along with SS. SCS.CCS and exposed examples of soft rock CR.MCR.SfR.	

3.4.6

3.4.7 Figure 3.20 illustrates the distribution of the sedimentary biotopes, while Figure 3.21 illustrates the biotopes for the hard ground habitats.

3.4.8 The biotopes derived from the video analysis broadly follow the distribution identified for both the enumerated infauna and the colonial and encrusting epifauna (Figure 3.20). The peripheral areas were occupied by the SS.SCS.CCS biotope complex, with SS.SCS.CCS.PomB occurring in the more inshore sites, particularly along the northern edge of the Zone and to the west of the Cable Route area. The SS.SMx.CMx biotopes tended to be found in the more inshore areas, including the north west of the Zone, although replaced by the IMX, including SS.SMx.IMx.CreAsAn in the shallow water sites very close inshore in the Cable Route area. The sand based habitats and biotopes, particularly the SS.SSa.IFiSa.IMoSa were found over large parts of the Zone with more muddy sediments IMuSa, occurring closer inshore.

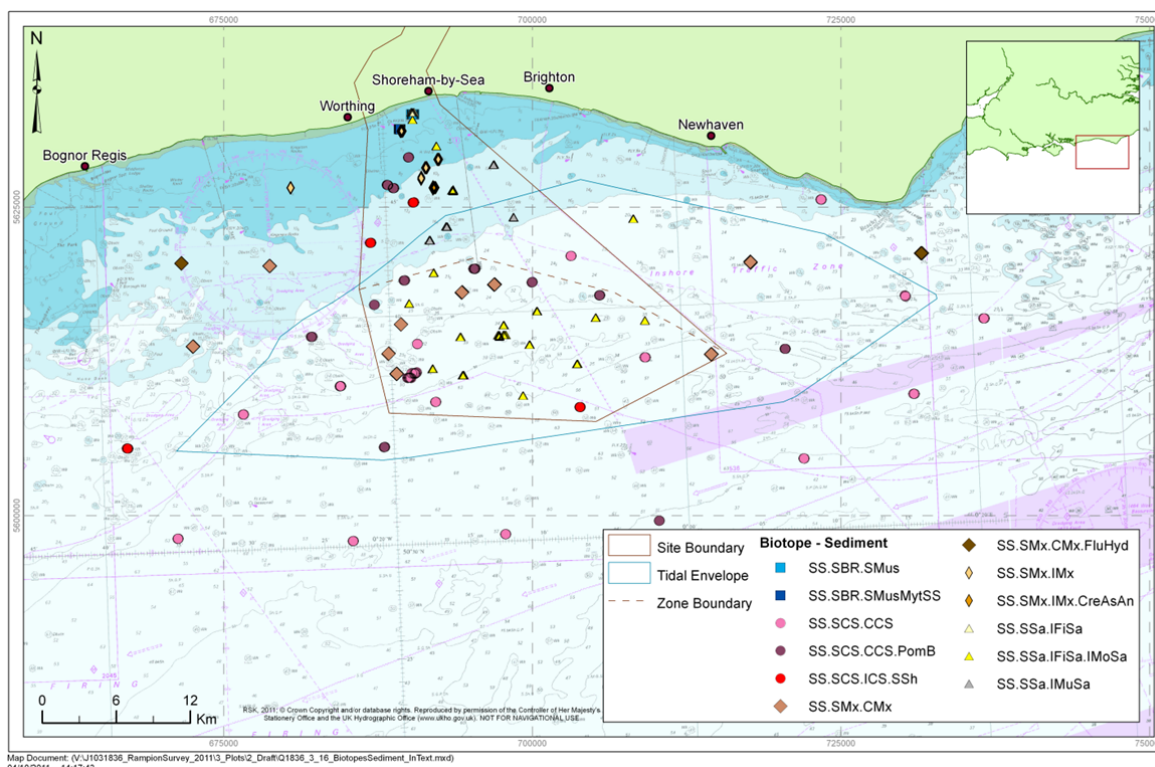


Figure 3.20 Distribution of sedimentary biotopes for the survey area based on video data

3.4.9 Sublittoral Biogenic Reef was recorded in the sites close inshore within the Cable Route area, with SS.SBR.SMus/SS.SBR.SMusMytSS identified at two sites. Although associated with soft sediments, it is likely that this biotope is encouraged by emergent bedrock and superficial cobbles. Other hard ground sites were identified (Figure 3.21) and it is highly likely that further areas of both soft and hard rock outcrop occur across the area. These rock outcrops are covered by very thin layers of sediment, which are ephemeral in many cases. The biotope IR.HIR.Ksed is a good example of this with algal species emerging through a sandy layer overlying a subsurface rock, probably chalk in this instance. The distribution of these habitats is, therefore, not well represented by the data collected using the video equipment although it does give an indication of potential features. The data presented in Figure 3.21, suggests that the majority of these areas are located both inshore and to the west of the area. The interpretation of the SSS illustrated in Figure 1.4 gives a better idea of the complexity of the rock outcrop in the area although it is relatively limited in extent.

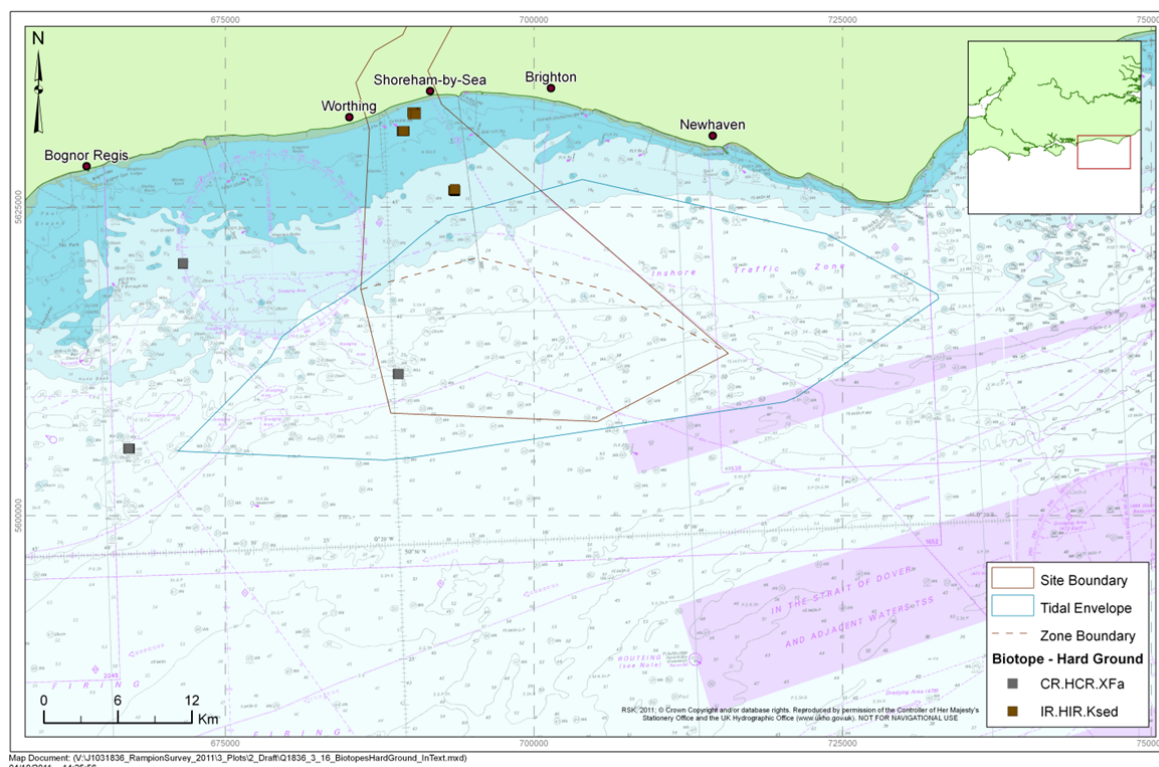


Figure 3.21 Distribution of hard ground biotopes for the survey area based on video data.

3.5 2 m Beam Trawl data

- 3.5.1 The data employed in the analysis of the 2m Beam Trawls is included in Appendix P. The most frequently recorded individuals and their mean abundance are recorded in Table 3.9, while the most abundant taxa are recorded in Table 3.10 (mean and maximum). The distribution of both number of species and abundance is presented in Figure 3.22 and Figure 3.23.
- 3.5.2 The taxa most frequently recorded by the 2 m Beam Trawling were Echinodermata or Crustacea, with the common starfish *Asterias rubens* most frequently encountered (100% of sites) followed by the hermit crab *Pagurus bernhardus* and the brittlestar *Ophiura albida*, both in 94% of sites. The abundance of many of the most frequently encountered species however, was relatively low, with only *Ophiura albida* and *Psammechinus miliaris* recorded in large numbers. The greatest overall abundance was recorded for *Alcyonidium diaphanum*, although it should be noted that the means of calculating a comparable abundance for this colonial species was based on biomass conversion. The most abundant epibenthic species was *Ophiura albida* followed by *Psammechinus miliaris*, both with very large individual maximum abundances.
- 3.5.3 Figure 3.22 indicates that the higher diversity sites were noted across the middle of the survey area, with low values in the inshore area along the Cable Route. Other low diversity sites were noted in the Zone and to the west of the Tidal Envelope. No clear trend was evident for the abundance data, with a range of values evident within each of the zones.

Table 3.9 Most frequently recorded taxa from the 2m Beam Trawl survey

Most frequently recorded taxa	Frequency	Mean abundance (0.1m ²)
<i>Asterias rubens</i>	100%	68
<i>Pagurus bernhardus</i>	94%	23
<i>Ophiura albida</i>	94%	302
<i>Pagurus prideaux</i>	89%	6
<i>Macropodia parva/rostrata</i>	89%	15
<i>Ophiotrix fragilis</i>	89%	23
<i>Psammechinus miliaris</i>	89%	239
<i>Crangon allmanni</i>	83%	15
<i>Liocarcinus holstatus</i>	83%	15
<i>Aequipecten opercularis</i>	78%	28

Table 3.10 Most abundant taxa from the 2 m Beam Trawl survey

Most abundant taxa	Mean abundance (0.1m ²)	Max abundance (0.1m ²)
<i>Alcyonidium diaphanum</i>	380	1525
<i>Ophiura albida</i>	302	1458
<i>Psammechinus miliaris</i>	239	898
<i>Flustra foliacea</i>	100	426
<i>Ophiura ophiura</i>	79	266
<i>Asterias rubens</i>	68	205
<i>Balanus crenatus</i>	64	273
<i>Alcyonium digitatum</i>	61	200
<i>Aequipecten opercularis</i>	28	227
<i>Pagurus bernhardus</i>	23	67

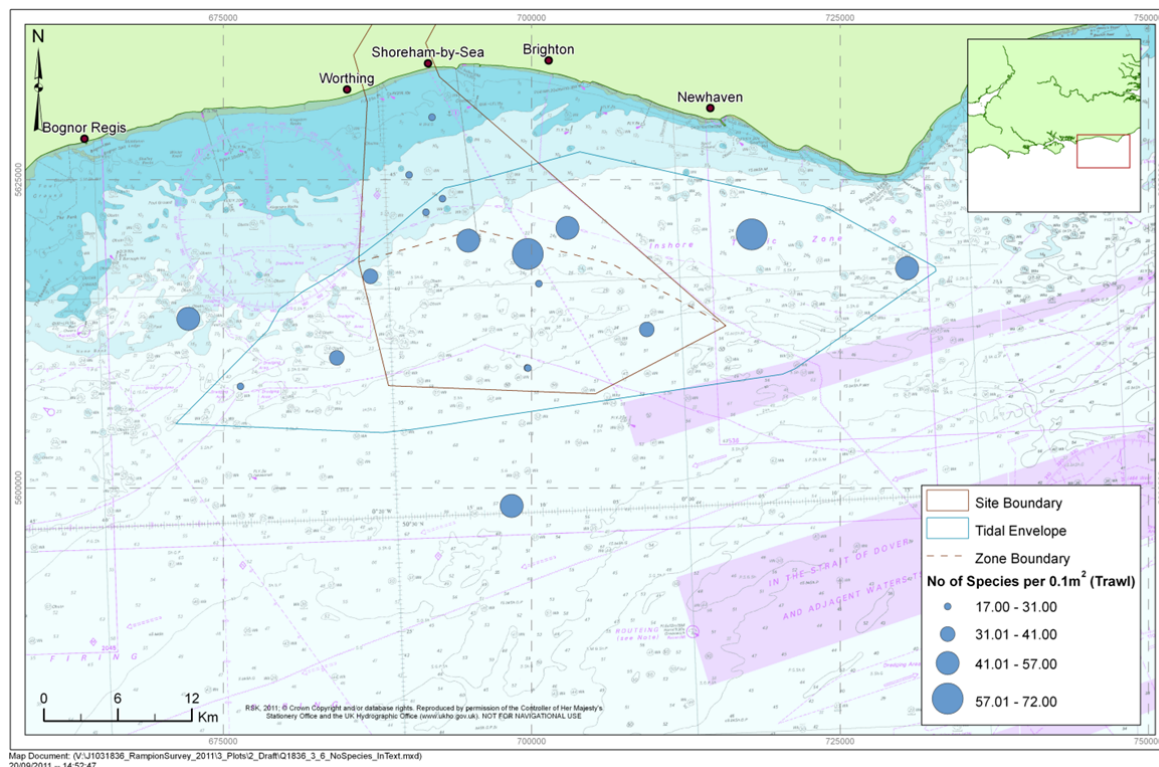


Figure 3.22 Number of taxa per 2 m Beam Trawl across the survey area.

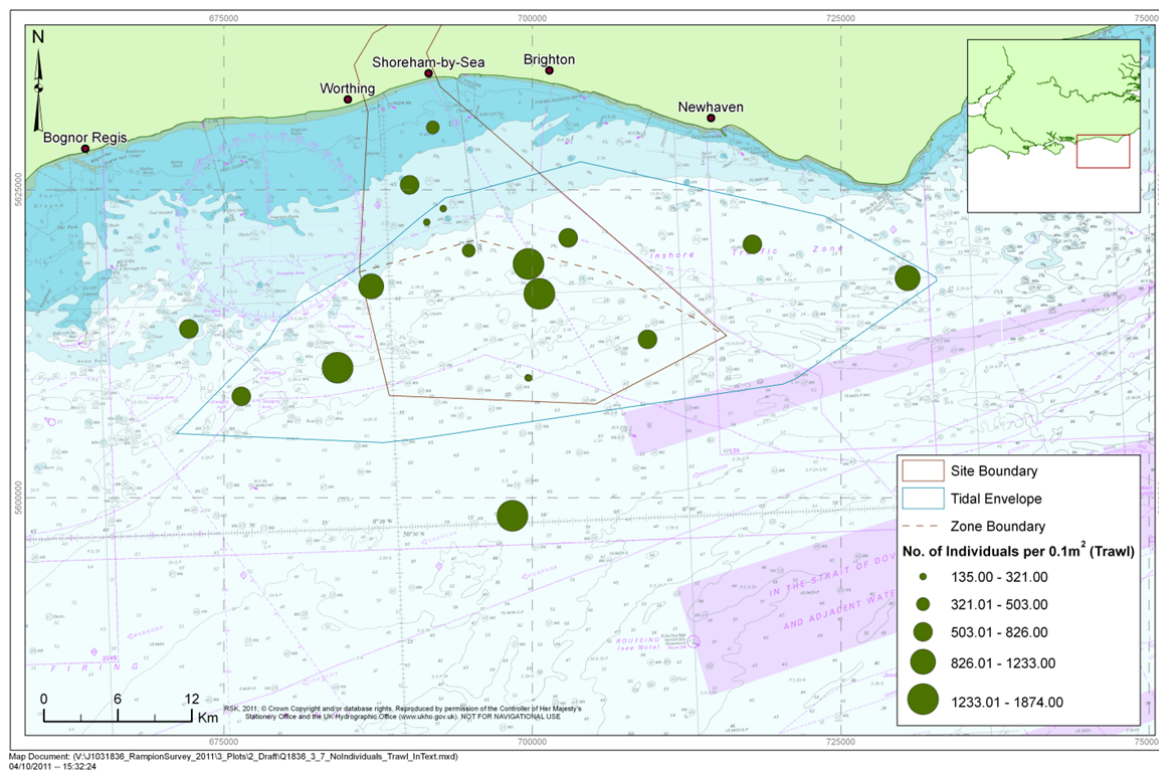


Figure 3.23 Number of individuals per 2 m Beam Trawl across the survey area.

3.5.4 The data were subjected to PRIMER analysis using Cluster and Ordination analyses to identify groupings of sites with similar faunal compositions. Initial analyses employed fourth root transformation but the exceptionally high values at certain sites still undervalued some of the more important but low abundance species. Hence the analysis was completed on presence / absence data. The MDS of this output is illustrated in Figure 3.24.

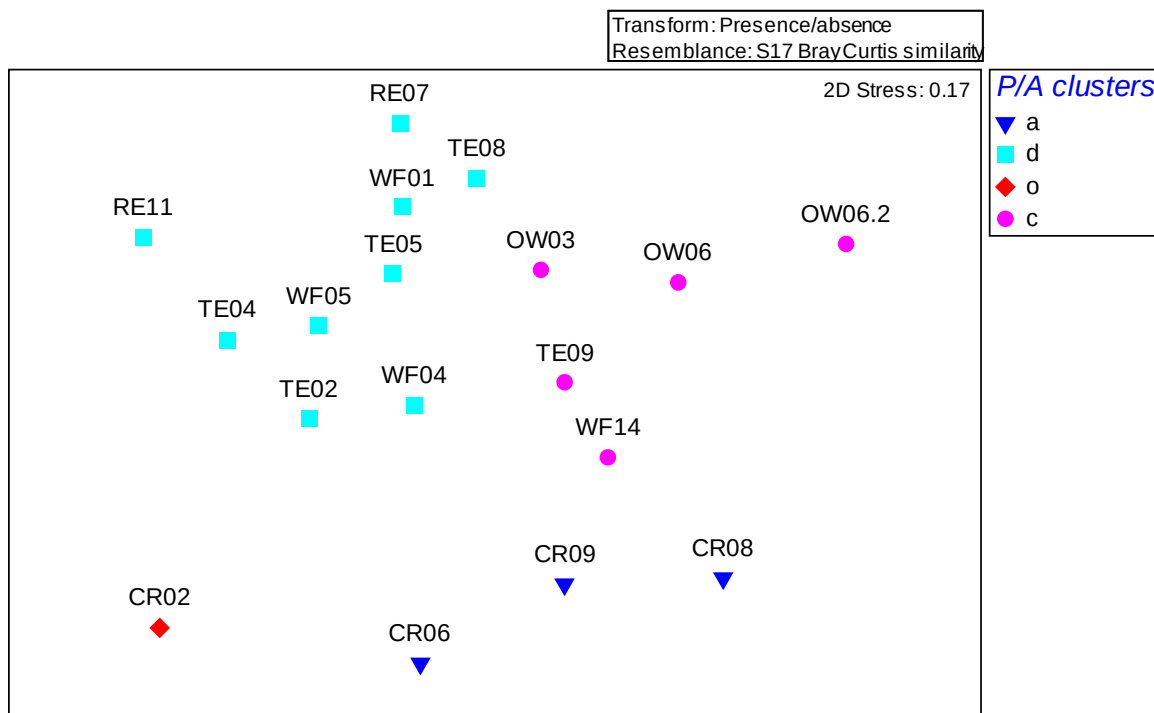


Figure 3.24 MDS of the 2 m Beam Trawl sites based on presence/absence data.

3.5.5 To identify the most important contributory species, iterative plotting of species abundances was conducted on the MDS plot, enabling those species with greatest relative importance to be identified.

3.5.6 The two major clusters C and D comprised distinctly different communities, with the greatest diversity and abundance noted in Cluster D (mean of 54 species and >1500 individuals); Cluster C comprising a mean of 27 species and >700 individuals.

3.5.7 The characterising species in Cluster D are indicative of the mixed sediment conditions in the area with a great variety of faunal groups including sessile species such *Alcyonium diaphanum* and *Ciona intestinalis* in combination with a diverse echinoderm community including *Psammechinus miliaris* (Figure 3.25), *Ophiura albida* and *Ophiothrix fragilis*, and a variety of crustacean species including several of the small spider crab species, such as *Inachus dorsetensis* (Figure 3.26).

3.5.8 Cluster C in contrast was defined by relatively low abundance species which typified more mobile sediments, with species such as the lesser weever fish, *Echiichthys vipera* (Figure 3.27) and *Crangon allmanni* recorded frequently and in relatively high abundance.

3.5.9 The sites comprising cluster A differed from the others due to reduced overall number of species (25 spp) and abundance (>500 ind) with a different range of sessile species in comparison with the other clusters, including the absence of *Alcyonidium diaphanum* and *Flustra foliacea* but the presence of *Balanus crenatus* and *Alcyonium digitatum*. The most characteristic species were some of the more mobile species such as the fish *Raja clavata* and the Gobiidae (Figure 3.28), although these species were by no means ubiquitous within the group.

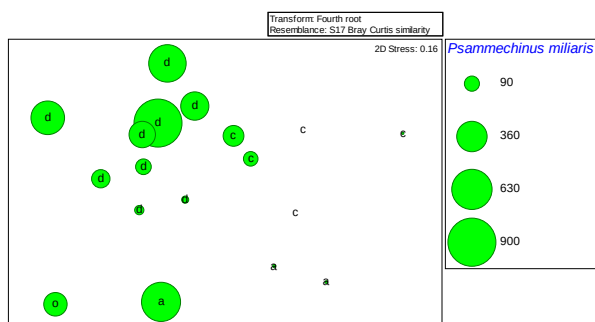


Figure 3.25 Abundance of *Psammechinus miliaris* in Cluster D

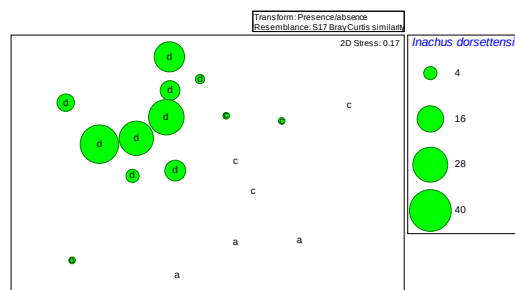


Figure 3.26 Abundance of *Inachus dorsettensis* in Cluster D

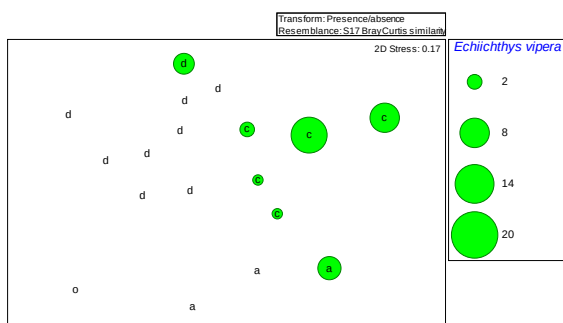


Figure 3.27 Abundance of *Echiichthys vipera* in Cluster C

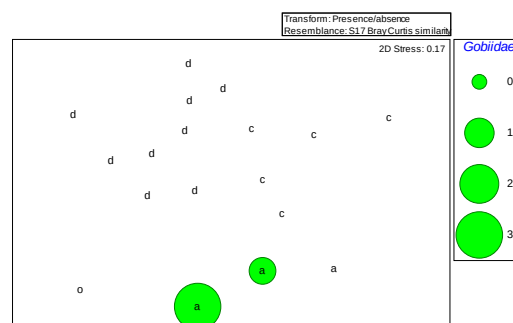


Figure 3.28 Abundance of the Gobiidae in Cluster A

3.5.10 The outlier site CR2 was similar in community structure to Cluster A but supported a slightly different assemblage of species with two of these particular characteristic, the goby, *Pomatoschistus* spp. and the solenette, *Buglossidium luteum*.

3.5.11 The distribution of the different clusters has been plotted in Figure 3.29. They follow the same general trends that have been identified for the other data sets, with Cluster D present over the mixed sediments in a line extending from the western and southern extents of the Reference area, across the Zone and into the Tidal Envelope as far as the eastern most point of the survey. Cluster C in contrast was largely limited to the Zone in the more mobile sediment habitats.

3.5.12 Cluster A and the outlier were limited to the inshore waters in the Cable Route area, where a mixture of habitats was noted, although all had a degree of sediment mobility.

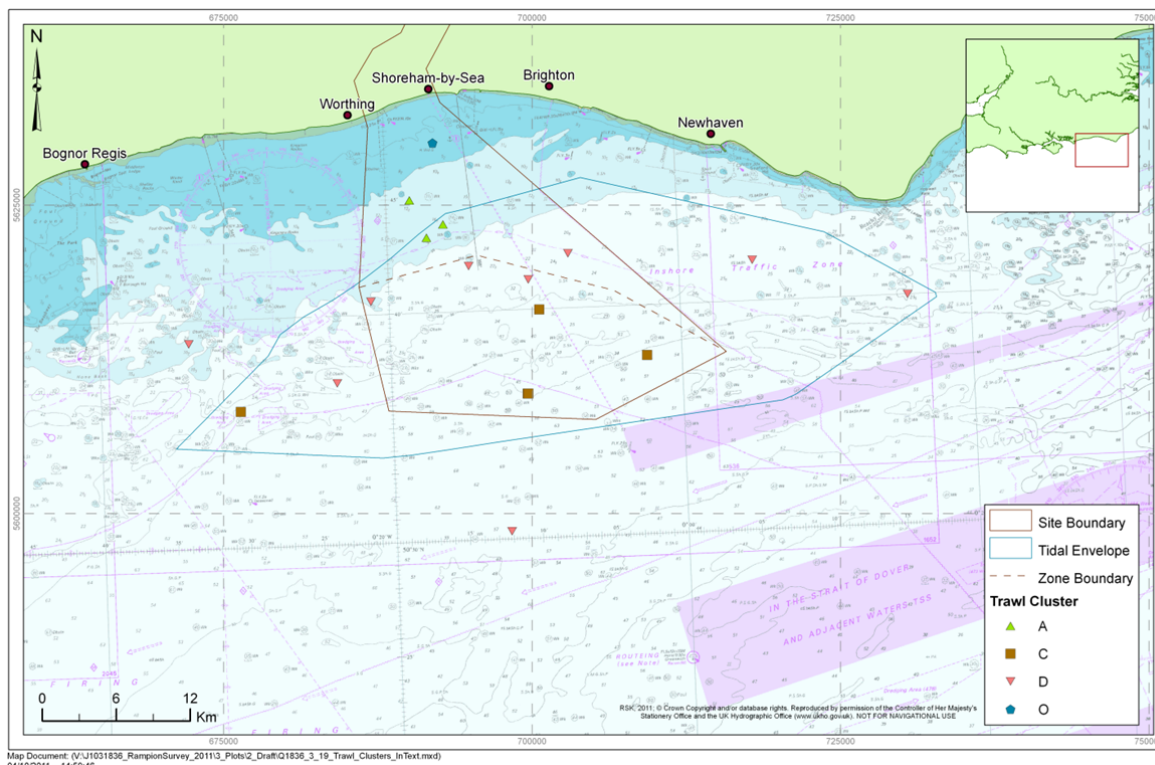


Figure 3.29 Distribution of the faunal clusters derived from the analysis of the 2 m Beam Trawl data.

3.6 Features of conservation importance

3.6.1 The Rampion development site does not encompass any currently designated European or National sites (SPA, SAC, Ramsar or SCI); however, some of the species and habitats recorded during the site specific survey are noted for their nature conservation importance and/or rarity. These are presented and discussed below, listed directly under the OSPAR and BERN conventions, or through the Wildlife and Countryside Act (1981 and as amended) and/or the Habitats Directive (92/43/EEC). At a regional/local level planning authorities must give regard to UK BAP through the NERC Act 2006 through Clause 7 of The Infrastructure Planning (Decisions) Regulations 2010. A summary of the habitat features of conservation interest is illustrated in Figure 3.30.

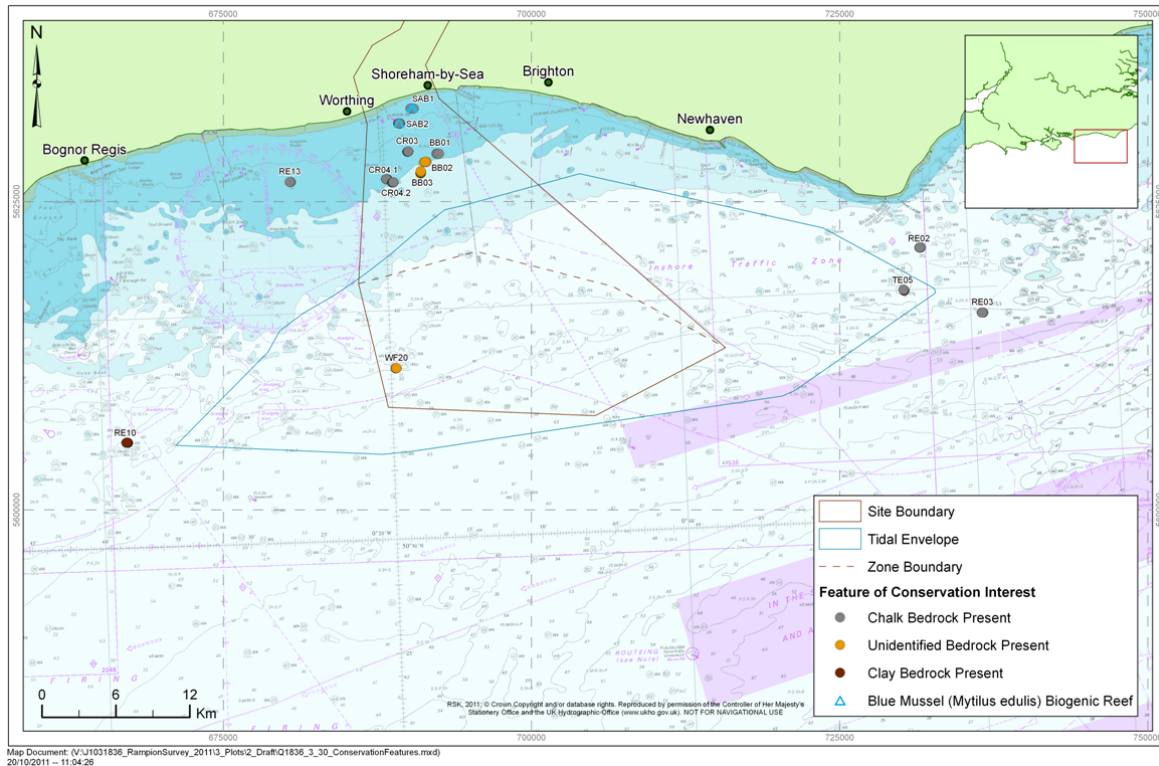


Figure 3.30 Habitat features of conservation interest, identified through video analysis.

Reefs

- 3.6.2 Reefs are listed under Annex I of the Habitat Directive. The definition of “reef” has been subject to modification since adoption of the Directive, with the most recent interpretation provided by the European Union in 2007 (CEC, 2007). For UK waters, Annex I reefs have been categorised into three broad sub-types: these are bedrock reefs, stony reefs and biogenic reefs.
- 3.6.3 Video analysis (See Appendix O) identified sites where sands and mixed sediments overlay bedrock that was either exposed in limited areas or fully covered by a thin layer of overlying sediment. Two types of bedrock were positively identified in the surveyed area, chalk and clay. Exposed chalk bedrock was recorded at 5 sites, namely SAB1, SAB2 and CR3 within the area for the proposed Cable Route and the Reference Sites RE2, RE13. Sites BBT1 and CR4 along the proposed Cable Route, the Tidal Envelope site TE5 and the Reference Site RE3 were also identified as having an underlay of chalk bedrock with a thin overlay of other sediment. An area of clay bedrock, with burrowing piddock bivalve molluscs, was observed at site RE10.
- 3.6.4 Exposed bedrock was also recorded along the proposed cable route at sites BBT2 and BBT3, and at site WF20, at the edge of the proposed wind farm zone. RE1 was also identified as a possible site with bedrock, but due to poor visibility, this could not be conclusively ascertained.
- 3.6.5 The definition of “stony reef” under the Habitat Directive was discussed during an inter-agency workshop and subsequent discussion in 2008 (Irving, 2009), when several key parameters were established in order to define “reefiness” (Appendices Q and R). These parameters were adhered to during the assessment of potential cobble reefs within the development site. Although Cable Route sites CR3 and CR4, as well as sites RE6 and 13, do contain a noticeable percentage of surface cobbles,

there was not a high enough percentage and / or a sufficient amount of epifauna to be deemed to be “stony reef”.

- 3.6.6 A sublittoral blue mussel (*Mytilus edulis*) biogenic reef was recorded in the sites close inshore within the Cable Route area, with SS.SBR.SMus and SS.SBR.SMusMytSS identified at sites SAB1 and SAB2 respectively, colonising the chalk bedrock. As well as being listed under Annex I reef habitats, blue mussel reefs are listed as a UK BAP habitat and as a Feature of Conservation Importance (FOCI) to be protected under proposed Marine Conservation Zones (MCZ's).
- 3.6.7 The IR.HIR.Ksed. and CR.HCR.Xfa. biotopes, forming mosaics of different coarse and mixed biotopes also fall within the Annex I habitat type “reef”.
- 3.6.8 *Sabellaria* reef was tentatively identified in six areas from geophysical data (Osiris, 2010) and sites were located within the current study to ground truth the possible presence. *Sabellaria* reef was not identified from video analysis using the system for evaluating the “reefiness” of *Sabellaria* congregations (Appendix R, Gubbay, 2007). *Sabellaria* congregations were recorded from trawls namely the reference site RE11, the outer wind farm site OW3, and within the tidal envelope at sites TE2 and TE4. Small amounts of thin crust were also recorded at Wind Farm sites WF4 and WF5. None of the aggregations were substantial. Grab samples did contain *Sabellaria* specimens but abundances were not high. Only a thin crust (<0.5 cm), making up less than 1% of the sample, was recorded from one of the pre-designated *Sabellaria* sites SAB3.

Circalittoral sands and coarse sediments

- 3.6.9 Subtidal sand and gravel habitats (SS.SCS.CCS, SS.SCS.CCS.PomB. and SS.SCS.ICS.SSh) fall within the UK BAP habitat “subtidal sands and gravel” (JNCC, 2010). Sand and gravel habitats are widespread around the British Isles. They occur in a range of environmental conditions which determine the type of faunal communities that live in this habitat. Offshore gravel and sand habitats support internationally important commercial fisheries, such as those for scallops and flatfish. They are also important nursery grounds for the young of commercial fish species such as flatfish, bass, skates, and rays as well as sharks.

Sheltered muddy gravels

- 3.6.10 SS.SMx.IMx.CreAsAn falls with the UK BAP habitat of “sheltered muddy gravels” and was attributed to site SAB3, located within the area of the proposed Cable Route.

Sandbanks

- 3.6.11 Sub-types of SS.SCS.CCS can fall within the Annex 1 habitat “sandbanks which are slightly covered by sea water at all times”, but all sites that had the biotope attributed lay at depths of more than 20 m, with the exception of the Reference Site RE1, that does not fit other criteria of the Annex 1 habitat.

Thornback skate/ray Raja clavata

- 3.6.12 The thornback ray is on the OSPAR list of threatened species as agreed at the OSPAR convention for the protection of the marine environment of the North-East Atlantic, 2008. One specimen was recorded at each of the proposed Cable Route sites CR6 and CR9, and within the Tidal Envelope at site TE2. Although covered by legislation, the species also has a global red list status with a near threatened designation.

Spotted skate/ray Raja montagui

- 3.6.13 The spotted ray is on the OSPAR list of threatened species as agreed at the OSPAR convention for the protection of the marine environment of the North-East Atlantic, 2008. One specimen was recorded from each of the Wind Farm site WF4 and the Tidal Envelope site TE5.

Sea monkfish Lophius piscatorius

- 3.6.14 The monkfish is listed as a species “of principal importance for the purpose of conserving biodiversity” covered in England only under the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. It is also listed as a UK BAP priority species under threat. One specimen was recorded from each of the Wind Farm site WF4 and the Tidal Envelope site TE5. One specimen was recorded at Wind Farm site WF1.

Sand goby Pomatoschistus minutus

- 3.6.15 The sand goby is protected under the BERN convention. Three specimens were recorded at Wind Farm site WF14, 1 specimen at Wind Farm site WF5 and 1 specimen within the Tidal Envelope at site TE2.

Plaice Pleuronectes platessa

- 3.6.16 Plaice is listed as a UK BAP priority species and as a species “of principal importance for the purpose of conserving biodiversity”, covered in England and Wales under the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. Twenty seven specimens were recorded at the surveyed sites CR2 (3), WF14 (2), OW3 (6), OW6 (6), TE2 (3), TE5 (1), TE8 (4) and TE9 (2).

Sole Solea solea

- 3.6.17 Sole are listed as a species “of principal importance for the purpose of conserving biodiversity”, covered in England and Wales under the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. It is also listed as a UK BAP priority species under threat. Eight specimens were recorded at the surveyed sites CR2 (1), WF5 (2), WF14 (2), OW3 (1), TE8 (1) and RE11 (1).

Black seabream Spondyliosoma cantharus

- 3.6.18 Three possible black bream nesting sites were identified from previous side scan sonar and swath bathymetry surveys (Osiris, 2010) within the proposed export cable route. Further drop down video surveys of these areas could not confirm their presence.

4 SUMMARY

4.1 Physical environment

- 4.1.1 Sediments were generally comprised of sands and gravelly sands with several areas of sandy gravels. Siltier sediment was recorded to the west of the survey area, primarily in the west part of the wind farm Zone. Sands were recorded predominantly to the east of the Cable Route and within the central wind farm Zone where the most well sorted sands were found.
- 4.1.2 A group of predominantly gravel sites fell to the west of the array including sites within the Cable Route corridor, the wind farm Zone and both the Tidal Envelope and the Reference Areas.
- 4.1.3 Findings of sediment sample analyses appear to generally agree with the predicted range and distribution of sediments described for the MESH habitats. The central areas of the Zone match with the predicted deep circalittoral sand and the peripheral areas match with the deep circalittoral coarse sediments. The only areas which did not match well were the areas where siltier sediments were identified, which MESH indicated to the east, while the current data suggest they occurred in the centre and towards the west of the array. The UKSeaMaps data in contrast suggest extensive areas of rock or reef, which clearly did not match with the current data. However, some of the sedimentary material identified was relatively superficial, comprising thin layers overlaying chalk bedrock.

4.2 Contaminants

- 4.2.1 Eleven of the sites sampled supported levels of contaminants in excess of Action Level 1, for one or more metals, specifically Arsenic, at all eleven sites, and Chromium, at four of these sites. These may present a concern to CEFAS for the future movement of seabed sediments, particularly as several of these fell within the Zone and Cable route.

4.3 Infaunal Communities based on grab samples

- 4.3.1 The lowest numbers of species in general were recorded from the Zone, although in the north west of the Zone several sites supported relatively large numbers of species.
- 4.3.2 Similar to the numbers of species, the lowest numbers of individuals were generally recorded from the Zone, although several high abundance sites were noted to the northwest of the Zone.
- 4.3.3 No clear pattern of biomass distribution was evident in the survey area, with a range of high and low biomass values in each of the zones.
- 4.3.4 The most frequently occurring species were by no means ubiquitous with the most frequently recorded (Nermertea) only present in 71% of samples. Although nine of the top 15 species were polychaetes, the Echinodermata were also well represented along with the Mollusca, the former represented by *Echinocyamus pusillus* and the latter by *Abra prismatica*. Mean abundances were low overall, to some extent due to the relatively low frequency of occurrence of most species, with *Echinocyamus pusillus* exhibiting the greatest mean abundance followed by the polychaete *Magelona johnstoni*.
- 4.3.5 A total of four ecologically identifiable groups were defined through multivariate analysis, including two major clusters of sites and two smaller groups. One of the major clusters included a mixed silty gravelly sand habitat supporting a community dominated by *Echinocyamus pusillus* but with species representative of siltier sediments (*Lumbrineris* spp.) and coarser sediments including gravels

(*Pomatoceros* spp). The most representative biotope describing this community is SS.SCS.CCS.MedLumVen. This community was located to the outer edge of the survey area and to the north west of the Zone. The other major community was typified by species associated with sandy habitats and is best described by the biotope SS.SSa.CFiSa.EpusOborApri (*Echinocyamus pusillus*, *Ophelia borealis* and *Abra prismatica* in circalittoral fine sand). This cluster of sites was centred in the eastern part of the Zone with several sites in the Cable Route and towards the east of the array in the Tidal Envelope. A degree of sediment instability was associated with this habitat, although less than occurred in the inshore areas occupied by the third cluster which was typified by robust Polychaeta and mobile Crustacea (*Bathyporeia* spp). No clear biotope fitted this latter assemblage but the habitat level description of SS.SSa.IFiSa was considered appropriate. The final grouping was an impoverished community that contained components of the two major clusters, with the robust bivalve *Spisula elliptica*, and the disturbance tolerant polychaete, *Ophelia borealis* most representative. The nearest biotope complex that could be attributed was SS.SCS.CCS.

- 4.3.6 Biomass at each site did not demonstrate any clear distributional trend, primarily due to individual instances of high biomass at several sites, generally due to large mollusc and echinoderm species.
- 4.3.7 The principal physical features responsible for the distribution of the fauna were identified as percentage of sand, sediment sorting (representing level of sediment instability) and depth to seabed.

4.4 Colonial and encrusting epifaunal communities based on grab samples

- 4.4.1 The colonial and encrusting epifauna were well represented across the region with bryozoans the most evident, particularly the dominants *Schizomavella auriculata* and *Aspidelectra melolontha*. These two species typified the sites from the two principal groups identified in the multivariate analysis. The former was associated with a high diversity group located over coarser mixed sediments, while the latter was associated with more unstable sediments. The distribution of these clusters mirrored the infaunal groupings. An intermediate cluster was also identified for the colonial and encrusting epifauna, with representatives of both faunal groups. The sites from this cluster were identified as occurring spatially on the interface between the other clusters.

4.5 Biotopes based on video surveys

- 4.5.1 A total of 14 biotopes or biotope complex level descriptions were identified. The most frequently present was SS.SSa.IFiSa.IMoSa, Infralittoral Mobile Sand. The biotope complex level description of SS.SCS.CCS (Circalittoral Coarse Sediment) was also frequently encountered along with the biotope SS.SCS.CCS.PomB (*Pomatoceros triqueter* with barnacles and bryozoan crusts on unstable circalittoral cobbles and pebbles).
- 4.5.2 The biotopes derived from the video analysis broadly follow the distribution identified for both the enumerated infauna and the colonial and encrusting epifauna. The peripheral areas were occupied by the SS.SCS.CCS biotope complex, with SS.SCS.CCS.PomB occurring in the more inshore sites, particularly along the northern edge of the Zone and to the west of the Cable Route area. The SS.SMx.CMx biotopes tended to be located in the more inshore areas, including the north west of the Zone, although replaced by the IMX, including SS.SMx.IMx.CreAsAn in the shallow water sites very close inshore in the Cable Route area. The sand based habitats and biotopes, particularly the SS.SSa.IFiSa.IMoSa were located over large parts of the Zone with more muddy sediments IMuSa, occurring closer inshore. Note that the infralittoral and circalittoral definitions are not adequately covered within the current UK biotope classification as the IFiSa.IMoSa sites recorded here fell within the circalittoral zone.

- 4.5.3 Sublittoral Biogenic Reef was recorded in the sites close inshore within the Cable Route area, with SS.SBR.SMus.MytSS identified at one site. Although associated with soft sediments, it is likely that this biotope is encouraged by emergent bedrock and superficial cobbles. Other hard ground sites were identified and it is highly likely that further areas of both soft and hard rock outcrop occur across the area. These rock outcrops are covered by very thin layers of sediment, which are ephemeral in many cases.

4.6 Epibenthic Communities based on 2 m Beam Trawl surveys.

- 4.6.1 The taxa recorded by the 2m Beam Trawling were most frequently Echinodermata or Crustacea, with the common starfish *Asterias rubens* most frequently encountered (100% of sites) followed by the hermit crab *Pagurus bernhardus* and the brittlestar *Ophiura albida*, both in 94% of sites. The abundance of many of the most frequently encountered species however, was relatively low, with only *Ophiura albida* and *Psammechinus miliaris* recorded in large numbers.
- 4.6.2 Three clusters of sites were identified from the multivariate analysis. The largest cluster was representative of mixed coarse seabed, including an abundant mixture of both sessile and mobile species including the bryozoan, *Alcyonium diaphanum* and the ascidian, *Ciona intestinalis* in combination with a diverse echinoderm community including *Psammechinus miliaris* and *Ophiura albida*. The second largest cluster comprised elements of the first but with species more representative of mobile substrata including the lesser weever fish, *Echiichthys vipera* and the prawn *Crangon allmanni*. These communities conformed to the same distribution as the previous sampling techniques identified, with the mobile species communities located in the main part of the zone and the more stable habitats in the peripheral areas.
- 4.6.3 The most inshore sites tended to support reduced communities, typified by the Gobiidae, including *Pomatoschistus* spp., although in some cases with hard ground species such as *Balanus crenatus* and *Alcyonium digitatum*, suggestive of variable seabed habitats.

4.7 Features of conservation importance

- 4.7.1 The Annex I habitat of Reefs were recorded within the zone with the UK BAP priority habitat of subtidal chalk having an important presence in inshore areas, including along the proposed Cable Exit Route. A blue mussel biogenic reef was recorded colonising the chalk bedrock at the most inshore sites within the Cable Route.
- 4.7.2 Although *Sabellaria* reef was tentatively identified from geophysical data, no reef was identified within the zone, based on the scale of “reefiness” (Gubbay, 2007).
- 4.7.3 Six protected marine fish species with regard to current nature conservation legislation were recorded.
- 4.7.4 The presence of black bream nesting sites could not be confirmed from video analysis.

5 REFERENCES

Barnes, J. H., Robson, C. F., Kaznowska, S. S., Doody, J. P., Davidson, N. C. and Buck, A. L. (1998) *Coasts and seas of the United Kingdom. Region 8 Sussex: Rye Bay to Chichester Harbour*. Peterborough: Joint Nature conservation Committee. ISBN 1873701829

CEC (Commision of the European Community). (2007) The Interpretation Manual of European Union Habitats - EUR27 [online]. Brussels: European Commission DG Environment. Available from: http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

Connor D. W., Allen J. H., Golding N., Howell K. L., Lieberknecht L. M., Northern K. O. and Reker J. B. (2004) The Marine Habitat Classification for Britain and Ireland, Version 04.05. Joint Nature Conservation Committee.

Eleftheriou, A. and Basford, D. J. (1989) The macrofauna of the offshore northern North Sea. *Journal of the Marine Biological Association of the UK*, **69**, 123–143.

EMU. (2008) South Coast Regional Environmental Assessment. Fisheries Activity Survey. Draft Report. (South Coast Dredging Association)

EMU. (2010) South Coast Marine Aggregates Regional Environmental Assessment. (South Coast Dredging Association). J/1/06/1165.

Gubbay, S. (2007) Defining and managing *Sabellaria spinulosa* reefs: Report of an inter-agency workshop. JNCC report No.405.

Irving, R. A. (1996) A Dossier of Sussex Marine Sites of Nature Conservation Importance. Compiled on behalf of the Sussex Marine SNCI Steering Group.

Irving, R. A. (1999) Report of the Sussex SEASEARCH Project, 1992-1998. Published by the Sussex SEASEARCH Project. English Nature, Lewes & Brighton & Hove Council, Brighton.

Irving, R. A. (2009). The identification of the main characteristics of stony reef habitats under the Habitats Directive. Summary report of an inter-agency workshop 26-27 March 2008. JNCC Report No. 432

JNCC. (2007) UK List of Priority Species and Habitats. UK Biodiversity Action Plan. Available online at <http://www.ukbap.org.uk/NewPriorityList.aspx> Accessed 24 November 2010.

JNCC. (2010) Correlation Table showing Relationships between Marine Habitat Classifications (2004 and 2007 versions) and Habitats Listed for Protection. Available online at www.jncc.gov.uk/page-3365. Accessed 12 September 2011.

MarLin. *The Marine Life Information Network* [online] Plymouth: Marine Biological Association of the UK. www.marlin.ac.uk Accessed 05 October 2011.

Mapping European Seabed Habitats (MESH). Available online at <http://www.searchmesh.net/> Accessed 26 September 2011.

McBreen, F., Askew, N., Cameron, A., Connor, D., Ellwood, H. & Carter, A. (2011). UKSeaMap 2010: Predictive mapping of seabed habitats in UK waters. JNCC Report, No. 446. <http://jncc.defra.gov.uk/page-5955> Accessed 26 September 2011.

Osiris (2010). Rampion Offshore Wind Farm Definitive Geophysical Survey. Osiris Projects report for RSK Environmental Limited.

RSK Environmental Ltd. (2011) Rampion Offshore Windfarm EIA Benthic Survey Specification.
RSK/He/P/P41318/04b/rev00

Uncles, R.J. & Stephens, J.A. (2007) SEA-8 Technical Report - Hydrography. Contract report to Geotek, p. 105

APPENDIX A DAILY PROGRESS REPORTS



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	EMU Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: RE3
Daily Progress Report No: 1	<i>RV Discovery</i>
Date: 15/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870 764 836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, Leigh Marsh, Erin Pettifer, John Peters, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	1	1
Vessel Safety Drills	1	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	-	-	Wind: W light airs Sea state: Calm	Wind: W light airs Sea state: Calm	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	4	56
Mini Hamon grabs	4	56
Contaminants grabs	1	23
Standalone video sites	0	10

Daily Log

Time UTC	Activity
07:00	Arrived at vessel to complete mobbing and prepare for departure.
10:00 – 11:30	Various briefings and safety talks undertaken.
11:40	Ropes away, enter Shoreham lock.
11:55	Depart from lock
13:10	Arrive site TE3, start survey operations. Site abandoned due to dense fishing gear deployment in area. Decision made that too unsafe to deploy equipment.
14:20	Arrive TE4. Various discussions throughout the next few hours between the client, client rep, party chief and Jo Weir (EMU Limited) re: issues with the deployment of the camera in areas of fishing gear and across substrates such as <i>Sabellaria</i> and Black Bream nests. Client (Dave Watson) confirmed approach required, surveying continued throughout.
17:30	Generator issue affecting winch. Sensor found to be loose.
18:15	Resumed survey
18:00	Arrived site RE1
20:15	Arrived site RE2
21:00	Arrived site TE5
23:00	Arrived RE3. Shift change. Survey continuing offshore as not possible to deploy gear in areas of fishing gear during the night.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminants sampling.

Weather

W to Var F3-4

Sea state: Slight to moderate

Inshore:

W – Var F3 or less

Sea state: Slight

EMU Limited comments

Various issues with coarse sediment and heavy deployment of fishing gear. Where exact plan at each site has not been achieved, Client rep has been consulted for approval of approach.

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: TE08
Daily Progress Report No: 2	<i>RV Discovery</i>
Date: 16/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind Light Airs SS Calm	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	12	44
Mini Hamon grabs	12	44
Contaminants grabs	4	19
Standalone video sites	0	10

Daily Log

Time UTC	Activity
2300	Arrive site RE03.
0118	Arrive site RE04.
0358	Arrive site RE05
0612	Arrive site RE06
0802	Arrive site RE07.
1015	Arrive site RE08.
1100	Vessel in distress visible on port side. Responded to call and towed angling vessel with no power out of the shipping lane to rendezvous with the Life Boat.
1300	Arrive site RE09. Left site 1503.
1538	Arrive site RE10. Left site 1637.
1709	Arrive site TE09. Left site 1754.
1811	Arrive site RE11. Left site 2020. Extra time spent changing set-up to low viz camera.
2115	Arrive site TE10. 2155 left site.
2225	Arrive site TE08. Left site 0027. Downloaded and backed up images. Changed camera system back to drop-down frame.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminant sampling.
 Inshore forecast – Wind variable F3 or less. NE Force 3 or 4 later.
 Sea state smooth or slight.
 Outlook – East or NE, F3-4, SS smooth to slight.

Emu Limited comments

Areas of extreme low visibility occurring, resulting in re-attempting those sites with the Low-Viz camera frame. Images still poor but substrate generally more visible, allowing assessment.

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: WF20
Daily Progress Report No: 3	<i>RV Discovery</i>
Date: 17/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind ESE F4 SS Slight to moderate.	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	12	32
Mini Hamon grabs	12	32
Contaminants grabs	4	15
Standalone video sites	1	9

Daily Log

Time UTC	Activity
0053	Arrive TE7. Video and grab. To minimize gear change have opted to do a run on video and grab, with a return sweep through a small set of sites to pick off the chemistry sites. Leave site 0144.
0215	Arrive site OW7. Leave site 0319.
0356	Arrive site OW6. Leave site 0429.
0449	Arrive site OW5. Leave site 0556.
0614	Arrive site OW4. Leave site 0650.
0704	Arrive site OW3. Leave site 0749.
0813	Arrive site OW1. Leave site 0846.
0912	Arrive site OW2. Leave site 1010.
1038	Arrive site TE6. Leave site 1354 – chemistry also done at this time.
1447	Arrive site OW3 to do chemistry sampling.
1531	Arrive site OW5 to do chemistry sampling.
1650	Arrive site OW7 to do chemistry sampling. Leave site 1724.
1741	Arrive site WF18. Leave site 1841.
1900	Arrive site WF19. Leave site 2030.
2053	Arrive site WF20. Leave site 2118. Video only done as due to state of tide, wanted to do the Sab Trans Site 6 at this point.
2122	Arrive <i>Sabellaria</i> Transect site 6 comprising 2 transects. Leave site 2225.
2300	Handover at WF20 where returned to take fauna grab.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminant sampling.
Moving inshore to use a full day on the sites where potentially more hazardous due to fishing gear expected in the area.
Weather forecast
ENE Force 3-4, occ F5 in the East later.
Outlook – SE, F3-4, occ F5 in the east. Becoming variable F3 or less.

Emu Ltd comments

Due to poor visibility experienced at many sites, changed where appropriate to the Elviz camera set up. Where possible used the oblique system at a steeper angle on the frame. Elviz used where this system was not adequate to get footage. Changed from Day grab to the Shipek grab to take contaminants to make sure lack of sample was not gear dependant. Continued to use Shipek from that point. Day grab to be used in the event of Shipek failure.

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: WF08
Daily Progress Report No: 4	<i>RV Discovery</i>
Date: 18/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind ENE Force 2 SS: Slight	Wind NE Force 2 SS: Slight	Wind NE Force 2 SS: Slight	Wind NE Force 2 SS: Slight	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	14	18
Mini Hamon grabs	13	19
Contaminants grabs	2	13
Standalone video sites	7	2

Daily Log

Time UTC	Activity
0110	Arrive WF11. Leave site 0255.
0303	Arrive site WF09. Leave site 0344.
0355	Arrive site WF01. Leave site 0508.
0618	Arrive site RE14. Leave site 0728.
0748	Arrive site RE12. Video transect only. Leave site 0805.
0831	Arrive site RE13. Video only. No grab – too coarse. Leave site 0845.
0929	Sabellaria Transect 1. Video only. Leave site 1016.
1020	Arrive site CR1. Leave site 1045. Had to move site due to fishing gear.
1056	Arrive Sabellaria Transect 2. Video only. Leave site 1146.
1155	Arrive site CR2. Leave site 1220.
1230	Arrive site CR3. Video only. Too hard for grab.
1312	Arrive Black Bream Transect 1. Video only. Leave site 1321.
1334	Arrive Black Bream Transect 2. Video only. Leave site 1345.
1355	Arrive Black Bream Transect 3. Video only. Leave site 1428.
1437	Arrive Sabellaria Transect 3. Video. Grab taken at Sab Point 3. Leave site 1525.
1535	Arrive Sabellaria Transect 4. Video. Grab taken at Sab Point 4. Leave site 1622.
1635	Arrive site CR6. Leave site 1715.
1740	Arrive site CR4. Moved site twice, once due to fishing gear, once due to substrate. Very poor faunal sample. Leave site 1845.
1855	Arrive site CR5. Leave site 2026.
2040	Arrive site WF02. Leave site 2145.

2158	Arrive site WF08. Leave site 2305.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminant sampling.

Work out into the Windfarm area overnight with the intention of moving back inshore in daylight hours.

Emu Ltd comments

No bream or *Sabellaria* noted at the allotted sites. Areas of hard ground found where not particularly expected resulting in some sites with very poor samples. Liaison with shoreside resulting in request to take a grab at sites of *Sabellaria* point positions regardless of any noted presence of *Sabellaria*. As some sites already done will result in a return to those sites to grab sample at the point positions if the substrate allows.

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: WF04
Daily Progress Report No: 5	<i>RV Discovery</i>
Date: 19/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind E. Force 2. SS Slight	Wind E. Force 2. SS Slight	Wind Variable. Force 1. SS Calm.	Wind Variable. Force 1. SS Calm.	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	18	0
Mini Hamon grabs	19	0
Contaminants grabs	13	0
Standalone video sites	2	0

Daily Log

Time UTC	Activity
0015	Arrive Site WF12. Left site 0053.
0110	Arrive Sabellaria Transect 5. Took fauna sample. Left site 0348.
0355	Arrive site WF13. Left site 0450.
0505	Arrive site WF17. Left 0550.
0610	Arrive site WF14. Left 0628.
0702	Arrive site WF16. Left site 0724.
0731	Arrive site WF15. Very small sample. Left site 0930.
0953	Arrive site WF5. Left site 1055.
1120	Arrive site TE1. Moved site due to fishing gear and renamed TE1.1. Left site 1215.
1250	Arrive site CR1 to take chemistry samples. Left at 1335.
1401	Arrive site CR7. Left site 1455.
1541	Arrive site TE3. Left site 1613.
1644	Arrive site TE2. Moved site due to fishing gear and renamed TE2.1. Left site 1733.
1819	Arrive site CR8. Left site 1850.
1854	Arrive site CR9. Left site 1936.
2016	Arrive site WF3. Left site 2045.
2055	Arrive site WF7. Left site 2153.
2155	Arrive site WF6. Left site 2300.
2306	Arrive site WF4. Left site 0009. Finish survey.
20/4/11 0236	Arrive Shoreham Lock. Alongside 0252.

Planned operation for the next 24 hours / Weather forecast

De-mob survey vessel and return to Trafalgar Wharf.
Weather N/A.

Emu Ltd comments

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Alongside at Shoreham
Daily Progress Report No: T1	<i>FV Sara Lena</i>
Date: 08/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	1	1
Vessel Safety Drills	0	0

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	-	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	0	1
2m beam trawling	0	16

Daily Log

Time UTC	Activity
08:00 – 13:00	Mobilisation. Delayed due to poor weather.
14:30- 15:15	Survey safety briefing.
15:15 – 24:00	Weather standby alongside Shoreham.

Planned operation for the next 24 hours / Weather forecast

Commence trawling survey operations subject to weather.

Inshore waters North Foreland to Selsey Bill valid from 0600 UTC 09/07/11.

24 hr:

Wind: Southwesterly 4 or 5, increasing 6 or 7 for a time in east, decreasing 3 or 4 later.

Sea state: Slight or moderate

48 hr:

Wind: Westerly or southwesterly 3 or 4, occasionally 5 in east, decreasing 2 at times later.

Sea state: Slight

Emu Ltd comments

Client Representative Comments

Signed:

Signed:

Jo Weir
Party Chief
EMU Limited

Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Alongside at Shoreham
Daily Progress Report No: T2	<i>FV Sara Lena</i>
Date: 09/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	1	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	-	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	0	1
2m beam trawling	0	16

Daily Log

Time UTC	Activity
00:00 – 24:00	Weather standby alongside Shoreham.

Planned operation for the next 24 hours / Weather forecast

Leave Shoreham at 04:30 to commence survey operations.

Inshore waters North Foreland to Selsey Bill valid from 1800 UTC 09/07/11.

24 hr:

Wind: Southwesterly 4 or 5, occasionally F6 at first.

Sea state: Smooth or slight, occasionally moderate at first.

48 hr:

Wind: Southwesterly 4 or 5, veering northeasterly 3 or less later

Sea state: Smooth or slight

Emu Ltd comments

Client Representative Comments

Signed:

Signed:

Jo Weir
Party Chief
EMU Limited

Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Eastern edge of the survey array
Daily Progress Report No: T3	<i>FV Sara Lena</i>
Date: 10/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	Wind: SW-S F2 Sea state: Slight	Wind: SW-WSW F3/4 Sea state: Slight-moderate	Wind: WSW-SW F3/4 Sea state: moderate	Wind: SW F3/4 Sea state: moderate

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	0	1
2m beam trawling	12	5

Daily Log

Time UTC	Activity
00:00-04:10	Alongside at Shoreham.
04:10-04:37	In transit from berth to Shoreham lock.
04:37-05:00	In transit from Shoreham to site CHARLIE ROMERO 02.
05:00-05:44	Undertaking trawling at site CR02.
05:44-06:19	In transit from site CR02 to CR06.
06:19-06:45	Undertaking trawling at site CR06.
06:45-07:16	In transit from site CR06 to CR08.
07:16-07:35	Undertaking trawling at site CR08.
07:35-07:55	In transit from site CR08 to CR09.
07:55-08:22	Undertaking trawling at site CR09.
0822-09:05	In transit from site CF09 to WHISKEY FOXTROT 01.
09:05-09:29	Undertaking trawling at site WF01.
09:29-10:30	In transit from site WF01 to ROMEO ECHO 11.
10:30-10:53	Undertaking trawling at site RE11.
10:53-11:32	In transit from site RE11 to TANGO ECHO 09.
11:32-11:56	Undertaking trawling at site TE09.
11:56-12:34	In transit from site TE09 to TE08.
12:34-13:05	Undertaking trawling at site TE08.
13:05-14:18	In transit from site TE08 to RE07.
14:18-14:49	Undertaking trawling at site RE07.

14:49-15:46	In transit from site RE07 to OW06.
15:46-16:39	Undertaking trawling at site OW06. Net torn at first tow so line had to be redone.
16:39-17:23	In transit from site OW06 to OW03.
17:23-17:49	Undertaking trawling at site OW03.
17:49-18:34	In transit from site OW03 to WF14.
18:34-19:01	Undertaking trawling at site WF14.
19:01-20:30	Processing of sample WF13. Preserving samples and stowing equipment and samples.
20:30-24:00	Heading eastwards to stay in area to first light.

Planned operation for the next 24 hours / Weather forecast

Continue with survey operations.

Inshore waters from North Foreland to Selsey Bill, valid from 2400 UTC 10/07/11:

24hr:

Wind: West to southwesterly 3 or 4, occasionally F5, east at first

Sea state: Slight.

48hr:

Wind: Var. 2 or 3, occasionally F4, becoming northeasterly 5 or 6.

Sea state: Slight, becoming moderate to rough.

EMU Limited comments

Prior to trawling at each site, the trawl line was run to check for the presence of any static gear.
Only if clear was the trawl deployed.

Client Representative Comments

Signed:

Jo Weir
Party Chief
EMU Limited

Signed:

Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Alongside at Shoreham
Daily Progress Report No: T4	<i>FV Sara Lena</i>
Date: 11/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	Wind: SW F2 Sea state: Slight	Wind: SW F2 – NE F1-2 Sea state: Slight decreasing smooth	Wind: SW F2 Sea state: Slight	-

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	1	0
2m beam trawling	5	0

Daily Log

Time UTC	Activity
00:00 – 04:32	Vessel remaining within the vicinity of site TE05
04:32 – 05:16	Undertaking trawling at site TE05
05:16 – 06:18	In transit from site TE05 to site TE04
06:18 – 06:45	Undertaking trawling at site TE04
06:45 – 07:51	In transit from site TE04 to site TE02
07:51 – 08:09	Undertaking trawling at site TE02
08:09 – 08:45	In transit from site TE02 to site WF05
08:45 – 09:11	Undertaking trawling at site WF05
09:11 – 10:00	In transit from site WF05 to site WF04
10:00 – 10:26	Undertaking trawling at site WF04
10:26 – 12:21	In transit from site WF04 to site BBT01. Completion of trawl sampling processing. Swopping over gear from trawling to video.
12:21 – 14:46	Undertaking drop down video
14:46 – 15:30	In transit from site to Shoreham Lock. Slow steam back in, waiting for lock.
15:30 – 16:04	Entering Shoreham, and transiting to berth.
16:04 – 18:02	Demobilisation of vessel.

Planned operation for the next 24 hours / Weather forecast

Survey operations completed.

EMU Limited comments

Prior to trawling and video, the trawl / video line was run, to check for the presence of any static gear. Only if clear was the trawl / video deployed.

