



# MachairWind Offshore Windfarm

## Appendix D – MachairWind 2023 Benthic Characterisation Report



SEPTEMBER 2024

DOCUMENT ID: MCW-SCH-GEO-REP-FUG-000009  
Revision 3



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# MachairWind Phase 1 Geophysical and Environmental Survey

MachairWind Offshore Windfarm OAA  
Benthic Survey Characterisation Report

Survey Period: 24 August to 8 November 2023

230633-MachairWind-V5 3 | 31 July 2024

Complete

**MachairWind Ltd**



# Document Control

## Document Information

Document Title	MachairWind Phase 1 Geophysical and Environmental Survey MachairWind Offshore Windfarm OAA Benthic Survey Characterisation Report
Fugro Project No.	210836
Fugro Document No.	230633-MachairWind-V5
Issue Number	3
Issue Status	Complete
Fugro Legal Entity	Fugro GB Limited
Issuing Office Address	1 – 9 The Curve, 32 Research Avenue North, Heriot Watt Research Park, Edinburgh, EH14 4AP, United Kingdom

## Client Information

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Client Document No.	MCW-SCH-GEO-REP-FUG-000009

## Revision History

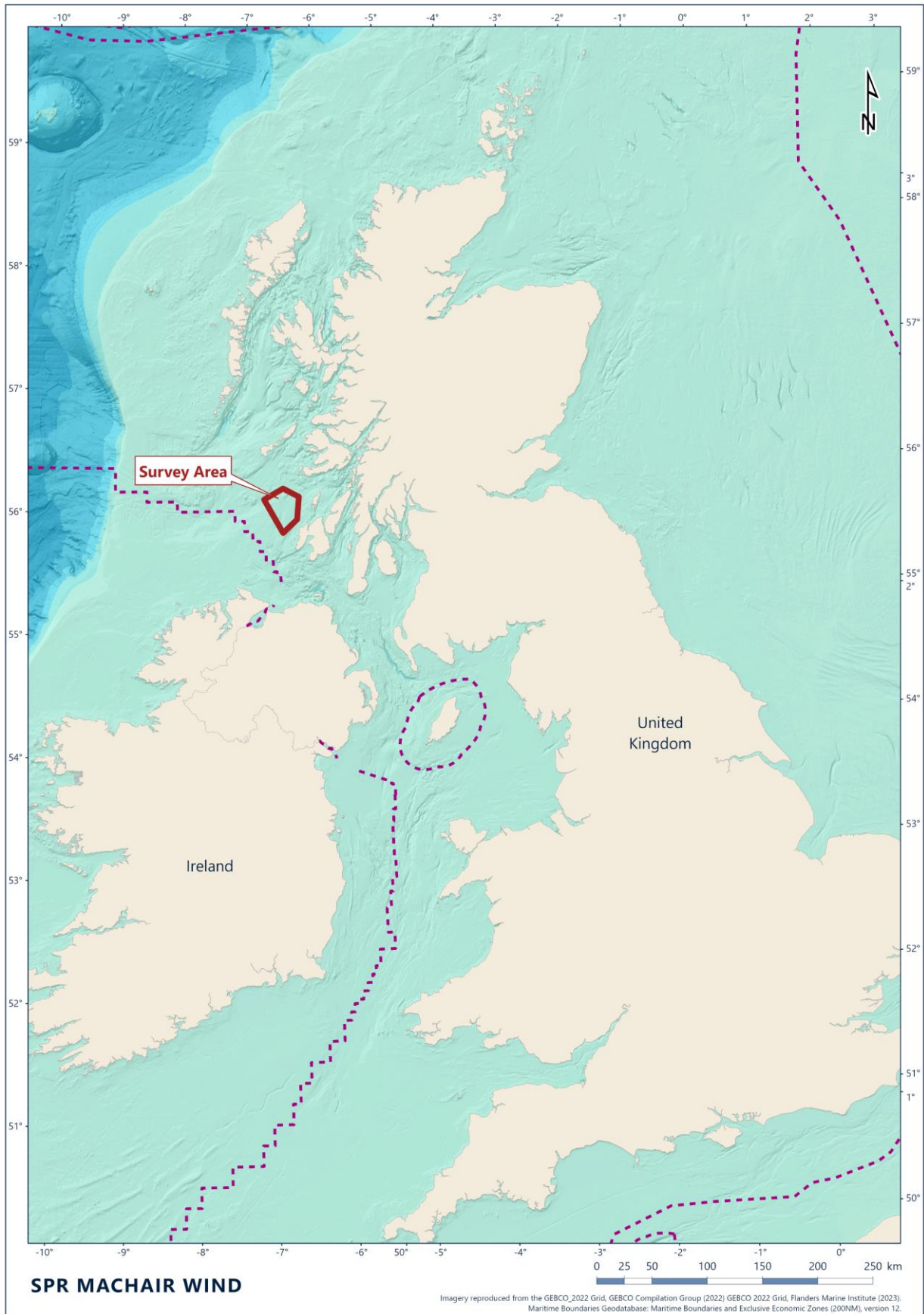
Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
1	27 March 2024	Complete	Issued as complete	[REDACTED]	[REDACTED]	[REDACTED]
2	17 June 2024	Complete	Issued as complete	[REDACTED]	[REDACTED]	[REDACTED]
3	31 July 2024	Accepted	Issued as complete	[REDACTED]	[REDACTED]	[REDACTED]

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# Frontispiece



## Executive Summary

### Introduction

On the instruction of MachairWind Ltd, Fugro performed a geophysical and environmental characterisation site survey at the proposed MachairWind Offshore Windfarm (OWF) Option Agreement Area (OAA). The survey area was located between the north-west of Islay and the west of Colonsay. Operations were conducted onboard the MV Fugro Galaxy during the survey period 24 August to 8 November 2023.

The OAA was divided into four smaller blocks (A to D). Table S.1 presents the coordinates of each block within the MachairWind OAA survey area.

Table S.1: Extents of survey blocks

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Block A	Easting	Northing	Latitude	Longitude
A1	627 181.65	6 217 830.50	56° 05' 19.20" N	006° 57' 21.36" W
A2	644 309.15	6 227 853.71	56° 10' 25.62" N	006° 40' 31.74" W
A3	650 992.84	6 224 403.66	56° 08' 26.70" N	006° 34' 11.58" W
A4	632 344.82	6 208 795.63	56° 00' 22.08" N	006° 52' 38.94" W
Block B	Easting	Northing	Latitude	Longitude
B1	632 344.82	6 208 795.63	56° 00' 22.08" N	006° 52' 38.94" W
B2	650 992.84	6 224 403.66	56° 08' 26.70" N	006° 34' 11.58" W
B3	657 867.47	6 220 856.47	56° 06' 24.06" N	006° 27' 41.22" W
B4	635 950.55	6 202 487.08	55° 56' 54.54" N	006° 49' 22.38" W
Block C	Easting	Northing	Latitude	Longitude
C1	635 950.55	6 202 487.08	55° 56' 54.54" N	006° 49' 22.38" W
C2	657 867.47	6 220 856.47	56° 06' 24.06" N	006° 27' 41.22" W
C3	658 620.44	6 220 467.77	56° 06' 10.56" N	006° 26' 58.56" W
C4	657 993.70	6 211 784.92	56° 01' 30.78" N	006° 27' 53.22" W
C5	639 483.03	6 196 307.37	55° 53' 31.20" N	006° 46' 10.38" W
Block D	Easting	Northing	Latitude	Longitude
D1	639 483.03	6 196 307.37	55° 53' 31.20" N	006° 46' 10.38" W
D2	657 993.70	6 211 784.92	56° 01' 30.78" N	006° 27' 53.22" W
D3	657 146.31	6 200 038.41	55° 55' 12.18" N	006° 29' 06.78" W
D4	644 440.30	6 187 629.57	55° 48' 45.48" N	006° 41' 41.88" W

### Survey Strategy

The environmental characterisation survey comprised 62 proposed environmental stations. Drop-down video transects were proposed at all stations. Grab sampling to acquire samples for macrofaunal, particle size distribution (PSD) and contaminants analysis was also proposed at all

stations, although the exact suite of samples required varied between stations. Water samples were to be collected for environmental deoxyribonucleic acid (eDNA) analysis at 30 of the 62 stations.

Photographic data were successfully acquired at 59 of the 62 proposed stations. The suites of sediment samples were successfully acquired at 57 of the 62 proposed stations. Water samples for eDNA analysis were successfully acquired at 29 of the 30 stations.

Three stations from Block D were removed from the scope of work at the client's request. The presence of hard substratum at two stations in Block C prevented any sample acquisition at one station and limited acquisition to a single PSD sample at another station.

## Sediment Characteristics

Sand was the dominant sediment fraction at all but two of the stations, with these instead dominated by the gravel fraction. Mud (fines) were absent from 44 of the 58 stations sampled and, where present, was recorded as a low proportion of the sediment (0.01 % to 11.17 %).

When sediments were classified in accordance with the Folk (British Geological Survey [BGS] modified) classification, five distinct sediment types were evident. Of these, 'sand' described 53 stations, 'gravelly sand' described 2 stations and 'muddy sand', 'sandy gravel' and 'gravel' each described 1 station.

The coarseness of the sediment, as expressed by classifying the mean particle size using the Wentworth (1922) scale, resulted in 35 stations being described as 'fine sand', 19 stations as 'medium sand', 2 stations as 'coarse sand' and single stations as 'fine pebble' and 'medium pebble'.

## Macrofauna

The macrofaunal community across the MachairWind OAA was dominated by annelids, which were the most abundant phylum at the majority of stations, followed by molluscs and arthropods. Of the Annelida, the polychaete *Spiophanes bombyx* was the most abundant taxon across the survey area.

Calculated community statistics showed that the macrofaunal community was of 'moderate' to 'good' diversity, with measures of evenness/dominance showing the abundance present in samples was generally evenly distributed across their constituent taxa. Multivariate statistical analysis identified six macrofaunal clusters and three ungrouped stations. The majority of the clusters/stations appeared to represent variants of a single benthic community as they shared characterising taxa, such as the numerically dominant *S. bombyx*.

The Mollusca contributed most of the macrofaunal biomass (57.0 %) across the MachairWind OAA. The Echinodermata contributed 21.5 % to biomass, the Annelida contributed 7.9 % and arthropods contributed 0.7 %. Members of 'other phyla' (Cnidaria, Platyhelminthes, Nemertea, Phoronida, Hemichordata and Chordata) contributed 13.0 % of biomass.

Overall, the macrofaunal community structure and composition recorded in this study are typical of sand sediments in the water depths sampled.

## Epifauna

Colonial epifauna were present at 37 of the 38 stations from which macrofaunal samples were collected. A total of 20 taxa were recorded, with bryozoans (*Crisiidae* and *Electra pilosa*) and cnidarians (*Leptothecata* and *Lovenella clausa*) the most frequently observed taxa.

## Seafloor Habitats and Biotopes

The results of the geophysical interpretation and the photographic analysis were reviewed, in conjunction with the physical and biological characteristics identified from grab sampling, to provide a comprehensive habitat assessment.

The main habitat assigned within the survey area and at the reference station was the Joint Nature Conservation Committee (JNCC) level 4 biotope complex 'Offshore circalittoral sand' (SS.SSa.OSa). Areas with gravelly sand, shell fragments, pebbles and infrequent cobbles were observed and classified as patches of the JNCC level 4 biotope complex 'Offshore circalittoral coarse sediment' (SS.SCS.OCS). Where numerous cobbles and large boulders occurred, the biotope complex assigned was 'Echinoderms and crustose communities' (CR.MCR.EcCr). One station was shown to contain a mosaic of 'Offshore circalittoral coarse sediment' (SS.SCS.OCS) with 'Echinoderms and crustose communities on' (CR.MCR.EcCr).

Epibenthic fauna observed included hermit crabs (*Paguroidea*), crabs (*Cancer pagurus* and *Necora puber*), brittlestars (*Ophiuroidea*, including *Ophiothrix fragilis*), starfish (*Asteroidea* including *Asterias rubens*, *Astropecten irregularis*, *Crossaster papposus*, *Marthasterias glacialis* and *Luidia sarsii*), urchins (*Echinus esculentus*) and soft corals (*Alcyonium digitatum*). A wide range of fish were recorded, with the most frequently observed comprising members of the cod family (*Gadidae*, including *Merlangius merlangus*), mackerel (*Scomber scombrus*), herring (*Clupea harengus*), dragonets (*Callionymus* sp.) and flatfish (*Pleuronectiformes*, including *Soleidae*, *Microchirus variegatus*, *Buglossidium luteum* and *Pleuronectes platessa*).

## Potentially Sensitive Habitats and Species

Three stations were assessed for the presence of the Annex I habitat 'Reef' (geogenic). Most categories of 'Stony Reef' were recorded, including 'not a reef', 'low reef' and 'medium reef'. No areas with 'high reef' potential were identified within the assessed areas.

The presence of the habitat types 'Circalittoral coarse sediment' (SS.SCS.CCS) and 'Offshore circalittoral sand' (SS.SSa.OSa) indicate the occurrence of the priority marine feature (PMF) broad scale habitat (BSH) 'Subtidal sands and gravels' and 'Offshore subtidal sands and gravels'.

Adult and juvenile Ocean Quahogs (*Arctica islandica*), an Oslo and Paris Commission (OSPAR) threatened species, were recorded from 16 macrofaunal grab samples and observed from photographic data acquired at 5 stations. The shells of dead specimens were recorded from video data acquired at 17 camera stations.

Certain fish that are considered UK Biodiversity Action Plan (BAP) species, Scottish Biodiversity List species, PMFs or OSPAR threatened and/or declining species were identified within the survey area.

These included plaice (*P. platessa*), mackerel (*S. scombrus*), whiting (*M. merlangus*), herring (*C. harengus*), sandeel (*Ammodytes marinus*) and thornback ray (*Raja clavata*).

No other Annex I habitats or Annex II species, OSPAR threatened and/or declining species and habitats, UK BAP priority habitats and species or Scottish biodiversity list species were observed within the survey area.

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## Document Arrangement

Volume No.	Volume Title	Fugro Document No.
Volume 1	Geophysical Field Operations Report	230633-MachairWind-V1
Volume 2	Geophysical Processing Report	230633-MachairWind-V2
Volume 3	Geophysical Habitat Interpretive Report	230633-MachairWind-V3
Volume 4	Geophysical Results Report	230633-MachairWind-V4
<b>Volume 5</b>	<b>Benthic Survey Interpretive Report</b>	<b>230633-MachairWind-V5</b>
Volume 6	Contaminant Chemical Analysis Report	230633-MachairWind-V6
Volume 7	eDNA Data Report	230633-MachairWind-V7
N/A	Environmental Field Report	-
N/A	MMO Report	-



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## Abbreviations

AFDW	Ash free dry weight
BAP	Biodiversity Action Plan
BGS	British Geological Survey
BRIG	Biodiversity Reporting and Information Group
BS	British Standards
BSH	Broad scale habitat
CBD	Convention of Biological Diversity
CM	Central meridian
DDV	Drop-down video
DNA	Deoxyribonucleic acid
DVV	Dual van Veen grab
eDNA	Environmental deoxyribonucleic acid sample
EEA	European Environment Agency
EIA	Environmental Impact Assessment
EMODnet	European Marine Observation Data Network
EOL	End of line
ETRS89	European Terrestrial Reference System 1989
EU	European Union
EUNIS	European Nature Information System
FA	Faunal sample A
FGBL	Fugro GB Limited
FOCI	Feature of Conservation Interest
GBIF	Global Biodiversity Information Facility
GES	Good environmental status
GNSS	Global Navigation Satellite System
HG	Hamon grab
IDA	Industrial denatured alcohol
ISO	International Organisation for Standardisation
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
LAT	Lowest Astronomical Tide
LED	Light-emitting diode
MCZ	Marine Conservation Zone
MPA	Marine Protected Area
MV	Motor vessel
N	Abundance of individuals

NCBI	National Center for Biotechnology Information
NCMPA	Nature Conservation Marine Protected Area
NF	No fix
NMBAQC	Nort East Marine Biological Association Quality Control
nMDS	Non-metric multi-dimensional scaling
NS	No sample
OAA	Option Agreement Area
OSPAR	Oslo and Paris Commission
OWF	Offshore Wind Farm
PC	Physico-chemical sample
PCR	Polymerase chain reaction
PES	Polyethersulfone
PMF	Priority Marine Feature
PRIMER	Plymouth Routines in Multivariate Ecological Research
PSA	Particle size analysis
PSD	Particle size distribution
S	Species richness
SAC	Special Area of Conservation
SACFOR	Superabundant, abundant, common, frequent, occasional and rare (semi-quantitative abundance scale)
SIMPROF	Similarity Profile
SOL	Start of line
SPA	Special Protection Area
SSS	Side scan sonar
SSSI	Site of Special Scientific Interest
THC	Total hydrocarbon content
TM	Transverse Mercator
UK	United Kingdom
UKOOA	United Kingdom Offshore Operators Association
USBL	Ultra-short baseline
UTC	Coordinated Universal Time
UTM	Universal Transverse Mercator
VHF	Very high frequency
WoRMS	World Register of Marine Species
WS	Water sample
zOTU	Zero-radius operational taxonomic unit

# 1. Introduction

## 1.1 Background

On the instruction of MachairWind Ltd, Fugro performed a characterisation survey including geophysical and environmental data acquisition at the MachairWind Offshore Wind Farm (OWF) Option Agreement Area (OAA). The survey area was located between the northwest of Islay and the west of Colonsay. Operations were conducted onboard the MV Fugro Galaxy during the survey period 24 August to 8 November 2023.

The OAA was divided into four smaller blocks (A to D) displayed in Figure 1.1. The blocks were devised to best work with the fisheries in the area, allowing fishing gear to be removed from a block prior to the vessel arriving to proceed with data and/or sample acquisition.

Table 1.1 presents the coordinates of each block within the MachairWind OAA.

Table 1.1: Survey area extents

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Block A	Easting	Northing	Latitude	Longitude
A1	627 181.65	6 217 830.50	56° 05' 19.20" N	006° 57' 21.36" W
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D1	639 483.03	6 196 307.37	55° 53' 31.20" N	006° 46' 10.38" W
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D3	657 146.31	6 200 038.41	55° 55' 12.18" N	006° 29' 06.78" W
D4	644 440.30	6 187 629.57	55° 48' 45.48" N	006° 41' 41.88" W



This report (Report No. 230633-MachairWind-V5) presents the methods and the results of the photographic and macrofaunal data analyses, and subsequent habitat classification, including assessment of potentially sensitive habitats.

The Geophysical Habitat Interpretive Report details the results of sediment particle size and macrofaunal analysis and summarises the habitats, biotope complexes and biotopes described within the survey area (Report No. 230633-MachairWind-V3).

The Contaminants Report details the results of the contaminants analysis (Report No. 230633-MachairWind-V6).

The environmental deoxyribonucleic acid (eDNA) report (Report No. 230633-MachairWind-V7) details the results of the analysis of the eDNA water samples carried out by Naturemetrics Ltd

Appendix A outlines the guidelines for use of this report.

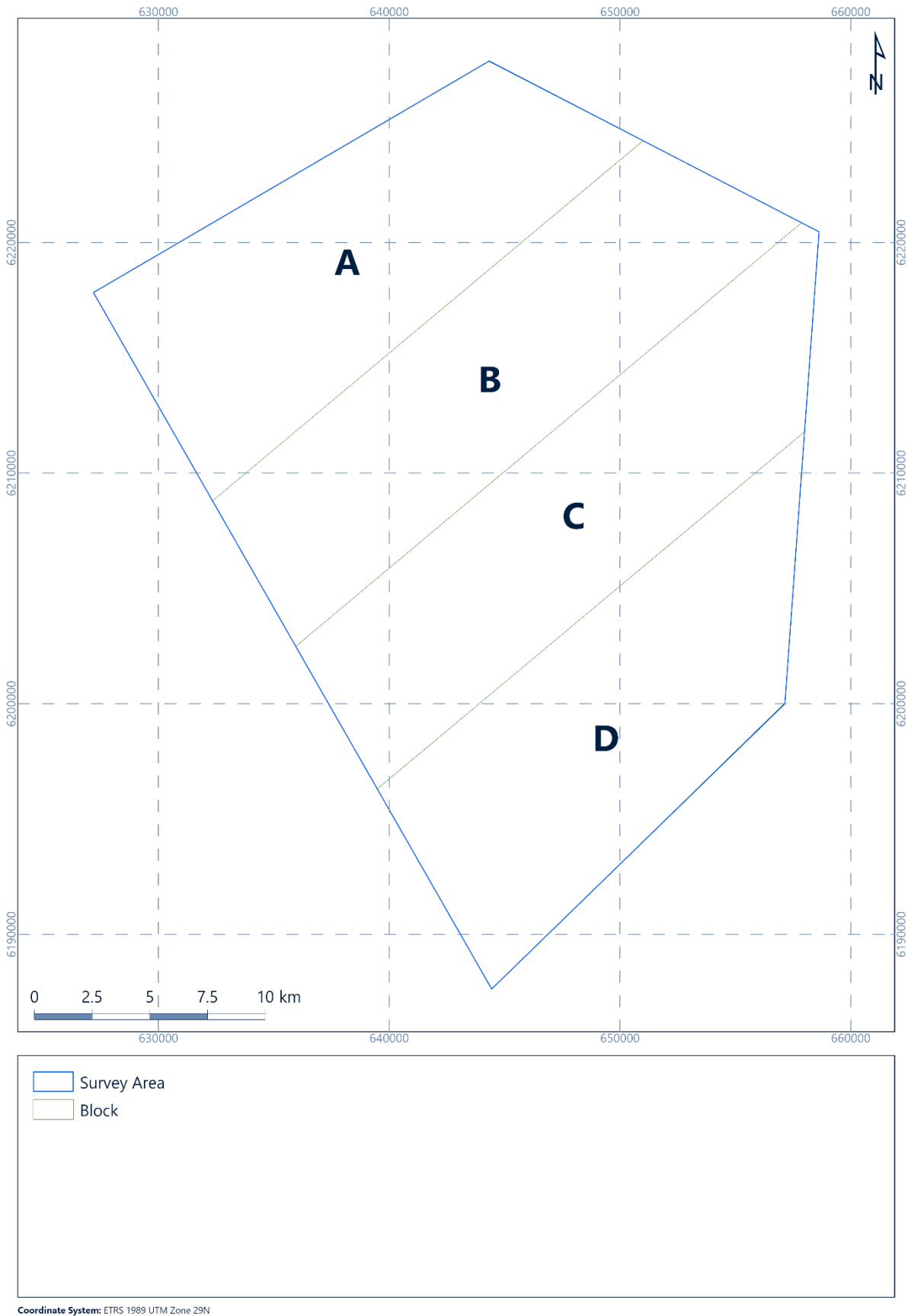


Figure 1.1: Blocks A to D in the MachairWind Option Agreement Area

## 1.2 Scope of Work

The environmental survey aimed to characterise the benthic environment within the MachairWind OAA and comprised a benthic sampling programme to collect photographic data, using a drop-down video (DDV) system and grab samples for the analysis of benthic fauna, particle size distribution (PSD) and sediment contaminants. In addition, water samples for the analysis of eDNA of mobile species were collected.

The environmental data were to be analysed in combination with the geophysical data to complete biotope mapping and identify any sensitive habitats and species, with regards to those listed as Annex I habitats or Annex II species of the Conservation of Habitats and Species Regulations 2019 and those included in the Oslo and Paris Commission (OSPAR) list of threatened and/or declining habitats and species (OSPAR, 2023), Priority Marine Features (PMFs) in Scotland's seas (Joint Nature Conservation Committee [JNCC], 2014), UK Biodiversity Action Plan (BAP) priority species (JNCC, 2019a) and habitats (JNCC, 2019b) and Scottish Biodiversity List habitats and species (NatureScot, 2020).

## 1.3 Environmental Legislation

Tables 1.2 and 1.3 summarise the relevant environmental legislation applying to the MachairWind OAA site investigation. Together they guide the identification of habitats and species of conservation importance in the study area.

Table 1.2: Environmental legislation

Legislation	Key aims
Conservation of Habitats and Species (Amendment (EU Exit) Regulations 2019), referred to as the 2019 Regulations	Transposes the requirements of the European Union (EU) Habitats Directive and some elements of the Wild Birds Directive (together forming the Nature Directives) into UK law; aims at conserving biodiversity through measures for protection of habitats listed in Annex I and species listed in Annex II of the Directives through the establishment of a national site network of protected sites, referred to as Special Areas of Conservation (SACs) and Special Protection Area (SPA).
UK Marine Strategy	Provides a framework for community action in the field of marine environmental policy through three components: <ol style="list-style-type: none"> <li>1. assessment of the state of UK seas and revised objectives for good environmental status (GES) for 2018 to 2024;</li> <li>2. monitoring progress against set targets and indicators;</li> <li>3. measuring the achievement of GES.</li> </ol>
The Wildlife and Countryside Act 1981 (as amended)	Regulates the designation of Site of Special Scientific Interest (SSSIs), which underpins the designation of Ramsar sites.
Marine and Coastal and Access Act 2009	Enables the designation of Marine Conservation Zones (MCZs) in England, Wales and UK offshore waters.
Marine (Scotland) Act 2010	Provides a framework which will help balance competing demands on Scotland's seas. The Act introduces a duty to protect and enhance the marine environment and includes measures to help boost economic investment and growth in areas such as marine renewables.

Legislation	Key aims
Oslo and Paris (OSPAR) Convention	Establishes Marine Protected Areas (MPAs).
Convention on Biological Diversity (CBD)	Conservation of biological diversity and sustainable use of its components.
Ramsar Convention	Aims at the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development.

Table 1.3: Marine Protected Areas biodiversity features

Biodiversity Feature	Description
Priority Marine Features (PMFs)	In Scotland, habitats and species of conservation interest, termed PMFs, are protected through the designation of Nature Conservation Marine Protected Areas (NCMPAs) under the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010. These features incorporate habitats and species included on the OSPAR List of threatened and/or declining species and habitats, and Priority Species and Habitats recognised under the UK Post-2010 Biodiversity Framework. Many PMFs are characteristic of the Scottish marine environment.
UK Post-2010 Biodiversity Framework priority habitats and/or species	List of important (priority) habitats and species, produced by the UK BAP, superseded by the UK Post-2010 Biodiversity Framework, under the CBD.
Scottish Biodiversity List	The Scottish Biodiversity List is a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland.
OSPAR list of threatened and/or declining species and habitats	Allows setting priorities for further conservation and protection of marine biodiversity.

## 1.4 Regional Habitats, Species and Protected Areas

Based on the European Marine Observation and Data Network (EMODnet) seafloor habitats map, the MachairWind survey area lies in an area where the following European Nature Information System (EUNIS) habitats occur (EMODnet, 2023):

- 'Atlantic circalittoral coarse sediment' (MC32);
- 'Atlantic offshore circalittoral coarse sediment' (MD32);
- 'Atlantic circalittoral sand' (MC52);
- 'Atlantic offshore circalittoral sand' (MD52);
- 'Atlantic circalittoral rock' (MC12);
- 'Atlantic offshore circalittoral rock' (MD12).

These habitats relate to the JNCC classifications:

- 'Circalittoral coarse sediment' (SS.SCS.CCS);
- 'Offshore circalittoral coarse sediment' (SS.SCS.OCS);
- 'Sublittoral sand and muddy sands' (SS.SSa);
- 'Offshore circalittoral sand' (SS.SSa.OSa);
- 'Circalittoral rock' (Cr).

The PMF broad scale habitat (BSH) 'Offshore subtidal sands and gravels' may occur within the habitats 'Sublittoral sand and muddy sands' and 'Offshore circalittoral sand'. The Annex I habitat 'reefs' may occur in areas of 'Circalittoral rock'.

Table 1.4 lists the nearby protected areas within 80 km of the survey area, summarising the sensitive habitats and species for which they were designated. Figure 1.2 illustrates the protected areas in relation to the MachairWind survey area.

Table 1.4: Summary of nearby marine protected areas relating to benthic habitats and species

Protected Area	Status	Distance* [km]	Direction*	Protected Habitats/Species
Inner Hebrides and the Minches	SAC	18	N	Annex II Species <ul style="list-style-type: none"> <li>■ Harbour porpoise (<i>Phocoena phocoena</i>)</li> </ul>
Sea of the Hebrides	NCMPA	19	N	PMFs <ul style="list-style-type: none"> <li>■ Basking shark (<i>Cetorhinus maximus</i>)</li> <li>■ Minke whale (<i>Balaenoptera acutorostrata</i>)</li> </ul>
Gruinart Flats, Islay	SPA	25	SE	Qualifying Species <ul style="list-style-type: none"> <li>■ Greenland barnacle goose (<i>Branta leucopsis</i>)</li> <li>■ Chough (<i>Pyrhacorax pyrrhacorax</i>)</li> <li>■ Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>)</li> <li>■ Canadian light-bellied brent goose (<i>Branta bernicla hrota</i>)</li> </ul>
North Colonsay and Western Cliffs	SPA	28	NE	Qualifying Species <ul style="list-style-type: none"> <li>■ Chough (<i>Pyrhacorax pyrrhacorax</i>)</li> <li>■ Guillemot (<i>Uria aalge</i>)</li> <li>■ Kittiwake (<i>Rissa tridactyla</i>)</li> </ul>
Firth of Lorn	SAC	37	E	Annex I Habitat <ul style="list-style-type: none"> <li>■ Reefs</li> </ul>
Stanton Banks	SAC	60	NE	Annex I Habitat <ul style="list-style-type: none"> <li>■ Reefs</li> </ul>
East Mingulay	SAC	77	NW	Annex I Habitat <ul style="list-style-type: none"> <li>■ Reefs</li> </ul>
<p>Notes</p> <p>NCMPA = Nature Conservation Marine Protected Area</p> <p>PMF = Priority Marine Feature</p> <p>SAC = Special Area of Conservation</p> <p>SPA = Special Protection Area</p> <p>* = Distance (to nearest kilometre) and direction from the closest sampling station, MCW-B-ST59A</p>				

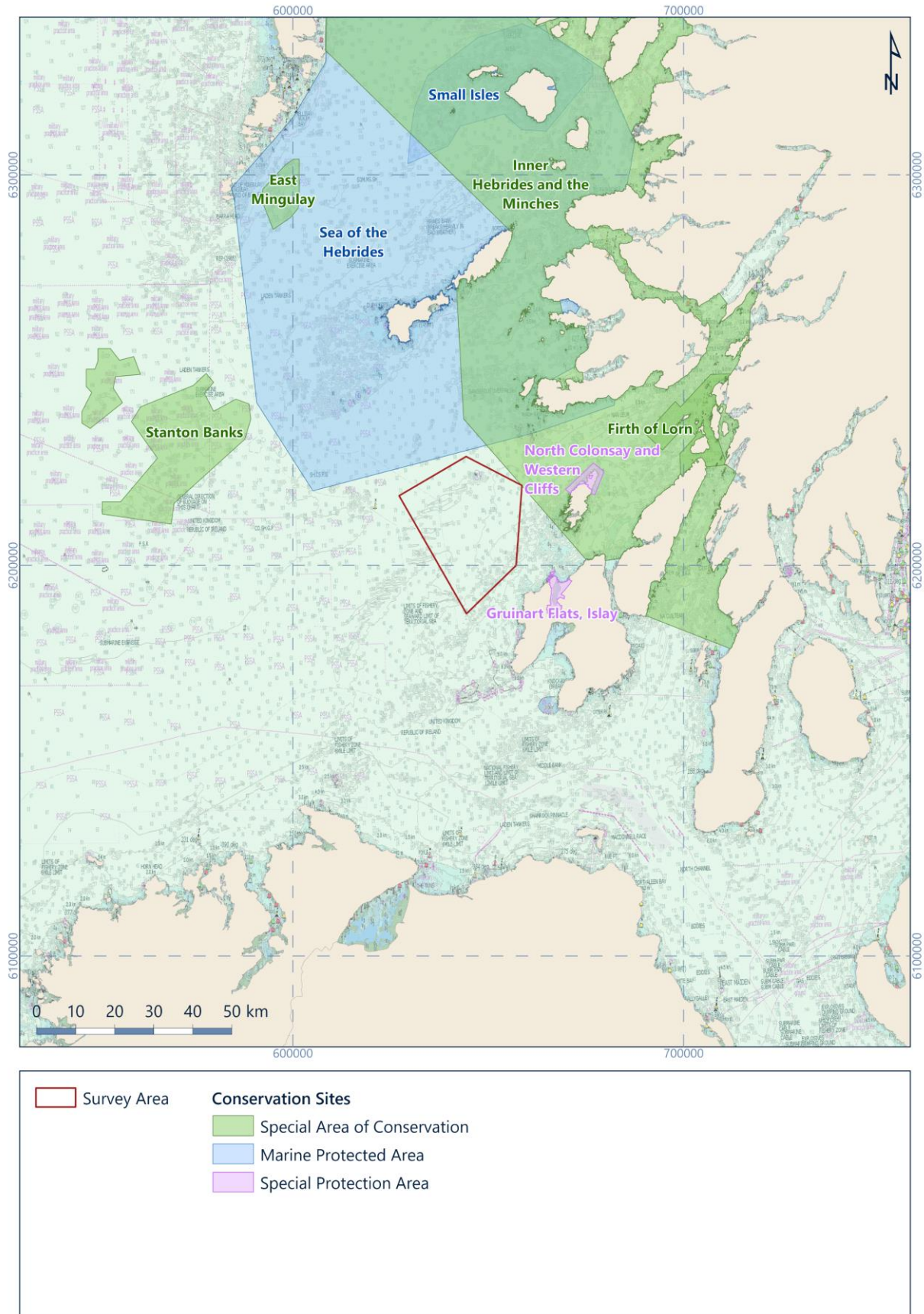


Figure 1.2: Protected areas relating to benthic habitat and species relevant to the survey area



## 1.5 Coordinate Reference System

All coordinates detailed in this report are referenced to European Terrestrial Reference System 1989 (ETRS89) Universal Transverse Mercator (UTM) projection Zone 29N central meridian (CM) 9° West. Table 1.5 presents the geodetic and projection parameters.

Table 1.5: Project geodetic and projection parameters

Global Navigation Satellite System (GNSS) Geodetic Parameters*		
Datum:	International Terrestrial Reference Frame 2014	ESPG: 1165
Spheroid:	GRS 1980	
Semi major axis:	a = 6 378 137.000 m	
Reciprocal flattening:	1/f = 298.257 223 563	
Local Geodetic Datum Parameters		
Datum:	European Terrestrial Reference System 1989	ESPG: 6258
Spheroid:	GRS 1980	
Semi major axis:	a = 6 378 137.000 m	
Reciprocal flattening:	1/f = 298.257 223 563	
Datum Transformation Parameters from ITRF2014 to ETRS89		
Translation X-axis: 0.05608 m	Rotation X-axis: -0.0028148"	Scale difference 0.0036325 ppm
Translation Y-axis: 0.05358 m	Rotation Y-axis: -0.0170275"	Coordinate Frame rotation
Translation Z-axis: -0.10023 m	Rotation Z-axis: 0.027522"	FUGRO: 41366
Local Projection Parameters		
Map Projection:	Transverse Mercator (TM)	
Grid System	UTM Zone 29N	ESPG: 16029
Central Meridian:	009° 00' 00" West	
Latitude of Origin:	00° 00' 00" North	
False Easting:	500 000 m	
False Northing:	0 m	
Scale factor on Central Meridian:	0.9996	
Units:	metre	
Project Vertical Parameters		
Vertical coordinate reference system	VORF LAT height	FUGRO: 41042
Datum	VORF LAT datum	FUGRO: 40916
Transformation	ETRS89 to VORF LAT	FUGRO: 41338
Notes		
* = The geodetic datum of Fugro's global GNSS correction data is ITRF2014, epoch 2023.75 (01/10/2023 18:00:00)		

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## 2. Survey Strategy

Sixty-two environmental sampling stations were predetermined by the client. These stations were arranged to provide spatial coverage throughout the survey area and were aligned with the geophysical survey lines. At each environmental sampling station, video and stills were to be acquired prior to grab sampling. The total number of samples to be acquired for each analysis is listed below:

- 43 macrofaunal (FA) samples;
- 32 PSD samples;
- 30 physico-chemical (PC) samples (i.e. sediment PSD and chemistry analysis);
- 30 eDNA water (near surface and near seafloor) samples.

After geophysical data had been acquired, the side scan sonar (SSS) and bathymetric data were reviewed by the onboard environmental scientist in conjunction with the onboard geophysicist to confirm that the client predefined locations were suitable for grab sampling and camera investigations. Particular emphasis was placed on locating areas of potential conservation value (e.g. Annex I listed habitats), on boundaries between areas of differing sonic reflectivity, bathymetric highs and lows, and areas characteristic of the general background conditions of the survey area.

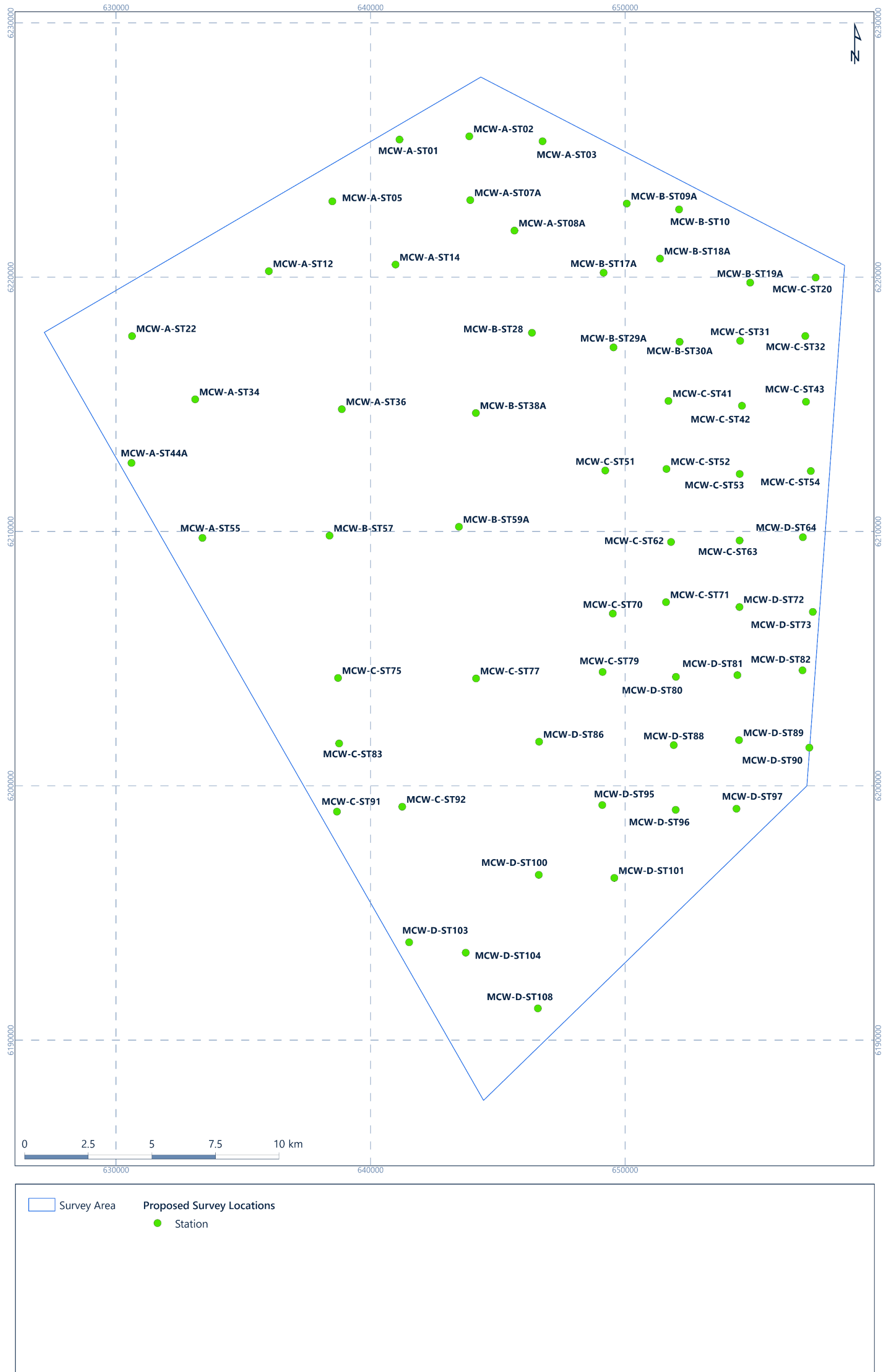
Table 2.1 provides the coordinates, data to be acquired and rationale for each location, including relocated coordinates based on SSS interpretation. Figure 2.1 provides a spatial display of these proposed survey locations overlain on the SSS mosaic.

Table 2.1: Proposed sampling stations

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Station	Easting	Northing	Rationale	Data and Sample Acquisition
<b>Block A</b>				
MCW-A-ST01	641 137.9	6 225 410.2	Client predefined	Video, stills, PSD, FA
MCW-A-ST02	643 878.0	6 225 536.8	Client predefined	Video, stills, PC, FA, eDNA
MCW-A-ST03	646 757.3	6 225 342.1	Client predefined	Video, stills, PSD, FA
MCW-A-ST05	638 497.8	6 222 980.4	Client predefined	Video, stills, PC, eDNA
MCW-A-ST07A	643 915.1	6 223 028.5	Original station location moved to investigate an area of high SSS reflectivity	Video, stills, PSD, FA
MCW-A-ST08A	645 652.5	6 221 830.4	Relocated from original position on a rocky island to investigate area of changeable seafloor with sediment ripples	Video, stills, PC, FA, eDNA
MCW-A-ST12	636 003.8	6 220 235.0	Client predefined	Video, stills, PC, eDNA
MCW-A-ST14	640 980.1	6 220 494.4	Client predefined	Video, stills, PC, eDNA
MCW-A-ST22	630 628.1	6 217 682.3	Client predefined	Video, stills, PC, eDNA
MCW-A-ST34	633 107.6	6 215 194.0	Client predefined	Video, stills, PC, eDNA
MCW-A-ST36	638 870.0	6 214 807.6	Client predefined	Video, stills, PC, eDNA
MCW-A-ST44A	630 608.2	6 212 696.0	Station moved to investigate area of high SSS reflectivity and potential rippled sediment	Video, stills, PSD, FA
MCW-A-ST55	633 395.3	6 209 745.9	Client predefined	Video, stills, PC, eDNA
<b>Block B</b>				
MCW-B-ST09A	650 065.9	6 222 892.3	Station moved 1096 m to the east from the original*	Video, stills, PSD, FA
MCW-B-ST10	652 120.3	6 222 662.4	Client predefined	Video, stills, PSD, FA
MCW-B-ST17A	649 155.4	6 220 174.6	Station moved 500 m to the north-west from the original location*	Video, stills, PSD, FA
MCW-B-ST18A	651 370.4	6 220 727.7	Station moved 500 m to the south-east. Transect extended to investigate a patch of high SSS reflectivity*	Video, stills, PC, FA, eDNA
MCW-B-ST19A	654 912.3	6 219 783.6	Station moved 500 m to the south-east from the original location*	Video, stills, PSD, FA
MCW-B-ST28	646 339.9	6 217 812.1	Client predefined	Video, stills, PC, eDNA
MCW-B-ST29A	649 544.8	6 217 237.8	Station moved 500 m to the south-east from the original location*	Video, stills, PSD, FA
MCW-B-ST30A	652 141.6	6 217 458.6	Station moved 500 m to the south-east from the original location*	Video, stills, PC, FA, eDNA
MCW-B-ST38A	644 136.5	6 214 657.6	Station moved 500 m to the south-east from the original location*	Video, stills, PC, eDNA
MCW-B-ST57	638 388.4	6 209 834.5	Client predefined	Video, stills, PC, eDNA

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Station	Easting	Northing	Rationale	Data and Sample Acquisition
MCW-B-ST59A	643 471.4	6 210 183.5	Station moved 755 m to the north-west from the original location*	Video, stills, PC, eDNA
<b>Block C</b>				
MCW-C-ST20	657 485.3	6 219 984.4	Client predefined	Video, stills, PSD, FA
MCW-C-ST31	654 519.6	6 217 495.9	Client predefined	Video, stills, PSD, FA
MCW-C-ST32	657 080.4	6 217 686.5	Client predefined	Video, stills, PSD, FA
MCW-C-ST41	651 703.6	6 215 133.0	Client predefined	Video, stills, PSD, FA
MCW-C-ST42	654 589.7	6 214 943.9	Client predefined	Video, stills, PC, FA, eDNA
MCW-C-ST43	657 107.2	6 215 098.2	Client predefined	Video, stills, PSD, FA
MCW-C-ST51	649 221.2	6 212 397.3	Client predefined	Video, stills, PC, eDNA
MCW-C-ST52	651 625.9	6 212 457.0	Client predefined	Video, stills, PSD, FA
MCW-C-ST53	654 502.8	6 212 260.2	Client predefined	Video, stills, PSD, FA
MCW-C-ST54	657 296.2	6 212 376.3	Client predefined	Video, stills, PSD, FA
MCW-C-ST62	651 805.5	6 209 585.5	Client predefined	Video, stills, PSD, FA
MCW-C-ST63	654 497.1	6 209 644.6	Client predefined	Video, stills, PC, FA, eDNA
MCW-C-ST70	649 517.0	6 206 771.2	Client predefined	Video, stills, PC, FA, eDNA
MCW-C-ST71	651 606.3	6 207 218.9	Client predefined	Video, stills, PSD, FA
MCW-C-ST75	638 721.0	6 204 239.3	Client predefined	Video, stills, PC, eDNA
MCW-C-ST77	644 143.5	6 204 220.4	Client predefined	Video, stills, PC, eDNA
MCW-C-ST79	649 114.1	6 204 475.0	Client predefined	Video, stills, PSD, FA
MCW-C-ST83	638 764.7	6 201 665.2	Client predefined	Video, stills, PSD, FA
MCW-C-ST91	638 680.2	6 198 983.5	Client predefined	Video, stills, PSD, FA
MCW-C-ST92	641 244.2	6 199 176.8	Client predefined	Video, stills, PC, eDNA
<b>Block D</b>				
MCW-D-ST64	656 984.8	6 209 773.9	Client predefined	Video, stills, PSD, FA
MCW-D-ST72A	654 833.7	6 206 663.5	The proposed grab location was on rocky reef. Grab location moved to area of soft sediment 501 m away to the south-east	Video, stills, PSD, FA
MCW-D-ST73	657 373.9	6 206 836.9	Client predefined	Video, stills, PSD, FA
MCW-D-ST80	651 997.4	6 204 283.6	Client predefined	Video, stills, PC, FA, eDNA
MCW-D-ST81	654 411.2	6 204 350.8	Client predefined	Video, stills, PSD, FA
MCW-D-ST82	656 969.8	6 204 539.7	Client predefined	Video, stills, PC, FA, eDNA
MCW-D-ST86A	647 336.7	6 201 678.2	Station moved 716 m to the east from the original location	Video, stills, PC, eDNA
MCW-D-ST88A	651 542.8	6 201 944.0	Station moved 504 m to the north-west from the original location	Video, stills, PSD, FA

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Station	Easting	Northing	Rationale	Data and Sample Acquisition
MCW-D-ST89A	654 093.0	6 202 125.7	Station moved 507 m to the north-west from the original location	Video, stills, PSD, FA
MCW-D-ST90	657 236.5	6 201 500.0	Client predefined	Video, stills, PSD, FA
MCW-D-ST95A	649 709.0	6 198 447.1	Station moved 1001 m to the south-east from the original location	Video, stills, PC, eDNA
MCW-D-ST96A	651 988.0	6 199 054.1	Station moved 814 m to the east from the original location	Video, stills, PSD, FA
MCW-D-ST97A	654 477.5	6 200 490.3	Station moved 1396 m to the north from the original location	Video, stills, PC, FA, eDNA
MCW-D-ST100A	654 921.0	6 197 226.7	Station moved 1000 m to the north-west to an area of soft sediment	Video, stills, PC, FA, eDNA
MCW-D-ST101	649 576.3	6 196 377.7	Client predefined	Video, stills, PSD, FA
MCW-D-ST103A	641 665.6	6 193 656.0	Station moved 242 m to the south-east to an area of soft sediment	Video, stills, PSD, FA
MCW-D-ST104	643 738.1	6 193 436.9	Client predefined	Video, stills, PC, eDNA
MCW-D-ST108A	646 225.7	6 191 608.1	Station moved 501 m to the north-west to an area of soft sediment	Video, stills, PC, eDNA
<p><b>Notes</b></p> <p>SSS = Side scan sonar  PC = Physical chemical  PSD = Particle size distribution  FA = Faunal sample A  eDNA = Environmental deoxyribonucleic acid  * = Stations relocated to coincide with priority geophysical survey lines  Station names with the suffix 'A' were moved from original client defined positions</p>				



Coordinate System: ETRS 1989 UTM Zone 29N

Figure 2.1: Proposed survey locations



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## 3. Methods

### 3.1 Survey Methods

#### 3.1.1 Seafloor Photography

Seafloor photographic data were acquired using a Subsea Technology and Rentals Limited SeaSpyder deep sea camera system, mounted within a purpose built camera frame, complete with a high definition video camera and high resolution stills camera (24 megapixel). A separate high power strobe and four high intensity LED lamps provided illumination and quad scaling lasers were set up 17 cm wide by 16.5 cm high to provide a scale. The camera system was equipped with an ultra-short baseline (USBL) beacon for subsea positioning.

Seafloor video was displayed on a computer monitor and recorded directly onto the server. Position (easting and northing) derived from the attached USBL beacon including time, date and depth were overlaid on the video. The survey location and station number were also displayed (manually updated). The stills camera imagery was visible on a second window of the computer. Photographic data were viewed in real time via a sonar cable, assisting in the control of the camera in the water.

Details of the operational procedure can be found in the field report (Fugro, 2024).

#### 3.1.2 Sediment Sampling

Seafloor samples were acquired using a 0.1 m<sup>2</sup> dual van Veen (DVV) grab. In areas that comprised sediments that were too coarse for the DVV grab to take a successful sample, a 0.1 m<sup>2</sup> Hamon grab (HG) was used.

Details of the operational procedure can be found in the field report (Fugro, 2024).

### 3.2 Laboratory Methods

Brief analytical methodologies are described in the following subsections. Further descriptions of the analytical methodologies are detailed in Appendix B.1.

#### 3.2.1 Sediment Characteristics

##### 3.2.1.1 Particle Size Distribution

Sediment samples were analysed for their PSD using a combination of two techniques: sieve analysis for all material retained by a 1.0 mm sieve, followed by laser diffraction analysis of the finer material.

#### 3.2.2 Sediment Macrofauna

Each deployment of the 0.1 m<sup>2</sup> Hamon grab and each of the 0.1 m<sup>2</sup> DVV buckets provided a sample. One macrofaunal sample was collected at each station (FA) and each sample was processed on a sieve mesh of 1 mm, with retained taxa identified and enumerated.

Biomass was determined for infaunal invertebrates to phyla level from grab samples; biomass of epifaunal taxa was not measured.

### 3.2.3 Environmental DNA

Water samples were collected using a 5 L Niskin bottle. Each deployment of the Niskin provided two samples, one near surface and one near seafloor. One eDNA sample was collected at each station and processed using a NatureMetrics aquatic eDNA sampling kit and Vampire sampler. The DNA of mobile taxa was extracted and amplified into polymerase chain reaction (PCR) replicates before being sequenced.

## 3.3 Data Analysis

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

### 3.3.1 Sediment Particle Size Distribution Statistics

Sieve and laser data were merged and inputted into GRADISTAT version 8 (V8) (Blott, 2010) to derive statistics including the cumulative percentage of each particle size passing through each sieve, the percentage retained within each size fraction, mean and median grain size, bulk sediment classes (percentage gravel, sand and fines), skewness, kurtosis, sorting coefficients and Folk (1954) classification.

The PSD statistics derived in GRADISTAT are based on the Folk and Ward (1957) method. The sediment descriptions are based on the Wentworth (1922) scale and the sediment classification is based on the British Geological Survey (BGS) modified Folk classification (Long, 2006). Data were presented at 0.5 phi unit intervals, with the equivalent particle size in microns also provided for each size class. The phi scale is a logarithmic scale that allows grain size data to be expressed in units of equal value.

Table 3.1 summarises the sediment PSD statistics that were calculated using Gradistat V8 (Blott, 2010).

Table 3.1: Sediment particle size distribution statistics

Statistic	Definition and Descriptive Terminology
Mean	A measure of central tendency: the arithmetic mean of all the sediment particles in a sample, expressed in metric and phi units
Median	A measure of central tendency: central value of the grain size distribution where half of the sediment grains resides above this point and half below
Mode	A measure of central tendency: most frequently observed value of particle size
Modality	A measure of the number of peaks in the frequency distribution
Sorting	A measure of the grain size range and magnitude of their spread around the mean, presented as a coefficient and descriptor (as a range of values)
Skewness	A measure of the degree of symmetry, presented as a coefficient and descriptor (as a range of values)
Kurtosis	A measure of the peakedness of a sediment distribution curve and of the sorting ratio between values at the tail and at the centre of the distribution (as a range of values)

### 3.3.2 Sediment Macrofauna Data Rationalisation

Prior to analysis, the macrofaunal dataset was rationalised. To avoid spurious enhancement of the species list, damaged taxa were removed whereas some taxa were merged with a higher corresponding taxon identified. Juveniles were also removed as they represent an ephemeral stage of the macrofaunal community and are, therefore, not representative of prevailing benthic conditions. Sessile colonial epifauna recorded as P was also removed prior to analysis and assessed separately from the enumerated dataset.

### 3.3.3 Sediment Macrofaunal Univariate Analysis

Table 3.2 summarises the univariate statistics derived from Plymouth Routines in Multivariate Ecological Research (PRIMER) version 7 (v7). Appendix B.2 provides further details of the techniques utilised.

Table 3.2: Macrofaunal univariate statistics

Statistic	Definition
Number of taxa (S)	Count of taxa
Abundance (N)	Count of individuals
Margalef's index of richness (d)	A measure of the number of species present for a given number of individuals
Shannon-Wiener index of diversity ( $H' \log_2$ )	A measure of the number of taxa in a sample and the distribution of abundance across these taxa; results were assessed in line with the threshold values in Dauvin et al. (2012): <ul style="list-style-type: none"> <li>■ High diversity (<math>H' \log_2 &gt; 4.00</math>);</li> <li>■ Good diversity (<math>3.00 &lt; H' \log_2 &lt; 4.00</math>);</li> <li>■ Moderate diversity (<math>2.00 &lt; H' \log_2 &lt; 3.00</math>);</li> <li>■ Poor diversity (<math>1.00 &lt; H' \log_2 &lt; 2.00</math>);</li> <li>■ Bad diversity (<math>H' \log_2 &lt; 1.00</math>).</li> </ul>
Pielou's index of evenness (J)	A measure of how evenly distributed the individuals are among the different species;
Simpsons index of dominance ( $\lambda$ )	A measure of dominance whereby larger values correspond to assemblages where the abundance is dominated by one or very few of the taxa present

### 3.3.4 Biomass Analysis

The macrofaunal blotted wet weight biomass dataset was converted to ash free dry weight (AFDW) by applying the appropriate standard corrections, with the limitations of the method as outlined in Eleftheriou and Basford (1989). Table 3.3 summarises the corrections applied.

Table 3.3: Macrofaunal standard biomass corrections by phyla

Phyla	Standard Biomass Correction [%]
Annelida	15.5
Arthropoda	22.5
Mollusca	8.5
Echinodermata	8.0
Other Taxa	15.5
Notes Standard biomass corrections to convert blotted wet weight to ash free dry weight, from Eleftheriou & Basford (1989)	

### 3.3.5 Multivariate Analysis

Table 3.4 summarises the multivariate analysis undertaken for macrofaunal datasets in PRIMER v7 (Clarke & Gorley, 2015). Data transformation was undertaken prior to multivariate analysis, where deemed necessary. Transformation was applied to macrofaunal data matrix to reduce the influence of the numerically dominant taxa which may mask the underlying community composition (detailed in Section 4.3.1.3) (Clarke et al., 2014). Appendix B.2 provides further details of the techniques utilised.

Table 3.4: Multivariate statistics

Statistic	Definition
Cluster with SIMPROF	Hierarchical agglomerative clustering, 'Cluster' analysis, groups samples based on the nearest neighbour sorting of a matrix of sample similarities using Bray Curtis similarity. The similarity profiling (SIMPROF) algorithm can be used in conjunction with cluster analysis to identify statistically significant splits within the data. The results of the cluster analysis and SIMPROF are visualised in a dendrogram.
nMDS	Non-metric multidimensional scaling (nMDS) ordination are also outputs of Bray Curtis similarity analysis. The nMDS ordination the samples in a two-dimensional plane where the more similar samples are, the nearer they are. The extent to which these relations can be adequately represented in a two-dimensional space is expressed as the stress coefficient statistic, low values (< 0.1) indicating a good ordination with no real prospect of misleading interpretation (Clarke et al., 2014).
SIMPER	Similarity percentage (SIMPER) identified the percentages of similarity contributed by the taxa present within the groupings identified during cluster analysis. The taxa which contribute the highest proportion of similarity to each cluster can be considered characteristic of the communities sampled. This analysis can also be used to identify the taxa which contribute the highest proportion of dissimilarity between the multivariate clusters.

### 3.3.6 Seafloor Habitats and Biotopes Classification

Detailed analysis of the photographic data was undertaken. In accordance with the guidance provided by Kaskela et al. (2019) sediments within the survey area have been described using the Folk (1954) classification, which describes sediments based on their relative proportions of gravel, sand and mud, in combination the Wentworth (1922) scale for describing coarser (pebble, cobble and boulder) material. Biota evident from seafloor photography were identified to the lowest practicable taxonomic level and semi-quantified using the Superabundant, Abundant, Common, Frequent, Occasional, Rare (SACFOR) scale (JNCC, 2015).

Habitats within the survey area have been classified in accordance with 'The Marine Habitat Classification for Britain and Ireland – Version 22.04' (JNCC, 2022). Classifications were assigned to each habitat type observed within the video and still photographic dataset. The full photographic data analysis method is presented in the Geophysical Habitat Interpretive Report (Report No. 230633-MachairWind-V3).

### 3.3.7 Sensitive Habitats and Species

Habitats and species were assessed for their conservation status using the Annex I habitats list (JNCC, 2019a), Annex II species list (JNCC, 2019b), OSPAR threatened and/or declining species and habitats (OSPAR, 2023), UK BAP list of priority species (JNCC, 2019c) and habitats (JNCC, 2019d), Scottish biodiversity list species and habitats (NatureScot, 2020) and PMFs (JNCC, 2014). Reference to the International Union for Conservation of Nature (IUCN) Red List (IUCN, 2024) status of the sensitive taxa identified is also included, where appropriate.

The presence of aggregations of cobbles and boulders at two stations within the survey area warranted assessment of these areas for their potential to qualify as Annex I 'Stony reef' habitat. This assessment was undertaken in accordance with the methodology described by

Golding et al. (2020); full details of this methodology are presented in the Geophysical Habitat Interpretive Report (Report No. 230633-MachairWind-V3).

### 3.3.8 eDNA Data Rationalisation

Prior to analysis, the eDNA dataset was rationalised. Identifications were sense-checked against Global Biodiversity Information Facility (GBIF) occurrence records for presence in the sampling country and elevated to higher taxonomic levels where required. Zero-radius operational taxonomic units (zOTUs) were clustered at 97 % similarity with USEARCH to obtain OTUs. Low abundance, unassigned, human and domesticated mammal OTUs were removed from the dataset.

### 3.3.9 eDNA Univariate Analysis

Table 3.5 summarises the community statistics used for the analysis.

Table 3.5: Community statistics

Statistic	Definition
Species Richness	A biodiversity metric that is consistently reported for biodiversity monitoring, for eDNA analysis refers to the total count of OTUs detected in each sample and it is reported both for each sample (alpha diversity) and for the total number of OTUs from all samples taken (gamma diversity). It is called 'Species Richness' because an OTU is a hypothesised species based upon clusters of similar DNA sequences. This metric is not the sum of OTUs identified to species-level. Although some OTUs cannot be assigned to a species, these are approximately equivalent to species. Higher 'Species Richness' is a broad indication of a healthier functioning ecosystem
Evolutionary Diversity	A biodiversity metric calculated for each sample, is a measure of the variety of the diversity of species detected, based on how distantly-related those species are. Evolutionary Diversity is a strong complementary indicator of biodiversity status alongside Species Richness. An increase in Evolutionary Diversity indicates a more varied species assemblage, which is generally associated with a better functioning ecosystem and more ecological niches available. We calculate the Evolutionary Diversity of samples by arranging all OTUs in a family tree based on the similarity of the DNA sequences. The overall size of the family tree (including lengths of all family tree branches) gives the value for Evolutionary Diversity. The metric used is 'Faith's Phylogenetic Diversity' which is commonly used in ecological science and biodiversity monitoring

## 4. Results

### 4.1 Field Operations

#### 4.1.1 Bathymetry and Seafloor features

The water depth within the MachairWind OAA survey area ranged from a minimum of 21.5 m below lowest astronomical tide (LAT), associated with bedrock outcrops around the Dudh Artach lighthouse, to a maximum of 119.0 m LAT, associated with a large area of scour immediately east of the bedrock outcrop around the lighthouse.

The average gradient within the survey area was very gentle ( $< 1^\circ$ ), with a maximum gradient of  $83^\circ$  observed associated with bedrock outcrops.

Seafloor sediments were interpreted as comprising sand with shell fragments associated with areas of low reflectivity. Coarse to gravelly sand, gravels, cobbles and boulders were associated with areas of high reflectivity, enclosed within depressions, or on bathymetric highs in the south-west and south of the area. Bedrock outcrops observed in the north (Dudh Artach lighthouse) and south of the survey area, correspond to mottled low to high reflectivity on the SSS data.

Bedforms are mobile sediment features generated by currents, that have laminar to turbulent flow patterns. Ripple, mega ripple, sand wave and sand dune bedforms were observed within the survey area. The positions of larger sand waves and dunes are consistent with those observed in EMODnet (2022), suggesting little migration has occurred over time.

#### 4.1.2 Seafloor Photography

Video and stills photographic data were successfully acquired at 59 of the 62 proposed stations using a towed transect methodology (Table 4.1).

Stations MCW-D-ST90, MCW-D-ST96A and MCW-D-ST97A were removed from the scope of work at the client's request.

Table 4.1: Completed camera stations

Geodetic Parameters: ETRS89 UTM Zone 29N [m]					
Station		Easting	Northing	Depth [m LAT]	Data Acquisition
<b>Block A</b>					
MCW-A-ST01	SOL	641 119.4	6 225 432.5	62	Video: 9 min 3 sec 12 stills
	EOL	641 155.2	6 225 389.7		
MCW-A-ST02	SOL	643 864.3	6 225 561.9	68	Video: 11 min 50 sec 13 stills
	EOL	643 890.9	6 225 512.1		
MCW-A-ST03	SOL	646 751.3	6 225 373.8	74	Video: 9 min 44 sec 12 stills
	EOL	646 762.3	6 225 315.3		



Geodetic Parameters: ETRS89 UTM Zone 29N [m]					
Station		Easting	Northing	Depth [m LAT]	Data Acquisition
MCW-A-ST05	SOL	638 498.5	6 223 011.6	63	Video: 9 min 17 sec 12 stills
	EOL	638 495.0	6 222 954.4		
MCW-A-ST07A	SOL	643 944.7	6 223 040.9	65	Video: 9 min 31 sec 12 stills
	EOL	643 890.8	6 223 017.0		
MCW-A-ST08A	SOL	645 659.6	6 221 867.9	59	Video: 10 min 27 sec 17 stills
	EOL	645 647.1	6 221 804.1		
MCW-A-ST12	SOL	636 002.8	6 220 270.2	66	Video: 10 min 41 sec 12 stills
	EOL	636 004.7	6 220 207.0		
MCW-A-ST14	SOL	640 982.6	6 220 520.5	52	Video: 8 min 29 sec 12 stills
	EOL	640 976.4	6 220 468.1		
MCW-A-ST22	SOL	630 633.6	6 217 717.7	75	Video: 9 min 54 sec 13 stills
	EOL	630 622.6	6 217 656.5		
MCW-A-ST34	SOL	633 130.5	6 215 215.3	65	Video: 9 min 25 sec 13 stills
	EOL	633 087.9	6 215 176.2		
MCW-A-ST36	SOL	638 876.7	6 214 834.4	50	Video: 8 min 48 sec 12 still
	EOL	638 863.0	6 214 781.7		
MCW-A-ST44A	SOL	630 639.4	6 212 685.9	58	Video: 9 min 24 sec 14 stills
	EOL	630 583.6	6 212 704.5		
MCW-A-ST55	SOL	633 382.5	6 209 770.4	50	Video: 8 min 41 sec 12 stills
	EOL	633 406.1	6 209 723.0		
<b>Block B</b>					
MCW-B-ST09A	SOL	650 116.9	6 222 911.4	104	Video: 19 min 26 sec 16 stills
	EOL	650 013.4	6 222 871.7		
MCW-B-ST10	SOL	652 151.9	6 222 703.7	51	Video: 18 min 6 sec 12 stills
	EOL	652 088.1	6 222 619.8		
MCW-B-ST17A	SOL	649 187.5	6 220 216.9	58	Video: 17 min 59 sec 10 stills
	EOL	649 122.9	6 220 136.9		
MCW-B-ST18A	SOL	651 412.7	6 220 771.5	52	Video: 20 min 12 sec 16 stills
	EOL	651 335.2	6 220 687.3		
MCW-B-ST19A	SOL	654 910.7	6 219 719.9	51	Video: 18 min 36 sec 24 stills
	EOL	654 911.1	6 219 834.7		
MCW-B-ST28	SOL	646 381.0	6 217 841.8	62	Video: 16 min 34 sec 20 stills
	EOL	646 298.3	6 217 783.8		
MCW-B-ST29A	SOL	649 612.7	6 217 240.5	60	Video: 19 min 13 sec 22 stills
	EOL	649 492.7	6 217 236.7		

Geodetic Parameters: ETRS89 UTM Zone 29N [m]					
Station		Easting	Northing	Depth [m LAT]	Data Acquisition
MCW-B-ST30A	SOL	652 172.8	6 217 411.6	51	Video: 17 min 32 sec 18 stills
	EOL	652 112.3	6 217 501.2		
MCW-B-ST38A	SOL	644 192.7	6 214 646.5	60	Video: 17 min 32 sec 25 stills
	EOL	644 087.4	6 214 668.1		
MCW-B-ST57	SOL	638 413.9	6 209 784.4	56	Video: 18 min 36 sec 19 stills
	EOL	638 363.8	6 209 881.8		
MCW-B-ST59A	SOL	643 527.5	6 210 197.0	63	Video: 19 min 4 sec 15 stills
	EOL	643 420.9	6 210 170.9		
<b>Block C</b>					
MCW-C-ST20	SOL	657 510.6	6 219 953.3	45	Video: 10 min 54 sec 10 stills
	EOL	657 467.8	6 220 004.3		
MCW-C-ST31	SOL	654 524.3	6 217 459.7	47	Video: 10 min 25 sec 10 stills
	EOL	654 515.2	6 217 522.2		
MCW-C-ST32	SOL	657 077.1	6 217 652.2	45	Video: 9 min 52 sec 10 stills
	EOL	657 082.6	6 217 712.8		
MCW-C-ST41	SOL	651 608.4	6 215 065.1	55	Video: 23 min 30 sec 30 stills
	EOL	651 726.4	6 215 148.6		
MCW-C-ST42	SOL	654 566.4	6 214 919.7	46	Video: 9 min 41 sec 13 stills
	EOL	654 608.3	6 214 962.6		
MCW-C-ST43	SOL	657 099.3	6 215 065.0	46	Video: 9 min 40 sec 10 stills
	EOL	657 112.6	6 215 123.1		
MCW-C-ST51	SOL	649 241.5	6 212 426.7	55	Video: 9 min 48 sec 13 stills
	EOL	649 206.3	6 212 376.1		
MCW-C-ST52	SOL	651 655.8	6 212 473.5	50	Video: 9 min 44 sec 13 stills
	EOL	651 603.0	6 212 443.9		
MCW-C-ST53	SOL	654 496.3	6 212 296.1	50	Video: 10 min 22 sec 13 stills
	EOL	654 508.1	6 212 233.2		
MCW-C-ST54	SOL	657 295.1	6 212 408.4	52	Video: 9 min 26 sec 13 stills
	EOL	657 296.1	6 212 350.3		
MCW-C-ST62	SOL	651 792.6	6 209 616.5	50	Video: 12 min 53 sec 15 stills
	EOL	651 816.2	6 209 560.7		
MCW-C-ST63	SOL	654 466.3	6 209 648.3	50	Video: 10 min 08 sec 12 stills
	EOL	654 523.4	6 209 640.7		
MCW-C-ST70	SOL	649 490.5	6 206 785.2	52	Video: 10 min 32 sec 12 stills
	EOL	649 541.9	6 206 757.4		
MCW-C-ST71	SOL	651 617.5	6 207 254.8	52	Video: 11 min 24 sec 13 stills
	EOL	651 599.1	6 207 192.7		

Geodetic Parameters: ETRS89 UTM Zone 29N [m]					
Station		Easting	Northing	Depth [m LAT]	Data Acquisition
MCW-C-ST75	SOL	638 731.3	6 204 211.0	55	Video: 9 min 5 sec 13 stills
	EOL	638 707.4	6 204 262.7		
MCW-C-ST77	SOL	644 161.2	6 204 242.0	65	Video: 8 min 58 sec 14 stills
	EOL	644 126.3	6 204 198.7		
MCW-C-ST79	SOL	649 121.6	6 204 505.9	53	Video: 9 min 21 sec 13 stills
	EOL	649 108.1	6 204 449.1		
MCW-C-ST83	SOL	638 745.9	6 201 691.6	48	Video: 9 min 27 sec 19 stills
	EOL	638 780.5	6 201 642.1		
MCW-C-ST91	SOL	638 656.9	6 199 012.8	49	Video: 12 min 6 sec 17 stills
	EOL	638 699.7	6 198 961.7		
MCW-C-ST92	SOL	641 227.4	6 199 153.9	55	Video: 8 min 49 sec 11 stills
	EOL	641 258.7	6 199 198.1		
<b>Block D</b>					
MCW-D-ST64	SOL	656 999.0	6 209 828.9	55	Video: 17 min 49 sec 22 stills
	EOL	656 970.7	6 209 723.5		
MCW-D-ST72A	SOL	654 858.7	6 206 718.0	56	Video: 18 min 56 sec 12 stills
	EOL	654 836.8	6 206 665.3		
MCW-D-ST73	SOL	657 309.5	6 206 853.3	59	Video: 21 min 23 sec 39 stills
	EOL	657 437.2	6 206 822.1		
MCW-D-ST80	SOL	651 951.8	6 204 318.1	55	Video: 19 min 6 sec 14 stills
	EOL	651 997.1	6 204 284.6		
MCW-D-ST81	SOL	654 425.3	6 204 405.4	59	Video: 18 min 53 sec 10 stills
	EOL	654 400.9	6 204 296.4		
MCW-D-ST82	SOL	656 829.8	6 204 546.1	57	Video: 33 min 42 sec 34 stills
	EOL	657 023.8	6 204 536.5		
MCW-D-ST86A	SOL	647 290.7	6 201 713.3	53	Video: 19 min 28 sec 10 stills
	EOL	647 380.9	6 201 645.6		
MCW-D-ST88A	SOL	651 487.3	6 201 953.0	58	Video: 18 min 50 sec 12 stills
	EOL	651 595.3	6 201 934.8		
MCW-D-ST89A	SOL	654 049.1	6 202 156.0	58	Video: 18 min 17 sec 8 stills
	EOL	654 137.3	6 202 095.1		
MCW-D-ST95A	SOL	649 710.1	6 198 504.1	52	Video: 18 min 3 sec 17 stills
	EOL	649 709.9	6 198 396.1		
MCW-D-ST100A	SOL	645 937.3	6 197 289.8	59	Video: 20 min 28 sec 10 stills
	EOL	645 907.9	6 197 174.1		
MCW-D-ST101	SOL	649 522.9	6 196 386.5	58	Video: 17 min 18 sec 18 stills
	EOL	649 628.7	6 196 367.7		
MCW-D-ST103A	SOL	641 624.2	6 193 696.8	62	Video: 20 min 20 sec 8 stills
	EOL	641 705.5	6 193 616.9		

Geodetic Parameters: ETRS89 UTM Zone 29N [m]					
Station		Easting	Northing	Depth [m LAT]	Data Acquisition
MCW-D-ST104	SOL	643 705.4	6 193 486.8	60	Video: 19 min 6 sec 13 stills
	EOL	643 769.5	6 193 392.5		
MCW-D-ST108A	SOL	646 195.7	6 191 655.2	49	Video: 17 min 18 sec 21 stills
	EOL	646 252.3	6 191 564.2		
<b>Notes</b> LAT = Lowest Astronomical Tide SOL = Start of line EOL = End of line Station names with the suffix 'A' were moved from original client defined positions					

### 4.1.3 Seafloor Sampling

The proposed suites of grab samples were successfully acquired at 57 of the 62 proposed stations as detailed in Table 4.2 and summarised below:

- 38 macrofaunal (FA) samples;
- 29 particle size distribution (PSD) samples;
- 29 physico-chemical (PC) samples (i.e. sediment PSD and chemistry analysis).
- 29 eDNA water (near surface and near seafloor) samples.

Grab sampling was unsuccessful, or only partially successful, at two stations in Block C, namely stations MCW-C-ST83 and MCW-C-ST91, due to the presence of hard substratum. Specifically, no samples were acquired from station MCW-C-ST83 and only a single sample for PSD analysis was acquired from station MCW-C-ST91.

Three stations in Block D, namely MCW-D-ST90, MCW-D-ST96A and MCW-D-ST97A, were removed from the scope at the client's request (Table 4.2).

Table 4.2: Completed sediment sampling stations

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Station	Easting*	Northing*	Depth [m LAT]	Sample Acquisition
<b>Block A</b>				
MCW-A-ST01	641 139.0	6 225 411.7	62	PSD, FA
MCW-A-ST02	643 880.2	6 225 537.1	68	PC, FA, eDNA
MCW-A-ST03	646 759.0	6 225 343.8	73	PSD, FA
MCW-A-ST05	638 499.7	6 222 981.9	63	PC, eDNA
MCW-A-ST07A	643 890.8	6 223 017.0	65	PSD, FA
MCW-A-ST08A	645 653.2	6 221 828.2	59	PC, FA, eDNA
MCW-A-ST12	636 006.1	6 220 237.5	66	PC, eDNA
MCW-A-ST14	640 981.5	6 220 495.1	52	PC, eDNA
MCW-A-ST22	630 630.8	6 217 682.8	75	PC, eDNA

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Station	Easting*	Northing*	Depth [m LAT]	Sample Acquisition
MCW-A-ST34	633 109.1	6 215 193.0	65	PC, eDNA
MCW-A-ST36	638 870.6	6 214 808.8	50	PC, eDNA
MCW-A-ST44A	630 608.9	6 212 694.8	60	PSD, FA
MCW-A-ST55	633 395.4	6 209 746.4	57	PC, eDNA
<b>Block B</b>				
MCW-B-ST09A	650 065.7	6 222 890.7	106	PSD, FA
MCW-B-ST10	652 119.2	6 222 662.8	52	PSD, FA
MCW-B-ST17A	649 157.7	6 220 178.0	59	PSD, FA
MCW-B-ST18A	651 371.1	6 220 729.2	53	PC, FA, eDNA
MCW-B-ST19A	654 909.3	6 219 783.9	45	PSD, FA
MCW-B-ST28	646 340.4	6 217 812.0	62	PC, eDNA
MCW-B-ST29A	649 544.1	6 217 237.0	60	PSD, FA
MCW-B-ST30A	652 140.1	6 217 454.2	51	PC, FA, eDNA
MCW-B-ST38A	644 137.9	6 214 662.2	60	PC, eDNA
MCW-B-ST57	638 385.8	6 209 840.6	56	PC, eDNA
MCW-B-ST59A	643 473.6	6 210 184.4	64	PC, eDNA
<b>Block C</b>				
MCW-C-ST20	657 483.2	6 219 982.5	45	PSD, FA
MCW-C-ST31	654 517.2	6 217 494.8	47	PSD, FA
MCW-C-ST32	657 077.5	6 217 685.0	44	PSD, FA
MCW-C-ST41	651 701.2	6 215 129.6	55	PSD, FA
MCW-C-ST42	654 587.5	6 214 945.8	45	PC, FA, eDNA
MCW-C-ST43	657 103.5	6 215 097.9	46	PSD, FA
MCW-C-ST51	649 223.7	6 212 398.7	55	PC, eDNA
MCW-C-ST52	651 627.6	6 212 456.4	50	PSD, FA
MCW-C-ST53	654 503.4	6 212 260.1	50	PSD, FA
MCW-C-ST54	657 295.3	6 212 375.4	52	PSD, FA
MCW-C-ST62	651 810.4	6 209 592.5	50	PSD, FA
MCW-C-ST63	654 498.0	6 209 647.3	50	PC, FA, eDNA
MCW-C-ST70	649 517.7	6 206 767.9	52	PC, FA, eDNA
MCW-C-ST71	651 609.3	6 207 220.0	52	PSD, FA
MCW-C-ST75	638 718.2	6 204 233.2	55	PC, eDNA

Geodetic Parameters: ETRS89 UTM Zone 29N [m]				
Station	Easting*	Northing*	Depth [m LAT]	Sample Acquisition
MCW-C-ST77	644 145.1	6 204 220.9	65	PC, eDNA
MCW-C-ST79	649 117.1	6 204 475.3	53	PSD, FA
MCW_C-ST91	638 689.7	6198 979.8	49	PSD
MCW-C-ST92	641 242.6	6 199 177.8	55	PC, eDNA
Block D				
MCW-D-ST64	656 987.4	6 209 777.4	55	PSD, FA
MCW-D-ST72A	654 836.2	6 206 664.3	56	PSD, FA
MCW-D-ST73	657 312.4	6 206 854.1	57	PSD, FA
MCW-D-ST80	651 998.0	6 204 285.9	55	PC, FA, eDNA
MCW-D-ST81	654 413.7	6 204 349.9	59	PSD, FA
MCW-D-ST82	656 969.4	6 204 544.5	57	PC, FA, eDNA
MCW-D-ST86A	647 338.8	6 201 682.3	53	PC, eDNA
MCW-D-ST88A	651 542.2	6 201 946.3	58	PSD, FA
MCW-D-ST89A	654 093.6	6 202 127.7	58	PSD, FA
MCW-D-ST95A	649 709.0	6 198 447.1	52	PC, eDNA
MCW-D-ST100A	645 921.9	6 197 226.4	60	PC, FA, eDNA
MCW-D-ST101	649 575.3	6 196 376.7	58	PSD, FA
MCW-D-ST103A	641 665.7	6 193 658.6	62	PSD, FA
MCW-D-ST104	643 738.4	6 193 432.4	60	PC, eDNA
MCW-D-ST108A	646 226.1	6 191 608.6	49	PC, eDNA
<b>Notes</b> * = Coordinates presented for the SC or PSD grab sample LAT = Lowest Astronomical Tide PC = Physic-chemical FA = Faunal sample PSD = Particle size distribution Edna = Environmental deoxyribonucleic acid				

Figure 4.1 illustrates the completed survey locations.

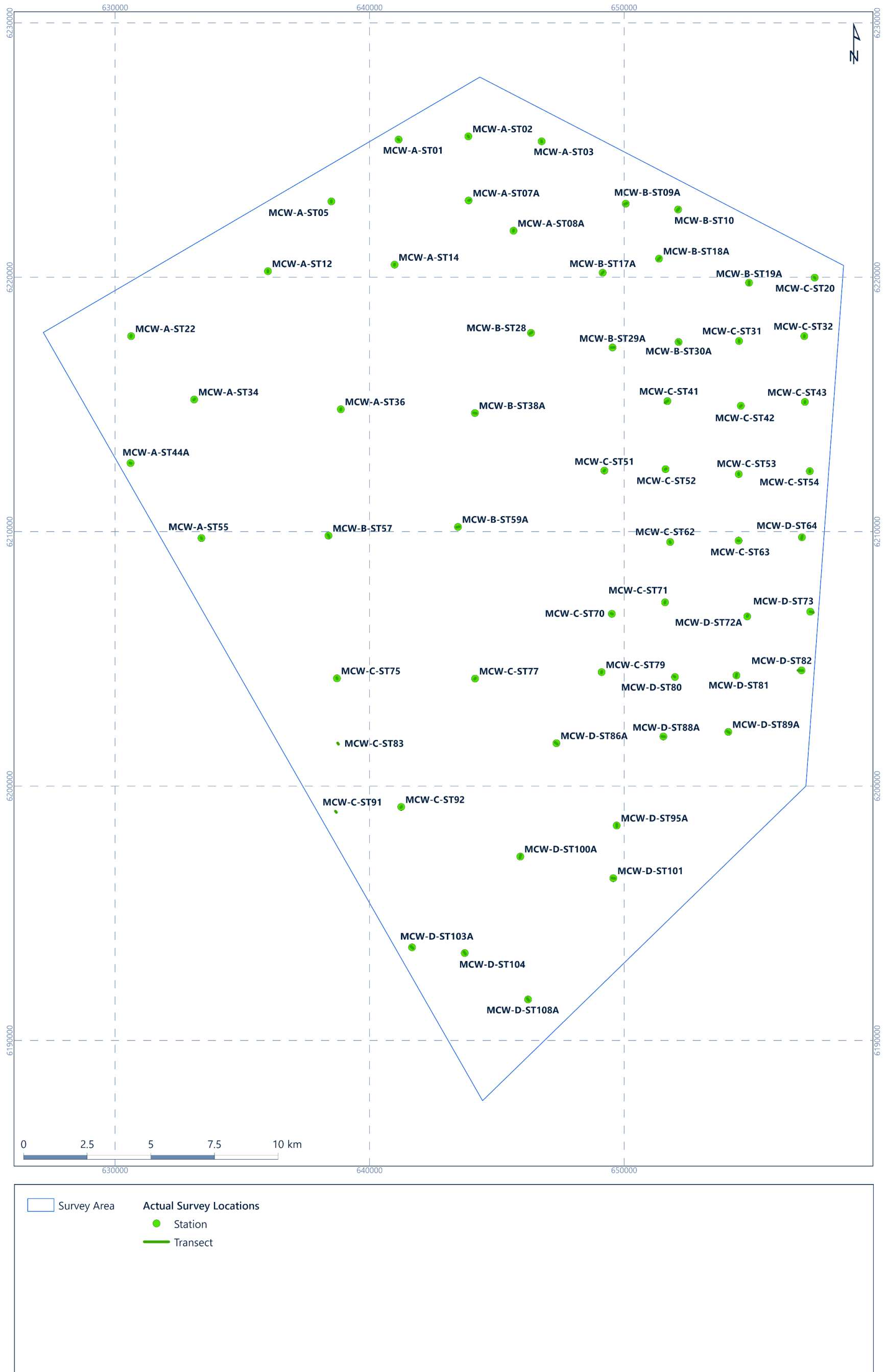


Figure 4.1: Completed survey locations



## 4.2 Sediment Characterisation

Table 4.3 presents the sediment characteristics and Table 4.4 presents the sediment particle size distribution across the MachairWind survey area. Figure 4.2 provides an overview of the variations of the fractional composition of the sediment. Figure 4.3 illustrates the spatial variations of percentage sand, gravel and fines. Appendix D presents the details of particle size distribution for individual stations and the analysis certificates.

Sand was the dominant fraction with proportions ranging from 15.54 % (station MCW-D-ST108A) to 100 % (stations MCW-A-ST14 and MCW-D-ST86A), with a mean of 95.87 % and a median of 99.88 % (Table 4.3 and Figure 4.2).

Gravel was absent from three stations and where it occurred, gravel content ranged from 0.01 % at five stations to 84.46 % (station MCW-D-ST108A), with a mean of 3.42 % and a median of 0.08 % (Table 4.3 and Figure 4.2).

Fines were absent from 44 stations and where present, fines content ranged from 0.01 % (station MCW-D-ST64) to 11.17 % (station MCW-B-ST09A), with a mean of 0.71 % and a median of 0.00 % (Table 4.3 and Figure 4.2).

The Folk description classifies sediment by the relative proportion of sediment fractions (gravel, sand and fines). The Folk classification (BGS modified; Long, 2006) described 53 stations as 'sand', 2 stations as 'gravelly sand', 1 station as 'muddy sand', 1 station as 'sandy gravel' and 1 station as 'gravel'.

Table 4.4 presents a summary of the sediment particle size distribution at each station. Within the MachairWind survey area. Sediment particle size distributions were 'unimodal' at 53 stations, 'bimodal' at 4 stations and 'polymodal' at station MCW-D-ST108A.

The mean sediment particle size ( $\mu\text{m}$ ) ranged from 175  $\mu\text{m}$  (fine sand; station MCW-A-ST02) to 10 410  $\mu\text{m}$  (medium pebble; station MCW-D-ST108A), with a mean of 559  $\mu\text{m}$  (coarse sand) and a median of 228  $\mu\text{m}$  (fine sand).

The Wentworth (1922) description, assigned from mean particle size, described 35 stations as 'fine sand', 19 stations as 'medium sand', 2 stations as 'coarse sand', 1 station as 'fine pebble' and 1 station as 'medium pebble'.

When the sorting coefficient was considered, the sediments at 42 stations were classified as 'moderately well sorted', 8 stations were 'moderately sorted', 4 stations were 'poorly sorted', 2 stations were 'well sorted' and 2 stations were 'very poorly sorted'. The skewness of the particle size distribution was classified as 'symmetrical' at 48 stations, 'fine skewed' at 5 stations, 'very fine skewed' at 3 stations and 'coarse skewed' at 2 stations. When kurtosis was considered the sediments at 51 stations were 'mesokurtic', 3 stations were 'leptokurtic', 3 stations were 'very leptokurtic' and 1 station was 'very platykurtic'.

Table 4.3: Summary of sediment characteristics

Station	Fractional Composition			Fines		Folk Description (BGS modified)
	Gravel [%]	Sand [%]	Fines [%]	Silt [%]	Clay [%]	
<b>Block A</b>						
MCW-A-ST01	0.08	99.17	0.75	0.46	0.30	Sand
MCW-A-ST02	0.01	95.00	5.00	3.54	1.46	Sand
MCW-A-ST03	0.16	94.70	5.14	3.72	1.42	Sand
MCW-A-ST05	0.06	99.94	0.00	0.00	0.00	Sand
MCW-A-ST07A	0.37	99.63	0.00	0.00	0.00	Sand
MCW-A-ST08A	1.22	98.78	0.00	0.00	0.00	Sand
MCW-A-ST12	0.09	99.91	0.00	0.00	0.00	Sand
MCW-A-ST14	0.00	100.00	0.00	0.00	0.00	Sand
MCW-A-ST22	0.80	95.19	4.01	3.15	0.86	Sand
MCW-A-ST34	0.09	99.91	0.00	0.00	0.00	Sand
MCW-A-ST36	0.07	99.93	0.00	0.00	0.00	Sand
MCW-A-ST44A	0.01	99.99	0.00	0.00	0.00	Sand
MCW-A-ST55	0.05	99.95	0.00	0.00	0.00	Sand
<b>Block B</b>						
MCW-B-ST09A	< 0.01	88.83	11.17	8.13	3.04	Muddy sand
MCW-B-ST10	0.14	99.86	0.00	0.00	0.00	Sand
MCW-B-ST17A	0.00	99.90	0.10	0.06	0.04	Sand
MCW-B-ST18A	0.01	99.99	0.00	0.00	0.00	Sand
MCW-B-ST19A	0.08	99.92	0.00	0.00	0.00	Sand
MCW-B-ST28	0.25	99.55	0.20	0.11	0.09	Sand
MCW-B-ST29A	0.15	94.06	5.79	4.13	1.66	Sand
MCW-B-ST30A	0.31	99.69	0.00	0.00	0.00	Sand
MCW-B-ST38A	0.29	99.17	0.54	0.34	0.20	Sand
MCW-B-ST57	0.13	99.87	0.00	0.00	0.00	Sand
MCW-B-ST59A	0.19	96.17	3.64	3.03	0.61	Sand

Station	Fractional Composition			Fines		Folk Description (BGS modified)
	Gravel [%]	Sand [%]	Fines [%]	Silt [%]	Clay [%]	
<b>Block C</b>						
MCW-C-ST20	0.11	99.89	0.00	0.00	0.00	Sand
MCW-C-ST31	0.19	99.81	0.00	0.00	0.00	Sand
MCW-C-ST32	0.04	99.96	0.00	0.00	0.00	Sand
MCW-C-ST41	0.17	99.83	0.00	0.00	0.00	Sand
MCW-C-ST42	0.07	99.93	0.00	0.00	0.00	Sand
MCW-C-ST43	0.07	99.93	0.00	0.00	0.00	Sand
MCW-C-ST51	0.06	99.94	0.00	0.00	0.00	Sand
MCW-C-ST52	0.07	99.93	0.00	0.00	0.00	Sand
MCW-C-ST53	0.07	99.93	0.00	0.00	0.00	Sand
MCW-C-ST54	0.06	99.94	0.00	0.00	0.00	Sand
MCW-C-ST62	0.05	99.95	0.00	0.00	0.00	Sand
MCW-C-ST63	0.06	99.94	0.00	0.00	0.00	Sand
MCW-C-ST70	0.05	99.95	0.00	0.00	0.00	Sand
MCW-C-ST71	0.07	99.93	0.00	0.00	0.00	Sand
MCW-C-ST75	0.30	99.70	0.00	0.00	0.00	Sand
MCW-C-ST77	0.19	99.81	0.00	0.00	0.00	Sand
MCW-C-ST79	0.05	99.95	0.00	0.00	0.00	Sand
MCW-C-ST91	72.66	27.34	0.00	0.00	0.00	Sandy gravel
MCW-C-ST92	0.01	99.99	0.00	0.00	0.00	Sand
<b>Block D</b>						
MCW-D-ST64	0.08	99.91	0.01	0.01	0.00	Sand
MCW-D-ST72A	0.01	99.99	0.00	0.00	0.00	Sand
MCW-D-ST73	0.17	99.83	0.00	0.00	0.00	Sand
MCW-D-ST80	0.33	99.67	0.00	0.00	0.00	Sand
MCW-D-ST81	0.09	97.51	2.40	2.13	0.26	Sand
MCW-D-ST82	0.39	99.61	0.00	0.00	0.00	Sand
MCW-D-ST86A	0.00	100.00	0.00	0.00	0.00	Sand

Station	Fractional Composition			Fines		Folk Description (BGS modified)
	Gravel [%]	Sand [%]	Fines [%]	Silt [%]	Clay [%]	
MCW-D-ST88A	0.05	98.48	1.47	1.29	0.18	Sand
MCW-D-ST89A	0.15	99.85	0.00	0.00	0.00	Sand
MCW-D-ST95A	0.09	99.91	0.00	0.00	0.00	Sand
MCW-D-ST100A	14.72	84.37	0.91	0.88	0.03	Gravelly sand
MCW-D-ST101	16.63	83.37	0.00	0.00	0.00	Gravelly sand
MCW-D-ST103A	0.05	99.95	0.00	0.00	0.00	Sand
MCW-D-ST104	2.48	97.52	0.00	0.00	0.00	Sand
MCW-D-ST108A	84.46	15.54	0.00	0.00	0.00	Gravel
<b>Minimum</b>	<b>0.00</b>	<b>15.54</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	-
<b>Maximum</b>	<b>84.46</b>	<b>100.00</b>	<b>11.17</b>	<b>8.13</b>	<b>3.04</b>	
<b>Median</b>	<b>0.08</b>	<b>99.88</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
<b>Mean</b>	<b>3.42</b>	<b>95.87</b>	<b>0.71</b>	<b>0.53</b>	<b>0.17</b>	
<b>Standard Deviation</b>	<b>14.65</b>	<b>14.64</b>	<b>1.96</b>	<b>1.45</b>	<b>0.525</b>	
<p>Notes:</p> <p>BGS = British Geological Survey</p> <p>Fines = Silt and clay content</p> <p style="text-align: center;">Silt = &lt; 4.0 phi to +8.0 phi (&lt;62.5 µm to 3.9 µm)</p> <p style="text-align: right;">Clay = &lt; 8.0 phi to +10.0 phi (&lt;3.9 µm to 0.98 µm)</p>						

Table 4.4: Summary of particle size distribution

Station	Modality	Median [µm]	Mean Particle Size			Sorting Coefficient		Skewness		Kurtosis	
			[µm]	[phi]	Wentworth (1922) Description	[µm]	Description†	[µm]	Description	[µm]	Description
<b>Block A</b>											
MCW-A-ST01	Unimodal	195	196	2.35	Fine sand	1.47	Moderately well sorted	-0.02	Symmetrical	0.97	Mesokurtic
MCW-A-ST02	Unimodal	178	175	2.51	Fine sand	1.58	Moderately well sorted	-0.15	Fine skewed	1.25	Leptokurtic
MCW-A-ST03	Unimodal	212	212	2.24	Fine sand	1.94	Moderately sorted	-0.19	Fine skewed	1.58	Very Leptokurtic
MCW-A-ST05	Unimodal	203	204	2.30	Fine sand	1.46	Moderately well sorted	-0.01	Symmetrical	0.95	Mesokurtic
MCW-A-ST07A	Unimodal	202	203	2.30	Fine sand	1.48	Moderately well sorted	0.01	Symmetrical	0.98	Mesokurtic
MCW-A-ST08A	Unimodal	349	356	1.49	Medium sand	1.56	Moderately well sorted	0.13	Coarse skewed	1.12	Leptokurtic
MCW-A-ST12	Unimodal	207	207	2.27	Fine sand	1.47	Moderately well sorted	0.00	Symmetrical	0.95	Mesokurtic
MCW-A-ST14	Unimodal	254	253	1.98	Medium sand	1.40	Well sorted	-0.01	Symmetrical	1.00	Mesokurtic
MCW-A-ST22	Unimodal	184	183	2.45	Fine sand	1.46	Moderately well sorted	-0.06	Symmetrical	1.06	Mesokurtic
MCW-A-ST34	Unimodal	233	233	2.10	Fine sand	1.45	Moderately well sorted	0.02	Symmetrical	0.98	Mesokurtic
MCW-A-ST36	Unimodal	320	319	1.65	Medium sand	1.47	Moderately well sorted	0.03	Symmetrical	0.97	Mesokurtic
MCW-A-ST44A	Unimodal	301	301	1.73	Medium sand	1.41	Well sorted	0.01	Symmetrical	0.90	Mesokurtic
MCW-A-ST55	Unimodal	255	256	1.96	Medium sand	1.46	Moderately well sorted	0.01	Symmetrical	0.97	Mesokurtic
<b>Block B</b>											
MCW-B-ST09A	Unimodal	189	187	2.42	Fine sand	2.88	Poorly sorted	-0.24	Fine skewed	1.91	Very Leptokurtic
MCW-B-ST10	Unimodal	209	210	2.25	Fine sand	1.53	Moderately well sorted	0.02	Symmetrical	0.97	Mesokurtic
MCW-B-ST17A	Unimodal	188	190	2.39	Fine sand	1.51	Moderately well sorted	0.02	Symmetrical	0.97	Mesokurtic
MCW-B-ST18A	Unimodal	199	200	2.32	Fine sand	1.53	Moderately well sorted	0.02	Symmetrical	0.97	Mesokurtic
MCW-B-ST19A	Unimodal	231	230	2.12	Fine sand	1.46	Moderately well sorted	0.02	Symmetrical	0.97	Mesokurtic
MCW-B-ST28	Unimodal	182	184	2.45	Fine sand	1.51	Moderately well sorted	0.02	Symmetrical	0.95	Mesokurtic
MCW-B-ST29A	Unimodal	183	181	2.47	Fine sand	1.81	Moderately sorted	-0.29	Fine skewed	2.05	Very Leptokurtic
MCW-B-ST30A	Unimodal	227	226	2.15	Fine sand	1.55	Moderately well sorted	0.00	Symmetrical	0.96	Mesokurtic
MCW-B-ST38A	Unimodal	203	205	2.28	Fine sand	1.60	Moderately well sorted	0.04	Symmetrical	0.98	Mesokurtic
MCW-B-ST57	Unimodal	251	252	1.99	Medium sand	1.47	Moderately well sorted	0.01	Symmetrical	0.97	Mesokurtic
MCW-B-ST59A	Unimodal	216	215	2.21	Fine sand	1.62	Moderately sorted	-0.02	Symmetrical	1.01	Mesokurtic

Station	Modality	Median [μm]	Mean Particle Size			Sorting Coefficient		Skewness		Kurtosis	
			[μm]	[phi]	Wentworth (1922) Description	[μm]	Description†	[μm]	Description	[μm]	Description
<b>Block C</b>											
MCW-C-ST20	Unimodal	246	246	2.02	Fine sand	1.52	Moderately well sorted	0.01	Symmetrical	0.95	Mesokurtic
MCW-C-ST31	Unimodal	295	296	1.76	Medium sand	1.46	Moderately well sorted	0.00	Symmetrical	0.95	Mesokurtic
MCW-C-ST32	Unimodal	221	220	2.18	Fine sand	1.53	Moderately well sorted	0.01	Symmetrical	0.96	Mesokurtic
MCW-C-ST41	Unimodal	350	351	1.51	Medium sand	1.51	Moderately well sorted	0.02	Symmetrical	0.96	Mesokurtic
MCW-C-ST42	Unimodal	330	329	1.60	Medium sand	1.45	Moderately well sorted	0.02	Symmetrical	0.98	Mesokurtic
MCW-C-ST43	Unimodal	305	305	1.72	Medium sand	1.46	Moderately well sorted	0.02	Symmetrical	0.95	Mesokurtic
MCW-C-ST51	Unimodal	200	201	2.32	Fine sand	1.46	Moderately well sorted	-0.01	Symmetrical	0.95	Mesokurtic
MCW-C-ST52	Unimodal	201	203	2.30	Fine sand	1.52	Moderately well sorted	0.03	Symmetrical	0.98	Mesokurtic
MCW-C-ST53	Unimodal	207	209	2.26	Fine sand	1.57	Moderately well sorted	0.04	Symmetrical	0.97	Mesokurtic
MCW-C-ST54	Unimodal	210	212	2.24	Fine sand	1.65	Moderately sorted	0.04	Symmetrical	0.93	Mesokurtic
MCW-C-ST62	Unimodal	204	205	2.29	Fine sand	1.49	Moderately well sorted	0.02	Symmetrical	0.97	Mesokurtic
MCW-C-ST63	Unimodal	198	201	2.32	Fine sand	1.56	Moderately well sorted	0.05	Symmetrical	0.99	Mesokurtic
MCW-C-ST70	Unimodal	216	216	2.21	Fine sand	1.46	Moderately well sorted	0.03	Symmetrical	0.94	Mesokurtic
MCW-C-ST71	Unimodal	219	220	2.18	Fine sand	1.56	Moderately well sorted	0.03	Symmetrical	0.96	Mesokurtic
MCW-C-ST75	Unimodal	226	227	2.14	Fine sand	1.41	Moderately well sorted	0.03	Symmetrical	0.99	Mesokurtic
MCW-C-ST77	Unimodal	283	285	1.81	Medium sand	1.53	Moderately well sorted	0.01	Symmetrical	0.97	Mesokurtic
MCW-C-ST79	Unimodal	242	242	2.04	Fine sand	1.51	Moderately well sorted	0.03	Symmetrical	0.95	Mesokurtic
MCW-C-ST91	Bimodal	20794	6629	-2.73	Fine pebble	6.34	Very poorly sorted	-0.77	Very fine skewed	0.65	Very Platykurtic
MCW-C-ST92	Unimodal	288	288	1.80	Medium sand	1.41	Moderately well sorted	0.00	Symmetrical	0.94	Mesokurtic
<b>Block D</b>											
MCW-D-ST64	Unimodal	214	219	2.19	Fine sand	1.71	Moderately sorted	0.08	Symmetrical	0.97	Mesokurtic
MCW-D-ST72A	Unimodal	210	212	2.24	Fine sand	1.59	Moderately well sorted	0.05	Symmetrical	0.97	Mesokurtic
MCW-D-ST73	Unimodal	227	231	2.11	Fine sand	1.66	Moderately sorted	0.07	Symmetrical	0.99	Mesokurtic
MCW-D-ST80	Unimodal	220	221	2.18	Fine sand	1.54	Moderately well sorted	0.03	Symmetrical	0.96	Mesokurtic
MCW-D-ST81	Unimodal	240	243	2.04	Fine sand	1.68	Moderately sorted	0.03	Symmetrical	1.07	Mesokurtic
MCW-D-ST82	Unimodal	388	394	1.34	Medium sand	1.58	Moderately well sorted	0.05	Symmetrical	1.00	Mesokurtic
MCW-D-ST86A	Unimodal	271	273	1.87	Medium sand	1.47	Moderately well sorted	-0.01	Symmetrical	0.97	Mesokurtic

Station	Modality	Median [µm]	Mean Particle Size			Sorting Coefficient		Skewness		Kurtosis	
			[µm]	[phi]	Wentworth (1922) Description	[µm]	Description†	[µm]	Description	[µm]	Description
MCW-D-ST88A	Unimodal	274	277	1.85	Medium sand	1.65	Moderately sorted	0.04	Symmetrical	0.96	Mesokurtic
MCW-D-ST89A	Unimodal	387	388	1.36	Medium sand	1.62	Moderately well sorted	0.02	Symmetrical	0.93	Mesokurtic
MCW-D-ST95A	Unimodal	420	421	1.25	Medium sand	1.47	Moderately well sorted	0.01	Symmetrical	0.95	Mesokurtic
MCW-D-ST100A	Bimodal	1224	956	0.07	Coarse sand	2.27	Poorly sorted	-0.42	Very fine skewed	0.97	Mesokurtic
MCW-D-ST101	Bimodal	1029	945	0.08	Coarse sand	2.23	Poorly sorted	-0.13	Fine skewed	0.93	Mesokurtic
MCW-D-ST103A	Unimodal	265	269	1.89	Medium sand	1.51	Moderately well sorted	0.04	Symmetrical	1.00	Mesokurtic
MCW-D-ST104	Bimodal	419	484	1.05	Medium sand	2.07	Poorly sorted	0.27	Coarse skewed	0.97	Mesokurtic
MCW-D-ST108A	Polymodal	14932	10410	-3.38	Medium pebble	4.12	Very poorly sorted	-0.48	Very fine skewed	1.27	Leptokurtic
<b>Minimum</b>	-	<b>178</b>	<b>175</b>	<b>-3.38</b>	-	<b>1.40</b>	-	<b>-0.77</b>	-	<b>0.65</b>	-
<b>Maximum</b>		<b>20794</b>	<b>10410</b>	<b>2.51</b>		<b>6.34</b>		<b>0.27</b>		<b>2.05</b>	
<b>Median</b>		<b>227</b>	<b>228</b>	<b>2.13</b>		<b>1.53</b>		<b>0.02</b>		<b>0.97</b>	
<b>Mean</b>		<b>885</b>	<b>559</b>	<b>1.80</b>		<b>1.72</b>		<b>-0.02</b>		<b>1.02</b>	
<b>Standard Deviation</b>		<b>3287</b>	<b>1565</b>	<b>1.05</b>		<b>0.743</b>		<b>0.152</b>		<b>0.214</b>	

Notes

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



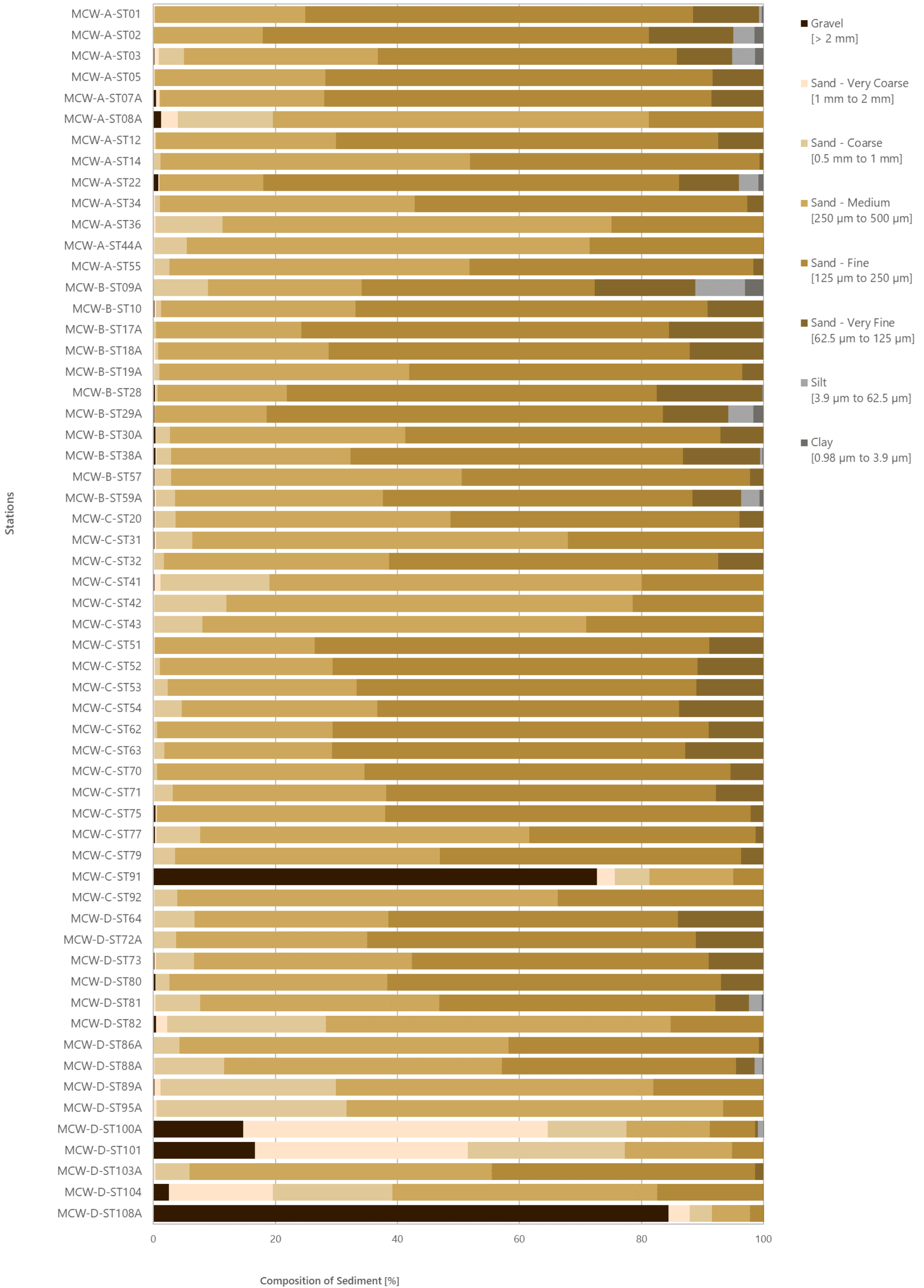
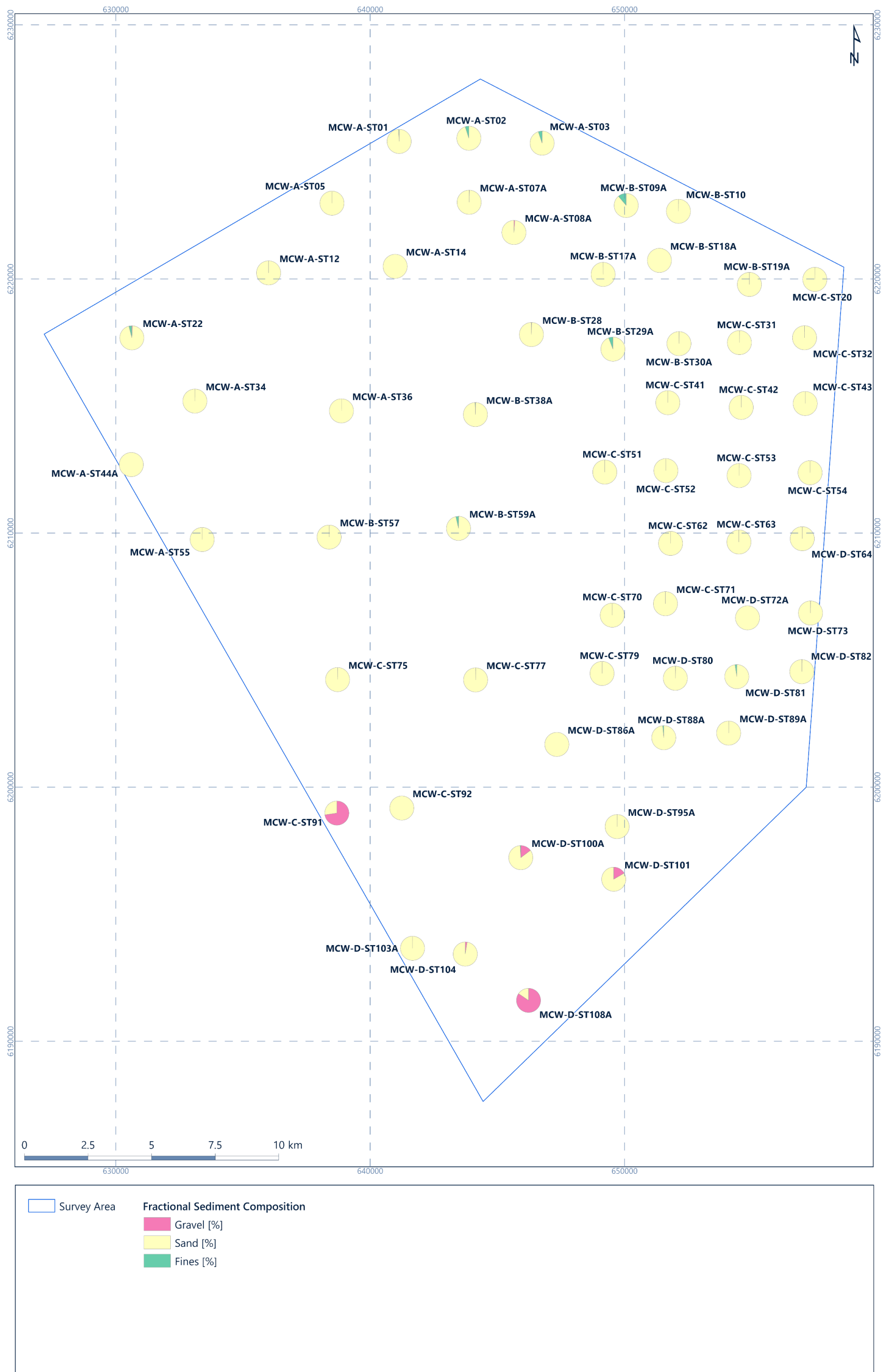


Figure 4.2: Sediment fractional composition



Coordinate System: ETRS 1989 UTM Zone 29N

Figure 4.3: Spatial variations of percentage of sand, gravel and fines

## 4.3 Sediment Macrofauna

The macrofauna from the grab samples included infauna and epifauna, the latter comprising solitary and colonial organisms. The infauna and solitary epifauna were enumerated and were analysed together in terms of phyletic composition, diversity, abundance and multivariate community structure (Section 4.3.1). The colonial epifauna, which were only recorded as present/absent, were removed from the enumerated dataset and assessed separately for phyletic composition (Section 4.3.2). Section 4.3.3 details the results of the analysis of macrofaunal biomass. Appendix E presents the full macrofaunal datasets.

### 4.3.1 Infaunal and Solitary Epifauna

#### 4.3.1.1 Phyletic Composition

A full list of taxa identified and enumerated (individuals per 0.1 m<sup>2</sup>) from the survey area are presented in Appendix E.

Prior to rationalisation the enumerated infaunal and solitary epifaunal dataset comprised 255 taxa and 3834 individuals. Before the analysis the raw data were rationalised (see details in Section 3.3.2) and 48 taxa were excluded. These included juveniles, algae, colonial epifauna, meiofauna, fish or damaged taxa. In addition, individuals of the species *Autonoe longipes* and of the family Aoridae were aggregated to the family level (Aoridae).

Juveniles comprised 35 taxa and 960 individuals of which chordates of the class Ascidiacea (336 individuals) and echinoderms of the family Amphiuroidae (143 individuals) were the most abundant across the survey area. Echinoderms of the order Spatangoida (113 individuals), the class Ophiuroidea (76 individuals) and molluscs of the genus *Dosinia* (65 individuals) were also abundant across the survey area.

Seventeen juvenile individuals of the OSPAR (2023) listed ocean quahog (*Arctica islandica*) were recorded from the dataset but excluded from the statistical analysis. Additionally, specimens of the lesser sandeel *Ammodytes marinus*, which is a UK BAP priority species (JNCC, 2018), were recorded, but not considered in the statistical analysis. Section 4.4.2.3 discusses the conservation importance of these species .

Table 4.5 summarises the abundance of taxonomic groups identified following rationalisation and Figure 4.4 illustrates the phyletic composition of taxa and individuals at each station.

Table 4.5: Taxonomic groups of enumerated fauna from the grab samples

Taxonomic group	Number of Taxa	Composition of Taxa [%]	Abundance	Composition of Individuals [%]
Annelida	108	52.4	1555	55.2
Arthropoda	37	18.0	433	15.4
Mollusca	42	20.4	450	16.0
Echinodermata	9	4.4	191	6.8
Other phyla	10	4.9	188	6.7
<b>Total</b>	<b>206</b>	<b>100</b>	<b>2817</b>	<b>100</b>
Notes				
Macrofaunal samples were processed through a 1 mm mesh sieve				
Other phyla included: Cnidaria, Platyhelminthes, Nemertea, Phoronida and Hemichordata				

The Annelida comprised most of the infaunal and solitary epifaunal taxa across the MachairWind OAA, with a contribution of 52.4 %. Mollusca comprised the second highest number of taxa, with a contribution of 20.4 %. Arthropoda had the third highest number of taxa with a contribution of 18.0 %. The contribution of Echinodermata to the taxa was 4.4 % and that of other phyla accounted for 4.9 %. Other phyla were represented by Cnidaria (including *Virgularia mirabilis*, the family Edwardsiidae, the genus *Halcompa* and unidentifiable Actiniaria), Platyhelminthes, Nemertea (including *Tubulanus polymorphus* and members of the genus *Cerebratulus*), *Phoronis* sp. and Enteropneusta.

The Annelida comprised most of the macrofaunal abundance within the MachairWind OAA, with a contribution of 55.2 %. Analysis of the species list indicated that the polychaetes *Spiophanes bombyx* and *Chaetozone christiei* were the most abundant species across the area. Other polychaetes which featured within the most abundant taxa included the *Lumbrineris cingulata*, *Galathowenia oculata*, *Myriochele danielsseni* and *Sthenelais limicola*.

The Mollusca was the second most abundant phylum within the MachairWind OAA, with a contribution of 16.0 %. Analysis of the species list indicated the bivalves *Nucula nitidosa* and *Abra prismatica* were the most abundant molluscan species recorded.

The Arthropoda had the third highest contribution to macrofaunal abundance within the MachairWind OAA (15.4 %). Examination of the species list indicated high abundances of the crustaceans *Centraloecetes kroyeranus* and *Bathyporeia elegans*.

The Echinodermata contributed 6.8 % of the total abundance of individuals, with the urchin *Echinocyamus pusillus* amongst the top five most abundant species. Other phyla contributed 6.7 % of the total abundance of individuals, with the nemertean *Tubulanus polymorphus* being the most abundant species reported from other phyla.

When looking at individual stations, it was evident that whilst annelids were the most abundant taxa at most stations, arthropods were the most abundant phylum at stations

MCW-C-ST63, MCW-D-ST81 and MCW-D-ST89A and molluscs at station MCW-D-ST82 (Figure 4.4).

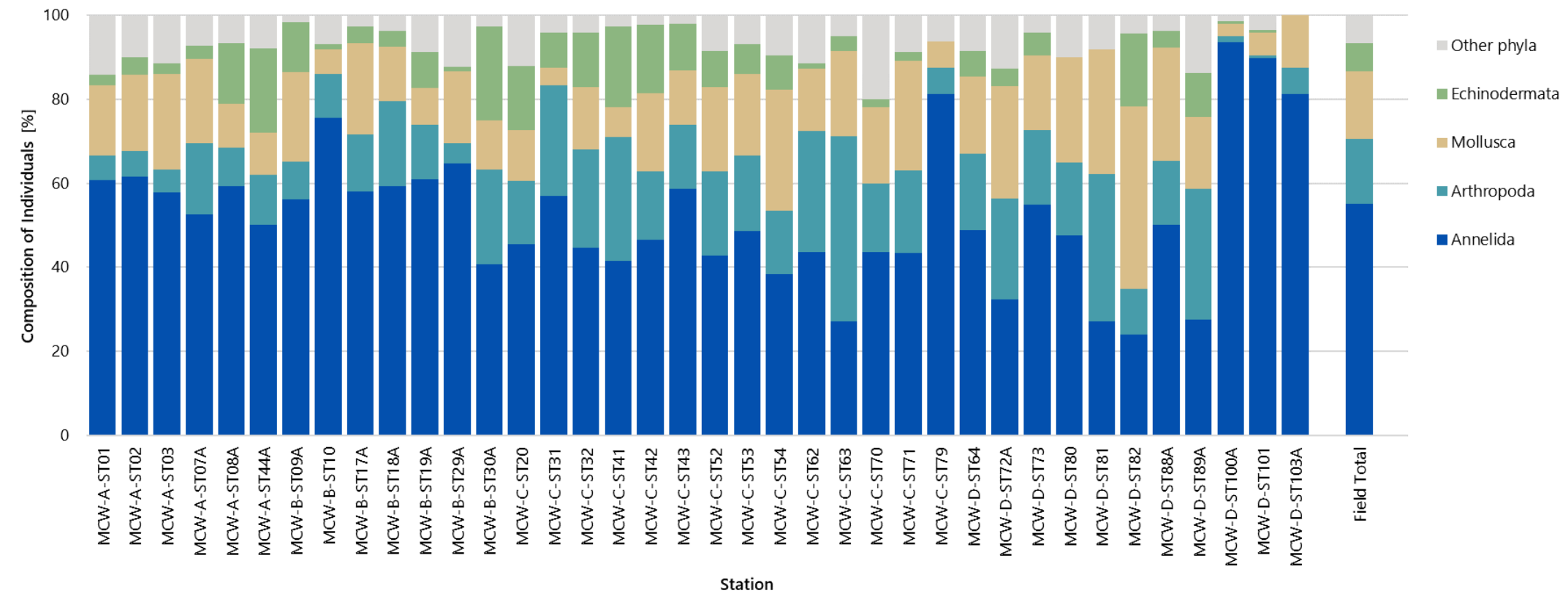
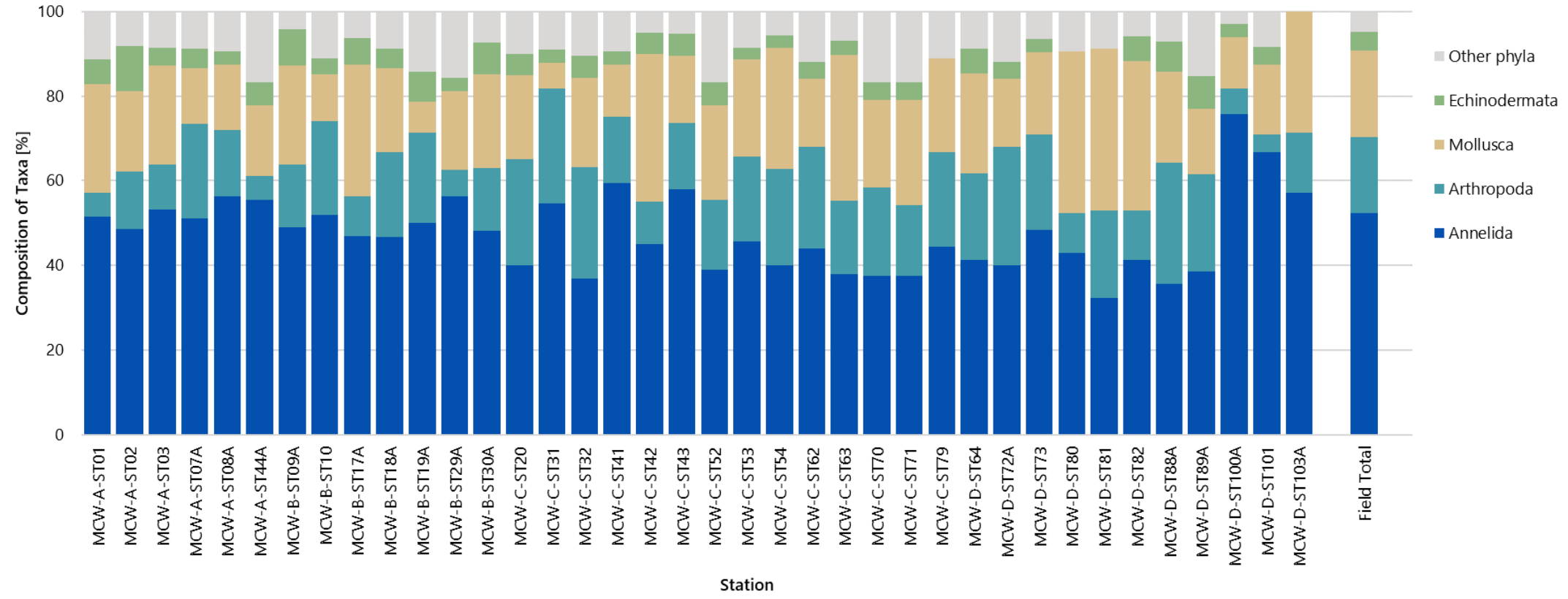


Figure 4.4: Phyletic composition of enumerated macrofaunal (A) taxa and (B) individuals from the grab samples

#### 4.3.1.2 Community Statistics

Table 4.6 presents the results of the univariate analysis for samples acquired at stations across the MachairWind OAA. Figures 4.5 and 4.6 illustrate the spatial distribution of the number of taxa and individuals, respectively.

The number of taxa per station (0.1 m<sup>2</sup>) ranged from 7 (station MCW-D-ST103A) to 47 (stations MCW-A-ST03 and MCW-B-ST09A), with a mean of 27 and a median of 27.

The number of individuals per station (0.1 m<sup>2</sup>) ranged from 16 (station MCW-D-ST103A) to 183 (station MCW-C-ST41), with a mean of 74 individuals and a median of 73 individuals.

Faunal diversity calculated with the Shannon-Wiener index ( $H' \log_2$ ) and assessed in line with the criteria in Dauvin et al. (2012), was 'moderate' at two stations, 'good' at thirteen stations, and 'high' at twenty-three stations.

Evenness ranged from 0.727 (station MCW-C-ST79) to 0.951 (station MCW-B-ST19A), with a mean of 0.881 and a median of 0.898, indicating that the faunal abundance was overall evenly distributed across the taxa recorded.

Dominance was inversely related to evenness, so that in general low values of dominance corresponded to high values of evenness and vice-versa.

The Margalef's richness index ranged from 2.2 (station MCW-D-ST103A) to 9.7 (stations MCW-A-ST03 and MCW-A-ST07A), with a mean of 6.1 and a median of 6.0.



Table 4.6: Community statistics of enumerated fauna from the grab samples (0.1 m<sup>2</sup>)

Station	Numbers		Richness	Diversity	Evenness	Dominance
	Taxa	Individuals	Margalef [d]	Shannon-Wiener [H'Log <sub>2</sub> ]	Pielou [J']	Simpson [λ]
<b>Block A</b>						
MCW-A-ST01	35	84	7.7	4.59	0.894	0.061
MCW-A-ST02	37	99	7.8	4.38	0.841	0.080
MCW-A-ST03	47	114	9.7	5.19	0.934	0.035
MCW-A-ST07A	45	95	9.7	4.98	0.907	0.043
MCW-A-ST08A	32	76	7.2	4.40	0.879	0.073
MCW-A-ST44A	18	50	4.3	3.68	0.882	0.103
<b>Block B</b>						
MCW-B-ST09A	47	178	8.9	4.63	0.834	0.065
MCW-B-ST10	27	86	5.8	3.77	0.794	0.131
MCW-B-ST17A	32	74	7.2	4.49	0.898	0.064
MCW-B-ST18A	45	108	9.4	4.93	0.898	0.048
MCW-B-ST19A	14	23	4.1	3.62	0.951	0.093
MCW-B-ST29A	32	105	6.7	4.34	0.868	0.071
MCW-B-ST30A	27	76	6.0	4.13	0.868	0.084
<b>Block C</b>						
MCW-C-ST20	20	33	5.4	4.00	0.926	0.078
MCW-C-ST31	33	72	7.5	4.50	0.893	0.061
MCW-C-ST32	19	47	4.7	3.86	0.908	0.085
MCW-C-ST41	32	183	6.0	3.88	0.776	0.109
MCW-C-ST42	20	43	5.1	3.96	0.916	0.082
MCW-C-ST43	19	46	4.7	3.72	0.877	0.106
MCW-C-ST52	18	35	4.8	3.94	0.946	0.074
MCW-C-ST53	35	72	8.0	4.72	0.921	0.049
MCW-C-ST54	35	73	7.9	4.77	0.929	0.046
MCW-C-ST62	25	87	5.4	4.04	0.870	0.085
MCW-C-ST63	29	59	6.9	4.22	0.868	0.088
MCW-C-ST70	24	55	5.7	4.29	0.936	0.061
MCW-C-ST71	24	46	6.0	4.12	0.899	0.081
MCW-C-ST79	9	32	2.3	2.31	0.727	0.318
<b>Block D</b>						
MCW-D-ST64	34	82	7.5	4.78	0.939	0.043
MCW-D-ST72A	25	71	5.6	4.31	0.929	0.059
MCW-D-ST73	31	73	7.0	4.48	0.903	0.067
MCW-D-ST80	21	40	5.4	4.15	0.946	0.066
MCW-D-ST81	34	74	7.7	4.66	0.915	0.054
MCW-D-ST82	17	46	4.2	3.72	0.909	0.094
MCW-D-ST88A	14	26	4.0	3.42	0.899	0.118
MCW-D-ST89A	13	29	3.6	3.44	0.931	0.108
MCW-D-ST100A	33	141	6.5	3.83	0.760	0.126
MCW-D-ST101	24	168	4.5	3.40	0.742	0.163
MCW-D-ST103A	7	16	2.2	2.20	0.785	0.305
<b>Minimum</b>	<b>7</b>	<b>16</b>	<b>2.2</b>	<b>2.20</b>	<b>0.727</b>	<b>0.035</b>
<b>Maximum</b>	<b>47</b>	<b>183</b>	<b>9.7</b>	<b>5.19</b>	<b>0.951</b>	<b>0.318</b>
<b>Median</b>	<b>27</b>	<b>73</b>	<b>6.0</b>	<b>4.14</b>	<b>0.898</b>	<b>0.079</b>
<b>Mean</b>	<b>27</b>	<b>74</b>	<b>6.1</b>	<b>4.10</b>	<b>0.881</b>	<b>0.091</b>
<b>Standard Deviation</b>	<b>10.2</b>	<b>41.2</b>	<b>1.87</b>	<b>0.632</b>	<b>0.0592</b>	<b>0.0592</b>

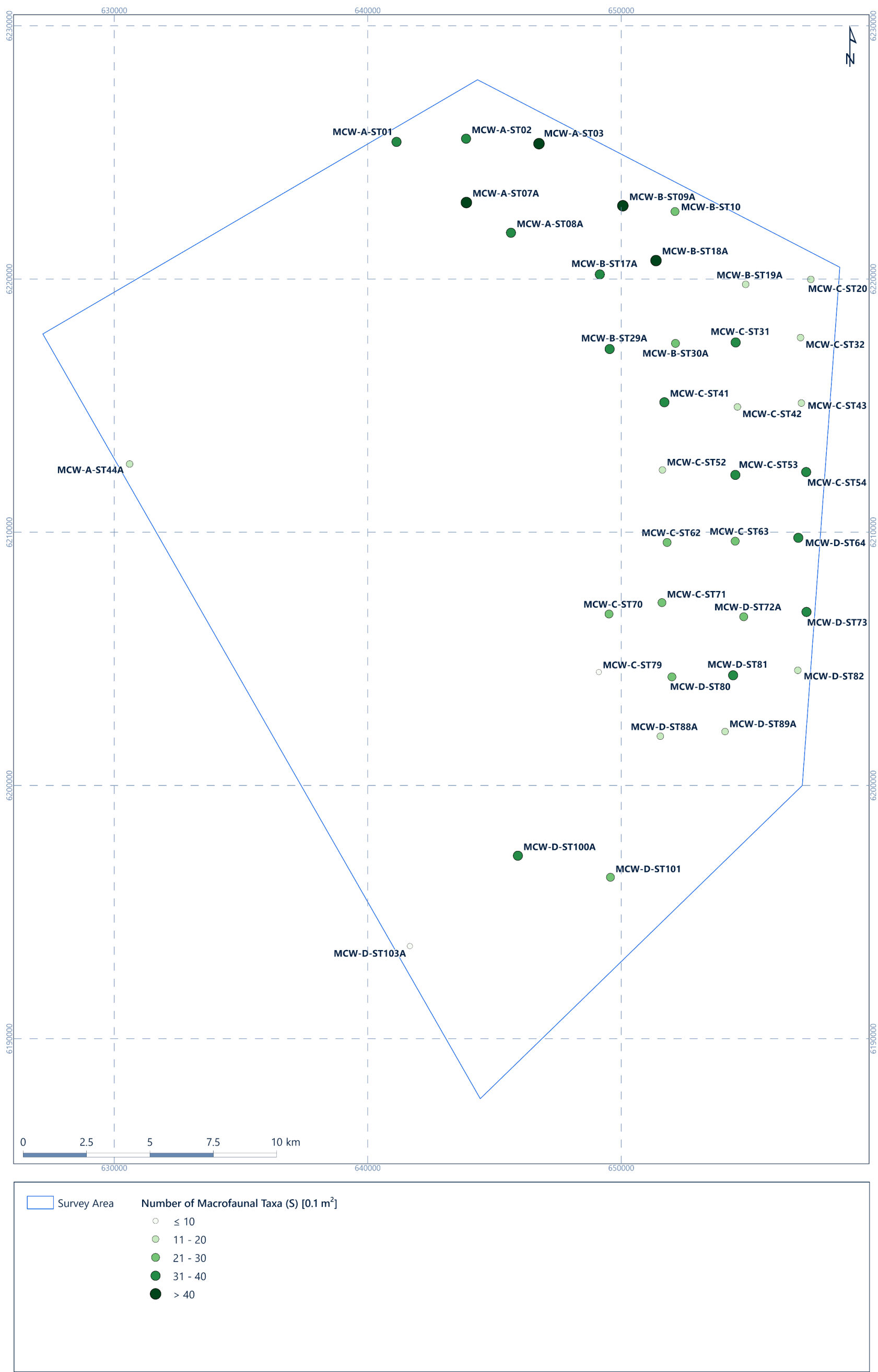


Figure 4.5: Spatial variations of the number of taxa (0.1m<sup>2</sup>)

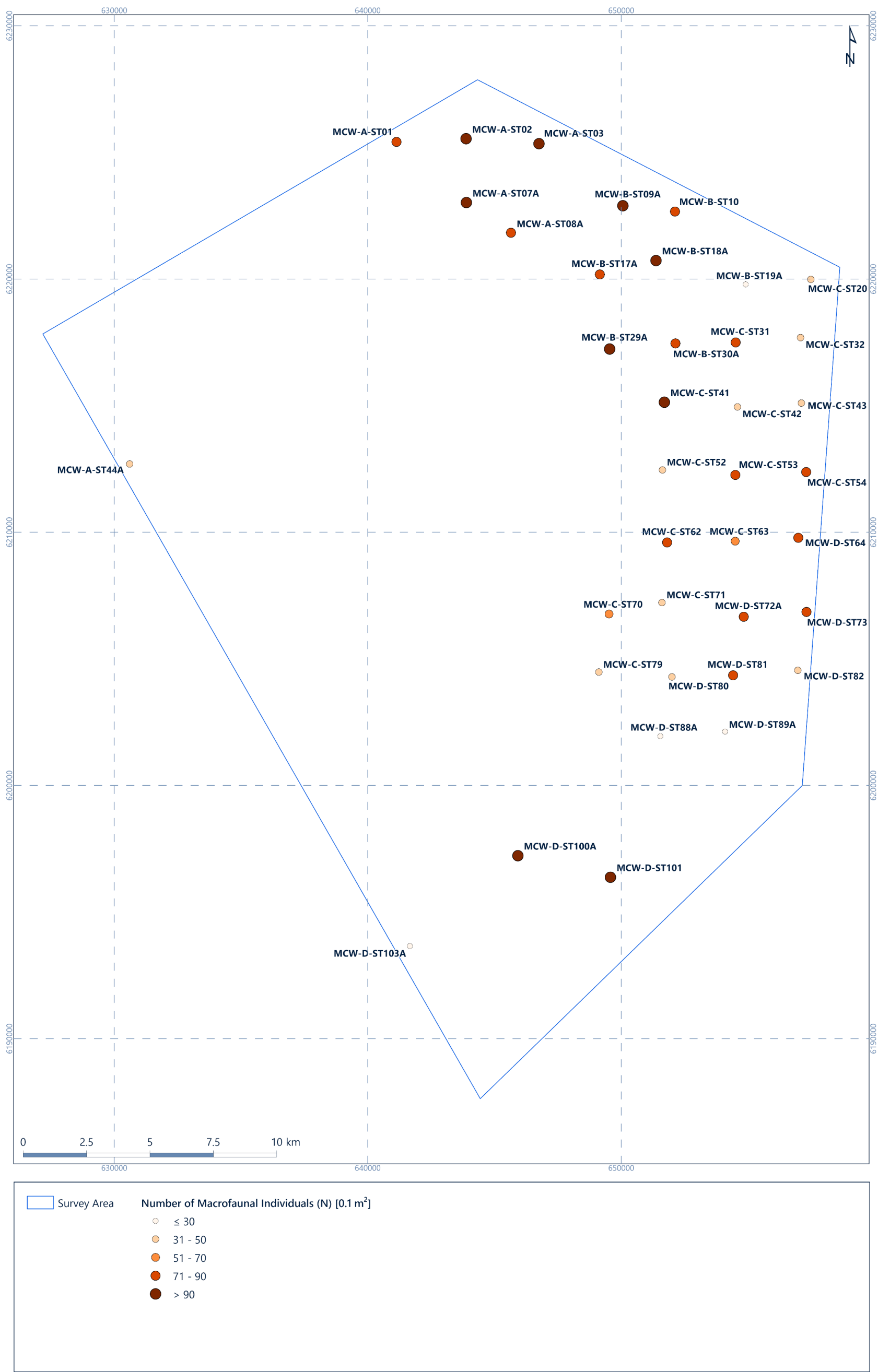


Figure 4.6: Spatial variations of the number of individuals (0.1m<sup>2</sup>)

### 4.3.13 Investigation of Faunal Similarities

Univariate statistics can summarise large and complex datasets (see Appendix B.2) to a certain extent, condensing a large data matrix to a much more manageable form and allowing direct comparison of variables. Multivariate analysis examines relationships among multiple variables at the same time, which allows assessment of structure and provides synthesised conclusions with less error and more robustness. In doing so, subtle trends in the data may be elucidated.

Figures 4.7 and 4.8 present the multivariate statistical analyses of the macrobenthic community from PRIMER v7: the 'Cluster' dendrogram and nMDS ordination, respectively. SIMPER analysis was then used to identify the taxa that contributed the most similarity within each cluster and can thus be considered characteristic of the areas' benthic community (Table 4.7).

#### Cluster Analysis

In PRIMER, the 'Cluster' algorithm was used to group stations according to their faunal similarity. Figure 4.7 presents the hierarchical agglomerative cluster dendrogram for square root transformed station data. The 'SIMPROF' algorithm was used to identify statistically significant ( $P = 0.05$ ) differences between stations, with significant splits depicted as black lines and non-significant splits as red lines. Statistically significant splits may not be ecologically significant (Clarke et al., 2008), with ecological significance considered in subsequent sections of this report.

The whole dataset showed a moderate to high degree of variation across the survey area, with similarity between stations ranging from 0 % to 64.8 %. From the dendrogram, six clusters and three ungrouped stations were identified:

- Cluster A, comprising 12 stations (MCW-C-ST32, MCW-C-ST53, MCW-C-ST54, MCW-C-ST62, MCW-C-ST63, MCW-C-ST70, MCW-C-ST71, MCW-D-ST64, MCW-D-ST72A, MCW-D-ST73, MCW-D-ST80 and MCW-D-ST81), grouped together with at least 39.4 % similarity; the SIMPER analysis returned an average similarity of 47.1 % for cluster A;
- Cluster B, comprising seven stations (MCW-A-ST01, MCW-A-ST02, MCW-A-ST03, MCW-B-ST10, MCW-B-ST17A, MCW-B-ST18A and MCW-B-ST29A), grouped together with at least 46.6 % similarity; the SIMPER analysis returned an average similarity of 49.7 % for cluster B;
- Cluster C, comprising nine stations (MCW-A-ST44A, MCW-B-ST19A, MCW-B-ST30A, MCW-C-ST20, MCW-C-ST31, MCW-C-ST42, MCW-C-ST43, MCW-C-ST52 and MCW-D-ST89A) grouped together with at least 38.4 % similarity; the SIMPER analysis returned an average similarity of 38.7 % for cluster C;
- Cluster D, comprising two stations (MCW-A-ST07A and MCW-C-ST41) grouped together with 38.5 % similarity; the SIMPER analysis returned an average similarity of 44.5 % for cluster D;

- Cluster E, comprising three stations (MCW-C-ST79, MCW-D-ST88A and MCW-D-ST103A), grouped together with at least 40.8 % similarity; the SIMPER analysis returned an average similarity of 44.8 % for cluster E;
- Cluster F, comprising two stations (MCW-D-ST100A and MCW-D-ST101), grouped together with 52.7 % similarity; the SIMPER analysis returned an average similarity of 52.6 % for cluster F;
- Ungrouped station MCW-A-ST08A was located to the north of the MachairWind OAA and was most similar to cluster F (26.8 %);
- Ungrouped station MCW-B-ST09A was located to the north-east of the MachairWind OAA and was 14.8 % similar to the group average of clusters A to E;
- Ungrouped station MCW-D-ST82 was located to the south-east of the MachairWind OAA and was 30.9 % similar to the group average of clusters C and D.

### Non-metric Multi-dimensional Scaling

Figure 4.8 displays the results of the nMDS, which is an ordination technique that arranges stations on a two-dimensional plot, so that their relative distances from each other reflect their faunal similarities. The stress coefficient of 0.15 provides a meaningful ordination of the data, but one in which smaller scale variation may not be accurately represented (Clarke & Warwick, 2001). To facilitate interpretation, the identified groups from the 'Cluster' analysis were superimposed upon the nMDS ordination with their corresponding similarities. The plot mirrors the inter-cluster relationships shown in the dendrogram.

### Similarity Percentage (SIMPER) Analysis

Table 4.7 presents the results of the SIMPER analysis, contrasting the five taxa that contributed the highest level of similarity within each cluster and the top five most abundant taxa recorded at the ungrouped stations.

As would be expected given their overall dominance within the survey area (Section 4.3.1.1), polychaetes were prominent among the characterising taxa for the majority of clusters and ungrouped stations. The most abundant taxon identified from the survey area overall, the spionid polychaete *S. bombyx*, was shown to be characterising taxon for four of the six clusters identified. *Sthenelais limicola*, *N. cirrosa*, *L. cingulata*, *G. oculata* and *M. danielseni* were also characteristic of multiple clusters and/or ungrouped stations. The only non-annelid taxa that were characteristic of more than one cluster/ungrouped station were the bivalve *A. prismatica* and urchin *E. pusillus*.

Cluster A differed from the remaining clusters due to the increased prominence of arthropods in its community; within this cluster the amphipods *B. guilliamsoniana* and *B. elegans* were the first and third most abundant taxa, respectively. Annelids were the most abundant taxa at all of the other clusters and at ungrouped stations MCW-A-ST08A and MCW-B-ST09A, although the bivalve *A. prismatica* contributed the highest level of similarity within cluster C due to its consistent abundance across its constituent stations. Ungrouped station MCW-D-ST82 was the only station/cluster that did not include polychaetes within the

top five taxa. It was instead characterised by three bivalves, an amphipod and urchin *E. pusillus*.

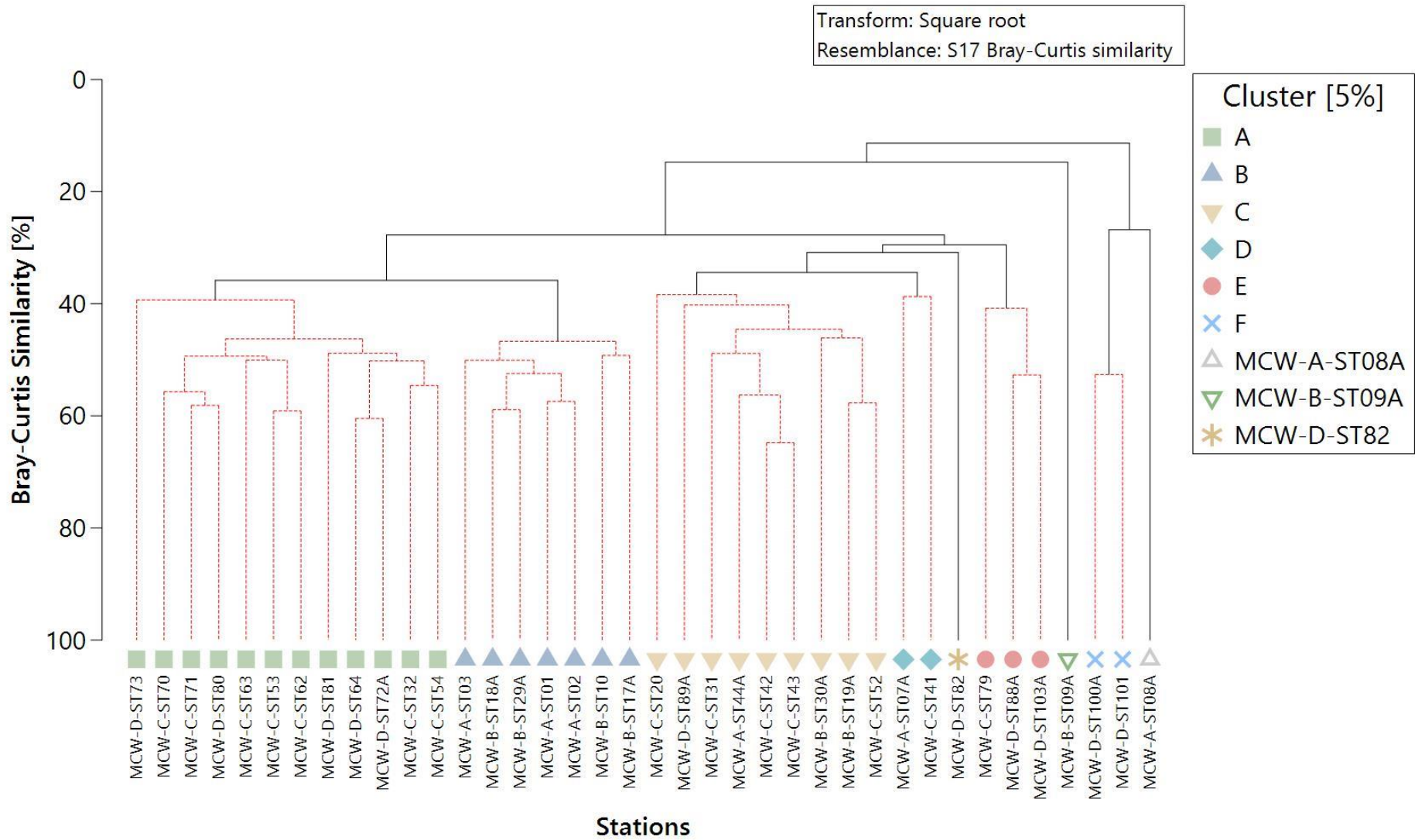


Figure 4.7: Dendrogram of hierarchical clustering analysis of enumerated fauna from the grab samples

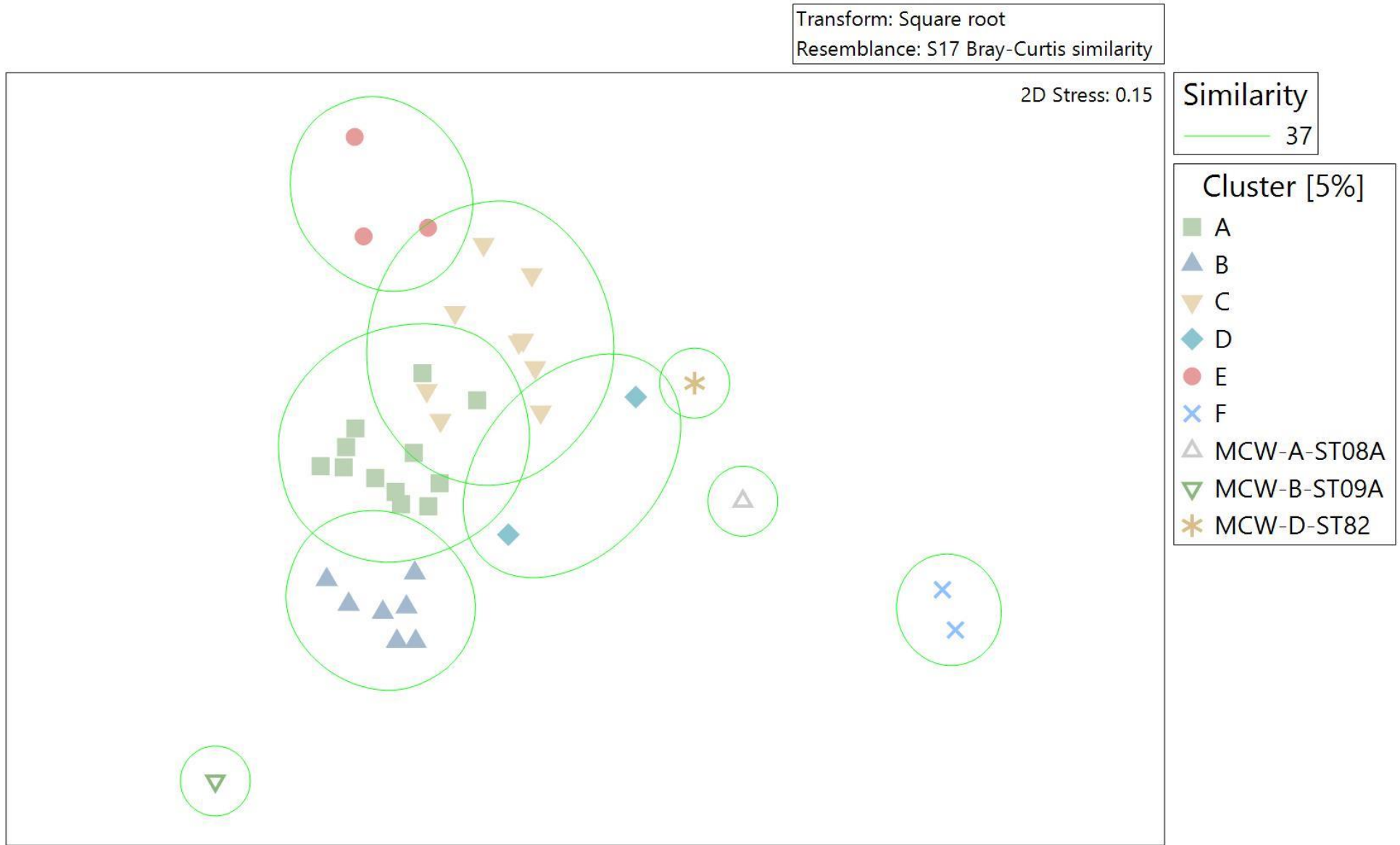


Figure 4.8: nMDS of hierarchical clustering analysis of enumerated fauna from the grab samples



Table 4.7: Similarity percentage (SIMPER) Analysis of multivariate clusters

Multivariate Clusters							
Taxa	Mean Abundance	Similarity [%]	Cumulative Similarity [%]	Taxa	Mean Abundance	Similarity [%]	Cumulative Similarity [%]
<b>Cluster A</b>				<b>Cluster B</b>			
<i>Bathyporeia guilliamsoniana</i>	4	8.8	8.8	<i>Chaetozone christiei</i>	12	11.0	11.0
<i>Spiophanes bombyx</i>	5	8.0	16.7	<i>Myriochele danielsseni</i>	11	9.0	20.0
<i>Bathyporeia elegans</i>	4	6.7	23.4	<i>Magelona filiformis</i>	7	8.1	28.1
<i>Tubulanus polymorphus</i>	3	5.9	29.4	<i>Galathowenia oculata</i>	6	6.4	34.5
<i>Lumbrineris cingulata</i>	3	5.9	35.3	<i>Spiophanes bombyx</i>	3	5.8	40.3
<b>Cluster C</b>				<b>Cluster D</b>			
<i>Spiophanes bombyx</i>	6	16.3	16.3	<i>Abra prismatica</i>	9	12.6	12.6
<i>Echinocyamus pusillus</i>	6	15.8	32.1	<i>Sthenelais limicola</i>	7	10.3	23.0
<i>Nephtys cirrosa</i>	2	10.2	42.3	<i>Nephtys cirrosa</i>	6	9.4	32.4
<i>Sthenelais limicola</i>	2	8.6	50.9	<i>Spiophanes bombyx</i>	11	9.4	41.8
<i>Abra prismatica</i>	2	8.0	58.8	<i>Poecilochaetus serpens</i>	9	8.4	50.2
<b>Cluster E</b>				<b>Cluster F</b>			
<i>Lumbrineris cingulata</i>	10	39.7	39.7	<i>Pisione remota</i>	35	12.3	12.3
<i>Sthenelais limicola</i>	3	20.7	60.5	<i>Glycera lapidum</i>	13	12.3	24.6
<i>Nephtys cirrosa</i>	2	18.7	79.2	<i>Protodorvillea kefersteini</i>	17	11.8	36.3
<i>Ophelia borealis</i>	1	5.4	84.6	<i>Syllis licheri</i>	8	9.4	45.7
<i>Centraloecetes kroyeranus</i>	1	5.4	90.0	<i>Aonides paucibranchiata</i>	10	7.9	53.7
<b>Ungrouped Stations</b>							
Taxa	Abundance	Taxa	Abundance	Taxa	Abundance	Taxa	Abundance
<b>MCW-A-ST08A</b>		<b>MCW-B-ST09A</b>		<b>MCW-D-ST82</b>			
<i>Aponuphis bilineata</i>	13	<i>Galathowenia oculata</i>	26	<i>Echinocyamus pusillus</i>	8		
<i>Echinocyamus pusillus</i>	11	<i>Euclymene oerstedii</i>	22	<i>Goodallia triangularis</i>	7		
<i>Notomastus</i>	6	<i>Amphiura filiformis</i>	17	<i>Asbjornsenia pygmaea</i>	4		
<i>Mysia undata</i>	4	<i>Kurtiella bidentata</i>	15	<i>Centraloecetes striatus</i>	4		
<i>Sthenelais limicola</i>	3	<i>Myriochele danielsseni</i>	9	<i>Abra prismatica</i>	4		
<b>Key to Phyla</b>							
Annelida	Arthropoda	Mollusca	Echinodermata	Other phyla			

### 4.3.2 Colonial Epifauna

Table 4.8 presents the community structure of the colonial epifauna. Figure 4.9 illustrates the colonial epifaunal community structure per station.

Table 4.8: Taxonomic groups of colonial epifauna from the grab samples

Taxonomic Group	Number of Taxa	Composition of Taxa [%]
Porifera	1	5.0
Cnidaria	7	35.0
Arthropoda	2	10.0
Bryozoa	10	50.0
<b>Total</b>	<b>20</b>	<b>100</b>
Notes		
Macrofaunal samples were processed through a 1 mm mesh sieve		

Colonial epifauna were recorded from 37 of the 38 macrofaunal grab samples acquired within the MachairWind OAA; station MCW-A-ST08A was devoid of colonial epifauna. Twenty epifaunal taxa were recorded in total, with these falling within four phyla. The Bryozoa comprised most of the taxa recorded (50.0 %), followed by the Cnidaria (35.0 %), Arthropoda (10.0 %), and Porifera (5.0 %). Cnidarians were recorded at 33 stations, bryozoans were recorded at 15 stations, arthropods (barnacles) at 4 stations and poriferans (sponges) at 2 stations.

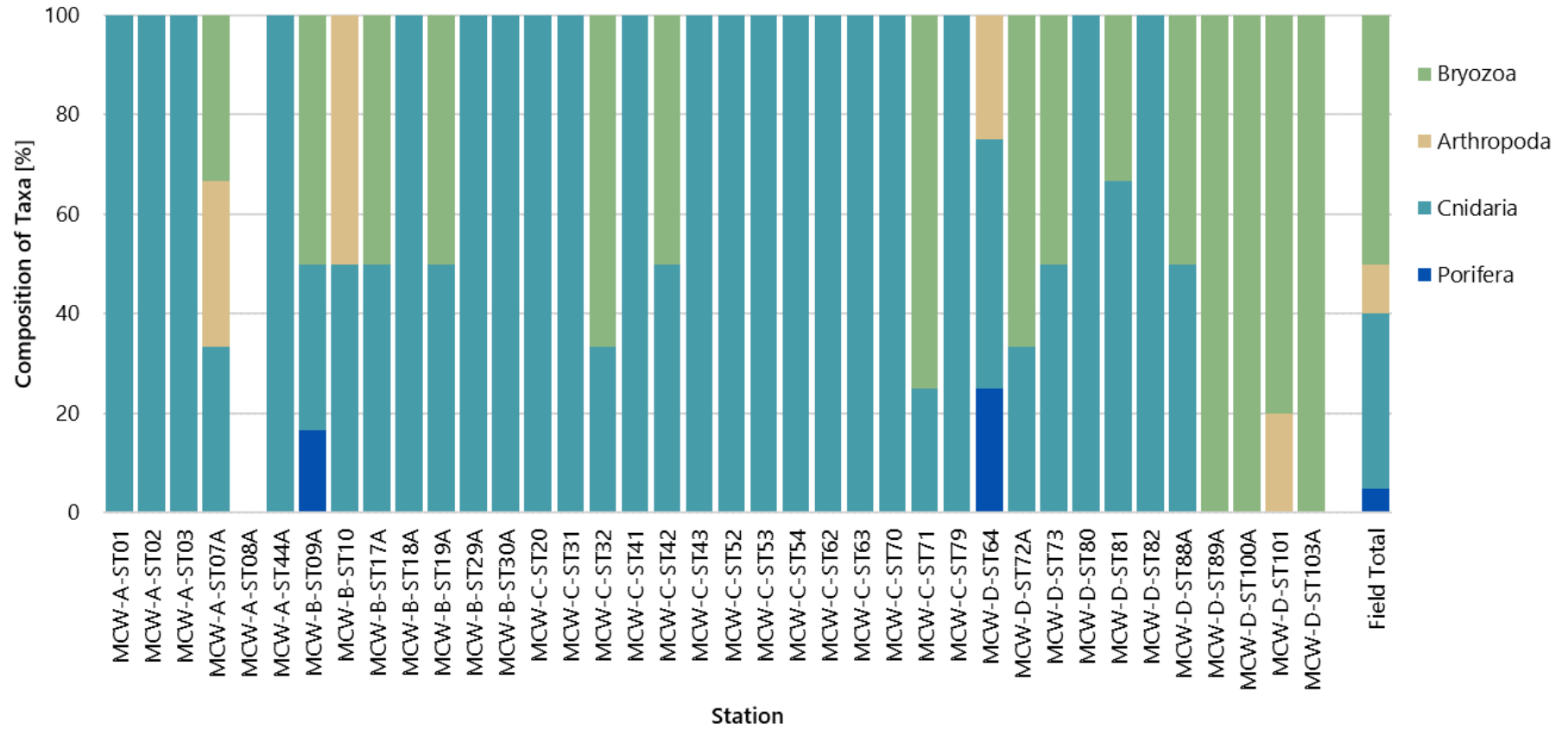


Figure 4.9: Phyletic composition of epifaunal taxa from the grab samples

### 4.3.3 Biomass

This section presents the macrofaunal biomass data, which has been converted to the approximate equivalent of AFDW using the factors described by Eleftheriou & Basford (1989). Appendix E.2 provides the raw macrofaunal biomass data per station (blotted wet weight).

Table 4.9 presents the percentage contribution of phyla to biomass across the MachairWind survey area. Table 4.10 presents the biomass of major taxonomic groups at each station. Figure 4.10 illustrates the phyletic composition of the biomass at each station and Figure 4.11 illustrates the spatial variations of infaunal biomass across the survey area.

Table 4.9: Taxonomic groups of macrofaunal biomass from the grab samples

Phylum	Biomass [AFDW g/0.1 m <sup>2</sup> ]	Biomass [%]
Annelida	1.2602	7.2
Arthropoda	0.1147	0.7
Mollusca	9.1187	51.8
Echinodermata	3.4402	19.5
Other phyla	3.6743	20.9
<b>Total</b>	<b>17.6080</b>	<b>100</b>
Notes		
Macrofaunal samples were processed through a 1 mm mesh sieve		
Other phyla included: Chordata, Cnidaria, Hemichordata, Nemertea, Phoronida, Platyhelminthes		

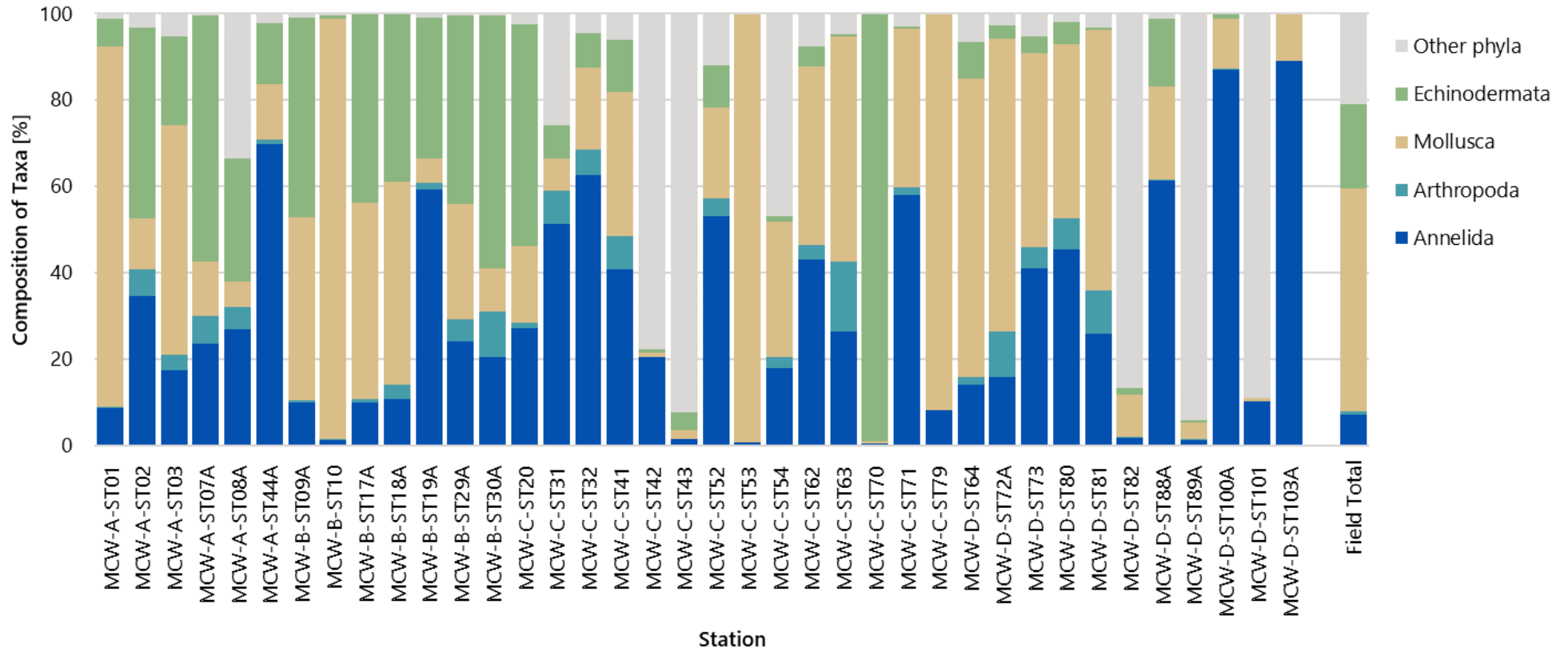
Mollusca comprised most of the macrofaunal abundance (51.8 %), followed by other phyla (20.9 %), Echinodermata (19.5 %), Annelida (7.2 %) and Arthropoda (0.7 %).

The total biomass ranged from 0.0154 AFDW g/0.1 m<sup>2</sup> at station MCW-D-ST103A to 5.9926 AFDW g/0.1 m<sup>2</sup> at station MCW-C-ST53, with a mean of 0.4634 AFDW g/0.1 m<sup>2</sup> and a median of 0.1182 AFDW g/0.1 m<sup>2</sup>.

The high value of biomass at station MCW-C-ST53 was associated with molluscs; examination of the macrofauna data and grab sample photographs for this station suggested this was mainly contributed by a single large *Arctica islandica*. The biomass at station MCW-C-ST70, with the second highest value of 2.2701 AFDW g/0.1 m<sup>2</sup>, was associated with echinoderms, with the majority of this contributed by a single large urchin (*Echinocardium cordatum*) seen from the sample photographs.

Table 4.10: Phyletic composition of macrofaunal biomass from the grab samples (0.1 m<sup>2</sup>)

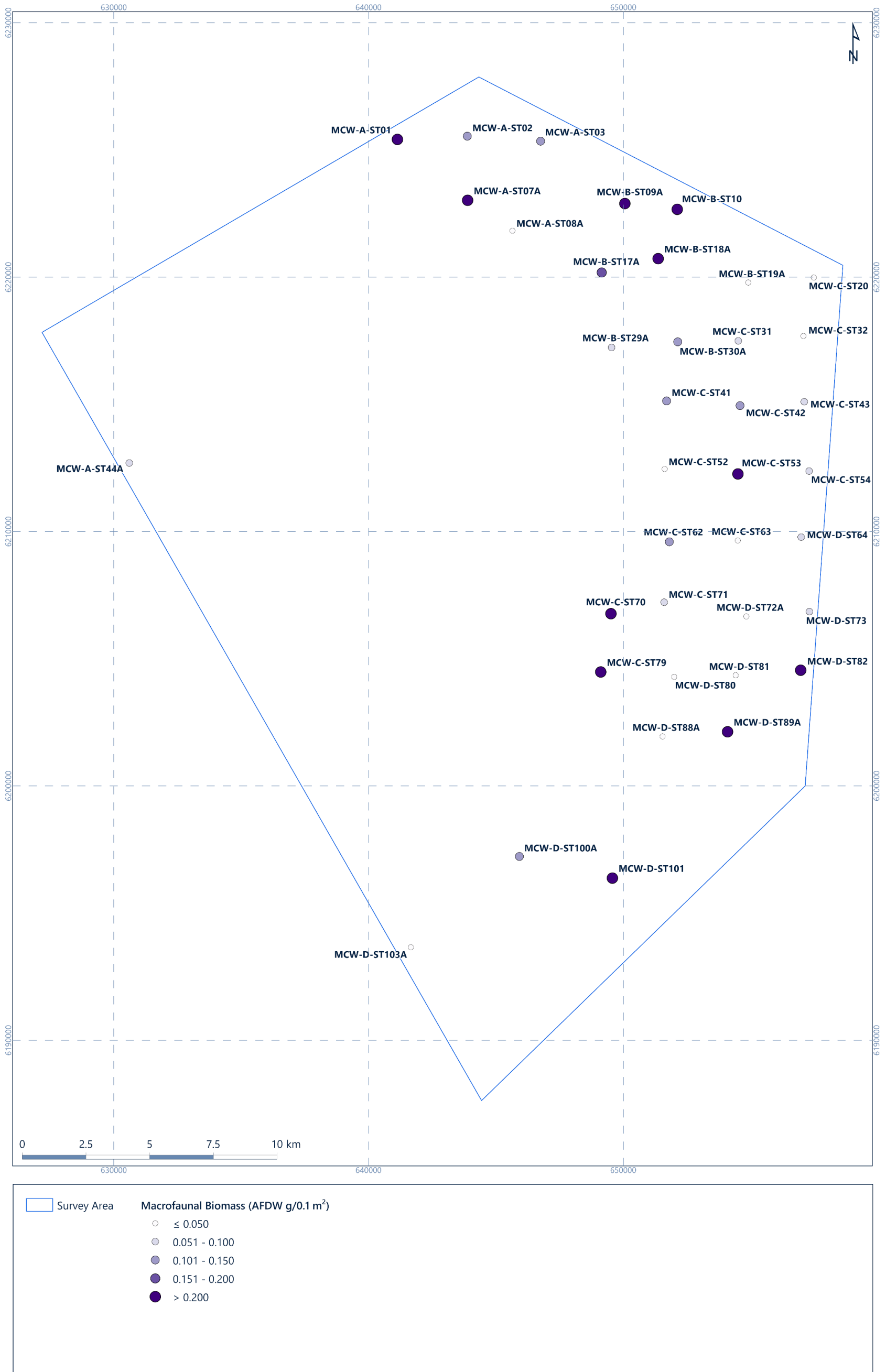
Station	Biomass					Total
	Annelida	Arthropoda	Mollusca	Echinodermata	Other Phyla	
<b>Block A</b>						
MCW-A-ST01	0.0245	0.0002	0.2344	0.0180	0.0034	0.2805
MCW-A-ST02	0.0441	0.0080	0.0149	0.0564	0.0042	0.1276
MCW-A-ST03	0.0223	0.0047	0.0689	0.0263	0.0069	0.1290
MCW-A-ST07A	0.0722	0.0192	0.0385	0.1750	0.0008	0.3057
MCW-A-ST08A	0.0117	0.0023	0.0026	0.0125	0.0147	0.0437
MCW-A-ST44A	0.0541	0.0007	0.0100	0.0110	0.0017	0.0776
<b>Block B</b>						
MCW-B-ST09A	0.1062	0.0057	0.4467	0.4889	0.0109	1.0584
MCW-B-ST10	0.0141	0.0020	1.1005	0.0075	0.0056	1.1298
MCW-B-ST17A	0.0178	0.0014	0.0823	0.0787	0.0004	0.1806
MCW-B-ST18A	0.0219	0.0072	0.0964	0.0796	0.0003	0.2054
MCW-B-ST19A	0.0287	0.0008	0.0027	0.0158	0.0004	0.0484
MCW-B-ST29A	0.0125	0.0027	0.0139	0.0228	0.0002	0.0522
MCW-B-ST30A	0.0268	0.0140	0.0132	0.0773	0.0004	0.1316
<b>Block C</b>						
MCW-C-ST20	0.0067	0.0003	0.0044	0.0127	0.0006	0.0247
MCW-C-ST31	0.0325	0.0050	0.0047	0.0049	0.0163	0.0635
MCW-C-ST32	0.0160	0.0015	0.0049	0.0020	0.0012	0.0255
MCW-C-ST41	0.0470	0.0090	0.0385	0.0140	0.0069	0.1154
MCW-C-ST42	0.1334	0.0003	0.0072	0.0046	0.5089	0.6543
MCW-C-ST43	0.0184	0.0002	0.0223	0.0482	1.0892	1.1784
MCW-C-ST52	0.0142	0.0011	0.0057	0.0026	0.0032	0.0267
MCW-C-ST53	0.0376	0.0011	5.9500	0.0031	0.0007	5.9926
MCW-C-ST54	0.0102	0.0015	0.0179	0.0007	0.0267	0.0570
MCW-C-ST62	0.0521	0.0042	0.0500	0.0055	0.0093	0.1211
MCW-C-ST63	0.0064	0.0040	0.0127	0.0002	0.0011	0.0244
MCW-C-ST70	0.0108	0.0011	0.0095	2.2440	0.0047	2.2701
MCW-C-ST71	0.0300	0.0009	0.0190	0.0003	0.0016	0.0518
MCW-C-ST79	0.0535	0.0002	0.6010	0.0012	0.0003	0.6562
<b>Block D</b>						
MCW-D-ST64	0.0119	0.0016	0.0589	0.0072	0.0055	0.0850
MCW-D-ST72A	0.0079	0.0052	0.0338	0.0016	0.0013	0.0498
MCW-D-ST73	0.0244	0.0029	0.0268	0.0023	0.0031	0.0595
MCW-D-ST80	0.0122	0.0019	0.0109	0.0013	0.0005	0.0268
MCW-D-ST81	0.0076	0.0030	0.0179	0.0002	0.0009	0.0297
MCW-D-ST82	0.0084	0.0004	0.0460	0.0074	0.4039	0.4662
MCW-D-ST88A	0.0116	0.0001	0.0041	0.0030	0.0002	0.0189
MCW-D-ST89A	0.0075	0.0002	0.0233	0.0016	0.5377	0.5704
MCW-D-ST100A	0.1132	0.0002	0.0152	0.0012	0.0002	0.1300
MCW-D-ST101	0.1159	0.0000	0.0070	0.0009	1.0002	1.1240
MCW-D-ST103A	0.0137	< 0.0001	0.0016	-	< 0.0001	0.0154
<b>Minimum</b>	<b>0.0064</b>	<b>&lt; 0.0001</b>	<b>0.0016</b>	<b>0.0002</b>	<b>&lt; 0.0001</b>	<b>0.0154</b>
<b>Maximum</b>	<b>0.1334</b>	<b>0.0192</b>	<b>5.9500</b>	<b>2.2440</b>	<b>1.0892</b>	<b>5.9926</b>
<b>Median</b>	<b>0.0201</b>	<b>0.0015</b>	<b>0.0179</b>	<b>0.0072</b>	<b>0.0024</b>	<b>0.1182</b>
<b>Mean</b>	<b>0.0332</b>	<b>0.0030</b>	<b>0.2400</b>	<b>0.0930</b>	<b>0.0967</b>	<b>0.4634</b>
<b>Standard deviation</b>	<b>0.0334</b>	<b>0.0041</b>	<b>0.9737</b>	<b>0.3731</b>	<b>0.2622</b>	<b>1.0363</b>
Notes						
Biomass expressed as ash free dry weight [AFDW] g/0.1 m <sup>2</sup> grab sample						



Notes

Biomass expressed as ash free dry weight in g/0.1 m<sup>2</sup> grab sample

Figure 4.10: Phyletic composition of macrofaunal biomass from the grab samples



Notes

Biomass expressed as ash free dry weight [AFDW] in g/0.1 m<sup>2</sup> grab sample

Figure 4.11: Spatial variations of total macrofaunal biomass from the grab samples

## 4.4 Seafloor Habitats and Biotopes

This section classifies and describes the habitats and biotopes present within the MachairWind OAA.

Broadscale variations in seafloor sediment type and morphology type were interpreted from seafloor photographic data, with PSD data used to refine sediment descriptions and classify the seafloor habitats present. Epifaunal data derived from seafloor photographic operations were then utilised, in conjunction with macrofaunal data, to describe the faunal communities present and assign biotopes (Section 4.4.1). Appendix C.3 provides full photographic logs and Appendix G.2 presents the semi-quantitative epifaunal data derived from seafloor photographic operations, based on the SACFOR scale (JNCC, 2015).

Section 4.4.2 provides details of the potentially sensitive habitats and species present within the survey area. Appendix G.1 provides detailed sensitive habitat assessment data.

### 4.4.1 Biotope Classifications

The main sediment type observed was 'slightly gravelly sand', with varying proportions of shell fragments; the epifauna recorded in association with this sediment type was generally sparse. This sediment type/community was recorded from 55 of the 62 stations surveyed and classified as the JNCC level 4 biotope complex 'Offshore circalittoral sand' (SS.SSa.OSa).

Particle size analysis of sediment samples collected within this biotope complex identified 'medium sand' to 'fine sand' (Wentworth, 1922) with little or no gravel or mud content, which were described as 'sand' under the BGS modified Folk classification (Long, 2006; Table 4.3). For biotope classification purposes, Kaskela et al (2019) suggest that sediments are classified using the original Folk (1954) classification, under which the majority of these samples would be considered 'slightly gravelly sand'.

Areas of coarser sediment were observed at seven stations (stations MCW-A-ST08A, MCW-A-ST44A, MCW-B-ST57, MCW-C-ST91, MCW-D-ST73, MCW-D-ST82 and MCW-D-ST108A), with these typically co-occurring with the previously mentioned 'Offshore circalittoral sand' (SS.SSa.OSa) biotope complex. Here, the seafloor ranged from sediments comprising 'gravelly sand' with shell fragments to patches/ribbons of pebbles, cobbles and boulders interspersed with 'slightly gravelly sand' and shell fragments. Where PSD data were available, sediments were described as 'gravelly sand', 'sandy gravel' or 'gravel' (Folk, 1954). The epifauna associated with this habitat type was again sparse. These stations have been classified as the JNCC level 4 biotope complex 'Offshore circalittoral coarse sediment' (SS.SCS.OCS).

Two stations (stations MCW-C-ST83 and MCW-D-ST73) contained coarse sediments of pebbles, cobbles and boulders interspersed with sand. Higher numbers of echinoderms and attached epifauna were observed from these stations and they have therefore been classified as the JNCC level 4 biotope complex 'Echinoderms and crustose communities' (CR.MCR.EcCr).



In the case of station MCW-D-ST73, 'Echinoderms and crustose communities' (CR.MCR.EcCr) were present as a mosaic with 'Offshore circalittoral coarse sediment' (SS.SCS.OCS).

These sediment descriptions are consistent with the geophysical seafloor features interpretation, which showed that the seafloor sediments predominantly comprise sand with shell fragments. Coarse to gravelly sand, gravels, cobbles and boulders were found, either enclosed within depressions, or on bathymetric highs in the north, south and south-west of the area. Boulders were particularly prevalent in the south of the area.

Table 4.11 presents the classification hierarchy for the habitats observed within the survey area when photographic, PSD and macrofaunal data were considered. Figure 4.12 spatially presents the habitats observed across the survey area.

Table 4.12 summarises the physical and biological parameters characteristics of the biotopes assigned, along with example photographs. Appendix F provides further example photographs. Sections 4.4.1.1 to 4.4.1.3 provide detailed descriptions of each biotope.

Table 4.11: Habitat classifications

JNCC (2022) Habitat Classification				Equivalent EUNIS (EEA, 2022) Classifications
Environment Level 1	Broad Habitat Level 2	Habitat Level 3	Biotope Complex Level 4	
Marine	CR Circalittoral rock	CR.MCR Moderate energy circalittoral rock	CR.MCR.EcCr Echinoderms and crustose communities	MC122 Echinoderms and crustose communities on Atlantic circalittoral rock
	SS Sublittoral sediment	SS.SCS Sublittoral coarse sediment	SS.SCS.OCS Offshore circalittoral coarse sediment	MD32 Atlantic offshore circalittoral coarse sediment
		SS.SSa Sublittoral sand and muddy sands	SS.SSa.OSa Offshore circalittoral sand	MD52 Atlantic offshore circalittoral sand
Notes EUNIS = European Nature Information System JNCC = Joint Nature Conservation Committee				

#### 4.4.1.1 Echinoderms and crustose communities (CR.MCR.EcCr)

The JNCC level 4 biotope complex 'Echinoderms and crustose communities' (CR.MCR.EcCr) is described as wave-exposed, moderately strong to weakly tide-swept, circalittoral bedrock and boulders. Echinoderms, faunal (*Parasmittina trispinosa*) and algal crusts (red encrusting algae) dominated this biotope. Typical echinoderms present are the starfish *Asterias rubens*, the brittlestar *Ophiothrix fragilis* and the urchin *Echinus esculentus*. There may be isolated clumps of the hydroids *Nemertesia antennina* and *Abietinaria abietina*, soft coral

*Alcyonium digitatum*, the anemone *Urticina felina* and the cup coral *Caryophyllia smithii*' (JNCC, 2022).

Across the survey area, this biotope complex has been assigned to station MCW-C-ST83 and along a 116 m section of the transect surveyed at station MCW-D-ST73 as part of a mosaic in combination with 'Offshore circalittoral coarse sediment' (SS.SCS.OCS). Both stations were located towards the south of the survey area in water depths of between 48 m and 59 m LAT.

From photographic data, the coarser sediments observed at station MCW-D-ST73 were described as cobbles and boulders interspersed with 'slightly gravelly sand' and shell fragments. The PSD sample taken at station MCW-D-ST73 was acquired from sand substratum immediately adjacent to this biotope complex, not from the biotope complex itself and, as such, was not considered applicable to its classification. Particle size distribution data were not available for MCW-C-ST83, as sampling attempts at this station failed; the seafloor was described from photographic data as cobbles and boulders, interspersed with 'gravelly sand' (Table 4.12 and Appendix C.3).

Both occurrences of the 'Echinoderms and crustose communities' (CR.MCR.EcCr) biotope complex were associated with mottled high reflectivity acoustic facies, as evident from the SSS data.'

The most regularly observed epifaunal taxa evident from photographic data included brittlestars (Ophiuroidea including *O. fragilis*), sea urchins (*E. esculentus*), starfish (*A. rubens*), crabs (*Cancer pagurus*), soft corals (*A. digitatum*), bryozoans (including Flustridae) and cup corals (Caryophylliidae). Fish observed included snakeblenny (*Lumpenus lampretaeformis*; Appendix C.3). Most of the taxa observed are characterising taxa of this biotope complex. Abundance of epifauna associated with this biotope complex (Appendix G.1.2) ranged from 'rare' (*A. digitatum*, Flustridae, *Calliostoma* sp. and Pectinidae) to 'abundant' (Ophiuroidea, including *O. fragilis*) on the SACFOR abundance scale.

Due to the dominance of brittlestars in this biotope complex, the JNCC level 5 biotope 'Ophiothrix fragilis and/or Ophiocomina nigra brittlestar beds on sublittoral mixed sediment' (SS.SMx.CMx.OphMx) was considered. However, seafloor photographic data acquired from this habitat showed aggregations of sands with boulders, pebbles and cobbles, rather than the muddy mixed sediments characteristic of the 'Ophiothrix fragilis and/or Ophiocomina nigra brittlestar beds on sublittoral mixed sediment' (SS.SMx.CMx.OphMx) biotope.

#### 4.4.1.2 Offshore circalittoral coarse sediment (SS.SCS.OCS)

The JNCC level 4 biotope complex 'Offshore circalittoral coarse sediment' (SS.SCS.OCS) is described as tide-swept circalittoral coarse sands, gravel and shell at depths of 20 m to 200 m. This biotope complex is characterised by robust infaunal polychaetes, mobile crustacea and bivalves (JNCC, 2022).

Across the survey area, this biotope complex has been assigned to the entirety of the transects surveyed at stations MCW-A-ST08A, MCW-C-ST91 and MCW-D-ST108A, and along sections of the transects surveyed at stations MCW-A-ST44A, MCW-D-ST82 and MCW-B-ST57. 'Offshore circalittoral coarse sediment' was also observed in a mosaic with 'Echinoderms and crustose communities' along a 116 m long section of the transect surveyed at station MCW-D-ST73. The stations where this biotope complex occurred were sampled in water depths of between 49 m and 60 m LAT.

Particle size analysis identified 'gravelly sand' from station MCW-A-ST08A, 'sandy gravel' sediments from station MCW-C-ST91 and 'gravel' sediments from station MCW-D-108A (Appendix C.3). The samples acquired from the remaining four stations where 'Offshore circalittoral coarse sediment' occurred were collected from sand areas representative of the 'Offshore circalittoral sand' (SS.SSa.OSa) biotope complex and have therefore been disregarded within this description.

Across all stations where 'offshore circalittoral coarse sediment' occurred, areas of high sonar reflectivity were observed, sediments comprised sandy gravel with shells and shell fragments, cobbles and infrequent boulders.

The only macrofaunal sample acquired within the 'offshore circalittoral coarse sediment' biotope complex was collected from station MCW-A-ST08A. This was an ungrouped station in the multivariate statistical analysis of infauna and solitary epifauna data (Section 4.3.1.3) which was shown to be dominated by the urchin *E. pusillus* and the polychaetes *Aponuphis bilineata* and *Notomastus* sp. Other samples collected from stations where this biotope complex occurred were representative of adjacent 'offshore circalittoral sand' sediments.

The most regularly observed epifauna from photographic data included brittlestars (Ophiuroidea), sea urchins (*E. esculentus*), starfish (Asteroidea including *Henricia* sp., *Crossaster papposus* and *Marthasterias glacialis*), squat lobsters (*Munida* sp.), crabs (*Necora puber*, *Atelecyclus rotundatus*), soft corals (*A. digitatum*), cup corals (Caryophylliidae), barnacles (Sessilia), serpulid worms (Serpulidae) and faunal turf (Hydrozoa/Bryozoa) (Appendix C.3). Fish observed included dragonets (*Callionymus* sp.), flatfish (Pleuronectiformes), mackerel (*Scomber scombrus*) and unidentified species (Table 4.12).

#### 4.4.1.3 Offshore circalittoral sand (SS.SSa.OSa)

The JNCC level 4 biotope complex 'Offshore circalittoral sand' (SS.SSa.OSa) is described as offshore (deep) circalittoral habitats with fine sands or non-cohesive muddy sands. Fauna more likely to be found within this biotope complex include a diverse range of polychaetes, amphipods, bivalves, and echinoderms (JNCC, 2022).

The 'Offshore circalittoral sand' (SS.SSa.OSa) biotope complex occurred at 55 of the stations surveyed. From photographic data combined with PSD data 'slightly gravelly sand' (Folk, 1954) with small scale ripples and shell fragments was reported at all of these stations. This

corresponded with low reflectivity on the SSS which has been interpreted as sand with shell fragments. Water depths across the stations ranged from 44 m to 106 m LAT (Table 4.12).




The epifauna most regularly observed from the photographic data included starfish (*A. rubens*, *Luidia sarsii*, *Luidia ciliaris* and *Astropecten irregularis*), hermit crabs (Paguroidea), crabs (*Cancer pagurus* and *Liocarcinus* sp.), shrimp (Caridea), cephalopods (Cephalopoda including Loliginidae and *Sepiola* sp.) and rays (Rajiformes including *Raja clavata*) (Appendix C.3). Fish observed included dragonets (*Callionymus* sp.), mackerel (*Scomber scombrus*), Atlantic herring (*Clupea harengus*), whiting (*Merlangius merlangus*), thickback sole (*Microchirus variegatus*), solenette (*Buglossidium luteum*), plaice (*Pleuronectes platessa*) and dab (*Limanda limanda*).

Macrofaunal analysis was undertaken on samples collected from 38 of the 57 stations and recorded species representative of offshore sand sediments. There appeared to be several communities/sub-communities present within the 'Offshore circalittoral sand' (SS.SSa.Osa) biotope complex, as was evident from the multivariate analysis of infauna and solitary epifaunal data (Section 4.3.1.3). The various communities/sub communities within this biotope complex were identified as clusters A to F within this analysis, as well as ungrouped stations MCW-B-ST09A and MCW-D-ST82. Although each cluster/station was characterised by different dominant taxa, certain taxa co-occurred across multiple clusters/stations. The most abundant infauna from the samples acquired in the 'Offshore circalittoral sand' (SS.SSa.OSa) biotope complex comprised the annelids *S. bombyx*, *C. christiei*, *L. cingulata* and *G. oculata*, and urchins *E. pusillus* (Table 4.12).

Due to the presence of certain taxa characteristic of biotopes described within 'The Marine Habitat Classification for Britain and Ireland' (JNCC, 2022), these were examined in detail to see if the 'Offshore circalittoral sand' (SS.SSa.Osa) biotope complex could be classified to biotope level. The community identified by cluster A of the multivariate analysis of macrofaunal data bears some resemblance to the biotope '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (SS.SSa.IFiSa.NcirBat). All of the clusters, and ungrouped stations, were also somewhat similar to the biotope '*Echinocyamus pusillus*, *Ophelia borealis* and *Abra prismatica* in circalittoral fine sand' (SS.SSa.CFiSa.EpusOborApri). This biotope is characterised by several of the polychaete taxa prominent within the MachairWind OAA, along with the titular *E. pusillus* and *A. prismatica*, both of which were abundant within the survey area. Despite the similarities to these biotopes, it was deemed appropriate to retain the 'Offshore circalittoral sand' (SS.SSa.Osa) biotope complex classification, due to the physical mismatch of its predominantly offshore circalittoral habitats (> 50 m BSL water depth) to these generally shallower biotopes.



Table 4.12: Characterisation of JNCC habitat classifications

JNCC Habitat Classification (JNCC, 2022)	Stations	Physical Characteristics					Depth [m LAT]	Biological Characteristics		Representative Photograph
		Photographic Observations	Particle Size Distribution					Photographic Observations	Macrofauna Cluster and Characterising Infauna	
			Folk (1954)* with descriptors	Gravel [%]	Sand [%]	Fines [%]				
CR.MCR.EcCr Echinoderms and crustose communities	Stations: MCW-C-ST83, MCW-D-ST73*	Cobbles and boulders, interspersed with sand	NA	NA	NA	NA	48-57	Brittlestars (Ophiuroidea, including <i>Ophiothrix fragilis</i> ) Soft coral ( <i>Alcyonium digitatum</i> ) Cup corals (Caryophylliidae) Urchins ( <i>Echinus esculentus</i> ) Starfish ( <i>Asterias rubens</i> )	NA	
SS.SCS.OCS Offshore circalittoral coarse sediment	Stations: MCW-A-ST08A, MCW-A-ST44A†, MCW-B-ST57†, MCW-C-ST91, MCW-D-ST73†, MCW-D-ST82†, MCW-D-ST108A	Gravelly sand/ Shell hash, sand, gravel and boulders	52.78	47.22	0.00	Sandy gravel	49-60	Brittlestars (Ophiuroidea) Urchins ( <i>E. esculentus</i> ) Starfish ( <i>Henricia</i> sp., <i>Crossaster papposus</i> and <i>Marthasterias glacialis</i> ),	Station MCW-A-08A <i>Aponuphis bilineata</i> <i>Echinocyamus pusillus</i> <i>Notomastus</i> <i>Mysia undata</i> <i>Sthenelais limicola</i>	
SS.SSa.OSa Offshore circalittoral sand	Stations: MCW-A-ST01, MCW-A-ST02, MCW-A-ST03, MCW-A-ST05, MCW-A-ST07A, MCW-A-ST12, MCW-A-ST14, MCW-A-ST22, MCW-A-ST34, MCW-A-ST36, MCW-A-ST44A, MCW-A-ST55, MCW-B-ST09A, MCW-B-ST010, MCW-B-ST017A, MCW-B-ST018A, MCW-B-ST019A, MCW-B-ST28, MCW-B-ST29A, MCW-B-ST30A, MCW-B-ST38A, MCW-B-ST57, MCW-B-ST59A, MCW-C-ST20, MCW-C-ST31, MCW-C-ST32, MCW-C-ST41, MCW-C-ST42, MCW-C-ST43, MCW-C-ST51, MCW-C-ST52, MCW-C-ST53, MCW-C-ST54, MCW-C-ST62, MCW-C-ST63, MCW-C-ST70, MCW-C-ST71, MCW-C-ST75, MCW-C-ST77, MCW-C-ST79, MCW-C-ST92, MCW-D-ST64, MCW-D-ST72A, MCW-D-ST73, MCW-D-ST80, MCW-D-ST81, MCW-D-ST82, MCW-D-ST86A, MCW-D-ST88A, MCW-D-ST89A, MCW-D-ST95A, MCW-D-ST100A, MCW-D-ST101, MCW-D-ST103A, MCW-D-ST104	Slightly gravelly sand	98.52	0.73	0.75	Slightly gravelly sand	44-106	Starfish ( <i>A. rubens</i> , and <i>Astropecten irregularis</i> ) Hermit crabs (Paguroidea)	Clusters A to E, Stations MCW-B-ST09A and MCW-D-ST82 <i>Spiophanes bombyx</i> <i>Echinocyamus pusillus</i> <i>Chaetozone christiei</i> <i>Lumbrineris cingulata</i> <i>Galathowenia oculata</i>	

Notes  
 JNCC = Joint Nature Conservation Committee  
 LAT = Lowest astronomical tide  
 Laser distances shown in image (green dots) 16.5 cm wide by 17 cm high  
 \* = Folk (1954) sediment description defined by the proportions of the gravel, sand and mud fractions  
 † = Samples acquired from adjacent sand sediments and not considered representative of biotope complex (omitted from calculation of mean particle size values)

Key	Annelida	Arthropoda	Mollusca	Echinodermata	Other
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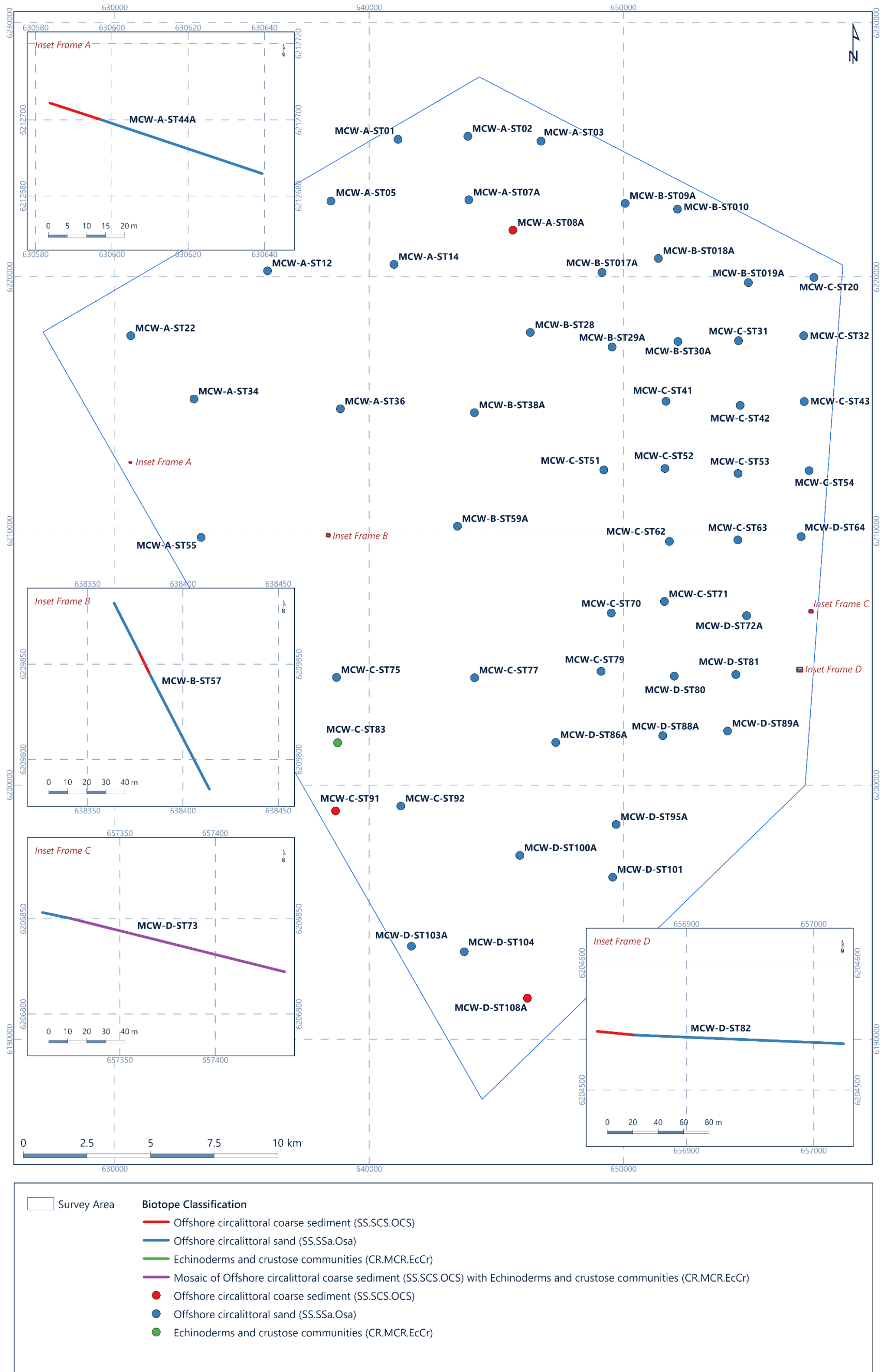


Figure 4.12: The spatial distribution of JNCC habitat classifications (JNCC, 2022)

## 4.4.2 Potential Sensitive Habitats and Species

### 4.4.2.1 Stony Reef

Areas of cobbles and boulders at three stations (MCW-A-ST08A, MCW-D-ST73 and MCW-D-ST82) were further assessed for possible resemblance to Annex I Stony reef using the methodology described by Golding et al. (2020).

Along sections of the transects surveyed at stations MCW-D-ST73 and MCW-D-ST82, the composition of cobbles and boulders was in the range of 'medium' (40 % to 95 % cover), with an elevation of 'medium' (64 mm to 5 m) (Table 4.13). Occurrences of medium reef, as based on cover and elevation data, were sporadic and covered short distances within the transects surveyed, as such they failed to satisfy the stony reef criterion for area coverage, which states that reefs must be  $> 25 \text{ m}^2$  (Golding et al., 2020).

Several other areas had elevation that fell in the range of 'medium' (64 mm to 5 m); however, the compositions of cobbles and boulders was 'low' (10 % to 40 %). One section of the transect surveyed at station MCW-D-ST73 and one patch at station MCW-D-ST82 were classified as 'low reef' as  $45 \text{ m}^2$  and  $27 \text{ m}^2$  was observed. When delineated, areas of  $5568 \text{ m}^2$  and  $20\,804 \text{ m}^2$  were observed around stations MCW-D-ST82 and MCW-D-ST73, respectively, confirming the presence of 'low reef'.

Numerous large boulders, cobbles and pebbles were observed along sections of transects classified as 'medium reef', interspersed between coarse sediments and areas of 'low reef'. Abundance of epifauna associated with stony reefs (Appendix G.1.2) ranged from 'rare' (*A. digitatum* and Pectinidae) to 'abundant' (Ophiuroidea including *O. fragilis*).

Table 4.13 summarises the results of the proportions of each reefiness classification along each transect. Figure 4.13 and 4.14 show the stony reef assessments undertaken for stations MCW-D-ST73 and MCW-D-ST82, where composition and elevation only are considered.

Appendix G.1 provides the detailed stony reef assessment. Appendix G.1.2 presents the results of epifaunal counts within reef areas.

Table 4.13: Summary of 'reefiness' classifications within the survey area

Geodetic Parameters: ETRS89 UTM Zone 29N [m]									
Transect	SOL Easting	SOL Northing	EOL Easting	EOL Northing	% Cover cobbles and boulders	Elevation	Area Observed [m <sup>2</sup> ]	Biota	Overall Assessment
MCW-A-ST08A	645 659.5	6 221 867.8	645 654.4	6 221 840.7	< 10	Flat seafloor	33	<80	Not a Reef
	645 654.4	6 221 840.7	645 647.0	6 221 804.0	< 10	Flat seafloor	45	<80	Not a Reef
MCW-D-ST73	657 309.5	6 206 853.3	657 323.7	6 206 850.3	< 10	Flat seafloor	18	<80	Not a Reef
	657 323.7	6 206 850.3	657 326.1	6 206 849.7	10 – 40	< 64	3	<80	Low reef
	657 326.1	6 206 849.7	657 328.1	6 206 849.4	10 – 40	64 - 5	2	<80	Low reef
	657 328.1	6 206 849.4	657 331.3	6 206 848.2	10 – 40	< 64	4	<80	Low reef
	657 331.3	6 206 848.2	657 335.3	6 206 846.6	10 – 40	64 - 5	5	<80	Low reef
	657 335.3	6 206 846.6	657 339.3	6 206 845.3	40 – 95	64 - 5	5	<80	Medium reef
	657 339.3	6 206 845.3	657 374.0	6 206 838.3	10 – 40	64 - 5	43	<80	Low reef
	657 374.0	6 206 838.3	657 375.6	6 206 838.0	40 – 95	64 - 5	2	<80	Medium reef
	657 375.6	6 206 838.0	657 386.2	6 206 835.1	10 – 40	64 - 5	13	<80	Low reef
	657 386.2	6 206 835.1	657 389.8	6 206 834.2	10 – 40	< 64	5	<80	Low reef
	657 389.8	6 206 834.2	657 399.3	6 206 831.1	10 – 40	64 - 5	12	<80	Low reef
	657 399.3	6 206 831.1	657 400.7	6 206 830.7	40 – 95	64 - 5	2	<80	Medium reef
	657 400.7	6 206 830.7	657 415.9	6 206 827.1	10 – 40	64 - 5	19	<80	Low reef
	657 415.9	6 206 827.1	657 421.6	6 206 825.7	40 – 95	64 - 5	7	<80	Medium reef
	657 421.6	6 206 825.7	657 436.4	6 206 822.2	10 – 40	64 - 5	18	<80	Low reef
	MCW-D-ST82	656 829.8	6 204 546.1	656 834.4	6 204 545.2	10 – 40	64 - 5	6	<80
656 834.4		6 204 545.2	656 837.5	6 204 544.6	40 – 95	64 - 5	4	<80	Medium reef
656 837.5		6 204 543.2	656 859.6	6 204 543.2	10 – 40	64 - 5	27	<80	Low reef
656 859.6		6 204 543.2	657 023.4	6 204 536.5	< 10	Flat seafloor	197	<80	Not a Reef

Key:

Not a Reef	Low Reef	Medium Reef	High Reef
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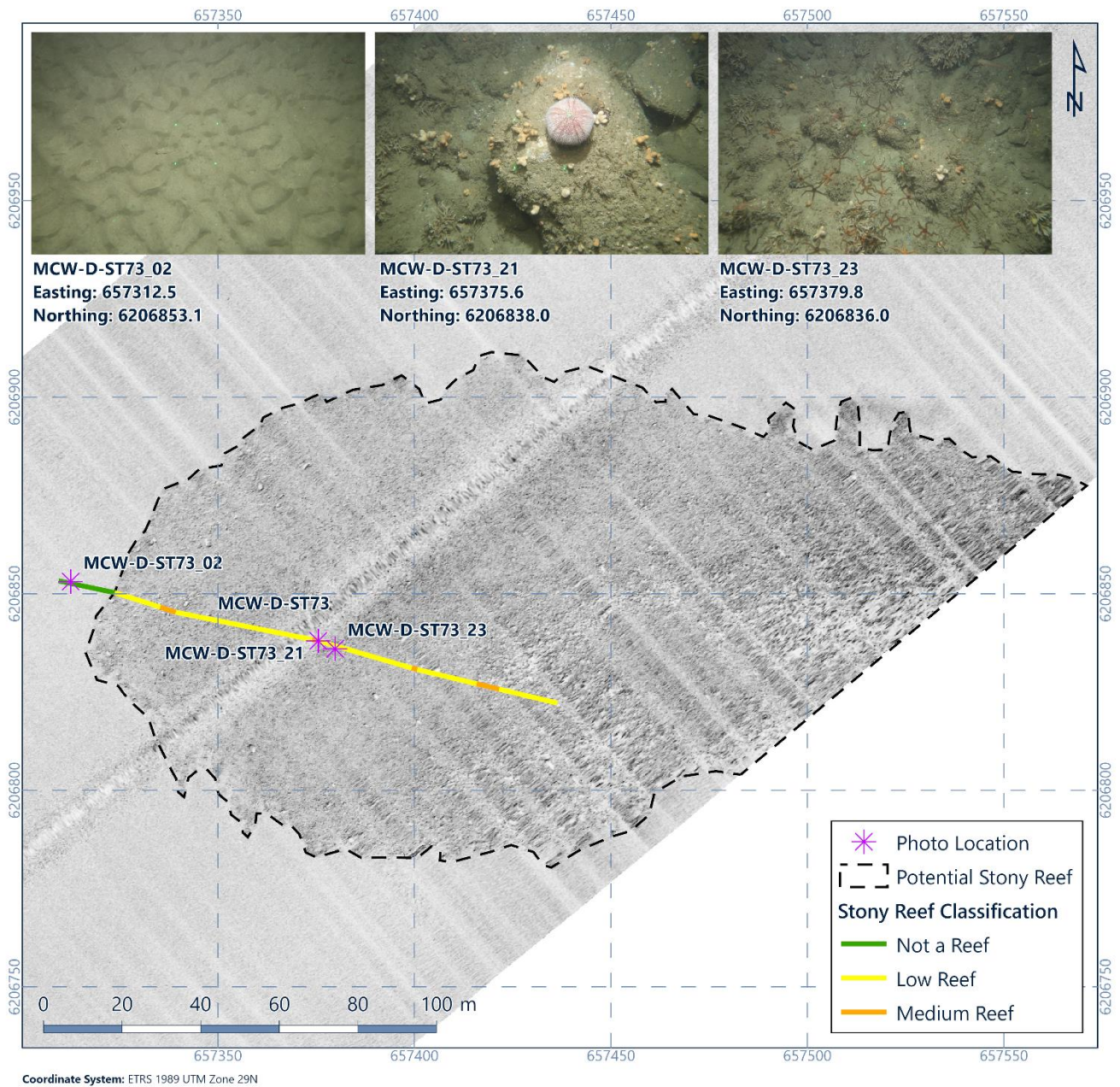


Figure 4.13: Stony reef assessment at transect MCW-D-ST73, from composition and elevation only, with potential full extent of the stony reef extrapolated on a side scan sonar mosaic



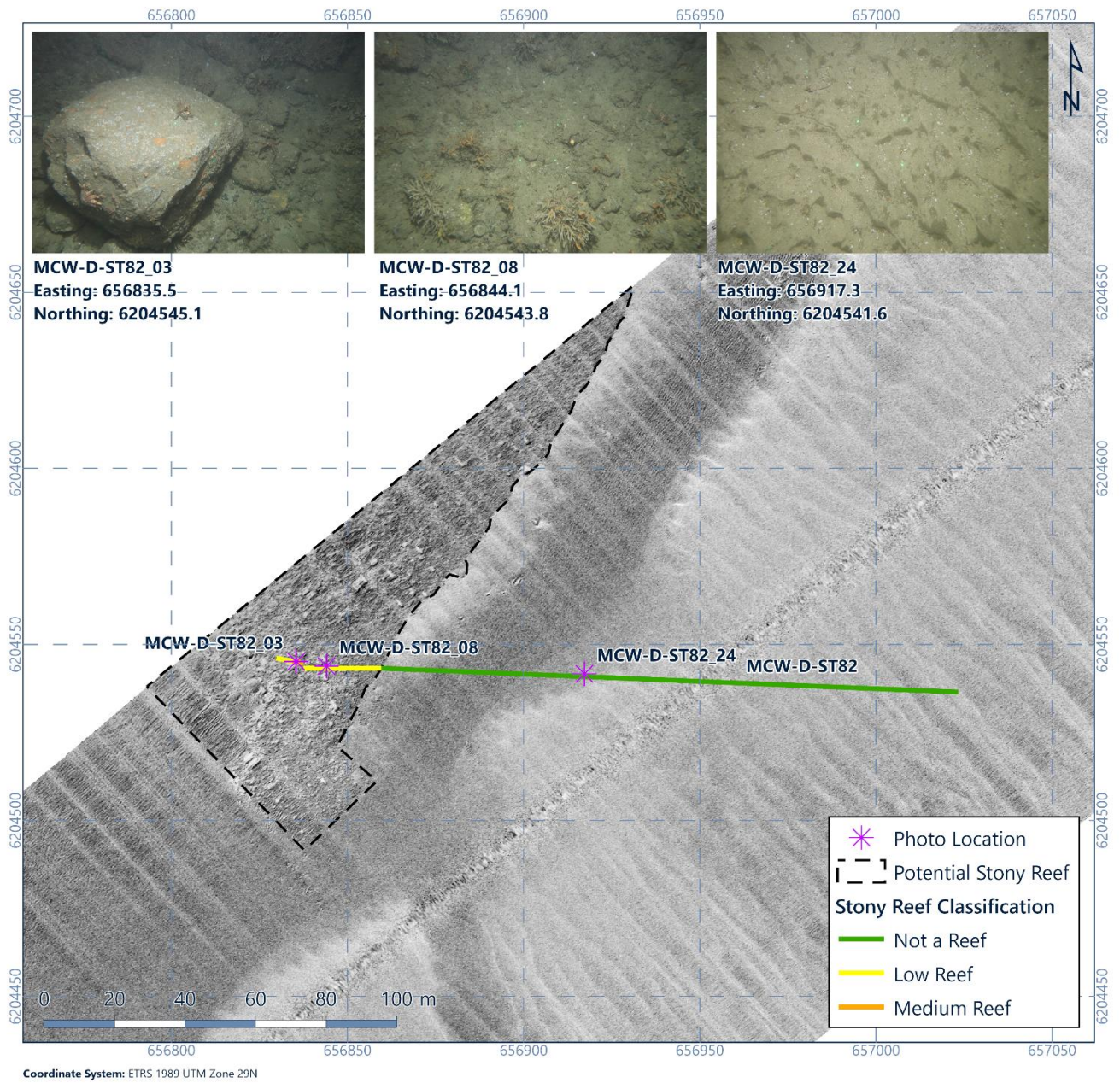


Figure 4.14: Stony reef assessment at transect MCW-D-ST82, from composition and elevation only, with potential full extent of the stony reef extrapolated on a side scan sonar mosaic

#### 4.4.2.2 *Arctica islandica* (Ocean quahog)

Analysis of seafloor photographic and macrofaunal data was conducted to determine the potential presence of the OSPAR threatened and/or declining species *A. islandica*.

From the seafloor photographs alone, live *A. islandica* siphons were visible at the sediment surface from five stations (stations MCW-A-ST05, MCW-A-ST07A, MCW-B-ST10, MCW-C-ST20 and MCW-C-ST79; Table 4.14) and empty *A. islandica* shells were observed on the sediment surface at 17 stations. The bivalves' inclination to retract their siphons beneath the sediment for extended durations means that reliance solely on seafloor photography estimates is not entirely dependable.

When assessed against the 3 cm to 15 cm size category, as recommended for SACFOR (based on the size of the adult), *A. islandica* were classified as 'occasional' at four stations and 'rare' at transect MCW-B-ST10 from photographic data.

Table 4.14: Abundance of *Arctica islandica* and SACFOR assessment from photographic data

Transect	Number per transect	Total Surface Area Observed [m <sup>2</sup> ]	SACFOR				
MCW-A-ST05	1*	56.1	O				
MCW-A-ST07A	1 <sup>†</sup>	55.3	O				
MCW-B-ST10	1 <sup>†</sup>	119.1	R				
MCW-C-ST20	1 <sup>†</sup>	74.3	O				
MCW-C-ST79	1*	75.9	O				
<b>Notes</b> SACFOR Classifications: (3 cm to 15 cm) Superabundant = 1 - 9/0.01 m <sup>2</sup> Abundant = 1 - 9/0.1 m <sup>2</sup> Common = 1 - 9/1 m <sup>2</sup> Frequent = 1 - 9/10 m <sup>2</sup> Occasional = 1 - 9/100 m <sup>2</sup> Rare = 1 - 9/1000 m <sup>2</sup>							
SACFOR Classification based on the assumption that adults achieve a size of 3 cm to 15 cm * = Siphons observed † = Whole shell in sediment							
Key	- = Absent	R = Rare	O = Occasional	F = Frequent	C = Common	A = Abundant	S = Superabundant

The sediment grab macrofauna analysis provides the most reliable data for assessing *A. islandica* abundance. The *A. islandica* abundance data were categorized into adult and juvenile forms. To facilitate analysis and given the absence of size-at-maturity information, individuals with a diameter less than 10 mm were considered juveniles.

The presence of adult *A. islandica* was confirmed at 7 stations in the grab samples. Juvenile *A. islandica* were recorded at a further 10 stations following macrofaunal analysis (Table 4.15).

Table 4.15: Abundance of *Arctica islandica* adults and juveniles from grab samples

Station	Adults (> 10 mm)	Juveniles (< 10 mm)
MCW-A-ST01	-	1
MCW-A-ST03	1	-
MCW-B-ST10	-	2
MCW-B-ST19A	-	3
MCW-B-ST30A	-	2
MCW-C-ST32	1	-
MCW-C-ST41	-	1
MCW-C-ST42	1	-
MCW-C-ST52	-	2
MCW-C-ST53	1	1
MCW-C-ST54	-	2
MCW-C-ST79	1	-
MCW-D-ST73	1	-
MCW-D-ST80	-	1
MCW-D-ST81	1	-
MCW-D-ST88A	-	2

#### 4.4.2.3 Other Potentially Sensitive Habitats and Species

The JNCC level 4 biotope complex 'Offshore circalittoral sand' (SS.SSa.OSa) and 'Offshore circalittoral coarse sediment' (SS.SCS.OCS) were present within the survey area (Section 5.3) and are representative of the UK BAP priority habitat 'Subtidal sands and gravels' and the BSH/PMF 'Offshore subtidal sands and gravels'.

From the video analysis, individuals belonging to the family Gadidae were observed on four stations (Appendix C.3), indicating the potential presence of the Atlantic cod *Gadus morhua*, a UK BAP and PMF species. *Gadus morhua* is also on the OSPAR list of threatened and/or declining habitats and species for regions II and III, the survey area being part of OSPAR region III.

Two individuals belonging to the family Rajidae were observed at stations MCW-A-ST02 and MCW-D-ST88A, indicating the potential presence of *Raja clavata*, *R. undulata* or *R. montagui*. The individual at transect MCW-A-ST02 was confirmed to be the species *R. clavata*. *Raja undulata* is a UK BAP priority species, whilst *R. clavata* and *R. montagui* are on the OSPAR list of threatened and/or declining habitats and species for Regions II and III.

Other UK BAP species and PMF species observed during the video analysis included mackerel (*Scomber scombrus*) at nine stations, Atlantic herring (*Clupea harengus*) at four stations, plaice (*P. platessa*) at four stations and whiting (*Merlangius merlangus*) at two stations.

The lesser sandeel *Ammodytes marinus*, is also a UK BAP priority species (JNCC, 2018). Sandeels (Ammodytidae) were observed in video data captured in stations MCW-A-ST36, MCW-B-ST09A, MCW-B-ST10 and MCW-D-ST86A. It is not possible to identify sandeels to species level from photographic data, therefore the species of sandeel present at these stations cannot be confirmed. However, two *Ammodytes marinus* individuals were recorded within the macrofauna data from the grab samples at stations MCW-C-ST42 and MCW-D-ST101.

Anemones of the family Edwardsiidae were recorded within the survey area by grab sampling at 21 stations, indicating the possible presence of the UK BAP species *Edwardsia timida* (JNCC, 2019c).

Except for the Ocean quahog *A. islandica*, these species are also listed in the Scottish biodiversity list (NatureScot, 2020).

No other Annex I habitats or Annex II species, OSPAR threatened and/or declining species and habitats, or UK Priority Habitats and Species and Scottish biodiversity list species and habitats were observed within the survey areas.

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## 5. Discussion

Physico-chemical and biological analysis of sediment samples provided information for sediment and biological communities characterisation across the MachairWind survey area. Data gathered are important components of environmental studies to support engineering design and/or environmental impact assessment (EIA).

### 5.1 Sediment Characterisation

Results of the sediment PSD analysis of the grab samples indicated a predominantly sandy sediment. Gravel content was variable, with four stations being devoid of this fraction. Generally, the stations with highest gravel content were in the south of the survey area. The fines content was generally low, with 44 stations being devoid of fines. Generally, the stations with highest fines content were located at the north of the survey area.

Correlation of grain size parameters with depth (Appendix H) identified a highly statistically significant positive correlation between depth and fines content ( $R_s = 0.632$ ;  $P < 0.01$ ). Comparison with published data suggested this depth-driven trends in seafloor sediment type is typical of the wider area. Strategic Environmental Assessment 7 (SEA7) described the surficial sediments of the Hebrides Shelf as comprising a mixture of glacial sediments and more recent biogenic sediments that have been mixed and winnowed by seafloor currents. They describe modern surficial sediments on the shelf as having a range of grain sizes due to a system of continuous sediment recycling, which results in shallow areas having predominantly clean sand sediments, while mud content increases in deeper, more depositional environments (Holmes et al., 2006).

### 5.2 Macrofaunal Communities

Seafloor sediments provide support, protection and the food source for many macrofaunal species. The sediment macrofauna, most of which are infaunal (living within the sediment), are therefore particularly vulnerable to external influences that alter the sediments' physical, chemical or biological nature. Such infaunal animals are largely sedentary and are thus unable to avoid unfavourable conditions. Each species has its own response and degree of sensitivity to changes in the physical and/or chemical environment and consequently the species composition and their relative abundance in a particular location provides a reflection of the health and condition of the immediate environment, both current and historical. The recognition that aquatic contaminant inputs may alter sediment characteristics, together with the relative ease of obtaining quantitative samples from specific locations, has led to the widespread use of infaunal communities in monitoring the impact of disturbances to the marine environment over a long period of time.

Annelida accounted for most of the taxa composition within the entire MachairWind OAA survey area, followed by Mollusca and Arthropoda. Of the Annelida, the polychaete



*S. bombyx* was characteristic of four of the six clusters. *S. bombyx* can be found along the coast of the UK, inhabiting sandy sediments down to depths of around 60 m (Ager, 2005).

Mollusca were the second most represented phylum in terms of taxa composition and in terms of abundance. Molluscs comprised bivalves such as *A. prismatica*, *N. nitidosa*, *Fabulina fabula*, *Timoclea ovata* and *Chamelea striatula*. Some of these molluscs are opportunistic species; for example, bivalves of the genus *Abra* are reported to be capable of exploiting newly disturbed substratum through larval recruitment, secondary settlement of post metamorphosis juveniles, and/or redistribution of adults (De-Bastos, 2016).

Arthropoda were the third most represented phylum in terms of taxa composition and abundance across the MachairWind survey area. Arthropoda comprised amphipods such as *Centraloecetes kroyeranus*, *B. elegans*, *B. guilliamsoniana*, *Bathyporeia tenuipes* and *Centraloecetes striatus*. Of these amphipods, *B. elegans*, is reported in association with the bivalve *A. prismatica* and the polychaete *S. bombyx* (Tillin, 2016), which were amongst the most abundant and frequently occurring molluscs and annelids recorded in this study.

The echinoderms comprised urchins such as *E. pusillus* and *E. cordatum*, brittlestars such as *Amphiura filiformis* and *Acronida branchiata*, and sea cucumbers such as *Oostergrenia digitata* and *Leptosynapta bergensis*. These taxa are reported to be typical of habitats with mixed coarse sediments exposed to strong tidal currents (Jackson, 2008), with species such as *E. pusillus* inhabiting the interstices of gravelly substrata (Eggleton et al., 2007) and *A. brachiata* being generally associated with *E. cordatum* (Barnes, 2008),

Other phyla were represented mainly by species of *Phoronis* and Nemertea (including *T. polymorphus*) and burrowing anemones of the family Edwardsiidae.

In general, the faunal diversity, calculated through the Shannon-Wiener ( $H' \log_2$ ) and assessed in line with the criteria of Dauvin et al. (2012), was good across the MachairWind survey area, with faunal abundances fairly evenly distributed across the taxa recorded, as indicated by the Pielou's index of evenness. Correlation analysis identified significant but weak associations between fines content and the number of taxa and individuals ( $R_s = 0.483$  and  $0.432$ , respectively;  $P < 0.01$ ) suggesting that the sediment had little influence on the species richness and abundance.

The macrobenthic communities recorded in this study are typical of habitats subject to a degree of surface sediment disturbance, as indicated by the widespread occurrence of *S. bombyx* (Ager, 2005) and robust amphipod crustaceans (Tillin et al., 2019). Six macrofaunal assemblages were identified through the multivariate analysis, although a number of taxa (including the abundant *S. bombyx*, *S. limicola*, *N. cirrosa*, *L. cingulata*, *G. oculata*, *A. prismatica* and *E. pusillus*) were characteristic of multiple clusters and/or ungrouped stations, suggesting that these statistical groupings should be considered sub-assemblages of a single benthic community, rather than individual communities in their own right.

The infaunal biomass was represented mainly by echinoderms and molluscs, the former owing to the abundance as well as the size of urchins, namely *E. pusillus*, which can reach 1 cm in diameter (Lumbis, 2008), and *E. cordatum*, which can grow up to 9 cm (Hill, 2008), but also the brittlestar *A. brachiata*, the arms of which can reach up to 18 cm (Barnes, 2008). The biomass of molluscs was associated with the abundance as well as the size of selected bivalves, namely *A. islandica*, *C. striatula* and *P. pellucidus*, which can reach 13.0 cm, 4.0 cm and 4.5 cm, respectively (Oliver et al., 2016).

Colonial epifauna were recorded across most of the survey area and were mainly represented by low-lying bryozoans and hydroids capable of colonising small irregular patches on stones and shells (Tyler-Walters, 2005), sponges and crustaceans.

### 5.3 Seafloor Habitats and Biotopes

From photographic data, the seafloor in the MachairWind survey area mainly comprised slightly gravelly sand with varying proportions of gravel, shell fragments, cobbles and boulders. With consideration of available PSD data, where applicable, three JNCC habitat types were observed within the MachairWind survey area: 'Offshore circalittoral sand' (SS.SSa.OSa), 'Offshore circalittoral coarse sediment' (SS.SCS.OCS) and 'Echinoderms and crustose communities' (CR.MCR.EcCr). The latter biotope was limited in distribution, occurring along small sections of two stations. Depths across the survey area ranged from 44 m to 106 m LAT, consistent with offshore circalittoral communities (JNCC, 2022).

From photographic and PSD data, the 'slightly gravelly sand' sediment type was classified as the JNCC level 4 biotope complex 'Offshore circalittoral sand' (SS.SSa.OSa). Analysis of the infaunal communities did not allow refinement of this biotope complex. Taxa were dominated by annelids, amphipods and echinoderms, including *Spiophanes bombyx*, *Centroloecetes kroyeranus* and *Echinocyamus pusillus*, which is consistent with this biotope complex description. Epibenthic fauna associated with sands observed during photographic analysis in the current survey included starfish (*A. rubens*, *Luidia sarsii*, *Luidia ciliaris* and *Astropecten irregularis*), hermit crabs (Paguroidea), crabs (*Cancer pagurus* and *Liocarcinus* sp.), shrimp (Caridea), cephalopods (Cephalopoda including Loliginidae and *Sepiola* sp.) and rays (Rajiformes including *Raja clavata*).

'Offshore circalittoral coarse sediment' (SS.SCS.OCS) and 'Echinoderms and crustose communities' (CR.MCR.EcCr) were present as a habitat mosaic along one section of transect MCW-D-ST73, with the sandy sediments overlying coarser material. From photographic data, it was apparent that the seafloor in the survey area comprised gravelly sand with cobbles and boulders visible in some places. The seafloor was classified as 'Offshore circalittoral coarse sediment' where minimal cobbles and boulders were recorded. From faunal composition and photographic data, where the number of cobbles and boulders were elevated, the seafloor has been classified as a 'Echinoderms and crustose communities'.

EMODnet indicates that 'Offshore circalittoral sand' (SS.SSa.OSa) was likely to be the dominant habitat within in the survey area, with areas of 'Offshore circalittoral coarse



sediment' (SS.SCS.OCS) and 'Moderate energy circalittoral rock' (CR.MCR) also present (EMODnet, 2023). The predicted sediment types largely supported what was observed within the current survey. The shallower designations were not considered applicable to the sand and coarse sediments in the current survey area, due to the minimum depth of 44 m LAT.

Due to the cobbles and boulder coverage over extended patches of the MachairWind survey area, there was potential for the Annex I habitat 'stony reef'. The JNCC guidelines for identifying stony reef (Irving, 2009) state that "*when determining whether an area of seafloor should be considered as Annex I stony reef, if a 'low' is scored in any of the characteristics (composition, elevation, extent or biota), then a strong justification would be required for this area to be considered as contributing to the Marine Natura site network of qualifying reefs in terms of the EU Habitats Directive [transposed into UK law by the 2019 Regulations]*". Most areas assessed were assigned 'not a reef' or 'low reef' classification; limited areas of 'medium reef' extending over an area of less than 25 m<sup>2</sup> were also noted. The aggregations of cobbles and boulders in the area are consistent with glacial till exposures known to occur on the Hebrides Shelf (Holmes et al., 2006).

The broad-scale habitat 'Subtidal sands and gravels' and the PMF 'Offshore subtidal sands and gravels' are amongst the most common habitats in the UK offshore marine environment (EMODnet, 2023; JNCC, 2014). The biotope complexes 'Offshore circalittoral sand' (SS.SSa.OSa) and 'Offshore circalittoral coarse sediment' (SS.SCS.OCS) observed in this study are known to be present within the survey area.

Sand and gravel sediments are the most common subtidal habitat around the UK coastline. The diversity of flora and fauna living within these habitats varies according to the level of environmental stress to which they are exposed, with offshore subtidal sands and gravels considered more stable than their shallower equivalents. Sands and gravels feature a higher biodiversity often with a range of anemones, polychaetes, bivalves, amphipods, and both mobile and sessile epifauna. These habitat types support numerous fish/shellfish taxa including sandeels, flatfish and bass, (OSPAR 2010).

Adult and juvenile individuals of the ocean quahog, *Arctica islandica*, were recorded in the grab data and this species was observed at 17 stations during video analysis with evidence of living specimens at 5 of these stations, and empty shells at all 17 stations. The ocean quahog, *A. islandica*, can be found predominately in offshore firm sediments, buried (or part buried) in sand and muddy sand that ranges from fine to coarse grains and to depths of 500 m (Tyler-Walters & Sabatini, 2017). *Arctica islandica* is included in the threatened and/or declining species list for OSPAR Regions II and III and is a PMF low or limited mobility species (JNCC, 2014; OSPAR, 2023).

While *Arctica islandica* resides beneath the seafloor surface as an infaunal organism, its filter-feeding behaviour allows for the identification of its siphons in seafloor photography data. Ragnarsson and Thórarinsdóttir (2002) proposed that seafloor photography offers superior data for estimating *A. islandica* abundance compared to trawling. In the current

survey, all photographic data was analysed for *A. islandica* siphon evidence. Nonetheless, relying entirely on abundance estimates from seafloor photography data is cautioned due to the periodic deep burrowing of ocean quahogs, rendering their siphons invisible on the sediment surface (Taylor, 1976). Factors such as prolonged food absence, particularly during winter, have been suggested to prompt them to bury deeper in sediments, reducing their metabolic rate for extended periods (Oeschger, 1990; Theede et al., 1969).

Gadoid fish (Gadidae) were observed in photographic data, indicating the potential presence of the Atlantic cod *Gadus morhua*. This species is listed on the IUCN Red list of threatened species as 'Vulnerable' (IUCN, 2024). It is included on the OSPAR list of threatened and/or declining habitats and species for Regions II and III (OSPAR, 2023). Low intensity nursery grounds for this species overlap the MachairWind survey area (Ellis et al., 2012).

Rays of the family Rajidae, including the thornback ray *Raja clavata*, were also observed in photographic data, indicating the potential presence of the spotted ray *R. montagui* and the undulate ray *R. undulata*. *Raja clavata* and *R. montagui* are included on the OSPAR list of threatened and/or declining habitats and species for Regions II and III (OSPAR, 2023), whilst *R. undulata* is a UK BAP priority marine species (JNCC, 2019c). Low intensity *R. montagui* nursery grounds overlap the MachairWind survey area (Ellis et al., 2012). On the IUCN Red list, *R. undulata* is considered endangered, *R. clavata* near threatened and *R. montagui* of least concern (IUCN, 2024).

The UK BAP priority species and PMF *Ammodytes marinus* was identified in the macrofauna samples. Taxa of the family Ammodytidae was identified during the video analysis and therefore the PMF *A. tobianus* could also be present and is assessed as data deficient within Europe on the IUCN red list (IUCN, 2024). Sandeels are known to prefer sandy habitats, where they burrow to escape predators, and are threatened by a variety of factors, including variations in temperature and physical disturbance or removal of their sediment habitat (NatureScot, 2023). Low intensity spawning and nursery grounds of *Ammodytes marinus* overlap the MachairWind survey area (Ellis et al., 2012).

Plaice (*P. platessa*), mackerel (*Scomber scombrus*), whiting (*Merlangius merlangus*) and Atlantic herring (*Clupea harengus*) were observed during video analysis. Nursery grounds and low intensity spawning grounds for these species either overlap, or lie adjacent to, the MachairWind survey area (Coull et al., 1998; Ellis et al., 2012). All these UK BAP priority species are considered as 'Least Concern' on the IUCN Red List (IUCN, 2024; JNCC, 2019c). *Scomber scombrus*, *M. merlangus* and *C. harengus* are all PMFs (JNCC, 2014).

No other Annex I habitats or Annex II species, OSPAR threatened and/or declining species and habitats, or UK Priority Habitats and Species and Scottish biodiversity list species and habitats were observed within the survey areas.

## 5.4 Limitations and Uncertainties

As indicated in the scope of work, this study was required in support of the EIA of the MachairWind OAA development which is at proposal stage. A baseline study, which will be carried out prior to construction, should consider replication of faunal sampling to provide a more robust statistical basis for future monitoring studies.

The application of the SACFOR scale to the assessment of the epifaunal assemblages from video data is only semi-quantitative and is very dependent on the quality of the source data obtained. Variations in visibility, sea state and other factors beyond the control of Fugro or any other future survey contractors, can significantly influence the results of any interpretation undertaken in this way.

The results presented in this study reflect the state of the seafloor sediments, habitats and communities at the time of sampling only. Seasonal, or longer-term temporal variations in hydrodynamic processes, or extreme events such as storms, can result in significant changes to seafloor sediments, especially in nearshore areas; these changes can, in turn, affect biological assemblages. Seasonality may also be observed in larval recruitment to seafloor communities and seasonal die back may occur in certain shorter-lived species.

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## 6. Conclusions

The benthic environment of the MachairWind OAA survey area was characterised through a subtidal survey which comprised acquisition of seafloor photographic data and grab samples, which were analysed to identify habitats and to evaluate the physico-chemical and biological conditions of the seafloor. The results were used to derive biotopes, in line with the JNCC habitat classification, which were assessed for conservation importance and contextualised within the geographical setting of the survey area.

The sediment across the survey area featured mainly sand and to a lesser extent gravel, with a generally small percentage of fines. The varying percentages of the main sediment fractions resulted in five sediment classes including 'sand', 'muddy sand', 'gravelly sand', 'sandy gravel' and 'gravel', as identified from PSD analysis.

The coarseness of the sediment resulted in five Wentworth sediment descriptions including 'medium pebble', 'fine pebble', 'coarse sand', 'medium sand' and 'fine sand'. The sorting coefficient ranged from 'well sorted' to 'very poorly sorted'.

Macrofauna from the grab samples comprised mainly infaunal taxa, with epifaunal taxa being recorded at few stations. The Annelida were the most abundant phylum overall, with *Spiophanes bombyx* being the most dominant and abundant taxa.

The biomass of invertebrates from the grab samples was dominated by molluscs, followed by echinoderms and annelids. Macrofaunal composition was typical of sand sediments in the water depths sampled.

Three biotope complexes were described across the survey area:

1. 'Offshore circalittoral sand' (SS.SSa.OSa);
2. 'Offshore circalittoral coarse sediment' (SS.SCS.OCS);
3. 'Echinoderms and crustose communities' (CR.MCR.EcCr).

These biotope complexes reflected those predicted to occur within this region.

Aggregation of cobbles, along transects at station MCW-A-ST08A, MCW-D-ST73 and MCW-D-ST82, were assessed for the potential of these aggregations to constitute Annex I habitat 'Reef' (geogenic), specifically stony reef. The overall assessment for these areas was of 'Not a reef' at station MCW-A-ST08A and 'Low resemblance' to a stony reef at stations MCW-D-ST73 and MCW-D-ST82. However, these aggregations are unlikely to be considered to represent Annex I habitats based on the current guidelines.

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# Appendix A

## Guidelines on Use of Report

This report (the "Report") was prepared as part of the services (the "Services") provided by Fugro GB Limited ("Fugro") for its client (the "Client") under terms of the relevant contract between the two parties (the "Contract"). The Services were performed by Fugro based on requirements of the Client set out in the Contract or otherwise made known by the Client to Fugro at the time.