Client Representative Comments

Signed:

Jo Weir
Party Chief
EMU Limited

Signed:

Client Representative

APPENDIX B HYPERDIGITAL CAMERA LOG

APPENDIX B- HYPERDIGITAL CAMERA LOG

Rampion Benthic J/1/03/1836

Site	Date	Start Time (GMT)	Start Depth (m BCD)	WGS84 UTM Z30N			
				Start Position		End Position	
				Eastings	Northings	Eastings	Northings
BlackBream01	18/04/11	13:15	11.2	692279.20	5628889.22	692511.45	5628888.64
BlackBream02	18/04/11	13:38	11.0	691288.73	5628207.31	691495.63	5628215.82
BlackBream03	18/04/11	14:08	13.0	691006.02	5627208.39	691021.15	5627467.19
CR01	18/04/11	10:27	5.6	690274.37	5632091.18	690420.64	5632138.19
CR02	18/04/11	12:00	9.5	692193.39	5629979.55	692260.33	5629955.57
CR03	18/04/11	12:36	9.2	689932.11	5629047.61	690024.92	5629075.45
CR04.1	18/04/11	17:53	11.0	688345.42	5626812.76	688211.96	5626811.15
CR04.2	18/04/11	18:15	11.7	688826.57	5626566.42	688674.93	5626539.76
CR05	18/04/11	19:59	17.9	686959.78	5622133.10	686835.72	5622118.80
CR06	18/04/11	16:41	13.7	690287.32	5625385.98	690437.40	5625410.02
CR07	19/04/11	14:12	14.4	696818.41	5628452.12	696938.52	5628481.14
CR08	19/04/11	18:29	19.5	693156.12	5623445.37	692986.30	5623461.02
CR09	19/04/11	19:01	19.7	691776.66	5622338.91	691641.76	5622362.19
OW01	17/04/11	08:22	44.3	709169.24	5615833.45	709070.29	5615789.73
OW02	17/04/11	09:18	53.8	714554.27	5613091.95	714463.40	5613064.10
OW03	17/04/11	07:15	54.7	709191.36	5612828.76	709092.48	5612840.89
OW04	17/04/11	06:20	41.9	703704.40	5612321.55	703589.05	5612293.04
OW05	17/04/11	04:57	58.9	703903.93	5608800.26	703811.82	5608798.16
OW05	17/04/11	05:23	59.7	703915.39	5608793.75	703887.62	5608810.58
OW06	17/04/11	04:04	53.5	699316.73	5609726.27	699210.32	5609726.97
OW07	17/04/11	02:25	59.1	692142.38	5609204.65	692230.07	5609217.77
RE01	15/04/11	18:00	16.5	723449.18	5625625.18	723346.78	5625632.24
RE02	15/04/11	20:32	27.1	731617.20	5621279.72	731451.10	5621259.34
RE03	15/04/11	23:11	35.0	736524.33	5615995.00	736649.58	5615999.63
RE04	16/04/11	01:32	59.3	730856.19	5609880.53	730985.47	5609887.99
RE05	16/04/11	04:08	47.7	721970.89	5604635.19	722104.05	5604636.66
RE06	16/04/11	06:21	49.9	710321.60	5599593.80	710265.93	5599586.64
RE07	16/04/11	08:22	61.6	697870.70	5598498.84	697788.61	5598497.07
RE08	16/04/11	10:22	56.8	685445.47	5597939.75	685563.97	5597956.18
RE09	16/04/11	13:41	71.4	671132.48	5598128.11	671334.27	5598128.88
RE10	16/04/11	15:47	37.7	667143.41	5605426.64	667270.28	5605443.05
RE11	16/04/11	19:28	19.6	672576.24	5613716.74	672464.87	5613702.57
RE12	18/04/11	07:59	16.6	678777.04	5620236.36	678690.83	5620236.89
RE13	18/04/11	08:37	9.0	680478.19	5626582.79	680346.81	5626582.88
RE14	18/04/11	06:22	16.8	671598.99	5620472.21	671562.30	5620421.24
SAB01.1 (SABT1)	18/04/11	09:34	5.1	690473.77	5632704.45	690165.84	5632710.69
SAB01.2 (SABT2)	18/04/11	10:02	5.5	690185.62	5632536.61	690502.26	5632535.23
SAB02.1 (SABT3)	18/04/11	11:00	5.2	689183.92	5631333.34	689379.01	5631322.15
SAB02.2 (SABT4)	18/04/11	11:25	5.4	689303.41	5631172.54	689545.10	5631181.16
SAB03.1 (SABT5)	18/04/11	14:43	15.1	691900.51	5626591.35	692232.37	5626591.22
SAB03.2 (SABT6)	18/04/11	15:02	15.3	691968.77	5626459.83	691976.00	5626688.27
SAB04.1 (SABT7)	18/04/11	15:42	16.4	693459.71	5626354.52	693658.92	5626359.27
SAB04.2 (SABT8)	18/04/11	15:56	16.0	693600.71	5626297.51	693598.08	5626507.34
SAB05.1 (SABT9)	19/04/11	01:23	58.4	697345.45	5614446.63	697334.97	5614653.96
SAB05.2 (SABT10)	19/04/11	02:56	56.1	697204.23	5614630.25	697439.91	5614619.56
SAB05.3 (SABT11)	19/04/11	03:15	55.3	697630.71	5614655.07	697878.13	5614659.01
SAB06.1	17/04/11	22:03	39.6	690207.40	5611562.44	690673.46	5611578.14
SAB06.2	17/04/11	21:26	41.1	690229.78	5611156.31	689858.98	5611174.07
TE01	19/04/11	11:45	20.1	698436.46	5624192.18	698442.13	5624212.42
TE02	19/04/11	16:50	25.5	703088.67	5621044.97	703168.58	5621072.17
TE03	19/04/11	15:54	22.5	708122.75	5624066.74	708244.62	5624087.19
TE04	15/04/11	15:34	26.5	717634.20	5620586.28	717687.98	5620484.24
TE05	15/04/11	21:16	38.7	730248.92	5617749.84	730169.82	5617862.18
TE06	17/04/11	10:44	50.7	720441.24	5613526.56	720524.89	5613514.53
TE07	17/04/11	01:06	64.0	687965.75	5605538.33	688098.12	5605584.13
TE08	16/04/11	22:32	38.6	684420.01	5610490.74	684490.51	5610502.80
TE08	16/04/11	23:09	39.0	684399.24	5610472.77	684501.35	5610496.03
TE09	16/04/11	17:27	40.6	676650.75	5608205.83	676538.69	5608191.69

Site	Date	Start Time (GMT)	Start Depth (m BCD)	WGS84 UTM Z30N			
				Start Position		End Position	
				Eastings	Northings	Eastings	Northings
TE10	16/04/11	21:32	28.6	682222.68	5614495.22	682041.99	5614516.00
WF01	18/04/11	03:55	21.6	687167.69	5617085.33	687282.34	5617110.08
WF02	18/04/11	20:48	22.4	689693.46	5619086.09	689561.31	5619069.42
WF03	19/04/11	20:27	26.2	692077.01	5619704.31	691975.62	5619671.82
WF04	19/04/11	23:12	25.9	695403.03	5620027.94	695222.66	5620003.09
WF05	19/04/11	09:58	26.9	700030.60	5618954.45	699891.42	5618865.66
WF06	19/04/11	22:17	28.5	696992.93	5618748.04	696888.28	5618700.08
WF07	19/04/11	21:03	26.7	694357.98	5618125.22	694262.73	5618059.99
WF08	18/04/11	22:11	28.9	690060.45	5617202.45	689991.82	5617263.88
WF09	18/04/11	03:03	28.4	689336.85	5615487.87	689396.49	5615551.38
WF10	17/04/11	00:09	43.1	688330.47	5613082.47	688398.26	5613149.87
WF11	18/04/11	01:19	34.6	690684.28	5613903.42	690737.31	5613981.89
WF12	19/04/11	00:23	41.7	694129.87	5614486.90	694263.82	5614503.21
WF13	19/04/11	04:02	48.9	697648.93	5615425.11	697763.93	5615443.88
WF14	19/04/11	06:20	42.9	700450.19	5616581.20	700261.20	5616599.78
WF15	19/04/11	07:36	28.7	705505.23	5617883.17	705365.99	5617840.77
WF16	19/04/11	07:05	32.4	705176.84	5616055.94	705066.41	5616057.75
WF17	19/04/11	05:11	45.2	699739.23	5613858.77	699885.74	5613880.65
WF18	17/04/11	18:07	56.7	694494.77	5611414.71	694333.49	5611389.08
WF19	17/04/11	20:01	46.2	691989.47	5611925.03	691897.26	5611907.35
WF20	17/04/11	21:02	28.2	689080.70	5611484.97	688976.60	5611484.64

APPENDIX B HYPERDIGITAL CAMERA LOG

Rampion Benthic J/1/03/1836

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
BlackBream01	B235	18/04/11	692302.79	5628882.11
BlackBream01	B236	18/04/11	692306.66	5628883.52
BlackBream01	B237	18/04/11	692318.84	5628890.78
BlackBream01	B238	18/04/11	692354.43	5628890.17
BlackBream01	B239	18/04/11	692359.83	5628890.91
BlackBream01	B240	18/04/11	692365.68	5628889.92
BlackBream01	B241	18/04/11	692390.24	5628886.13
BlackBream01	B242	18/04/11	692434.32	5628889.67
BlackBream01	B243	18/04/11	692450.22	5628887.26
BlackBream01	B244	18/04/11	692475.22	5628890.53
BlackBream01	B245	18/04/11	692485.41	5628893.24
BlackBream02	B247	18/04/11	691311.27	5628209.68
BlackBream02	B248	18/04/11	691322.65	5628214.60
BlackBream02	B249	18/04/11	691377.97	5628214.24
BlackBream02	B250	18/04/11	691402.16	5628217.14
BlackBream02	B251	18/04/11	691431.39	5628212.49
BlackBream02	B252	18/04/11	691452.93	5628216.28
BlackBream02	B253	18/04/11	691480.94	5628215.47
BlackBream03	B255	18/04/11	691011.18	5627253.45
BlackBream03	B256	18/04/11	691019.92	5627305.33
BlackBream03	B257	18/04/11	691024.69	5627324.88
BlackBream03	B258	18/04/11	691015.50	5627351.61
BlackBream03	B259	18/04/11	691016.27	5627368.88
BlackBream03	B260	18/04/11	691020.63	5627384.05
BlackBream03	B261	18/04/11	691018.98	5627413.99
BlackBream03	B262	18/04/11	691020.46	5627457.67
CR01	B184	18/04/11	690283.11	5632095.54
CR01	B185	18/04/11	690291.10	5632101.92
CR01	B186	18/04/11	690300.78	5632106.65
CR01	B187	18/04/11	690316.65	5632106.23
CR01	B188	18/04/11	690324.70	5632105.83
CR01	B189	18/04/11	690335.46	5632105.24
CR02	B218	18/04/11	692208.05	5629980.99
CR02	B219	18/04/11	692217.84	5629978.49
CR02	B220	18/04/11	692239.00	5629977.78
CR02	B221	18/04/11	692249.63	5629975.16
CR02	B222	18/04/11	692253.85	5629960.27
CR02	B223	18/04/11	692260.33	5629955.57
CR03	B225	18/04/11	689943.77	5629043.34
CR03	B226	18/04/11	689957.71	5629047.50
CR03	B227	18/04/11	689962.33	5629045.81
CR03	B228	18/04/11	689972.53	5629047.71
CR03	B229	18/04/11	689976.18	5629049.97
CR03	B230	18/04/11	689981.82	5629051.08
CR03	B231	18/04/11	689985.18	5629055.48
CR03	B232	18/04/11	689991.71	5629057.35
CR03	B233	18/04/11	690011.39	5629072.18
CR04.1	B324	18/04/11	688309.14	5626803.87
CR04.1	B325	18/04/11	688304.09	5626800.90
CR04.1	B326	18/04/11	688294.93	5626796.89
CR04.1	B327	18/04/11	688285.13	5626796.48
CR04.1	B328	18/04/11	688277.39	5626798.90

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
CR04.1	B329	18/04/11	688267.49	5626803.40
CR04.1	B330	18/04/11	688259.57	5626806.28
CR04.1	B331	18/04/11	688252.59	5626809.21
CR04.1	B332	18/04/11	688244.19	5626813.04
CR04.1	B333	18/04/11	688236.65	5626816.93
CR04.1	B334	18/04/11	688231.17	5626819.97
CR04.1	B335	18/04/11	688225.97	5626821.79
CR04.1	B336	18/04/11	688219.15	5626817.52
CR04.2	B338	18/04/11	688808.06	5626559.61
CR04.2	B339	18/04/11	688798.52	5626557.18
CR04.2	B340	18/04/11	688785.99	5626553.07
CR04.2	B341	18/04/11	688771.76	5626550.23
CR04.2	B342	18/04/11	688762.31	5626548.38
CR04.2	B343	18/04/11	688749.77	5626548.61
CR04.2	B344	18/04/11	688743.09	5626546.22
CR04.2	B345	18/04/11	688733.32	5626544.22
CR04.2	B346	18/04/11	688717.65	5626548.07
CR04.2	B347	18/04/11	688705.22	5626543.35
CR05	B349	18/04/11	686943.82	5622132.62
CR05	B350	18/04/11	686931.19	5622130.43
CR05	B351	18/04/11	686920.09	5622126.57
CR05	B352	18/04/11	686910.05	5622122.45
CR05	B353	18/04/11	686892.09	5622116.73
CR05	B354	18/04/11	686877.99	5622112.57
CR05	B355	18/04/11	686865.43	5622114.84
CR05	B356	18/04/11	686843.15	5622119.45
CR06	B315	18/04/11	690309.08	5625378.19
CR06	B316	18/04/11	690320.64	5625377.42
CR06	B317	18/04/11	690332.06	5625379.22
CR06	B318	18/04/11	690343.52	5625383.91
CR06	B319	18/04/11	690358.27	5625382.63
CR06	B320	18/04/11	690389.00	5625396.27
CR06	B321	18/04/11	690412.72	5625398.41
CR06	B322	18/04/11	690428.05	5625406.68
CR07	D024	19/04/11	696828.36	5628452.71
CR07	D025	19/04/11	696835.78	5628453.17
CR07	D026	19/04/11	696854.79	5628454.42
CR07	D027	19/04/11	696862.72	5628456.11
CR07	D028	19/04/11	696871.82	5628460.45
CR07	D029	19/04/11	696885.47	5628463.83
CR07	D030	19/04/11	696893.45	5628465.62
CR07	D031	19/04/11	696898.50	5628468.06
CR07	D032	19/04/11	696904.28	5628470.49
CR07	D033	19/04/11	696922.98	5628475.98
CR07	D034	19/04/11	696931.94	5628478.55
CR08	D053	19/04/11	693135.29	5623442.06
CR08	D054	19/04/11	693126.51	5623438.96
CR08	D055	19/04/11	693115.34	5623433.57
CR08	D056	19/04/11	693109.87	5623427.35
CR08	D057	19/04/11	693099.29	5623422.85
CR08	D058	19/04/11	693073.08	5623429.24
CR08	D059	19/04/11	693059.25	5623434.26
CR08	D060	19/04/11	693049.43	5623429.93
CR08	D061	19/04/11	693038.86	5623430.53
CR08	D062	19/04/11	693033.79	5623437.75

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
CR08	D063	19/04/11	693023.55	5623456.03
CR08	D064	19/04/11	693000.19	5623465.15
CR09	D066	19/04/11	691755.47	5622346.89
CR09	D067	19/04/11	691745.06	5622349.45
CR09	D068	19/04/11	691738.10	5622346.36
CR09	D069	19/04/11	691732.02	5622326.79
CR09	D070	19/04/11	691723.10	5622323.59
CR09	D071	19/04/11	691708.83	5622349.24
CR09	D072	19/04/11	691699.06	5622348.58
CR09	D073	19/04/11	691681.64	5622341.06
CR09	D074	19/04/11	691671.47	5622346.53
CR09	D075	19/04/11	691653.91	5622357.20
OW01	B006	17/04/11	709164.40	5615827.42
OW01	B007	17/04/11	709147.34	5615820.01
OW01	B008	17/04/11	709127.99	5615830.80
OW01	B009	17/04/11	709118.87	5615827.71
OW01	B010	17/04/11	709113.34	5615827.07
OW02	B012	17/04/11	714547.21	5613087.73
OW02	B013	17/04/11	714534.46	5613087.61
OW02	B014	17/04/11	714529.58	5613089.44
OW02	B015	17/04/11	714518.48	5613081.51
OW02	B016	17/04/11	714515.60	5613077.01
OW02	B017	17/04/11	714508.57	5613077.28
OW02	B018	17/04/11	714495.78	5613080.50
OW02	B019	17/04/11	714463.78	5613064.62
OW03	C065	17/04/11	709188.87	5612828.83
OW03	C066	17/04/11	709176.20	5612830.57
OW03	C067	17/04/11	709164.04	5612826.69
OW03	C068	17/04/11	709155.43	5612830.53
OW03	C069	17/04/11	709115.31	5612832.98
OW03	C070	17/04/11	709110.70	5612829.50
OW03	C071	17/04/11	709092.48	5612840.89
OW04	C056	17/04/11	703697.76	5612318.25
OW04	C057	17/04/11	703677.33	5612317.50
OW04	C058	17/04/11	703665.13	5612309.15
OW04	C059	17/04/11	703646.51	5612316.39
OW04	C060	17/04/11	703628.30	5612308.86
OW04	C061	17/04/11	703622.59	5612309.95
OW04	C062	17/04/11	703613.83	5612313.25
OW04	C063	17/04/11	703589.05	5612293.04
OW05	C048	17/04/11	703903.93	5608800.26
OW05	C049	17/04/11	703883.56	5608794.29
OW05	C050	17/04/11	703863.18	5608801.05
OW05	C051	17/04/11	703856.10	5608800.30
OW05	C052	17/04/11	703844.91	5608797.68
OW05	C053	17/04/11	703833.14	5608800.61
OW05	C054	17/04/11	703826.39	5608798.93
OW05	B003	17/04/11	703903.10	5608801.63
OW05	B004	17/04/11	703890.52	5608808.67
OW06	C043	17/04/11	699291.15	5609731.11
OW06	C044	17/04/11	699276.76	5609735.19
OW06	C045	17/04/11	699254.22	5609739.40
OW06	C046	17/04/11	699225.49	5609733.36
OW07	C036	17/04/11	692147.40	5609207.79
OW07	C037	17/04/11	692150.26	5609206.92

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
OW07	C038	17/04/11	692157.82	5609208.22
OW07	C039	17/04/11	692172.62	5609207.26
OW07	C040	17/04/11	692197.48	5609228.34
OW07	C041	17/04/11	692221.71	5609221.93
RE01	A017	15/04/11	723437.95	5625622.89
RE01	A018	15/04/11	723427.20	5625628.47
RE01	A019	15/04/11	723415.48	5625631.94
RE01	A020	15/04/11	723405.65	5625629.82
RE01	A021	15/04/11	723392.87	5625626.98
RE01	A022	15/04/11	723378.07	5625624.66
RE01	A023	15/04/11	723371.39	5625625.80
RE01	A024	15/04/11	723351.79	5625629.66
RE02	A027	15/04/11	731587.09	5621275.89
RE02	A028	15/04/11	731549.80	5621270.25
RE02	A029	15/04/11	731525.90	5621271.94
RE02	A030	15/04/11	731520.10	5621272.36
RE02	A031	15/04/11	731514.41	5621265.23
RE02	A032	15/04/11	731508.62	5621267.74
RE02	A033	15/04/11	731496.95	5621279.11
RE02	A034	15/04/11	731485.62	5621280.72
RE02	A035	15/04/11	731475.81	5621273.95
RE02	A036	15/04/11	731468.16	5621268.42
RE03	A048	15/04/11	736533.57	5615999.51
RE03	A049	15/04/11	736538.04	5616001.25
RE03	A050	15/04/11	736558.90	5615993.99
RE03	A051	15/04/11	736575.41	5616001.51
RE03	A052	15/04/11	736595.94	5615996.38
RE03	A053	15/04/11	736620.26	5615999.74
RE03	A054	15/04/11	736626.06	5615997.56
RE03	A055	15/04/11	736633.14	5615995.56
RE03	A056	15/04/11	736643.81	5616000.33
RE04	A059	16/04/11	730869.84	5609877.86
RE04	A060	16/04/11	730881.96	5609880.64
RE04	A061	16/04/11	730899.65	5609881.47
RE04	A062	16/04/11	730922.44	5609880.99
RE04	A063	16/04/11	730940.24	5609879.93
RE04	A064	16/04/11	730949.16	5609877.49
RE04	A065	16/04/11	730955.18	5609877.27
RE04	A066	16/04/11	730963.17	5609879.83
RE05	A068	16/04/11	721978.02	5604637.32
RE05	A069	16/04/11	721983.78	5604637.80
RE05	A070	16/04/11	721989.67	5604637.90
RE05	A071	16/04/11	721994.52	5604637.63
RE05	A072	16/04/11	722001.14	5604638.20
RE05	A073	16/04/11	722021.07	5604641.18
RE05	A074	16/04/11	722066.22	5604631.01
RE06	A076	16/04/11	710314.83	5599589.60
RE06	A077	16/04/11	710308.58	5599589.73
RE06	A078	16/04/11	710299.12	5599592.58
RE06	A079	16/04/11	710284.53	5599594.84
RE06	A080	16/04/11	710280.79	5599593.87
RE06	A081	16/04/11	710272.67	5599585.70
RE07	A083	16/04/11	697862.63	5598504.26
RE07	A084	16/04/11	697850.54	5598494.31
RE07	A085	16/04/11	697838.67	5598500.01

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
RE07	A086	16/04/11	697829.65	5598516.94
RE07	A087	16/04/11	697846.89	5598496.97
RE07	A088	16/04/11	697837.07	5598496.78
RE07	A089	16/04/11	697827.19	5598495.66
RE07	A090	16/04/11	697819.93	5598490.53
RE08	A092	16/04/11	685456.80	5597941.77
RE08	A093	16/04/11	685471.12	5597943.47
RE08	A094	16/04/11	685479.23	5597942.32
RE08	A095	16/04/11	685490.71	5597941.92
RE08	A096	16/04/11	685500.74	5597938.91
RE08	A097	16/04/11	685508.23	5597944.05
RE08	A098	16/04/11	685512.24	5597950.01
RE08	A099	16/04/11	685526.27	5597945.21
RE09	A101	16/04/11	671261.47	5598121.66
RE09	A102	16/04/11	671278.17	5598123.04
RE09	A103	16/04/11	671286.84	5598122.56
RE09	A104	16/04/11	671292.73	5598128.14
RE09	A105	16/04/11	671298.82	5598130.27
RE09	A106	16/04/11	671306.86	5598136.42
RE09	A107	16/04/11	671316.90	5598130.30
RE09	A108	16/04/11	671328.21	5598130.06
RE10	A110	16/04/11	667154.63	5605436.22
RE10	A111	16/04/11	667164.75	5605446.76
RE10	A112	16/04/11	667181.11	5605447.48
RE10	A113	16/04/11	667194.19	5605443.65
RE10	A114	16/04/11	667200.87	5605441.30
RE10	A115	16/04/11	667207.28	5605442.87
RE10	A116	16/04/11	667223.15	5605446.13
RE10	A117	16/04/11	667242.19	5605442.04
RE10	A118	16/04/11	667250.28	5605439.46
RE10	A119	16/04/11	667261.13	5605439.19
RE11	C002	16/04/11	672554.25	5613714.84
RE11	C003	16/04/11	672550.19	5613712.18
RE11	C004	16/04/11	672545.78	5613708.46
RE11	C005	16/04/11	672535.42	5613697.66
RE11	C006	16/04/11	672529.99	5613694.72
RE11	C007	16/04/11	672522.49	5613694.11
RE11	C008	16/04/11	672513.50	5613689.40
RE11	C009	16/04/11	672502.10	5613688.82
RE11	C010	16/04/11	672481.18	5613698.14
RE12	B137	18/04/11	678761.03	5620229.36
RE12	B138	18/04/11	678751.20	5620226.89
RE12	B139	18/04/11	678744.14	5620226.13
RE12	B140	18/04/11	678739.89	5620226.02
RE12	B141	18/04/11	678737.17	5620226.01
RE12	B142	18/04/11	678733.31	5620226.16
RE12	B143	18/04/11	678729.05	5620227.55
RE12	B144	18/04/11	678721.42	5620227.18
RE12	B145	18/04/11	678717.39	5620227.17
RE12	B146	18/04/11	678712.77	5620226.05
RE12	B147	18/04/11	678700.63	5620232.11
RE12	B148	18/04/11	678698.28	5620233.14
RE13	B150	18/04/11	680464.33	5626582.78
RE13	B151	18/04/11	680457.02	5626581.18
RE13	B152	18/04/11	680449.34	5626579.59

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
RE13	B153	18/04/11	680436.41	5626579.63
RE13	B154	18/04/11	680431.20	5626579.90
RE13	B155	18/04/11	680413.45	5626581.06
RE13	B156	18/04/11	680404.09	5626583.50
RE14	B130	18/04/11	671593.45	5620475.13
RE14	B131	18/04/11	671589.84	5620473.20
RE14	B132	18/04/11	671589.36	5620468.24
RE14	B133	18/04/11	671588.58	5620462.17
RE14	B134	18/04/11	671594.48	5620439.60
RE14	B135	18/04/11	671562.30	5620421.24
SAB01.1 (SABT1)	B158	18/04/11	690453.36	5632705.19
SAB01.1 (SABT1)	B159	18/04/11	690389.00	5632703.81
SAB01.1 (SABT1)	B160	18/04/11	690367.79	5632702.65
SAB01.1 (SABT1)	B161	18/04/11	690347.65	5632701.69
SAB01.1 (SABT1)	B162	18/04/11	690329.67	5632701.26
SAB01.1 (SABT1)	B163	18/04/11	690311.54	5632701.30
SAB01.1 (SABT1)	B164	18/04/11	690286.01	5632702.68
SAB01.1 (SABT1)	B165	18/04/11	690267.55	5632703.84
SAB01.1 (SABT1)	B166	18/04/11	690244.45	5632706.46
SAB01.1 (SABT1)	B167	18/04/11	690218.99	5632708.23
SAB01.1 (SABT1)	B168	18/04/11	690194.43	5632709.23
SAB01.1 (SABT1)	B169	18/04/11	690165.84	5632710.69
SAB01.2 (SABT2)	B171	18/04/11	690195.35	5632536.66
SAB01.2 (SABT2)	B172	18/04/11	690255.76	5632533.89
SAB01.2 (SABT2)	B173	18/04/11	690264.89	5632534.11
SAB01.2 (SABT2)	B174	18/04/11	690275.24	5632534.15
SAB01.2 (SABT2)	B175	18/04/11	690294.71	5632534.98
SAB01.2 (SABT2)	B176	18/04/11	690312.27	5632535.18
SAB01.2 (SABT2)	B177	18/04/11	690337.65	5632535.51
SAB01.2 (SABT2)	B178	18/04/11	690371.20	5632534.89
SAB01.2 (SABT2)	B179	18/04/11	690390.48	5632534.13
SAB01.2 (SABT2)	B180	18/04/11	690403.52	5632534.15
SAB01.2 (SABT2)	B181	18/04/11	690414.93	5632534.55
SAB01.2 (SABT2)	B182	18/04/11	690441.40	5632536.84
SAB02.1 (SABT3)	B191	18/04/11	689191.16	5631332.77
SAB02.1 (SABT3)	B192	18/04/11	689222.43	5631333.31
SAB02.1 (SABT3)	B193	18/04/11	689235.02	5631335.34
SAB02.1 (SABT3)	B194	18/04/11	689250.95	5631337.64
SAB02.1 (SABT3)	B195	18/04/11	689254.32	5631337.12
SAB02.1 (SABT3)	B196	18/04/11	689259.71	5631337.93
SAB02.1 (SABT3)	B197	18/04/11	689264.13	5631338.04
SAB02.1 (SABT3)	B198	18/04/11	689269.86	5631336.39
SAB02.1 (SABT3)	B199	18/04/11	689276.65	5631334.29
SAB02.1 (SABT3)	B200	18/04/11	689283.92	5631331.64
SAB02.1 (SABT3)	B201	18/04/11	689291.29	5631330.81
SAB02.1 (SABT3)	B202	18/04/11	689312.07	5631331.26
SAB02.1 (SABT3)	B203	18/04/11	689326.11	5631336.52
SAB02.2 (SABT4)	B205	18/04/11	689311.26	5631173.24
SAB02.2 (SABT4)	B206	18/04/11	689318.66	5631175.30
SAB02.2 (SABT4)	B207	18/04/11	689330.53	5631176.07
SAB02.2 (SABT4)	B208	18/04/11	689346.52	5631170.30
SAB02.2 (SABT4)	B209	18/04/11	689372.93	5631176.27
SAB02.2 (SABT4)	B210	18/04/11	689390.18	5631177.00
SAB02.2 (SABT4)	B211	18/04/11	689393.16	5631178.87
SAB02.2 (SABT4)	B212	18/04/11	689415.07	5631177.97

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
SAB02.2 (SABT4)	B213	18/04/11	689429.54	5631181.95
SAB02.2 (SABT4)	B214	18/04/11	689463.70	5631180.77
SAB02.2 (SABT4)	B215	18/04/11	689512.51	5631181.58
SAB02.2 (SABT4)	B216	18/04/11	689526.47	5631179.78
SAB03.1 (SABT5)	B264	18/04/11	691919.91	5626589.02
SAB03.1 (SABT5)	B265	18/04/11	691930.27	5626588.52
SAB03.1 (SABT5)	B266	18/04/11	691944.39	5626587.13
SAB03.1 (SABT5)	B267	18/04/11	691956.56	5626590.53
SAB03.1 (SABT5)	B268	18/04/11	691963.36	5626594.47
SAB03.1 (SABT5)	B269	18/04/11	691973.21	5626597.40
SAB03.1 (SABT5)	B270	18/04/11	691983.97	5626595.68
SAB03.1 (SABT5)	B271	18/04/11	692007.31	5626592.57
SAB03.1 (SABT5)	B272	18/04/11	692018.84	5626593.24
SAB03.1 (SABT5)	B273	18/04/11	692053.78	5626593.83
SAB03.1 (SABT5)	B274	18/04/11	692099.53	5626591.10
SAB03.1 (SABT5)	B275	18/04/11	692127.97	5626592.86
SAB03.1 (SABT5)	B276	18/04/11	692175.64	5626593.49
SAB03.1 (SABT5)	B277	18/04/11	692191.06	5626591.15
SAB03.2 (SABT6)	B279	18/04/11	691970.27	5626474.17
SAB03.2 (SABT6)	B280	18/04/11	691972.57	5626481.50
SAB03.2 (SABT6)	B281	18/04/11	691975.27	5626493.95
SAB03.2 (SABT6)	B282	18/04/11	691975.29	5626509.92
SAB03.2 (SABT6)	B283	18/04/11	691973.28	5626520.58
SAB03.2 (SABT6)	B284	18/04/11	691970.96	5626543.86
SAB03.2 (SABT6)	B285	18/04/11	691971.70	5626586.30
SAB03.2 (SABT6)	B286	18/04/11	691971.40	5626598.04
SAB03.2 (SABT6)	B287	18/04/11	691976.11	5626630.78
SAB03.2 (SABT6)	B288	18/04/11	691978.23	5626643.65
SAB03.2 (SABT6)	B289	18/04/11	691979.22	5626655.55
SAB03.2 (SABT6)	B290	18/04/11	691978.36	5626681.27
SAB04.1 (SABT7)	B292	18/04/11	693485.23	5626355.51
SAB04.1 (SABT7)	B293	18/04/11	693493.36	5626358.04
SAB04.1 (SABT7)	B294	18/04/11	693525.54	5626355.48
SAB04.1 (SABT7)	B295	18/04/11	693554.41	5626357.04
SAB04.1 (SABT7)	B296	18/04/11	693567.61	5626357.87
SAB04.1 (SABT7)	B297	18/04/11	693582.36	5626360.94
SAB04.1 (SABT7)	B298	18/04/11	693592.64	5626361.31
SAB04.1 (SABT7)	B299	18/04/11	693616.23	5626356.83
SAB04.1 (SABT7)	B300	18/04/11	693627.27	5626354.32
SAB04.1 (SABT7)	B301	18/04/11	693649.51	5626357.89
SAB04.2 (SABT8)	B303	18/04/11	693603.40	5626317.83
SAB04.2 (SABT8)	B304	18/04/11	693603.91	5626328.73
SAB04.2 (SABT8)	B305	18/04/11	693601.05	5626340.17
SAB04.2 (SABT8)	B306	18/04/11	693596.56	5626356.00
SAB04.2 (SABT8)	B307	18/04/11	693594.11	5626375.74
SAB04.2 (SABT8)	B308	18/04/11	693596.87	5626394.05
SAB04.2 (SABT8)	B309	18/04/11	693597.28	5626415.88
SAB04.2 (SABT8)	B310	18/04/11	693592.20	5626440.01
SAB04.2 (SABT8)	B311	18/04/11	693593.83	5626454.89
SAB04.2 (SABT8)	B312	18/04/11	693597.55	5626466.15
SAB04.2 (SABT8)	B313	18/04/11	693599.33	5626488.75
SAB05.2	D158	19/04/11	697209.96	5614632.17
SAB05.2	D159	19/04/11	697211.50	5614632.62
SAB05.2	D160	19/04/11	697215.90	5614632.46
SAB05.2	D161	19/04/11	697220.05	5614629.04

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
SAB05.2	D162	19/04/11	697230.20	5614622.77
SAB05.2	D163	19/04/11	697240.30	5614623.60
SAB05.2	D164	19/04/11	697260.63	5614622.04
SAB05.2	D165	19/04/11	697286.30	5614619.98
SAB05.2	D166	19/04/11	697311.20	5614627.62
SAB05.2	D167	19/04/11	697314.78	5614626.58
SAB05.2	D168	19/04/11	697331.25	5614627.91
SAB05.2	D169	19/04/11	697341.13	5614625.33
SAB05.2	D170	19/04/11	697370.51	5614621.44
SAB05.2	D173	19/04/11	697636.32	5614658.78
SAB05.2	D174	19/04/11	697644.93	5614656.10
SAB05.2	D175	19/04/11	697654.17	5614650.56
SAB05.2	D176	19/04/11	697671.49	5614653.27
SAB05.2	D177	19/04/11	697677.38	5614655.99
SAB05.2	D178	19/04/11	697704.26	5614650.03
SAB05.2	D179	19/04/11	697758.75	5614658.15
SAB05.2	D180	19/04/11	697772.19	5614658.15
SAB05.2	D181	19/04/11	697797.92	5614658.46
SAB05.2	D182	19/04/11	697861.23	5614651.67
SAB05.2	D183	19/04/11	697872.98	5614656.86
SAB5.1	D136	19/04/11	697348.92	5614513.60
SAB5.1	D137	19/04/11	697348.80	5614518.47
SAB5.1	D138	19/04/11	697346.14	5614525.68
SAB5.1	D139	19/04/11	697345.13	5614531.17
SAB5.1	D140	19/04/11	697345.18	5614537.53
SAB5.1	D141	19/04/11	697345.37	5614544.01
SAB5.1	D142	19/04/11	697346.94	5614552.81
SAB5.1	D143	19/04/11	697347.85	5614557.94
SAB5.1	D144	19/04/11	697348.08	5614563.27
SAB5.1	D145	19/04/11	697347.92	5614578.36
SAB5.1	D146	19/04/11	697347.34	5614583.62
SAB5.1	D147	19/04/11	697344.58	5614591.01
SAB5.1	D148	19/04/11	697344.48	5614613.71
SAB5.1	D149	19/04/11	697344.74	5614619.33
SAB5.1	D150	19/04/11	697344.88	5614623.58
SAB5.1	D151	19/04/11	697345.21	5614628.10
SAB5.1	D152	19/04/11	697344.86	5614631.95
SAB5.1	D153	19/04/11	697344.19	5614635.38
SAB5.1	D154	19/04/11	697338.41	5614646.90
SAB6.1	B089	17/04/11	690223.33	5611564.29
SAB6.1	B090	17/04/11	690227.89	5611560.93
SAB6.1	B091	17/04/11	690234.75	5611550.75
SAB6.1	B092	17/04/11	690249.44	5611519.22
SAB6.1	B093	17/04/11	690316.32	5611556.91
SAB6.1	B094	17/04/11	690362.66	5611561.46
SAB6.1	B095	17/04/11	690406.29	5611568.44
SAB6.1	B096	17/04/11	690407.79	5611564.28
SAB6.1	B097	17/04/11	690431.42	5611552.39
SAB6.1	B098	17/04/11	690446.04	5611521.27
SAB6.1	B099	17/04/11	690466.80	5611516.47
SAB6.1	B100	17/04/11	690482.55	5611512.21
SAB6.1	B101	17/04/11	690493.33	5611509.39
SAB6.1	B102	17/04/11	690519.59	5611495.29
SAB6.1	B103	17/04/11	690535.22	5611506.04
SAB6.1	B104	17/04/11	690537.73	5611524.59

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
SAB6.1	B105	17/04/11	690527.66	5611566.89
SAB6.1	B106	17/04/11	690567.72	5611586.03
SAB6.1	B107	17/04/11	690580.91	5611577.56
SAB6.1	B108	17/04/11	690603.67	5611576.62
SAB6.1	B109	17/04/11	690613.31	5611587.02
SAB6.1	B110	17/04/11	690622.93	5611615.34
SAB6.1	B111	17/04/11	690643.58	5611630.88
SAB6.2	B064	17/04/11	690209.73	5611151.22
SAB6.2	B065	17/04/11	690181.04	5611162.51
SAB6.2	B066	17/04/11	690161.36	5611177.68
SAB6.2	B067	17/04/11	690142.60	5611192.28
SAB6.2	B068	17/04/11	690129.09	5611191.75
SAB6.2	B069	17/04/11	690106.07	5611198.27
SAB6.2	B070	17/04/11	690093.13	5611193.72
SAB6.2	B071	17/04/11	690081.78	5611181.71
SAB6.2	B072	17/04/11	690067.79	5611180.99
SAB6.2	B073	17/04/11	690057.67	5611175.40
SAB6.2	B074	17/04/11	690048.69	5611171.44
SAB6.2	B075	17/04/11	690040.06	5611171.24
SAB6.2	B076	17/04/11	690026.53	5611180.92
SAB6.2	B077	17/04/11	690013.02	5611179.81
SAB6.2	B078	17/04/11	690009.60	5611180.40
SAB6.2	B079	17/04/11	689989.38	5611190.24
SAB6.2	B080	17/04/11	689974.18	5611187.01
SAB6.2	B081	17/04/11	689960.15	5611182.76
SAB6.2	B082	17/04/11	689942.85	5611181.57
SAB6.2	B083	17/04/11	689926.28	5611170.29
SAB6.2	B084	17/04/11	689920.59	5611164.37
SAB6.2	B085	17/04/11	689917.17	5611161.81
SAB6.2	B086	17/04/11	689892.65	5611165.93
SAB6.2	B087	17/04/11	689877.05	5611168.42
TE01	D014	19/04/11	698448.28	5624207.89
TE01	D015	19/04/11	698455.74	5624219.54
TE01	D016	19/04/11	698467.36	5624231.80
TE01	D017	19/04/11	698522.23	5624171.84
TE01	D018	19/04/11	698492.80	5624191.67
TE01	D019	19/04/11	698484.22	5624194.93
TE01	D020	19/04/11	698475.14	5624197.55
TE01	D021	19/04/11	698463.87	5624202.12
TE02	D045	19/04/11	703098.05	5621047.96
TE02	D046	19/04/11	703126.30	5621056.96
TE02	D047	19/04/11	703135.94	5621058.25
TE02	D048	19/04/11	703142.07	5621059.69
TE02	D049	19/04/11	703147.34	5621062.26
TE02	D050	19/04/11	703152.63	5621065.19
TE02	D051	19/04/11	703164.24	5621070.50
TE03	D036	19/04/11	708156.88	5624073.51
TE03	D037	19/04/11	708159.24	5624073.59
TE03	D038	19/04/11	708175.68	5624074.78
TE03	D039	19/04/11	708190.99	5624074.14
TE03	D040	19/04/11	708210.71	5624073.13
TE03	D041	19/04/11	708220.27	5624074.79
TE03	D042	19/04/11	708226.02	5624076.42
TE03	D043	19/04/11	708233.04	5624078.91
TE04	A006	15/04/11	717648.44	5620588.20

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
TE04	A007	15/04/11	717658.83	5620588.19
TE04	A008	15/04/11	717667.97	5620583.92
TE04	A009	15/04/11	717674.07	5620575.87
TE04	A010	15/04/11	717683.43	5620569.22
TE04	A011	15/04/11	717686.27	5620561.25
TE04	A012	15/04/11	717685.75	5620546.62
TE04	A013	15/04/11	717684.55	5620527.23
TE04	A014	15/04/11	717684.09	5620512.96
TE04	A015	15/04/11	717685.93	5620491.80
TE05	A038	15/04/11	730241.44	5617769.27
TE05	A039	15/04/11	730238.58	5617773.49
TE05	A040	15/04/11	730224.14	5617794.82
TE05	A041	15/04/11	730221.84	5617803.17
TE05	A042	15/04/11	730210.63	5617823.65
TE05	A043	15/04/11	730199.58	5617831.98
TE05	A044	15/04/11	730194.91	5617837.40
TE05	A045	15/04/11	730185.94	5617846.68
TE05	A046	15/04/11	730175.39	5617856.22
TE06	B021	17/04/11	720451.64	5613527.03
TE06	B022	17/04/11	720455.10	5613530.34
TE06	B023	17/04/11	720460.73	5613532.69
TE06	B024	17/04/11	720470.78	5613535.93
TE06	B025	17/04/11	720480.31	5613531.16
TE06	B026	17/04/11	720487.60	5613530.53
TE06	B027	17/04/11	720498.02	5613533.68
TE06	B028	17/04/11	720501.41	5613532.70
TE06	B029	17/04/11	720512.42	5613530.60
TE07	C027	17/04/11	687971.91	5605541.08
TE07	C028	17/04/11	687988.99	5605547.30
TE07	C029	17/04/11	687999.50	5605548.84
TE07	C030	17/04/11	688015.14	5605550.95
TE07	C031	17/04/11	688026.87	5605550.28
TE07	C032	17/04/11	688045.29	5605560.82
TE07	C033	17/04/11	688049.88	5605565.26
TE07	C034	17/04/11	688079.94	5605574.87
TE08	A140	16/04/11	684420.01	5610490.74
TE08	A141	16/04/11	684446.64	5610500.09
TE08	C012	16/04/11	684402.53	5610472.96
TE08	C013	16/04/11	684409.00	5610477.92
TE08	C014	16/04/11	684412.84	5610484.00
TE08	C015	16/04/11	684418.00	5610489.41
TE08	C016	16/04/11	684422.14	5610493.59
TE08	C017	16/04/11	684436.90	5610507.99
TE08	C018	16/04/11	684442.49	5610507.67
TE08	C019	16/04/11	684450.27	5610504.17
TE08	C020	16/04/11	684458.22	5610498.25
TE08	C021	16/04/11	684476.93	5610499.19
TE08	C022	16/04/11	684480.40	5610514.58
TE08	C023	16/04/11	684486.12	5610510.25
TE08	C024	16/04/11	684491.52	5610497.72
TE08	C025	16/04/11	684497.44	5610494.26
TE09	A121	16/04/11	676636.62	5608196.49
TE09	A122	16/04/11	676627.11	5608209.38
TE09	A123	16/04/11	676626.97	5608201.97
TE09	A124	16/04/11	676611.47	5608201.90

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
TE09	A125	16/04/11	676576.93	5608192.38
TE09	A126	16/04/11	676570.99	5608190.40
TE09	A127	16/04/11	676567.42	5608190.23
TE09	A128	16/04/11	676560.70	5608191.24
TE09	A129	16/04/11	676557.63	5608191.41
TE10	A131	16/04/11	682194.83	5614500.29
TE10	A132	16/04/11	682173.33	5614504.40
TE10	A133	16/04/11	682159.73	5614508.56
TE10	A134	16/04/11	682111.38	5614505.44
TE10	A135	16/04/11	682094.79	5614493.49
TE10	A136	16/04/11	682082.33	5614493.10
TE10	A137	16/04/11	682074.87	5614495.56
TE10	A138	16/04/11	682065.49	5614500.61
WF01	B122	18/04/11	687185.45	5617089.79
WF01	B123	18/04/11	687190.43	5617096.21
WF01	B124	18/04/11	687194.85	5617099.63
WF01	B125	18/04/11	687199.59	5617097.74
WF01	B126	18/04/11	687208.36	5617097.77
WF01	B127	18/04/11	687211.14	5617100.19
WF02	B358	18/04/11	689685.42	5619082.68
WF02	B359	18/04/11	689679.03	5619077.43
WF02	B360	18/04/11	689662.26	5619072.52
WF02	B361	18/04/11	689653.53	5619071.21
WF02	B362	18/04/11	689614.82	5619060.83
WF02	B363	18/04/11	689605.32	5619058.52
WF02	B364	18/04/11	689591.80	5619063.94
WF02	B365	18/04/11	689578.12	5619070.35
WF03	D077	19/04/11	692062.64	5619700.27
WF03	D078	19/04/11	692047.91	5619703.55
WF03	D079	19/04/11	692038.78	5619702.74
WF03	D080	19/04/11	692006.19	5619693.09
WF03	D081	19/04/11	691998.62	5619687.22
WF03	D082	19/04/11	691996.23	5619682.50
WF03	D083	19/04/11	691985.77	5619682.07
WF03	D084	19/04/11	691980.54	5619679.77
WF04	D109	19/04/11	695394.44	5620028.46
WF04	D110	19/04/11	695386.48	5620025.78
WF04	D111	19/04/11	695371.50	5620011.53
WF04	D112	19/04/11	695355.43	5620006.66
WF04	D113	19/04/11	695347.06	5620005.42
WF04	D114	19/04/11	695341.44	5620003.67
WF04	D115	19/04/11	695335.54	5620003.45
WF04	D116	19/04/11	695330.74	5620002.99
WF04	D117	19/04/11	695323.66	5620003.03
WF04	D118	19/04/11	695317.75	5620002.80
WF04	D119	19/04/11	695312.18	5620004.07
WF04	D120	19/04/11	695301.97	5620007.42
WF04	D121	19/04/11	695283.47	5620014.95
WF04	D122	19/04/11	695262.03	5620015.70
WF04	D123	19/04/11	695246.06	5620012.96
WF04	D124	19/04/11	695228.33	5620004.98
WF05	D005	19/04/11	700021.48	5618949.13
WF05	D006	19/04/11	700008.43	5618943.70
WF05	D007	19/04/11	699995.25	5618937.10
WF05	D008	19/04/11	699988.53	5618934.97

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
WF05	D009	19/04/11	699977.04	5618932.09
WF05	D010	19/04/11	699970.86	5618928.94
WF05	D011	19/04/11	699963.16	5618923.73
WF05	D012	19/04/11	699937.96	5618902.79
WF06	D097	19/04/11	696979.00	5618746.42
WF06	D098	19/04/11	696964.60	5618746.46
WF06	D099	19/04/11	696954.05	5618738.54
WF06	D100	19/04/11	696939.68	5618734.15
WF06	D101	19/04/11	696929.14	5618734.89
WF06	D102	19/04/11	696920.67	5618728.50
WF06	D103	19/04/11	696920.30	5618718.59
WF06	D104	19/04/11	696914.08	5618717.73
WF06	D105	19/04/11	696890.95	5618726.63
WF06	D106	19/04/11	696896.32	5618711.92
WF06	D107	19/04/11	696892.87	5618706.90
WF07	D086	19/04/11	694346.04	5618124.11
WF07	D087	19/04/11	694340.34	5618119.09
WF07	D088	19/04/11	694328.11	5618113.06
WF07	D089	19/04/11	694320.06	5618102.06
WF07	D090	19/04/11	694310.06	5618100.38
WF07	D091	19/04/11	694301.42	5618096.18
WF07	D092	19/04/11	694296.05	5618091.57
WF07	D093	19/04/11	694289.67	5618083.26
WF07	D094	19/04/11	694278.69	5618073.26
WF07	D095	19/04/11	694272.18	5618067.95
WF08	B367	18/04/11	690057.62	5617188.73
WF08	B368	18/04/11	690049.62	5617180.25
WF08	B369	18/04/11	690041.96	5617187.12
WF08	B370	18/04/11	690036.64	5617193.13
WF08	B371	18/04/11	690035.14	5617194.78
WF08	B372	18/04/11	690030.26	5617193.31
WF08	B373	18/04/11	690021.76	5617203.61
WF08	B374	18/04/11	690013.88	5617220.79
WF09	B114	18/04/11	689345.33	5615490.45
WF09	B115	18/04/11	689356.62	5615495.34
WF09	B116	18/04/11	689362.21	5615499.07
WF09	B117	18/04/11	689368.80	5615504.44
WF09	B118	18/04/11	689372.86	5615510.41
WF09	B119	18/04/11	689376.02	5615514.43
WF09	B120	18/04/11	689380.09	5615515.51
WF10	C072	17/04/11	688334.12	5613089.19
WF10	C073	17/04/11	688358.30	5613126.41
WF10	C074	17/04/11	688362.07	5613127.42
WF10	C075	17/04/11	688357.71	5613143.87
WF10	C076	17/04/11	688370.46	5613135.01
WF10	C077	17/04/11	688387.54	5613148.50
WF11	C079	18/04/11	690681.21	5613909.21
WF11	C080	18/04/11	690680.16	5613914.45
WF11	C081	18/04/11	690687.80	5613914.31
WF11	C082	18/04/11	690685.06	5613935.80
WF11	C083	18/04/11	690691.22	5613938.48
WF11	C084	18/04/11	690703.34	5613932.78
WF12	D127	19/04/11	694142.19	5614492.31
WF12	D128	19/04/11	694153.65	5614491.96
WF12	D129	19/04/11	694164.08	5614491.55

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
WF12	D130	19/04/11	694198.46	5614492.67
WF12	D131	19/04/11	694207.15	5614494.30
WF12	D132	19/04/11	694218.08	5614497.34
WF12	D133	19/04/11	694234.77	5614498.23
WF12	D134	19/04/11	694240.15	5614499.98
WF13	D185	19/04/11	697651.78	5615439.78
WF13	D186	19/04/11	697660.36	5615439.84
WF13	D187	19/04/11	697672.37	5615437.74
WF13	D188	19/04/11	697682.40	5615445.76
WF13	D189	19/04/11	697692.92	5615451.84
WF13	D190	19/04/11	697699.81	5615450.17
WF13	D191	19/04/11	697704.88	5615446.14
WF13	D192	19/04/11	697726.47	5615458.91
WF14	D203	19/04/11	700438.83	5616583.87
WF14	D204	19/04/11	700421.69	5616583.23
WF14	D205	19/04/11	700415.68	5616583.28
WF14	D206	19/04/11	700396.15	5616584.14
WF14	D207	19/04/11	700380.09	5616581.86
WF14	D208	19/04/11	700372.00	5616579.22
WF14	D209	19/04/11	700361.75	5616587.02
WF14	D210	19/04/11	700332.63	5616598.34
WF15	D220	19/04/11	705495.15	5617878.57
WF15	D221	19/04/11	705482.63	5617881.27
WF15	D222	19/04/11	705465.70	5617869.81
WF15	D223	19/04/11	705451.80	5617864.67
WF15	D224	19/04/11	705434.18	5617874.61
WF15	D001	19/04/11	705432.48	5617859.67
WF15	D002	19/04/11	705427.34	5617853.21
WF15	D003	19/04/11	705409.02	5617854.84
WF16	D212	19/04/11	705170.82	5616061.83
WF16	D213	19/04/11	705163.44	5616065.87
WF16	D214	19/04/11	705144.02	5616056.33
WF16	D215	19/04/11	705133.76	5616054.04
WF16	D216	19/04/11	705121.33	5616052.52
WF16	D217	19/04/11	705108.73	5616051.61
WF16	D218	19/04/11	705103.64	5616051.30
WF17	D194	19/04/11	699746.94	5613865.46
WF17	D195	19/04/11	699755.72	5613865.72
WF17	D196	19/04/11	699763.82	5613864.32
WF17	D197	19/04/11	699778.47	5613861.28
WF17	D198	19/04/11	699797.40	5613867.01
WF17	D199	19/04/11	699808.02	5613869.71
WF17	D200	19/04/11	699814.80	5613867.63
WF17	D201	19/04/11	699824.77	5613867.24
WF18	B031	17/04/11	694481.99	5611414.36
WF18	B032	17/04/11	694467.12	5611409.30
WF18	B033	17/04/11	694458.89	5611406.68
WF18	B034	17/04/11	694438.07	5611399.27
WF18	B035	17/04/11	694427.08	5611397.96
WF18	B036	17/04/11	694419.66	5611396.67
WF18	B037	17/04/11	694399.67	5611394.00
WF18	B038	17/04/11	694379.64	5611390.14
WF18	B039	17/04/11	694368.55	5611383.82
WF18	B040	17/04/11	694358.66	5611376.62
WF18	B041	17/04/11	694346.05	5611385.41

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
WF18	B042	17/04/11	694338.44	5611388.91
WF19	B044	17/04/11	691984.70	5611908.96
WF19	B045	17/04/11	691959.74	5611932.21
WF19	B046	17/04/11	691955.19	5611921.43
WF19	B047	17/04/11	691947.59	5611920.86
WF19	B048	17/04/11	691951.37	5611906.61
WF19	B049	17/04/11	691910.58	5611916.83
WF19	B050	17/04/11	691904.42	5611914.40
WF19	B051	17/04/11	691900.91	5611909.43
WF20	B053	17/04/11	689060.41	5611495.65
WF20	B054	17/04/11	689034.53	5611487.86
WF20	B055	17/04/11	689028.44	5611488.95
WF20	B056	17/04/11	689018.67	5611489.79
WF20	B057	17/04/11	689013.24	5611486.67
WF20	B058	17/04/11	689005.93	5611491.10
WF20	B059	17/04/11	688998.41	5611488.73
WF20	B060	17/04/11	688994.63	5611483.25
WF20	B061	17/04/11	688991.35	5611480.01
WF20	B062	17/04/11	688986.26	5611478.79

APPENDIX C GRAB LOGS AND DETAILS

APPENDIX C GRAB LOGS AND DETAILS
Rampion Benthic J/1/03/1836

Site No.	Date	Depth (m BCD)	UTM WGS84 Z 30N		Fauna (volume L)	PSA	<i>In-situ</i> sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
			Eastings	Northings							
CR01	18/04/11	5.5	690331.75	5632111.38	5	Y	Slightly shelly, slightly gravelly sand (1% shells)	None	None	None	None
CR02	18/04/11	9.5	692245.55	5629987.66	8	Y	Slightly shelly, slightly gravelly sand (3% shells)	Tubes	None	None	<i>Lanice conchilega</i>
CR04	18/04/11	11.8	688763.59	5626555.30	N/A	Y	Silty gravelly sand	None	None	None	None
CR04	18/04/11	11.8	688760.58	5626554.74	2.5	N	Silty gravelly sand	None	None	None	<i>Pomatoceros</i> sp., Pectinariae <i>Actinaria</i> , <i>Ophiura albida</i> , <i>Lanice conchilega</i> , Pectinariae, Low lying
CR05	18/04/11	17.7	686879.97	5622112.31	9	Y	Silty gravelly shelly sand (5% shells)	Tubes	None	None	<i>Sabellaria</i> crust
CR06	18/04/11	13.7	690342.76	5625389.53	1.5	N	Gravelly sand with cobbles	Tubes	None	None	<i>Pomatoceros</i> , <i>Upogebia</i> sp.
CR06	18/04/11	13.7	690344.64	5625386.64	1	Y	Gravelly sand with cobbles	Tubes	None	None	<i>Pomatoceros</i>
CR07	19/04/11	14.0	696883.31	5628460.59	5.5	Y	Silty sand with 2% shells	None	None	None	<i>Ensis</i> sp., <i>Echinocardium cordatum</i>
CR08	19/04/11	19.5	693052.65	5623434.20	5	Y	Slightly silty gravelly sand	None	None	None	None
CR09	19/04/11	20.9	691718.81	5622336.43	5	Y	Gravelly sand with pebbles and 10% shells	None	None	None	None
OW01	17/04/11	43.8	709119.34	5615824.29	9	Y	Slightly shelly sand (3% shells)	None	None	None	<i>Echinocardium cordatum</i>
OW02	17/04/11	53.5	714517.36	5613082.91	2	N	Slightly pebbly sand with 2 cobbles	None	None	None	None
OW03	17/04/11	54.8	709111.51	5612825.54	7.5	Y	Slightly shelly, silty sand (2% shells)	None	Lumps	None	None
OW04	17/04/11	41.1	703626.68	5612310.66	10	Y	Sand	None	None	None	<i>Echinocardium cordatum</i>
OW05	17/04/11	59.3	703827.65	5608803.25	10	Y	Slightly shelly, slightly gravelly sand (6% shells)	None	None	None	None
OW06	17/04/11	52.3	699288.18	5609723.49	11.5	Y	Slightly shelly sand (4% shells)	None	None	None	None
OW07	17/04/11	59.2	691903.97	5609383.06	8	Y	Slightly shelly gravelly pebbly sand (4% shells)	None	None	None	Bryozoan crust
RE01	15/04/11	17.5	723364.30	5625633.94	3.5	Y	Cobbly, silty, gravelly sand with 10% shells	Tubes	None	None	<i>Pectinaria</i> sp.
RE03	15/04/11	35.1	736619.44	5616002.03	N/A	Y	Slightly gravelly, pebbly sand with cobble and 30% shells	None	None	None	None
RE03	16/04/11	35.2	736624.56	5616000.25	3	N	Slightly gravelly, pebbly sand with 3 cobbles and 20% shells	None	None	None	<i>Upogebia</i> sp., Hydroid bryozoan turf
RE04	16/04/11	60.3	730956.89	5609877.86	7	Y	Slightly gravelly pebbly sand	None	None	None	<i>Pomatoceros</i> sp.
RE05	16/04/11	47.0	721995.57	5604642.86	4	Y	Slightly pebbly, gravelly sand with cobble and 3% shells	None	None	None	<i>Pomatoceros</i> sp.
RE06	16/04/11	50.2	710279.47	5599590.80	5	Y	Slightly shelly, slightly pebbly gravelly sand with cobble and 2% shells	None	None	None	<i>Pomatoceros</i> sp.
RE07	16/04/11	61.1	697812.09	5598476.62	8	Y	Slightly gravelly, slightly pebbly sand with 1% shells	None	None	None	<i>Upogebia</i> sp.
RE08	16/04/11	57.1	685511.46	5597944.61	10	Y	Slightly gravelly, shelly, pebbly sand (8% shells)	None	None	None	<i>Pomatoceros</i> sp.

APPENDIX C GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Depth (m BCD)	UTM WGS84 Z 30N		Fauna (volume L)	PSA	In-situ sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
			Eastings	Northings							
RE09	16/04/11	71.7	671323.02	5598126.31	4	Y	Silty sandy gravelly pebbels with 1% shells	Tubes	None	None	<i>Pomatoceros</i> sp.
RE09	16/04/11	71.7	671326.52	5598124.16	N/A	N	Silty sandy gravelly pebbels with 1% shells	Tubes	None	None	<i>Pomatoceros</i> sp., <i>Upogebia</i> sp.
RE10	16/04/11	36.2	667208.12	5605447.13	12	Y	Shelly sand (50% shells)	None	None	None	None
RE11	16/04/11	19.3	672517.09	5613686.41	N/A	Y	Silty gravelly pebbly sand with 5% shells	Tubes	None	None	<i>Pomatoceros</i> sp. , <i>Buccinum undatum</i> (juv.)
RE11	16/04/11	19.4	672519.54	5613680.32	1.5	N	Silty gravelly cobbly sand with 5% shells	Tubes	None	None	<i>Psammechinus miliaris</i> , <i>Pomatoceros</i> sp. , <i>Pectinaria</i> sp.
RE14	18/04/11	16.6	671582.48	5620469.18	5	Y	Slightly shelly, slightly pebbly gravelly sand with cobble (3% shells)	Tubes	None	None	<i>Pomatoceros</i> sp., <i>Echinocardium cordatum</i>
SAB3	18/04/11	15.5	691971.69	5626483.61	4	N	Gravelly sand with cobbles with 5-10% shells	None	None	None	Pectinariidae
SAB4	18/04/11	15.8	693564.91	5626352.49	5	N	Gravelly sand with cobbles with 5-10% shells	None	None	None	None
SAB5	19/04/11	56.5	697344.47	5614621.30	6.5	N	Slightly gravelly muddy sand	None	Layer	None	None
TE01	19/04/11	19.9	698479.62	5624200.58	10	Y	Slightly shelly sand	None	None	None	<i>Echinocardium cordatum</i>
TE02	19/04/11	25.2	703146.85	5621058.97	7.5	Y	Silty gravelly sand with clumps of clay and 20% shells	None	None	None	None
TE03	19/04/11	22.5	708242.29	5624083.42	8	Y	Slightly silty, slightly gravelly sand with 20% shells	None	None	None	<i>Ophiura ophiura</i>
TE04	15/04/11	26.5	717666.11	5620574.97	4	N	Shelly gravelly sand with 2 cobbles	Tubes	None	None	Small piece of eroded <i>Sabellaria</i> tubes
TE04	15/04/11	26.6	717656.36	5620575.20	N/A	Y	Shelly gravelly sand with 1 cobbles	Tubes	None	None	<i>Pomatoceros</i> sp.
TE05	15/04/11	37.6	730210.84	5617827.89	2.5	N	Slightly gravelly, pebbly sand with 15% shells	None	None	None	None
TE06	17/04/11	50.5	720509.35	5613527.66	N/A	Y	Slightly gravelly, pebbly sand with cobble and 5% shells	None	None	None	None
TE06	17/04/11	51.6	720504.13	5613532.58	4.5	N	Slightly gravelly sand with few pebbles, 2 cobbles and 5% shells	Tubes	None	None	<i>Sabellaria</i> crust on pebbles
TE07	17/04/11	64.1	688054.68	5605564.14	5	Y	Shelly gravelly pebbly sand with 3% shells	None	None	None	<i>Pomatoceros</i> sp.
TE08	16/04/11	38.8	684487.96	5610503.28	6.5	Y	Gravelly silty muddy sand with 2% shells	None	Lumps	None	<i>Upogebia</i> sp.
TE09	16/04/11	40.6	676572.03	5608200.19	8.5	Y	Slightly silty gravelly sand with 10% shells	None	None	None	None
TE10	16/04/11	28.8	682107.11	5614498.96	12.5	Y	gravelly silty sand with 2% shells	None	None	None	None
WF01	18/04/11	21.6	687210.72	5617101.80	5	Y	Slightly gravelly pebbly sand	Tubes	None	None	<i>Pomatoceros</i> sp.
WF02	18/04/11	22.0	689607.51	5619065.43	N/A	Y	Silty, slightly shelly sand	None	None	None	None

APPENDIX C GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Depth (m BCD)	UTM WGS84 Z 30N		Fauna (volume L)	PSA	In-situ sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
			Eastings	Northings							
WF03	19/04/11	26.4	692003.15	5619686.77	12	Y	Slightly silty, slightly gravelly sand with 10% shells	None	None	None	<i>Pectinaria</i> sp.
WF04	19/04/11	25.7	695312.51	5620004.21	7	Y	Slightly pebbly shelly gravelly sand (8% shells)	None	None	None	None
WF05	19/04/11	26.6	699970.07	5618924.75	8	Y	Slightly shelly, gravelly, pebbly, muddy sand (2% shells)	None	None	None	None
WF06	19/04/11	28.9	696906.86	5618723.20	4.5	Y	Slightly shelly, gravelly sand (4% shells)	None	None	None	None
WF07	19/04/11	26.9	694247.80	5618054.52	10	Y	Silty gravelly sand with 10% shells	None	None	None	<i>Pomatoceros</i> sp., dense broken low lying 1cm clumps of <i>Sabellaria</i>
WF08	18/04/11	28.6	690038.49	5617186.22	1.5	Y	Slightly silty shelly gravelly sand (5% shells)	None	None	None	<i>Aequipecten opercularis</i>
WF08	18/04/11	29.5	690037.57	5617189.28	2	N	Slightly silty shelly gravelly sand (5% shells)	None	None	None	None
WF09	18/04/11	29.2	689380.88	5615509.29	8	Y	Slightly shelly, slightly pebbly, slightly gravelly sand (1% shells)	None	None	None	<i>Upogebia</i> sp., <i>Ophiura</i> sp.
WF10	18/04/11	42.4	688362.28	5613135.67	9.5	Y	Slightly shelly, slightly gravelly muddy sand (5% shells)	None	Layer	None	<i>Ophiura</i> sp.
WF11	18/04/11	34.6	690692.37	5613937.55	10	Y	Slightly shelly, slightly gravelly silty sand (4% shells)	None	None	None	None
WF12	19/04/11	39.9	694240.43	5614498.70	11	Y	Slightly shelly sand	None	None	None	None
WF13	19/04/11	49.2	697701.63	5615443.49	12.5	Y	Muddy sand	None	Lumps	None	None
WF14	19/04/11	44.3	700353.20	5616583.40	12	Y	Slightly shelly sand	None	None	None	None
WF15	19/04/11	29.4	705429.02	5617852.65	1.5	N	Slightly pebbly, gravelly sand with 2 cobbles	None	None	None	None
WF16	19/04/11	33.0	705103.77	5616054.42	11.5	Y	Slightly shelly sand	None	None	None	None
WF17	19/04/11	44.9	699812.04	5613868.11	11	Y	Slightly gravelly, slightly shelly sand (3% shells)	None	None	None	None
WF18	17/04/11	56.1	694359.63	5611380.06	11	Y	Sand with 1% shells	None	None	None	None
WF19	17/04/11	46.1	691902.07	5611913.37	12	Y	Sand with 1% shells	None	None	None	None

APPENDIX C GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Replicate?	Attempts	Successful sample collected (Y/N)	Brief description of problems with sample	Size of sample retained	Additional Notes on Quality of Retained Samples
CR03	Single	1	N	Small sample due to hard ground	N/A	
CR04	Single	3	Y	Small samples	2.5	Fauna and PSA collected from two different attempts
CR06	Single	3	Y	Small samples	1.5	Fauna and PSA collected from two different attempts
OW02	Single	3	Y	Small samples	2	Fauna only
OW07	Single	2	Y	Cobble in jaw	8	
RE01	Single	4	Y	Cobble in jaw and small samples	3.5	
RE03	Single	3	Y	Small samples	3	Fauna and PSA collected from two different attempts
RE05	Single	3	Y	Cobble in jaw	4	
RE09	Single	3	Y	Small samples	4	Fauna and PSA collected from two different attempts
RE11	Single	3	Y	Small samples	1.5	Fauna and PSA collected from two different attempts
TE04	Single	3	Y	Small samples	4	Fauna and PSA collected from two different attempts
TE05	Single	3	Y	Small samples	2.5	Fauna only
TE06	Single	3	Y	Small samples	4.5	Fauna and PSA collected from two different attempts
WF04	Single	2	Y	Cobble in jaw	7	
WF06	Single	3	Y	Cobble in jaw and small samples	4.5	
WF08	Single	3	Y	Small samples	2	Fauna and PSA collected from two different attempts
WF15	Single	3	Y	Small samples	1.5	Fauna only
WF20	Single	2	N	Small samples	N/A	

APPENDIX D DECK PHOTOGRAPHS

Appendix D Deck Grab Photographs



Site CR01



Site CR02



Site CR03



Site CR04.2



Site CR05



Site CR06



Site CR07



Site CR08



Site CR09



Site TE01.1



Site TE02.1



Site TE03



Site TE04.1



Site TE05.1



Site TE06.1



Site TE07



Site TE08



Site TE09



Site TE10



Site RE01



Site RE03



Site RE04



Site RE05



Site RE06



Site RE07



Site RE08



Site RE09.1



Site RE10



Site RE11



Site RE14



Site OW01



Site OW02



Site OW03



Site OW04



Site OW05



Site OW06



Site OW07



Site WF01



Site WF02



Site WF03



Site WF04



Site WF05



Site WF06



Site WF07



Site WF08



Site WF09



Site WF10



Site WF11



Site WF12



Site WF13



Site WF14



Site WF15



Site WF16



Site WF17



Site WF18



Site WF19



Site WF20

APPENDIX E CONTAMINANTS SAMPLE LOGS

APPENDIX E CONTAMINANTS GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Metals	Organics	PSA	Photograph of sample?	<i>In-situ</i> sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
CR01	19/04/11	N	Y	N	N	Sand	None	None	None	None
CR01	19/04/11	Y	N	N	N	Sand	None	None	None	None
CR07	19/04/11	N	Y	N	N	Silty sand	None	None	None	None
CR07	19/04/11	Y	N	N	N	Silty sand	None	None	None	None
CR09	19/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	None
OW03	17/04/11	Y	Y	N	N	Slightly silty shelly sand	None	None	None	None
OW05	17/04/11	Y	Y	N	N	Slightly shelly, slightly gravelly sand	None	None	None	None
OW07	17/04/11	Y	Y	N	N	Shelly gravelly sand with small pebbles	None	None	None	<i>Atelecyclus rotundatus</i>
OW07	17/04/11	Y	N	N	N	Slightly shelly gravelly sand with few pebbles	None	None	None	None
RE04	16/04/11	Y	Y	N	N	Shelly gravelly sand	Tubes	None	None	None
RE07	16/04/11	Y	Y	N	N	Shelly gravelly sand	Tubes	None	None	Bryozoan crust
RE10	16/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	None
RE14	18/04/11	Y	N	N	N	Sand	None	None	None	None
RE14	18/04/11	N	Y	N	N	Sand	None	None	None	None
TE02	19/04/11	N	Y	N	N	Slightly gravelly sand	None	None	None	None
TE02	19/04/11	Y	N	N	N	Slightly gravelly sand	None	None	None	None
TE04	15/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	<i>Nemertesia</i> sp. <i>Alcyonidium diaphanum</i>
TE06	17/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	None
TE08	16/04/11	Y	N	N	N	Sandy gravel	Tubes	None	None	None
TE08	17/04/11	N	Y	N	N	Sandy gravel	Tubes	None	None	Bryozoan crust
WF01	18/04/11	N	Y	N	Y	Gravelly sand	None	None	None	None
WF01	18/04/11	Y	N	N	N	Gravelly sand with pebbles	None	None	None	<i>Pomatoceros</i> sp.
WF02	18/04/11	Y	Y	N	Y	Sand with 2% shells	None	None	None	None
WF04	19/04/11	N	Y	N	N	Gravelly sand	None	None	None	None
WF04	20/04/11	Y	N	N	N	Gravelly sand	None	None	None	None
WF05	19/04/11	N	Y	N	N	Sand with pebbles	None	None	None	<i>Ophiura albida</i>
WF07	19/04/11	Y	Y	N	N	Silty, pebbly, gravelly sand	None	None	None	None
WF11	18/04/11	N	Y	N	N	Gravelly sand with shells	None	None	None	<i>Ophiura albida</i>
WF11	18/04/11	Y	N	N	Y	Gravelly sand with pebbles	None	None	None	<i>Ophiura albida</i>

APPENDIX E CONTAMINANTS GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Metals	Organics	PSA	Photograph of sample?	<i>In-situ</i> sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
WF11	18/04/11	Y	N	N	Y	Sandy gravel	None	None	None	None
WF13	19/04/11	Y	Y	N	N	Sand with large shell fragments	None	Layer	None	<i>Ophiura albida</i>
WF15	19/04/11	N	Y	N	N	Sand with pebbles	None	None	None	<i>Ophiura sp.</i>
WF17	19/04/11	Y	Y	N	N	Sand with shells	None	None	None	None

APPENDIX E CONTAMINANTS GRAB QUALITY

Rampion Benthic J/1/03/1836

Site No.	Replicate?	Attempts	Successful sample collected (Y/N)	Brief description of problems with sample	Metals retained	Organics retained
CR01	Single	2	Yes	Small samples	Yes	Yes
CR07	Single	2	Yes	Small samples	Yes	Yes
OW07	Single	3	Yes	Small samples	Yes	Yes
RE04	Single	2	Yes	Cobble in jaw	Yes	Yes
RE14	Single	3	Yes	Small samples	Yes	Yes
TE02	Single	2	Yes	Small samples	Yes	Yes
TE04	Single	2	Yes	Pebble in jaw	Yes	Yes
TE06	Single	4	Yes	Cobble in Jaw	Yes	Yes
TE08	Single	2	Yes	Small samples	Yes	Yes
WF01	Single	3	Yes	Small samples and a pebble in jaw	Yes	Yes
WF04	Single	2	Yes	Small samples	Yes	Yes
WF05	Single	3	Yes	Pebble in jaw	No	Yes
WF11	Single	3	Yes	Small samples	Yes	Yes
WF15	Single	3	Yes	Small sample	No	Yes

APPENDIX E CONTAMINANTS GRAB POSITIONS

Rampion Benthic J/1/03/1836

Site No.	Date	Time (GMT)	Depth (m_bcd)	UTM WGS84 Z30N	
				Easting	Northing
CR01	19/04/11	13:00	5.7	690333.77	5632106.18
CR01	19/04/11	13:17	5.7	690340.59	5632110.95
CR07	19/04/11	14:41	14.4	696886.07	5628463.47
CR07	19/04/11	14:51	14.2	696884.95	5628459.73
CR09	19/04/11	19:28	20.7	691720.84	5622337.13
OW03	17/04/11	14:47	54.5	709110.66	5612817.43
OW05	17/04/11	15:31	59.2	703823.61	5608800.47
OW07	17/04/11	16:50	59.1	692200.95	5609221.45
OW07	17/04/11	17:24	59.2	692199.82	5609220.24
RE04	16/04/11	02:51	61.0	730963.09	5609880.33
RE07	16/04/11	09:18	61.8	697814.66	5598492.89
RE10	16/04/11	16:32	37.3	667207.45	5605453.36
RE14	18/04/11	07:14	16.4	671582.93	5620474.06
RE14	18/04/11	07:25	16.5	671584.09	5620471.91
TE02	19/04/11	17:18	25.0	703146.57	5621061.83
TE02	19/04/11	17:30	25.0	703147.00	5621057.96
TE04	15/04/11	18:27	25.5	717664.49	5620576.37
TE06	17/04/11	13:41	50.7	720501.95	5613531.01
TE08	16/04/11	23:55	39.1	684489.59	5610503.01
TE08	17/04/11	00:21	38.7	684488.54	5610500.78
WF01	18/04/11	04:39	21.9	687210.35	5617097.73
WF01	18/04/11	04:54	22.1	687208.62	5617099.64
WF02	18/04/11	21:42	21.8	689604.91	5619061.75
WF04	19/04/11	23:55	25.9	695311.51	5619998.28
WF04	20/04/11	00:02	25.7	695313.76	5620008.64
WF05	19/04/11	10:42	26.7	699966.31	5618918.96
WF07	19/04/11	21:40	26.6	694291.50	5618083.04
WF11	18/04/11	02:15	34.7	690691.67	5613946.49
WF11	18/04/11	02:31	34.8	690694.26	5613938.55
WF11	18/04/11	02:47	34.8	690689.76	5613939.09
WF13	19/04/11	04:42	49.0	697707.82	5615443.51
WF15	19/04/11	09:20	29.3	705428.10	5617856.09
WF17	19/04/11	05:46	45.1	699812.90	5613865.03

APPENDIX F TRAWL LOGS AND DETAILS

APPENDIX F 2M BEAM TRAWLING POSITIONS AND RELATED INFORMATION

Rampion Benthic J/1/03/1836

Site No	Date	Point on line	WGS84 UTM Z30N		Time (GMT)	Depth (BCD m)	Trawl Speed (knots)	Distance (m)	Direction of Travel	Comments
			Easting	Northing						
CR02	10/07/11	Start	691945.06	5630050.64	05:25	5.3	2.5	518	Into current	
		End	692461.96	5630011.13	05:31	6.2				
CR06	10/07/11	Start	690066.42	5625389.63	06:29	9.6	2.4	509	Into current	
		End	690571.72	5625447.63	06:36	9.6				
CR08	10/07/11	Start	692791.67	5623453.78	07:23	15.1	2.4	504	Into current	
		End	693295.38	5623457.41	07:30	15.2				
CR09	10/07/11	Start	691445.76	5622360.18	08:07	15.4	2.4	523	Into current	
		End	691968.83	5622365.82	08:15	15.8				
OW03	10/07/11	Start	709340.38	5612864.68	17:31	50.0	2.0	468	Into current	
		End	708872.30	5612871.75	17:38	48.9				
OW06	10/07/11	Start	699658.44	5609738.81	15:51	48.1	2.2	524	Into current	Hole in net, so re-do trawl, swapped to other trawl
		End	699146.11	5609627.79	15:58	52.5				
OW06.2	10/07/11	Start	699706.73	5609727.58	16:21	48.5	2.0	487	Into current	Start 172m from east end
		End	699220.02	5609713.52	16:28	52.0				
RE07	10/07/11	Start	698385.31	5598553.36	14:29	57.1	2.1	616	Into current	
		End	697780.41	5598438.06	14:39	55.8				
RE11	10/07/11	Start	672172.28	5613712.74	10:38	16.4	2.3	539	Into current	
		End	672709.35	5613671.30	10:46	15.9				
TE02	11/07/11	Start	702917.02	5621088.68	07:56	20.9	2.4	479	Into current	
		End	703395.76	5621066.35	08:03	19.8				
TE04	11/07/11	Start	717844.67	5620566.10	06:32	22.6	1.8	502	Into current	Start 63m from line
		End	717343.17	5620553.43	06:38	23.5				
TE05	11/07/11	Start	730434.32	5617819.58	05:01	34.7	2.0	486	Into current	
		End	729948.39	5617802.76	05:09	29.4				
TE08	10/07/11	Start	684222.46	5610552.27	12:46	34.9	2.7-3.0	510	Slack water / into current	Moved trawl location slightly North as an obstruction was marked on the vessel's plotter.
		End	684731.38	5610588.99	12:52	33.7				
TE09	10/07/11	Start	676411.06	5608241.89	11:40	30.6	2.5	518	Into current	
		End	676927.05	5608200.81	11:47	37.7				
WF01	10/07/11	Start	686942.46	5617163.95	09:13	17.5	2.2	566	Into current	
		End	687506.00	5617107.19	09:22	17.1				
WF04	11/07/11	Start	694863.42	5620058.53	10:09	19.6	1.8	434	Into current	
		End	695296.76	5620039.32	10:17	20.9				
WF05	11/07/11	Start	699699.29	5618976.79	08:55	22.9	2.2	526	Into current	
		End	700222.23	5618919.34	09:03	21.8				
WF14	10/07/11	Start	700585.29	5616556.09	18:48	40.0	2.1	462	Into current	
		End	700128.48	5616622.27	18:53	36.3				

APPENDIX F 2M BEAM TRAWLING SAMPLE DETAILS

Rampion Benthic J/1/03/1836

Site Number	Date	Total Volume (Litres)	Sediment Character (Percentage)					% Shell Material	% Algae	Other features
			Granules	Gravel	Cobbles	Lge Cobbles	Boulders			
CR02	10/07/11	6			1			10		lesser spotted dogfish egg case, squid eggs.
CR06	10/07/11	15								Dead Pecten, <i>Lanice conchiliga</i> tubes
CR08	10/07/11	5		1						
CR09	10/07/11	5						5		Necklace shell egg capsules, piece of wood
OW03	10/07/11	10		1	5					Lesser spotted dogfish egg case, clinker, clay
OW06	10/07/11	7		5				5		Glove, piece of wood, Coal, <i>Buccinum undatum</i> eggs, Piece of plastic
OW06.2	10/07/11	6						15		Piece of clay, piece of wood, clinker
RE07	10/07/11	15		10	5			15		Lesser spotted dogfish egg case, string
RE11	10/07/11	29			P			P		Sabellaria reef, pebbles with sabellaria up to 5cm height, & cobbles (pieces of reef 9cm max, 5cm average, vol. of sab=3L), <i>Buccinum undatum</i> eggs, sponges and dead <i>Chlamys</i>
TE02	11/07/11	12			1					Crisp packet, coal, piece of peat
TE04	11/07/11	18			P			10		Peat, rubber, Thornback ray egg case, <i>Buccinum undatum</i> eggs, <i>Chaetopterus</i> tubes,
TE05	11/07/11	20		5	10			10		Peat, coal
TE08	10/07/11	20			<1		30cm (10L)			Fishing twine, Lesser spotted dogfish egg case, Thornback ray egg case, <i>Buccinum undatum</i> eggs, clinker.
TE09	10/07/11	5		5				10		Spatangus test, peat (1%), coal, clinker
WF01	10/07/11	12		1	1			20		Clinker, small pieces of peat, dead <i>Pecten maximus</i>
WF04	11/07/11	6						5		Dead Ensis sp. shell, peat
WF05	11/07/11	17						20		Piece of clay, clinker, old <i>Ostrea</i> sp. shell
WF14	10/07/11	10						1		Necklace shell egg capsules, coal, squid eggs

APPENDIX F 2M BEAM TRAWLING SPECIES LIST

Rampion Benthic J/1/03/1836

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Polymastia penicillus	C0361								P										
Suberites ficus sp. (agg.)	C0418										P	P					P	P	P
HALICHONDRIIDA	C0525									P									
Ciocalypa penicillus	C0626												P						
Ciocalypa penicillus	C0626										P								
Iophon sp.	C1050								P										
Raspailia hispida	C1321								P									P	
Tubularia indivisa	D0166													R					
Eudendrium sp.	D0218			P							P								
Bougainvillidae	D0246											P							
Hydractinia sp.	D0272									2									P
Hydractinia echinata	D0273					P	P	P	P		P			P		P			
Halecium sp.	D0390																P	P	
Halecium halecinum	D0392		P							P								P	
Abietinaria abietinaria	D0409					R	R	R	O		R		R	R			R	P	
Diphasia sp.	D0413																	P	
Hydrallmania falcata	D0424					O	P	O	F		R	R	P	R	R	P	R	P	P
Sertularella sp.	D0427											P						P	
Sertularella polyzonias	D0430											P					P		
Nemertesia sp.	D0462				P													P	
Nemertesia antennina	D0463								R			R	P						
Nemertesia ramosa	D0466						R		R	R	R	R						R	P
Aglaophenia pluma	D0481		P													P			
Obeliinae	D0506			P								P							
Obelia sp.	D0517																	P	
Obelia dichotoma	D0519																	P	
Obelia longissima	D0521				P						P						P		
Alcyonium digitatum	D0597	R	100g						<25g		50g	<25g	200g			<25g			
ACTINIARIA sp.	D0662	1				4		1			1	1		1				1	
Urticina sp.	D0682																	2	
Metridium senile	D0710			1								1							
Adamsia cariniopados	D0743		4	1		1	2	2	3			2	7	3	1	14	1	10	
Aphrodita aculeata	P0019										1			1					
Eunice cf. vittata	P0560								2										
Lagis koreni	P1107																1		
Sabellaria	P1115					4cm													
Sabellaria clumps	P1115									P	P	P					R	P	
Sabellaria reef	P1115									P									
Sabellaria spinulosa	P1117									P		P							
Thelepus cinnatus	P1254																		
Pomatoceros sp.	P1339	F on cobble	R						P			P	P	5		P			
Pomatoceros triqueter	P1341															O			
Filograna / Salmacina	P1349/P1360															R			
Scalpellum scalpellum	R0022											1					2		
Balanus crenatus	R0077				75				273				11			1	1	23	
Maera othonis (male)	S0519															1			
CARIDEA	S1293								1	1		1	2						
Processa canaliculata	S1363										1								
Pandalidae	S1370					1			1	2	1	1	1						
Pandalina brevisrostris	S1374					1				8		2	3						

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Pandalus sp.	S1375											1	1						
Pandalus montagui	S1377									27	4	7	8		2	2	5	2	1
Crangon sp.	S1383						1						1	3					
Crangon allmanni	S1384			3	13	9	72		1	1	13	9	29	10	23	3	19	3	13
Philocheras sculptus	S1389								38	2			1			3		1	
Philocheras trispinosus	S1390			16	19	1	5				4	4	8				3		1
Pontophilus spinosus	S1393																1		
Upogebia sp.	S1418																	1	
Upogebia deltaura	S1419	1																4	
Anapagurus hyndmanni	S1448		1																
Pagurus bernhardus	S1457	2	8	4	15	59	21	67	14	23		13	11	28	17	22	6	21	62
Pagurus cuanensis	S1460	3	3							1	1	2	1	1				1	
Pagurus prideaux	S1462		3	1	1	4	7	3	9	3		8	9	12	1	18	2	11	3
Galathea intermedia	S1472									4					1	2			
Pisidia longicornis	S1482		1							1		2					1		
Macropodia parva/rostrata	S15xx/S1532	8	9	3	2	5			1	16	27	50	3	14	4	3	36	56	2
Ebalia tuberosa	S1508								2									1	
Ebalia tumefacta	S1509					1			2	1		1		2		2		1	
Maja brachydactyla	S1515									3									
Hyas coarctatus	S1519								6	4	1		2	1		1		2	
Inachus dorsettensis	S1526	1				1	1		21	7	4	34	29	2		9	10	27	
Inachus phalangium	S1528	1								1									
Macropodia sp.	S1529					3			2	1	1			1	1				
Macropodia linaresi	S1531								2					1	1		1	4	
Macropodia tenuirostris	S1533					2	3		15					3					
Eurynome sp.	S1535													1		1	1		
Eurynome spinosa	S1537									2	1	2			1		2	8	
Pisa armata	S1539	1								3		1							
Corystes cassivelaunus	S1552																		1
Atelecyclus rotundatus	S1555								1				1		1				
Thia scutellata	S1559							1											
Polybiinae	S1573					1													
Liocarcinus depurator	S1580		2									1						2	
Liocarcinus holsatus	S1581		3		10	23	16		8	5	2	2	5	6	4	2	7	4	128
Liocarcinus marmoreus	S1582												2						
Liocarcinus pusillus	S1584								5	1		1	3	9				3	
Necora puber	S1589											1							
Pilumnus hirtellus	S1615	6								17	1	18					1	1	
Acanthochitona crinita	W0086									1									
Gibbula tumida	W0161													1					
Gibbula cineraria	W0163	2																	
Calliostoma zizyphinum	W0182									3		1		2					
Calliostoma zizyphinum var. lloydi	W0183									1									
Calliostoma granulatum	W0185								1					3			1	1	
Crepidula fornicata	W0439									2		2	1			1			
Trivia arctica	W0459									1									
Polinices pulchellus	W0491			1															
Euspira catena	W0493			1	1			2	3		3			4				5	4
Ocenebra erinacea	W0685									4		5	1						
Buccinum undatum	W0708	3	24		1	4			1	91	3	5	3	10		35	3	84	
Hinia reticulata	W0745	6										3				1		8	2
Tritonia hombergii	W1250															1			
Acanthodoris pilosa	W1333											1					7		
Archioris pseudoargus	W1376										1								

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Nucula hanleyi	W1568																1		
Modiolarca tumida	W1718									6	9	6							
Pecten maximus	W1771												3	1				1	
Aequipecten opercularis	W1773	2				31	1		40	7	4	3	227	8	6	22	4	27	3
Chlamys varia	W1779								1										
Heteranomia squamula	W1809								1				1						
Laevicardium crassum	W1959		1																
Sepia officinalis	W2307				1														
Sepiola atlantica	W2329	3	3	4	5	1	3		2		1	1	1		1		4	1	7
Bryozoan crust	Y0001	O									R	R		O					
Alcyonidium diaphanum	Y0076					<25g	<25g		100g	<25g	1200g	625g	150g		<25g		1525g	100g	
Alcyonidium parasiticum	Y0081			P	P												P		
Vesicularia spinosa	Y0131																	P	
Electra pilosa	Y0178											P	P					P	
Flustra foliacea	Y0187						<25g			426g			<25g		<25g		R		
Chartella papyracea	Y0192		P																
Bugula flabellata	Y0243																P		
Bugula plumosa	Y0246	P																	
Bugula turbinata	Y0250											P							
Scrupocellaria scrupea	Y0278		P																
Scrupocellaria scruposa	Y0279											P							
Pentapora fascialis	Y0418									R									
Omalosecosa ramulosa	Y0508								P										
Anseropoda placenta	ZB0062								1										
Crossaster papposus	ZB0075								1										
Asterias rubens	ZB0100	99	129	61	78	22	26	8	50	94	46	205	84	64	18	76	88	63	9
Ophiothrix fragilis	ZB0124	3	3		1	20	2		2	21	22	14	160	30	3	36	9	41	1
Amphipholis squamata	ZB0161										1								
Ophiura albida	ZB0168		16	53	17	274	47	14	429	1	128	16	39	924	472	25	169	1058	1458
Ophiura ophiura	ZB0170			155	57	7	1	20			266	11				7	80	117	150
Psammechinus miliaris	ZB0193	215	596	3	4	168		2	546	441	33	132	270	311	83	898	20	96	
Echinocardium cordatum	ZB0233																	1	1
Thyone fusus	ZB0262											1							
Spatangus purpureus	ZB219																	2	
Polyclinum aurantium	ZD0022																P		
Aplidium nordmanni	ZD0039																P		
Tridemnum tenerum	ZD0047									P									
Didemnum maculosum	ZD0051										P	P							
Ciona intestinalis	ZD0071		4						1		9	4	7			17		11	
Ascidella sp.	ZD0083										1								
Ascidella scabra	ZD0085										1	3							
Ascidia sp.	ZD0087								4										
Ascidia conchilega	ZD0088								3				1						
Ascidia virginea	ZD0092												1						
Styela clava	ZD0104	4																	
Polycarpa sp. (juv.)	ZD0110										2								
Polycarpa fibrosa	ZD0112										6	6					1	1	
Polycarpa pomaria	ZD0115										3	1							
Botryllus schlosseri	ZD0126								R										
Botrylloides leachi	ZD0128								P	P									
Pyura squamulosa	ZD0140								1										
Molgula sp.	ZD0146											1		1					
Molgula manhattensis	ZD0151								6		8	11	2	4		3	4	1	
Raja clavata (female)	ZF0089		1		1														

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Raja clavata (male)	ZF0089										1								
Raja montagui	ZF0094																1		
Raja montagui (female)	ZF0094												1						
OSTEICHTHYES	ZG0001								1	1		1							
Lophius piscatorius	ZG0084															1			
Diplecogaster bimaculata bimaculata	ZG0086											1							
Gadinae	ZG01??		4		1										1				
Ciliata septentrionalis	ZG0112									1									
Trisopterus sp.	ZG0141					1													
Trisopterus luscus	ZG0143										2								
Trisopterus minutus	ZG0144					4						2	6				3		
Belonidae (juv.)	ZG0183	2																	
Syngnathus acus	ZG0245										1								
Aspitrigla cuculus	ZG0262									2									
Agonus cataphractus	ZG0291				2		1				1							1	4
Cyclopterus lumpus	ZG0294										1							1	
Cyclopterus lumpus (juv.)	ZG0294			2															
Ctenolabrus rupestris	ZG0397									1									
Echlichthys vipera	ZG0405			5		2	12	8	4						1				1
Gymnammodytes semisquamatus	ZG0446						6												
Hyperoplus lanceolatus	ZG0449							1											
Callionymus lyra	ZG0452		1	1	3				1	5	3	5	2	2	2	12	3	8	1
Gobiidae	ZG0455		3		1														
Gobius niger	ZG0467																	1	
Pomatoschistus sp.	ZG0476	34		3	4					5	22	3	5		1	13	3	4	3
Pomatoschistus minutus	ZG0479										1							1	3
Pomatoschistus pictus	ZG0481		1																
Arnoglossus laterna	ZG0562						3	4			4	2	1				2	1	3
Limanda limanda	ZG0572			1		1								1					7
Microstomus kitt	ZG0574					1			3			2	2					1	
Pleuronectes platessa	ZG0578	3				6	4	2			3		1	4	2				2
Buglossidium luteum	ZG0585	21			1						10	8						9	2
Buglossidium luteum (juv.)	ZG0585			1															
Solea solea	ZG0591	1				1				1				1				2	2
Number of Species		23	22	21	23	30	20	14	41	45	45	54	43	36	23	31	36	50	27
Number of colonial species (P counts only)		1	4	3	2	2	2	1	7	7	7	12	5	1	0	4	8	14	4
Colonial Species (weighed)		3	2	0	0	4	4	2	7	4	6	6	4	4	3	3	5	3	0
Total number of species		27	28	24	25	36	26	17	55	56	58	72	52	41	26	38	49	67	31
Number of Individual solitary species		422	820	321	313	659	234	135	1508	826	659	622	957	1475	647	1233	503	1736	1874

Rampion Benthic J/1/03/1836

[illegible]

[illegible]

Rampion Benthic J/1/03/1836

[illegible]

APPENDIX G TRAWL DECK PHOTOGRAPHS

APPENDIX G – 2M BEAM TRAWL PHOTOGRAPHS



CR02



CR06



CR08



CR09



WF01



RE11



TE09



TE08



RE07



OW06



OW06.2



OW03



WF14



TE05



TE04



TE02



WF05



WF04

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	CR1.1	CR2	CR4.2	CR5	CR6	CR7	CR8	CR9	OW1	OW3	OW4
EMU LAB ID	7121	7122	7124	7125	7126	7127	7128	7129	7130	7132	7133
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	0.00	0.00	0.00	24.01	0.00	5.66	11.34	0.00	0.00	0.00
22400	12.261	0.000	20.145	1.442	2.753	0.000	2.082	8.984	0.000	0.000	0.000
16000	0.00	0.00	3.09	7.13	3.21	0.00	4.70	0.78	0.00	0.00	0.00
11200	4.06	2.00	15.79	0.00	26.33	0.00	8.73	1.85	0.00	2.25	0.00
8000	2.56	2.73	13.76	10.31	7.14	0.00	8.03	2.94	0.00	1.34	0.22
5600	1.72	1.81	8.97	5.78	7.48	0.00	2.88	2.06	0.27	2.44	0.00
4000	1.57	0.78	4.73	5.54	2.65	0.45	1.32	0.78	0.10	0.89	0.00
2800	0.91	0.85	4.13	4.48	1.85	0.19	0.93	0.74	0.06	0.52	0.00
2000	0.64	0.48	2.54	3.46	1.23	0.11	0.59	0.73	0.04	0.50	0.01
1400	0.40	0.42	2.29	3.15	1.22	0.14	0.81	0.94	0.09	0.39	0.01
1000	0.24	0.38	1.74	2.45	1.00	0.24	1.03	1.49	0.09	0.25	0.02
710	0.20	0.36	1.37	2.12	0.99	0.30	1.58	2.62	0.08	0.20	0.04
500	0.24	0.51	1.83	2.51	1.43	0.50	2.83	5.83	0.23	0.52	0.21
355	0.31	1.07	2.22	3.83	1.68	1.01	5.97	14.42	2.54	6.49	3.13
250	0.84	2.78	2.83	11.39	3.55	3.89	16.96	24.65	60.19	48.36	61.02
180	17.74	16.50	6.99	20.68	8.68	27.61	25.95	14.36	26.31	22.95	32.44
125	37.82	57.46	5.58	8.27	2.92	50.28	7.18	3.30	5.20	6.99	1.27
90	15.45	9.70	0.63	1.33	0.54	9.71	1.20	0.49	0.74	1.83	0.29
63	1.83	0.86	0.11	0.67	0.20	1.79	0.28	0.13	0.27	0.77	0.22
44	0.05	0.05	0.03	0.24	0.04	0.14	0.05	0.07	0.10	0.12	0.08
31	0.06	0.06	0.04	0.32	0.05	0.18	0.07	0.10	0.17	0.18	0.08
22	0.06	0.06	0.06	0.37	0.07	0.23	0.09	0.12	0.26	0.24	0.08
16	0.07	0.08	0.08	0.43	0.09	0.31	0.12	0.14	0.37	0.32	0.09
11	0.09	0.10	0.10	0.51	0.11	0.39	0.14	0.16	0.47	0.38	0.10
8	0.10	0.11	0.12	0.60	0.13	0.44	0.15	0.17	0.51	0.41	0.11
6	0.11	0.12	0.13	0.65	0.13	0.45	0.15	0.17	0.47	0.39	0.12
4	0.12	0.13	0.13	0.62	0.13	0.42	0.13	0.16	0.40	0.34	0.11
3	0.12	0.13	0.12	0.52	0.11	0.35	0.11	0.14	0.31	0.27	0.09
2	0.11	0.12	0.10	0.39	0.09	0.27	0.09	0.11	0.23	0.20	0.07
1.4	0.09	0.10	0.08	0.27	0.06	0.20	0.06	0.08	0.16	0.14	0.05
1.0	0.07	0.08	0.07	0.19	0.04	0.14	0.04	0.05	0.12	0.11	0.04
0.7	0.06	0.07	0.07	0.15	0.03	0.12	0.03	0.04	0.10	0.09	0.04
0.5	0.05	0.06	0.06	0.12	0.03	0.09	0.03	0.03	0.08	0.07	0.03
0.3	0.03	0.03	0.03	0.07	0.02	0.05	0.02	0.02	0.04	0.04	0.02
<0.3	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.00
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	OW5	OW6	OW7	RE1	RE3	RE4	RE5	RE6	RE7	RE8	RE9
EMU LAB ID	7134	7135	7136	7137	7139	7140	7141	7142	7143	7144	7145
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.17	0.00	0.00	0.00
22400	0.000	0.000	21.465	0.000	10.309	0.000	0.000	0.000	0.000	0.000	10.096
16000	0.00	0.00	14.46	8.53	7.12	0.00	0.00	0.00	0.00	12.04	30.22
11200	0.50	0.00	2.60	4.50	3.65	0.00	2.41	3.84	0.00	22.94	3.08
8000	1.45	0.62	5.16	3.26	5.34	3.32	13.45	3.41	2.34	2.82	8.03
5600	2.97	0.28	4.14	3.63	4.95	7.68	7.70	5.61	5.00	4.05	1.67
4000	5.14	0.25	2.17	2.58	2.82	5.31	6.13	2.80	4.11	4.82	2.23
2800	4.20	0.38	1.78	2.26	2.15	4.00	5.21	2.90	3.73	3.66	2.31
2000	4.69	0.20	1.69	2.43	1.33	3.30	3.91	2.74	3.57	2.96	1.53
1400	5.67	0.21	1.32	3.38	1.14	2.50	3.82	2.55	3.96	3.32	2.12
1000	6.69	0.19	1.06	4.02	0.86	1.91	3.10	2.41	3.29	3.75	2.77
710	8.23	0.21	1.22	4.39	0.92	2.13	2.51	2.65	3.74	4.43	3.21
500	16.20	1.17	2.32	6.31	2.42	5.44	4.76	6.18	9.00	7.49	5.29
355	17.21	28.07	10.16	7.35	31.69	13.52	12.02	13.40	22.91	8.89	8.50
250	18.20	59.45	22.46	7.94	19.11	28.63	21.58	12.65	24.43	11.37	13.53
180	6.82	7.83	5.29	19.37	3.60	16.69	9.35	2.64	9.98	4.27	2.06
125	0.74	0.22	1.28	7.29	0.80	1.95	1.31	0.60	1.39	0.51	0.34
90	0.13	0.04	0.25	5.17	0.19	0.48	0.30	0.25	0.45	0.13	0.22
63	0.11	0.05	0.11	2.16	0.14	0.30	0.21	0.17	0.32	0.15	0.25
44	0.04	0.04	0.02	0.21	0.05	0.08	0.07	0.04	0.07	0.06	0.07
31	0.06	0.05	0.03	0.30	0.07	0.13	0.10	0.05	0.09	0.10	0.11
22	0.07	0.07	0.06	0.39	0.09	0.19	0.15	0.07	0.11	0.14	0.16
16	0.09	0.08	0.09	0.50	0.12	0.26	0.20	0.09	0.15	0.20	0.22
11	0.11	0.09	0.12	0.60	0.15	0.33	0.25	0.11	0.19	0.26	0.28
8	0.12	0.09	0.14	0.65	0.17	0.37	0.28	0.13	0.22	0.30	0.32
6	0.12	0.09	0.14	0.64	0.17	0.36	0.28	0.13	0.23	0.31	0.32
4	0.11	0.08	0.13	0.56	0.16	0.32	0.25	0.12	0.20	0.28	0.29
3	0.10	0.06	0.11	0.45	0.13	0.25	0.20	0.09	0.16	0.23	0.23
2	0.08	0.05	0.08	0.34	0.10	0.18	0.14	0.06	0.12	0.17	0.17
1.4	0.05	0.04	0.05	0.24	0.07	0.12	0.09	0.04	0.08	0.12	0.11
1.0	0.04	0.03	0.04	0.18	0.06	0.08	0.06	0.03	0.06	0.08	0.08
0.7	0.03	0.03	0.04	0.15	0.05	0.07	0.06	0.03	0.05	0.07	0.07
0.5	0.03	0.02	0.03	0.13	0.04	0.06	0.05	0.02	0.04	0.06	0.06
0.3	0.01	0.01	0.02	0.07	0.03	0.03	0.03	0.01	0.02	0.03	0.03
<0.3	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	RE10	RE11	RE14	TE1.1	TE2.1	TE3	TE4	TE6	TE7	TE8	TE9
EMU LAB ID	7146	7147	7150	7151	7152	7153	7154	7156	7157	7158	7159
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	16.95	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	28.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.000	27.586	12.600	0.000	0.000	0.000	0.000	20.301	0.000	0.000	0.000
16000	0.00	6.41	6.39	0.00	0.00	0.00	0.00	2.35	2.97	0.00	9.93
11200	0.00	4.60	6.62	0.00	0.00	0.00	5.45	1.25	2.79	0.68	0.00
8000	0.00	2.50	1.02	0.00	1.88	0.55	3.43	2.25	11.54	4.09	3.31
5600	0.07	3.86	3.02	0.06	1.76	1.34	5.43	2.88	11.43	2.48	2.45
4000	0.31	1.91	2.11	0.07	1.31	0.86	2.73	1.94	5.65	1.83	1.83
2800	0.38	1.61	2.02	0.25	1.14	0.96	2.51	0.99	3.71	2.16	1.63
2000	0.67	1.11	1.41	0.33	1.41	0.87	1.61	0.81	3.32	2.23	1.29
1400	1.18	1.10	1.47	0.29	1.24	1.10	1.39	0.93	2.82	2.73	1.06
1000	1.84	0.70	1.39	0.57	1.55	1.12	1.22	0.86	2.50	2.78	0.85
710	2.97	0.51	1.50	0.72	2.70	1.43	1.10	0.97	2.59	2.23	0.84
500	11.20	0.65	2.83	1.64	3.57	3.03	1.83	2.88	5.69	2.15	1.11
355	40.12	1.07	4.99	4.05	6.29	8.86	10.90	34.25	18.12	4.28	6.32
250	33.42	5.38	11.78	16.45	18.17	36.68	39.60	22.02	20.71	32.81	32.24
180	5.15	8.81	22.49	55.58	15.01	27.04	17.88	3.73	3.78	18.66	21.64
125	0.58	2.58	9.99	15.10	5.73	11.75	2.24	0.60	0.61	3.21	4.23
90	0.25	0.31	1.93	2.98	3.27	2.44	0.52	0.08	0.24	4.86	4.35
63	0.19	0.14	0.64	0.44	3.18	0.38	0.23	0.05	0.20	4.59	1.15
44	0.06	0.03	0.12	0.05	1.00	0.06	0.05	0.02	0.04	0.29	0.16
31	0.10	0.04	0.22	0.07	1.22	0.09	0.07	0.03	0.06	0.39	0.25
22	0.14	0.05	0.38	0.09	1.22	0.11	0.10	0.04	0.09	0.53	0.38
16	0.18	0.06	0.59	0.12	1.18	0.14	0.14	0.06	0.12	0.74	0.54
11	0.20	0.07	0.77	0.15	1.20	0.16	0.17	0.08	0.15	0.95	0.69
8	0.21	0.08	0.87	0.17	1.28	0.18	0.21	0.09	0.16	1.10	0.76
6	0.20	0.08	0.83	0.18	1.35	0.18	0.22	0.10	0.16	1.10	0.74
4	0.18	0.07	0.68	0.16	1.36	0.17	0.21	0.10	0.14	0.96	0.64
3	0.14	0.06	0.49	0.14	1.27	0.14	0.19	0.09	0.12	0.74	0.49
2	0.10	0.04	0.31	0.11	1.08	0.11	0.16	0.07	0.09	0.50	0.35
1.4	0.06	0.03	0.18	0.08	0.83	0.08	0.12	0.05	0.06	0.31	0.23
1.0	0.04	0.02	0.12	0.06	0.63	0.06	0.10	0.04	0.05	0.20	0.17
0.7	0.03	0.02	0.10	0.05	0.53	0.05	0.08	0.03	0.04	0.17	0.15

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	TE10	WF1	WF2	WF3	WF4	WF5	WF6	WF7	WF8	WF9	WF10
EMU LAB ID	7160	7161	7162	7163	7164	7165	7166	7167	7168	7169	7170
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	11.49	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	24.42	0.00	0.00	2.73	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.000	0.000	0.000	2.575	0.000	0.000	3.196	0.000	0.000	0.000	20.713
16000	0.00	9.72	0.00	0.39	11.71	12.29	0.00	0.00	12.56	4.10	4.66
11200	2.53	9.32	12.66	0.00	4.65	0.00	0.00	0.00	3.12	2.18	3.26
8000	1.21	4.18	2.06	1.15	3.06	3.14	1.59	2.38	3.23	1.47	7.23
5600	1.43	2.47	0.89	0.28	0.88	2.75	0.33	1.26	2.26	4.35	1.85
4000	1.45	2.35	0.88	0.20	0.97	2.13	0.78	2.08	3.10	2.07	1.31
2800	2.73	1.77	0.45	0.26	0.95	2.23	0.79	1.41	2.56	1.22	1.37
2000	2.66	2.12	0.79	0.14	1.27	2.41	0.91	2.63	2.48	2.02	1.44
1400	3.47	1.88	0.88	0.32	1.39	2.57	0.79	2.68	2.09	2.04	1.37
1000	4.02	2.03	0.98	0.44	1.26	2.23	0.65	2.77	1.73	1.98	1.61
710	3.90	2.30	1.56	0.70	1.53	1.88	0.74	2.53	1.65	2.02	1.91
500	4.89	3.50	2.36	1.36	2.24	2.30	0.99	2.97	2.25	2.99	2.42
355	4.95	4.13	4.91	3.89	6.56	3.25	2.49	4.85	5.40	4.98	3.50
250	14.09	8.23	32.17	22.70	20.07	14.00	28.51	12.43	11.98	13.29	14.49
180	27.48	13.63	33.09	49.82	17.04	18.56	32.31	19.51	22.12	32.15	9.66
125	5.57	2.62	4.13	9.93	6.38	4.62	6.44	11.18	13.53	11.71	6.79
90	1.04	0.78	0.41	2.05	1.04	1.20	4.56	4.44	2.05	3.25	4.50
63	1.02	0.43	0.16	0.65	0.42	0.95	9.66	3.34	0.64	1.16	2.28
44	0.63	0.09	0.05	0.14	0.16	0.82	0.39	0.70	0.16	0.22	0.37
31	0.93	0.17	0.08	0.20	0.24	1.21	0.39	1.08	0.34	0.33	0.50
22	1.19	0.28	0.13	0.27	0.32	1.56	0.38	1.61	0.59	0.48	0.64
16	1.39	0.42	0.18	0.33	0.42	1.89	0.44	2.33	0.86	0.67	0.81
11	1.56	0.54	0.22	0.37	0.51	2.15	0.52	3.00	1.04	0.84	0.99
8	1.71	0.60	0.23	0.39	0.56	2.32	0.57	3.36	1.07	0.94	1.14
6	1.82	0.57	0.21	0.37	0.55	2.38	0.57	3.25	0.97	0.92	1.18
4	1.82	0.48	0.17	0.32	0.48	2.33	0.53	2.73	0.77	0.80	1.08
3	1.67	0.35	0.12	0.26	0.38	2.17	0.45	2.03	0.55	0.61	0.89
2	1.40	0.23	0.08	0.18	0.26	1.89	0.34	1.34	0.35	0.43	0.66
1.4	1.05	0.14	0.05	0.12	0.17	1.49	0.23	0.80	0.20	0.27	0.44
1.0	0.83	0.09	0.03	0.08	0.11	1.18	0.16	0.49	0.12	0.18	0.32
0.7	0.70	0.07	0.02	0.06	0.08	0.96	0.13	0.36	0.09	0.14	0.26
0.5	0.54	0.06	0.02	0.05	0.07	0.70	0.10	0.29	0.08	0.12	0.22
0.3	0.30	0.04	0.01	0.03	0.04	0.37	0.06	0.17	0.04	0.07	0.12
<0.3	0.04	0.00	0.00	0.00	0.01	0.05	0.01	0.02	0.01	0.01	0.01
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

[illegible]

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	CR1.1	CR2	CR4.2	CR5	CR6	CR7	CR8	CR9	OW1	OW3	OW4
EMU LAB ID	7121	7122	7124	7125	7126	7127	7128	7129	7130	7132	7133
% Gravel	23.72%	8.65%	73.16%	38.15%	76.65%	0.75%	34.92%	30.19%	0.47%	7.94%	0.23%
%Sand	75.08%	90.04%	25.59%	56.40%	22.22%	95.45%	63.79%	68.23%	95.74%	88.75%	98.65%
% Silt/Clay	1.19%	1.30%	1.25%	5.45%	1.13%	3.79%	1.29%	1.58%	3.79%	3.31%	1.13%
Mean (mm)	0.61	0.17	3.96	0.88	5.21	0.16	0.96	1.35	0.26	0.26	0.26
Md (mm)	0.17	0.16	8.58	0.43	12.29	0.16	0.33	0.40	0.27	0.28	0.27
Mean (phi)	0.71	2.56	-1.99	0.19	-2.38	2.60	0.06	-0.43	1.96	1.93	1.93
Md (phi)	2.58	2.67	-3.10	1.21	-3.62	2.65	1.58	1.31	1.89	1.85	1.88
Sorting	2.90	1.18	2.74	2.78	2.90	0.49	2.74	2.91	0.42	1.14	0.32
Skq	-0.82	-0.57	0.53	-0.37	0.55	-0.06	-0.71	-0.72	0.38	-0.14	0.21
Kurtosis	2.10	4.61	0.93	0.78	1.01	1.35	0.59	0.64	1.12	3.81	0.81

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	OW5	OW6	OW7	RE1	RE3	RE4	RE5	RE6	RE7	RE8	RE9
EMU LAB ID	7134	7135	7136	7137	7139	7140	7141	7142	7143	7144	7145
% Gravel	18.95%	1.74%	53.46%	27.19%	37.66%	23.61%	38.82%	55.47%	18.75%	53.28%	59.17%
%Sand	79.98%	97.44%	45.46%	67.39%	60.88%	73.55%	58.97%	43.50%	79.47%	44.31%	38.30%
% Silt/Clay	1.07%	0.82%	1.08%	5.42%	1.46%	2.83%	2.21%	1.03%	1.79%	2.41%	2.52%
Mean (mm)	0.74	0.33	3.03	0.78	1.33	0.68	1.09	3.72	0.66	2.42	3.89
Md (mm)	0.57	0.32	3.99	0.40	0.46	0.35	0.62	3.92	0.42	2.92	8.51
Mean (phi)	0.44	1.61	-1.60	0.35	-0.42	0.56	-0.12	-1.89	0.61	-1.28	-1.96
Md (phi)	0.82	1.65	-2.00	1.32	1.11	1.52	0.68	-1.97	1.25	-1.54	-3.09
Sorting	1.50	0.37	2.70	2.83	2.51	1.89	2.12	2.83	1.62	2.38	2.54
Skq	-0.38	-0.11	0.19	-0.36	-0.74	-0.64	-0.44	0.05	-0.56	0.15	0.54
Kurtosis	0.97	1.04	0.49	0.97	0.61	0.85	0.58	0.48	1.10	0.55	0.52

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	RE10	RE11	RE14	TE1.1	TE2.1	TE3	TE4	TE6	TE7	TE8	TE9
EMU LAB ID	7146	7147	7150	7151	7152	7153	7154	7156	7157	7158	7159
% Gravel	1.42%	78.08%	35.19%	0.71%	24.45%	4.58%	21.17%	32.78%	41.41%	13.47%	20.44%
%Sand	96.90%	21.25%	59.00%	97.82%	60.72%	93.82%	76.91%	66.37%	57.26%	78.31%	73.79%
% Silt/Clay	1.68%	0.67%	5.81%	1.47%	14.83%	1.60%	1.92%	0.85%	1.33%	8.22%	5.77%
Mean (mm)	0.38	6.58	1.00	0.22	0.98	0.27	0.68	1.47	1.19	0.36	0.65
Md (mm)	0.38	24.43	0.33	0.21	0.29	0.27	0.32	0.44	0.68	0.28	0.29
Mean (phi)	1.38	-2.72	0.00	2.20	0.02	1.89	0.55	-0.56	-0.25	1.49	0.62
Md (phi)	1.39	-4.61	1.61	2.23	1.78	1.91	1.66	1.17	0.56	1.84	1.80
Sorting	0.58	2.91	3.28	0.50	4.44	0.88	2.01	2.64	2.08	2.38	2.70
Skq	-0.10	0.81	-0.47	-0.14	-0.33	-0.23	-0.74	-0.78	-0.48	-0.14	-0.48
Kurtosis	1.35	1.08	0.72	1.70	1.64	2.01	1.72	0.59	0.56	3.28	3.25

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	TE10	WF1	WF2	WF3	WF4	WF5	WF6	WF7	WF8	WF9	WF10
EMU LAB ID	7160	7161	7162	7163	7164	7165	7166	7167	7168	7169	7170
% Gravel	12.01%	56.35%	17.72%	4.98%	37.71%	24.97%	7.60%	9.75%	29.32%	17.42%	41.84%
%Sand	70.41%	39.53%	80.65%	91.85%	57.94%	51.57%	87.15%	66.69%	63.44%	75.56%	48.53%
% Silt/Clay	17.58%	4.12%	1.63%	3.16%	4.35%	23.46%	5.25%	23.56%	7.24%	7.02%	9.64%
Mean (mm)	0.22	3.56	0.64	0.24	1.15	0.28	0.20	0.13	0.77	0.44	1.11
Md (mm)	0.24	5.75	0.28	0.22	0.37	0.26	0.23	0.20	0.28	0.24	0.46
Mean (phi)	2.21	-1.83	0.64	2.08	-0.20	1.84	2.35	2.92	0.38	1.18	-0.15
Md (phi)	2.05	-2.52	1.84	2.16	1.45	1.96	2.13	2.31	1.82	2.08	1.12
Sorting	3.03	3.15	2.14	0.86	3.09	4.34	1.52	3.10	3.14	2.55	3.73
Skq	0.13	0.31	-0.76	-0.37	-0.65	0.01	0.00	0.21	-0.43	-0.41	-0.25
Kurtosis	2.43	0.56	2.49	2.79	0.61	1.28	3.31	1.80	0.99	2.39	0.76

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	WF11	WF12	WF13	WF14	WF16	WF17	WF18	WF19
EMU LAB ID	7171	7172	7173	7174	7176	7177	7178	7179
% Gravel	17.88%	0.47%	0.28%	0.01%	0.04%	7.22%	1.97%	0.29%
%Sand	69.60%	98.57%	84.63%	98.90%	98.64%	91.36%	96.45%	98.88%
% Silt/Clay	12.51%	0.96%	15.09%	1.09%	1.33%	1.42%	1.57%	0.83%
Mean (mm)	0.44	0.30	0.19	0.30	0.30	0.31	0.35	0.42
Md (mm)	0.26	0.30	0.27	0.30	0.30	0.30	0.34	0.42
Mean (phi)	1.17	1.75	2.41	1.74	1.73	1.68	1.51	1.26
Md (phi)	1.95	1.75	1.88	1.74	1.74	1.76	1.56	1.26
Sorting	2.84	0.30	1.58	0.29	0.33	0.98	0.55	0.30
Skq	-0.26	-0.01	0.73	0.03	0.00	-0.43	-0.19	0.03
Kurtosis	2.80	1.52	2.66	1.49	1.43	2.73	1.20	1.43

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	CR1.1	CR2	CR4.2	CR5
EMU LAB ID	7121	7122	7124	7125
In-situ Sediment Description	Slightly shelly, slightly gravelly sand (1% shells)	Slightly shelly, slightly gravelly sand (3% shells)	Silty gravelly sand	Silty gravelly shelly sand (5% shells)
% Shell Estimation (Volume)	1 - 5%	5 - 10%	15 - 25%	20 - 30%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)
Maximum Shell Aperture (µm)	5600	11200	16000	22400
Sample Type	Bimodal, Very Poorly Sorted	Unimodal, Poorly Sorted	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Gravelly Sand	Sandy Gravel	Sandy Gravel
Mean	Coarse Sand	Fine Sand	Very Fine Gravel	Coarse Sand
Sorting	Very Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Very Fine Skewed	Very Coarse Skewed
Kurtosis	Very Leptokurtic	Extremely Leptokurtic	Mesokurtic	Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	CR6	CR7	CR8	CR9
EMU LAB ID	7126	7127	7128	7129
In-situ Sediment Description	gravelly sand with cobbles	Silty sand (2% shells)	Slightly silty gravelly sand	Gravelly sand with pebbles (10% shells)
% Shell Estimation (Volume)	10 - 15%	1 - 5%	10 - 20%	30 - 35%
% Shell Description	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-1000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)
Maximum Shell Aperture (µm)	8000	4000	31500	31500
Sample Type	Polymodal, Very Poorly Sorted	Unimodal, Well Sorted	Trimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Sandy Gravel	Slightly Gravelly Sand	Sandy Gravel	Sandy Gravel
Mean	Fine Gravel	Fine Sand	Coarse Sand	Very Coarse Sand
Sorting	Very Poorly Sorted	Well Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Fine Skewed	Symmetrical	Very Coarse Skewed	Very Coarse Skewed
Kurtosis	Mesokurtic	Leptokurtic	Very Platykurtic	Very Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	OW1	OW3	OW4	OW5
EMU LAB ID	7130	7132	7133	7134
In-situ Sediment Description	Slightly shelly sand (3% shells)	Slightly shelly, silty sand (2% shells)	Sand	Slightly shelly, slightly gravelly sand (6% shells)
% Shell Estimation (Volume)	1 - 5%	1 - 5%	1 - 5%	35 - 45%
% Shell Description	Predominantly fine-medium shell hash (63-710 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-medium shell hash (63-710 µm)	Predominantly fine-coarse shell hash (63-5600 µm)
Maximum Shell Aperture (µm)	5600	11200	8000	11200
Sample Type	Unimodal, Well Sorted	Unimodal, Poorly Sorted	Unimodal, Very Well Sorted	Bimodal, Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Gravelly Sand	Slightly Gravelly Sand	Gravelly Sand
Mean	Medium Sand	Medium Sand	Medium Sand	Coarse Sand
Sorting	Well Sorted	Poorly Sorted	Very Well Sorted	Poorly Sorted
Skewness	Very Fine Skewed	Coarse Skewed	Fine Skewed	Very Coarse Skewed
Kurtosis	Leptokurtic	Extremely Leptokurtic	Platykurtic	Mesokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	OW6	OW7	RE1	RE3
EMU LAB ID	7135	7136	7137	7139
In-situ Sediment Description	Slightly shelly sand (4% shells)	Slightly shelly gravelly pebbly sand (4% shells)	Cobbly, silty, gravelly sand (10% shells)	Slightly gravelly, pebbly sand with cobble (30% shells)
% Shell Estimation (Volume)	1 - 5%	5 - 10%	35 - 50%	5 - 10%
% Shell Description	Predominantly fine-medium shell hash (63-500 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-5600 µm)	Predominantly fine-coarse shell hash (63-1000 µm)
Maximum Shell Aperture (µm)	8000	8000	11200	8000
Sample Type	Unimodal, Well Sorted	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Sandy Gravel	Gravelly Sand	Sandy Gravel
Mean	Medium Sand	Very Fine Gravel	Coarse Sand	Very Coarse Sand
Sorting	Well Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Coarse Skewed	Fine Skewed	Very Coarse Skewed	Very Coarse Skewed
Kurtosis	Mesokurtic	Very Platykurtic	Mesokurtic	Very Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	RE4	RE5	RE6	RE7
EMU LAB ID	7140	7141	7142	7143
In-situ Sediment Description	Slightly gravelly pebbelly sand	Slightly pebbely, gravelly sand with cobble (3% shells)	Slightly shelly, slightly pebbly gravelly sand with cobble (2% shells)	Slightly gravelly, slightly pebbly sand (1% shells)
% Shell Estimation (Volume)	15 - 25%	15 - 20%	10 - 20%	15 - 25%
% Shell Description	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	8000	8000	8000	5600
Sample Type	Bimodal, Poorly Sorted	Bimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Trimodal, Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Sandy Gravel	Sandy Gravel	Gravelly Sand
Mean	Coarse Sand	Very Coarse Sand	Very Fine Gravel	Coarse Sand
Sorting	Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Symmetrical	Very Coarse Skewed
Kurtosis	Platykurtic	Very Platykurtic	Very Platykurtic	Mesokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	RE8	RE9	RE10	RE11
EMU LAB ID	7144	7145	7146	7147
In-situ Sediment Description	Slightly gravelly, shelly, pebbly sand (8% shells)	Silty sandy gravelly pebbels (1% shells)	Shelly sand (50% shells)	Silty gravelly pebbly sand (5% shells)
% Shell Estimation (Volume)	10 - 15%	10 - 15%	40 - 50%	10 - 15%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	16000	5600	5600	16000
Sample Type	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Unimodal, Moderately Well Sorted	Bimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Sandy Gravel	Sandy Gravel	Slightly Gravelly Sand	Sandy Gravel
Mean	Very Fine Gravel	Very Fine Gravel	Medium Sand	Fine Gravel
Sorting	Very Poorly Sorted	Very Poorly Sorted	Moderately Well Sorted	Very Poorly Sorted
Skewness	Fine Skewed	Very Fine Skewed	Coarse Skewed	Very Fine Skewed
Kurtosis	Very Platykurtic	Very Platykurtic	Leptokurtic	Mesokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	RE14	TE1.1	TE2.1	TE3
EMU LAB ID	7150	7151	7152	7153
In-situ Sediment Description	Slightly shelly, slightly pebbly gravelly sand with cobble (3% shells)	Slightly shelly sand	Silty gravelly sand with clumps of clay (20% shells)	Slightly silty, slightly gravelly sand (20% shells)
% Shell Estimation (Volume)	10 - 20%	10 - 15%	25 - 40%	10 - 20%
% Shell Description	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	22400	5600	45000	8000
Sample Type	Trimodal, Very Poorly Sorted	Unimodal, Moderately Well Sorted	Bimodal, Extremely Poorly Sorted	Unimodal, Moderately Sorted
Textural Group (Original Folk & Ward 1954)	Sandy Gravel	Slightly Gravelly Sand	Gravelly Muddy Sand	Slightly Gravelly Sand
Mean	Very Coarse Sand	Fine Sand	Coarse Sand	Medium Sand
Sorting	Very Poorly Sorted	Moderately Well Sorted	Extremely Poorly Sorted	Moderately Sorted
Skewness	Very Coarse Skewed	Coarse Skewed	Very Coarse Skewed	Coarse Skewed
Kurtosis	Platykurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	TE4	TE6	TE7	TE8
EMU LAB ID	7154	7156	7157	7158
In-situ Sediment Description	shelly gravelly sand with 1 cobble	Slightly gravelly, pebbly sand with cobble (5% shells)	Shelly gravelly pebbly sand (3% shells)	Gravelly silty muddy sand (2% shells)
% Shell Estimation (Volume)	5 - 15%	5 - 10%	5 - 10%	30 - 40%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)
Maximum Shell Aperture (µm)	11200	8000	11200	8000
Sample Type	Unimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted	Unimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Sandy Gravel	Sandy Gravel	Gravelly Sand
Mean	Coarse Sand	Very Coarse Sand	Very Coarse Sand	Medium Sand
Sorting	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Very Coarse Skewed	Coarse Skewed
Kurtosis	Very Leptokurtic	Very Platykurtic	Very Platykurtic	Extremely Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	TE9	TE10	WF1	WF2
EMU LAB ID	7159	7160	7161	7162
In-situ Sediment Description	Slightly silty gravelly sand (10% shells)	gravelly silty sand (2% shells)	Slightly gravelly pebbly sand	Silty, slightly shelly sand
% Shell Estimation (Volume)	10 - 15%	35 - 45%	5 - 10%	10 - 15%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	8000	5600	11200	5600
Sample Type	Bimodal, Very Poorly Sorted	Unimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Gravelly Muddy Sand	Sandy Gravel	Gravelly Sand
Mean	Coarse Sand	Fine Sand	Very Fine Gravel	Coarse Sand
Sorting	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Coarse Skewed	Fine Skewed	Very Fine Skewed	Very Coarse Skewed
Kurtosis	Extremely Leptokurtic	Very Leptokurtic	Very Platykurtic	Very Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	WF3	WF4	WF5	WF6
EMU LAB ID	7163	7164	7165	7166
In-situ Sediment Description	Slightly silty, slightly gravelly sand (10% shells)	Slightly pebbly shelly gravelly sand (8% shells)	Slightly shelly, gravelly, pebbly, muddy sand (2% shells)	Slightly shelly, gravelly sand (4% shells)
% Shell Estimation (Volume)	10 - 15%	20 - 30%	10 - 15%	10 - 20%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)
Maximum Shell Aperture (µm)	22400	45000	16000	22400
Sample Type	Unimodal, Moderately Sorted	Trimodal, Very Poorly Sorted	Trimodal, Extremely Poorly Sorted	Bimodal, Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Sandy Gravel	Gravelly Muddy Sand	Gravelly Sand
Mean	Fine Sand	Very Coarse Sand	Medium Sand	Fine Sand
Sorting	Moderately Sorted	Very Poorly Sorted	Extremely Poorly Sorted	Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Symmetrical	Symmetrical
Kurtosis	Very Leptokurtic	Very Platykurtic	Leptokurtic	Extremely Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	WF7	WF8	WF9	WF10
EMU LAB ID	7167	7168	7169	7170
In-situ Sediment Description	Silty gravelly sand (10% shells)	Slightly silty shelly gravelly sand (5% shells)	Slightly shelly, slightly pebbly, slightly gravelly sand (1% shells)	Slightly shelly, slightly gravelly muddy sand (5% shells)
% Shell Estimation (Volume)	10 - 15%	5 -15%	10 - 20%	5 - 15%
% Shell Description	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)
Maximum Shell Aperture (µm)	8000	11200	11200	5600
Sample Type	Bimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted	Unimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Muddy Sand	Gravelly Muddy Sand	Gravelly Sand	Muddy Sandy Gravel
Mean	Fine Sand	Coarse Sand	Medium Sand	Very Coarse Sand
Sorting	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Fine Skewed	Very Coarse Skewed	Very Coarse Skewed	Coarse Skewed
Kurtosis	Very Leptokurtic	Mesokurtic	Very Leptokurtic	Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	WF11	WF12	WF13	WF14
EMU LAB ID	7171	7172	7173	7174
In-situ Sediment Description	Slightly shelly, slightly gravelly silty sand (4% shells)	Slightly shelly sand	Muddy sand	Slightly shelly sand
% Shell Estimation (Volume)	10 -15%	5 - 10%	5 - 10%	5 - 10%
% Shell Description	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-1400 µm)
Maximum Shell Aperture (µm)	22400	5600	4000	2800
Sample Type	Bimodal, Very Poorly Sorted	Unimodal, Very Well Sorted	Unimodal, Poorly Sorted	Unimodal, Very Well Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Muddy Sand	Slightly Gravelly Sand	Slightly Gravelly Muddy Sand	Slightly Gravelly Sand
Mean	Medium Sand	Medium Sand	Fine Sand	Medium Sand
Sorting	Very Poorly Sorted	Very Well Sorted	Poorly Sorted	Very Well Sorted
Skewness	Coarse Skewed	Symmetrical	Very Fine Skewed	Symmetrical
Kurtosis	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

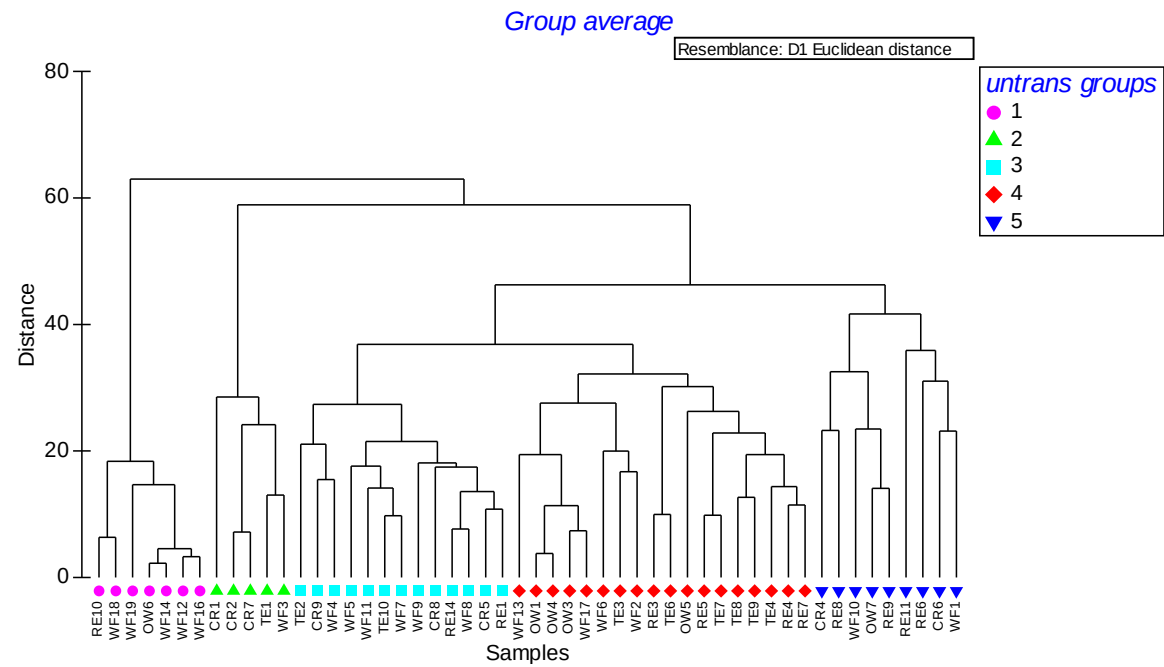
Table 3: Descriptive Statistics

SITE NAME	WF16	WF17	WF18	WF19
EMU LAB ID	7176	7177	7178	7179
In-situ Sediment Description	Slightly shelly sand	Slightly gravelly, slightly shelly sand (3% shells)	Sand (1% shells)	Sand with (1% shells)
% Shell Estimation (Volume)	1 - 5%	10 - 20%	10 - 15%	1 - 5%
% Shell Description	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-medium shell hash (63-710 µm)
Maximum Shell Aperture (µm)	2800	8000	16000	4000
Sample Type	Unimodal, Very Well Sorted	Unimodal, Moderately Sorted	Unimodal, Moderately Well Sorted	Unimodal, Very Well Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Gravelly Sand	Slightly Gravelly Sand	Slightly Gravelly Sand
Mean	Medium Sand	Medium Sand	Medium Sand	Medium Sand
Sorting	Very Well Sorted	Moderately Sorted	Moderately Well Sorted	Very Well Sorted
Skewness	Symmetrical	Very Coarse Skewed	Coarse Skewed	Symmetrical
Kurtosis	Leptokurtic	Very Leptokurtic	Leptokurtic	Leptokurtic

APPENDIX I CLUSTER ANALYSIS OF PSD

APPENDIX I CLUSTER ANALYSIS OF PSD

Rampion Benthic J/1/03/1836



Site classifications based on untransformed PSA analysis of sediments, Rampion site.