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# Appendix B

## Methodologies

## **B.1 Laboratory Analysis**

### **B.1.1 Particle Size Analysis**

Particle size distribution (PSD) analysis was undertaken in accordance with Fugro GB Limited (FGBL) in-house methods based on the National Marine Biological Association Quality Control scheme's (NMBAQC) best practice guidance document – Particle Size Analysis (PSA) for Supporting Biological Analysis: 2016, and British Standards (BS) 1377: Parts 1: 2016 and 2: 1990.

#### **B.1.1.1 Dry Sieve Analysis**

Representative material > 1 mm was split from the bulk subsample and oven dried before sieving through a series of sieves with apertures corresponding to 0.5 phi intervals between 63 mm and 1 mm as described by the Wentworth scale (Wentworth, 1922). The weight of the sediment fraction retained on each mesh was subsequently measured and recorded.

#### **B.1.1.2 Laser Diffraction**

Laser diffraction analysis was undertaken in accordance with FGBL in-house methods based on the NMBAQC best practice guidance document – PSA for Supporting Biological Analysis: 2016, and BS International Organisation for Standardisation (ISO) 13320: 2009.

Representative material < 1 mm was removed from the bulk subsample for laser analysis, with a minimum of three triplicate analyses performed using the laser sizer at 0.5 phi intervals between < 1 mm to < 0.98 µm. Laser diffraction was carried out using a Malvern Mastersizer 2000 with a Hydro 2000G dispersion unit.

Sieve and laser data are merged and entered into GRADISTAT to derive statistics including mass and percentage retained within each size fraction, mean and median grain size, bulk sediment classes (percentage gravel, sand and silt/clay), skewness, sorting coefficients and Folk classification.

### **B.1.2 Macrofaunal Analysis**

Macrofauna analysis was carried out by Fugro GB Limited benthic laboratories, which are members of the NMBAQC scheme of external quality assurance.

On return to the laboratory, the samples were removed from formalin and washed through 1 mm mesh sieves. The material retained was then processed to remove fauna. The animals were separated by hand from the retained sediment by using a combination of stereo microscopes for the fine sediments and in white trays for any coarser material. Processed sediment was stored in PhenoxetoITM (2 %) or returned to the original formalin.

Following extraction, the animals were identified and enumerated by specialist taxonomists. Identification was to species level where possible. Specimens which, due to their immaturity, damage incurred during processing or lack of suitable taxonomic literature, could not be identified to species level are identified at higher taxonomic levels as appropriate. After

identification, fauna was stored in 70 % industrial denatured alcohol (IDA) or a mixture of 70 % ethanol/1 % propylene glycol/29 % water. A minimum of 10 % of samples within the project were re-analysed (for extraction, species identification, enumeration and data entry) as per NMBAQC quality control guidelines (Worsfold et al., 2010). For biomass, identified macrofauna were blot dried and weighed at species/phyla level then returned to storage container.

Species abundances were entered on file in the ABACUS database, which stores and sorts entries into taxonomic order and provide output files for numerical analysis. Nomenclature follows that given on the World Register of Marine Species (Worms Editorial Board, 2023). The taxonomic order is based on Species Directory codes (Howson & Picton, 1997) to give an idea of 'evolutionary rank'.

### **B.1.3 Environmental DNA (eDNA) Analysis**

#### **B.1.3.1 Water Sampling**

Water samples were collected from the near surface water and the near seafloor water using a 5 L Niskin bottle.

Operational procedures for water sampling were as follows:

- The Niskin bottle was prepared for operations prior to arrival on station. A USBL beacon was attached to the wire below the bottle and a clump weight was attached to the end of the wire. The Bridge communicated to the deck via a VHF radio when the vessel was steady and on location, and the bottle was deployed from the stern A-frame;
- When the surveyor located the beacon and it reached the desired depth (approximately 5 m above the seafloor/near surface), the engineer operating the winch was informed (via VHF radio);
- The winch was stopped, and the survey engineer attached a messenger weight to the cable to trigger the Niskin bottle firing mechanism and collect the sample;
- When the survey engineer observed that the messenger had reached the bottle (evidenced through a vibration of the wire upon impact), the online surveyor was informed (via VHF radio) and a fix was taken;
- On recovery to the deck, the sample was inspected and judged acceptable if the bottle was full or otherwise rejected (e.g. if not triggered or only part full);
- Water samples were processed from the Niskin bottle using a NatureMetrics aquatic eDNA sampling kit and Vampire sampler. The samples preserved with the provided fixing agent, and stored in specimen bags provided at approximately  $-20^{\circ}\text{C}$ .

#### **B.1.3.2 Water Extraction (Marine Standard)**

Samples were processed in dedicated clean rooms, designed for the handling of eDNA samples, at NatureMetrics UK with all work undertaken in class II biosafety cabinets and all workstations decontaminated with a chemical disinfectant and UV irradiated before and after use.



Samples were collected with 0.8 µm Polyethersulfone (PES) filters with a modified Longmire's solution added to the filter housing to preserve DNA prior to extraction. DNA was extracted from the 0.8 µm PES filters using a DNeasy Blood and Tissue Kit (Qiagen) following Spens et al. (2016) method for disc filters in buffer, with proteinase K added directly to the filter housing to minimise the risk of contamination arising from handling of the filter. A negative control, consisting of molecular grade water, was processed with each batch of samples to monitor for exogenous deoxyribonucleic acid (DNA) contamination. Extraction yields were checked by measuring DNA concentration using a Qubit fluorometer with the Qubit dsDNA broad range assay kit (Thermo Fisher Scientific).

### B.1.3.3 DNA Amplification

Replicate polymerase chain reactions (PCRs) for each sample and extraction blank were amplified via a two-step PCR process, with tails added to the 5' end of taxon specific primers to complement downstream adapter and index primer sequences.

Positive and negative controls, consisting of proprietary synthetic sequences (that do not match known biological records) and PCR-grade water, respectively, were included with every PCR plate to verify amplification performance. PCR amplification success was confirmed visually by gel electrophoresis.

### B.1.3.4 Library Preparation and Sequencing

Successfully amplified first round PCR replicates were pooled per sample and purified using MagBind TotalPure NGS magnetic beads (Omega Biotek). A sequencing library was prepared from the purified amplicons using unique dual indexes, following Illumina's 16S Metagenomic Sequencing Library Preparation protocol (16S Metagenomic Sequencing Library Preparation, n.d.). Indexed PCR products were subsequently purified, quantified, normalised, and pooled in equal volumes. The final pooled library was sequenced on an Illumina MiSeq system using a V3 600 cycle reagent kit (Illumina).

## B.2 Statistical Analysis

### B.2.1 Correlations

Depth, crude granulometric data, chemical data and univariate indices of community structure were correlated using Spearman's Rank Correlation Coefficient in PRIMER v7 (Clarke & Gorley, 2015). This is calculated as follows:

$$\rho = \frac{\sum(x - \bar{x})(y - \bar{y}')}{\sqrt{\sum(x - \bar{x})^2 \sum(y - \bar{y}')^2}}$$

Equation B.1

Where  $x$  and  $y$  are ranked values for each variable.

The resultant test statistic ( $\rho$ ) will range from -1 to 1, with -1 indicating a very strong negative correlation, 0 no correlation and 1 a very strong positive correlation. Positive correlations are when both reported values increase or decrease in unison, whilst negative correlations indicate that as one value increases the other decreases and vice versa.

Significance levels were assigned from tabulated values for a two-tail test at 5 % and 1 % based on Zar (1984).

### B.2.2 Univariate and Multivariate Analysis of Macrofauna Data

#### B.2.2.1 Primary Variables and Diversity Indices

A range of primary variables and derived indices were calculated that attempt to quantify the species richness, evenness and a combination of both. The primary variables (number of individuals and species) and diversity indices (Shannon-Wiener diversity, Brillouin's diversity, Simpson's dominance and Pielou's evenness) were calculated for both the samples and the pooled replicates for each station using the PRIMER v7 DIVERSE procedure.

#### Shannon Wiener Index ( $H'$ or more specifically $H' \log_2$ )

The Shannon-Wiener index (or Shannon-Wiener information function) is essentially a measure of how difficult it would be to predict correctly the species of the next individual collected from the community under study. It is a measure of uncertainty and was originally developed to assess the information content of codes. Information content is a measure of uncertainty, so that the larger the value of the index, the greater the uncertainty.

It is usually expressed as:

$$= - \sum_i P_i \log(P_i)$$

Equation B.2

Where  $P_i$  is the proportion of the  $i^{\text{th}}$  species. For practical application, the formula can be expanded to:

$$= C(\log_{10} N - \frac{1}{N} \sum n_i \log_{10} n_i)$$

Equation B.3

Where:

- $N$  = total number of individuals
- $n_i$  = number of individuals of  $i^{\text{th}}$  species
- $C$  = conversion factor  $\log_{10} - \log_2$

Two components of diversity are combined in the Shannon-Wiener index. These are species richness (i.e. numbers of species) and the equitability or evenness of distribution of individuals among the species. A greater number of species increases the index value as does more even distribution of individuals amongst species. Theoretically, the Shannon-Wiener index should only be used on random samples drawn from a large community in which the total number of species is known. This is, of course, not usually possible and so the use of the index is always a compromise.

### Simpsons Dominance ( $\lambda$ )

Simpson's index of dominance is derived from probability theory. It is simply a measure of the probability of picking two individuals from a community at random that are different species. The index is calculated from:

$$= \sum_{i=1}^s (p_i)^2$$

Equation B.4

Where  $p_i$  is the proportion of the  $i^{\text{th}}$  species.

Simpson's index assigns relatively little weight to rare species, and more weight to the common ones. It ranges in value from close to 0 (an equitable distribution across a number of species) to a maximum of 1 (where all abundance is assigned to a single species).

#### B.2.2.2 Pielou's Evenness ( $J$ )

Equitability refers to the evenness with which individuals are distributed amongst species. Equitability is clearly a component of species diversity and certainly enters into diversity indices such as  $H' \log_2$ ,  $H_b$ , and  $\lambda$ .

Equitability can be assessed in several ways, the most commonly used approach being to calculate the theoretical diversity for a given species abundance list if all the species were equal in abundance. The equitability of the sample can then be defined as the ratio of the actual diversity to the theoretical maximum.

This is usually done using the Shannon-Wiener index ( $H' \log_2$ )

If all species are equally represented, then the equation can be written:

$$H'(max) = -S \left( \frac{1}{S} \log_2 \frac{1}{S} \right) = \log_s S$$

Equation B.5

The equitability ratio is therefore:

$$J = \frac{H_s}{\log_2 S}$$

Equation B.6

Where:

- $J$  = equitability measure (Pielou)
- $H'$  = calculated Shannon-Wiener diversity
- $s$  = total number of species.

### B.2.3 Multivariate Analysis

Macrofauna abundance data was analysed by multivariate techniques using the statistical package PRIMER v7. Approaches followed those outlined in Clarke and Gorley (2015). The main techniques used to interrogate the data are detailed below.

#### B.2.3.1 Pre-treatment and Transformations

Prior to analysis data typically undergo transformation to down weight the effect of dominant data components in determining inter-sample similarities. These transformations vary in their effect through: no transform; square root ( $\sqrt{\cdot}$ ); fourth root/double square root ( $\sqrt[4]{\cdot}$ ); logarithmic, and; reduction to presence/absence. At the former end of the spectrum (no transform) all attention is focused on the dominant components of the dataset, and at the latter end (reduction to presence/absence) equal weighting is applied to all components (Clarke and Gorley, 2015). Due to the relatively low abundance of individuals reported from the MachairWind OAA, square root transformation was used in this instance, as detailed within the report.

#### B.2.3.2 Similarity Matrices

A triangular similarity matrix was produced from the square root transformed data, by calculating the similarity between every pair of replicate samples. The Bray-Curtis similarity coefficient was used for macrofaunal data (Bray and Curtis, 1957). This similarity measure is considered the most suitable as it maintains independence of joint absence (i.e. will not infer similarity between samples based on the absence of a certain parameter in them).

#### B.2.3.3 Hierarchical Agglomerative Clustering (CLUSTER) and Similarity Profile Testing (SIMPROF)

The CLUSTER programme uses the similarity matrix to successively fuse samples into groups and groups into clusters according to their level of similarity. The end point of this process is a single cluster containing all the samples, which is displayed by means of a dendrogram with similarity displayed on one axis and samples on the other. Similarity profile permutation tests (SIMPROF) were also performed, to look for evidence of genuine statistically significant

clusters, in samples that are a-priori unstructured (i.e. with no prior statistical design). By combining this significance testing with the CLUSTER function, dendrograms are produced indicating those clusters that are statistically significant.

#### B.2.3.4 Non-metric Multidimensional Scaling (nMDS)

Non-metric multidimensional scaling (nMDS) uses the similarity matrix to ordinate samples in a two-dimensional plane. The representation of the multidimensional (multiple variable) dataset in two dimensions will inevitably result in some distortion of the real data relationships and this distortion is expressed as a stress value. Stress values above 0.3 indicate arbitrary points and the ordination should be considered unreliable. Stress values between 0.2 and 0.3 are poor representations of the data. Stress < 0.2 can provide meaningful ordinations, while stress < 0.1 demonstrate a good interpretation of the data.

### B.2.4 Environmental DNA Analysis

#### B.2.4.1 Data Rationalisation

Identifications were sense-checked against GBIF occurrence records for presence in the sampling country and elevated to higher taxonomic levels where required (rgbif; Chamberlain et al., 2023).

Zero-radius OTUs (zOTUs) were clustered at 97% similarity with USEARCH to obtain OTUs. An OTU-by-sample table was generated by mapping all dereplicated reads for each sample to the OTU representative sequences with USEARCH at an identity threshold of 97%.

The OTU table was filtered to remove low abundance OTUs from each sample (< 0.02% or < 10 reads, whichever is the greater threshold for the sample). Unassigned OTUs, and OTUs identified to human and domesticated mammals, were removed from the dataset for subsequent analyses.

#### B.2.4.2 Bioinformatics

Sequences were demultiplexed with bcl2fastq and processed via a custom NatureMetrics eDNA analysis pipeline. Paired-end FASTQ reads for each sample were merged with USEARCH (Edgar, 2010). Forward and reverse primers were trimmed from the merged sequences using cutadapt (Martin, 2011). Sequences were quality filtered with USEARCH to retain only those with an expected error rate per base of 0.01 or below and dereplicated by sample, retaining singletons to obtain zOTUs. Unique sequences from all samples were denoised in a single analysis with UNOISE (Edgar, 2016). Consensus taxonomic assignments were made for each zOTU using sequence similarity searches against NCBI nucleotide (NCBI nt). Searches against databases were made using blastn (Altschul et al., 1990; Camacho et al., 2009) and required hits to have a minimum e-score of 1e-20 and cover at least 90% of the query sequence. The taxonomic identification associated with all hits was converted to match the GBIF taxonomic backbone. Assignments were made to the lowest possible taxonomic

level where there was consistency in the matches, with minimum similarity thresholds of 99%, 97% and 95% for species, genus, and higher-level assignments respectively.

The eDNA analysis aims at displaying species level or the lowest taxonomic level confidently detected. The eDNA signal, which indicates the proportion of DNA sequences within a sample, is represented using a bubble plot, with a bubble indicating the presence of that species in that sample. A larger bubble size potentially indicates a stronger eDNA signal.

It is important to highlight that whilst this signal may be linked to the abundance of species in the environment, this should be interpreted only as a coarse measure because the signal is also impacted by biological (e.g., biomass, life stage, activity, body condition), environmental (e.g. temperature, pH, salinity, conductivity), and technical factors (e.g. primer bias, PCR stochasticity).

Table 3.1 summarises the community statistics used for the analysis.

Table 3.1: Community Statistics

Statistic	Definition
Species Richness	A biodiversity metric that is consistently reported for biodiversity monitoring, for eDNA analysis refers to the total count of OTUs detected in each sample and it is reported both for each sample (alpha diversity) and for the total number of OTUs from all samples taken (gamma diversity). It is called 'Species Richness' because an OTU is a hypothesised species based upon clusters of similar DNA sequences. This metric is not the sum of OTUs identified to species-level. Although some OTUs cannot be assigned to a species, these are approximately equivalent to species. Higher 'Species Richness' is a broad indication of a healthier functioning ecosystem
Evolutionary Diversity	A biodiversity metric calculated for each sample, is a measure of the variety of the diversity of species detected, based on how distantly-related those species are. Evolutionary Diversity is a strong complementary indicator of biodiversity status alongside Species Richness. An increase in Evolutionary Diversity indicates a more varied species assemblage, which is generally associated with a better functioning ecosystem and more ecological niches available. We calculate the Evolutionary Diversity of samples by arranging all OTUs in a family tree based on the similarity of the DNA sequences. The overall size of the family tree (including lengths of all family tree branches) gives the value for Evolutionary Diversity. The metric used is 'Faith's Phylogenetic Diversity' which is commonly used in ecological science and biodiversity monitoring

### B.2.4.3 Species of Conservation Importance

All OTUs with species-level identifications were queried against the International Union for Conservation of Nature (IUCN) Red List to obtain global threat status. Species were also assessed for their conservation status using the Oslo and Paris Commission (OSPAR) list of threatened and/or declining species and habitats, and the Scottish priority marine feature (PMF) list.

# Appendix C

Logs

C.1 Survey Log

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
07/09/2023	12:07:11	MCW-A-ST02	Video	SOL	1	68	643 878.0	6 225 536.8	643 864.3	6 225 561.9	28.6	-
07/09/2023	12:07:36	MCW-A-ST02	Still	MCW-A-ST02_01	2	-	643 878.0	6 225 536.8	643 864.8	6 225 560.7	27.2	-
07/09/2023	12:08:03	MCW-A-ST02	Still	MCW-A-ST02_02	3	-	643 878.0	6 225 536.8	643 865.2	6 225 559.4	25.9	-
07/09/2023	12:08:36	MCW-A-ST02	Still	MCW-A-ST02_03	4	-	643 878.0	6 225 536.8	643 866.1	6 225 557.9	24.2	-
07/09/2023	12:10:47	MCW-A-ST02	Still	MCW-A-ST02_04	5	-	643 878.0	6 225 536.8	643 869.5	6 225 552.3	17.6	-
07/09/2023	12:11:47	MCW-A-ST02	Still	MCW-A-ST02_05	6	-	643 878.0	6 225 536.8	643 870.6	6 225 549.5	14.7	-
07/09/2023	12:12:23	MCW-A-ST02	Still	MCW-A-ST02_06	7	-	643 878.0	6 225 536.8	643 871.3	6 225 548.2	13.2	-
07/09/2023	12:12:24	MCW-A-ST02	Still	MCW-A-ST02_07	8	-	643 878.0	6 225 536.8	643 871.4	6 225 548.1	13.0	-
07/09/2023	12:13:30	MCW-A-ST02	Still	MCW-A-ST02_08	9	-	643 878.0	6 225 536.8	643 874.1	6 225 542.7	7.1	-
07/09/2023	12:14:34	MCW-A-ST02	Still	MCW-A-ST02_09	10	-	643 878.0	6 225 536.8	643 877.0	6 225 535.8	1.4	-
07/09/2023	12:15:47	MCW-A-ST02	Still	MCW-A-ST02_10	11	-	643 878.0	6 225 536.8	643 881.7	6 225 530.0	7.8	-
07/09/2023	12:16:49	MCW-A-ST02	Still	MCW-A-ST02_11	12	-	643 878.0	6 225 536.8	643 884.1	6 225 524.0	14.2	-
07/09/2023	12:17:35	MCW-A-ST02	Still	MCW-A-ST02_12	13	-	643 878.0	6 225 536.8	643 885.6	6 225 519.8	18.6	-
07/09/2023	12:18:15	MCW-A-ST02	Still	MCW-A-ST02_13	14	-	643 878.0	6 225 536.8	643 888.6	6 225 516.4	23.0	-
07/09/2023	12:19:01	MCW-A-ST02	Video	EOL	15	-	643 878.0	6 225 536.8	643 890.9	6 225 512.1	27.9	-
07/09/2023	12:47:12	MCW-A-ST02	WS	NS	16	62	643 878.0	6 225 536.8	643 877.9	6 225 537.7	0.8	-
07/09/2023	12:58:06	MCW-A-ST02	WS	BOT	17	62	643 878.0	6 225 536.8	643 878.7	6 225 537.1	0.7	-
07/09/2023	13:05:50	MCW-A-ST02	WS	TOP	18	2.4	643 878.0	6 225 536.8	643 878.1	6 225 537.8	1.0	-
07/09/2023	13:20:36	MCW-A-ST02	DVV	NS/NS	19	68	643 878.0	6 225 536.8	643 879.6	6 225 537.7	1.8	-
07/09/2023	13:27:59	MCW-A-ST02	DVV	PC/FA	20	68	643 878.0	6 225 536.8	643 880.2	6 225 537.1	2.3	-
07/09/2023	14:29:05	MCW-A-ST01	Video	SOL	21	63	641 137.9	6 225 410.2	641 119.4	6 225 432.5	29.0	-
07/09/2023	14:29:24	MCW-A-ST01	Still	MCW-A-ST01_01	22	-	641 137.9	6 225 410.2	641 120.7	6 225 430.9	26.9	-
07/09/2023	14:30:13	MCW-A-ST01	Still	MCW-A-ST01_02	23	-	641 137.9	6 225 410.2	641 123.3	6 225 428.0	23.1	-
07/09/2023	14:30:50	MCW-A-ST01	Still	MCW-A-ST01_03	24	-	641 137.9	6 225 410.2	641 126.2	6 225 424.7	18.7	-
07/09/2023	14:31:26	MCW-A-ST01	Still	MCW-A-ST01_04	25	-	641 137.9	6 225 410.2	641 128.7	6 225 421.6	14.7	-
07/09/2023	14:31:37	MCW-A-ST01	Still	MCW-A-ST01_05	26	-	641 137.9	6 225 410.2	641 129.3	6 225 420.8	13.7	-
07/09/2023	14:32:35	MCW-A-ST01	Still	MCW-A-ST01_06	27	-	641 137.9	6 225 410.2	641 133.1	6 225 416.2	7.7	-
07/09/2023	14:33:32	MCW-A-ST01	Still	MCW-A-ST01_07	28	-	641 137.9	6 225 410.2	641 136.8	6 225 411.4	1.6	-
07/09/2023	14:34:02	MCW-A-ST01	Still	MCW-A-ST01_08	29	-	641 137.9	6 225 410.2	641 139.0	6 225 408.9	1.6	-
07/09/2023	14:34:55	MCW-A-ST01	Still	MCW-A-ST01_09	30	-	641 137.9	6 225 410.2	641 142.1	6 225 404.6	7.0	-
07/09/2023	14:35:38	MCW-A-ST01	Still	MCW-A-ST01_10	31	-	641 137.9	6 225 410.2	641 145.1	6 225 401.3	11.4	-
07/09/2023	14:36:50	MCW-A-ST01	Still	MCW-A-ST01_11	32	-	641 137.9	6 225 410.2	641 150.0	6 225 396.1	18.5	-
07/09/2023	14:37:28	MCW-A-ST01	Still	MCW-A-ST01_12	33	-	641 137.9	6 225 410.2	641 152.7	6 225 393.0	22.6	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
07/09/2023	14:38:08	MCW-A-ST01	Video	EOL	34	-	641 137.9	6 225 410.2	641 155.2	6 225 389.7	26.8	-
07/09/2023	15:43:26	MCW-A-ST01	DVV	FA/NS	35	62	641 137.9	6 225 410.2	641 138.7	6 225 411.5	1.5	-
07/09/2023	15:53:20	MCW-A-ST01	DVV	PC	36	62	641 137.9	6 225 410.2	641 139.0	6 225 411.7	1.9	-
07/09/2023	17:01:25	MCW-A-ST05	Video	SOL	37	63	638 497.8	6 222 980.4	638 498.5	6 223 011.6	31.2	-
07/09/2023	17:02:00	MCW-A-ST05	Still	MCW-A-ST05_01	38	-	638 497.8	6 222 980.4	638 498.4	6 223 008.5	28.1	-
07/09/2023	17:02:38	MCW-A-ST05	Still	MCW-A-ST05_02	39	-	638 497.8	6 222 980.4	638 497.6	6 223 004.9	24.6	-
07/09/2023	17:03:16	MCW-A-ST05	Still	MCW-A-ST05_03	40	-	638 497.8	6 222 980.4	638 497.4	6 223 000.9	20.5	-
07/09/2023	17:03:39	MCW-A-ST05	Still	MCW-A-ST05_04	41	-	638 497.8	6 222 980.4	638 497.0	6 222 998.8	18.4	-
07/09/2023	17:04:56	MCW-A-ST05	Still	MCW-A-ST05_05	42	-	638 497.8	6 222 980.4	638 496.6	6 222 990.1	9.8	-
07/09/2023	17:05:23	MCW-A-ST05	Still	MCW-A-ST05_06	43	-	638 497.8	6 222 980.4	638 496.6	6 222 987.2	6.9	-
07/09/2023	17:05:58	MCW-A-ST05	Still	MCW-A-ST05_07	44	-	638 497.8	6 222 980.4	638 496.5	6 222 983.4	3.3	-
07/09/2023	17:07:25	MCW-A-ST05	Still	MCW-A-ST05_08	45	-	638 497.8	6 222 980.4	638 495.9	6 222 974.7	6.0	-
07/09/2023	17:07:54	MCW-A-ST05	Still	MCW-A-ST05_09	46	-	638 497.8	6 222 980.4	638 495.8	6 222 971.6	9.0	-
07/09/2023	17:08:37	MCW-A-ST05	Still	MCW-A-ST05_10	47	-	638 497.8	6 222 980.4	638 496.0	6 222 967.1	13.4	-
07/09/2023	17:09:32	MCW-A-ST05	Still	MCW-A-ST05_11	48	-	638 497.8	6 222 980.4	638 495.5	6 222 961.7	18.8	-
07/09/2023	17:09:56	MCW-A-ST05	Still	MCW-A-ST05_12	49	-	638 497.8	6 222 980.4	638 495.6	6 222 959.2	21.3	-
07/09/2023	17:10:42	MCW-A-ST05	Video	EOL	50	-	638 497.8	6 222 980.4	638 495.0	6 222 954.4	26.1	-
07/09/2023	17:26:31	MCW-A-ST05	WS	TOP	51	6	638 497.8	6 222 980.4	638 497.5	6 222 980.8	0.5	-
07/09/2023	17:37:14	MCW-A-ST05	WS	BOT	52	58	638 497.8	6 222 980.4	638 497.0	6 222 981.6	1.5	-
07/09/2023	17:50:47	MCW-A-ST05	DVV	PC	53	63	638 497.8	6 222 980.4	638 499.7	6 222 981.9	2.4	-
07/09/2023	19:37:23	MCW-A-ST12	Video	SOL	54	66	636 003.8	6 220 235.0	636 002.8	6 220 270.2	35.2	-
07/09/2023	19:38:00	MCW-A-ST12	Still	MCW-A-ST12_01	55	-	636 003.8	6 220 235.0	636 003.0	6 220 267.8	32.8	-
07/09/2023	19:39:10	MCW-A-ST12	Still	MCW-A-ST12_02	56	-	636 003.8	6 220 235.0	636 003.4	6 220 260.3	25.2	-
07/09/2023	19:39:25	MCW-A-ST12	Still	MCW-A-ST12_03	57	-	636 003.8	6 220 235.0	636 003.5	6 220 258.6	23.6	-
07/09/2023	19:39:49	MCW-A-ST12	Still	MCW-A-ST12_04	58	-	636 003.8	6 220 235.0	636 003.5	6 220 256.3	21.3	-
07/09/2023	19:40:05	MCW-A-ST12	Still	MCW-A-ST12_05	59	-	636 003.8	6 220 235.0	636 003.8	6 220 254.9	19.9	-
07/09/2023	19:40:51	MCW-A-ST12	Still	MCW-A-ST12_06	60	-	636 003.8	6 220 235.0	636 004.3	6 220 250.5	15.4	-
07/09/2023	19:41:10	MCW-A-ST12	Still	MCW-A-ST12_07	61	-	636 003.8	6 220 235.0	636 004.4	6 220 248.2	13.2	-
07/09/2023	19:42:06	MCW-A-ST12	Still	MCW-A-ST12_08	62	-	636 003.8	6 220 235.0	636 004.3	6 220 243.2	8.2	-
07/09/2023	19:42:30	MCW-A-ST12	Still	MCW-A-ST12_09	63	-	636 003.8	6 220 235.0	636 004.4	6 220 240.3	5.3	-
07/09/2023	19:44:11	MCW-A-ST12	Still	MCW-A-ST12_10	64	-	636 003.8	6 220 235.0	636 004.4	6 220 230.5	4.6	-
07/09/2023	19:45:48	MCW-A-ST12	Still	MCW-A-ST12_11	65	-	636 003.8	6 220 235.0	636 004.3	6 220 220.7	14.4	-
07/09/2023	19:46:32	MCW-A-ST12	Still	MCW-A-ST12_12	66	-	636 003.8	6 220 235.0	636 004.4	6 220 216.1	18.9	-
07/09/2023	19:48:04	MCW-A-ST12	Video	EOL	67	-	636 003.8	6 220 235.0	636 004.7	6 220 207.0	28.0	-
07/09/2023	20:03:29	MCW-A-ST12	WS	TOP	68	4	636 003.8	6 220 235.0	636 003.8	6 220 235.4	0.4	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
07/09/2023	20:10:35	MCW-A-ST12	WS	BOT	69	61	636 003.8	6 220 235.0	636 004.3	6 220 236.6	1.6	-
07/09/2023	20:22:49	MCW-A-ST12	DVV	PC	70	66	636 003.8	6 220 235.0	636 006.1	6 220 237.5	3.3	-
07/09/2023	21:42:40	MCW-A-ST22	Video	SOL	72	75	630 628.1	6 217 682.3	630 633.6	6 217 717.7	35.8	-
07/09/2023	21:43:17	MCW-A-ST22	Still	MCW-A-ST22_01	73	-	630 628.1	6 217 682.3	630 633.0	6 217 713.9	31.9	-
07/09/2023	21:43:37	MCW-A-ST22	Still	MCW-A-ST22_02	74	-	630 628.1	6 217 682.3	630 632.7	6 217 711.7	29.7	-
07/09/2023	21:44:03	MCW-A-ST22	Still	MCW-A-ST22_03	75	-	630 628.1	6 217 682.3	630 631.8	6 217 708.4	26.3	-
07/09/2023	21:45:59	MCW-A-ST22	Still	MCW-A-ST22_04	76	-	630 628.1	6 217 682.3	630 630.3	6 217 696.8	14.6	-
07/09/2023	21:46:16	MCW-A-ST22	Still	MCW-A-ST22_05	77	-	630 628.1	6 217 682.3	630 630.1	6 217 694.8	12.7	-
07/09/2023	21:46:47	MCW-A-ST22	Still	MCW-A-ST22_06	78	-	630 628.1	6 217 682.3	630 629.4	6 217 691.7	9.4	-
07/09/2023	21:47:40	MCW-A-ST22	Still	MCW-A-ST22_07	79	-	630 628.1	6 217 682.3	630 628.4	6 217 686.2	3.9	-
07/09/2023	21:48:28	MCW-A-ST22	Still	MCW-A-ST22_08	80	-	630 628.1	6 217 682.3	630 627.5	6 217 681.5	1.0	-
07/09/2023	21:49:22	MCW-A-ST22	Still	MCW-A-ST22_09	81	-	630 628.1	6 217 682.3	630 626.3	6 217 676.4	6.2	-
07/09/2023	21:49:59	MCW-A-ST22	Still	MCW-A-ST22_10	82	-	630 628.1	6 217 682.3	630 625.7	6 217 672.4	10.2	-
07/09/2023	21:50:29	MCW-A-ST22	Still	MCW-A-ST22_11	83	-	630 628.1	6 217 682.3	630 624.9	6 217 669.3	13.4	-
07/09/2023	21:51:49	MCW-A-ST22	Still	MCW-A-ST22_12	84	-	630 628.1	6 217 682.3	630 623.6	6 217 661.3	21.6	-
07/09/2023	21:52:16	MCW-A-ST22	Still	MCW-A-ST22_13	85	-	630 628.1	6 217 682.3	630 623.0	6 217 658.4	24.5	-
07/09/2023	21:52:34	MCW-A-ST22	Video	EOL	86	-	630 628.1	6 217 682.3	630 622.6	6 217 656.5	26.4	-
07/09/2023	22:07:10	MCW-A-ST22	WS	TOP	87	5	630 628.1	6 217 682.3	630 628.1	6 217 682.7	0.3	-
07/09/2023	22:13:36	MCW-A-ST22	WS	BOT	88	69	630 628.1	6 217 682.3	630 628.0	6 217 682.7	0.4	-
07/09/2023	22:32:01	MCW-A-ST22	DVV	NS/NS	89	75	630 628.1	6 217 682.3	630 630.7	6 217 683.3	2.8	-
07/09/2023	22:40:36	MCW-A-ST22	DVV	NS/NS	90	75	630 628.1	6 217 682.3	630 631.1	6 217 683.3	3.2	-
07/09/2023	22:49:23	MCW-A-ST22	DVV	NS/NS	91	75	630 628.1	6 217 682.3	630 630.6	6 217 683.6	2.8	-
07/09/2023	22:59:10	MCW-A-ST22	DVV	PC	92	75	630 628.1	6 217 682.3	630 630.8	6 217 682.8	2.7	-
08/09/2023	00:27:15	MCW-A-ST34	Video	SOL	NF	65	633 107.6	6 215 194.0	633 130.5	6 215 215.3	31.2	-
08/09/2023	00:28:18	MCW-A-ST34	Still	MCW-A-ST34_01	93	-	633 107.6	6 215 194.0	633 126.1	6 215 210.8	25.0	-
08/09/2023	00:28:59	MCW-A-ST34	Still	MCW-A-ST34_02	94	-	633 107.6	6 215 194.0	633 122.9	6 215 207.9	20.6	-
08/09/2023	00:29:27	MCW-A-ST34	Still	MCW-A-ST34_03	95	-	633 107.6	6 215 194.0	633 120.9	6 215 206.0	17.9	-
08/09/2023	00:29:47	MCW-A-ST34	Still	MCW-A-ST34_04	96	-	633 107.6	6 215 194.0	633 119.4	6 215 204.8	15.9	-
08/09/2023	00:30:38	MCW-A-ST34	Still	MCW-A-ST34_05	97	-	633 107.6	6 215 194.0	633 115.6	6 215 201.5	10.9	-
08/09/2023	00:31:13	MCW-A-ST34	Still	MCW-A-ST34_06	98	-	633 107.6	6 215 194.0	633 112.9	6 215 199.1	7.3	-
08/09/2023	00:32:11	MCW-A-ST34	Still	MCW-A-ST34_07	99	-	633 107.6	6 215 194.0	633 108.1	6 215 195.1	1.2	-
08/09/2023	00:32:54	MCW-A-ST34	Still	MCW-A-ST34_08	100	-	633 107.6	6 215 194.0	633 104.9	6 215 192.1	3.3	-
08/09/2023	00:33:38	MCW-A-ST34	Still	MCW-A-ST34_09	101	-	633 107.6	6 215 194.0	633 101.5	6 215 189.2	7.8	-
08/09/2023	00:34:40	MCW-A-ST34	Still	MCW-A-ST34_10	102	-	633 107.6	6 215 194.0	633 096.9	6 215 184.5	14.3	-
08/09/2023	00:35:12	MCW-A-ST34	Still	MCW-A-ST34_11	103	-	633 107.6	6 215 194.0	633 094.5	6 215 182.3	17.6	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
08/09/2023	00:35:54	MCW-A-ST34	Still	MCW-A-ST34_12	104	-	633 107.6	6 215 194.0	633 091.3	6 215 179.6	21.8	-
08/09/2023	00:36:25	MCW-A-ST34	Still	MCW-A-ST34_13	105	-	633 107.6	6 215 194.0	633 089.0	6 215 177.2	25.1	-
08/09/2023	00:36:40	MCW-A-ST34	Video	EOL	106	-	633 107.6	6 215 194.0	633 087.9	6 215 176.2	26.6	-
08/09/2023	00:57:14	MCW-A-ST34	WS	TOP	107	3	633 107.6	6 215 194.0	633 109.9	6 215 197.5	4.2	-
08/09/2023	01:07:10	MCW-A-ST34	WS	BOT	108	58	633 107.6	6 215 194.0	633 109.3	6 215 195.0	1.9	-
08/09/2023	01:27:06	MCW-A-ST34	DVV	PC	109	58	633 107.6	6 215 194.0	633 109.1	6 215 193.0	1.8	-
08/09/2023	03:08:12	MCW-A-ST44A	Video	SOL	NF	58	630 608.2	6 212 696.0	630 639.4	6 212 685.9	32.8	-
08/09/2023	03:08:38	MCW-A-ST44A	Still	MCW-A-ST44A_01	110	-	630 608.2	6 212 696.0	630 637.1	6 212 686.7	30.4	-
08/09/2023	03:09:25	MCW-A-ST44A	Still	MCW-A-ST44A_02	111	-	630 608.2	6 212 696.0	630 632.5	6 212 688.2	25.5	-
08/09/2023	03:10:11	MCW-A-ST44A	Still	MCW-A-ST44A_03	112	-	630 608.2	6 212 696.0	630 627.5	6 212 689.8	20.3	-
08/09/2023	03:10:44	MCW-A-ST44A	Still	MCW-A-ST44A_04	113	-	630 608.2	6 212 696.0	630 624.3	6 212 691.0	16.9	-
08/09/2023	03:11:08	MCW-A-ST44A	Still	MCW-A-ST44A_05	114	-	630 608.2	6 212 696.0	630 621.9	6 212 691.8	14.3	-
08/09/2023	03:11:31	MCW-A-ST44A	Still	MCW-A-ST44A_06	115	-	630 608.2	6 212 696.0	630 619.5	6 212 692.7	11.8	-
08/09/2023	03:12:08	MCW-A-ST44A	Still	MCW-A-ST44A_07	116	-	630 608.2	6 212 696.0	630 615.9	6 212 693.9	8.0	-
08/09/2023	03:12:52	MCW-A-ST44A	Still	MCW-A-ST44A_08	117	-	630 608.2	6 212 696.0	630 611.7	6 212 695.2	3.6	-
08/09/2023	03:13:35	MCW-A-ST44A	Still	MCW-A-ST44A_09	118	-	630 608.2	6 212 696.0	630 607.4	6 212 696.5	1.0	-
08/09/2023	03:14:03	MCW-A-ST44A	Still	MCW-A-ST44A_10	119	-	630 608.2	6 212 696.0	630 604.5	6 212 697.6	4.1	-
08/09/2023	03:14:43	MCW-A-ST44A	Still	MCW-A-ST44A_11	120	-	630 608.2	6 212 696.0	630 600.7	6 212 698.8	8.0	-
08/09/2023	03:15:27	MCW-A-ST44A	Still	MCW-A-ST44A_12	121	-	630 608.2	6 212 696.0	630 596.3	6 212 700.3	12.7	-
08/09/2023	03:16:17	MCW-A-ST44A	Still	MCW-A-ST44A_13	122	-	630 608.2	6 212 696.0	630 591.4	6 212 702.0	17.8	-
08/09/2023	03:16:51	MCW-A-ST44A	Still	MCW-A-ST44A_14	123	-	630 608.2	6 212 696.0	630 588.0	6 212 703.1	21.4	-
08/09/2023	03:17:36	MCW-A-ST44A	Video	EOL	124	-	630 608.2	6 212 696.0	630 583.6	6 212 704.5	26.0	-
08/09/2023	03:37:34	MCW-A-ST44A	DVV	PC/FA	125	-	630 608.2	6 212 696.0	630 608.9	6 212 694.8	1.4	-
08/09/2023	04:35:51	MCW-A-ST55	Video	SOL	NF	50	633 395.3	6 209 745.9	633 382.5	6 209 770.4	27.7	-
08/09/2023	04:36:04	MCW-A-ST55	Still	MCW-A-ST55_01	126	-	633 395.3	6 209 745.9	633 382.7	6 209 769.1	26.4	-
08/09/2023	04:36:31	MCW-A-ST55	Still	MCW-A-ST55_02	127	-	633 395.3	6 209 745.9	633 383.4	6 209 766.7	24.0	-
08/09/2023	04:37:22	MCW-A-ST55	Still	MCW-A-ST55_03	128	-	633 395.3	6 209 745.9	633 386.3	6 209 762.3	18.8	-
08/09/2023	04:37:40	MCW-A-ST55	Still	MCW-A-ST55_04	129	-	633 395.3	6 209 745.9	633 387.2	6 209 760.7	16.9	-
08/09/2023	04:38:24	MCW-A-ST55	Still	MCW-A-ST55_05	130	-	633 395.3	6 209 745.9	633 389.2	6 209 756.5	12.3	-
08/09/2023	04:39:22	MCW-A-ST55	Still	MCW-A-ST55_06	131	-	633 395.3	6 209 745.9	633 391.9	6 209 751.3	6.4	-
08/09/2023	04:40:17	MCW-A-ST55	Still	MCW-A-ST55_07	132	-	633 395.3	6 209 745.9	633 394.7	6 209 746.6	1.0	-
08/09/2023	04:41:14	MCW-A-ST55	Still	MCW-A-ST55_08	133	-	633 395.3	6 209 745.9	633 397.1	6 209 741.4	4.8	-
08/09/2023	04:42:07	MCW-A-ST55	Still	MCW-A-ST55_09	134	-	633 395.3	6 209 745.9	633 399.5	6 209 736.5	10.3	-
08/09/2023	04:42:43	MCW-A-ST55	Still	MCW-A-ST55_10	135	-	633 395.3	6 209 745.9	633 401.1	6 209 732.9	14.2	-
08/09/2023	04:43:26	MCW-A-ST55	Still	MCW-A-ST55_11	136	-	633 395.3	6 209 745.9	633 403.0	6 209 728.8	18.7	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
08/09/2023	04:44:00	MCW-A-ST55	Still	MCW-A-ST55_12	137	-	633 395.3	6 209 745.9	633 404.6	6 209 725.6	22.3	-
08/09/2023	04:44:32	MCW-A-ST55	Video	EOL	138	-	633 395.3	6 209 745.9	633 406.1	6 209 723.0	25.3	-
08/09/2023	05:01:32	MCW-A-ST55	WS	TOP	139	3	633 395.3	6 209 745.9	633 394.1	6 209 747.7	2.2	-
08/09/2023	05:11:05	MCW-A-ST55	WS	BOT	140	50	633 395.3	6 209 745.9	633 394.5	6 209 745.3	1.0	-
08/09/2023	05:29:44	MCW-A-ST55	DVV	PC	141	50	633 395.3	6 209 745.9	633 395.4	6 209 746.4	0.5	-
08/09/2023	07:04:16	MCW-A-ST36	Video	SOL	NF	50	638 870.0	6 214 807.6	638 876.7	6 214 834.4	27.6	-
08/09/2023	07:04:39	MCW-A-ST36	Still	MCW-A-ST36_01	142	-	638 870.0	6 214 807.6	638 876.2	6 214 832.2	25.4	-
08/09/2023	07:05:21	MCW-A-ST36	Still	MCW-A-ST36_02	143	-	638 870.0	6 214 807.6	638 875.0	6 214 828.0	20.9	-
08/09/2023	07:06:11	MCW-A-ST36	Still	MCW-A-ST36_03	144	-	638 870.0	6 214 807.6	638 873.8	6 214 823.2	16.0	-
08/09/2023	07:06:48	MCW-A-ST36	Still	MCW-A-ST36_04	145	-	638 870.0	6 214 807.6	638 872.6	6 214 819.1	11.7	-
08/09/2023	07:07:30	MCW-A-ST36	Still	MCW-A-ST36_05	146	-	638 870.0	6 214 807.6	638 871.7	6 214 814.8	7.4	-
08/09/2023	07:08:29	MCW-A-ST36	Still	MCW-A-ST36_06	147	-	638 870.0	6 214 807.6	638 870.2	6 214 809.0	1.3	-
08/09/2023	07:09:04	MCW-A-ST36	Still	MCW-A-ST36_07	148	-	638 870.0	6 214 807.6	638 869.3	6 214 805.7	2.1	-
08/09/2023	07:09:50	MCW-A-ST36	Still	MCW-A-ST36_08	149	-	638 870.0	6 214 807.6	638 868.0	6 214 801.1	6.9	-
08/09/2023	07:10:28	MCW-A-ST36	Still	MCW-A-ST36_09	150	-	638 870.0	6 214 807.6	638 867.0	6 214 797.2	10.8	-
08/09/2023	07:11:06	MCW-A-ST36	Still	MCW-A-ST36_10	151	-	638 870.0	6 214 807.6	638 865.9	6 214 793.4	14.8	-
08/09/2023	07:11:43	MCW-A-ST36	Still	MCW-A-ST36_11	152	-	638 870.0	6 214 807.6	638 865.0	6 214 789.6	18.7	-
08/09/2023	07:12:20	MCW-A-ST36	Still	MCW-A-ST36_12	153	-	638 870.0	6 214 807.6	638 864.1	6 214 786.1	22.3	-
08/09/2023	07:13:04	MCW-A-ST36	Video	EOL	154	-	638 870.0	6 214 807.6	638 863.0	6 214 781.7	26.9	-
08/09/2023	07:32:18	MCW-A-ST36	WS	TOP	155	3	638 870.0	6 214 807.6	638 869.7	6 214 808.1	0.6	-
08/09/2023	07:41:11	MCW-A-ST36	WS	BOT	156	45	638 870.0	6 214 807.6	638 870.1	6 214 809.4	1.8	-
08/09/2023	08:07:04	MCW-A-ST36	DVV	PC	157	50	638 870.0	6 214 807.6	638 870.6	6 214 808.8	1.3	-
08/09/2023	09:41:23	MCW-A-ST14	Video	SOL	NF	52	640 980.1	6 220 494.4	640 982.6	6 220 520.5	26.2	-
08/09/2023	09:41:41	MCW-A-ST14	Still	MCW-A-ST14_01	158	-	640 980.1	6 220 494.4	640 982.3	6 220 518.2	24.0	-
08/09/2023	09:42:27	MCW-A-ST14	Still	MCW-A-ST14_02	159	-	640 980.1	6 220 494.4	640 981.8	6 220 513.6	19.3	-
08/09/2023	09:42:46	MCW-A-ST14	Still	MCW-A-ST14_03	160	-	640 980.1	6 220 494.4	640 981.5	6 220 511.9	17.6	-
08/09/2023	09:43:22	MCW-A-ST14	Still	MCW-A-ST14_04	161	-	640 980.1	6 220 494.4	640 981.3	6 220 508.5	14.1	-
08/09/2023	09:44:16	MCW-A-ST14	Still	MCW-A-ST14_05	162	-	640 980.1	6 220 494.4	640 980.2	6 220 502.8	8.4	-
08/09/2023	09:44:59	MCW-A-ST14	Still	MCW-A-ST14_06	163	-	640 980.1	6 220 494.4	640 979.7	6 220 498.4	4.0	-
08/09/2023	09:45:23	MCW-A-ST14	Still	MCW-A-ST14_07	164	-	640 980.1	6 220 494.4	640 979.4	6 220 495.7	1.5	-
08/09/2023	09:46:11	MCW-A-ST14	Still	MCW-A-ST14_08	165	-	640 980.1	6 220 494.4	640 978.6	6 220 490.8	3.8	-
08/09/2023	09:46:54	MCW-A-ST14	Still	MCW-A-ST14_09	166	-	640 980.1	6 220 494.4	640 978.3	6 220 485.9	8.7	-
08/09/2023	09:47:27	MCW-A-ST14	Still	MCW-A-ST14_10	167	-	640 980.1	6 220 494.4	640 978.0	6 220 482.9	11.7	-
08/09/2023	09:48:18	MCW-A-ST14	Still	MCW-A-ST14_11	168	-	640 980.1	6 220 494.4	640 977.3	6 220 477.8	16.8	-
08/09/2023	09:48:59	MCW-A-ST14	Still	MCW-A-ST14_12	169	-	640 980.1	6 220 494.4	640 976.9	6 220 473.5	21.1	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
08/09/2023	09:49:52	MCW-A-ST14	Video	EOL	170	-	640 980.1	6 220 494.4	640 976.4	6 220 468.1	26.5	-
08/09/2023	10:03:45	MCW-A-ST14	WS	TOP	171	3	640 980.1	6 220 494.4	640 980.0	6 220 496.2	1.9	-
08/09/2023	10:11:53	MCW-A-ST14	WS	BOT	172	47	640 980.1	6 220 494.4	640 980.0	6 220 498.0	3.6	-
08/09/2023	10:35:51	MCW-A-ST14	DVV	PC	173	52	640 980.1	6 220 494.4	640 981.5	6 220 495.1	1.6	-
08/09/2023	12:13:54	MCW-A-ST08A	Video	SOL	174	59	645 652.5	6 221 830.4	645 659.6	6 221 867.9	38.2	-
08/09/2023	12:14:17	MCW-A-ST08A	Still	MCW-A-ST08A_01	175	-	645 652.5	6 221 830.4	645 658.9	6 221 865.8	36.0	-
08/09/2023	12:14:38	MCW-A-ST08A	Still	MCW-A-ST08A_02	176	-	645 652.5	6 221 830.4	645 658.5	6 221 863.8	33.9	-
08/09/2023	12:15:14	MCW-A-ST08A	Still	MCW-A-ST08A_03	177	-	645 652.5	6 221 830.4	645 657.9	6 221 859.8	29.9	-
08/09/2023	12:15:43	MCW-A-ST08A	Still	MCW-A-ST08A_04	178	-	645 652.5	6 221 830.4	645 657.2	6 221 856.9	26.9	-
08/09/2023	12:16:18	MCW-A-ST08A	Still	MCW-A-ST08A_05	179	-	645 652.5	6 221 830.4	645 656.7	6 221 853.1	23.1	-
08/09/2023	12:16:31	MCW-A-ST08A	Still	MCW-A-ST08A_06	180	-	645 652.5	6 221 830.4	645 656.2	6 221 851.9	21.8	-
08/09/2023	12:17:00	MCW-A-ST08A	Still	MCW-A-ST08A_07	181	-	645 652.5	6 221 830.4	645 655.8	6 221 848.9	18.8	-
08/09/2023	12:17:39	MCW-A-ST08A	Still	MCW-A-ST08A_08	182	-	645 652.5	6 221 830.4	645 655.1	6 221 844.8	14.6	-
08/09/2023	12:18:22	MCW-A-ST08A	Still	MCW-A-ST08A_09	183	-	645 652.5	6 221 830.4	645 654.6	6 221 840.8	10.6	-
08/09/2023	12:19:13	MCW-A-ST08A	Still	MCW-A-ST08A_10	184	-	645 652.5	6 221 830.4	645 653.6	6 221 835.6	5.3	-
08/09/2023	12:20:13	MCW-A-ST08A	Still	MCW-A-ST08A_11	185	-	645 652.5	6 221 830.4	645 652.4	6 221 829.8	0.6	-
08/09/2023	12:21:08	MCW-A-ST08A	Still	MCW-A-ST08A_12	186	-	645 652.5	6 221 830.4	645 651.0	6 221 823.8	6.8	-
08/09/2023	12:21:31	MCW-A-ST08A	Still	MCW-A-ST08A_13	187	-	645 652.5	6 221 830.4	645 650.3	6 221 821.6	9.1	-
08/09/2023	12:22:22	MCW-A-ST08A	Still	MCW-A-ST08A_14	188	-	645 652.5	6 221 830.4	645 649.3	6 221 816.3	14.4	-
08/09/2023	12:22:44	MCW-A-ST08A	Still	MCW-A-ST08A_15	189	-	645 652.5	6 221 830.4	645 648.9	6 221 814.1	16.7	-
08/09/2023	12:22:54	MCW-A-ST08A	Still	MCW-A-ST08A_16	190	-	645 652.5	6 221 830.4	645 648.8	6 221 812.9	17.8	-
08/09/2023	12:23:28	MCW-A-ST08A	Still	MCW-A-ST08A_17	191	-	645 652.5	6 221 830.4	645 648.3	6 221 809.2	21.6	-
08/09/2023	12:24:21	MCW-A-ST08A	Video	EOL	192	-	645 652.5	6 221 830.4	645 647.1	6 221 804.1	26.9	-
08/09/2023	12:42:13	MCW-A-ST08A	WS	TOP	193	4	645 652.5	6 221 830.4	645 653.0	6 221 831.0	0.8	-
08/09/2023	12:48:14	MCW-A-ST08A	WS	BOT	194	55	645 652.5	6 221 830.4	645 653.3	6 221 830.9	0.9	-
08/09/2023	13:04:49	MCW-A-ST08A	DVV	PC/NS	195	55	645 652.5	6 221 830.4	645 653.2	6 221 828.2	2.3	-
08/09/2023	13:17:52	MCW-A-ST08A	DVV	FA	196	55	645 652.5	6 221 830.4	645 654.4	6 221 826.8	4.1	-
08/09/2023	14:12:50	MCW-A-ST07A	Video	SOL	197	65	643 915.1	6 223 028.5	643 944.7	6 223 040.9	32.1	-
08/09/2023	14:13:20	MCW-A-ST07A	Still	MCW-A-ST07A_01	198	-	643 915.1	6 223 028.5	643 942.5	6 223 039.6	29.5	-
08/09/2023	14:13:56	MCW-A-ST07A	Still	MCW-A-ST07A_02	199	-	643 915.1	6 223 028.5	643 939.1	6 223 037.9	25.8	-
08/09/2023	14:14:12	MCW-A-ST07A	Still	MCW-A-ST07A_03	200	-	643 915.1	6 223 028.5	643 937.2	6 223 037.1	23.7	-
08/09/2023	14:15:29	MCW-A-ST07A	Still	MCW-A-ST07A_04	201	-	643 915.1	6 223 028.5	643 930.4	6 223 034.0	16.2	-
08/09/2023	14:15:42	MCW-A-ST07A	Still	MCW-A-ST07A_05	202	-	643 915.1	6 223 028.5	643 928.8	6 223 033.4	14.5	-
08/09/2023	14:16:11	MCW-A-ST07A	Still	MCW-A-ST07A_06	203	-	643 915.1	6 223 028.5	643 925.9	6 223 032.5	11.5	-
08/09/2023	14:17:27	MCW-A-ST07A	Still	MCW-A-ST07A_07	204	-	643 915.1	6 223 028.5	643 919.0	6 223 030.0	4.2	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
08/09/2023	14:18:47	MCW-A-ST07A	Still	MCW-A-ST07A_08	205	-	643 915.1	6 223 028.5	643 910.6	6 223 026.2	5.0	-
08/09/2023	14:19:17	MCW-A-ST07A	Still	MCW-A-ST07A_09	206	-	643 915.1	6 223 028.5	643 908.0	6 223 025.0	7.9	-
08/09/2023	14:20:10	MCW-A-ST07A	Still	MCW-A-ST07A_10	207	-	643 915.1	6 223 028.5	643 903.1	6 223 022.7	13.3	-
08/09/2023	14:20:32	MCW-A-ST07A	Still	MCW-A-ST07A_11	208	-	643 915.1	6 223 028.5	643 901.0	6 223 021.7	15.6	-
08/09/2023	14:21:11	MCW-A-ST07A	Still	MCW-A-ST07A_12	209	-	643 915.1	6 223 028.5	643 897.4	6 223 020.0	19.6	-
08/09/2023	14:22:21	MCW-A-ST07A	Video	EOL	210	-	643 915.1	6 223 028.5	643 890.8	6 223 017.0	26.9	-
08/09/2023	14:45:00	MCW-A-ST07A	DVV	PC/FA	211	-	643 915.1	6 223 028.5	643 890.8	6 223 017.0	26.9	-
08/09/2023	16:37:41	MCW-A-ST03	Video	SOL	212	74	646 757.3	6 225 342.1	646 751.3	6 225 373.8	32.3	-
08/09/2023	16:37:52	MCW-A-ST03	Still	MCW-A-ST03_01	213	-	646 757.3	6 225 342.1	646 751.5	6 225 373.8	32.3	-
08/09/2023	16:38:05	MCW-A-ST03	Still	MCW-A-ST03_02	214	-	646 757.3	6 225 342.1	646 751.2	6 225 372.7	31.2	-
08/09/2023	16:39:24	MCW-A-ST03	Still	MCW-A-ST03_03	215	-	646 757.3	6 225 342.1	646 752.6	6 225 365.1	23.5	-
08/09/2023	16:39:43	MCW-A-ST03	Still	MCW-A-ST03_04	216	-	646 757.3	6 225 342.1	646 753.0	6 225 362.8	21.2	-
08/09/2023	16:40:25	MCW-A-ST03	Still	MCW-A-ST03_05	217	-	646 757.3	6 225 342.1	646 754.4	6 225 357.4	15.6	-
08/09/2023	16:41:03	MCW-A-ST03	Still	MCW-A-ST03_06	218	-	646 757.3	6 225 342.1	646 755.0	6 225 354.2	12.3	-
08/09/2023	16:41:22	MCW-A-ST03	Still	MCW-A-ST03_07	219	-	646 757.3	6 225 342.1	646 755.5	6 225 351.8	9.9	-
08/09/2023	16:43:04	MCW-A-ST03	Still	MCW-A-ST03_08	220	-	646 757.3	6 225 342.1	646 757.3	6 225 341.8	0.2	-
08/09/2023	16:43:49	MCW-A-ST03	Still	MCW-A-ST03_09	221	-	646 757.3	6 225 342.1	646 758.1	6 225 337.3	4.8	-
08/09/2023	16:45:05	MCW-A-ST03	Still	MCW-A-ST03_10	222	-	646 757.3	6 225 342.1	646 759.6	6 225 329.9	12.3	-
08/09/2023	16:45:50	MCW-A-ST03	Still	MCW-A-ST03_11	223	-	646 757.3	6 225 342.1	646 760.7	6 225 325.3	17.1	-
08/09/2023	16:46:34	MCW-A-ST03	Still	MCW-A-ST03_12	224	-	646 757.3	6 225 342.1	646 761.6	6 225 320.4	22.1	-
08/09/2023	16:47:24	MCW-A-ST03	Video	EOL	225	-	646 757.3	6 225 342.1	646 762.3	6 225 315.3	27.2	-
08/09/2023	17:21:06	MCW-A-ST03	DVV	NS/NS	226	73	646 757.3	6 225 342.1	646 759.5	6 225 343.7	2.7	-
08/09/2023	17:29:29	MCW-A-ST03	DVV	PC/FA	227	73	646 757.3	6 225 342.1	646 759.0	6 225 343.8	2.4	-
12/09/2023	17:41:15	MCW-C-ST20	Video	SOL	228	45	657 485.3	6 219 984.4	657 510.6	6 219 953.3	40.1	-
12/09/2023	17:41:55	MCW-C-ST20	Still	MCW-C-ST20_01	229	-	657 485.3	6 219 984.4	657 508.9	6 219 956.4	36.7	-
12/09/2023	17:43:02	MCW-C-ST20	Still	MCW-C-ST20_02	230	-	657 485.3	6 219 984.4	657 505.5	6 219 962.1	30.1	-
12/09/2023	17:43:39	MCW-C-ST20	Still	MCW-C-ST20_03	231	-	657 485.3	6 219 984.4	657 502.2	6 219 965.7	25.2	-
12/09/2023	17:45:01	MCW-C-ST20	Still	MCW-C-ST20_04	232	-	657 485.3	6 219 984.4	657 495.9	6 219 971.5	16.8	-
12/09/2023	17:45:32	MCW-C-ST20	Still	MCW-C-ST20_05	233	-	657 485.3	6 219 984.4	657 495.1	6 219 973.2	14.9	-
12/09/2023	17:47:31	MCW-C-ST20	Still	MCW-C-ST20_06	234	-	657 485.3	6 219 984.4	657 486.7	6 219 982.6	2.3	-
12/09/2023	17:49:03	MCW-C-ST20	Still	MCW-C-ST20_07	235	-	657 485.3	6 219 984.4	657 480.6	6 219 989.5	6.9	-
12/09/2023	17:50:38	MCW-C-ST20	Still	MCW-C-ST20_08	236	-	657 485.3	6 219 984.4	657 474.1	6 219 997.6	17.3	-
12/09/2023	17:51:11	MCW-C-ST20	Still	MCW-C-ST20_09	237	-	657 485.3	6 219 984.4	657 471.5	6 219 999.7	20.6	-
12/09/2023	17:52:05	MCW-C-ST20	Still	MCW-C-ST20_10	NF	-	657 485.3	6 219 984.4	657 468.1	6 220 003.9	26.0	-
12/09/2023	17:52:09	MCW-C-ST20	Video	EOL	238	-	657 485.3	6 219 984.4	657 467.8	6 220 004.3	26.5	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/09/2023	18:17:01	MCW-C-ST20	DVV	PC/FA	239	45	657 485.3	6 219 984.4	657 483.2	6 219 982.5	2.8	-
12/09/2023	19:23:44	MCW-C-ST31	Video	SOL	240	47	654 519.6	6 217 495.9	654 524.3	6 217 459.7	36.5	-
12/09/2023	19:24:15	MCW-C-ST31	Still	MCW-C-ST31_01	241	-	654 519.6	6 217 495.9	654 524.4	6 217 461.9	34.4	-
12/09/2023	19:24:47	MCW-C-ST31	Still	MCW-C-ST31_02	242	-	654 519.6	6 217 495.9	654 523.8	6 217 465.7	30.5	-
12/09/2023	19:25:15	MCW-C-ST31	Still	MCW-C-ST31_03	243	-	654 519.6	6 217 495.9	654 523.2	6 217 469.1	27.0	-
12/09/2023	19:27:19	MCW-C-ST31	Still	MCW-C-ST31_04	244	-	654 519.6	6 217 495.9	654 522.7	6 217 480.5	15.7	-
12/09/2023	19:28:04	MCW-C-ST31	Still	MCW-C-ST31_05	245	-	654 519.6	6 217 495.9	654 521.0	6 217 485.6	10.4	-
12/09/2023	19:30:04	MCW-C-ST31	Still	MCW-C-ST31_06	246	-	654 519.6	6 217 495.9	654 518.6	6 217 497.7	2.0	-
12/09/2023	19:31:52	MCW-C-ST31	Still	MCW-C-ST31_07	247	-	654 519.6	6 217 495.9	654 518.1	6 217 507.9	12.0	-
12/09/2023	19:32:20	MCW-C-ST31	Still	MCW-C-ST31_08	248	-	654 519.6	6 217 495.9	654 517.1	6 217 511.2	15.5	-
12/09/2023	19:32:59	MCW-C-ST31	Still	MCW-C-ST31_09	249	-	654 519.6	6 217 495.9	654 516.8	6 217 514.0	18.3	-
12/09/2023	19:33:40	MCW-C-ST31	Still	MCW-C-ST31_10	250	-	654 519.6	6 217 495.9	654 515.9	6 217 518.6	23.0	-
12/09/2023	19:34:10	MCW-C-ST31	Video	EOL	251	-	654 519.6	6 217 495.9	654 515.2	6 217 522.2	26.6	-
12/09/2023	19:51:13	MCW-C-ST31	DVV	PC/FA	253	45	654 519.6	6 217 495.9	654 517.2	6 217 494.8	2.7	-
12/09/2023	20:36:13	MCW-C-ST32	Video	SOL	254	45	657 080.4	6 217 686.5	657 077.1	6 217 652.2	34.5	-
12/09/2023	20:36:46	MCW-C-ST32	Still	MCW-C-ST32_01	255	-	657 080.4	6 217 686.5	657 077.5	6 217 653.9	32.8	-
12/09/2023	20:37:38	MCW-C-ST32	Still	MCW-C-ST32_02	256	-	657 080.4	6 217 686.5	657 077.1	6 217 659.8	26.9	-
12/09/2023	20:37:58	MCW-C-ST32	Still	MCW-C-ST32_03	257	-	657 080.4	6 217 686.5	657 077.3	6 217 662.1	24.6	-
12/09/2023	20:39:02	MCW-C-ST32	Still	MCW-C-ST32_04	258	-	657 080.4	6 217 686.5	657 078.0	6 217 669.1	17.6	-
12/09/2023	20:40:35	MCW-C-ST32	Still	MCW-C-ST32_05	259	-	657 080.4	6 217 686.5	657 078.7	6 217 678.6	8.1	-
12/09/2023	20:41:37	MCW-C-ST32	Still	MCW-C-ST32_06	260	-	657 080.4	6 217 686.5	657 079.2	6 217 684.8	2.1	-
12/09/2023	20:42:19	MCW-C-ST32	Still	MCW-C-ST32_07	261	-	657 080.4	6 217 686.5	657 079.6	6 217 689.2	2.8	-
12/09/2023	20:43:06	MCW-C-ST32	Still	MCW-C-ST32_08	262	-	657 080.4	6 217 686.5	657 080.4	6 217 693.5	7.0	-
12/09/2023	20:44:16	MCW-C-ST32	Still	MCW-C-ST32_09	263	-	657 080.4	6 217 686.5	657 081.1	6 217 700.8	14.3	-
12/09/2023	20:44:44	MCW-C-ST32	Still	MCW-C-ST32_10	264	-	657 080.4	6 217 686.5	657 081.5	6 217 703.2	16.8	-
12/09/2023	20:46:05	MCW-C-ST32	Video	EOL	265	-	657 080.4	6 217 686.5	657 082.6	6 217 712.8	26.4	-
12/09/2023	21:00:27	MCW-C-ST32	DVV	PC/FA	266	46	657 080.4	6 217 686.5	657 077.5	6 217 685.0	3.3	-
12/09/2023	21:47:50	MCW-C-ST43	Video	SOL	267	46	657 107.2	6 215 098.2	657 099.3	6 215 065.0	34.2	-
12/09/2023	21:48:40	MCW-C-ST43	Still	MCW-C-ST43_01	268	-	657 107.2	6 215 098.2	657 100.0	6 215 069.0	30.1	-
12/09/2023	21:49:32	MCW-C-ST43	Still	MCW-C-ST43_02	269	-	657 107.2	6 215 098.2	657 101.1	6 215 074.2	24.8	-
12/09/2023	21:50:49	MCW-C-ST43	Still	MCW-C-ST43_03	270	-	657 107.2	6 215 098.2	657 102.3	6 215 082.8	16.2	-
12/09/2023	21:52:02	MCW-C-ST43	Still	MCW-C-ST43_04	271	-	657 107.2	6 215 098.2	657 104.2	6 215 089.8	8.9	-
12/09/2023	21:52:47	MCW-C-ST43	Still	MCW-C-ST43_05	272	-	657 107.2	6 215 098.2	657 105.7	6 215 093.9	4.6	-
12/09/2023	21:53:08	MCW-C-ST43	Still	MCW-C-ST43_06	273	-	657 107.2	6 215 098.2	657 106.3	6 215 095.8	2.6	-
12/09/2023	21:54:28	MCW-C-ST43	Still	MCW-C-ST43_07	274	-	657 107.2	6 215 098.2	657 108.2	6 215 104.8	6.6	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
12/09/2023	21:55:22	MCW-C-ST43	Still	MCW-C-ST43_08	275	-	657 107.2	6 215 098.2	657 109.7	6 215 110.8	12.8	-
12/09/2023	21:55:29	MCW-C-ST43	Still	MCW-C-ST43_09	276	-	657 107.2	6 215 098.2	657 109.8	6 215 111.6	13.6	-
12/09/2023	21:56:45	MCW-C-ST43	Still	MCW-C-ST43_10	277	-	657 107.2	6 215 098.2	657 111.2	6 215 117.8	19.9	-
12/09/2023	21:57:30	MCW-C-ST43	Video	EOL	278	-	657 107.2	6 215 098.2	657 112.6	6 215 123.1	25.5	-
12/09/2023	22:15:57	MCW-C-ST43	DVV	PC/FA	279	46	657 107.2	6 215 098.2	657 103.5	6 215 097.9	3.7	-
12/09/2023	23:32:22	MCW-C-ST42	Video	SOL	280	46	654 589.7	6 214 943.9	654 566.4	6 214 919.7	33.6	-
12/09/2023	23:32:35	MCW-C-ST42	Still	MCW-C-ST42_01	281	-	654 589.7	6 214 943.9	654 567.0	6 214 921.0	32.3	-
12/09/2023	23:33:19	MCW-C-ST42	Still	MCW-C-ST42_02	282	-	654 589.7	6 214 943.9	654 570.0	6 214 923.9	28.0	-
12/09/2023	23:34:21	MCW-C-ST42	Still	MCW-C-ST42_03	283	-	654 589.7	6 214 943.9	654 574.6	6 214 928.2	21.8	-
12/09/2023	23:35:10	MCW-C-ST42	Still	MCW-C-ST42_04	284	-	654 589.7	6 214 943.9	654 577.9	6 214 932.3	16.5	-
12/09/2023	23:35:32	MCW-C-ST42	Still	MCW-C-ST42_05	285	-	654 589.7	6 214 943.9	654 579.3	6 214 934.1	14.2	-
12/09/2023	23:36:20	MCW-C-ST42	Still	MCW-C-ST42_06	286	-	654 589.7	6 214 943.9	654 582.8	6 214 937.6	9.3	-
12/09/2023	23:37:12	MCW-C-ST42	Still	MCW-C-ST42_07	287	-	654 589.7	6 214 943.9	654 587.1	6 214 941.1	3.8	-
12/09/2023	23:37:45	MCW-C-ST42	Still	MCW-C-ST42_08	288	-	654 589.7	6 214 943.9	654 589.1	6 214 943.5	0.7	-
12/09/2023	23:38:40	MCW-C-ST42	Still	MCW-C-ST42_09	289	-	654 589.7	6 214 943.9	654 593.3	6 214 947.8	5.3	-
12/09/2023	23:39:19	MCW-C-ST42	Still	MCW-C-ST42_10	290	-	654 589.7	6 214 943.9	654 596.2	6 214 950.6	9.3	-
12/09/2023	23:40:07	MCW-C-ST42	Still	MCW-C-ST42_11	291	-	654 589.7	6 214 943.9	654 600.0	6 214 953.6	14.2	-
12/09/2023	23:40:47	MCW-C-ST42	Still	MCW-C-ST42_12	292	-	654 589.7	6 214 943.9	654 603.0	6 214 956.9	18.6	-
12/09/2023	23:41:29	MCW-C-ST42	Still	MCW-C-ST42_13	293	-	654 589.7	6 214 943.9	654 605.8	6 214 960.0	22.8	-
12/09/2023	23:42:03	MCW-C-ST42	Video	EOL	294	-	654 589.7	6 214 943.9	654 608.3	6 214 962.6	26.4	-
13/09/2023	00:10:30	MCW-C-ST42	WS	TOP	295	5	654 589.7	6 214 943.9	654 589.5	6 214 943.2	0.7	-
13/09/2023	00:15:50	MCW-C-ST42	WS	BOT	296	42	654 589.7	6 214 943.9	654 589.3	6 214 943.6	0.5	-
13/09/2023	00:29:49	MCW-C-ST42	DVV	PC/FA	297	55	654 589.7	6 214 943.9	654 587.5	6 214 945.8	2.9	-
13/09/2023	02:46:59	MCW-C-ST51	Video	SOL	298	55	649 221.2	6 212 397.3	649 241.5	6 212 426.7	35.7	-
13/09/2023	02:47:21	MCW-C-ST51	Still	MCW-C-ST51_01	299	-	649 221.2	6 212 397.3	649 239.7	6 212 424.6	32.9	-
13/09/2023	02:48:43	MCW-C-ST51	Still	MCW-C-ST51_02	300	-	649 221.2	6 212 397.3	649 235.1	6 212 417.6	24.6	-
13/09/2023	02:49:12	MCW-C-ST51	Still	MCW-C-ST51_03	301	-	649 221.2	6 212 397.3	649 232.9	6 212 414.8	21.0	-
13/09/2023	02:49:49	MCW-C-ST51	Still	MCW-C-ST51_04	302	-	649 221.2	6 212 397.3	649 231.0	6 212 411.5	17.2	-
13/09/2023	02:50:42	MCW-C-ST51	Still	MCW-C-ST51_05	303	-	649 221.2	6 212 397.3	649 228.2	6 212 407.5	12.4	-
13/09/2023	02:51:40	MCW-C-ST51	Still	MCW-C-ST51_06	304	-	649 221.2	6 212 397.3	649 224.6	6 212 402.1	5.9	-
13/09/2023	02:52:32	MCW-C-ST51	Still	MCW-C-ST51_07	305	-	649 221.2	6 212 397.3	649 221.5	6 212 397.5	0.3	-
13/09/2023	02:53:20	MCW-C-ST51	Still	MCW-C-ST51_08	307	-	649 221.2	6 212 397.3	649 218.8	6 212 393.5	4.6	-
13/09/2023	02:54:07	MCW-C-ST51	Still	MCW-C-ST51_09	308	-	649 221.2	6 212 397.3	649 216.0	6 212 389.7	9.3	-
13/09/2023	02:54:28	MCW-C-ST51	Still	MCW-C-ST51_10	309	-	649 221.2	6 212 397.3	649 214.7	6 212 387.6	11.7	-
13/09/2023	02:55:05	MCW-C-ST51	Still	MCW-C-ST51_11	310	-	649 221.2	6 212 397.3	649 212.5	6 212 385.1	15.0	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
13/09/2023	02:55:35	MCW-C-ST51	Still	MCW-C-ST51_12	311	-	649 221.2	6 212 397.3	649 210.7	6 212 382.2	18.4	-
13/09/2023	02:56:11	MCW-C-ST51	Still	MCW-C-ST51_13	312	-	649 221.2	6 212 397.3	649 208.8	6 212 379.3	21.9	-
13/09/2023	02:56:47	MCW-C-ST51	Video	EOL	313	-	649 221.2	6 212 397.3	649 206.3	6 212 376.1	25.9	-
13/09/2023	03:17:44	MCW-C-ST51	WS	TOP	314	5	649 221.2	6 212 397.3	649 221.4	6 212 397.9	0.6	-
13/09/2023	03:24:29	MCW-C-ST51	WS	BOT	315	52	649 221.2	6 212 397.3	649 222.4	6 212 399.9	2.8	-
13/09/2023	03:41:47	MCW-C-ST51	DVV	PC	316	50	649 221.2	6 212 397.3	649 223.7	6 212 398.7	2.8	-
13/09/2023	04:36:59	MCW-C-ST52	Video	SOL	317	50	651 625.9	6 212 457.0	651 655.8	6 212 473.5	34.2	-
13/09/2023	04:37:19	MCW-C-ST52	Still	MCW-C-ST52_01	318	-	651 625.9	6 212 457.0	651 654.3	6 212 473.1	32.7	-
13/09/2023	04:38:26	MCW-C-ST52	Still	MCW-C-ST52_02	319	-	651 625.9	6 212 457.0	651 647.4	6 212 469.8	25.1	-
13/09/2023	04:39:27	MCW-C-ST52	Still	MCW-C-ST52_03	320	-	651 625.9	6 212 457.0	651 642.2	6 212 466.5	18.9	-
13/09/2023	04:39:58	MCW-C-ST52	Still	MCW-C-ST52_04	321	-	651 625.9	6 212 457.0	651 639.8	6 212 464.9	16.0	-
13/09/2023	04:40:41	MCW-C-ST52	Still	MCW-C-ST52_05	322	-	651 625.9	6 212 457.0	651 635.9	6 212 462.5	11.4	-
13/09/2023	04:41:23	MCW-C-ST52	Still	MCW-C-ST52_06	323	-	651 625.9	6 212 457.0	651 631.8	6 212 460.4	6.8	-
13/09/2023	04:41:48	MCW-C-ST52	Still	MCW-C-ST52_07	324	-	651 625.9	6 212 457.0	651 629.4	6 212 459.3	4.2	-
13/09/2023	04:42:27	MCW-C-ST52	Still	MCW-C-ST52_08	325	-	651 625.9	6 212 457.0	651 626.0	6 212 457.1	0.2	-
13/09/2023	04:42:59	MCW-C-ST52	Still	MCW-C-ST52_09	326	-	651 625.9	6 212 457.0	651 623.5	6 212 455.5	2.8	-
13/09/2023	04:43:47	MCW-C-ST52	Still	MCW-C-ST52_10	327	-	651 625.9	6 212 457.0	651 618.8	6 212 452.7	8.2	-
13/09/2023	04:44:23	MCW-C-ST52	Still	MCW-C-ST52_11	328	-	651 625.9	6 212 457.0	651 615.9	6 212 451.0	11.6	-
13/09/2023	04:45:05	MCW-C-ST52	Still	MCW-C-ST52_12	329	-	651 625.9	6 212 457.0	651 612.8	6 212 449.0	15.3	-
13/09/2023	04:45:34	MCW-C-ST52	Still	MCW-C-ST52_13	330	-	651 625.9	6 212 457.0	651 609.5	6 212 447.7	18.8	-
13/09/2023	04:46:43	MCW-C-ST52	Video	EOL	331	-	651 625.9	6 212 457.0	651 603.0	6 212 443.9	26.3	-
13/09/2023	05:06:19	MCW-C-ST52	DVV	PC/FA	332	50	651 625.9	6 212 457.0	651 627.6	6 212 456.4	1.8	-
13/09/2023	06:20:57	MCW-C-ST53	Video	SOL	333	50	654 502.8	6 212 260.2	654 496.3	6 212 296.1	36.5	-
13/09/2023	06:21:22	MCW-C-ST53	Still	MCW-C-ST53_01	334	-	654 502.8	6 212 260.2	654 497.2	6 212 293.4	33.6	-
13/09/2023	06:23:03	MCW-C-ST53	Still	MCW-C-ST53_02	335	-	654 502.8	6 212 260.2	654 497.9	6 212 283.5	23.8	-
13/09/2023	06:23:46	MCW-C-ST53	Still	MCW-C-ST53_03	336	-	654 502.8	6 212 260.2	654 499.2	6 212 279.6	19.8	-
13/09/2023	06:23:57	MCW-C-ST53	Still	MCW-C-ST53_04	337	-	654 502.8	6 212 260.2	654 499.8	6 212 278.4	18.5	-
13/09/2023	06:24:34	MCW-C-ST53	Still	MCW-C-ST53_05	338	-	654 502.8	6 212 260.2	654 500.4	6 212 274.5	14.5	-
13/09/2023	06:25:36	MCW-C-ST53	Still	MCW-C-ST53_06	339	-	654 502.8	6 212 260.2	654 501.2	6 212 268.3	8.2	-
13/09/2023	06:26:13	MCW-C-ST53	Still	MCW-C-ST53_07	340	-	654 502.8	6 212 260.2	654 502.1	6 212 264.0	3.8	-
13/09/2023	06:26:59	MCW-C-ST53	Still	MCW-C-ST53_08	341	-	654 502.8	6 212 260.2	654 503.2	6 212 259.3	1.0	-
13/09/2023	06:27:28	MCW-C-ST53	Still	MCW-C-ST53_09	342	-	654 502.8	6 212 260.2	654 503.4	6 212 256.9	3.4	-
13/09/2023	06:28:24	MCW-C-ST53	Still	MCW-C-ST53_10	343	-	654 502.8	6 212 260.2	654 504.5	6 212 251.2	9.2	-
13/09/2023	06:29:13	MCW-C-ST53	Still	MCW-C-ST53_11	344	-	654 502.8	6 212 260.2	654 505.9	6 212 246.7	13.8	-
13/09/2023	06:30:06	MCW-C-ST53	Still	MCW-C-ST53_12	345	-	654 502.8	6 212 260.2	654 506.3	6 212 240.9	19.6	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
13/09/2023	06:30:17	MCW-C-ST53	Still	MCW-C-ST53_13	346	-	654 502.8	6 212 260.2	654 506.4	6 212 239.7	20.8	-
13/09/2023	06:31:18	MCW-C-ST53	Video	EOL	347	-	654 502.8	6 212 260.2	654 508.1	6 212 233.2	27.5	-
13/09/2023	06:52:02	MCW-C-ST53	DVV	FA/NS	348	50	654 502.8	6 212 260.2	654 503.4	6 212 260.1	0.6	-
13/09/2023	07:02:41	MCW-C-ST53	DVV	PC	349	52	654 502.8	6 212 260.2	654 503.4	6 212 260.1	0.6	-
13/09/2023	07:58:09	MCW-C-ST54	Video	SOL	350	52	657 296.2	6 212 376.3	657 295.1	6 212 408.4	32.1	-
13/09/2023	07:58:43	MCW-C-ST54	Still	MCW-C-ST54_01	351	-	657 296.2	6 212 376.3	657 295.6	6 212 405.3	29.0	-
13/09/2023	07:59:54	MCW-C-ST54	Still	MCW-C-ST54_02	352	-	657 296.2	6 212 376.3	657 294.9	6 212 397.4	21.2	-
13/09/2023	08:00:16	MCW-C-ST54	Still	MCW-C-ST54_03	353	-	657 296.2	6 212 376.3	657 295.3	6 212 395.3	19.0	-
13/09/2023	08:00:38	MCW-C-ST54	Still	MCW-C-ST54_04	354	-	657 296.2	6 212 376.3	657 295.6	6 212 393.3	17.0	-
13/09/2023	08:01:33	MCW-C-ST54	Still	MCW-C-ST54_05	355	-	657 296.2	6 212 376.3	657 295.8	6 212 387.6	11.2	-
13/09/2023	08:02:21	MCW-C-ST54	Still	MCW-C-ST54_06	356	-	657 296.2	6 212 376.3	657 296.0	6 212 382.5	6.2	-
13/09/2023	08:02:52	MCW-C-ST54	Still	MCW-C-ST54_07	357	-	657 296.2	6 212 376.3	657 296.4	6 212 379.5	3.2	-
13/09/2023	08:03:18	MCW-C-ST54	Still	MCW-C-ST54_08	358	-	657 296.2	6 212 376.3	657 295.6	6 212 376.6	0.6	-
13/09/2023	08:03:54	MCW-C-ST54	Still	MCW-C-ST54_09	359	-	657 296.2	6 212 376.3	657 295.5	6 212 372.8	3.6	-
13/09/2023	08:04:39	MCW-C-ST54	Still	MCW-C-ST54_10	360	-	657 296.2	6 212 376.3	657 295.4	6 212 368.3	8.1	-
13/09/2023	08:05:16	MCW-C-ST54	Still	MCW-C-ST54_11	361	-	657 296.2	6 212 376.3	657 295.3	6 212 364.0	12.3	-
13/09/2023	08:05:55	MCW-C-ST54	Still	MCW-C-ST54_12	362	-	657 296.2	6 212 376.3	657 295.8	6 212 360.0	16.3	-
13/09/2023	08:07:02	MCW-C-ST54	Still	MCW-C-ST54_13	363	-	657 296.2	6 212 376.3	657 296.9	6 212 353.8	22.5	-
13/09/2023	08:07:35	MCW-C-ST54	Video	EOL	364	-	657 296.2	6 212 376.3	657 296.1	6 212 350.3	26.0	-
13/09/2023	08:26:55	MCW-C-ST54	DVV	PC/FA	365	55	657 296.2	6 212 376.3	657 295.3	6 212 375.4	1.3	-
16/09/2023	12:26:49	MCW-C-ST92	Video	SOL	366	55	641 244.2	6 199 176.8	641 227.4	6 199 153.9	28.5	-
16/09/2023	12:28:06	MCW-C-ST92	Still	MCW-C-ST92_01	368	-	641 244.2	6 199 176.8	641 232.0	6 199 159.4	21.3	-
16/09/2023	12:28:50	MCW-C-ST92	Still	MCW-C-ST92_02	370	-	641 244.2	6 199 176.8	641 234.4	6 199 164.4	15.8	-
16/09/2023	12:29:48	MCW-C-ST92	Still	MCW-C-ST92_03	371	-	641 244.2	6 199 176.8	641 237.6	6 199 168.5	10.7	-
16/09/2023	12:30:24	MCW-C-ST92	Still	MCW-C-ST92_04	372	-	641 244.2	6 199 176.8	641 240.3	6 199 171.7	6.4	-
16/09/2023	12:31:21	MCW-C-ST92	Still	MCW-C-ST92_05	373	-	641 244.2	6 199 176.8	641 243.5	6 199 177.7	1.1	-
16/09/2023	12:32:01	MCW-C-ST92	Still	MCW-C-ST92_06	374	-	641 244.2	6 199 176.8	641 245.6	6 199 180.4	3.8	-
16/09/2023	12:32:26	MCW-C-ST92	Still	MCW-C-ST92_07	375	-	641 244.2	6 199 176.8	641 247.6	6 199 182.9	6.9	-
16/09/2023	12:33:10	MCW-C-ST92	Still	MCW-C-ST92_08	376	-	641 244.2	6 199 176.8	641 250.5	6 199 186.1	11.2	-
16/09/2023	12:33:40	MCW-C-ST92	Still	MCW-C-ST92_09	377	-	641 244.2	6 199 176.8	641 251.9	6 199 189.1	14.5	-
16/09/2023	12:34:40	MCW-C-ST92	Still	MCW-C-ST92_10	378	-	641 244.2	6 199 176.8	641 255.7	6 199 193.7	20.4	-
16/09/2023	12:35:11	MCW-C-ST92	Still	MCW-C-ST92_11	379	-	641 244.2	6 199 176.8	641 257.8	6 199 195.8	23.3	-
16/09/2023	12:35:39	MCW-C-ST92	Video	EOL	380	-	641 244.2	6 199 176.8	641 258.7	6 199 198.1	25.7	-
16/09/2023	12:54:00	MCW-C-ST92	WS	NS	381	5	641 244.2	6 199 176.8	641 243.3	6 199 177.0	0.9	-
16/09/2023	13:00:00	MCW-C-ST92	WS	TOP	382	5	641 244.2	6 199 176.8	641 243.9	6 199 176.3	0.6	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/09/2023	13:18:00	MCW-C-ST92	WS	BOT	383	50	641 244.2	6 199 176.8	641 243.7	6 199 177.0	0.6	-
16/09/2023	13:43:00	MCW-C-ST92	DVV	PC	384	65	641 244.2	6 199 176.8	641 242.6	6 199 177.8	1.9	-
16/09/2023	16:52:39	MCW-C-ST77	Video	SOL	385	65	644 143.5	6 204 220.4	644 161.2	6 204 242.0	27.9	-
16/09/2023	16:52:58	MCW-C-ST77	Still	MCW-C-ST77_01	386	-	644 143.5	6 204 220.4	644 160.0	6 204 241.1	26.5	-
16/09/2023	16:53:31	MCW-C-ST77	Still	MCW-C-ST77_02	387	-	644 143.5	6 204 220.4	644 157.7	6 204 238.9	23.2	-
16/09/2023	16:53:58	MCW-C-ST77	Still	MCW-C-ST77_03	388	-	644 143.5	6 204 220.4	644 156.0	6 204 236.5	20.4	-
16/09/2023	16:54:26	MCW-C-ST77	Still	MCW-C-ST77_04	389	-	644 143.5	6 204 220.4	644 154.3	6 204 233.8	17.2	-
16/09/2023	16:55:21	MCW-C-ST77	Still	MCW-C-ST77_05	390	-	644 143.5	6 204 220.4	644 150.2	6 204 229.1	11.0	-
16/09/2023	16:56:01	MCW-C-ST77	Still	MCW-C-ST77_06	391	-	644 143.5	6 204 220.4	644 147.5	6 204 226.1	6.9	-
16/09/2023	16:56:18	MCW-C-ST77	Still	MCW-C-ST77_07	392	-	644 143.5	6 204 220.4	644 146.3	6 204 224.7	5.0	-
16/09/2023	16:56:52	MCW-C-ST77	Still	MCW-C-ST77_08	393	-	644 143.5	6 204 220.4	644 144.2	6 204 222.2	1.9	-
16/09/2023	16:57:32	MCW-C-ST77	Still	MCW-C-ST77_09	394	-	644 143.5	6 204 220.4	644 141.5	6 204 218.5	2.8	-
16/09/2023	16:58:36	MCW-C-ST77	Still	MCW-C-ST77_10	395	-	644 143.5	6 204 220.4	644 137.6	6 204 213.4	9.2	-
16/09/2023	16:59:26	MCW-C-ST77	Still	MCW-C-ST77_11	396	-	644 143.5	6 204 220.4	644 134.5	6 204 209.4	14.2	-
16/09/2023	16:59:47	MCW-C-ST77	Still	MCW-C-ST77_12	397	-	644 143.5	6 204 220.4	644 133.1	6 204 207.7	16.5	-
16/09/2023	17:00:21	MCW-C-ST77	Still	MCW-C-ST77_13	398	-	644 143.5	6 204 220.4	644 130.6	6 204 204.5	20.5	-
16/09/2023	17:01:27	MCW-C-ST77	Still	MCW-C-ST77_14	399	-	644 143.5	6 204 220.4	644 126.8	6 204 199.6	26.7	-
16/09/2023	17:01:38	MCW-C-ST77	Video	EOL	400	-	644 143.5	6 204 220.4	644 126.3	6 204 198.7	27.7	-
16/09/2023	17:35:00	MCW-C-ST77	DVV	PC	401	65	644 143.5	6 204 220.4	644 145.1	6 204 220.9	1.6	-
16/09/2023	18:01:00	MCW-C-ST77	WS	TOP	402	5	644 143.5	6 204 220.4	644 144.7	6 204 221.6	1.7	-
16/09/2023	18:15:00	MCW-C-ST77	WS	BOT	403	60	644 143.5	6 204 220.4	644 145.1	6 204 221.2	1.8	-
16/09/2023	21:43:05	MCW-C-ST41	Video	SOL	404	55	651 703.6	6 215 133.0	651 608.4	6 215 065.1	116.9	-
16/09/2023	21:43:30	MCW-C-ST41	Still	MCW-C-ST41_01	405	-	651 703.6	6 215 133.0	651 609.9	6 215 065.5	115.4	-
16/09/2023	21:44:09	MCW-C-ST41	Still	MCW-C-ST41_02	406	-	651 703.6	6 215 133.0	651 612.7	6 215 068.3	111.6	-
16/09/2023	21:45:17	MCW-C-ST41	Still	MCW-C-ST41_03	407	-	651 703.6	6 215 133.0	651 619.4	6 215 072.2	103.8	-
16/09/2023	21:46:11	MCW-C-ST41	Still	MCW-C-ST41_04	408	-	651 703.6	6 215 133.0	651 624.1	6 215 075.4	98.1	-
16/09/2023	21:47:00	MCW-C-ST41	Still	MCW-C-ST41_05	409	-	651 703.6	6 215 133.0	651 628.2	6 215 078.4	93.1	-
16/09/2023	21:47:53	MCW-C-ST41	Still	MCW-C-ST41_06	410	-	651 703.6	6 215 133.0	651 633.0	6 215 080.0	88.3	-
16/09/2023	21:48:17	MCW-C-ST41	Still	MCW-C-ST41_07	411	-	651 703.6	6 215 133.0	651 634.8	6 215 082.6	85.3	-
16/09/2023	21:49:21	MCW-C-ST41	Still	MCW-C-ST41_08	412	-	651 703.6	6 215 133.0	651 640.0	6 215 085.9	79.1	-
16/09/2023	21:50:34	MCW-C-ST41	Still	MCW-C-ST41_09	413	-	651 703.6	6 215 133.0	651 645.8	6 215 090.9	71.5	-
16/09/2023	21:51:15	MCW-C-ST41	Still	MCW-C-ST41_10	414	-	651 703.6	6 215 133.0	651 649.4	6 215 093.5	67.1	-
16/09/2023	21:52:37	MCW-C-ST41	Still	MCW-C-ST41_11	415	-	651 703.6	6 215 133.0	651 656.4	6 215 098.2	58.6	-
16/09/2023	21:53:14	MCW-C-ST41	Still	MCW-C-ST41_12	416	-	651 703.6	6 215 133.0	651 659.4	6 215 100.4	54.9	-
16/09/2023	21:53:48	MCW-C-ST41	Still	MCW-C-ST41_13	417	-	651 703.6	6 215 133.0	651 662.0	6 215 102.3	51.7	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/09/2023	21:54:46	MCW-C-ST41	Still	MCW-C-ST41_14	418	-	651 703.6	6 215 133.0	651 666.8	6 215 105.7	45.8	-
16/09/2023	21:55:45	MCW-C-ST41	Still	MCW-C-ST41_15	419	-	651 703.6	6 215 133.0	651 671.1	6 215 108.9	40.4	-
16/09/2023	21:56:00	MCW-C-ST41	Still	MCW-C-ST41_16	420	-	651 703.6	6 215 133.0	651 672.5	6 215 109.9	38.7	-
16/09/2023	21:56:27	MCW-C-ST41	Still	MCW-C-ST41_17	421	-	651 703.6	6 215 133.0	651 675.3	6 215 111.3	35.7	-
16/09/2023	21:57:23	MCW-C-ST41	Still	MCW-C-ST41_18	422	-	651 703.6	6 215 133.0	651 680.2	6 215 115.1	29.4	-
16/09/2023	21:58:16	MCW-C-ST41	Still	MCW-C-ST41_19	423	-	651 703.6	6 215 133.0	651 684.4	6 215 118.3	24.2	-
16/09/2023	21:58:43	MCW-C-ST41	Still	MCW-C-ST41_20	424	-	651 703.6	6 215 133.0	651 686.7	6 215 120.3	21.1	-
16/09/2023	21:59:25	MCW-C-ST41	Still	MCW-C-ST41_21	425	-	651 703.6	6 215 133.0	651 690.6	6 215 122.5	16.7	-
16/09/2023	22:00:14	MCW-C-ST41	Still	MCW-C-ST41_22	426	-	651 703.6	6 215 133.0	651 694.7	6 215 126.1	11.2	-
16/09/2023	22:00:39	MCW-C-ST41	Still	MCW-C-ST41_23	427	-	651 703.6	6 215 133.0	651 696.5	6 215 126.9	9.4	-
16/09/2023	22:01:06	MCW-C-ST41	Still	MCW-C-ST41_24	428	-	651 703.6	6 215 133.0	651 698.7	6 215 128.1	6.9	-
16/09/2023	22:02:02	MCW-C-ST41	Still	MCW-C-ST41_25	429	-	651 703.6	6 215 133.0	651 703.3	6 215 131.9	1.2	-
16/09/2023	22:02:43	MCW-C-ST41	Still	MCW-C-ST41_26	430	-	651 703.6	6 215 133.0	651 706.8	6 215 134.1	3.3	-
16/09/2023	22:03:43	MCW-C-ST41	Still	MCW-C-ST41_27	431	-	651 703.6	6 215 133.0	651 711.9	6 215 138.1	9.8	-
16/09/2023	22:04:10	MCW-C-ST41	Still	MCW-C-ST41_28	432	-	651 703.6	6 215 133.0	651 714.0	6 215 139.8	12.4	-
16/09/2023	22:05:03	MCW-C-ST41	Still	MCW-C-ST41_29	433	-	651 703.6	6 215 133.0	651 718.5	6 215 143.2	18.1	-
16/09/2023	22:05:56	MCW-C-ST41	Still	MCW-C-ST41_30	434	-	651 703.6	6 215 133.0	651 723.0	6 215 146.0	23.4	-
16/09/2023	22:06:35	MCW-C-ST41	Video	EOL	435	-	651 703.6	6 215 133.0	651 726.4	6 215 148.6	27.6	-
16/09/2023	22:23:00	MCW-C-ST41	DVV	PC/FA	436	50	651 703.6	6 215 133.0	651 701.2	6 215 129.6	4.2	-
17/09/2023	00:36:03	MCW-C-ST63	Video	SOL	NF	50	654 497.1	6 209 644.6	654 466.3	6 209 648.3	31.0	-
17/09/2023	00:36:13	MCW-C-ST63	Still	MCW-C-ST63_01	437	-	654 497.1	6 209 644.6	654 466.4	6 209 648.6	30.9	-
17/09/2023	00:38:08	MCW-C-ST63	Still	MCW-C-ST63_02	438	-	654 497.1	6 209 644.6	654 473.2	6 209 647.7	24.1	-
17/09/2023	00:39:08	MCW-C-ST63	Still	MCW-C-ST63_03	439	-	654 497.1	6 209 644.6	654 479.7	6 209 646.9	17.6	-
17/09/2023	00:39:46	MCW-C-ST63	Still	MCW-C-ST63_04	440	-	654 497.1	6 209 644.6	654 483.5	6 209 646.3	13.7	-
17/09/2023	00:40:33	MCW-C-ST63	Still	MCW-C-ST63_05	441	-	654 497.1	6 209 644.6	654 488.1	6 209 646.3	9.2	-
17/09/2023	00:41:26	MCW-C-ST63	Still	MCW-C-ST63_06	442	-	654 497.1	6 209 644.6	654 493.6	6 209 645.0	3.5	-
17/09/2023	00:42:22	MCW-C-ST63	Still	MCW-C-ST63_07	443	-	654 497.1	6 209 644.6	654 500.3	6 209 644.2	3.2	-
17/09/2023	00:42:54	MCW-C-ST63	Still	MCW-C-ST63_08	444	-	654 497.1	6 209 644.6	654 503.4	6 209 643.8	6.4	-
17/09/2023	00:43:47	MCW-C-ST63	Still	MCW-C-ST63_09	445	-	654 497.1	6 209 644.6	654 508.7	6 209 642.4	11.8	-
17/09/2023	00:44:58	MCW-C-ST63	Still	MCW-C-ST63_10	446	-	654 497.1	6 209 644.6	654 515.9	6 209 641.6	19.0	-
17/09/2023	00:45:34	MCW-C-ST63	Still	MCW-C-ST63_11	447	-	654 497.1	6 209 644.6	654 519.1	6 209 641.0	22.3	-
17/09/2023	00:46:11	MCW-C-ST63	Still	MCW-C-ST63_12	NF	-	654 497.1	6 209 644.6	654 523.4	6 209 640.7	26.6	-
17/09/2023	00:46:11	MCW-C-ST63	Video	EOL	448	-	654 497.1	6 209 644.6	654 523.4	6 209 640.7	26.6	-
17/09/2023	01:09:00	MCW-C-ST63	WS	TOP	449	5	654 497.1	6 209 644.6	654 496.0	6 209 644.7	1.1	-
17/09/2023	01:24:00	MCW-C-ST63	WS	BOT	450	45	654 497.1	6 209 644.6	654 495.6	6 209 644.6	1.5	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
17/09/2023	01:46:00	MCW-C-ST63	DVV	PC/FA	451	50	654 497.1	6 209 644.6	654 498.0	6 209 647.3	2.9	-
17/09/2023	03:22:52	MCW-C-ST62	Video	SOL	NF	50	651 805.5	6 209 585.5	651 792.6	6 209 616.5	33.6	-
17/09/2023	03:23:16	MCW-C-ST62	Still	MCW-C-ST62_01	NF	-	651 805.5	6 209 585.5	651 792.9	6 209 616.7	33.7	-
17/09/2023	03:24:27	MCW-C-ST62	Still	MCW-C-ST62_02	452	-	651 805.5	6 209 585.5	651 792.8	6 209 617.2	34.1	-
17/09/2023	03:26:00	MCW-C-ST62	Still	MCW-C-ST62_03	453	-	651 805.5	6 209 585.5	651 792.8	6 209 616.1	33.2	-
17/09/2023	03:27:20	MCW-C-ST62	Still	MCW-C-ST62_04	454	-	651 805.5	6 209 585.5	651 796.7	6 209 608.3	24.5	-
17/09/2023	03:27:57	MCW-C-ST62	Still	MCW-C-ST62_05	455	-	651 805.5	6 209 585.5	651 798.0	6 209 605.0	20.9	-
17/09/2023	03:28:38	MCW-C-ST62	Still	MCW-C-ST62_06	456	-	651 805.5	6 209 585.5	651 800.0	6 209 601.5	17.0	-
17/09/2023	03:29:33	MCW-C-ST62	Still	MCW-C-ST62_07	457	-	651 805.5	6 209 585.5	651 802.6	6 209 596.4	11.3	-
17/09/2023	03:30:48	MCW-C-ST62	Still	MCW-C-ST62_08	458	-	651 805.5	6 209 585.5	651 805.5	6 209 589.1	3.6	-
17/09/2023	03:31:29	MCW-C-ST62	Still	MCW-C-ST62_09	459	-	651 805.5	6 209 585.5	651 805.9	6 209 584.2	1.3	-
17/09/2023	03:32:20	MCW-C-ST62	Still	MCW-C-ST62_10	460	-	651 805.5	6 209 585.5	651 809.2	6 209 578.2	8.2	-
17/09/2023	03:33:01	MCW-C-ST62	Still	MCW-C-ST62_11	461	-	651 805.5	6 209 585.5	651 810.8	6 209 576.0	10.9	-
17/09/2023	03:33:45	MCW-C-ST62	Still	MCW-C-ST62_12	462	-	651 805.5	6 209 585.5	651 811.7	6 209 570.9	15.9	-
17/09/2023	03:34:18	MCW-C-ST62	Still	MCW-C-ST62_13	463	-	651 805.5	6 209 585.5	651 812.3	6 209 568.9	18.0	-
17/09/2023	03:35:01	MCW-C-ST62	Still	MCW-C-ST62_14	464	-	651 805.5	6 209 585.5	651 814.9	6 209 564.1	23.4	-
17/09/2023	03:35:39	MCW-C-ST62	Still	MCW-C-ST62_15	465	-	651 805.5	6 209 585.5	651 816.7	6 209 561.1	26.8	-
17/09/2023	03:35:45	MCW-C-ST62	Video	EOL	NF	-	651 805.5	6 209 585.5	651 816.2	6 209 560.7	27.0	-
17/09/2023	03:56:36	MCW-C-ST62	DVV	NS/NS	466	50	651 805.5	6 209 585.5	651 809.7	6 209 592.0	7.7	-
17/09/2023	04:14:12	MCW-C-ST62	DVV	PC/FA	467	52	651 805.5	6 209 585.5	651 810.4	6 209 592.5	8.5	-
17/09/2023	05:09:53	MCW-C-ST71	Video	SOL	468	52	651 606.3	6 207 218.9	651 617.5	6 207 254.8	37.5	-
17/09/2023	05:10:09	MCW-C-ST71	Still	MCW-C-ST71_01	NF	-	651 606.3	6 207 218.9	651 617.8	6 207 254.9	37.8	-
17/09/2023	05:12:07	MCW-C-ST71	Still	MCW-C-ST71_02	469	-	651 606.3	6 207 218.9	651 616.5	6 207 247.7	30.6	-
17/09/2023	05:12:40	MCW-C-ST71	Still	MCW-C-ST71_03	470	-	651 606.3	6 207 218.9	651 616.0	6 207 244.2	27.0	-
17/09/2023	05:13:38	MCW-C-ST71	Still	MCW-C-ST71_04	471	-	651 606.3	6 207 218.9	651 614.5	6 207 237.7	20.5	-
17/09/2023	05:14:21	MCW-C-ST71	Still	MCW-C-ST71_05	472	-	651 606.3	6 207 218.9	651 612.9	6 207 234.8	17.2	-
17/09/2023	05:15:33	MCW-C-ST71	Still	MCW-C-ST71_06	473	-	651 606.3	6 207 218.9	651 610.0	6 207 227.3	9.2	-
17/09/2023	05:16:11	MCW-C-ST71	Still	MCW-C-ST71_07	474	-	651 606.3	6 207 218.9	651 609.6	6 207 223.5	5.7	-
17/09/2023	05:17:05	MCW-C-ST71	Still	MCW-C-ST71_08	475	-	651 606.3	6 207 218.9	651 607.0	6 207 218.3	0.9	-
17/09/2023	05:17:45	MCW-C-ST71	Still	MCW-C-ST71_09	476	-	651 606.3	6 207 218.9	651 605.7	6 207 213.5	5.5	-
17/09/2023	05:18:24	MCW-C-ST71	Still	MCW-C-ST71_10	477	-	651 606.3	6 207 218.9	651 604.2	6 207 210.1	9.1	-
17/09/2023	05:19:17	MCW-C-ST71	Still	MCW-C-ST71_11	478	-	651 606.3	6 207 218.9	651 604.2	6 207 204.8	14.3	-
17/09/2023	05:20:06	MCW-C-ST71	Still	MCW-C-ST71_12	479	-	651 606.3	6 207 218.9	651 601.9	6 207 200.4	19.1	-
17/09/2023	05:21:13	MCW-C-ST71	Still	MCW-C-ST71_13	NF	-	651 606.3	6 207 218.9	651 599.5	6 207 193.2	26.7	-
17/09/2023	05:21:17	MCW-C-ST71	Video	EOL	480	-	651 606.3	6 207 218.9	651 599.1	6 207 192.7	27.2	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
17/09/2023	05:39:59	MCW-C-ST71	DVV	NS/NS	481	52	651 606.3	6 207 218.9	651 608.9	6 207 221.8	3.9	-
17/09/2023	05:53:26	MCW-C-ST71	DVV	PC/NS	482	52	651 606.3	6 207 218.9	651 609.3	6 207 220.0	3.2	-
17/09/2023	06:11:16	MCW-C-ST71	DVV	FA/NS	483	52	651 606.3	6 207 218.9	651 609.0	6 207 214.6	5.2	-
17/09/2023	07:41:26	MCW-C-ST70	Video	SOL	484	52	649 517.0	6 206 771.2	649 490.5	6 206 785.2	30.0	-
17/09/2023	07:41:51	MCW-C-ST70	Still	MCW-C-ST70_01	NF	-	649 517.0	6 206 771.2	649 490.6	6 206 785.2	29.9	-
17/09/2023	07:43:03	MCW-C-ST70	Still	MCW-C-ST70_02	485	-	649 517.0	6 206 771.2	649 493.1	6 206 784.3	27.2	-
17/09/2023	07:44:15	MCW-C-ST70	Still	MCW-C-ST70_03	486	-	649 517.0	6 206 771.2	649 499.8	6 206 780.6	19.6	-
17/09/2023	07:44:36	MCW-C-ST70	Still	MCW-C-ST70_04	487	-	649 517.0	6 206 771.2	649 501.4	6 206 779.1	17.5	-
17/09/2023	07:45:16	MCW-C-ST70	Still	MCW-C-ST70_05	488	-	649 517.0	6 206 771.2	649 505.2	6 206 776.8	13.0	-
17/09/2023	07:46:11	MCW-C-ST70	Still	MCW-C-ST70_06	489	-	649 517.0	6 206 771.2	649 510.7	6 206 774.9	7.3	-
17/09/2023	07:46:50	MCW-C-ST70	Still	MCW-C-ST70_07	490	-	649 517.0	6 206 771.2	649 514.2	6 206 772.6	3.1	-
17/09/2023	07:48:18	MCW-C-ST70	Still	MCW-C-ST70_08	491	-	649 517.0	6 206 771.2	649 521.9	6 206 767.9	5.9	-
17/09/2023	07:49:23	MCW-C-ST70	Still	MCW-C-ST70_09	492	-	649 517.0	6 206 771.2	649 528.5	6 206 765.6	12.8	-
17/09/2023	07:50:45	MCW-C-ST70	Still	MCW-C-ST70_10	493	-	649 517.0	6 206 771.2	649 536.0	6 206 761.3	21.4	-
17/09/2023	07:50:53	MCW-C-ST70	Still	MCW-C-ST70_11	494	-	649 517.0	6 206 771.2	649 536.1	6 206 760.9	21.7	-
17/09/2023	07:51:54	MCW-C-ST70	Still	MCW-C-ST70_12	NF	-	649 517.0	6 206 771.2	649 541.6	6 206 757.9	28.0	-
17/09/2023	07:51:58	MCW-C-ST70	Video	EOL	495	-	649 517.0	6 206 771.2	649 541.9	6 206 757.4	28.4	-
17/09/2023	08:21:19	MCW-C-ST70	WS	TOP	496	7	649 517.0	6 206 771.2	649 516.5	6 206 770.4	47.0	-
17/09/2023	08:36:32	MCW-C-ST70	WS	BOT	497	47	649 517.0	6 206 771.2	649 517.4	6 206 767.6	3.6	-
17/09/2023	08:51:17	MCW-C-ST70	DVV	PC/FA	498	53	649 517.0	6 206 771.2	649 517.7	6 206 767.9	3.3	-
17/09/2023	19:08:31	MCW-C-ST79	Video	SOL	499	53	649 114.1	6 204 475.0	649 121.6	6 204 505.9	31.8	-
17/09/2023	19:08:57	MCW-C-ST79	Still	MCW-C-ST79_01	500	-	649 114.1	6 204 475.0	649 121.2	6 204 503.8	29.6	-
17/09/2023	19:09:27	MCW-C-ST79	Still	MCW-C-ST79_02	501	-	649 114.1	6 204 475.0	649 120.1	6 204 499.8	25.5	-
17/09/2023	19:10:05	MCW-C-ST79	Still	MCW-C-ST79_03	502	-	649 114.1	6 204 475.0	649 119.4	6 204 495.8	21.4	-
17/09/2023	19:10:39	MCW-C-ST79	Still	MCW-C-ST79_04	503	-	649 114.1	6 204 475.0	649 118.5	6 204 492.7	18.1	-
17/09/2023	19:11:24	MCW-C-ST79	Still	MCW-C-ST79_05	504	-	649 114.1	6 204 475.0	649 116.7	6 204 487.5	12.7	-
17/09/2023	19:12:10	MCW-C-ST79	Still	MCW-C-ST79_06	505	-	649 114.1	6 204 475.0	649 115.3	6 204 483.0	8.0	-
17/09/2023	19:12:45	MCW-C-ST79	Still	MCW-C-ST79_07	506	-	649 114.1	6 204 475.0	649 114.8	6 204 479.5	4.5	-
17/09/2023	19:13:23	MCW-C-ST79	Still	MCW-C-ST79_08	507	-	649 114.1	6 204 475.0	649 113.6	6 204 475.9	1.0	-
17/09/2023	19:14:13	MCW-C-ST79	Still	MCW-C-ST79_09	508	-	649 114.1	6 204 475.0	649 113.5	6 204 470.7	4.3	-
17/09/2023	19:15:02	MCW-C-ST79	Still	MCW-C-ST79_10	509	-	649 114.1	6 204 475.0	649 113.6	6 204 466.0	9.1	-
17/09/2023	19:15:39	MCW-C-ST79	Still	MCW-C-ST79_11	510	-	649 114.1	6 204 475.0	649 112.6	6 204 462.9	12.2	-
17/09/2023	19:16:25	MCW-C-ST79	Still	MCW-C-ST79_12	511	-	649 114.1	6 204 475.0	649 111.7	6 204 457.9	17.3	-
17/09/2023	19:17:04	MCW-C-ST79	Still	MCW-C-ST79_13	512	-	649 114.1	6 204 475.0	649 110.5	6 204 454.3	21.0	-
17/09/2023	19:17:58	MCW-C-ST79	Video	EOL	513	-	649 114.1	6 204 475.0	649 108.1	6 204 449.1	26.6	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
17/09/2023	19:35:00	MCW-C-ST79	DVV	PC/FA	514	55	649 114.1	6 204 475.0	649 117.1	6 204 475.3	2.9	-
17/09/2023	21:46:15	MCW-C-ST75	Video	SOL	515	55	638 721.0	6 204 239.3	638 731.3	6 204 211.0	30.1	-
17/09/2023	21:46:33	MCW-C-ST75	Still	MCW-C-ST75_01	516	-	638 721.0	6 204 239.3	638 729.5	6 204 212.7	27.9	-
17/09/2023	21:47:01	MCW-C-ST75	Still	MCW-C-ST75_02	517	-	638 721.0	6 204 239.3	638 726.3	6 204 216.6	23.3	-
17/09/2023	21:48:21	MCW-C-ST75	Still	MCW-C-ST75_03	519	-	638 721.0	6 204 239.3	638 723.2	6 204 223.2	16.3	-
17/09/2023	21:48:59	MCW-C-ST75	Still	MCW-C-ST75_04	520	-	638 721.0	6 204 239.3	638 721.7	6 204 226.3	13.0	-
17/09/2023	21:49:37	MCW-C-ST75	Still	MCW-C-ST75_05	521	-	638 721.0	6 204 239.3	638 719.9	6 204 230.0	9.4	-
17/09/2023	21:50:30	MCW-C-ST75	Still	MCW-C-ST75_06	522	-	638 721.0	6 204 239.3	638 717.8	6 204 234.9	5.4	-
17/09/2023	21:50:49	MCW-C-ST75	Still	MCW-C-ST75_07	523	-	638 721.0	6 204 239.3	638 717.5	6 204 236.9	4.3	-
17/09/2023	21:51:54	MCW-C-ST75	Still	MCW-C-ST75_08	524	-	638 721.0	6 204 239.3	638 715.6	6 204 243.2	6.7	-
17/09/2023	21:52:40	MCW-C-ST75	Still	MCW-C-ST75_09	525	-	638 721.0	6 204 239.3	638 714.0	6 204 247.6	10.9	-
17/09/2023	21:52:50	MCW-C-ST75	Still	MCW-C-ST75_10	526	-	638 721.0	6 204 239.3	638 713.7	6 204 248.8	12.0	-
17/09/2023	21:53:29	MCW-C-ST75	Still	MCW-C-ST75_11	527	-	638 721.0	6 204 239.3	638 711.8	6 204 252.4	16.0	-
17/09/2023	21:53:54	MCW-C-ST75	Still	MCW-C-ST75_12	528	-	638 721.0	6 204 239.3	638 711.4	6 204 254.4	18.0	-
17/09/2023	21:54:30	MCW-C-ST75	Still	MCW-C-ST75_13	529	-	638 721.0	6 204 239.3	638 709.9	6 204 258.4	22.1	-
17/09/2023	21:55:20	MCW-C-ST75	Video	EOL	530	-	638 721.0	6 204 239.3	638 707.4	6 204 262.7	27.1	-
17/09/2023	22:08:00	MCW-C-ST75	WS	TOP	531	5	638 721.0	6 204 239.3	638 718.8	6 204 237.0	3.2	-
17/09/2023	22:23:00	MCW-C-ST75	WS	BOT	532	52	638 721.0	6 204 239.3	638 714.6	6 204 245.5	8.9	-
17/09/2023	22:35:00	MCW-C-ST75	DVV	PC	533	49	638 721.0	6 204 239.3	638 718.2	6 204 233.2	6.7	-
23/09/2023	07:56:38	MCW-C-ST91	Video	SOL	NF	49	638 680.2	6 198 983.5	638 656.9	6 199 012.8	37.5	-
23/09/2023	07:56:48	MCW-C-ST91	Still	MCW-C-ST91_01	534	-	638 680.2	6 198 983.5	638 656.7	6 199 013.4	38.1	-
23/09/2023	07:58:15	MCW-C-ST91	Still	MCW-C-ST91_02	535	-	638 680.2	6 198 983.5	638 661.1	6 199 012.0	34.3	-
23/09/2023	07:58:39	MCW-C-ST91	Still	MCW-C-ST91_03	536	-	638 680.2	6 198 983.5	638 663.5	6 199 008.9	30.5	-
23/09/2023	07:59:20	MCW-C-ST91	Still	MCW-C-ST91_04	537	-	638 680.2	6 198 983.5	638 665.3	6 199 006.3	27.3	-
23/09/2023	08:00:07	MCW-C-ST91	Still	MCW-C-ST91_05	538	-	638 680.2	6 198 983.5	638 668.0	6 199 001.9	22.1	-
23/09/2023	08:01:03	MCW-C-ST91	Still	MCW-C-ST91_06	539	-	638 680.2	6 198 983.5	638 669.7	6 199 000.7	20.2	-
23/09/2023	08:01:22	MCW-C-ST91	Still	MCW-C-ST91_07	540	-	638 680.2	6 198 983.5	638 670.7	6 198 999.2	18.4	-
23/09/2023	08:02:13	MCW-C-ST91	Still	MCW-C-ST91_08	541	-	638 680.2	6 198 983.5	638 675.2	6 198 994.3	11.9	-
23/09/2023	08:02:52	MCW-C-ST91	Still	MCW-C-ST91_09	542	-	638 680.2	6 198 983.5	638 676.9	6 198 991.3	8.5	-
23/09/2023	08:03:26	MCW-C-ST91	Still	MCW-C-ST91_10	543	-	638 680.2	6 198 983.5	638 678.5	6 198 989.0	5.8	-
23/09/2023	08:03:57	MCW-C-ST91	Still	MCW-C-ST91_11	544	-	638 680.2	6 198 983.5	638 681.4	6 198 986.3	3.1	-
23/09/2023	08:05:13	MCW-C-ST91	Still	MCW-C-ST91_12	545	-	638 680.2	6 198 983.5	638 686.3	6 198 979.4	7.3	-
23/09/2023	08:05:59	MCW-C-ST91	Still	MCW-C-ST91_13	546	-	638 680.2	6 198 983.5	638 689.0	6 198 976.6	11.2	-
23/09/2023	08:06:21	MCW-C-ST91	Still	MCW-C-ST91_14	547	-	638 680.2	6 198 983.5	638 690.7	6 198 974.2	14.0	-
23/09/2023	08:07:25	MCW-C-ST91	Still	MCW-C-ST91_15	548	-	638 680.2	6 198 983.5	638 693.9	6 198 969.0	19.9	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
23/09/2023	08:08:05	MCW-C-ST91	Still	MCW-C-ST91_16	549	-	638 680.2	6 198 983.5	638 696.4	6 198 964.9	24.6	-
23/09/2023	08:08:29	MCW-C-ST91	Still	MCW-C-ST91_17	550	-	638 680.2	6 198 983.5	638 697.7	6 198 963.1	26.8	-
23/09/2023	08:08:44	MCW-C-ST91	Video	EOL	NF	-	638 680.2	6 198 983.5	638 699.7	6 198 961.7	29.1	-
23/09/2023	08:35:00	MCW-C-ST91	DVV	NS/NS	551	48	638 680.2	6 198 983.5	638 684.4	6 198 983.6	4.2	-
23/09/2023	09:33:51	MCW-C-ST83	Video	SOL	NF	48	638 764.7	6 201 665.2	638 745.9	6 201 691.6	32.4	-
23/09/2023	09:34:25	MCW-C-ST83	Still	MCW-C-ST83_01	555	-	638 764.7	6 201 665.2	638 746.2	6 201 691.0	31.8	-
23/09/2023	09:34:40	MCW-C-ST83	Still	MCW-C-ST83_02	556	-	638 764.7	6 201 665.2	638 746.4	6 201 690.3	31.1	-
23/09/2023	09:35:05	MCW-C-ST83	Still	MCW-C-ST83_03	557	-	638 764.7	6 201 665.2	638 746.9	6 201 688.6	29.4	-
23/09/2023	09:35:25	MCW-C-ST83	Still	MCW-C-ST83_04	558	-	638 764.7	6 201 665.2	638 748.1	6 201 686.6	27.1	-
23/09/2023	09:35:40	MCW-C-ST83	Still	MCW-C-ST83_05	559	-	638 764.7	6 201 665.2	638 749.1	6 201 685.1	25.3	-
23/09/2023	09:36:09	MCW-C-ST83	Still	MCW-C-ST83_06	560	-	638 764.7	6 201 665.2	638 751.3	6 201 682.3	21.7	-
23/09/2023	09:36:56	MCW-C-ST83	Still	MCW-C-ST83_07	561	-	638 764.7	6 201 665.2	638 754.4	6 201 679.4	17.6	-
23/09/2023	09:37:07	MCW-C-ST83	Still	MCW-C-ST83_08	562	-	638 764.7	6 201 665.2	638 755.2	6 201 678.5	16.4	-
23/09/2023	09:37:33	MCW-C-ST83	Still	MCW-C-ST83_09	563	-	638 764.7	6 201 665.2	638 756.5	6 201 675.6	13.3	-
23/09/2023	09:38:22	MCW-C-ST83	Still	MCW-C-ST83_10	564	-	638 764.7	6 201 665.2	638 759.5	6 201 671.6	8.3	-
23/09/2023	09:38:58	MCW-C-ST83	Still	MCW-C-ST83_11	565	-	638 764.7	6 201 665.2	638 761.3	6 201 668.5	4.7	-
23/09/2023	09:39:40	MCW-C-ST83	Still	MCW-C-ST83_12	566	-	638 764.7	6 201 665.2	638 763.6	6 201 665.4	1.1	-
23/09/2023	09:40:16	MCW-C-ST83	Still	MCW-C-ST83_13	567	-	638 764.7	6 201 665.2	638 766.0	6 201 661.9	3.5	-
23/09/2023	09:41:05	MCW-C-ST83	Still	MCW-C-ST83_14	568	-	638 764.7	6 201 665.2	638 769.2	6 201 658.5	8.0	-
23/09/2023	09:41:35	MCW-C-ST83	Still	MCW-C-ST83_15	569	-	638 764.7	6 201 665.2	638 771.3	6 201 655.5	11.7	-
23/09/2023	09:41:59	MCW-C-ST83	Still	MCW-C-ST83_16	570	-	638 764.7	6 201 665.2	638 772.1	6 201 653.7	13.7	-
23/09/2023	09:43:06	MCW-C-ST83	Still	MCW-C-ST83_17	571	-	638 764.7	6 201 665.2	638 776.2	6 201 646.6	21.8	-
23/09/2023	09:43:54	MCW-C-ST83	Still	MCW-C-ST83_18	572	-	638 764.7	6 201 665.2	638 779.0	6 201 643.7	25.8	-
23/09/2023	09:44:14	MCW-C-ST83	Still	MCW-C-ST83_19	573	-	638 764.7	6 201 665.2	638 780.4	6 201 642.4	27.7	-
23/09/2023	09:44:19	MCW-C-ST83	Video	EOL	NF	-	638 764.7	6 201 665.2	638 780.5	6 201 642.1	27.9	Switched to Hamon Grab
23/09/2023	11:05:00	MCW-C-ST83	HG	NS	574	48	638 764.7	6 201 665.2	638 747.3	6 201 693.1	32.9	-
23/09/2023	11:12:00	MCW-C-ST83	HG	NS	575	48	638 764.7	6 201 665.2	638 752.3	6 201 688.7	26.6	-
23/09/2023	11:22:00	MCW-C-ST83	HG	NS	576	49	638 764.7	6 201 665.2	638 781.3	6 201 643.3	27.5	Undersized but PSD taken
23/09/2023	12:17:00	MCW-C-ST91	HG	PC	577	49	638 680.2	6 198 983.5	638 689.7	6 198 979.8	10.1	-
23/09/2023	12:27:00	MCW-C-ST91	HG	NS	578	49	638 680.2	6 198 983.5	638 684.8	6 198 978.6	6.7	-
23/09/2023	12:34:00	MCW-C-ST91	HG	NS	579	56	638 680.2	6 198 983.5	638 693.8	6 198 980.1	14.0	-
09/10/2023	07:35:40	MCW-B-ST57	Video	SOL	NF	56	638 388.4	6 209 834.5	638 413.9	6 209 784.4	56.2	-
09/10/2023	07:36:23	MCW-B-ST57	Still	MCW-B-ST57_01	580	-	638 388.4	6 209 834.5	638 415.0	6 209 784.0	57.1	-
09/10/2023	07:37:21	MCW-B-ST57	Still	MCW-B-ST57_02	581	-	638 388.4	6 209 834.5	638 412.6	6 209 788.3	52.2	-
09/10/2023	07:37:46	MCW-B-ST57	Still	MCW-B-ST57_03	582	-	638 388.4	6 209 834.5	638 411.0	6 209 791.2	48.9	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
09/10/2023	07:38:48	MCW-B-ST57	Still	MCW-B-ST57_04	583	-	638 388.4	6 209 834.5	638 408.9	6 209 796.4	43.3	-
09/10/2023	07:40:32	MCW-B-ST57	Still	MCW-B-ST57_05	584	-	638 388.4	6 209 834.5	638 402.5	6 209 806.6	31.3	-
09/10/2023	07:40:58	MCW-B-ST57	Still	MCW-B-ST57_06	585	-	638 388.4	6 209 834.5	638 400.9	6 209 809.1	28.4	-
09/10/2023	07:41:35	MCW-B-ST57	Still	MCW-B-ST57_07	586	-	638 388.4	6 209 834.5	638 399.3	6 209 811.8	25.2	-
09/10/2023	07:43:13	MCW-B-ST57	Still	MCW-B-ST57_08	587	-	638 388.4	6 209 834.5	638 394.6	6 209 820.8	15.1	-
09/10/2023	07:44:10	MCW-B-ST57	Still	MCW-B-ST57_09	588	-	638 388.4	6 209 834.5	638 392.3	6 209 825.9	9.5	-
09/10/2023	07:45:02	MCW-B-ST57	Still	MCW-B-ST57_10	589	-	638 388.4	6 209 834.5	638 388.7	6 209 831.0	3.6	-
09/10/2023	07:46:19	MCW-B-ST57	Still	MCW-B-ST57_11	590	-	638 388.4	6 209 834.5	638 386.3	6 209 837.7	3.8	-
09/10/2023	07:47:46	MCW-B-ST57	Still	MCW-B-ST57_12	591	-	638 388.4	6 209 834.5	638 381.4	6 209 846.4	13.7	-
09/10/2023	07:48:16	MCW-B-ST57	Still	MCW-B-ST57_13	592	-	638 388.4	6 209 834.5	638 379.7	6 209 849.0	16.9	-
09/10/2023	07:49:20	MCW-B-ST57	Still	MCW-B-ST57_14	593	-	638 388.4	6 209 834.5	638 377.9	6 209 854.1	22.2	-
09/10/2023	07:50:30	MCW-B-ST57	Still	MCW-B-ST57_15	594	-	638 388.4	6 209 834.5	638 373.9	6 209 860.4	29.7	-
09/10/2023	07:51:09	MCW-B-ST57	Still	MCW-B-ST57_16	595	-	638 388.4	6 209 834.5	638 372.2	6 209 863.7	33.4	-
09/10/2023	07:51:46	MCW-B-ST57	Still	MCW-B-ST57_17	596	-	638 388.4	6 209 834.5	638 370.3	6 209 867.5	37.6	-
09/10/2023	07:52:38	MCW-B-ST57	Still	MCW-B-ST57_18	597	-	638 388.4	6 209 834.5	638 368.3	6 209 872.9	43.3	-
09/10/2023	07:54:16	MCW-B-ST57	Still	MCW-B-ST57_19	598	-	638 388.4	6 209 834.5	638 363.7	6 209 881.8	53.3	-
09/10/2023	07:54:16	MCW-B-ST57	Video	EOL	NF	-	638 388.4	6 209 834.5	638 364.0	6 209 882.0	53.4	-
09/10/2023	08:16:00	MCW-B-ST57	WS	TOP	599	5	638 388.4	6 209 834.5	638 391.2	6 209 834.4	2.8	-
09/10/2023	08:29:00	MCW-B-ST57	WS	BOT	600	49	638 388.4	6 209 834.5	638 393.5	6 209 834.0	5.2	-
09/10/2023	09:05:00	MCW-B-ST57	DVV	PC	601	63	638 388.4	6 209 834.5	638 385.8	6 209 840.6	6.6	-
09/10/2023	10:12:32	MCW-B-ST59A	Video	SOL	NF	63	643 471.4	6 210 183.5	643 527.5	6 210 197.0	57.7	-
09/10/2023	10:12:50	MCW-B-ST59A	Still	MCW-B-ST59A_01	602	-	643 471.4	6 210 183.5	643 527.1	6 210 196.5	57.3	-
09/10/2023	10:15:26	MCW-B-ST59A	Still	MCW-B-ST59A_02	603	-	643 471.4	6 210 183.5	643 517.7	6 210 195.0	47.7	-
09/10/2023	10:17:01	MCW-B-ST59A	Still	MCW-B-ST59A_03	604	-	643 471.4	6 210 183.5	643 507.7	6 210 192.4	37.4	-
09/10/2023	10:17:54	MCW-B-ST59A	Still	MCW-B-ST59A_04	605	-	643 471.4	6 210 183.5	643 502.3	6 210 191.1	31.8	-
09/10/2023	10:19:34	MCW-B-ST59A	Still	MCW-B-ST59A_05	606	-	643 471.4	6 210 183.5	643 492.5	6 210 188.3	21.7	-
09/10/2023	10:20:16	MCW-B-ST59A	Still	MCW-B-ST59A_06	607	-	643 471.4	6 210 183.5	643 488.5	6 210 187.3	17.5	-
09/10/2023	10:21:32	MCW-B-ST59A	Still	MCW-B-ST59A_07	608	-	643 471.4	6 210 183.5	643 480.5	6 210 185.2	9.3	-
09/10/2023	10:22:39	MCW-B-ST59A	Still	MCW-B-ST59A_08	609	-	643 471.4	6 210 183.5	643 474.0	6 210 183.9	2.7	-
09/10/2023	10:24:41	MCW-B-ST59A	Still	MCW-B-ST59A_09	610	-	643 471.4	6 210 183.5	643 461.8	6 210 180.2	10.1	-
09/10/2023	10:26:48	MCW-B-ST59A	Still	MCW-B-ST59A_10	611	-	643 471.4	6 210 183.5	643 449.3	6 210 177.6	22.8	-
09/10/2023	10:27:07	MCW-B-ST59A	Still	MCW-B-ST59A_11	612	-	643 471.4	6 210 183.5	643 448.5	6 210 177.7	23.6	-
09/10/2023	10:28:28	MCW-B-ST59A	Still	MCW-B-ST59A_12	613	-	643 471.4	6 210 183.5	643 439.6	6 210 174.9	32.9	-
09/10/2023	10:29:25	MCW-B-ST59A	Still	MCW-B-ST59A_13	614	-	643 471.4	6 210 183.5	643 434.1	6 210 173.4	38.7	-
09/10/2023	10:31:20	MCW-B-ST59A	Still	MCW-B-ST59A_14	615	-	643 471.4	6 210 183.5	643 422.0	6 210 170.8	50.9	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
09/10/2023	10:31:33	MCW-B-ST59A	Still	MCW-B-ST59A_15	616	-	643 471.4	6 210 183.5	643 421.3	6 210 171.0	51.6	-
09/10/2023	10:31:36	MCW-B-ST59A	Video	EOL	NF	-	643 471.4	6 210 183.5	643 421.0	6 210 171.0	51.9	-
09/10/2023	11:09:00	MCW-B-ST59A	WS	TOP	617	5	643 471.4	6 210 183.5	643 472.9	6 210 184.3	1.7	-
09/10/2023	11:25:00	MCW-B-ST59A	WS	BOT	618	59	643 471.4	6 210 183.5	643 471.9	6 210 186.9	3.5	-
09/10/2023	11:49:00	MCW-B-ST59A	DVV	PC	619	60	643 471.4	6 210 183.5	643 473.6	6 210 184.4	2.4	-
15/10/2023	13:46:49	MCW-B-ST38A	Video	SOL	NF	60	644 136.5	6 214 657.6	644 192.7	6 214 646.5	57.3	-
15/10/2023	13:47:03	MCW-B-ST38A	Still	MCW-B-ST38A_01	620	-	644 136.5	6 214 657.6	644 192.7	6 214 646.5	57.3	-
15/10/2023	13:47:54	MCW-B-ST38A	Still	MCW-B-ST38A_02	621	-	644 136.5	6 214 657.6	644 191.9	6 214 645.0	56.8	-
15/10/2023	13:48:18	MCW-B-ST38A	Still	MCW-B-ST38A_03	622	-	644 136.5	6 214 657.6	644 190.5	6 214 644.9	55.6	-
15/10/2023	13:49:25	MCW-B-ST38A	Still	MCW-B-ST38A_04	623	-	644 136.5	6 214 657.6	644 181.3	6 214 646.4	46.2	-
15/10/2023	13:49:54	MCW-B-ST38A	Still	MCW-B-ST38A_05	624	-	644 136.5	6 214 657.6	644 178.8	6 214 648.2	43.4	-
15/10/2023	13:50:19	MCW-B-ST38A	Still	MCW-B-ST38A_06	625	-	644 136.5	6 214 657.6	644 176.3	6 214 648.3	41.0	-
15/10/2023	13:50:32	MCW-B-ST38A	Still	MCW-B-ST38A_07	626	-	644 136.5	6 214 657.6	644 175.4	6 214 649.1	39.8	-
15/10/2023	13:51:16	MCW-B-ST38A	Still	MCW-B-ST38A_08	627	-	644 136.5	6 214 657.6	644 170.6	6 214 650.3	34.9	-
15/10/2023	13:51:50	MCW-B-ST38A	Still	MCW-B-ST38A_09	628	-	644 136.5	6 214 657.6	644 166.4	6 214 650.3	30.8	-
15/10/2023	13:52:23	MCW-B-ST38A	Still	MCW-B-ST38A_10	629	-	644 136.5	6 214 657.6	644 163.1	6 214 651.5	27.4	-
15/10/2023	13:52:59	MCW-B-ST38A	Still	MCW-B-ST38A_11	630	-	644 136.5	6 214 657.6	644 159.0	6 214 651.9	23.3	-
15/10/2023	13:53:32	MCW-B-ST38A	Still	MCW-B-ST38A_12	631	-	644 136.5	6 214 657.6	644 155.6	6 214 651.9	20.0	-
15/10/2023	13:54:29	MCW-B-ST38A	Still	MCW-B-ST38A_13	632	-	644 136.5	6 214 657.6	644 150.0	6 214 653.1	14.3	-
15/10/2023	13:55:08	MCW-B-ST38A	Still	MCW-B-ST38A_14	633	-	644 136.5	6 214 657.6	644 147.3	6 214 653.4	11.7	-
15/10/2023	13:55:29	MCW-B-ST38A	Still	MCW-B-ST38A_15	634	-	644 136.5	6 214 657.6	644 145.2	6 214 653.1	9.9	-
15/10/2023	13:56:36	MCW-B-ST38A	Still	MCW-B-ST38A_16	635	-	644 136.5	6 214 657.6	644 138.3	6 214 655.9	2.5	-
15/10/2023	13:57:01	MCW-B-ST38A	Still	MCW-B-ST38A_17	636	-	644 136.5	6 214 657.6	644 135.2	6 214 656.4	1.7	-
15/10/2023	13:57:43	MCW-B-ST38A	Still	MCW-B-ST38A_18	637	-	644 136.5	6 214 657.6	644 130.8	6 214 657.8	5.6	-
15/10/2023	13:58:33	MCW-B-ST38A	Still	MCW-B-ST38A_19	638	-	644 136.5	6 214 657.6	644 125.8	6 214 658.6	10.7	-
15/10/2023	13:59:53	MCW-B-ST38A	Still	MCW-B-ST38A_20	639	-	644 136.5	6 214 657.6	644 118.2	6 214 658.9	18.3	-
15/10/2023	14:01:25	MCW-B-ST38A	Still	MCW-B-ST38A_21	640	-	644 136.5	6 214 657.6	644 107.8	6 214 662.4	29.0	-
15/10/2023	14:01:53	MCW-B-ST38A	Still	MCW-B-ST38A_22	641	-	644 136.5	6 214 657.6	644 104.6	6 214 662.9	32.3	-
15/10/2023	14:03:02	MCW-B-ST38A	Still	MCW-B-ST38A_23	642	-	644 136.5	6 214 657.6	644 098.2	6 214 663.9	38.7	-
15/10/2023	14:03:31	MCW-B-ST38A	Still	MCW-B-ST38A_24	643	-	644 136.5	6 214 657.6	644 095.6	6 214 665.2	41.5	-
15/10/2023	14:04:45	MCW-B-ST38A	Still	MCW-B-ST38A_25	644	-	644 136.5	6 214 657.6	644 088.4	6 214 668.1	49.2	-
15/10/2023	14:04:58	MCW-B-ST38A	Video	EOL	645	-	644 136.5	6 214 657.6	644 087.4	6 214 668.1	50.2	-
15/10/2023	14:58:19	MCW-B-ST38A	WS	TOP	646	5	644 136.5	6 214 657.6	644 140.2	6 214 661.0	5.1	-
15/10/2023	15:11:49	MCW-B-ST38A	WS	BOT	647	55	644 136.5	6 214 657.6	644 139.0	6 214 661.1	4.3	-
15/10/2023	15:33:12	MCW-B-ST38A	DVV	PC	648	62	644 136.5	6 214 657.6	644 137.9	6 214 662.2	4.8	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
15/10/2023	16:59:10	MCW-B-ST28	Video	SOL	649	62	646 339.9	6 217 812.1	646 381.0	6 217 841.8	50.7	-
15/10/2023	16:59:44	MCW-B-ST28	Still	MCW-B-ST28_01	650	-	646 339.9	6 217 812.1	646 379.8	6 217 840.4	48.9	-
15/10/2023	17:00:06	MCW-B-ST28	Still	MCW-B-ST28_02	651	-	646 339.9	6 217 812.1	646 377.4	6 217 839.2	46.3	-
15/10/2023	17:00:54	MCW-B-ST28	Still	MCW-B-ST28_03	652	-	646 339.9	6 217 812.1	646 372.3	6 217 836.9	40.9	-
15/10/2023	17:01:29	MCW-B-ST28	Still	MCW-B-ST28_04	653	-	646 339.9	6 217 812.1	646 370.0	6 217 834.9	37.7	-
15/10/2023	17:02:19	MCW-B-ST28	Still	MCW-B-ST28_05	654	-	646 339.9	6 217 812.1	646 365.2	6 217 831.9	32.2	-
15/10/2023	17:03:12	MCW-B-ST28	Still	MCW-B-ST28_06	655	-	646 339.9	6 217 812.1	646 361.1	6 217 828.0	26.5	-
15/10/2023	17:03:55	MCW-B-ST28	Still	MCW-B-ST28_07	656	-	646 339.9	6 217 812.1	646 357.5	6 217 826.4	22.7	-
15/10/2023	17:04:30	MCW-B-ST28	Still	MCW-B-ST28_08	657	-	646 339.9	6 217 812.1	646 355.0	6 217 823.9	19.2	-
15/10/2023	17:05:25	MCW-B-ST28	Still	MCW-B-ST28_09	658	-	646 339.9	6 217 812.1	646 350.0	6 217 820.0	12.8	-
15/10/2023	17:06:40	MCW-B-ST28	Still	MCW-B-ST28_10	659	-	646 339.9	6 217 812.1	646 343.8	6 217 816.1	5.6	-
15/10/2023	17:07:09	MCW-B-ST28	Still	MCW-B-ST28_11	660	-	646 339.9	6 217 812.1	646 341.4	6 217 814.2	2.6	-
15/10/2023	17:08:00	MCW-B-ST28	Still	MCW-B-ST28_12	661	-	646 339.9	6 217 812.1	646 336.7	6 217 811.2	3.3	-
15/10/2023	17:09:04	MCW-B-ST28	Still	MCW-B-ST28_13	662	-	646 339.9	6 217 812.1	646 331.9	6 217 807.6	9.2	-
15/10/2023	17:10:08	MCW-B-ST28	Still	MCW-B-ST28_14	663	-	646 339.9	6 217 812.1	646 326.0	6 217 803.6	16.3	-
15/10/2023	17:10:58	MCW-B-ST28	Still	MCW-B-ST28_15	664	-	646 339.9	6 217 812.1	646 321.9	6 217 800.1	21.6	-
15/10/2023	17:11:59	MCW-B-ST28	Still	MCW-B-ST28_16	665	-	646 339.9	6 217 812.1	646 316.9	6 217 796.7	27.7	-
15/10/2023	17:12:13	MCW-B-ST28	Still	MCW-B-ST28_17	666	-	646 339.9	6 217 812.1	646 315.8	6 217 796.3	28.8	-
15/10/2023	17:14:14	MCW-B-ST28	Still	MCW-B-ST28_18	667	-	646 339.9	6 217 812.1	646 305.7	6 217 788.7	41.4	-
15/10/2023	17:14:26	MCW-B-ST28	Still	MCW-B-ST28_19	668	-	646 339.9	6 217 812.1	646 304.4	6 217 788.2	42.7	-
15/10/2023	17:15:05	MCW-B-ST28	Still	MCW-B-ST28_20	669	-	646 339.9	6 217 812.1	646 301.2	6 217 785.9	46.7	-
15/10/2023	17:15:44	MCW-B-ST28	Video	EOL	670	-	646 339.9	6 217 812.1	646 298.3	6 217 783.8	50.3	-
15/10/2023	17:31:34	MCW-B-ST28	WS	TOP	671	5	646 339.9	6 217 812.1	646 340.8	6 217 811.7	1.0	-
15/10/2023	17:39:15	MCW-B-ST28	WS	BOT	672	57	646 339.9	6 217 812.1	646 341.2	6 217 811.6	1.3	-
15/10/2023	17:54:00	MCW-B-ST28	DVV	PC	673	60	646 339.9	6 217 812.1	646 340.4	6 217 812.0	0.5	-
15/10/2023	18:43:52	MCW-B-ST29A	Video	SOL	674	60	649 544.8	6 217 237.8	649 612.7	6 217 240.5	67.9	-
15/10/2023	18:44:48	MCW-B-ST29A	Still	MCW-B-ST29A_01	675	-	649 544.8	6 217 237.8	649 606.0	6 217 239.5	61.2	-
15/10/2023	18:45:51	MCW-B-ST29A	Still	MCW-B-ST29A_02	676	-	649 544.8	6 217 237.8	649 599.3	6 217 240.1	54.5	-
15/10/2023	18:46:06	MCW-B-ST29A	Still	MCW-B-ST29A_03	677	-	649 544.8	6 217 237.8	649 597.8	6 217 239.8	53.0	-
15/10/2023	18:46:17	MCW-B-ST29A	Still	MCW-B-ST29A_04	678	-	649 544.8	6 217 237.8	649 596.4	6 217 239.8	51.6	-
15/10/2023	18:47:40	MCW-B-ST29A	Still	MCW-B-ST29A_05	679	-	649 544.8	6 217 237.8	649 587.9	6 217 238.9	43.0	-
15/10/2023	18:48:31	MCW-B-ST29A	Still	MCW-B-ST29A_06	680	-	649 544.8	6 217 237.8	649 582.2	6 217 239.1	37.4	-
15/10/2023	18:49:45	MCW-B-ST29A	Still	MCW-B-ST29A_07	681	-	649 544.8	6 217 237.8	649 575.7	6 217 239.5	30.9	-
15/10/2023	18:49:52	MCW-B-ST29A	Still	MCW-B-ST29A_08	682	-	649 544.8	6 217 237.8	649 574.6	6 217 239.4	29.8	-
15/10/2023	18:50:21	MCW-B-ST29A	Still	MCW-B-ST29A_09	683	-	649 544.8	6 217 237.8	649 571.1	6 217 239.4	26.3	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
15/10/2023	18:51:04	MCW-B-ST29A	Still	MCW-B-ST29A_10	684	-	649 544.8	6 217 237.8	649 565.9	6 217 238.9	21.1	-
15/10/2023	18:52:04	MCW-B-ST29A	Still	MCW-B-ST29A_11	685	-	649 544.8	6 217 237.8	649 560.0	6 217 238.1	15.2	-
15/10/2023	18:53:52	MCW-B-ST29A	Still	MCW-B-ST29A_12	686	-	649 544.8	6 217 237.8	649 550.5	6 217 238.3	5.7	-
15/10/2023	18:54:14	MCW-B-ST29A	Still	MCW-B-ST29A_13	687	-	649 544.8	6 217 237.8	649 547.6	6 217 237.9	2.8	-
15/10/2023	18:54:21	MCW-B-ST29A	Still	MCW-B-ST29A_14	688	-	649 544.8	6 217 237.8	649 547.5	6 217 237.9	2.6	-
15/10/2023	18:56:19	MCW-B-ST29A	Still	MCW-B-ST29A_15	690	-	649 544.8	6 217 237.8	649 533.8	6 217 238.0	11.0	-
15/10/2023	18:57:59	MCW-B-ST29A	Still	MCW-B-ST29A_16	691	-	649 544.8	6 217 237.8	649 524.2	6 217 237.4	20.6	-
15/10/2023	18:58:21	MCW-B-ST29A	Still	MCW-B-ST29A_17	692	-	649 544.8	6 217 237.8	649 521.4	6 217 236.9	23.5	-
15/10/2023	18:59:10	MCW-B-ST29A	Still	MCW-B-ST29A_18	693	-	649 544.8	6 217 237.8	649 516.9	6 217 236.8	28.0	-
15/10/2023	18:59:43	MCW-B-ST29A	Still	MCW-B-ST29A_19	694	-	649 544.8	6 217 237.8	649 512.8	6 217 237.2	32.0	-
15/10/2023	19:00:38	MCW-B-ST29A	Still	MCW-B-ST29A_20	695	-	649 544.8	6 217 237.8	649 508.3	6 217 237.1	36.5	-
15/10/2023	19:01:13	MCW-B-ST29A	Still	MCW-B-ST29A_21	696	-	649 544.8	6 217 237.8	649 503.8	6 217 237.4	41.0	-
15/10/2023	19:02:31	MCW-B-ST29A	Still	MCW-B-ST29A_22	697	-	649 544.8	6 217 237.8	649 496.0	6 217 237.1	48.8	-
15/10/2023	19:03:05	MCW-B-ST29A	Video	EOL	698	-	649 544.8	6 217 237.8	649 492.7	6 217 236.7	52.2	-
15/10/2023	19:22:56	MCW-B-ST29A	DVV	PC/FA	699	51	649 544.8	6 217 237.8	649 544.1	6 217 237.0	1.1	-
15/10/2023	20:19:28	MCW-B-ST30A	Video	SOL	700	51	652 141.6	6 217 458.6	652 172.8	6 217 411.6	56.5	-
15/10/2023	20:19:58	MCW-B-ST30A	Still	MCW-B-ST30A_01	701	-	652 141.6	6 217 458.6	652 172.2	6 217 413.0	54.9	-
15/10/2023	20:21:11	MCW-B-ST30A	Still	MCW-B-ST30A_02	702	-	652 141.6	6 217 458.6	652 167.9	6 217 418.9	47.6	-
15/10/2023	20:22:05	MCW-B-ST30A	Still	MCW-B-ST30A_03	703	-	652 141.6	6 217 458.6	652 164.4	6 217 424.2	41.3	-
15/10/2023	20:22:58	MCW-B-ST30A	Still	MCW-B-ST30A_04	704	-	652 141.6	6 217 458.6	652 161.3	6 217 429.3	35.4	-
15/10/2023	20:23:27	MCW-B-ST30A	Still	MCW-B-ST30A_05	705	-	652 141.6	6 217 458.6	652 159.5	6 217 431.4	32.5	-
15/10/2023	20:23:56	MCW-B-ST30A	Still	MCW-B-ST30A_06	706	-	652 141.6	6 217 458.6	652 157.9	6 217 433.5	30.0	-
15/10/2023	20:24:57	MCW-B-ST30A	Still	MCW-B-ST30A_07	707	-	652 141.6	6 217 458.6	652 154.6	6 217 438.1	24.3	-
15/10/2023	20:26:35	MCW-B-ST30A	Still	MCW-B-ST30A_08	708	-	652 141.6	6 217 458.6	652 149.3	6 217 447.6	13.5	-
15/10/2023	20:27:26	MCW-B-ST30A	Still	MCW-B-ST30A_09	709	-	652 141.6	6 217 458.6	652 145.8	6 217 451.9	7.9	-
15/10/2023	20:28:23	MCW-B-ST30A	Still	MCW-B-ST30A_10	710	-	652 141.6	6 217 458.6	652 142.8	6 217 456.4	2.6	-
15/10/2023	20:29:09	MCW-B-ST30A	Still	MCW-B-ST30A_11	711	-	652 141.6	6 217 458.6	652 140.0	6 217 461.3	3.1	-
15/10/2023	20:29:24	MCW-B-ST30A	Still	MCW-B-ST30A_12	712	-	652 141.6	6 217 458.6	652 138.7	6 217 462.8	5.0	-
15/10/2023	20:30:01	MCW-B-ST30A	Still	MCW-B-ST30A_13	713	-	652 141.6	6 217 458.6	652 136.5	6 217 465.6	8.6	-
15/10/2023	20:30:58	MCW-B-ST30A	Still	MCW-B-ST30A_14	714	-	652 141.6	6 217 458.6	652 133.7	6 217 469.0	13.0	-
15/10/2023	20:33:36	MCW-B-ST30A	Still	MCW-B-ST30A_15	716	-	652 141.6	6 217 458.6	652 124.3	6 217 483.1	30.0	-
15/10/2023	20:34:33	MCW-B-ST30A	Still	MCW-B-ST30A_16	717	-	652 141.6	6 217 458.6	652 121.6	6 217 487.1	34.8	-
15/10/2023	20:35:04	MCW-B-ST30A	Still	MCW-B-ST30A_17	718	-	652 141.6	6 217 458.6	652 119.8	6 217 489.7	38.0	-
15/10/2023	20:36:08	MCW-B-ST30A	Still	MCW-B-ST30A_18	719	-	652 141.6	6 217 458.6	652 116.3	6 217 495.7	44.9	-
15/10/2023	20:37:01	MCW-B-ST30A	Video	EOL	720	5	652 141.6	6 217 458.6	652 112.3	6 217 501.2	51.7	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
15/10/2023	20:52:35	MCW-B-ST30A	WS	TOP	721	46	652 141.6	6 217 458.6	652 143.5	6 217 457.3	2.3	-
15/10/2023	20:59:31	MCW-B-ST30A	WS	BOT	722	51	652 141.6	6 217 458.6	652 142.3	6 217 455.5	3.2	-
15/10/2023	21:17:45	MCW-B-ST30A	DVV	PC/FA	723	51	652 141.6	6 217 458.6	652 140.1	6 217 454.2	4.7	-
15/10/2023	22:21:55	MCW-B-ST19A	Video	SOL	724	51	654 912.3	6 219 783.6	654 910.7	6 219 719.9	63.7	-
15/10/2023	22:22:25	MCW-B-ST19A	Still	MCW-B-ST19A_01	725	-	654 912.3	6 219 783.6	654 910.9	6 219 722.6	61.0	-
15/10/2023	22:22:34	MCW-B-ST19A	Still	MCW-B-ST19A_02	726	-	654 912.3	6 219 783.6	654 911.0	6 219 723.7	59.9	-
15/10/2023	22:23:19	MCW-B-ST19A	Still	MCW-B-ST19A_03	727	-	654 912.3	6 219 783.6	654 910.9	6 219 728.0	55.5	-
15/10/2023	22:24:12	MCW-B-ST19A	Still	MCW-B-ST19A_04	728	-	654 912.3	6 219 783.6	654 909.4	6 219 733.1	50.6	-
15/10/2023	22:25:21	MCW-B-ST19A	Still	MCW-B-ST19A_05	729	-	654 912.3	6 219 783.6	654 907.2	6 219 739.9	44.0	-
15/10/2023	22:26:15	MCW-B-ST19A	Still	MCW-B-ST19A_06	730	-	654 912.3	6 219 783.6	654 906.8	6 219 746.3	37.7	-
15/10/2023	22:26:59	MCW-B-ST19A	Still	MCW-B-ST19A_07	731	-	654 912.3	6 219 783.6	654 906.9	6 219 750.3	33.7	-
15/10/2023	22:27:58	MCW-B-ST19A	Still	MCW-B-ST19A_08	732	-	654 912.3	6 219 783.6	654 907.6	6 219 756.4	27.6	-
15/10/2023	22:28:45	MCW-B-ST19A	Still	MCW-B-ST19A_09	733	-	654 912.3	6 219 783.6	654 908.3	6 219 761.6	22.3	-
15/10/2023	22:29:26	MCW-B-ST19A	Still	MCW-B-ST19A_10	734	-	654 912.3	6 219 783.6	654 908.2	6 219 765.7	18.4	-
15/10/2023	22:30:26	MCW-B-ST19A	Still	MCW-B-ST19A_11	735	-	654 912.3	6 219 783.6	654 908.0	6 219 771.5	12.8	-
15/10/2023	22:31:10	MCW-B-ST19A	Still	MCW-B-ST19A_12	736	-	654 912.3	6 219 783.6	654 908.7	6 219 776.2	8.2	-
15/10/2023	22:32:20	MCW-B-ST19A	Still	MCW-B-ST19A_13	737	-	654 912.3	6 219 783.6	654 909.4	6 219 783.7	3.0	-
15/10/2023	22:33:04	MCW-B-ST19A	Still	MCW-B-ST19A_14	738	-	654 912.3	6 219 783.6	654 909.0	6 219 788.5	5.9	-
15/10/2023	22:33:40	MCW-B-ST19A	Still	MCW-B-ST19A_15	739	-	654 912.3	6 219 783.6	654 909.5	6 219 791.1	8.0	-
15/10/2023	22:34:25	MCW-B-ST19A	Still	MCW-B-ST19A_16	740	-	654 912.3	6 219 783.6	654 909.5	6 219 795.9	12.6	-
15/10/2023	22:35:07	MCW-B-ST19A	Still	MCW-B-ST19A_17	741	-	654 912.3	6 219 783.6	654 909.7	6 219 801.5	18.2	-
15/10/2023	22:35:52	MCW-B-ST19A	Still	MCW-B-ST19A_18	742	-	654 912.3	6 219 783.6	654 909.7	6 219 805.8	22.4	-
15/10/2023	22:36:43	MCW-B-ST19A	Still	MCW-B-ST19A_19	743	-	654 912.3	6 219 783.6	654 910.2	6 219 810.7	27.3	-
15/10/2023	22:37:12	MCW-B-ST19A	Still	MCW-B-ST19A_20	744	-	654 912.3	6 219 783.6	654 910.3	6 219 814.0	30.5	-
15/10/2023	22:37:53	MCW-B-ST19A	Still	MCW-B-ST19A_21	745	-	654 912.3	6 219 783.6	654 910.3	6 219 817.9	34.4	-
15/10/2023	22:39:21	MCW-B-ST19A	Still	MCW-B-ST19A_22	746	-	654 912.3	6 219 783.6	654 910.3	6 219 826.5	43.0	-
15/10/2023	22:39:58	MCW-B-ST19A	Still	MCW-B-ST19A_23	747	-	654 912.3	6 219 783.6	654 911.1	6 219 831.0	47.4	-
15/10/2023	22:40:27	MCW-B-ST19A	Still	MCW-B-ST19A_24	NF	-	654 912.3	6 219 783.6	654 911.2	6 219 834.5	50.9	-
15/10/2023	22:40:31	MCW-B-ST19A	Video	EOL	748	-	654 912.3	6 219 783.6	654 911.1	6 219 834.7	51.1	-
15/10/2023	23:35:06	MCW-B-ST19A	DVV	PC/FA	749	52	654 912.3	6 219 783.6	654 909.3	6 219 783.9	3.0	-
16/10/2023	00:58:58	MCW-B-ST18A	Video	SOL	750	52	651 370.4	6 220 727.7	651 412.7	6 220 771.5	60.9	-
16/10/2023	01:00:59	MCW-B-ST18A	Still	MCW-B-ST18A_01	751	-	651 370.4	6 220 727.7	651 412.4	6 220 770.4	59.9	-
16/10/2023	01:01:59	MCW-B-ST18A	Still	MCW-B-ST18A_02	752	-	651 370.4	6 220 727.7	651 408.5	6 220 765.2	53.5	-
16/10/2023	01:02:27	MCW-B-ST18A	Still	MCW-B-ST18A_03	753	-	651 370.4	6 220 727.7	651 406.6	6 220 763.3	50.7	-
16/10/2023	01:02:49	MCW-B-ST18A	Still	MCW-B-ST18A_04	754	-	651 370.4	6 220 727.7	651 404.3	6 220 762.1	48.3	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/10/2023	01:04:08	MCW-B-ST18A	Still	MCW-B-ST18A_05	755	-	651 370.4	6 220 727.7	651 399.4	6 220 755.6	40.3	-
16/10/2023	01:05:03	MCW-B-ST18A	Still	MCW-B-ST18A_06	756	-	651 370.4	6 220 727.7	651 395.0	6 220 751.2	34.0	-
16/10/2023	01:06:59	MCW-B-ST18A	Still	MCW-B-ST18A_07	757	-	651 370.4	6 220 727.7	651 386.2	6 220 742.6	21.7	-
16/10/2023	01:07:09	MCW-B-ST18A	Still	MCW-B-ST18A_08	758	-	651 370.4	6 220 727.7	651 385.5	6 220 741.6	20.5	-
16/10/2023	01:07:50	MCW-B-ST18A	Still	MCW-B-ST18A_09	759	-	651 370.4	6 220 727.7	651 382.3	6 220 738.7	16.2	-
16/10/2023	01:09:45	MCW-B-ST18A	Still	MCW-B-ST18A_10	760	-	651 370.4	6 220 727.7	651 374.4	6 220 729.5	4.4	-
16/10/2023	01:10:42	MCW-B-ST18A	Still	MCW-B-ST18A_11	761	-	651 370.4	6 220 727.7	651 370.4	6 220 725.9	1.8	-
16/10/2023	01:11:14	MCW-B-ST18A	Still	MCW-B-ST18A_12	762	-	651 370.4	6 220 727.7	651 368.1	6 220 723.6	4.7	-
16/10/2023	01:13:46	MCW-B-ST18A	Still	MCW-B-ST18A_13	763	-	651 370.4	6 220 727.7	651 358.3	6 220 711.5	20.3	-
16/10/2023	01:16:04	MCW-B-ST18A	Still	MCW-B-ST18A_14	764	-	651 370.4	6 220 727.7	651 347.1	6 220 701.8	34.9	-
16/10/2023	01:17:17	MCW-B-ST18A	Still	MCW-B-ST18A_15	765	-	651 370.4	6 220 727.7	651 342.7	6 220 696.2	41.9	-
16/10/2023	01:18:59	MCW-B-ST18A	Still	MCW-B-ST18A_16	766	-	651 370.4	6 220 727.7	651 335.6	6 220 688.0	52.7	-
16/10/2023	01:19:10	MCW-B-ST18A	Video	EOL	767	-	651 370.4	6 220 727.7	651 335.2	6 220 687.3	53.6	-
16/10/2023	01:43:07	MCW-B-ST18A	WS	TOP	768	5	651 370.4	6 220 727.7	651 370.9	6 220 729.2	1.6	-
16/10/2023	01:53:05	MCW-B-ST18A	WS	BOT	769	47	651 370.4	6 220 727.7	651 369.1	6 220 730.5	3.0	-
16/10/2023	02:20:06	MCW-B-ST18A	DVV	PC/FA	770	58	651 370.4	6 220 727.7	651 371.1	6 220 729.2	1.6	-
16/10/2023	03:07:53	MCW-B-ST17A	Video	SOL	771	58	649 155.4	6 220 174.6	649 187.5	6 220 216.9	53.1	-
16/10/2023	03:08:17	MCW-B-ST17A	Still	MCW-B-ST17A_01	772	-	649 155.4	6 220 174.6	649 187.3	6 220 216.8	52.9	-
16/10/2023	03:11:12	MCW-B-ST17A	Still	MCW-B-ST17A_02	773	-	649 155.4	6 220 174.6	649 180.1	6 220 206.6	40.5	-
16/10/2023	03:13:48	MCW-B-ST17A	Still	MCW-B-ST17A_03	774	-	649 155.4	6 220 174.6	649 169.3	6 220 194.5	24.3	-
16/10/2023	03:14:16	MCW-B-ST17A	Still	MCW-B-ST17A_04	775	-	649 155.4	6 220 174.6	649 167.7	6 220 192.2	21.5	-
16/10/2023	03:14:45	MCW-B-ST17A	Still	MCW-B-ST17A_05	776	-	649 155.4	6 220 174.6	649 165.9	6 220 189.6	18.3	-
16/10/2023	03:16:12	MCW-B-ST17A	Still	MCW-B-ST17A_06	777	-	649 155.4	6 220 174.6	649 160.7	6 220 182.6	9.6	-
16/10/2023	03:17:33	MCW-B-ST17A	Still	MCW-B-ST17A_07	778	-	649 155.4	6 220 174.6	649 154.7	6 220 176.3	1.9	-
16/10/2023	03:20:12	MCW-B-ST17A	Still	MCW-B-ST17A_08	779	-	649 155.4	6 220 174.6	649 144.6	6 220 163.7	15.4	-
16/10/2023	03:21:38	MCW-B-ST17A	Still	MCW-B-ST17A_09	780	-	649 155.4	6 220 174.6	649 138.5	6 220 157.1	24.3	-
16/10/2023	03:24:20	MCW-B-ST17A	Still	MCW-B-ST17A_10	781	-	649 155.4	6 220 174.6	649 128.5	6 220 144.0	40.8	-
16/10/2023	03:25:52	MCW-B-ST17A	Video	EOL	782	-	649 155.4	6 220 174.6	649 122.9	6 220 136.9	49.7	-
16/10/2023	03:45:51	MCW-B-ST17A	DVV	PC/FA	783	51	649 155.4	6 220 174.6	649 157.7	6 220 178.0	4.1	-
16/10/2023	04:51:34	MCW-B-ST10	Video	SOL	784	51	652 120.3	6 222 662.4	652 151.9	6 222 703.7	52.0	-
16/10/2023	04:53:50	MCW-B-ST10	Still	MCW-B-ST10_01	785	-	652 120.3	6 222 662.4	652 147.4	6 222 698.7	45.4	-
16/10/2023	04:56:00	MCW-B-ST10	Still	MCW-B-ST10_02	786	-	652 120.3	6 222 662.4	652 139.5	6 222 687.5	31.6	-
16/10/2023	04:57:58	MCW-B-ST10	Still	MCW-B-ST10_03	787	-	652 120.3	6 222 662.4	652 132.0	6 222 676.9	18.7	-
16/10/2023	04:58:45	MCW-B-ST10	Still	MCW-B-ST10_04	788	-	652 120.3	6 222 662.4	652 129.0	6 222 672.7	13.6	-
16/10/2023	05:00:03	MCW-B-ST10	Still	MCW-B-ST10_05	789	-	652 120.3	6 222 662.4	652 124.4	6 222 666.6	5.9	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
16/10/2023	05:01:39	MCW-B-ST10	Still	MCW-B-ST10_06	790	-	652 120.3	6 222 662.4	652 117.8	6 222 659.3	3.9	-
16/10/2023	05:01:59	MCW-B-ST10	Still	MCW-B-ST10_07	791	-	652 120.3	6 222 662.4	652 116.4	6 222 657.3	6.3	-
16/10/2023	05:02:40	MCW-B-ST10	Still	MCW-B-ST10_08	792	-	652 120.3	6 222 662.4	652 114.3	6 222 653.7	10.5	-
16/10/2023	05:04:51	MCW-B-ST10	Still	MCW-B-ST10_09	793	-	652 120.3	6 222 662.4	652 106.6	6 222 642.9	23.8	-
16/10/2023	05:05:52	MCW-B-ST10	Still	MCW-B-ST10_10	794	-	652 120.3	6 222 662.4	652 102.2	6 222 638.1	30.2	-
16/10/2023	05:06:15	MCW-B-ST10	Still	MCW-B-ST10_11	795	-	652 120.3	6 222 662.4	652 100.9	6 222 636.4	32.4	-
16/10/2023	05:07:20	MCW-B-ST10	Still	MCW-B-ST10_12	796	-	652 120.3	6 222 662.4	652 096.3	6 222 631.0	39.4	-
16/10/2023	05:09:40	MCW-B-ST10	Video	EOL	797	-	652 120.3	6 222 662.4	652 088.1	6 222 619.8	53.3	-
16/10/2023	05:25:42	MCW-B-ST10	DVV	PC/FA	798	104	652 120.3	6 222 662.4	652 119.2	6 222 662.8	1.1	-
16/10/2023	06:27:57	MCW-B-ST09A	Video	SOL	799	104	650 065.9	6 222 892.3	650 116.9	6 222 911.4	54.4	-
16/10/2023	06:31:50	MCW-B-ST09A	Still	MCW-B-ST09A_01	803	-	650 065.9	6 222 892.3	650 100.0	6 222 905.5	36.6	-
16/10/2023	06:32:35	MCW-B-ST09A	Still	MCW-B-ST09A_02	804	-	650 065.9	6 222 892.3	650 095.3	6 222 903.3	31.3	-
16/10/2023	06:33:08	MCW-B-ST09A	Still	MCW-B-ST09A_03	805	-	650 065.9	6 222 892.3	650 092.3	6 222 901.9	28.1	-
16/10/2023	06:33:22	MCW-B-ST09A	Still	MCW-B-ST09A_04	806	-	650 065.9	6 222 892.3	650 090.9	6 222 901.3	26.5	-
16/10/2023	06:33:38	MCW-B-ST09A	Still	MCW-B-ST09A_05	807	-	650 065.9	6 222 892.3	650 089.3	6 222 901.0	24.9	-
16/10/2023	06:34:32	MCW-B-ST09A	Still	MCW-B-ST09A_06	808	-	650 065.9	6 222 892.3	650 084.1	6 222 898.7	19.3	-
16/10/2023	06:36:32	MCW-B-ST09A	Still	MCW-B-ST09A_07	809	-	650 065.9	6 222 892.3	650 072.4	6 222 893.9	6.6	-
16/10/2023	06:38:06	MCW-B-ST09A	Still	MCW-B-ST09A_08	810	-	650 065.9	6 222 892.3	650 063.1	6 222 890.5	3.3	-
16/10/2023	06:39:29	MCW-B-ST09A	Still	MCW-B-ST09A_09	811	-	650 065.9	6 222 892.3	650 054.8	6 222 887.8	12.0	-
16/10/2023	06:41:13	MCW-B-ST09A	Still	MCW-B-ST09A_10	812	-	650 065.9	6 222 892.3	650 045.2	6 222 884.3	22.2	-
16/10/2023	06:41:27	MCW-B-ST09A	Still	MCW-B-ST09A_11	813	-	650 065.9	6 222 892.3	650 044.3	6 222 883.5	23.4	-
16/10/2023	06:42:20	MCW-B-ST09A	Still	MCW-B-ST09A_12	814	-	650 065.9	6 222 892.3	650 039.3	6 222 881.2	28.8	-
16/10/2023	06:43:33	MCW-B-ST09A	Still	MCW-B-ST09A_13	815	-	650 065.9	6 222 892.3	650 032.1	6 222 877.9	36.7	-
16/10/2023	06:44:19	MCW-B-ST09A	Still	MCW-B-ST09A_14	816	-	650 065.9	6 222 892.3	650 027.9	6 222 876.5	41.2	-
16/10/2023	06:44:32	MCW-B-ST09A	Still	MCW-B-ST09A_15	817	-	650 065.9	6 222 892.3	650 026.8	6 222 876.0	42.4	-
16/10/2023	06:46:14	MCW-B-ST09A	Still	MCW-B-ST09A_16	818	-	650 065.9	6 222 892.3	650 017.3	6 222 872.0	52.7	-
16/10/2023	06:47:23	MCW-B-ST09A	Video	EOL	819	-	650 065.9	6 222 892.3	650 013.4	6 222 871.7	56.4	-
16/10/2023	07:07:21	MCW-B-ST09A	DVV	PC/FA	820	62	650 065.9	6 222 892.3	650 065.7	6 222 890.7	1.7	-
17/10/2023	01:53:21	MCW-D-ST103A	Video	SOL	821	62	641 665.6	6 193 656.0	641 624.2	6 193 696.8	58.1	-
17/10/2023	01:53:21	MCW-D-ST103A	Still	MCW-D-ST103A_01	821	62	641 665.6	6 193 656.0	641 624.2	6 193 696.8	58.1	-
17/10/2023	01:54:50	MCW-D-ST103A	Still	MCW-D-ST103A_02	822	-	641 665.6	6 193 656.0	641 625.1	6 193 695.3	56.4	-
17/10/2023	01:57:38	MCW-D-ST103A	Still	MCW-D-ST103A_03	823	-	641 665.6	6 193 656.0	641 637.2	6 193 684.5	40.2	-
17/10/2023	01:58:27	MCW-D-ST103A	Still	MCW-D-ST103A_04	824	-	641 665.6	6 193 656.0	641 640.7	6 193 680.3	34.7	-
17/10/2023	02:00:53	MCW-D-ST103A	Still	MCW-D-ST103A_05	825	-	641 665.6	6 193 656.0	641 650.9	6 193 670.4	20.5	-
17/10/2023	02:04:04	MCW-D-ST103A	Still	MCW-D-ST103A_06	826	-	641 665.6	6 193 656.0	641 665.2	6 193 655.6	0.6	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
17/10/2023	02:06:31	MCW-D-ST103A	Still	MCW-D-ST103A_07	827	-	641 665.6	6 193 656.0	641 676.0	6 193 645.6	14.8	-
17/10/2023	02:10:02	MCW-D-ST103A	Still	MCW-D-ST103A_08	828	-	641 665.6	6 193 656.0	641 691.7	6 193 631.4	35.8	-
17/10/2023	02:13:40	MCW-D-ST103A	Video	EOL	830	-	641 665.6	6 193 656.0	641 705.5	6 193 616.9	55.9	-
17/10/2023	02:37:14	MCW-D-ST103A	DVV	PC/FA	831	59	641 665.6	6 193 656.0	641 665.7	6 193 658.6	2.6	-
17/10/2023	04:24:42	MCW-D-ST100A	Video	SOL	832	59	645 921.0	6 197 226.7	645 937.3	6 197 289.8	65.2	-
17/10/2023	04:28:02	MCW-D-ST100A	Still	MCW-D-ST100A_01	833	-	645 921.0	6 197 226.7	645 933.6	6 197 274.7	49.7	-
17/10/2023	04:29:16	MCW-D-ST100A	Still	MCW-D-ST100A_02	834	-	645 921.0	6 197 226.7	645 932.1	6 197 266.9	41.7	-
17/10/2023	04:30:47	MCW-D-ST100A	Still	MCW-D-ST100A_03	835	-	645 921.0	6 197 226.7	645 929.6	6 197 257.1	31.6	-
17/10/2023	04:32:07	MCW-D-ST100A	Still	MCW-D-ST100A_04	836	-	645 921.0	6 197 226.7	645 928.5	6 197 250.1	24.6	-
17/10/2023	04:33:33	MCW-D-ST100A	Still	MCW-D-ST100A_05	837	-	645 921.0	6 197 226.7	645 925.8	6 197 241.6	15.6	-
17/10/2023	04:34:35	MCW-D-ST100A	Still	MCW-D-ST100A_06	838	-	645 921.0	6 197 226.7	645 923.7	6 197 234.9	8.7	-
17/10/2023	04:36:02	MCW-D-ST100A	Still	MCW-D-ST100A_07	839	-	645 921.0	6 197 226.7	645 922.2	6 197 225.4	1.8	-
17/10/2023	04:39:17	MCW-D-ST100A	Still	MCW-D-ST100A_08	840	-	645 921.0	6 197 226.7	645 916.4	6 197 207.4	19.9	-
17/10/2023	04:42:26	MCW-D-ST100A	Still	MCW-D-ST100A_09	841	-	645 921.0	6 197 226.7	645 911.0	6 197 187.7	40.3	-
17/10/2023	04:44:04	MCW-D-ST100A	Still	MCW-D-ST100A_10	842	-	645 921.0	6 197 226.7	645 909.5	6 197 177.0	51.1	-
17/10/2023	04:45:10	MCW-D-ST100A	Video	EOL	843	-	645 921.0	6 197 226.7	645 907.9	6 197 174.1	54.3	-
17/10/2023	05:11:44	MCW-D-ST100A	WS	TOP	846	5	645 921.0	6 197 226.7	645 921.0	6 197 227.0	0.3	-
17/10/2023	05:21:08	MCW-D-ST100A	WS	BOT	847	54	645 921.0	6 197 226.7	645 922.9	6 197 230.8	4.5	-
17/10/2023	05:42:46	MCW-D-ST100A	DVV	PC/FA	848	55	645 921.0	6 197 226.7	645 921.9	6 197 226.4	1.0	-
22/10/2023	21:18:09	MCW-D-ST64	Video	SOL	849	55	656 984.8	6 209 773.9	656 999.0	6 209 828.9	56.8	-
22/10/2023	21:18:35	MCW-D-ST64	Still	MCW-D-ST64_01	850	-	656 984.8	6 209 773.9	656 999.3	6 209 827.5	55.6	-
22/10/2023	21:19:35	MCW-D-ST64	Still	MCW-D-ST64_02	851	-	656 984.8	6 209 773.9	656 998.3	6 209 821.1	49.2	-
22/10/2023	21:20:34	MCW-D-ST64	Still	MCW-D-ST64_03	852	-	656 984.8	6 209 773.9	656 996.9	6 209 815.1	43.0	-
22/10/2023	21:21:14	MCW-D-ST64	Still	MCW-D-ST64_04	853	-	656 984.8	6 209 773.9	656 995.8	6 209 811.8	39.5	-
22/10/2023	21:21:51	MCW-D-ST64	Still	MCW-D-ST64_05	854	-	656 984.8	6 209 773.9	656 994.6	6 209 807.7	35.3	-
22/10/2023	21:22:43	MCW-D-ST64	Still	MCW-D-ST64_06	855	-	656 984.8	6 209 773.9	656 993.6	6 209 802.3	29.8	-
22/10/2023	21:23:36	MCW-D-ST64	Still	MCW-D-ST64_07	856	-	656 984.8	6 209 773.9	656 991.9	6 209 797.5	24.7	-
22/10/2023	21:24:46	MCW-D-ST64	Still	MCW-D-ST64_08	857	-	656 984.8	6 209 773.9	656 989.8	6 209 790.5	17.4	-
22/10/2023	21:25:41	MCW-D-ST64	Still	MCW-D-ST64_09	858	-	656 984.8	6 209 773.9	656 987.9	6 209 786.0	12.6	-
22/10/2023	21:26:16	MCW-D-ST64	Still	MCW-D-ST64_10	859	-	656 984.8	6 209 773.9	656 987.2	6 209 781.5	8.0	-
22/10/2023	21:27:00	MCW-D-ST64	Still	MCW-D-ST64_11	860	-	656 984.8	6 209 773.9	656 985.9	6 209 776.6	3.0	-
22/10/2023	21:28:06	MCW-D-ST64	Still	MCW-D-ST64_12	861	-	656 984.8	6 209 773.9	656 984.1	6 209 770.5	3.4	-
22/10/2023	21:29:10	MCW-D-ST64	Still	MCW-D-ST64_13	862	-	656 984.8	6 209 773.9	656 982.6	6 209 764.1	10.0	-
22/10/2023	21:30:01	MCW-D-ST64	Still	MCW-D-ST64_14	863	-	656 984.8	6 209 773.9	656 980.7	6 209 759.0	15.4	-
22/10/2023	21:30:33	MCW-D-ST64	Still	MCW-D-ST64_15	864	-	656 984.8	6 209 773.9	656 979.8	6 209 756.2	18.3	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
22/10/2023	21:31:26	MCW-D-ST64	Still	MCW-D-ST64_16	865	-	656 984.8	6 209 773.9	656 978.4	6 209 751.1	23.7	-
22/10/2023	21:31:58	MCW-D-ST64	Still	MCW-D-ST64_17	866	-	656 984.8	6 209 773.9	656 977.5	6 209 748.0	26.8	-
22/10/2023	21:33:07	MCW-D-ST64	Still	MCW-D-ST64_18	867	-	656 984.8	6 209 773.9	656 975.4	6 209 740.7	34.4	-
22/10/2023	21:33:34	MCW-D-ST64	Still	MCW-D-ST64_19	868	-	656 984.8	6 209 773.9	656 974.5	6 209 738.2	37.1	-
22/10/2023	21:34:35	MCW-D-ST64	Still	MCW-D-ST64_20	869	-	656 984.8	6 209 773.9	656 972.8	6 209 732.2	43.3	-
22/10/2023	21:35:16	MCW-D-ST64	Still	MCW-D-ST64_21	870	-	656 984.8	6 209 773.9	656 971.6	6 209 728.5	47.2	-
22/10/2023	21:35:48	MCW-D-ST64	Still	MCW-D-ST64_22	871	-	656 984.8	6 209 773.9	656 970.9	6 209 724.6	51.1	-
22/10/2023	21:35:58	MCW-D-ST64	Video	EOL	872	-	656 984.8	6 209 773.9	656 970.7	6 209 723.5	52.2	-
22/10/2023	22:00:26	MCW-D-ST64	DVV	PC/FA	873	56	656 984.8	6 209 773.9	656 987.4	6 209 777.4	4.4	-
22/10/2023	23:18:28	MCW-D-ST72A	Video	SOL	874	56	654 833.7	6 206 663.5	654 858.7	6 206 718.0	59.9	-
22/10/2023	23:21:21	MCW-D-ST72A	Still	MCW-D-ST72_01	875	-	654 833.7	6 206 663.5	654 854.3	6 206 707.4	48.4	-
22/10/2023	23:23:00	MCW-D-ST72A	Still	MCW-D-ST72_02	876	-	654 833.7	6 206 663.5	654 851.0	6 206 698.3	38.9	-
22/10/2023	23:23:43	MCW-D-ST72A	Still	MCW-D-ST72_03	877	-	654 833.7	6 206 663.5	654 848.8	6 206 694.1	34.1	-
22/10/2023	23:24:50	MCW-D-ST72A	Still	MCW-D-ST72_04	878	-	654 833.7	6 206 663.5	654 846.5	6 206 687.8	27.4	-
22/10/2023	23:25:17	MCW-D-ST72A	Still	MCW-D-ST72_05	879	-	654 833.7	6 206 663.5	654 845.5	6 206 685.4	24.8	-
22/10/2023	23:25:52	MCW-D-ST72A	Still	MCW-D-ST72_06	880	-	654 833.7	6 206 663.5	654 843.9	6 206 682.1	21.2	-
22/10/2023	23:28:46	MCW-D-ST72A	Still	MCW-D-ST72_07	881	-	654 833.7	6 206 663.5	654 835.8	6 206 665.6	3.0	-
22/10/2023	23:29:36	MCW-D-ST72A	Still	MCW-D-ST72_08	882	-	654 833.7	6 206 663.5	654 834.1	6 206 660.7	2.8	-
22/10/2023	23:30:29	MCW-D-ST72A	Still	MCW-D-ST72_09	883	-	654 833.7	6 206 663.5	654 831.6	6 206 655.2	8.6	-
22/10/2023	23:32:17	MCW-D-ST72A	Still	MCW-D-ST72_10	884	-	654 833.7	6 206 663.5	654 828.3	6 206 646.1	18.2	-
22/10/2023	23:34:29	MCW-D-ST72A	Still	MCW-D-ST72_11	885	-	654 833.7	6 206 663.5	654 822.7	6 206 632.9	32.6	-
22/10/2023	23:35:54	MCW-D-ST72A	Still	MCW-D-ST72_12	886	-	654 833.7	6 206 663.5	654 819.3	6 206 625.3	40.8	-
22/10/2023	00:01:51	MCW-D-ST72A	Video	EOL	888	-	654 833.7	6 206 663.5	654 836.8	6 206 665.3	3.5	-
22/10/2023	00:19:10	MCW-D-ST72A	DVV	PC/FA	889	59	654 833.7	6 206 663.5	654 836.2	6 206 664.3	2.6	-
23/10/2023	01:11:02	MCW-D-ST81	Video	SOL	890	59	654 411.2	6 204 350.8	654 425.3	6 204 405.4	56.4	-
23/10/2023	01:12:51	MCW-D-ST81	Still	MCW-D-ST81_01	891	-	654 411.2	6 204 350.8	654 424.5	6 204 399.2	50.1	-
23/10/2023	01:14:23	MCW-D-ST81	Still	MCW-D-ST81_02	892	-	654 411.2	6 204 350.8	654 422.5	6 204 389.4	40.2	-
23/10/2023	01:15:49	MCW-D-ST81	Still	MCW-D-ST81_03	893	-	654 411.2	6 204 350.8	654 420.6	6 204 381.0	31.7	-
23/10/2023	01:16:53	MCW-D-ST81	Still	MCW-D-ST81_04	894	-	654 411.2	6 204 350.8	654 419.5	6 204 375.0	25.6	-
23/10/2023	01:19:44	MCW-D-ST81	Still	MCW-D-ST81_05	895	-	654 411.2	6 204 350.8	654 414.8	6 204 357.7	7.7	-
23/10/2023	01:20:49	MCW-D-ST81	Still	MCW-D-ST81_06	896	-	654 411.2	6 204 350.8	654 413.4	6 204 351.0	2.3	-
23/10/2023	01:22:16	MCW-D-ST81	Still	MCW-D-ST81_07	897	-	654 411.2	6 204 350.8	654 411.3	6 204 342.0	8.8	-
23/10/2023	01:23:58	MCW-D-ST81	Still	MCW-D-ST81_08	898	-	654 411.2	6 204 350.8	654 408.7	6 204 332.3	18.7	-
23/10/2023	01:27:18	MCW-D-ST81	Still	MCW-D-ST81_09	899	-	654 411.2	6 204 350.8	654 404.2	6 204 311.5	39.9	-
23/10/2023	01:28:59	MCW-D-ST81	Still	MCW-D-ST81_10	900	-	654 411.2	6 204 350.8	654 402.3	6 204 301.7	49.9	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
23/10/2023	01:29:56	MCW-D-ST81	Video	EOL	901	-	654 411.2	6 204 350.8	654 400.9	6 204 296.4	55.4	-
23/10/2023	01:59:31	MCW-D-ST81	DVV	PC/FA	902	55	654 411.2	6 204 350.8	654 413.7	6 204 349.9	2.7	-
23/10/2023	02:59:14	MCW-D-ST80	Video	SOL	904	55	651 997.4	6 204 283.6	651 951.8	6 204 318.1	57.2	-
23/10/2023	03:00:31	MCW-D-ST80	Still	MCW-D-ST80_01	905	-	651 997.4	6 204 283.6	651 953.4	6 204 315.3	54.3	-
23/10/2023	03:02:31	MCW-D-ST80	Still	MCW-D-ST80_02	906	-	651 997.4	6 204 283.6	651 963.7	6 204 308.4	41.8	-
23/10/2023	03:03:16	MCW-D-ST80	Still	MCW-D-ST80_03	907	-	651 997.4	6 204 283.6	651 968.3	6 204 305.6	36.5	-
23/10/2023	03:03:49	MCW-D-ST80	Still	MCW-D-ST80_04	908	-	651 997.4	6 204 283.6	651 971.8	6 204 303.8	32.6	-
23/10/2023	03:04:23	MCW-D-ST80	Still	MCW-D-ST80_05	909	-	651 997.4	6 204 283.6	651 973.9	6 204 301.9	29.8	-
23/10/2023	03:05:08	MCW-D-ST80	Still	MCW-D-ST80_06	910	-	651 997.4	6 204 283.6	651 978.0	6 204 299.6	25.2	-
23/10/2023	03:07:28	MCW-D-ST80	Still	MCW-D-ST80_07	911	-	651 997.4	6 204 283.6	651 989.7	6 204 291.2	10.8	-
23/10/2023	03:09:42	MCW-D-ST80	Still	MCW-D-ST80_08	912	-	651 997.4	6 204 283.6	652 000.8	6 204 282.2	3.7	-
23/10/2023	03:11:16	MCW-D-ST80	Still	MCW-D-ST80_09	913	-	651 997.4	6 204 283.6	652 009.0	6 204 276.7	13.5	-
23/10/2023	03:12:39	MCW-D-ST80	Still	MCW-D-ST80_10	914	-	651 997.4	6 204 283.6	652 015.9	6 204 272.1	21.8	-
23/10/2023	03:13:38	MCW-D-ST80	Still	MCW-D-ST80_11	915	-	651 997.4	6 204 283.6	652 020.5	6 204 268.5	27.6	-
23/10/2023	03:14:22	MCW-D-ST80	Still	MCW-D-ST80_12	916	-	651 997.4	6 204 283.6	652 023.6	6 204 265.3	31.9	-
23/10/2023	03:15:34	MCW-D-ST80	Still	MCW-D-ST80_13	917	-	651 997.4	6 204 283.6	652 030.0	6 204 261.5	39.4	-
23/10/2023	03:16:52	MCW-D-ST80	Still	MCW-D-ST80_14	918	-	651 997.4	6 204 283.6	652 036.8	6 204 256.5	47.8	-
23/10/2023	03:34:00	MCW-D-ST80	Video	EOL	920	-	651 997.4	6 204 283.6	651 997.1	6 204 284.6	1.1	-
23/10/2023	03:43:47	MCW-D-ST80	WS	TOP	921	5	651 997.4	6 204 283.6	651 997.7	6 204 285.1	1.5	-
23/10/2023	03:57:24	MCW-D-ST80	WS	BOT	922	50	651 997.4	6 204 283.6	651 998.3	6 204 285.0	1.7	-
23/10/2023	04:31:45	MCW-D-ST80	DVV	PC/FA	923	53	651 997.4	6 204 283.6	651 998.0	6 204 285.9	2.4	-
23/10/2023	05:57:24	MCW-D-ST86A	Video	SOL	924	53	647 336.7	6 201 678.2	647 290.7	6 201 713.3	57.8	-
23/10/2023	06:03:02	MCW-D-ST86A	Still	MCW-D-ST86A_01	925	-	647 336.7	6 201 678.2	647 312.9	6 201 699.0	31.6	-
23/10/2023	06:04:19	MCW-D-ST86A	Still	MCW-D-ST86A_02	926	-	647 336.7	6 201 678.2	647 318.9	6 201 692.8	23.0	-
23/10/2023	06:05:20	MCW-D-ST86A	Still	MCW-D-ST86A_03	927	-	647 336.7	6 201 678.2	647 323.8	6 201 688.9	16.8	-
23/10/2023	06:06:42	MCW-D-ST86A	Still	MCW-D-ST86A_04	928	-	647 336.7	6 201 678.2	647 330.5	6 201 683.2	8.0	-
23/10/2023	06:08:10	MCW-D-ST86A	Still	MCW-D-ST86A_05	929	-	647 336.7	6 201 678.2	647 337.5	6 201 679.6	1.6	-
23/10/2023	06:11:11	MCW-D-ST86A	Still	MCW-D-ST86A_06	930	-	647 336.7	6 201 678.2	647 352.2	6 201 667.8	18.6	-
23/10/2023	06:13:15	MCW-D-ST86A	Still	MCW-D-ST86A_07	931	-	647 336.7	6 201 678.2	647 361.9	6 201 659.9	31.2	-
23/10/2023	06:14:56	MCW-D-ST86A	Still	MCW-D-ST86A_08	932	-	647 336.7	6 201 678.2	647 372.6	6 201 654.1	43.3	-
23/10/2023	06:15:50	MCW-D-ST86A	Still	MCW-D-ST86A_09	933	-	647 336.7	6 201 678.2	647 377.0	6 201 650.5	48.9	-
23/10/2023	06:16:12	MCW-D-ST86A	Still	MCW-D-ST86A_10	934	-	647 336.7	6 201 678.2	647 378.4	6 201 648.9	51.0	-
23/10/2023	06:16:53	MCW-D-ST86A	Video	EOL	935	-	647 336.7	6 201 678.2	647 380.9	6 201 645.6	54.9	-
23/10/2023	06:37:24	MCW-D-ST86A	WS	TOP	936	5	647 336.7	6 201 678.2	647 337.3	6 201 679.9	1.8	-
23/10/2023	06:46:20	MCW-D-ST86A	WS	BOT	937	48	647 336.7	6 201 678.2	647 339.1	6 201 681.7	4.2	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
23/10/2023	06:58:28	MCW-D-ST86A	DVV	PC	938	60	647 336.7	6 201 678.2	647 338.8	6 201 682.3	4.7	-
23/10/2023	08:21:33	MCW-D-ST104	Video	SOL	939	60	643 738.1	6 193 436.9	643 705.4	6 193 486.8	59.6	-
23/10/2023	08:23:25	MCW-D-ST104	Still	MCW-D-ST104_01	940	-	643 738.1	6 193 436.9	643 709.3	6 193 481.1	52.7	-
23/10/2023	08:23:53	MCW-D-ST104	Still	MCW-D-ST104_02	941	-	643 738.1	6 193 436.9	643 711.1	6 193 479.5	50.4	-
23/10/2023	08:25:00	MCW-D-ST104	Still	MCW-D-ST104_03	942	-	643 738.1	6 193 436.9	643 714.4	6 193 472.4	42.6	-
23/10/2023	08:26:31	MCW-D-ST104	Still	MCW-D-ST104_04	943	-	643 738.1	6 193 436.9	643 720.0	6 193 466.4	34.6	-
23/10/2023	08:27:26	MCW-D-ST104	Still	MCW-D-ST104_05	944	-	643 738.1	6 193 436.9	643 722.6	6 193 460.5	28.2	-
23/10/2023	08:28:22	MCW-D-ST104	Still	MCW-D-ST104_06	945	-	643 738.1	6 193 436.9	643 726.6	6 193 455.4	21.7	-
23/10/2023	08:29:39	MCW-D-ST104	Still	MCW-D-ST104_07	946	-	643 738.1	6 193 436.9	643 731.3	6 193 448.9	13.7	-
23/10/2023	08:31:08	MCW-D-ST104	Still	MCW-D-ST104_08	947	-	643 738.1	6 193 436.9	643 736.1	6 193 440.8	4.4	-
23/10/2023	08:31:49	MCW-D-ST104	Still	MCW-D-ST104_09	948	-	643 738.1	6 193 436.9	643 738.0	6 193 437.8	0.9	-
23/10/2023	08:33:15	MCW-D-ST104	Still	MCW-D-ST104_10	949	-	643 738.1	6 193 436.9	643 742.9	6 193 430.3	8.2	-
23/10/2023	08:35:07	MCW-D-ST104	Still	MCW-D-ST104_11	950	-	643 738.1	6 193 436.9	643 750.8	6 193 421.3	20.1	-
23/10/2023	08:36:33	MCW-D-ST104	Still	MCW-D-ST104_12	951	-	643 738.1	6 193 436.9	643 755.6	6 193 415.4	27.8	-
23/10/2023	08:38:21	MCW-D-ST104	Still	MCW-D-ST104_13	952	-	643 738.1	6 193 436.9	643 760.6	6 193 404.3	39.7	-
23/10/2023	08:40:39	MCW-D-ST104	Video	EOL	953	-	643 738.1	6 193 436.9	643 769.5	6 193 392.5	54.4	-
23/10/2023	09:00:30	MCW-D-ST104	WS	NS	954	-	643 738.1	6 193 436.9	643 738.7	6 193 438.1	1.3	-
23/10/2023	09:08:57	MCW-D-ST104	WS	TOP	957	5	643 738.1	6 193 436.9	643 736.8	6 193 438.6	2.1	-
23/10/2023	09:16:03	MCW-D-ST104	WS	BOT	958	55	643 738.1	6 193 436.9	643 737.7	6 193 446.4	9.4	-
23/10/2023	09:32:40	MCW-D-ST104	DVV	NS	959	60	643 738.1	6 193 436.9	643 738.7	6 193 437.7	1.0	-
23/10/2023	09:56:26	MCW-D-ST104	DVV	PC	960	49	643 738.1	6 193 436.9	643 738.4	6 193 432.4	4.6	-
23/10/2023	11:11:25	MCW-D-ST108A	Video	SOL	961	49	646 225.7	6 191 608.1	646 195.7	6 191 655.2	55.9	-
23/10/2023	11:11:43	MCW-D-ST108A	Still	MCW-D-ST108A_01	962	-	646 225.7	6 191 608.1	646 196.3	6 191 654.5	54.9	-
23/10/2023	11:12:40	MCW-D-ST108A	Still	MCW-D-ST108A_02	963	-	646 225.7	6 191 608.1	646 199.5	6 191 649.1	48.6	-
23/10/2023	11:13:33	MCW-D-ST108A	Still	MCW-D-ST108A_03	964	-	646 225.7	6 191 608.1	646 202.2	6 191 644.9	43.7	-
23/10/2023	11:14:04	MCW-D-ST108A	Still	MCW-D-ST108A_04	965	-	646 225.7	6 191 608.1	646 204.2	6 191 641.7	39.9	-
23/10/2023	11:14:49	MCW-D-ST108A	Still	MCW-D-ST108A_05	966	-	646 225.7	6 191 608.1	646 206.3	6 191 636.4	34.3	-
23/10/2023	11:15:38	MCW-D-ST108A	Still	MCW-D-ST108A_06	967	-	646 225.7	6 191 608.1	646 208.9	6 191 632.9	30.0	-
23/10/2023	11:16:54	MCW-D-ST108A	Still	MCW-D-ST108A_07	968	-	646 225.7	6 191 608.1	646 214.5	6 191 628.2	23.0	-
23/10/2023	11:17:31	MCW-D-ST108A	Still	MCW-D-ST108A_08	969	-	646 225.7	6 191 608.1	646 215.4	6 191 623.6	18.6	-
23/10/2023	11:18:27	MCW-D-ST108A	Still	MCW-D-ST108A_09	970	-	646 225.7	6 191 608.1	646 218.1	6 191 618.2	12.6	-
23/10/2023	11:19:12	MCW-D-ST108A	Still	MCW-D-ST108A_10	971	-	646 225.7	6 191 608.1	646 220.5	6 191 614.7	8.4	-
23/10/2023	11:19:54	MCW-D-ST108A	Still	MCW-D-ST108A_11	972	-	646 225.7	6 191 608.1	646 221.9	6 191 610.6	4.6	-
23/10/2023	11:20:31	MCW-D-ST108A	Still	MCW-D-ST108A_12	973	-	646 225.7	6 191 608.1	646 225.5	6 191 608.2	0.2	-
23/10/2023	11:21:27	MCW-D-ST108A	Still	MCW-D-ST108A_13	974	-	646 225.7	6 191 608.1	646 229.5	6 191 604.1	5.5	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
23/10/2023	11:22:26	MCW-D-ST108A	Still	MCW-D-ST108A_14	975	-	646 225.7	6 191 608.1	646 232.9	6 191 598.9	11.7	-
23/10/2023	11:23:19	MCW-D-ST108A	Still	MCW-D-ST108A_15	976	-	646 225.7	6 191 608.1	646 235.2	6 191 592.9	17.9	-
23/10/2023	11:24:13	MCW-D-ST108A	Still	MCW-D-ST108A_16	977	-	646 225.7	6 191 608.1	646 236.6	6 191 587.1	23.7	-
23/10/2023	11:25:03	MCW-D-ST108A	Still	MCW-D-ST108A_17	978	-	646 225.7	6 191 608.1	646 241.0	6 191 584.7	28.0	-
23/10/2023	11:26:21	MCW-D-ST108A	Still	MCW-D-ST108A_18	979	-	646 225.7	6 191 608.1	646 245.4	6 191 576.8	36.9	-
23/10/2023	11:27:23	MCW-D-ST108A	Still	MCW-D-ST108A_19	980	-	646 225.7	6 191 608.1	646 248.3	6 191 572.0	42.6	-
23/10/2023	11:27:43	MCW-D-ST108A	Still	MCW-D-ST108A_20	981	-	646 225.7	6 191 608.1	646 249.8	6 191 570.3	44.9	-
23/10/2023	11:28:27	MCW-D-ST108A	Still	MCW-D-ST108A_21	982	-	646 225.7	6 191 608.1	646 251.9	6 191 565.8	49.7	-
23/10/2023	11:28:40	MCW-D-ST108A	Video	EOL	983	-	646 225.7	6 191 608.1	646 252.3	6 191 564.2	51.3	-
23/10/2023	11:54:54	MCW-D-ST108A	WS	TOP	984	5	646 225.7	6 191 608.1	646 228.2	6 191 609.5	2.8	-
23/10/2023	12:02:35	MCW-D-ST108A	WS	BOT	985	44	646 225.7	6 191 608.1	646 229.0	6 191 611.0	4.4	-
23/10/2023	12:41:59	MCW-D-ST108A	HG	PC	986	58	646 225.7	6 191 608.1	646 226.1	6 191 608.6	0.6	-
23/10/2023	14:05:31	MCW-D-ST101	Video	SOL	987	58	649 576.3	6 196 377.7	649 522.9	6 196 386.5	54.1	-
23/10/2023	14:05:47	MCW-D-ST101	Still	MCW-D-ST101_01	988	-	649 576.3	6 196 377.7	649 524.1	6 196 386.1	52.9	-
23/10/2023	14:07:13	MCW-D-ST101	Still	MCW-D-ST101_02	989	-	649 576.3	6 196 377.7	649 532.2	6 196 384.5	44.6	-
23/10/2023	14:08:13	MCW-D-ST101	Still	MCW-D-ST101_03	990	-	649 576.3	6 196 377.7	649 538.3	6 196 383.2	38.4	-
23/10/2023	14:08:47	MCW-D-ST101	Still	MCW-D-ST101_04	991	-	649 576.3	6 196 377.7	649 541.7	6 196 382.2	34.9	-
23/10/2023	14:09:10	MCW-D-ST101	Still	MCW-D-ST101_05	992	-	649 576.3	6 196 377.7	649 544.6	6 196 382.0	31.9	-
23/10/2023	14:09:43	MCW-D-ST101	Still	MCW-D-ST101_06	993	-	649 576.3	6 196 377.7	649 547.7	6 196 381.3	28.8	-
23/10/2023	14:10:33	MCW-D-ST101	Still	MCW-D-ST101_07	994	-	649 576.3	6 196 377.7	649 553.4	6 196 380.8	23.1	-
23/10/2023	14:11:27	MCW-D-ST101	Still	MCW-D-ST101_08	995	-	649 576.3	6 196 377.7	649 558.2	6 196 379.1	18.1	-
23/10/2023	14:12:27	MCW-D-ST101	Still	MCW-D-ST101_09	996	-	649 576.3	6 196 377.7	649 564.2	6 196 378.3	12.1	-
23/10/2023	14:13:39	MCW-D-ST101	Still	MCW-D-ST101_10	997	-	649 576.3	6 196 377.7	649 571.4	6 196 377.6	4.9	-
23/10/2023	14:14:02	MCW-D-ST101	Still	MCW-D-ST101_11	998	-	649 576.3	6 196 377.7	649 573.8	6 196 377.4	2.5	-
23/10/2023	14:15:00	MCW-D-ST101	Still	MCW-D-ST101_12	999	-	649 576.3	6 196 377.7	649 580.2	6 196 375.8	4.4	-
23/10/2023	14:15:59	MCW-D-ST101	Still	MCW-D-ST101_13	1000	-	649 576.3	6 196 377.7	649 586.5	6 196 374.6	10.7	-
23/10/2023	14:17:06	MCW-D-ST101	Still	MCW-D-ST101_14	1001	-	649 576.3	6 196 377.7	649 593.5	6 196 373.3	17.7	-
23/10/2023	14:18:30	MCW-D-ST101	Still	MCW-D-ST101_15	1002	-	649 576.3	6 196 377.7	649 602.1	6 196 372.6	26.3	-
23/10/2023	14:19:38	MCW-D-ST101	Still	MCW-D-ST101_16	1003	-	649 576.3	6 196 377.7	649 608.6	6 196 371.6	32.9	-
23/10/2023	14:20:32	MCW-D-ST101	Still	MCW-D-ST101_17	1004	-	649 576.3	6 196 377.7	649 614.0	6 196 371.1	38.2	-
23/10/2023	14:21:34	MCW-D-ST101	Still	MCW-D-ST101_18	1005	-	649 576.3	6 196 377.7	649 620.5	6 196 369.7	45.0	-
23/10/2023	14:22:49	MCW-D-ST101	Video	EOL	1006	-	649 576.3	6 196 377.7	649 628.7	6 196 367.7	53.3	-
23/10/2023	14:40:34	MCW-D-ST101	DVV	PC/FA	1007	52	649 576.3	6 196 377.7	649 575.3	6 196 376.7	1.4	-
23/10/2023	15:37:04	MCW-D-ST95A	Video	SOL	1008	52	649 709.0	6 198 447.1	649 710.1	6 198 504.1	57.0	-
23/10/2023	15:37:22	MCW-D-ST95A	Still	MCW-D-ST95A_01	1009	-	649 709.0	6 198 447.1	649 709.8	6 198 502.5	55.4	-



Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
23/10/2023	15:38:33	MCW-D-ST95A	Still	MCW-D-ST95A_02	1010	-	649 709.0	6 198 447.1	649 710.6	6 198 497.6	50.5	-
23/10/2023	15:39:38	MCW-D-ST95A	Still	MCW-D-ST95A_03	1011	-	649 709.0	6 198 447.1	649 710.1	6 198 491.6	44.5	-
23/10/2023	15:40:40	MCW-D-ST95A	Still	MCW-D-ST95A_04	1012	-	649 709.0	6 198 447.1	649 710.3	6 198 485.5	38.3	-
23/10/2023	15:41:42	MCW-D-ST95A	Still	MCW-D-ST95A_05	1013	-	649 709.0	6 198 447.1	649 710.2	6 198 478.5	31.4	-
23/10/2023	15:42:36	MCW-D-ST95A	Still	MCW-D-ST95A_06	1014	-	649 709.0	6 198 447.1	649 710.5	6 198 473.1	26.0	-
23/10/2023	15:43:46	MCW-D-ST95A	Still	MCW-D-ST95A_07	1015	-	649 709.0	6 198 447.1	649 710.4	6 198 465.7	18.6	-
23/10/2023	15:45:03	MCW-D-ST95A	Still	MCW-D-ST95A_08	1016	-	649 709.0	6 198 447.1	649 710.5	6 198 457.3	10.3	-
23/10/2023	15:46:14	MCW-D-ST95A	Still	MCW-D-ST95A_09	1017	-	649 709.0	6 198 447.1	649 710.4	6 198 449.5	2.7	-
23/10/2023	15:46:22	MCW-D-ST95A	Still	MCW-D-ST95A_10	1018	-	649 709.0	6 198 447.1	649 710.5	6 198 448.5	2.1	-
23/10/2023	15:47:44	MCW-D-ST95A	Still	MCW-D-ST95A_11	1019	-	649 709.0	6 198 447.1	649 709.5	6 198 440.7	6.5	-
23/10/2023	15:49:09	MCW-D-ST95A	Still	MCW-D-ST95A_12	1020	-	649 709.0	6 198 447.1	649 709.4	6 198 431.8	15.3	-
23/10/2023	15:49:55	MCW-D-ST95A	Still	MCW-D-ST95A_13	1021	-	649 709.0	6 198 447.1	649 710.2	6 198 426.8	20.4	-
23/10/2023	15:51:03	MCW-D-ST95A	Still	MCW-D-ST95A_14	1022	-	649 709.0	6 198 447.1	649 708.9	6 198 418.7	28.4	-
23/10/2023	15:52:22	MCW-D-ST95A	Still	MCW-D-ST95A_15	1023	-	649 709.0	6 198 447.1	649 709.0	6 198 411.1	36.0	-
23/10/2023	15:52:57	MCW-D-ST95A	Still	MCW-D-ST95A_16	1024	-	649 709.0	6 198 447.1	649 709.1	6 198 408.0	39.1	-
23/10/2023	15:54:10	MCW-D-ST95A	Still	MCW-D-ST95A_17	1025	-	649 709.0	6 198 447.1	649 709.6	6 198 400.6	46.5	-
23/10/2023	15:55:07	MCW-D-ST95A	Video	EOL	1026	-	649 709.0	6 198 447.1	649 709.9	6 198 396.1	51.0	-
23/10/2023	16:13:59	MCW-D-ST95A	WS	TOP	1027	5	649 709.0	6 198 447.1	649 708.5	6 198 445.3	1.9	-
23/10/2023	16:26:57	MCW-D-ST95A	WS	BOT	1028	47	649 709.0	6 198 447.1	649 707.9	6 198 443.1	4.2	-
23/10/2023	16:40:21	MCW-D-ST95A	DVV	PC	1029	58	649 709.0	6 198 447.1	649 709.0	6 198 447.1	0.0	-
24/10/2023	07:06:03	MCW-D-ST88A	Video	SOL	1030	58	651 542.8	6 201 944.0	651 487.3	6 201 953.0	56.3	-
24/10/2023	07:08:43	MCW-D-ST88A	Still	MCW-D-ST88A_01	1031	-	651 542.8	6 201 944.0	651 496.7	6 201 949.8	46.4	-
24/10/2023	07:10:20	MCW-D-ST88A	Still	MCW-D-ST88A_02	1032	-	651 542.8	6 201 944.0	651 505.9	6 201 948.6	37.2	-
24/10/2023	07:12:17	MCW-D-ST88A	Still	MCW-D-ST88A_03	1033	-	651 542.8	6 201 944.0	651 518.5	6 201 947.6	24.6	-
24/10/2023	07:13:16	MCW-D-ST88A	Still	MCW-D-ST88A_04	1034	-	651 542.8	6 201 944.0	651 524.9	6 201 946.3	18.1	-
24/10/2023	07:15:13	MCW-D-ST88A	Still	MCW-D-ST88A_05	1035	-	651 542.8	6 201 944.0	651 536.4	6 201 944.8	6.5	-
24/10/2023	07:16:46	MCW-D-ST88A	Still	MCW-D-ST88A_06	1036	-	651 542.8	6 201 944.0	651 545.6	6 201 942.2	3.3	-
24/10/2023	07:17:21	MCW-D-ST88A	Still	MCW-D-ST88A_07	1037	-	651 542.8	6 201 944.0	651 548.5	6 201 941.8	6.1	-
24/10/2023	07:17:23	MCW-D-ST88A	Still	MCW-D-ST88A_08	1038	-	651 542.8	6 201 944.0	651 549.0	6 201 941.7	6.6	-
24/10/2023	07:20:15	MCW-D-ST88A	Still	MCW-D-ST88A_09	1039	-	651 542.8	6 201 944.0	651 566.9	6 201 939.9	24.5	-
24/10/2023	07:21:47	MCW-D-ST88A	Still	MCW-D-ST88A_10	1040	-	651 542.8	6 201 944.0	651 575.8	6 201 937.2	33.7	-
24/10/2023	07:21:53	MCW-D-ST88A	Still	MCW-D-ST88A_11	1041	-	651 542.8	6 201 944.0	651 576.7	6 201 937.2	34.5	-
24/10/2023	07:23:07	MCW-D-ST88A	Still	MCW-D-ST88A_12	1042	-	651 542.8	6 201 944.0	651 584.3	6 201 936.6	42.1	-
24/10/2023	07:24:54	MCW-D-ST88A	Video	EOL	1044	-	651 542.8	6 201 944.0	651 595.3	6 201 934.8	53.3	-
24/10/2023	07:45:25	MCW-D-ST88A	DVV	PC/FA	1045	58	651 542.8	6 201 944.0	651 542.2	6 201 946.3	2.4	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
24/10/2023	08:29:37	MCW-D-ST89A	Video	SOL	1046	58	654 093.0	6 202 125.7	654 049.1	6 202 156.0	53.4	-
24/10/2023	08:32:00	MCW-D-ST89A	Still	MCW-D-ST89A_01	1047	-	654 093.0	6 202 125.7	654 056.3	6 202 150.9	44.5	-
24/10/2023	08:33:50	MCW-D-ST89A	Still	MCW-D-ST89A_02	1048	-	654 093.0	6 202 125.7	654 066.5	6 202 144.3	32.3	-
24/10/2023	08:35:39	MCW-D-ST89A	Still	MCW-D-ST89A_03	1049	-	654 093.0	6 202 125.7	654 075.6	6 202 138.5	21.6	-
24/10/2023	08:37:25	MCW-D-ST89A	Still	MCW-D-ST89A_04	1050	-	654 093.0	6 202 125.7	654 084.2	6 202 131.7	10.6	-
24/10/2023	08:38:50	MCW-D-ST89A	Still	MCW-D-ST89A_05	1051	-	654 093.0	6 202 125.7	654 092.2	6 202 126.4	1.0	-
24/10/2023	08:40:36	MCW-D-ST89A	Still	MCW-D-ST89A_06	1052	-	654 093.0	6 202 125.7	654 100.3	6 202 120.2	9.2	-
24/10/2023	08:43:41	MCW-D-ST89A	Still	MCW-D-ST89A_07	1053	-	654 093.0	6 202 125.7	654 115.9	6 202 109.8	27.9	-
24/10/2023	08:46:13	MCW-D-ST89A	Still	MCW-D-ST89A_08	1054	-	654 093.0	6 202 125.7	654 129.3	6 202 099.8	44.6	-
24/10/2023	08:47:53	MCW-D-ST89A	Video	EOL	1055	-	654 093.0	6 202 125.7	654 137.3	6 202 095.1	53.9	-
24/10/2023	09:05:24	MCW-D-ST89A	DVV	PC/FA	1056	57	654 093.0	6 202 125.7	654 093.6	6 202 127.7	2.0	-
24/10/2023	10:16:24	MCW-D-ST82	Video	SOL	1057	57	656 969.8	6 204 539.7	656 829.8	6 204 546.1	140.1	-
24/10/2023	10:18:05	MCW-D-ST82	Still	MCW-D-ST82_01	1058	-	656 969.8	6 204 539.7	656 831.4	6 204 545.9	138.5	-
24/10/2023	10:18:34	MCW-D-ST82	Still	MCW-D-ST82_02	1059	-	656 969.8	6 204 539.7	656 834.1	6 204 545.1	135.8	-
24/10/2023	10:18:49	MCW-D-ST82	Still	MCW-D-ST82_03	1060	-	656 969.8	6 204 539.7	656 835.5	6 204 545.1	134.4	-
24/10/2023	10:19:02	MCW-D-ST82	Still	MCW-D-ST82_04	1061	-	656 969.8	6 204 539.7	656 837.2	6 204 544.7	132.6	-
24/10/2023	10:19:15	MCW-D-ST82	Still	MCW-D-ST82_05	1062	-	656 969.8	6 204 539.7	656 838.5	6 204 544.6	131.4	-
24/10/2023	10:19:26	MCW-D-ST82	Still	MCW-D-ST82_06	1063	-	656 969.8	6 204 539.7	656 840.1	6 204 544.5	129.7	-
24/10/2023	10:19:39	MCW-D-ST82	Still	MCW-D-ST82_07	1064	-	656 969.8	6 204 539.7	656 841.4	6 204 544.1	128.5	-
24/10/2023	10:20:08	MCW-D-ST82	Still	MCW-D-ST82_08	1065	-	656 969.8	6 204 539.7	656 844.1	6 204 543.8	125.7	-
24/10/2023	10:20:29	MCW-D-ST82	Still	MCW-D-ST82_09	1066	-	656 969.8	6 204 539.7	656 846.7	6 204 544.0	123.2	-
24/10/2023	10:20:42	MCW-D-ST82	Still	MCW-D-ST82_10	1067	-	656 969.8	6 204 539.7	656 847.9	6 204 544.0	121.9	-
24/10/2023	10:21:08	MCW-D-ST82	Still	MCW-D-ST82_11	1068	-	656 969.8	6 204 539.7	656 850.7	6 204 544.7	119.2	-
24/10/2023	10:21:26	MCW-D-ST82	Still	MCW-D-ST82_12	1069	-	656 969.8	6 204 539.7	656 852.2	6 204 544.1	117.6	-
24/10/2023	10:21:48	MCW-D-ST82	Still	MCW-D-ST82_13	1070	-	656 969.8	6 204 539.7	656 854.4	6 204 543.9	115.4	-
24/10/2023	10:21:59	MCW-D-ST82	Still	MCW-D-ST82_14	1071	-	656 969.8	6 204 539.7	656 855.2	6 204 544.0	114.7	-
24/10/2023	10:22:40	MCW-D-ST82	Still	MCW-D-ST82_15	1072	-	656 969.8	6 204 539.7	656 860.3	6 204 543.3	109.6	-
24/10/2023	10:23:39	MCW-D-ST82	Still	MCW-D-ST82_16	1073	-	656 969.8	6 204 539.7	656 866.2	6 204 543.4	103.6	-
24/10/2023	10:24:21	MCW-D-ST82	Still	MCW-D-ST82_17	1074	-	656 969.8	6 204 539.7	656 870.0	6 204 542.3	99.8	-
24/10/2023	10:25:40	MCW-D-ST82	Still	MCW-D-ST82_18	1075	-	656 969.8	6 204 539.7	656 878.7	6 204 543.2	91.1	-
24/10/2023	10:26:32	MCW-D-ST82	Still	MCW-D-ST82_19	1076	-	656 969.8	6 204 539.7	656 883.9	6 204 543.0	85.9	-
24/10/2023	10:27:35	MCW-D-ST82	Still	MCW-D-ST82_20	1077	-	656 969.8	6 204 539.7	656 890.3	6 204 544.2	79.6	-
24/10/2023	10:28:27	MCW-D-ST82	Still	MCW-D-ST82_21	1078	-	656 969.8	6 204 539.7	656 895.5	6 204 543.2	74.4	-
24/10/2023	10:29:36	MCW-D-ST82	Still	MCW-D-ST82_22	1079	-	656 969.8	6 204 539.7	656 902.8	6 204 543.0	67.0	-
24/10/2023	10:30:39	MCW-D-ST82	Still	MCW-D-ST82_23	1080	-	656 969.8	6 204 539.7	656 909.1	6 204 541.4	60.6	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
24/10/2023	10:31:59	MCW-D-ST82	Still	MCW-D-ST82_24	1081	-	656 969.8	6 204 539.7	656 917.3	6 204 541.6	52.5	-
24/10/2023	10:33:28	MCW-D-ST82	Still	MCW-D-ST82_25	1082	-	656 969.8	6 204 539.7	656 926.7	6 204 541.4	43.1	-
24/10/2023	10:34:10	MCW-D-ST82	Still	MCW-D-ST82_26	1083	-	656 969.8	6 204 539.7	656 931.4	6 204 540.5	38.4	-
24/10/2023	10:34:51	MCW-D-ST82	Still	MCW-D-ST82_27	1084	-	656 969.8	6 204 539.7	656 935.7	6 204 540.4	34.1	-
24/10/2023	10:36:29	MCW-D-ST82	Still	MCW-D-ST82_28	1085	-	656 969.8	6 204 539.7	656 945.0	6 204 540.0	24.7	-
24/10/2023	10:39:11	MCW-D-ST82	Still	MCW-D-ST82_29	1086	-	656 969.8	6 204 539.7	656 961.9	6 204 538.8	7.9	-
24/10/2023	10:41:20	MCW-D-ST82	Still	MCW-D-ST82_30	1087	-	656 969.8	6 204 539.7	656 975.7	6 204 538.5	6.1	-
24/10/2023	10:42:34	MCW-D-ST82	Still	MCW-D-ST82_31	1088	-	656 969.8	6 204 539.7	656 983.2	6 204 537.6	13.6	-
24/10/2023	10:46:28	MCW-D-ST82	Still	MCW-D-ST82_32	1089	-	656 969.8	6 204 539.7	657 001.4	6 204 538.1	31.7	-
24/10/2023	10:47:32	MCW-D-ST82	Still	MCW-D-ST82_33	1090	-	656 969.8	6 204 539.7	657 008.2	6 204 536.7	38.6	-
24/10/2023	10:48:49	MCW-D-ST82	Still	MCW-D-ST82_34	1091	-	656 969.8	6 204 539.7	657 016.2	6 204 536.6	46.5	-
24/10/2023	10:50:06	MCW-D-ST82	Video	EOL	1092	-	656 969.8	6 204 539.7	657 023.8	6 204 536.5	54.1	-
24/10/2023	11:16:13	MCW-D-ST82	WS	TOP	1093	5	656 969.8	6 204 539.7	656 968.7	6 204 540.2	1.2	-
24/10/2023	11:27:18	MCW-D-ST82	WS	BOT	1094	52	656 969.8	6 204 539.7	656 971.4	6 204 542.5	3.3	-
24/10/2023	11:41:20	MCW-D-ST82	DVV	PC/FA	1095	-	656 969.8	6 204 539.7	656 969.4	6 204 544.5	4.9	-
24/10/2023	12:39:37	MCW-D-ST73	Video	SOL	1096	59	657 373.9	6 206 836.9	657 309.5	6 206 853.3	66.4	-
24/10/2023	12:40:01	MCW-D-ST73	Still	MCW-D-ST73_01	1097	-	657 373.9	6 206 836.9	657 311.1	6 206 853.5	65.0	-
24/10/2023	12:40:16	MCW-D-ST73	Still	MCW-D-ST73_02	1098	-	657 373.9	6 206 836.9	657 312.5	6 206 853.1	63.5	-
24/10/2023	12:42:08	MCW-D-ST73	Still	MCW-D-ST73_03	1099	-	657 373.9	6 206 836.9	657 324.2	6 206 850.2	51.4	-
24/10/2023	12:42:38	MCW-D-ST73	Still	MCW-D-ST73_04	1100	-	657 373.9	6 206 836.9	657 326.8	6 206 849.2	48.7	-
24/10/2023	12:42:46	MCW-D-ST73	Still	MCW-D-ST73_05	1101	-	657 373.9	6 206 836.9	657 327.7	6 206 849.1	47.8	-
24/10/2023	12:43:18	MCW-D-ST73	Still	MCW-D-ST73_06	1102	-	657 373.9	6 206 836.9	657 330.6	6 206 848.3	44.8	-
24/10/2023	12:43:42	MCW-D-ST73	Still	MCW-D-ST73_07	1103	-	657 373.9	6 206 836.9	657 333.3	6 206 847.8	42.1	-
24/10/2023	12:43:54	MCW-D-ST73	Still	MCW-D-ST73_08	1104	-	657 373.9	6 206 836.9	657 334.1	6 206 847.3	41.2	-
24/10/2023	12:44:24	MCW-D-ST73	Still	MCW-D-ST73_09	1105	-	657 373.9	6 206 836.9	657 337.0	6 206 846.0	38.0	-
24/10/2023	12:44:33	MCW-D-ST73	Still	MCW-D-ST73_10	1106	-	657 373.9	6 206 836.9	657 337.8	6 206 845.7	37.2	-
24/10/2023	12:45:17	MCW-D-ST73	Still	MCW-D-ST73_11	1107	-	657 373.9	6 206 836.9	657 342.8	6 206 845.6	32.3	-
24/10/2023	12:45:53	MCW-D-ST73	Still	MCW-D-ST73_12	1108	-	657 373.9	6 206 836.9	657 346.1	6 206 844.9	28.9	-
24/10/2023	12:46:38	MCW-D-ST73	Still	MCW-D-ST73_13	1109	-	657 373.9	6 206 836.9	657 350.7	6 206 843.8	24.2	-
24/10/2023	12:46:59	MCW-D-ST73	Still	MCW-D-ST73_14	1110	-	657 373.9	6 206 836.9	657 352.9	6 206 843.3	22.0	-
24/10/2023	12:47:15	MCW-D-ST73	Still	MCW-D-ST73_15	1111	-	657 373.9	6 206 836.9	657 354.5	6 206 842.5	20.2	-
24/10/2023	12:47:49	MCW-D-ST73	Still	MCW-D-ST73_16	1112	-	657 373.9	6 206 836.9	657 358.1	6 206 841.7	16.6	-
24/10/2023	12:48:05	MCW-D-ST73	Still	MCW-D-ST73_17	1113	-	657 373.9	6 206 836.9	657 359.6	6 206 841.2	14.9	-
24/10/2023	12:48:57	MCW-D-ST73	Still	MCW-D-ST73_18	1114	-	657 373.9	6 206 836.9	657 364.8	6 206 840.1	9.7	-
24/10/2023	12:49:38	MCW-D-ST73	Still	MCW-D-ST73_19	1115	-	657 373.9	6 206 836.9	657 368.9	6 206 839.7	5.7	-

Geodetic Parameters: ETRS89 / UTM Zone 29N [ETRF2000-ITRF2014] [2023.75] [m]												
Date	Time [UTC]	Transect/ Station	Type*	Sample Rep/ Still No.	Fix No.	Water Depth [m LAT]	Proposed Location		Actual Location		Offset [m]	Notes
							Easting	Northing	Easting	Northing		
24/10/2023	12:50:06	MCW-D-ST73	Still	MCW-D-ST73_20	1116	-	657 373.9	6 206 836.9	657 371.9	6 206 839.0	2.9	-
24/10/2023	12:50:42	MCW-D-ST73	Still	MCW-D-ST73_21	1117	-	657 373.9	6 206 836.9	657 375.6	6 206 838.0	2.0	-
24/10/2023	12:51:04	MCW-D-ST73	Still	MCW-D-ST73_22	1118	-	657 373.9	6 206 836.9	657 377.5	6 206 837.1	3.6	-
24/10/2023	12:51:31	MCW-D-ST73	Still	MCW-D-ST73_23	1119	-	657 373.9	6 206 836.9	657 379.8	6 206 836.0	6.0	-
24/10/2023	12:52:16	MCW-D-ST73	Still	MCW-D-ST73_24	1120	-	657 373.9	6 206 836.9	657 384.8	6 206 834.7	11.1	-
24/10/2023	12:53:08	MCW-D-ST73	Still	MCW-D-ST73_25	1121	-	657 373.9	6 206 836.9	657 389.4	6 206 834.3	15.7	-
24/10/2023	12:53:48	MCW-D-ST73	Still	MCW-D-ST73_26	1122	-	657 373.9	6 206 836.9	657 393.9	6 206 832.6	20.5	-
24/10/2023	12:54:18	MCW-D-ST73	Still	MCW-D-ST73_27	1123	-	657 373.9	6 206 836.9	657 397.2	6 206 831.8	23.8	-
24/10/2023	12:54:55	MCW-D-ST73	Still	MCW-D-ST73_28	1124	-	657 373.9	6 206 836.9	657 401.2	6 206 830.5	28.0	-
24/10/2023	12:55:18	MCW-D-ST73	Still	MCW-D-ST73_29	1125	-	657 373.9	6 206 836.9	657 403.4	6 206 829.9	30.3	-
24/10/2023	12:55:30	MCW-D-ST73	Still	MCW-D-ST73_30	1126	-	657 373.9	6 206 836.9	657 404.4	6 206 829.5	31.4	-
24/10/2023	12:55:51	MCW-D-ST73	Still	MCW-D-ST73_31	1127	-	657 373.9	6 206 836.9	657 406.9	6 206 829.0	34.0	-
24/10/2023	12:56:10	MCW-D-ST73	Still	MCW-D-ST73_32	1128	-	657 373.9	6 206 836.9	657 408.4	6 206 828.6	35.4	-
24/10/2023	12:56:48	MCW-D-ST73	Still	MCW-D-ST73_33	1129	-	657 373.9	6 206 836.9	657 411.6	6 206 828.0	38.7	-
24/10/2023	12:57:18	MCW-D-ST73	Still	MCW-D-ST73_34	1130	-	657 373.9	6 206 836.9	657 414.7	6 206 827.1	41.9	-
24/10/2023	12:58:33	MCW-D-ST73	Still	MCW-D-ST73_35	1131	-	657 373.9	6 206 836.9	657 422.2	6 206 825.5	49.6	-
24/10/2023	12:58:41	MCW-D-ST73	Still	MCW-D-ST73_36	1132	-	657 373.9	6 206 836.9	657 423.3	6 206 825.2	50.7	-
24/10/2023	12:59:15	MCW-D-ST73	Still	MCW-D-ST73_37	1133	-	657 373.9	6 206 836.9	657 427.2	6 206 824.7	54.7	-
24/10/2023	12:59:48	MCW-D-ST73	Still	MCW-D-ST73_38	1134	-	657 373.9	6 206 836.9	657 430.1	6 206 824.1	57.7	-
24/10/2023	13:00:20	MCW-D-ST73	Still	MCW-D-ST73_39	1135	-	657 373.9	6 206 836.9	657 433.1	6 206 823.1	60.8	-
24/10/2023	13:01:00	MCW-D-ST73	Video	EOL	1136	-	657 373.9	6 206 836.9	657 437.2	6 206 822.1	64.9	-
24/10/2023	13:34:23	MCW-D-ST73	DVV	PC/FA	1137	57	657 373.9	6 206 836.9	657 312.4	6 206 854.1	63.9	-

Notes  
 UTC = Coordinated Universal Time  
 LAT = Lowest Astronomical Tide  
 NF = No fix  
 SOL = Start of line  
 EOL = End of line  
 HG = Hamon grab  
 DVV = Dual van Veen grab  
 PC = Physico chemical sample  
 WS = Water sample  
 FA = Faunal sample A  
 NS = No sample



## C.2 Grab Log

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)				Comments (fauna, smell, bioturbation, debris)
						Depth [cm]	Sediment Type*	Sediment Description	Munsell Colour	
07/09/2023	13:20:36	MCW-A-ST02	NS	19	4.5	4.5	S	Sand	2.5Y 3/2	Sample taken at an angle
07/09/2023	13:20:36	MCW-A-ST02	NS	19	5	5	S	Sand	2.5Y 3/2	Sample taken at an angle
07/09/2023	13:27:59	MCW-A-ST02	FA	20	11	11	S	Sand	2.5Y 3/2	-
07/09/2023	13:27:59	MCW-A-ST02	PC	20	12.5	12.5	S	Sand	2.5Y 3/2	-
07/09/2023	15:43:26	MCW-A-ST01	FA	35	7.5	7.5	S	Sand	2.5Y 4/2	-
07/09/2023	15:43:26	MCW-A-ST01	NS	35	5	5	S	Sand	2.5Y 4/2	-
07/09/2023	15:53:20	MCW-A-ST01	PSD	36	7.5	7.5	S	Sand	2.5Y 4/2	-
07/09/2023	17:50:47	MCW-A-ST05	PC	53	8	8	S	Sand	2.5Y 4/2	-
07/09/2023	20:22:49	MCW-A-ST12	PC	70	12	12	S	Sand	2.5Y 3/2	-
07/09/2023	22:32:01	MCW-A-ST22	NS	89	5	5	S	Sand	5Y 4/2	Insufficient sample volume
07/09/2023	22:32:01	MCW-A-ST22	NS	89	5	5	S	Sand	5Y 4/2	Insufficient sample volume
07/09/2023	22:40:36	MCW-A-ST22	NS	90	5	5	S	Sand	5Y 4/2	Insufficient sample volume
07/09/2023	22:40:36	MCW-A-ST22	NS	90	5	5	S	Sand	5Y 4/2	Insufficient sample volume
07/09/2023	22:49:23	MCW-A-ST22	NS	91	5	5	S	Sand	5Y 4/2	Insufficient sample volume
07/09/2023	22:49:23	MCW-A-ST22	NS	91	0	0	-	-	-	Did not fire
07/09/2023	22:59:10	MCW-A-ST22	PC	92	7	7	S	Sand	5Y 4/2	-
08/09/2023	01:27:06	MCW-A-ST34	PC	109	10	10	S	Sand	2.5Y 4/3	-
08/09/2023	03:37:34	MCW-A-ST44A	FA	125	10	10	S	Sand	2.5Y 4/3	-
08/09/2023	03:37:34	MCW-A-ST44A	PSD	125	10	10	S	Sand	2.5Y 4/3	-
08/09/2023	05:29:44	MCW-A-ST55	PC	141	12	12	S	Sand	2.5Y 5/3	-
08/09/2023	08:07:04	MCW-A-ST36	PC	157	14	14	S	Sand	5Y 5/2	-

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)				Comments (fauna, smell, bioturbation, debris)
						Depth [cm]	Sediment Type*	Sediment Description	Munsell Colour	
08/09/2023	10:35:51	MCW-A-ST14	PC	173	12	12	S	Sand	2.5Y 5/3	-
08/09/2023	13:04:49	MCW-A-ST08A	PC	195	11	11	S	Coarse sand	2.5Y 5/4	-
08/09/2023	13:04:49	MCW-A-ST08A	NS	195	0	0	-	-	-	Pebble in jaws
08/09/2023	13:17:52	MCW-A-ST08A	FA	196	8	8	S	Coarse sand	2.5Y 5/4	-
08/09/2023	14:45:00	MCW-A-ST07A	FA	211	8.5	8.5	S	Sand	2.5Y 6/4	-
08/09/2023	14:45:00	MCW-A-ST07A	PC	211	8	8	S	Sand	2.5Y 6/4	-
08/09/2023	17:21:06	MCW-A-ST03	NS	226	5	5	S	Sand	-	Insufficient sample volume
08/09/2023	17:21:06	MCW-A-ST03	NS	226	5	5	S	Sand	-	Insufficient sample volume
08/09/2023	17:29:29	MCW-A-ST03	FA	227	8	8	S	Sand	2.5Y 3/2	-
08/09/2023	17:29:29	MCW-A-ST03	PSD	227	7	7	S	Sand	2.5Y 3/2	-
12/09/2023	18:17:01	MCW-C-ST20	FA	239	9.5	9.5	S	Sand	5Y 4/4	-
12/09/2023	18:17:01	MCW-C-ST20	PSD	239	9.5	9.5	S	Sand	5Y 4/4	-
12/09/2023	19:51:13	MCW-C-ST31	FA	253	8.5	8.5	S	Sand	2.5Y 4/4	-
12/09/2023	19:51:13	MCW-C-ST31	PSD	253	9	9	S	Sand	2.5Y 4/4	-
12/09/2023	21:00:27	MCW-C-ST32	FA	266	7.5	7.5	S	Sand	2.5Y 3/3	-
12/09/2023	21:00:27	MCW-C-ST32	PSD	266	8.5	8.5	S	Sand	2.5Y 3/3	-
12/09/2023	22:15:57	MCW-C-ST43	FA	279	10	10	S	Sand	2.5Y 4/3	-
12/09/2023	22:15:57	MCW-C-ST43	PSD	279	11	11	S	Sand	2.5Y 4/3	-
13/09/2023	00:29:49	MCW-C-ST42	FA	297	9	9	S	Sand	2.5Y 4/3	-
13/09/2023	00:29:49	MCW-C-ST42	PC	297	11	11	S	Sand	2.5Y 4/3	-
13/09/2023	03:41:47	MCW-C-ST51	PC	316	12	12	S	Sand	2.5Y 4/3	-
13/09/2023	05:06:19	MCW-C-ST52	FA	332	9	9	S	Sand	2.5Y 4/3	-