APPENDIX J CONTAMINANT SAMPLE RESULTS

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		WF15 19-APR-11 09:20	WF5 19-APR-11 10:42	Station RE4 16-APR-11 02:51
Analyte	Units			
Mercury : Dry Wt	mg/kg			0.005
Aluminium, HF Digest : Dry Wt	mg/kg			10900
Barium, HF Digest : Dry Wt	mg/kg			91.7
Iron, HF Digest : Dry Wt	mg/kg			12200
Arsenic, HF Digest : Dry Wt	mg/kg			28.3
Cadmium, HF Digest : Dry Wt	mg/kg	Insufficient sample collected on survey - no Metals sample submitted	Insufficient sample collected on survey - no Metals sample submitted	0.035
Chromium, HF Digest : Dry Wt	mg/kg			8.4
Copper, HF Digest : Dry Wt	mg/kg			2.91
Lead, HF Digest : Dry Wt	mg/kg			11.9
Nickel, HF Digest : Dry Wt	mg/kg			6.2
Tin, HF Digest : Dry Wt	mg/kg			0.671
Vanadium, HF Digest : Dry Wt	mg/kg			28.4
Zinc : HF Digest : Dry Wt	mg/kg			18.5
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	81.5	76.8	80
Carbon, Organic : Dry Wt as C	%	0.41	0.69	1.6
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 120ml glass pot weighing approx. 386g in total. The sample appeared to be light brown wet gritty sandy sediment. 98.08g of the sample was taken for drying at <30degC which gave 80.96g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jawcrusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 120ml glass pot weighing approx. 347g in total. The sample appeared to be light brown wet gritty sandy sediment. 80.52g of the sample was taken for drying at <30degC which gave 63.08g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jawcrusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1674g in total. The sample appeared to be light brown wet sandy sediment with stones. 123.28g of the sample was taken for drying at <30degC which gave 99.69g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station RE7 16-APR-11 09:18	Station TE4 15-APR-11 18:27	Station RE10 16-APR-11 16:32
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.004	0.004	0.003
Aluminium, HF Digest : Dry Wt	mg/kg	5980	11800	2780
Barium, HF Digest : Dry Wt	mg/kg	70.2	132	<20
Iron, HF Digest : Dry Wt	mg/kg	10500	9970	25600
Arsenic, HF Digest : Dry Wt	mg/kg	11.5	10.9	21.8
Cadmium, HF Digest : Dry Wt	mg/kg	0.025	0.024	0.014
Chromium, HF Digest : Dry Wt	mg/kg	4.92	8.28	11
Copper, HF Digest : Dry Wt	mg/kg	6.3	4	2.58
Lead, HF Digest : Dry Wt	mg/kg	7.49	9.15	6.33
Nickel, HF Digest : Dry Wt	mg/kg	2.51	3.43	6.65
Tin, HF Digest : Dry Wt	mg/kg	<0.5	0.537	0.504
Vanadium, HF Digest : Dry Wt	mg/kg	22.5	21.8	54.9
Zinc : HF Digest : Dry Wt	mg/kg	16.5	16.8	20
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	81.5	77.8	77.4
Carbon, Organic : Dry Wt as C	%	1.7	0.79	0.77
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1413g in total. The sample appeared to be light brown wet sandy sediment with stones. 145.72g of the sample was taken for drying at <30degC which gave 119.82g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 963g in total. The sample appeared to be light brown wet sandy sediment with stones. 121.13g of the sample was taken for drying at <30degC which gave 95.41g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1300g in total. The sample appeared to be light brown wet sandy sediment with stones. 109.17g of the sample was taken for drying at <30degC which gave 85.73g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station TE8 16-APR-11 23:55	Station TE6 17-APR-11 13:41	Station OW3 17-APR-11 14:47
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.008	0.003	0.002
Aluminium, HF Digest : Dry Wt	mg/kg	9510	6090	11100
Barium, HF Digest : Dry Wt	mg/kg	72.6	93.9	124
Iron, HF Digest : Dry Wt	mg/kg	33500	7830	8580
Arsenic, HF Digest : Dry Wt	mg/kg	28.2	13.7	9.5
Cadmium, HF Digest : Dry Wt	mg/kg	0.024	0.019	0.017
Chromium, HF Digest : Dry Wt	mg/kg	25	4.04	5.53
Copper, HF Digest : Dry Wt	mg/kg	5.73	2.89	1.57
Lead, HF Digest : Dry Wt	mg/kg	14.5	6.82	12.1
Nickel, HF Digest : Dry Wt	mg/kg	7.48	2.43	2.83
Tin, HF Digest : Dry Wt	mg/kg	0.809	<0.5	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	83.7	16.1	15.1
Zinc : HF Digest : Dry Wt	mg/kg	34.1	14.4	15.3
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	78.8	81.8	79.4
Carbon, Organic : Dry Wt as C	%	2.3	0.5	0.32
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1209g in total. The sample appeared to be light brown wet sandy sediment with stones. 95.74g of the sample was taken for drying at <30degC which gave 76.57g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 567g in total. The sample appeared to be light brown wet sandy sediment with stones. 82.43g of the sample was taken for drying at <30degC which gave 68.43g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1105g in total. The sample appeared to be light brown wet sandy sediment with stones. 119.66g of the sample was taken for drying at <30degC which gave 96.09g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station OW5 17-APR-11 15:31	Station OW7 17-APR-11 17:24	Station WF11 18-APR-11 02:15
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.002	0.003	0.006
Aluminium, HF Digest : Dry Wt	mg/kg	6090	9650	15800
Barium, HF Digest : Dry Wt	mg/kg	76.4	112	69.9
Iron, HF Digest : Dry Wt	mg/kg	7620	8060	44700
Arsenic, HF Digest : Dry Wt	mg/kg	10.1	8.58	16.4
Cadmium, HF Digest : Dry Wt	mg/kg	0.017	0.018	0.019
Chromium, HF Digest : Dry Wt	mg/kg	4.56	6.59	33.7
Copper, HF Digest : Dry Wt	mg/kg	3.61	2.21	4.56
Lead, HF Digest : Dry Wt	mg/kg	6.28	10.5	14.2
Nickel, HF Digest : Dry Wt	mg/kg	1.62	2.94	10.9
Tin, HF Digest : Dry Wt	mg/kg	<0.5	<0.5	0.714
Vanadium, HF Digest : Dry Wt	mg/kg	17.6	20.5	76.7
Zinc : HF Digest : Dry Wt	mg/kg	12.3	19.1	38
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	81.3	80.3	75.8
Carbon, Organic : Dry Wt as C	%	1.6	0.78	0.61
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 852g in total. The sample appeared to be light brown wet sandy sediment with stones. 124.36g of the sample was taken for drying at <30degC which gave 102.11g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1087g in total. The sample appeared to be light brown wet sandy sediment with stones. 129.69g of the sample was taken for drying at <30degC which gave 105.21g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1162g in total. The sample appeared to be dark brown wet sandy sediment with stones. 141.05g of the sample was taken for drying at <30degC which gave 108.18g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station WF1 18-APR-11 04:39	Station RE14 18-APR-11 07:14	Station WF2 18-APR-11 21:42
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.007	0.005	0.002
Aluminium, HF Digest : Dry Wt	mg/kg	10600	10200	5480
Barium, HF Digest : Dry Wt	mg/kg	56.9	68.4	31.3
Iron, HF Digest : Dry Wt	mg/kg	37100	35800	32900
Arsenic, HF Digest : Dry Wt	mg/kg	23.3	14.9	20.7
Cadmium, HF Digest : Dry Wt	mg/kg	0.019	0.012	0.024
Chromium, HF Digest : Dry Wt	mg/kg	43.7	23.8	20.3
Copper, HF Digest : Dry Wt	mg/kg	7.5	4.29	2.26
Lead, HF Digest : Dry Wt	mg/kg	12.3	9.12	8.8
Nickel, HF Digest : Dry Wt	mg/kg	10.1	7.58	7.23
Tin, HF Digest : Dry Wt	mg/kg	0.598	0.568	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	78.7	58.7	68.1
Zinc : HF Digest : Dry Wt	mg/kg	37.5	27.6	25.4
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	82	75.8	75
Carbon, Organic : Dry Wt as C	%	1.6	0.58	1
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 825g in total. The sample appeared to be medium brown wet sandy sediment with stones. 116.64g of the sample was taken for drying at <30degC which gave 96.60g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1051g in total. The sample appeared to be dark brown wet sandy sediment with stones. 114.45g of the sample was taken for drying at <30degC which gave 88.12g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1559g in total. The sample appeared to be medium brown wet sandy sediment with stones. 110.85g of the sample was taken for drying at <30degC which gave 84.49g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station WF13 19-APR-11 04:42	Station WF17 19-APR-11 05:46	Station CR1.1 19-APR-11 13:00
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.002	0.002	0.002
Aluminium, HF Digest : Dry Wt	mg/kg	7900	15600	6990
Barium, HF Digest : Dry Wt	mg/kg	81.8	121	111
Iron, HF Digest : Dry Wt	mg/kg	12800	10200	19300
Arsenic, HF Digest : Dry Wt	mg/kg	10.5	8.13	10.2
Cadmium, HF Digest : Dry Wt	mg/kg	0.023	0.034	0.017
Chromium, HF Digest : Dry Wt	mg/kg	11.9	11.7	31.8
Copper, HF Digest : Dry Wt	mg/kg	5.16	6.12	5.74
Lead, HF Digest : Dry Wt	mg/kg	6.29	15.2	7.6
Nickel, HF Digest : Dry Wt	mg/kg	4.02	4.62	4.59
Tin, HF Digest : Dry Wt	mg/kg	0.658	0.635	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	27	20.7	36.5
Zinc : HF Digest : Dry Wt	mg/kg	16.7	16.9	22.3
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	76.4	78.9	78.8
Carbon, Organic : Dry Wt as C	%	0.5	0.61	0.27
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1232g in total. The sample appeared to be medium brown wet sandy sediment with stones. 109.74g of the sample was taken for drying at <30degC which gave 85.09g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1533g in total. The sample appeared to be medium brown wet sandy sediment with stones. 112.31g of the sample was taken for drying at <30degC which gave 89.74g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 911g in total. The sample appeared to be grey brown wet sandy sediment with stones. 113.92g of the sample was taken for drying at <30degC which gave 90.92g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station CR7 19-APR-11 14:51	Station TE2.1 19-APR-11 17:30	Station CR9 19-APR-11 19:28
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.003	0.003	0.003
Aluminium, HF Digest : Dry Wt	mg/kg	8440	7340	4350
Barium, HF Digest : Dry Wt	mg/kg	68.8	52.6	31
Iron, HF Digest : Dry Wt	mg/kg	21500	28500	18600
Arsenic, HF Digest : Dry Wt	mg/kg	12.7	38	12.9
Cadmium, HF Digest : Dry Wt	mg/kg	0.018	0.034	0.012
Chromium, HF Digest : Dry Wt	mg/kg	17	20	10.7
Copper, HF Digest : Dry Wt	mg/kg	5.56	3.27	2.62
Lead, HF Digest : Dry Wt	mg/kg	8.36	14.9	6.42
Nickel, HF Digest : Dry Wt	mg/kg	5.21	6.02	3.92
Tin, HF Digest : Dry Wt	mg/kg	0.521	<0.5	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	43.3	70.5	32.8
Zinc : HF Digest : Dry Wt	mg/kg	23.7	35	18.5
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	74.5	73.2	75.4
Carbon, Organic : Dry Wt as C	%	0.44	1.9	1.5
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1002g in total. The sample appeared to be medium brown wet sandy sediment with stones. 98.79g of the sample was taken for drying at <30degC which gave 74.99g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1051g in total. The sample appeared to be light brown wet sandy sediment with stones. 104.58g of the sample was taken for drying at <30degC which gave 78.03g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1211g in total. The sample appeared to be light brown wet sandy sediment with stones. 105.45g of the sample was taken for drying at <30degC which gave 80.81g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station WF7 19-APR-11 21:40	Station WF4 20-APR-11 00:07
Analyte	Units		
Mercury : Dry Wt	mg/kg	0.008	0.003
Aluminium, HF Digest : Dry Wt	mg/kg	16700	7540
Barium, HF Digest : Dry Wt	mg/kg	124	56.4
Iron, HF Digest : Dry Wt	mg/kg	38000	18400
Arsenic, HF Digest : Dry Wt	mg/kg	26.3	19
Cadmium, HF Digest : Dry Wt	mg/kg	0.023	0.01
Chromium, HF Digest : Dry Wt	mg/kg	36	11.7
Copper, HF Digest : Dry Wt	mg/kg	6.06	4.44
Lead, HF Digest : Dry Wt	mg/kg	15.3	10
Nickel, HF Digest : Dry Wt	mg/kg	38.8	4.4
Tin, HF Digest : Dry Wt	mg/kg	0.863	0.863
Vanadium, HF Digest : Dry Wt	mg/kg	64.7	43.4
Zinc : HF Digest : Dry Wt	mg/kg	47.1	22.8
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50
Dry Solids @ 30°C	%	74.7	75.5
Carbon, Organic : Dry Wt as C	%	0.71	0.37
Accreditation Assessment	No.	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1042g in total. The sample appeared to be medium brown wet sandy sediment with stones. 94.19g of the sample was taken for drying at <30degC which gave 71.72g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1323g in total. The sample appeared to be medium brown wet sandy sediment with stones. 110.00g of the sample was taken for drying at <30degC which gave 84.42g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX K SPECIES LIST FOR INFAUNAL GRAB SPECIES

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	CR001	CR002	CR003	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007	RE001	RE002	RE003	RE004	RE005
D0632	Cerianthus lloydii	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D0755	Peachia cylindrica	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F0002	TURBELLARIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
G0001	NEMERTEA	0	0	0	0	2	1	0	0	1	2	2	2	2	2	1	1	9	0	1	1	7
N0001	SIPUNCULA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
N0001	SIPUNCULA (juv)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
N0011	Golfingiidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
N0014	Golfingia elongata	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
N0025	Nephasoma minutum	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	4	2
N0034	Phascolion strombus	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
P0019	Aphrodita aculeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0025	Polynoidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0044	Enipo kinbergi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0049	Gattyana cirrhosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
P0050	Harmothoe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
P0050	Malmgreniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0050	Malmgreniella darbouxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1
P0062	Malmgreniella glabra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0082	Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
P0092	Pholoe baltica	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0
P0094	Pholoe inornata	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
P0104	Sigalion mathildae	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0107	Sthenelais boa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0109	Sthenelais limicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0114	Phyllodocidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0118	Eteone longa (agg)	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0	0	0	1	0
P0127	Mysta picta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0141	Anaitides groenlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0142	Anaitides lineata	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
P0143	Anaitides longipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0146	Anaitides rosea	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0155	Eulalia mustela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0156	Eulalia ornata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0163	Eumida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
P0167	Eumida sanguinea	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0254	Glyceridae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
P0256	Glycera alba	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
P0259	Glycera fallax	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0260	Glycera lapidum	0	0	0	0	5	0	0	0	0	0	2	0	0	1	0	4	0	0	3	0	2
P0262	Glycera oxycephala	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
P0268	Glycinde nordmanni	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0
P0270	Goniada emerita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0271	Goniada maculata	0	1	0	0	0	0	1	0	0	3	0	2	0	0	0	0	0	0	0	0	0
P0291	Sphaerodorum gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0319	Podarkeopsis capensis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0358	Syllis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Syllis "species D"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0
	Syllis "species E"	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
P0365	Syllis armillaris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0380	Eusyllis blomstrandii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	Opisthodonta "species A"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	CR001	CR002	CR003	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007	RE001	RE002	RE003	RE004	RE005
P0394	Palposyllis prosostoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
P0422	Exogone naidina	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0434	Autolytus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0451	Proceraea scapularis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0458	Nereididae	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0458	Nereididae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0475	Eunereis longissima	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0494	Nephtys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0494	Nephtys (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
P0495	Nephtys assimilis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0496	Nephtys caeca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0498	Nephtys cirrosa	0	9	0	0	0	0	0	1	0	2	1	2	1	0	0	1	0	0	0	0	0
P0560	Eunice vittata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0564	Marphysa bellii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0566	Marphysa sanguinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0568	Nematonereis unicornis	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0571	Lumbrineriopsis paradoxa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
P0572	Lumbrineris (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0572	Lumbrineris futilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lumbrineris cingulata	0	0	0	0	10	3	0	0	0	0	0	0	0	0	0	1	3	0	1	1	1
	Scoletoma magnidentata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0591	Drilonereis filum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0642	Schistomeringos neglecta	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0643	Schistomeringos rudolphi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0672	Scoloplos armiger	1	1	0	0	1	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0
P0699	Paradoneis lyra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0718	Poecilochaetus serpens	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0
P0722	Aonides oxycephala	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
P0723	Aonides paucibranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
	Atherospio guillei	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
P0733	Laonice bahusiensis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
P0748	Polydora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0750	Polydora caeca (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0751	Polydora caulleryi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
P0752	Polydora ciliata (agg)	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0776	Pygospio elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0777	Scolecopsis (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0779	Scolecopsis bonnierii	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
P0783	Scolecopsis squamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0788	Spio armata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0789	Spio decorata	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0794	Spiophanes bombyx	0	8	0	16	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0802	Magelonidae	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0803	Magelona	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0805	Magelona filiformis	3	7	0	0	0	0	3	0	0	4	0	0	3	0	0	0	0	0	0	0	0
	Magelona johnstoni	3	4	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
P0822	Cirratulidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aphelocheata "species A"	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
P0829	Caulleriella alata	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	1
P0832	Chaetozone	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Chaetozone christiei	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	CR001	CR002	CR003	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007	RE001	RE002	RE003	RE004	RE005
P0831	Chaetozone zetlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1
P0840	Dodecaceria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0879	Diplocirrus stopbowitzi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0906	Capitella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0919	Mediomastus fragilis	0	0	0	1	8	1	0	0	0	0	0	0	0	0	0	0	23	0	0	1	0
P0920	Notomastus	0	0	0	2	5	0	0	1	0	0	1	0	0	4	1	0	2	0	4	14	8
P0938	Maldanidae	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0953	Clymenella cincta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0955	Clymenura	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	Clymenura tricirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Euclymene "species A"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0964	Euclymene oerstedii	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0983	Notoproctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
P0985	Petaloproctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0997	Ophelia (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0999	Ophelia borealis	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	2	0	0	0	0	0
P1000	Ophelia celtica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1007	Travisia forbesii	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
P1020	Scalibregmatidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1022	Asclerocheilus intermedius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1026	Scalibregma celticum	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P1027	Scalibregma inflatum	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1029	Sclerocheilus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1093	Galathowenia oculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P1098	Owenia fusiformis	0	0	0	2	5	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
P1107	Lagis koreni	0	0	0	1	4	0	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0
P1117	Sabellaria spinulosa	0	0	0	0	2	2	0	0	0	0	0	0	0	4	0	0	28	0	1	0	0
P1133	Ampharete	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1139	Ampharete lindstroemi	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
P1175	Terebellides stroemi	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1185	Amphitritides gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
P1190	Eupolymnia nesidensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1195	Lanice conchilega	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1210	Nicolea venustula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1215	Phisidia aurea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1217	Pista cristata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
P1229	Amaeana trilobata	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
P1234	Lysilla nivea	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1235	Polycirrus	1	4	0	4	2	2	6	0	1	0	2	0	0	0	0	0	6	0	1	0	1
P1253	Thelepus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1254	Thelepus cinnatus	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
P1257	Sabellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1257	Sabellidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1269	Chone filicaudata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1271	Demonax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1273	Demonax cambrensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1339	Pomatoceros	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
P1340	Pomatoceros lamarcki	0	0	0	8	27	4	0	0	0	0	0	0	0	0	0	0	1	0	0	6	3
P1341	Pomatoceros triqueter	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	10	2	2
R0001	CRUSTACEA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S0008	Nebalia herbsti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
D0632	Cerianthus lloydii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D0755	Peachia cylindrica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F0002	TURBELLARIA	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G0001	NEMERTEA	1	2	3	2	0	2	0	0	0	2	3	0	2	1	0	1	1	5	1	3	1
N0001	SIPUNCULA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N0001	SIPUNCULA (juv)	3	5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0
N0011	Golfingiidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N0014	Golfingia elongata	0	0	0	1	0	0	0	0	0	0	1	0	3	0	0	0	0	0	1	0	0
N0025	Nephasoma minutum	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
N0034	Phascolion strombus	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
P0019	Aphrodita aculeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0025	Polynoidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0044	Enipo kinbergi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0049	Gattyana cirrhosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0050	Harmothoe	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0050	Malmgreniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0050	Malmgreniella darbouxi	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0
P0062	Malmgreniella glabra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0082	Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0092	Pholoe baltica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0
P0094	Pholoe inornata	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0104	Sigalion mathildae	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
P0107	Sthenelais boa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0109	Sthenelais limicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0114	Phyllodocidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0118	Eteone longa (agg)	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	1	1	1	0	0
P0127	Mysta picta	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
P0141	Anaitides groenlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0142	Anaitides lineata	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0143	Anaitides longipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0146	Anaitides rosea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0155	Eulalia mustela	3	0	2	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0
P0156	Eulalia ornata	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0163	Eumida	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0167	Eumida sanguinea	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
P0254	Glyceridae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0256	Glycera alba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0259	Glycera fallax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0260	Glycera lapidum	2	1	2	1	0	3	0	0	0	0	0	0	4	0	0	0	0	1	3	1	2
P0262	Glycera oxycephala	0	2	0	0	0	2	0	0	0	0	0	0	2	0	2	1	0	2	0	0	0
P0268	Glycinde nordmanni	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	1	0
P0270	Goniada emerita	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0271	Goniada maculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0291	Sphaerodorum gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0319	Podarkeopsis capensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0358	Syllis	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Syllis "species D"	3	2	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
	Syllis "species E"	0	1	1	0	0	0	0	0	0	0	0	0	7	0	8	1	1	0	2	2	0
P0365	Syllis armillaris	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0380	Eusyllis blomstrandii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	Opisthodonta "species A"	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
P0394	Palposyllis prosostoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0422	Exogone naidina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0434	Autolytus	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0451	Proceraea scapularis	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
P0458	Nereididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0458	Nereididae (juv)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0475	Eunereis longissima	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
P0494	Nephtys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0494	Nephtys (juv)	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0
P0495	Nephtys assimilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0496	Nephtys caeca	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
P0498	Nephtys cirrosa	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	1
P0560	Eunice vittata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0564	Marphysa bellii	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0566	Marphysa sanguinea	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0568	Nematonereis unicornis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0
P0571	Lumbrineriopsis paradoxa	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0572	Lumbrineris (juv)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0572	Lumbrineris futilis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lumbrineris cingulata	3	2	3	5	0	4	0	0	0	0	0	0	7	0	4	0	12	4	5	2	0
	Scoletoma magnidentata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0591	Drilonereis filum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0642	Schistomeringos neglecta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0643	Schistomeringos rudolphi	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0
P0672	Scoloplos armiger	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
P0699	Paradoneis lyra	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	2	0	1	2	0
P0718	Poecilochaetus serpens	1	0	1	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	1	0	0
P0722	Aonides oxycephala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0723	Aonides paucibranchiata	4	3	4	0	0	1	0	0	1	0	0	0	6	0	1	0	0	1	0	1	0
	Atherospio guillei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
P0733	Laonice bahusiensis	1	1	10	10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0748	Polydora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0750	Polydora caeca (agg)	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0751	Polydora caulleryi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0752	Polydora ciliata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0776	Pygospio elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0777	Scolecopsis (juv)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0779	Scolecopsis bonnierii	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
P0783	Scolecopsis squamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0788	Spio armata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0789	Spio decorata	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
P0794	Spiophanes bombyx	0	0	1	0	0	0	0	0	0	6	0	1	0	0	0	0	0	0	2	0	0
P0802	Magelonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0803	Magelona	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0
P0805	Magelona filiformis	0	0	0	0	0	0	0	0	0	22	0	3	0	0	0	0	0	0	0	0	0
	Magelona johnstoni	0	0	0	0	0	0	0	0	0	248	0	6	0	0	0	0	0	0	0	0	0
P0822	Cirratulidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
	Aphelochaeta "species A"	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0
P0829	Caulleriella alata	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	3	3	1	0	0
P0832	Chaetozone	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
	Chaetozone christiei	0	0	0	0	0	0	0	0	0	14	0	3	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
P0831	Chaetozone zetlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1
P0840	Dodecaceria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0879	Diplocirrus stopbowitzi	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
P0906	Capitella	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
P0919	Mediomastus fragilis	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	1	0	0
P0920	Notomastus	7	3	10	16	0	4	0	0	1	0	0	0	7	0	3	0	8	9	6	8	0
P0938	Maldanidae	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0
P0953	Clymenella cincta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0955	Clymenura	0	0	1	0	0	8	0	0	0	0	1	0	4	0	0	0	2	1	2	4	0
	Clymenura tricirrata	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Euclymene "species A"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
P0964	Euclymene oerstedii	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	7	0	1	1	0
P0983	Notoproctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0985	Petaloproctus	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
P0997	Ophelia (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
P0999	Ophelia borealis	0	0	0	0	6	0	0	0	5	0	5	9	2	0	0	1	0	1	1	0	4
P1000	Ophelia celtica	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1007	Travisia forbesii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
P1020	Scalibregmatidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P1022	Asclerocheilus intermedius	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0
P1026	Scalibregma celticum	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P1027	Scalibregma inflatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0
P1029	Sclerocheilus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1093	Galathowenia oculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1098	Owenia fusiformis	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
P1107	Lagis koreni	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	4	1	0	0
P1117	Sabellaria spinulosa	1	0	0	0	0	3	0	0	1	0	20	0	29	0	0	0	1	0	2	0	0
P1133	Ampharete	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
P1139	Ampharete lindstroemi	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
P1175	Terebellides stroemi	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	1	0	0
P1185	Amphitritides gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1190	Eupolymnia nesidensis	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1195	Lanice conchilega	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1210	Nicolea venustula	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
P1215	Phisidia aurea	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P1217	Pista cristata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1229	Amaeana trilobata	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1234	Lysilla nivea	0	2	0	0	0	0	0	0	0	0	0	0	4	0	4	1	2	0	1	0	0
P1235	Polycirrus	0	1	2	3	0	4	0	0	0	3	0	0	4	0	0	0	2	3	1	1	0
P1253	Thelepus	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1254	Thelepus cinnatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P1257	Sabellidae	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1257	Sabellidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1269	Chone filicaudata	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1271	Demonax	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1273	Demonax cambrensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1339	Pomatoceros	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
P1340	Pomatoceros lamarcki	3	2	0	1	0	3	0	0	0	0	0	0	0	0	0	2	0	2	2	33	0
P1341	Pomatoceros triqueter	2	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	14	0
R0001	CRUSTACEA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S0008	Nebalia herbsti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
W1975	Spisula elliptica	0	5	7	0	5	0	0	0	1	0	2	0	0	0	2	2	0	1	2	5	0
W1977	Spisula solida	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
W1999	Ensis ensis	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
W2006	Phaxas pellucidus	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
W2015	Arcopagia crassa	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2019	Fabulina fabula	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0
W2020	Moerella (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2021	Moerella donacina	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
W2023	Moerella pygmaea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2051	Gari fervensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2049	Gari tellinella	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2058	Abra	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17	0	2	0	0
W2058	Abra (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
W2059	Abra alba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
W2062	Abra prismatica	1	3	0	0	0	0	0	0	0	3	1	3	1	0	0	0	3	2	0	2	2
W2113	Tapes rhomboides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2104	Timoclea ovata	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2139	Mysia undata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2152	Sphenia binghami	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2157	Corbula gibba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2162	Gastrochaena dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2227	Thracia (juv)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2231	Thracia phaseolina	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	0
ZA0003	Phoronis	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0
ZB0001	ECHINODERMATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0105	OPHIUROIDEA (juv)	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
ZB0148	Amphiuridae (juv)	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0
ZB0151	Acrocnida brachiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0160	Amphipholis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
ZB0161	Amphipholis squamata	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0165	Ophiuridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0165	Ophiuridae (juv)	0	0	0	6	0	0	0	0	0	0	2	1	0	0	0	0	2	0	0	1	1
ZB0166	Ophiura (juv)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
ZB0168	Ophiura albida	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0
ZB0170	Ophiura ophiura	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ZB0167	Ophiocten affinis	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
ZB0193	Psammechinus miliaris	1	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0212	Echinocyamus pusillus	1	8	7	10	0	0	0	0	0	0	9	1	8	1	0	5	31	18	15	3	0
ZB0222	Echinocardium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0223	Echinocardium cordatum	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
ZB0296	Leptosynapta inhaerens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

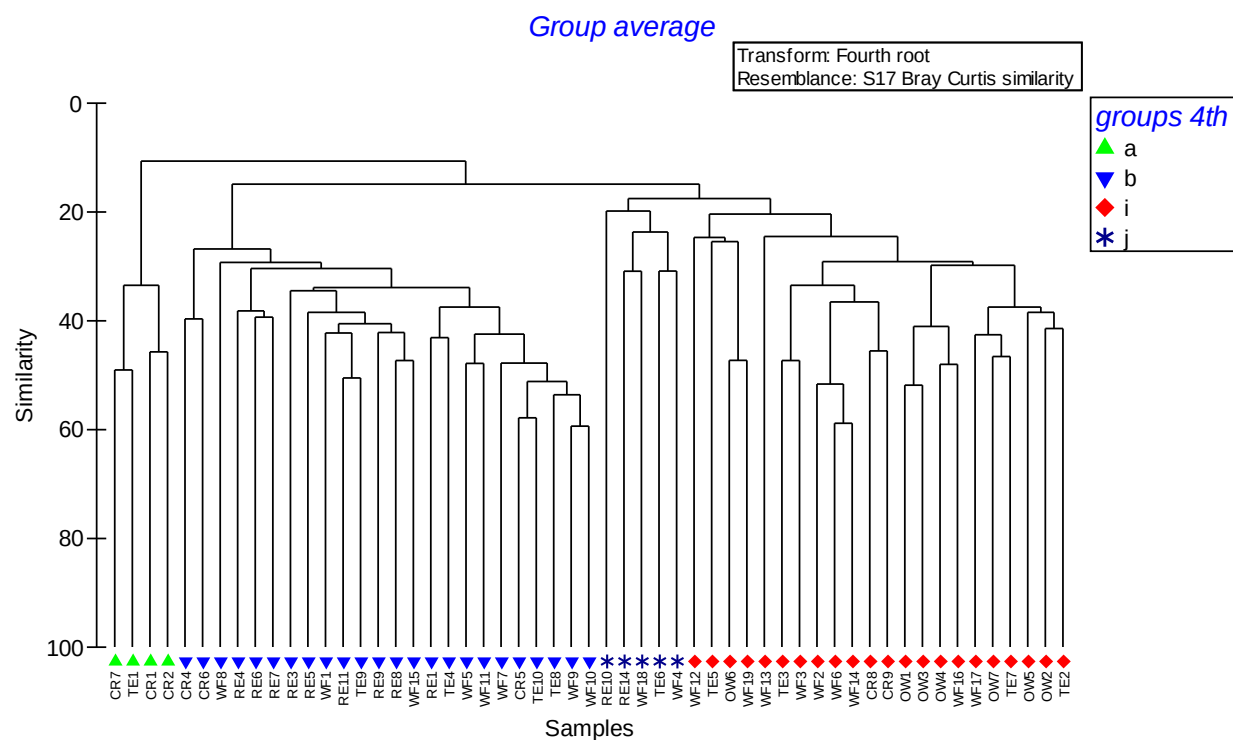
Infauna Abundance

SDC	TaxonName	WF003	WF004	WF005	WF006	WF007	WF008	WF009	WF010	WF011	WF012	WF013	WF014	WF015	WF016	WF017	WF018	WF019	WF020
W1975	Spisula elliptica	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
W1977	Spisula solida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W1999	Ensis ensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2006	Phaxas pellucidus	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
W2015	Arcopagia crassa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2019	Fabulina fabula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2020	Moerella (juv)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
W2021	Moerella donacina	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
W2023	Moerella pygmaea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2051	Gari fervensis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
W2049	Gari tellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2058	Abra	0	0	0	0	0	0	3	11	0	0	2	0	0	0	0	0	0	0
W2058	Abra (juv)	2	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
W2059	Abra alba	0	0	0	0	10	1	6	22	0	0	0	1	3	7	0	0	0	0
W2062	Abra prismatica	7	0	0	11	0	0	1	1	0	0	8	5	0	24	10	0	5	0
W2113	Tapes rhomboides	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
W2104	Timoclea ovata	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
W2139	Mysia undata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2152	Sphenia binghami	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2157	Corbula gibba	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
W2162	Gastrochaena dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2227	Thracia (juv)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
W2231	Thracia phaseolina	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ZA0003	Phoronis	0	0	0	0	2	2	2	1	2	0	0	0	0	0	0	0	0	0
ZB0001	ECHINODERMATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0105	OPHIUROIDEA (juv)	0	2	0	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0
ZB0148	Amphiuridae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0151	Acrocnida brachiata	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ZB0160	Amphipholis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0161	Amphipholis squamata	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
ZB0165	Ophiuridae	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ZB0165	Ophiuridae (juv)	0	0	1	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0166	Ophiura (juv)	0	0	0	0	0	0	0	1	0	0	4	1	0	2	10	0	0	0
ZB0168	Ophiura albida	0	0	4	0	6	0	4	4	2	0	0	4	0	0	0	0	0	0
ZB0170	Ophiura ophiura	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0167	Ophiocten affinis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ZB0193	Psammechinus miliaris	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
ZB0212	Echinocyamus pusillus	0	1	5	0	31	9	45	15	56	0	0	2	8	0	0	0	0	0
ZB0222	Echinocardium	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ZB0223	Echinocardium cordatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0296	Leptosynapta inhaerens	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0

APPENDIX L CLUSTER ANALYSIS OF INFAUNAL GRAB DATA

APPENDIX L CLUSTER ANALYSIS OF INFAUNAL GRAB DATA

Rampion Wind Farm J/1/03/1836



Site classifications based on 4th root transformed infaunal data, Rampion site.

APPENDIX M BIOMASS DATA

APPENDIX M- BIOMASS DATA

Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	CR001	CR002	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007
Polychaeta	0.0750	0.9907	0.2503	1.5147	0.1157	0.0515	0.0311	0.0260	0.2032	0.1052	0.2715	0.1422	0.1050	0.0035	0.3960
Crustacea	0.1486	0.0728	0.0030	0.0000	2.6076	0.0005	0.0120	0.0006	0.0009	0.0031	0.0000	0.0009	0.0426	0.0000	0.0126
Molluscs	0.0000	0.2122	0.2860	0.0655	0.0079	0.0302	0.8746	0.4035	1.4676	0.1952	1.5287	0.5300	0.0772	0.0000	0.3414
Echinoderms	0.0000	0.0000	0.0000	0.4944	0.0022	26.8780	0.0000	0.0000	49.1370	0.1831	0.0281	32.5200	0.4228	0.0277	1.3358
Others	0.0000	0.0032	0.0601	8.4839	0.2021	0.0000	0.0015	0.0014	0.0180	0.0092	nr	0.0054	0.0188	0.0008	0.0010
Total	0.2236	1.2789	0.5994	10.5585	2.9355	26.9602	0.9192	0.4315	50.8267	0.4958	1.8283	33.1985	0.6664	0.0320	2.0868

APPENDIX M- BIOMASS DATA

Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	RE001	RE003	RE004	RE005	RE006	RE007	RE008	RE009	RE010	RE011	RE014	TE001	TE002	TE003	TE004
Polychaeta	1.0193	1.1009	0.1562	0.1851	0.1033	0.0571	0.3527	1.2428	0.0107	1.5752	0.1198	2.4621	0.4040	0.0634	0.6135
Crustacea	0.0195	2.0330	0.0091	0.0129	0.0074	1.2736	0.5240	2.2196	0.0000	0.1140	0.0075	0.0045	0.0121	0.0144	0.0075
Molluscs	0.9005	1.1251	0.0623	1.3626	0.0482	0.3256	54.8343	0.0198	0.0230	7.4998	0.5590	1.0142	0.0402	0.5571	4.1656
Echinoderms	0.0000	1.0237	0.0471	0.6548	0.0085	0.2532	1.1289	1.4033	0.0000	2.1013	0.7640	31.8600	0.4318	2.5613	0.1366
Others	0.1157	0.0076	0.0018	0.0040	0.0015	0.0166	0.0014	0.0040	0.0027	0.0152	0.0000	0.0063	0.0076	0.0000	0.0215
Total	2.0550	5.2903	0.2765	2.2194	0.1689	1.9261	56.8413	4.8895	0.0364	11.3055	1.4503	35.3471	0.8957	3.1962	4.9447

APPENDIX M- BIOMASS DATA

Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002	WF003	WF004	WF005	WF006	WF007	WF008	WF009
Polychaeta	0.0048	0.1102	1.8850	0.9046	0.9705	1.1453	1.6587	0.0345	0.0512	0.1112	2.4723	0.0201	2.9696	0.0494	0.8261
Crustacea	0.0012	0.0529	0.0408	2.7446	nr	0.0088	0.0072	0.0024	0.0009	0.0112	11.7916	0.0016	0.0461	0.0025	5.4213
Molluscs	0.0014	0.3374	0.5326	0.1830	0.0307	1.6884	3.5772	0.0193	0.2254	0.0367	3.0528	0.4110	11.5810	1.0587	1.0784
Echinoderms	0.0280	0.0000	0.0793	0.5242	0.2557	0.7321	0.0757	0.0008	0.0000	2.4307	0.7171	nr	1.3170	0.0988	1.1873
Others	0.0505	0.0000	0.0030	0.0007	0.0189	0.0270	0.0029	0.0063	0.0000	0.0005	0.0292	0.0133	0.0257	0.0017	0.0358
Total	0.0859	0.5005	2.5407	4.3571	1.2758	3.6016	5.3217	0.0633	0.2775	2.5903	18.0630	0.4460	15.9394	1.2111	8.5489

APPENDIX M- BIOMASS DATA

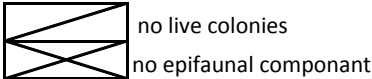
Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	WF010	WF011	WF012	WF013	WF014	WF015	WF016	WF017	WF018	WF019
Polychaeta	1.5907	0.1684	0.0247	0.2871	0.0177	0.4867	0.6395	0.0575	0.1832	0.0461
Crustacea	0.0446	2.8941	0.0000	0.7592	0.0007	0.0001	0.0063	0.0083	0.0007	0.0077
Molluscs	0.6206	0.3472	0.0000	3.6126	0.0305	4.1424	0.7527	0.4967	0.0000	0.0728
Echinoderms	0.5743	1.2312	0.0000	5.3394	0.3631	1.7282	0.0006	0.0129	0.0000	0.0214
Others	0.0079	nr	0.0000	0.0117	0.0000	nr	0.0000	0.0112	0.0000	0.0000
Total	2.8381	4.6409	0.0247	10.0100	0.4120	6.3574	1.3991	0.5866	0.1839	0.1480

APPENDIX N SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Epifauna abundance



Species Name	MCS Code	CR001.1	CR002.1	CR004.2	CR005.1	CR006.1	CR007.1	CR008.1	CR009.1	OW001.1	OW002.1	OW003.1	OW004.1	OW005.1	OW006.1	OW007.1	RE001.1	RE003.1	RE004.1	RE005.1	RE006.1
PORIFERA	C0001				P									P		P		P	P	P	P
Tethya citrina	C0340																	P			
Polymastia penicillus	C0361																		P		
Suberitidae	C0387																				
Timea spp.	C0432										P							P	P	P	
Timea stellifasciata	C0438																				
Trachycladus minax	C0470																				
Cliona spp. (agg.)	C0475				P	P								P			P	P	P	P	P
Bubaris vermiculata	C0578																				P
Raspailiidae	C1258																				
Eurypon spp.	C1286																	P			
Bougainvilliidae	D0246					P					P										
CAMPANULINOIDEA	D0338			P	P																
Calycella syringa	D0348																	P			
Haleciidae sp.	D0389																	P			
Halecium spp.	D0390										P						P				P
Halecium halecinum	D0392																				
Sertulariidae	D0407																				
Abietinaria abietina	D0409			P														P			
Diphasia sp.	D0413											P									
Hydrallmania falcata	D0424										P		P			P		P		P	P
Sertularella spp.	D0427																				
Sertularia sp. (juv)	D0433																			P	P
Sertularia spp.	D0433			P	P									P			P	P			
Kirchenpaueria pinnata	D0455																	P			
Campanulariidae	D0491																	P			
Obeliinae	D0506				P																
Obelia spp.	D0517										P							P			
Obelia dichotoma	D0519																				
Alcyonium digitatum	D0597					P															
Epizoanthus couchii	D0649															22		17	22		2
ACTINIARIA	D0662									1							12				
ACTINIARIA sp. (juv)	D0662										2							1			
Pedicellina spp.	K0045																				
Barentsia spp.	K0050																	P			
Pomatoceros spp.	P1339				1													12		6	
CIRRIPEDIA sp. (juv.)	R0014					5												76		61	181
Verruca stroemia	R0041																	2	12	8	
Balanus crenatus	R0077																	2			
Anomiidae (juv.)	W1805																	12		4	
Crisia spp.	Y0013																	P			
Tubuliporidae	Y0026				P													P	P	P	P
Diastoporidae	Y0037																	P			
Eurystrotos compacta	Y0039				P													P	P	P	P
Plagioecia patina	Y0041				P																
Plagioecia sarniensis	Y0042																			P	
Dispirella hispida	Y0066				P									P				P	P	P	P

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance

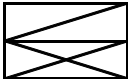


no live colonies

no epifaunal component

[illegible]

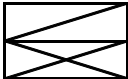
Epifauna abundance



no live colonies
no epifaunal component

Species Name	MCS Code	CR001.1	CR002.1	CR004.2	CR005.1	CR006.1	CR007.1	CR008.1	CR009.1	OW001.1	OW002.1	OW003.1	OW004.1	OW005.1	OW006.1	OW007.1	RE001.1	RE003.1	RE004.1	RE005.1	RE006.1
Cellepora pumicosa	Y0495																	P			
Lagenipora lepralioides	Y0502																		P	P	P
Turbicellepora avicularis	Y0504																				
Rhynchozoon bispinosum	Y0533																			P	P
ASCIDIACEA sp. (juv.)	ZD0002			2	1	1											1				
Didemnidae	ZD0041																				
Polycarpa fibrosa	ZD0112			1	2																
Dendrodoa grossularia	ZD0120				1													3	4	16	12
Pyura squamulosa	ZD0140																			1	
Corallinaceae	ZM0194				P	P												P		P	

Epifauna abundance

no live colonies

no epifaunal component

Species Name	MCS Code	RE007.1	RE008.1	RE009.1	RE010.1	RE011.1	RE014.1	TE001.1	TE002.1	TE003.1	TE004.1	TE005.1	TE006.1	TE007.1	TE008.1	TE009.1	TE010.1	WF001.1	WF002.1	WF003.1	WF004.1
PORIFERA	C0001		P			P					P	P	P			P					
Tethya citrina	C0340																				
Polymastia penicillus	C0361																				
Suberitidae	C0387			P																	
Timea spp.	C0432																				
Timea stellifasciata	C0438	P				P															
Trachycladus minax	C0470															P					
Cliona spp. (agg.)	C0475			P		P										P	P			P	
Bubaris vermiculata	C0578																				
Raspailiidae	C1258																				
Eurypon spp.	C1286					P															
Bougainvilliidae	D0246																				
CAMPANULINOIDEA	D0338																				
Calycella syringa	D0348																				
Haleciidae sp.	D0389																				
Halecium spp.	D0390	P													P	P	P				
Halecium halecinum	D0392																				
Sertulariidae	D0407			P																	
Abietinaria abietina	D0409																				
Diphasia sp.	D0413																				
Hydrallmania falcata	D0424	P		P						P			P		P	P	P				
Sertularella spp.	D0427										P										
Sertularia sp. (juv)	D0433	P											P								
Sertularia spp.	D0433																				
Kirchenpaueria pinnata	D0455																				
Campanulariidae	D0491										P										
Obeliinae	D0506																				
Obelia spp.	D0517										P										
Obelia dichotoma	D0519																				
Alcyonium digitatum	D0597																				
Epizoanthus couchii	D0649	1												2		4	1	25			
ACTINIARIA	D0662					1															
ACTINIARIA sp. (juv)	D0662										2					4					
Pedicellina spp.	K0045																				
Barentsia spp.	K0050																P				
Pomatoceros spp.	P1339					1															
CIRRIPEDIA sp. (juv.)	R0014			8		51					7										
Verruca stroemia	R0041					1							1								
Balanus crenatus	R0077										5										
Anomiidae (juv.)	W1805												1								
Crisia spp.	Y0013																				
Tubuliporidae	Y0026		P	P	P	P										P		P			
Diastoporidae	Y0037					P							P								
Eurystrotos compacta	Y0039		P																		
Plagioecia patina	Y0041																				
Plagioecia sarniensis	Y0042																				
Dispirella hispida	Y0066	P	P	P		P								P							

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance

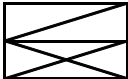


no live colonies

no epifaunal component

[illegible]

Epifauna abundance



no live colonies

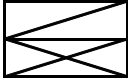
no epifaunal component

Species Name	MCS Code	RE007.1	RE008.1	RE009.1	RE010.1	RE011.1	RE014.1	TE001.1	TE002.1	TE003.1	TE004.1	TE005.1	TE006.1	TE007.1	TE008.1	TE009.1	TE010.1	WF001.1	WF002.1	WF003.1	WF004.1
Cellepora pumicosa	Y0495					P															
Lagenipora lepralioides	Y0502	P		P																	
Turbicellepora avicularis	Y0504					P															
Rhynchozoon bispinosum	Y0533	P			P	P										P	P				
ASCIDIACEA sp. (juv.)	ZD0002										7										
Didemnidae	ZD0041										P										
Polycarpa fibrosa	ZD0112																	1			
Dendrodoa grossularia	ZD0120	1														4					
Pyura squamulosa	ZD0140																				
Corallinaceae	ZM0194					P	P											P	P		

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance



no live colonies

no epifaunal component

Species Name	MCS Code	WF005.1	WF006.1	WF007.1	WF008.1	WF009.1	WF010.1	WF011.1	WF012.1	WF013.1	WF014.1	WF015.1	WF016.1	WF017.1	WF018.1	WF019.1
PORIFERA	C0001				P									P		
Tethya citrina	C0340															
Polymastia penicillus	C0361															
Suberitidae	C0387															
Timea spp.	C0432											P				
Timea stellifasciata	C0438															
Trachycladus minax	C0470															
Cliona spp. (agg.)	C0475											P				
Bubaris vermiculata	C0578															
Raspailiidae	C1258				P											
Eurypon spp.	C1286															
Bougainvilliidae	D0246															
CAMPANULINOIDEA	D0338															
Calycella syringa	D0348															
Haleciidae sp.	D0389															
Halecium spp.	D0390			P												
Halecium halecinum	D0392	P														
Sertulariidae	D0407															
Abietinaria abietina	D0409															
Diphasia sp.	D0413				P											
Hydrallmania falcata	D0424				P	P	P					P	P			
Sertularella spp.	D0427															
Sertularia sp. (juv)	D0433							P								
Sertularia spp.	D0433															
Kirchenpaueria pinnata	D0455								P							
Campanulariidae	D0491															
Obeliinae	D0506															
Obelia spp.	D0517															
Obelia dichotoma	D0519	P														
Alcyonium digitatum	D0597															
Epizoanthus couchii	D0649					13	4					27				
ACTINIARIA	D0662															
ACTINIARIA sp. (juv)	D0662	1										1				
Pedicellina spp.	K0045				P											
Barentsia spp.	K0050															
Pomatoceros spp.	P1339	2										1				
CIRRIPIEDIA sp. (juv.)	R0014				5							123				
Verruca stroemia	R0041											2				
Balanus crenatus	R0077															
Anomiidae (juv.)	W1805											1				
Crisia spp.	Y0013															
Tubuliporidae	Y0026															
Diastoporidae	Y0037															
Eurystrotos compacta	Y0039															
Plagioecia patina	Y0041															
Plagioecia sarniensis	Y0042															
Disporella hispida	Y0066															

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance



no live colonies

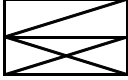
no epifaunal component

[illegible]

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance



no live colonies

no epifaunal component

[illegible]

APPENDIX O VIDEO ANALYSIS DATA

APPENDIX O VIDEO ANALYSIS DATA

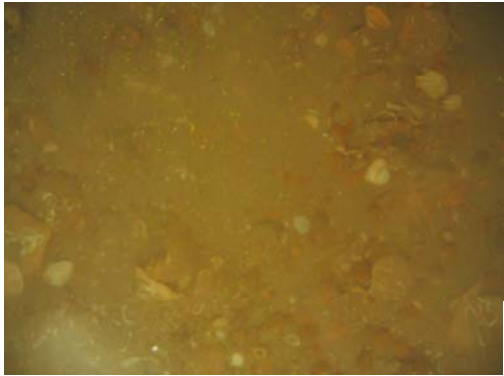
Rampion Benthic (J/1/03/1836)

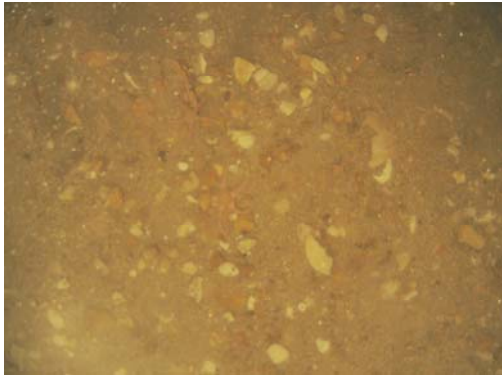
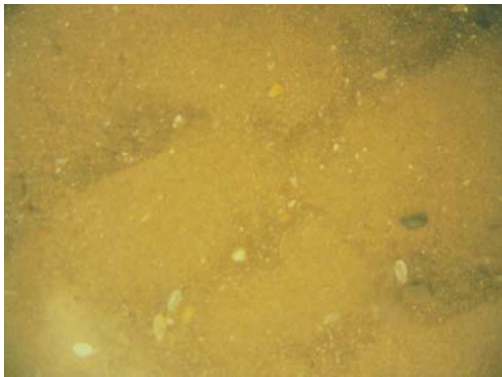
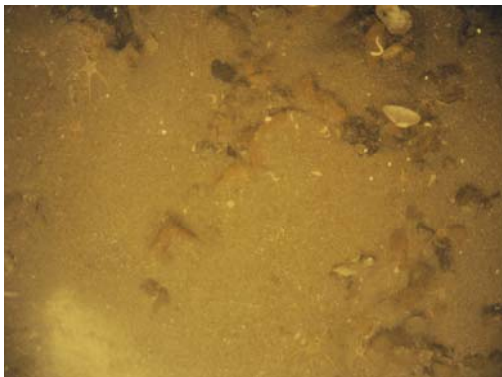
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR1.1	Sand	Slightly shelly, slightly gravelly sand.	Sparse and short algal turf. <i>Asterias rubens</i>	
CR2	Sand	Slightly shelly, slightly gravelly sand.	<i>Asterias rubens</i> , Flat fish	

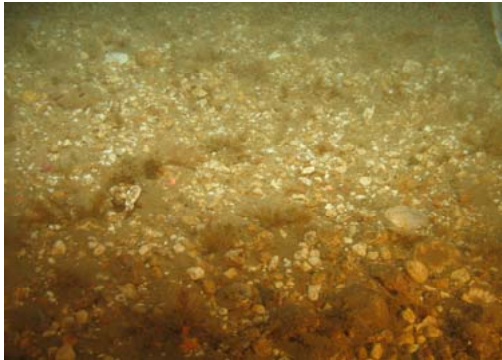
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR3	Bedrock with boulders, and a gravelly cobbly pebbly overlay.	Broken chalk bedrock with small boulders and a dense overlay of sandy cobbly gravelly pebbles.	<i>Pomatoceros</i> sp.(noticeably dense at this site), Hydroid turf species, <i>Asterias rubens</i> , <i>Psammechinus miliaris</i> , Actiniaria spp. (<i>Sagartia</i> spp and <i>Cereus pedunculatus</i>), <i>Anemonia viridis</i> .	
CR4.1 Video only as substrate too coarse for grab.	Cobbly pebbly gravel.	Area of compact hard ground, possibly bedrock, with a thick coarse sediment overlay. Shelly, sandy, cobbly pebbly gravel.	<i>Alcyonium digitatum</i> , <i>Pomatoceros</i> sp., Hydroid turf species, <i>Asterias rubens</i> , Actiniaria spp., (<i>Sagartia</i> spp and <i>Cereus</i> sp.), <i>Corallinaceae</i> , very notable at this site). <i>Psammechinus miliaris</i> , Paguridae, <i>Urticina</i> sp.	
CR4.2	Cobbly pebbly gravel.	Area of compact hard ground, possibly bedrock, with a thick coarse sediment overlay. Shelly, sandy, cobbly pebbly gravel.	<i>Alcyonium digitatum</i> , <i>Pomatoceros</i> sp., Hydroid turf species, <i>Asterias rubens</i> , Actiniaria spp., (<i>Sagartia</i> spp), <i>Corallinaceae</i> , very notable at this site). <i>Psammechinus miliaris</i> , Paguridae, <i>Urticina</i> sp.	

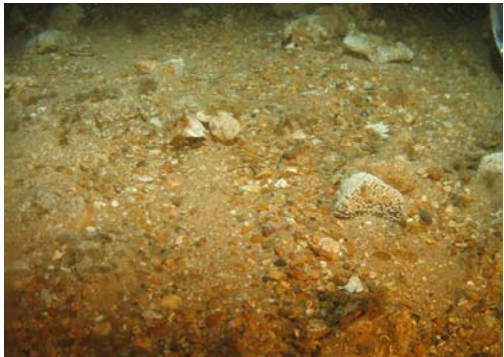
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR5	Sandy pebbly gravel.	Slightly shelly sandy pebbly gravel with occasional cobble.	<i>Asterias rubens</i> , Hydroid turf species, <i>Urticina</i> sp., <i>Pecten maximus</i> , Paguridae.	
CR6	Sandy gravel.	Shelly sandy pebbly gravel with occasional cobbles.	<i>Pomatoceros</i> sp., <i>Asterias rubens</i> , <i>Ophiura albida</i> , <i>Alcyonium digitatum</i> , Paguridae, <i>Psammechinus miliaris</i> .	
CR7	Sand	Slightly shelly, slightly gravelly rippled sand with <i>Echinocardium cordatum</i> .	<i>Echinocardium cordatum</i> , <i>Asterias rubens</i> , Hydroid turf species, Paguridae.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR8	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Asterias rubens</i> , Hydroid turf species, Paguridae, <i>Ophiura albida</i> , <i>Ophiura ophiura</i> .	
CR9	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Asterias rubens</i> , Paguridae, <i>Ophiura albida</i> , <i>Ophiura ophiura</i> . <i>Pecten maximus</i> .	
OW1	Sand	Slightly shelly sand. Small rare clay/mud deposits.	Paguridae, <i>Asterias rubens</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
OW2	Sand	Slightly shelly pebbly gravelly rippled sand with the occasional cobble.	<i>Ophiura albida</i> , Paguridae, <i>Asterias rubens</i> .	
OW3	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly pebbly gravelly sand.	Paguridae, <i>Ophiura albida</i> .	
OW4	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly rippled sand. Silt deposition within recesses of ripples.	No noted fauna.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
OW5	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly gravelly rippled sand. Silt deposition within recesses of ripples. Varying dominance of sand across the area. Silt deposition aggregating within recesses of rippled sand.	<i>Ophiura albida</i>	
OW6	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly gravelly rippled sand. Silt deposition within recesses of ripples.	No noted fauna.	
OW7	Slightly shelly gravelly pebbly sand.	Reduced area footage due to poor visibility. Low visibility camera system used. Substrate with the occasional cobble.	<i>Aequipecten opercularis</i> , <i>Ophiura albida</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE1	Shelly sandy gravel with cobbles and small boulders.	Coarse shelly sandy gravel with small cobbles sparsely deposited. Area appears compacted in places. Small boulders evident, potentially bedrock exposures.	Hydroid turf species, <i>Asterias rubens</i> .	
RE2	Chalk bedrock with shelly sandy gravel and occasional cobble	Extensive area of chalk bedrock exposure often covered with a layer of shelly gravel and pebbles. Occasional cobble/small boulder. Dense silt deposition in some areas. Rich faunal turf of soft coral and anemones. Low lying <i>Sabellaria spinulosa</i> coverage over an extensive proportion of the transect.	<i>Sabellaria spinulosa</i> , <i>Alcyonium digitatum</i> , <i>Urticina</i> sp, Actiniaria spp (<i>Sagartia</i> spp and others), <i>Flustra foliacea</i> , Hydroid turf including Plumulariidae, <i>Pagurus bernhardus</i> .	
RE3	Cobbly sandy shelly gravel with the occasional boulder. Small patches of rippled sand.	Veneer of coarse chalky cobbly sandy shelly gravel over what appears to be chalk bedrock, not clearly visible but probable. Occasional small patches of rippled sand. Surface silt deposition.	<i>Asterias rubens</i> , Hydroid turf species, <i>Aequipecten opercularis</i> , <i>Urticina</i> sp, <i>Pecten maximus</i> , <i>Psammechinus miliaris</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE4	Sandy pebbly gravel.	Sandy pebbly gravel with an occasional cobble. Rare boulder.	Hydroid turf species, <i>Asterias rubens</i> , <i>Aequipecten opercularis</i> , <i>Nemertesia antennina</i> , <i>Alcyonium digitatum</i> , <i>Ophiura albida</i> .	
RE5	Sandy pebbly gravel.	Sandy pebbly gravel with an occasional cobble. Rare boulder.	Hydroid turf species, <i>Asterias rubens</i> , <i>Aequipecten opercularis</i> , <i>Nemertesia antennina</i> , <i>Alcyonium digitatum</i> , <i>Ophiura albida</i> .	
RE6	Sandy cobbly pebbly gravel	Sandy pebbly gravel with a notable and consistent deposition of cobbles along the transect. Cobbles with a dense cover of barnacles. Occasional boulder.	Cirripedia, <i>Aequipecten opercularis</i> , <i>Pecten maximus</i> , <i>Nemertesia antennina</i> , Hydroid turf species.	

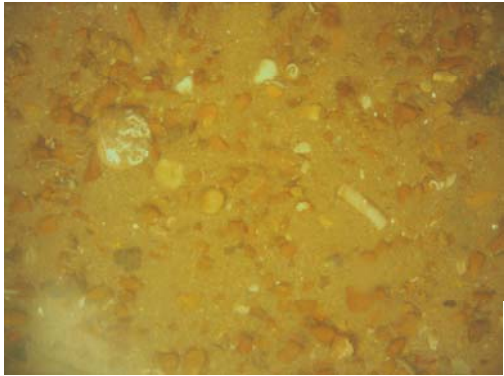
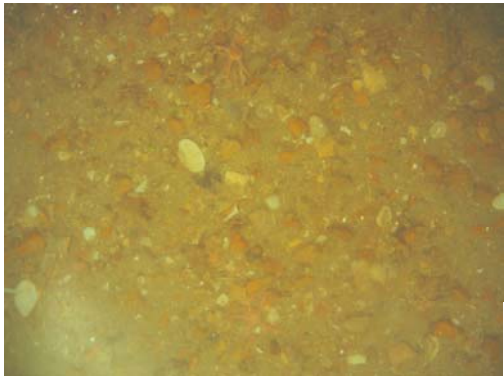
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE7	Shelly pebbly sandy gravel	Sandy pebbly gravel with the occasional rare cobble	Fauna very sparse. <i>Pecten maximus</i> , <i>Aequipecten opercularis</i> , <i>Ophiura albida</i> .	
RE8	Shelly gravelly pebbles.	Dense and 'clean' gravelly pebble substrate with a small shell fraction.	Very sparse fauna. <i>Pecten maximus</i> , <i>Aequipecten opercularis</i> , <i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , <i>Asterias rubens</i> .	
RE9	Shelly sandy gravelly pebbles.	Dense and 'clean' sandy gravelly pebble substrate with a small shell fraction.	Very sparse fauna. <i>Pecten maximus</i> , <i>Aequipecten opercularis</i> , <i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , <i>Asterias rubens</i> .	

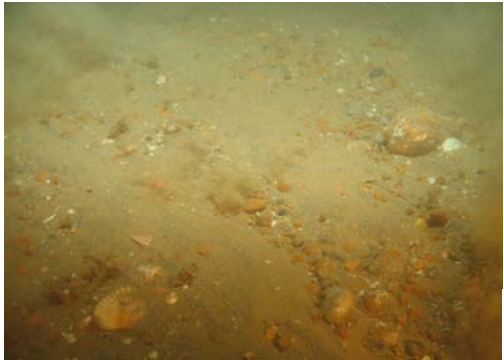
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE10	Substrate 1 – Sand	Slightly shelly rippled sand with silt deposits within recesses of ripples. Raised banks of sand regularly apparent throughout the transect.	Paguridae.	
	Substrate 2 – Piddock clay 'bedrock' with surface deposits of shelly gravelly sand	Clay bedrock exposures with a patchy covering of shelly gravelly sand. Occasional cobble and small boulder where most of fauna noted. Substrate evident as a quarter of the overall length within the middle of the transect before the return of substrate 1.	Paguridae, <i>Urticina</i> sp., <i>?Pentapora fascialis</i> <i>Tubularia indivisa</i> , Porifera.	
RE11	Shelly sandy cobbly gravelly pebbles.	Reduced area footage due to poor visibility. Low visibility camera system used. Very coarse substrate.	Hydroid turf species, <i>Lanice conchilega</i> , <i>Psammechinus miliaris</i> , <i>Ophiura albida</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE12	Pebbly gravel.	Slightly shelly sandy cobbly pebbly gravel. Very dense coarse substrate.	<i>Asterias rubens</i> , Hydroid turf species, <i>Alcyonium digitatum</i> , <i>Dendrodoa grossularia</i> , <i>Actiniaria</i> sp. (<i>Sagartia</i> spp.), <i>Ophiura albida</i> , <i>Aequipecten opercularis</i> , <i>Sabellaria</i> tubes (low lying and rare)	
RE13	Chalk bedrock reef with cobbly, gravelly, pebbly veneer.	Chalk bedrock reef, broken up to form pebbly cobbly deposits with a further veneer of shelly cobbly pebbly gravel. Bedrock more obvious in some places, appearing more just as a consolidated coarse substrate in other areas.	Mixed algal turf, <i>Asterias rubens</i> , <i>Urticina</i> sp, <i>Anemonia viridis</i> , <i>Actiniaria</i> (<i>Sagartia</i> spp), <i>Ascidia</i> spp, <i>Lanice conchilega</i> , Porifera, <i>Styela clava</i> , Hydroid turf species, <i>Psammechinus miliaris</i>	
RE14	Sand.	Slightly shelly rippled sand with cobbles and pebble deposits and the occasional small boulder. Most fauna concentrated on the hard cobbles and boulders.	<i>Mytilus edulis</i> (small clusters on cobbles and boulders), <i>Dendrodoa grossularia</i> (on sediment + hard substrate), <i>Styela clava</i> , Hydroid turf species, <i>Pecten maximus</i> , <i>Urticina</i> sp., <i>Asterias rubens</i> , <i>Ophiura albida</i> , <i>Lanice conchilega</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE1.1 Moved and site re-labelled 1.1 due to fishing gear.	Sand	Slightly shelly, slightly gravelly sand.	<i>Asterias rubens</i> , <i>Ophiura albida</i> , Paguridae, <i>Buglossidium luteum</i> <i>Corystes cassivelaunus</i> , <i>Ophiura ophiura</i> ,	
TE2.1 Moved and site re-labelled 2.1 due to fishing gear.	Sand	Slightly shelly, slightly gravelly rippled sand with the occasional cobble.	<i>Asterias rubens</i> , <i>Ophiura albida</i> , Paguridae, <i>Ophiura ophiura</i> , <i>Aequipecten opercularis</i> , Hydroid turf species, <i>Urticina</i> sp., <i>Actiniaria</i> sp. (<i>Sagartia</i> sp),	
TE3	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Ophiura ophiura</i> , Paguridae	

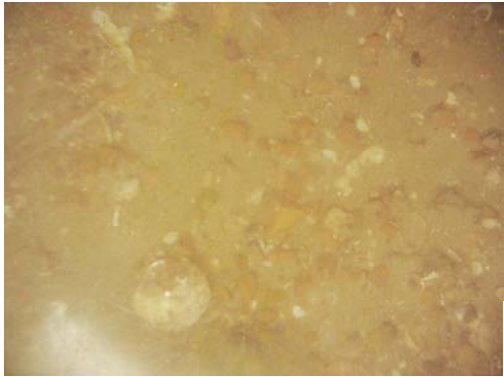
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE4	Sand	Rippled shelly sand with greater shell deposits visible as the transect progresses. Gravel and pebbles becoming a notable fraction in some areas. Sediment appearing patchily compacted. Sparse cobbles present throughout. Cobbles with hydroid turf evident.	Hydroid turf, Paguridae, <i>Ophiura albida</i> , <i>Urticina</i> sp.	
TE5	Substrate 1 – Shelly, sandy, pebbly gravel with occ cobble.	Appears to be a veneer of shelly sandy pebbly gravel over hard ground. Pebbles and cobbles seem to be chalk in origin, indicating chalk bedrock beneath veneer. Heavy silt surface deposition.	<i>Aequipecten opercularis</i> , <i>Asterias rubens</i> , <i>Ophiura albida</i> , Paguridae, Hydroid turf species.	
	Substrate 2 – Shelly sand	Transition zone leads to slightly shelly rippled sand with surface silt deposition, flocculating within the recesses of the ripples. Occasional cobble and pebble deposits.	Sparse hydroid turf, rare Paguridae, rare <i>Ophiura albida</i> .	

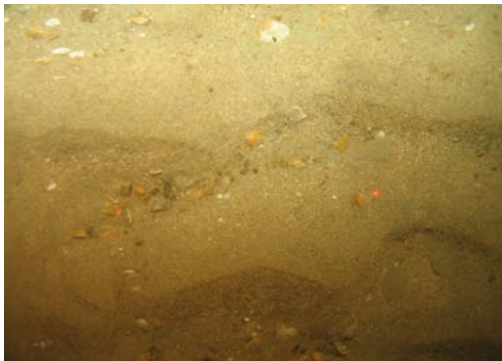
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE6	Sand	Slightly shelly slightly gravelly rippled sand with the occasional cobble. Dense silt deposit with flocculation apparent.	<i>Asterias rubens</i> , <i>Actiniaria</i> , <i>Ophiura albida</i> , <i>Cirripedia</i> on cobbles.	
TE7	Cobbly pebbly sandy gravel	Reduced area footage due to poor visibility. Low visibility camera system used. Mixed coarse substrate. Sand and gravel alternating in dominance along the transect.	<i>Pomatoceros</i> sp	
TE8	Cobbly pebbly sandy gravel	Reduced area footage due to poor visibility. Low visibility camera system used. Mixed coarse substrate. Sand and gravel alternating in dominance along the transect.	<i>Ophiura albida</i> , Hydroid turf species, <i>Aequipecten opercularis</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE9	Sand	Slightly shelly pebbly gravelly sand with the occasional cobble. 1 small boulder noted.	<i>Asterias rubens</i> , Paguridae..	
TE10	Cobbly pebbly sandy gravel	Mixed coarse substrate appearing compacted in some areas. Sand and gravel alternating in dominance along the transect.	<i>Ophiura albida</i> , Hydroid turf species, <i>Urticina</i> sp.	
WF01	Slightly shelly sandy cobbly gravelly pebbles/pebbly gravel.	Coarse mixed substrate with a notable proportion of pebbles and cobbles. Sparse fauna but <i>Pomatoceros</i> worms notably apparent on the larger sediment fractions.	<i>Pomatoceros</i> sp. <i>Asterias rubens</i> , Paguridae, <i>Ophiura albida</i> , <i>Aequipecten opercularis</i> , <i>Psammechinus miliaris</i> . Corallinacea.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF02	Sand	Slightly shelly, slightly pebbly gravelly sand with the occasional cobble.	<i>Pomatoceros</i> sp., Cirripedia (dense on cobbles), Paguridae, <i>Raja clavata</i> .	
WF03	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Ophiura ophiura</i> , Paguridae, Hydroid turf species.	
WF04	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Ophiura ophiura</i> , <i>Pomatoceros</i> sp. Hydroid turf species.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF05	Sandy gravel.	Slightly shelly, pebbly sandy gravel with cobbles and the occasional small boulder. Evidence of small mud/clay deposits.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae, <i>Asterias rubens</i> .	
WF06	Gravelly sand.	Slightly shelly, pebbly gravelly sand with cobbles and the occasional small boulder.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae, <i>Aequipecten opercularis</i> .	
WF07	Sandy gravel.	Slightly shelly, pebbly sandy gravel with occasional cobbles.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae, <i>Asterias rubens</i> , <i>Aequipecten opercularis</i> , <i>Actinaria</i> sp., <i>Inachinae</i> sp.	

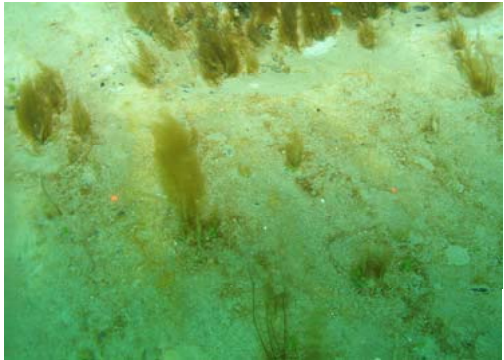
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF08	Sand	Slightly shelly, slightly pebbly gravelly sand with the occasional cobble.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae.	
WF09	Slightly shelly pebbly sandy gravel	Mostly sandy gravel but also small areas of gravelly rippled sand. Occasional cobble.	<i>Asterias rubens</i> , Paguridae, <i>Ophiura albida</i> , Hydroid turf species, <i>Aequipecten opercularis</i>	
WF10	Slightly shelly pebbly sandy gravel.	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly pebbly sandy gravel with the occasional cobble.	<i>Ophiura albida</i> , Hydroid turf species, <i>Aequipecten opercularis</i> , <i>Pomatoceros sp.</i>	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF11	Slightly shelly gravelly sand.	Reduced area footage due to poor visibility. Low visibility camera system used.	<i>Ophiura albida</i> , Hydroid turf species, <i>Asterias rubens</i> , Paguridae.	
WF12	Sand	Slightly shelly, slightly gravelly rippled sand with the occasional cobble. Silt in recesses of ripples.	<i>Ophiura albida</i> , Hydroid turf species	
WF13	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with the occasional cobble.	<i>Ophiura albida</i> , Hydroid turf species, <i>Asterias rubens</i> , Paguridae	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF14	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with the occasional cobble.	<i>Ophiura albida</i> ,	
WF15	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with cobbles.	<i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , Paguridae, Hydroid turf species.	
WF16	Sand	Slightly shelly, slightly pebbly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Pagurus bernhardus</i> , <i>Asterias rubens</i> , Paguridae.	

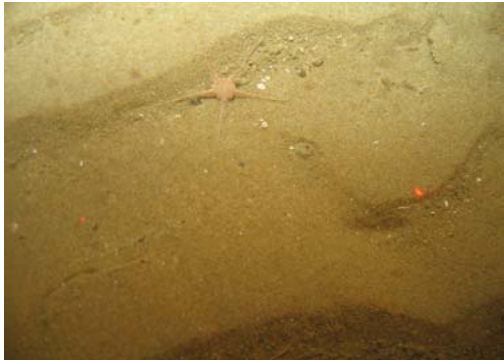
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF17	Sand	Slightly shelly, slightly pebbly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Trisopterus</i> sp.	
WF18	Sand	Slightly shelly slightly gravelly rippled sand. .	Paguridae, <i>Ophiura ophiura</i> , <i>Ophiura albida</i>	
WF19	Sand	Slightly shelly slightly gravelly rippled sand. Rare small pebble sized deposits of clay/mud.	Paguridae.	