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)				Comments (fauna, smell, bioturbation, debris)
						Depth [cm]	Sediment Type*	Sediment Description	Munsell Colour	
13/09/2023	05:06:19	MCW-C-ST52	PSD	332	10	10	S	Sand	2.5Y 4/3	-
13/09/2023	06:52:02	MCW-C-ST53	FA	348	10	10	S	Sand	2.5Y 5/3	Damaged <i>A. islandica</i>
13/09/2023	06:52:02	MCW-C-ST53	NS	348	0	0	-	-	-	Shells in jaws, washout
13/09/2023	07:02:41	MCW-C-ST53	PC	349	10	10	S	Sand	2.5Y 5/3	-
13/09/2023	08:26:55	MCW-C-ST54	FA	365	11	11	S	Sand	2.5Y 5/3	<i>A. islandica</i> 9 cm - returned to sea
13/09/2023	08:26:55	MCW-C-ST54	PSD	365	12	12	S	Sand	2.5Y 5/3	-
16/09/2023	13:43:00	MCW-C-ST92	PC	384	8	8	S	Sand	2.5Y 5/3	Sandeels present
16/09/2023	17:35:00	MCW-C-ST77	PC	401	7.5	7.5	S	Sand	2.5Y 4/3	-
16/09/2023	22:23:00	MCW-C-ST41	PSD	436	13	13	S	Sand	2.5Y 5/2	Shell fragments
16/09/2023	22:23:00	MCW-C-ST41	FA	436	11	11	S	Sand	2.5Y 5/2	Shell fragments
17/09/2023	01:46:00	MCW-C-ST63	PC	451	13	13	S	Sand	2.5Y 4/3	-
17/09/2023	01:46:00	MCW-C-ST63	FA	451	11	11	S	Sand	2.5Y 4/3	-
17/09/2023	03:56:36	MCW-C-ST62	NS	466	11	11	S	Sand	2.5Y 4/3	<i>A. islandica</i> in jaws (crushed)
17/09/2023	03:56:36	MCW-C-ST62	NS	466	0	0	S	Sand	2.5Y 4/3	<i>A. islandica</i> in jaws (crushed)
17/09/2023	04:14:12	MCW-C-ST62	FA	467	11	11	S	Sand	2.5Y 4/3	-
17/09/2023	04:14:12	MCW-C-ST62	PSD	467	10	10	S	Sand	2.5Y 4/3	-
17/09/2023	05:39:59	MCW-C-ST71	NS	481	0	0	S	Sand	2.5Y 4/3	<i>A. islandica</i> shells in jaw, sample washout. Live <i>A. islandica</i> 9.8 cm (returned to sea)
17/09/2023	05:39:59	MCW-C-ST71	NS	481	11	11	S	Sand	2.5Y 4/3	<i>A. islandica</i> in jaws (crushed) and live <i>A. islandica</i> 9.5 cm (returned to sea). Some sample washed out.
17/09/2023	05:53:26	MCW-C-ST71	PSD	482	13	13	S	Sand	2.5Y 4/3	-



Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)				Comments (fauna, smell, bioturbation, debris)
						Depth [cm]	Sediment Type*	Sediment Description	Munsell Colour	
17/09/2023	05:53:26	MCW-C-ST71	NS	482	0	0	S	Sand	2.5Y 4/3	<i>A. islandica</i> in jaws, sample washout
17/09/2023	06:11:16	MCW-C-ST71	FA	483	11	11	S	Sand	2.5Y 4/3	<i>A. islandica</i> 8.1 cm (returned to sea)
17/09/2023	06:11:16	MCW-C-ST71	NS	483	0	0	S	Sand	2.5Y 4/3	Damaged <i>A. islandica</i> in jaws and live <i>A. islandica</i> 10 cm (returned to sea)
17/09/2023	08:51:17	MCW-C-ST70	FA	498	13	13	S	Sand	2.5Y 4/3	-
17/09/2023	08:51:17	MCW-C-ST70	PC	498	11	11	S	Sand	2.5Y 4/3	<i>A. islandica</i> 8.5 cm (returned to sea)
17/09/2023	19:35:00	MCW-C-ST79	PSD	514	7	7	S	Sand	2.5Y 4/3	Crushed <i>A. islandica</i> - grab jaws closed
17/09/2023	19:35:00	MCW-C-ST79	FA	514	8	8	S	Sand	2.5Y 4/3	-
17/09/2023	22:35:00	MCW-C-ST75	PC	533	11	11	S	Sand	2.5Y 4/3	-
23/09/2023	08:35:00	MCW-C-ST91	NS	551	0	0		-	-	Rock in jaws - switched to Hamon grab
23/09/2023	08:35:00	MCW-C-ST91	NS	551	0	0	-	-	-	-
23/09/2023	11:05:00	MCW-C-ST83	NS	574	0	0	-	Small pebbles	-	Ophiuroidea arms
23/09/2023	11:12:00	MCW-C-ST83	NS	575	0	0	-	Small pebbles	-	-
23/09/2023	11:22:00	MCW-C-ST83	NS	576	0	0	-	-	-	-
23/09/2023	12:17:00	MCW-C-ST91	PC	577	0.5	0	-	Coarse sand, shell fragments and pebbles	-	-
23/09/2023	12:27:00	MCW-C-ST91	NS	578	0.1	0	-	Coarse sand, shell fragments and cobbles	-	One large cobble
23/09/2023	12:34:00	MCW-C-ST91	NS	579	0	0	-	-	-	-
09/10/2023	09:05:00	MCW-B-ST57	PC	601	9	9	S	Sand	2.5Y 5/4	-
09/10/2023	11:49:00	MCW-B-ST59A	PC	619	9	9	S	Sand with shell fragments	2.5Y 4/2	-

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)				Comments (fauna, smell, bioturbation, debris)
						Depth [cm]	Sediment Type*	Sediment Description	Munsell Colour	
15/10/2023	15:33:12	MCW-B-ST38A	PC	648	10	10	S	Sand	2.5Y 4/2	-
15/10/2023	15:33:12	MCW-B-ST38A	PC	648	9	9	S	Sand	2.5Y 4/2	-
15/10/2023	17:54:00	MCW-B-ST28	PC	673	11	11	S	Sand	2.5Y 4/2	-
15/10/2023	17:54:00	MCW-B-ST28	PC	673	10	10	S	Sand	2.5Y 4/2	-
15/10/2023	19:22:56	MCW-B-ST29A	PSD	699	10	10	S	Sand	2.5Y 4/2	-
15/10/2023	19:22:56	MCW-B-ST29A	FA	699	11	11	S	Sand	2.5Y 4/2	-
15/10/2023	21:17:45	MCW-B-ST30A	PC	723	10	10	S	Sand	2.5Y 4/2	-
15/10/2023	21:17:45	MCW-B-ST30A	FA	723	10	10	S	Sand	2.5Y 4/2	-
15/10/2023	23:35:06	MCW-B-ST19A	PSD	749	8.5	8.5	S	Sand	2.5Y 4/2	-
15/10/2023	23:35:06	MCW-B-ST19A	FA	749	9.5	9.5	S	Sand	2.5Y 4/2	-
16/10/2023	02:20:06	MCW-B-ST18A	PC	770	7	7	S	Sand	2.5Y 4/2	-
16/10/2023	02:20:06	MCW-B-ST18A	FA	770	7.5	7.5	S	Sand	2.5Y 4/2	-
16/10/2023	03:45:51	MCW-B-ST17A	PC	783	9.5	9.5	S	Sand	2.5Y 4/2	-
16/10/2023	03:45:51	MCW-B-ST17A	FA	783	10	10.0	S	Sand	2.5Y 4/2	-
16/10/2023	05:25:42	MCW-B-ST10	PSD	798	9	9	S	Sand	2.5Y 4/2	-
16/10/2023	05:25:42	MCW-B-ST10	FA	798	9	9	S	Sand	2.5Y 4/2	-
16/10/2023	07:07:21	MCW-B-ST09A	PSD	820	10	10	mS	Muddy sand	2.5Y 4/2	-
16/10/2023	07:07:21	MCW-B-ST09A	FA	820	9.5	9.5	mS	Muddy sand	2.5Y 4/2	-
17/10/2023	02:37:14	MCW-D-ST103A	PSD	831	9	9	S	Sand	2.5Y 4.4	-
17/10/2023	02:37:14	MCW-D-ST103A	FA	831	8	8	S	Sand	2.5Y 4.4	-
17/10/2023	05:42:46	MCW-D-ST100A	PC	848	13	13	G	Gravel	2.5Y 5.6	-
17/10/2023	05:42:46	MCW-D-ST100A	FA	848	11.3	11.3	G	Gravel	2.5Y 5.6	-

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)				Comments (fauna, smell, bioturbation, debris)
						Depth [cm]	Sediment Type*	Sediment Description	Munsell Colour	
22/10/2023	22:00:26	MCW-D-ST64	PSD	873	10	10	S	Sand	2.5Y 4/3	-
22/10/2023	22:00:26	MCW-D-ST64	FA	873	9	9	S	Sand	2.5Y 4/3	-
22/10//2023	00:19:10	MCW-D-ST72A	PSD	889	7.5	7.5	mS	Muddy sand	2.5Y 4/4	-
22/10//2023	00:19:10	MCW-D-ST72A	FA	889	7.5	7.5	mS	Muddy sand	2.5Y 4/4	-
23/10/2023	01:59:31	MCW-D-ST81	PSD	902	8	8	mS	Muddy sand	2.5Y 4/4	-
23/10/2023	01:59:31	MCW-D-ST81	FA	902	8.5	8.5	mS	Muddy sand	2.5Y 4/4	-
23/10/2023	04:31:45	MCW-D-ST80	PC	923	8.5	8.5	mS	Muddy sand	2.5Y 4/3	-
23/10/2023	04:31:45	MCW-D-ST80	FA	923	6.5	6.5	mS	Muddy sand	2.5Y 4/3	-
23/10/2023	06:58:28	MCW-D-ST86A	PC	938	11	11	S	Sand	2.5Y 5/4	-
23/10/2023	09:56:26	MCW-D-ST104	PC	960	NS	NS	S	Sand	2.5Y 6/6	-
23/10/2023	09:56:26	MCW-D-ST104	PC	960	11	11	S	Sand	2.5Y 6/6	-
23/10/2023	12:41:59	MCW-D-ST108A	PC	986	7	7	gS	Gravelly sand	2.5Y 6/3	-
23/10/2023	14:40:34	MCW-D-ST101	PSD	1007	14	14	S	Sand	10YR 6/4	-
23/10/2023	14:40:34	MCW-D-ST101	FA	1007	17	17	S	Sand	10YR 6/4	-
23/10/2023	16:40:21	MCW-D-ST95A	PC	1029	-	-	-	-	-	-
24/10/2023	07:45:25	MCW-D-ST88A	PSD	1045	8	8	S	Sand	2.5Y 5/4	-
24/10/2023	07:45:25	MCW-D-ST88A	FA	1045	8	8	S	Sand	2.5Y 5/4	-
24/10/2023	09:05:24	MCW-D-ST89A	PSD	1056	11	11	S	Sand	2.5Y 5/4	-
24/10/2023	09:05:24	MCW-D-ST89A	FA	1056	12	12	S	Sand	2.5Y 5/4	-
24/10/2023	11:41:20	MCW-D-ST82	PC	1095	14	14	S	Sand	2.5Y 5/3	-
24/10/2023	11:41:20	MCW-D-ST82	FA	1095	10	10	S	Sand	2.5Y 5/2	-
24/10/2023	13:34:23	MCW-D-ST73	PSD	1137	12	12	S	Sand	5YR 5/2	-

Date	Time [UTC]	Station	Sample Rep	Fix No.	Sample Depth [cm]	Sediment Description (including stratigraphy)				Comments (fauna, smell, bioturbation, debris)
						Depth [cm]	Sediment Type*	Sediment Description	Munsell Colour	
24/10/2023	13:34:23	MCW-D-ST73	FA	1137	11	11	S	Sand	5YR 5/2	-

Notes  
 UTC = Coordinated Universal Time  
 NS = No sample  
 PC = Physico-chemical sample  
 PSD = Particle size distribution  
 FA = Faunal sample A

### C.3 Photographic Log

Geodetic Parameters: ETRS89 / UTM Zone 29N [m]													
Date	Transect/Station	Section	Start of Line			End of line			Length	Still Nos.	Sediment Description	Fauna/Bioturbation/Debris	Habitat Classification (JNCC)
			Time [UTC]	Easting	Northing	Time [UTC]	Easting	Northing					
07/09/2023	MCW-A-ST01	MCW-A-ST01	14:29:07	641 119.6	6 225 432.2	14:38:11	641 155.5	6 225 389.5	55.8	MCW-A-ST01_01 to MCW-A-ST01_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs with associated anemones (Paguroidea with associated Actiniaria), fish (Osteichthyes inc. <i>Callionymus</i> sp.). Faunal burrows, casts and tubes	Offshore circalittoral sand (SS.SSa.Osa)
07/09/2023	MCW-A-ST02	MCW-A-ST02	12:07:14	643 864.3	6 225 561.8	12:19:01	643 890.9	6 225 512.1	56.3	MCW-A-ST02_01 to MCW-A-ST02_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. brittlestar (Ophiuroidea), hermit crab (Paguroidea), fish (Osteichthyes inc. <i>Callionymus</i> sp.), thornback ray ( <i>Raja clavata</i> ). Faunal burrows, casts and tubes	Offshore circalittoral sand (SS.SSa.Osa)
08/09/2023	MCW-A-ST03	MCW-A-ST03	16:37:46	646 751.4	6 225 373.9	16:47:24	646 762.3	6 225 315.4	59.4	MCW-A-ST03_01 to MCW-A-ST03_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. soft coral ( <i>Alcyonium digitatum</i> ), polychaete worm (Polychaeta), starfish ( <i>Astropecten irregularis</i> ), brittlestar (Ophiuridae inc. <i>Ophiura ophiura</i> ), hermit crab (Paguroidea), bryozoan (Flustridae), fish (Osteichthyes inc. <i>Callionymus</i> sp.). Faunal burrows, casts and tubes. Possible <i>Arctica islandica</i> shell in sediment	Offshore circalittoral sand (SS.SSa.Osa)
07/09/2023	MCW-A-ST05	MCW-A-ST05	17:01:30	638 498.6	6 223 011.3	17:10:42	638 495.0	6 222 954.4	57.0	MCW-A-ST05_01 to MCW-A-ST05_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. anemone (Anthozoa), hermit crab (Paguroidea), possible ocean quahog siphons ( <i>Arctica islandica</i> ). Faunal tubes, casts and burrows	Offshore circalittoral sand (SS.SSa.Osa)
08/09/2023	MCW-A-ST07A	MCW-A-ST07A	14:12:56	643 944.6	6 223 040.6	14:22:20	643 891.0	6 223 017.0	58.5	MCW-A-ST07A_01 to MCW-A-ST07A_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. starfish (Asteroidea), brittlestars (Ophiuridae), hermit crab with associated faunal turf (Paguroidea with associated Hydractiniidae). Faunal burrows, tracks, casts and tubes. <i>Arctica islandica</i> shell in sediment	Offshore circalittoral sand (SS.SSa.Osa)
08/09/2023	MCW-A-ST08A	MCW-A-ST08A_1	12:13:57	645 659.5	6 221 867.8	12:18:23	645 654.4	6 221 840.7	27.6	MCW-A-ST08A_01 to MCW-A-ST08A_09	Coarse sediment including shell hash, sand, gravel, and cobbles with small scale ripples	Sparse fauna inc. soft coral ( <i>Alcyonium digitatum</i> ), cup corals (Caryophylliidae), crab ( <i>Atelecyclus rotundatus</i> ), faunal turf (Hydrozoa/Bryozoa), barnacles (Sessilia), serpulid worms (Serpulidae), fish (Osteichthyes inc. <i>Callionymus</i> sp. and Gadidae)	Offshore circalittoral coarse sediment (SS.SCS.OCS)
		MCW-A-ST08A_2	12:18:23	645 654.4	6 221 840.7	12:24:23	645 647.0	6 221 804.0	37.4	MCW-A-ST08A_10 to MCW-A-ST08A_17	Slightly gravelly sand with small scale ripples, shell fragments and cobbles	Sparse fauna inc. soft coral ( <i>Alcyonium digitatum</i> ), barnacles (Sessilia), cup coral (Caryophylliidae), tube anemone (Ceriantharia), hermit crab (Paguroidea), bryozoan (Flustridae), faunal turf (Hydrozoa/Bryozoa). Fish (Osteichthyes inc. <i>Callionymus</i> sp.), flatfish (Pleuronectiformes)	Offshore circalittoral coarse sediment (SS.SCS.OCS)
07/09/2023	MCW-A-ST12	MCW-A-ST12	19:37:29	636 002.9	6 220 270.2	19:48:05	636 004.6	6 220 206.9	63.4	MCW-A-ST12_01 to MCW-A-ST12_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), sea snail (Gastropoda). Fish (Osteichthyes inc. ?Gobiidae), flatfish (Pleuronectiformes inc. Soleidae). Faunal burrows, casts and tubes. Possible <i>Arctica islandica</i> shell in sediment	Offshore circalittoral sand (SS.SSa.Osa)
08/09/2023	MCW-A-ST14	MCW-A-ST14	09:41:24	640 982.6	6 220 520.5	09:49:45	640 976.4	6 220 468.8	52.0	MCW-A-ST14_01 to MCW-A-ST14_12	Sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab ( <i>Pagurus prideaux</i> and associated <i>Calliactis palliata</i> ), flatfish (Pleuronectiformes) Faunal tubes	Offshore circalittoral sand (SS.SSa.Osa)

Geodetic Parameters: ETRS89 / UTM Zone 29N [m]													
Date	Transect/ Station	Section	Start of Line			End of line			Length	Still Nos.	Sediment Description	Fauna/Bioturbation/Debris	Habitat Classification (JNCC)
			Time [UTC]	Easting	Northing	Time [UTC]	Easting	Northing					
07/09/2023	MCW-A-ST22	MCW-A-ST22	21:42:45	630 633.6	6 217 717.1	21:52:34	630 622.6	6 217 656.5	61.6	MCW-A-ST22_01 to MCW-A-ST22_13	Slightly gravelly sand with small scale ripples and shell fragments	Possible sponge (?Porifera), soft coral ( <i>Alcyonium digitatum</i> ), anemone (Hormathiidae), possible sea cucumber (?Holothuroidea), hermit crab ( <i>Pagurus prideaux</i> and associated <i>Calliactis palliata</i> ), faunal turf (Hydrozoa/Bryozoa), fish (Osteichthyes inc. Gadidae, <i>Callionymus</i> sp. and ? <i>Scomber</i> sp.), flatfish (Pleuronectiformes, inc. Soleidae and <i>Buglossidium luteum</i> ). Faunal casts, tubes and tracks	Offshore circalittoral sand (SS.SSa.Osa)
08/09/2023	MCW-A-ST34	MCW-A-ST34	00:27:15	633 130.5	6 215 215.3	00:36:35	633 088.2	6 215 176.5	57.4	MCW-A-ST34_01 to MCW-A-ST34_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. starfish ( <i>Asterias rubens</i> ), hermit crab (Paguroidea), squid (Cephalopoda inc. Loliginidae and <i>Sepiolo</i> sp.), fish (Osteichthyes inc. Gadidae and ?Triglidae), flatfish (Pleuronectiformes inc. Soleidae and <i>Buglossidium luteum</i> ). Faunal casts	Offshore circalittoral sand (SS.SSa.Osa)
08/09/2023	MCW-A-ST36	MCW-A-ST36	07:04:17	638 876.7	6 214 834.3	07:13:02	638 863.1	6 214 781.9	54.1	MCW-A-ST36_01 to MCW-A-ST36_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. starfish ( <i>Astropecten irregularis</i> ), sandeels (Ammodytidae), fish (Osteichthyes)	Offshore circalittoral sand (SS.SSa.Osa)
08/09/2023	MCW-A-ST44A	MCW-A-ST44A_1	03:08:12	630 639.4	6 212 685.9	03:15:18	630 597.2	6 212 700.0	44.4	MCW-A-ST44A_01 to MCW-A-ST44A_11	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs (Paguroidea), crab (Brachyura), squid (Loliginidae and <i>Sepiolo</i> sp.), bryozoan ( <i>Flustra foliacea</i> ), krill (Euphausiacea), flatfish (Pleuronectiformes)	Offshore circalittoral sand (SS.SSa.Osa)
		MCW-A-ST44A_2	03:15:18	630 597.2	6 212 700.0	03:17:33	630 583.8	6 212 704.4	14.1	MCW-A-ST44A_12 to MCW-A-ST44A_14	Gravelly sand with shell fragments	Sparse fauna inc. hermit crab ( <i>Pagurus prideaux</i> and associated <i>Calliactis palliata</i> ), fish (Osteichthyes), flatfish (Pleuronectiformes). Anthropogenic debris (chord or rope)	Offshore circalittoral coarse sediment (SS.SCS.OCS)
08/09/2023	MCW-A-ST55	MCW-A-ST55	04:35:51	633 382.5	6 209 770.4	04:44:30	633 405.9	6 209 723.2	52.6	MCW-A-ST55_01 to MCW-A-ST55_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), faunal turf (Hydrozoa/Bryozoa), fish (Osteichthyes inc. Gadidae, Triglidae and <i>Merlangius merlangus</i> ), flatfish (Pleuronectiformes inc. Soleidae). Faunal tracks and tubes	Offshore circalittoral sand (SS.SSa.Osa)
16/10/2023	MCW-B-ST09A	MCW-B-ST09A	06:27:57	650 116.9	6 222 911.4	06:47:25	650 013.4	6 222 871.7	110.8	MCW-B-ST09A_01 to MCW-B-ST09A_16	Slightly gravelly muddy sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura inc. <i>Cancer pagurus</i> , <i>Liocarcinus</i> sp. and ? <i>Goneplax rhomboides</i> ), hermit crabs (Paguroidea), starfish (Asteroidea inc. <i>Astropecten irregularis</i> ), brittlestar (Ophiuroidea), shrimp (Caridea), fish (Osteichthyes inc. Clupeidae and Gadidae), sandeels (Ammodytidae), flatfish (Pleuronectiformes). Elasmobranch egg cases (Chondrichthyes). Algae ( <i>Laminaria</i> sp. debris and Rhodophyta debris). Faunal burrows, tubes and casts. Anthropogenic debris (crab pot)	Offshore circalittoral sand (SS.SSa.Osa)
16/10/2023	MCW-B-ST010	MCW-B-ST010	04:51:35	652 151.9	6 222 703.7	05:09:40	652 088.1	6 222 619.9	105.3	MCW-B-ST10_01 to MCW-B-ST10_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. bivalves ( <i>Bivalvia</i> inc. ? <i>Arctica islandica</i> ), squid (Loliginidae), hermit crab (Paguroidea), starfish (Asteroidea inc. <i>Luidia sarsi</i> ), polychaete worms (Polychaeta), fish (Osteichthyes inc. Gadidae, Clupeidae, Callionymidae, Triglidae, <i>Clupea harengus</i> ), sandeels (Ammodytidae), flatfish (Pleuronectiformes Soleidae inc. <i>Microchirus variegatus</i> ). Faunal tracks, casts and tubes	Offshore circalittoral sand (SS.SSa.Osa)
16/10/2023	MCW-B-ST017A	MCW-B-ST017A	03:07:59	649 187.5	6 220 216.9	03:25:48	649 122.9	6 220 136.9	102.8	MCW-B-ST17A_01 to MCW-B-ST17A_10	Sand with small scale ripples and shell fragments	Sparse fauna inc. starfish ( <i>Astropecten irregularis</i> ), hermit crabs (Paguroidea), fish (Osteichthyes inc. Triglidae, Gadidae, <i>Scomber scombrus</i> , <i>Clupea harengus</i> ), flatfish (Pleuronectiformes inc. Soleidae and <i>Pleuronectes platessa</i> ). Empty <i>Arctica islandica</i> shell. Algae (Rhodophyta debris). Faunal casts and tracks	Offshore circalittoral sand (SS.SSa.Osa)

Geodetic Parameters: ETRS89 / UTM Zone 29N [m]													
Date	Transect/ Station	Section	Start of Line			End of line			Length	Still Nos.	Sediment Description	Fauna/Bioturbation/Debris	Habitat Classification (JNCC)
			Time [UTC]	Easting	Northing	Time [UTC]	Easting	Northing					
16/10/2023	MCW-B-ST018A	MCW-B-ST018A	00:58:49	651 412.7	6 220 771.5	01:19:09	651 335.2	6 220 687.3	114.5	MCW-B-ST18A_01 to MCW-B- ST18A_16	Slightly gravelly sand with small scale ripples and shell fragments	Burrowing anemones (Anthozoa inc. Halcampoides and Ceriantharia), possible cephalopod (Cephalopoda), starfish (Asteroidea inc. <i>Astropecten irregularis</i> ), crab ( <i>Liocarcinus</i> sp.), hermit crab (Paguroidea), fish (Osteichthyes inc. Gadidae, Callionymidae, <i>Clupea harengus</i> ), flatfish (Pleuronectiformes inc. Soleidae, <i>Limanda limanda</i> and <i>Microchirus variegatus</i> ). Faunal tracks, tubes and casts. Empty <i>Arctica islandica</i> shell.	Offshore circalittoral sand (SS.SSa.Osa)
15/10/2023	MCW-B-ST019A	MCW-B-ST019A	22:21:51	654 910.7	6 219 719.9	22:40:31	654 911.1	6 219 834.7	114.8	MCW-B-ST19A_01 to MCW-B- ST19A_24	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs with associated faunal turf (Paguroidea with associated Hydractiniidae), Shrimp (Caridea), fish (Osteichthyes inc. Gobiidae), flatfish (Pleuronectiformes). Algae (Rhodophyta debris). Faunal casts	Offshore circalittoral sand (SS.SSa.Osa)
15/10/2023	MCW-B-ST28	MCW-B-ST28	16:59:08	646 381.0	6 217 841.8	17:15:40	646 298.0	6 217 783.6	101.4	MCW-B-ST28_01 to MCW-B- ST28_20	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs with associated faunal turf and anemones (Paguroidea with associated Hydractiniidae and <i>Pagurus prideaux</i> with associated <i>Calliactis palliata</i> ), possible tunicate (Asciacea), spoonworm ( <i>Echiura</i> possibly <i>Maxmuelleria</i> sp.), starfish (Asteroidea), brittlestars (Ophiuroidea inc. <i>Ophiura ophiura</i> ), crab ( <i>Liocarcinus</i> sp.), bryozoans (unattached <i>Flustra foliacea</i> ), fish (Osteichthyes inc. Gobiidae, Callionymidae and Triglidae), flatfish (Pleuronectiformes). Algae (Rhodophyta debris). Faunal casts and tubes. Empty <i>Arctica islandica</i> shell.	Offshore circalittoral sand (SS.SSa.Osa)
15/10/2023	MCW-B-ST29A	MCW-B-ST29A	18:43:48	649 612.9	6 217 240.6	19:03:10	649 492.7	6 217 236.7	120.3	MCW-B-ST29A_01 to MCW-B- ST29A_22	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. starfish (Asteroidea inc. <i>Luidia sarsi</i> ), brittlestar (Ophiuroidea), hermit crab (Paguroidea), crab ( <i>Cancer pagurus</i> ), fish (Osteichthyes inc. Gadidae, <i>Scomber scombrus</i> ), sand eels (Ammodytidae), flatfish (Pleuronectiformes inc. Soleidae). Faunal tracks, casts and tubes	Offshore circalittoral sand (SS.SSa.Osa)
15/10/2023	MCW-B-ST30A	MCW-B-ST30A	20:19:27	652 172.8	6 217 411.6	20:37:05	652 112.3	6 217 501.2	108.1	MCW-B-ST30A_01 to MCW-B- ST30A_18	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. starfish (Asteroidea inc. <i>Luidia sarsi</i> and <i>Astropecten irregularis</i> ), polychaete worms (Polychaeta), squid (Loliginidae), fish (Osteichthyes inc. Callionymidae, Gadidae, Gobiidae, <i>Scomber scombrus</i> , <i>Trisopterus</i> sp. and <i>Merlangius merlangus</i> ), sand eels (Ammodytidae), flatfish (Pleuronectiformes). Faunal casts and tracks. Empty <i>Arctica islandica</i> shell	Offshore circalittoral sand (SS.SSa.Osa)
15/10/2023	MCW-B-ST38A	MCW-B-ST38A	13:46:49	644 192.7	6 214 646.5	14:04:53	644 087.4	6 214 668.1	107.5	MCW-B-ST38A_01 to MCW-B- ST38A_25	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), possible tunicate (?Asciacea), squid (Loliginidae), starfish ( <i>Astropecten irregularis</i> ), bryozoans (Flustrina), fish (Osteichthyes inc. Gobiidae, Callionymidae). Faunal casts, tubes and tracks	Offshore circalittoral sand (SS.SSa.Osa)
09/10/2023	MCW-B-ST57	MCW-B-ST57	07:35:51	638 413.9	6 209 784.4	07:47:30	638 382.7	6 209 844.6	67.8	MCW-B-ST57_01 to MCW-B- ST57_11	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), crab ( <i>Corystes cassivelaunus</i> ), fish (Osteichthyes inc. Callionymidae, Gadidae, <i>Scomber scombrus</i> and <i>Clupea harengus</i> ), sand eels (Ammodytidae)	Offshore circalittoral sand (SS.SSa.Osa)
			07:47:30	638 382.7	6 209 844.6	07:49:48	638 376.8	6 209 856.8	13.6	MCW-B-ST57_12 to MCW-B- ST57_14	Gravelly sand with shell fragments	Sparse fauna inc. hermit crab (Paguroidea), faunal turf (Bryozoa/Hydrozoa), fish (Osteichthyes inc. <i>Scomber scombrus</i> )	Offshore circalittoral coarse sediment (SS.SCS.OCS)
			07:49:48	638 376.8	6 209 856.8	07:54:20	638 364.0	6 209 882.0	28.3	MCW-B-ST57_15 to MCW-B- ST57_19	Sand with small scale ripples and shell fragments	Sparse fauna inc. fish (Osteichthyes inc. Callionymidae, Gadidae)	Offshore circalittoral sand (SS.SSa.Osa)



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			Time [UTC]	Easting	Northing	Time [UTC]	Easting	Northing					
09/10/2023	MCW-B-ST59A	MCW-B-ST59A	10:12:32	643 527.5	6 210 197.0	10:31:36	643 420.9	6 210 170.9	109.7	MCW-B-ST59A_01 to MCW-B- ST59A_15	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. possible brittlestar (Ophiuroidea), hermit crab (Paguroidea), fish (Osteichthyes). Faunal casts and tubes. Empty <i>Arctica islandica</i> shells (observed throughout transect)	Offshore circalittoral sand (SS.SSa.Osa)
12/09/2023	MCW-C-ST20	MCW-C-ST20	17:41:20	657 510.3	6 219 953.6	17:52:12	657 467.3	6 220 004.7	66.8	MCW-C-ST20_01 to MCW-C- ST20_10	Slightly gravelly sand with small scale ripples and shell fragments and sporadic cobbles	Sparse fauna inc. possible ocean quahog ( <i>Arctica islandica</i> ), hermit crab (Paguroidea), fish (Osteichthyes inc. Callionymidae)	Offshore circalittoral sand (SS.SSa.Osa)
12/09/2023	MCW-C-ST31	MCW-C-ST31	19:23:49	654 524.4	6 217 459.8	19:34:12	654 515.0	6 217 522.5	63.4	MCW-C-ST31_01 to MCW-C- ST31_10	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), starfish ( <i>Astropecten irregularis</i> ), faunal turf (Hydrozoa/Bryozoa), flatfish (Soleidae)	Offshore circalittoral sand (SS.SSa.Osa)
12/09/2023	MCW-C-ST32	MCW-C-ST32	20:36:19	657 077.1	6 217 652.1	20:46:06	657 082.7	6 217 713.0	61.2	MCW-C-ST32_01 to MCW-C- ST32_10	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. fish (Osteichthyes inc. Gadidae, Callionymidae, <i>Scomber scombrus</i> ). Faunal tracks and burrows	Offshore circalittoral sand (SS.SSa.Osa)
16/09/2023	MCW-C-ST41	MCW-C-ST41	21:43:06	651 608.4	6 215 065.2	21:52:03	651 653.3	6 215 095.2	54.0	MCW-C-ST41_01 to MCW-C- ST41_10	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura), starfish ( <i>Luidia ciliaris</i> ), squid (Loliginidae), fish (Osteichthyes)	Offshore circalittoral sand (SS.SSa.Osa)
			21:52:03	651 653.3	6 215 095.2	22:06:34	651 725.9	6 215 148.4	90.0	MCW-C-ST41_11 to MCW-C- ST41_30	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura inc. ?Inachida), hermit crab (Paguroidea), starfish (Asteroidea), squid (Loliginidae), faunal turf (Hydrozoa/Bryozoa), fish (Osteichthyes inc. Callionymidae, Gadidae), flatfish (Pleuronectiformes inc. Soleidae)	Offshore circalittoral sand (SS.SSa.Osa)
12/09/2023	MCW-C-ST42	MCW-C-ST42	23:32:20	654 566.3	6 214 919.6	23:42:01	654 608.2	6 214 962.5	59.9	MCW-C-ST42_01 to MCW-C- ST42_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. brittlestars (Ophiuroidea), squid (Loliginidae), fish (Osteichthyes inc. Triglidae), flatfish (Pleuronectiformes). Faunal tracks and burrows	Offshore circalittoral sand (SS.SSa.Osa)
12/09/2023	MCW-C-ST43	MCW-C-ST43	21:47:55	657 099.2	6 215 064.9	21:57:32	657 112.5	6 215 123.3	59.9	MCW-C-ST43_01 to MCW-C- ST43_10	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crab ( <i>Cancer pagurus</i> ), hermit crabs (Paguroidea), starfish ( <i>Astropecten irregularis</i> ), fish (Osteichthyes), flatfish (Pleuronectiformes)	Offshore circalittoral sand (SS.SSa.Osa)
13/09/2023	MCW-C-ST51	MCW-C-ST51	02:47:02	649 241.1	6 212 426.3	02:56:43	649 206.5	6 212 376.2	60.8	MCW-C-ST51_01 to MCW-C- ST51_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura), hermit crabs (Paguroidea), squid (Loliginidae), fish (Osteichthyes inc. Callionymidae), flatfish (Pleuronectiformes). Faunal casts and burrows. Empty <i>Arctica islandica</i> shells. Faunal tracks and tubes	Offshore circalittoral sand (SS.SSa.Osa)
13/09/2023	MCW-C-ST52	MCW-C-ST52	04:37:02	651 655.7	6 212 473.4	04:46:40	651 603.1	6 212 444.1	60.2	MCW-C-ST52_01 to MCW-C- ST52_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs (Paguroidea), brittlestars (Ophiuroidea), starfish ( <i>Astropecten irregularis</i> ), ray (Rajiformes), flatfish (Pleuronectiformes inc. <i>Pleuronectes platessa</i> and <i>?Microchirus variegatus</i> ), red gurnard ( <i>Chelidonichthys cuculus</i> ). Faunal tracks and casts	Offshore circalittoral sand (SS.SSa.Osa)
13/09/2023	MCW-C-ST53	MCW-C-ST53	06:20:59	654 496.4	6 212 296.0	06:31:16	654 508.1	6 212 233.7	63.4	MCW-C-ST53_01 to MCW-C- ST53_13	Slightly gravelly sand with small scale ripples and shell fragments and sporadic cobbles	Sparse fauna inc. crab (Brachyura), starfish ( <i>Asterias rubens</i> ), flatfish (Pleuronectiformes)	Offshore circalittoral sand (SS.SSa.Osa)
13/09/2023	MCW-C-ST54	MCW-C-ST54	07:58:09	657 295.1	6 212 408.4	08:07:32	657 296.2	6 212 350.7	57.8	MCW-C-ST54_01 to MCW-C- ST54_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. fish (Osteichthyes). Faunal tracks and casts	Offshore circalittoral sand (SS.SSa.Osa)

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			Time [UTC]	Easting	Northing	Time [UTC]	Easting	Northing					
17/09/2023	MCW-C-ST62	MCW-C-ST62	03:22:52	651 792.6	6 209 616.5	03:35:45	651 816.2	6 209 560.7	60.7	MCW-C-ST62_01 to MCW-C-ST62_15	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crab (Brachyura), hermit crab (Paguroidea), starfish (Asteroidea), bryozoan (unattached <i>Flustra foliacea</i> ), fish (Osteichthyes inc. Callionymidae, <i>Chelidonichthys cuculus</i> ), flatfish (Pleuronectiformes). Empty <i>Arctica islandica</i> shells	Offshore circalittoral sand (SS.SSa.Osa)
17/09/2023	MCW-C-ST63	MCW-C-ST63	00:36:03	654 466.3	6 209 648.3	00:46:20	654 524.6	6 209 640.5	58.8	MCW-C-ST63_01 to MCW-C-ST63_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs (Paguroidea), starfish ( <i>Astropecten irregularis</i> ), polychaete worm (Polychaeta), hydroid/bryozoan (Hydrozoa/Bryozoa), fish (Osteichthyes inc. Gadidae, Triglidae), flatfish (Pleuronectiformes). Empty <i>Arctica islandica</i> shells	Offshore circalittoral sand (SS.SSa.Osa)
17/09/2023	MCW-C-ST70	MCW-C-ST70	07:41:26	649 490.5	6 206 785.2	07:51:58	649 541.9	6 206 757.4	58.4	MCW-C-ST70_01 to MCW-C-ST70_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crab (Brachyura inc. <i>Atelecyclus rotundatus</i> ), polychaete worm (Polychaeta), faunal turf (Hydrozoa/Bryozoa). Empty <i>Arctica islandica</i> shells	Offshore circalittoral sand (SS.SSa.Osa)
17/09/2023	MCW-C-ST71	MCW-C-ST71	05:09:51	651 617.7	6 207 254.9	05:21:18	651 599.1	6 207 192.7	64.9	MCW-C-ST71_01 to MCW-C-ST71_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), starfish ( <i>Asterias rubens</i> ), faunal turf (Hydrozoa/Bryozoa), fish (Osteichthyes inc. Callionymidae), flatfish (Pleuronectiformes). Empty <i>Arctica islandica</i> shells	Offshore circalittoral sand (SS.SSa.Osa)
17/09/2023	MCW-C-ST75	MCW-C-ST75	21:46:19	638 730.6	6 204 211.3	21:55:21	638 707.4	6 204 262.7	56.4	MCW-C-ST75_01 to MCW-C-ST75_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs (Paguroidea), squid (Loliginidae), flatfish (Pleuronectiformes inc. <i>Pleuronectes platessa</i> ), gadoid fish (Gadidae possibly <i>Trisopterus</i> sp.)	Offshore circalittoral sand (SS.SSa.Osa)
16/09/2023	MCW-C-ST77	MCW-C-ST77	16:52:41	644 161.0	6 204 241.8	17:01:37	644 126.4	6 204 198.7	55.2	MCW-C-ST77_01 to MCW-C-ST77_14	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs (Paguroidea)	Offshore circalittoral sand (SS.SSa.Osa)
17/09/2023	MCW-C-ST79	MCW-C-ST79	19:08:33	649 121.6	6 204 505.9	19:17:55	649 108.3	6 204 449.6	57.9	MCW-C-ST79_01 to MCW-C-ST79_13	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crab (Brachyura), plaice ( <i>Pleuronectes platessa</i> ), pogge ( <i>Agonus cataphractus</i> ). Empty <i>Arctica islandica</i> shells, possible <i>Arctica islandica</i> siphons	Offshore circalittoral sand (SS.SSa.Osa)
23/09/2023	MCW-C-ST83	MCW-C-ST83	09:33:51	638 745.9	6 201 691.6	09:44:19	638 780.5	6 201 642.1	60.3	MCW-C-ST83_01 to MCW-C-ST83_19	Coarse sediment with cobbles and boulders, interspersed with sand	Fauna dominated by brittlestars (Ophiuroidea inc. <i>Ophiothrix fragilis</i> ). Other fauna observed inc. edible crab ( <i>Cancer pagurus</i> ), hermit crabs with associated anemones ( <i>Pagurus prideaux</i> with associated <i>Calliactis palliata</i> ), squat lobster (Galatheididae), anemones (Actiniaria), seven-armed starfish ( <i>Luidia ciliaris</i> ), sea snail ( <i>Calliostoma</i> sp.), sea urchin ( <i>Echinus esculentus</i> ), sea squirts (Asciidiacea), soft coral ( <i>Alcyonium digitatum</i> ), cup corals (Caryophylliidae), serpulid worms ( <i>Spirobranchus</i> sp.), sponges (Porifera), saddle oysters (Anomiidae), faunal turf (Hydrozoa/Bryozoa), fish (Osteichthyes)	Echinoderms and crustose communities (CR.MCR.EcCr)
23/09/2023	MCW-C-ST91	MCW-C-ST91	07:56:38	638 656.9	6 199 012.8	08:08:44	638 699.7	6 198 961.7	66.6	MCW-C-ST91_01 to MCW-C-ST91_17	Coarse sediment with cobbles, interspersed with sand with small scale ripples and shell fragments	Fauna inc. sponges (Porifera), anemones (Actiniaria inc. <i>Urticina</i> sp.), brittlestars (Ophiuroidea), sea urchins ( <i>Echinus esculentus</i> ), sea squirts (Asciidiacea), soft coral ( <i>Alcyonium digitatum</i> ), sea snail ( <i>Calliostoma</i> sp.), serpulid worms ( <i>Spirobranchus</i> sp.), faunal turf (Hydrozoa/Bryozoa inc. <i>Flustra foliacea</i> ), barnacles (Sessilia). Faunal tubes	Offshore circalittoral coarse sediment (SS.SCS.OCS)
16/09/2023	MCW-C-ST92	MCW-C-ST92	12:26:49	641 227.4	6 199 153.9	12:35:39	641 258.7	6 199 198.1	54.2	MCW-C-ST92_01 to MCW-C-ST92_11	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. starfish ( <i>Astropecten irregularis</i> ). Faunal tubes	Offshore circalittoral sand (SS.SSa.Osa)

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			Time [UTC]	Easting	Northing	Time [UTC]	Easting	Northing					
22/10/2023	MCW-D-ST64	MCW-D-ST64	21:18:09	656 999.0	6 209 828.9	21:35:52	656 971.0	6 209 724.2	108.4	MCW-D-ST64_01 to MCW-D- ST64_22	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crab ( <i>Liocarcinus</i> sp.), hermit crabs (Paguroidea), faunal turf (Hydrozoa/Bryozoa). Fish (Osteichthyes inc. <i>Scomber scombrus</i> ). Faunal burrows, tubes and casts	Offshore circalittoral sand (SS.SSa.Osa)
22/10/2023	MCW-D-ST72A	MCW-D-ST72A	23:18:31	654 858.6	6 206 718.1	23:37:30	654 815.2	6 206 616.1	110.8	MCW-D-ST72A_01 to MCW-D- ST72A_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crab (Brachyura), hermit crabs (Paguroidea), shrimp (Caridea), squid (Loliginidae), hydroid/bryozoan (Hydrozoa/Bryozoa inc. unattached <i>Flustra foliacea</i> ). Fish (Osteichthyes inc. Gobiidae), flatfish (Pleuronectiformes). Algae ( <i>Laminaria</i> sp. debris and Rhodophyta debris). Faunal casts. Empty <i>Arctica islandica</i> shells	Offshore circalittoral sand (SS.SSa.Osa)
24/10/2023	MCW-D-ST73	MCW-D-ST73_1	12:39:34	657 309.5	6 206 853.3	12:42:04	657 323.7	6 206 850.3	14.6	MCW-D-ST73_01 to MCW-D- ST73_02	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. dragonet ( <i>Callionymus lyra</i> )	Offshore circalittoral sand (SS.SSa.Osa)
		MCW-D-ST73_2	12:42:04	657 323.7	6 206 850.3	13:01:00	657 312.4	6 206 854.1	12.0	MCW-D-ST73_03 to MCW-D- ST73_39	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	Fauna dominated by brittlestars (Ophiuroidea inc. <i>Ophiothrix fragilis</i> ). Other fauna observed inc. crabs (Brachyura inc. <i>Cancer pagurus</i> , <i>Necora puber</i> ), squat lobsters ( <i>Munida</i> sp.), spider crab (Macropodia), starfish (Asteroidea inc. <i>Henricia</i> sp., <i>Marthasterias glacialis</i> , <i>Asterias rubens</i> ), sea urchins ( <i>Echinus esculentus</i> ), soft coral ( <i>Alcyonium digitatum</i> ), cup corals (Caryophylliidae), faunal turf (Hydrozoa/Bryozoa inc. <i>Flustra foliacea</i> , Plumulariidae, Flustrina), scallop ( <i>Pecten maximus</i> ), barnacles (Sessilia). Fish (Osteichthyes), snake blenny ( <i>Lumpenus lampretaeformis</i> ). Faunal tubes inc. <i>Ampeliscidae</i> tube masses	Mosaic of Offshore circalittoral coarse sediment (SS.SCS.OCS) with Echinoderms and crustose communities (CR.MCR.EcCr)
23/10/2023	MCW-D-ST80	MCW-D-ST80	02:59:14	651 951.8	6 204 318.1	03:18:12	652 043.0	6 204 251.7	112.8	MCW-D-ST80_01 to MCW-D- ST80_14	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crabs (Paguroidea), starfish ( <i>Luidia sarsii</i> ), brittlestar (Ophiuroidea), squid (Loliginidae). Fish (Osteichthyes inc. Gadidae, Callionymidae, <i>Chelidonichthys cuculus</i> , <i>Scomber scombrus</i> )	Offshore circalittoral sand (SS.SSa.Osa)
23/10/2023	MCW-D-ST81	MCW-D-ST81	01:11:08	654 425.1	6 204 405.4	01:29:54	654 400.9	6 204 296.4	111.6	MCW-D-ST81_01 to MCW-D- ST81_10	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. soft coral ( <i>Alcyonium digitatum</i> ), faunal turf (Hydrozoa/Bryozoa inc. <i>Flustra foliacea</i> ). Fish (Osteichthyes inc. Callionymidae), flatfish (Pleuronectiformes)	Offshore circalittoral sand (SS.SSa.Osa)
24/10/2023	MCW-D-ST82	MCW-D-ST82_1	10:16:24	656 829.8	6 204 546.1	10:22:33	656 859.6	6 204 543.2	29.9	MCW-D-ST82_01 to MCW-D- ST82_14	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	Fauna inc. sponges (Porifera), crabs ( <i>Necora puber</i> ), squat lobsters ( <i>Munida</i> sp.), starfish (Asteroidea inc. <i>Henricia</i> sp., <i>Crossaster papposus</i> , <i>Marthasterias glacialis</i> ), sea urchin ( <i>Echinus esculentus</i> ), soft coral ( <i>Alcyonium digitatum</i> ), cup corals (Caryophylliidae), sea squirts (Ascidacea), bryozoan (Bryozoa), faunal turf (Hydrozoa/Bryozoa inc. <i>Flustra foliacea</i> ), scallop ( <i>Pecten maximus</i> ), barnacles (Sessilia). Fish (Osteichthyes inc. Blenniidae)	Offshore circalittoral coarse sediment (SS.SCS.OCS)
		MCW-D-ST82_2	10:22:33	656 859.6	6 204 543.2	10:50:01	657 023.4	6 204 536.5	163.9	MCW-D-ST82_15 to MCW-D- ST82_34	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crab (Brachyura), faunal turf (Hydrozoa/Bryozoa inc. <i>Flustra foliacea</i> ), scallop (Pectinidae). Fish (Osteichthyes inc. Callionymidae)	Offshore circalittoral sand (SS.SSa.Osa)
23/10/2023	MCW-D-ST86A	MCW-D-ST86A	05:57:31	647 290.6	6 201 713.4	06:16:57	647 381.2	6 201 645.4	113.2	MCW-D-ST86A_01 to MCW-D- ST86A_10	Sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), faunal turf (Hydrozoa/Bryozoa), possible sandeel (Ammodytidae). Fish (Osteichthyes inc. <i>Chelidonichthys cuculus</i> , <i>Scomber scombrus</i> ), flatfish (Pleuronectiformes)	Offshore circalittoral sand (SS.SSa.Osa)

Geodetic Parameters: ETRS89 / UTM Zone 29N [m]													
Date	Transect/ Station	Section	Start of Line			End of line			Length	Still Nos.	Sediment Description	Fauna/Bioturbation/Debris	Habitat Classification (JNCC)
			Time [UTC]	Easting	Northing	Time [UTC]	Easting	Northing					
24/10/2023	MCW-D-ST88A	MCW-D-ST88A	07:06:05	651 487.2	6 201 952.9	07:24:54	651 595.3	6 201 934.8	109.6	MCW-D-ST88A_01 to MCW-D- ST88A_12	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. hermit crab (Paguroidea), squid (Loliginidae), faunal turf (Hydrozoa/Bryozoa), ray (Rajidae). Fish (Osteichthyes inc. Callionymidae, <i>Chelidonichthys cuculus</i> )	Offshore circalittoral sand (SS.SSa.Osa)
24/10/2023	MCW-D-ST89A	MCW-D-ST89A	08:29:42	654 049.2	6 202 156.0	08:47:48	654 137.0	6 202 095.2	106.8	MCW-D-ST89A_01 to MCW-D- ST89A_08	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura inc. <i>Corystes cassivelaunus</i> ), brittlestar (Ophiuroidea)	Offshore circalittoral sand (SS.SSa.Osa)
23/10/2023	MCW-D-ST95A	MCW-D-ST95A	15:37:00	649 709.9	6 198 504.3	15:55:02	649 709.9	6 198 396.5	107.8	MCW-D-ST95A_01 to MCW-D- ST95A_17	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura)	Offshore circalittoral sand (SS.SSa.Osa)
17/10/2023	MCW-D-ST100A	MCW-D-ST100A	04:24:23	645 937.4	6 197 289.8	04:45:04	645 908.0	6 197 174.2	119.3	MCW-D- ST100A_01 to MCW-D- ST100A_10	Gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura), hermit crab (Paguroidea), squid (Loliginidae). Fish inc. red gurnard ( <i>Chelidonichthys cuculus</i> ), flatfish (Pleuronectiformes)	Offshore circalittoral sand (SS.SSa.Osa)
23/10/2023	MCW-D-ST101	MCW-D-ST101	14:05:27	649 523.0	6 196 386.5	14:22:42	649 627.8	6 196 368.1	106.5	MCW-D-ST101_01 to MCW-D- ST101_18	Gravelly sand with small scale ripples and shell fragments sporadic pebbles and cobbles	Sparse fauna inc. crab (Brachyura), hermit crab (Paguroidea), dragonet (Callionymidae)	Offshore circalittoral sand (SS.SSa.Osa)
17/10/2023	MCW-D-ST103A	MCW-D-ST103A	01:53:23	641 624.2	6 193 696.8	02:13:39	641 705.5	6 193 616.9	114.0	MCW-D- ST103A_01 to MCW-D- ST103A_09	Slightly gravelly sand with small scale ripples and shell fragments	Sparse fauna inc. crabs (Brachyura), hermit crabs (Paguroidea), bryozoa (Flustridae). Fish (Osteichthyes), flatfish (Pleuronectiformes)	Offshore circalittoral sand (SS.SSa.Osa)
23/10/2023	MCW-D-ST104	MCW-D-ST104	08:21:38	643 705.4	6 193 487.0	08:40:39	643 769.5	6 193 392.5	114.2	MCW-D-ST104_01 to MCW-D- ST104_13	Slightly gravelly sand with small scale ripples and shell fragment sporadic cobbles and a boulder	Sparse fauna inc. crabs (Brachyura), faunal turf (Hydrozoa/Bryozoa)	Offshore circalittoral sand (SS.SSa.Osa)
23/10/2023	MCW-D-ST108A	MCW-D-ST108A	11:11:21	646 195.7	6 191 655.0	11:28:33	646 252.1	6 191 564.7	106.5	MCW-D- ST108A_01 to MCW-D- ST108A_21	Gravel with shell fragments, cobbles and infrequent boulders	Sparse fauna inc. encrusting sponge (Porifera), crabs (Brachyura inc. Majoidea), hermit crabs (Paguroidea), starfish (Asteroidea), brittlestar (Ophiuroidea), sea squirts (Ascidiacea), barnacles (Sessilia), faunal turf (Hydrozoa/Bryozoa)	Offshore circalittoral coarse sediment (SS.SCS.OCS)
<b>Notes</b> UTC = Coordinated Universal Time													


# Appendix D


PSD and Grab Sample  
Photographs



# Certificate of Analysis

<b>Certificate Number</b>	EP/23/5069	<b>Revision Number</b>	0
<b>Job Number</b>	210836		
<b>Job Reference</b>	SPR MachairWind		
<b>Prepared For</b>	<b>Prepared By</b>		
SPR	<b>Adam Burtonshaw</b> <b>Fugro GB Marine Limited</b> Trafalgar Wharf (Unit 16) Hamilton Road Portchester Portsmouth PO6 4PX United Kingdom		
	<b>Phone:</b> +44 (0) 2392 205500 <b>Web:</b> <a href="http://www.fugro.com">www.fugro.com</a>		

<b>Sampling Undertaken By</b>	FGBML	<b>Sampling Date</b>	07/09/2023 – 24/10/2023
<b>Date of Receipt</b>	15/11/2023	<b>Date of Analysis</b>	20/11/2023 – 30/11/2023
<b>Sample Matrix</b>	Marine Sediments		
<b>Method Reference</b>	Particle Size Distribution by Dry Sieving – UK-SED-TCH-WI-001 based on NMBAQC's Best Practice Guidance - Particle Size Analysis (PSA) for Supporting Biological Analysis 2022 and UK-SED-TCH-WI-002 based on BS 1377: Part 1: 2016 and Part 2: 1990 (withdrawn).  Particle Size Distribution by Laser Diffraction – UK-SED-TCH-WI-006 based on NMBAQC's Best Practice Guidance - Particle Size Analysis (PSA) for Supporting Biological Analysis 2022 and BS ISO 13320: 2020.		
<b>Test Results</b>	Refer to pages 2-6 of 6 Refer to Excel results file for laser diffraction metadata.		
<b>Laboratory Comments</b>	<b>Deviating Codes:</b> None		
<b>Authorised Signature</b>			
<b>Name</b>	James Hutchinson		
<b>Position</b>	Sediment Laboratory Manager		
<b>Issue Date</b>	21/12/2023		

<ul style="list-style-type: none"> <li>Further information on methods of analysis may be obtained from the above address</li> <li>Opinions and interpretations expressed herein are outside the scope of UKAS accreditation</li> <li>Test results reported relate only to those items tested</li> <li>Test results reported specifically refer to sample(s) tested as received unless otherwise stated</li> <li><sup>Sub</sup>Indicates subcontracted test</li> <li><sup>D</sup>Indicates relevant Deviating Code applies to test results</li> </ul>	<p>A UKAS TESTING LABORATORY</p>  <p>0919</p>
Registered in England: Fugro House, Hithercroft Road, Wallingford, Oxfordshire, OX10 9RB, UK Registered in England No. 1135456   VAT No. GB 579 3459 84	







**TEST RESULTS**

**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (< 1000 - < 0.98 µm) @ 0.5 Phi Intervals  
**Job Number:** 210836  
**Job Reference:** SPR MachairWind

SAMPLE ID:	MCW-A-ST01	MCW-A-ST02	MCW-A-ST03	MCW-A-ST05	MCW-A-ST07A	MCW-A-ST08A	MCW-A-ST12	MCW-A-ST14	MCW-A-ST22	MCW-A-ST34	MCW-A-ST36	MCW-A-ST44A	MCW-A-ST55
LAB ID:	WL043345	WL043346	WL043347	WL043348	WL043349	WL043350	WL043351	WL043352	WL043353	WL043354	WL043355	WL043356	WL043357
Aperture [µm]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]
63000	0.00	0.00	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	0.00	0.00
31500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11200	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.43	0.00	0.00	0.00	0.00
8000	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.00
4000	0.02	0.00	0.09	0.00	0.00	0.31	0.02	0.00	0.16	0.00	0.00	0.00	0.00
2800	0.04	0.00	0.03	0.01	0.06	0.21	0.04	0.00	0.10	0.00	0.03	0.00	0.03
2000	0.02	0.01	0.04	0.04	0.15	0.26	0.02	0.00	0.04	0.05	0.04	0.01	0.02
1400	0.03	0.02	0.16	0.05	0.30	0.96	0.07	0.03	0.04	0.05	0.10	0.05	0.03
1000	0.08	0.03	0.55	0.08	0.32	1.78	0.10	0.03	0.09	0.07	0.13	0.08	0.07
707.11	0.00	0.00	0.98	0.00	0.00	2.52	0.00	0.00	0.00	0.00	0.76	0.07	0.00
500.00	0.03	0.01	3.11	0.07	0.11	13.05	0.13	1.13	0.00	0.80	10.28	5.22	2.44
353.55	4.39	2.49	10.17	5.33	5.08	29.29	5.94	13.95	1.63	10.83	28.52	25.65	15.83
250.00	20.24	15.39	21.67	22.58	21.84	32.40	23.58	36.71	15.41	30.96	35.23	40.38	33.33
176.78	34.97	32.46	27.91	36.40	36.14	16.39	36.53	35.43	36.41	36.33	20.53	24.28	32.45
125.00	28.68	30.78	21.09	27.09	27.35	2.40	26.11	12.07	31.78	18.23	4.31	4.23	14.17
88.39	10.15	12.57	8.22	8.09	8.24	0.00	7.30	0.64	9.46	2.64	0.06	0.03	1.62
62.50	0.61	1.24	0.82	0.25	0.25	0.00	0.16	0.00	0.38	0.00	0.00	0.00	0.00
44.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31.25	0.00	0.05	0.17	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
22.10	0.00	0.72	0.70	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
15.63	0.00	0.78	0.62	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
11.05	0.00	0.41	0.42	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
7.81	0.05	0.34	0.47	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
5.52	0.19	0.55	0.64	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00
3.91	0.23	0.70	0.71	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00
2.76	0.18	0.65	0.63	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
1.95	0.11	0.46	0.45	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
1.38	0.00	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
0.98	0.00	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
< 0.98	0.00	0.00	0.00	0.00	0.00	0.00	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	100.00	100.00







**TEST RESULTS**

**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (< 1000 - < 0.98 µm) @ 0.5 Phi Intervals  
**Job Number:** 210836  
**Job Reference:** SPR MachairWind

SAMPLE ID:	MCW-B-ST09A	MCW-B-ST10	MCW-B-ST17A	MCW-B-ST18A	MCW-B-ST19A	MCW-B-ST28	MCW-B-ST29A	MCW-B-ST30A	MCW-B-ST38A	MCW-B-ST57	MCW-B-ST59A	MCW-C-ST20	MCW-C-ST31
LAB ID:	WL043358	WL043359	WL043360	WL043361	WL043362	WL043363	WL043364	WL043365	WL043366	WL043367	WL043368	WL043369	WL043370
Aperture [µm]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]
63000	0.00	0.00	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	0.00	0.00
31500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8000	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
5600	0.00	0.05	0.00	0.00	0.00	0.22	0.07	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00	0.00	0.00	0.00	0.04	0.00	0.05	0.12	0.01	0.00	0.10	0.00	0.05
2800	0.00	0.01	0.00	0.00	0.02	0.00	0.02	0.10	0.05	0.11	0.03	0.04	0.04
2000	0.00	0.03	0.00	0.01	0.02	0.03	0.01	0.09	0.09	0.02	0.07	0.07	0.11
1400	0.02	0.09	0.02	0.09	0.04	0.05	0.02	0.04	0.08	0.03	0.12	0.13	0.11
1000	0.04	0.22	0.06	0.23	0.05	0.11	0.06	0.05	0.16	0.10	0.15	0.12	0.11
707.11	3.10	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.29	0.00	0.27	0.00	0.09
500.00	5.75	0.74	0.33	0.44	0.77	0.21	0.02	2.29	2.08	2.65	2.78	3.30	5.84
353.55	9.81	8.27	5.27	6.73	10.86	4.26	2.26	12.43	8.70	15.46	10.84	15.51	24.37
250.00	15.40	23.61	18.54	21.23	30.15	16.84	16.05	26.14	20.67	32.15	23.25	29.50	37.24
176.78	19.68	32.98	31.35	32.32	35.48	30.63	34.71	30.78	29.49	32.18	29.39	30.39	25.36
125.00	18.54	24.73	28.97	26.87	19.09	29.99	30.19	20.87	25.04	15.14	21.35	17.01	6.53
88.39	11.89	8.75	13.59	11.04	3.45	15.04	10.16	6.82	11.28	2.17	7.54	3.90	0.15
62.50	4.60	0.47	1.77	1.04	0.04	2.31	0.60	0.27	1.39	0.00	0.46	0.03	0.00
44.19	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31.25	0.43	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.17	0.00	0.00
22.10	0.99	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.71	0.00	0.00
15.63	1.17	0.00	0.00	0.00	0.00	0.00	0.83	0.00	0.00	0.00	0.55	0.00	0.00
11.05	1.08	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.30	0.00	0.00
7.81	1.10	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.02	0.00	0.33	0.00	0.00
5.52	1.24	0.00	0.02	0.00	0.00	0.04	0.66	0.00	0.14	0.00	0.47	0.00	0.00
3.91	1.28	0.00	0.03	0.00	0.00	0.07	0.80	0.00	0.17	0.00	0.49	0.00	0.00
2.76	1.14	0.00	0.03	0.00	0.00	0.06	0.74	0.00	0.14	0.00	0.38	0.00	0.00
1.95	0.82	0.00	0.01	0.00	0.00	0.03	0.52	0.00	0.06	0.00	0.22	0.00	0.00
1.38	0.49	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.01	0.00	0.00
0.98	0.29	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
< 0.98	0.30	0.00	0.00	0.00	0.00	0.00	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	100.00	100.00





**TEST RESULTS**

**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (< 1000 - < 0.98 µm) @ 0.5 Phi Intervals  
**Job Number:** 210836  
**Job Reference:** SPR MachairWind

SAMPLE ID:	MCW-C-ST32	MCW-C-ST41	MCW-C-ST42	MCW-C-ST43	MCW-C-ST51	MCW-C-ST52	MCW-C-ST53	MCW-C-ST54	MCW-C-ST62	MCW-C-ST63	MCW-C-ST70	MCW-C-ST71	MCW-C-ST75
LAB ID:	WL043371	WL043372	WL043373	WL043374	WL043375	WL043376	WL043377	WL043378	WL043379	WL043380	WL043381	WL043382	WL043383
Aperture [µm]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]
63000	0.00	0.00	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	0.00	0.00
31500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
5600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.01	0.00	0.03	0.00	0.04
2800	0.00	0.05	0.05	0.01	0.04	0.04	0.03	0.04	0.00	0.04	0.01	0.02	0.02
2000	0.04	0.13	0.02	0.04	0.02	0.04	0.02	0.02	0.04	0.02	0.01	0.05	0.17
1400	0.02	0.33	0.05	0.04	0.04	0.07	0.05	0.04	0.04	0.05	0.02	0.05	0.10
1000	0.04	0.69	0.05	0.07	0.06	0.06	0.07	0.06	0.05	0.06	0.02	0.04	0.06
707.11	0.00	2.70	0.69	0.27	0.00	0.02	0.13	0.57	0.00	0.25	0.00	0.33	0.00
500.00	1.62	15.14	11.07	7.57	0.07	0.82	1.98	3.90	0.49	1.39	0.52	2.69	0.15
353.55	11.07	29.99	30.80	26.26	4.80	6.95	9.12	11.19	6.50	7.29	7.98	10.80	7.25
250.00	25.80	31.03	35.86	36.65	21.39	21.38	21.88	20.87	22.25	20.18	26.03	24.14	30.13
176.78	31.94	16.67	18.50	23.35	36.41	32.97	30.72	26.67	34.84	31.04	36.46	31.31	40.42
125.00	22.03	3.29	2.92	5.60	28.26	26.86	24.93	22.80	26.79	26.82	23.47	22.73	19.44
88.39	7.16	0.00	0.00	0.11	8.65	10.14	10.12	11.71	8.67	11.60	5.40	7.60	2.14
62.50	0.27	0.00	0.00	0.00	0.26	0.67	0.92	2.12	0.31	1.25	0.05	0.23	0.00
44.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
< 0.98	0.00	0.00	0.00	0.00	0.00	0.00	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	100.00	100.00





**TEST RESULTS**

**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (< 1000 - < 0.98 µm) @ 0.5 Phi Intervals  
**Job Number:** 210836  
**Job Reference:** SPR MachairWind

SAMPLE ID:	MCW-C-ST77	MCW-C-ST79	MCW-C-ST91	MCW-C-ST92	MCW-D-ST64	MCW-D-ST72A	MCW-D-ST73	MCW-D-ST80	MCW-D-ST81	MCW-D-ST82	MCW-D-ST86A
LAB ID:	WL043384	WL043385	WL043386	WL043387	WL043388	WL043389	WL043390	WL043391	WL043392	WL043393	WL043394
Aperture [µm]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]
63000	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
31500	0.00	0.00	17.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22400	0.00	0.00	30.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16000	0.00	0.00	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11200	0.00	0.00	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8000	0.00	0.00	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600	0.00	0.00	2.12	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00
4000	0.00	0.04	1.44	0.00	0.00	0.00	0.06	0.08	0.00	0.02	0.00
2800	0.11	0.00	1.56	0.00	0.07	0.00	0.01	0.01	0.02	0.14	0.00
2000	0.09	0.01	1.43	0.01	0.01	0.01	0.11	0.01	0.07	0.22	0.00
1400	0.17	0.02	1.48	0.04	0.04	0.04	0.12	0.02	0.10	0.70	0.04
1000	0.18	0.01	1.46	0.09	0.04	0.04	0.17	0.03	0.10	1.19	0.02
707.11	0.28	0.11	1.72	0.03	1.56	0.75	1.33	0.14	1.72	6.65	0.08
500.00	6.85	3.34	4.02	3.75	5.04	2.85	4.82	2.13	5.67	19.30	4.09
353.55	21.73	14.53	6.68	22.08	11.60	9.70	12.72	10.61	14.30	29.79	19.12
250.00	32.17	28.93	7.02	40.25	20.14	21.61	23.04	25.05	24.88	26.80	34.87
176.78	26.18	31.42	4.07	27.80	25.45	29.70	27.67	32.26	27.53	13.01	30.01
125.00	10.96	17.90	0.90	5.85	22.04	24.17	20.93	22.46	17.76	2.19	11.02
88.39	1.30	3.67	0.00	0.10	11.65	10.13	8.48	6.84	5.31	0.00	0.75
62.50	0.00	0.02	0.00	0.00	2.35	0.99	0.53	0.13	0.14	0.00	0.00
44.19	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
31.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
22.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00
15.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00
11.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
7.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
5.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
< 0.98	0.00	0.00	0.00	0.00	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





**TEST RESULTS**

**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (< 1000 - < 0.98 µm) @ 0.5 Phi Intervals  
**Job Number:** 210836  
**Job Reference:** SPR MachairWind

SAMPLE ID:	MCW-D-ST88A	MCW-D-ST89A	MCW-D-ST95A	MCW-D-ST100A	MCW-D-ST101	MCW-D-ST103A	MCW-D-ST104	MCW-D-ST108A
LAB ID:	WL043395	WL043396	WL043397	WL043398	WL043399	WL043400	WL043401	WL043402
Aperture [µm]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]
63000	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
31500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.66
22400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.59
16000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.73
11200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.60
8000	0.00	0.00	0.00	0.00	0.13	0.00	0.00	7.34
5600	0.00	0.00	0.00	0.00	1.15	0.00	0.00	6.20
4000	0.00	0.00	0.00	0.52	1.59	0.00	0.08	3.90
2800	0.04	0.02	0.04	2.93	4.15	0.01	0.27	2.69
2000	0.01	0.13	0.05	11.27	9.61	0.03	2.14	1.75
1400	0.02	0.30	0.13	25.52	16.99	0.08	6.91	1.93
1000	0.07	0.69	0.33	24.41	17.89	0.23	10.13	1.54
707.11	2.49	8.84	6.47	5.98	12.69	0.60	6.09	1.21
500.00	8.99	19.88	24.60	6.89	13.11	4.99	13.52	2.40
353.55	18.82	27.21	36.66	7.03	10.48	17.63	21.25	3.24
250.00	26.67	24.82	25.15	6.65	7.03	31.87	22.20	3.01
176.78	24.79	14.24	6.45	5.01	3.75	29.98	13.65	1.75
125.00	13.59	3.80	0.11	2.43	1.30	13.16	3.69	0.45
88.39	3.04	0.06	0.00	0.45	0.14	1.41	0.07	0.00
62.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44.19	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
31.25	0.18	0.00	0.00	0.17	0.00	0.00	0.00	0.00
22.10	0.25	0.00	0.00	0.15	0.00	0.00	0.00	0.00
15.63	0.13	0.00	0.00	0.10	0.00	0.00	0.00	0.00
11.05	0.08	0.00	0.00	0.10	0.00	0.00	0.00	0.00
7.81	0.18	0.00	0.00	0.12	0.00	0.00	0.00	0.00
5.52	0.24	0.00	0.00	0.11	0.00	0.00	0.00	0.00
3.91	0.23	0.00	0.00	0.09	0.00	0.00	0.00	0.00
2.76	0.16	0.00	0.00	0.03	0.00	0.00	0.00	0.00
1.95	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
< 0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL:</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>





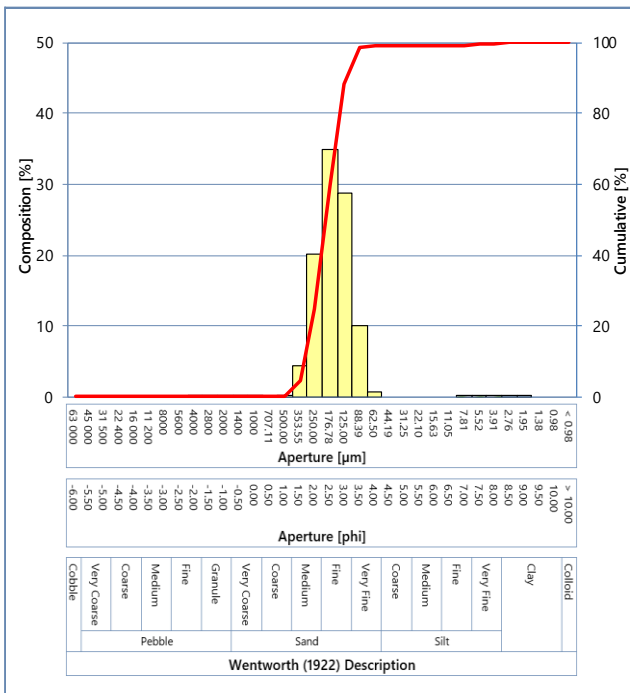
STATION: MCW-A-ST01



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.02	0.02
2800	-1.50	0.04	0.06
2000	-1.00	0.02	0.08
1400	-0.50	0.03	0.10
1000	0.00	0.08	0.18
707.11	0.50	0.00	0.18
500.00	1.00	0.03	0.21
353.55	1.50	4.39	4.60
250.00	2.00	20.24	24.84
176.78	2.50	34.97	59.81
125.00	3.00	28.68	88.49
88.39	3.50	10.15	98.64
62.50	4.00	0.61	99.25
44.19	4.50	0.00	99.25
31.25	5.00	0.00	99.25
22.10	5.50	0.00	99.25
15.63	6.00	0.00	99.25
11.05	6.50	0.00	99.25
7.81	7.00	0.05	99.29
5.52	7.50	0.19	99.48
3.91	8.00	0.23	99.70
2.76	8.50	0.18	99.89
1.95	9.00	0.11	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	195	Fine sand
Median [phi]*	2.36	
Mean [µm]*†	196	Fine sand
Mean [phi]*†	2.35	
Sorting [µm]†	1.47	Moderately well sorted
Sorting [phi]†	0.56	
Skewness [µm]†	-0.02	Symmetrical
Skewness [phi]†	0.02	
Gravel [%]‡	0.08	Sand
Sand [%]‡	99.17	
Fines [%]‡	0.75	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

**STATION: MCW-A-ST02**

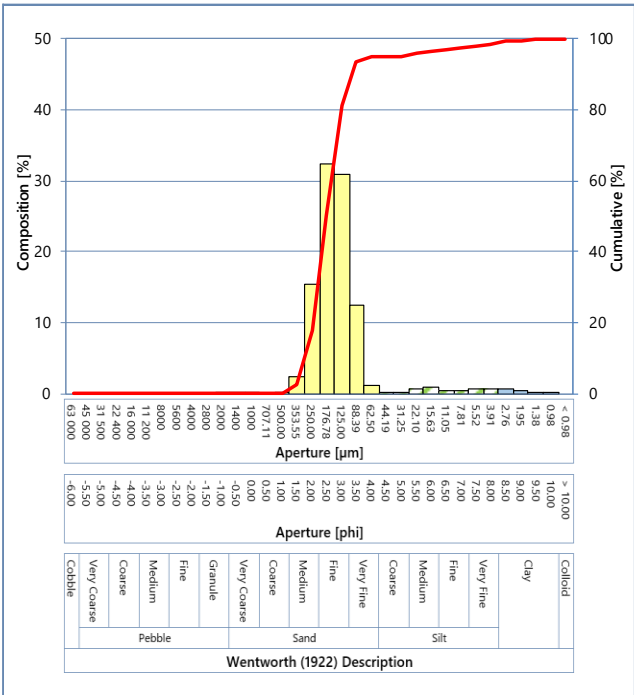
**FRACTIONAL DATA**



Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.01	0.01
1400	-0.50	0.02	0.03
1000	0.00	0.03	0.06
707.11	0.50	0.00	0.06
500.00	1.00	0.01	0.06
353.55	1.50	2.49	2.55
250.00	2.00	15.39	17.94
176.78	2.50	32.46	50.40
125.00	3.00	30.78	81.19
88.39	3.50	12.57	93.76
62.50	4.00	1.24	95.00
44.19	4.50	0.00	95.00
31.25	5.00	0.05	95.05
22.10	5.50	0.72	95.77
15.63	6.00	0.78	96.55
11.05	6.50	0.41	96.96
7.81	7.00	0.34	97.30
5.52	7.50	0.55	97.85
3.91	8.00	0.70	98.54
2.76	8.50	0.65	99.19
1.95	9.00	0.46	99.65
1.38	9.50	0.27	99.93
0.98	10.00	0.07	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**

**SUMMARY STATISTICS**



Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	178	Fine sand
Median [phi]*	2.49	
Mean [µm]*†	175	Fine sand
Mean [phi]*†	2.51	
Sorting [µm]†	1.58	Moderately well sorted
Sorting [phi]†	0.66	
Skewness [µm]†	-0.15	Fine skewed
Skewness [phi]†	0.15	
Gravel [%]‡	0.01	Sand
Sand [%]‡	95.00	
Fines [%]‡	5.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



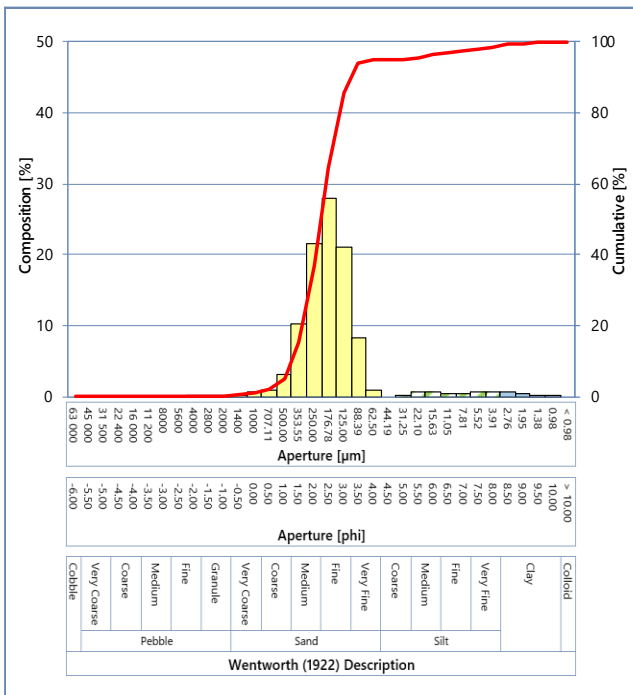
STATION: MCW-A-ST03



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.09	0.09
2800	-1.50	0.03	0.12
2000	-1.00	0.04	0.16
1400	-0.50	0.16	0.32
1000	0.00	0.55	0.87
707.11	0.50	0.98	1.85
500.00	1.00	3.11	4.96
353.55	1.50	10.17	15.14
250.00	2.00	21.67	36.81
176.78	2.50	27.91	64.72
125.00	3.00	21.09	85.82
88.39	3.50	8.22	94.04
62.50	4.00	0.82	94.86
44.19	4.50	0.00	94.86
31.25	5.00	0.17	95.02
22.10	5.50	0.70	95.72
15.63	6.00	0.62	96.34
11.05	6.50	0.42	96.76
7.81	7.00	0.47	97.23
5.52	7.50	0.64	97.87
3.91	8.00	0.71	98.58
2.76	8.50	0.63	99.21
1.95	9.00	0.45	99.66
1.38	9.50	0.27	99.93
0.98	10.00	0.07	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	212	Fine sand
Median [phi]*	2.24	
Mean [µm]*†	212	Fine sand
Mean [phi]*†	2.24	
Sorting [µm]†	1.94	Moderately sorted
Sorting [phi]†	0.95	
Skewness [µm]†	-0.19	Fine skewed
Skewness [phi]†	0.19	
Gravel [%]‡	0.16	Sand
Sand [%]‡	94.70	
Fines [%]‡	5.14	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)





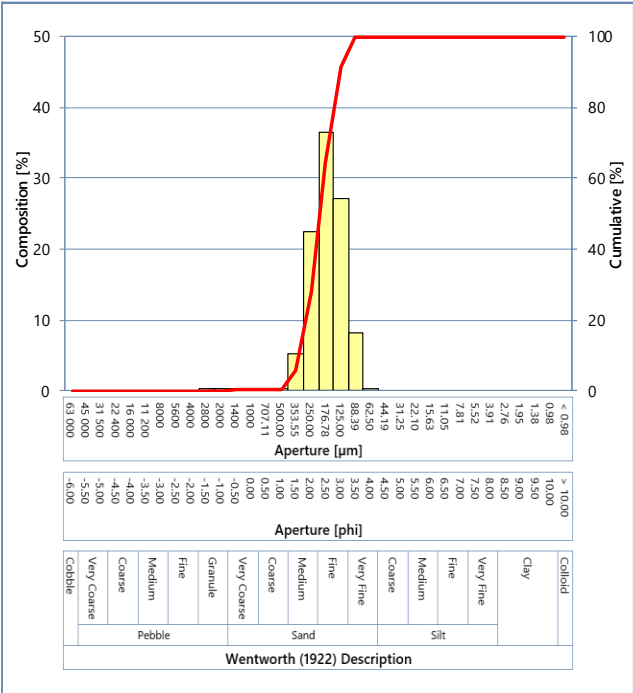
**STATION: MCW-A-ST05**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.01	0.01
2000	-1.00	0.04	0.06
1400	-0.50	0.05	0.11
1000	0.00	0.08	0.18
707.11	0.50	0.00	0.18
500.00	1.00	0.07	0.25
353.55	1.50	5.33	5.58
250.00	2.00	22.58	28.17
176.78	2.50	36.40	64.57
125.00	3.00	27.09	91.66
88.39	3.50	8.09	99.75
62.50	4.00	0.25	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm] <sup>†</sup>	213	Fine sand
Mode 2 [µm] <sup>†</sup>	-	-
Mode 3 [µm] <sup>†</sup>	-	-
Median [µm] <sup>†</sup>	203	Fine sand
Median [phi] <sup>†</sup>	2.30	
Mean [µm] <sup>†‡</sup>	204	Fine sand
Mean [phi] <sup>†‡</sup>	2.30	
Sorting [µm] <sup>†</sup>	1.46	Moderately well sorted
Sorting [phi] <sup>†</sup>	0.55	
Skewness [µm] <sup>†</sup>	-0.01	Symmetrical
Skewness [phi] <sup>†</sup>	0.01	
Gravel [%] <sup>#</sup>	0.06	
Sand [%] <sup>#</sup>	99.94	Sand
Fines [%] <sup>#</sup>	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



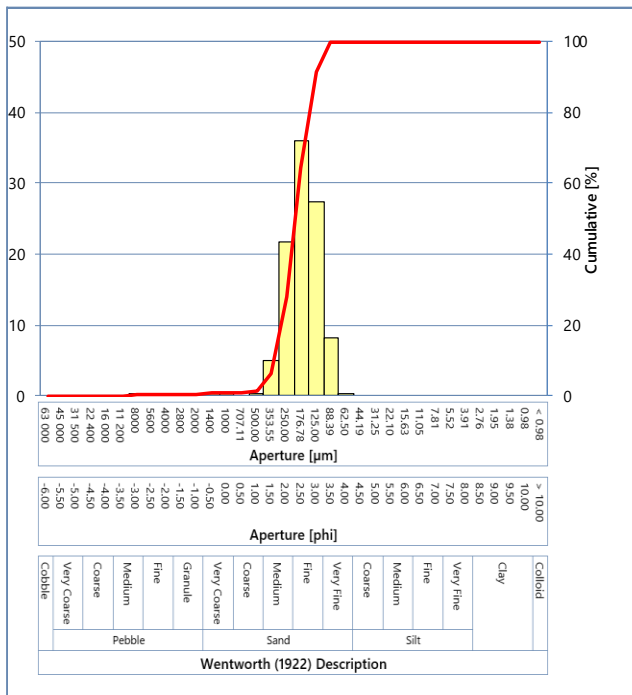
STATION: MCW-A-ST07A



FRACTIONAL DATA

Aperture [μm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.17	0.17
5600	-2.50	0.00	0.17
4000	-2.00	0.00	0.17
2800	-1.50	0.06	0.22
2000	-1.00	0.15	0.37
1400	-0.50	0.30	0.67
1000	0.00	0.32	0.99
707.11	0.50	0.00	0.99
500.00	1.00	0.11	1.10
353.55	1.50	5.08	6.18
250.00	2.00	21.84	28.02
176.78	2.50	36.14	64.16
125.00	3.00	27.35	91.51
88.39	3.50	8.24	99.75
62.50	4.00	0.25	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [μm]*	213	Fine sand
Mode 2 [μm]*	-	-
Mode 3 [μm]*	-	-
Median [μm]*	202	Fine sand
Median [phi]*	2.30	
Mean [μm]*†	203	Fine sand
Mean [phi]*†	2.30	
Sorting [μm]†	1.48	Moderately well sorted
Sorting [phi]†	0.56	
Skewness [μm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.37	Sand
Sand [%]‡	99.63	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 μm - 1000 μm) and Laser Diffraction (< 1000 μm - < 0.98 μm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

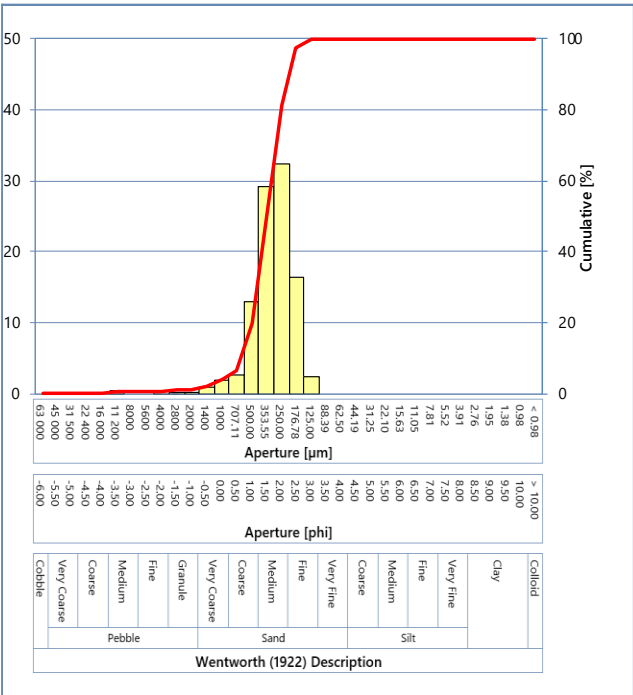
**STATION: MCW-A-ST08A**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.44	0.44
8000	-3.00	0.00	0.44
5600	-2.50	0.00	0.44
4000	-2.00	0.31	0.74
2800	-1.50	0.21	0.95
2000	-1.00	0.26	1.22
1400	-0.50	0.96	2.17
1000	0.00	1.78	3.95
707.11	0.50	2.52	6.47
500.00	1.00	13.05	19.52
353.55	1.50	29.29	48.81
250.00	2.00	32.40	81.21
176.78	2.50	16.39	97.60
125.00	3.00	2.40	100.00
88.39	3.50	0.00	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	349	Medium sand
Median [phi]*	1.52	
Mean [µm]*†	356	Medium sand
Mean [phi]*†	1.49	
Sorting [µm]†	1.56	Moderately well sorted
Sorting [phi]†	0.64	
Skewness [µm]†	0.13	Coarse skewed
Skewness [phi]†	-0.13	
Gravel [%]†	1.22	Sand
Sand [%]†	98.78	
Fines [%]†	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



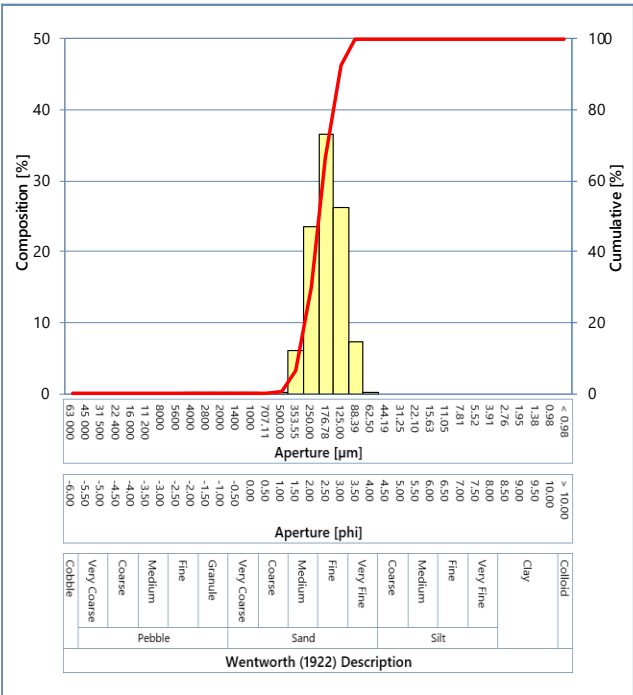
**STATION: MCW-A-ST12**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.02	0.02
2800	-1.50	0.04	0.06
2000	-1.00	0.02	0.09
1400	-0.50	0.07	0.16
1000	0.00	0.10	0.25
707.11	0.50	0.00	0.25
500.00	1.00	0.13	0.38
353.55	1.50	5.94	6.32
250.00	2.00	23.58	29.90
176.78	2.50	36.53	66.43
125.00	3.00	26.11	92.54
88.39	3.50	7.30	99.84
62.50	4.00	0.16	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	207	Fine sand
Median [phi]*	2.28	
Mean [µm]*†	207	Fine sand
Mean [phi]*†	2.27	
Sorting [µm]†	1.47	Moderately well sorted
Sorting [phi]†	0.55	
Skewness [µm]†	0.00	Symmetrical
Skewness [phi]†	0.00	
Gravel [%]‡	0.09	Sand
Sand [%]‡	99.91	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)





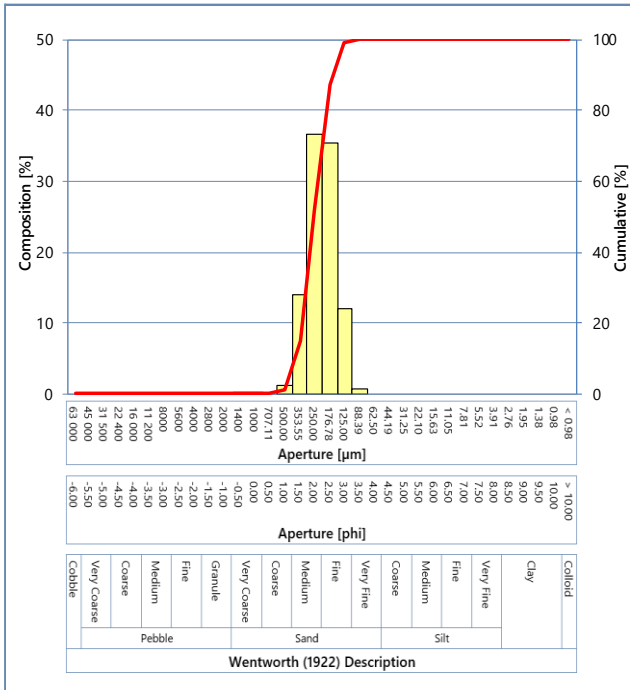
STATION: MCW-A-ST14



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.00	0.00
1400	-0.50	0.03	0.03
1000	0.00	0.03	0.06
707.11	0.50	0.00	0.06
500.00	1.00	1.13	1.20
353.55	1.50	13.95	15.15
250.00	2.00	36.71	51.86
176.78	2.50	35.43	87.29
125.00	3.00	12.07	99.36
88.39	3.50	0.64	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	254	Medium sand
Median [phi]*	1.97	
Mean [µm]*†	253	Medium sand
Mean [phi]*†	1.98	
Sorting [µm]†	1.40	Well sorted
Sorting [phi]†	0.49	
Skewness [µm]†	-0.01	Symmetrical
Skewness [phi]†	0.01	
Gravel [%]‡	0.00	Sand
Sand [%]‡	100.00	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

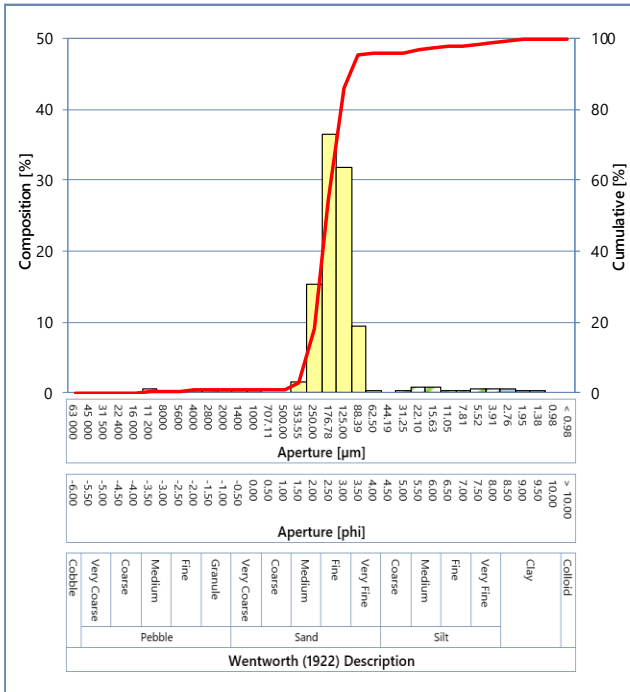
STATION: MCW-A-ST22



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.43	0.43
8000	-3.00	0.00	0.43
5600	-2.50	0.06	0.49
4000	-2.00	0.16	0.65
2800	-1.50	0.10	0.76
2000	-1.00	0.04	0.80
1400	-0.50	0.04	0.84
1000	0.00	0.09	0.93
707.11	0.50	0.00	0.93
500.00	1.00	0.00	0.93
353.55	1.50	1.63	2.56
250.00	2.00	15.41	17.97
176.78	2.50	36.41	54.38
125.00	3.00	31.78	86.15
88.39	3.50	9.46	95.61
62.50	4.00	0.38	95.99
44.19	4.50	0.00	95.99
31.25	5.00	0.06	96.05
22.10	5.50	0.80	96.84
15.63	6.00	0.75	97.59
11.05	6.50	0.32	97.91
7.81	7.00	0.25	98.16
5.52	7.50	0.44	98.59
3.91	8.00	0.54	99.14
2.76	8.50	0.47	99.61
1.95	9.00	0.31	99.92
1.38	9.50	0.08	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

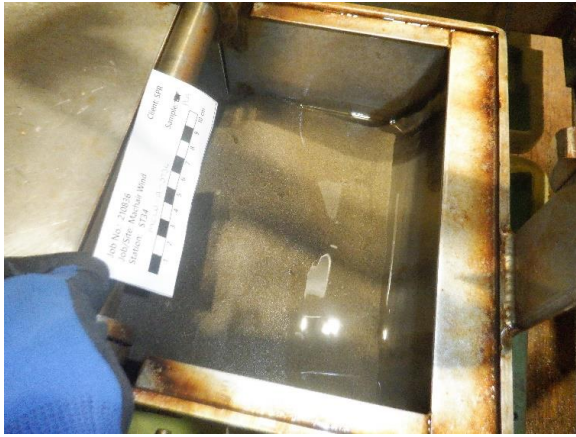


SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	184	Fine sand
Median [phi]*	2.44	
Mean [µm]*†	183	Fine sand
Mean [phi]*†	2.45	
Sorting [µm]†	1.46	Moderately well sorted
Sorting [phi]†	0.54	
Skewness [µm]†	-0.06	Symmetrical
Skewness [phi]†	0.06	
Gravel [%]‡	0.80	Sand
Sand [%]‡	95.19	
Fines [%]‡	4.01	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

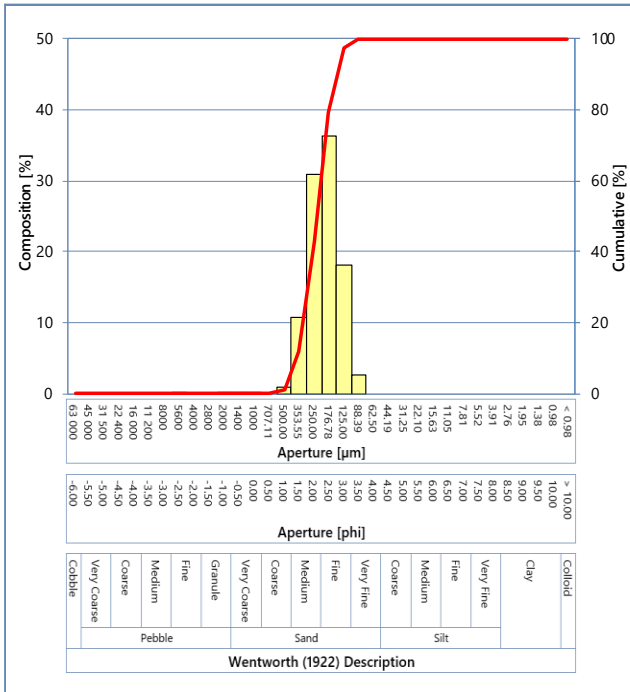
STATION: MCW-A-ST34



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.04	0.04
4000	-2.00	0.00	0.04
2800	-1.50	0.00	0.04
2000	-1.00	0.05	0.09
1400	-0.50	0.05	0.14
1000	0.00	0.07	0.21
707.11	0.50	0.00	0.21
500.00	1.00	0.80	1.02
353.55	1.50	10.83	11.85
250.00	2.00	30.96	42.80
176.78	2.50	36.33	79.14
125.00	3.00	18.23	97.36
88.39	3.50	2.64	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	233	Fine sand
Median [phi]*	2.10	
Mean [µm]*†	233	Fine sand
Mean [phi]*†	2.10	
Sorting [µm]†	1.45	Moderately well sorted
Sorting [phi]†	0.53	
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	
Gravel [%]‡	0.09	
Sand [%]‡	99.91	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



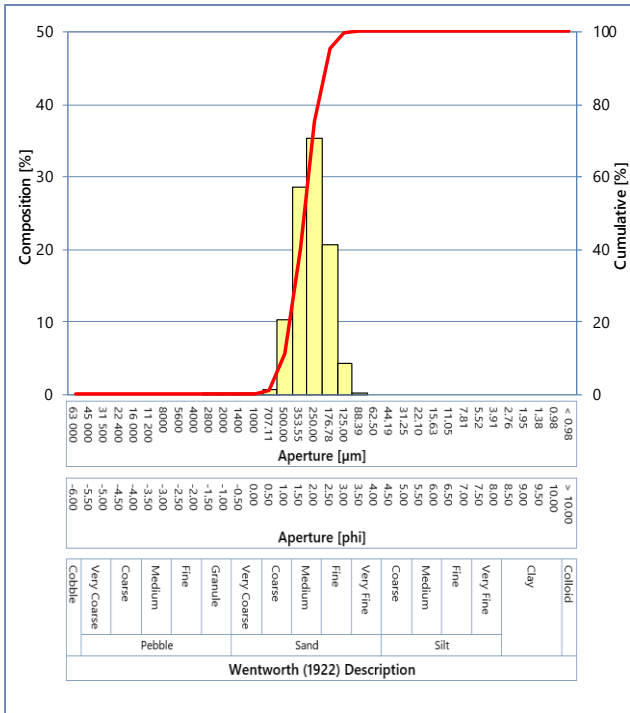
STATION: MCW-A-ST36



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.03	0.03
2000	-1.00	0.04	0.07
1400	-0.50	0.10	0.17
1000	0.00	0.13	0.30
707.11	0.50	0.76	1.06
500.00	1.00	10.28	11.35
353.55	1.50	28.52	39.87
250.00	2.00	35.23	75.09
176.78	2.50	20.53	95.62
125.00	3.00	4.31	99.94
88.39	3.50	0.06	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

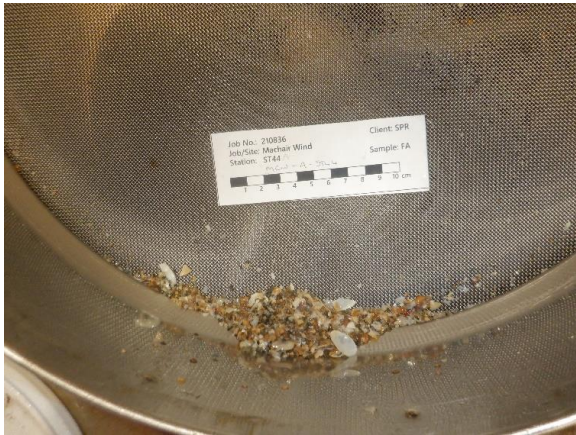


SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	320	Medium sand
Median [phi]*	1.64	
Mean [µm]*†	319	Medium sand
Mean [phi]*†	1.65	
Sorting [µm]†	1.47	Moderately well sorted
Sorting [phi]†	0.56	
Skewness [µm]†	0.03	Symmetrical
Skewness [phi]†	-0.03	
Gravel [%]‡	0.07	Sand
Sand [%]‡	99.93	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

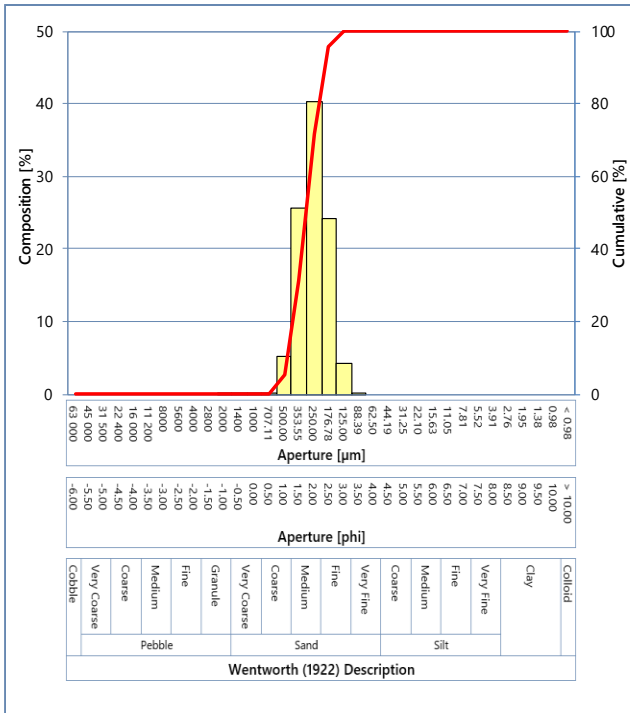
STATION: MCW-A-ST44A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.01	0.01
1400	-0.50	0.05	0.07
1000	0.00	0.08	0.15
707.11	0.50	0.07	0.21
500.00	1.00	5.22	5.43
353.55	1.50	25.65	31.08
250.00	2.00	40.38	71.46
176.78	2.50	24.28	95.74
125.00	3.00	4.23	99.97
88.39	3.50	0.03	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

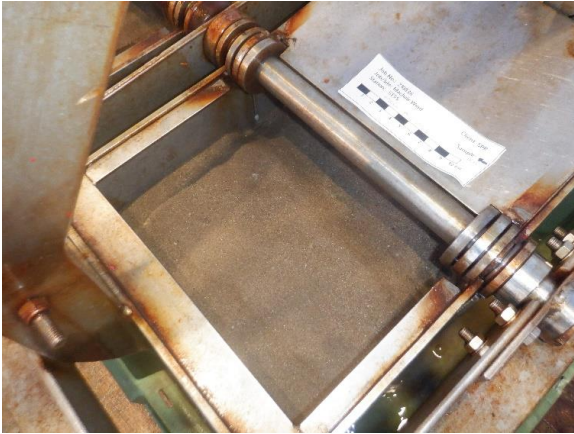


SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	301	Medium sand
Median [phi]*	1.73	
Mean [µm]*†	301	Medium sand
Mean [phi]*†	1.73	
Sorting [µm]†	1.41	Well sorted
Sorting [phi]†	0.49	
Skewness [µm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.01	Sand
Sand [%]‡	99.99	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

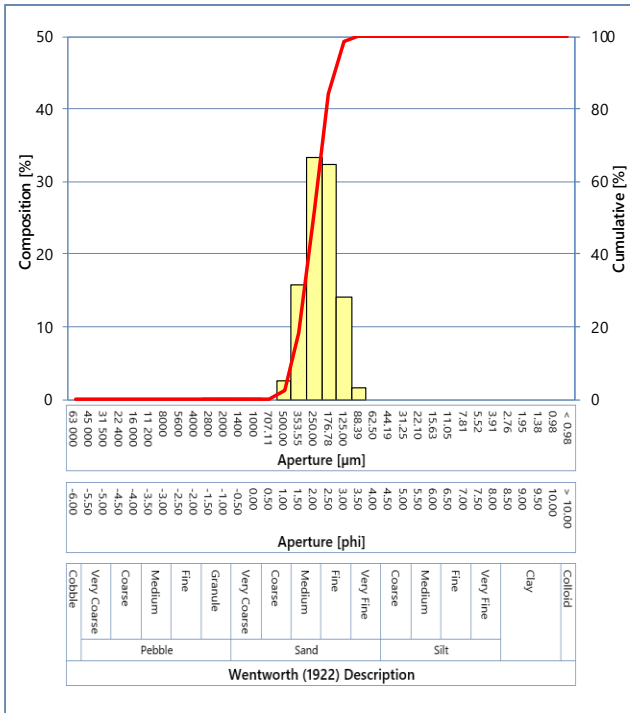
STATION: MCW-A-ST55



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.03	0.03
2000	-1.00	0.02	0.05
1400	-0.50	0.03	0.09
1000	0.00	0.07	0.16
707.11	0.50	0.00	0.16
500.00	1.00	2.44	2.60
353.55	1.50	15.83	18.43
250.00	2.00	33.33	51.76
176.78	2.50	32.45	84.21
125.00	3.00	14.17	98.38
88.39	3.50	1.62	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	255	Medium sand
Median [phi]*	1.97	
Mean [µm]*†	256	Medium sand
Mean [phi]*†	1.96	Moderately well sorted
Sorting [µm]†	1.46	
Sorting [phi]†	0.54	
Skewness [µm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.05	Sand
Sand [%]‡	99.95	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



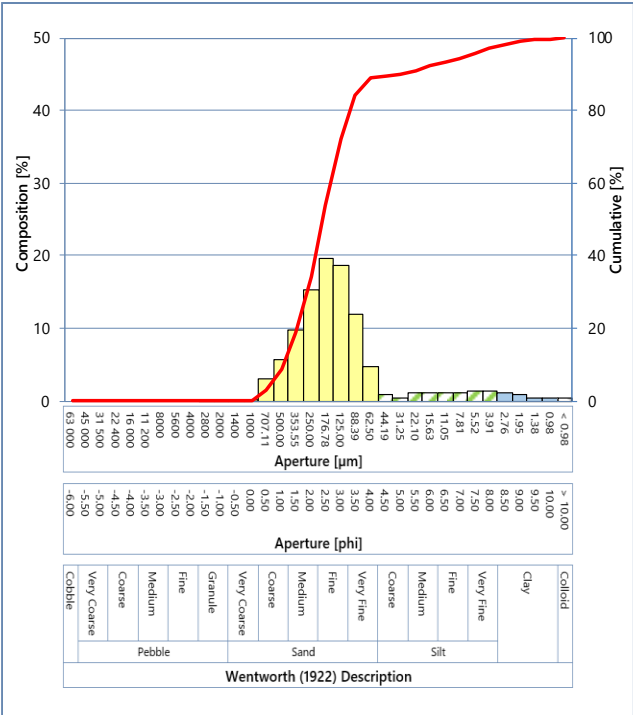
**STATION: MCW-B-ST09A**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.00	0.00
1400	-0.50	0.02	0.02
1000	0.00	0.04	0.07
707.11	0.50	3.10	3.16
500.00	1.00	5.75	8.91
353.55	1.50	9.81	18.72
250.00	2.00	15.40	34.12
176.78	2.50	19.68	53.80
125.00	3.00	18.54	72.34
88.39	3.50	11.89	84.23
62.50	4.00	4.60	88.83
44.19	4.50	0.84	89.67
31.25	5.00	0.43	90.10
22.10	5.50	0.99	91.09
15.63	6.00	1.17	92.26
11.05	6.50	1.08	93.34
7.81	7.00	1.10	94.44
5.52	7.50	1.24	95.68
3.91	8.00	1.28	96.96
2.76	8.50	1.14	98.10
1.95	9.00	0.82	98.92
1.38	9.50	0.49	99.41
0.98	10.00	0.29	99.70
< 0.98	> 10.00	0.30	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	189	Fine sand
Median [phi]*	2.40	
Mean [µm]*†	187	Fine sand
Mean [phi]*†	2.42	
Sorting [µm]†	2.88	Poorly sorted
Sorting [phi]†	1.53	
Skewness [µm]†	-0.24	Fine skewed
Skewness [phi]†	0.24	
Gravel [%]‡	0.00	
Sand [%]‡	88.83	Muddy sand
Fines [%]‡	11.17	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



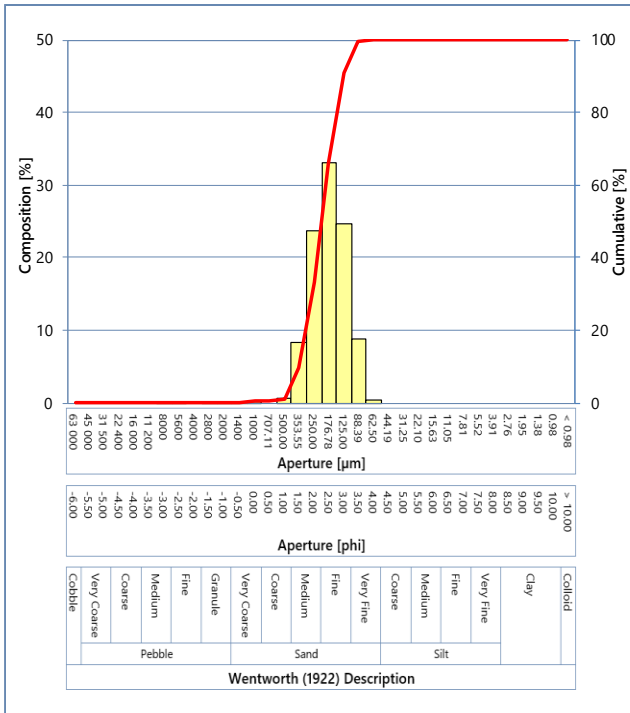
STATION: MCW-B-ST10



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.06	0.06
5600	-2.50	0.05	0.11
4000	-2.00	0.00	0.11
2800	-1.50	0.01	0.11
2000	-1.00	0.03	0.14
1400	-0.50	0.09	0.24
1000	0.00	0.22	0.46
707.11	0.50	0.00	0.46
500.00	1.00	0.74	1.20
353.55	1.50	8.27	9.47
250.00	2.00	23.61	33.08
176.78	2.50	32.98	66.06
125.00	3.00	24.73	90.79
88.39	3.50	8.75	99.53
62.50	4.00	0.47	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

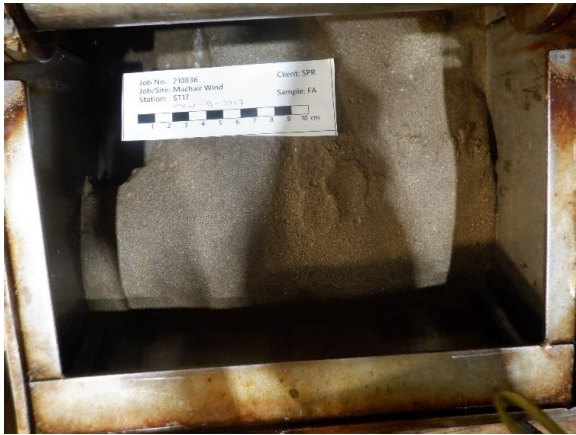


SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	209	Fine sand
Median [phi]*	2.26	Fine sand
Mean [µm]*†	210	Fine sand
Mean [phi]*†	2.25	Fine sand
Sorting [µm]†	1.53	Moderately well sorted
Sorting [phi]†	0.61	Moderately well sorted
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	
Gravel [%]‡	0.14	Sand
Sand [%]‡	99.86	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

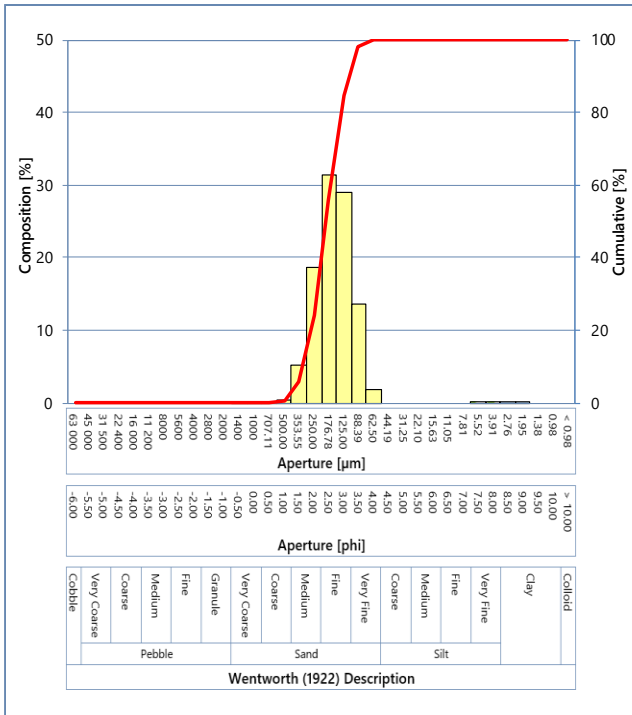
STATION: MCW-B-ST17A



FRACTIONAL DATA

Aperture [μm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.00	0.00
1400	-0.50	0.02	0.02
1000	0.00	0.06	0.08
707.11	0.50	0.00	0.08
500.00	1.00	0.33	0.41
353.55	1.50	5.27	5.68
250.00	2.00	18.54	24.22
176.78	2.50	31.35	55.57
125.00	3.00	28.97	84.54
88.39	3.50	13.59	98.13
62.50	4.00	1.77	99.90
44.19	4.50	0.00	99.90
31.25	5.00	0.00	99.90
22.10	5.50	0.00	99.90
15.63	6.00	0.00	99.90
11.05	6.50	0.00	99.90
7.81	7.00	0.00	99.90
5.52	7.50	0.02	99.92
3.91	8.00	0.03	99.96
2.76	8.50	0.03	99.99
1.95	9.00	0.01	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [μm]*	213	Fine sand
Mode 2 [μm]*	-	-
Mode 3 [μm]*	-	-
Median [μm]*	188	Fine sand
Median [phi]*	2.41	Fine sand
Mean [μm]*†	190	Fine sand
Mean [phi]*†	2.39	Fine sand
Sorting [μm]†	1.51	Moderately well sorted
Sorting [phi]†	0.60	Moderately well sorted
Skewness [μm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	Symmetrical
Gravel [%]‡	0.00	
Sand [%]‡	99.90	Sand
Fines [%]‡	0.10	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 μm - 1000 μm) and Laser Diffraction (< 1000 μm - < 0.98 μm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



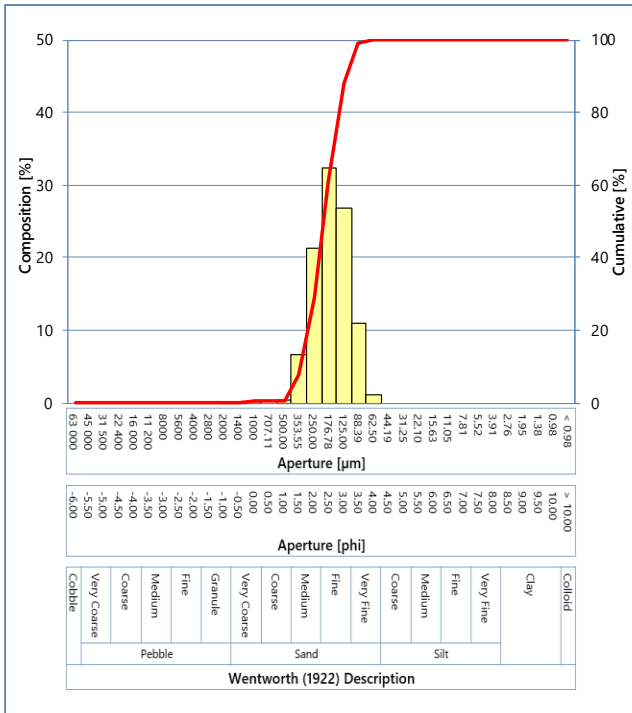
STATION: MCW-B-ST18A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.01	0.01
1400	-0.50	0.09	0.10
1000	0.00	0.23	0.33
707.11	0.50	0.00	0.33
500.00	1.00	0.44	0.77
353.55	1.50	6.73	7.50
250.00	2.00	21.23	28.73
176.78	2.50	32.32	61.05
125.00	3.00	26.87	87.92
88.39	3.50	11.04	98.96
62.50	4.00	1.04	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

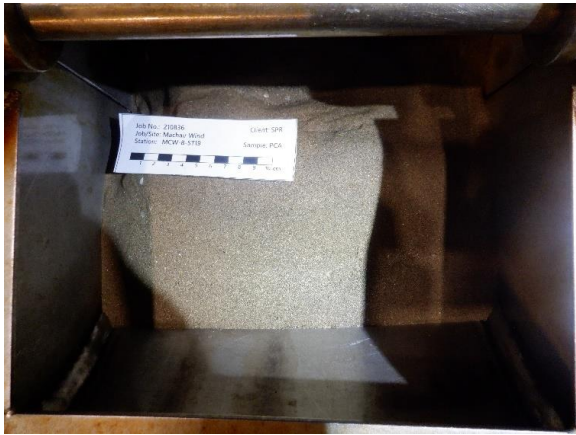


SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	199	Fine sand
Median [phi]*	2.33	
Mean [µm]*†	200	Fine sand
Mean [phi]*†	2.32	
Sorting [µm]†	1.53	Moderately well sorted
Sorting [phi]†	0.61	
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	
Gravel [%]‡	0.01	
Sand [%]‡	99.99	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

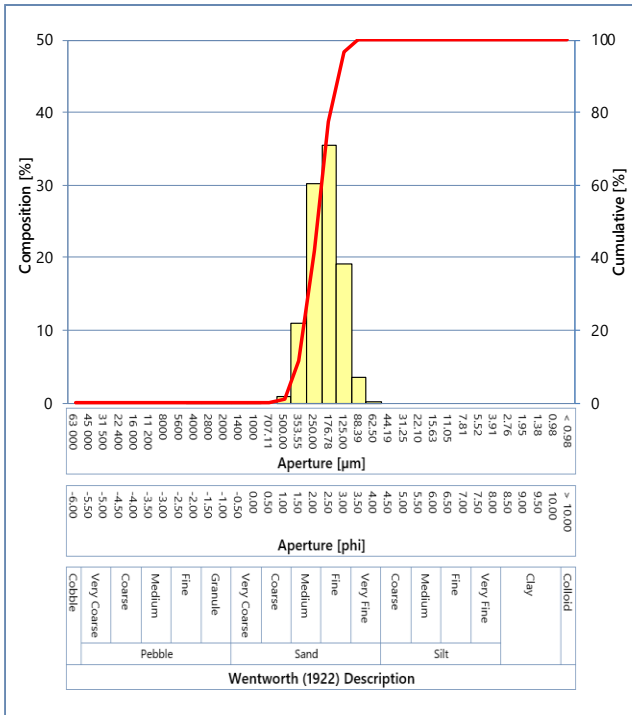
STATION: MCW-B-ST19A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.04	0.04
2800	-1.50	0.02	0.06
2000	-1.00	0.02	0.08
1400	-0.50	0.04	0.12
1000	0.00	0.05	0.17
707.11	0.50	0.00	0.17
500.00	1.00	0.77	0.93
353.55	1.50	10.86	11.79
250.00	2.00	30.15	41.95
176.78	2.50	35.48	77.42
125.00	3.00	19.09	96.51
88.39	3.50	3.45	99.96
62.50	4.00	0.04	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

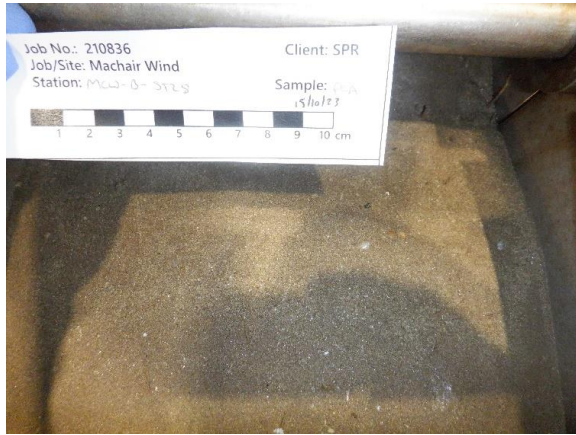


SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	231	Fine sand
Median [phi]*	2.11	Fine sand
Mean [µm]*†	230	Fine sand
Mean [phi]*†	2.12	Fine sand
Sorting [µm]†	1.46	Moderately well sorted
Sorting [phi]†	0.54	Moderately well sorted
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	Symmetrical
Gravel [%]‡	0.08	Sand
Sand [%]‡	99.92	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

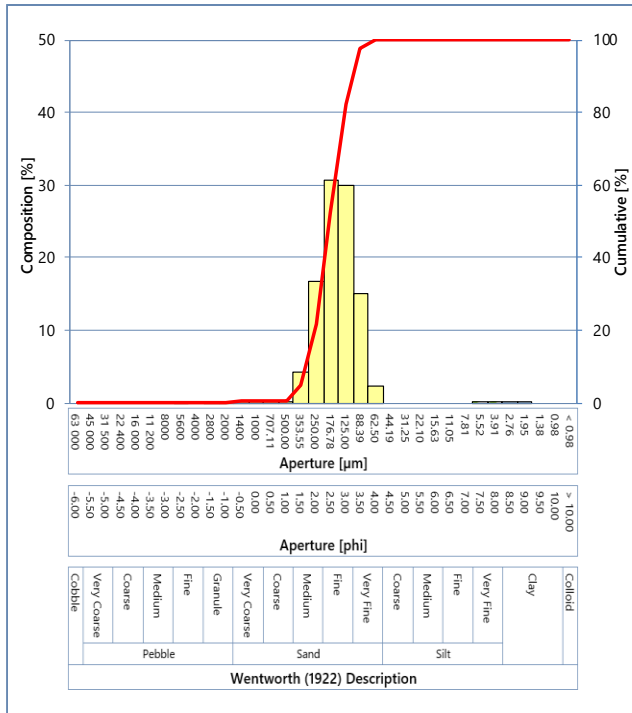
STATION: MCW-B-ST28



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.22	0.22
4000	-2.00	0.00	0.22
2800	-1.50	0.00	0.22
2000	-1.00	0.03	0.25
1400	-0.50	0.05	0.30
1000	0.00	0.11	0.42
707.11	0.50	0.10	0.52
500.00	1.00	0.21	0.73
353.55	1.50	4.26	4.99
250.00	2.00	16.84	21.83
176.78	2.50	30.63	52.46
125.00	3.00	29.99	82.45
88.39	3.50	15.04	97.49
62.50	4.00	2.31	99.80
44.19	4.50	0.00	99.80
31.25	5.00	0.00	99.80
22.10	5.50	0.00	99.80
15.63	6.00	0.00	99.80
11.05	6.50	0.00	99.80
7.81	7.00	0.00	99.80
5.52	7.50	0.04	99.84
3.91	8.00	0.07	99.91
2.76	8.50	0.06	99.97
1.95	9.00	0.03	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	182	Fine sand
Median [phi]*	2.46	
Mean [µm]*†	184	Fine sand
Mean [phi]*†	2.45	
Sorting [µm]†	1.51	Moderately well sorted
Sorting [phi]†	0.60	
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	
Gravel [%]‡	0.25	Sand
Sand [%]‡	99.55	
Fines [%]‡	0.20	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



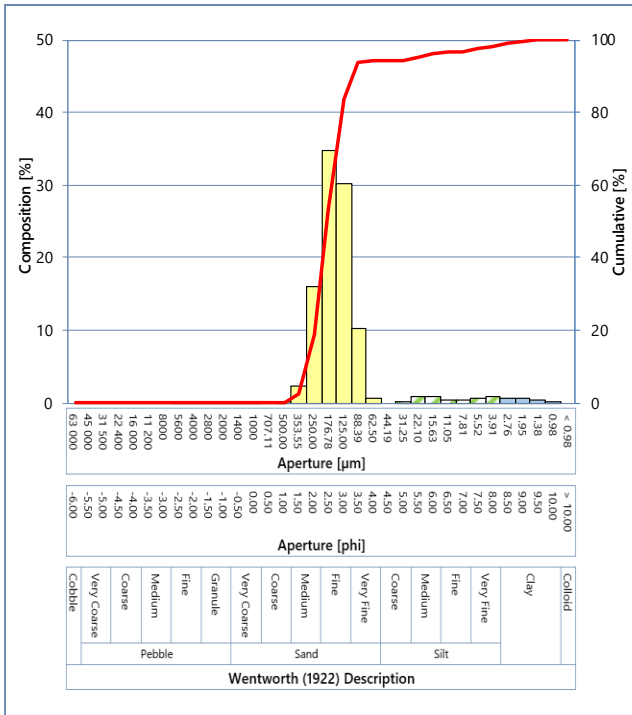
STATION: MCW-B-ST29A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.07	0.07
4000	-2.00	0.05	0.12
2800	-1.50	0.02	0.14
2000	-1.00	0.01	0.15
1400	-0.50	0.02	0.18
1000	0.00	0.06	0.23
707.11	0.50	0.00	0.23
500.00	1.00	0.02	0.25
353.55	1.50	2.26	2.51
250.00	2.00	16.05	18.55
176.78	2.50	34.71	53.27
125.00	3.00	30.19	83.46
88.39	3.50	10.16	93.62
62.50	4.00	0.60	94.21
44.19	4.50	0.00	94.21
31.25	5.00	0.08	94.29
22.10	5.50	0.86	95.15
15.63	6.00	0.83	95.98
11.05	6.50	0.46	96.44
7.81	7.00	0.43	96.87
5.52	7.50	0.66	97.54
3.91	8.00	0.80	98.34
2.76	8.50	0.74	99.08
1.95	9.00	0.52	99.60
1.38	9.50	0.31	99.90
0.98	10.00	0.10	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	183	Fine sand
Median [phi]*	2.45	
Mean [µm]*†	181	Fine sand
Mean [phi]*†	2.47	
Sorting [µm]†	1.81	Moderately sorted
Sorting [phi]†	0.86	
Skewness [µm]†	-0.29	Fine skewed
Skewness [phi]†	0.29	
Gravel [%]‡	0.15	
Sand [%]‡	94.06	Sand
Fines [%]‡	5.79	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

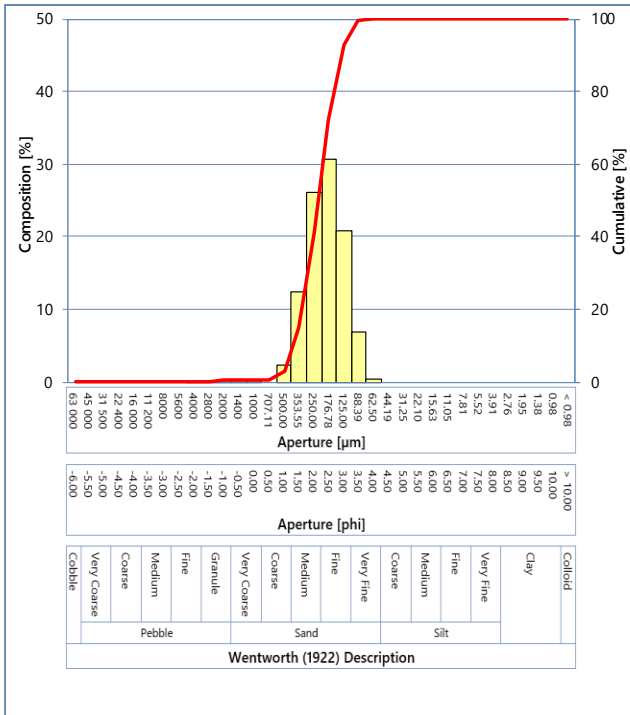
STATION: MCW-B-ST30A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.12	0.12
2800	-1.50	0.10	0.22
2000	-1.00	0.09	0.31
1400	-0.50	0.04	0.35
1000	0.00	0.05	0.40
707.11	0.50	0.00	0.40
500.00	1.00	2.29	2.69
353.55	1.50	12.43	15.12
250.00	2.00	26.14	41.26
176.78	2.50	30.78	72.05
125.00	3.00	20.87	92.91
88.39	3.50	6.82	99.73
62.50	4.00	0.27	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	227	Fine sand
Median [phi]*	2.14	
Mean [µm]*†	226	Fine sand
Mean [phi]*†	2.15	
Sorting [µm]†	1.55	Moderately well sorted
Sorting [phi]†	0.63	
Skewness [µm]†	0.00	Symmetrical
Skewness [phi]†	0.00	
Gravel [%]‡	0.31	
Sand [%]‡	99.69	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

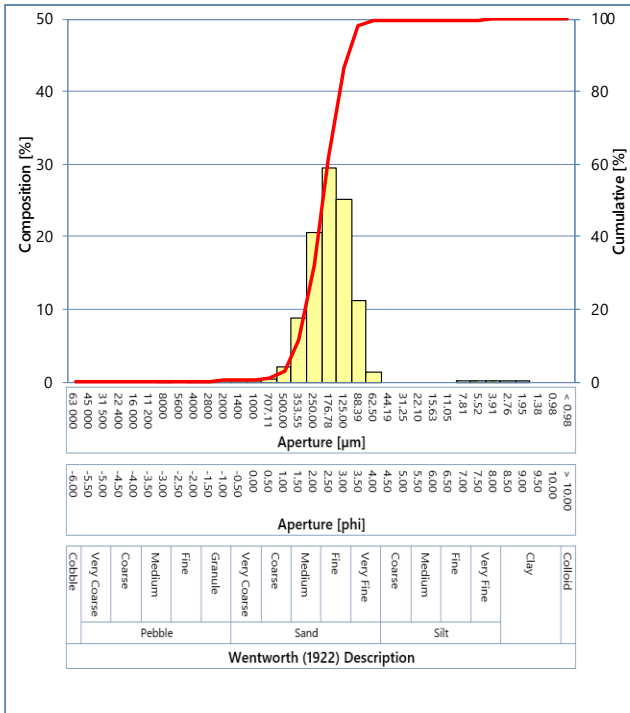
STATION: MCW-B-ST38A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.13	0.13
5600	-2.50	0.00	0.13
4000	-2.00	0.01	0.14
2800	-1.50	0.05	0.20
2000	-1.00	0.09	0.29
1400	-0.50	0.08	0.37
1000	0.00	0.16	0.53
707.11	0.50	0.29	0.82
500.00	1.00	2.08	2.89
353.55	1.50	8.70	11.59
250.00	2.00	20.67	32.26
176.78	2.50	29.49	61.75
125.00	3.00	25.04	86.79
88.39	3.50	11.28	98.07
62.50	4.00	1.39	99.46
44.19	4.50	0.00	99.46
31.25	5.00	0.00	99.46
22.10	5.50	0.00	99.46
15.63	6.00	0.00	99.46
11.05	6.50	0.00	99.46
7.81	7.00	0.02	99.49
5.52	7.50	0.14	99.63
3.91	8.00	0.17	99.80
2.76	8.50	0.14	99.94
1.95	9.00	0.06	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	203	Fine sand
Median [phi]*	2.30	
Mean [µm]*†	205	Fine sand
Mean [phi]*†	2.28	
Sorting [µm]†	1.60	Moderately well sorted
Sorting [phi]†	0.67	
Skewness [µm]†	0.04	Symmetrical
Skewness [phi]†	-0.04	
Gravel [%]‡	0.29	
Sand [%]‡	99.17	Sand
Fines [%]‡	0.54	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



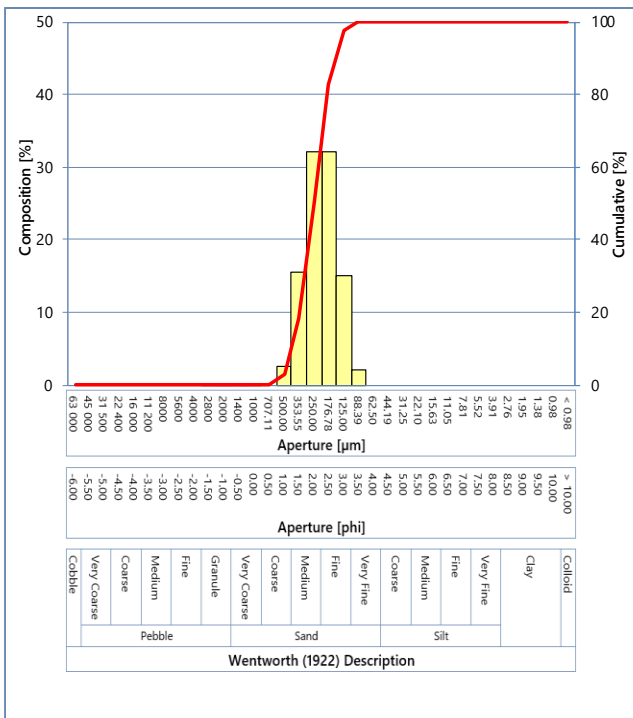
STATION: MCW-B-ST57



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.11	0.11
2000	-1.00	0.02	0.13
1400	-0.50	0.03	0.16
1000	0.00	0.10	0.26
707.11	0.50	0.00	0.26
500.00	1.00	2.65	2.90
353.55	1.50	15.46	18.36
250.00	2.00	32.15	50.51
176.78	2.50	32.18	82.69
125.00	3.00	15.14	97.83
88.39	3.50	2.17	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	251	Medium sand
Median [phi]*	1.99	
Mean [µm]*†	252	Medium sand
Mean [phi]*†	1.99	
Sorting [µm]†	1.47	Moderately well sorted
Sorting [phi]†	0.56	
Skewness [µm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.13	
Sand [%]‡	99.87	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



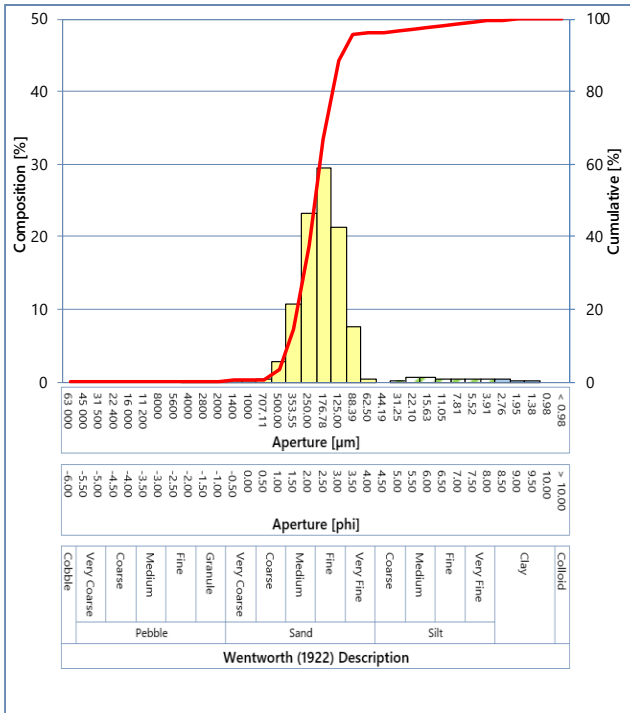
STATION: MCW-B-ST59A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.10	0.10
2800	-1.50	0.03	0.12
2000	-1.00	0.07	0.19
1400	-0.50	0.12	0.31
1000	0.00	0.15	0.46
707.11	0.50	0.27	0.73
500.00	1.00	2.78	3.51
353.55	1.50	10.84	14.35
250.00	2.00	23.25	37.60
176.78	2.50	29.39	67.00
125.00	3.00	21.35	88.35
88.39	3.50	7.54	95.89
62.50	4.00	0.46	96.36
44.19	4.50	0.00	96.36
31.25	5.00	0.17	96.52
22.10	5.50	0.71	97.24
15.63	6.00	0.55	97.79
11.05	6.50	0.30	98.09
7.81	7.00	0.33	98.42
5.52	7.50	0.47	98.90
3.91	8.00	0.49	99.39
2.76	8.50	0.38	99.77
1.95	9.00	0.22	99.99
1.38	9.50	0.01	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	216	Fine sand
Median [phi]*	2.21	
Mean [µm]*†	215	Fine sand
Mean [phi]*†	2.21	
Sorting [µm]†	1.62	Moderately sorted
Sorting [phi]†	0.70	
Skewness [µm]†	-0.02	Symmetrical
Skewness [phi]†	0.02	
Gravel [%]‡	0.19	Sand
Sand [%]‡	96.17	
Fines [%]‡	3.64	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

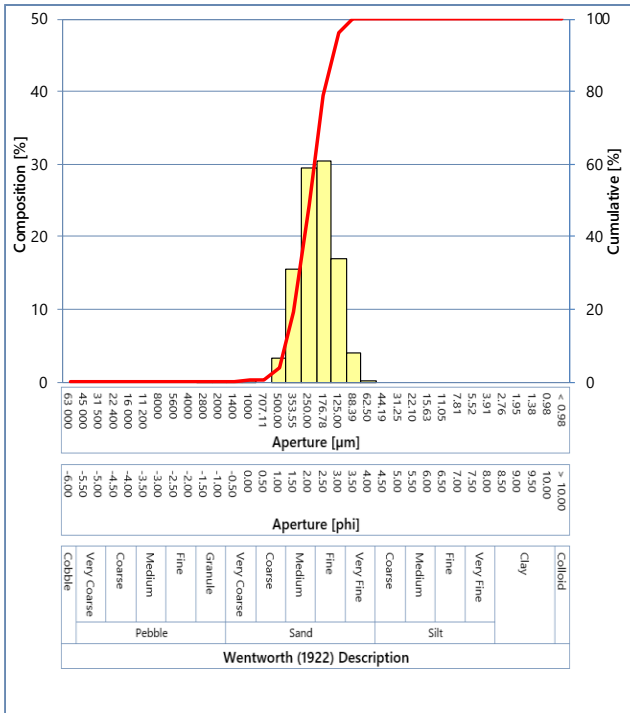
STATION: MCW-C-ST20



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.04	0.04
2000	-1.00	0.07	0.11
1400	-0.50	0.13	0.24
1000	0.00	0.12	0.36
707.11	0.50	0.00	0.36
500.00	1.00	3.30	3.66
353.55	1.50	15.51	19.17
250.00	2.00	29.50	48.67
176.78	2.50	30.39	79.06
125.00	3.00	17.01	96.07
88.39	3.50	3.90	99.97
62.50	4.00	0.03	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

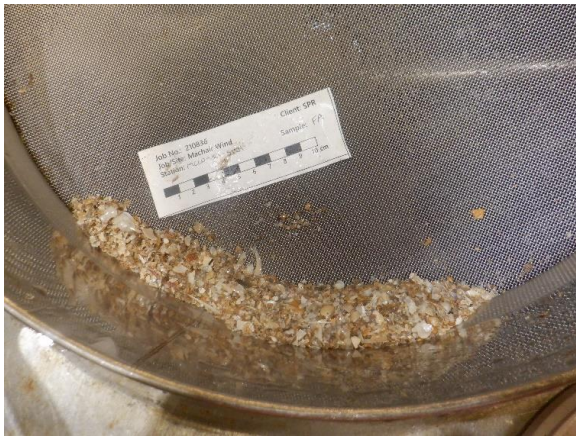


SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	246	Fine sand
Median [phi]*	2.02	
Mean [µm]*†	246	Fine sand
Mean [phi]*†	2.02	
Sorting [µm]†	1.52	Moderately well sorted
Sorting [phi]†	0.60	
Skewness [µm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.11	Sand
Sand [%]‡	99.89	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

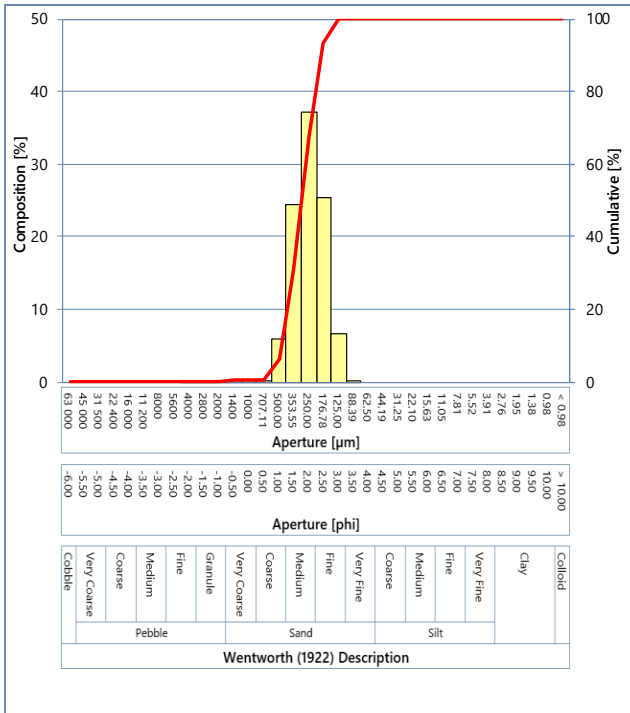
STATION: MCW-C-ST31



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.05	0.05
2800	-1.50	0.04	0.08
2000	-1.00	0.11	0.19
1400	-0.50	0.11	0.30
1000	0.00	0.11	0.41
707.11	0.50	0.09	0.50
500.00	1.00	5.84	6.34
353.55	1.50	24.37	30.72
250.00	2.00	37.24	67.96
176.78	2.50	25.36	93.33
125.00	3.00	6.53	99.85
88.39	3.50	0.15	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



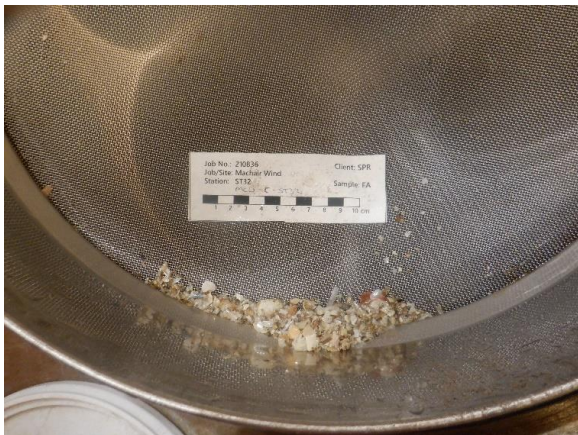
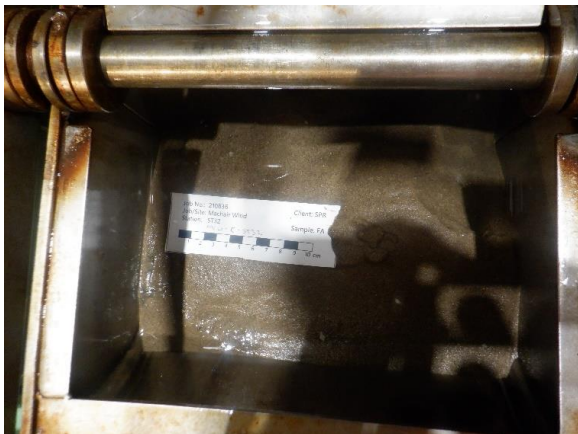
SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	295	Medium sand
Median [phi]*	1.76	
Mean [µm]*†	296	Medium sand
Mean [phi]*†	1.76	
Sorting [µm]†	1.46	Moderately well sorted
Sorting [phi]†	0.54	
Skewness [µm]†	0.00	Symmetrical
Skewness [phi]†	0.00	
Gravel [%]‡	0.19	Sand
Sand [%]‡	99.81	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



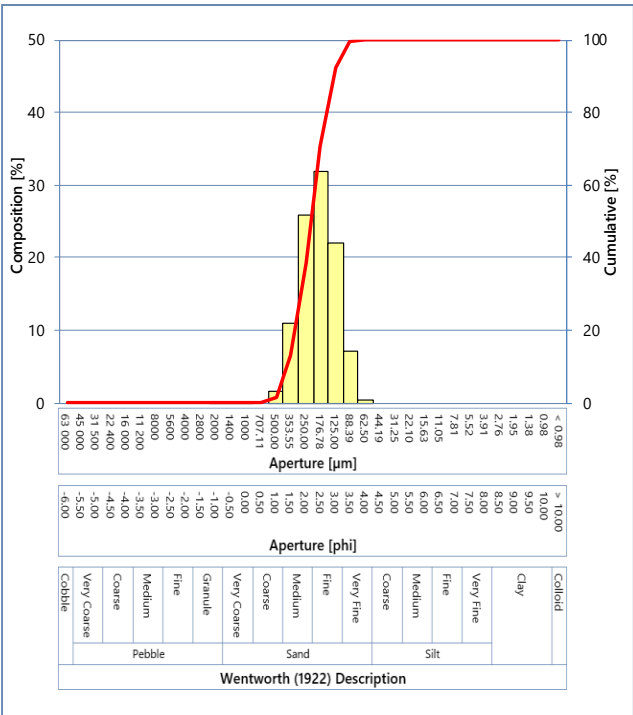
**STATION: MCW-C-ST32**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.04	0.04
1400	-0.50	0.02	0.06
1000	0.00	0.04	0.10
707.11	0.50	0.00	0.10
500.00	1.00	1.62	1.72
353.55	1.50	11.07	12.80
250.00	2.00	25.80	38.60
176.78	2.50	31.94	70.54
125.00	3.00	22.03	92.57
88.39	3.50	7.16	99.73
62.50	4.00	0.27	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	221	Fine sand
Median [phi]*	2.18	
Mean [µm]*†	220	Fine sand
Mean [phi]*†	2.18	
Sorting [µm]†	1.53	Moderately well sorted
Sorting [phi]†	0.62	
Skewness [µm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.04	Sand
Sand [%]‡	99.96	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



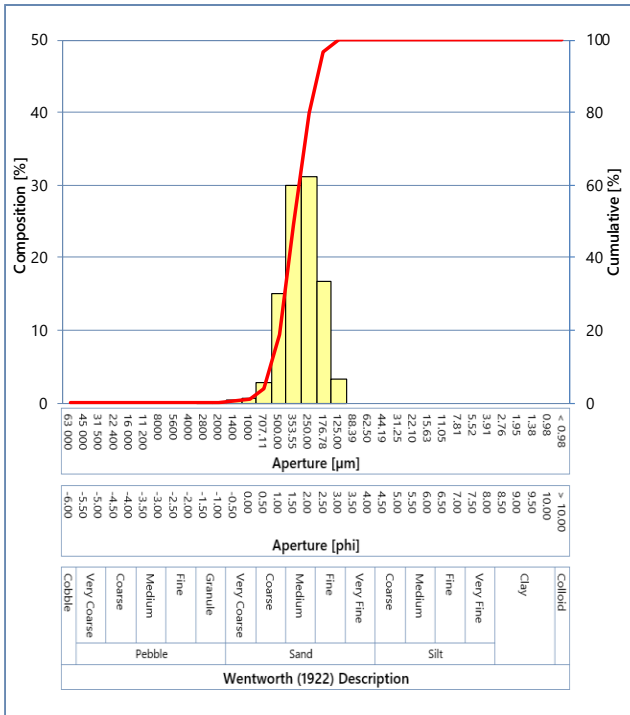
STATION: MCW-C-ST41



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.05	0.05
2000	-1.00	0.13	0.17
1400	-0.50	0.33	0.50
1000	0.00	0.69	1.19
707.11	0.50	2.70	3.89
500.00	1.00	15.14	19.02
353.55	1.50	29.99	49.01
250.00	2.00	31.03	80.04
176.78	2.50	16.67	96.71
125.00	3.00	3.29	100.00
88.39	3.50	0.00	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	350	Medium sand
Median [phi]*	1.52	Medium sand
Mean [µm]*†	351	Medium sand
Mean [phi]*†	1.51	Medium sand
Sorting [µm]†	1.51	Moderately well sorted
Sorting [phi]†	0.59	Moderately well sorted
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	Symmetrical
Gravel [%]‡	0.17	Sand
Sand [%]‡	99.83	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



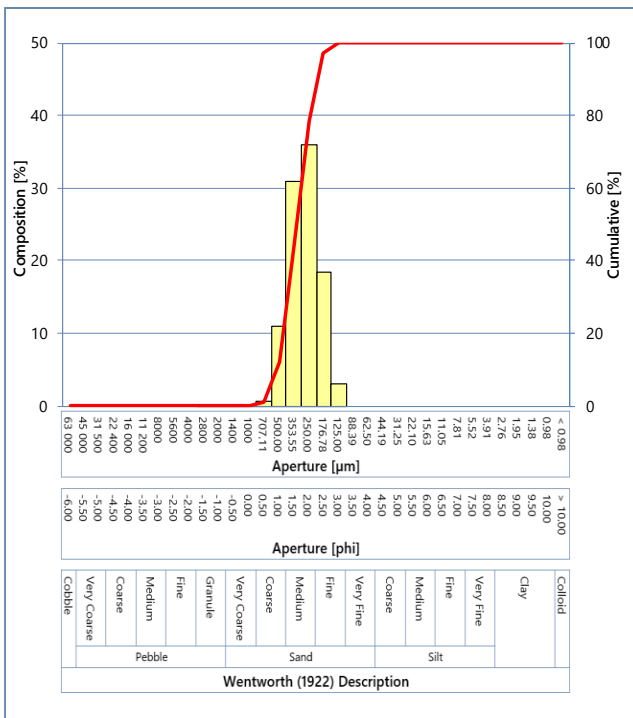
**STATION: MCW-C-ST42**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.05	0.05
2000	-1.00	0.02	0.07
1400	-0.50	0.05	0.11
1000	0.00	0.05	0.17
707.11	0.50	0.69	0.85
500.00	1.00	11.07	11.92
353.55	1.50	30.80	42.73
250.00	2.00	35.86	78.58
176.78	2.50	18.50	97.08
125.00	3.00	2.92	100.00
88.39	3.50	0.00	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	330	Medium sand
Median [phi]*	1.60	
Mean [µm]*†	329	Medium sand
Mean [phi]*†	1.60	
Sorting [µm]†	1.45	Moderately well sorted
Sorting [phi]†	0.54	
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	
Gravel [%]‡	0.07	Sand
Sand [%]‡	99.93	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



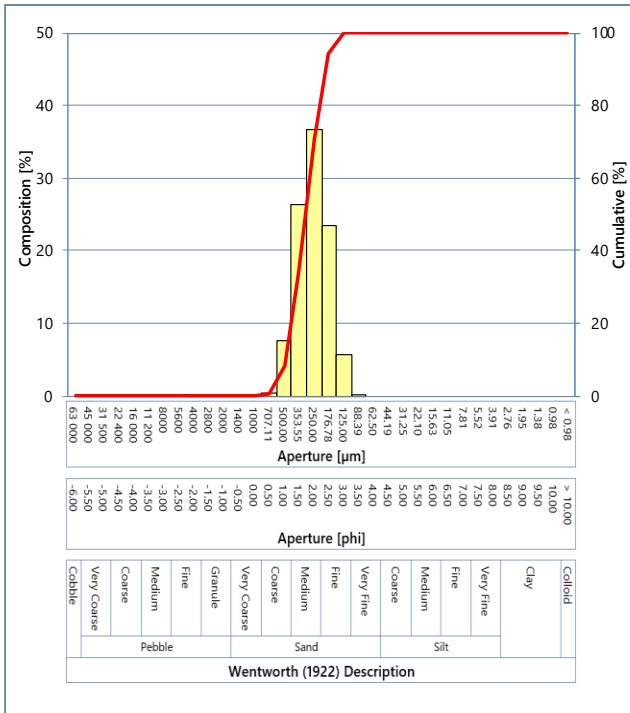
STATION: MCW-C-ST43



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.02	0.02
2800	-1.50	0.01	0.03
2000	-1.00	0.04	0.07
1400	-0.50	0.05	0.12
1000	0.00	0.07	0.19
707.11	0.50	0.27	0.46
500.00	1.00	7.57	8.03
353.55	1.50	26.26	34.29
250.00	2.00	36.65	70.94
176.78	2.50	23.35	94.29
125.00	3.00	5.60	99.89
88.39	3.50	0.11	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

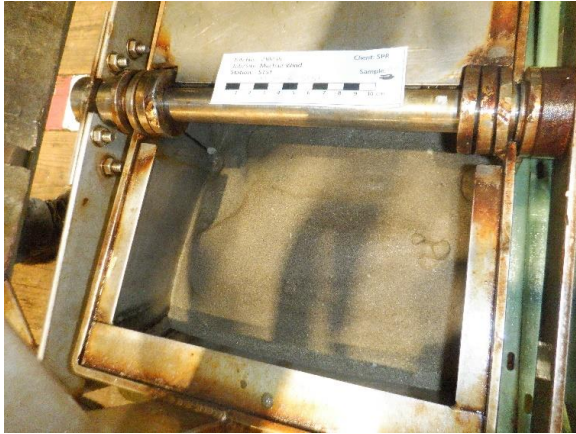


SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	305	Medium sand
Median [phi]*	1.71	
Mean [µm]*†	305	Medium sand
Mean [phi]*†	1.72	
Sorting [µm]†	1.46	Moderately well sorted
Sorting [phi]†	0.55	
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	
Gravel [%]‡	0.07	Sand
Sand [%]‡	99.93	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

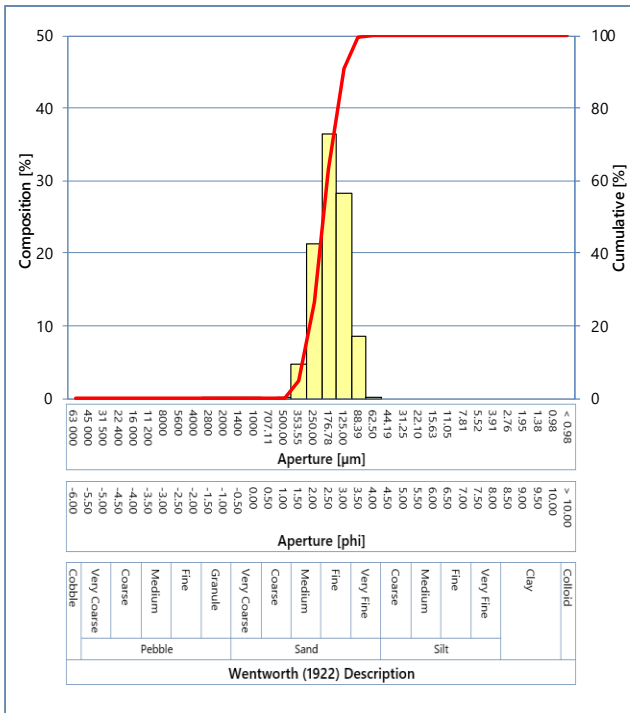
STATION: MCW-C-ST51



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.04	0.04
2000	-1.00	0.02	0.06
1400	-0.50	0.04	0.10
1000	0.00	0.06	0.16
707.11	0.50	0.00	0.16
500.00	1.00	0.07	0.23
353.55	1.50	4.80	5.03
250.00	2.00	21.39	26.43
176.78	2.50	36.41	62.84
125.00	3.00	28.26	91.09
88.39	3.50	8.65	99.74
62.50	4.00	0.26	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	200	Fine sand
Median [phi]*	2.32	
Mean [µm]*†	201	Fine sand
Mean [phi]*†	2.32	
Sorting [µm]‡	1.46	Moderately well sorted
Sorting [phi]‡	0.54	
Skewness [µm]‡	-0.01	Symmetrical
Skewness [phi]‡	0.01	
Gravel [%]†	0.06	
Sand [%]†	99.94	Sand
Fines [%]†	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



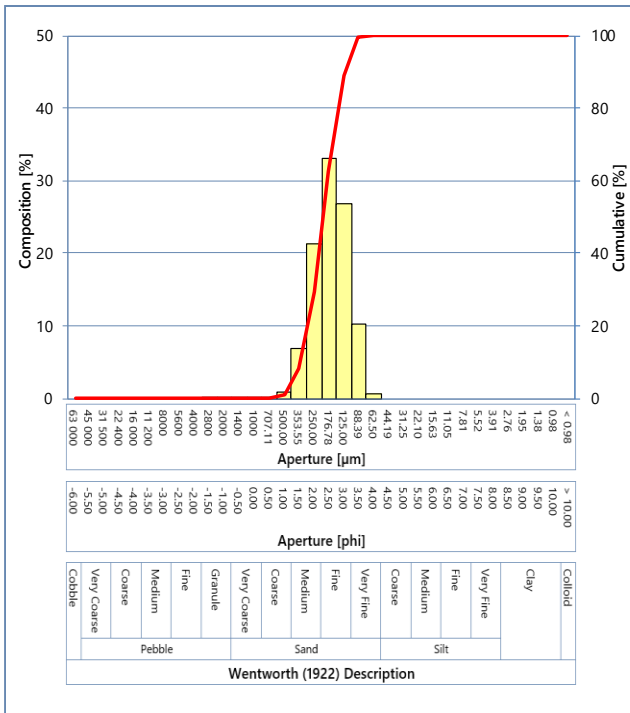
STATION: MCW-C-ST52



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.04	0.04
2000	-1.00	0.04	0.07
1400	-0.50	0.07	0.14
1000	0.00	0.06	0.20
707.11	0.50	0.02	0.21
500.00	1.00	0.82	1.03
353.55	1.50	6.95	7.98
250.00	2.00	21.38	29.36
176.78	2.50	32.97	62.33
125.00	3.00	26.86	89.19
88.39	3.50	10.14	99.33
62.50	4.00	0.67	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	201	Fine sand
Median [phi]*	2.31	
Mean [µm]*†	203	Fine sand
Mean [phi]*†	2.30	
Sorting [µm]‡	1.52	Moderately well sorted
Sorting [phi]‡	0.61	
Skewness [µm]‡	0.03	Symmetrical
Skewness [phi]‡	-0.03	
Gravel [%]‡	0.07	
Sand [%]‡	99.93	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

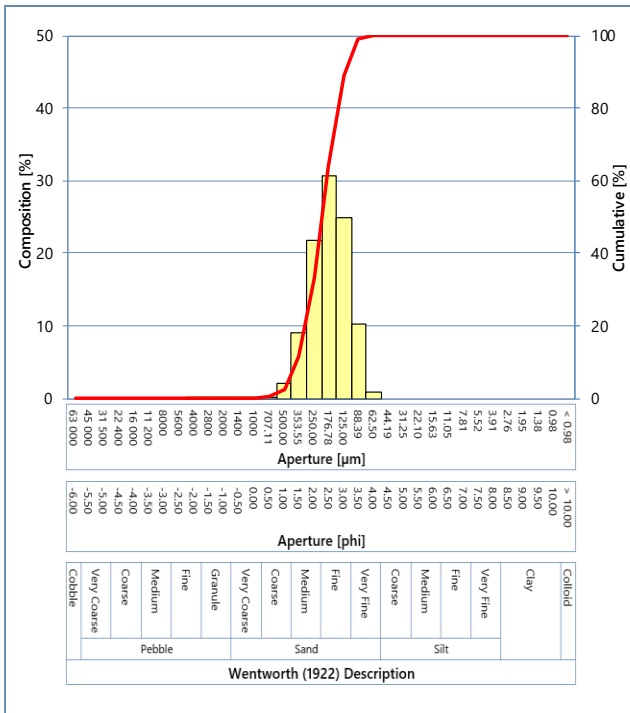
STATION: MCW-C-ST53



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.02	0.02
2800	-1.50	0.03	0.04
2000	-1.00	0.02	0.07
1400	-0.50	0.05	0.12
1000	0.00	0.07	0.19
707.11	0.50	0.13	0.32
500.00	1.00	1.98	2.30
353.55	1.50	9.12	11.42
250.00	2.00	21.88	33.30
176.78	2.50	30.72	64.03
125.00	3.00	24.93	88.95
88.39	3.50	10.12	99.08
62.50	4.00	0.92	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	207	Fine sand
Median [phi]*	2.27	
Mean [µm]*†	209	Fine sand
Mean [phi]*†	2.26	
Sorting [µm]†	1.57	Moderately well sorted
Sorting [phi]†	0.65	
Skewness [µm]†	0.04	Symmetrical
Skewness [phi]†	-0.04	
Gravel [%]†	0.07	
Sand [%]†	99.93	Sand
Fines [%]†	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

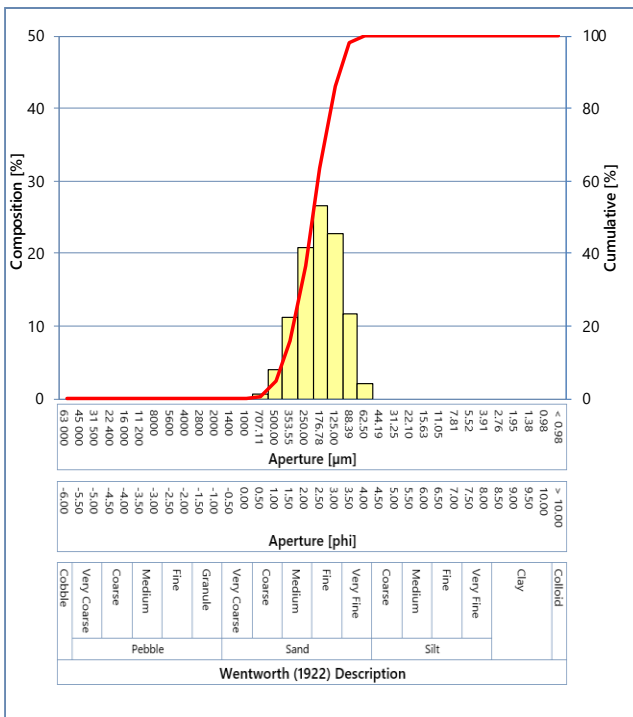
STATION: MCW-C-ST54



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.04	0.04
2000	-1.00	0.02	0.06
1400	-0.50	0.04	0.11
1000	0.00	0.06	0.17
707.11	0.50	0.57	0.74
500.00	1.00	3.90	4.64
353.55	1.50	11.19	15.83
250.00	2.00	20.87	36.70
176.78	2.50	26.67	63.37
125.00	3.00	22.80	86.17
88.39	3.50	11.71	97.88
62.50	4.00	2.12	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	210	Fine sand
Median [phi]*	2.25	
Mean [µm]*†	212	Fine sand
Mean [phi]*†	2.24	
Sorting [µm]‡	1.65	Moderately sorted
Sorting [phi]‡	0.72	
Skewness [µm]‡	0.04	Symmetrical
Skewness [phi]‡	-0.04	
Gravel [%]‡	0.06	
Sand [%]‡	99.94	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



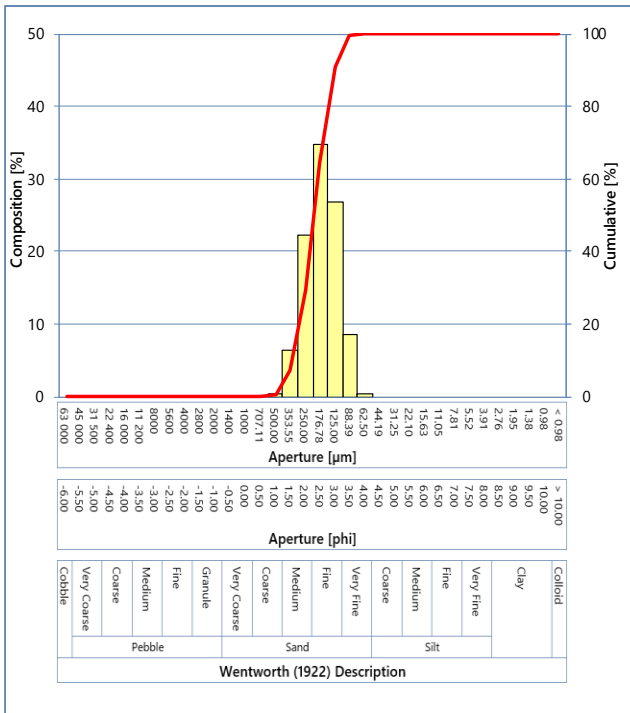
STATION: MCW-C-ST62



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.01	0.01
2800	-1.50	0.00	0.01
2000	-1.00	0.04	0.05
1400	-0.50	0.04	0.10
1000	0.00	0.05	0.15
707.11	0.50	0.00	0.15
500.00	1.00	0.49	0.63
353.55	1.50	6.50	7.14
250.00	2.00	22.25	29.39
176.78	2.50	34.84	64.23
125.00	3.00	26.79	91.02
88.39	3.50	8.67	99.69
62.50	4.00	0.31	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	204	Fine sand
Median [phi]*	2.30	
Mean [µm]*†	205	Fine sand
Mean [phi]*†	2.29	
Sorting [µm]‡	1.49	Moderately well sorted
Sorting [phi]‡	0.58	
Skewness [µm]‡	0.02	Symmetrical
Skewness [phi]‡	-0.02	
Gravel [%]‡	0.05	Sand
Sand [%]‡	99.95	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

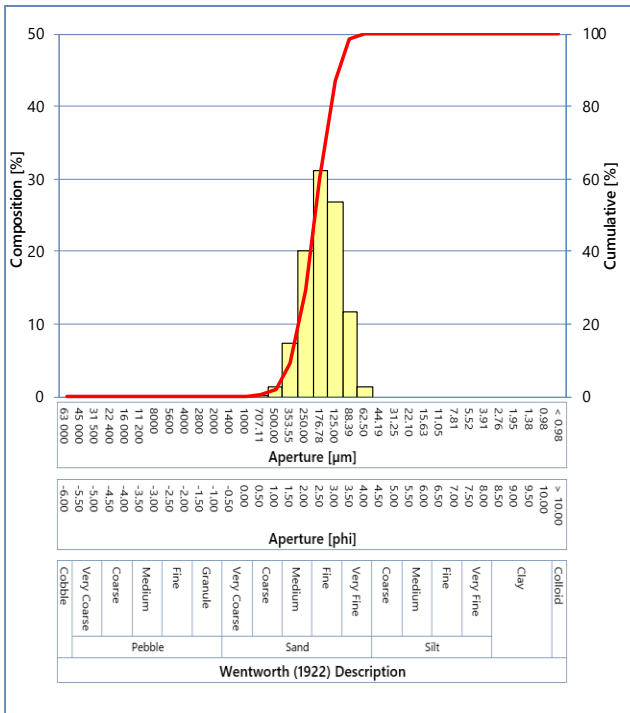
STATION: MCW-C-ST63



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.04	0.04
2000	-1.00	0.02	0.06
1400	-0.50	0.05	0.11
1000	0.00	0.06	0.17
707.11	0.50	0.25	0.42
500.00	1.00	1.39	1.81
353.55	1.50	7.29	9.10
250.00	2.00	20.18	29.28
176.78	2.50	31.04	60.33
125.00	3.00	26.82	87.14
88.39	3.50	11.60	98.75
62.50	4.00	1.25	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	198	Fine sand
Median [phi]*	2.33	
Mean [µm]*†	201	Fine sand
Mean [phi]*†	2.32	
Sorting [µm]‡	1.56	Moderately well sorted
Sorting [phi]‡	0.64	
Skewness [µm]‡	0.05	Symmetrical
Skewness [phi]‡	-0.05	
Gravel [%]‡	0.06	Sand
Sand [%]‡	99.94	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

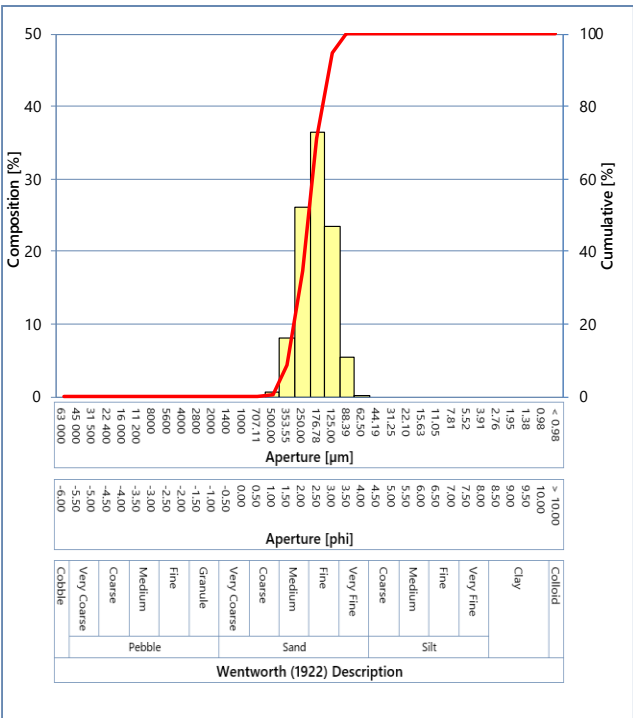
**STATION: MCW-C-ST70**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.03	0.03
2800	-1.50	0.01	0.04
2000	-1.00	0.01	0.05
1400	-0.50	0.02	0.07
1000	0.00	0.02	0.09
707.11	0.50	0.00	0.09
500.00	1.00	0.52	0.61
353.55	1.50	7.98	8.59
250.00	2.00	26.03	34.62
176.78	2.50	36.46	71.08
125.00	3.00	23.47	94.55
88.39	3.50	5.40	99.95
62.50	4.00	0.05	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	216	Fine sand
Median [phi]*	2.21	
Mean [µm]*†	216	Fine sand
Mean [phi]*†	2.21	
Sorting [µm]†	1.46	Moderately well sorted
Sorting [phi]†	0.55	
Skewness [µm]†	0.03	Symmetrical
Skewness [phi]†	-0.03	
Gravel [%]‡	0.05	Sand
Sand [%]‡	99.95	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)





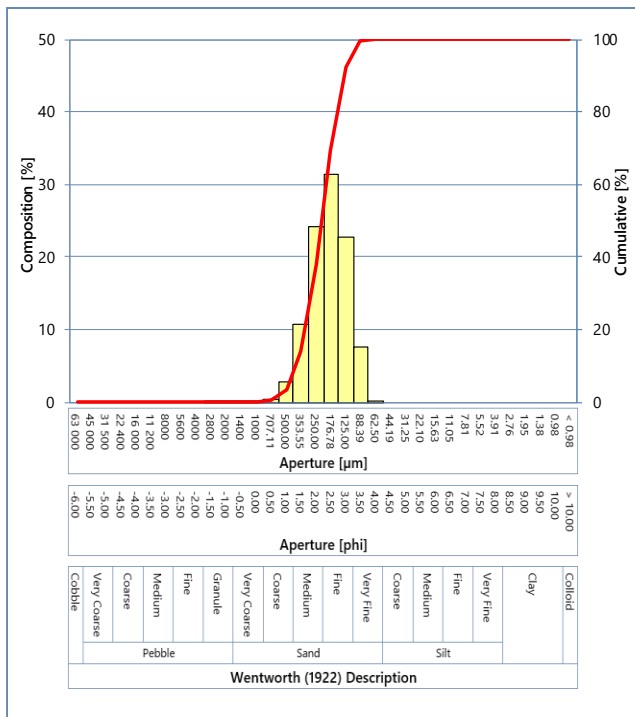
STATION: MCW-C-ST71



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.02	0.02
2000	-1.00	0.05	0.07
1400	-0.50	0.05	0.12
1000	0.00	0.04	0.16
707.11	0.50	0.33	0.49
500.00	1.00	2.69	3.18
353.55	1.50	10.80	13.98
250.00	2.00	24.14	38.13
176.78	2.50	31.31	69.44
125.00	3.00	22.73	92.17
88.39	3.50	7.60	99.77
62.50	4.00	0.23	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



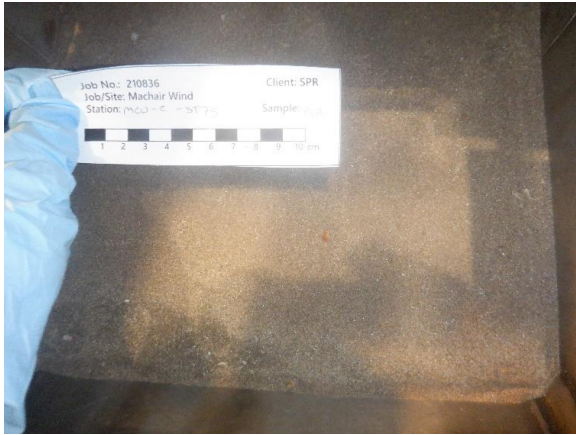
SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	219	Fine sand
Median [phi]*	2.19	
Mean [µm]*†	220	Fine sand
Mean [phi]*†	2.18	
Sorting [µm]‡	1.56	Moderately well sorted
Sorting [phi]‡	0.64	
Skewness [µm]‡	0.03	Symmetrical
Skewness [phi]‡	-0.03	
Gravel [%]‡	0.07	Sand
Sand [%]‡	99.93	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



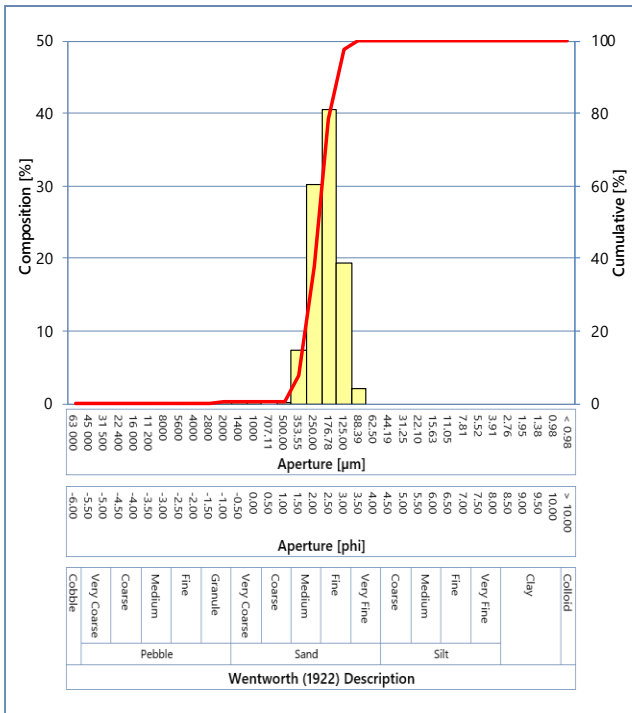
STATION: MCW-C-ST75



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.07	0.07
5600	-2.50	0.00	0.07
4000	-2.00	0.04	0.12
2800	-1.50	0.02	0.14
2000	-1.00	0.17	0.30
1400	-0.50	0.10	0.40
1000	0.00	0.06	0.47
707.11	0.50	0.00	0.47
500.00	1.00	0.15	0.61
353.55	1.50	7.25	7.87
250.00	2.00	30.13	38.00
176.78	2.50	40.42	78.41
125.00	3.00	19.44	97.86
88.39	3.50	2.14	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	226	Fine sand
Median [phi]*	2.15	
Mean [µm]*†	227	Fine sand
Mean [phi]*†	2.14	
Sorting [µm]‡	1.41	Moderately well sorted
Sorting [phi]‡	0.50	
Skewness [µm]‡	0.03	Symmetrical
Skewness [phi]‡	-0.03	
Gravel [%]‡	0.30	Sand
Sand [%]‡	99.70	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

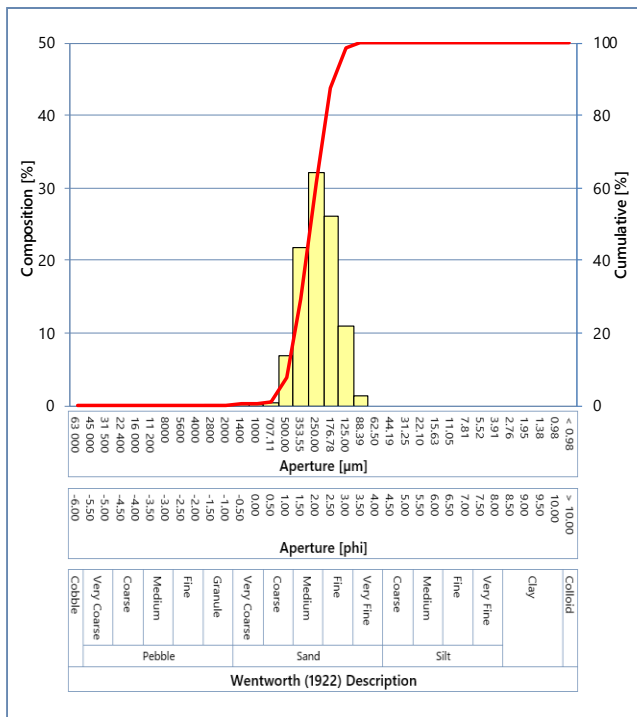
STATION: MCW-C-ST77



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.11	0.11
2000	-1.00	0.09	0.19
1400	-0.50	0.17	0.36
1000	0.00	0.18	0.53
707.11	0.50	0.28	0.82
500.00	1.00	6.85	7.67
353.55	1.50	21.73	29.40
250.00	2.00	32.17	61.57
176.78	2.50	26.18	87.74
125.00	3.00	10.96	98.70
88.39	3.50	1.30	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



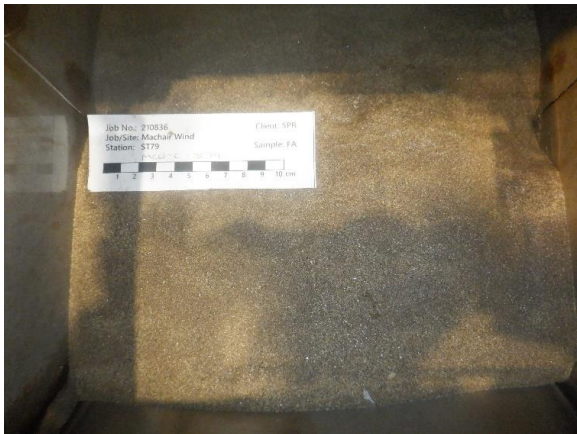
SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	283	Medium sand
Median [phi]*	1.82	
Mean [µm]*†	285	Medium sand
Mean [phi]*†	1.81	
Sorting [µm]†	1.53	Moderately well sorted
Sorting [phi]†	0.62	
Skewness [µm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.19	Sand
Sand [%]‡	99.81	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



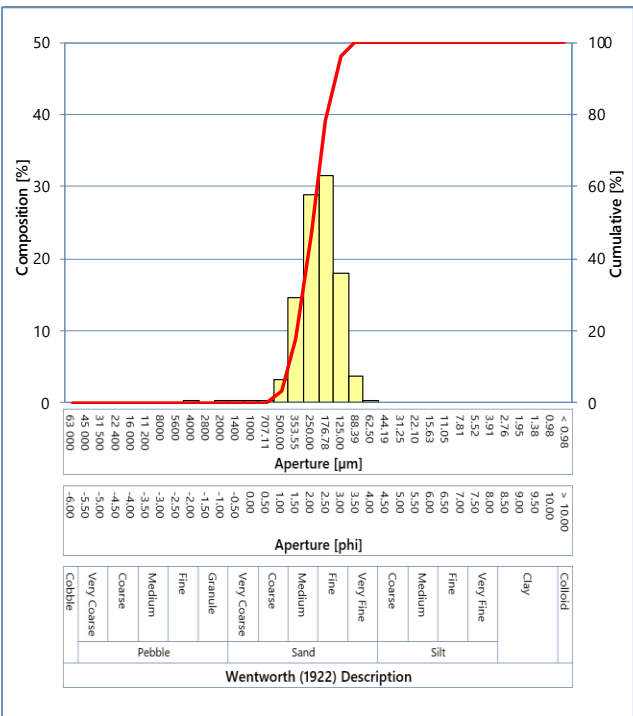
**STATION: MCW-C-ST79**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.04	0.04
2800	-1.50	0.00	0.04
2000	-1.00	0.01	0.05
1400	-0.50	0.02	0.07
1000	0.00	0.01	0.08
707.11	0.50	0.11	0.19
500.00	1.00	3.34	3.53
353.55	1.50	14.53	18.05
250.00	2.00	28.93	46.99
176.78	2.50	31.42	78.41
125.00	3.00	17.90	96.31
88.39	3.50	3.67	99.98
62.50	4.00	0.02	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



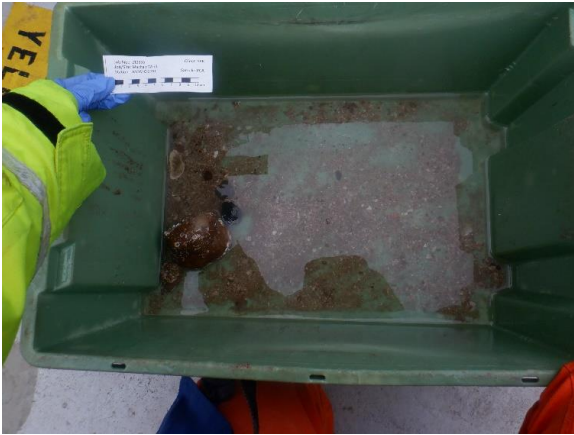
**SUMMARY STATISTICS**

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	242	Fine sand
Median [phi]*	2.05	
Mean [µm]*†	242	Fine sand
Mean [phi]*†	2.04	
Sorting [µm]†	1.51	Moderately well sorted
Sorting [phi]†	0.60	
Skewness [µm]†	0.03	Symmetrical
Skewness [phi]†	-0.03	
Gravel [%]‡	0.05	Sand
Sand [%]‡	99.95	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



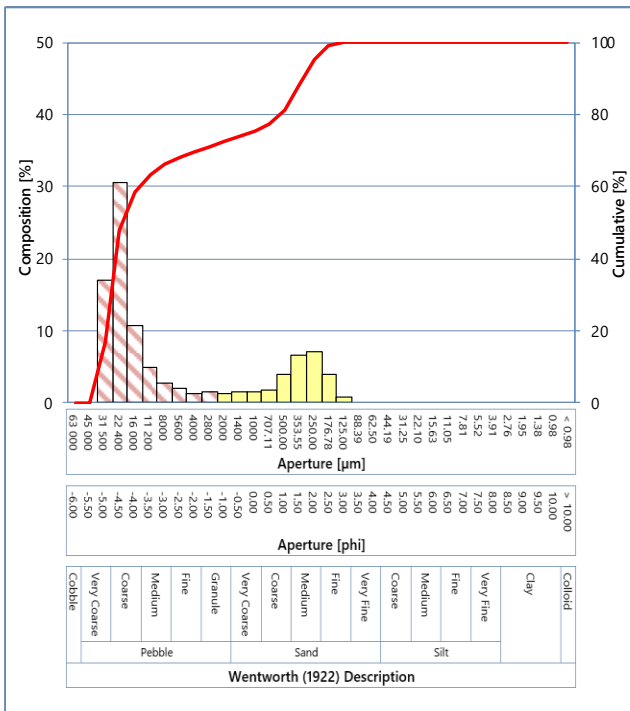
STATION: MCW-C-ST91



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	17.02	17.02
22 400	-4.50	30.59	47.61
16 000	-4.00	10.80	58.41
11 200	-3.50	5.03	63.44
8000	-3.00	2.68	66.12
5600	-2.50	2.12	68.23
4000	-2.00	1.44	69.67
2800	-1.50	1.56	71.23
2000	-1.00	1.43	72.66
1400	-0.50	1.48	74.14
1000	0.00	1.46	75.60
707.11	0.50	1.72	77.32
500.00	1.00	4.02	81.33
353.55	1.50	6.68	88.01
250.00	2.00	7.02	95.03
176.78	2.50	4.07	99.10
125.00	3.00	0.90	100.00
88.39	3.50	0.00	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	26950	Coarse pebble
Mode 2 [µm]*	302	Medium sand
Mode 3 [µm]*	-	-
Median [µm]*	20794	Coarse pebble
Median [phi]*	-4.38	Coarse pebble
Mean [µm]*†	6629	Fine pebble
Mean [phi]*†	-2.73	Fine pebble
Sorting [µm]†	6.34	Very poorly sorted
Sorting [phi]†	2.66	Very poorly sorted
Skewness [µm]†	-0.77	Very fine skewed
Skewness [phi]†	0.77	Very fine skewed
Gravel [%]‡	72.66	Sandy gravel
Sand [%]‡	27.34	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

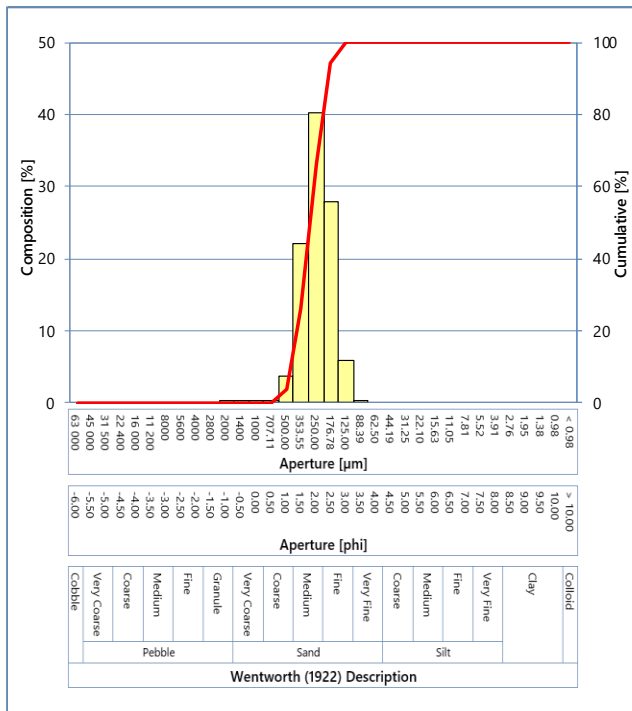
**STATION: MCW-C-ST92**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.01	0.01
1400	-0.50	0.04	0.05
1000	0.00	0.09	0.14
707.11	0.50	0.03	0.17
500.00	1.00	3.75	3.92
353.55	1.50	22.08	26.00
250.00	2.00	40.25	66.25
176.78	2.50	27.80	94.05
125.00	3.00	5.85	99.90
88.39	3.50	0.10	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	288	Medium sand
Median [phi]*	1.80	
Mean [µm]*†	288	Medium sand
Mean [phi]*†	1.80	
Sorting [µm]†	1.41	Moderately well sorted
Sorting [phi]†	0.50	
Skewness [µm]†	0.00	Symmetrical
Skewness [phi]†	0.00	
Gravel [%]‡	0.01	
Sand [%]‡	99.99	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

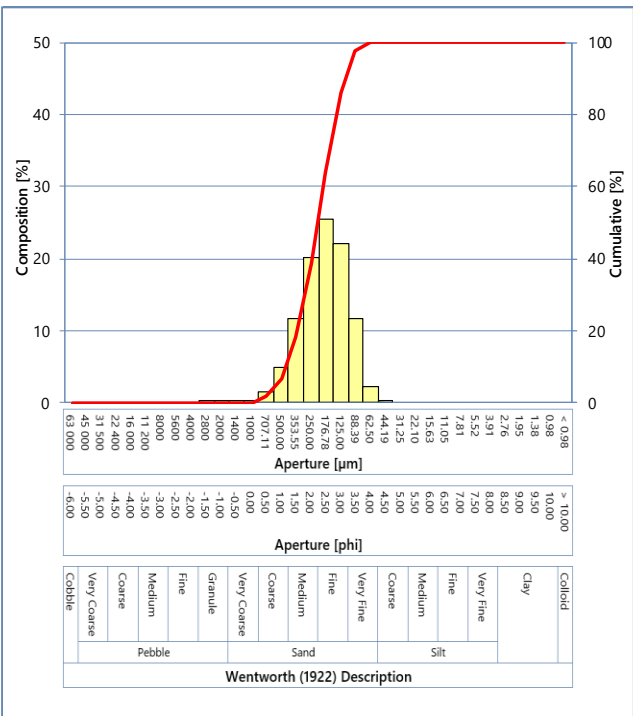
**STATION: MCW-D-ST64**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.07	0.07
2000	-1.00	0.01	0.08
1400	-0.50	0.04	0.12
1000	0.00	0.04	0.15
707.11	0.50	1.56	1.72
500.00	1.00	5.04	6.76
353.55	1.50	11.60	18.36
250.00	2.00	20.14	38.50
176.78	2.50	25.45	63.95
125.00	3.00	22.04	85.99
88.39	3.50	11.65	97.65
62.50	4.00	2.35	99.99
44.19	4.50	0.01	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

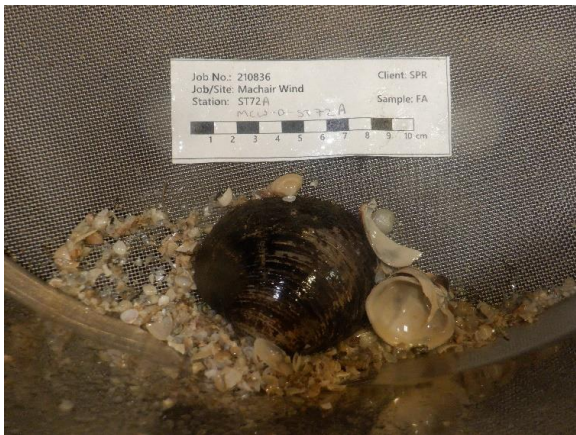
Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	214	Fine sand
Median [phi]*	2.23	Fine sand
Mean [µm]*†	219	Fine sand
Mean [phi]*†	2.19	Fine sand
Sorting [µm]†	1.71	Moderately sorted
Sorting [phi]†	0.78	Moderately sorted
Skewness [µm]†	0.08	Symmetrical
Skewness [phi]†	-0.08	Symmetrical
Gravel [%]‡	0.08	Sand
Sand [%]‡	99.91	
Fines [%]‡	0.01	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)





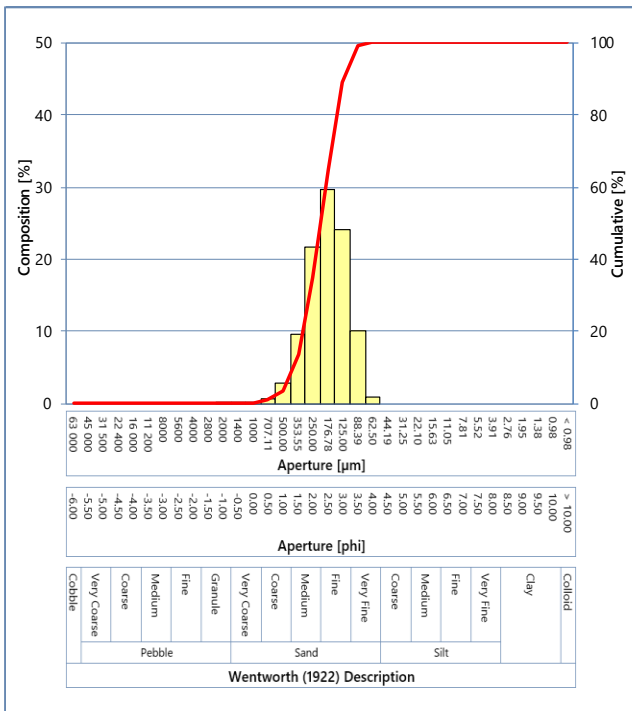
STATION: MCW-D-ST72A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.01	0.01
1400	-0.50	0.04	0.05
1000	0.00	0.04	0.09
707.11	0.50	0.75	0.84
500.00	1.00	2.85	3.70
353.55	1.50	9.70	13.40
250.00	2.00	21.61	35.01
176.78	2.50	29.70	64.71
125.00	3.00	24.17	88.88
88.39	3.50	10.13	99.01
62.50	4.00	0.99	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	210	Fine sand
Median [phi]*	2.25	Fine sand
Mean [µm]*†	212	Fine sand
Mean [phi]*†	2.24	Fine sand
Sorting [µm]†	1.59	Moderately well sorted
Sorting [phi]†	0.67	Moderately well sorted
Skewness [µm]†	0.05	Symmetrical
Skewness [phi]†	-0.05	Symmetrical
Gravel [%]‡	0.01	Sand
Sand [%]‡	99.99	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

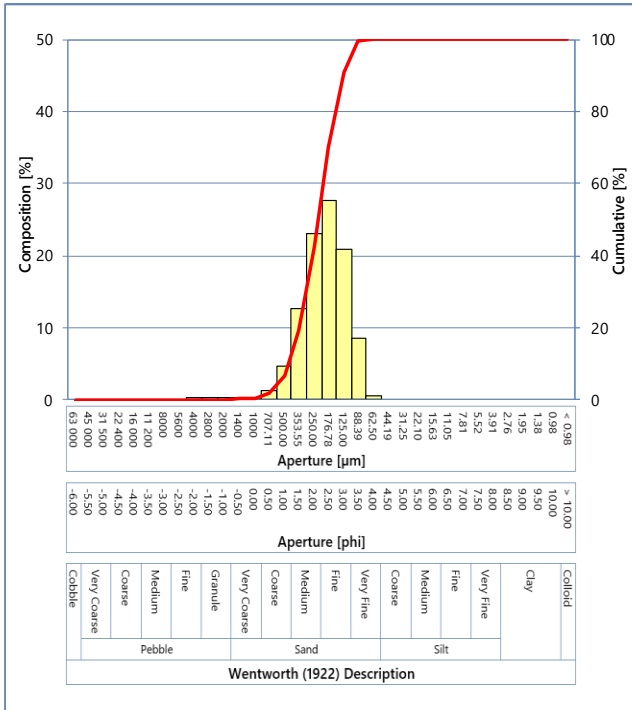
STATION: MCW-D-ST73



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.06	0.06
2800	-1.50	0.01	0.07
2000	-1.00	0.11	0.17
1400	-0.50	0.12	0.30
1000	0.00	0.17	0.46
707.11	0.50	1.33	1.79
500.00	1.00	4.82	6.62
353.55	1.50	12.72	19.34
250.00	2.00	23.04	42.38
176.78	2.50	27.67	70.05
125.00	3.00	20.93	90.99
88.39	3.50	8.48	99.47
62.50	4.00	0.53	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



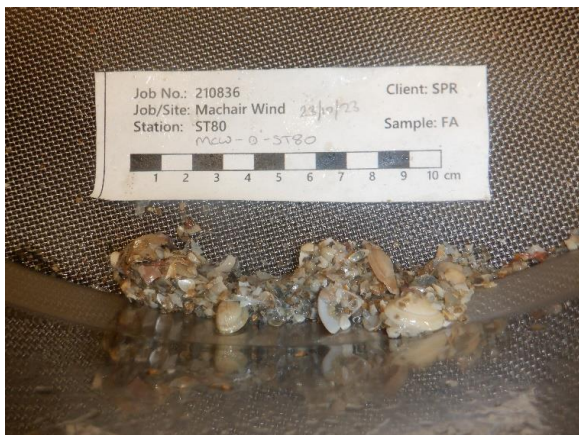
SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	227	Fine sand
Median [phi]*	2.14	
Mean [µm]*†	231	Fine sand
Mean [phi]*†	2.11	Moderately sorted
Sorting [µm]†	1.66	
Sorting [phi]†	0.73	
Skewness [µm]†	0.07	Symmetrical
Skewness [phi]†	-0.07	
Gravel [%]‡	0.17	Sand
Sand [%]‡	99.83	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



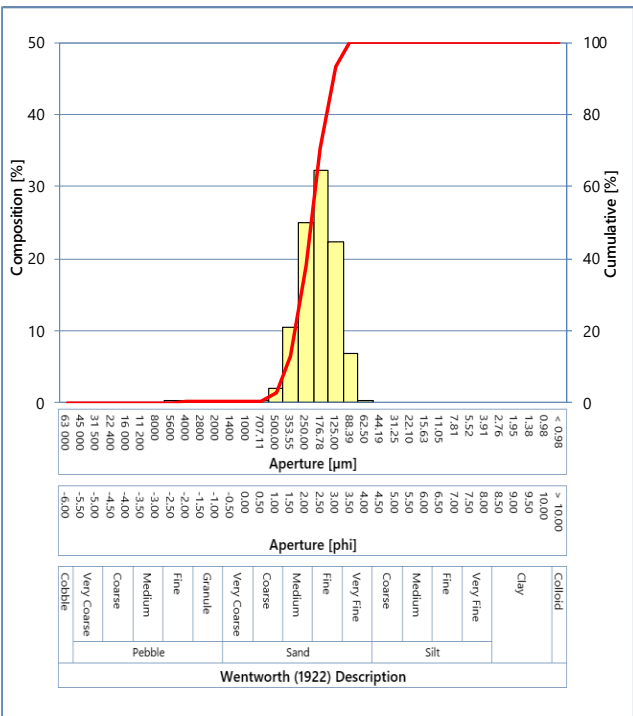
**STATION: MCW-D-ST80**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.23	0.23
4000	-2.00	0.08	0.31
2800	-1.50	0.01	0.32
2000	-1.00	0.01	0.33
1400	-0.50	0.02	0.36
1000	0.00	0.03	0.39
707.11	0.50	0.14	0.53
500.00	1.00	2.13	2.66
353.55	1.50	10.61	13.26
250.00	2.00	25.05	38.31
176.78	2.50	32.26	70.57
125.00	3.00	22.46	93.03
88.39	3.50	6.84	99.87
62.50	4.00	0.13	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



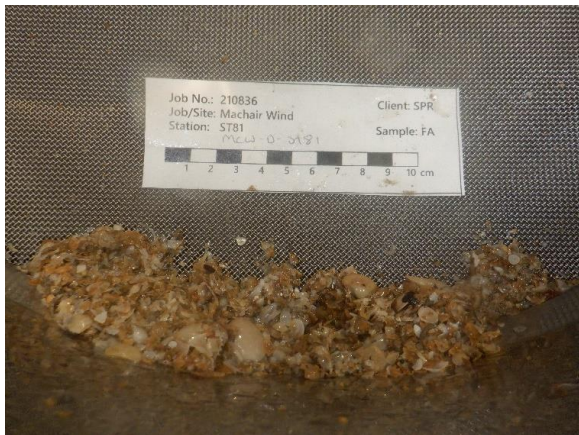
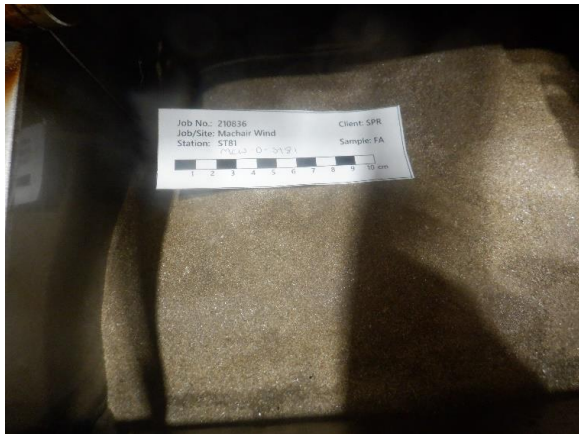
**SUMMARY STATISTICS**

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	220	Fine sand
Median [phi]*	2.18	
Mean [µm]*†	221	Fine sand
Mean [phi]*†	2.18	
Sorting [µm]†	1.54	Moderately well sorted
Sorting [phi]†	0.62	
Skewness [µm]†	0.03	Symmetrical
Skewness [phi]†	-0.03	
Gravel [%]‡	0.33	
Sand [%]‡	99.67	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



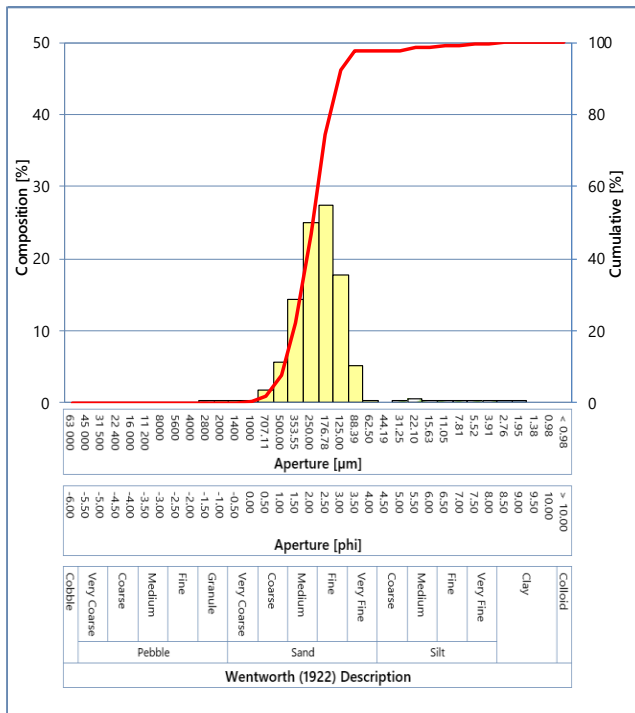
STATION: MCW-D-ST81



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.02	0.02
2000	-1.00	0.07	0.09
1400	-0.50	0.10	0.19
1000	0.00	0.10	0.29
707.11	0.50	1.72	2.01
500.00	1.00	5.67	7.68
353.55	1.50	14.30	21.98
250.00	2.00	24.88	46.86
176.78	2.50	27.53	74.39
125.00	3.00	17.76	92.15
88.39	3.50	5.31	97.46
62.50	4.00	0.14	97.60
44.19	4.50	0.00	97.60
31.25	5.00	0.22	97.82
22.10	5.50	0.59	98.40
15.63	6.00	0.36	98.77
11.05	6.50	0.15	98.92
7.81	7.00	0.20	99.11
5.52	7.50	0.31	99.42
3.91	8.00	0.31	99.74
2.76	8.50	0.23	99.97
1.95	9.00	0.03	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	213	Fine sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	240	Fine sand
Median [phi]*	2.06	
Mean [µm]*†	243	Fine sand
Mean [phi]*†	2.04	Moderately sorted
Sorting [µm]†	1.68	
Sorting [phi]†	0.75	Symmetrical
Skewness [µm]†	0.03	
Skewness [phi]†	-0.03	Sand
Gravel [%]‡	0.09	
Sand [%]‡	97.51	Sand
Fines [%]‡	2.40	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

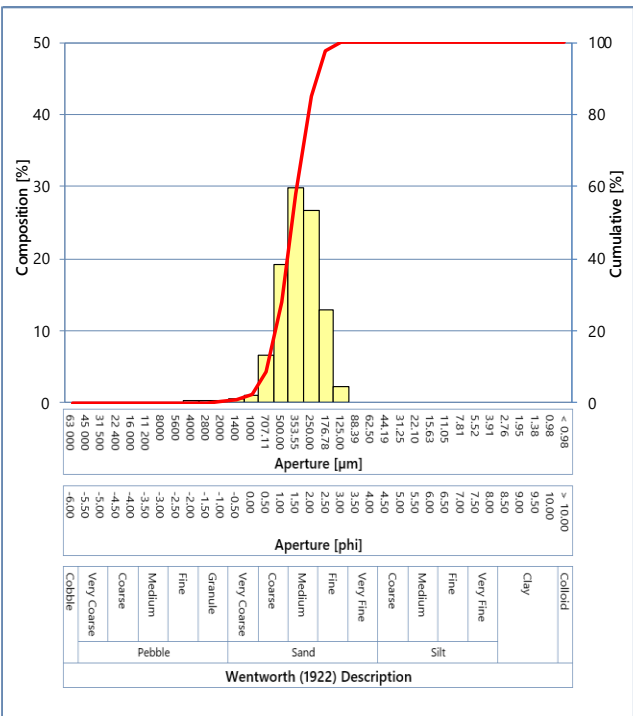
**STATION: MCW-D-ST82**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.02	0.02
2800	-1.50	0.14	0.17
2000	-1.00	0.22	0.39
1400	-0.50	0.70	1.09
1000	0.00	1.19	2.28
707.11	0.50	6.65	8.93
500.00	1.00	19.30	28.22
353.55	1.50	29.79	58.01
250.00	2.00	26.80	84.80
176.78	2.50	13.01	97.81
125.00	3.00	2.19	100.00
88.39	3.50	0.00	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

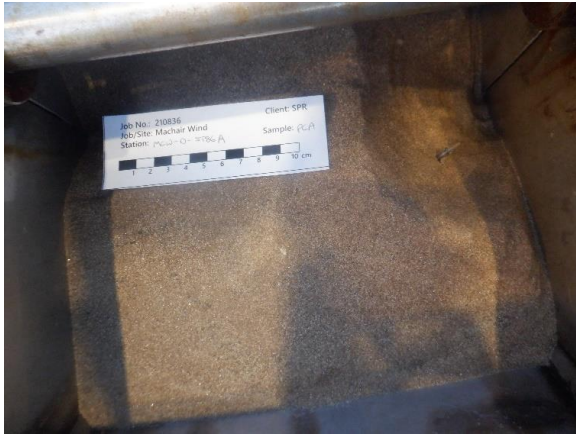
Mode 1 [µm]*	427	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	388	Medium sand
Median [phi]*	1.37	
Mean [µm]*†	394	Medium sand
Mean [phi]*†	1.34	
Sorting [µm]†	1.58	Moderately well sorted
Sorting [phi]†	0.66	
Skewness [µm]†	0.05	Symmetrical
Skewness [phi]†	-0.05	
Gravel [%]‡	0.39	Sand
Sand [%]‡	99.61	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)





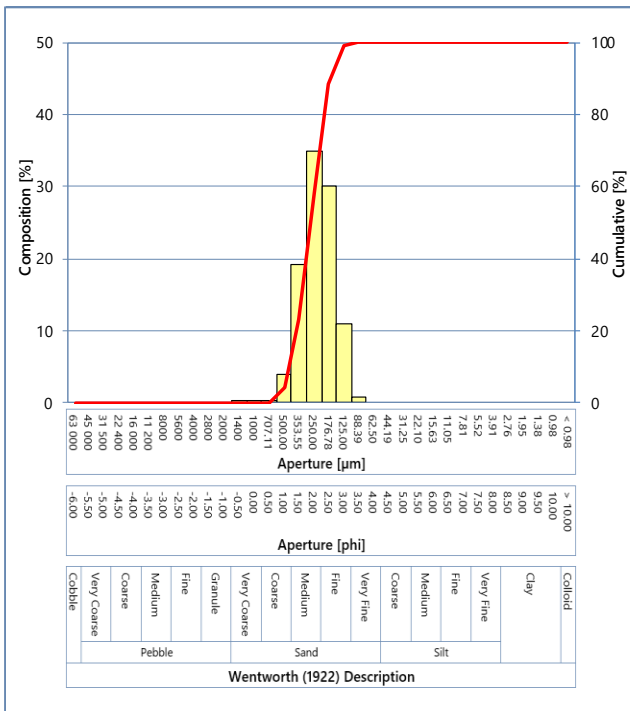
STATION: MCW-D-ST86A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.00	0.00
2000	-1.00	0.00	0.00
1400	-0.50	0.04	0.04
1000	0.00	0.02	0.06
707.11	0.50	0.08	0.14
500.00	1.00	4.09	4.22
353.55	1.50	19.12	23.35
250.00	2.00	34.87	58.22
176.78	2.50	30.01	88.23
125.00	3.00	11.02	99.25
88.39	3.50	0.75	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

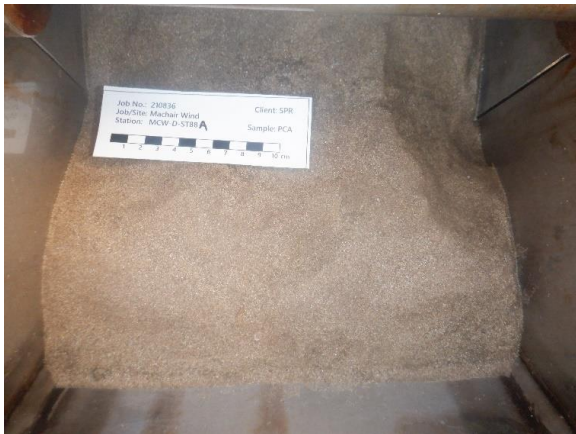


SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	271	Medium sand
Median [phi]*	1.88	
Mean [µm]*†	273	Medium sand
Mean [phi]*†	1.87	
Sorting [µm]†	1.47	Moderately well sorted
Sorting [phi]†	0.55	
Skewness [µm]†	-0.01	Symmetrical
Skewness [phi]†	0.01	
Gravel [%]‡	0.00	
Sand [%]‡	100.00	Sand
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

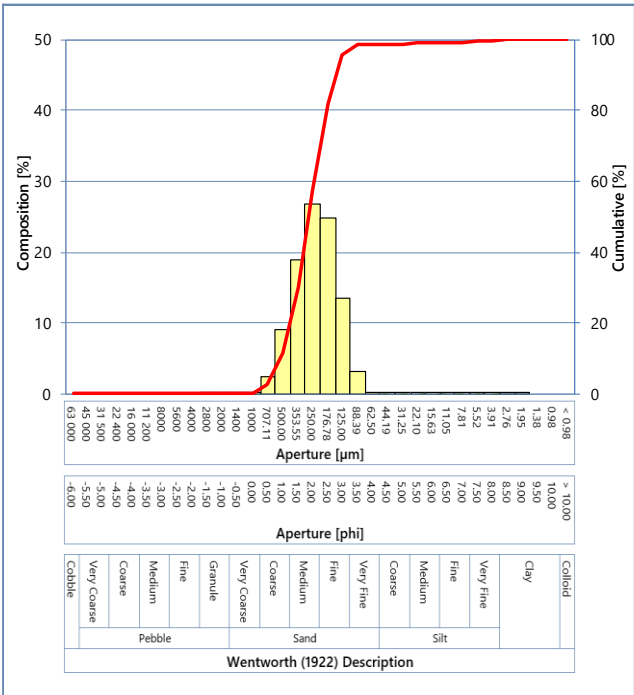
**STATION: MCW-D-ST88A**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.04	0.04
2000	-1.00	0.01	0.05
1400	-0.50	0.02	0.06
1000	0.00	0.07	0.13
707.11	0.50	2.49	2.62
500.00	1.00	8.99	11.61
353.55	1.50	18.82	30.43
250.00	2.00	26.67	57.10
176.78	2.50	24.79	81.89
125.00	3.00	13.59	95.48
88.39	3.50	3.04	98.53
62.50	4.00	0.00	98.53
44.19	4.50	0.00	98.53
31.25	5.00	0.18	98.72
22.10	5.50	0.25	98.97
15.63	6.00	0.13	99.09
11.05	6.50	0.08	99.17
7.81	7.00	0.18	99.35
5.52	7.50	0.24	99.59
3.91	8.00	0.23	99.82
2.76	8.50	0.16	99.98
1.95	9.00	0.02	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	274	Medium sand
Median [phi]*	1.87	
Mean [µm]*†	277	Medium sand
Mean [phi]*†	1.85	
Sorting [µm]†	1.65	Moderately sorted
Sorting [phi]†	0.72	
Skewness [µm]†	0.04	Symmetrical
Skewness [phi]†	-0.04	
Gravel [%]‡	0.05	Sand
Sand [%]‡	98.48	
Fines [%]‡	1.47	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)





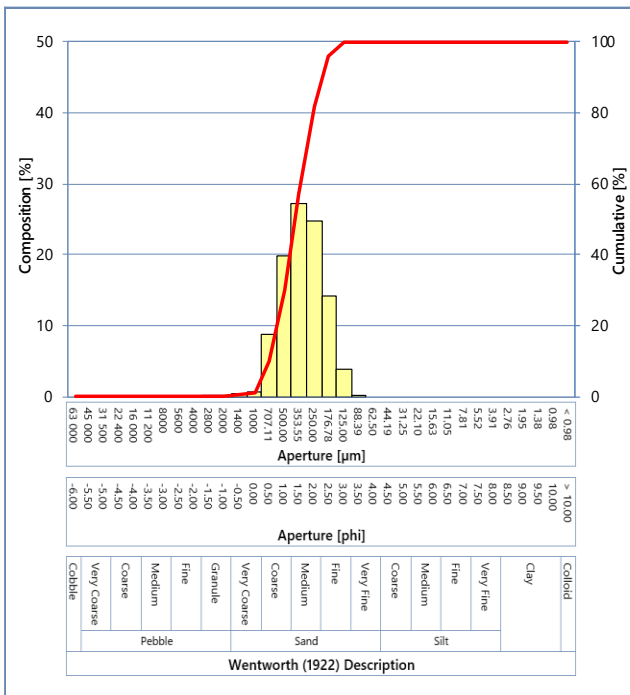
STATION: MCW-D-ST89A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.02	0.02
2000	-1.00	0.13	0.15
1400	-0.50	0.30	0.45
1000	0.00	0.69	1.15
707.11	0.50	8.84	9.99
500.00	1.00	19.88	29.87
353.55	1.50	27.21	57.08
250.00	2.00	24.82	81.90
176.78	2.50	14.24	96.14
125.00	3.00	3.80	99.94
88.39	3.50	0.06	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	427	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	387	Medium sand
Median [phi]*	1.37	
Mean [µm]*†	388	Medium sand
Mean [phi]*†	1.36	
Sorting [µm]†	1.62	Moderately well sorted
Sorting [phi]†	0.70	
Skewness [µm]†	0.02	Symmetrical
Skewness [phi]†	-0.02	
Gravel [%]‡	0.15	Sand
Sand [%]‡	99.85	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

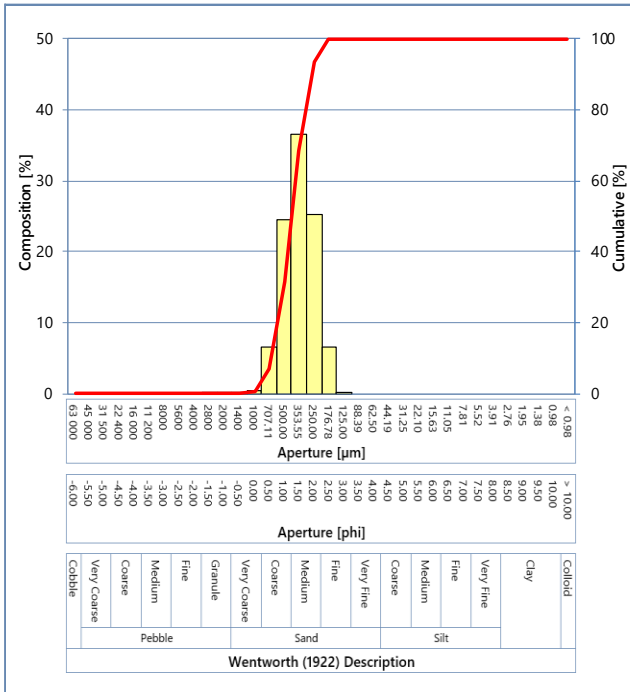
STATION: MCW-D-ST95A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.04	0.04
2000	-1.00	0.05	0.09
1400	-0.50	0.13	0.22
1000	0.00	0.33	0.55
707.11	0.50	6.47	7.02
500.00	1.00	24.60	31.62
353.55	1.50	36.66	68.29
250.00	2.00	25.15	93.43
176.78	2.50	6.45	99.89
125.00	3.00	0.11	100.00
88.39	3.50	0.00	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION

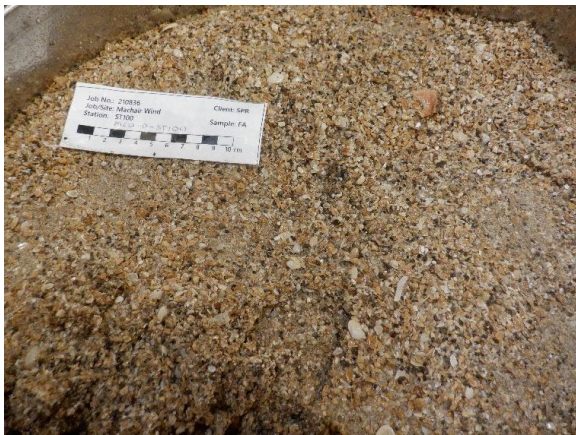


SUMMARY STATISTICS

Mode 1 [µm]*	427	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	420	Medium sand
Median [phi]*	1.25	
Mean [µm]*†	421	Medium sand
Mean [phi]*†	1.25	
Sorting [µm]†	1.47	Moderately well sorted
Sorting [phi]†	0.55	
Skewness [µm]†	0.01	Symmetrical
Skewness [phi]†	-0.01	
Gravel [%]‡	0.09	Sand
Sand [%]‡	99.91	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

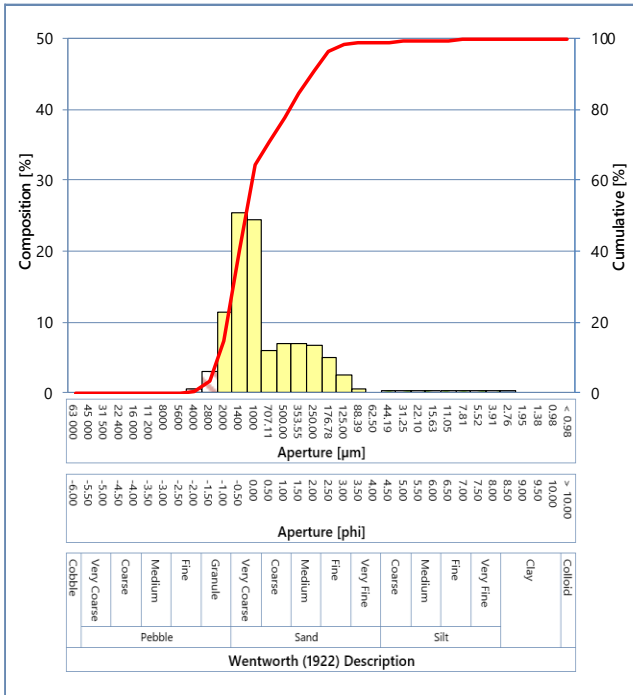
STATION: MCW-D-ST100A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.52	0.52
2800	-1.50	2.93	3.45
2000	-1.00	11.27	14.72
1400	-0.50	25.52	40.24
1000	0.00	24.41	64.65
707.11	0.50	5.98	70.62
500.00	1.00	6.89	77.51
353.55	1.50	7.03	84.55
250.00	2.00	6.65	91.20
176.78	2.50	5.01	96.21
125.00	3.00	2.43	98.64
88.39	3.50	0.45	99.09
62.50	4.00	0.00	99.09
44.19	4.50	0.03	99.12
31.25	5.00	0.17	99.29
22.10	5.50	0.15	99.44
15.63	6.00	0.10	99.54
11.05	6.50	0.10	99.65
7.81	7.00	0.12	99.77
5.52	7.50	0.11	99.88
3.91	8.00	0.09	99.97
2.76	8.50	0.03	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm] <sup>†</sup>	1200	Very coarse sand
Mode 2 [µm] <sup>†</sup>	427	Medium sand
Mode 3 [µm] <sup>†</sup>	-	-
Median [µm] <sup>†</sup>	1224	Very coarse sand
Median [phi] <sup>†</sup>	-0.29	
Mean [µm] <sup>†‡</sup>	956	Coarse sand
Mean [phi] <sup>†‡</sup>	0.07	
Sorting [µm] <sup>†</sup>	2.27	Poorly sorted
Sorting [phi] <sup>†</sup>	1.18	
Skewness [µm] <sup>†</sup>	-0.42	Very fine skewed
Skewness [phi] <sup>†</sup>	0.42	
Gravel [%] <sup>#</sup>	14.72	
Sand [%] <sup>#</sup>	84.37	Gravelly sand
Fines [%] <sup>#</sup>	0.91	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



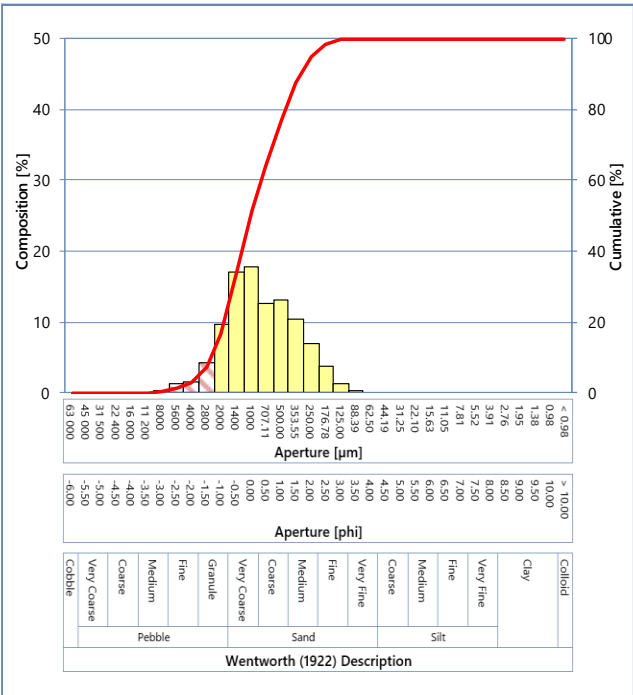
**STATION: MCW-D-ST101**



**FRACTIONAL DATA**

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.13	0.13
5600	-2.50	1.15	1.28
4000	-2.00	1.59	2.87
2800	-1.50	4.15	7.02
2000	-1.00	9.61	16.63
1400	-0.50	16.99	33.62
1000	0.00	17.89	51.51
707.11	0.50	12.69	64.20
500.00	1.00	13.11	77.31
353.55	1.50	10.48	87.79
250.00	2.00	7.03	94.81
176.78	2.50	3.75	98.56
125.00	3.00	1.30	99.86
88.39	3.50	0.14	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

**PARTICLE SIZE DISTRIBUTION**



**SUMMARY STATISTICS**

Mode 1 [µm]*	1200	Very coarse sand
Mode 2 [µm]*	604	Coarse sand
Mode 3 [µm]*	-	-
Median [µm]*	1029	Very coarse sand
Median [phi]*	-0.04	
Mean [µm]*†	945	Coarse sand
Mean [phi]*†	0.08	
Sorting [µm]†	2.23	Poorly sorted
Sorting [phi]†	1.16	
Skewness [µm]†	-0.13	Fine skewed
Skewness [phi]†	0.13	
Gravel [%]‡	16.63	Gravelly sand
Sand [%]‡	83.37	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



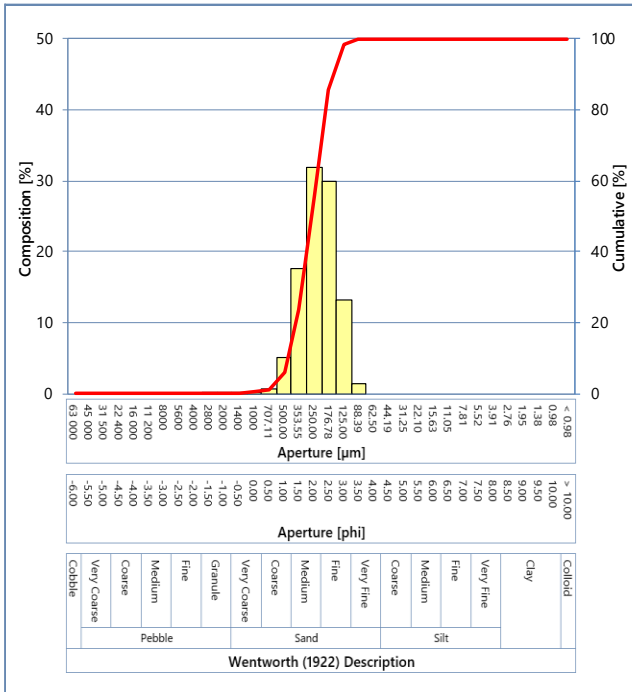
STATION: MCW-D-ST103A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.00	0.00
2800	-1.50	0.01	0.01
2000	-1.00	0.03	0.05
1400	-0.50	0.08	0.13
1000	0.00	0.23	0.35
707.11	0.50	0.60	0.96
500.00	1.00	4.99	5.95
353.55	1.50	17.63	23.58
250.00	2.00	31.87	55.45
176.78	2.50	29.98	85.44
125.00	3.00	13.16	98.59
88.39	3.50	1.41	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



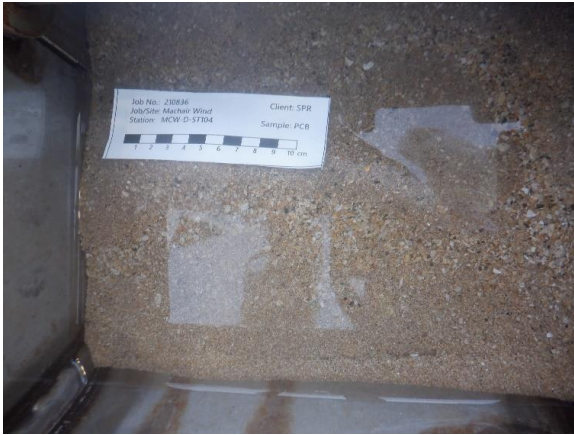
SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	-	-
Mode 3 [µm]*	-	-
Median [µm]*	265	Medium sand
Median [phi]*	1.91	
Mean [µm]*†	269	Medium sand
Mean [phi]*†	1.89	
Sorting [µm]†	1.51	Moderately well sorted
Sorting [phi]†	0.59	
Skewness [µm]†	0.04	Symmetrical
Skewness [phi]†	-0.04	
Gravel [%]‡	0.05	Sand
Sand [%]‡	99.95	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)



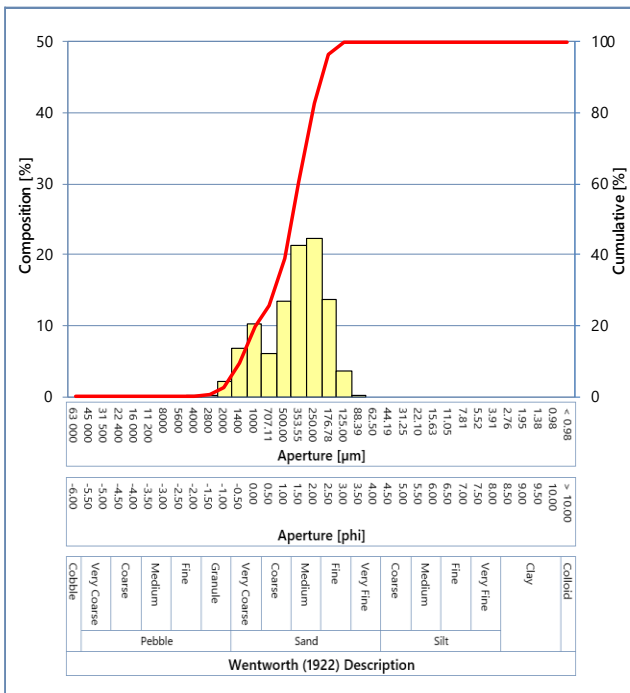
STATION: MCW-D-ST104



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	0.00	0.00
22 400	-4.50	0.00	0.00
16 000	-4.00	0.00	0.00
11 200	-3.50	0.00	0.00
8000	-3.00	0.00	0.00
5600	-2.50	0.00	0.00
4000	-2.00	0.08	0.08
2800	-1.50	0.27	0.35
2000	-1.00	2.14	2.48
1400	-0.50	6.91	9.40
1000	0.00	10.13	19.53
707.11	0.50	6.09	25.62
500.00	1.00	13.52	39.14
353.55	1.50	21.25	60.39
250.00	2.00	22.20	82.59
176.78	2.50	13.65	96.24
125.00	3.00	3.69	99.93
88.39	3.50	0.07	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	302	Medium sand
Mode 2 [µm]*	1200	Very coarse sand
Mode 3 [µm]*	-	-
Median [µm]*	419	Medium sand
Median [phi]*	1.26	
Mean [µm]*†	484	Medium sand
Mean [phi]*†	1.05	
Sorting [µm]†	2.07	Poorly sorted
Sorting [phi]†	1.05	
Skewness [µm]†	0.27	Coarse skewed
Skewness [phi]†	-0.27	
Gravel [%]†	2.48	Sand
Sand [%]†	97.52	
Fines [%]†	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

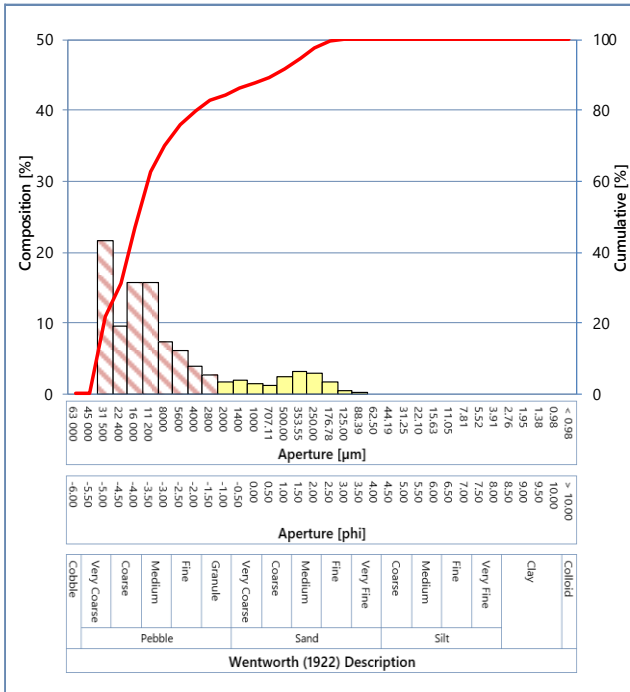
STATION: MCW-D-ST108A



FRACTIONAL DATA

Aperture [µm]	Aperture [phi]	Fractional [%]	Cumulative [%]
63 000	-6.00	0.00	0.00
45 000	-5.50	0.00	0.00
31 500	-5.00	21.66	21.66
22 400	-4.50	9.59	31.25
16 000	-4.00	15.73	46.98
11 200	-3.50	15.60	62.58
8000	-3.00	7.34	69.93
5600	-2.50	6.20	76.13
4000	-2.00	3.90	80.02
2800	-1.50	2.69	82.71
2000	-1.00	1.75	84.46
1400	-0.50	1.93	86.39
1000	0.00	1.54	87.93
707.11	0.50	1.21	89.14
500.00	1.00	2.40	91.54
353.55	1.50	3.24	94.78
250.00	2.00	3.01	97.79
176.78	2.50	1.75	99.55
125.00	3.00	0.45	100.00
88.39	3.50	0.00	100.00
62.50	4.00	0.00	100.00
44.19	4.50	0.00	100.00
31.25	5.00	0.00	100.00
22.10	5.50	0.00	100.00
15.63	6.00	0.00	100.00
11.05	6.50	0.00	100.00
7.81	7.00	0.00	100.00
5.52	7.50	0.00	100.00
3.91	8.00	0.00	100.00
2.76	8.50	0.00	100.00
1.95	9.00	0.00	100.00
1.38	9.50	0.00	100.00
0.98	10.00	0.00	100.00
< 0.98	> 10.00	0.00	100.00
<b>Total</b>		<b>100.00</b>	<b>-</b>