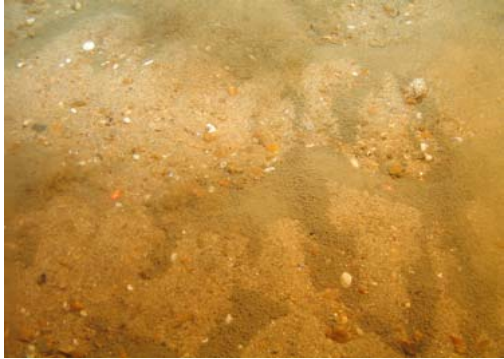
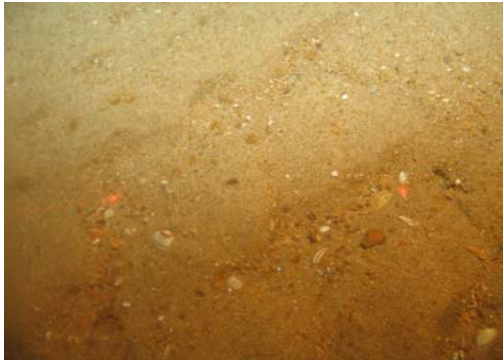
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF20	Bedrock with gravelly sand surface deposits.	Extensive bedrock plateau with occasional small boulders and areas of variable height creating under-hangs and small drop offs. Deposits of cobbly pebbly sandy gravel/gravelly sand of varying thickness across the area.	Hydroid turf species, <i>Alcyonium digitatum</i> , <i>Cancer pagurus</i> , <i>Asterias rubens</i> , <i>Urticina</i> sp, Actiniaria (dense in areas <i>Sagartia</i> spp), <i>Metridium senile</i> , <i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , Paguridae.	
Black Bream Transect 1	Sand	Slightly shelly slightly gravelly rippled sand with cobbles and the occasional small boulder. Note that the whole site appears as an overlay over chalk bedrock.	<i>Asterias rubens</i> , Hydroid turf species, <i>Alcyonium digitatum</i> ,	
Black Bream Transect 2	Bedrock with a mixed coarse and spatially variable sediment overlay.	Bedrock with a patchy overlay of slightly shelly sandy cobbly pebbly gravel. Some areas with rippled sand, other areas more pebbly cobbly deposits.	<i>Alcyonium digitatum</i> , <i>Asterias rubens</i> , Hydroid turf species, <i>Pomatoceros</i> sp., <i>Psammechinus miliaris</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Black Bream Transect 3	Gravelly sand over bedrock.	Slightly shelly cobbly gravelly pebbly rippled sand with the occasional boulder and bedrock exposure.	<i>Asterias rubens</i> , <i>Alcyonium digitatum</i> , Hydroid turf species, <i>Actiniaria sp</i> , Paguridae	
Sabellaria Transect 1.1	Chalk bedrock with sandy veneer.	Chalk bedrock plateau with a thin veneer of slightly shelly gravelly sand. As travel to the west, the algal cover becomes thinner and the veneer becomes a more obvious low lying rippled sand.	Dense algal cover up to 30cm long.	
Sabellaria Transect 1.2	Chalk bedrock with sandy veneer.	Chalk bedrock plateau with a thin veneer of slightly shelly gravelly sand. Very dense coverage of algae, including kelp. Algae reduces in density in places, revealing the mussel bed density. Feature:- circular recesses in bedrock approx 30cm diameter , spanning small area at start of transect.	Red, green and brown algae. <i>Mytilus edulis</i> <i>Asterias rubens</i> Flat fish	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 2.1	Chalk bedrock with sandy veneer.	Chalk bedrock plateau with a thin veneer of slightly shelly gravelly sand. Dense coverage of algae, along with a very dense and consistent mussel bed.	Mixed algal turf, <i>Mytilus edulis</i> <i>Asterias rubens</i> , <i>Anemonia viridis</i> , Solitary ascidians, <i>Actiniaria</i> sp(<i>Sagartia</i> spp), <i>Cereus pedunculatus</i> ,	
Sabellaria Transect 2.2	Chalk bedrock plateau with sandy gravel veneer.	Chalk bedrock with sandy pebbly gravelly veneer with the occasional cobble.	Mixed algal turf, <i>Mytilus edulis</i> , <i>Anemonia viridis</i> , <i>Urticina</i> sp, <i>Asterias rubens</i> , <i>Psammechinus miliaris</i> , <i>Actiniaria</i> , (<i>Sagartia</i> spp. and poss <i>Cereus pedunculatus</i> .	
Sabellaria Transect 3.1	Shelly, sandy gravel.	Cobbly, shelly, pebbly, sandy gravel. Variable substrate across the area. Shell fraction predominantly dead <i>Crepidula fornicata</i> shell. Live <i>Crepidula</i> also present.	<i>Asterias rubens</i> , <i>Crepidula fornicata</i> , Paguridae, <i>Pomatoceros</i> sp., <i>Psammechinus miliaris</i> , <i>Alcyonium digitatum</i> , <i>Urticina</i> sp, Hydroid turf species, <i>Actiniaria</i> sp, (<i>Sagartia</i> sp.)	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 3.2	Shelly, sandy gravel.	Cobbly, shelly, pebbly, sandy gravel. Variable substrate across the area. Shell fraction predominantly dead <i>Crepidula fornicata</i> shell. Live <i>Crepidula</i> also present.	<i>Asterias rubens</i> , (very concentrated in areas of <i>Crepidula</i> density), <i>Crepidula fornicata</i> <i>Pomatoceros</i> sp., <i>Psammechinus miliaris</i> , <i>Alcyonium digitatum</i> , <i>Urticina</i> sp, Hydroid turf species,	
Sabellaria Transect 4.1	Sand	Slightly shelly, slightly gravelly pebbly rippled sand with the occasional small boulder.	Hydroid turf species (notably <i>Sertularia argentea</i>), <i>Asterias rubens</i> , <i>Pomatoceros</i> sp., <i>Ophiura ophiura</i> , Paguridae, <i>Actiniaria</i> sp.	
Sabellaria Transect 4.2	Sand	Slightly shelly, slightly gravelly pebbly rippled sand with cobbles.	Hydroid turf species, <i>Asterias rubens</i> , <i>Pomatoceros</i> sp., <i>Ophiura ophiura</i> , <i>Ophiura albida</i> , Paguridae, <i>Actiniaria</i> sp.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 5.1	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with occasional cobbles.	<i>Ophiura albida</i> , Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Hinia reticulata</i>	
Sabellaria Transect 5.2	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with occasional cobbles.	<i>Ophiura albida</i> , Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Hinia reticulata</i>	
Sabellaria Transect 5.3	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with occasional cobbles.	<i>Ophiura albida</i> , Paguridae, <i>Asterias rubens</i> , <i>Ophiura ophiura</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 6.1	Slightly shelly gravelly sand.	Slightly shelly gravelly rippled sand with dense surface deposition of silt, forming flocculating aggregations in recesses of ripples.	Paguridae, <i>Asterias rubens</i> , CARIDEA <i>Aequipecten opercularis</i> , <i>Psammechinus miliaris</i>	
Sabellaria Transect 6.2	Substrate 1 Slightly gravelly sand.	Slightly sandy gravel/gravelly rippled sand forming raised banks on occasions. Silt flocculating in recesses of sand ripples.	Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Ebalia</i> sp,	
	Substrate 2 Shelly sandy pebbly gravel with occ. cobble.	Shelly sandy pebbly gravel with occ. cobble. Appears to be a veneer over hard ground in places. Very poor low lying <i>Sabellaria</i> crust tubes visible on few pebbles and cobbles.	Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Actiniaria</i> spp. (predict <i>Sagartia</i> spp), <i>Pecten maximus</i> , <i>Ophiura albida</i> , <i>Inachinae</i> , <i>Cerianthus loydii</i> , <i>Urticina</i> sp.	

APPENDIX P SPECIES LIST FOR TRAWL SPECIES

APPENDIX P 2M BEAM TRAWLING SPECIES LIST

Rampion Benthic J/1/03/1836

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Polymastia penicillus	C0361								P										
Suberites ficus sp. (agg.)	C0418										P	P					P	P	P
HALICHONDRIIDA	C0525									P									
Ciocalypa penicillus	C0626												P						
Ciocalypa penicillus	C0626										P								
Iophon sp.	C1050								P										
Raspailia hispida	C1321								P									P	
Tubularia indivisa	D0166													R					
Eudendrium sp.	D0218			P							P								
Bougainvillidae	D0246											P							
Hydractinia sp.	D0272									2									P
Hydractinia echinata	D0273					P	P	P	P		P			P		P			
Halecium sp.	D0390																P	P	
Halecium halecinum	D0392		P							P								P	
Abietinaria abietinaria	D0409					R	R	R	O		R		R	R			R	P	
Diphasia sp.	D0413																	P	
Hydrallmania falcata	D0424					O	P	O	F		R	R	P	R	R	P	R	P	P
Sertularella sp.	D0427											P						P	
Sertularella polyzonias	D0430											P					P		
Nemertesia sp.	D0462				P													P	
Nemertesia antennina	D0463								R			R	P						
Nemertesia ramosa	D0466						R		R	R	R	R						R	P
Aglaophenia pluma	D0481		P													P			
Obeliinae	D0506			P								P							
Obelia sp.	D0517																	P	
Obelia dichotoma	D0519																	P	
Obelia longissima	D0521				P						P						P		
Alcyonium digitatum	D0597	R	100g						<25g		50g	<25g	200g			<25g			
ACTINIARIA sp.	D0662	1				4		1			1	1		1				1	
Urticina sp.	D0682																	2	
Metridium senile	D0710			1								1							
Adamsia cariniopados	D0743		4	1		1	2	2	3			2	7	3	1	14	1	10	
Aphrodita aculeata	P0019										1			1					
Eunice cf. vittata	P0560								2										
Lagis koreni	P1107																1		
Sabellaria	P1115					4cm													
Sabellaria clumps	P1115									P	P	P					R	P	
Sabellaria reef	P1115									P									
Sabellaria spinulosa	P1117									P		P							
Thelepus cinnatus	P1254																		
Pomatoceros sp.	P1339	F on cobble	R						P			P	P	5		P			
Pomatoceros triqueter	P1341															O			
Filograna / Salmacina	P1349/P1360															R			
Scalpellum scalpellum	R0022											1					2		
Balanus crenatus	R0077				75				273				11			1	1	23	
Maera othonis (male)	S0519															1			
CARIDEA	S1293								1	1		1	2						
Processa canaliculata	S1363										1								
Pandalidae	S1370					1			1	2	1	1	1						
Pandalina brevisrostris	S1374					1				8		2	3						

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Pandalus sp.	S1375											1	1						
Pandalus montagui	S1377									27	4	7	8		2	2	5	2	1
Crangon sp.	S1383						1						1	3					
Crangon allmanni	S1384			3	13	9	72		1	1	13	9	29	10	23	3	19	3	13
Philocheras sculptus	S1389								38	2			1			3		1	
Philocheras trispinosus	S1390			16	19	1	5				4	4	8				3		1
Pontophilus spinosus	S1393																1		
Upogebia sp.	S1418																	1	
Upogebia deltaura	S1419	1																4	
Anapagurus hyndmanni	S1448		1																
Pagurus bernhardus	S1457	2	8	4	15	59	21	67	14	23		13	11	28	17	22	6	21	62
Pagurus cuanensis	S1460	3	3							1	1	2	1	1				1	
Pagurus prideaux	S1462		3	1	1	4	7	3	9	3		8	9	12	1	18	2	11	3
Galathea intermedia	S1472									4					1	2			
Pisidia longicornis	S1482		1							1		2					1		
Macropodia parva/rostrata	S15xx/S1532	8	9	3	2	5			1	16	27	50	3	14	4	3	36	56	2
Ebalia tuberosa	S1508								2									1	
Ebalia tumefacta	S1509					1			2	1		1		2		2		1	
Maja brachydactyla	S1515									3									
Hyas coarctatus	S1519								6	4	1		2	1		1		2	
Inachus dorsettensis	S1526	1				1	1		21	7	4	34	29	2		9	10	27	
Inachus phalangium	S1528	1								1									
Macropodia sp.	S1529					3			2	1	1			1	1				
Macropodia linaresi	S1531								2					1	1		1	4	
Macropodia tenuirostris	S1533					2	3		15					3					
Eurynome sp.	S1535													1		1	1		
Eurynome spinosa	S1537									2	1	2			1		2	8	
Pisa armata	S1539	1								3		1							
Corystes cassivelaunus	S1552																		1
Atelecyclus rotundatus	S1555								1				1		1				
Thia scutellata	S1559							1											
Polybiinae	S1573					1													
Liocarcinus depurator	S1580		2									1						2	
Liocarcinus holsatus	S1581		3		10	23	16		8	5	2	2	5	6	4	2	7	4	128
Liocarcinus marmoreus	S1582												2						
Liocarcinus pusillus	S1584								5	1		1	3	9				3	
Necora puber	S1589											1							
Pilumnus hirtellus	S1615	6								17	1	18					1	1	
Acanthochitona crinita	W0086									1									
Gibbula tumida	W0161													1					
Gibbula cineraria	W0163	2																	
Calliostoma zizyphinum	W0182									3		1		2					
Calliostoma zizyphinum var. lloydi	W0183									1									
Calliostoma granulatum	W0185								1					3			1	1	
Crepidula fornicata	W0439									2		2	1			1			
Trivia arctica	W0459									1									
Polinices pulchellus	W0491			1															
Euspira catena	W0493			1	1			2	3		3			4				5	4
Ocenebra erinacea	W0685									4		5	1						
Buccinum undatum	W0708	3	24		1	4			1	91	3	5	3	10		35	3	84	
Hinia reticulata	W0745	6										3				1		8	2
Tritonia hombergii	W1250															1			
Acanthodoris pilosa	W1333											1					7		
Archioris pseudoargus	W1376										1								

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Nucula hanleyi	W1568																1		
Modiolarca tumida	W1718									6	9	6							
Pecten maximus	W1771												3	1				1	
Aequipecten opercularis	W1773	2				31	1		40	7	4	3	227	8	6	22	4	27	3
Chlamys varia	W1779								1										
Heteranomia squamula	W1809								1				1						
Laevicardium crassum	W1959		1																
Sepia officinalis	W2307				1														
Sepiola atlantica	W2329	3	3	4	5	1	3		2		1	1	1		1		4	1	7
Bryozoan crust	Y0001	O									R	R		O					
Alcyonidium diaphanum	Y0076					<25g	<25g		100g	<25g	1200g	625g	150g		<25g		1525g	100g	
Alcyonidium parasiticum	Y0081			P	P												P		
Vesicularia spinosa	Y0131																	P	
Electra pilosa	Y0178											P	P					P	
Flustra foliacea	Y0187						<25g			426g			<25g		<25g		R		
Chartella papyracea	Y0192		P																
Bugula flabellata	Y0243																P		
Bugula plumosa	Y0246	P																	
Bugula turbinata	Y0250											P							
Scrupocellaria scrupea	Y0278		P																
Scrupocellaria scruposa	Y0279											P							
Pentapora fascialis	Y0418									R									
Omalosecosa ramulosa	Y0508								P										
Anseropoda placenta	ZB0062								1										
Crossaster papposus	ZB0075								1										
Asterias rubens	ZB0100	99	129	61	78	22	26	8	50	94	46	205	84	64	18	76	88	63	9
Ophiothrix fragilis	ZB0124	3	3		1	20	2		2	21	22	14	160	30	3	36	9	41	1
Amphipholis squamata	ZB0161										1								
Ophiura albida	ZB0168		16	53	17	274	47	14	429	1	128	16	39	924	472	25	169	1058	1458
Ophiura ophiura	ZB0170			155	57	7	1	20			266	11				7	80	117	150
Psammechinus miliaris	ZB0193	215	596	3	4	168		2	546	441	33	132	270	311	83	898	20	96	
Echinocardium cordatum	ZB0233																	1	1
Thyone fusus	ZB0262											1							
Spatangus purpureus	ZB219																	2	
Polyclinum aurantium	ZD0022																P		
Aplidium nordmanni	ZD0039																P		
Tridemnum tenerum	ZD0047									P									
Didemnum maculosum	ZD0051										P	P							
Ciona intestinalis	ZD0071		4						1		9	4	7			17		11	
Ascidella sp.	ZD0083										1								
Ascidella scabra	ZD0085										1	3							
Ascidia sp.	ZD0087								4										
Ascidia conchilega	ZD0088								3				1						
Ascidia virginea	ZD0092												1						
Styela clava	ZD0104	4																	
Polycarpa sp. (juv.)	ZD0110										2								
Polycarpa fibrosa	ZD0112										6	6					1	1	
Polycarpa pomaria	ZD0115										3	1							
Botryllus schlosseri	ZD0126								R										
Botrylloides leachi	ZD0128								P	P									
Pyura squamulosa	ZD0140								1										
Molgula sp.	ZD0146											1		1					
Molgula manhattensis	ZD0151								6		8	11	2	4		3	4	1	
Raja clavata (female)	ZF0089		1		1														

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Raja clavata (male)	ZF0089										1								
Raja montagui	ZF0094																1		
Raja montagui (female)	ZF0094												1						
OSTEICHTHYES	ZG0001								1	1		1							
Lophius piscatorius	ZG0084															1			
Diplecogaster bimaculata bimaculata	ZG0086											1							
Gadinae	ZG01??		4		1										1				
Ciliata septentrionalis	ZG0112									1									
Trisopterus sp.	ZG0141					1													
Trisopterus luscus	ZG0143										2								
Trisopterus minutus	ZG0144					4						2	6				3		
Belonidae (juv.)	ZG0183	2																	
Syngnathus acus	ZG0245										1								
Aspitrigla cuculus	ZG0262									2									
Agonus cataphractus	ZG0291				2		1				1							1	4
Cyclopterus lumpus	ZG0294										1							1	
Cyclopterus lumpus (juv.)	ZG0294			2															
Ctenolabrus rupestris	ZG0397									1									
Echlichthys vipera	ZG0405			5		2	12	8	4						1				1
Gymnammodytes semisquamatus	ZG0446						6												
Hyperoplus lanceolatus	ZG0449							1											
Callionymus lyra	ZG0452		1	1	3				1	5	3	5	2	2	2	12	3	8	1
Gobiidae	ZG0455		3		1														
Gobius niger	ZG0467																	1	
Pomatoschistus sp.	ZG0476	34		3	4					5	22	3	5		1	13	3	4	3
Pomatoschistus minutus	ZG0479										1							1	3
Pomatoschistus pictus	ZG0481		1																
Arnoglossus laterna	ZG0562						3	4			4	2	1				2	1	3
Limanda limanda	ZG0572			1		1								1					7
Microstomus kitt	ZG0574					1			3			2	2					1	
Pleuronectes platessa	ZG0578	3				6	4	2			3		1	4	2				2
Buglossidium luteum	ZG0585	21			1						10	8						9	2
Buglossidium luteum (juv.)	ZG0585			1															
Solea solea	ZG0591	1				1				1				1				2	2

Number of Species		23	22	21	23	30	20	14	41	45	45	54	43	36	23	31	36	50	27
Number of colonial species (P counts only)		1	4	3	2	2	2	1	7	7	7	12	5	1	0	4	8	14	4
Colonial Species (weighed)		3	2	0	0	4	4	2	7	4	6	6	4	4	3	3	5	3	0
Total number of species		27	28	24	25	36	26	17	55	56	58	72	52	41	26	38	49	67	31
Number of Individual solitary species		422	820	321	313	659	234	135	1508	826	659	622	957	1475	647	1233	503	1736	1874

APPENDIX Q *STONY REEF* “REEFINESS” ASSESSMENT PARAMETERS

APPENDIX Q- STONY REEF 'REEFINESS' ASSESSMENT PARAMETERS

(Taken from Irving, 2009)

Characteristic	Gp	Not a 'stony reef'	'Reefiness'		
			Low	Medium	High
Composition					
Boulders / cobbles (>64mm)	1	<64mm	Matrix- supported		Clast- supported
	2	Not suggested	Not suggested		
	3	<10%	10-40% Matrix- supported	40-95%	>95% Clast- supported
Consensus:		<10%	10-40% Matrix supported	40-95%	>95% Clast supported
Elevation					
(Topographical distinctiveness)	1	Flat, featureless seabed	<64mm	64mm-5m	>5m
	2	Must be an identifiable feature distinct from the surrounding seabed (could use MESH definition as a standard here)			
	3	<0.05m	0.05-0.30m	0.30m-5m	>5m
Consensus:		Flat or undulating seabed	<64mm	64mm-5m	>5m
Extent					
Total Area	1	Not suggested	Not suggested		
	2	<5m x 5m	← >25m ² →		
	3	<25m ²	25m ² -1km ²	1-10km ²	>10km ²
Consensus:		<25m ²	← >25m ² →		
Biota^B					
Ecosystem function	1	Dominated by infauna	Use SACFOR scale		>80% epifauna
Biological component	2		Should be biased towards physical aspects with less emphasis on biology. Should be characteristic of biogeographic region		
Function	3		Impossible to quantify		
Consensus:		Dominated by infauna			>80% epifauna
Patchiness					
(100% cover of 1m x 5m) ^A	1		1m x 50m area Clast-supported 20% cover of 1m x 5m patches	↔	1m x 50m area Matrix-supported 60% cover of 1m x 5m patches
% cover of hard substrata (>64mm constituent) within 'reef' (100m ² or 100m x 1m transect) _A	2		>50% coverage by hard substrata, but at least 25% (of the 100%) needs to be cobble-sized or larger if smaller sediments are present.		
	3	<10%	10-50%	50-75%	>75%
Consensus:		<10%	10-50%	50-75%	>75%
Stability^B					
	1	Not stable enough to support epifauna	Could support encrusting epifauna	↔	Able to support erect epifauna
	3	Did not think that the size of physical constituents could be quantified, or the composition of the biota			
Distinctness	3	Impossible to quantify			
Sub-seabed structure	3	Group was not able to progress this further due to lack of time			

Notes:

A 1m wide areas suggested here as 1m approximates to the width of the seabed viewed by video.

B The term 'Biota' was not given as a category to be considered by the separate break-out groups. However, each group came up with their own title which, on reflection, appear very similar & are therefore grouped together.

APPENDIX R *SABELLARIA* “REEFINESS” ASSESSMENT PARAMETERS

APPENDIX R *SABELLAIRA* “REEFINESS” ASSESSMENT PARAMETERS

Range of figures which could be used as a measure of “reefiness” (Gubbay, 2007)

Characteristics	Not a Reef	'Reefiness'		
		Low	Medium	High
Elevation (Average Tube Height - cm)	<2	2-5	5-10	>10
Extent (Area covered- m ²)	<25	25-10,000	10,000-1,000,000	>1,000,000
Patchiness (% cover)	<10	10-20	20-30	>30



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	EMU Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: RE3
Daily Progress Report No: 1	<i>RV Discovery</i>
Date: 15/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870 764 836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, Leigh Marsh, Erin Pettifer, John Peters, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	1	1
Vessel Safety Drills	1	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	-	-	Wind: W light airs Sea state: Calm	Wind: W light airs Sea state: Calm	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	4	56
Mini Hamon grabs	4	56
Contaminants grabs	1	23
Standalone video sites	0	10

Daily Log

Time UTC	Activity
07:00	Arrived at vessel to complete mobbing and prepare for departure.
10:00 – 11:30	Various briefings and safety talks undertaken.
11:40	Ropes away, enter Shoreham lock.
11:55	Depart from lock
13:10	Arrive site TE3, start survey operations. Site abandoned due to dense fishing gear deployment in area. Decision made that too unsafe to deploy equipment.
14:20	Arrive TE4. Various discussions throughout the next few hours between the client, client rep, party chief and Jo Weir (EMU Limited) re: issues with the deployment of the camera in areas of fishing gear and across substrates such as <i>Sabellaria</i> and Black Bream nests. Client (Dave Watson) confirmed approach required, surveying continued throughout.
17:30	Generator issue affecting winch. Sensor found to be loose.
18:15	Resumed survey
18:00	Arrived site RE1
20:15	Arrived site RE2
21:00	Arrived site TE5
23:00	Arrived RE3. Shift change. Survey continuing offshore as not possible to deploy gear in areas of fishing gear during the night.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminants sampling.

Weather

W to Var F3-4

Sea state: Slight to moderate

Inshore:

W – Var F3 or less

Sea state: Slight

EMU Limited comments

Various issues with coarse sediment and heavy deployment of fishing gear. Where exact plan at each site has not been achieved, Client rep has been consulted for approval of approach.

Client Representative Comments

Signed:

Signed:

Alison Bessell
Party Chief
EMU Limited

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: TE08
Daily Progress Report No: 2	<i>RV Discovery</i>
Date: 16/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind Light Airs SS Calm	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	12	44
Mini Hamon grabs	12	44
Contaminants grabs	4	19
Standalone video sites	0	10

Daily Log

Time UTC	Activity
2300	Arrive site RE03.
0118	Arrive site RE04.
0358	Arrive site RE05
0612	Arrive site RE06
0802	Arrive site RE07.
1015	Arrive site RE08.
1100	Vessel in distress visible on port side. Responded to call and towed angling vessel with no power out of the shipping lane to rendezvous with the Life Boat.
1300	Arrive site RE09. Left site 1503.
1538	Arrive site RE10. Left site 1637.
1709	Arrive site TE09. Left site 1754.
1811	Arrive site RE11. Left site 2020. Extra time spent changing set-up to low viz camera.
2115	Arrive site TE10. 2155 left site.
2225	Arrive site TE08. Left site 0027. Downloaded and backed up images. Changed camera system back to drop-down frame.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminant sampling.
 Inshore forecast – Wind variable F3 or less. NE Force 3 or 4 later.
 Sea state smooth or slight.
 Outlook – East or NE, F3-4, SS smooth to slight.

Emu Limited comments

Areas of extreme low visibility occurring, resulting in re-attempting those sites with the Low-Viz camera frame. Images still poor but substrate generally more visible, allowing assessment.

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: WF20
Daily Progress Report No: 3	<i>RV Discovery</i>
Date: 17/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind Light Airs SS Calm	Wind ESE F4 SS Slight to moderate.	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	12	32
Mini Hamon grabs	12	32
Contaminants grabs	4	15
Standalone video sites	1	9

Daily Log

Time UTC	Activity
0053	Arrive TE7. Video and grab. To minimize gear change have opted to do a run on video and grab, with a return sweep through a small set of sites to pick off the chemistry sites. Leave site 0144.
0215	Arrive site OW7. Leave site 0319.
0356	Arrive site OW6. Leave site 0429.
0449	Arrive site OW5. Leave site 0556.
0614	Arrive site OW4. Leave site 0650.
0704	Arrive site OW3. Leave site 0749.
0813	Arrive site OW1. Leave site 0846.
0912	Arrive site OW2. Leave site 1010.
1038	Arrive site TE6. Leave site 1354 – chemistry also done at this time.
1447	Arrive site OW3 to do chemistry sampling.
1531	Arrive site OW5 to do chemistry sampling.
1650	Arrive site OW7 to do chemistry sampling. Leave site 1724.
1741	Arrive site WF18. Leave site 1841.
1900	Arrive site WF19. Leave site 2030.
2053	Arrive site WF20. Leave site 2118. Video only done as due to state of tide, wanted to do the Sab Trans Site 6 at this point.
2122	Arrive <i>Sabellaria</i> Transect site 6 comprising 2 transects. Leave site 2225.
2300	Handover at WF20 where returned to take fauna grab.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminant sampling.
Moving inshore to use a full day on the sites where potentially more hazardous due to fishing gear expected in the area.
Weather forecast
ENE Force 3-4, occ F5 in the East later.
Outlook – SE, F3-4, occ F5 in the east. Becoming variable F3 or less.

Emu Ltd comments

Due to poor visibility experienced at many sites, changed where appropriate to the Elviz camera set up. Where possible used the oblique system at a steeper angle on the frame. Elviz used where this system was not adequate to get footage. Changed from Day grab to the Shipek grab to take contaminants to make sure lack of sample was not gear dependant. Continued to use Shipek from that point. Day grab to be used in the event of Shipek failure.

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: WF08
Daily Progress Report No: 4	<i>RV Discovery</i>
Date: 18/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind ENE Force 2 SS: Slight	Wind NE Force 2 SS: Slight	Wind NE Force 2 SS: Slight	Wind NE Force 2 SS: Slight	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	14	18
Mini Hamon grabs	13	19
Contaminants grabs	2	13
Standalone video sites	7	2

Daily Log

Time UTC	Activity
0110	Arrive WF11. Leave site 0255.
0303	Arrive site WF09. Leave site 0344.
0355	Arrive site WF01. Leave site 0508.
0618	Arrive site RE14. Leave site 0728.
0748	Arrive site RE12. Video transect only. Leave site 0805.
0831	Arrive site RE13. Video only. No grab – too coarse. Leave site 0845.
0929	Sabellaria Transect 1. Video only. Leave site 1016.
1020	Arrive site CR1. Leave site 1045. Had to move site due to fishing gear.
1056	Arrive Sabellaria Transect 2. Video only. Leave site 1146.
1155	Arrive site CR2. Leave site 1220.
1230	Arrive site CR3. Video only. Too hard for grab.
1312	Arrive Black Bream Transect 1. Video only. Leave site 1321.
1334	Arrive Black Bream Transect 2. Video only. Leave site 1345.
1355	Arrive Black Bream Transect 3. Video only. Leave site 1428.
1437	Arrive Sabellaria Transect 3. Video. Grab taken at Sab Point 3. Leave site 1525.
1535	Arrive Sabellaria Transect 4. Video. Grab taken at Sab Point 4. Leave site 1622.
1635	Arrive site CR6. Leave site 1715.
1740	Arrive site CR4. Moved site twice, once due to fishing gear, once due to substrate. Very poor faunal sample. Leave site 1845.
1855	Arrive site CR5. Leave site 2026.
2040	Arrive site WF02. Leave site 2145.

2158	Arrive site WF08. Leave site 2305.

Planned operation for the next 24 hours / Weather forecast

Continue with grab, video and contaminant sampling.

Work out into the Windfarm area overnight with the intention of moving back inshore in daylight hours.

Emu Ltd comments

No bream or *Sabellaria* noted at the allotted sites. Areas of hard ground found where not particularly expected resulting in some sites with very poor samples. Liaison with shoreside resulting in request to take a grab at sites of *Sabellaria* point positions regardless of any noted presence of *Sabellaria*. As some sites already done will result in a return to those sites to grab sample at the point positions if the substrate allows.

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>RV Discovery</i>	Emu Job No.: J/1/03/1836
Call sign: 2ALE8	Position at 2400: WF04
Daily Progress Report No: 5	<i>RV Discovery</i>
Date: 19/04/11	Bridge Phone: 07876 454806 Sat. Phone: 00870764836974
Survey Personnel Onboard: Alison Bessell, Peter Falkner, John Peters, Leigh Marsh, Erin Pettifer, Emma Hand	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
EMU Limited	James Hutchinson	james.hutchinson@emulimited.com
EMU Limited	Richard Cooke	richard.cooke@emulimited.com
EMU Limited	Glynn Thomas	glynn.thomas@emulimited.com
EMU Limited	Susan Parker	susan.parker@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400	Remarks
Weather / sea state conditions	Wind E. Force 2. SS Slight	Wind E. Force 2. SS Slight	Wind Variable. Force 1. SS Calm.	Wind Variable. Force 1. SS Calm.	

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video at grab sites	18	0
Mini Hamon grabs	19	0
Contaminants grabs	13	0
Standalone video sites	2	0

Daily Log

Time UTC	Activity
0015	Arrive Site WF12. Left site 0053.
0110	Arrive Sabellaria Transect 5. Took fauna sample. Left site 0348.
0355	Arrive site WF13. Left site 0450.
0505	Arrive site WF17. Left 0550.
0610	Arrive site WF14. Left 0628.
0702	Arrive site WF16. Left site 0724.
0731	Arrive site WF15. Very small sample. Left site 0930.
0953	Arrive site WF5. Left site 1055.
1120	Arrive site TE1. Moved site due to fishing gear and renamed TE1.1. Left site 1215.
1250	Arrive site CR1 to take chemistry samples. Left at 1335.
1401	Arrive site CR7. Left site 1455.
1541	Arrive site TE3. Left site 1613.
1644	Arrive site TE2. Moved site due to fishing gear and renamed TE2.1. Left site 1733.
1819	Arrive site CR8. Left site 1850.
1854	Arrive site CR9. Left site 1936.
2016	Arrive site WF3. Left site 2045.
2055	Arrive site WF7. Left site 2153.
2155	Arrive site WF6. Left site 2300.
2306	Arrive site WF4. Left site 0009. Finish survey.
20/4/11 0236	Arrive Shoreham Lock. Alongside 0252.

Planned operation for the next 24 hours / Weather forecast

De-mob survey vessel and return to Trafalgar Wharf.
Weather N/A.

Emu Ltd comments

Client Representative Comments

Signed:

Alison Bessell
Party Chief
EMU Limited

Signed:

Rob Rolph
Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Alongside at Shoreham
Daily Progress Report No: T1	<i>FV Sara Lena</i>
Date: 08/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	1	1
Vessel Safety Drills	0	0

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	-	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	0	1
2m beam trawling	0	16

Daily Log

Time UTC	Activity
08:00 – 13:00	Mobilisation. Delayed due to poor weather.
14:30- 15:15	Survey safety briefing.
15:15 – 24:00	Weather standby alongside Shoreham.

Planned operation for the next 24 hours / Weather forecast

Commence trawling survey operations subject to weather.

Inshore waters North Foreland to Selsey Bill valid from 0600 UTC 09/07/11.

24 hr:

Wind: Southwesterly 4 or 5, increasing 6 or 7 for a time in east, decreasing 3 or 4 later.

Sea state: Slight or moderate

48 hr:

Wind: Westerly or southwesterly 3 or 4, occasionally 5 in east, decreasing 2 at times later.

Sea state: Slight

Emu Ltd comments

Client Representative Comments

Signed:

Signed:

Jo Weir
Party Chief
EMU Limited

Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Alongside at Shoreham
Daily Progress Report No: T2	<i>FV Sara Lena</i>
Date: 09/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	1	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	-	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)	Wind: SW F5-7 Sea state: Moderate / rough (just outside Shoreham harbour)

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	0	1
2m beam trawling	0	16

Daily Log

Time UTC	Activity
00:00 – 24:00	Weather standby alongside Shoreham.

Planned operation for the next 24 hours / Weather forecast

Leave Shoreham at 04:30 to commence survey operations.

Inshore waters North Foreland to Selsey Bill valid from 1800 UTC 09/07/11.

24 hr:

Wind: Southwesterly 4 or 5, occasionally F6 at first.

Sea state: Smooth or slight, occasionally moderate at first.

48 hr:

Wind: Southwesterly 4 or 5, veering northeasterly 3 or less later

Sea state: Smooth or slight

Emu Ltd comments

Client Representative Comments

Signed:

Signed:

Jo Weir
Party Chief
EMU Limited

Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Eastern edge of the survey array
Daily Progress Report No: T3	<i>FV Sara Lena</i>
Date: 10/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	Wind: SW-S F2 Sea state: Slight	Wind: SW-WSW F3/4 Sea state: Slight-moderate	Wind: WSW-SW F3/4 Sea state: moderate	Wind: SW F3/4 Sea state: moderate

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	0	1
2m beam trawling	12	5

Daily Log

Time UTC	Activity
00:00-04:10	Alongside at Shoreham.
04:10-04:37	In transit from berth to Shoreham lock.
04:37-05:00	In transit from Shoreham to site CHARLIE ROMERO 02.
05:00-05:44	Undertaking trawling at site CR02.
05:44-06:19	In transit from site CR02 to CR06.
06:19-06:45	Undertaking trawling at site CR06.
06:45-07:16	In transit from site CR06 to CR08.
07:16-07:35	Undertaking trawling at site CR08.
07:35-07:55	In transit from site CR08 to CR09.
07:55-08:22	Undertaking trawling at site CR09.
0822-09:05	In transit from site CF09 to WHISKEY FOXTROT 01.
09:05-09:29	Undertaking trawling at site WF01.
09:29-10:30	In transit from site WF01 to ROMEO ECHO 11.
10:30-10:53	Undertaking trawling at site RE11.
10:53-11:32	In transit from site RE11 to TANGO ECHO 09.
11:32-11:56	Undertaking trawling at site TE09.
11:56-12:34	In transit from site TE09 to TE08.
12:34-13:05	Undertaking trawling at site TE08.
13:05-14:18	In transit from site TE08 to RE07.
14:18-14:49	Undertaking trawling at site RE07.

14:49-15:46	In transit from site RE07 to OW06.
15:46-16:39	Undertaking trawling at site OW06. Net torn at first tow so line had to be redone.
16:39-17:23	In transit from site OW06 to OW03.
17:23-17:49	Undertaking trawling at site OW03.
17:49-18:34	In transit from site OW03 to WF14.
18:34-19:01	Undertaking trawling at site WF14.
19:01-20:30	Processing of sample WF13. Preserving samples and stowing equipment and samples.
20:30-24:00	Heading eastwards to stay in area to first light.

Planned operation for the next 24 hours / Weather forecast

Continue with survey operations.

Inshore waters from North Foreland to Selsey Bill, valid from 2400 UTC 10/07/11:

24hr:

Wind: West to southwesterly 3 or 4, occasionally F5, east at first

Sea state: Slight.

48hr:

Wind: Var. 2 or 3, occasionally F4, becoming northeasterly 5 or 6.

Sea state: Slight, becoming moderate to rough.

EMU Limited comments

Prior to trawling at each site, the trawl line was run to check for the presence of any static gear.
Only if clear was the trawl deployed.

Client Representative Comments

Signed:

Jo Weir
Party Chief
EMU Limited

Signed:

Client Representative



Daily Progress Report



Client: RSK	Project: Rampion Offshore Wind Farm
Vessel: <i>FV Sara Lena</i>	Emu Job No.: J/1/03/1836
Call sign: MMAD9	Position at 2400: Alongside at Shoreham
Daily Progress Report No: T4	<i>FV Sara Lena</i>
Date: 11/07/11	Survey Phone: 07825 260423
Survey Personnel Onboard: Jo Weir, Rayner Piper, Tom Latter-Stapley	

Distribution List

To Company:	Attention:	E-mail:
EMU Limited	Nigel Thomas	nigel.thomas@emulimited.com
EMU Limited	Michael Davis	michael.davis@emulimited.com
EMU Limited	Paul English	paul.english@emulimited.com
EMU Limited	Heather Shepherd	heather.shepherd@emulimited.com
EMU Limited	Jo Weir	jo.weir@emulimited.com
EMU Limited	Séamus Whyte	seamus.whyte@emulimited.com
EMU Limited	Karen Hamilton	karen.hamilton@emulimited.com
RSK	David Watson	DWatson@rsk.co.uk
FLO	Stephen Appleby	Stephen@brownmay.com
E.ON	Neville Horton	Neville.Horton@eon.com

Safety

	Today	To Date
Accidents/Incidents	0	0
Near Misses	0	0
Safety Briefings	0	1
Vessel Safety Drills	0	1

Weather

	0000-0600	0600-1200	1200-1800	1800-2400
Weather / sea state conditions	Wind: SW F2 Sea state: Slight	Wind: SW F2 – NE F1-2 Sea state: Slight decreasing smooth	Wind: SW F2 Sea state: Slight	-

Survey Progress

Site Type	Sites Completed Today	Sites Left
Drop down video	1	0
2m beam trawling	5	0

Daily Log

Time UTC	Activity
00:00 – 04:32	Vessel remaining within the vicinity of site TE05
04:32 – 05:16	Undertaking trawling at site TE05
05:16 – 06:18	In transit from site TE05 to site TE04
06:18 – 06:45	Undertaking trawling at site TE04
06:45 – 07:51	In transit from site TE04 to site TE02
07:51 – 08:09	Undertaking trawling at site TE02
08:09 – 08:45	In transit from site TE02 to site WF05
08:45 – 09:11	Undertaking trawling at site WF05
09:11 – 10:00	In transit from site WF05 to site WF04
10:00 – 10:26	Undertaking trawling at site WF04
10:26 – 12:21	In transit from site WF04 to site BBT01. Completion of trawl sampling processing. Swopping over gear from trawling to video.
12:21 – 14:46	Undertaking drop down video
14:46 – 15:30	In transit from site to Shoreham Lock. Slow steam back in, waiting for lock.
15:30 – 16:04	Entering Shoreham, and transiting to berth.
16:04 – 18:02	Demobilisation of vessel.

Planned operation for the next 24 hours / Weather forecast

Survey operations completed.

EMU Limited comments

Prior to trawling and video, the trawl / video line was run, to check for the presence of any static gear. Only if clear was the trawl / video deployed.

Client Representative Comments

Signed:

Jo Weir
Party Chief
EMU Limited

Signed:

Client Representative

APPENDIX B- HYPERDIGITAL CAMERA LOG

Rampion Benthic J/1/03/1836

Site	Date	Start Time (GMT)	Start Depth (m BCD)	WGS84 UTM Z30N			
				Start Position		End Position	
				Eastings	Northings	Eastings	Northings
BlackBream01	18/04/11	13:15	11.2	692279.20	5628889.22	692511.45	5628888.64
BlackBream02	18/04/11	13:38	11.0	691288.73	5628207.31	691495.63	5628215.82
BlackBream03	18/04/11	14:08	13.0	691006.02	5627208.39	691021.15	5627467.19
CR01	18/04/11	10:27	5.6	690274.37	5632091.18	690420.64	5632138.19
CR02	18/04/11	12:00	9.5	692193.39	5629979.55	692260.33	5629955.57
CR03	18/04/11	12:36	9.2	689932.11	5629047.61	690024.92	5629075.45
CR04.1	18/04/11	17:53	11.0	688345.42	5626812.76	688211.96	5626811.15
CR04.2	18/04/11	18:15	11.7	688826.57	5626566.42	688674.93	5626539.76
CR05	18/04/11	19:59	17.9	686959.78	5622133.10	686835.72	5622118.80
CR06	18/04/11	16:41	13.7	690287.32	5625385.98	690437.40	5625410.02
CR07	19/04/11	14:12	14.4	696818.41	5628452.12	696938.52	5628481.14
CR08	19/04/11	18:29	19.5	693156.12	5623445.37	692986.30	5623461.02
CR09	19/04/11	19:01	19.7	691776.66	5622338.91	691641.76	5622362.19
OW01	17/04/11	08:22	44.3	709169.24	5615833.45	709070.29	5615789.73
OW02	17/04/11	09:18	53.8	714554.27	5613091.95	714463.40	5613064.10
OW03	17/04/11	07:15	54.7	709191.36	5612828.76	709092.48	5612840.89
OW04	17/04/11	06:20	41.9	703704.40	5612321.55	703589.05	5612293.04
OW05	17/04/11	04:57	58.9	703903.93	5608800.26	703811.82	5608798.16
OW05	17/04/11	05:23	59.7	703915.39	5608793.75	703887.62	5608810.58
OW06	17/04/11	04:04	53.5	699316.73	5609726.27	699210.32	5609726.97
OW07	17/04/11	02:25	59.1	692142.38	5609204.65	692230.07	5609217.77
RE01	15/04/11	18:00	16.5	723449.18	5625625.18	723346.78	5625632.24
RE02	15/04/11	20:32	27.1	731617.20	5621279.72	731451.10	5621259.34
RE03	15/04/11	23:11	35.0	736524.33	5615995.00	736649.58	5615999.63
RE04	16/04/11	01:32	59.3	730856.19	5609880.53	730985.47	5609887.99
RE05	16/04/11	04:08	47.7	721970.89	5604635.19	722104.05	5604636.66
RE06	16/04/11	06:21	49.9	710321.60	5599593.80	710265.93	5599586.64
RE07	16/04/11	08:22	61.6	697870.70	5598498.84	697788.61	5598497.07
RE08	16/04/11	10:22	56.8	685445.47	5597939.75	685563.97	5597956.18
RE09	16/04/11	13:41	71.4	671132.48	5598128.11	671334.27	5598128.88
RE10	16/04/11	15:47	37.7	667143.41	5605426.64	667270.28	5605443.05
RE11	16/04/11	19:28	19.6	672576.24	5613716.74	672464.87	5613702.57
RE12	18/04/11	07:59	16.6	678777.04	5620236.36	678690.83	5620236.89
RE13	18/04/11	08:37	9.0	680478.19	5626582.79	680346.81	5626582.88
RE14	18/04/11	06:22	16.8	671598.99	5620472.21	671562.30	5620421.24
SAB01.1 (SABT1)	18/04/11	09:34	5.1	690473.77	5632704.45	690165.84	5632710.69
SAB01.2 (SABT2)	18/04/11	10:02	5.5	690185.62	5632536.61	690502.26	5632535.23
SAB02.1 (SABT3)	18/04/11	11:00	5.2	689183.92	5631333.34	689379.01	5631322.15
SAB02.2 (SABT4)	18/04/11	11:25	5.4	689303.41	5631172.54	689545.10	5631181.16
SAB03.1 (SABT5)	18/04/11	14:43	15.1	691900.51	5626591.35	692232.37	5626591.22
SAB03.2 (SABT6)	18/04/11	15:02	15.3	691968.77	5626459.83	691976.00	5626688.27
SAB04.1 (SABT7)	18/04/11	15:42	16.4	693459.71	5626354.52	693658.92	5626359.27
SAB04.2 (SABT8)	18/04/11	15:56	16.0	693600.71	5626297.51	693598.08	5626507.34
SAB05.1 (SABT9)	19/04/11	01:23	58.4	697345.45	5614446.63	697334.97	5614653.96
SAB05.2 (SABT10)	19/04/11	02:56	56.1	697204.23	5614630.25	697439.91	5614619.56
SAB05.3 (SABT11)	19/04/11	03:15	55.3	697630.71	5614655.07	697878.13	5614659.01
SAB06.1	17/04/11	22:03	39.6	690207.40	5611562.44	690673.46	5611578.14
SAB06.2	17/04/11	21:26	41.1	690229.78	5611156.31	689858.98	5611174.07
TE01	19/04/11	11:45	20.1	698436.46	5624192.18	698442.13	5624212.42
TE02	19/04/11	16:50	25.5	703088.67	5621044.97	703168.58	5621072.17
TE03	19/04/11	15:54	22.5	708122.75	5624066.74	708244.62	5624087.19
TE04	15/04/11	15:34	26.5	717634.20	5620586.28	717687.98	5620484.24
TE05	15/04/11	21:16	38.7	730248.92	5617749.84	730169.82	5617862.18
TE06	17/04/11	10:44	50.7	720441.24	5613526.56	720524.89	5613514.53
TE07	17/04/11	01:06	64.0	687965.75	5605538.33	688098.12	5605584.13
TE08	16/04/11	22:32	38.6	684420.01	5610490.74	684490.51	5610502.80
TE08	16/04/11	23:09	39.0	684399.24	5610472.77	684501.35	5610496.03
TE09	16/04/11	17:27	40.6	676650.75	5608205.83	676538.69	5608191.69

Site	Date	Start Time (GMT)	Start Depth (m BCD)	WGS84 UTM Z30N			
				Start Position		End Position	
				Eastings	Northings	Eastings	Northings
TE10	16/04/11	21:32	28.6	682222.68	5614495.22	682041.99	5614516.00
WF01	18/04/11	03:55	21.6	687167.69	5617085.33	687282.34	5617110.08
WF02	18/04/11	20:48	22.4	689693.46	5619086.09	689561.31	5619069.42
WF03	19/04/11	20:27	26.2	692077.01	5619704.31	691975.62	5619671.82
WF04	19/04/11	23:12	25.9	695403.03	5620027.94	695222.66	5620003.09
WF05	19/04/11	09:58	26.9	700030.60	5618954.45	699891.42	5618865.66
WF06	19/04/11	22:17	28.5	696992.93	5618748.04	696888.28	5618700.08
WF07	19/04/11	21:03	26.7	694357.98	5618125.22	694262.73	5618059.99
WF08	18/04/11	22:11	28.9	690060.45	5617202.45	689991.82	5617263.88
WF09	18/04/11	03:03	28.4	689336.85	5615487.87	689396.49	5615551.38
WF10	17/04/11	00:09	43.1	688330.47	5613082.47	688398.26	5613149.87
WF11	18/04/11	01:19	34.6	690684.28	5613903.42	690737.31	5613981.89
WF12	19/04/11	00:23	41.7	694129.87	5614486.90	694263.82	5614503.21
WF13	19/04/11	04:02	48.9	697648.93	5615425.11	697763.93	5615443.88
WF14	19/04/11	06:20	42.9	700450.19	5616581.20	700261.20	5616599.78
WF15	19/04/11	07:36	28.7	705505.23	5617883.17	705365.99	5617840.77
WF16	19/04/11	07:05	32.4	705176.84	5616055.94	705066.41	5616057.75
WF17	19/04/11	05:11	45.2	699739.23	5613858.77	699885.74	5613880.65
WF18	17/04/11	18:07	56.7	694494.77	5611414.71	694333.49	5611389.08
WF19	17/04/11	20:01	46.2	691989.47	5611925.03	691897.26	5611907.35
WF20	17/04/11	21:02	28.2	689080.70	5611484.97	688976.60	5611484.64

APPENDIX B HYPERDIGITAL CAMERA LOG

Rampion Benthic J/1/03/1836

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
BlackBream01	B235	18/04/11	692302.79	5628882.11
BlackBream01	B236	18/04/11	692306.66	5628883.52
BlackBream01	B237	18/04/11	692318.84	5628890.78
BlackBream01	B238	18/04/11	692354.43	5628890.17
BlackBream01	B239	18/04/11	692359.83	5628890.91
BlackBream01	B240	18/04/11	692365.68	5628889.92
BlackBream01	B241	18/04/11	692390.24	5628886.13
BlackBream01	B242	18/04/11	692434.32	5628889.67
BlackBream01	B243	18/04/11	692450.22	5628887.26
BlackBream01	B244	18/04/11	692475.22	5628890.53
BlackBream01	B245	18/04/11	692485.41	5628893.24
BlackBream02	B247	18/04/11	691311.27	5628209.68
BlackBream02	B248	18/04/11	691322.65	5628214.60
BlackBream02	B249	18/04/11	691377.97	5628214.24
BlackBream02	B250	18/04/11	691402.16	5628217.14
BlackBream02	B251	18/04/11	691431.39	5628212.49
BlackBream02	B252	18/04/11	691452.93	5628216.28
BlackBream02	B253	18/04/11	691480.94	5628215.47
BlackBream03	B255	18/04/11	691011.18	5627253.45
BlackBream03	B256	18/04/11	691019.92	5627305.33
BlackBream03	B257	18/04/11	691024.69	5627324.88
BlackBream03	B258	18/04/11	691015.50	5627351.61
BlackBream03	B259	18/04/11	691016.27	5627368.88
BlackBream03	B260	18/04/11	691020.63	5627384.05
BlackBream03	B261	18/04/11	691018.98	5627413.99
BlackBream03	B262	18/04/11	691020.46	5627457.67
CR01	B184	18/04/11	690283.11	5632095.54
CR01	B185	18/04/11	690291.10	5632101.92
CR01	B186	18/04/11	690300.78	5632106.65
CR01	B187	18/04/11	690316.65	5632106.23
CR01	B188	18/04/11	690324.70	5632105.83
CR01	B189	18/04/11	690335.46	5632105.24
CR02	B218	18/04/11	692208.05	5629980.99
CR02	B219	18/04/11	692217.84	5629978.49
CR02	B220	18/04/11	692239.00	5629977.78
CR02	B221	18/04/11	692249.63	5629975.16
CR02	B222	18/04/11	692253.85	5629960.27
CR02	B223	18/04/11	692260.33	5629955.57
CR03	B225	18/04/11	689943.77	5629043.34
CR03	B226	18/04/11	689957.71	5629047.50
CR03	B227	18/04/11	689962.33	5629045.81
CR03	B228	18/04/11	689972.53	5629047.71
CR03	B229	18/04/11	689976.18	5629049.97
CR03	B230	18/04/11	689981.82	5629051.08
CR03	B231	18/04/11	689985.18	5629055.48
CR03	B232	18/04/11	689991.71	5629057.35
CR03	B233	18/04/11	690011.39	5629072.18
CR04.1	B324	18/04/11	688309.14	5626803.87
CR04.1	B325	18/04/11	688304.09	5626800.90
CR04.1	B326	18/04/11	688294.93	5626796.89
CR04.1	B327	18/04/11	688285.13	5626796.48
CR04.1	B328	18/04/11	688277.39	5626798.90

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
CR04.1	B329	18/04/11	688267.49	5626803.40
CR04.1	B330	18/04/11	688259.57	5626806.28
CR04.1	B331	18/04/11	688252.59	5626809.21
CR04.1	B332	18/04/11	688244.19	5626813.04
CR04.1	B333	18/04/11	688236.65	5626816.93
CR04.1	B334	18/04/11	688231.17	5626819.97
CR04.1	B335	18/04/11	688225.97	5626821.79
CR04.1	B336	18/04/11	688219.15	5626817.52
CR04.2	B338	18/04/11	688808.06	5626559.61
CR04.2	B339	18/04/11	688798.52	5626557.18
CR04.2	B340	18/04/11	688785.99	5626553.07
CR04.2	B341	18/04/11	688771.76	5626550.23
CR04.2	B342	18/04/11	688762.31	5626548.38
CR04.2	B343	18/04/11	688749.77	5626548.61
CR04.2	B344	18/04/11	688743.09	5626546.22
CR04.2	B345	18/04/11	688733.32	5626544.22
CR04.2	B346	18/04/11	688717.65	5626548.07
CR04.2	B347	18/04/11	688705.22	5626543.35
CR05	B349	18/04/11	686943.82	5622132.62
CR05	B350	18/04/11	686931.19	5622130.43
CR05	B351	18/04/11	686920.09	5622126.57
CR05	B352	18/04/11	686910.05	5622122.45
CR05	B353	18/04/11	686892.09	5622116.73
CR05	B354	18/04/11	686877.99	5622112.57
CR05	B355	18/04/11	686865.43	5622114.84
CR05	B356	18/04/11	686843.15	5622119.45
CR06	B315	18/04/11	690309.08	5625378.19
CR06	B316	18/04/11	690320.64	5625377.42
CR06	B317	18/04/11	690332.06	5625379.22
CR06	B318	18/04/11	690343.52	5625383.91
CR06	B319	18/04/11	690358.27	5625382.63
CR06	B320	18/04/11	690389.00	5625396.27
CR06	B321	18/04/11	690412.72	5625398.41
CR06	B322	18/04/11	690428.05	5625406.68
CR07	D024	19/04/11	696828.36	5628452.71
CR07	D025	19/04/11	696835.78	5628453.17
CR07	D026	19/04/11	696854.79	5628454.42
CR07	D027	19/04/11	696862.72	5628456.11
CR07	D028	19/04/11	696871.82	5628460.45
CR07	D029	19/04/11	696885.47	5628463.83
CR07	D030	19/04/11	696893.45	5628465.62
CR07	D031	19/04/11	696898.50	5628468.06
CR07	D032	19/04/11	696904.28	5628470.49
CR07	D033	19/04/11	696922.98	5628475.98
CR07	D034	19/04/11	696931.94	5628478.55
CR08	D053	19/04/11	693135.29	5623442.06
CR08	D054	19/04/11	693126.51	5623438.96
CR08	D055	19/04/11	693115.34	5623433.57
CR08	D056	19/04/11	693109.87	5623427.35
CR08	D057	19/04/11	693099.29	5623422.85
CR08	D058	19/04/11	693073.08	5623429.24
CR08	D059	19/04/11	693059.25	5623434.26
CR08	D060	19/04/11	693049.43	5623429.93
CR08	D061	19/04/11	693038.86	5623430.53
CR08	D062	19/04/11	693033.79	5623437.75

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
CR08	D063	19/04/11	693023.55	5623456.03
CR08	D064	19/04/11	693000.19	5623465.15
CR09	D066	19/04/11	691755.47	5622346.89
CR09	D067	19/04/11	691745.06	5622349.45
CR09	D068	19/04/11	691738.10	5622346.36
CR09	D069	19/04/11	691732.02	5622326.79
CR09	D070	19/04/11	691723.10	5622323.59
CR09	D071	19/04/11	691708.83	5622349.24
CR09	D072	19/04/11	691699.06	5622348.58
CR09	D073	19/04/11	691681.64	5622341.06
CR09	D074	19/04/11	691671.47	5622346.53
CR09	D075	19/04/11	691653.91	5622357.20
OW01	B006	17/04/11	709164.40	5615827.42
OW01	B007	17/04/11	709147.34	5615820.01
OW01	B008	17/04/11	709127.99	5615830.80
OW01	B009	17/04/11	709118.87	5615827.71
OW01	B010	17/04/11	709113.34	5615827.07
OW02	B012	17/04/11	714547.21	5613087.73
OW02	B013	17/04/11	714534.46	5613087.61
OW02	B014	17/04/11	714529.58	5613089.44
OW02	B015	17/04/11	714518.48	5613081.51
OW02	B016	17/04/11	714515.60	5613077.01
OW02	B017	17/04/11	714508.57	5613077.28
OW02	B018	17/04/11	714495.78	5613080.50
OW02	B019	17/04/11	714463.78	5613064.62
OW03	C065	17/04/11	709188.87	5612828.83
OW03	C066	17/04/11	709176.20	5612830.57
OW03	C067	17/04/11	709164.04	5612826.69
OW03	C068	17/04/11	709155.43	5612830.53
OW03	C069	17/04/11	709115.31	5612832.98
OW03	C070	17/04/11	709110.70	5612829.50
OW03	C071	17/04/11	709092.48	5612840.89
OW04	C056	17/04/11	703697.76	5612318.25
OW04	C057	17/04/11	703677.33	5612317.50
OW04	C058	17/04/11	703665.13	5612309.15
OW04	C059	17/04/11	703646.51	5612316.39
OW04	C060	17/04/11	703628.30	5612308.86
OW04	C061	17/04/11	703622.59	5612309.95
OW04	C062	17/04/11	703613.83	5612313.25
OW04	C063	17/04/11	703589.05	5612293.04
OW05	C048	17/04/11	703903.93	5608800.26
OW05	C049	17/04/11	703883.56	5608794.29
OW05	C050	17/04/11	703863.18	5608801.05
OW05	C051	17/04/11	703856.10	5608800.30
OW05	C052	17/04/11	703844.91	5608797.68
OW05	C053	17/04/11	703833.14	5608800.61
OW05	C054	17/04/11	703826.39	5608798.93
OW05	B003	17/04/11	703903.10	5608801.63
OW05	B004	17/04/11	703890.52	5608808.67
OW06	C043	17/04/11	699291.15	5609731.11
OW06	C044	17/04/11	699276.76	5609735.19
OW06	C045	17/04/11	699254.22	5609739.40
OW06	C046	17/04/11	699225.49	5609733.36
OW07	C036	17/04/11	692147.40	5609207.79
OW07	C037	17/04/11	692150.26	5609206.92

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
OW07	C038	17/04/11	692157.82	5609208.22
OW07	C039	17/04/11	692172.62	5609207.26
OW07	C040	17/04/11	692197.48	5609228.34
OW07	C041	17/04/11	692221.71	5609221.93
RE01	A017	15/04/11	723437.95	5625622.89
RE01	A018	15/04/11	723427.20	5625628.47
RE01	A019	15/04/11	723415.48	5625631.94
RE01	A020	15/04/11	723405.65	5625629.82
RE01	A021	15/04/11	723392.87	5625626.98
RE01	A022	15/04/11	723378.07	5625624.66
RE01	A023	15/04/11	723371.39	5625625.80
RE01	A024	15/04/11	723351.79	5625629.66
RE02	A027	15/04/11	731587.09	5621275.89
RE02	A028	15/04/11	731549.80	5621270.25
RE02	A029	15/04/11	731525.90	5621271.94
RE02	A030	15/04/11	731520.10	5621272.36
RE02	A031	15/04/11	731514.41	5621265.23
RE02	A032	15/04/11	731508.62	5621267.74
RE02	A033	15/04/11	731496.95	5621279.11
RE02	A034	15/04/11	731485.62	5621280.72
RE02	A035	15/04/11	731475.81	5621273.95
RE02	A036	15/04/11	731468.16	5621268.42
RE03	A048	15/04/11	736533.57	5615999.51
RE03	A049	15/04/11	736538.04	5616001.25
RE03	A050	15/04/11	736558.90	5615993.99
RE03	A051	15/04/11	736575.41	5616001.51
RE03	A052	15/04/11	736595.94	5615996.38
RE03	A053	15/04/11	736620.26	5615999.74
RE03	A054	15/04/11	736626.06	5615997.56
RE03	A055	15/04/11	736633.14	5615995.56
RE03	A056	15/04/11	736643.81	5616000.33
RE04	A059	16/04/11	730869.84	5609877.86
RE04	A060	16/04/11	730881.96	5609880.64
RE04	A061	16/04/11	730899.65	5609881.47
RE04	A062	16/04/11	730922.44	5609880.99
RE04	A063	16/04/11	730940.24	5609879.93
RE04	A064	16/04/11	730949.16	5609877.49
RE04	A065	16/04/11	730955.18	5609877.27
RE04	A066	16/04/11	730963.17	5609879.83
RE05	A068	16/04/11	721978.02	5604637.32
RE05	A069	16/04/11	721983.78	5604637.80
RE05	A070	16/04/11	721989.67	5604637.90
RE05	A071	16/04/11	721994.52	5604637.63
RE05	A072	16/04/11	722001.14	5604638.20
RE05	A073	16/04/11	722021.07	5604641.18
RE05	A074	16/04/11	722066.22	5604631.01
RE06	A076	16/04/11	710314.83	5599589.60
RE06	A077	16/04/11	710308.58	5599589.73
RE06	A078	16/04/11	710299.12	5599592.58
RE06	A079	16/04/11	710284.53	5599594.84
RE06	A080	16/04/11	710280.79	5599593.87
RE06	A081	16/04/11	710272.67	5599585.70
RE07	A083	16/04/11	697862.63	5598504.26
RE07	A084	16/04/11	697850.54	5598494.31
RE07	A085	16/04/11	697838.67	5598500.01

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
RE07	A086	16/04/11	697829.65	5598516.94
RE07	A087	16/04/11	697846.89	5598496.97
RE07	A088	16/04/11	697837.07	5598496.78
RE07	A089	16/04/11	697827.19	5598495.66
RE07	A090	16/04/11	697819.93	5598490.53
RE08	A092	16/04/11	685456.80	5597941.77
RE08	A093	16/04/11	685471.12	5597943.47
RE08	A094	16/04/11	685479.23	5597942.32
RE08	A095	16/04/11	685490.71	5597941.92
RE08	A096	16/04/11	685500.74	5597938.91
RE08	A097	16/04/11	685508.23	5597944.05
RE08	A098	16/04/11	685512.24	5597950.01
RE08	A099	16/04/11	685526.27	5597945.21
RE09	A101	16/04/11	671261.47	5598121.66
RE09	A102	16/04/11	671278.17	5598123.04
RE09	A103	16/04/11	671286.84	5598122.56
RE09	A104	16/04/11	671292.73	5598128.14
RE09	A105	16/04/11	671298.82	5598130.27
RE09	A106	16/04/11	671306.86	5598136.42
RE09	A107	16/04/11	671316.90	5598130.30
RE09	A108	16/04/11	671328.21	5598130.06
RE10	A110	16/04/11	667154.63	5605436.22
RE10	A111	16/04/11	667164.75	5605446.76
RE10	A112	16/04/11	667181.11	5605447.48
RE10	A113	16/04/11	667194.19	5605443.65
RE10	A114	16/04/11	667200.87	5605441.30
RE10	A115	16/04/11	667207.28	5605442.87
RE10	A116	16/04/11	667223.15	5605446.13
RE10	A117	16/04/11	667242.19	5605442.04
RE10	A118	16/04/11	667250.28	5605439.46
RE10	A119	16/04/11	667261.13	5605439.19
RE11	C002	16/04/11	672554.25	5613714.84
RE11	C003	16/04/11	672550.19	5613712.18
RE11	C004	16/04/11	672545.78	5613708.46
RE11	C005	16/04/11	672535.42	5613697.66
RE11	C006	16/04/11	672529.99	5613694.72
RE11	C007	16/04/11	672522.49	5613694.11
RE11	C008	16/04/11	672513.50	5613689.40
RE11	C009	16/04/11	672502.10	5613688.82
RE11	C010	16/04/11	672481.18	5613698.14
RE12	B137	18/04/11	678761.03	5620229.36
RE12	B138	18/04/11	678751.20	5620226.89
RE12	B139	18/04/11	678744.14	5620226.13
RE12	B140	18/04/11	678739.89	5620226.02
RE12	B141	18/04/11	678737.17	5620226.01
RE12	B142	18/04/11	678733.31	5620226.16
RE12	B143	18/04/11	678729.05	5620227.55
RE12	B144	18/04/11	678721.42	5620227.18
RE12	B145	18/04/11	678717.39	5620227.17
RE12	B146	18/04/11	678712.77	5620226.05
RE12	B147	18/04/11	678700.63	5620232.11
RE12	B148	18/04/11	678698.28	5620233.14
RE13	B150	18/04/11	680464.33	5626582.78
RE13	B151	18/04/11	680457.02	5626581.18
RE13	B152	18/04/11	680449.34	5626579.59

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
RE13	B153	18/04/11	680436.41	5626579.63
RE13	B154	18/04/11	680431.20	5626579.90
RE13	B155	18/04/11	680413.45	5626581.06
RE13	B156	18/04/11	680404.09	5626583.50
RE14	B130	18/04/11	671593.45	5620475.13
RE14	B131	18/04/11	671589.84	5620473.20
RE14	B132	18/04/11	671589.36	5620468.24
RE14	B133	18/04/11	671588.58	5620462.17
RE14	B134	18/04/11	671594.48	5620439.60
RE14	B135	18/04/11	671562.30	5620421.24
SAB01.1 (SABT1)	B158	18/04/11	690453.36	5632705.19
SAB01.1 (SABT1)	B159	18/04/11	690389.00	5632703.81
SAB01.1 (SABT1)	B160	18/04/11	690367.79	5632702.65
SAB01.1 (SABT1)	B161	18/04/11	690347.65	5632701.69
SAB01.1 (SABT1)	B162	18/04/11	690329.67	5632701.26
SAB01.1 (SABT1)	B163	18/04/11	690311.54	5632701.30
SAB01.1 (SABT1)	B164	18/04/11	690286.01	5632702.68
SAB01.1 (SABT1)	B165	18/04/11	690267.55	5632703.84
SAB01.1 (SABT1)	B166	18/04/11	690244.45	5632706.46
SAB01.1 (SABT1)	B167	18/04/11	690218.99	5632708.23
SAB01.1 (SABT1)	B168	18/04/11	690194.43	5632709.23
SAB01.1 (SABT1)	B169	18/04/11	690165.84	5632710.69
SAB01.2 (SABT2)	B171	18/04/11	690195.35	5632536.66
SAB01.2 (SABT2)	B172	18/04/11	690255.76	5632533.89
SAB01.2 (SABT2)	B173	18/04/11	690264.89	5632534.11
SAB01.2 (SABT2)	B174	18/04/11	690275.24	5632534.15
SAB01.2 (SABT2)	B175	18/04/11	690294.71	5632534.98
SAB01.2 (SABT2)	B176	18/04/11	690312.27	5632535.18
SAB01.2 (SABT2)	B177	18/04/11	690337.65	5632535.51
SAB01.2 (SABT2)	B178	18/04/11	690371.20	5632534.89
SAB01.2 (SABT2)	B179	18/04/11	690390.48	5632534.13
SAB01.2 (SABT2)	B180	18/04/11	690403.52	5632534.15
SAB01.2 (SABT2)	B181	18/04/11	690414.93	5632534.55
SAB01.2 (SABT2)	B182	18/04/11	690441.40	5632536.84
SAB02.1 (SABT3)	B191	18/04/11	689191.16	5631332.77
SAB02.1 (SABT3)	B192	18/04/11	689222.43	5631333.31
SAB02.1 (SABT3)	B193	18/04/11	689235.02	5631335.34
SAB02.1 (SABT3)	B194	18/04/11	689250.95	5631337.64
SAB02.1 (SABT3)	B195	18/04/11	689254.32	5631337.12
SAB02.1 (SABT3)	B196	18/04/11	689259.71	5631337.93
SAB02.1 (SABT3)	B197	18/04/11	689264.13	5631338.04
SAB02.1 (SABT3)	B198	18/04/11	689269.86	5631336.39
SAB02.1 (SABT3)	B199	18/04/11	689276.65	5631334.29
SAB02.1 (SABT3)	B200	18/04/11	689283.92	5631331.64
SAB02.1 (SABT3)	B201	18/04/11	689291.29	5631330.81
SAB02.1 (SABT3)	B202	18/04/11	689312.07	5631331.26
SAB02.1 (SABT3)	B203	18/04/11	689326.11	5631336.52
SAB02.2 (SABT4)	B205	18/04/11	689311.26	5631173.24
SAB02.2 (SABT4)	B206	18/04/11	689318.66	5631175.30
SAB02.2 (SABT4)	B207	18/04/11	689330.53	5631176.07
SAB02.2 (SABT4)	B208	18/04/11	689346.52	5631170.30
SAB02.2 (SABT4)	B209	18/04/11	689372.93	5631176.27
SAB02.2 (SABT4)	B210	18/04/11	689390.18	5631177.00
SAB02.2 (SABT4)	B211	18/04/11	689393.16	5631178.87
SAB02.2 (SABT4)	B212	18/04/11	689415.07	5631177.97