PARTICLE SIZE DISTRIBUTION



SUMMARY STATISTICS

Mode 1 [µm]*	38250	Very coarse pebble
Mode 2 [µm]*	19200	Coarse pebble
Mode 3 [µm]*	427	Medium sand
Median [µm]*	14932	Medium pebble
Median [phi]*	-3.90	
Mean [µm]*†	10410	Medium pebble
Mean [phi]*†	-3.38	
Sorting [µm]†	4.12	Very poorly sorted
Sorting [phi]†	2.04	
Skewness [µm]†	-0.48	Very fine skewed
Skewness [phi]†	0.48	
Gravel [%]‡	84.46	Gravel
Sand [%]‡	15.54	
Fines [%]‡	0.00	

Notes  
 Particle Size Distribution by Dry Sieving (63 000 µm - 1000 µm) and Laser Diffraction (< 1000 µm - < 0.98 µm) at 0.5 phi Intervals  
 \* = Particle size expressed in accordance with Wentworth (1922) scale  
 † = Statistics calculated using Folk and Ward (1957) method  
 ‡ = Description based on BGS modified Folk classification (Long, 2006)

# Appendix E

## Macrofaunal Data

## E.1 Macrofaunal Abundance

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
<b>Cnidaria</b>																	
<i>Virgularia mirabilis</i>		D0618	128539	(Müller, 1776)						1							1
ACTINIARIA		D0662	1360	Hertwig, 1882				1									
<i>Halcampa</i>		D0757	100740	Gosse, 1858													
Edwardsiidae		D0759	100665	Andres, 1881	6	8		4	2	2		1	1				
<b>Platyhelminthes</b>																	
PLATYHELMINTHES		F0001	793	Minot, 1876					1					1		1	
<b>Nemertea</b>																	
NEMERTEA		G0001	152391		1	1	5		2					1	1	7	
<i>Tubulanus polymorphus</i>		G0034	122637	Renier, 1804				1			2			1	1	3	1
<i>Cerebratulus</i>		G0039	122348	Renier, 1804			1	1			1					1	
<b>Annelida</b>																	
<i>Phascolion (Phascolion) strombus strombus</i>		N0034	410749	(Montagu, 1804)					1								
<i>Pisione remota</i>		P0015	130707	(Southern, 1914)													
<i>Pholoe inornata</i>		P0092	130601	Johnston, 1839				1									
<i>Pholoe baltica</i>		P0095	130599	Örsted, 1843		1					3						
<i>Sigalion mathildae</i>		P0104	131072	Audouin & Milne Edwards, 1832								1	1	1			1
<i>Sthenelais limicola</i>		P0109	131077	(Ehlers, 1864)	1	4	3	6	3	2	1	1	1	1	3	2	3
<i>Eteone longa</i>	Aggregate	P0118	130616	(Fabricius, 1780)													
<i>Hesionura elongata</i>		P0122	130649	(Southern, 1914)													
<i>Phyllodoce longipes</i>		P0143	130673	Kinberg, 1866	1												
<i>Phyllodoce rosea</i>		P0146	334514	(McIntosh, 1877)			1	1				2				1	
<i>Eulalia mustela</i>		P0155	130631	Pleijel, 1987													
<i>Eulalia viridis</i>		P0161	130639	(Linnaeus, 1767)				1									
<i>Eumida bahusiensis</i>		P0164	130641	Bergstrom, 1914	1		1	1						1		1	
<i>Glycera alba</i>		P0256	130116	(O.F. Müller, 1776)							1						
<i>Glycera lapidum</i>		P0260	130123	Quatrefages, 1866					1								
<i>Glycera oxycephala</i>		P0262	130126	Ehlers, 1887													
<i>Glycera unicornis</i>		P0263	130131	Lamarck, 1818													
<i>Glycinde nordmanni</i>		P0268	130136	(Malmgren, 1866)												1	
<i>Goniada maculata</i>		P0271	130140	Örsted, 1843			1	1						1		1	1
<i>Goniadella gracilis</i>		P0276	130145	(Verrill, 1873)													
<i>Psamathe fusca</i>		P0305	152249	Johnston, 1836													
<i>Oxydromus flexuosus</i>		P0313	710680	(Delle Chiaje, 1827)							1						

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
<i>Syllis garciai</i>		P0351	131431	(Campoy, 1982)													
<i>Syllis licheri</i>		P0358_B	238263	Ravara, San Martín & Moreira, 2004													
<i>Syllis armillaris</i>	Aggregate	P0365	131415	(O.F. Müller, 1776)				1									
<i>Streptosyllis websteri</i>		P0405	131402	Southern, 1914										1			
<i>Parexogone hebes</i>		P0421	757970	(Webster & Benedict, 1884)													
<i>Exogone naidina</i>		P0422	327985	Örsted, 1845													
<i>Sphaerosyllis bulbosa</i>		P0425	131379	Southern, 1914													
<i>Nereis zonata</i>		P0478	130407	Malmgren, 1867													
<i>Aglaophamus agilis</i>		P0493	130343	(Langerhans, 1880)					2								
<i>Nephtys assimilis</i>		P0495	130353	Örsted, 1843				1									
<i>Nephtys cirrosa</i>		P0498	130357	Ehlers, 1868				7		1					2		3
<i>Nephtys hombergii</i>		P0499	130359	Savigny in Lamarck, 1818							2		1				
<i>Aponuphis bilineata</i>		P0539	130452	(Baird, 1870)					13	1							
<i>Lumbrineris cingulata</i>		P0572_A	130240	Ehlers, 1897		1	5	2		3	1	1		3	1		4
<i>Ophryotrocha</i>		P0613	129266	Claparède & Meczniow, 1869							1						
<i>Protodorvillea kefersteini</i>		P0638	130041	(McIntosh, 1869)													
<i>Schistomeringos neglecta</i>		P0642	130044	(Fauvel, 1923)													
<i>Orbinia armandi</i>		P0663	130518	(McIntosh, 1910)													
<i>Orbinia sertulata</i>		P0665	130523	(Savigny, 1822)													
<i>Scoloplos armiger</i>		P0672	130537	(Müller, 1776)			1			2				1			
<i>Aricidea (Aricidea) minuta</i>		P0677	730747	Southward, 1956													
<i>Aricidea (Acmira) catherinae</i>		P0684	333034	Laubier, 1967		2	1					1		1		3	
<i>Aricidea (Acmira) cerrutii</i>		P0685	525497	Laubier, 1966					1								
<i>Aricidea (Acmira) laubieri</i>		P0686	326587	Hartley, 1981		1											
<i>Apistobranthus tullbergi</i>		P0712	129851	(Théel, 1879)			1									1	
<i>Poecilochaetus serpens</i>		P0718	130711	Allen, 1904	1	1	2	4	1								1
<i>Aonides paucibranchiata</i>		P0723	131107	Southern, 1914					3	1		2	2	2			1
<i>Laonice irinae</i>		P0731_A	1518242	Sikorski, Radashevsky & Nygren in Sikorski et al, 2021													
<i>Prionospio cirrifera</i>		P0747	131153	Wirén, 1883	1		1										
<i>Dipolydora caulleryi</i>		P0751	131116	(Mesnil, 1897)				1									
<i>Dipolydora saintjosephi</i>		P0761	131123	(Eliason, 1920)				2									
<i>Prionospio fallax</i>		P0765	131157	Söderström, 1920			3						1				
<i>Aurospio banyulensis</i>		P0766	146532	(Laubier, 1966)					1								
<i>Pseudopolydora pulchra</i>		P0774	131169	(Carazzi, 1893)						1				1			
<i>Scoelepisp korsuni</i>		P0777_A	131174	Sikorski, 1994						2							



Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
<i>Scolecopsis bonnieri</i>		P0779	131171	(Mesnil, 1896)	1												
<i>Spio symphyta</i>		P0787_C	596189	Meißner, Bick & Bastrop, 2011	1	1			1					1		1	
<i>Spio decorata</i>		P0789	152314	Bobretzky, 1870			1		2				1				
<i>Spiophanes bombyx</i>	Aggregate	P0794	131187	(Claparède, 1870)	5	2	4	5	1	8		2	2	2	4	5	8
<i>Spiophanes kroyeri</i>	Aggregate	P0796	131188	Grube, 1860	3	1	4										
<i>Magelona johnstoni</i>		P0803_A	130269	Fiege, Licher & Mackie, 2000	7								2	4			
<i>Magelona alleni</i>		P0804	130266	Wilson, 1958		1	1						1			1	
<i>Magelona filiformis</i>		P0805	130268	Wilson, 1959	6	11	1					6	5	10		10	1
<i>Magelona mirabilis</i>		P0807	130271	(Johnston, 1865)													
<i>Chaetopterus</i>		P0811	129229	Cuvier, 1830						3							
<i>Spiochaetopterus</i>		P0818	129233	M Sars, 1856													
<i>Aphelochaeta</i>	Species A	P0823	129240	Blake, 1991		3		1									
<i>Aphelochaeta</i>		P0823	129240	Blake, 1991				1									
<i>Cauleriella alata</i>		P0829	129943	(Southern, 1914)													
<i>Chaetozone zetlandica</i>		P0831	336485	McIntosh, 1911							1						
<i>Chaetozone christiei</i>		P0832_A	152217	Chambers, 2000	14	20	4	1			1	7	10	13	1	15	1
<i>Chaetozone setosa</i>		P0834	129955	Malmgren, 1867							3						
<i>Dodecaceria</i>		P0840	129246	Örsted, 1843								1					
<i>Tharyx killariensis</i>		P0846	152269	(Southern, 1914)	1		2				6	1		2		1	
<i>Diplocirrus glaucus</i>		P0878	130100	(Malmgren, 1867)			2									1	
<i>Mediomastus fragilis</i>		P0919	129892	Rasmussen, 1973													
<i>Notomastus</i>		P0920	129220	M. Sars, 1851					6	1							
<i>Praxillura longissima</i>		P0944	130327	Arwidsson, 1906									2			3	
<i>Euclymene</i>	Species A	P0960	129347	Verrill, 1900							1						
<i>Euclymene oerstedii</i>		P0964	130294	(Claparède, 1863)							22						
<i>Ophelia borealis</i>		P0999	130491	Quatrefages, 1866						2					1		3
<i>Travisia forbesii</i>		P1007	130512	Johnston, 1840											2		
<i>Ophelina acuminata</i>		P1014	130500	Örsted, 1843							5						
<i>Scalibregma inflatum</i>		P1027	130980	Rathke, 1843		1	2										
<i>Scalibregma hanseni</i>		P1027A	746615	Bakken, Oug & Kongsrud, 2014										1			
Polygordiidae		P1061	993	Czerniavsky, 1881													
<i>Galathowenia oculata</i>		P1093	146950	(Zachs, 1923)	2	6	4				26	14	1	8		5	
<i>Myriochele danielsseni</i>		P1095	130540	Hansen, 1878	2	3	12	2			9	25	11	8		15	3
<i>Owenia</i>		P1097	129427	Delle Chiaje, 1844	1			1	2	4	5			1			
<i>Amphictene auricoma</i>		P1102	152448	(O.F. Müller, 1776)							1						
<i>Lagis koreni</i>		P1107	152367	Malmgren, 1866				1			2						

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
<i>Sabellaria spinulosa</i>		P1117	130867	(Leuckart, 1849)					1								
<i>Ampharete falcata</i>		P1135	129777	Eliason, 1955												1	
<i>Ampharete lindstroemi</i>		P1139	129781	Hessle, 1917	2	1	6	1					2				
<i>Ampharete octocirrata</i>		P1160	332932	(Sars, 1835)							1						
<i>Terebellides</i>		P1174	129717	Sars, 1835			1										
<i>Eupolymnia nebulosa</i>		P1189	131489	(Montagu, 1819)							4						
<i>Lanice conchilega</i>		P1195	131495	(Pallas, 1766)	1	1	2	1			1	1		1			
<i>Phisidia aurea</i>		P1215	131513	Southward, 1956													
<i>Pista bansei</i>		P1219_B	152254	Saphronova, 1988													
<i>Polycirrus</i>		P1235	129710	Grube, 1850													1
<i>Dialychone</i>		P1264_C	155472	Claparède, 1868													
<i>Hydroides norvegica</i>		P1334	131009	Gunnerus, 1768				7									
<i>Tubificoides amplivasatus</i>		P1489	137570	(Erséus, 1975)							2						
Enchytraeidae		P1501	2038	d'Udekem, 1855													
HIRUDINEA		P1579	2041	Savigny, 1822													
<b>Arthropoda</b>																	
<i>Anoplodactylus petiolatus</i>		Q0044	134723	(Krøyer, 1844)							3	1					
<i>Perioculodes longimanus</i>		S0131	102915	(Spence Bate & Westwood, 1868)													
<i>Synchelidium maculatum</i>		S0138	102928	Stebbing, 1906	1			1						2			
<i>Harpinia antennaria</i>		S0254	102960	Meinert, 1890		1	2				2			1			
<i>Hippomedon denticulatus</i>		S0296	102570	(Spence Bate, 1857)		1											
<i>Lepidepecreum longicorne</i>		S0301	102598	(Spence Bate & Westwood, 1861)													
<i>Lysianassa plumosa</i>		S0305	102611	Boeck, 1871													
<i>Tryphosella nanooides</i>		S0343	102764	(Lilljeborg, 1865)													
<i>Argissa hamatipes</i>		S0360	102064	(Norman, 1869)													
<i>Iphimedia perplexa</i>		S0383	102348	Myers & Costello, in Myers, McGrath & Costello, 1987													
<i>Nototropis falcatus</i>		S0410	102139	(Metzger, 1871)													
<i>Ampelisca brevicornis</i>		S0427	101891	(A. Costa, 1853)		1	1	1				1	1	4		2	
<i>Ampelisca diadema</i>		S0429	101896	(A. Costa, 1853)													
<i>Ampelisca tenuicornis</i>		S0440	101930	Liljeborg, 1856		1			1		2						
<i>Bathyporeia elegans</i>		S0452	103058	Watkin, 1938				3		6	1	3	4	5			8
<i>Bathyporeia guilliamsoniana</i>		S0454	103060	(Spence Bate, 1857)				1				1			1		7
<i>Bathyporeia tenuipes</i>		S0459	103076	Meinert, 1877	4	2	1	5				2	5	4		3	
<i>Megaluropus agilis</i>		S0489	102783	Hoek, 1889				1						1			
<i>Abludomelita obtusata</i>		S0498	102788	(Montagu, 1813)							1						

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
Aoridae		S0577	101368	Stebbing, 1899											1		
<i>Centroloecetes kroyeranus</i>		S0618	1059646	(Spence Bate, 1857)										2	1		
<i>Centroloecetes striatus</i>		S0619	1059649	(Myers & McGrath, 1979)										2			
<i>Pariambus typicus</i>		S0651	101857	(Krøyer, 1845)						1							
<i>Gnathia oxyuraea</i>		S0796	118995	(Lilljeborg, 1855)						1							
<i>Astacilla dilatata</i>		S0951	295579	G. O. Sars, 1883													1
<i>Tanaopsis graciloides</i>		S1142	136458	(Lilljeborg, 1864)							2						
<i>Eudorelopsis deformis</i>		S1210	110536	(Krøyer, 1846)								1					
<i>Pseudocuma (Pseudocuma) simile</i>		S1237	110628	G.O. Sars, 1900				1	3								
<i>Diastylis bradyi</i>		S1248	110472	Norman, 1879										1			
<i>Diastylis laevis</i>		S1251	110481	Norman, 1869			1				5						
<i>Diastylis rugosa</i>		S1254	110488	Sars, 1865				1									
<i>Processa nouveli holthuisi</i>		S1367	108344	Al-Adhub & Williamson, 1975			1										
<i>Philocheras trispinosus</i>		S1390	107562	(Hailstone <i>in</i> Hailstone & Westwood, 1835)						1							
<i>Pagurus cuanensis</i>		S1460	107235	Bell, 1845				1									
<i>Galathea intermedia</i>		S1472	107150	Lilljeborg, 1851				1									
<i>Ebalia tuberosa</i>		S1508	107301	(Pennant, 1777)													
<i>Pinnotheres pisum</i>		S1638	107473	(Linnaeus, 1767)													1
<b>Mollusca</b>																	
<i>Chaetoderma nitidulum</i>		W0009	139106	Lovén, 1844							1						
<i>Ceratia proxima</i>		W0408	140128	(Forbes & Hanley, 1850)			3										
<i>Aporrhais pespelecani</i>		W0430	138760	(Linnaeus, 1758)							2						
<i>Erato voluta</i>		W0465	139761	(Montagu, 1803)				1									
<i>Euspira nitida</i>		W0491	151894	(Donovan, 1803)	1	1		1	1	3			1				
<i>Epitonium trevelyanum</i>		W0553	139736	(G. Johnston, 1841)													
<i>Eulima bilineata</i>		W0603	139800	Alder, 1848													
<i>Bela nebula</i>		W0801	139217	(Montagu, 1803)													
<i>Megastomia conoidea</i>		W0952	224401	(Brocchi, 1814)										1			
<i>Pyrgiscus crenatus</i>		W0985	836211	(T. Brown, 1827)	1												1
<i>Acteon tornatilis</i>		W1006	138691	(Linnaeus, 1758)				1			1			1			
<i>Cylichna cylindracea</i>		W1028	139476	(Pennant, 1777)	2	1	1				3			1		3	
<i>Hermania scabra/indistincta</i>		W1045	867492/867493														
NUDIBRANCHIA		W1243	1762	Cuvier, 1817						1							
<i>Antalis entalis</i>		W1519	150534	(Linnaeus, 1758)									1	1			
<i>Nucula nitidosa</i>		W1569	140589	Winckworth, 1930	3	9	4	6			8	1	2	2		6	2

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
<i>Glycymeris glycymeris</i>		W1688	140025	(Linnaeus, 1758)													
Anomiidae		W1805	214	Rafinesque, 1815							1						
<i>Myrtea spinifera</i>		W1827	140287	(Montagu, 1803)							1						
<i>Lucinoma borealis</i>		W1829	140283	(Linnaeus, 1767)			1						2				
<i>Thyasira flexuosa</i>		W1837	141662	(Montagu, 1803)	2		2						1	3		3	
<i>Kurtiella bidentata</i>		W1906	345281	(Montagu, 1803)							15						
<i>Goodallia triangularis</i>		W1929	138831	(Montagu, 1803)					1								
<i>Acanthocardia echinata</i>		W1943	138992	(Linnaeus, 1758)										1			
<i>Spisula elliptica</i>		W1975	140300	(T. Brown, 1827)													
<i>Phaxas pellucidus</i>		W2006	140737	(Pennant, 1777)	1		4				5		2				
<i>Arcopagia crassa</i>		W2015	141577	(Pennant, 1777)													
<i>Fabulina fabula</i>		W2019	146907	(Gmelin, 1791)	2	2							3			1	
<i>Asbjornsenia pygmaea</i>		W2023	879714	(Lovén, 1846)			2		1	1							
<i>Gari fervensis</i>		W2051	140870	(Gmelin, 1791)				1									
<i>Abra alba</i>		W2059	141433	(W. Wood, 1802)		3	4				1						
<i>Abra prismatica</i>		W2062	141436	(Montagu, 1808)	1	1	3	9		1			2	2	2	4	2
<i>Arctica islandica</i>		W2072	138802	(Linnaeus, 1767)			1										
<i>Chamelea striatula</i>		W2097_A	141908	(da Costa, 1778)	1								1	2		1	1
<i>Timoclea ovata</i>		W2104	141929	(Pennant, 1777)									1				
<i>Mysia undata</i>		W2139	140728	(Pennant, 1777)					4								
<i>Varicorbula gibba</i>		W2157	378492	(Olivi, 1792)			1				1						
<i>Hiatella arctica</i>		W2166	140103	(Linnaeus, 1767)							1						
<i>Thracia phaseolina</i>		W2231	152378	(Lamarck, 1818)													
<i>Cochlodesma praetenu</i>		W2239	181373	(Pulteney, 1799)								2					2
<i>Lyonsia norvegica</i>		W2247	140291	(Gmelin, 1791)													
<i>Pandora pinna</i>		W2252	140675	(Montagu, 1803)		1											1
<b>Phoronida</b>																	
<i>Phoronis</i>		ZA0003	128545	Wright, 1856	3	1	4					2		1		1	
<b>Echinodermata</b>																	
<i>Astropecten irregularis</i>		ZB0026	123867	(Pennant, 1777)				1									
<i>Acrocnida brachiata</i>		ZB0151	236130	(Montagu, 1804)		1							1				
<i>Amphiura filiformis</i>		ZB0154	125080	(O.F. Müller, 1776)							17						
<i>Ophiura albida</i>		ZB0168	124913	Forbes, 1839							1						
<i>Echinocyamus pusillus</i>		ZB0212	124273	(O.F. Müller, 1776)	1	1	2	2	11	10		1		3	2	1	15
<i>Echinocardium cordatum</i>		ZB0223	124392	(Pennant, 1777)		1								1			2
<i>Echinocardium flavescens</i>		ZB0224	124394	(O.F. Müller, 1776)							1						

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
<i>Leptosynapta bergensis</i>		ZB0292	124462	(Östergren, 1905)	1						2						
<i>Oestergrenia digitata</i>		ZB0300	152547	(Montagu, 1815)		1	1						2				
<b>Hemichordata</b>																	
ENTEROPNEUSTA		ZC0012	1820	Gegenbaur, 1870	2		3			1		3	1				
<b>Taxa</b>					<b>35</b>	<b>37</b>	<b>47</b>	<b>45</b>	<b>32</b>	<b>18</b>	<b>47</b>	<b>27</b>	<b>32</b>	<b>45</b>	<b>14</b>	<b>32</b>	<b>27</b>
<b>Abundance</b>					<b>84</b>	<b>99</b>	<b>114</b>	<b>95</b>	<b>76</b>	<b>50</b>	<b>178</b>	<b>86</b>	<b>74</b>	<b>108</b>	<b>23</b>	<b>105</b>	<b>76</b>
<b>The following taxa (highlighted below) are merged in the rationalised dataset above</b>																	
Aoridae	Female	S0577	101368	Stebbing, 1899													
<i>Autonoe longipes</i>		S0583	102021	(Liljeborg, 1852)											1		
<b>Aoridae</b>		S0577	101368	Stebbing, 1899											1		
<b>The following taxa were excluded from the analysis</b>																	
<b>Juveniles</b>																	
HEXACORALLIA	Juvenile	D0627	1340	Haeckel, 1896													
SIPUNCULA	Juvenile	N0001	1268	Stephen, 1965													
Aphroditidae	Juvenile	P0017	938	Malmgren, 1867				1									
Polynoidea	Juvenile	P0025	939	Kinberg, 1856		2											
<i>Sthenelais</i>	Juvenile	P0106	129595	Kinberg, 1856	1	2											
<i>Eumida</i>	Juvenile	P0163	129446	Malmgren, 1865					1								
<i>Syllis</i>	Juvenile	P0358	129680	Lamarck, 1818													
Nephtyidae	Juvenile	P0490	956	Grube, 1850	1			1	1			1					
Lumbrineridae	Juvenile	P0569	967	Schmarda, 1861			1							2			
Pectinariidae	Juvenile	P1100	980	Quatrefages, 1866	1			1									
Terebellidae	Juvenile	P1179	982	Johnston, 1846					2								
<i>Hippolyte</i>	Juvenile	S1346	106987	Leach, 1814				1									
Callianassidae	Juvenile	S1413	106800	Dana, 1852	1												
<i>Liocarcinus</i>	Juvenile	S1577	106925	Stimpson, 1871							1						
Philineidae	Juvenile	W1035	161	Gray, 1850 (1815)				1									
BIVALVIA	Juvenile	W1560	105	Linnaeus, 1758				1									
<i>Nucula</i>	Juvenile	W1565	138262	Lamarck, 1799	1	1	1	2			2	1	1	1	1		1
<i>Mytilus</i>	Juvenile	W1693	138228	Linnaeus, 1758			1										
Thyasiridae	Juvenile	W1833	219	Dall, 1900 (1895)	2		1	2					1	1			
Mactrinae	Juvenile	W1968	152831	Lamarck, 1809													
<i>Spisula</i>	Juvenile	W1973	138159	J. E. Gray, 1837					1								
<i>Gari</i>	Juvenile	W2044	138388	Schumacher, 1817													1
<i>Abra</i>	Juvenile	W2058	138474	Lamarck, 1818						1		1		1			
<i>Arctica islandica</i>	Juvenile	W2072	138802	(Linnaeus, 1767)	1							2			3		2



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Veneridae	Juvenile	W2086	243	Rafinesque, 1815				1									1
<i>Dosinia</i>	Juvenile	W2126	138636	Scopoli, 1777			1	2		1		4	2	6	1	1	3
THRACIOIDEA	Juvenile	W2225	382318	Stoliczka, 1870 (1839)													
OPHIUROIDEA	Juvenile	ZB0105	123084	Gray, 1840		2	1	15				5		11	2	4	
Amphiuridae	Juvenile	ZB0148	123206	Ljungman, 1867	1	9	8	8			8		9	17	4	20	17
Ophiuridae	Juvenile	ZB0165	123200	Müller & Troschel, 1840							1						
SPATANGOIDA	Juvenile	ZB0213	123106	L. Agassiz, 1840			2	2	1	3		3	1	6	4	6	16
<i>Echinocardium</i>	Juvenile	ZB0222	123426	Gray, 1825				1						2	2		2
DENDROCHIROTIDA	Juvenile	ZB0249	123111	Grube, 1840												1	1
ASCIDIACEA	Juvenile	ZD0002	1839	Blainville, 1824				3	2	7						21	1
Ammodytidae	Juvenile	ZG0441	125516	Bonaparte, 1835													
<b>Damaged</b>																	
Polynoidae	Damaged	P0025	939	Kinberg, 1856				1									
Phyllodocidae	Damaged	P0114	931	Örsted, 1843				2									
<i>Eumida</i>	Damaged	P0163	129446	Malmgren, 1865													
<i>Orbinia</i>	Damaged	P0661	129420	Quatrefages, 1866													
Maldanidae	Damaged	P0938	923	Malmgren, 1867							1						
Serpulidae	Damaged	P1324	988	Rafinesque, 1815				7									
<i>Diastylis</i>	Damaged	S1247	110398	Say, 1818								1					
Ammodytidae	Damaged	ZG0441	125516	Bonaparte, 1835													
<b>Epifauna</b>																	
PORIFERA		C0001	558	Grant, 1836							P						
ANTHOATHECATA		D0140	13551	Cornelius, 1992													
Tubulariidae		D0158	1603	Goldfuss, 1818													
FILIFERA		D0216	16352	Kühn, 1913										P			
<i>Eudendrium</i>		D0218	117093	Ehrenberg, 1834							P						
LEPTOTHECATA		D0295	13552	Cornelius, 1992			P						P	P			
<i>Lovenella clausa</i>		D0336	117736	(Lovén, 1836)	P	P		P		P		P			P	P	P
Campanulariidae		D0491	1606	Johnston, 1836							P						
SESSILIA		R0015_A	106033	Lamarck, 1818				P				P					
<i>Verruca stroemia</i>		R0041	106257	(O.F. Müller, 1776)													
Crisiidae		Y0004	110806	Johnston, 1838							P						
<i>Vesicularia spinosa</i>		Y0131	111669	(Linnaeus, 1758)											P		
<i>Amathia lendigera</i>		Y0135	111659	(Linnaeus, 1758)													
CHEILOSTOMATIDA		Y0149	110722	Busk, 1852				P									
<i>Aetea</i>		Y0153	110819	Lamouroux, 1812													

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-A-ST01FA	MCW-A-ST02FA	MCW-A-ST03FA	MCW-A-ST07AFA	MCW-A-ST08AFA	MCW-A-ST44AFA	MCW-B-ST09AFA	MCW-B-ST10FA	MCW-B-ST17AFA	MCW-B-ST18AFA	MCW-B-ST19AFA	MCW-B-ST29AFA	MCW-B-ST30AFA
<i>Eucratea loricata</i>		Y0165	111361	(Linnaeus, 1758)													
<i>Electra pilosa</i>		Y0178	111355	(Linnaeus, 1767)							P						
<i>Flustra foliacea</i>		Y0187	111367	(Linnaeus, 1758)													
Candidae		Y0265	110734	d'Orbigny, 1851									P				
<i>Celleporella hyalina</i>		Y0337	111397	(Linnaeus, 1767)							P						
<b>Algae</b>																	
<i>Polysiphonia stricta</i>	?	ZM0679	144672	(Mertens ex Dillwyn) Greville, 1824							P						
<i>Hypoglossum hypoglossoides</i>		ZM610	144756	(Stackhouse) Collins & Hervey, 1917							P						
<b>Meiofauna</b>																	
NEMATODA		HD0001	799								2						
COPEPODA		R0142	1080	Milne Edwards, 1840		1											
<b>Fish</b>																	
<i>Ammodytes marinus</i>		ZG0443	126751	Raitt, 1934													
<b>Taxa</b>					9	7	9	21	6	5	14	10	7	11	10	6	11
<b>Abundance</b>					9	17	16	52	8	12	15	18	14	47	38	32	45

Taxon	Qualifier	SDC	AlphaID	Authority	MCW-C-ST20FA	MCW-C-ST31FA	MCW-C-ST32FA	MCW-C-ST41FA	MCW-C-ST42FA	MCW-C-ST43FA	MCW-C-ST52FA	MCW-C-ST53FA	MCW-C-ST54FA	MCW-C-ST62FA	MCW-C-ST63FA	MCW-C-ST70FA	MCW-C-ST71FA
<b>Cnidaria</b>																	
<i>Virgularia mirabilis</i>		D0618	128539	(Müller, 1776)													
ACTINIARIA		D0662	1360	Hertwig, 1882													
<i>Halcampa</i>		D0757	100740	Gosse, 1858							1						
Edwardsiidae		D0759	100665	Andres, 1881			1	2	1		1	1	1	3	2	4	1
<b>Platyhelminthes</b>																	
PLATYHELMINTHES		F0001	793	Minot, 1876													
<b>Nemertea</b>																	
NEMERTEA		G0001	152391									1					1
<i>Tubulanus polymorphus</i>		G0034	122637	Renier, 1804	3	1	1	2		1	1	3	6	5	1	5	1
<i>Cerebratulus</i>		G0039	122348	Renier, 1804	1	1		1									
<b>Annelida</b>																	
<i>Phascolion (Phascolion) strombus strombus</i>		N0034	410749	(Montagu, 1804)													
<i>Pisione remota</i>		P0015	130707	(Southern, 1914)													
<i>Pholoe inornata</i>		P0092	130601	Johnston, 1839													
<i>Pholoe baltica</i>		P0095	130599	Örsted, 1843													
<i>Sigalion mathildae</i>		P0104	131072	Audouin & Milne Edwards, 1832								2		1		1	
<i>Sthenelais limicola</i>		P0109	131077	(Ehlers, 1864)	1	2	5	7	2	4	3	1	2	2	2	2	
<i>Eteone longa</i>	Aggregate	P0118	130616	(Fabricius, 1780)				4									
<i>Hesionura elongata</i>		P0122	130649	(Southern, 1914)													
<i>Phyllodoce longipes</i>		P0143	130673	Kinberg, 1866		1							1				
<i>Phyllodoce rosea</i>		P0146	334514	(McIntosh, 1877)	4	4				2	1	1		1	1		
<i>Eulalia mustela</i>		P0155	130631	Pleijel, 1987													
<i>Eulalia viridis</i>		P0161	130639	(Linnaeus, 1767)													
<i>Eumida bahusiensis</i>		P0164	130641	Bergstrom, 1914				1									
<i>Glycera alba</i>		P0256	130116	(O.F. Müller, 1776)		1											
<i>Glycera lapidum</i>		P0260	130123	Quatrefages, 1866													
<i>Glycera oxycephala</i>		P0262	130126	Ehlers, 1887				1									
<i>Glycera unicornis</i>		P0263	130131	Lamarck, 1818				2									
<i>Glycinde nordmanni</i>		P0268	130136	(Malmgren, 1866)													
<i>Goniada maculata</i>		P0271	130140	Örsted, 1843													
<i>Goniadella gracilis</i>		P0276	130145	(Verrill, 1873)													
<i>Psamathe fusca</i>		P0305	152249	Johnston, 1836													
<i>Oxydromus flexuosus</i>		P0313	710680	(Delle Chiaje, 1827)													
<i>Syllis garciai</i>		P0351	131431	(Campoy, 1982)													

Taxon	Qualifier	SDC	AlphaID	Authority	MCW-C-ST20FA	MCW-C-ST31FA	MCW-C-ST32FA	MCW-C-ST41FA	MCW-C-ST42FA	MCW-C-ST43FA	MCW-C-ST52FA	MCW-C-ST53FA	MCW-C-ST54FA	MCW-C-ST62FA	MCW-C-ST63FA	MCW-C-ST70FA	MCW-C-ST71FA
<i>Syllis licheri</i>		P0358_B	238263	Ravara, San Martín & Moreira, 2004													
<i>Syllis armillaris</i>	Aggregate	P0365	131415	(O.F. Müller, 1776)													
<i>Streptosyllis websteri</i>		P0405	131402	Southern, 1914				1									
<i>Parexogone hebes</i>		P0421	757970	(Webster & Benedict, 1884)													
<i>Exogone naidina</i>		P0422	327985	Örsted, 1845	1												
<i>Sphaerosyllis bulbosa</i>		P0425	131379	Southern, 1914													
<i>Nereis zonata</i>		P0478	130407	Malmgren, 1867													
<i>Aglaophamus agilis</i>		P0493	130343	(Langerhans, 1880)													
<i>Nephtys assimilis</i>		P0495	130353	Örsted, 1843										1			
<i>Nephtys cirrosa</i>		P0498	130357	Ehlers, 1868	2	1		5	2	1	4	1		1			
<i>Nephtys hombergii</i>		P0499	130359	Savigny in Lamarck, 1818													
<i>Aponuphis bilineata</i>		P0539	130452	(Baird, 1870)				3	1								
<i>Lumbrineris cingulata</i>		P0572_A	130240	Ehlers, 1897	1	5	4		4				3		1	5	9
<i>Ophryotrocha</i>		P0613	129266	Claparède & Mecznirow, 1869													
<i>Protodorvillea kefersteini</i>		P0638	130041	(McIntosh, 1869)													
<i>Schistomeringos neglecta</i>		P0642	130044	(Fauvel, 1923)													
<i>Orbinia armandi</i>		P0663	130518	(McIntosh, 1910)													
<i>Orbinia sertulata</i>		P0665	130523	(Savigny, 1822)											1		
<i>Scoloplos armiger</i>		P0672	130537	(Müller, 1776)		1	1					1	2				1
<i>Aricidea (Aricidea) minuta</i>		P0677	730747	Southward, 1956													
<i>Aricidea (Acmira) catherinae</i>		P0684	333034	Laubier, 1967							1						
<i>Aricidea (Acmira) cerrutii</i>		P0685	525497	Laubier, 1966													
<i>Aricidea (Acmira) laubieri</i>		P0686	326587	Hartley, 1981													
<i>Apistobranchnus tullbergi</i>		P0712	129851	(Théel, 1879)													
<i>Poecilochaetus serpens</i>		P0718	130711	Allen, 1904			2	14				1	1	4	1	3	1
<i>Aonides paucibranchiata</i>		P0723	131107	Southern, 1914		3	1					3		1	1		
<i>Laonice irinae</i>		P0731_A	1518242	Sikorski, Radashevsky & Nygren in Sikorski et al, 2021													
<i>Prionospio cirrifera</i>		P0747	131153	Wirén, 1883													
<i>Dipolydora caulleryi</i>		P0751	131116	(Mesnil, 1897)													
<i>Dipolydora saintjosephi</i>		P0761	131123	(Eliason, 1920)													
<i>Prionospio fallax</i>		P0765	131157	Söderström, 1920													
<i>Aurospio banyulensis</i>		P0766	146532	(Laubier, 1966)													
<i>Pseudopolydora pulchra</i>		P0774	131169	(Carazzi, 1893)		1		1									
<i>Scolecopsis korsuni</i>		P0777_A	131174	Sikorski, 1994													
<i>Scolecopsis bonnieri</i>		P0779	131171	(Mesnil, 1896)													

Taxon	Qualifier	SDC	AlphiaID	Authority	MCW-C-ST20FA	MCW-C-ST31FA	MCW-C-ST32FA	MCW-C-ST41FA	MCW-C-ST42FA	MCW-C-ST43FA	MCW-C-ST52FA	MCW-C-ST53FA	MCW-C-ST54FA	MCW-C-ST62FA	MCW-C-ST63FA	MCW-C-ST70FA	MCW-C-ST71FA
<i>Spio symphyta</i>		P0787_C	596189	Meißner, Bick & Bastrop, 2011				3						2			
<i>Spio decorata</i>		P0789	152314	Bobretzky, 1870		1											
<i>Spiophanes bombyx</i>	Aggregate	P0794	131187	(Claparède, 1870)	4	7	7	16	4	11	4	8	4	14	1	2	1
<i>Spiophanes kroyeri</i>	Aggregate	P0796	131188	Grube, 1860								1					
<i>Magelona johnstoni</i>		P0803_A	130269	Fiege, Licher & Mackie, 2000								2	1	5		2	3
<i>Magelona alleni</i>		P0804	130266	Wilson, 1958													
<i>Magelona filiformis</i>		P0805	130268	Wilson, 1959								4	2	6	1	7	1
<i>Magelona mirabilis</i>		P0807	130271	(Johnston, 1865)	1												
<i>Chaetopterus</i>		P0811	129229	Cuvier, 1830													
<i>Spiochaetopterus</i>		P0818	129233	M Sars, 1856		1										1	
<i>Aphelochaeta</i>	Species A	P0823	129240	Blake, 1991													
<i>Aphelochaeta</i>		P0823	129240	Blake, 1991													
<i>Caulleriella alata</i>		P0829	129943	(Southern, 1914)													
<i>Chaetozone zetlandica</i>		P0831	336485	McIntosh, 1911													
<i>Chaetozone christiei</i>		P0832_A	152217	Chambers, 2000		1		1	1	1	1	1	5		2	1	2
<i>Chaetozone setosa</i>		P0834	129955	Malmgren, 1867													
<i>Dodecaceria</i>		P0840	129246	Örsted, 1843													
<i>Tharyx killariensis</i>		P0846	152269	(Southern, 1914)													
<i>Diplocirrus glaucus</i>		P0878	130100	(Malmgren, 1867)													
<i>Mediomastus fragilis</i>		P0919	129892	Rasmussen, 1973													
<i>Notomastus</i>		P0920	129220	M. Sars, 1851		8		9	2	1		1					
<i>Praxillura longissima</i>		P0944	130327	Arwidsson, 1906													
<i>Euclymene</i>	Species A	P0960	129347	Verrill, 1900													
<i>Euclymene oerstedii</i>		P0964	130294	(Claparède, 1863)													
<i>Ophelia borealis</i>		P0999	130491	Quatrefages, 1866		1	1		2	3							
<i>Travisia forbesii</i>		P1007	130512	Johnston, 1840	1												
<i>Ophelina acuminata</i>		P1014	130500	Örsted, 1843													
<i>Scalibregma inflatum</i>		P1027	130980	Rathke, 1843											1		
<i>Scalibregma hansenii</i>		P1027A	746615	Bakken, Oug & Kongsrud, 2014													
Polygordiidae		P1061	993	Czerniavsky, 1881													
<i>Galathowenia oculata</i>		P1093	146950	(Zachs, 1923)								6	3		4		
<i>Myriochele danielsseni</i>		P1095	130540	Hansen, 1878									1				
<i>Owenia</i>		P1097	129427	Delle Chiaje, 1844		1		1									
<i>Amphictene auricoma</i>		P1102	152448	(O.F. Müller, 1776)													
<i>Lagis koreni</i>		P1107	152367	Malmgren, 1866							1		1				1
<i>Sabellaria spinulosa</i>		P1117	130867	(Leuckart, 1849)													



Taxon	Qualifier	SDC	AlphaID	Authority	MCW-C-ST20FA	MCW-C-ST31FA	MCW-C-ST32FA	MCW-C-ST41FA	MCW-C-ST42FA	MCW-C-ST43FA	MCW-C-ST52FA	MCW-C-ST53FA	MCW-C-ST54FA	MCW-C-ST62FA	MCW-C-ST63FA	MCW-C-ST70FA	MCW-C-ST71FA
<i>Ampharete falcata</i>		P1135	129777	Eliason, 1955													
<i>Ampharete lindstroemi</i>		P1139	129781	Hessle, 1917		1		2		1							
<i>Ampharete octocirrata</i>		P1160	332932	(Sars, 1835)													
<i>Terebellides</i>		P1174	129717	Sars, 1835													
<i>Eupolymnia nebulosa</i>		P1189	131489	(Montagu, 1819)				1									
<i>Lanice conchilega</i>		P1195	131495	(Pallas, 1766)		1						1					1
<i>Phisidia aurea</i>		P1215	131513	Southward, 1956				2		1			1				
<i>Pista bansei</i>		P1219_B	152254	Saphronova, 1988						1							
<i>Polycirrus</i>		P1235	129710	Grube, 1850				2	2	1							
<i>Dialychone</i>		P1264_C	155472	Claparède, 1868									1				
<i>Hydroides norvegica</i>		P1334	131009	Gunnerus, 1768													
<i>Tubificoides amplivasatus</i>		P1489	137570	(Erséus, 1975)													
Enchytraeidae		P1501	2038	d'Udekem, 1855													
HIRUDINEA		P1579	2041	Savigny, 1822								1					
<b>Arthropoda</b>																	
<i>Anoplodactylus petiolatus</i>		Q0044	134723	(Krøyer, 1844)													
<i>Periculodes longimanus</i>		S0131	102915	(Spence Bate & Westwood, 1868)		1	1						1	1			
<i>Synchelidium maculatum</i>		S0138	102928	Stebbing, 1906	1											1	
<i>Harpinia antennaria</i>		S0254	102960	Meinert, 1890													
<i>Hippomedon denticulatus</i>		S0296	102570	(Spence Bate, 1857)									1				
<i>Lepidepecreum longicorne</i>		S0301	102598	(Spence Bate & Westwood, 1861)											1		
<i>Lysianassa plumosa</i>		S0305	102611	Boeck, 1871													
<i>Tryphosella nanooides</i>		S0343	102764	(Lilljeborg, 1865)								1					
<i>Argissa hamatipes</i>		S0360	102064	(Norman, 1869)		2											1
<i>Iphimedia perplexa</i>		S0383	102348	Myers & Costello, in Myers, McGrath & Costello, 1987													
<i>Nototropis falcatus</i>		S0410	102139	(Metzger, 1871)		1				1					1		
<i>Ampelisca brevicornis</i>		S0427	101891	(A. Costa, 1853)													
<i>Ampelisca diadema</i>		S0429	101896	(A. Costa, 1853)	1												
<i>Ampelisca tenuicornis</i>		S0440	101930	Liljeborg, 1856													
<i>Bathyporeia elegans</i>		S0452	103058	Watkin, 1938		2	1		1	1	4	4	1	15	12	3	2
<i>Bathyporeia guilliamsoniana</i>		S0454	103060	(Spence Bate, 1857)			5				2	2	2	3	10	1	5
<i>Bathyporeia tenuipes</i>		S0459	103076	Meinert, 1877										1			
<i>Megaluropus agilis</i>		S0489	102783	Hoek, 1889		1											
<i>Abludomelita obtusata</i>		S0498	102788	(Montagu, 1813)													
Aoridae		S0577	101368	Stebbing, 1899													
<i>Centraloecetes kroyeranus</i>		S0618	1059646	(Spence Bate, 1857)	1	9	3	39	6	5	1	2	2				

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<i>Centroloecetes striatus</i>		S0619	1059649	(Myers & McGrath, 1979)		1	1	12					1				
<i>Pariambus typicus</i>		S0651	101857	(Krøyer, 1845)								1	2	1			1
<i>Gnathia oxyuraea</i>		S0796	118995	(Lilljeborg, 1855)													
<i>Astacilla dilatata</i>		S0951	295579	G. O. Sars, 1883													
<i>Tanaopsis graciloides</i>		S1142	136458	(Lilljeborg, 1864)													
<i>Eudorellopsis deformis</i>		S1210	110536	(Krøyer, 1846)								2			2		
<i>Pseudocuma (Pseudocuma) simile</i>		S1237	110628	G.O. Sars, 1900	1	1		1				1				1	
<i>Diastylis bradyi</i>		S1248	110472	Norman, 1879				1					1	4		3	
<i>Diastylis laevis</i>		S1251	110481	Norman, 1869													
<i>Diastylis rugosa</i>		S1254	110488	Sars, 1865	1			1									
<i>Processa noveli holthuisi</i>		S1367	108344	Al-Adhub & Williamson, 1975													
<i>Philocheras trispinosus</i>		S1390	107562	(Hailstone <i>in</i> Hailstone & Westwood, 1835)													
<i>Pagurus cuanensis</i>		S1460	107235	Bell, 1845													
<i>Galathea intermedia</i>		S1472	107150	Lilljeborg, 1851													
<i>Ebalia tuberosa</i>		S1508	107301	(Pennant, 1777)		1											
<i>Pinnotheres pisum</i>		S1638	107473	(Linnaeus, 1767)													
<b>Mollusca</b>																	
<i>Chaetoderma nitidulum</i>		W0009	139106	Lovén, 1844													
<i>Ceratia proxima</i>		W0408	140128	(Forbes & Hanley, 1850)													
<i>Aporrhais pespelecani</i>		W0430	138760	(Linnaeus, 1758)													
<i>Erato voluta</i>		W0465	139761	(Montagu, 1803)													
<i>Euspira nitida</i>		W0491	151894	(Donovan, 1803)	1			2	2	2			1		1		1
<i>Epitonium trevelyanum</i>		W0553	139736	(G. Johnston, 1841)													
<i>Eulima bilineata</i>		W0603	139800	Alder, 1848													
<i>Bela nebula</i>		W0801	139217	(Montagu, 1803)				1									
<i>Megastomia conoidea</i>		W0952	224401	(Brocchi, 1814)													
<i>Pyrgiscus crenatus</i>		W0985	836211	(T. Brown, 1827)									1				
<i>Acteon tornatilis</i>		W1006	138691	(Linnaeus, 1758)													
<i>Cylichna cylindracea</i>		W1028	139476	(Pennant, 1777)											1	2	2
<i>Hermania scabra/indistincta</i>		W1045	867492/867493									1					
NUDIBRANCHIA		W1243	1762	Cuvier, 1817													
<i>Antalis entalis</i>		W1519	150534	(Linnaeus, 1758)													
<i>Nucula nitidosa</i>		W1569	140589	Winckworth, 1930				2			2	2	5	5	1		2
<i>Glycymeris glycymeris</i>		W1688	140025	(Linnaeus, 1758)													
Anomiidae		W1805	214	Rafinesque, 1815													

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<i>Myrtea spinifera</i>		W1827	140287	(Montagu, 1803)													
<i>Lucinoma borealis</i>		W1829	140283	(Linnaeus, 1767)											1		
<i>Thyasira flexuosa</i>		W1837	141662	(Montagu, 1803)									1		2		
<i>Kurtiella bidentata</i>		W1906	345281	(Montagu, 1803)													
<i>Goodallia triangularis</i>		W1929	138831	(Montagu, 1803)					1								
<i>Acanthocardia echinata</i>		W1943	138992	(Linnaeus, 1758)													
<i>Spisula elliptica</i>		W1975	140300	(T. Brown, 1827)													
<i>Phaxas pellucidus</i>		W2006	140737	(Pennant, 1777)			1					1		1		2	1
<i>Arcopagia crassa</i>		W2015	141577	(Pennant, 1777)													
<i>Fabulina fabula</i>		W2019	146907	(Gmelin, 1791)							1	6	1	6	2	3	5
<i>Asbjornsenia pygmaea</i>		W2023	879714	(Lovén, 1846)					1								
<i>Gari fervensis</i>		W2051	140870	(Gmelin, 1791)									1		1		
<i>Abra alba</i>		W2059	141433	(W. Wood, 1802)	1											1	
<i>Abra prismatica</i>		W2062	141436	(Montagu, 1808)		2		9	1	3	2	1	1	1	1	2	1
<i>Arctica islandica</i>		W2072	138802	(Linnaeus, 1767)			1		1			1					
<i>Chamelea striatula</i>		W2097_A	141908	(da Costa, 1778)			3		1	1		1	3		1		
<i>Timoclea ovata</i>		W2104	141929	(Pennant, 1777)							2		6				
<i>Mysia undata</i>		W2139	140728	(Pennant, 1777)	1				1				1				
<i>Varicorbula gibba</i>		W2157	378492	(Olivi, 1792)													
<i>Hiatella arctica</i>		W2166	140103	(Linnaeus, 1767)													
<i>Thracia phaseolina</i>		W2231	152378	(Lamarck, 1818)													
<i>Cochlodesma praetenue</i>		W2239	181373	(Pulteney, 1799)	1			1				1			1		
<i>Lyonsia norwegica</i>		W2247	140291	(Gmelin, 1791)		1											
<i>Pandora pinna</i>		W2252	140675	(Montagu, 1803)													
<b>Phoronida</b>																	
<i>Phoronis</i>		ZA0003	128545	Wright, 1856		1										1	1
<b>Echinodermata</b>																	
<i>Astropecten irregularis</i>		ZB0026	123867	(Pennant, 1777)													
<i>Acrocnida brachiata</i>		ZB0151	236130	(Montagu, 1804)													
<i>Amphiura filiformis</i>		ZB0154	125080	(O.F. Müller, 1776)													
<i>Ophiura albida</i>		ZB0168	124913	Forbes, 1839													
<i>Echinocyamus pusillus</i>		ZB0212	124273	(O.F. Müller, 1776)	5	6	6	35	7	5	3	5	6	1	2		1
<i>Echinocardium cordatum</i>		ZB0223	124392	(Pennant, 1777)												1	
<i>Echinocardium flavescens</i>		ZB0224	124394	(O.F. Müller, 1776)													
<i>Leptosynapta bergensis</i>		ZB0292	124462	(Östergren, 1905)													
<i>Oestergrenia digitata</i>		ZB0300	152547	(Montagu, 1815)													

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<b>Hemichordata</b>																	
ENTEROPNEUSTA		ZC0012	1820	Gegenbaur, 1870										2		1	
<b>Taxa</b>					20	33	19	32	20	19	18	35	35	25	29	24	24
<b>Abundance</b>					33	72	47	183	43	46	35	72	73	87	59	55	46
<b>The following taxa (highlighted below) are merged in the rationalised dataset above</b>																	
Aoridae	Female	S0577	101368	Stebbing, 1899													
<i>Autonoe longipes</i>		S0583	102021	(Liljeborg, 1852)													
Aoridae		S0577	101368	Stebbing, 1899													
<b>The following taxa were excluded from the analysis</b>																	
<b>Juveniles</b>																	
HEXACORALLIA	Juvenile	D0627	1340	Haeckel, 1896	1					1		1					
SIPUNCULA	Juvenile	N0001	1268	Stephen, 1965							1						
Aphroditidae	Juvenile	P0017	938	Malmgren, 1867													
Polynoidae	Juvenile	P0025	939	Kinberg, 1856													
<i>Sthenelais</i>	Juvenile	P0106	129595	Kinberg, 1856													
<i>Eumida</i>	Juvenile	P0163	129446	Malmgren, 1865													
<i>Syllis</i>	Juvenile	P0358	129680	Lamarck, 1818													
Nephtyidae	Juvenile	P0490	956	Grube, 1850													
Lumbrineridae	Juvenile	P0569	967	Schmarda, 1861		2		2									
Pectinariidae	Juvenile	P1100	980	Quatrefages, 1866													
Terebellidae	Juvenile	P1179	982	Johnston, 1846													
<i>Hippolyte</i>	Juvenile	S1346	106987	Leach, 1814													
Callianassidae	Juvenile	S1413	106800	Dana, 1852													
<i>Liocarcinus</i>	Juvenile	S1577	106925	Stimpson, 1871				1									
Philinidae	Juvenile	W1035	161	Gray, 1850 (1815)													
BIVALVIA	Juvenile	W1560	105	Linnaeus, 1758													
<i>Nucula</i>	Juvenile	W1565	138262	Lamarck, 1799			1				1				1	1	
<i>Mytilus</i>	Juvenile	W1693	138228	Linnaeus, 1758													
Thyasiridae	Juvenile	W1833	219	Dall, 1900 (1895)											1		
Mactrinae	Juvenile	W1968	152831	Lamarck, 1809	1				1								1
<i>Spisula</i>	Juvenile	W1973	138159	J. E. Gray, 1837					2								
<i>Gari</i>	Juvenile	W2044	138388	Schumacher, 1817													1
<i>Abra</i>	Juvenile	W2058	138474	Lamarck, 1818		1		1				1					1
<i>Arctica islandica</i>	Juvenile	W2072	138802	(Linnaeus, 1767)				1			2	1	2				
Veneridae	Juvenile	W2086	243	Rafinesque, 1815	2						1						1
<i>Dosinia</i>	Juvenile	W2126	138636	Scopoli, 1777	1	2	1	1	1	1			3		5		

Taxon	Qualifier	SDC	AlphaID	Authority	MCW-C-ST20FA	MCW-C-ST31FA	MCW-C-ST32FA	MCW-C-ST41FA	MCW-C-ST42FA	MCW-C-ST43FA	MCW-C-ST52FA	MCW-C-ST53FA	MCW-C-ST54FA	MCW-C-ST62FA	MCW-C-ST63FA	MCW-C-ST70FA	MCW-C-ST71FA
THRACIOIDEA	Juvenile	W2225	382318	Stoliczka, 1870 (1839)	2	1	2	3	4	1			2	1			
OPHIUROIDEA	Juvenile	ZB0105	123084	Gray, 1840	6	6	2	4				3	3	2	1	3	
Amphiuridae	Juvenile	ZB0148	123206	Ljungman, 1867		3	4	1	1	3	3	5	1	1			3
Ophiuridae	Juvenile	ZB0165	123200	Müller & Troschel, 1840													
SPATANGOIDA	Juvenile	ZB0213	123106	L. Agassiz, 1840	4	5	4	4	2	6	1	7		8	2		2
<i>Echinocardium</i>	Juvenile	ZB0222	123426	Gray, 1825	1			1						1			
DENDROCHIROTIDA	Juvenile	ZB0249	123111	Grube, 1840													
ASCIDIACEA	Juvenile	ZD0002	1839	Blainville, 1824				7	24	2		1	5				
Ammodytidae	Juvenile	ZG0441	125516	Bonaparte, 1835					1	7							
<b>Damaged</b>																	
Polynoidae	Damaged	P0025	939	Kinberg, 1856													
Phyllodocidae	Damaged	P0114	931	Örsted, 1843													
<i>Eumida</i>	Damaged	P0163	129446	Malmgren, 1865													
<i>Orbinia</i>	Damaged	P0661	129420	Quatrefages, 1866													
Maldanidae	Damaged	P0938	923	Malmgren, 1867													
Serpulidae	Damaged	P1324	988	Rafinesque, 1815													
<i>Diastylis</i>	Damaged	S1247	110398	Say, 1818													
Ammodytidae	Damaged	ZG0441	125516	Bonaparte, 1835					1								
<b>Epifauna</b>																	
PORIFERA		C0001	558	Grant, 1836													
ANTHOATHECATA		D0140	13551	Cornelius, 1992								P					
Tubulariidae		D0158	1603	Goldfuss, 1818		P											
FILIFERA		D0216	16352	Kühn, 1913													
<i>Eudendrium</i>		D0218	117093	Ehrenberg, 1834													
LEPTOTHECATA		D0295	13552	Cornelius, 1992				P	P	P							
<i>Lovenella clausa</i>		D0336	117736	(Lovén, 1836)	P	P	P				P	P	P	P	P	P	P
Campanulariidae		D0491	1606	Johnston, 1836													
SESSILIA		R0015_A	106033	Lamarck, 1818													
<i>Verruca stroemia</i>		R0041	106257	(O.F. Müller, 1776)													
Crisiidae		Y0004	110806	Johnston, 1838													P
<i>Vesicularia spinosa</i>		Y0131	111669	(Linnaeus, 1758)					P								
<i>Amathia lendigera</i>		Y0135	111659	(Linnaeus, 1758)													P
CHEILOSTOMATIDA		Y0149	110722	Busk, 1852													
<i>Aetea</i>		Y0153	110819	Lamouroux, 1812													
<i>Eucratea loricata</i>		Y0165	111361	(Linnaeus, 1758)													
<i>Electra pilosa</i>		Y0178	111355	(Linnaeus, 1767)			P										P



Taxon	Qualifier	SDC	AlphiaID	Authority	MCW-C-ST20FA	MCW-C-ST31FA	MCW-C-ST32FA	MCW-C-ST41FA	MCW-C-ST42FA	MCW-C-ST43FA	MCW-C-ST52FA	MCW-C-ST53FA	MCW-C-ST54FA	MCW-C-ST62FA	MCW-C-ST63FA	MCW-C-ST70FA	MCW-C-ST71FA
<i>Flustra foliacea</i>		Y0187	111367	(Linnaeus, 1758)			P										
Candidae		Y0265	110734	d'Orbigny, 1851													
<i>Celleporella hyalina</i>		Y0337	111397	(Linnaeus, 1767)													
<b>Algae</b>																	
<i>Polysiphonia stricta</i>	?	ZM0679	144672	(Mertens ex Dillwyn) Greville, 1824													
<i>Hypoglossum hypoglossoides</i>		ZM610	144756	(Stackhouse) Collins & Hervey, 1917													
<b>Meiofauna</b>																	
NEMATODA		HD0001	799														
COPEPODA		R0142	1080	Milne Edwards, 1840											1		
<b>Fish</b>																	
<i>Ammodytes marinus</i>		ZG0443	126751	Raitt, 1934					1								
<b>Taxa</b>					9	9	9	12	12	8	6	10	7	6	6	3	11
<b>Abundance</b>					18	20	14	26	38	21	8	20	16	13	10	4	10

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-C-ST79FA	MCW-D-ST64FA	MCW-D-ST72AFA	MCW-D-ST73FA	MCW-D-ST80FA	MCW-D-ST81FA	MCW-D-ST82FA	MCW-D-ST88AFA	MCW-D-ST89AFA	MCW-D-ST100AFA	MCW-D-ST101FA	MCW-D-ST103AFA
<b>Cnidaria</b>																
<i>Virgularia mirabilis</i>		D0618	128539	(Müller, 1776)												
ACTINIARIA		D0662	1360	Hertwig, 1882												
<i>Halcampa</i>		D0757	100740	Gosse, 1858				1								
Edwardsiidae		D0759	100665	Andres, 1881	2					1			2		1	
<b>Platyhelminthes</b>																
PLATYHELMINTHES		F0001	793	Minot, 1876												
<b>Nemertea</b>																
NEMERTEA		G0001	152391				1			1	2			2	5	
<i>Tubulanus polymorphus</i>		G0034	122637	Renier, 1804		2	2		2	4						
<i>Cerebratulus</i>		G0039	122348	Renier, 1804									2			
<b>Annelida</b>																
<i>Phascolion (Phascolion) strombus strombus</i>		N0034	410749	(Montagu, 1804)				1							5	
<i>Pisione remota</i>		P0015	130707	(Southern, 1914)										12	57	
<i>Pholoe inornata</i>		P0092	130601	Johnston, 1839												
<i>Pholoe baltica</i>		P0095	130599	Örsted, 1843												
<i>Sigalion mathildae</i>		P0104	131072	Audouin & Milne Edwards, 1832		3	1									
<i>Sthenelais limicola</i>		P0109	131077	(Ehlers, 1864)	4	1	2	4	2	1		5				1
<i>Eteone longa</i>	Aggregate	P0118	130616	(Fabricius, 1780)										1		
<i>Hesionura elongata</i>		P0122	130649	(Southern, 1914)										1	2	
<i>Phyllodoce longipes</i>		P0143	130673	Kinberg, 1866												
<i>Phyllodoce rosea</i>		P0146	334514	(McIntosh, 1877)												
<i>Eulalia mustela</i>		P0155	130631	Pleijel, 1987										2	2	
<i>Eulalia viridis</i>		P0161	130639	(Linnaeus, 1767)												
<i>Eumida bahusiensis</i>		P0164	130641	Bergstrom, 1914												
<i>Glycera alba</i>		P0256	130116	(O.F. Müller, 1776)												
<i>Glycera lapidum</i>		P0260	130123	Quatrefages, 1866										13	12	
<i>Glycera oxycephala</i>		P0262	130126	Ehlers, 1887									1			
<i>Glycera unicornis</i>		P0263	130131	Lamarck, 1818										1		
<i>Glycinde nordmanni</i>		P0268	130136	(Malmgren, 1866)										1		
<i>Goniada maculata</i>		P0271	130140	Örsted, 1843												
<i>Goniadella gracilis</i>		P0276	130145	(Verrill, 1873)										4		
<i>Psamathe fusca</i>		P0305	152249	Johnston, 1836										1	1	
<i>Oxydromus flexuosus</i>		P0313	710680	(Delle Chiaje, 1827)												
<i>Syllis garciai</i>		P0351	131431	(Campoy, 1982)										3		

Taxon	Qualifier	SDC	AlphiaID	Authority	MCW-C-ST79FA	MCW-D-ST64FA	MCW-D-ST72AFA	MCW-D-ST73FA	MCW-D-ST80FA	MCW-D-ST81FA	MCW-D-ST82FA	MCW-D-ST88AFA	MCW-D-ST89AFA	MCW-D-ST100AFA	MCW-D-ST101FA	MCW-D-ST103AFA
<i>Syllis licheri</i>		P0358_B	238263	Ravara, San Martín & Moreira, 2004										9	7	
<i>Syllis armillaris</i>	Aggregate	P0365	131415	(O.F. Müller, 1776)												
<i>Streptosyllis websteri</i>		P0405	131402	Southern, 1914												
<i>Parexogone hebes</i>		P0421	757970	(Webster & Benedict, 1884)				1						1		
<i>Exogone naidina</i>		P0422	327985	Örsted, 1845				1		1						
<i>Sphaerosyllis bulbosa</i>		P0425	131379	Southern, 1914										1	4	
<i>Nereis zonata</i>		P0478	130407	Malmgren, 1867											2	
<i>Aglaophamus agilis</i>		P0493	130343	(Langerhans, 1880)							1			3	1	
<i>Nephtys assimilis</i>		P0495	130353	Örsted, 1843												
<i>Nephtys cirrosa</i>		P0498	130357	Ehlers, 1868	2			2	2		2	1	3			3
<i>Nephtys hombergii</i>		P0499	130359	Savigny in Lamarck, 1818												
<i>Aponuphis bilineata</i>		P0539	130452	(Baird, 1870)										1		
<i>Lumbrineris cingulata</i>		P0572_A	130240	Ehlers, 1897	17	4	3	5	1	4		5	1			8
<i>Ophryotrocha</i>		P0613	129266	Claparède & Mecznikow, 1869												
<i>Protodorvillea kefersteini</i>		P0638	130041	(McIntosh, 1869)										11	23	
<i>Schistomeringos neglecta</i>		P0642	130044	(Fauvel, 1923)											3	
<i>Orbinia armandi</i>		P0663	130518	(McIntosh, 1910)							1					
<i>Orbinia sertulata</i>		P0665	130523	(Savigny, 1822)												
<i>Scoloplos armiger</i>		P0672	130537	(Müller, 1776)			1		5	3						
<i>Aricidea (Aricidea) minuta</i>		P0677	730747	Southward, 1956						1						
<i>Aricidea (Acmira) catherinae</i>		P0684	333034	Laubier, 1967		2	1	1		1						
<i>Aricidea (Acmira) cerrutii</i>		P0685	525497	Laubier, 1966										1		
<i>Aricidea (Acmira) laubieri</i>		P0686	326587	Hartley, 1981												
<i>Apistobranthus tullbergi</i>		P0712	129851	(Théel, 1879)		1										
<i>Poecilochaetus serpens</i>		P0718	130711	Allen, 1904				1	1							
<i>Aonides paucibranchiata</i>		P0723	131107	Southern, 1914		5	1	1		2				15	5	
<i>Laonice irinae</i>		P0731_A	1518242	Sikorski, Radashevsky & Nygren in Sikorski et al, 2021											1	
<i>Prionospio cirrifera</i>		P0747	131153	Wirén, 1883												
<i>Dipolydora caulleryi</i>		P0751	131116	(Mesnil, 1897)												
<i>Dipolydora saintjosephi</i>		P0761	131123	(Eliason, 1920)												
<i>Prionospio fallax</i>		P0765	131157	Söderström, 1920		1										
<i>Aurospio banyulensis</i>		P0766	146532	(Laubier, 1966)												
<i>Pseudopolydora pulchra</i>		P0774	131169	(Carazzi, 1893)												
<i>Scolecopsis korsuni</i>		P0777_A	131174	Sikorski, 1994												

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-C-ST79FA	MCW-D-ST64FA	MCW-D-ST72AFA	MCW-D-ST73FA	MCW-D-ST80FA	MCW-D-ST81FA	MCW-D-ST82FA	MCW-D-ST88AFA	MCW-D-ST89AFA	MCW-D-ST100AFA	MCW-D-ST101FA	MCW-D-ST103AFA
<i>Scolecopsis bonnieri</i>		P0779	131171	(Mesnil, 1896)												
<i>Spio symphyta</i>		P0787_C	596189	Meißner, Bick & Bastrop, 2011		1		2						2		
<i>Spio decorata</i>		P0789	152314	Bobretzky, 1870												
<i>Spiophanes bombyx</i>	Aggregate	P0794	131187	(Claparède, 1870)	3	6	3	14	1	2	2	1	2			
<i>Spiophanes kroyeri</i>	Aggregate	P0796	131188	Grube, 1860												
<i>Magelona johnstoni</i>		P0803_A	130269	Fiege, Licher & Mackie, 2000		1										
<i>Magelona alleni</i>		P0804	130266	Wilson, 1958												
<i>Magelona filiformis</i>		P0805	130268	Wilson, 1959		2	4	2	3							
<i>Magelona mirabilis</i>		P0807	130271	(Johnston, 1865)									1			
<i>Chaetopterus</i>		P0811	129229	Cuvier, 1830												
<i>Spiochaetopterus</i>		P0818	129233	M Sars, 1856												
<i>Aphelochaeta</i>	Species A	P0823	129240	Blake, 1991												
<i>Aphelochaeta</i>		P0823	129240	Blake, 1991												
<i>Caulleriella alata</i>		P0829	129943	(Southern, 1914)										1		
<i>Chaetozone zetlandica</i>		P0831	336485	McIntosh, 1911							1					
<i>Chaetozone christiei</i>		P0832_A	152217	Chambers, 2000					3		1					
<i>Chaetozone setosa</i>		P0834	129955	Malmgren, 1867		2										
<i>Dodecaceria</i>		P0840	129246	Ørsted, 1843												
<i>Tharyx killariensis</i>		P0846	152269	(Southern, 1914)												
<i>Diplocirrus glaucus</i>		P0878	130100	(Malmgren, 1867)												
<i>Mediomastus fragilis</i>		P0919	129892	Rasmussen, 1973										3		
<i>Notomastus</i>		P0920	129220	M. Sars, 1851							3			41	5	
<i>Praxillura longissima</i>		P0944	130327	Arwidsson, 1906												
<i>Euclymene</i>	Species A	P0960	129347	Verrill, 1900												
<i>Euclymene oerstedii</i>		P0964	130294	(Claparède, 1863)												
<i>Ophelia borealis</i>		P0999	130491	Quatrefages, 1866								1				1
<i>Travisia forbesii</i>		P1007	130512	Johnston, 1840				1								
<i>Ophelina acuminata</i>		P1014	130500	Ørsted, 1843												
<i>Scalibregma inflatum</i>		P1027	130980	Rathke, 1843												
<i>Scalibregma hanseni</i>		P1027A	746615	Bakken, Oug & Kongsrud, 2014												
Polygordiidae		P1061	993	Czerniavsky, 1881										1	21	
<i>Galathowenia oculata</i>		P1093	146950	(Zachs, 1923)		7	6	1	1	3						
<i>Myriochele danielsseni</i>		P1095	130540	Hansen, 1878		4										
<i>Owenia</i>		P1097	129427	Delle Chiaje, 1844												
<i>Amphictene auricoma</i>		P1102	152448	(O.F. Müller, 1776)												

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<i>Lagis koreni</i>		P1107	152367	Malmgren, 1866												
<i>Sabellaria spinulosa</i>		P1117	130867	(Leuckart, 1849)												
<i>Ampharete falcata</i>		P1135	129777	Eliason, 1955												
<i>Ampharete lindstroemi</i>		P1139	129781	Hessle, 1917						1						
<i>Ampharete octocirrata</i>		P1160	332932	(Sars, 1835)												
<i>Terebellides</i>		P1174	129717	Sars, 1835						1						
<i>Eupolymnia nebulosa</i>		P1189	131489	(Montagu, 1819)												
<i>Lanice conchilega</i>		P1195	131495	(Pallas, 1766)			1	3								
<i>Phisidia aurea</i>		P1215	131513	Southward, 1956												
<i>Pista bansei</i>		P1219_B	152254	Saphronova, 1988												
<i>Polycirrus</i>		P1235	129710	Grube, 1850										1		
<i>Dialychone</i>		P1264_C	155472	Claparède, 1868												
<i>Hydroides norvegica</i>		P1334	131009	Gunnerus, 1768												
<i>Tubificoides amplivasatus</i>		P1489	137570	(Erséus, 1975)												
Enchytraeidae		P1501	2038	d'Udekem, 1855										2		
HIRUDINEA		P1579	2041	Savigny, 1822												
<b>Arthropoda</b>																
<i>Anoplodactylus petiolatus</i>		Q0044	134723	(Krøyer, 1844)												
<i>Periculodes longimanus</i>		S0131	102915	(Spence Bate & Westwood, 1868)			1			1						
<i>Synchelidium maculatum</i>		S0138	102928	Stebbing, 1906				2		1						
<i>Harpinia antennaria</i>		S0254	102960	Meinert, 1890			1									
<i>Hippomedon denticulatus</i>		S0296	102570	(Spence Bate, 1857)												
<i>Lepidepcreum longicorne</i>		S0301	102598	(Spence Bate & Westwood, 1861)				1								
<i>Lysianassa plumosa</i>		S0305	102611	Boeck, 1871			1									
<i>Tryphosella nanoides</i>		S0343	102764	(Lilljeborg, 1865)												
<i>Argissa hamatipes</i>		S0360	102064	(Norman, 1869)												
<i>Iphimedia perplexa</i>		S0383	102348	Myers & Costello, in Myers, McGrath & Costello, 1987							1					
<i>Nototropis falcatus</i>		S0410	102139	(Metzger, 1871)						1						
<i>Ampelisca brevicornis</i>		S0427	101891	(A. Costa, 1853)												
<i>Ampelisca diadema</i>		S0429	101896	(A. Costa, 1853)												
<i>Ampelisca tenuicornis</i>		S0440	101930	Liljeborg, 1856										1	1	
<i>Bathyporeia elegans</i>		S0452	103058	Watkin, 1938	1	4	5		2	3			1	1		
<i>Bathyporeia guilliamsoniana</i>		S0454	103060	(Spence Bate, 1857)		5	5	1	5	8						
<i>Bathyporeia tenuipes</i>		S0459	103076	Meinert, 1877												
<i>Megaluropus agilis</i>		S0489	102783	Hoek, 1889												



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<i>Abludomelita obtusata</i>		S0498	102788	(Montagu, 1813)			3					1				
Aoridae		S0577	101368	Stebbing, 1899		1										
<i>Centraloecetes kroyeranus</i>		S0618	1059646	(Spence Bate, 1857)		2		3		10		1	6			1
<i>Centraloecetes striatus</i>		S0619	1059649	(Myers & McGrath, 1979)		1	1	1			4		2			
<i>Pariambus typicus</i>		S0651	101857	(Krøyer, 1845)						2		1				
<i>Gnathia oxyuraea</i>		S0796	118995	(Lilljeborg, 1855)												
<i>Astacilla dilatata</i>		S0951	295579	G. O. Sars, 1883												
<i>Tanaopsis graciloides</i>		S1142	136458	(Lilljeborg, 1864)												
<i>Eudorelopsis deformis</i>		S1210	110536	(Krøyer, 1846)		1										
<i>Pseudocuma (Pseudocuma) simile</i>		S1237	110628	G.O. Sars, 1900												
<i>Diastylis bradyi</i>		S1248	110472	Norman, 1879	1	1		2			1					
<i>Diastylis laevis</i>		S1251	110481	Norman, 1869												
<i>Diastylis rugosa</i>		S1254	110488	Sars, 1865				3								
<i>Processa nouveli holthuisi</i>		S1367	108344	Al-Adhub & Williamson, 1975												
<i>Philocheras trispinosus</i>		S1390	107562	(Hailstone <i>in</i> Hailstone & Westwood, 1835)												
<i>Pagurus cuanensis</i>		S1460	107235	Bell, 1845												
<i>Galathea intermedia</i>		S1472	107150	Lilljeborg, 1851												
<i>Ebalia tuberosa</i>		S1508	107301	(Pennant, 1777)												
<i>Pinnotheres pisum</i>		S1638	107473	(Linnaeus, 1767)												
<b>Mollusca</b>																
<i>Chaetoderma nitidulum</i>		W0009	139106	Lovén, 1844												
<i>Ceratia proxima</i>		W0408	140128	(Forbes & Hanley, 1850)												
<i>Aporrhais pespelecani</i>		W0430	138760	(Linnaeus, 1758)												
<i>Erato voluta</i>		W0465	139761	(Montagu, 1803)												
<i>Euspira nitida</i>		W0491	151894	(Donovan, 1803)								2				1
<i>Epitonium trevelyanum</i>		W0553	139736	(G. Johnston, 1841)		1										
<i>Eulima bilineata</i>		W0603	139800	Alder, 1848											1	
<i>Bela nebula</i>		W0801	139217	(Montagu, 1803)												
<i>Megastomia conoidea</i>		W0952	224401	(Brocchi, 1814)												
<i>Pyrgiscus crenatus</i>		W0985	836211	(T. Brown, 1827)				1				1				
<i>Acteon tornatilis</i>		W1006	138691	(Linnaeus, 1758)												
<i>Cylichna cylindracea</i>		W1028	139476	(Pennant, 1777)					1	3						
<i>Hermania scabra/indistincta</i>		W1045	867492/867493													
NUDIBRANCHIA		W1243	1762	Cuvier, 1817												
<i>Antalis entalis</i>		W1519	150534	(Linnaeus, 1758)		2										

Taxon	Qualifier	SDC	AlphiaID	Authority	MCW-C-ST79FA	MCW-D-ST64FA	MCW-D-ST72AFA	MCW-D-ST73FA	MCW-D-ST80FA	MCW-D-ST81FA	MCW-D-ST82FA	MCW-D-ST88AFA	MCW-D-ST89AFA	MCW-D-ST100AFA	MCW-D-ST101FA	MCW-D-ST103AFA
<i>Nucula nitidosa</i>		W1569	140589	Winckworth, 1930		2	4		1	1						1
<i>Glycymeris glycymeris</i>		W1688	140025	(Linnaeus, 1758)											1	
Anomiidae		W1805	214	Rafinesque, 1815												
<i>Myrtea spinifera</i>		W1827	140287	(Montagu, 1803)												
<i>Lucinoma borealis</i>		W1829	140283	(Linnaeus, 1767)						1						
<i>Thyasira flexuosa</i>		W1837	141662	(Montagu, 1803)												
<i>Kurtiella bidentata</i>		W1906	345281	(Montagu, 1803)		1										
<i>Goodallia triangularis</i>		W1929	138831	(Montagu, 1803)						1	7				5	
<i>Acanthocardia echinata</i>		W1943	138992	(Linnaeus, 1758)												
<i>Spisula elliptica</i>		W1975	140300	(T. Brown, 1827)							3			1		
<i>Phaxas pellucidus</i>		W2006	140737	(Pennant, 1777)					2	1						
<i>Arcopagia crassa</i>		W2015	141577	(Pennant, 1777)										1		
<i>Fabulina fabula</i>		W2019	146907	(Gmelin, 1791)		1	6		1	2						
<i>Asbjornsenia pygmaea</i>		W2023	879714	(Lovén, 1846)							4			1		
<i>Gari fervensis</i>		W2051	140870	(Gmelin, 1791)				2								
<i>Abra alba</i>		W2059	141433	(W. Wood, 1802)	1				1	1						
<i>Abra prismatica</i>		W2062	141436	(Montagu, 1808)		1	2	4	1	3	4		4			
<i>Arctica islandica</i>		W2072	138802	(Linnaeus, 1767)	1			1		1						
<i>Chamelea striatula</i>		W2097_A	141908	(da Costa, 1778)		2		1	1	2	1					
<i>Timoclea ovata</i>		W2104	141929	(Pennant, 1777)		5	7	4	2	4	1	4	1	1	2	
<i>Mysia undata</i>		W2139	140728	(Pennant, 1777)												
<i>Varicorbula gibba</i>		W2157	378492	(Olivi, 1792)												
<i>Hiatella arctica</i>		W2166	140103	(Linnaeus, 1767)												
<i>Thracia phaseolina</i>		W2231	152378	(Lamarck, 1818)						1						
<i>Cochlodesma praetenuae</i>		W2239	181373	(Pulteney, 1799)												
<i>Lyonsia norvegica</i>		W2247	140291	(Gmelin, 1791)												
<i>Pandora pinna</i>		W2252	140675	(Montagu, 1803)						1						
<b>Phoronida</b>																
<i>Phoronis</i>		ZA0003	128545	Wright, 1856		3	6	2	2			1				
<b>Echinodermata</b>																
<i>Astropecten irregularis</i>		ZB0026	123867	(Pennant, 1777)												
<i>Acrocnida brachiata</i>		ZB0151	236130	(Montagu, 1804)		1										
<i>Amphiura filiformis</i>		ZB0154	125080	(O.F. Müller, 1776)												
<i>Ophiura albida</i>		ZB0168	124913	Forbes, 1839												
<i>Echinocyamus pusillus</i>		ZB0212	124273	(O.F. Müller, 1776)		4	3	4			8	1	3	1	1	
<i>Echinocardium cordatum</i>		ZB0223	124392	(Pennant, 1777)												

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-C-ST79FA	MCW-D-ST64FA	MCW-D-ST72AFA	MCW-D-ST73FA	MCW-D-ST80FA	MCW-D-ST81FA	MCW-D-ST82FA	MCW-D-ST88AFA	MCW-D-ST89AFA	MCW-D-ST100AFA	MCW-D-ST101FA	MCW-D-ST103AFA
<i>Echinocardium flavescens</i>		ZB0224	124394	(O.F. Müller, 1776)												
<i>Leptosynapta bergensis</i>		ZB0292	124462	(Östergren, 1905)												
<i>Oestergrenia digitata</i>		ZB0300	152547	(Montagu, 1815)												
<b>Hemichordata</b>																
ENTEROPNEUSTA		ZC0012	1820	Gegenbaur, 1870		2										
<b>Taxa</b>					<b>9</b>	<b>34</b>	<b>25</b>	<b>31</b>	<b>21</b>	<b>34</b>	<b>17</b>	<b>14</b>	<b>13</b>	<b>33</b>	<b>24</b>	<b>7</b>
<b>Abundance</b>					<b>32</b>	<b>82</b>	<b>71</b>	<b>73</b>	<b>40</b>	<b>74</b>	<b>46</b>	<b>26</b>	<b>29</b>	<b>141</b>	<b>168</b>	<b>16</b>
Aoridae	Female	S0577	101368	Stebbing, 1899		1										
<i>Autonoe longipes</i>		S0583	102021	(Liljeborg, 1852)												
Aoridae		S0577	101368	Stebbing, 1899		1										
<b>Juveniles</b>																
HEXACORALLIA	Juvenile	D0627	1340	Haeckel, 1896				1			9	5	1	1		1
SIPUNCULA	Juvenile	N0001	1268	Stephen, 1965											1	
Aphroditidae	Juvenile	P0017	938	Malmgren, 1867							1					
Polynoidea	Juvenile	P0025	939	Kinberg, 1856										1	1	
<i>Sthenelais</i>	Juvenile	P0106	129595	Kinberg, 1856												
<i>Eumida</i>	Juvenile	P0163	129446	Malmgren, 1865												
<i>Syllis</i>	Juvenile	P0358	129680	Lamarck, 1818										3		
Nephtyidae	Juvenile	P0490	956	Grube, 1850							1					
Lumbrineridae	Juvenile	P0569	967	Schmarda, 1861												
Pectinariidae	Juvenile	P1100	980	Quatrefages, 1866												
Terebellidae	Juvenile	P1179	982	Johnston, 1846												
<i>Hippolyte</i>	Juvenile	S1346	106987	Leach, 1814												
Callianassidae	Juvenile	S1413	106800	Dana, 1852												
<i>Liocarcinus</i>	Juvenile	S1577	106925	Stimpson, 1871												
Philinidae	Juvenile	W1035	161	Gray, 1850 (1815)												
BIVALVIA	Juvenile	W1560	105	Linnaeus, 1758												
<i>Nucula</i>	Juvenile	W1565	138262	Lamarck, 1799	1											
<i>Mytilus</i>	Juvenile	W1693	138228	Linnaeus, 1758												
Thyasiridae	Juvenile	W1833	219	Dall, 1900 (1895)				1								
Mactrinae	Juvenile	W1968	152831	Lamarck, 1809							2		1		7	
<i>Spisula</i>	Juvenile	W1973	138159	J. E. Gray, 1837						1	15	2	1	1	10	3
<i>Gari</i>	Juvenile	W2044	138388	Schumacher, 1817											1	
<i>Abra</i>	Juvenile	W2058	138474	Lamarck, 1818		1	1									
<i>Arctica islandica</i>	Juvenile	W2072	138802	(Linnaeus, 1767)					1			2				
Veneridae	Juvenile	W2086	243	Rafinesque, 1815							1	1			1	

Taxon	Qualifier	SDC	AlphialD	Authority	MCW-C-ST79FA	MCW-D-ST64FA	MCW-D-ST72AFA	MCW-D-ST73FA	MCW-D-ST80FA	MCW-D-ST81FA	MCW-D-ST82FA	MCW-D-ST88AFA	MCW-D-ST89AFA	MCW-D-ST100AFA	MCW-D-ST101FA	MCW-D-ST103AFA
<i>Dosinia</i>	Juvenile	W2126	138636	Scopoli, 1777		9	1	4	3	8	1	2	1			
THRACIOIDEA	Juvenile	W2225	382318	Stoliczka, 1870 (1839)		1	1						1		1	
OPHIUROIDEA	Juvenile	ZB0105	123084	Gray, 1840	1		2	2		1						
Amphiuridae	Juvenile	ZB0148	123206	Ljungman, 1867	4	1	5	2	4				1			
Ophiuridae	Juvenile	ZB0165	123200	Müller & Troschel, 1840												
SPATANGOIDA	Juvenile	ZB0213	123106	L. Agassiz, 1840	4	2	4	4	7	2		1				
<i>Echinocardium</i>	Juvenile	ZB0222	123426	Gray, 1825												
DENDROCHIROTIDA	Juvenile	ZB0249	123111	Grube, 1840										1		
ASCIDIACEA	Juvenile	ZD0002	1839	Blainville, 1824		24	29	37	13	76	16	43	3	3	16	3
Ammodytidae	Juvenile	ZG0441	125516	Bonaparte, 1835							5		5		3	
<b>Damaged</b>																
Polynoidae	Damaged	P0025	939	Kinberg, 1856												
Phyllodocidae	Damaged	P0114	931	Örsted, 1843												
<i>Eumida</i>	Damaged	P0163	129446	Malmgren, 1865											1	
<i>Orbinia</i>	Damaged	P0661	129420	Quatrefages, 1866							1					
Maldanidae	Damaged	P0938	923	Malmgren, 1867												
Serpulidae	Damaged	P1324	988	Rafinesque, 1815												
<i>Diastylis</i>	Damaged	S1247	110398	Say, 1818												
Ammodytidae	Damaged	ZG0441	125516	Bonaparte, 1835												
<b>Epifauna</b>																
PORIFERA		C0001	558	Grant, 1836		P										
ANTHOATHECATA		D0140	13551	Cornelius, 1992		P										
Tubulariidae		D0158	1603	Goldfuss, 1818												
FILIFERA		D0216	16352	Kühn, 1913												
<i>Eudendrium</i>		D0218	117093	Ehrenberg, 1834						P						
LEPTOTHECATA		D0295	13552	Cornelius, 1992			P		P			P				
<i>Lovenella clausa</i>		D0336	117736	(Lovén, 1836)	P	P		P		P	P					
Campanulariidae		D0491	1606	Johnston, 1836												
SESSILIA		R0015_A	106033	Lamarck, 1818		P										
<i>Verruca stroemia</i>		R0041	106257	(O.F. Müller, 1776)											P	
Crisiidae		Y0004	110806	Johnston, 1838								P			P	P
<i>Vesicularia spinosa</i>		Y0131	111669	(Linnaeus, 1758)												
<i>Amathia lendigera</i>		Y0135	111659	(Linnaeus, 1758)			P	P								
CHEILOSTOMATIDA		Y0149	110722	Busk, 1852						P						
<i>Aetea</i>		Y0153	110819	Lamouroux, 1812			P								P	
<i>Eucratea loricata</i>		Y0165	111361	(Linnaeus, 1758)									P			

Taxon	Qualifier	SDC	AlphiaID	Authority	MCW-C-ST79FA	MCW-D-ST64FA	MCW-D-ST72AFA	MCW-D-ST73FA	MCW-D-ST80FA	MCW-D-ST81FA	MCW-D-ST82FA	MCW-D-ST88AFA	MCW-D-ST89AFA	MCW-D-ST100AFA	MCW-D-ST101FA	MCW-D-ST103AFA
<i>Electra pilosa</i>		Y0178	111355	(Linnaeus, 1767)											P	P
<i>Flustra foliacea</i>		Y0187	111367	(Linnaeus, 1758)										P		
Candidae		Y0265	110734	d'Orbigny, 1851											P	
<i>Celleporella hyalina</i>		Y0337	111397	(Linnaeus, 1767)												
<b>Algae</b>																
<i>Polysiphonia stricta</i>	?	ZM0679	144672	(Mertens ex Dillwyn) Greville, 1824												
<i>Hypoglossum hypoglossoides</i>		ZM610	144756	(Stackhouse) Collins & Hervey, 1917												
<b>Meiofauna</b>																
NEMATODA		HD0001	799											26	10	
COPEPODA		R0142	1080	Milne Edwards, 1840												
<b>Fish</b>																
<i>Ammodytes marinus</i>		ZG0443	126751	Raitt, 1934											1	
<b>Taxa</b>					5	10	10	9	6	8	10	10	9	8	17	5
<b>Abundance</b>					10	38	43	51	28	88	51	57	14	36	53	7



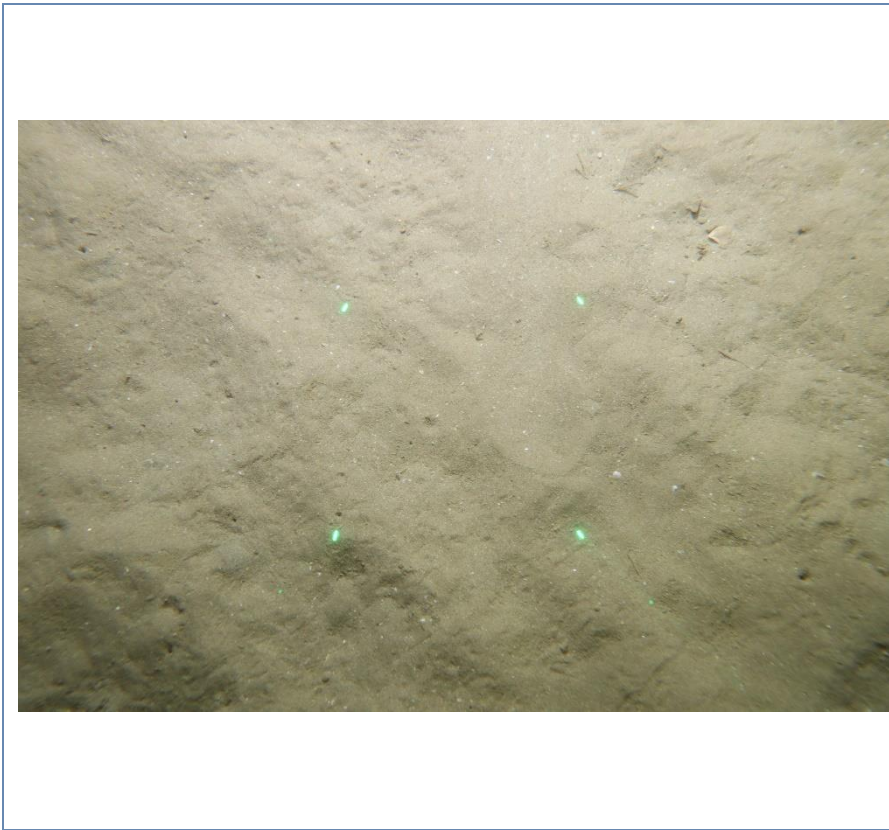
## E.2 Macrofaunal Biomass

Stations	Biomass (blotted wet weight) for Phyla							Total
	Cnidaria	Annelida	Arthropoda	Mollusca	Echinodermata	Others	Chordata	
MCW-A-ST01	0.0103	0.1581	0.0010	2.7579	0.2247	0.0116	-	3.1636
MCW-A-ST02	0.0259	0.2843	0.0356	0.1754	0.7049	0.0013	-	1.2274
MCW-A-ST03	-	0.1438	0.0207	0.8106	0.3289	0.0444	-	1.3484
MCW-A-ST07A	0.0052	0.4659	0.0852	0.4530	2.1870	0.0002	-	3.1965
MCW-A-ST08A	0.0890	0.0756	0.0100	0.0311	0.1558	0.0056	-	0.3671
MCW-A-ST44A	0.0101	0.3493	0.0032	0.1177	0.1373	0.0009	-	0.6185
MCW-B-ST09A	-	0.6854	0.0254	5.2549	6.1111	0.0700	-	12.1468
MCW-B-ST10	0.0001	0.0909	0.0090	12.9473	0.0939	0.0363	-	13.1775
MCW-B-ST17A	0.0007	0.1149	0.0062	0.9688	0.9838	0.0017	-	2.0761
MCW-B-ST18A	-	0.1410	0.0322	1.1342	0.9948	0.0022	-	2.3044
MCW-B-ST19A	-	0.1853	0.0034	0.0323	0.1973	0.0027	-	0.4210
MCW-B-ST29A	-	0.0807	0.0121	0.1641	0.2852	0.0015	-	0.5436
MCW-B-ST30A	0.0001	0.1729	0.0621	0.1558	0.9658	0.0022	-	1.3589
MCW-C-ST20	0.0001	0.0433	0.0013	0.0515	0.1585	0.0039	-	0.2586
MCW-C-ST31	-	0.2099	0.0221	0.0556	0.0611	0.1054	-	0.4541
MCW-C-ST32	0.0050	0.1031	0.0066	0.0577	0.0247	0.0026	-	0.1997
MCW-C-ST41	0.0361	0.3031	0.0401	0.4532	0.1747	0.0086	-	1.0158
MCW-C-ST42	0.0032	0.8606	0.0012	0.0842	0.0576	-	3.2798	4.2866
MCW-C-ST43	0.0001	0.1188	0.0008	0.2627	0.6030	0.0022	7.0250	8.0126
MCW-C-ST52	0.0206	0.0915	0.0048	0.0669	0.0320	0.0001	-	0.2159
MCW-C-ST53	0.0005	0.2429	0.0049	70.0003	0.0390	0.0038	-	70.2914
MCW-C-ST54	0.0001	0.0656	0.0066	0.2107	0.0089	0.1723	-	0.4642
MCW-C-ST62	0.0138	0.3361	0.0187	0.5877	0.0691	0.0460	-	1.0714
MCW-C-ST63	0.0054	0.0415	0.0177	0.1493	0.0021	0.0020	-	0.2180
MCW-C-ST70	0.0019	0.0699	0.0047	0.1122	28.0500	0.0282	-	28.2669
MCW-C-ST71	0.0010	0.1935	0.0042	0.2241	0.0033	0.0092	-	0.4353
MCW-C-ST79	0.0020	0.3453	0.0011	7.0700	0.0151	-	-	7.4335
MCW-D-ST64	-	0.0765	0.0071	0.6926	0.0901	0.0353	-	0.9016
MCW-D-ST72A	-	0.0512	0.0233	0.3974	0.0194	0.0086	-	0.4999
MCW-D-ST73	0.0179	0.1573	0.0129	0.3154	0.0283	0.0022	-	0.5340
MCW-D-ST80	-	0.0787	0.0084	0.1280	0.0166	0.0035	-	0.2352
MCW-D-ST81	0.0001	0.0493	0.0132	0.2111	0.0021	0.0060	-	0.2818
MCW-D-ST82	0.0001	0.0540	0.0019	0.5417	0.0927	0.0001	2.6059	3.2964
MCW-D-ST88A	0.0001	0.0748	0.0003	0.0480	0.0372	0.0013	-	0.1617
MCW-D-ST89A	0.0011	0.0486	0.0007	0.2747	0.0203	0.3644	3.1038	3.8136
MCW-D-ST100A	0.0001	0.7304	0.0008	0.1788	0.0148	0.0012	-	0.9261
MCW-D-ST101	0.0001	0.7478	0.0001	0.0822	0.0113	0.0025	6.4500	7.2940
MCW-D-ST103A	0.0001	0.0882	0.0001	0.0194	-	-	-	0.1078

# Appendix F

## Seafloor Photographs

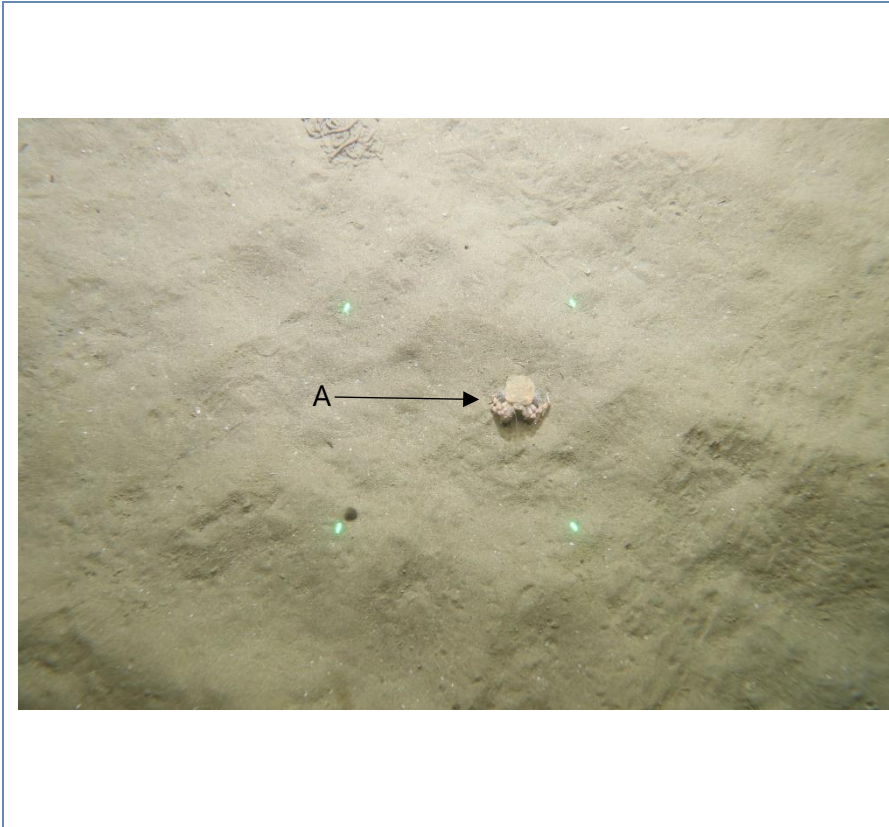
Station MCW-A-ST01



**Photograph:**  
MCW-A-ST01\_02

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-A-ST01\_08

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)  
Faunal casts

Station MCW-A-ST02



**Photograph:**  
MCW-A-ST02\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Thornback ray (*Raja clavata*)



**Photograph:**  
MCW-A-ST02\_11

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)  
Faunal casts



Station MCW-A-ST03



**Photograph:**  
MCW-A-ST03\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Dragonet (*Callionymus* sp.)  
Faunal casts



**Photograph:**  
MCW-A-ST03\_12

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
Faunal casts and tubes



Station MCW-A-ST05



**Photograph:**  
MCW-A-ST05\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crabs (Paguroidea)



**Photograph:**  
MCW-A-ST05\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Anemone (Actiniaria)  
Faunal casts and tubes

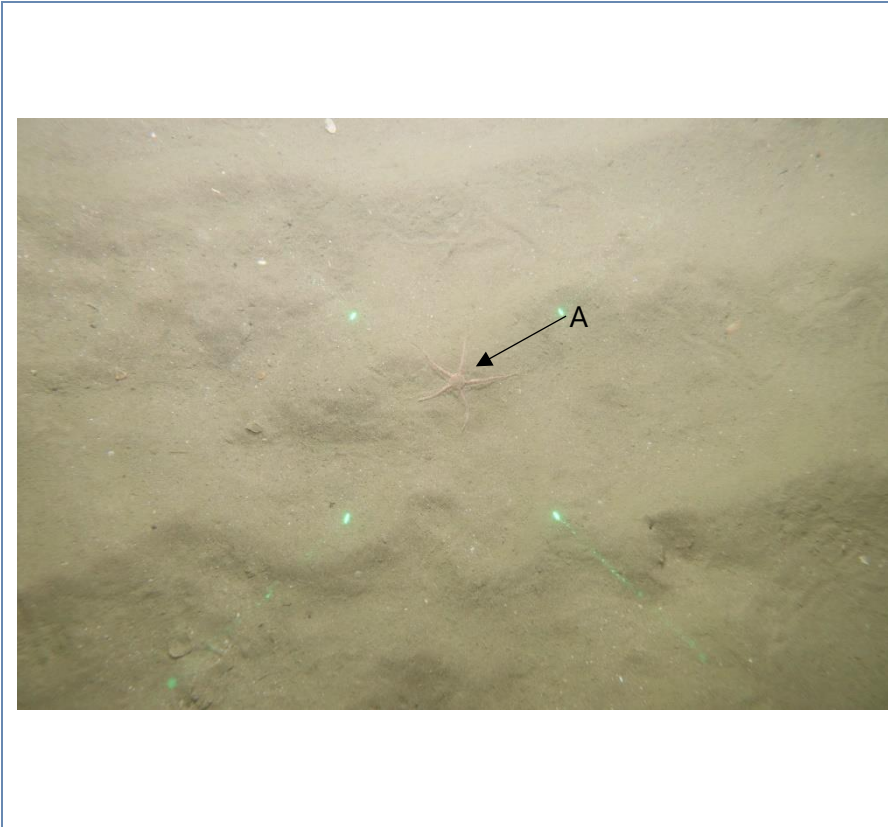
Station MCW-A-ST07A



**Photograph:**  
MCW-A-ST07A\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Ocean quahog shell (*Arctica islandica*)



**Photograph:**  
MCW-A-ST07A\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Brittlestar (Ophiuroidea)

Station MCW-A-ST08A



**Photograph:**  
MCW-A-ST08A\_08

**Sediment Type:**  
Coarse sediment including shell hash, sand, gravel, and cobbles with small scale ripples

**Fauna:**  
A: Barnacles (Sessilia)  
B: Serpulid worms (Serpulidae)



**Photograph:**  
MCW-A-ST08A\_14

**Sediment Type:**  
Slightly gravelly sand with small scale ripples, shell fragments and cobbles

**Fauna:**  
No fauna observed



Station MCW-A-ST12



**Photograph:**  
MCW-A-ST12\_03

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Flatfish (Soleidae)  
Faunal casts



**Photograph:**  
MCW-A-ST12\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)  
Faunal casts

Station MCW-A-ST14



**Photograph:**  
MCW-A-ST14\_03

**Sediment Type:**  
Sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)



**Photograph:**  
MCW-A-ST14\_12

**Sediment Type:**  
Sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



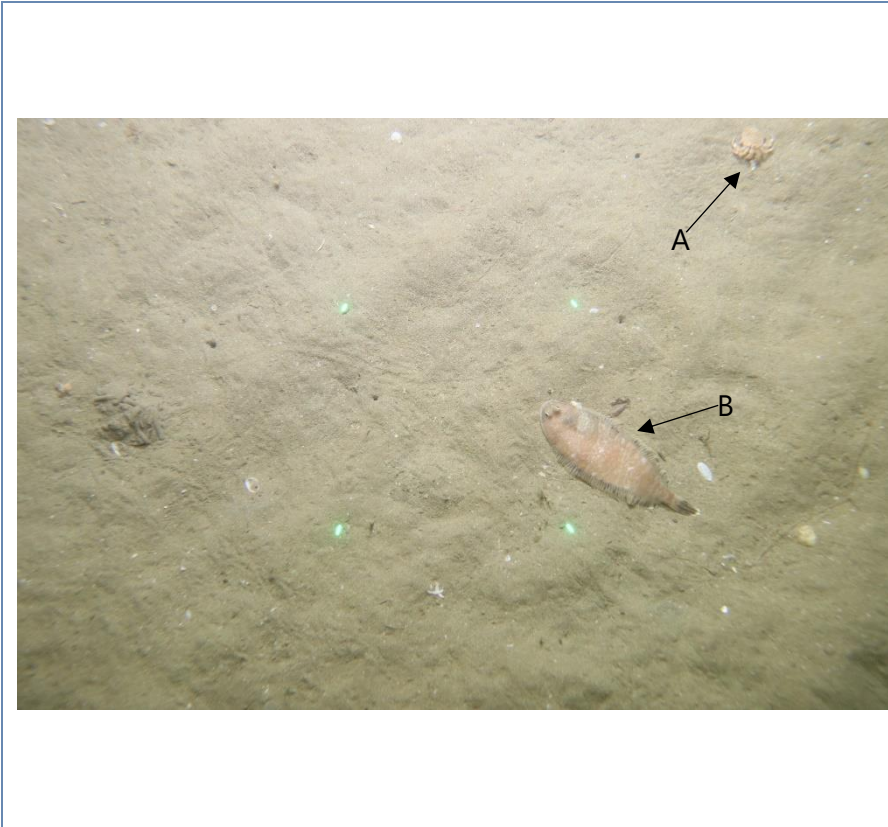
Station MCW-A-ST22



**Photograph:**  
MCW-A-ST22\_03

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Flatfish (Pleuronectiformes)  
Faunal casts and tubes



**Photograph:**  
MCW-A-ST22\_11

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)  
B: Solenette (*Buglossidium luteum*)  
Faunal casts

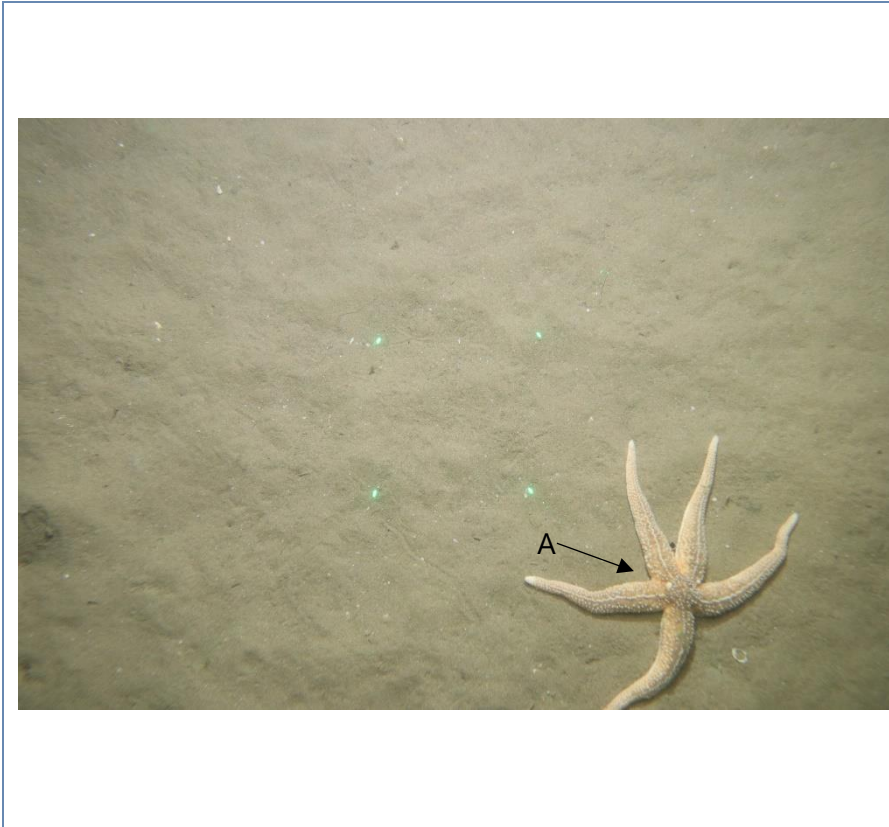
Station MCW-A-ST34



**Photograph:**  
MCW-A-ST34\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Squid (*Sepiola* sp.)




**Photograph:**  
MCW-A-ST34\_10

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Starfish (*Asterias rubens*)

Station MCW-A-ST36

	<p><b>Photograph:</b> MCW-A-ST36_03</p> <p><b>Sediment Type:</b> Slightly gravelly sand with small scale ripples and shell fragments</p> <p><b>Fauna:</b> No fauna observed</p>
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	<p><b>Photograph:</b> MCW-A-ST36_09</p> <p><b>Sediment Type:</b> Slightly gravelly sand with small scale ripples and shell fragments</p> <p><b>Fauna:</b> No fauna observed</p>
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Station MCW-A-ST44A



**Photograph:**  
MCW-A-ST44A\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Squid (Loliginigae)

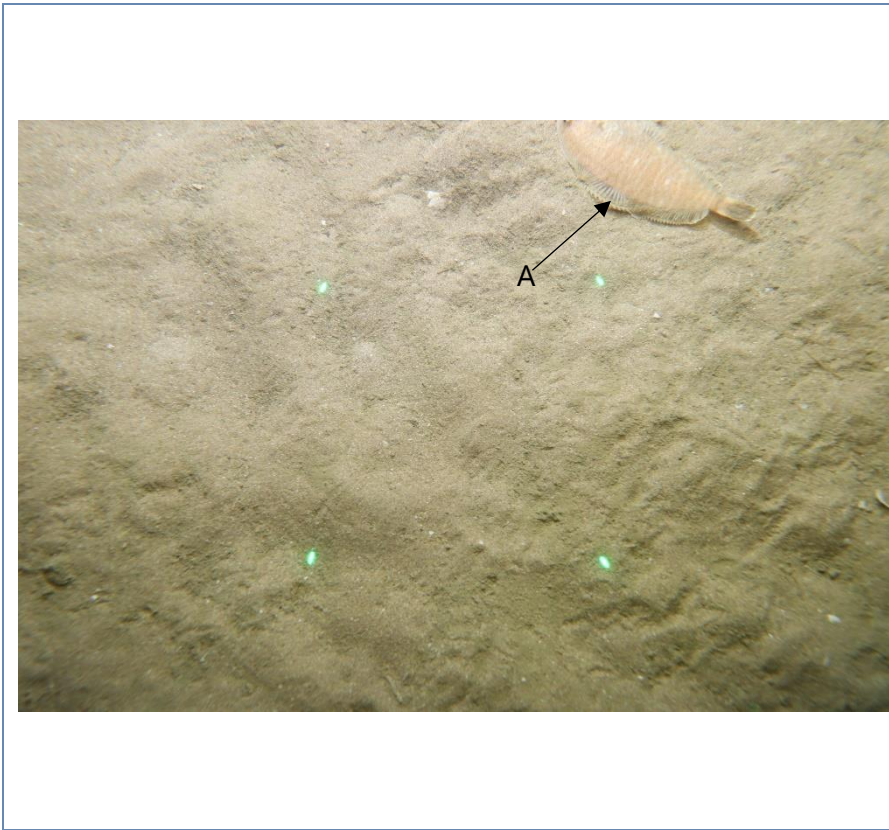


**Photograph:**  
MCW-A-ST44A\_14

**Sediment Type:**  
Gravelly sand with shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)

Station MCW-A-ST55



**Photograph:**  
MCW-A-ST55\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Flatfish (Soleidae)



**Photograph:**  
MCW-A-ST55\_10

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Flatfish (Soleidae)  
B: Hermit crab (Paguroidea)



Station MCW-B-ST09A



**Photograph:**  
MCW-B-ST09A\_04

**Sediment Type:**  
Slightly gravelly muddy sand with small scale ripples and shell fragments

- Fauna:**  
 A: Shrimp (Caridea)  
 B: Fish (Osteichthyes)  
 C: Sandeels (Ammodytidae)

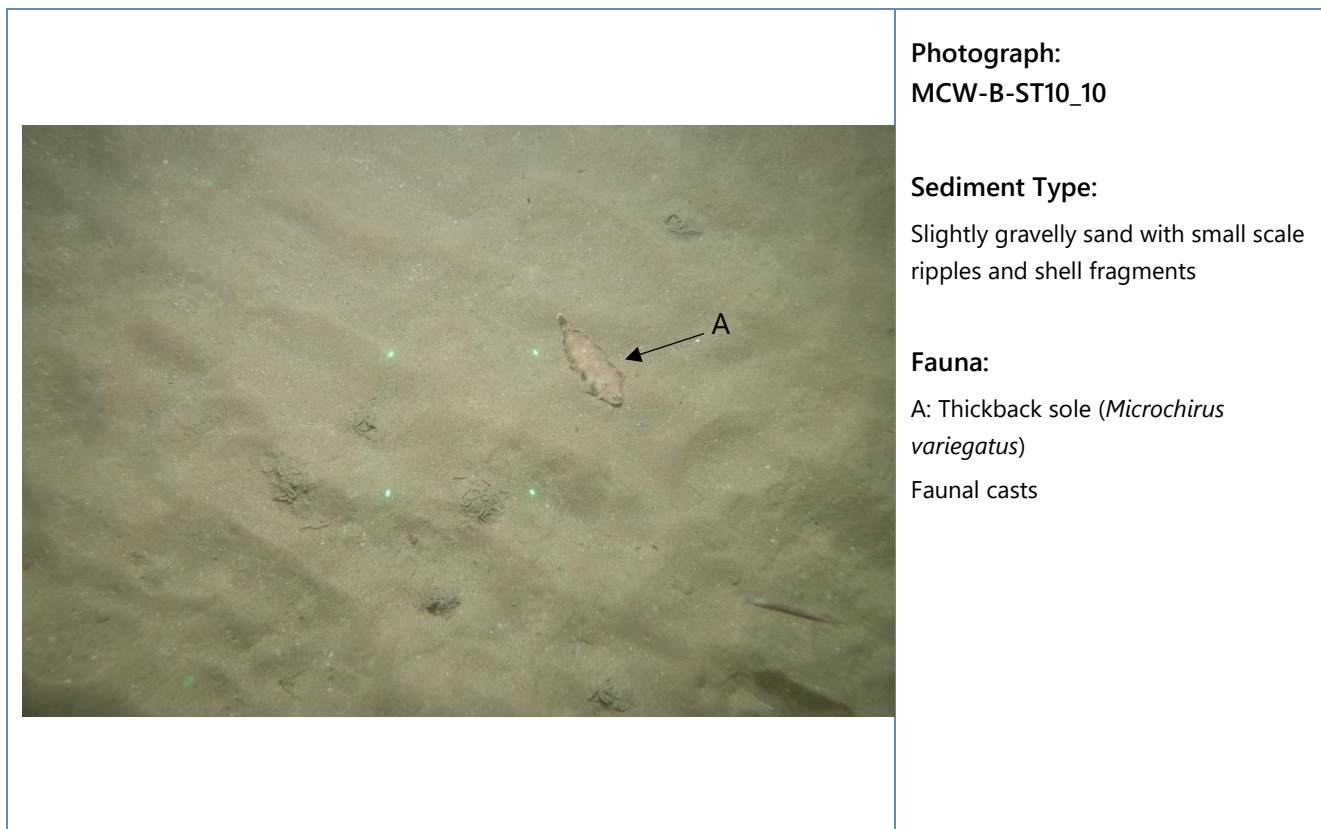
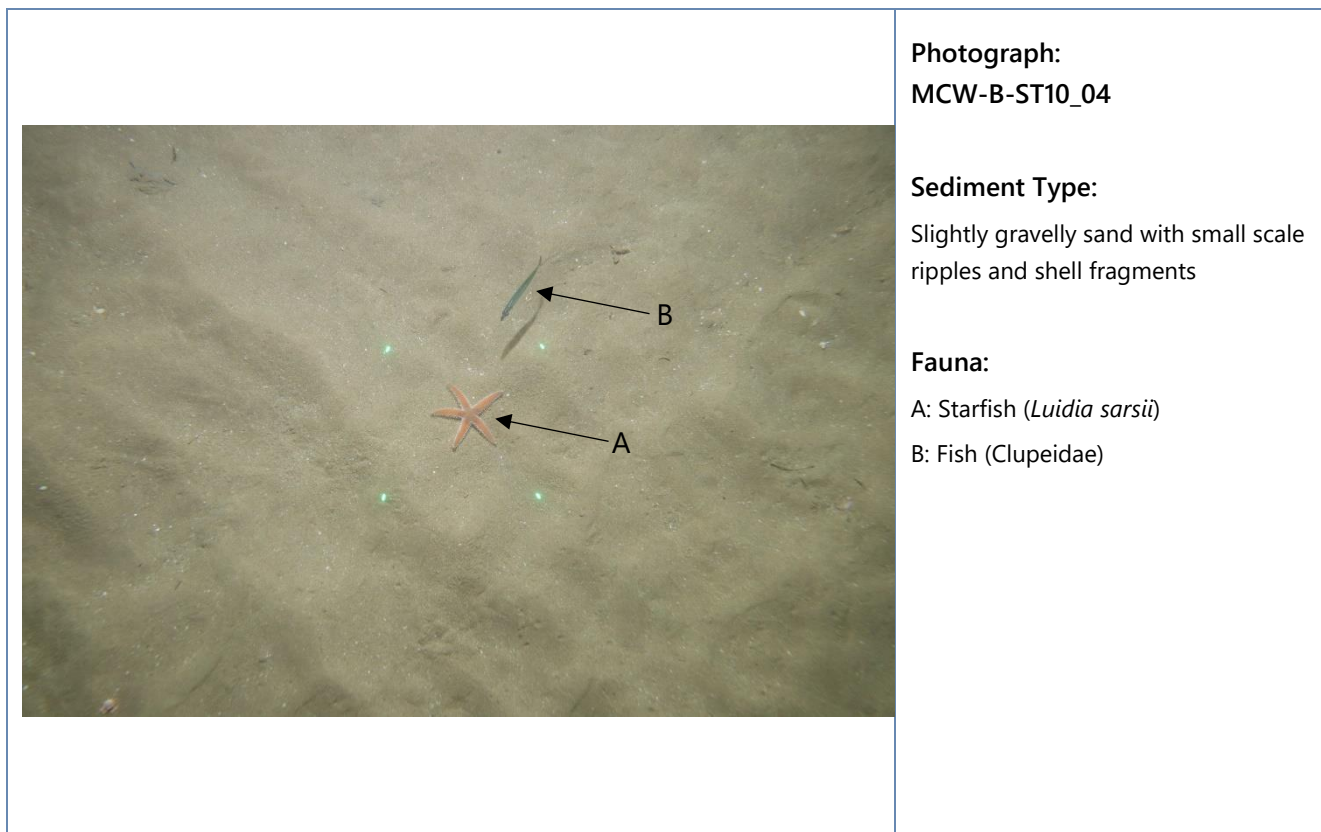