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
SAB02.2 (SABT4)	B213	18/04/11	689429.54	5631181.95
SAB02.2 (SABT4)	B214	18/04/11	689463.70	5631180.77
SAB02.2 (SABT4)	B215	18/04/11	689512.51	5631181.58
SAB02.2 (SABT4)	B216	18/04/11	689526.47	5631179.78
SAB03.1 (SABT5)	B264	18/04/11	691919.91	5626589.02
SAB03.1 (SABT5)	B265	18/04/11	691930.27	5626588.52
SAB03.1 (SABT5)	B266	18/04/11	691944.39	5626587.13
SAB03.1 (SABT5)	B267	18/04/11	691956.56	5626590.53
SAB03.1 (SABT5)	B268	18/04/11	691963.36	5626594.47
SAB03.1 (SABT5)	B269	18/04/11	691973.21	5626597.40
SAB03.1 (SABT5)	B270	18/04/11	691983.97	5626595.68
SAB03.1 (SABT5)	B271	18/04/11	692007.31	5626592.57
SAB03.1 (SABT5)	B272	18/04/11	692018.84	5626593.24
SAB03.1 (SABT5)	B273	18/04/11	692053.78	5626593.83
SAB03.1 (SABT5)	B274	18/04/11	692099.53	5626591.10
SAB03.1 (SABT5)	B275	18/04/11	692127.97	5626592.86
SAB03.1 (SABT5)	B276	18/04/11	692175.64	5626593.49
SAB03.1 (SABT5)	B277	18/04/11	692191.06	5626591.15
SAB03.2 (SABT6)	B279	18/04/11	691970.27	5626474.17
SAB03.2 (SABT6)	B280	18/04/11	691972.57	5626481.50
SAB03.2 (SABT6)	B281	18/04/11	691975.27	5626493.95
SAB03.2 (SABT6)	B282	18/04/11	691975.29	5626509.92
SAB03.2 (SABT6)	B283	18/04/11	691973.28	5626520.58
SAB03.2 (SABT6)	B284	18/04/11	691970.96	5626543.86
SAB03.2 (SABT6)	B285	18/04/11	691971.70	5626586.30
SAB03.2 (SABT6)	B286	18/04/11	691971.40	5626598.04
SAB03.2 (SABT6)	B287	18/04/11	691976.11	5626630.78
SAB03.2 (SABT6)	B288	18/04/11	691978.23	5626643.65
SAB03.2 (SABT6)	B289	18/04/11	691979.22	5626655.55
SAB03.2 (SABT6)	B290	18/04/11	691978.36	5626681.27
SAB04.1 (SABT7)	B292	18/04/11	693485.23	5626355.51
SAB04.1 (SABT7)	B293	18/04/11	693493.36	5626358.04
SAB04.1 (SABT7)	B294	18/04/11	693525.54	5626355.48
SAB04.1 (SABT7)	B295	18/04/11	693554.41	5626357.04
SAB04.1 (SABT7)	B296	18/04/11	693567.61	5626357.87
SAB04.1 (SABT7)	B297	18/04/11	693582.36	5626360.94
SAB04.1 (SABT7)	B298	18/04/11	693592.64	5626361.31
SAB04.1 (SABT7)	B299	18/04/11	693616.23	5626356.83
SAB04.1 (SABT7)	B300	18/04/11	693627.27	5626354.32
SAB04.1 (SABT7)	B301	18/04/11	693649.51	5626357.89
SAB04.2 (SABT8)	B303	18/04/11	693603.40	5626317.83
SAB04.2 (SABT8)	B304	18/04/11	693603.91	5626328.73
SAB04.2 (SABT8)	B305	18/04/11	693601.05	5626340.17
SAB04.2 (SABT8)	B306	18/04/11	693596.56	5626356.00
SAB04.2 (SABT8)	B307	18/04/11	693594.11	5626375.74
SAB04.2 (SABT8)	B308	18/04/11	693596.87	5626394.05
SAB04.2 (SABT8)	B309	18/04/11	693597.28	5626415.88
SAB04.2 (SABT8)	B310	18/04/11	693592.20	5626440.01
SAB04.2 (SABT8)	B311	18/04/11	693593.83	5626454.89
SAB04.2 (SABT8)	B312	18/04/11	693597.55	5626466.15
SAB04.2 (SABT8)	B313	18/04/11	693599.33	5626488.75
SAB05.2	D158	19/04/11	697209.96	5614632.17
SAB05.2	D159	19/04/11	697211.50	5614632.62
SAB05.2	D160	19/04/11	697215.90	5614632.46
SAB05.2	D161	19/04/11	697220.05	5614629.04

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
SAB05.2	D162	19/04/11	697230.20	5614622.77
SAB05.2	D163	19/04/11	697240.30	5614623.60
SAB05.2	D164	19/04/11	697260.63	5614622.04
SAB05.2	D165	19/04/11	697286.30	5614619.98
SAB05.2	D166	19/04/11	697311.20	5614627.62
SAB05.2	D167	19/04/11	697314.78	5614626.58
SAB05.2	D168	19/04/11	697331.25	5614627.91
SAB05.2	D169	19/04/11	697341.13	5614625.33
SAB05.2	D170	19/04/11	697370.51	5614621.44
SAB05.2	D173	19/04/11	697636.32	5614658.78
SAB05.2	D174	19/04/11	697644.93	5614656.10
SAB05.2	D175	19/04/11	697654.17	5614650.56
SAB05.2	D176	19/04/11	697671.49	5614653.27
SAB05.2	D177	19/04/11	697677.38	5614655.99
SAB05.2	D178	19/04/11	697704.26	5614650.03
SAB05.2	D179	19/04/11	697758.75	5614658.15
SAB05.2	D180	19/04/11	697772.19	5614658.15
SAB05.2	D181	19/04/11	697797.92	5614658.46
SAB05.2	D182	19/04/11	697861.23	5614651.67
SAB05.2	D183	19/04/11	697872.98	5614656.86
SAB5.1	D136	19/04/11	697348.92	5614513.60
SAB5.1	D137	19/04/11	697348.80	5614518.47
SAB5.1	D138	19/04/11	697346.14	5614525.68
SAB5.1	D139	19/04/11	697345.13	5614531.17
SAB5.1	D140	19/04/11	697345.18	5614537.53
SAB5.1	D141	19/04/11	697345.37	5614544.01
SAB5.1	D142	19/04/11	697346.94	5614552.81
SAB5.1	D143	19/04/11	697347.85	5614557.94
SAB5.1	D144	19/04/11	697348.08	5614563.27
SAB5.1	D145	19/04/11	697347.92	5614578.36
SAB5.1	D146	19/04/11	697347.34	5614583.62
SAB5.1	D147	19/04/11	697344.58	5614591.01
SAB5.1	D148	19/04/11	697344.48	5614613.71
SAB5.1	D149	19/04/11	697344.74	5614619.33
SAB5.1	D150	19/04/11	697344.88	5614623.58
SAB5.1	D151	19/04/11	697345.21	5614628.10
SAB5.1	D152	19/04/11	697344.86	5614631.95
SAB5.1	D153	19/04/11	697344.19	5614635.38
SAB5.1	D154	19/04/11	697338.41	5614646.90
SAB6.1	B089	17/04/11	690223.33	5611564.29
SAB6.1	B090	17/04/11	690227.89	5611560.93
SAB6.1	B091	17/04/11	690234.75	5611550.75
SAB6.1	B092	17/04/11	690249.44	5611519.22
SAB6.1	B093	17/04/11	690316.32	5611556.91
SAB6.1	B094	17/04/11	690362.66	5611561.46
SAB6.1	B095	17/04/11	690406.29	5611568.44
SAB6.1	B096	17/04/11	690407.79	5611564.28
SAB6.1	B097	17/04/11	690431.42	5611552.39
SAB6.1	B098	17/04/11	690446.04	5611521.27
SAB6.1	B099	17/04/11	690466.80	5611516.47
SAB6.1	B100	17/04/11	690482.55	5611512.21
SAB6.1	B101	17/04/11	690493.33	5611509.39
SAB6.1	B102	17/04/11	690519.59	5611495.29
SAB6.1	B103	17/04/11	690535.22	5611506.04
SAB6.1	B104	17/04/11	690537.73	5611524.59

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
SAB6.1	B105	17/04/11	690527.66	5611566.89
SAB6.1	B106	17/04/11	690567.72	5611586.03
SAB6.1	B107	17/04/11	690580.91	5611577.56
SAB6.1	B108	17/04/11	690603.67	5611576.62
SAB6.1	B109	17/04/11	690613.31	5611587.02
SAB6.1	B110	17/04/11	690622.93	5611615.34
SAB6.1	B111	17/04/11	690643.58	5611630.88
SAB6.2	B064	17/04/11	690209.73	5611151.22
SAB6.2	B065	17/04/11	690181.04	5611162.51
SAB6.2	B066	17/04/11	690161.36	5611177.68
SAB6.2	B067	17/04/11	690142.60	5611192.28
SAB6.2	B068	17/04/11	690129.09	5611191.75
SAB6.2	B069	17/04/11	690106.07	5611198.27
SAB6.2	B070	17/04/11	690093.13	5611193.72
SAB6.2	B071	17/04/11	690081.78	5611181.71
SAB6.2	B072	17/04/11	690067.79	5611180.99
SAB6.2	B073	17/04/11	690057.67	5611175.40
SAB6.2	B074	17/04/11	690048.69	5611171.44
SAB6.2	B075	17/04/11	690040.06	5611171.24
SAB6.2	B076	17/04/11	690026.53	5611180.92
SAB6.2	B077	17/04/11	690013.02	5611179.81
SAB6.2	B078	17/04/11	690009.60	5611180.40
SAB6.2	B079	17/04/11	689989.38	5611190.24
SAB6.2	B080	17/04/11	689974.18	5611187.01
SAB6.2	B081	17/04/11	689960.15	5611182.76
SAB6.2	B082	17/04/11	689942.85	5611181.57
SAB6.2	B083	17/04/11	689926.28	5611170.29
SAB6.2	B084	17/04/11	689920.59	5611164.37
SAB6.2	B085	17/04/11	689917.17	5611161.81
SAB6.2	B086	17/04/11	689892.65	5611165.93
SAB6.2	B087	17/04/11	689877.05	5611168.42
TE01	D014	19/04/11	698448.28	5624207.89
TE01	D015	19/04/11	698455.74	5624219.54
TE01	D016	19/04/11	698467.36	5624231.80
TE01	D017	19/04/11	698522.23	5624171.84
TE01	D018	19/04/11	698492.80	5624191.67
TE01	D019	19/04/11	698484.22	5624194.93
TE01	D020	19/04/11	698475.14	5624197.55
TE01	D021	19/04/11	698463.87	5624202.12
TE02	D045	19/04/11	703098.05	5621047.96
TE02	D046	19/04/11	703126.30	5621056.96
TE02	D047	19/04/11	703135.94	5621058.25
TE02	D048	19/04/11	703142.07	5621059.69
TE02	D049	19/04/11	703147.34	5621062.26
TE02	D050	19/04/11	703152.63	5621065.19
TE02	D051	19/04/11	703164.24	5621070.50
TE03	D036	19/04/11	708156.88	5624073.51
TE03	D037	19/04/11	708159.24	5624073.59
TE03	D038	19/04/11	708175.68	5624074.78
TE03	D039	19/04/11	708190.99	5624074.14
TE03	D040	19/04/11	708210.71	5624073.13
TE03	D041	19/04/11	708220.27	5624074.79
TE03	D042	19/04/11	708226.02	5624076.42
TE03	D043	19/04/11	708233.04	5624078.91
TE04	A006	15/04/11	717648.44	5620588.20

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
TE04	A007	15/04/11	717658.83	5620588.19
TE04	A008	15/04/11	717667.97	5620583.92
TE04	A009	15/04/11	717674.07	5620575.87
TE04	A010	15/04/11	717683.43	5620569.22
TE04	A011	15/04/11	717686.27	5620561.25
TE04	A012	15/04/11	717685.75	5620546.62
TE04	A013	15/04/11	717684.55	5620527.23
TE04	A014	15/04/11	717684.09	5620512.96
TE04	A015	15/04/11	717685.93	5620491.80
TE05	A038	15/04/11	730241.44	5617769.27
TE05	A039	15/04/11	730238.58	5617773.49
TE05	A040	15/04/11	730224.14	5617794.82
TE05	A041	15/04/11	730221.84	5617803.17
TE05	A042	15/04/11	730210.63	5617823.65
TE05	A043	15/04/11	730199.58	5617831.98
TE05	A044	15/04/11	730194.91	5617837.40
TE05	A045	15/04/11	730185.94	5617846.68
TE05	A046	15/04/11	730175.39	5617856.22
TE06	B021	17/04/11	720451.64	5613527.03
TE06	B022	17/04/11	720455.10	5613530.34
TE06	B023	17/04/11	720460.73	5613532.69
TE06	B024	17/04/11	720470.78	5613535.93
TE06	B025	17/04/11	720480.31	5613531.16
TE06	B026	17/04/11	720487.60	5613530.53
TE06	B027	17/04/11	720498.02	5613533.68
TE06	B028	17/04/11	720501.41	5613532.70
TE06	B029	17/04/11	720512.42	5613530.60
TE07	C027	17/04/11	687971.91	5605541.08
TE07	C028	17/04/11	687988.99	5605547.30
TE07	C029	17/04/11	687999.50	5605548.84
TE07	C030	17/04/11	688015.14	5605550.95
TE07	C031	17/04/11	688026.87	5605550.28
TE07	C032	17/04/11	688045.29	5605560.82
TE07	C033	17/04/11	688049.88	5605565.26
TE07	C034	17/04/11	688079.94	5605574.87
TE08	A140	16/04/11	684420.01	5610490.74
TE08	A141	16/04/11	684446.64	5610500.09
TE08	C012	16/04/11	684402.53	5610472.96
TE08	C013	16/04/11	684409.00	5610477.92
TE08	C014	16/04/11	684412.84	5610484.00
TE08	C015	16/04/11	684418.00	5610489.41
TE08	C016	16/04/11	684422.14	5610493.59
TE08	C017	16/04/11	684436.90	5610507.99
TE08	C018	16/04/11	684442.49	5610507.67
TE08	C019	16/04/11	684450.27	5610504.17
TE08	C020	16/04/11	684458.22	5610498.25
TE08	C021	16/04/11	684476.93	5610499.19
TE08	C022	16/04/11	684480.40	5610514.58
TE08	C023	16/04/11	684486.12	5610510.25
TE08	C024	16/04/11	684491.52	5610497.72
TE08	C025	16/04/11	684497.44	5610494.26
TE09	A121	16/04/11	676636.62	5608196.49
TE09	A122	16/04/11	676627.11	5608209.38
TE09	A123	16/04/11	676626.97	5608201.97
TE09	A124	16/04/11	676611.47	5608201.90

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
TE09	A125	16/04/11	676576.93	5608192.38
TE09	A126	16/04/11	676570.99	5608190.40
TE09	A127	16/04/11	676567.42	5608190.23
TE09	A128	16/04/11	676560.70	5608191.24
TE09	A129	16/04/11	676557.63	5608191.41
TE10	A131	16/04/11	682194.83	5614500.29
TE10	A132	16/04/11	682173.33	5614504.40
TE10	A133	16/04/11	682159.73	5614508.56
TE10	A134	16/04/11	682111.38	5614505.44
TE10	A135	16/04/11	682094.79	5614493.49
TE10	A136	16/04/11	682082.33	5614493.10
TE10	A137	16/04/11	682074.87	5614495.56
TE10	A138	16/04/11	682065.49	5614500.61
WF01	B122	18/04/11	687185.45	5617089.79
WF01	B123	18/04/11	687190.43	5617096.21
WF01	B124	18/04/11	687194.85	5617099.63
WF01	B125	18/04/11	687199.59	5617097.74
WF01	B126	18/04/11	687208.36	5617097.77
WF01	B127	18/04/11	687211.14	5617100.19
WF02	B358	18/04/11	689685.42	5619082.68
WF02	B359	18/04/11	689679.03	5619077.43
WF02	B360	18/04/11	689662.26	5619072.52
WF02	B361	18/04/11	689653.53	5619071.21
WF02	B362	18/04/11	689614.82	5619060.83
WF02	B363	18/04/11	689605.32	5619058.52
WF02	B364	18/04/11	689591.80	5619063.94
WF02	B365	18/04/11	689578.12	5619070.35
WF03	D077	19/04/11	692062.64	5619700.27
WF03	D078	19/04/11	692047.91	5619703.55
WF03	D079	19/04/11	692038.78	5619702.74
WF03	D080	19/04/11	692006.19	5619693.09
WF03	D081	19/04/11	691998.62	5619687.22
WF03	D082	19/04/11	691996.23	5619682.50
WF03	D083	19/04/11	691985.77	5619682.07
WF03	D084	19/04/11	691980.54	5619679.77
WF04	D109	19/04/11	695394.44	5620028.46
WF04	D110	19/04/11	695386.48	5620025.78
WF04	D111	19/04/11	695371.50	5620011.53
WF04	D112	19/04/11	695355.43	5620006.66
WF04	D113	19/04/11	695347.06	5620005.42
WF04	D114	19/04/11	695341.44	5620003.67
WF04	D115	19/04/11	695335.54	5620003.45
WF04	D116	19/04/11	695330.74	5620002.99
WF04	D117	19/04/11	695323.66	5620003.03
WF04	D118	19/04/11	695317.75	5620002.80
WF04	D119	19/04/11	695312.18	5620004.07
WF04	D120	19/04/11	695301.97	5620007.42
WF04	D121	19/04/11	695283.47	5620014.95
WF04	D122	19/04/11	695262.03	5620015.70
WF04	D123	19/04/11	695246.06	5620012.96
WF04	D124	19/04/11	695228.33	5620004.98
WF05	D005	19/04/11	700021.48	5618949.13
WF05	D006	19/04/11	700008.43	5618943.70
WF05	D007	19/04/11	699995.25	5618937.10
WF05	D008	19/04/11	699988.53	5618934.97

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
WF05	D009	19/04/11	699977.04	5618932.09
WF05	D010	19/04/11	699970.86	5618928.94
WF05	D011	19/04/11	699963.16	5618923.73
WF05	D012	19/04/11	699937.96	5618902.79
WF06	D097	19/04/11	696979.00	5618746.42
WF06	D098	19/04/11	696964.60	5618746.46
WF06	D099	19/04/11	696954.05	5618738.54
WF06	D100	19/04/11	696939.68	5618734.15
WF06	D101	19/04/11	696929.14	5618734.89
WF06	D102	19/04/11	696920.67	5618728.50
WF06	D103	19/04/11	696920.30	5618718.59
WF06	D104	19/04/11	696914.08	5618717.73
WF06	D105	19/04/11	696890.95	5618726.63
WF06	D106	19/04/11	696896.32	5618711.92
WF06	D107	19/04/11	696892.87	5618706.90
WF07	D086	19/04/11	694346.04	5618124.11
WF07	D087	19/04/11	694340.34	5618119.09
WF07	D088	19/04/11	694328.11	5618113.06
WF07	D089	19/04/11	694320.06	5618102.06
WF07	D090	19/04/11	694310.06	5618100.38
WF07	D091	19/04/11	694301.42	5618096.18
WF07	D092	19/04/11	694296.05	5618091.57
WF07	D093	19/04/11	694289.67	5618083.26
WF07	D094	19/04/11	694278.69	5618073.26
WF07	D095	19/04/11	694272.18	5618067.95
WF08	B367	18/04/11	690057.62	5617188.73
WF08	B368	18/04/11	690049.62	5617180.25
WF08	B369	18/04/11	690041.96	5617187.12
WF08	B370	18/04/11	690036.64	5617193.13
WF08	B371	18/04/11	690035.14	5617194.78
WF08	B372	18/04/11	690030.26	5617193.31
WF08	B373	18/04/11	690021.76	5617203.61
WF08	B374	18/04/11	690013.88	5617220.79
WF09	B114	18/04/11	689345.33	5615490.45
WF09	B115	18/04/11	689356.62	5615495.34
WF09	B116	18/04/11	689362.21	5615499.07
WF09	B117	18/04/11	689368.80	5615504.44
WF09	B118	18/04/11	689372.86	5615510.41
WF09	B119	18/04/11	689376.02	5615514.43
WF09	B120	18/04/11	689380.09	5615515.51
WF10	C072	17/04/11	688334.12	5613089.19
WF10	C073	17/04/11	688358.30	5613126.41
WF10	C074	17/04/11	688362.07	5613127.42
WF10	C075	17/04/11	688357.71	5613143.87
WF10	C076	17/04/11	688370.46	5613135.01
WF10	C077	17/04/11	688387.54	5613148.50
WF11	C079	18/04/11	690681.21	5613909.21
WF11	C080	18/04/11	690680.16	5613914.45
WF11	C081	18/04/11	690687.80	5613914.31
WF11	C082	18/04/11	690685.06	5613935.80
WF11	C083	18/04/11	690691.22	5613938.48
WF11	C084	18/04/11	690703.34	5613932.78
WF12	D127	19/04/11	694142.19	5614492.31
WF12	D128	19/04/11	694153.65	5614491.96
WF12	D129	19/04/11	694164.08	5614491.55

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
WF12	D130	19/04/11	694198.46	5614492.67
WF12	D131	19/04/11	694207.15	5614494.30
WF12	D132	19/04/11	694218.08	5614497.34
WF12	D133	19/04/11	694234.77	5614498.23
WF12	D134	19/04/11	694240.15	5614499.98
WF13	D185	19/04/11	697651.78	5615439.78
WF13	D186	19/04/11	697660.36	5615439.84
WF13	D187	19/04/11	697672.37	5615437.74
WF13	D188	19/04/11	697682.40	5615445.76
WF13	D189	19/04/11	697692.92	5615451.84
WF13	D190	19/04/11	697699.81	5615450.17
WF13	D191	19/04/11	697704.88	5615446.14
WF13	D192	19/04/11	697726.47	5615458.91
WF14	D203	19/04/11	700438.83	5616583.87
WF14	D204	19/04/11	700421.69	5616583.23
WF14	D205	19/04/11	700415.68	5616583.28
WF14	D206	19/04/11	700396.15	5616584.14
WF14	D207	19/04/11	700380.09	5616581.86
WF14	D208	19/04/11	700372.00	5616579.22
WF14	D209	19/04/11	700361.75	5616587.02
WF14	D210	19/04/11	700332.63	5616598.34
WF15	D220	19/04/11	705495.15	5617878.57
WF15	D221	19/04/11	705482.63	5617881.27
WF15	D222	19/04/11	705465.70	5617869.81
WF15	D223	19/04/11	705451.80	5617864.67
WF15	D224	19/04/11	705434.18	5617874.61
WF15	D001	19/04/11	705432.48	5617859.67
WF15	D002	19/04/11	705427.34	5617853.21
WF15	D003	19/04/11	705409.02	5617854.84
WF16	D212	19/04/11	705170.82	5616061.83
WF16	D213	19/04/11	705163.44	5616065.87
WF16	D214	19/04/11	705144.02	5616056.33
WF16	D215	19/04/11	705133.76	5616054.04
WF16	D216	19/04/11	705121.33	5616052.52
WF16	D217	19/04/11	705108.73	5616051.61
WF16	D218	19/04/11	705103.64	5616051.30
WF17	D194	19/04/11	699746.94	5613865.46
WF17	D195	19/04/11	699755.72	5613865.72
WF17	D196	19/04/11	699763.82	5613864.32
WF17	D197	19/04/11	699778.47	5613861.28
WF17	D198	19/04/11	699797.40	5613867.01
WF17	D199	19/04/11	699808.02	5613869.71
WF17	D200	19/04/11	699814.80	5613867.63
WF17	D201	19/04/11	699824.77	5613867.24
WF18	B031	17/04/11	694481.99	5611414.36
WF18	B032	17/04/11	694467.12	5611409.30
WF18	B033	17/04/11	694458.89	5611406.68
WF18	B034	17/04/11	694438.07	5611399.27
WF18	B035	17/04/11	694427.08	5611397.96
WF18	B036	17/04/11	694419.66	5611396.67
WF18	B037	17/04/11	694399.67	5611394.00
WF18	B038	17/04/11	694379.64	5611390.14
WF18	B039	17/04/11	694368.55	5611383.82
WF18	B040	17/04/11	694358.66	5611376.62
WF18	B041	17/04/11	694346.05	5611385.41

Site	Image Number	Date	UTM WGS84 Z30N	
			Eastings	Northings
WF18	B042	17/04/11	694338.44	5611388.91
WF19	B044	17/04/11	691984.70	5611908.96
WF19	B045	17/04/11	691959.74	5611932.21
WF19	B046	17/04/11	691955.19	5611921.43
WF19	B047	17/04/11	691947.59	5611920.86
WF19	B048	17/04/11	691951.37	5611906.61
WF19	B049	17/04/11	691910.58	5611916.83
WF19	B050	17/04/11	691904.42	5611914.40
WF19	B051	17/04/11	691900.91	5611909.43
WF20	B053	17/04/11	689060.41	5611495.65
WF20	B054	17/04/11	689034.53	5611487.86
WF20	B055	17/04/11	689028.44	5611488.95
WF20	B056	17/04/11	689018.67	5611489.79
WF20	B057	17/04/11	689013.24	5611486.67
WF20	B058	17/04/11	689005.93	5611491.10
WF20	B059	17/04/11	688998.41	5611488.73
WF20	B060	17/04/11	688994.63	5611483.25
WF20	B061	17/04/11	688991.35	5611480.01
WF20	B062	17/04/11	688986.26	5611478.79

APPENDIX C GRAB LOGS AND DETAILS
Rampion Benthic J/1/03/1836

Site No.	Date	Depth (m BCD)	UTM WGS84 Z 30N		Fauna (volume L)	PSA	<i>In-situ</i> sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
			Eastings	Northings							
CR01	18/04/11	5.5	690331.75	5632111.38	5	Y	Slightly shelly, slightly gravelly sand (1% shells)	None	None	None	None
CR02	18/04/11	9.5	692245.55	5629987.66	8	Y	Slightly shelly, slightly gravelly sand (3% shells)	Tubes	None	None	<i>Lanice conchilega</i>
CR04	18/04/11	11.8	688763.59	5626555.30	N/A	Y	Silty gravelly sand	None	None	None	None
CR04	18/04/11	11.8	688760.58	5626554.74	2.5	N	Silty gravelly sand	None	None	None	<i>Pomatoceros</i> sp., Pectinariae <i>Actinaria</i> , <i>Ophiura albida</i> , <i>Lanice conchilega</i> , Pectinariae, Low lying
CR05	18/04/11	17.7	686879.97	5622112.31	9	Y	Silty gravelly shelly sand (5% shells)	Tubes	None	None	<i>Sabellaria</i> crust
CR06	18/04/11	13.7	690342.76	5625389.53	1.5	N	Gravelly sand with cobbles	Tubes	None	None	<i>Pomatoceros</i> , <i>Upogebia</i> sp.
CR06	18/04/11	13.7	690344.64	5625386.64	1	Y	Gravelly sand with cobbles	Tubes	None	None	<i>Pomatoceros</i>
CR07	19/04/11	14.0	696883.31	5628460.59	5.5	Y	Silty sand with 2% shells	None	None	None	<i>Ensis</i> sp., <i>Echinocardium cordatum</i>
CR08	19/04/11	19.5	693052.65	5623434.20	5	Y	Slightly silty gravelly sand	None	None	None	None
CR09	19/04/11	20.9	691718.81	5622336.43	5	Y	Gravelly sand with pebbles and 10% shells	None	None	None	None
OW01	17/04/11	43.8	709119.34	5615824.29	9	Y	Slightly shelly sand (3% shells)	None	None	None	<i>Echinocardium cordatum</i>
OW02	17/04/11	53.5	714517.36	5613082.91	2	N	Slightly pebbly sand with 2 cobbles	None	None	None	None
OW03	17/04/11	54.8	709111.51	5612825.54	7.5	Y	Slightly shelly, silty sand (2% shells)	None	Lumps	None	None
OW04	17/04/11	41.1	703626.68	5612310.66	10	Y	Sand	None	None	None	<i>Echinocardium cordatum</i>
OW05	17/04/11	59.3	703827.65	5608803.25	10	Y	Slightly shelly, slightly gravelly sand (6% shells)	None	None	None	None
OW06	17/04/11	52.3	699288.18	5609723.49	11.5	Y	Slightly shelly sand (4% shells)	None	None	None	None
OW07	17/04/11	59.2	691903.97	5609383.06	8	Y	Slightly shelly gravelly pebbly sand (4% shells)	None	None	None	Bryozoan crust
RE01	15/04/11	17.5	723364.30	5625633.94	3.5	Y	Cobbly, silty, gravelly sand with 10% shells	Tubes	None	None	<i>Pectinaria</i> sp.
RE03	15/04/11	35.1	736619.44	5616002.03	N/A	Y	Slightly gravelly, pebbly sand with cobble and 30% shells	None	None	None	None
RE03	16/04/11	35.2	736624.56	5616000.25	3	N	Slightly gravelly, pebbly sand with 3 cobbles and 20% shells	None	None	None	<i>Upogebia</i> sp., Hydroid bryozoan turf
RE04	16/04/11	60.3	730956.89	5609877.86	7	Y	Slightly gravelly pebbly sand	None	None	None	<i>Pomatoceros</i> sp.
RE05	16/04/11	47.0	721995.57	5604642.86	4	Y	Slightly pebbly, gravelly sand with cobble and 3% shells	None	None	None	<i>Pomatoceros</i> sp.
RE06	16/04/11	50.2	710279.47	5599590.80	5	Y	Slightly shelly, slightly pebbly gravelly sand with cobble and 2% shells	None	None	None	<i>Pomatoceros</i> sp.
RE07	16/04/11	61.1	697812.09	5598476.62	8	Y	Slightly gravelly, slightly pebbly sand with 1% shells	None	None	None	<i>Upogebia</i> sp.
RE08	16/04/11	57.1	685511.46	5597944.61	10	Y	Slightly gravelly, shelly, pebbly sand (8% shells)	None	None	None	<i>Pomatoceros</i> sp.

APPENDIX C GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Depth (m BCD)	UTM WGS84 Z 30N		Fauna (volume L)	PSA	<i>In-situ</i> sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
			Eastings	Northings							
RE09	16/04/11	71.7	671323.02	5598126.31	4	Y	Silty sandy gravelly pebbels with 1% shells	Tubes	None	None	<i>Pomatoceros</i> sp.
RE09	16/04/11	71.7	671326.52	5598124.16	N/A	N	Silty sandy gravelly pebbels with 1% shells	Tubes	None	None	<i>Pomatoceros</i> sp., <i>Upogebia</i> sp.
RE10	16/04/11	36.2	667208.12	5605447.13	12	Y	Shelly sand (50% shells)	None	None	None	None
RE11	16/04/11	19.3	672517.09	5613686.41	N/A	Y	Silty gravelly pebbly sand with 5% shells	Tubes	None	None	<i>Pomatoceros</i> sp. , <i>Buccinum undatum</i> (juv.)
RE11	16/04/11	19.4	672519.54	5613680.32	1.5	N	Silty gravelly cobbly sand with 5% shells	Tubes	None	None	<i>Psammechinus miliaris</i> , <i>Pomatoceros</i> sp. , <i>Pectinaria</i> sp.
RE14	18/04/11	16.6	671582.48	5620469.18	5	Y	Slightly shelly, slightly pebbly gravelly sand with cobble (3% shells)	Tubes	None	None	<i>Pomatoceros</i> sp., <i>Echinocardium cordatum</i>
SAB3	18/04/11	15.5	691971.69	5626483.61	4	N	Gravelly sand with cobbles with 5-10% shells	None	None	None	Pectinariidae
SAB4	18/04/11	15.8	693564.91	5626352.49	5	N	Gravelly sand with cobbles with 5-10% shells	None	None	None	None
SAB5	19/04/11	56.5	697344.47	5614621.30	6.5	N	Slightly gravelly muddy sand	None	Layer	None	None
TE01	19/04/11	19.9	698479.62	5624200.58	10	Y	Slightly shelly sand	None	None	None	<i>Echinocardium cordatum</i>
TE02	19/04/11	25.2	703146.85	5621058.97	7.5	Y	Silty gravelly sand with clumps of clay and 20% shells	None	None	None	None
TE03	19/04/11	22.5	708242.29	5624083.42	8	Y	Slightly silty, slightly gravelly sand with 20% shells	None	None	None	<i>Ophiura ophiura</i>
TE04	15/04/11	26.5	717666.11	5620574.97	4	N	Shelly gravelly sand with 2 cobbles	Tubes	None	None	Small piece of eroded <i>Sabellaria</i> tubes
TE04	15/04/11	26.6	717656.36	5620575.20	N/A	Y	Shelly gravelly sand with 1 cobbles	Tubes	None	None	<i>Pomatoceros</i> sp.
TE05	15/04/11	37.6	730210.84	5617827.89	2.5	N	Slightly gravelly, pebbly sand with 15% shells	None	None	None	None
TE06	17/04/11	50.5	720509.35	5613527.66	N/A	Y	Slightly gravelly, pebbly sand with cobble and 5% shells	None	None	None	None
TE06	17/04/11	51.6	720504.13	5613532.58	4.5	N	Slightly gravelly sand with few pebbles, 2 cobbles and 5% shells	Tubes	None	None	<i>Sabellaria</i> crust on pebbles
TE07	17/04/11	64.1	688054.68	5605564.14	5	Y	Shelly gravelly pebbly sand with 3% shells	None	None	None	<i>Pomatoceros</i> sp.
TE08	16/04/11	38.8	684487.96	5610503.28	6.5	Y	Gravelly silty muddy sand with 2% shells	None	Lumps	None	<i>Upogebia</i> sp.
TE09	16/04/11	40.6	676572.03	5608200.19	8.5	Y	Slightly silty gravelly sand with 10% shells	None	None	None	None
TE10	16/04/11	28.8	682107.11	5614498.96	12.5	Y	gravelly silty sand with 2% shells	None	None	None	None
WF01	18/04/11	21.6	687210.72	5617101.80	5	Y	Slightly gravelly pebbly sand	Tubes	None	None	<i>Pomatoceros</i> sp.
WF02	18/04/11	22.0	689607.51	5619065.43	N/A	Y	Silty, slightly shelly sand	None	None	None	None

APPENDIX C GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Depth (m BCD)	UTM WGS84 Z 30N		Fauna (volume L)	PSA	In-situ sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
			Eastings	Northings							
WF03	19/04/11	26.4	692003.15	5619686.77	12	Y	Slightly silty, slightly gravelly sand with 10% shells	None	None	None	<i>Pectinaria</i> sp.
WF04	19/04/11	25.7	695312.51	5620004.21	7	Y	Slightly pebbly shelly gravelly sand (8% shells)	None	None	None	None
WF05	19/04/11	26.6	699970.07	5618924.75	8	Y	Slightly shelly, gravelly, pebbly, muddy sand (2% shells)	None	None	None	None
WF06	19/04/11	28.9	696906.86	5618723.20	4.5	Y	Slightly shelly, gravelly sand (4% shells)	None	None	None	None
WF07	19/04/11	26.9	694247.80	5618054.52	10	Y	Silty gravelly sand with 10% shells	None	None	None	<i>Pomatoceros</i> sp., dense broken low lying 1cm clumps of <i>Sabellaria</i>
WF08	18/04/11	28.6	690038.49	5617186.22	1.5	Y	Slightly silty shelly gravelly sand (5% shells)	None	None	None	<i>Aequipecten opercularis</i>
WF08	18/04/11	29.5	690037.57	5617189.28	2	N	Slightly silty shelly gravelly sand (5% shells)	None	None	None	None
WF09	18/04/11	29.2	689380.88	5615509.29	8	Y	Slightly shelly, slightly pebbly, slightly gravelly sand (1% shells)	None	None	None	<i>Upogebia</i> sp., <i>Ophiura</i> sp.
WF10	18/04/11	42.4	688362.28	5613135.67	9.5	Y	Slightly shelly, slightly gravelly muddy sand (5% shells)	None	Layer	None	<i>Ophiura</i> sp.
WF11	18/04/11	34.6	690692.37	5613937.55	10	Y	Slightly shelly, slightly gravelly silty sand (4% shells)	None	None	None	None
WF12	19/04/11	39.9	694240.43	5614498.70	11	Y	Slightly shelly sand	None	None	None	None
WF13	19/04/11	49.2	697701.63	5615443.49	12.5	Y	Muddy sand	None	Lumps	None	None
WF14	19/04/11	44.3	700353.20	5616583.40	12	Y	Slightly shelly sand	None	None	None	None
WF15	19/04/11	29.4	705429.02	5617852.65	1.5	N	Slightly pebbly, gravelly sand with 2 cobbles	None	None	None	None
WF16	19/04/11	33.0	705103.77	5616054.42	11.5	Y	Slightly shelly sand	None	None	None	None
WF17	19/04/11	44.9	699812.04	5613868.11	11	Y	Slightly gravelly, slightly shelly sand (3% shells)	None	None	None	None
WF18	17/04/11	56.1	694359.63	5611380.06	11	Y	Sand with 1% shells	None	None	None	None
WF19	17/04/11	46.1	691902.07	5611913.37	12	Y	Sand with 1% shells	None	None	None	None

APPENDIX C GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Replicate?	Attempts	Successful sample collected (Y/N)	Brief description of problems with sample	Size of sample retained	Additional Notes on Quality of Retained Samples
CR03	Single	1	N	Small sample due to hard ground	N/A	
CR04	Single	3	Y	Small samples	2.5	Fauna and PSA collected from two different attempts
CR06	Single	3	Y	Small samples	1.5	Fauna and PSA collected from two different attempts
OW02	Single	3	Y	Small samples	2	Fauna only
OW07	Single	2	Y	Cobble in jaw	8	
RE01	Single	4	Y	Cobble in jaw and small samples	3.5	
RE03	Single	3	Y	Small samples	3	Fauna and PSA collected from two different attempts
RE05	Single	3	Y	Cobble in jaw	4	
RE09	Single	3	Y	Small samples	4	Fauna and PSA collected from two different attempts
RE11	Single	3	Y	Small samples	1.5	Fauna and PSA collected from two different attempts
TE04	Single	3	Y	Small samples	4	Fauna and PSA collected from two different attempts
TE05	Single	3	Y	Small samples	2.5	Fauna only
TE06	Single	3	Y	Small samples	4.5	Fauna and PSA collected from two different attempts
WF04	Single	2	Y	Cobble in jaw	7	
WF06	Single	3	Y	Cobble in jaw and small samples	4.5	
WF08	Single	3	Y	Small samples	2	Fauna and PSA collected from two different attempts
WF15	Single	3	Y	Small samples	1.5	Fauna only
WF20	Single	2	N	Small samples	N/A	

Appendix D Deck Grab Photographs



Site CR01



Site CR02



Site CR03



Site CR04.2



Site CR05



Site CR06



Site CR07



Site CR08



Site CR09



Site TE01.1



Site TE02.1



Site TE03



Site TE04.1



Site TE05.1



Site TE06.1



Site TE07



Site TE08



Site TE09



Site TE10



Site RE01



Site RE03



Site RE04



Site RE05



Site RE06



Site RE07



Site RE08



Site RE09.1



Site RE10



Site RE11



Site RE14



Site OW01



Site OW02



Site OW03



Site OW04



Site OW05



Site OW06



Site OW07



Site WF01



Site WF02



Site WF03



Site WF04



Site WF05



Site WF06



Site WF07



Site WF08



Site WF09



Site WF10



Site WF11



Site WF12



Site WF13



Site WF14



Site WF15



Site WF16



Site WF17



Site WF18



Site WF19



Site WF20

APPENDIX E CONTAMINANTS GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Metals	Organics	PSA	Photograph of sample?	<i>In-situ</i> sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
CR01	19/04/11	N	Y	N	N	Sand	None	None	None	None
CR01	19/04/11	Y	N	N	N	Sand	None	None	None	None
CR07	19/04/11	N	Y	N	N	Silty sand	None	None	None	None
CR07	19/04/11	Y	N	N	N	Silty sand	None	None	None	None
CR09	19/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	None
OW03	17/04/11	Y	Y	N	N	Slightly silty shelly sand	None	None	None	None
OW05	17/04/11	Y	Y	N	N	Slightly shelly, slightly gravelly sand	None	None	None	None
OW07	17/04/11	Y	Y	N	N	Shelly gravelly sand with small pebbles	None	None	None	<i>Atelecyclus rotundatus</i>
OW07	17/04/11	Y	N	N	N	Slightly shelly gravelly sand with few pebbles	None	None	None	None
RE04	16/04/11	Y	Y	N	N	Shelly gravelly sand	Tubes	None	None	None
RE07	16/04/11	Y	Y	N	N	Shelly gravelly sand	Tubes	None	None	Bryozoan crust
RE10	16/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	None
RE14	18/04/11	Y	N	N	N	Sand	None	None	None	None
RE14	18/04/11	N	Y	N	N	Sand	None	None	None	None
TE02	19/04/11	N	Y	N	N	Slightly gravelly sand	None	None	None	None
TE02	19/04/11	Y	N	N	N	Slightly gravelly sand	None	None	None	None
TE04	15/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	<i>Nemertesia</i> sp. <i>Alcyonidium diaphanum</i>
TE06	17/04/11	Y	Y	N	N	Slightly shelly sand	None	None	None	None
TE08	16/04/11	Y	N	N	N	Sandy gravel	Tubes	None	None	None
TE08	17/04/11	N	Y	N	N	Sandy gravel	Tubes	None	None	Bryozoan crust
WF01	18/04/11	N	Y	N	Y	Gravelly sand	None	None	None	None
WF01	18/04/11	Y	N	N	N	Gravelly sand with pebbles	None	None	None	<i>Pomatoceros</i> sp.
WF02	18/04/11	Y	Y	N	Y	Sand with 2% shells	None	None	None	None
WF04	19/04/11	N	Y	N	N	Gravelly sand	None	None	None	None
WF04	20/04/11	Y	N	N	N	Gravelly sand	None	None	None	None
WF05	19/04/11	N	Y	N	N	Sand with pebbles	None	None	None	<i>Ophiura albida</i>
WF07	19/04/11	Y	Y	N	N	Silty, pebbly, gravelly sand	None	None	None	None
WF11	18/04/11	N	Y	N	N	Gravelly sand with shells	None	None	None	<i>Ophiura albida</i>
WF11	18/04/11	Y	N	N	Y	Gravelly sand with pebbles	None	None	None	<i>Ophiura albida</i>

APPENDIX E CONTAMINANTS GRAB LOGS AND DETAILS

Rampion Benthic J/1/03/1836

Site No.	Date	Metals	Organics	PSA	Photograph of sample?	<i>In-situ</i> sediment description	Sediment features (includes: burrows, tubes, casts, smell)	Sediment anoxia (includes: None, streaks, patches, layers, depth of layer)	Anthropogenic features (includes: sewage derived material, other)	Conspicuous Fauna
WF11	18/04/11	Y	N	N	Y	Sandy gravel	None	None	None	None
WF13	19/04/11	Y	Y	N	N	Sand with large shell fragments	None	Layer	None	<i>Ophiura albida</i>
WF15	19/04/11	N	Y	N	N	Sand with pebbles	None	None	None	<i>Ophiura sp.</i>
WF17	19/04/11	Y	Y	N	N	Sand with shells	None	None	None	None

APPENDIX E CONTAMINANTS GRAB QUALITY**Rampion Benthic J/1/03/1836**

Site No.	Replicate?	Attempts	Successful sample collected (Y/N)	Brief description of problems with sample	Metals retained	Organics retained
CR01	Single	2	Yes	Small samples	Yes	Yes
CR07	Single	2	Yes	Small samples	Yes	Yes
OW07	Single	3	Yes	Small samples	Yes	Yes
RE04	Single	2	Yes	Cobble in jaw	Yes	Yes
RE14	Single	3	Yes	Small samples	Yes	Yes
TE02	Single	2	Yes	Small samples	Yes	Yes
TE04	Single	2	Yes	Pebble in jaw	Yes	Yes
TE06	Single	4	Yes	Cobble in Jaw	Yes	Yes
TE08	Single	2	Yes	Small samples	Yes	Yes
WF01	Single	3	Yes	Small samples and a pebble in jaw	Yes	Yes
WF04	Single	2	Yes	Small samples	Yes	Yes
WF05	Single	3	Yes	Pebble in jaw	No	Yes
WF11	Single	3	Yes	Small samples	Yes	Yes
WF15	Single	3	Yes	Small sample	No	Yes

APPENDIX E CONTAMINANTS GRAB POSITIONS

Rampion Benthic J/1/03/1836

Site No.	Date	Time (GMT)	Depth (m_bcd)	UTM WGS84 Z30N	
				Easting	Northing
CR01	19/04/11	13:00	5.7	690333.77	5632106.18
CR01	19/04/11	13:17	5.7	690340.59	5632110.95
CR07	19/04/11	14:41	14.4	696886.07	5628463.47
CR07	19/04/11	14:51	14.2	696884.95	5628459.73
CR09	19/04/11	19:28	20.7	691720.84	5622337.13
OW03	17/04/11	14:47	54.5	709110.66	5612817.43
OW05	17/04/11	15:31	59.2	703823.61	5608800.47
OW07	17/04/11	16:50	59.1	692200.95	5609221.45
OW07	17/04/11	17:24	59.2	692199.82	5609220.24
RE04	16/04/11	02:51	61.0	730963.09	5609880.33
RE07	16/04/11	09:18	61.8	697814.66	5598492.89
RE10	16/04/11	16:32	37.3	667207.45	5605453.36
RE14	18/04/11	07:14	16.4	671582.93	5620474.06
RE14	18/04/11	07:25	16.5	671584.09	5620471.91
TE02	19/04/11	17:18	25.0	703146.57	5621061.83
TE02	19/04/11	17:30	25.0	703147.00	5621057.96
TE04	15/04/11	18:27	25.5	717664.49	5620576.37
TE06	17/04/11	13:41	50.7	720501.95	5613531.01
TE08	16/04/11	23:55	39.1	684489.59	5610503.01
TE08	17/04/11	00:21	38.7	684488.54	5610500.78
WF01	18/04/11	04:39	21.9	687210.35	5617097.73
WF01	18/04/11	04:54	22.1	687208.62	5617099.64
WF02	18/04/11	21:42	21.8	689604.91	5619061.75
WF04	19/04/11	23:55	25.9	695311.51	5619998.28
WF04	20/04/11	00:02	25.7	695313.76	5620008.64
WF05	19/04/11	10:42	26.7	699966.31	5618918.96
WF07	19/04/11	21:40	26.6	694291.50	5618083.04
WF11	18/04/11	02:15	34.7	690691.67	5613946.49
WF11	18/04/11	02:31	34.8	690694.26	5613938.55
WF11	18/04/11	02:47	34.8	690689.76	5613939.09
WF13	19/04/11	04:42	49.0	697707.82	5615443.51
WF15	19/04/11	09:20	29.3	705428.10	5617856.09
WF17	19/04/11	05:46	45.1	699812.90	5613865.03

APPENDIX F 2M BEAM TRAWLING POSITIONS AND RELATED INFORMATION

Rampion Benthic J/1/03/1836

Site No	Date	Point on line	WGS84 UTM Z30N		Time (GMT)	Depth (BCD m)	Trawl Speed (knots)	Distance (m)	Direction of Travel	Comments
			Easting	Northing						
CR02	10/07/11	Start	691945.06	5630050.64	05:25	5.3	2.5	518	Into current	
		End	692461.96	5630011.13	05:31	6.2				
CR06	10/07/11	Start	690066.42	5625389.63	06:29	9.6	2.4	509	Into current	
		End	690571.72	5625447.63	06:36	9.6				
CR08	10/07/11	Start	692791.67	5623453.78	07:23	15.1	2.4	504	Into current	
		End	693295.38	5623457.41	07:30	15.2				
CR09	10/07/11	Start	691445.76	5622360.18	08:07	15.4	2.4	523	Into current	
		End	691968.83	5622365.82	08:15	15.8				
OW03	10/07/11	Start	709340.38	5612864.68	17:31	50.0	2.0	468	Into current	
		End	708872.30	5612871.75	17:38	48.9				
OW06	10/07/11	Start	699658.44	5609738.81	15:51	48.1	2.2	524	Into current	Hole in net, so re-do trawl, swapped to other trawl
		End	699146.11	5609627.79	15:58	52.5				
OW06.2	10/07/11	Start	699706.73	5609727.58	16:21	48.5	2.0	487	Into current	Start 172m from east end
		End	699220.02	5609713.52	16:28	52.0				
RE07	10/07/11	Start	698385.31	5598553.36	14:29	57.1	2.1	616	Into current	
		End	697780.41	5598438.06	14:39	55.8				
RE11	10/07/11	Start	672172.28	5613712.74	10:38	16.4	2.3	539	Into current	
		End	672709.35	5613671.30	10:46	15.9				
TE02	11/07/11	Start	702917.02	5621088.68	07:56	20.9	2.4	479	Into current	
		End	703395.76	5621066.35	08:03	19.8				
TE04	11/07/11	Start	717844.67	5620566.10	06:32	22.6	1.8	502	Into current	Start 63m from line
		End	717343.17	5620553.43	06:38	23.5				
TE05	11/07/11	Start	730434.32	5617819.58	05:01	34.7	2.0	486	Into current	
		End	729948.39	5617802.76	05:09	29.4				
TE08	10/07/11	Start	684222.46	5610552.27	12:46	34.9	2.7-3.0	510	Slack water / into current	Moved trawl location slightly North as an obstruction was marked on the vessel's plotter.
		End	684731.38	5610588.99	12:52	33.7				
TE09	10/07/11	Start	676411.06	5608241.89	11:40	30.6	2.5	518	Into current	
		End	676927.05	5608200.81	11:47	37.7				
WF01	10/07/11	Start	686942.46	5617163.95	09:13	17.5	2.2	566	Into current	
		End	687506.00	5617107.19	09:22	17.1				
WF04	11/07/11	Start	694863.42	5620058.53	10:09	19.6	1.8	434	Into current	
		End	695296.76	5620039.32	10:17	20.9				
WF05	11/07/11	Start	699699.29	5618976.79	08:55	22.9	2.2	526	Into current	
		End	700222.23	5618919.34	09:03	21.8				
WF14	10/07/11	Start	700585.29	5616556.09	18:48	40.0	2.1	462	Into current	
		End	700128.48	5616622.27	18:53	36.3				

APPENDIX F 2M BEAM TRAWLING SAMPLE DETAILS

Rampion Benthic J/1/03/1836

Site Number	Date	Total Volume (Litres)	Sediment Character (Percentage)					% Shell Material	% Algae	Other features
			Granules	Gravel	Cobbles	Lge Cobbles	Boulders			
CR02	10/07/11	6			1			10		lesser spotted dogfish egg case, squid eggs.
CR06	10/07/11	15								Dead Pecten, <i>Lanice conchiliga</i> tubes
CR08	10/07/11	5		1						
CR09	10/07/11	5						5		Necklace shell egg capsules, piece of wood
OW03	10/07/11	10		1	5					Lesser spotted dogfish egg case, clinker, clay
OW06	10/07/11	7		5				5		Glove, piece of wood, Coal, <i>Buccinum undatum</i> eggs, Piece of plastic
OW06.2	10/07/11	6						15		Piece of clay, piece of wood, clinker
RE07	10/07/11	15		10	5			15		Lesser spotted dogfish egg case, string
RE11	10/07/11	29			P			P		Sabellaria reef, pebbles with sabellaria up to 5cm height, & cobbles (pieces of reef 9cm max, 5cm average, vol. of sab=3L), <i>Buccinum undatum</i> eggs, sponges and dead <i>Chlamys</i>
TE02	11/07/11	12			1					Crisp packet, coal, piece of peat
TE04	11/07/11	18			P			10		Peat, rubber, Thornback ray egg case, <i>Buccinum undatum</i> eggs, <i>Chaetopterus</i> tubes,
TE05	11/07/11	20		5	10			10		Peat, coal
TE08	10/07/11	20			<1		30cm (10L)			Fishing twine, Lesser spotted dogfish egg case, Thornback ray egg case, <i>Buccinum undatum</i> eggs, clinker.
TE09	10/07/11	5		5				10		Spatangus test, peat (1%), coal, clinker
WF01	10/07/11	12		1	1			20		Clinker, small pieces of peat, dead <i>Pecten maximus</i>
WF04	11/07/11	6						5		Dead Ensis sp. shell, peat
WF05	11/07/11	17						20		Piece of clay, clinker, old <i>Ostrea</i> sp. shell
WF14	10/07/11	10						1		Necklace shell egg capsules, coal, squid eggs

APPENDIX F 2M BEAM TRAWLING SPECIES LIST

Rampion Benthic J/1/03/1836

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Polymastia penicillus	C0361								P										
Suberites ficus sp. (agg.)	C0418										P	P					P	P	P
HALICHONDRIIDA	C0525									P									
Ciocalypa penicillus	C0626												P						
Ciocalypa penicillus	C0626										P								
Iophon sp.	C1050								P										
Raspailia hispida	C1321								P									P	
Tubularia indivisa	D0166													R					
Eudendrium sp.	D0218			P							P								
Bougainvillidae	D0246											P							
Hydractinia sp.	D0272									2									P
Hydractinia echinata	D0273					P	P	P	P		P			P		P			
Halecium sp.	D0390																P	P	
Halecium halecinum	D0392		P							P								P	
Abietinaria abietinaria	D0409					R	R	R	O		R		R	R			R	P	
Diphasia sp.	D0413																	P	
Hydrallmania falcata	D0424					O	P	O	F		R	R	P	R	R	P	R	P	P
Sertularella sp.	D0427											P						P	
Sertularella polyzonias	D0430											P					P		
Nemertesia sp.	D0462				P													P	
Nemertesia antennina	D0463								R			R	P						
Nemertesia ramosa	D0466						R		R	R	R	R						R	P
Aglaophenia pluma	D0481		P													P			
Obeliinae	D0506			P								P							
Obelia sp.	D0517																	P	
Obelia dichotoma	D0519																	P	
Obelia longissima	D0521				P						P						P		
Alcyonium digitatum	D0597	R	100g						<25g		50g	<25g	200g			<25g			
ACTINIARIA sp.	D0662	1				4		1			1	1		1				1	
Urticina sp.	D0682																	2	
Metridium senile	D0710			1								1							
Adamsia cariniopados	D0743		4	1		1	2	2	3			2	7	3	1	14	1	10	
Aphrodita aculeata	P0019										1			1					
Eunice cf. vittata	P0560								2										
Lagis koreni	P1107																1		
Sabellaria	P1115					4cm													
Sabellaria clumps	P1115									P	P	P					R	P	
Sabellaria reef	P1115									P									
Sabellaria spinulosa	P1117									P		P							
Thelepus cinnatus	P1254																		
Pomatoceros sp.	P1339	F on cobble	R						P			P	P	5		P			
Pomatoceros triqueter	P1341															O			
Filograna / Salmacina	P1349/P1360															R			
Scalpellum scalpellum	R0022											1					2		
Balanus crenatus	R0077				75				273				11			1	1	23	
Maera othonis (male)	S0519															1			
CARIDEA	S1293								1	1		1	2						
Processa canaliculata	S1363										1								
Pandalidae	S1370					1			1	2	1	1	1						
Pandalina brevisrostris	S1374					1				8		2	3						

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
<i>Pandalus</i> sp.	S1375											1	1						
<i>Pandalus montagui</i>	S1377									27	4	7	8		2	2	5	2	1
<i>Crangon</i> sp.	S1383						1						1	3					
<i>Crangon allmanni</i>	S1384			3	13	9	72		1	1	13	9	29	10	23	3	19	3	13
<i>Philocheras sculptus</i>	S1389								38	2			1			3		1	
<i>Philocheras trispinosus</i>	S1390			16	19	1	5				4	4	8				3		1
<i>Pontophilus spinosus</i>	S1393																1		
<i>Upogebia</i> sp.	S1418																	1	
<i>Upogebia deltaura</i>	S1419	1																4	
<i>Anapagurus hyndmanni</i>	S1448		1																
<i>Pagurus bernhardus</i>	S1457	2	8	4	15	59	21	67	14	23		13	11	28	17	22	6	21	62
<i>Pagurus cuanensis</i>	S1460	3	3							1	1	2	1	1				1	
<i>Pagurus prideaux</i>	S1462		3	1	1	4	7	3	9	3		8	9	12	1	18	2	11	3
<i>Galathea intermedia</i>	S1472									4					1	2			
<i>Pisidia longicornis</i>	S1482		1							1		2					1		
<i>Macropodia parva/rostrata</i>	S15xx/S1532	8	9	3	2	5			1	16	27	50	3	14	4	3	36	56	2
<i>Ebalia tuberosa</i>	S1508								2									1	
<i>Ebalia tumefacta</i>	S1509					1			2	1		1		2		2		1	
<i>Maja brachydactyla</i>	S1515									3									
<i>Hyas coarctatus</i>	S1519								6	4	1		2	1		1		2	
<i>Inachus dorsettensis</i>	S1526	1				1	1		21	7	4	34	29	2		9	10	27	
<i>Inachus phalangium</i>	S1528	1								1									
<i>Macropodia</i> sp.	S1529					3			2	1	1			1	1				
<i>Macropodia linaresi</i>	S1531								2					1	1		1	4	
<i>Macropodia tenuirostris</i>	S1533					2	3		15					3					
<i>Eurynome</i> sp.	S1535													1		1	1		
<i>Eurynome spinosa</i>	S1537									2	1	2			1		2	8	
<i>Pisa armata</i>	S1539	1								3		1							
<i>Corystes cassivelaunus</i>	S1552																		1
<i>Atelecyclus rotundatus</i>	S1555								1				1		1				
<i>Thia scutellata</i>	S1559							1											
<i>Polybiinae</i>	S1573					1													
<i>Liocarcinus depurator</i>	S1580		2									1						2	
<i>Liocarcinus holsatus</i>	S1581		3		10	23	16		8	5	2	2	5	6	4	2	7	4	128
<i>Liocarcinus marmoreus</i>	S1582												2						
<i>Liocarcinus pusillus</i>	S1584								5	1		1	3	9				3	
<i>Necora puber</i>	S1589											1							
<i>Pilumnus hirtellus</i>	S1615	6								17	1	18					1	1	
<i>Acanthochitona crinita</i>	W0086									1									
<i>Gibbula tumida</i>	W0161													1					
<i>Gibbula cineraria</i>	W0163	2																	
<i>Calliostoma zizyphinum</i>	W0182									3		1		2					
<i>Calliostoma zizyphinum</i> var. <i>lloydi</i>	W0183									1									
<i>Calliostoma granulatum</i>	W0185								1					3			1	1	
<i>Crepidula fornicata</i>	W0439									2		2	1			1			
<i>Trivia arctica</i>	W0459									1									
<i>Polinices pulchellus</i>	W0491			1															
<i>Euspira catena</i>	W0493			1	1			2	3		3			4				5	4
<i>Ocenebra erinacea</i>	W0685									4		5	1						
<i>Buccinum undatum</i>	W0708	3	24		1	4			1	91	3	5	3	10		35	3	84	
<i>Hinia reticulata</i>	W0745	6										3				1		8	2
<i>Tritonia hombergii</i>	W1250															1			
<i>Acanthodoris pilosa</i>	W1333											1					7		
<i>Archioris pseudoargus</i>	W1376										1								

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Nucula hanleyi	W1568																1		
Modiolarca tumida	W1718									6	9	6							
Pecten maximus	W1771												3	1				1	
Aequipecten opercularis	W1773	2				31	1		40	7	4	3	227	8	6	22	4	27	3
Chlamys varia	W1779								1										
Heteranomia squamula	W1809								1				1						
Laevicardium crassum	W1959		1																
Sepia officinalis	W2307				1														
Sepiola atlantica	W2329	3	3	4	5	1	3		2		1	1	1		1		4	1	7
Bryozoan crust	Y0001	O									R	R		O					
Alcyonidium diaphanum	Y0076					<25g	<25g		100g	<25g	1200g	625g	150g		<25g		1525g	100g	
Alcyonidium parasiticum	Y0081			P	P												P		
Vesicularia spinosa	Y0131																	P	
Electra pilosa	Y0178											P	P					P	
Flustra foliacea	Y0187						<25g			426g			<25g		<25g		R		
Chartella papyracea	Y0192		P																
Bugula flabellata	Y0243																P		
Bugula plumosa	Y0246	P																	
Bugula turbinata	Y0250											P							
Scrupocellaria scrupea	Y0278		P																
Scrupocellaria scruposa	Y0279											P							
Pentapora fascialis	Y0418									R									
Omalosecosa ramulosa	Y0508								P										
Anseropoda placenta	ZB0062								1										
Crossaster papposus	ZB0075								1										
Asterias rubens	ZB0100	99	129	61	78	22	26	8	50	94	46	205	84	64	18	76	88	63	9
Ophiothrix fragilis	ZB0124	3	3		1	20	2		2	21	22	14	160	30	3	36	9	41	1
Amphipholis squamata	ZB0161										1								
Ophiura albida	ZB0168		16	53	17	274	47	14	429	1	128	16	39	924	472	25	169	1058	1458
Ophiura ophiura	ZB0170			155	57	7	1	20			266	11				7	80	117	150
Psammechinus miliaris	ZB0193	215	596	3	4	168		2	546	441	33	132	270	311	83	898	20	96	
Echinocardium cordatum	ZB0233																	1	1
Thyone fusus	ZB0262											1							
Spatangus purpureus	ZB219																	2	
Polyclinum aurantium	ZD0022																P		
Aplidium nordmanni	ZD0039																P		
Tridemnum tenerum	ZD0047									P									
Didemnum maculosum	ZD0051										P	P							
Ciona intestinalis	ZD0071		4						1		9	4	7			17		11	
Ascidella sp.	ZD0083										1								
Ascidella scabra	ZD0085										1	3							
Ascidia sp.	ZD0087								4										
Ascidia conchilega	ZD0088								3				1						
Ascidia virginea	ZD0092												1						
Styela clava	ZD0104	4																	
Polycarpa sp. (juv.)	ZD0110										2								
Polycarpa fibrosa	ZD0112										6	6					1	1	
Polycarpa pomaria	ZD0115										3	1							
Botryllus schlosseri	ZD0126								R										
Botrylloides leachi	ZD0128								P	P									
Pyura squamulosa	ZD0140								1										
Molgula sp.	ZD0146											1		1					
Molgula manhattensis	ZD0151								6		8	11	2	4		3	4	1	
Raja clavata (female)	ZF0089		1		1														

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Raja clavata (male)	ZF0089										1								
Raja montagui	ZF0094																1		
Raja montagui (female)	ZF0094												1						
OSTEICHTHYES	ZG0001								1	1		1							
Lophius piscatorius	ZG0084															1			
Diplecogaster bimaculata bimaculata	ZG0086											1							
Gadinae	ZG01??		4		1										1				
Ciliata septentrionalis	ZG0112									1									
Trisopterus sp.	ZG0141					1													
Trisopterus luscus	ZG0143										2								
Trisopterus minutus	ZG0144					4						2	6				3		
Belonidae (juv.)	ZG0183	2																	
Syngnathus acus	ZG0245										1								
Aspitrigla cuculus	ZG0262									2									
Agonus cataphractus	ZG0291				2		1				1							1	4
Cyclopterus lumpus	ZG0294										1							1	
Cyclopterus lumpus (juv.)	ZG0294			2															
Ctenolabrus rupestris	ZG0397									1									
Echlichthys vipera	ZG0405			5		2	12	8	4						1				1
Gymnammodytes semisquamatus	ZG0446						6												
Hyperoplus lanceolatus	ZG0449							1											
Callionymus lyra	ZG0452		1	1	3				1	5	3	5	2	2	2	12	3	8	1
Gobiidae	ZG0455		3		1														
Gobius niger	ZG0467																	1	
Pomatoschistus sp.	ZG0476	34		3	4					5	22	3	5		1	13	3	4	3
Pomatoschistus minutus	ZG0479										1							1	3
Pomatoschistus pictus	ZG0481		1																
Arnoglossus laterna	ZG0562						3	4			4	2	1				2	1	3
Limanda limanda	ZG0572			1		1								1					7
Microstomus kitt	ZG0574					1			3			2	2					1	
Pleuronectes platessa	ZG0578	3				6	4	2			3		1	4	2				2
Buglossidium luteum	ZG0585	21			1						10	8						9	2
Buglossidium luteum (juv.)	ZG0585			1															
Solea solea	ZG0591	1				1				1				1				2	2
Number of Species		23	22	21	23	30	20	14	41	45	45	54	43	36	23	31	36	50	27
Number of colonial species (P counts only)		1	4	3	2	2	2	1	7	7	7	12	5	1	0	4	8	14	4
Colonial Species (weighed)		3	2	0	0	4	4	2	7	4	6	6	4	4	3	3	5	3	0
Total number of species		27	28	24	25	36	26	17	55	56	58	72	52	41	26	38	49	67	31
Number of Individual solitary species		422	820	321	313	659	234	135	1508	826	659	622	957	1475	647	1233	503	1736	1874

Rampion Benthic J/1/03/1836

[illegible]

[illegible]

Rampion Benthic J/1/03/1836

[illegible]

APPENDIX G – 2M BEAM TRAWL PHOTOGRAPHS



CR02



CR06



CR08



CR09



WF01



RE11



TE09



TE08



RE07



OW06



OW06.2



OW03



WF14



TE05



TE04



TE02



WF05



WF04

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	CR1.1	CR2	CR4.2	CR5	CR6	CR7	CR8	CR9	OW1	OW3	OW4
EMU LAB ID	7121	7122	7124	7125	7126	7127	7128	7129	7130	7132	7133
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	0.00	0.00	0.00	24.01	0.00	5.66	11.34	0.00	0.00	0.00
22400	12.261	0.000	20.145	1.442	2.753	0.000	2.082	8.984	0.000	0.000	0.000
16000	0.00	0.00	3.09	7.13	3.21	0.00	4.70	0.78	0.00	0.00	0.00
11200	4.06	2.00	15.79	0.00	26.33	0.00	8.73	1.85	0.00	2.25	0.00
8000	2.56	2.73	13.76	10.31	7.14	0.00	8.03	2.94	0.00	1.34	0.22
5600	1.72	1.81	8.97	5.78	7.48	0.00	2.88	2.06	0.27	2.44	0.00
4000	1.57	0.78	4.73	5.54	2.65	0.45	1.32	0.78	0.10	0.89	0.00
2800	0.91	0.85	4.13	4.48	1.85	0.19	0.93	0.74	0.06	0.52	0.00
2000	0.64	0.48	2.54	3.46	1.23	0.11	0.59	0.73	0.04	0.50	0.01
1400	0.40	0.42	2.29	3.15	1.22	0.14	0.81	0.94	0.09	0.39	0.01
1000	0.24	0.38	1.74	2.45	1.00	0.24	1.03	1.49	0.09	0.25	0.02
710	0.20	0.36	1.37	2.12	0.99	0.30	1.58	2.62	0.08	0.20	0.04
500	0.24	0.51	1.83	2.51	1.43	0.50	2.83	5.83	0.23	0.52	0.21
355	0.31	1.07	2.22	3.83	1.68	1.01	5.97	14.42	2.54	6.49	3.13
250	0.84	2.78	2.83	11.39	3.55	3.89	16.96	24.65	60.19	48.36	61.02
180	17.74	16.50	6.99	20.68	8.68	27.61	25.95	14.36	26.31	22.95	32.44
125	37.82	57.46	5.58	8.27	2.92	50.28	7.18	3.30	5.20	6.99	1.27
90	15.45	9.70	0.63	1.33	0.54	9.71	1.20	0.49	0.74	1.83	0.29
63	1.83	0.86	0.11	0.67	0.20	1.79	0.28	0.13	0.27	0.77	0.22
44	0.05	0.05	0.03	0.24	0.04	0.14	0.05	0.07	0.10	0.12	0.08
31	0.06	0.06	0.04	0.32	0.05	0.18	0.07	0.10	0.17	0.18	0.08
22	0.06	0.06	0.06	0.37	0.07	0.23	0.09	0.12	0.26	0.24	0.08
16	0.07	0.08	0.08	0.43	0.09	0.31	0.12	0.14	0.37	0.32	0.09
11	0.09	0.10	0.10	0.51	0.11	0.39	0.14	0.16	0.47	0.38	0.10
8	0.10	0.11	0.12	0.60	0.13	0.44	0.15	0.17	0.51	0.41	0.11
6	0.11	0.12	0.13	0.65	0.13	0.45	0.15	0.17	0.47	0.39	0.12
4	0.12	0.13	0.13	0.62	0.13	0.42	0.13	0.16	0.40	0.34	0.11
3	0.12	0.13	0.12	0.52	0.11	0.35	0.11	0.14	0.31	0.27	0.09
2	0.11	0.12	0.10	0.39	0.09	0.27	0.09	0.11	0.23	0.20	0.07
1.4	0.09	0.10	0.08	0.27	0.06	0.20	0.06	0.08	0.16	0.14	0.05
1.0	0.07	0.08	0.07	0.19	0.04	0.14	0.04	0.05	0.12	0.11	0.04
0.7	0.06	0.07	0.07	0.15	0.03	0.12	0.03	0.04	0.10	0.09	0.04
0.5	0.05	0.06	0.06	0.12	0.03	0.09	0.03	0.03	0.08	0.07	0.03
0.3	0.03	0.03	0.03	0.07	0.02	0.05	0.02	0.02	0.04	0.04	0.02
<0.3	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.00
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	OW5	OW6	OW7	RE1	RE3	RE4	RE5	RE6	RE7	RE8	RE9
EMU LAB ID	7134	7135	7136	7137	7139	7140	7141	7142	7143	7144	7145
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.17	0.00	0.00	0.00
22400	0.000	0.000	21.465	0.000	10.309	0.000	0.000	0.000	0.000	0.000	10.096
16000	0.00	0.00	14.46	8.53	7.12	0.00	0.00	0.00	0.00	12.04	30.22
11200	0.50	0.00	2.60	4.50	3.65	0.00	2.41	3.84	0.00	22.94	3.08
8000	1.45	0.62	5.16	3.26	5.34	3.32	13.45	3.41	2.34	2.82	8.03
5600	2.97	0.28	4.14	3.63	4.95	7.68	7.70	5.61	5.00	4.05	1.67
4000	5.14	0.25	2.17	2.58	2.82	5.31	6.13	2.80	4.11	4.82	2.23
2800	4.20	0.38	1.78	2.26	2.15	4.00	5.21	2.90	3.73	3.66	2.31
2000	4.69	0.20	1.69	2.43	1.33	3.30	3.91	2.74	3.57	2.96	1.53
1400	5.67	0.21	1.32	3.38	1.14	2.50	3.82	2.55	3.96	3.32	2.12
1000	6.69	0.19	1.06	4.02	0.86	1.91	3.10	2.41	3.29	3.75	2.77
710	8.23	0.21	1.22	4.39	0.92	2.13	2.51	2.65	3.74	4.43	3.21
500	16.20	1.17	2.32	6.31	2.42	5.44	4.76	6.18	9.00	7.49	5.29
355	17.21	28.07	10.16	7.35	31.69	13.52	12.02	13.40	22.91	8.89	8.50
250	18.20	59.45	22.46	7.94	19.11	28.63	21.58	12.65	24.43	11.37	13.53
180	6.82	7.83	5.29	19.37	3.60	16.69	9.35	2.64	9.98	4.27	2.06
125	0.74	0.22	1.28	7.29	0.80	1.95	1.31	0.60	1.39	0.51	0.34
90	0.13	0.04	0.25	5.17	0.19	0.48	0.30	0.25	0.45	0.13	0.22
63	0.11	0.05	0.11	2.16	0.14	0.30	0.21	0.17	0.32	0.15	0.25
44	0.04	0.04	0.02	0.21	0.05	0.08	0.07	0.04	0.07	0.06	0.07
31	0.06	0.05	0.03	0.30	0.07	0.13	0.10	0.05	0.09	0.10	0.11
22	0.07	0.07	0.06	0.39	0.09	0.19	0.15	0.07	0.11	0.14	0.16
16	0.09	0.08	0.09	0.50	0.12	0.26	0.20	0.09	0.15	0.20	0.22
11	0.11	0.09	0.12	0.60	0.15	0.33	0.25	0.11	0.19	0.26	0.28
8	0.12	0.09	0.14	0.65	0.17	0.37	0.28	0.13	0.22	0.30	0.32
6	0.12	0.09	0.14	0.64	0.17	0.36	0.28	0.13	0.23	0.31	0.32
4	0.11	0.08	0.13	0.56	0.16	0.32	0.25	0.12	0.20	0.28	0.29
3	0.10	0.06	0.11	0.45	0.13	0.25	0.20	0.09	0.16	0.23	0.23
2	0.08	0.05	0.08	0.34	0.10	0.18	0.14	0.06	0.12	0.17	0.17
1.4	0.05	0.04	0.05	0.24	0.07	0.12	0.09	0.04	0.08	0.12	0.11
1.0	0.04	0.03	0.04	0.18	0.06	0.08	0.06	0.03	0.06	0.08	0.08
0.7	0.03	0.03	0.04	0.15	0.05	0.07	0.06	0.03	0.05	0.07	0.07
0.5	0.03	0.02	0.03	0.13	0.04	0.06	0.05	0.02	0.04	0.06	0.06
0.3	0.01	0.01	0.02	0.07	0.03	0.03	0.03	0.01	0.02	0.03	0.03
<0.3	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	RE10	RE11	RE14	TE1.1	TE2.1	TE3	TE4	TE6	TE7	TE8	TE9
EMU LAB ID	7146	7147	7150	7151	7152	7153	7154	7156	7157	7158	7159
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	16.95	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	28.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.000	27.586	12.600	0.000	0.000	0.000	0.000	20.301	0.000	0.000	0.000
16000	0.00	6.41	6.39	0.00	0.00	0.00	0.00	2.35	2.97	0.00	9.93
11200	0.00	4.60	6.62	0.00	0.00	0.00	5.45	1.25	2.79	0.68	0.00
8000	0.00	2.50	1.02	0.00	1.88	0.55	3.43	2.25	11.54	4.09	3.31
5600	0.07	3.86	3.02	0.06	1.76	1.34	5.43	2.88	11.43	2.48	2.45
4000	0.31	1.91	2.11	0.07	1.31	0.86	2.73	1.94	5.65	1.83	1.83
2800	0.38	1.61	2.02	0.25	1.14	0.96	2.51	0.99	3.71	2.16	1.63
2000	0.67	1.11	1.41	0.33	1.41	0.87	1.61	0.81	3.32	2.23	1.29
1400	1.18	1.10	1.47	0.29	1.24	1.10	1.39	0.93	2.82	2.73	1.06
1000	1.84	0.70	1.39	0.57	1.55	1.12	1.22	0.86	2.50	2.78	0.85
710	2.97	0.51	1.50	0.72	2.70	1.43	1.10	0.97	2.59	2.23	0.84
500	11.20	0.65	2.83	1.64	3.57	3.03	1.83	2.88	5.69	2.15	1.11
355	40.12	1.07	4.99	4.05	6.29	8.86	10.90	34.25	18.12	4.28	6.32
250	33.42	5.38	11.78	16.45	18.17	36.68	39.60	22.02	20.71	32.81	32.24
180	5.15	8.81	22.49	55.58	15.01	27.04	17.88	3.73	3.78	18.66	21.64
125	0.58	2.58	9.99	15.10	5.73	11.75	2.24	0.60	0.61	3.21	4.23
90	0.25	0.31	1.93	2.98	3.27	2.44	0.52	0.08	0.24	4.86	4.35
63	0.19	0.14	0.64	0.44	3.18	0.38	0.23	0.05	0.20	4.59	1.15
44	0.06	0.03	0.12	0.05	1.00	0.06	0.05	0.02	0.04	0.29	0.16
31	0.10	0.04	0.22	0.07	1.22	0.09	0.07	0.03	0.06	0.39	0.25
22	0.14	0.05	0.38	0.09	1.22	0.11	0.10	0.04	0.09	0.53	0.38
16	0.18	0.06	0.59	0.12	1.18	0.14	0.14	0.06	0.12	0.74	0.54
11	0.20	0.07	0.77	0.15	1.20	0.16	0.17	0.08	0.15	0.95	0.69
8	0.21	0.08	0.87	0.17	1.28	0.18	0.21	0.09	0.16	1.10	0.76
6	0.20	0.08	0.83	0.18	1.35	0.18	0.22	0.10	0.16	1.10	0.74
4	0.18	0.07	0.68	0.16	1.36	0.17	0.21	0.10	0.14	0.96	0.64
3	0.14	0.06	0.49	0.14	1.27	0.14	0.19	0.09	0.12	0.74	0.49
2	0.10	0.04	0.31	0.11	1.08	0.11	0.16	0.07	0.09	0.50	0.35
1.4	0.06	0.03	0.18	0.08	0.83	0.08	0.12	0.05	0.06	0.31	0.23
1.0	0.04	0.02	0.12	0.06	0.63	0.06	0.10	0.04	0.05	0.20	0.17
0.7	0.03	0.02	0.10	0.05	0.53	0.05	0.08	0.03	0.04	0.17	0.15

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

SITE NAME	TE10	WF1	WF2	WF3	WF4	WF5	WF6	WF7	WF8	WF9	WF10
EMU LAB ID	7160	7161	7162	7163	7164	7165	7166	7167	7168	7169	7170
Sieve Aperture (mm)	%	%	%	%	%	%	%	%	%	%	%
64000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45000	0.00	0.00	0.00	0.00	11.49	0.00	0.00	0.00	0.00	0.00	0.00
32000	0.00	24.42	0.00	0.00	2.73	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.000	0.000	0.000	2.575	0.000	0.000	3.196	0.000	0.000	0.000	20.713
16000	0.00	9.72	0.00	0.39	11.71	12.29	0.00	0.00	12.56	4.10	4.66
11200	2.53	9.32	12.66	0.00	4.65	0.00	0.00	0.00	3.12	2.18	3.26
8000	1.21	4.18	2.06	1.15	3.06	3.14	1.59	2.38	3.23	1.47	7.23
5600	1.43	2.47	0.89	0.28	0.88	2.75	0.33	1.26	2.26	4.35	1.85
4000	1.45	2.35	0.88	0.20	0.97	2.13	0.78	2.08	3.10	2.07	1.31
2800	2.73	1.77	0.45	0.26	0.95	2.23	0.79	1.41	2.56	1.22	1.37
2000	2.66	2.12	0.79	0.14	1.27	2.41	0.91	2.63	2.48	2.02	1.44
1400	3.47	1.88	0.88	0.32	1.39	2.57	0.79	2.68	2.09	2.04	1.37
1000	4.02	2.03	0.98	0.44	1.26	2.23	0.65	2.77	1.73	1.98	1.61
710	3.90	2.30	1.56	0.70	1.53	1.88	0.74	2.53	1.65	2.02	1.91
500	4.89	3.50	2.36	1.36	2.24	2.30	0.99	2.97	2.25	2.99	2.42
355	4.95	4.13	4.91	3.89	6.56	3.25	2.49	4.85	5.40	4.98	3.50
250	14.09	8.23	32.17	22.70	20.07	14.00	28.51	12.43	11.98	13.29	14.49
180	27.48	13.63	33.09	49.82	17.04	18.56	32.31	19.51	22.12	32.15	9.66
125	5.57	2.62	4.13	9.93	6.38	4.62	6.44	11.18	13.53	11.71	6.79
90	1.04	0.78	0.41	2.05	1.04	1.20	4.56	4.44	2.05	3.25	4.50
63	1.02	0.43	0.16	0.65	0.42	0.95	9.66	3.34	0.64	1.16	2.28
44	0.63	0.09	0.05	0.14	0.16	0.82	0.39	0.70	0.16	0.22	0.37
31	0.93	0.17	0.08	0.20	0.24	1.21	0.39	1.08	0.34	0.33	0.50
22	1.19	0.28	0.13	0.27	0.32	1.56	0.38	1.61	0.59	0.48	0.64
16	1.39	0.42	0.18	0.33	0.42	1.89	0.44	2.33	0.86	0.67	0.81
11	1.56	0.54	0.22	0.37	0.51	2.15	0.52	3.00	1.04	0.84	0.99
8	1.71	0.60	0.23	0.39	0.56	2.32	0.57	3.36	1.07	0.94	1.14
6	1.82	0.57	0.21	0.37	0.55	2.38	0.57	3.25	0.97	0.92	1.18
4	1.82	0.48	0.17	0.32	0.48	2.33	0.53	2.73	0.77	0.80	1.08
3	1.67	0.35	0.12	0.26	0.38	2.17	0.45	2.03	0.55	0.61	0.89
2	1.40	0.23	0.08	0.18	0.26	1.89	0.34	1.34	0.35	0.43	0.66
1.4	1.05	0.14	0.05	0.12	0.17	1.49	0.23	0.80	0.20	0.27	0.44
1.0	0.83	0.09	0.03	0.08	0.11	1.18	0.16	0.49	0.12	0.18	0.32
0.7	0.70	0.07	0.02	0.06	0.08	0.96	0.13	0.36	0.09	0.14	0.26
0.5	0.54	0.06	0.02	0.05	0.07	0.70	0.10	0.29	0.08	0.12	0.22
0.3	0.30	0.04	0.01	0.03	0.04	0.37	0.06	0.17	0.04	0.07	0.12
<0.3	0.04	0.00	0.00	0.00	0.01	0.05	0.01	0.02	0.01	0.01	0.01
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rampion Wind Farm J/1/03/1836

Table 1: Fractional Data as a % of Total Start Dry Weight

[illegible]

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	CR1.1	CR2	CR4.2	CR5	CR6	CR7	CR8	CR9	OW1	OW3	OW4
EMU LAB ID	7121	7122	7124	7125	7126	7127	7128	7129	7130	7132	7133
% Gravel	23.72%	8.65%	73.16%	38.15%	76.65%	0.75%	34.92%	30.19%	0.47%	7.94%	0.23%
%Sand	75.08%	90.04%	25.59%	56.40%	22.22%	95.45%	63.79%	68.23%	95.74%	88.75%	98.65%
% Silt/Clay	1.19%	1.30%	1.25%	5.45%	1.13%	3.79%	1.29%	1.58%	3.79%	3.31%	1.13%
Mean (mm)	0.61	0.17	3.96	0.88	5.21	0.16	0.96	1.35	0.26	0.26	0.26
Md (mm)	0.17	0.16	8.58	0.43	12.29	0.16	0.33	0.40	0.27	0.28	0.27
Mean (phi)	0.71	2.56	-1.99	0.19	-2.38	2.60	0.06	-0.43	1.96	1.93	1.93
Md (phi)	2.58	2.67	-3.10	1.21	-3.62	2.65	1.58	1.31	1.89	1.85	1.88
Sorting	2.90	1.18	2.74	2.78	2.90	0.49	2.74	2.91	0.42	1.14	0.32
Skq	-0.82	-0.57	0.53	-0.37	0.55	-0.06	-0.71	-0.72	0.38	-0.14	0.21
Kurtosis	2.10	4.61	0.93	0.78	1.01	1.35	0.59	0.64	1.12	3.81	0.81

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	OW5	OW6	OW7	RE1	RE3	RE4	RE5	RE6	RE7	RE8	RE9
EMU LAB ID	7134	7135	7136	7137	7139	7140	7141	7142	7143	7144	7145
% Gravel	18.95%	1.74%	53.46%	27.19%	37.66%	23.61%	38.82%	55.47%	18.75%	53.28%	59.17%
%Sand	79.98%	97.44%	45.46%	67.39%	60.88%	73.55%	58.97%	43.50%	79.47%	44.31%	38.30%
% Silt/Clay	1.07%	0.82%	1.08%	5.42%	1.46%	2.83%	2.21%	1.03%	1.79%	2.41%	2.52%
Mean (mm)	0.74	0.33	3.03	0.78	1.33	0.68	1.09	3.72	0.66	2.42	3.89
Md (mm)	0.57	0.32	3.99	0.40	0.46	0.35	0.62	3.92	0.42	2.92	8.51
Mean (phi)	0.44	1.61	-1.60	0.35	-0.42	0.56	-0.12	-1.89	0.61	-1.28	-1.96
Md (phi)	0.82	1.65	-2.00	1.32	1.11	1.52	0.68	-1.97	1.25	-1.54	-3.09
Sorting	1.50	0.37	2.70	2.83	2.51	1.89	2.12	2.83	1.62	2.38	2.54
Skq	-0.38	-0.11	0.19	-0.36	-0.74	-0.64	-0.44	0.05	-0.56	0.15	0.54
Kurtosis	0.97	1.04	0.49	0.97	0.61	0.85	0.58	0.48	1.10	0.55	0.52

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	RE10	RE11	RE14	TE1.1	TE2.1	TE3	TE4	TE6	TE7	TE8	TE9
EMU LAB ID	7146	7147	7150	7151	7152	7153	7154	7156	7157	7158	7159
% Gravel	1.42%	78.08%	35.19%	0.71%	24.45%	4.58%	21.17%	32.78%	41.41%	13.47%	20.44%
%Sand	96.90%	21.25%	59.00%	97.82%	60.72%	93.82%	76.91%	66.37%	57.26%	78.31%	73.79%
% Silt/Clay	1.68%	0.67%	5.81%	1.47%	14.83%	1.60%	1.92%	0.85%	1.33%	8.22%	5.77%
Mean (mm)	0.38	6.58	1.00	0.22	0.98	0.27	0.68	1.47	1.19	0.36	0.65
Md (mm)	0.38	24.43	0.33	0.21	0.29	0.27	0.32	0.44	0.68	0.28	0.29
Mean (phi)	1.38	-2.72	0.00	2.20	0.02	1.89	0.55	-0.56	-0.25	1.49	0.62
Md (phi)	1.39	-4.61	1.61	2.23	1.78	1.91	1.66	1.17	0.56	1.84	1.80
Sorting	0.58	2.91	3.28	0.50	4.44	0.88	2.01	2.64	2.08	2.38	2.70
Skq	-0.10	0.81	-0.47	-0.14	-0.33	-0.23	-0.74	-0.78	-0.48	-0.14	-0.48
Kurtosis	1.35	1.08	0.72	1.70	1.64	2.01	1.72	0.59	0.56	3.28	3.25

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	TE10	WF1	WF2	WF3	WF4	WF5	WF6	WF7	WF8	WF9	WF10
EMU LAB ID	7160	7161	7162	7163	7164	7165	7166	7167	7168	7169	7170
% Gravel	12.01%	56.35%	17.72%	4.98%	37.71%	24.97%	7.60%	9.75%	29.32%	17.42%	41.84%
%Sand	70.41%	39.53%	80.65%	91.85%	57.94%	51.57%	87.15%	66.69%	63.44%	75.56%	48.53%
% Silt/Clay	17.58%	4.12%	1.63%	3.16%	4.35%	23.46%	5.25%	23.56%	7.24%	7.02%	9.64%
Mean (mm)	0.22	3.56	0.64	0.24	1.15	0.28	0.20	0.13	0.77	0.44	1.11
Md (mm)	0.24	5.75	0.28	0.22	0.37	0.26	0.23	0.20	0.28	0.24	0.46
Mean (phi)	2.21	-1.83	0.64	2.08	-0.20	1.84	2.35	2.92	0.38	1.18	-0.15
Md (phi)	2.05	-2.52	1.84	2.16	1.45	1.96	2.13	2.31	1.82	2.08	1.12
Sorting	3.03	3.15	2.14	0.86	3.09	4.34	1.52	3.10	3.14	2.55	3.73
Skq	0.13	0.31	-0.76	-0.37	-0.65	0.01	0.00	0.21	-0.43	-0.41	-0.25
Kurtosis	2.43	0.56	2.49	2.79	0.61	1.28	3.31	1.80	0.99	2.39	0.76

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 2: Summary Statistics

SITE NAME	WF11	WF12	WF13	WF14	WF16	WF17	WF18	WF19
EMU LAB ID	7171	7172	7173	7174	7176	7177	7178	7179
% Gravel	17.88%	0.47%	0.28%	0.01%	0.04%	7.22%	1.97%	0.29%
%Sand	69.60%	98.57%	84.63%	98.90%	98.64%	91.36%	96.45%	98.88%
% Silt/Clay	12.51%	0.96%	15.09%	1.09%	1.33%	1.42%	1.57%	0.83%
Mean (mm)	0.44	0.30	0.19	0.30	0.30	0.31	0.35	0.42
Md (mm)	0.26	0.30	0.27	0.30	0.30	0.30	0.34	0.42
Mean (phi)	1.17	1.75	2.41	1.74	1.73	1.68	1.51	1.26
Md (phi)	1.95	1.75	1.88	1.74	1.74	1.76	1.56	1.26
Sorting	2.84	0.30	1.58	0.29	0.33	0.98	0.55	0.30
Skq	-0.26	-0.01	0.73	0.03	0.00	-0.43	-0.19	0.03
Kurtosis	2.80	1.52	2.66	1.49	1.43	2.73	1.20	1.43

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	CR1.1	CR2	CR4.2	CR5
EMU LAB ID	7121	7122	7124	7125
In-situ Sediment Description	Slightly shelly, slightly gravelly sand (1% shells)	Slightly shelly, slightly gravelly sand (3% shells)	Silty gravelly sand	Silty gravelly shelly sand (5% shells)
% Shell Estimation (Volume)	1 - 5%	5 - 10%	15 - 25%	20 - 30%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)
Maximum Shell Aperture (µm)	5600	11200	16000	22400
Sample Type	Bimodal, Very Poorly Sorted	Unimodal, Poorly Sorted	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Gravelly Sand	Sandy Gravel	Sandy Gravel
Mean	Coarse Sand	Fine Sand	Very Fine Gravel	Coarse Sand
Sorting	Very Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Very Fine Skewed	Very Coarse Skewed
Kurtosis	Very Leptokurtic	Extremely Leptokurtic	Mesokurtic	Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	CR6	CR7	CR8	CR9
EMU LAB ID	7126	7127	7128	7129
In-situ Sediment Description	gravelly sand with cobbles	Silty sand (2% shells)	Slightly silty gravelly sand	Gravelly sand with pebbles (10% shells)
% Shell Estimation (Volume)	10 - 15%	1 - 5%	10 - 20%	30 - 35%
% Shell Description	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-1000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)
Maximum Shell Aperture (µm)	8000	4000	31500	31500
Sample Type	Polymodal, Very Poorly Sorted	Unimodal, Well Sorted	Trimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Sandy Gravel	Slightly Gravelly Sand	Sandy Gravel	Sandy Gravel
Mean	Fine Gravel	Fine Sand	Coarse Sand	Very Coarse Sand
Sorting	Very Poorly Sorted	Well Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Fine Skewed	Symmetrical	Very Coarse Skewed	Very Coarse Skewed
Kurtosis	Mesokurtic	Leptokurtic	Very Platykurtic	Very Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	OW1	OW3	OW4	OW5
EMU LAB ID	7130	7132	7133	7134
In-situ Sediment Description	Slightly shelly sand (3% shells)	Slightly shelly, silty sand (2% shells)	Sand	Slightly shelly, slightly gravelly sand (6% shells)
% Shell Estimation (Volume)	1 - 5%	1 - 5%	1 - 5%	35 - 45%
% Shell Description	Predominantly fine-medium shell hash (63-710 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-medium shell hash (63-710 µm)	Predominantly fine-coarse shell hash (63-5600 µm)
Maximum Shell Aperture (µm)	5600	11200	8000	11200
Sample Type	Unimodal, Well Sorted	Unimodal, Poorly Sorted	Unimodal, Very Well Sorted	Bimodal, Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Gravelly Sand	Slightly Gravelly Sand	Gravelly Sand
Mean	Medium Sand	Medium Sand	Medium Sand	Coarse Sand
Sorting	Well Sorted	Poorly Sorted	Very Well Sorted	Poorly Sorted
Skewness	Very Fine Skewed	Coarse Skewed	Fine Skewed	Very Coarse Skewed
Kurtosis	Leptokurtic	Extremely Leptokurtic	Platykurtic	Mesokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	OW6	OW7	RE1	RE3
EMU LAB ID	7135	7136	7137	7139
In-situ Sediment Description	Slightly shelly sand (4% shells)	Slightly shelly gravelly pebbly sand (4% shells)	Cobbly, silty, gravelly sand (10% shells)	Slightly gravelly, pebbly sand with cobble (30% shells)
% Shell Estimation (Volume)	1 - 5%	5 - 10%	35 - 50%	5 - 10%
% Shell Description	Predominantly fine-medium shell hash (63-500 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-5600 µm)	Predominantly fine-coarse shell hash (63-1000 µm)
Maximum Shell Aperture (µm)	8000	8000	11200	8000
Sample Type	Unimodal, Well Sorted	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Sandy Gravel	Gravelly Sand	Sandy Gravel
Mean	Medium Sand	Very Fine Gravel	Coarse Sand	Very Coarse Sand
Sorting	Well Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Coarse Skewed	Fine Skewed	Very Coarse Skewed	Very Coarse Skewed
Kurtosis	Mesokurtic	Very Platykurtic	Mesokurtic	Very Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	RE4	RE5	RE6	RE7
EMU LAB ID	7140	7141	7142	7143
In-situ Sediment Description	Slightly gravelly pebbelly sand	Slightly pebbely, gravelly sand with cobble (3% shells)	Slightly shelly, slightly pebbly gravelly sand with cobble (2% shells)	Slightly gravelly, slightly pebbly sand (1% shells)
% Shell Estimation (Volume)	15 - 25%	15 - 20%	10 - 20%	15 - 25%
% Shell Description	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	8000	8000	8000	5600
Sample Type	Bimodal, Poorly Sorted	Bimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Trimodal, Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Sandy Gravel	Sandy Gravel	Gravelly Sand
Mean	Coarse Sand	Very Coarse Sand	Very Fine Gravel	Coarse Sand
Sorting	Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Symmetrical	Very Coarse Skewed
Kurtosis	Platykurtic	Very Platykurtic	Very Platykurtic	Mesokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	RE8	RE9	RE10	RE11
EMU LAB ID	7144	7145	7146	7147
In-situ Sediment Description	Slightly gravelly, shelly, pebbly sand (8% shells)	Silty sandy gravelly pebbels (1% shells)	Shelly sand (50% shells)	Silty gravelly pebbly sand (5% shells)
% Shell Estimation (Volume)	10 - 15%	10 - 15%	40 - 50%	10 - 15%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	16000	5600	5600	16000
Sample Type	Trimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Unimodal, Moderately Well Sorted	Bimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Sandy Gravel	Sandy Gravel	Slightly Gravelly Sand	Sandy Gravel
Mean	Very Fine Gravel	Very Fine Gravel	Medium Sand	Fine Gravel
Sorting	Very Poorly Sorted	Very Poorly Sorted	Moderately Well Sorted	Very Poorly Sorted
Skewness	Fine Skewed	Very Fine Skewed	Coarse Skewed	Very Fine Skewed
Kurtosis	Very Platykurtic	Very Platykurtic	Leptokurtic	Mesokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	RE14	TE1.1	TE2.1	TE3
EMU LAB ID	7150	7151	7152	7153
In-situ Sediment Description	Slightly shelly, slightly pebbly gravelly sand with cobble (3% shells)	Slightly shelly sand	Silty gravelly sand with clumps of clay (20% shells)	Slightly silty, slightly gravelly sand (20% shells)
% Shell Estimation (Volume)	10 - 20%	10 - 15%	25 - 40%	10 - 20%
% Shell Description	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	22400	5600	45000	8000
Sample Type	Trimodal, Very Poorly Sorted	Unimodal, Moderately Well Sorted	Bimodal, Extremely Poorly Sorted	Unimodal, Moderately Sorted
Textural Group (Original Folk & Ward 1954)	Sandy Gravel	Slightly Gravelly Sand	Gravelly Muddy Sand	Slightly Gravelly Sand
Mean	Very Coarse Sand	Fine Sand	Coarse Sand	Medium Sand
Sorting	Very Poorly Sorted	Moderately Well Sorted	Extremely Poorly Sorted	Moderately Sorted
Skewness	Very Coarse Skewed	Coarse Skewed	Very Coarse Skewed	Coarse Skewed
Kurtosis	Platykurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	TE4	TE6	TE7	TE8
EMU LAB ID	7154	7156	7157	7158
In-situ Sediment Description	shelly gravelly sand with 1 cobble	Slightly gravelly, pebbly sand with cobble (5% shells)	Shelly gravelly pebbly sand (3% shells)	Gravelly silty muddy sand (2% shells)
% Shell Estimation (Volume)	5 - 15%	5 - 10%	5 - 10%	30 - 40%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)
Maximum Shell Aperture (µm)	11200	8000	11200	8000
Sample Type	Unimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted	Unimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Sandy Gravel	Sandy Gravel	Gravelly Sand
Mean	Coarse Sand	Very Coarse Sand	Very Coarse Sand	Medium Sand
Sorting	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Very Coarse Skewed	Coarse Skewed
Kurtosis	Very Leptokurtic	Very Platykurtic	Very Platykurtic	Extremely Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	TE9	TE10	WF1	WF2
EMU LAB ID	7159	7160	7161	7162
In-situ Sediment Description	Slightly silty gravelly sand (10% shells)	gravelly silty sand (2% shells)	Slightly gravelly pebbly sand	Silty, slightly shelly sand
% Shell Estimation (Volume)	10 - 15%	35 - 45%	5 - 10%	10 - 15%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)
Maximum Shell Aperture (µm)	8000	5600	11200	5600
Sample Type	Bimodal, Very Poorly Sorted	Unimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Sand	Gravelly Muddy Sand	Sandy Gravel	Gravelly Sand
Mean	Coarse Sand	Fine Sand	Very Fine Gravel	Coarse Sand
Sorting	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Very Coarse Skewed	Fine Skewed	Very Fine Skewed	Very Coarse Skewed
Kurtosis	Extremely Leptokurtic	Very Leptokurtic	Very Platykurtic	Very Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	WF3	WF4	WF5	WF6
EMU LAB ID	7163	7164	7165	7166
In-situ Sediment Description	Slightly silty, slightly gravelly sand (10% shells)	Slightly pebbly shelly gravelly sand (8% shells)	Slightly shelly, gravelly, pebbly, muddy sand (2% shells)	Slightly shelly, gravelly sand (4% shells)
% Shell Estimation (Volume)	10 - 15%	20 - 30%	10 - 15%	10 - 20%
% Shell Description	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-4000 µm)
Maximum Shell Aperture (µm)	22400	45000	16000	22400
Sample Type	Unimodal, Moderately Sorted	Trimodal, Very Poorly Sorted	Trimodal, Extremely Poorly Sorted	Bimodal, Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Sandy Gravel	Gravelly Muddy Sand	Gravelly Sand
Mean	Fine Sand	Very Coarse Sand	Medium Sand	Fine Sand
Sorting	Moderately Sorted	Very Poorly Sorted	Extremely Poorly Sorted	Poorly Sorted
Skewness	Very Coarse Skewed	Very Coarse Skewed	Symmetrical	Symmetrical
Kurtosis	Very Leptokurtic	Very Platykurtic	Leptokurtic	Extremely Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	WF7	WF8	WF9	WF10
EMU LAB ID	7167	7168	7169	7170
In-situ Sediment Description	Silty gravelly sand (10% shells)	Slightly silty shelly gravelly sand (5% shells)	Slightly shelly, slightly pebbly, slightly gravelly sand (1% shells)	Slightly shelly, slightly gravelly muddy sand (5% shells)
% Shell Estimation (Volume)	10 - 15%	5 -15%	10 - 20%	5 - 15%
% Shell Description	Predominantly fine-coarse shell hash (63-4000 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-2800 µm)
Maximum Shell Aperture (µm)	8000	11200	11200	5600
Sample Type	Bimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted	Unimodal, Very Poorly Sorted	Trimodal, Very Poorly Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Muddy Sand	Gravelly Muddy Sand	Gravelly Sand	Muddy Sandy Gravel
Mean	Fine Sand	Coarse Sand	Medium Sand	Very Coarse Sand
Sorting	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
Skewness	Fine Skewed	Very Coarse Skewed	Very Coarse Skewed	Coarse Skewed
Kurtosis	Very Leptokurtic	Mesokurtic	Very Leptokurtic	Platykurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	WF11	WF12	WF13	WF14
EMU LAB ID	7171	7172	7173	7174
In-situ Sediment Description	Slightly shelly, slightly gravelly silty sand (4% shells)	Slightly shelly sand	Muddy sand	Slightly shelly sand
% Shell Estimation (Volume)	10 -15%	5 - 10%	5 - 10%	5 - 10%
% Shell Description	Predominantly fine-coarse shell hash (63-2800 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-1400 µm)
Maximum Shell Aperture (µm)	22400	5600	4000	2800
Sample Type	Bimodal, Very Poorly Sorted	Unimodal, Very Well Sorted	Unimodal, Poorly Sorted	Unimodal, Very Well Sorted
Textural Group (Original Folk & Ward 1954)	Gravelly Muddy Sand	Slightly Gravelly Sand	Slightly Gravelly Muddy Sand	Slightly Gravelly Sand
Mean	Medium Sand	Medium Sand	Fine Sand	Medium Sand
Sorting	Very Poorly Sorted	Very Well Sorted	Poorly Sorted	Very Well Sorted
Skewness	Coarse Skewed	Symmetrical	Very Fine Skewed	Symmetrical
Kurtosis	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Leptokurtic

APPENDIX H PARTICLE SIZE DATA (PSD)

Rampion Wind Farm J/1/03/1836

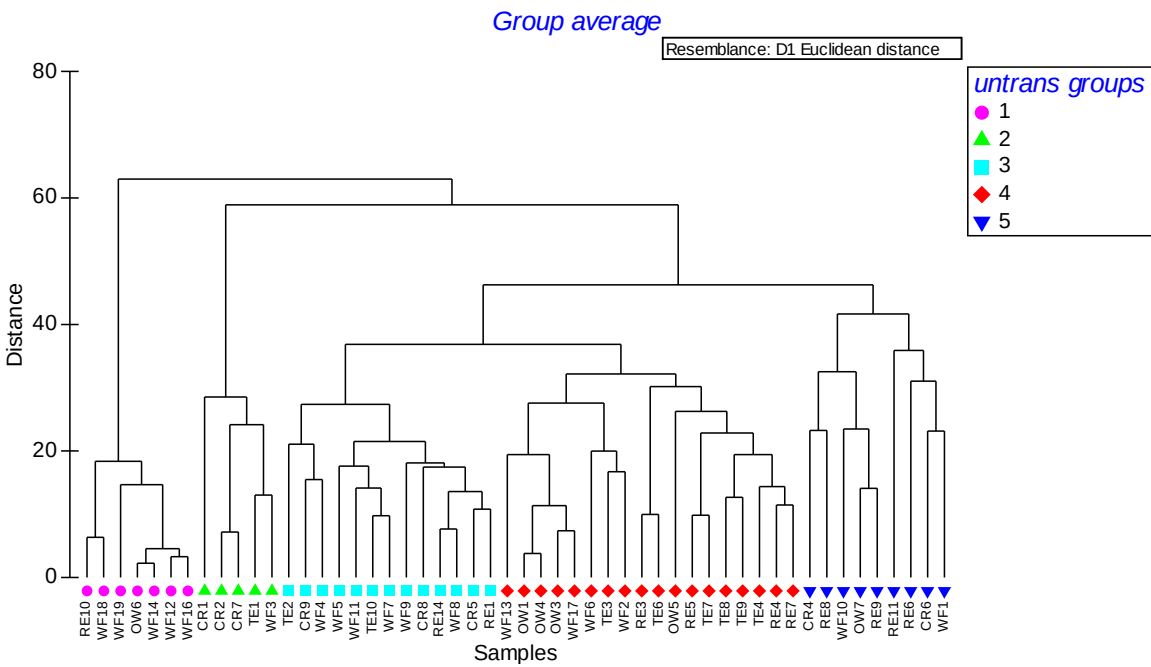
Particle Size Analysis Data @ 0.5 Phi Intervals - Sieve and Laser Diffraction Data Combined (64000 - <0.3µm)

Table 3: Descriptive Statistics

SITE NAME	WF16	WF17	WF18	WF19
EMU LAB ID	7176	7177	7178	7179
In-situ Sediment Description	Slightly shelly sand	Slightly gravelly, slightly shelly sand (3% shells)	Sand (1% shells)	Sand with (1% shells)
% Shell Estimation (Volume)	1 - 5%	10 - 20%	10 - 15%	1 - 5%
% Shell Description	Predominantly fine-coarse shell hash (63-1400 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-coarse shell hash (63-2000 µm)	Predominantly fine-medium shell hash (63-710 µm)
Maximum Shell Aperture (µm)	2800	8000	16000	4000
Sample Type	Unimodal, Very Well Sorted	Unimodal, Moderately Sorted	Unimodal, Moderately Well Sorted	Unimodal, Very Well Sorted
Textural Group (Original Folk & Ward 1954)	Slightly Gravelly Sand	Gravelly Sand	Slightly Gravelly Sand	Slightly Gravelly Sand
Mean	Medium Sand	Medium Sand	Medium Sand	Medium Sand
Sorting	Very Well Sorted	Moderately Sorted	Moderately Well Sorted	Very Well Sorted
Skewness	Symmetrical	Very Coarse Skewed	Coarse Skewed	Symmetrical
Kurtosis	Leptokurtic	Very Leptokurtic	Leptokurtic	Leptokurtic

APPENDIX I CLUSTER ANALYSIS OF PSD

Rampion Benthic J/1/03/1836



Site classifications based on untransformed PSA analysis of sediments, Rampion site.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		WF15 19-APR-11 09:20	WF5 19-APR-11 10:42	Station RE4 16-APR-11 02:51
Analyte	Units			
Mercury : Dry Wt	mg/kg			0.005
Aluminium, HF Digest : Dry Wt	mg/kg			10900
Barium, HF Digest : Dry Wt	mg/kg			91.7
Iron, HF Digest : Dry Wt	mg/kg			12200
Arsenic, HF Digest : Dry Wt	mg/kg			28.3
Cadmium, HF Digest : Dry Wt	mg/kg	Insufficient sample collected on survey - no Metals sample submitted	Insufficient sample collected on survey - no Metals sample submitted	0.035
Chromium, HF Digest : Dry Wt	mg/kg			8.4
Copper, HF Digest : Dry Wt	mg/kg			2.91
Lead, HF Digest : Dry Wt	mg/kg			11.9
Nickel, HF Digest : Dry Wt	mg/kg			6.2
Tin, HF Digest : Dry Wt	mg/kg			0.671
Vanadium, HF Digest : Dry Wt	mg/kg			28.4
Zinc : HF Digest : Dry Wt	mg/kg			18.5
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	81.5	76.8	80
Carbon, Organic : Dry Wt as C	%	0.41	0.69	1.6
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 120ml glass pot weighing approx. 386g in total. The sample appeared to be light brown wet gritty sandy sediment. 98.08g of the sample was taken for drying at <30degC which gave 80.96g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jawcrusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 120ml glass pot weighing approx. 347g in total. The sample appeared to be light brown wet gritty sandy sediment. 80.52g of the sample was taken for drying at <30degC which gave 63.08g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jawcrusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1674g in total. The sample appeared to be light brown wet sandy sediment with stones. 123.28g of the sample was taken for drying at <30degC which gave 99.69g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station RE7 16-APR-11 09:18	Station TE4 15-APR-11 18:27	Station RE10 16-APR-11 16:32
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.004	0.004	0.003
Aluminium, HF Digest : Dry Wt	mg/kg	5980	11800	2780
Barium, HF Digest : Dry Wt	mg/kg	70.2	132	<20
Iron, HF Digest : Dry Wt	mg/kg	10500	9970	25600
Arsenic, HF Digest : Dry Wt	mg/kg	11.5	10.9	21.8
Cadmium, HF Digest : Dry Wt	mg/kg	0.025	0.024	0.014
Chromium, HF Digest : Dry Wt	mg/kg	4.92	8.28	11
Copper, HF Digest : Dry Wt	mg/kg	6.3	4	2.58
Lead, HF Digest : Dry Wt	mg/kg	7.49	9.15	6.33
Nickel, HF Digest : Dry Wt	mg/kg	2.51	3.43	6.65
Tin, HF Digest : Dry Wt	mg/kg	<0.5	0.537	0.504
Vanadium, HF Digest : Dry Wt	mg/kg	22.5	21.8	54.9
Zinc : HF Digest : Dry Wt	mg/kg	16.5	16.8	20
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	81.5	77.8	77.4
Carbon, Organic : Dry Wt as C	%	1.7	0.79	0.77
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1413g in total. The sample appeared to be light brown wet sandy sediment with stones. 145.72g of the sample was taken for drying at <30degC which gave 119.82g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 963g in total. The sample appeared to be light brown wet sandy sediment with stones. 121.13g of the sample was taken for drying at <30degC which gave 95.41g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1300g in total. The sample appeared to be light brown wet sandy sediment with stones. 109.17g of the sample was taken for drying at <30degC which gave 85.73g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station TE8 16-APR-11 23:55	Station TE6 17-APR-11 13:41	Station OW3 17-APR-11 14:47
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.008	0.003	0.002
Aluminium, HF Digest : Dry Wt	mg/kg	9510	6090	11100
Barium, HF Digest : Dry Wt	mg/kg	72.6	93.9	124
Iron, HF Digest : Dry Wt	mg/kg	33500	7830	8580
Arsenic, HF Digest : Dry Wt	mg/kg	28.2	13.7	9.5
Cadmium, HF Digest : Dry Wt	mg/kg	0.024	0.019	0.017
Chromium, HF Digest : Dry Wt	mg/kg	25	4.04	5.53
Copper, HF Digest : Dry Wt	mg/kg	5.73	2.89	1.57
Lead, HF Digest : Dry Wt	mg/kg	14.5	6.82	12.1
Nickel, HF Digest : Dry Wt	mg/kg	7.48	2.43	2.83
Tin, HF Digest : Dry Wt	mg/kg	0.809	<0.5	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	83.7	16.1	15.1
Zinc : HF Digest : Dry Wt	mg/kg	34.1	14.4	15.3
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	78.8	81.8	79.4
Carbon, Organic : Dry Wt as C	%	2.3	0.5	0.32
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1209g in total. The sample appeared to be light brown wet sandy sediment with stones. 95.74g of the sample was taken for drying at <30degC which gave 76.57g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 567g in total. The sample appeared to be light brown wet sandy sediment with stones. 82.43g of the sample was taken for drying at <30degC which gave 68.43g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1105g in total. The sample appeared to be light brown wet sandy sediment with stones. 119.66g of the sample was taken for drying at <30degC which gave 96.09g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station OW5 17-APR-11 15:31	Station OW7 17-APR-11 17:24	Station WF11 18-APR-11 02:15
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.002	0.003	0.006
Aluminium, HF Digest : Dry Wt	mg/kg	6090	9650	15800
Barium, HF Digest : Dry Wt	mg/kg	76.4	112	69.9
Iron, HF Digest : Dry Wt	mg/kg	7620	8060	44700
Arsenic, HF Digest : Dry Wt	mg/kg	10.1	8.58	16.4
Cadmium, HF Digest : Dry Wt	mg/kg	0.017	0.018	0.019
Chromium, HF Digest : Dry Wt	mg/kg	4.56	6.59	33.7
Copper, HF Digest : Dry Wt	mg/kg	3.61	2.21	4.56
Lead, HF Digest : Dry Wt	mg/kg	6.28	10.5	14.2
Nickel, HF Digest : Dry Wt	mg/kg	1.62	2.94	10.9
Tin, HF Digest : Dry Wt	mg/kg	<0.5	<0.5	0.714
Vanadium, HF Digest : Dry Wt	mg/kg	17.6	20.5	76.7
Zinc : HF Digest : Dry Wt	mg/kg	12.3	19.1	38
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	81.3	80.3	75.8
Carbon, Organic : Dry Wt as C	%	1.6	0.78	0.61
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 852g in total. The sample appeared to be light brown wet sandy sediment with stones. 124.36g of the sample was taken for drying at <30degC which gave 102.11g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1087g in total. The sample appeared to be light brown wet sandy sediment with stones. 129.69g of the sample was taken for drying at <30degC which gave 105.21g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1162g in total. The sample appeared to be dark brown wet sandy sediment with stones. 141.05g of the sample was taken for drying at <30degC which gave 108.18g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station WF1 18-APR-11 04:39	Station RE14 18-APR-11 07:14	Station WF2 18-APR-11 21:42
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.007	0.005	0.002
Aluminium, HF Digest : Dry Wt	mg/kg	10600	10200	5480
Barium, HF Digest : Dry Wt	mg/kg	56.9	68.4	31.3
Iron, HF Digest : Dry Wt	mg/kg	37100	35800	32900
Arsenic, HF Digest : Dry Wt	mg/kg	23.3	14.9	20.7
Cadmium, HF Digest : Dry Wt	mg/kg	0.019	0.012	0.024
Chromium, HF Digest : Dry Wt	mg/kg	43.7	23.8	20.3
Copper, HF Digest : Dry Wt	mg/kg	7.5	4.29	2.26
Lead, HF Digest : Dry Wt	mg/kg	12.3	9.12	8.8
Nickel, HF Digest : Dry Wt	mg/kg	10.1	7.58	7.23
Tin, HF Digest : Dry Wt	mg/kg	0.598	0.568	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	78.7	58.7	68.1
Zinc : HF Digest : Dry Wt	mg/kg	37.5	27.6	25.4
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	82	75.8	75
Carbon, Organic : Dry Wt as C	%	1.6	0.58	1
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 825g in total. The sample appeared to be medium brown wet sandy sediment with stones. 116.64g of the sample was taken for drying at <30degC which gave 96.60g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1051g in total. The sample appeared to be dark brown wet sandy sediment with stones. 114.45g of the sample was taken for drying at <30degC which gave 88.12g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1559g in total. The sample appeared to be medium brown wet sandy sediment with stones. 110.85g of the sample was taken for drying at <30degC which gave 84.49g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station WF13 19-APR-11 04:42	Station WF17 19-APR-11 05:46	Station CR1.1 19-APR-11 13:00
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.002	0.002	0.002
Aluminium, HF Digest : Dry Wt	mg/kg	7900	15600	6990
Barium, HF Digest : Dry Wt	mg/kg	81.8	121	111
Iron, HF Digest : Dry Wt	mg/kg	12800	10200	19300
Arsenic, HF Digest : Dry Wt	mg/kg	10.5	8.13	10.2
Cadmium, HF Digest : Dry Wt	mg/kg	0.023	0.034	0.017
Chromium, HF Digest : Dry Wt	mg/kg	11.9	11.7	31.8
Copper, HF Digest : Dry Wt	mg/kg	5.16	6.12	5.74
Lead, HF Digest : Dry Wt	mg/kg	6.29	15.2	7.6
Nickel, HF Digest : Dry Wt	mg/kg	4.02	4.62	4.59
Tin, HF Digest : Dry Wt	mg/kg	0.658	0.635	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	27	20.7	36.5
Zinc : HF Digest : Dry Wt	mg/kg	16.7	16.9	22.3
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	76.4	78.9	78.8
Carbon, Organic : Dry Wt as C	%	0.5	0.61	0.27
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1232g in total. The sample appeared to be medium brown wet sandy sediment with stones. 109.74g of the sample was taken for drying at <30degC which gave 85.09g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1533g in total. The sample appeared to be medium brown wet sandy sediment with stones. 112.31g of the sample was taken for drying at <30degC which gave 89.74g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 911g in total. The sample appeared to be grey brown wet sandy sediment with stones. 113.92g of the sample was taken for drying at <30degC which gave 90.92g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station CR7 19-APR-11 14:51	Station TE2.1 19-APR-11 17:30	Station CR9 19-APR-11 19:28
Analyte	Units			
Mercury : Dry Wt	mg/kg	0.003	0.003	0.003
Aluminium, HF Digest : Dry Wt	mg/kg	8440	7340	4350
Barium, HF Digest : Dry Wt	mg/kg	68.8	52.6	31
Iron, HF Digest : Dry Wt	mg/kg	21500	28500	18600
Arsenic, HF Digest : Dry Wt	mg/kg	12.7	38	12.9
Cadmium, HF Digest : Dry Wt	mg/kg	0.018	0.034	0.012
Chromium, HF Digest : Dry Wt	mg/kg	17	20	10.7
Copper, HF Digest : Dry Wt	mg/kg	5.56	3.27	2.62
Lead, HF Digest : Dry Wt	mg/kg	8.36	14.9	6.42
Nickel, HF Digest : Dry Wt	mg/kg	5.21	6.02	3.92
Tin, HF Digest : Dry Wt	mg/kg	0.521	<0.5	<0.5
Vanadium, HF Digest : Dry Wt	mg/kg	43.3	70.5	32.8
Zinc : HF Digest : Dry Wt	mg/kg	23.7	35	18.5
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50	<50
Dry Solids @ 30°C	%	74.5	73.2	75.4
Carbon, Organic : Dry Wt as C	%	0.44	1.9	1.5
Accreditation Assessment	No.	2	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1002g in total. The sample appeared to be medium brown wet sandy sediment with stones. 98.79g of the sample was taken for drying at <30degC which gave 74.99g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1051g in total. The sample appeared to be light brown wet sandy sediment with stones. 104.58g of the sample was taken for drying at <30degC which gave 78.03g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1211g in total. The sample appeared to be light brown wet sandy sediment with stones. 105.45g of the sample was taken for drying at <30degC which gave 80.81g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX J CONTAMINANT SAMPLE RESULTS

Rampion Wind Farm J/1/03/1836

Contaminant Sample Results

		Station WF7 19-APR-11 21:40	Station WF4 20-APR-11 00:07
Analyte	Units		
Mercury : Dry Wt	mg/kg	0.008	0.003
Aluminium, HF Digest : Dry Wt	mg/kg	16700	7540
Barium, HF Digest : Dry Wt	mg/kg	124	56.4
Iron, HF Digest : Dry Wt	mg/kg	38000	18400
Arsenic, HF Digest : Dry Wt	mg/kg	26.3	19
Cadmium, HF Digest : Dry Wt	mg/kg	0.023	0.01
Chromium, HF Digest : Dry Wt	mg/kg	36	11.7
Copper, HF Digest : Dry Wt	mg/kg	6.06	4.44
Lead, HF Digest : Dry Wt	mg/kg	15.3	10
Nickel, HF Digest : Dry Wt	mg/kg	38.8	4.4
Tin, HF Digest : Dry Wt	mg/kg	0.863	0.863
Vanadium, HF Digest : Dry Wt	mg/kg	64.7	43.4
Zinc : HF Digest : Dry Wt	mg/kg	47.1	22.8
Hydrocarbon Screen >C5-C44 : Dry Wt	mg/kg	<50	<50
Dry Solids @ 30°C	%	74.7	75.5
Carbon, Organic : Dry Wt as C	%	0.71	0.37
Accreditation Assessment	No.	2	2
Sample Preparation	Text	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1042g in total. The sample appeared to be medium brown wet sandy sediment with stones. 94.19g of the sample was taken for drying at <30degC which gave 71.72g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.	The sample was received in a 1ltr plastic pot and 120ml glass pot weighing approx. 1323g in total. The sample appeared to be medium brown wet sandy sediment with stones. 110.00g of the sample was taken for drying at <30degC which gave 84.42g of dried sample (weights include tray weight). The sample was sieved to <10mm before being crushed using a jaw crusher. The sample was then crushed until it passed through a 2mm sieve. The sample was received unpreserved. All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used. Dry Weight (DW) results are reported as determined at <30degC.

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	CR001	CR002	CR003	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007	RE001	RE002	RE003	RE004	RE005
D0632	Cerianthus lloydii	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D0755	Peachia cylindrica	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F0002	TURBELLARIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
G0001	NEMERTEA	0	0	0	0	2	1	0	0	1	2	2	2	2	2	1	1	9	0	1	1	7
N0001	SIPUNCULA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
N0001	SIPUNCULA (juv)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
N0011	Golfingiidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
N0014	Golfingia elongata	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
N0025	Nephasoma minutum	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	4	2
N0034	Phascolion strombus	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
P0019	Aphrodita aculeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0025	Polynoidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0044	Enipo kinbergi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0049	Gattyana cirrhosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
P0050	Harmothoe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
P0050	Malmgreniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0050	Malmgreniella darbouxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1
P0062	Malmgreniella glabra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0082	Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
P0092	Pholoe baltica	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0
P0094	Pholoe inornata	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
P0104	Sigalion mathildae	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0107	Sthenelais boa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0109	Sthenelais limicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0114	Phyllodocidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0118	Eteone longa (agg)	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0	0	0	1	0
P0127	Mysta picta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0141	Anaitides groenlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0142	Anaitides lineata	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
P0143	Anaitides longipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0146	Anaitides rosea	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0155	Eulalia mustela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0156	Eulalia ornata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0163	Eumida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
P0167	Eumida sanguinea	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0254	Glyceridae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
P0256	Glycera alba	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
P0259	Glycera fallax	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0260	Glycera lapidum	0	0	0	0	5	0	0	0	0	0	2	0	0	1	0	4	0	0	3	0	2
P0262	Glycera oxycephala	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
P0268	Glycinde nordmanni	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0
P0270	Goniada emerita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0271	Goniada maculata	0	1	0	0	0	0	1	0	0	3	0	2	0	0	0	0	0	0	0	0	0
P0291	Sphaerodorum gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0319	Podarkeopsis capensis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0358	Syllis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Syllis "species D"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0
	Syllis "species E"	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
P0365	Syllis armillaris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0380	Eusyllis blomstrandii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	Opisthodonta "species A"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	CR001	CR002	CR003	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007	RE001	RE002	RE003	RE004	RE005
P0394	Palposyllis prosostoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
P0422	Exogone naidina	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0434	Autolytus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0451	Proceraea scapularis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0458	Nereididae	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0458	Nereididae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0475	Eunereis longissima	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0494	Nephtys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0494	Nephtys (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
P0495	Nephtys assimilis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0496	Nephtys caeca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0498	Nephtys cirrosa	0	9	0	0	0	0	0	1	0	2	1	2	1	0	0	1	0	0	0	0	0
P0560	Eunice vittata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0564	Marphysa bellii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0566	Marphysa sanguinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0568	Nematonereis unicornis	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0571	Lumbrineriopsis paradoxa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
P0572	Lumbrineris (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0572	Lumbrineris futilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lumbrineris cingulata	0	0	0	0	10	3	0	0	0	0	0	0	0	0	0	1	3	0	1	1	1
	Scoletoma magnidentata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0591	Drilonereis filum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0642	Schistomeringos neglecta	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0643	Schistomeringos rudolphi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0672	Scoloplos armiger	1	1	0	0	1	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0
P0699	Paradoneis lyra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0718	Poecilochaetus serpens	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0
P0722	Aonides oxycephala	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
P0723	Aonides paucibranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
	Atherospio guillei	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
P0733	Laonice bahusiensis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
P0748	Polydora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0750	Polydora caeca (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0751	Polydora caulleryi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
P0752	Polydora ciliata (agg)	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0776	Pygospio elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0777	Scolecopsis (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0779	Scolecopsis bonnierii	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
P0783	Scolecopsis squamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0788	Spio armata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0789	Spio decorata	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0794	Spiophanes bombyx	0	8	0	16	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0802	Magelonidae	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0803	Magelona	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0805	Magelona filiformis	3	7	0	0	0	0	3	0	0	4	0	0	3	0	0	0	0	0	0	0	0
	Magelona johnstoni	3	4	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
P0822	Cirratulidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aphelocheata "species A"	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
P0829	Caulleriella alata	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	1
P0832	Chaetozone	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Chaetozone christiei	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	CR001	CR002	CR003	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007	RE001	RE002	RE003	RE004	RE005
P0831	Chaetozone zetlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1
P0840	Dodecaceria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P0879	Diplocirrus stopbowitzi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0906	Capitella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0919	Mediomastus fragilis	0	0	0	1	8	1	0	0	0	0	0	0	0	0	0	0	23	0	0	1	0
P0920	Notomastus	0	0	0	2	5	0	0	1	0	0	1	0	0	4	1	0	2	0	4	14	8
P0938	Maldanidae	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0953	Clymenella cincta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0955	Clymenura	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	Clymenura tricirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Euclymene "species A"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0964	Euclymene oerstedii	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0983	Notoproctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
P0985	Petaloproctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0997	Ophelia (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0999	Ophelia borealis	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	2	0	0	0	0	0
P1000	Ophelia celtica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1007	Travisia forbesii	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
P1020	Scalibregmatidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1022	Asclerocheilus intermedius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1026	Scalibregma celticum	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P1027	Scalibregma inflatum	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1029	Sclerocheilus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1093	Galathowenia oculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P1098	Owenia fusiformis	0	0	0	2	5	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
P1107	Lagis koreni	0	0	0	1	4	0	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0
P1117	Sabellaria spinulosa	0	0	0	0	2	2	0	0	0	0	0	0	0	4	0	0	28	0	1	0	0
P1133	Ampharete	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1139	Ampharete lindstroemi	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
P1175	Terebellides stroemi	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1185	Amphitritides gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
P1190	Eupolymnia nesidensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1195	Lanice conchilega	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1210	Nicolea venustula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1215	Phisidia aurea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1217	Pista cristata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
P1229	Amaeana trilobata	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
P1234	Lysilla nivea	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1235	Polycirrus	1	4	0	4	2	2	6	0	1	0	2	0	0	0	0	0	6	0	1	0	1
P1253	Thelepus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1254	Thelepus cincinnatus	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
P1257	Sabellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1257	Sabellidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1269	Chone filicaudata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1271	Demonax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1273	Demonax cambrensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1339	Pomatoceros	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
P1340	Pomatoceros lamarcki	0	0	0	8	27	4	0	0	0	0	0	0	0	0	0	0	1	0	0	6	3
P1341	Pomatoceros triqueter	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	10	2	2
R0001	CRUSTACEA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S0008	Nebalia herbsti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
D0632	Cerianthus lloydii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D0755	Peachia cylindrica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F0002	TURBELLARIA	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G0001	NEMERTEA	1	2	3	2	0	2	0	0	0	2	3	0	2	1	0	1	1	5	1	3	1
N0001	SIPUNCULA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N0001	SIPUNCULA (juv)	3	5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0
N0011	Golfingiidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N0014	Golfingia elongata	0	0	0	1	0	0	0	0	0	0	1	0	3	0	0	0	0	0	1	0	0
N0025	Nephasoma minutum	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
N0034	Phascolion strombus	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
P0019	Aphrodita aculeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0025	Polynoidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0044	Enipo kinbergi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0049	Gattyana cirrhosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0050	Harmothoe	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0050	Malmgreniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0050	Malmgreniella darbouxi	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0
P0062	Malmgreniella glabra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0082	Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0092	Pholoe baltica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0
P0094	Pholoe inornata	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0104	Sigalion mathildae	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
P0107	Sthenelais boa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0109	Sthenelais limicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0114	Phyllodocidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0118	Eteone longa (agg)	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	1	1	1	0	0
P0127	Mysta picta	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
P0141	Anaitides groenlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0142	Anaitides lineata	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0143	Anaitides longipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0146	Anaitides rosea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0155	Eulalia mustela	3	0	2	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0
P0156	Eulalia ornata	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0163	Eumida	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0167	Eumida sanguinea	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
P0254	Glyceridae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0256	Glycera alba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0259	Glycera fallax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0260	Glycera lapidum	2	1	2	1	0	3	0	0	0	0	0	0	4	0	0	0	0	1	3	1	2
P0262	Glycera oxycephala	0	2	0	0	0	2	0	0	0	0	0	0	2	0	2	1	0	2	0	0	0
P0268	Glycinde nordmanni	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	1	0
P0270	Goniada emerita	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0271	Goniada maculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0291	Sphaerodorum gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0319	Podarkeopsis capensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0358	Syllis	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Syllis "species D"	3	2	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
	Syllis "species E"	0	1	1	0	0	0	0	0	0	0	0	0	7	0	8	1	1	0	2	2	0
P0365	Syllis armillaris	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0380	Eusyllis blomstrandii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	Opisthodonta "species A"	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
P0394	Palposyllis prosostoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0422	Exogone naidina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0434	Autolytus	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0451	Proceraea scapularis	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
P0458	Nereididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0458	Nereididae (juv)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0475	Eunereis longissima	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
P0494	Nephtys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0494	Nephtys (juv)	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0
P0495	Nephtys assimilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0496	Nephtys caeca	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
P0498	Nephtys cirrosa	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	1
P0560	Eunice vittata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0564	Marphysa bellii	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0566	Marphysa sanguinea	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0568	Nematonereis unicornis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0
P0571	Lumbrineriopsis paradoxa	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0572	Lumbrineris (juv)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0572	Lumbrineris futilis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lumbrineris cingulata	3	2	3	5	0	4	0	0	0	0	0	0	7	0	4	0	12	4	5	2	0
	Scoletoma magnidentata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0591	Drilonereis filum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0642	Schistomeringos neglecta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0643	Schistomeringos rudolphi	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0
P0672	Scoloplos armiger	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
P0699	Paradoneis lyra	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	2	0	1	2	0
P0718	Poecilochaetus serpens	1	0	1	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	1	0	0
P0722	Aonides oxycephala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0723	Aonides paucibranchiata	4	3	4	0	0	1	0	0	1	0	0	0	6	0	1	0	0	1	0	1	0
	Atherospio guillei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
P0733	Laonice bahusiensis	1	1	10	10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P0748	Polydora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P0750	Polydora caeca (agg)	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0751	Polydora caulleryi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0752	Polydora ciliata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0776	Pygospio elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0777	Scolecopsis (juv)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P0779	Scolecopsis bonnierii	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
P0783	Scolecopsis squamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0788	Spio armata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0789	Spio decorata	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
P0794	Spiophanes bombyx	0	0	1	0	0	0	0	0	0	6	0	1	0	0	0	0	0	0	2	0	0
P0802	Magelonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0803	Magelona	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0
P0805	Magelona filiformis	0	0	0	0	0	0	0	0	0	22	0	3	0	0	0	0	0	0	0	0	0
	Magelona johnstoni	0	0	0	0	0	0	0	0	0	248	0	6	0	0	0	0	0	0	0	0	0
P0822	Cirratulidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
	Aphelochaeta "species A"	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0
P0829	Caulleriella alata	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	3	3	1	0	0
P0832	Chaetozone	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
	Chaetozone christiei	0	0	0	0	0	0	0	0	0	14	0	3	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
P0831	Chaetozone zetlandica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1
P0840	Dodecaceria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0879	Diplocirrus stopbowitzi	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
P0906	Capitella	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
P0919	Mediomastus fragilis	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	1	0	0
P0920	Notomastus	7	3	10	16	0	4	0	0	1	0	0	0	7	0	3	0	8	9	6	8	0
P0938	Maldanidae	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0
P0953	Clymenella cincta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0955	Clymenura	0	0	1	0	0	8	0	0	0	0	1	0	4	0	0	0	2	1	2	4	0
	Clymenura tricirrata	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Euclymene "species A"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
P0964	Euclymene oerstedii	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	7	0	1	1	0
P0983	Notoproctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P0985	Petaloproctus	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
P0997	Ophelia (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
P0999	Ophelia borealis	0	0	0	0	6	0	0	0	5	0	5	9	2	0	0	1	0	1	1	0	4
P1000	Ophelia celtica	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1007	Travisia forbesii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
P1020	Scalibregmatidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P1022	Asclerocheilus intermedius	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0
P1026	Scalibregma celticum	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
P1027	Scalibregma inflatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0
P1029	Sclerocheilus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1093	Galathowenia oculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1098	Owenia fusiformis	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
P1107	Lagis koreni	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	4	1	0	0
P1117	Sabellaria spinulosa	1	0	0	0	0	3	0	0	1	0	20	0	29	0	0	0	1	0	2	0	0
P1133	Ampharete	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
P1139	Ampharete lindstroemi	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
P1175	Terebellides stroemi	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	1	0	0
P1185	Amphitritides gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1190	Eupolymnia nesidensis	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1195	Lanice conchilega	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1210	Nicolea venustula	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
P1215	Phisidia aurea	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
P1217	Pista cristata (agg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1229	Amaeana trilobata	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1234	Lysilla nivea	0	2	0	0	0	0	0	0	0	0	0	0	4	0	4	1	2	0	1	0	0
P1235	Polycirrus	0	1	2	3	0	4	0	0	0	3	0	0	4	0	0	0	2	3	1	1	0
P1253	Thelepus	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1254	Thelepus cinnatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P1257	Sabellidae	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1257	Sabellidae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P1269	Chone filicaudata	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1271	Demonax	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1273	Demonax cambrensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P1339	Pomatoceros	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
P1340	Pomatoceros lamarcki	3	2	0	1	0	3	0	0	0	0	0	0	0	0	0	2	0	2	2	33	0
P1341	Pomatoceros triqueter	2	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	14	0
R0001	CRUSTACEA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S0008	Nebalia herbsti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	RE006	RE007	RE008	RE009	RE010	RE011	RE012	RE013	RE014	TE001	TE002	TE003	TE004	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002
W1975	Spisula elliptica	0	5	7	0	5	0	0	0	1	0	2	0	0	0	2	2	0	1	2	5	0
W1977	Spisula solida	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
W1999	Ensis ensis	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
W2006	Phaxas pellucidus	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
W2015	Arcopagia crassa	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2019	Fabulina fabula	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0
W2020	Moerella (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2021	Moerella donacina	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
W2023	Moerella pygmaea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2051	Gari fervensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2049	Gari tellinella	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2058	Abra	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17	0	2	0	0
W2058	Abra (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
W2059	Abra alba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
W2062	Abra prismatica	1	3	0	0	0	0	0	0	0	3	1	3	1	0	0	0	3	2	0	2	2
W2113	Tapes rhomboides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2104	Timoclea ovata	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2139	Mysia undata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2152	Sphenia binghami	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2157	Corbula gibba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2162	Gastrochaena dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2227	Thracia (juv)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2231	Thracia phaseolina	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	0
ZA0003	Phoronis	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0
ZB0001	ECHINODERMATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0105	OPHIUROIDEA (juv)	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
ZB0148	Amphiuridae (juv)	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0
ZB0151	Acrocnida brachiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0160	Amphipholis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
ZB0161	Amphipholis squamata	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0165	Ophiuridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0165	Ophiuridae (juv)	0	0	0	6	0	0	0	0	0	0	2	1	0	0	0	0	2	0	0	1	1
ZB0166	Ophiura (juv)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
ZB0168	Ophiura albida	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0
ZB0170	Ophiura ophiura	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ZB0167	Ophiecten affinis	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
ZB0193	Psammechinus miliaris	1	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0212	Echinocyamus pusillus	1	8	7	10	0	0	0	0	0	0	9	1	8	1	0	5	31	18	15	3	0
ZB0222	Echinocardium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0223	Echinocardium cordatum	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
ZB0296	Leptosynapta inhaerens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Infauna Abundance

[illegible]

APPENDIX K- SPECIES LIST FOR INFAUNAL GRAB SPECIES

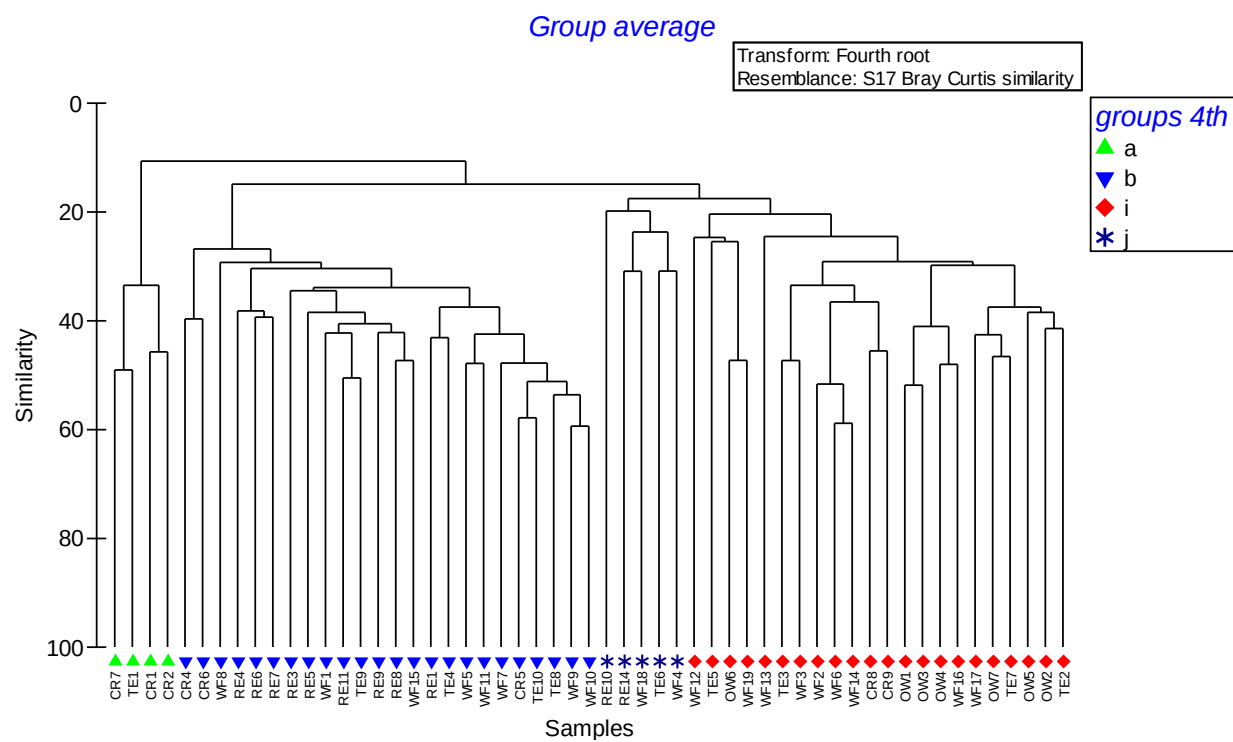
Rampion Wind Farm J/1/03/1836

Infauna Abundance

SDC	TaxonName	WF003	WF004	WF005	WF006	WF007	WF008	WF009	WF010	WF011	WF012	WF013	WF014	WF015	WF016	WF017	WF018	WF019	WF020
W1975	Spisula elliptica	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
W1977	Spisula solida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W1999	Ensis ensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2006	Phaxas pellucidus	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
W2015	Arcopagia crassa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2019	Fabulina fabula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2020	Moerella (juv)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
W2021	Moerella donacina	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
W2023	Moerella pygmaea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2051	Gari fervensis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
W2049	Gari tellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2058	Abra	0	0	0	0	0	0	3	11	0	0	2	0	0	0	0	0	0	0
W2058	Abra (juv)	2	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
W2059	Abra alba	0	0	0	0	10	1	6	22	0	0	0	1	3	7	0	0	0	0
W2062	Abra prismatica	7	0	0	11	0	0	1	1	0	0	8	5	0	24	10	0	5	0
W2113	Tapes rhomboides	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
W2104	Timoclea ovata	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
W2139	Mysia undata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2152	Sphenia binghami	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2157	Corbula gibba	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
W2162	Gastrochaena dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W2227	Thracia (juv)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
W2231	Thracia phaseolina	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ZA0003	Phoronis	0	0	0	0	2	2	2	1	2	0	0	0	0	0	0	0	0	0
ZB0001	ECHINODERMATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0105	OPHIUROIDEA (juv)	0	2	0	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0
ZB0148	Amphiuridae (juv)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0151	Acrocnida brachiata	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ZB0160	Amphipholis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0161	Amphipholis squamata	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
ZB0165	Ophiuridae	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ZB0165	Ophiuridae (juv)	0	0	1	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0166	Ophiura (juv)	0	0	0	0	0	0	0	1	0	0	4	1	0	2	10	0	0	0
ZB0168	Ophiura albida	0	0	4	0	6	0	4	4	2	0	0	4	0	0	0	0	0	0
ZB0170	Ophiura ophiura	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0167	Ophiocten affinis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ZB0193	Psammechinus miliaris	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
ZB0212	Echinocyamus pusillus	0	1	5	0	31	9	45	15	56	0	0	2	8	0	0	0	0	0
ZB0222	Echinocardium	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ZB0223	Echinocardium cordatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB0296	Leptosynapta inhaerens	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0

APPENDIX L CLUSTER ANALYSIS OF INFAUNAL GRAB DATA

Rampion Wind Farm J/1/03/1836



Site classifications based on 4th root transformed infaunal data, Rampion site.

APPENDIX M- BIOMASS DATA

Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	CR001	CR002	CR004	CR005	CR006	CR007	CR008	CR009	OW001	OW002	OW003	OW004	OW005	OW006	OW007
Polychaeta	0.0750	0.9907	0.2503	1.5147	0.1157	0.0515	0.0311	0.0260	0.2032	0.1052	0.2715	0.1422	0.1050	0.0035	0.3960
Crustacea	0.1486	0.0728	0.0030	0.0000	2.6076	0.0005	0.0120	0.0006	0.0009	0.0031	0.0000	0.0009	0.0426	0.0000	0.0126
Molluscs	0.0000	0.2122	0.2860	0.0655	0.0079	0.0302	0.8746	0.4035	1.4676	0.1952	1.5287	0.5300	0.0772	0.0000	0.3414
Echinoderms	0.0000	0.0000	0.0000	0.4944	0.0022	26.8780	0.0000	0.0000	49.1370	0.1831	0.0281	32.5200	0.4228	0.0277	1.3358
Others	0.0000	0.0032	0.0601	8.4839	0.2021	0.0000	0.0015	0.0014	0.0180	0.0092	nr	0.0054	0.0188	0.0008	0.0010
Total	0.2236	1.2789	0.5994	10.5585	2.9355	26.9602	0.9192	0.4315	50.8267	0.4958	1.8283	33.1985	0.6664	0.0320	2.0868

APPENDIX M- BIOMASS DATA

Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	RE001	RE003	RE004	RE005	RE006	RE007	RE008	RE009	RE010	RE011	RE014	TE001	TE002	TE003	TE004
Polychaeta	1.0193	1.1009	0.1562	0.1851	0.1033	0.0571	0.3527	1.2428	0.0107	1.5752	0.1198	2.4621	0.4040	0.0634	0.6135
Crustacea	0.0195	2.0330	0.0091	0.0129	0.0074	1.2736	0.5240	2.2196	0.0000	0.1140	0.0075	0.0045	0.0121	0.0144	0.0075
Molluscs	0.9005	1.1251	0.0623	1.3626	0.0482	0.3256	54.8343	0.0198	0.0230	7.4998	0.5590	1.0142	0.0402	0.5571	4.1656
Echinoderms	0.0000	1.0237	0.0471	0.6548	0.0085	0.2532	1.1289	1.4033	0.0000	2.1013	0.7640	31.8600	0.4318	2.5613	0.1366
Others	0.1157	0.0076	0.0018	0.0040	0.0015	0.0166	0.0014	0.0040	0.0027	0.0152	0.0000	0.0063	0.0076	0.0000	0.0215
Total	2.0550	5.2903	0.2765	2.2194	0.1689	1.9261	56.8413	4.8895	0.0364	11.3055	1.4503	35.3471	0.8957	3.1962	4.9447

APPENDIX M- BIOMASS DATA

Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	TE005	TE006	TE007	TE008	TE009	TE010	WF001	WF002	WF003	WF004	WF005	WF006	WF007	WF008	WF009
Polychaeta	0.0048	0.1102	1.8850	0.9046	0.9705	1.1453	1.6587	0.0345	0.0512	0.1112	2.4723	0.0201	2.9696	0.0494	0.8261
Crustacea	0.0012	0.0529	0.0408	2.7446	nr	0.0088	0.0072	0.0024	0.0009	0.0112	11.7916	0.0016	0.0461	0.0025	5.4213
Molluscs	0.0014	0.3374	0.5326	0.1830	0.0307	1.6884	3.5772	0.0193	0.2254	0.0367	3.0528	0.4110	11.5810	1.0587	1.0784
Echinoderms	0.0280	0.0000	0.0793	0.5242	0.2557	0.7321	0.0757	0.0008	0.0000	2.4307	0.7171	nr	1.3170	0.0988	1.1873
Others	0.0505	0.0000	0.0030	0.0007	0.0189	0.0270	0.0029	0.0063	0.0000	0.0005	0.0292	0.0133	0.0257	0.0017	0.0358
Total	0.0859	0.5005	2.5407	4.3571	1.2758	3.6016	5.3217	0.0633	0.2775	2.5903	18.0630	0.4460	15.9394	1.2111	8.5489

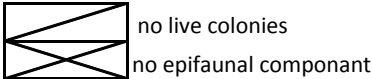
APPENDIX M- BIOMASS DATA

Rampion Wind Farm J/1/03/1836

Faunal Biomass (Wet blotted weight - gram)

TaxonName	WF010	WF011	WF012	WF013	WF014	WF015	WF016	WF017	WF018	WF019
Polychaeta	1.5907	0.1684	0.0247	0.2871	0.0177	0.4867	0.6395	0.0575	0.1832	0.0461
Crustacea	0.0446	2.8941	0.0000	0.7592	0.0007	0.0001	0.0063	0.0083	0.0007	0.0077
Molluscs	0.6206	0.3472	0.0000	3.6126	0.0305	4.1424	0.7527	0.4967	0.0000	0.0728
Echinoderms	0.5743	1.2312	0.0000	5.3394	0.3631	1.7282	0.0006	0.0129	0.0000	0.0214
Others	0.0079	nr	0.0000	0.0117	0.0000	nr	0.0000	0.0112	0.0000	0.0000
Total	2.8381	4.6409	0.0247	10.0100	0.4120	6.3574	1.3991	0.5866	0.1839	0.1480

Epifauna abundance



Species Name	MCS Code	CR001.1	CR002.1	CR004.2	CR005.1	CR006.1	CR007.1	CR008.1	CR009.1	OW001.1	OW002.1	OW003.1	OW004.1	OW005.1	OW006.1	OW007.1	RE001.1	RE003.1	RE004.1	RE005.1	RE006.1
PORIFERA	C0001				P									P		P		P	P	P	P
Tethya citrina	C0340																	P			
Polymastia penicillus	C0361																		P		
Suberitidae	C0387																				
Timea spp.	C0432										P							P	P	P	
Timea stellifasciata	C0438																				
Trachycladus minax	C0470																				
Cliona spp. (agg.)	C0475				P	P								P			P	P	P	P	P
Bubaris vermiculata	C0578																				P
Raspailiidae	C1258																				
Eurypon spp.	C1286																	P			
Bougainvilliidae	D0246					P					P										
CAMPANULINOIDEA	D0338			P	P																
Calycella syringa	D0348																	P			
Haleciidae sp.	D0389																	P			
Halecium spp.	D0390										P						P				P
Halecium halecinum	D0392																				
Sertulariidae	D0407																				
Abietinaria abietina	D0409			P														P			
Diphasia sp.	D0413											P									
Hydrallmania falcata	D0424										P		P			P		P		P	P
Sertularella spp.	D0427																				
Sertularia sp. (juv)	D0433																			P	P
Sertularia spp.	D0433			P	P									P			P	P			
Kirchenpaueria pinnata	D0455																	P			
Campanulariidae	D0491																	P			
Obeliinae	D0506				P																
Obelia spp.	D0517										P							P			
Obelia dichotoma	D0519																				
Alcyonium digitatum	D0597					P															
Epizoanthus couchii	D0649															22		17	22		2
ACTINIARIA	D0662									1							12				
ACTINIARIA sp. (juv)	D0662										2							1			
Pedicellina spp.	K0045																				
Barentsia spp.	K0050																	P			
Pomatoceros spp.	P1339				1													12		6	
CIRRIPEDIA sp. (juv.)	R0014					5												76		61	181
Verruca stroemia	R0041																	2	12	8	
Balanus crenatus	R0077																	2			
Anomiidae (juv.)	W1805																	12		4	
Crisia spp.	Y0013																	P			
Tubuliporidae	Y0026				P													P	P	P	P
Diastoporidae	Y0037																	P			
Eurystrotos compacta	Y0039				P													P	P	P	P
Plagioecia patina	Y0041				P																
Plagioecia sarniensis	Y0042																			P	
Dispirella hispida	Y0066				P									P				P	P	P	P

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance

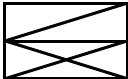


no live colonies

no epifaunal component

[illegible]

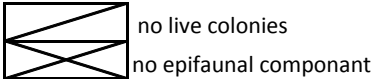
Epifauna abundance



no live colonies
no epifaunal componant

Species Name	MCS Code	CR001.1	CR002.1	CR004.2	CR005.1	CR006.1	CR007.1	CR008.1	CR009.1	OW001.1	OW002.1	OW003.1	OW004.1	OW005.1	OW006.1	OW007.1	RE001.1	RE003.1	RE004.1	RE005.1	RE006.1
Cellepora pumicosa	Y0495																	P			
Lagenipora lepralioides	Y0502																		P	P	P
Turbicellepora avicularis	Y0504																				
Rhynchozoon bispinosum	Y0533																			P	P
ASCIDIACEA sp. (juv.)	ZD0002			2	1	1											1				
Didemnidae	ZD0041																				
Polycarpa fibrosa	ZD0112			1	2																
Dendrodoa grossularia	ZD0120				1													3	4	16	12
Pyura squamulosa	ZD0140																			1	
Corallinaceae	ZM0194				P	P												P		P	

Epifauna abundance

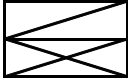


Species Name	MCS Code	RE007.1	RE008.1	RE009.1	RE010.1	RE011.1	RE014.1	TE001.1	TE002.1	TE003.1	TE004.1	TE005.1	TE006.1	TE007.1	TE008.1	TE009.1	TE010.1	WF001.1	WF002.1	WF003.1	WF004.1
PORIFERA	C0001		P			P					P	P	P			P					
Tethya citrina	C0340																				
Polymastia penicillus	C0361																				
Suberitidae	C0387			P																	
Timea spp.	C0432																				
Timea stellifasciata	C0438	P				P															
Trachycladus minax	C0470															P					
Cliona spp. (agg.)	C0475			P		P										P	P			P	
Bubaris vermiculata	C0578																				
Raspailiidae	C1258																				
Eurypon spp.	C1286					P															
Bougainvilliidae	D0246																				
CAMPANULINOIDEA	D0338																				
Calycella syringa	D0348																				
Haleciidae sp.	D0389																				
Halecium spp.	D0390	P													P	P	P				
Halecium halecinum	D0392																				
Sertulariidae	D0407			P																	
Abietinaria abietina	D0409																				
Diphasia sp.	D0413																				
Hydrallmania falcata	D0424	P		P						P			P		P	P	P				
Sertularella spp.	D0427										P										
Sertularia sp. (juv)	D0433	P											P								
Sertularia spp.	D0433																				
Kirchenpaueria pinnata	D0455																				
Campanulariidae	D0491										P										
Obeliinae	D0506																				
Obelia spp.	D0517										P										
Obelia dichotoma	D0519																				
Alcyonium digitatum	D0597																				
Epizoanthus couchii	D0649	1												2		4	1	25			
ACTINIARIA	D0662					1															
ACTINIARIA sp. (juv)	D0662										2					4					
Pedicellina spp.	K0045																				
Barentsia spp.	K0050																P				
Pomatoceros spp.	P1339					1															
CIRRIPEDIA sp. (juv.)	R0014			8		51					7										
Verruca stroemia	R0041					1							1								
Balanus crenatus	R0077										5										
Anomiidae (juv.)	W1805												1								
Crisia spp.	Y0013																				
Tubuliporidae	Y0026		P	P	P	P										P		P			
Diastoporidae	Y0037					P							P								
Eurystrotos compacta	Y0039		P																		
Plagioecia patina	Y0041																				
Plagioecia sarniensis	Y0042																				
Dispirella hispida	Y0066	P	P	P		P								P							

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance

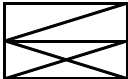


no live colonies

no epifaunal component

[illegible]

Epifauna abundance



no live colonies

no epifaunal component

Species Name	MCS Code	RE007.1	RE008.1	RE009.1	RE010.1	RE011.1	RE014.1	TE001.1	TE002.1	TE003.1	TE004.1	TE005.1	TE006.1	TE007.1	TE008.1	TE009.1	TE010.1	WF001.1	WF002.1	WF003.1	WF004.1
Cellepora pumicosa	Y0495					P															
Lagenipora lepralioides	Y0502	P		P																	
Turbicellepora avicularis	Y0504					P															
Rhynchozoon bispinosum	Y0533	P			P	P										P	P				
ASCIDIACEA sp. (juv.)	ZD0002										7										
Didemnidae	ZD0041										P										
Polycarpa fibrosa	ZD0112																	1			
Dendrodoa grossularia	ZD0120	1														4					
Pyura squamulosa	ZD0140																				
Corallinaceae	ZM0194					P	P											P	P		

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance



no live colonies

no epifaunal component

Species Name	MCS Code	WF005.1	WF006.1	WF007.1	WF008.1	WF009.1	WF010.1	WF011.1	WF012.1	WF013.1	WF014.1	WF015.1	WF016.1	WF017.1	WF018.1	WF019.1
PORIFERA	C0001				P									P		
Tethya citrina	C0340															
Polymastia penicillus	C0361															
Suberitidae	C0387															
Timea spp.	C0432											P				
Timea stellifasciata	C0438															
Trachycladus minax	C0470															
Cliona spp. (agg.)	C0475											P				
Bubaris vermiculata	C0578															
Raspailiidae	C1258				P											
Eurypon spp.	C1286															
Bougainvilliidae	D0246															
CAMPANULINOIDEA	D0338															
Calycella syringa	D0348															
Haleciidae sp.	D0389															
Halecium spp.	D0390			P												
Halecium halecinum	D0392	P														
Sertulariidae	D0407															
Abietinaria abietina	D0409															
Diphasia sp.	D0413				P											
Hydrallmania falcata	D0424				P	P	P					P	P			
Sertularella spp.	D0427															
Sertularia sp. (juv)	D0433							P								
Sertularia spp.	D0433															
Kirchenpaueria pinnata	D0455								P							
Campanulariidae	D0491															
Obeliinae	D0506															
Obelia spp.	D0517															
Obelia dichotoma	D0519	P														
Alcyonium digitatum	D0597															
Epizoanthus couchii	D0649					13	4					27				
ACTINIARIA	D0662															
ACTINIARIA sp. (juv)	D0662	1										1				
Pedicellina spp.	K0045				P											
Barentsia spp.	K0050															
Pomatoceros spp.	P1339	2										1				
CIRRIPIEDIA sp. (juv.)	R0014				5							123				
Verruca stroemia	R0041											2				
Balanus crenatus	R0077															
Anomiidae (juv.)	W1805											1				
Crisia spp.	Y0013															
Tubuliporidae	Y0026															
Diastoporidae	Y0037															
Eurystrotos compacta	Y0039															
Plagioecia patina	Y0041															
Plagioecia sarniensis	Y0042															
Disporella hispida	Y0066															

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance



no live colonies

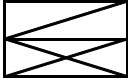
no epifaunal component

[illegible]

APPENDIX N- SPECIES LIST FOR EPIFAUNAL GRAB SPECIES

Rampion Wind Farm J/1/03/1836

Epifauna abundance



no live colonies

no epifaunal component

Species Name	MCS Code	WF005.1	WF006.1	WF007.1	WF008.1	WF009.1	WF010.1	WF011.1	WF012.1	WF013.1	WF014.1	WF015.1	WF016.1	WF017.1	WF018.1	WF019.1
Cellepora pumicosa	Y0495									/	X					
Lagenipora lepralioides	Y0502									/	X					
Turbicellepora avicularis	Y0504									/	X					
Rhynchozoon bispinosum	Y0533									/	X					
ASCIDIACEA sp. (juv.)	ZD0002	1								/	X			2		
Didemnidae	ZD0041									/	X					
Polycarpa fibrosa	ZD0112					1				/	X					
Dendrodoa grossularia	ZD0120									/	X	5				
Pyura squamulosa	ZD0140									/	X					
Corallinaceae	ZM0194		P							/	X					

APPENDIX O VIDEO ANALYSIS DATA

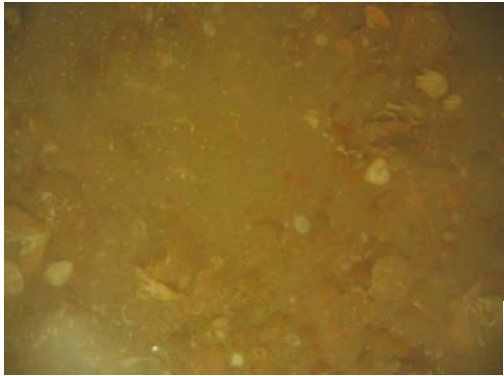
Rampion Benthic (J/1/03/1836)

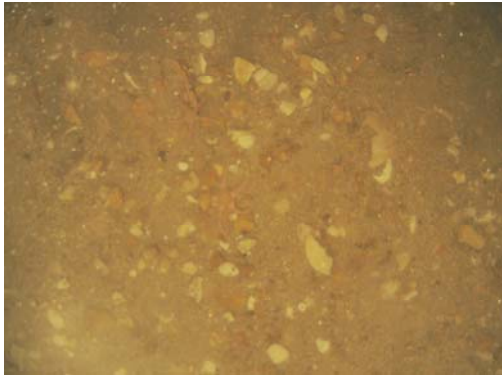
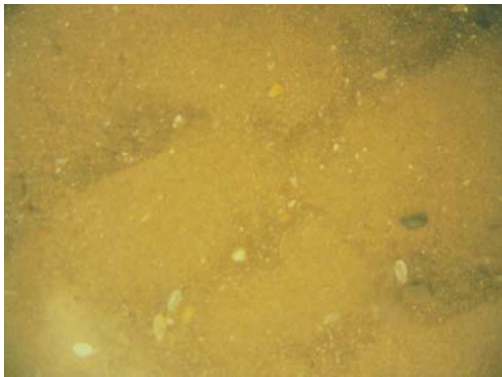
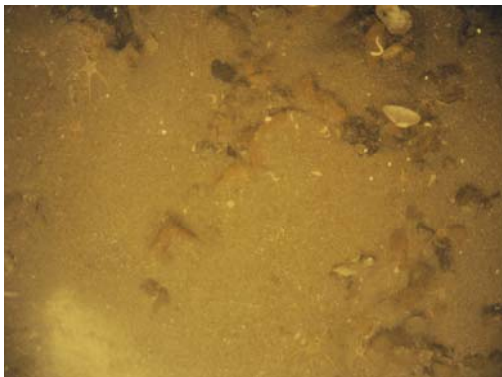
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR1.1	Sand	Slightly shelly, slightly gravelly sand.	Sparse and short algal turf. <i>Asterias rubens</i>	
CR2	Sand	Slightly shelly, slightly gravelly sand.	<i>Asterias rubens</i> , Flat fish	

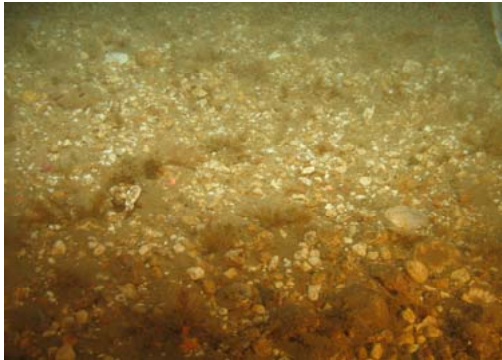
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR3	Bedrock with boulders, and a gravelly cobbly pebbly overlay.	Broken chalk bedrock with small boulders and a dense overlay of sandy cobbly gravelly pebbles.	<i>Pomatoceros</i> sp.(noticeably dense at this site), Hydroid turf species, <i>Asterias rubens</i> , <i>Psammechinus miliaris</i> , Actiniaria spp. (<i>Sagartia</i> spp and <i>Cereus pedunculatus</i>), <i>Anemonia viridis</i> .	
CR4.1 Video only as substrate too coarse for grab.	Cobbly pebbly gravel.	Area of compact hard ground, possibly bedrock, with a thick coarse sediment overlay. Shelly, sandy, cobbly pebbly gravel.	<i>Alcyonium digitatum</i> , <i>Pomatoceros</i> sp., Hydroid turf species, <i>Asterias rubens</i> , Actiniaria spp., (<i>Sagartia</i> spp and <i>Cereus</i> sp.), <i>Corallinaceae</i> , very notable at this site). <i>Psammechinus miliaris</i> , Paguridae, <i>Urticina</i> sp.	
CR4.2	Cobbly pebbly gravel.	Area of compact hard ground, possibly bedrock, with a thick coarse sediment overlay. Shelly, sandy, cobbly pebbly gravel.	<i>Alcyonium digitatum</i> , <i>Pomatoceros</i> sp., Hydroid turf species, <i>Asterias rubens</i> , Actiniaria spp., (<i>Sagartia</i> spp), <i>Corallinaceae</i> , very notable at this site). <i>Psammechinus miliaris</i> , Paguridae, <i>Urticina</i> sp.	

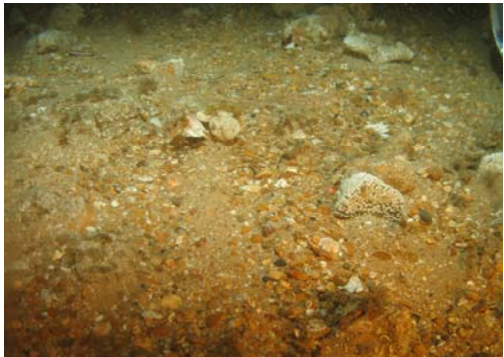
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR5	Sandy pebbly gravel.	Slightly shelly sandy pebbly gravel with occasional cobble.	<i>Asterias rubens</i> , Hydroid turf species, <i>Urticina</i> sp., <i>Pecten maximus</i> , Paguridae.	
CR6	Sandy gravel.	Shelly sandy pebbly gravel with occasional cobbles.	<i>Pomatoceros</i> sp., <i>Asterias rubens</i> , <i>Ophiura albida</i> , <i>Alcyonium digitatum</i> , Paguridae, <i>Psammechinus miliaris</i> .	
CR7	Sand	Slightly shelly, slightly gravelly rippled sand with <i>Echinocardium cordatum</i> .	<i>Echinocardium cordatum</i> , <i>Asterias rubens</i> , Hydroid turf species, Paguridae.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
CR8	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Asterias rubens</i> , Hydroid turf species, Paguridae, <i>Ophiura albida</i> , <i>Ophiura ophiura</i> .	
CR9	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Asterias rubens</i> , Paguridae, <i>Ophiura albida</i> , <i>Ophiura ophiura</i> . <i>Pecten maximus</i> .	
OW1	Sand	Slightly shelly sand. Small rare clay/mud deposits.	Paguridae, <i>Asterias rubens</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
OW2	Sand	Slightly shelly pebbly gravelly rippled sand with the occasional cobble.	<i>Ophiura albida</i> , Paguridae, <i>Asterias rubens</i> .	
OW3	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly pebbly gravelly sand.	Paguridae, <i>Ophiura albida</i> .	
OW4	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly rippled sand. Silt deposition within recesses of ripples.	No noted fauna.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
OW5	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly gravelly rippled sand. Silt deposition within recesses of ripples. Varying dominance of sand across the area. Silt deposition aggregating within recesses of rippled sand.	<i>Ophiura albida</i>	
OW6	Sand	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly gravelly rippled sand. Silt deposition within recesses of ripples.	No noted fauna.	
OW7	Slightly shelly gravelly pebbly sand.	Reduced area footage due to poor visibility. Low visibility camera system used. Substrate with the occasional cobble.	<i>Aequipecten opercularis</i> , <i>Ophiura albida</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE1	Shelly sandy gravel with cobbles and small boulders.	Coarse shelly sandy gravel with small cobbles sparsely deposited. Area appears compacted in places. Small boulders evident, potentially bedrock exposures.	Hydroid turf species, <i>Asterias rubens</i> .	
RE2	Chalk bedrock with shelly sandy gravel and occasional cobble	Extensive area of chalk bedrock exposure often covered with a layer of shelly gravel and pebbles. Occasional cobble/small boulder. Dense silt deposition in some areas. Rich faunal turf of soft coral and anemones. Low lying <i>Sabellaria spinulosa</i> coverage over an extensive proportion of the transect.	<i>Sabellaria spinulosa</i> , <i>Alcyonium digitatum</i> , <i>Urticina</i> sp, Actiniaria spp (<i>Sagartia</i> spp and others), <i>Flustra foliacea</i> , Hydroid turf including Plumulariidae, <i>Pagurus bernhardus</i> .	
RE3	Cobbly sandy shelly gravel with the occasional boulder. Small patches of rippled sand.	Veneer of coarse chalky cobbly sandy shelly gravel over what appears to be chalk bedrock, not clearly visible but probable. Occasional small patches of rippled sand. Surface silt deposition.	<i>Asterias rubens</i> , Hydroid turf species, <i>Aequipecten opercularis</i> , <i>Urticina</i> sp, <i>Pecten maximus</i> , <i>Psammechinus miliaris</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE4	Sandy pebbly gravel.	Sandy pebbly gravel with an occasional cobble. Rare boulder.	Hydroid turf species, <i>Asterias rubens</i> , <i>Aequipecten opercularis</i> , <i>Nemertesia antennina</i> , <i>Alcyonium digitatum</i> , <i>Ophiura albida</i> .	
RE5	Sandy pebbly gravel.	Sandy pebbly gravel with an occasional cobble. Rare boulder.	Hydroid turf species, <i>Asterias rubens</i> , <i>Aequipecten opercularis</i> , <i>Nemertesia antennina</i> , <i>Alcyonium digitatum</i> , <i>Ophiura albida</i> .	
RE6	Sandy cobbly pebbly gravel	Sandy pebbly gravel with a notable and consistent deposition of cobbles along the transect. Cobbles with a dense cover of barnacles. Occasional boulder.	Cirripedia, <i>Aequipecten opercularis</i> , <i>Pecten maximus</i> , <i>Nemertesia antennina</i> , Hydroid turf species.	

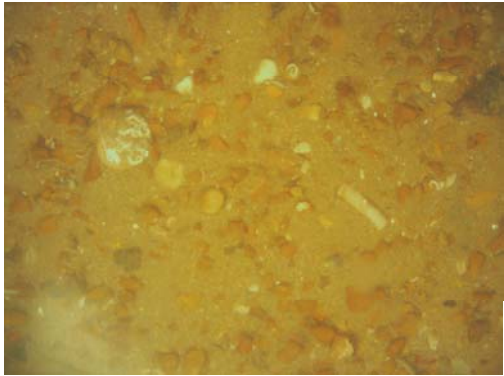
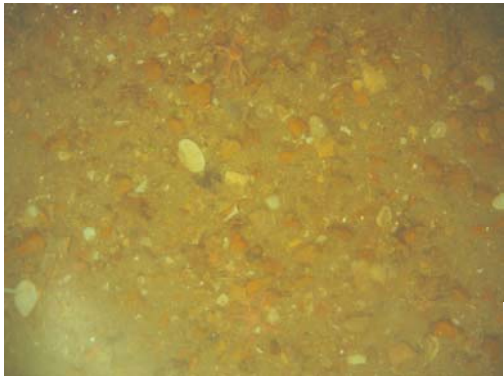
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE7	Shelly pebbly sandy gravel	Sandy pebbly gravel with the occasional rare cobble	Fauna very sparse. <i>Pecten maximus</i> , <i>Aequipecten opercularis</i> , <i>Ophiura albida</i> .	
RE8	Shelly gravelly pebbles.	Dense and 'clean' gravelly pebble substrate with a small shell fraction.	Very sparse fauna. <i>Pecten maximus</i> , <i>Aequipecten opercularis</i> , <i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , <i>Asterias rubens</i> .	
RE9	Shelly sandy gravelly pebbles.	Dense and 'clean' sandy gravelly pebble substrate with a small shell fraction.	Very sparse fauna. <i>Pecten maximus</i> , <i>Aequipecten opercularis</i> , <i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , <i>Asterias rubens</i> .	

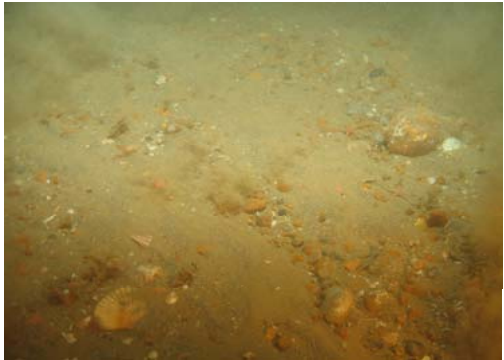
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE10	Substrate 1 – Sand	Slightly shelly rippled sand with silt deposits within recesses of ripples. Raised banks of sand regularly apparent throughout the transect.	Paguridae.	
	Substrate 2 – Piddock clay 'bedrock' with surface deposits of shelly gravelly sand	Clay bedrock exposures with a patchy covering of shelly gravelly sand. Occasional cobble and small boulder where most of fauna noted. Substrate evident as a quarter of the overall length within the middle of the transect before the return of substrate 1.	Paguridae, <i>Urticina</i> sp., <i>?Pentapora fascialis</i> <i>Tubularia indivisa</i> , Porifera.	
RE11	Shelly sandy cobbly gravelly pebbles.	Reduced area footage due to poor visibility. Low visibility camera system used. Very coarse substrate.	Hydroid turf species, <i>Lanice conchilega</i> , <i>Psammechinus miliaris</i> , <i>Ophiura albida</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
RE12	Pebbly gravel.	Slightly shelly sandy cobbly pebbly gravel. Very dense coarse substrate.	<i>Asterias rubens</i> , Hydroid turf species, <i>Alcyonium digitatum</i> , <i>Dendrodoa grossularia</i> , <i>Actiniaria</i> sp. (<i>Sagartia</i> spp.), <i>Ophiura albida</i> , <i>Aequipecten opercularis</i> , <i>Sabellaria</i> tubes (low lying and rare)	
RE13	Chalk bedrock reef with cobbly, gravelly, pebbly veneer.	Chalk bedrock reef, broken up to form pebbly cobbly deposits with a further veneer of shelly cobbly pebbly gravel. Bedrock more obvious in some places, appearing more just as a consolidated coarse substrate in other areas.	Mixed algal turf, <i>Asterias rubens</i> , <i>Urticina</i> sp, <i>Anemonia viridis</i> , <i>Actiniaria</i> (<i>Sagartia</i> spp), <i>Ascidia</i> spp, <i>Lanice conchilega</i> , Porifera, <i>Styela clava</i> , Hydroid turf species, <i>Psammechinus miliaris</i>	
RE14	Sand.	Slightly shelly rippled sand with cobbles and pebble deposits and the occasional small boulder. Most fauna concentrated on the hard cobbles and boulders.	<i>Mytilus edulis</i> (small clusters on cobbles and boulders), <i>Dendrodoa grossularia</i> (on sediment + hard substrate), <i>Styela clava</i> , Hydroid turf species, <i>Pecten maximus</i> , <i>Urticina</i> sp., <i>Asterias rubens</i> , <i>Ophiura albida</i> , <i>Lanice conchilega</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE1.1 Moved and site re-labelled 1.1 due to fishing gear.	Sand	Slightly shelly, slightly gravelly sand.	<i>Asterias rubens</i> , <i>Ophiura albida</i> , Paguridae, <i>Buglossidium luteum</i> <i>Corystes cassivelaunus</i> , <i>Ophiura ophiura</i> ,	
TE2.1 Moved and site re-labelled 2.1 due to fishing gear.	Sand	Slightly shelly, slightly gravelly rippled sand with the occasional cobble.	<i>Asterias rubens</i> , <i>Ophiura albida</i> , Paguridae, <i>Ophiura ophiura</i> , <i>Aequipecten opercularis</i> , Hydroid turf species, <i>Urticina</i> sp., <i>Actiniaria</i> sp. (<i>Sagartia</i> sp),	
TE3	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Ophiura ophiura</i> , Paguridae	

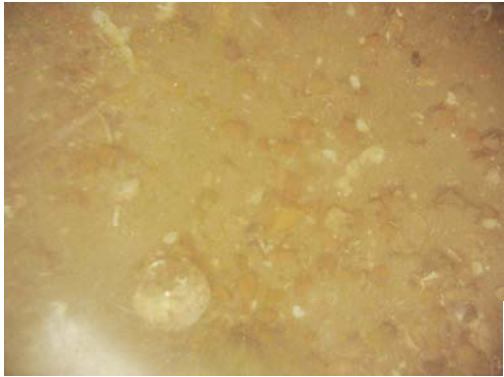
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE4	Sand	Rippled shelly sand with greater shell deposits visible as the transect progresses. Gravel and pebbles becoming a notable fraction in some areas. Sediment appearing patchily compacted. Sparse cobbles present throughout. Cobbles with hydroid turf evident.	Hydroid turf, Paguridae, <i>Ophiura albida</i> , <i>Urticina</i> sp.	
TE5	Substrate 1 – Shelly, sandy, pebbly gravel with occ cobble.	Appears to be a veneer of shelly sandy pebbly gravel over hard ground. Pebbles and cobbles seem to be chalk in origin, indicating chalk bedrock beneath veneer. Heavy silt surface deposition.	<i>Aequipecten opercularis</i> , <i>Asterias rubens</i> , <i>Ophiura albida</i> , Paguridae, Hydroid turf species.	
	Substrate 2 – Shelly sand	Transition zone leads to slightly shelly rippled sand with surface silt deposition, flocculating within the recesses of the ripples. Occasional cobble and pebble deposits.	Sparse hydroid turf, rare Paguridae, rare <i>Ophiura albida</i> .	

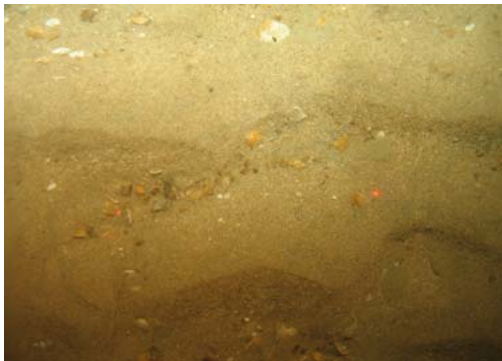
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE6	Sand	Slightly shelly slightly gravelly rippled sand with the occasional cobble. Dense silt deposit with flocculation apparent.	<i>Asterias rubens</i> , <i>Actiniaria</i> , <i>Ophiura albida</i> , <i>Cirripedia</i> on cobbles.	
TE7	Cobbly pebbly sandy gravel	Reduced area footage due to poor visibility. Low visibility camera system used. Mixed coarse substrate. Sand and gravel alternating in dominance along the transect.	<i>Pomatoceros</i> sp	
TE8	Cobbly pebbly sandy gravel	Reduced area footage due to poor visibility. Low visibility camera system used. Mixed coarse substrate. Sand and gravel alternating in dominance along the transect.	<i>Ophiura albida</i> , Hydroid turf species, <i>Aequipecten opercularis</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
TE9	Sand	Slightly shelly pebbly gravelly sand with the occasional cobble. 1 small boulder noted.	<i>Asterias rubens</i> , Paguridae..	
TE10	Cobbly pebbly sandy gravel	Mixed coarse substrate appearing compacted in some areas. Sand and gravel alternating in dominance along the transect.	<i>Ophiura albida</i> , Hydroid turf species, <i>Urticina</i> sp.	
WF01	Slightly shelly sandy cobbly gravelly pebbles/pebbly gravel.	Coarse mixed substrate with a notable proportion of pebbles and cobbles. Sparse fauna but <i>Pomatoceros</i> worms notably apparent on the larger sediment fractions.	<i>Pomatoceros</i> sp. <i>Asterias rubens</i> , Paguridae, <i>Ophiura albida</i> , <i>Aequipecten opercularis</i> , <i>Psammechinus miliaris</i> . Corallinacea.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF02	Sand	Slightly shelly, slightly pebbly gravelly sand with the occasional cobble.	<i>Pomatoceros</i> sp., Cirripedia (dense on cobbles), Paguridae, <i>Raja clavata</i> .	
WF03	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Ophiura ophiura</i> , Paguridae, Hydroid turf species.	
WF04	Sand	Slightly shelly, slightly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Ophiura ophiura</i> , <i>Pomatoceros</i> sp. Hydroid turf species.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF05	Sandy gravel.	Slightly shelly, pebbly sandy gravel with cobbles and the occasional small boulder. Evidence of small mud/clay deposits.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae, <i>Asterias rubens</i> .	
WF06	Gravelly sand.	Slightly shelly, pebbly gravelly sand with cobbles and the occasional small boulder.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae, <i>Aequipecten opercularis</i> .	
WF07	Sandy gravel.	Slightly shelly, pebbly sandy gravel with occasional cobbles.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae, <i>Asterias rubens</i> , <i>Aequipecten opercularis</i> , <i>Actinaria</i> sp., <i>Inachinae</i> sp.	

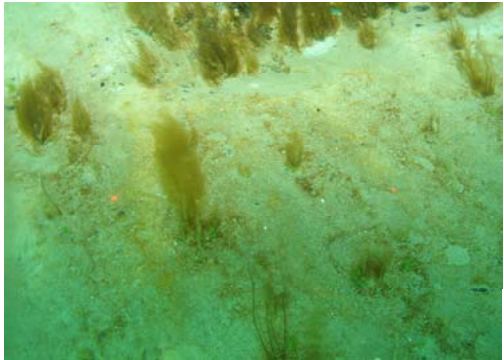
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF08	Sand	Slightly shelly, slightly pebbly gravelly sand with the occasional cobble.	<i>Ophiura albida</i> , Hydroid turf species, Paguridae.	
WF09	Slightly shelly pebbly sandy gravel	Mostly sandy gravel but also small areas of gravelly rippled sand. Occasional cobble.	<i>Asterias rubens</i> , Paguridae, <i>Ophiura albida</i> , Hydroid turf species, <i>Aequipecten opercularis</i>	
WF10	Slightly shelly pebbly sandy gravel.	Reduced area footage due to poor visibility. Low visibility camera system used. Slightly shelly pebbly sandy gravel with the occasional cobble.	<i>Ophiura albida</i> , Hydroid turf species, <i>Aequipecten opercularis</i> , <i>Pomatoceros sp.</i>	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF11	Slightly shelly gravelly sand.	Reduced area footage due to poor visibility. Low visibility camera system used.	<i>Ophiura albida</i> , Hydroid turf species, <i>Asterias rubens</i> , Paguridae.	
WF12	Sand	Slightly shelly, slightly gravelly rippled sand with the occasional cobble. Silt in recesses of ripples.	<i>Ophiura albida</i> , Hydroid turf species	
WF13	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with the occasional cobble.	<i>Ophiura albida</i> , Hydroid turf species, <i>Asterias rubens</i> , Paguridae	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF14	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with the occasional cobble.	<i>Ophiura albida</i> ,	
WF15	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with cobbles.	<i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , Paguridae, Hydroid turf species.	
WF16	Sand	Slightly shelly, slightly pebbly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Pagurus bernhardus</i> , <i>Asterias rubens</i> , Paguridae.	

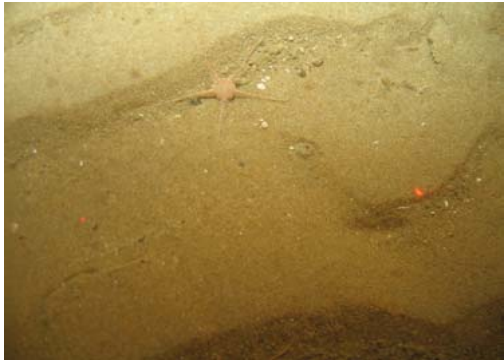
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF17	Sand	Slightly shelly, slightly pebbly gravelly rippled sand.	<i>Ophiura albida</i> , <i>Trisopterus</i> sp.	
WF18	Sand	Slightly shelly slightly gravelly rippled sand. .	Paguridae, <i>Ophiura ophiura</i> , <i>Ophiura albida</i>	
WF19	Sand	Slightly shelly slightly gravelly rippled sand. Rare small pebble sized deposits of clay/mud.	Paguridae.	

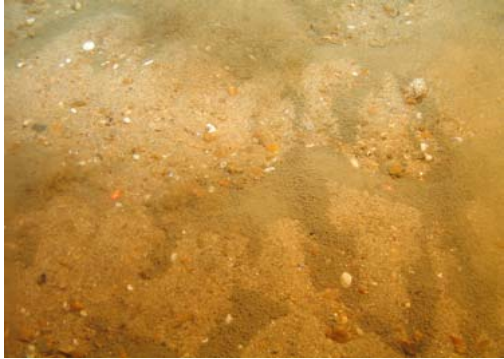
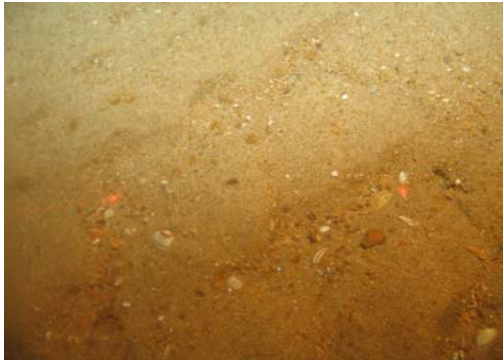
Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
WF20	Bedrock with gravelly sand surface deposits.	Extensive bedrock plateau with occasional small boulders and areas of variable height creating under-hangs and small drop offs. Deposits of cobbly pebbly sandy gravel/gravelly sand of varying thickness across the area.	Hydroid turf species, <i>Alcyonium digitatum</i> , <i>Cancer pagurus</i> , <i>Asterias rubens</i> , <i>Urticina</i> sp, Actiniaria (dense in areas <i>Sagartia</i> spp), <i>Metridium senile</i> , <i>Ophiura albida</i> , <i>Psammechinus miliaris</i> , Paguridae.	
Black Bream Transect 1	Sand	Slightly shelly slightly gravelly rippled sand with cobbles and the occasional small boulder. Note that the whole site appears as an overlay over chalk bedrock.	<i>Asterias rubens</i> , Hydroid turf species, <i>Alcyonium digitatum</i> ,	
Black Bream Transect 2	Bedrock with a mixed coarse and spatially variable sediment overlay.	Bedrock with a patchy overlay of slightly shelly sandy cobbly pebbly gravel. Some areas with rippled sand, other areas more pebbly cobbly deposits.	<i>Alcyonium digitatum</i> , <i>Asterias rubens</i> , Hydroid turf species, <i>Pomatoceros</i> sp., <i>Psammechinus miliaris</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Black Bream Transect 3	Gravelly sand over bedrock.	Slightly shelly cobbly gravelly pebbly rippled sand with the occasional boulder and bedrock exposure.	<i>Asterias rubens</i> , <i>Alcyonium digitatum</i> , Hydroid turf species, <i>Actiniaria sp</i> , Paguridae	
Sabellaria Transect 1.1	Chalk bedrock with sandy veneer.	Chalk bedrock plateau with a thin veneer of slightly shelly gravelly sand. As travel to the west, the algal cover becomes thinner and the veneer becomes a more obvious low lying rippled sand.	Dense algal cover up to 30cm long.	
Sabellaria Transect 1.2	Chalk bedrock with sandy veneer.	Chalk bedrock plateau with a thin veneer of slightly shelly gravelly sand. Very dense coverage of algae, including kelp. Algae reduces in density in places, revealing the mussel bed density. Feature:- circular recesses in bedrock approx 30cm diameter , spanning small area at start of transect.	Red, green and brown algae. <i>Mytilus edulis</i> <i>Asterias rubens</i> Flat fish	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 2.1	Chalk bedrock with sandy veneer.	Chalk bedrock plateau with a thin veneer of slightly shelly gravelly sand. Dense coverage of algae, along with a very dense and consistent mussel bed.	Mixed algal turf, <i>Mytilus edulis</i> <i>Asterias rubens</i> , <i>Anemonia viridis</i> , Solitary ascidians, <i>Actiniaria</i> sp(<i>Sagartia</i> spp), <i>Cereus pedunculatus</i> ,	
Sabellaria Transect 2.2	Chalk bedrock plateau with sandy gravel veneer.	Chalk bedrock with sandy pebbly gravelly veneer with the occasional cobble.	Mixed algal turf, <i>Mytilus edulis</i> , <i>Anemonia viridis</i> , <i>Urticina</i> sp, <i>Asterias rubens</i> , <i>Psammechinus miliaris</i> , <i>Actiniaria</i> , (<i>Sagartia</i> spp. and poss <i>Cereus pedunculatus</i> .	
Sabellaria Transect 3.1	Shelly, sandy gravel.	Cobbly, shelly, pebbly, sandy gravel. Variable substrate across the area. Shell fraction predominantly dead <i>Crepidula fornicata</i> shell. Live <i>Crepidula</i> also present.	<i>Asterias rubens</i> , <i>Crepidula fornicata</i> , Paguridae, <i>Pomatoceros</i> sp., <i>Psammechinus miliaris</i> , <i>Alcyonium digitatum</i> , <i>Urticina</i> sp, Hydroid turf species, <i>Actiniaria</i> sp, (<i>Sagartia</i> sp.)	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 3.2	Shelly, sandy gravel.	Cobbly, shelly, pebbly, sandy gravel. Variable substrate across the area. Shell fraction predominantly dead <i>Crepidula fornicata</i> shell. Live <i>Crepidula</i> also present.	<i>Asterias rubens</i> , (very concentrated in areas of <i>Crepidula</i> density), <i>Crepidula fornicata</i> <i>Pomatoceros</i> sp., <i>Psammechinus miliaris</i> , <i>Alcyonium digitatum</i> , <i>Urticina</i> sp, Hydroid turf species,	
Sabellaria Transect 4.1	Sand	Slightly shelly, slightly gravelly pebbly rippled sand with the occasional small boulder.	Hydroid turf species (notably <i>Sertularia argentea</i>), <i>Asterias rubens</i> , <i>Pomatoceros</i> sp., <i>Ophiura ophiura</i> , Paguridae, <i>Actiniaria</i> sp.	
Sabellaria Transect 4.2	Sand	Slightly shelly, slightly gravelly pebbly rippled sand with cobbles.	Hydroid turf species, <i>Asterias rubens</i> , <i>Pomatoceros</i> sp., <i>Ophiura ophiura</i> , <i>Ophiura albida</i> , Paguridae, <i>Actiniaria</i> sp.	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 5.1	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with occasional cobbles.	<i>Ophiura albida</i> , Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Hinia reticulata</i>	
Sabellaria Transect 5.2	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with occasional cobbles.	<i>Ophiura albida</i> , Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Hinia reticulata</i>	
Sabellaria Transect 5.3	Sand	Slightly shelly, slightly pebbly gravelly rippled sand with occasional cobbles.	<i>Ophiura albida</i> , Paguridae, <i>Asterias rubens</i> , <i>Ophiura ophiura</i> .	

Site Number	Sediment Description	Expanded Sediment Notes	Notable Species	Representative Image
Sabellaria Transect 6.1	Slightly shelly gravelly sand.	Slightly shelly gravelly rippled sand with dense surface deposition of silt, forming flocculating aggregations in recesses of ripples.	Paguridae, <i>Asterias rubens</i> , CARIDEA <i>Aequipecten opercularis</i> , <i>Psammechinus miliaris</i>	
Sabellaria Transect 6.2	Substrate 1 Slightly gravelly sand.	Slightly sandy gravel/gravelly rippled sand forming raised banks on occasions. Silt flocculating in recesses of sand ripples.	Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Ebalia</i> sp,	
	Substrate 2 Shelly sandy pebbly gravel with occ. cobble.	Shelly sandy pebbly gravel with occ. cobble. Appears to be a veneer over hard ground in places. Very poor low lying <i>Sabellaria</i> crust tubes visible on few pebbles and cobbles.	Paguridae, Hydroid turf species, <i>Asterias rubens</i> , <i>Actiniaria</i> spp. (predict <i>Sagartia</i> spp), <i>Pecten maximus</i> , <i>Ophiura albida</i> , <i>Inachinae</i> , <i>Cerianthus loydii</i> , <i>Urticina</i> sp.	

APPENDIX P 2M BEAM TRAWLING SPECIES LIST

Rampion Benthic J/1/03/1836

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Polymastia penicillus	C0361								P										
Suberites ficus sp. (agg.)	C0418										P	P					P	P	P
HALICHONDRIIDA	C0525									P									
Ciocalypa penicillus	C0626												P						
Ciocalypa penicillus	C0626										P								
Iophon sp.	C1050								P										
Raspailia hispida	C1321								P									P	
Tubularia indivisa	D0166													R					
Eudendrium sp.	D0218			P							P								
Bougainvillidae	D0246											P							
Hydractinia sp.	D0272									2									P
Hydractinia echinata	D0273					P	P	P	P		P			P		P			
Halecium sp.	D0390																P	P	
Halecium halecinum	D0392		P							P								P	
Abietinaria abietinaria	D0409					R	R	R	O		R		R	R			R	P	
Diphasia sp.	D0413																	P	
Hydrallmania falcata	D0424					O	P	O	F		R	R	P	R	R	P	R	P	P
Sertularella sp.	D0427											P						P	
Sertularella polyzonias	D0430											P					P		
Nemertesia sp.	D0462				P													P	
Nemertesia antennina	D0463								R			R	P						
Nemertesia ramosa	D0466						R		R	R	R	R						R	P
Aglaophenia pluma	D0481		P													P			
Obeliinae	D0506			P								P							
Obelia sp.	D0517																	P	
Obelia dichotoma	D0519																	P	
Obelia longissima	D0521				P						P						P		
Alcyonium digitatum	D0597	R	100g						<25g		50g	<25g	200g			<25g			
ACTINIARIA sp.	D0662	1				4		1			1	1		1				1	
Urticina sp.	D0682																	2	
Metridium senile	D0710			1								1							
Adamsia cariniopados	D0743		4	1		1	2	2	3			2	7	3	1	14	1	10	
Aphrodita aculeata	P0019										1			1					
Eunice cf. vittata	P0560								2										
Lagis koreni	P1107																1		
Sabellaria	P1115					4cm													
Sabellaria clumps	P1115									P	P	P					R	P	
Sabellaria reef	P1115									P									
Sabellaria spinulosa	P1117									P		P							
Thelepus cinnatus	P1254																		
Pomatoceros sp.	P1339	F on cobble	R						P			P	P	5		P			
Pomatoceros triqueter	P1341															O			
Filograna / Salmacina	P1349/P1360															R			
Scalpellum scalpellum	R0022											1					2		
Balanus crenatus	R0077				75				273				11				1	23	
Maera othonis (male)	S0519															1			
CARIDEA	S1293								1	1		1	2						
Processa canaliculata	S1363										1								
Pandalidae	S1370					1			1	2	1	1	1						
Pandalina brevisrostris	S1374					1				8		2	3						

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
<i>Pandalus</i> sp.	S1375											1	1						
<i>Pandalus montagui</i>	S1377									27	4	7	8		2	2	5	2	1
<i>Crangon</i> sp.	S1383						1						1	3					
<i>Crangon allmanni</i>	S1384			3	13	9	72		1	1	13	9	29	10	23	3	19	3	13
<i>Philocheras sculptus</i>	S1389								38	2			1			3		1	
<i>Philocheras trispinosus</i>	S1390			16	19	1	5				4	4	8				3		1
<i>Pontophilus spinosus</i>	S1393																1		
<i>Upogebia</i> sp.	S1418																	1	
<i>Upogebia deltaura</i>	S1419	1																4	
<i>Anapagurus hyndmanni</i>	S1448		1																
<i>Pagurus bernhardus</i>	S1457	2	8	4	15	59	21	67	14	23		13	11	28	17	22	6	21	62
<i>Pagurus cuanensis</i>	S1460	3	3							1	1	2	1	1				1	
<i>Pagurus prideaux</i>	S1462		3	1	1	4	7	3	9	3		8	9	12	1	18	2	11	3
<i>Galathea intermedia</i>	S1472									4					1	2			
<i>Pisidia longicornis</i>	S1482		1							1		2					1		
<i>Macropodia parva/rostrata</i>	S15xx/S1532	8	9	3	2	5			1	16	27	50	3	14	4	3	36	56	2
<i>Ebalia tuberosa</i>	S1508								2									1	
<i>Ebalia tumefacta</i>	S1509					1			2	1		1		2		2		1	
<i>Maja brachydactyla</i>	S1515									3									
<i>Hyas coarctatus</i>	S1519								6	4	1		2	1		1		2	
<i>Inachus dorsettensis</i>	S1526	1				1	1		21	7	4	34	29	2		9	10	27	
<i>Inachus phalangium</i>	S1528	1								1									
<i>Macropodia</i> sp.	S1529					3			2	1	1			1	1				
<i>Macropodia linaresi</i>	S1531								2					1	1		1	4	
<i>Macropodia tenuirostris</i>	S1533					2	3		15					3					
<i>Eurynome</i> sp.	S1535													1		1	1		
<i>Eurynome spinosa</i>	S1537									2	1	2			1		2	8	
<i>Pisa armata</i>	S1539	1								3		1							
<i>Corystes cassivelaunus</i>	S1552																		1
<i>Atelecyclus rotundatus</i>	S1555								1				1		1				
<i>Thia scutellata</i>	S1559							1											
<i>Polybiinae</i>	S1573					1													
<i>Liocarcinus depurator</i>	S1580		2									1						2	
<i>Liocarcinus holsatus</i>	S1581		3		10	23	16		8	5	2	2	5	6	4	2	7	4	128
<i>Liocarcinus marmoreus</i>	S1582												2						
<i>Liocarcinus pusillus</i>	S1584								5	1		1	3	9				3	
<i>Necora puber</i>	S1589											1							
<i>Pilumnus hirtellus</i>	S1615	6								17	1	18					1	1	
<i>Acanthochitona crinita</i>	W0086									1									
<i>Gibbula tumida</i>	W0161													1					
<i>Gibbula cineraria</i>	W0163	2																	
<i>Calliostoma zizyphinum</i>	W0182									3		1		2					
<i>Calliostoma zizyphinum</i> var. <i>lloydi</i>	W0183									1									
<i>Calliostoma granulatum</i>	W0185								1					3			1	1	
<i>Crepidula fornicata</i>	W0439									2		2	1			1			
<i>Trivia arctica</i>	W0459									1									
<i>Polinices pulchellus</i>	W0491			1															
<i>Euspira catena</i>	W0493			1	1			2	3		3			4				5	4
<i>Ocenebra erinacea</i>	W0685									4		5	1						
<i>Buccinum undatum</i>	W0708	3	24		1	4			1	91	3	5	3	10		35	3	84	
<i>Hinia reticulata</i>	W0745	6										3				1		8	2
<i>Tritonia hombergii</i>	W1250															1			
<i>Acanthodoris pilosa</i>	W1333											1					7		
<i>Archioris pseudoargus</i>	W1376										1								

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Nucula hanleyi	W1568																1		
Modiolarca tumida	W1718									6	9	6							
Pecten maximus	W1771												3	1				1	
Aequipecten opercularis	W1773	2				31	1		40	7	4	3	227	8	6	22	4	27	3
Chlamys varia	W1779								1										
Heteranomia squamula	W1809								1				1						
Laevicardium crassum	W1959		1																
Sepia officinalis	W2307				1														
Sepiola atlantica	W2329	3	3	4	5	1	3		2		1	1	1		1		4	1	7
Bryozoan crust	Y0001	O									R	R		O					
Alcyonidium diaphanum	Y0076					<25g	<25g		100g	<25g	1200g	625g	150g		<25g		1525g	100g	
Alcyonidium parasiticum	Y0081			P	P												P		
Vesicularia spinosa	Y0131																	P	
Electra pilosa	Y0178											P	P					P	
Flustra foliacea	Y0187						<25g			426g			<25g		<25g		R		
Chartella papyracea	Y0192		P																
Bugula flabellata	Y0243																P		
Bugula plumosa	Y0246	P																	
Bugula turbinata	Y0250											P							
Scrupocellaria scrupea	Y0278		P																
Scrupocellaria scruposa	Y0279											P							
Pentapora fascialis	Y0418									R									
Omalosecosa ramulosa	Y0508								P										
Anseropoda placenta	ZB0062								1										
Crossaster pappossus	ZB0075								1										
Asterias rubens	ZB0100	99	129	61	78	22	26	8	50	94	46	205	84	64	18	76	88	63	9
Ophiothrix fragilis	ZB0124	3	3		1	20	2		2	21	22	14	160	30	3	36	9	41	1
Amphipholis squamata	ZB0161										1								
Ophiura albida	ZB0168		16	53	17	274	47	14	429	1	128	16	39	924	472	25	169	1058	1458
Ophiura ophiura	ZB0170			155	57	7	1	20			266	11				7	80	117	150
Psammechinus miliaris	ZB0193	215	596	3	4	168		2	546	441	33	132	270	311	83	898	20	96	
Echinocardium cordatum	ZB0233																	1	1
Thyone fusus	ZB0262											1							
Spatangus purpureus	ZB219																	2	
Polyclinum aurantium	ZD0022																P		
Aplidium nordmanni	ZD0039																P		
Tridemnum tenerum	ZD0047									P									
Didemnum maculosum	ZD0051										P	P							
Ciona intestinalis	ZD0071		4						1		9	4	7			17		11	
Ascidella sp.	ZD0083										1								
Ascidella scabra	ZD0085										1	3							
Ascidia sp.	ZD0087								4										
Ascidia conchilega	ZD0088								3				1						
Ascidia virginea	ZD0092												1						
Styela clava	ZD0104	4																	
Polycarpa sp. (juv.)	ZD0110										2								
Polycarpa fibrosa	ZD0112										6	6					1	1	
Polycarpa pomaria	ZD0115										3	1							
Botryllus schlosseri	ZD0126								R										
Botrylloides leachi	ZD0128								P	P									
Pyura squamulosa	ZD0140								1										
Molgula sp.	ZD0146											1		1					
Molgula manhattensis	ZD0151								6		8	11	2	4		3	4	1	
Raja clavata (female)	ZF0089		1		1														

Taxon	MCS Code	CR02	CR06	CR08	CR09	OW03	OW06	OW06.2	RE07	RE11	TE02	TE04	TE05	TE08	TE09	WF01	WF04	WF05	WF14
Raja clavata (male)	ZF0089										1								
Raja montagui	ZF0094																1		
Raja montagui (female)	ZF0094												1						
OSTEICHTHYES	ZG0001								1	1		1							
Lophius piscatorius	ZG0084															1			
Diplecogaster bimaculata bimaculata	ZG0086											1							
Gadinae	ZG01??		4		1										1				
Ciliata septentrionalis	ZG0112									1									
Trisopterus sp.	ZG0141					1													
Trisopterus luscus	ZG0143										2								
Trisopterus minutus	ZG0144					4						2	6				3		
Belonidae (juv.)	ZG0183	2																	
Syngnathus acus	ZG0245										1								
Aspitrigla cuculus	ZG0262									2									
Agonus cataphractus	ZG0291				2		1				1							1	4
Cyclopterus lumpus	ZG0294										1							1	
Cyclopterus lumpus (juv.)	ZG0294			2															
Ctenolabrus rupestris	ZG0397									1									
Echlichthys vipera	ZG0405			5		2	12	8	4						1				1
Gymnammodytes semisquamatus	ZG0446						6												
Hyperoplus lanceolatus	ZG0449							1											
Callionymus lyra	ZG0452		1	1	3				1	5	3	5	2	2	2	12	3	8	1
Gobiidae	ZG0455		3		1														
Gobius niger	ZG0467																	1	
Pomatoschistus sp.	ZG0476	34		3	4					5	22	3	5		1	13	3	4	3
Pomatoschistus minutus	ZG0479										1							1	3
Pomatoschistus pictus	ZG0481		1																
Arnoglossus laterna	ZG0562						3	4			4	2	1				2	1	3
Limanda limanda	ZG0572			1		1								1					7
Microstomus kitt	ZG0574					1			3			2	2					1	
Pleuronectes platessa	ZG0578	3				6	4	2			3		1	4	2				2
Buglossidium luteum	ZG0585	21			1						10	8						9	2
Buglossidium luteum (juv.)	ZG0585			1															
Solea solea	ZG0591	1				1				1				1				2	2

Number of Species		23	22	21	23	30	20	14	41	45	45	54	43	36	23	31	36	50	27
Number of colonial species (P counts only)		1	4	3	2	2	2	1	7	7	7	12	5	1	0	4	8	14	4
Colonial Species (weighed)		3	2	0	0	4	4	2	7	4	6	6	4	4	3	3	5	3	0
Total number of species		27	28	24	25	36	26	17	55	56	58	72	52	41	26	38	49	67	31
Number of Individual solitary species		422	820	321	313	659	234	135	1508	826	659	622	957	1475	647	1233	503	1736	1874

APPENDIX Q- STONY REEF 'REEFINESS' ASSESSMENT PARAMETERS

(Taken from Irving, 2009)

Characteristic	Gp	Not a 'stony reef'	'Reefiness'		
			Low	Medium	High
Composition					
Boulders / cobbles (>64mm)	1	<64mm	Matrix- supported		Clast- supported
	2	Not suggested	Not suggested		
	3	<10%	10-40% Matrix- supported	40-95%	>95% Clast- supported
Consensus:		<10%	10-40% Matrix supported	40-95%	>95% Clast supported
Elevation					
(Topographical distinctiveness)	1	Flat, featureless seabed	<64mm	64mm-5m	>5m
	2	Must be an identifiable feature distinct from the surrounding seabed (could use MESH definition as a standard here)			
	3	<0.05m	0.05-0.30m	0.30m-5m	>5m
Consensus:		Flat or undulating seabed	<64mm	64mm-5m	>5m
Extent					
Total Area	1	Not suggested	Not suggested		
	2	<5m x 5m	← >25m ² →		
	3	<25m ²	25m ² -1km ²	1-10km ²	>10km ²
Consensus:		<25m ²	← >25m ² →		
Biota^B					
Ecosystem function	1	Dominated by infauna	Use SACFOR scale		>80% epifauna
Biological component	2		Should be biased towards physical aspects with less emphasis on biology. Should be characteristic of biogeographic region		
Function	3		Impossible to quantify		
Consensus:		Dominated by infauna			>80% epifauna
Patchiness					
(100% cover of 1m x 5m) ^A	1		1m x 50m area Clast-supported 20% cover of 1m x 5m patches	↔	1m x 50m area Matrix-supported 60% cover of 1m x 5m patches
% cover of hard substrata (>64mm constituent) within 'reef' (100m ² or 100m x 1m transect) ^A	2		>50% coverage by hard substrata, but at least 25% (of the 100%) needs to be cobble-sized or larger if smaller sediments are present.		
	3	<10%	10-50%	50-75%	>75%
Consensus:		<10%	10-50%	50-75%	>75%
Stability^B					
	1	Not stable enough to support epifauna	Could support encrusting epifauna	↔	Able to support erect epifauna
	3	Did not think that the size of physical constituents could be quantified, or the composition of the biota			
Distinctness	3	Impossible to quantify			
Sub-seabed structure	3	Group was not able to progress this further due to lack of time			

Notes:

A 1m wide areas suggested here as 1m approximates to the width of the seabed viewed by video.

B The term 'Biota' was not given as a category to be considered by the separate break-out groups. However, each group came up with their own title which, on reflection, appear very similar & are therefore grouped together.

APPENDIX R *SABELLAIRA* “REEFINESS” ASSESSMENT PARAMETERS

Range of figures which could be used as a measure of “reefiness” (Gubbay, 2007)

Characteristics	Not a Reef	'Reefiness'		
		Low	Medium	High
Elevation (Average Tube Height - cm)	<2	2-5	5-10	>10
Extent (Area covered- m ²)	<25	25-10,000	10,000-1,000,000	>1,000,000
Patchiness (% cover)	<10	10-20	20-30	>30