**Photograph:**  
MCW-B-ST09A\_13

**Sediment Type:**  
Slightly gravelly muddy sand with small scale ripples and shell fragments

- Fauna:**  
 A: Fish (Osteichthyes)

## Station MCW-B-ST10



Station MCW-B-ST17A



**Photograph:**  
MCW-B-ST17A\_04

**Sediment Type:**  
Sand with small scale ripples and shell fragments

**Fauna:**  
A: Gurnard (Triglidae)  
B: Fish (Osteichthyes)



**Photograph:**  
MCW-B-ST17A\_09

**Sediment Type:**  
Sand with small scale ripples and shell fragments

**Fauna:**  
A: Mackerel (*Scomber scombrus*)  
B: Plaice (*Pleuronectes platessa*)



**Station MCW-B-ST18A**



**Photograph:**  
MCW-B-ST18A\_08

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Fish (Osteichthyes)



**Photograph:**  
MCW-B-ST18A\_12

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Burrowing anemone (Ceriantharia)  
B: Fish (Osteichthyes)  
Faunal casts

**Station MCW-B-ST19A**



**Photograph:**  
MCW-B-ST19A\_03

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)



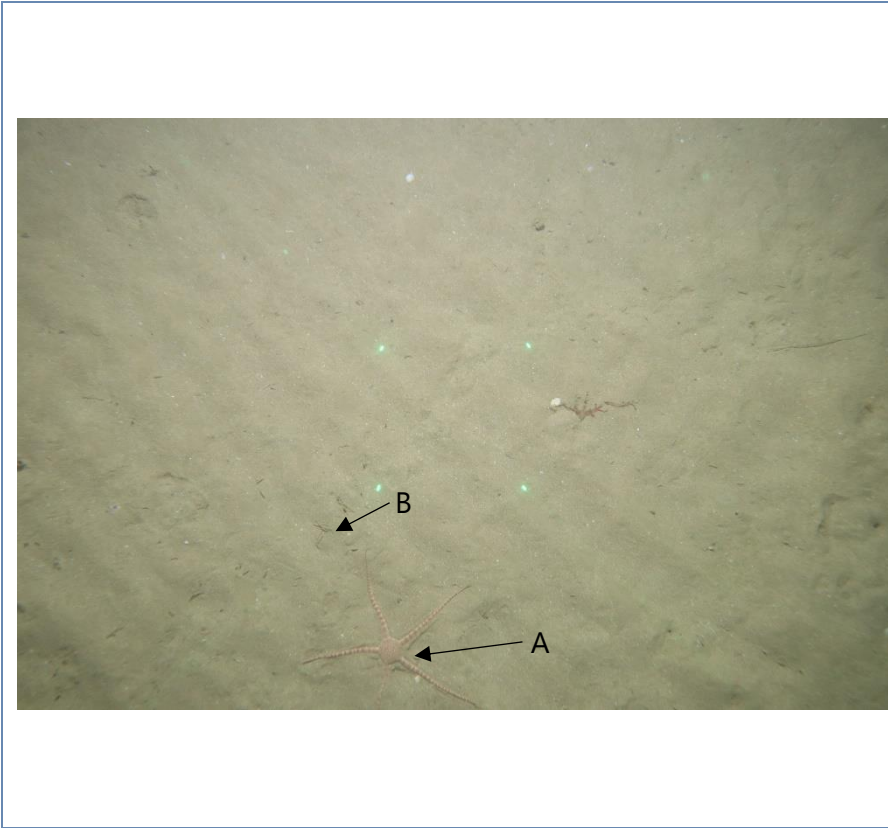
**Photograph:**  
MCW-B-ST19A\_10

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Flatfish (Pleuronectiformes)



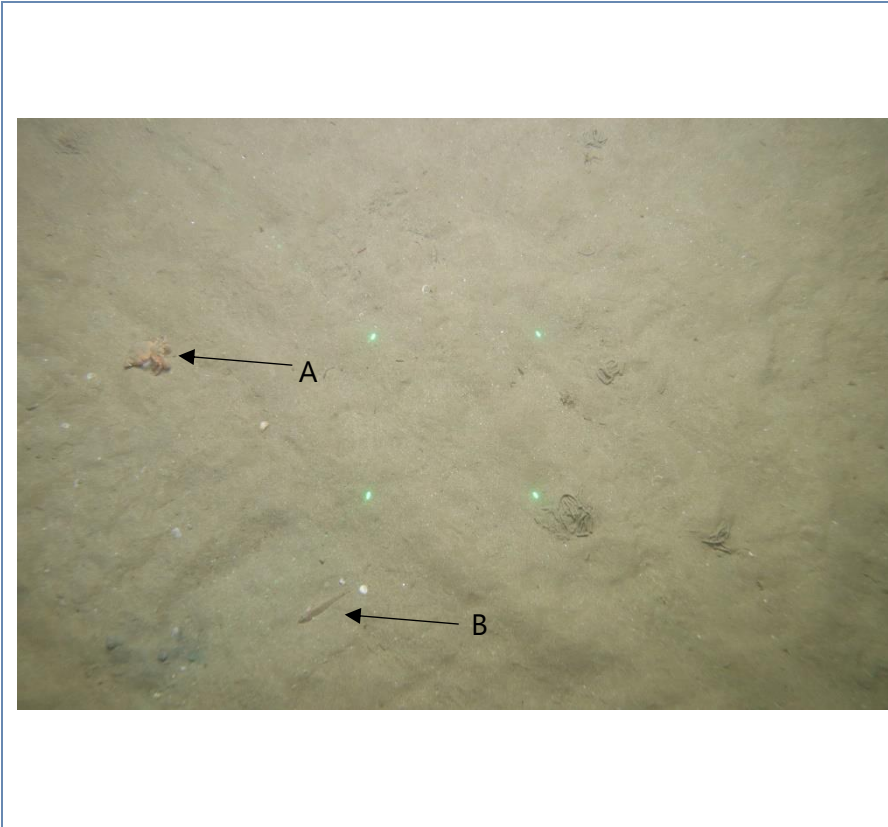
Station MCW-B-ST28



**Photograph:**  
MCW-B-ST28\_03

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Brittlestar (Ophiuroidea)  
B: Worm (Polychaeta)



**Photograph:**  
MCW-B-ST28\_11

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)  
B: Fish (Osteichthyes)  
Faunal casts

Station MCW-B-ST29A



**Photograph:**  
MCW-B-ST29A\_19

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Starfish (*Luidia sarsii*)  
Faunal casts



**Photograph:**  
MCW-B-ST29A\_21

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Mackerel (*Scomber scombrus*)  
B: Fish (*Osteichthyes*)  
Faunal casts

**Station MCW-B-ST30A**



**Photograph:**  
MCW-B-ST30A\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Fish (Osteichthyes)



**Photograph:**  
MCW-B-ST30A\_14

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-B-ST38A



**Photograph:**  
MCW-B-ST38A\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crabs (Paguroidea)



**Photograph:**  
MCW-B-ST38A\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Dragonet (*Callionymidae*)



Station MCW-B-ST57



**Photograph:**  
MCW-B-ST57\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-B-ST57\_14

**Sediment Type:**  
Gravelly sand with shell fragments

**Fauna:**  
A: Faunal turf (Hydrozoa/Bryozoa)



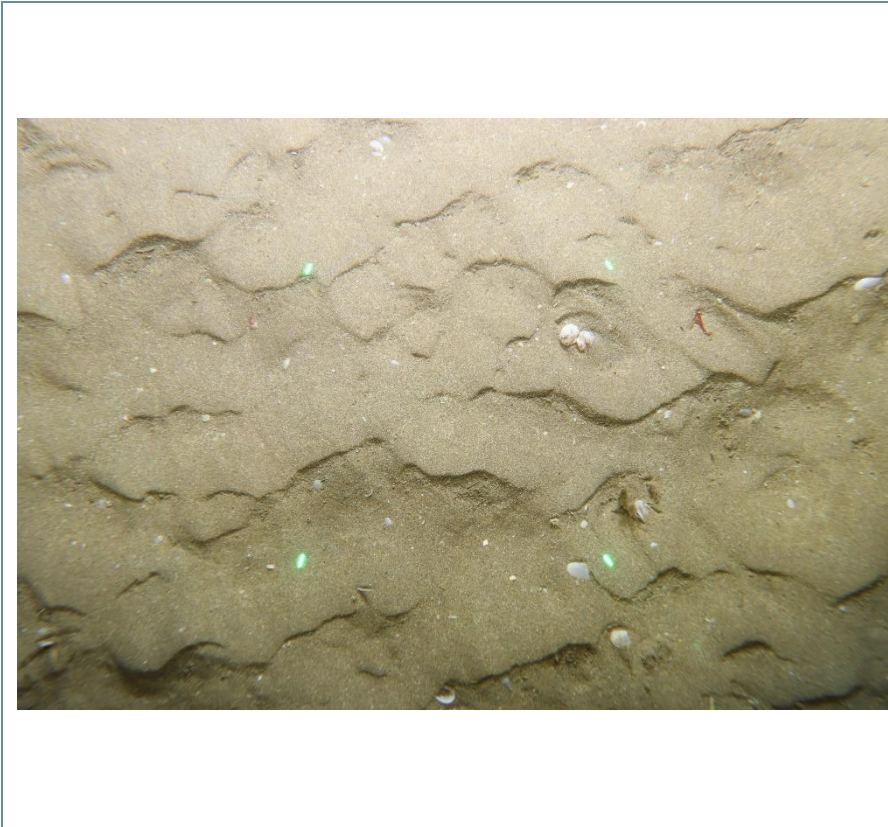
**Station MCW-B-ST59A**



**Photograph:**  
MCW-B-ST59A\_04

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)  
Faunal tube



**Photograph:**  
MCW-B-ST59A\_11

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-C-ST20



**Photograph:**  
MCW-C-ST20\_03

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

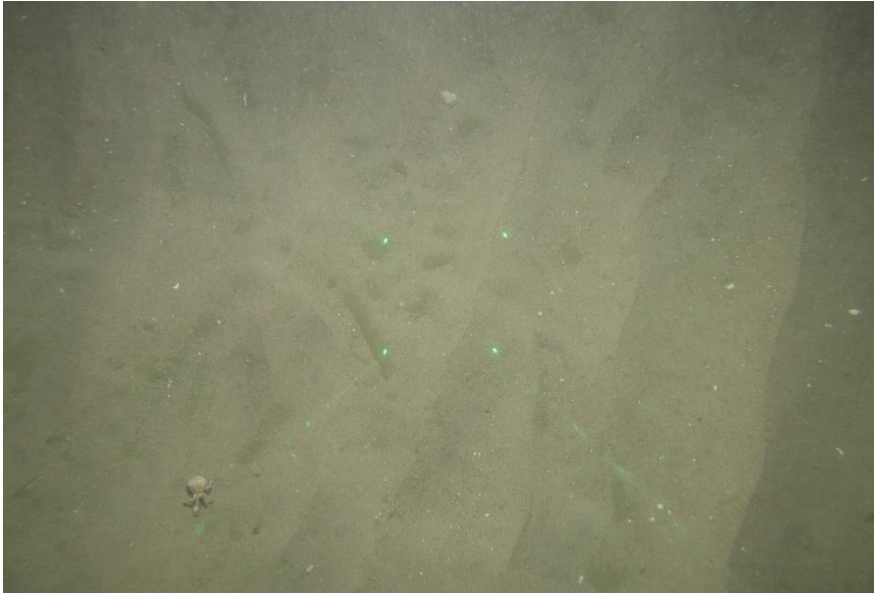



**Photograph:**  
MCW-C-ST20\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-C-ST31

	<p><b>Photograph:</b> MCW-C-ST31_02</p> <p><b>Sediment Type:</b> Slightly gravelly sand with small scale ripples and shell fragments</p> <p><b>Fauna:</b> A: Hermit crab (Paguroidea)</p>
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	<p><b>Photograph:</b> MCW-C-ST31_05</p> <p><b>Sediment Type:</b> Slightly gravelly sand with small scale ripples and shell fragments</p> <p><b>Fauna:</b> No fauna observed</p>
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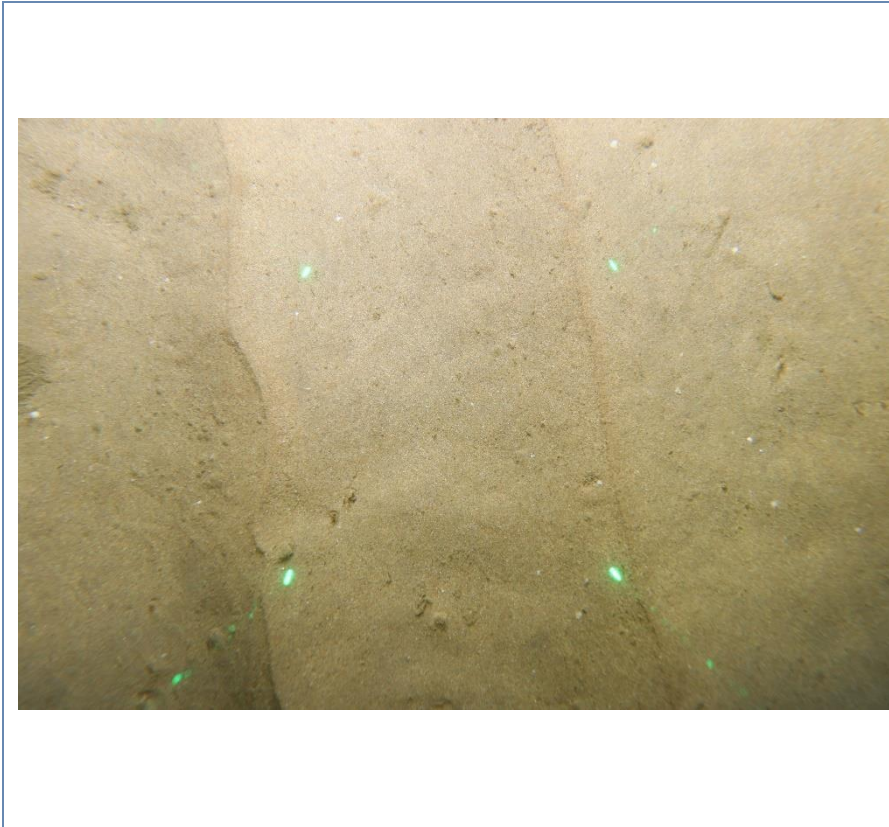
Station MCW-C-ST32



**Photograph:**  
MCW-C-ST32\_04

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Fish (Osteichthyes)



**Photograph:**  
MCW-C-ST32\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-C-ST41



**Photograph:**  
MCW-C-ST41\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Squid (*Loliginidae*)



**Photograph:**  
MCW-C-ST41\_19

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Squid (*Loliginidae*)



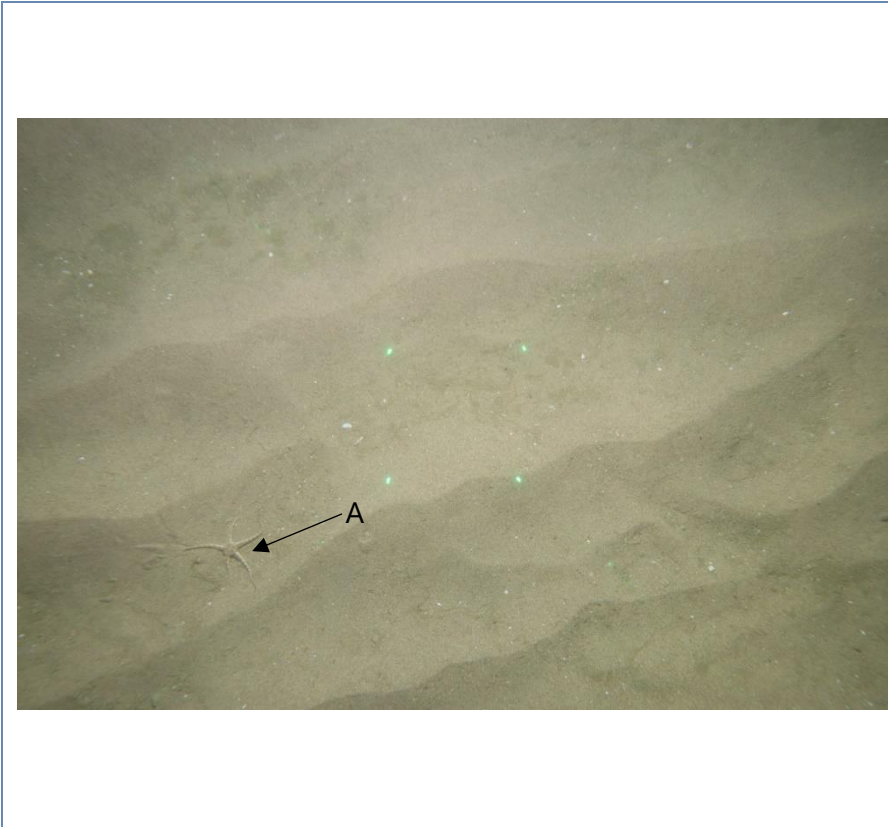
Station MCW-C-ST42



**Photograph:**  
MCW-C-ST42\_04

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-C-ST42\_10

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Brittlestar (Ophiuroidea)

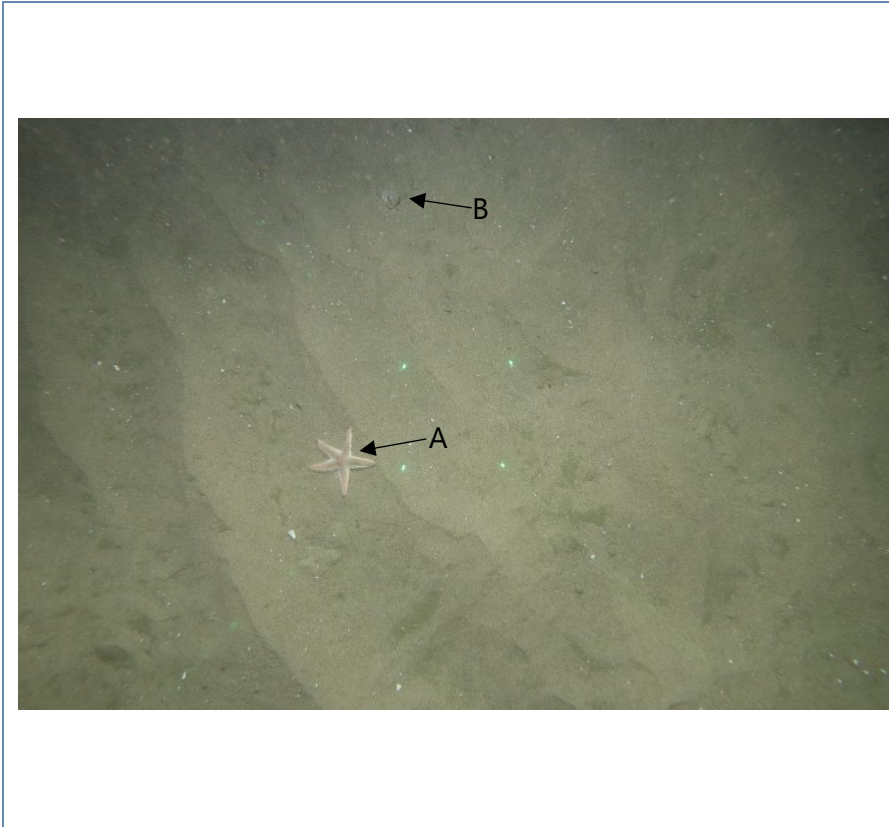
Station MCW-C-ST43



**Photograph:**  
MCW-C-ST43\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)

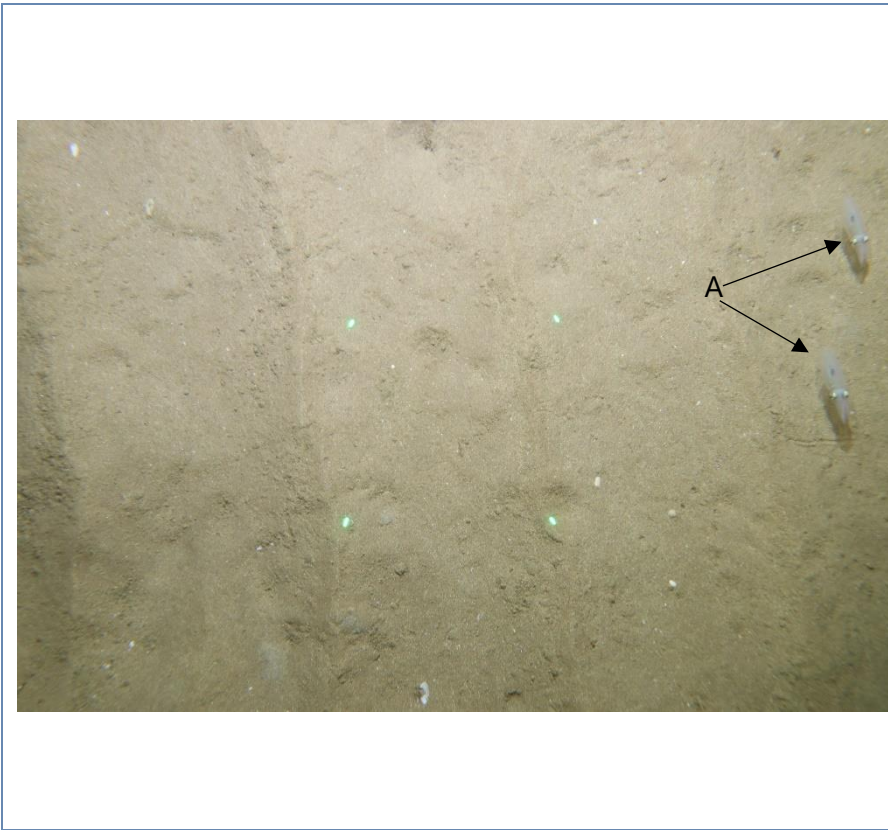


**Photograph:**  
MCW-C-ST43\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Starfish (*Astropecten irregularis*)  
B: Flatfish (Pleuronectiformes)

**Station MCW-C-ST51**



**Photograph:**  
MCW-C-ST51\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Squid (Loliginidae)



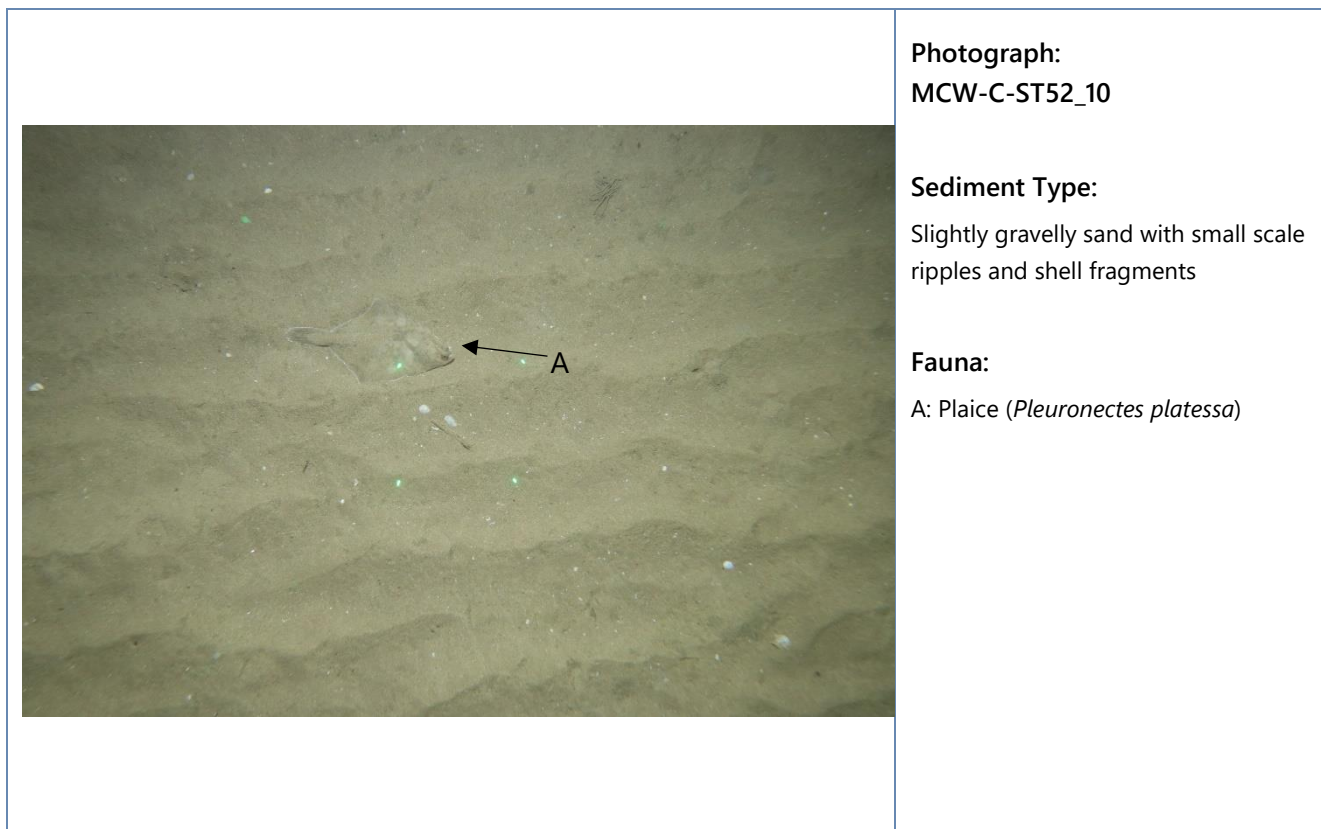
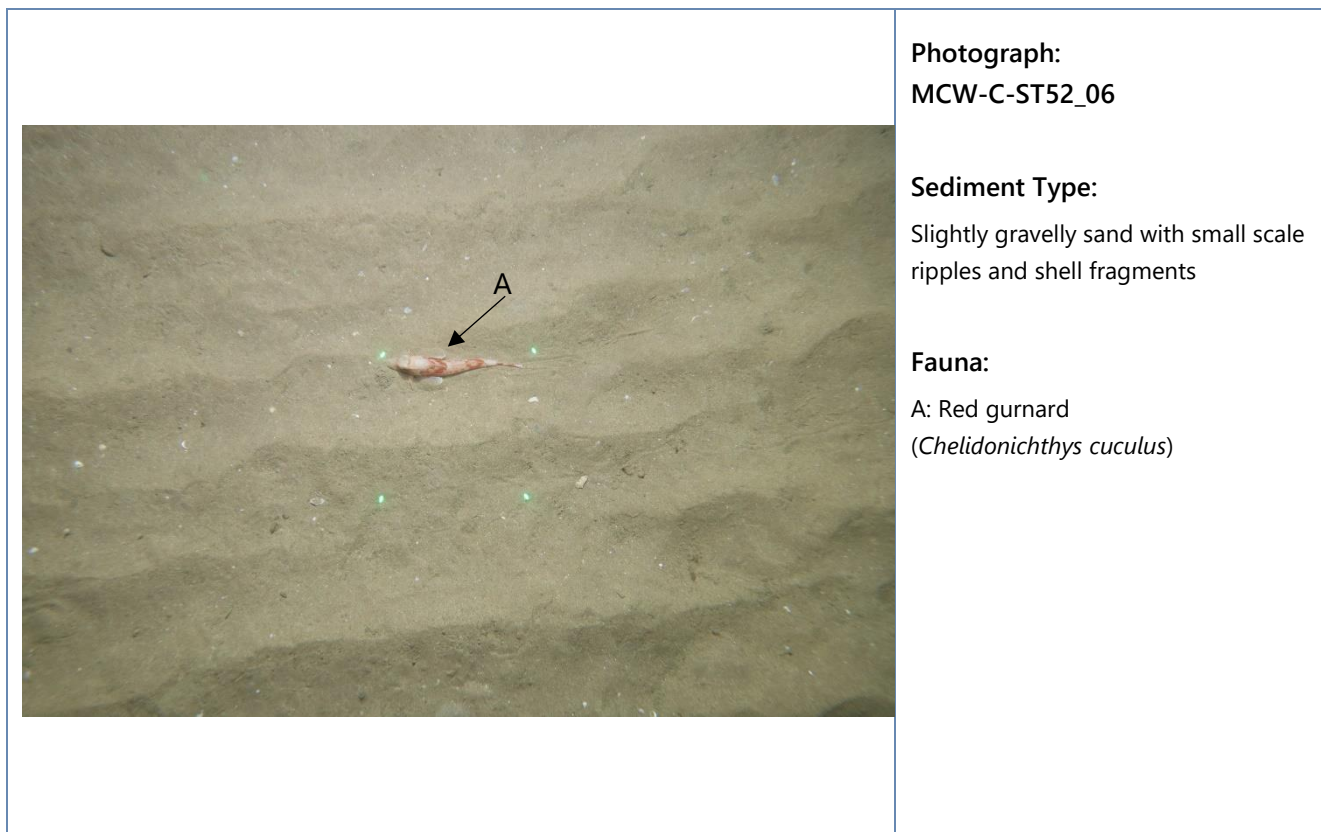
**Photograph:**  
MCW-C-ST51\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

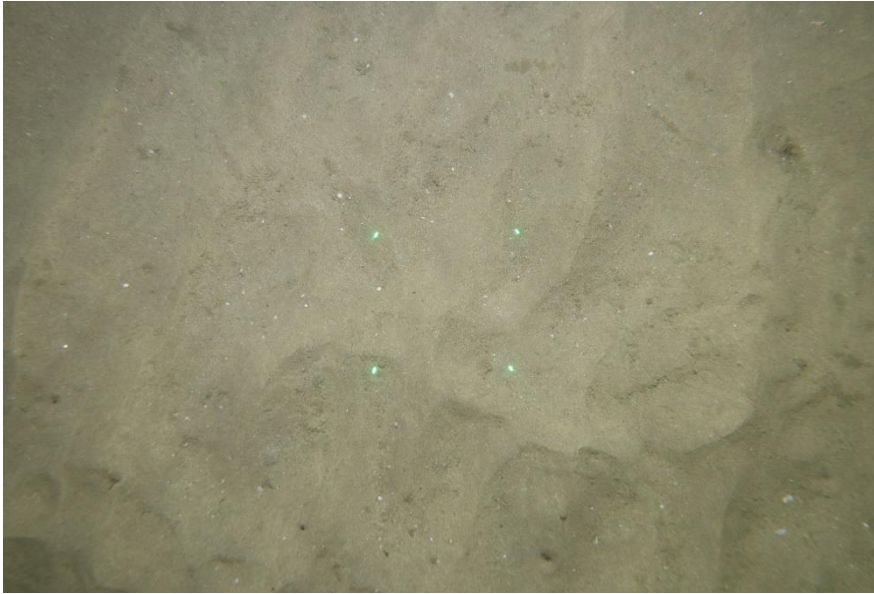
**Fauna:**  
A: Dragonet (Callionymidae)  
Faunal casts




## Station MCW-C-ST52



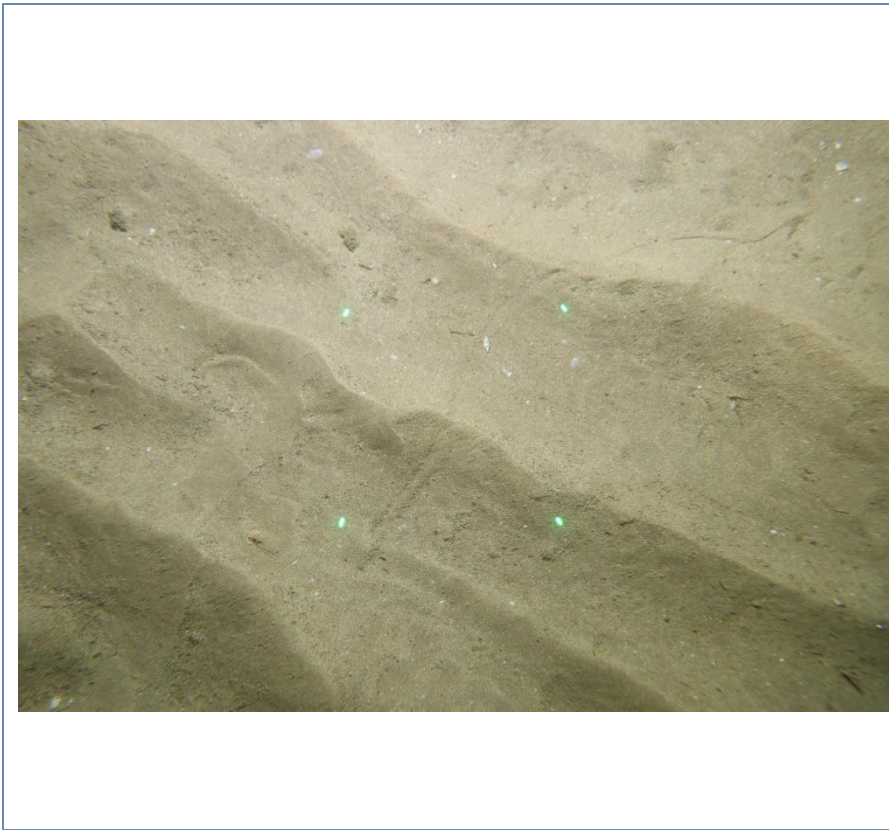
Station MCW-C-ST53

	<p><b>Photograph:</b> MCW-C-ST53_04</p> <p><b>Sediment Type:</b> Slightly gravelly sand with small scale ripples and shell fragments</p> <p><b>Fauna:</b> No fauna observed</p>
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	<p><b>Photograph:</b> MCW-C-ST53_13</p> <p><b>Sediment Type:</b> Slightly gravelly sand with small scale ripples and shell fragments</p> <p><b>Fauna:</b> No fauna observed</p>
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Station MCW-C-ST54



**Photograph:**  
MCW-C-ST54\_02

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-C-ST54\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-C-ST62



**Photograph:**  
MCW-C-ST62\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Dragonets (*Callionymidae*)



**Photograph:**  
MCW-C-ST62\_14

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-C-ST63



**Photograph:**  
MCW-C-ST63\_03

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Starfish (*Astropecten irregularis*)



**Photograph:**  
MCW-C-ST63\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



Station MCW-C-ST70



**Photograph:**  
MCW-C-ST70\_02

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-C-ST70\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

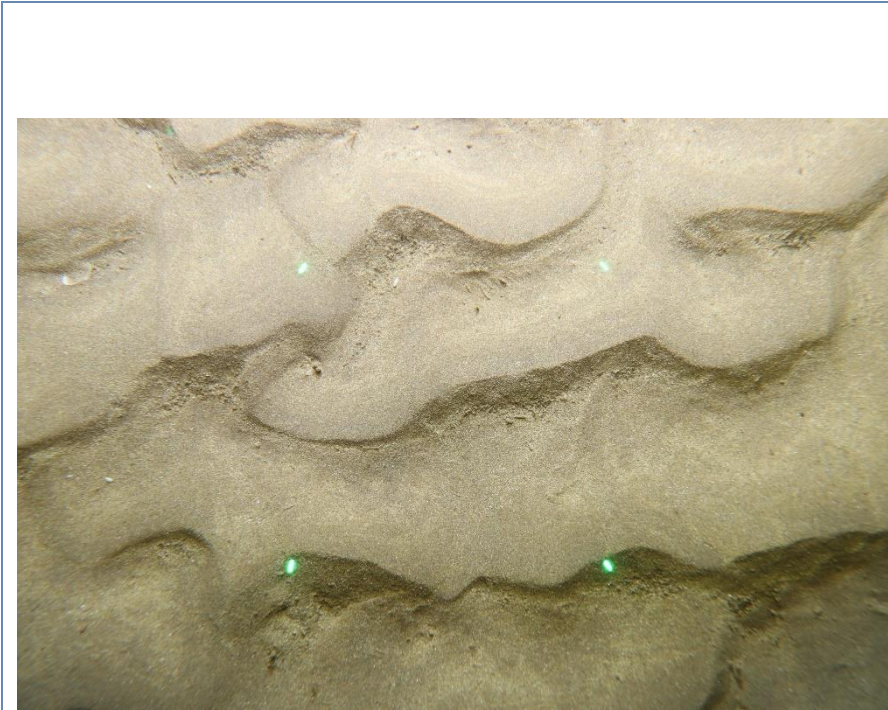
Station MCW-C-ST71



**Photograph:**  
MCW-C-ST71\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-C-ST71\_11

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



Station MCW-C-ST75



**Photograph:**  
MCW-C-ST75\_10

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (*Paguroidea*)

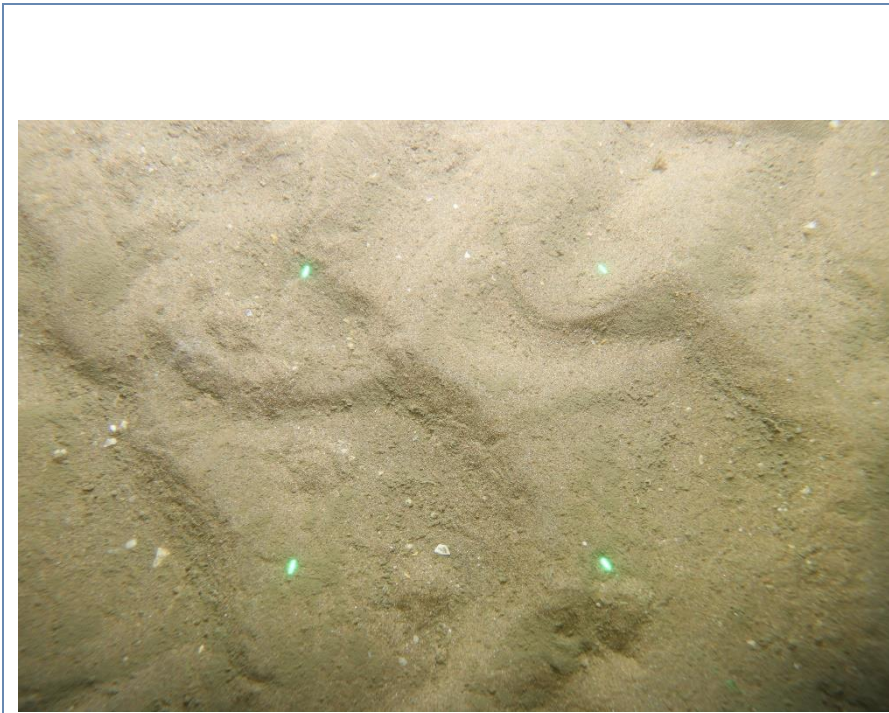


**Photograph:**  
MCW-C-ST75\_13

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Plaice (*Pleuronectes platessa*)

Station MCW-C-ST77



**Photograph:**  
MCW-C-ST77\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-C-ST77\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-C-ST79



**Photograph:**  
MCW-C-ST79\_02

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Crab (Brachyura)



**Photograph:**  
MCW-C-ST79\_13

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



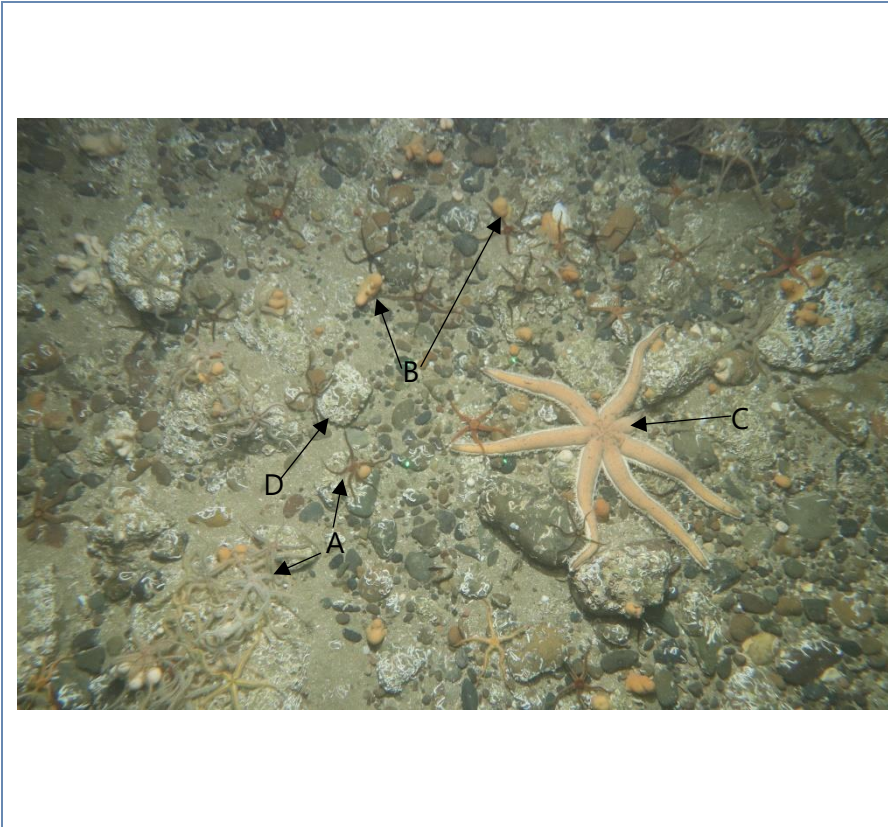
Station MCW-C-ST83



**Photograph:**  
MCW-C-ST83\_11

**Sediment Type:**  
Coarse sediment with cobbles and boulders, interspersed with sand

- Fauna:**
- A: Brittlestars (Ophiuroidea including *Ophiothrix fragilis*)
  - B: Soft coral (*Alcyonium digitatum*)
  - C: Serpulid worms (Serpulidae)



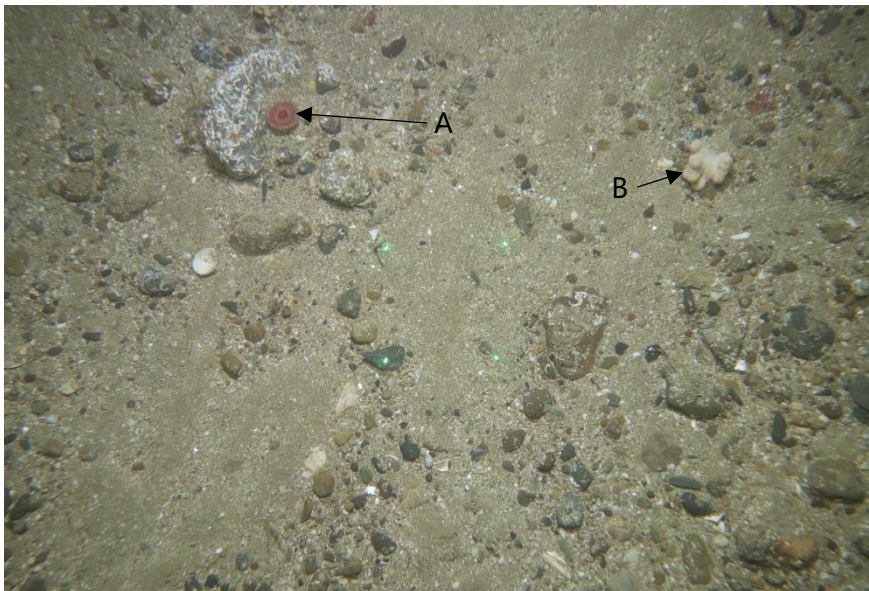
**Photograph:**  
MCW-C-ST83\_16

**Sediment Type:**  
Coarse sediment with cobbles and boulders, interspersed with sand

- Fauna:**
- A: Brittlestars (Ophiuroidea)
  - B: Soft coral (*Alcyonium digitatum*)
  - C: Seven-armed starfish (*Luidia ciliaris*)
  - D: Serpulid worms (Serpulidae)



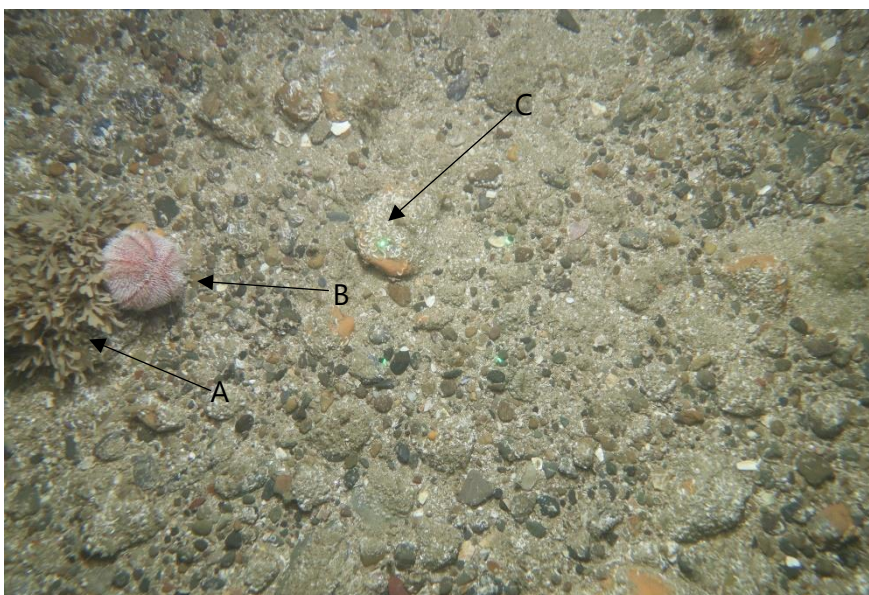
## Station MCW-C-ST91



**Photograph:**  
MCW-C-ST91\_05

**Sediment Type:**  
Coarse sediment with cobbles,  
interspersed with sand with small  
scale ripples and shell fragments

**Fauna:**  
A: Anemone (Actiniaria)  
B: Soft coral (*Alcyonium digitatum*)



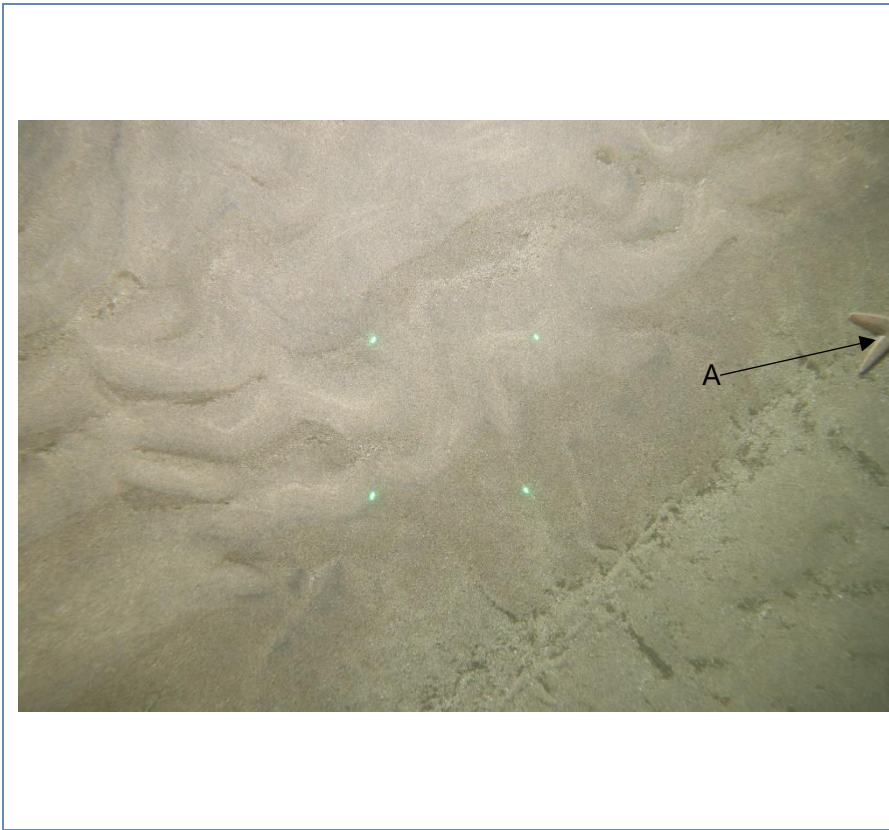
**Photograph:**  
MCW-C-ST91\_07

**Sediment Type:**  
Coarse sediment with cobbles,  
interspersed with sand with small  
scale ripples and shell fragments

**Fauna:**  
A: Bryozoan (*Flustra foliacea*)  
B: Sea urchin (*Echinus esculentus*)  
C: Serpulid worms (Serpulidae)



Station MCW-C-ST92



**Photograph:**  
MCW-C-ST92\_02

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Starfish (*Astropecten irregularis*)



**Photograph:**  
MCW-C-ST92\_08

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-D-ST64



**Photograph:**  
MCW-D-ST64\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-D-ST64\_12

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-D-ST72A



**Photograph:**  
MCW-D-ST72A\_04

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)



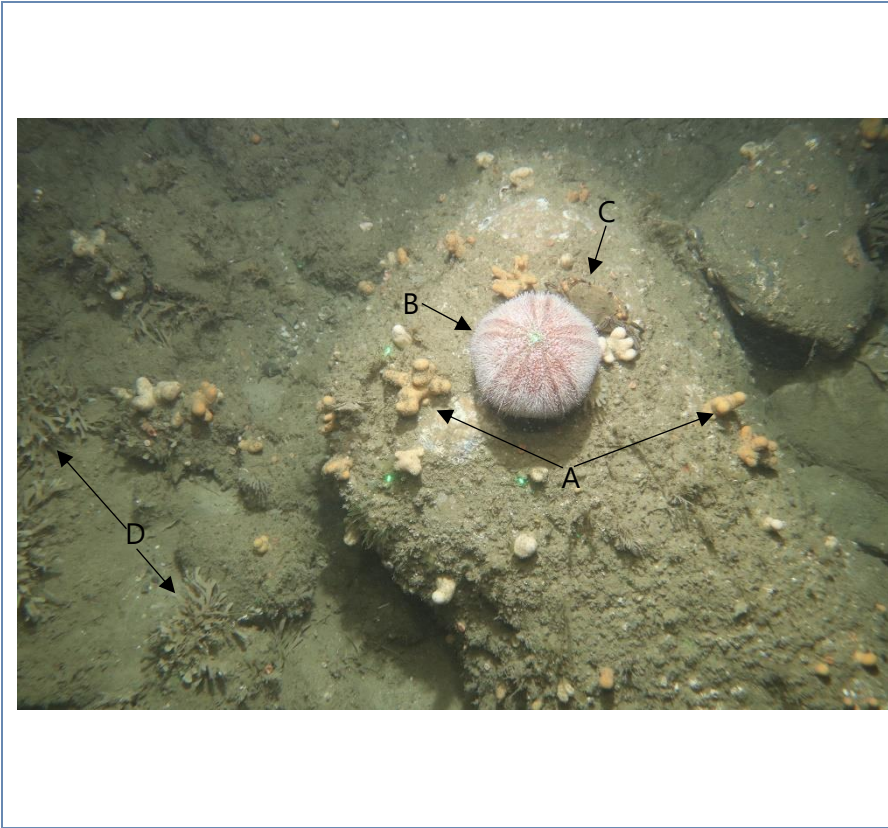
**Photograph:**  
MCW-D-ST72A\_12

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



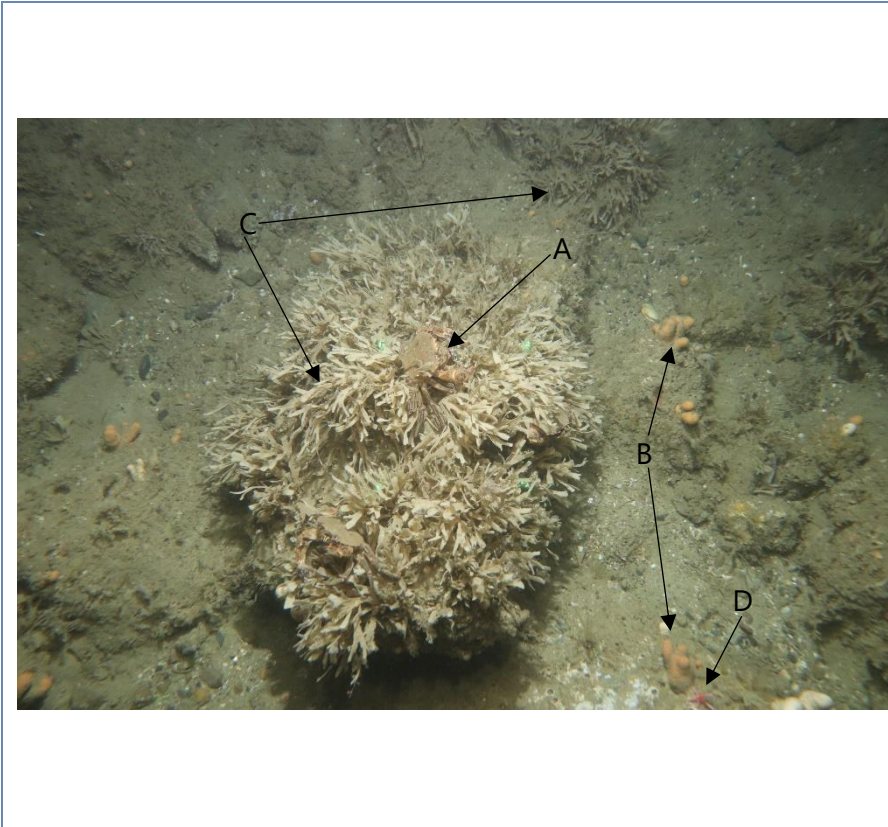
Station MCW-D-ST73



**Photograph:**  
MCW-D-ST73\_21

**Sediment Type:**  
Cobbles and boulders interspersed with slightly gravelly sand and shell fragments

- Fauna:**
- A: Soft coral (*Alcyonium digitatum*)
  - B: Sea urchin (*Echinus esculentus*)
  - C: Crab (*Necora puber*)
  - D: Bryozoan (*Flustra foliacea*)

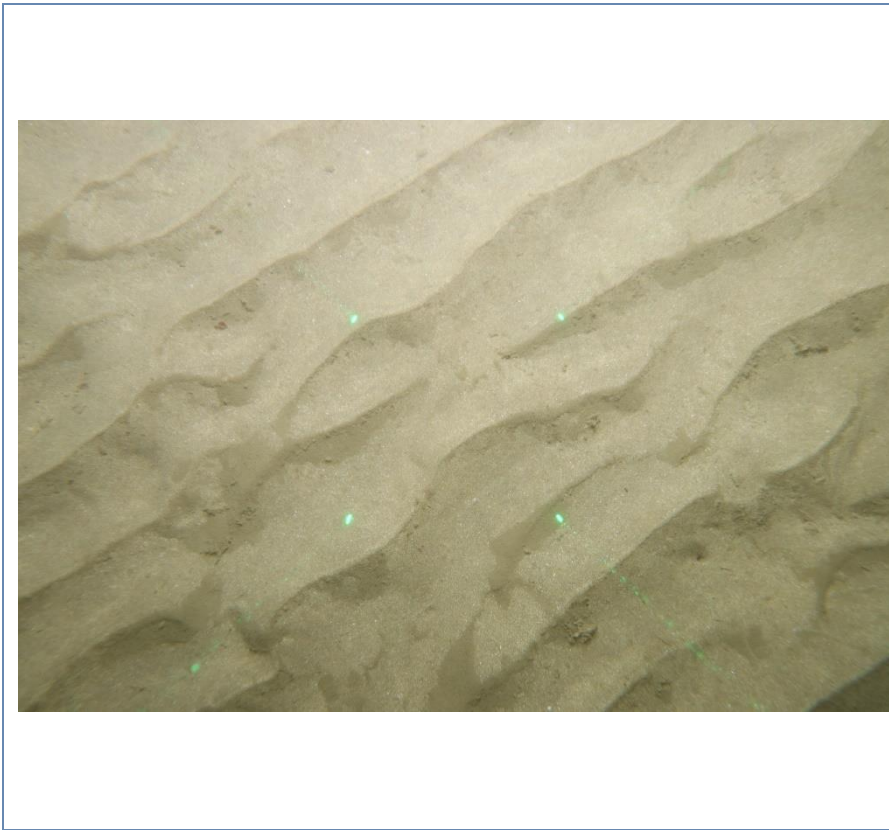


**Photograph:**  
MCW-D-ST73\_34

**Sediment Type:**  
Cobbles and boulders interspersed with slightly gravelly sand and shell fragments

- Fauna:**
- A: Crab (*Necora puber*)
  - B: Soft coral (*Alcyonium digitatum*)
  - C: Bryozoan (*Flustra foliacea*)
  - D: Starfish (*Henricia* sp.)

Station MCW-D-ST80



**Photograph:**  
MCW-D-ST80\_04

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



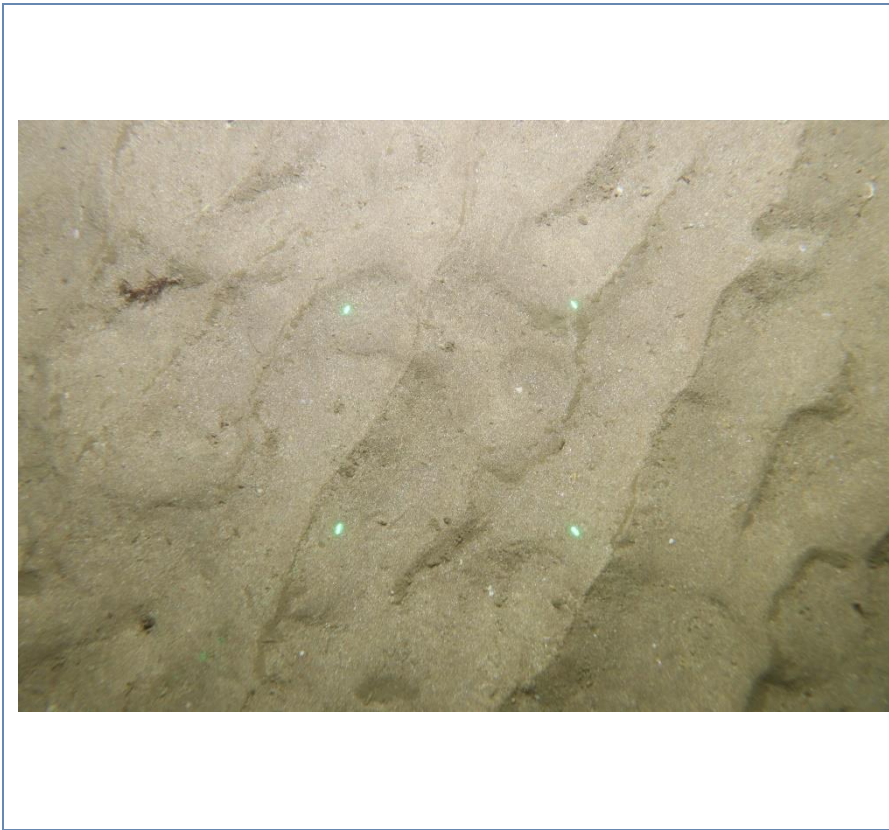
**Photograph:**  
MCW-D-ST80\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Brittlestar (Ophiuroidea)



Station MCW-D-ST81



**Photograph:**  
MCW-D-ST81\_04

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

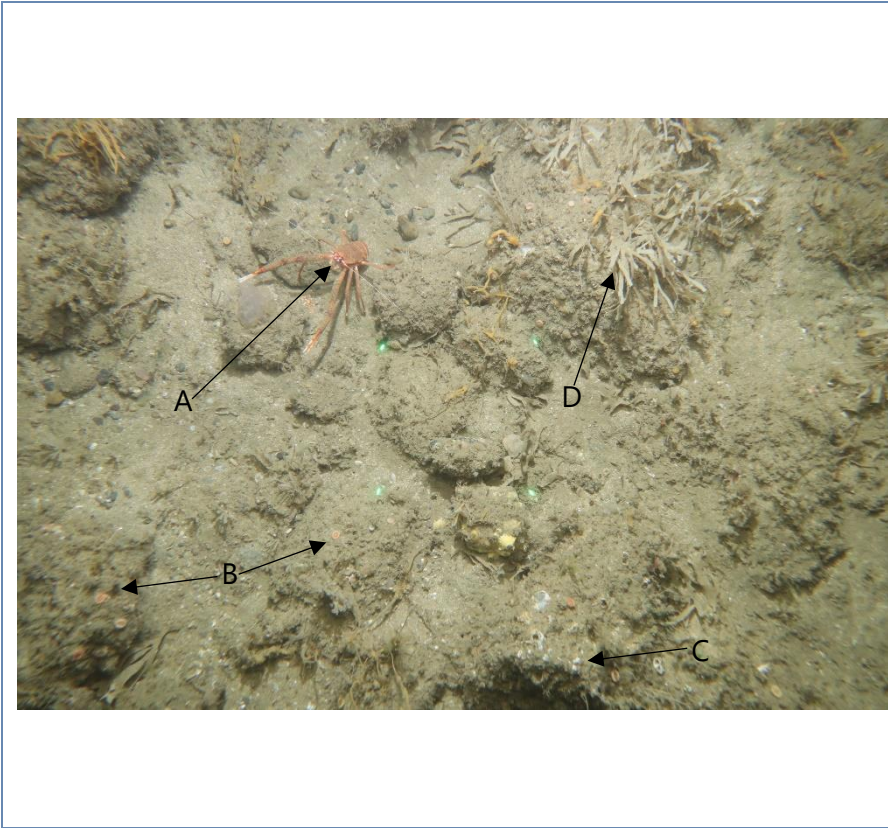


**Photograph:**  
MCW-D-ST81\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

Station MCW-D-ST82



**Photograph:**  
MCW-D-ST82\_02

**Sediment Type:**  
Cobbles and boulders interspersed with slightly gravelly sand and shell fragments

- Fauna:**
- A: Squat lobster (*Munida* sp.)
  - B: Cup corals (Caryophylliidae)
  - C: Barnacles (Sessilia)
  - D: Faunal turf (Hydrozoa/Bryozoa)



**Photograph:**  
MCW-D-ST82\_27

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



Station MCW-D-ST86A



Photograph:  
MCW-D-ST86A\_09

Sediment Type:  
Sand with small scale ripples and shell fragments

Fauna:  
A: Mackerel (*Scomber scombrus*)

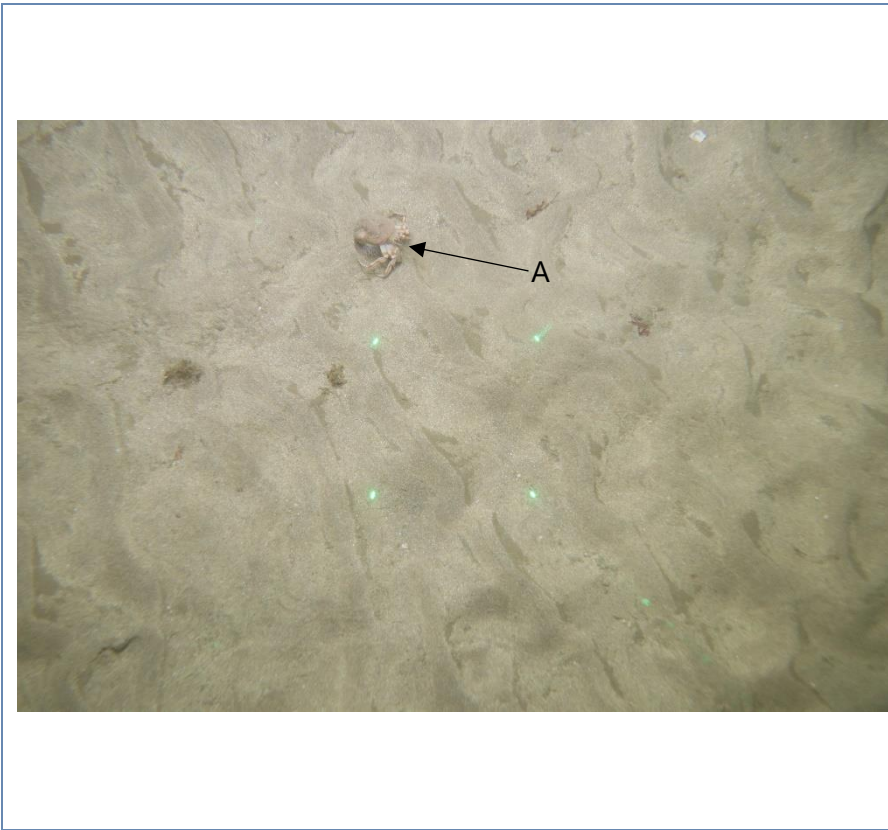


Photograph:  
MCW-D-ST86A\_10

Sediment Type:  
Sand with small scale ripples and shell fragments

Fauna:  
A: Mackerel (*Scomber scombrus*)  
B: Red gurnard (*Chelidonichthys cuculus*)

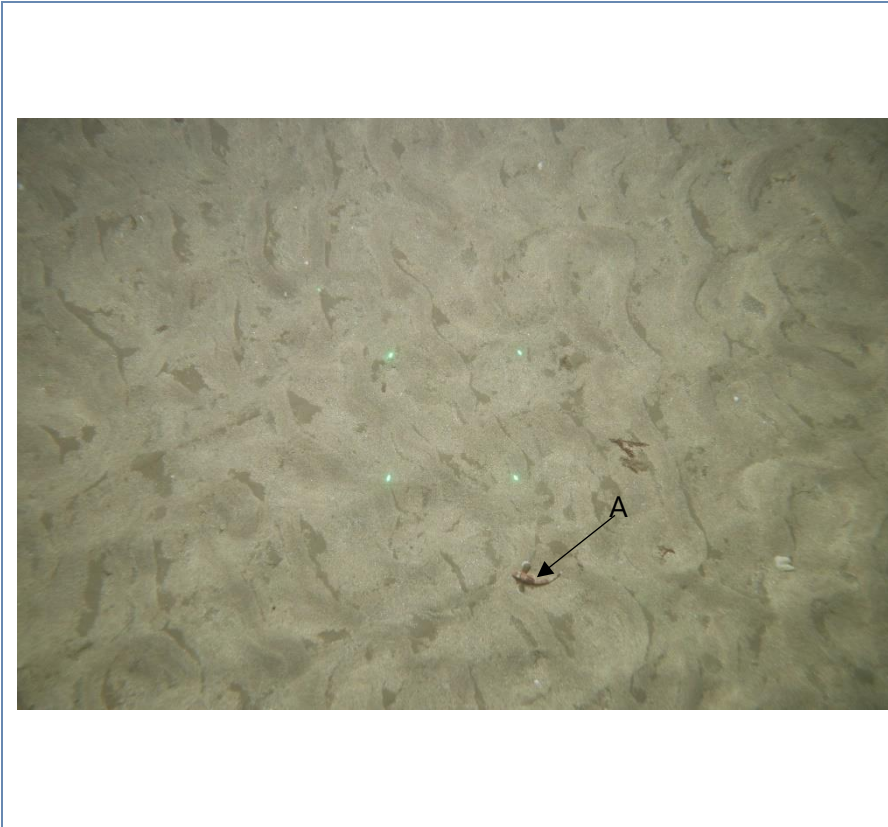
Station MCW-D-ST88A



**Photograph:**  
MCW-D-ST88A\_07

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Hermit crab (Paguroidea)

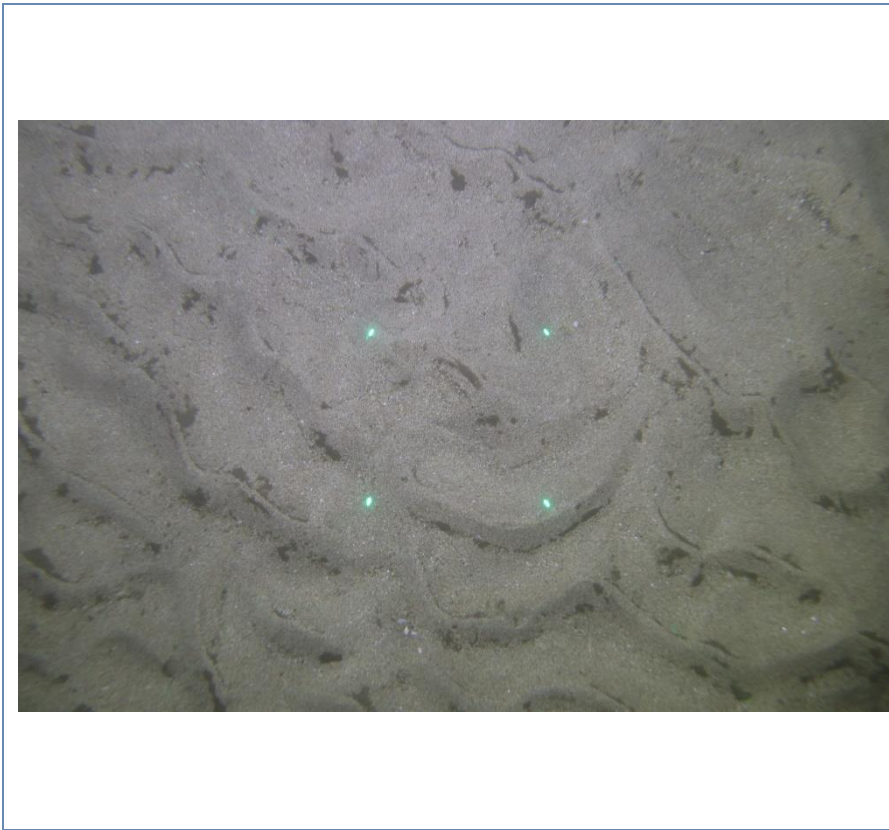


**Photograph:**  
MCW-D-ST88A\_10

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Gurnard (Triglidae)

Station MCW-D-ST89A



**Photograph:**  
MCW-D-ST89A\_01

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-D-ST89A\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Crab (*Corystes cassivelaunus*)



Station MCW-D-ST95A



**Photograph:**  
MCW-D-ST95A\_06

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Crab (Brachyura)

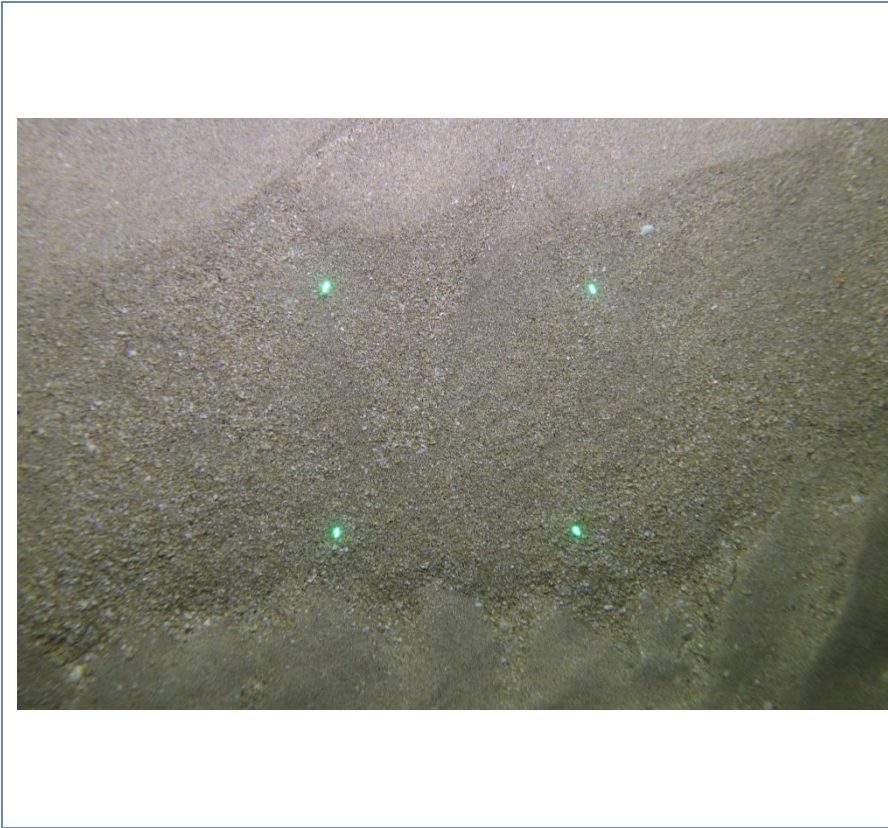


**Photograph:**  
MCW-D-ST95A\_12

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed

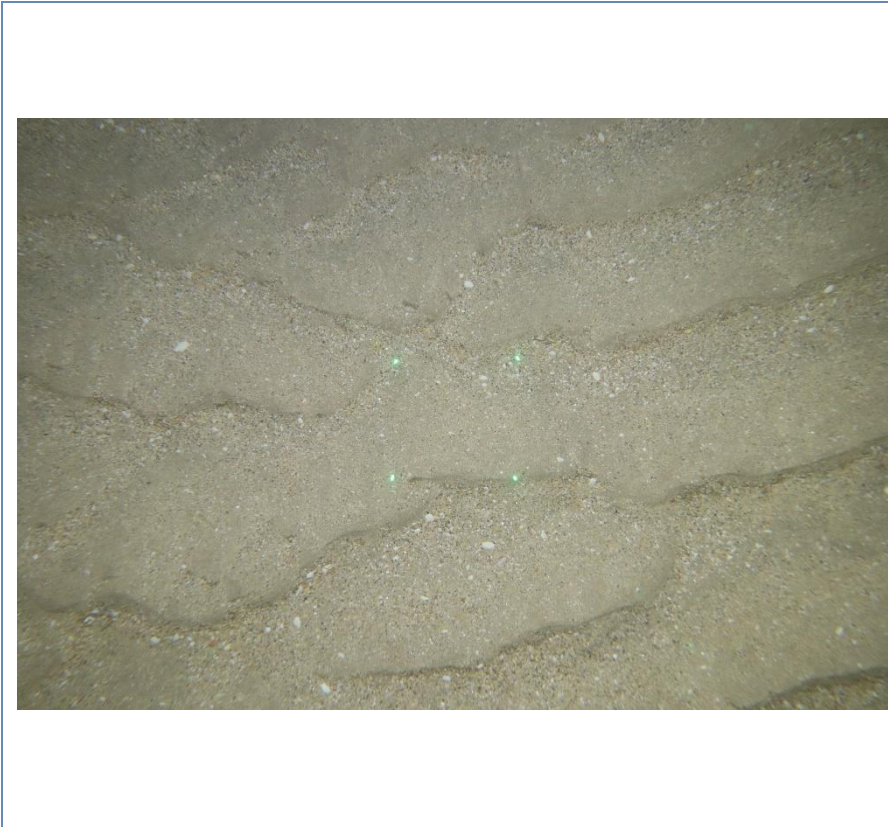
Station MCW-D-ST100A



**Photograph:**  
MCW-D-ST100A\_01

**Sediment Type:**  
Gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-D-ST100A\_03

**Sediment Type:**  
Gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



Station MCW-D-ST101



**Photograph:**  
MCW-D-ST101\_04

**Sediment Type:**  
Gravelly sand with small scale ripples and shell fragments sporadic pebbles and cobbles

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-D-ST101\_18

**Sediment Type:**  
Gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Dragonet (Callionymidae)

Station MCW-D-ST103A



**Photograph:**  
MCW-D-ST103A\_03

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
No fauna observed



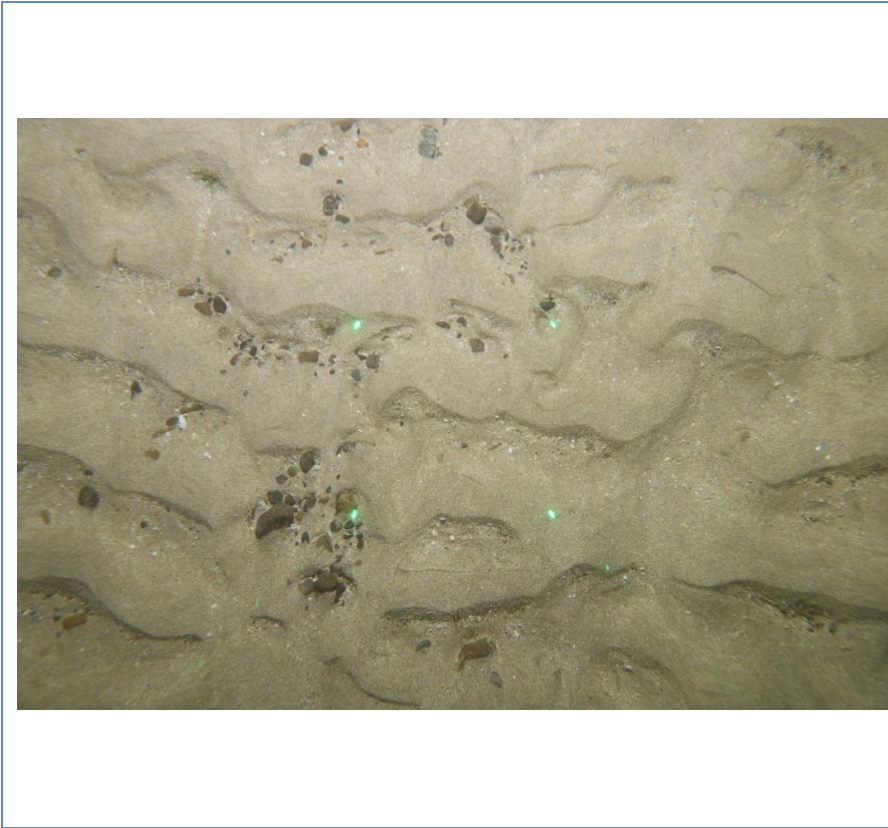
**Photograph:**  
MCW-D-ST103A\_05

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments

**Fauna:**  
A: Flatfish (Soleidae)



Station MCW-D-ST104



**Photograph:**  
MCW-D-ST104\_09

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments and sporadic cobbles

**Fauna:**  
No fauna observed



**Photograph:**  
MCW-D-ST104\_10

**Sediment Type:**  
Slightly gravelly sand with small scale ripples and shell fragments and sporadic cobbles

**Fauna:**  
No fauna observed



Station MCW-D-ST108A



**Photograph:**  
MCW-D-ST108A\_04

**Sediment Type:**  
Gravel with shell fragments, cobbles and infrequent boulders

**Fauna:**  
A: Barnacles (Sessilia)  
B: Serpulid worms (Serpulidae)



**Photograph:**  
MCW-D-ST108A\_20

**Sediment Type:**  
Gravel with shell fragments, cobbles and infrequent boulders

**Fauna:**  
A: Crab (Majoidea)  
B: Barnacles (Sessilia)  
C: Serpulid worms (Serpulidae)

# Appendix G

## Habitat Assessments

G.1 Stony Reef Assessment

G.1.1 Stony Reef Assessment

Geodetic Parameters: ETRS89 / UTM Zone 29N [m]													
Date	Transect	Section Assessment	Time [UTC]	Video Coordinates		Length [m]	Area Observed [m <sup>2</sup> ]	Still Nos.	Sediment Description	Stony Reef Characteristic			Overall
				Easting [m]	Northing [m]					Composition [% cover cobbles and boulders]	Elevation	Biota [Epibiota % cover]	
24/10/2023	MCW-D-ST73	MCW-D-ST73_1	12:39:34	657 309.46	6 206 853.29	15	18	MCW-D-ST73_01 to MCW-D-ST73_02	Slightly gravelly sand with small scale ripples and shell fragments	< 10	Flat seafloor	< 80	Not a Reef
			12:42:04	657 323.74	6 206 850.28								
		MCW-D-ST73_2	12:42:04	657 323.74	6 206 850.28	2	3	MCW-D-ST73_03	Cobbles interspersed with slightly gravelly sand and shell fragments	10 – 40	< 64 mm	< 80	Low
			12:42:23	657 326.13	6 206 849.73								
		MCW-D-ST73_3	12:42:23	657 326.13	6 206 849.73	2	2	MCW-D-ST73_04 to MCW-D-ST73_05	Sand with numerous pebbles, cobbles and large boulders interspersed with small patches of coarse sand	10 – 40	64 mm – 5 m	< 80	Low
			12:42:50	657 328.10	6 206 849.36								
		MCW-D-ST73_4	12:42:50	657 328.10	6 206 849.36	3	4	MCW-D-ST73_06	Cobbles interspersed with slightly gravelly sand and shell fragments	10 – 40	< 64 mm	< 80	Low
			12:43:20	657 331.31	6 206 848.23								
		MCW-D-ST73_5	12:43:20	657 331.31	6 206 848.23	4	5	MCW-D-ST73_07 to MCW-D-ST73_08	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			12:44:08	657 335.33	6 206 846.59								
		MCW-D-ST73_6	12:44:08	657 335.33	6 206 846.59	4	5	MCW-D-ST73_09 to MCW-D-ST73_10	Cobbles interspersed with slightly gravelly sand and shell fragments	40 – 95	64 mm – 5 m	< 80	Medium
			12:44:46	657 339.28	6 206 845.29								
		MCW-D-ST73_7	12:44:46	657 339.28	6 206 845.29	35	43	MCW-D-ST73_11 to MCW-D-ST73_20	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			12:50:28	657 374.03	6 206 838.33								
		MCW-D-ST73_8	12:50:28	657 374.03	6 206 838.33	2	2	MCW-D-ST73_21	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	40 – 95	64 mm – 5 m	< 80	Medium
			12:50:44	657 375.56	6 206 838.04								
		MCW-D-ST73_9	12:50:44	657 375.56	6 206 838.04	11	13	MCW-D-ST73_22 to MCW-D-ST73_24	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			12:52:29	657 386.16	6 206 835.08								
		MCW-D-ST73_10	12:52:29	657 386.16	6 206 835.08	4	5	MCW-D-ST73_25	Cobbles interspersed with slightly gravelly sand and shell fragments	10 – 40	< 64 mm	< 80	Low
			12:53:08	657 389.84	6 206 834.15								

Geodetic Parameters: ETRS89 / UTM Zone 29N [m]													
Date	Transect	Section Assessment	Time [UTC]	Video Coordinates		Length [m]	Area Observed [m <sup>2</sup> ]	Still Nos.	Sediment Description	Stony Reef Characteristic			Overall
				Easting [m]	Northing [m]					Composition [% cover cobbles and boulders]	Elevation	Biota [Epibiota % cover]	
24/10/2023	MCW-D-ST73	MCW-D-ST73_11	12:53:08	657 389.84	6 206 834.15	10	12	MCW-D-ST73_26 to MCW-D-ST73_27	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			12:54:40	657 399.33	6 206 831.09								
		MCW-D-ST73_12	12:54:40	657 399.33	6 206 831.09	1	2	MCW-D-ST73_28	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	40 – 95	64 mm – 5 m	< 80	Medium
			12:54:55	657 400.73	6 206 830.73								
		MCW-D-ST73_13	12:54:55	657 400.73	6 206 830.73	16	19	MCW-D-ST73_29 to MCW-D-ST73_34	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			12:57:46	657 415.85	6 206 827.09								
		MCW-D-ST73_14	12:57:29	657 415.85	6 206 827.09	6	7	-	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	40 – 95	64 mm – 5 m	< 80	Medium
			12:58:23	657 421.56	6 206 825.73								
		MCW-D-ST73_15	12:58:23	657 421.56	6 206 825.73	15	18	MCW-D-ST73_35 to MCW-D-ST73_39	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			13:00:53	657 436.36	6 206 822.19								
24/10/2023	MCW-D-ST82	MCW-D-ST82_1	10:16:24	656 829.83	6 204 546.11	5	6	MCW-D-ST82_01 to MCW-D-ST82_02	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			10:18:40	656 834.43	6 204 545.15								
		MCW-D-ST82_2	10:18:40	656 834.43	6 204 545.15	3	4	MCW-D-ST82_03 to MCW-D-ST82_04	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	40 – 95	64 mm – 5 m	< 80	Medium
			10:19:06	656 837.50	6 204 544.62								
		MCW-D-ST82_3	10:19:06	656 837.50	6 204 544.62	22	27	MCW-D-ST82_05 to MCW-D-ST82_14	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	10 – 40	64 mm – 5 m	< 80	Low
			10:22:33	656 859.63	6 204 543.22								
MCW-D-ST82_3	10:22:33	656 859.63	6 204 543.22	164	197	MCW-D-ST82_15 to MCW-D-ST82_34	Slightly gravelly sand with small scale ripples and shell fragments	< 10	Flat seafloor	< 80	Not a Reef		
	10:50:01	657 023.40	6 204 536.45										
08/09/2023	MCW-A-ST08A	MCW-A-ST08A_1	12:13:57	645 659.51	6 221 867.77	28	33	MCW-A-ST08A_01 to MCW-A-ST08A_09	Coarse sediment including shell hash, sand, gravel, and cobbles with small scale ripples	< 10	Flat seafloor	< 80	Not a Reef
			12:18:23	645 654.36	6 221 840.65								
		MCW-A-ST08A_2	12:18:23	645 654.36	6 221 840.65	37	45	MCW-A-ST08A_10 to MCW-A-ST08A_17	Slightly gravelly sand with small scale ripples, shell fragments and cobbles	< 10	Flat seafloor	< 80	Not a Reef
			12:24:23	645 646.98	6 221 803.96								

G.1.2 Stony Reef SACFOR Abundance

G.1.2.1 Percentage Cover

Transect/ Section	Start of Line/Section		End of Line/Section			Transect/ Section length [m]	Approximate area observed [m <sup>2</sup> ]	Folk Sediment Description	EUNIS Sediment Description	<i>Flustra foliacea</i> (Massive/Turf)		Encrusting Porifera (Crust/Meadow)		<i>Alcyonium digitatum</i> (Massive/Turf)	
	Time from start of video	Easting	Northing	Easting	Northing					Cover [%]	SACFOR	Cover [%]	SACFOR	Cover [%]	SACFOR
MCW-D-ST73	12:42:04	657 323.7	6 206 850.3	657 436.4	6 206 822.2	116.1	196.5	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	Mosaic of Atlantic offshore circalittoral coarse sediment (MD32) with Echinoderms and crustose communities on Atlantic circalittoral rock (MC122)	5.5	F	< 1	P	< 1	R
MCW-D-ST82	10:16:24	656 829.8	6 204 546.1	656 859.6	6 204 543.2	29.9	51.3	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	Atlantic offshore circalittoral coarse sediment (MD32)	8.17	F	< 1	P	< 1	R



## G.1.2.2 Density

Transect/ Section		MCW-D-ST73	MCW-D-ST82
Start of Line/Section	Time from start of video	12:42:04	10:16:24
	Easting	657 323.7	656 829.8
	Northing	6 206 850.3	6 204 546.1
End of Line/Section	Easting	657 436.4	656 859.6
	Northing	6 206 822.2	6 204 543.2
Transect/ Section length [m]		116.1	29.9
Approximate area observed [m <sup>2</sup> ]		200.3	48.5
Sediment Description		Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments
JNCC Habitat		Offshore circalittoral coarse sediment (SS.SSa.Osa) with Echinoderms and crustose communities on Atlantic circalittoral rock (CR.MCR.EcCr)	Offshore circalittoral coarse sediment (SS.SSa.Osa)
Caryophylliidae (1 cm - 3 cm)	Count	0	718
	Density [No/m <sup>2</sup> ]	0.00	14.81
	SACFOR	-	C
Ophiuroidea (3 cm - 15 cm)	Count	4275	0
	Density [No/m <sup>2</sup> ]	21.34	0.00
	SACFOR	A	-
<i>Munida</i> sp. (3 cm - 15 cm)	Count	18	9
	Density [No/m <sup>2</sup> ]	0.09	0.19
	SACFOR	O	F
Pectinidae (3 cm - 15 cm)	Count	1	1
	Density [No/m <sup>2</sup> ]	<0.001	0.02
	SACFOR	R	O
<i>Necora puber</i> (3 cm - 15 cm)	Count	16	3
	Density [No/m <sup>2</sup> ]	0.08	0.06
	SACFOR	O	O
<i>Henricia</i> sp. (3 cm - 15 cm)	Count	3	2
	Density [No/m <sup>2</sup> ]	0.01	0.04
	SACFOR	O	O
Ascidiacea (3 cm - 15 cm)	Count	0	3
	Density [No/m <sup>2</sup> ]	0.00	0.06
	SACFOR	-	O
	Count	24	22

Transect/ Section		MCW-D-ST73	MCW-D-ST82
Osteichthyes (> 15 cm)	Density [No/m <sup>2</sup> ]	0.12	0.45
	SACFOR	C	C
<i>Cancer pagurus</i> (> 15 cm)	Count	1	0
	Density [No/m <sup>2</sup> ]	<0.01	0.00
	SACFOR	O	-
<i>Echinus esculentus</i> (> 15 cm)	Count	16	5
	Density [No/m <sup>2</sup> ]	0.08	0.10
	SACFOR	F	C
Asteroidea (> 15 cm)	Count	1	1
	Density [No/m <sup>2</sup> ]	<0.01	0.02
	SACFOR	O	F
<i>Marthasterias glacialis</i> (> 15 cm)	Count	1	1
	Density [No/m <sup>2</sup> ]	<0.01	0.02
	SACFOR	O	F
<i>Asterias rubens</i> (> 15 cm)	Count	3	0
	Density [No/m <sup>2</sup> ]	0.01	0.00
	SACFOR	F	-
<i>Crossaster papposus</i> (> 15 cm)	Count	0	1
	Density [No/m <sup>2</sup> ]	0.00	0.02
	SACFOR	-	F
<i>Luidia ciliaris</i> (> 15 cm)	Count	0	2
	Density [No/m <sup>2</sup> ]	0.00	0.04
	SACFOR	-	F
<i>Lumpenus lampretaeformis</i> (> 15 cm)	Count	1	0
	Density [No/m <sup>2</sup> ]	<0.01	0.00
	SACFOR	O	-

G.2 Epifaunal SACFOR Abundance

Geodetic Parameters: ETRS89 UTM Zone 29 N																					
Transect/Section		MCW-A-ST01	MCW-A-ST02	MCW-A-ST03	MCW-A-ST05	MCW-A-ST07A	MCW-A-ST08A		MCW-A-ST12	MCW-A-ST14	MCW-A-ST22	MCW-A-ST34	MCW-A-ST36	MCW-A-ST44A		MCW-A-ST55	MCW-B-ST09A	MCW-B-ST010	MCW-B-ST017A	MCW-B-ST018A	MCW-B-ST019A
Start of Line/Section	Easting (mE)	641 119.6	643 864.3	646 751.4	638 498.6	643 944.6	645 659.5	645 654.4	636 002.9	640 982.6	630 633.6	633 130.5	638 876.7	630 639.4	630 597.2	633 382.5	650 116.9	652 151.9	649 187.5	651 412.7	654 910.7
	Northing (mN)	6 225 432.2	6 225 561.8	6 225 373.9	6 223 011.3	6 223 040.6	6 221 867.8	6 221 840.7	6 220 270.2	6 220 520.5	6 217 717.1	6 215 215.3	6 214 834.3	6 212 685.9	6 212 700.0	6 209 770.4	6 222 911.4	6 222 703.7	6 220 216.9	6 220 771.5	6 219 719.9
End of Line/Section	Easting (mE)	641 155.5	643 890.9	646 762.3	638 495.0	643 891.0	645 654.4	645 647.0	636 004.6	640 976.4	630 622.6	633 088.2	638 863.1	630 597.2	630 583.8	633 405.9	650 013.4	652 088.1	649 122.9	651 335.2	654 911.1
	Northing (mN)	6 225 389.5	6 225 512.1	6 225 315.4	6 222 954.4	6 223 017.0	6 221 840.7	6 221 840.7	6 220 206.9	6 220 468.8	6 217 656.5	6 215 176.5	6 214 781.9	6 212 700.0	6 212 704.4	6 209 723.2	6 222 871.7	6 222 619.9	6 220 136.9	6 220 687.3	6 219 834.7
Sediment Description		Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Coarse sediment including shell hash, sand, gravel, and cobbles with small scale ripples	Slightly gravelly sand with small scale ripples, shell fragments and cobbles	Slightly gravelly sand with small scale ripples and shell fragments	Sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly muddy sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments
JNCC Habitat		Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral coarse sediment (SS.SCS.OCS)	Offshore circalittoral coarse sediment (SS.SCS.OCS)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)
SACFOR	Caryophylliidae (1 cm - 3 cm)						O	O													
	Polychaeta (3 cm - 15 cm)			O														R			
	Echiura (3 cm - 15 cm)																				
	Possible Tunicate (3cm - 15 cm)																				
	Munida sp. (3 cm - 15 cm)																				
	Actiniaria (3 cm - 15 cm)	O			O						O										
	Anthozoa (3 cm - 15 cm)																				
	Halcampoides sp. (3 cm - 15 cm)																				O
	Ceriantharia (3 cm - 15 cm)								O												R
	Hormathiidae (3 cm - 15 cm)										O										
	Calliactis palliata (3 cm - 15 cm)										O	O				O					
	Pectinidae (3 cm - 15 cm)																				
	Gastropoda (3 cm - 15 cm)								O												
	Caridea (3 cm - 15 cm)																				
	Necora puber (3 cm - 15 cm)																				
	Paguroidea (3 cm - 15 cm)	F	F	F	F	F			F	F	F	F		F	C	F	O	O	F	O	R
	Pagurus prideaux (3 cm - 15 cm)										O	O									
	Henricia sp. (3 cm - 15 cm)																				
	Ophiuroidea (including Ophiothrix fragilis) (> 15 cm)		F	F		F			F								O				
	Ophiura ophiura (> 15 cm)			F																	
	possible Holothuroidea (3 cm - 15 cm)																				
	possible Arctica islandica (3 cm - 15 cm)				O	O													R		
	Cephalopoda (3 cm - 15 cm)												O								
	Loliginidae (3 cm - 15 cm)												F		O				O		
	Sepiella sp. (3 cm - 15 cm)												O		O						
	Asciacea (3 cm - 15 cm)																				
	Gobiidae (3 cm - 15 cm)								O												O
	Brachyura (3 cm - 15 cm)														O						
	Liocarcinus sp. (3 cm - 15 cm)																	R			R
	Osteichthyes (> 15 cm)	F	F	F			F		F	F	F	F	F	F		F	C	C	C	C	F
	Possible Ammodytidae (> 15 cm)													F			O	O			
	Gadidae (> 15cm)											F	F			F	F	C	C	C	
	Clupeidae (> 15 cm)																F	F			
	Triglidae (> 15 cm)																F		O	F	
Merlangius merlangus (> 15 cm)																F					
Scomber scombrus (> 15 cm)																				C	
Clupea harengus (> 15 cm)																		F	F	F	
Trisopterus sp. (> 15 cm)																					
Callionymus sp. (> 15 cm)	O	O	O			F	F											R		O	
Lumpenus lampretaeformis (> 15 cm)																					

Geodetic Parameters: ETRS89 UTM Zone 29 N

Transect/Section	MCW-A-ST01	MCW-A-ST02	MCW-A-ST03	MCW-A-ST05	MCW-A-ST07A	MCW-A-ST08A	MCW-A-ST12	MCW-A-ST14	MCW-A-ST22	MCW-A-ST34	MCW-A-ST36	MCW-A-ST44A	MCW-A-ST55	MCW-B-ST09A	MCW-B-ST010	MCW-B-ST017A	MCW-B-ST018A	MCW-B-ST019A
Pleuronectiformes (> 15 cm)							F	F	F			F	F	F	F	F	F	F
Soleidae (> 15 cm)							F		F	F			F		O	F	F	
<i>Microchirus variegatus</i> (> 15 cm)															O		O	
<i>Buglossidium luteum</i> (> 15 cm)									F	F								
<i>Pleuronectes platessa</i> (> 15 cm)																O		
<i>Limanda limanda</i> (> 15 cm)																	O	
Rajiformes (> 15 cm)																		
<i>Raja clavata</i> (> 15 cm)		F																
<i>Cancer pagurus</i> (> 15 cm)														O				
<i>Echinus esculentus</i> (> 15 cm)																		
Asteroidea (> 15 cm)					F									F	F		O	
<i>Marthasterias glacialis</i> (> 15 cm)																		
<i>Astropecten irregularis</i> (> 15cm)																O	O	
<i>Asterias rubens</i> (> 15 cm)										F	F							
<i>Crossaster papposus</i> (> 15 cm)																		
<i>Luidia sarsi</i> (> 15 cm)															O			
<i>Luidia ciliaris</i> (> 15 cm)																		
Blenniidae (3 - 15 cm)																		
<i>Atelecyclus rotundatus</i> (3 - 15 cm)						O												
<i>Corystes cassivelaunus</i> (3 - 15 cm)																		
<i>Calliostoma</i> sp. (1 - 3 cm)																		
<i>Urticina</i> sp. (3 - 15 cm)																		
Galatheididae (3 - 15 cm)																		
<i>Lanice conchilega</i> (3 - 15 cm)																		
Serpulidae (3 - 15 cm)																		
<i>Chelidonichthys cuculus</i> (> 15 cm)																		
<i>Agonus cataphractus</i> (> 15 cm)																		
<i>Flustra foliacea</i> (Massive/Turf)						R						R						
Encrusting Porifera (Crust/Meadow)																		
<i>Alcyonium digitatum</i> (Massive/Turf)			R			R			R									
Flustridae (Massive/Turf)			R			R												
Faunal turf (Hydrozoa/Bryozoa) (Massive/Turf)					R				R				R					

Geodetic Parameters: ETRS89 UTM Zone 29 N																								
Transect/Section		MCW-B-ST28	MCW-B-ST29A	MCW-B-ST30A	MCW-B-ST38A	MCW-B-ST57			MCW-B-ST59A	MCW-C-ST20	MCW-C-ST31	MCW-C-ST32	MCW_C_ST41		MCW-C-ST42	MCW-C-ST43	MCW-C-ST51	MCW-C-ST52	MCW-C-ST53	MCW-C-ST54	MCW-C-ST62	MCW-C-ST63	MCW-C-ST70	
Start of Line/Section	Easting (mE)	646 381.0	649 612.9	652 172.8	644 192.7	638 413.9	638 382.7	638 376.8	643 527.5	657 510.3	654 524.4	657 077.1	651 608.4	651 653.3	654 566.3	657 099.2	649 241.1	651 655.7	654 496.4	657 295.1	651 792.6	654 466.3	649 490.5	
	Northing (mN)	6 217 841.8	6 217 240.6	6 217 411.6	6 214 646.5	6 209 784.4	6 209 844.6	6 209 856.8	6 210 197.0	6 219 953.6	6 217 459.8	6 217 652.1	6 215 065.2	6 215 095.2	6 214 919.6	6 215 064.9	6 212 426.3	6 212 473.4	6 212 296.0	6 212 408.4	6 209 616.5	6 209 648.3	6 206 785.2	
End of Line/Section	Easting (mE)	646 298.0	649 492.7	652 112.3	644 087.4	638 382.7	638 376.8	638 364.0	643 420.9	657 467.3	654 515.0	657 082.7	651 653.3	651 725.9	654 608.2	657 112.5	649 206.5	651 603.1	654 508.1	657 296.2	651 816.2	654 524.6	649 541.9	
	Northing (mN)	6 217 783.6	6 217 236.7	6 217 501.2	6 214 668.1	6 209 844.6	6 209 856.8	6 209 882.0	6 210 170.9	6 220 004.7	6 217 522.5	6 217 713.0	6 215 095.2	6 215 148.4	6 214 962.5	6 215 123.3	6 212 376.2	6 212 444.1	6 212 233.7	6 212 350.7	6 209 560.7	6 209 640.5	6 206 757.4	
Sediment Description		Slightly gravelly sand with small scale ripples and shell fragments																						
JNCC Habitat		Offshore circalittoral sand (SS.SSa.Osa)																						
SACFOR	Caryophylliidae (1 cm - 3 cm)																							
	Polychaeta (3 cm - 15 cm)			R																			O	O
	Echiura (3 cm - 15 cm)	R																						
	Possible Tunicate (3cm - 15 cm)	R			R																			
	Munida sp. (3 cm - 15 cm)																							
	Actiniaria (3 cm - 15 cm)																							
	Anthozoa (3 cm - 15 cm)																							
	Halcampoides sp. (3 cm - 15 cm)																							
	Ceriantharia (3 cm - 15 cm)																							
	Hormathiidae (3 cm - 15 cm)																							
	Calliactis palliata (3 cm - 15 cm)	O																						
	Pectinidae (3 cm - 15 cm)																							
	Gastropoda (3 cm - 15 cm)																							
	Caridea (3 cm - 15 cm)																							
	Necora puber (3 cm - 15 cm)																							
	Paguroidea (3 cm - 15 cm)	F	O		F	O	O	O	O	O	O	O			R		O	O	F			O	O	
	Pagurus prideaux (3 cm - 15 cm)	O																						
	Henricia sp. (3 cm - 15 cm)																							
	Ophiuroidea (including Ophiothrix fragilis) (> 15 cm)	O	O													O			F					
	Ophiura ophiura (> 15 cm)	O																						
	possible Holothuroidea (3 cm - 15 cm)																							
	possible Arctica islandica (3 cm - 15 cm)										O													
	Cephalopoda (3 cm - 15 cm)																							
	Loliginidae (3 cm - 15 cm)				R	R									O	O	O		F					
	Sepioidae (3 cm - 15 cm)																							
	Ascidacea (3 cm - 15 cm)																							
	Gobiidae (3 cm - 15 cm)	R		O	R																			
	Brachyura (3 cm - 15 cm)														O	O			O		R		O	O
	Liocarcinus sp. (3 cm - 15 cm)	R																						
	Osteichthyes (> 15 cm)	O	C	C	F	F				F	F		C	F	C	F	F	F			F	F	F	
	Possible Ammodytidae (> 15 cm)			F	O	F																		
	Gadidae (> 15cm)			C	C	F	C	C					F		F									F
	Clupeidae (> 15 cm)																							
	Triglidae (> 15 cm)	O														O								F
Merlangius merlangus (> 15 cm)				O																				
Scomber scombrus (> 15 cm)			C	F	F							F												
Clupea harengus (> 15 cm)					F																			
Trisopterus sp. (> 15 cm)				F																				
Callionymus sp. (> 15 cm)	O		R	O	F			F			O		O		R		O				O			
Lumpenus lampretaeformis (> 15 cm)																								
Pleuronectiformes (> 15 cm)	O		F												F	F	F	F		O		F	F	
Soleidae (> 15 cm)			O								F				O									



Geodetic Parameters: ETRS89 UTM Zone 29 N

Transect/Section		MCW-B-ST28	MCW-B-ST29A	MCW-B-ST30A	MCW-B-ST38A	MCW-B-ST57		MCW-B-ST59A	MCW-C-ST20	MCW-C-ST31	MCW-C-ST32	MCW_C-ST41	MCW-C-ST42	MCW-C-ST43	MCW-C-ST51	MCW-C-ST52	MCW-C-ST53	MCW-C-ST54	MCW-C-ST62	MCW-C-ST63	MCW-C-ST70	
	<i>Microchirus variegatus</i> (> 15 cm)															F						
	<i>Buglossidium luteum</i> (> 15 cm)																					
	<i>Pleuronectes platessa</i> (> 15 cm)															F						
	<i>Limanda limanda</i> (> 15 cm)																					
	Rajiformes (> 15 cm)															F						
	<i>Raja clavata</i> (> 15 cm)																					
	<i>Cancer pagurus</i> (> 15 cm)		O												F							
	<i>Echinus esculentus</i> (> 15 cm)																					
	Asterioidea (> 15 cm)	O	F	O																		
	<i>Marthasterias glacialis</i> (> 15 cm)																					
	<i>Astropecten irregularis</i> (> 15cm)			O	O					F					F		F				F	
	<i>Asterias rubens</i> (> 15 cm)																F					
	<i>Crossaster papposus</i> (> 15 cm)																					
	<i>Luidia sarsi</i> (> 15 cm)		O	O																		
	<i>Luidia ciliaris</i> (> 15 cm)											O										
	Blenniidae (3 - 15 cm)																					
	<i>Atelecyclus rotundatus</i> (3 - 15 cm)																					O
	<i>Corystes cassivelaunus</i> (3 - 15 cm)					O																
	<i>Calliostoma</i> sp. (1 - 3 cm)																					
	<i>Urticina</i> sp. (3 - 15 cm)																					
	Galatheidae (3 - 15 cm)																					
	<i>Lanice conchilega</i> (3 - 15 cm)																					
	<i>Spirobranchus</i> sp. (3 - 15 cm)																					
	<i>Chelidonichthys cuculus</i> (> 15 cm)															F				F		
	<i>Agonus cataphractus</i> (> 15 cm)															F				F		
	<i>Flustra foliacea</i> (Massive/Turf)	R																				
	Encrusting Porifera (Crust/Meadow)																					
	<i>Alcyonium digitatum</i> (Massive/Turf)																					
	Flustridae (Massive/Turf)				R																	
	Faunal turf (Hydrozoa/Bryozoa) (Massive/Turf)								R			R								R		R

Geodetic Parameters: ETRS89 UTM Zone 29 N																				
Transect/Section		MCW-C-ST71	MCW-C-ST75	MCW-C-ST77	MCW-C-ST79	MCW-C-ST83	MCW-C-ST91	MCW-C-ST92	MCW-D-ST64	MCW-D-ST72A	MCW-D-ST73		MCW-D-ST80	MCW-D-ST81	MCW-D-ST82		MCW-D-ST86A	MCW-D-ST88A	MCW-D-ST89A	
Start of Line/Section	Easting (mE)	651 617.7	638 730.6	644 161.0	649 121.6	638 745.9	638 656.9	641 227.4	656 999.0	654 858.6	657 309.5	657 323.7	651 951.8	654 425.1	656 829.8	656 859.6	647 290.6	651 487.2	654 049.2	
	Northing (mN)	6 207 254.9	6 204 211.3	6 204 241.8	6 204 505.9	6 201 691.6	6 199 012.8	6 199 153.9	6 209 828.9	6 206 718.1	6 206 853.3	6 206 850.3	6 204 318.1	6 204 405.4	6 204 546.1	6 204 543.2	6 201 713.4	6 201 952.9	6 202 156.0	
End of Line/Section	Easting (mE)	651 599.1	638 707.4	644 126.4	649 108.3	638 780.5	638 699.7	641 258.7	656 971.0	654 815.2	657 323.7	657 436.4	652 043.0	654 400.9	656 859.6	657 023.4	647 381.2	651 595.3	654 137.0	
	Northing (mN)	6 207 192.7	6 204 262.7	6 204 198.7	6 204 449.6	6 201 642.1	6 198 961.7	6 199 198.1	6 209 724.2	6 206 616.1	6 206 850.3	6 206 822.2	6 204 251.7	6 204 296.4	6 204 543.2	6 204 536.5	6 201 645.4	6 201 934.8	6 202 095.2	
Sediment Description		Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Coarse sediment with cobbles and boulders, interspersed with sand	Coarse sediment with cobbles, interspersed with sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Cobbles and boulders interspersed with slightly gravelly sand and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragments
JNCC Habitat		Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Echinoderms and crustose communities (CR.MCR.EcCr)	Offshore circalittoral coarse sediment (SS.SCS.OCS)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Mosaic of Offshore circalittoral coarse sediment (SS.SCS.OCS) with Echinoderms and crustose communities (CR.MCR.EcCr)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral coarse sediment (SS.SCS.OCS)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)
SACFOR	Caryophylliidae (1 cm - 3 cm)					O										C				
	Polychaeta (3 cm - 15 cm)																			
	Echiura (3 cm - 15 cm)					O														
	Possible Tunicate (3cm - 15 cm)																			
	Munida sp. (3 cm - 15 cm)												O			F				
	Actiniaria (3 cm - 15 cm)					O	O													
	Anthozoa (3 cm - 15 cm)																			
	Halcampoides sp. (3 cm - 15 cm)																			
	Ceriantharia (3 cm - 15 cm)																			
	Hormathiidae (3 cm - 15 cm)																			
	Calliactis palliata (3 cm - 15 cm)						O													
	Pectinidae (3 cm - 15 cm)												R			O	R			
	Gastropoda (3 cm - 15 cm)																			
	Caridea (3 cm - 15 cm)										R									
	Necora puber (3 cm - 15 cm)												O			O				
	Paguroidea (3 cm - 15 cm)	O	O	O						F	O			R				R	R	
	Pagurus prideaux (3 cm - 15 cm)						O													
	Henricia sp. (3 cm - 15 cm)												O			O				
	Ophiuroidea (including Ophiothrix fragilis) (> 15 cm)						C	F				A	S	O					O	
	Ophiura ophiura (> 15 cm)																			
	possible Holothuroidea (3 cm - 15 cm)																			
	possible Arctica islandica (3 cm - 15 cm)					O														
	Cephalopoda (3 cm - 15 cm)																			
	Loliginidae (3 cm - 15 cm)										R			R					R	
	Sepioida sp. (3 cm - 15 cm)																			
	Asciacea (3 cm - 15 cm)						O	O								O				
	Gobiidae (3 cm - 15 cm)										R									
	Brachyura (3 cm - 15 cm)					O					R						R			
	Liocarcinus sp. (3 cm - 15 cm)										R									
	Osteichthyes (> 15 cm)						F			F	F		C	C	F	C	O	C	F	
	Possible Ammodytidae (> 15 cm)												O					O		
	Gadiidae (> 15cm)		F											F						
	Clupeidae (> 15 cm)																			
	Triglididae (> 15 cm)																			
Mertangius merlangus (> 15 cm)																				
Scomber scombrus (> 15 cm)									F				F				C			
Clupea harengus (> 15 cm)																				
Trisopterus sp. (> 15 cm)			F																	
Callionymus sp. (> 15 cm)	O												R	O		O		R		
Lumpenus lampretaeformis (> 15 cm)												O								
Pleuronectiformes (> 15 cm)	F	F								F				F			O			
Soleidae (> 15 cm)		C																		

Geodetic Parameters: ETRS89 UTM Zone 29 N

Transect/Section	MCW-C-ST71	MCW-C-ST75	MCW-C-ST77	MCW-C-ST79	MCW-C-ST83	MCW-C-ST91	MCW-C-ST92	MCW-D-ST64	MCW-D-ST72A	MCW-D-ST73	MCW-D-ST80	MCW-D-ST81	MCW-D-ST82	MCW-D-ST86A	MCW-D-ST88A	MCW-D-ST89A
<i>Microchirus variegatus</i> (> 15 cm)																
<i>Buglossidium luteum</i> (> 15 cm)																
<i>Pleuronectes platessa</i> (> 15 cm)				F												
<i>Limanda limanda</i> (> 15 cm)																
Rajiformes (> 15 cm)															O	
<i>Raja clavata</i> (> 15 cm)																
<i>Cancer pagurus</i> (> 15 cm)					F					O						
<i>Echinus esculentus</i> (> 15 cm)					F	F				F			C			
Asterioidea (> 15 cm)										O			F			
<i>Marthasterias glacialis</i> (> 15 cm)										O			F			
<i>Astropecten irregularis</i> (> 15cm)								F								
<i>Asterias rubens</i> (> 15 cm)	F									F						
<i>Crossaster papposus</i> (> 15 cm)					F								F			
<i>Luidia sarsi</i> (> 15 cm)											O					
<i>Luidia ciliaris</i> (> 15 cm)					F								F			
Blenniidae (3 - 15 cm)													O			
<i>Atelecyclus rotundatus</i> (3 - 15 cm)		O														
<i>Corystes cassivelaunus</i> (3 - 15 cm)																R
<i>Calliostoma</i> sp. (1 - 3 cm)					R	R										
<i>Urticina</i> sp. (3 - 15 cm)						O										
Galatheidae (3 - 15 cm)					O											
<i>Lanice conchilega</i> (3 - 15 cm)						O										
Serpulidae (3 - 15 cm)						O										
<i>Chelidonichthys cuculus</i> (> 15 cm)		F									O			F	O	
<i>Agonus cataphractus</i> (> 15 cm)				F												
<i>Flustra foliacea</i> (Massive/Turf)						R		R		F		R	F			
Encrusting Porifera (Crust/Meadow)					P	P				P			P			
<i>Alcyonium digitatum</i> (Massive/Turf)					R	R				R		R	R			
Flustridae (Massive/Turf)														R		
Faunal turf (Hydrozoa/Bryozoa) (Massive/Turf)	R							R	R			R		R	R	

Geodetic Parameters: ETRS89 UTM Zone 29 N							
Transect/Section		MCW-D-ST95A	MCW-D-ST100A	MCW-D-ST101	MCW-D-ST103A	MCW-D-ST104	MCW-D-ST108A
Start of Line/Section	Easting (mE)	649 709.9	645 937.4	649 523.0	641 624.2	643 705.4	646 195.7
	Northing (mN)	6 198 504.3	6 197 289.8	6 196 386.5	6 193 696.8	6 193 487.0	6 191 655.0
End of Line/Section	Easting (mE)	649 709.9	645 908.0	649 627.8	641 705.5	643 769.5	646 252.1
	Northing (mN)	6 198 396.5	6 197 174.2	6 196 368.1	6 193 616.9	6 193 392.5	6 191 564.7
Sediment Description		Slightly gravelly sand with small scale ripples and shell fragments	Gravelly sand with small scale ripples and shell fragments	Gravelly sand with small scale ripples and shell fragments sporadic pebbles and cobbles	Slightly gravelly sand with small scale ripples and shell fragments	Slightly gravelly sand with small scale ripples and shell fragment sporadic cobbles and a boulder	Gravel with shell fragments, cobbles and infrequent boulders
JNCC Habitat		Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral sand (SS.SSa.Osa)	Offshore circalittoral coarse sediment (SS.SCS.OCS)
SACFOR	Caryophylliidae (1 cm - 3 cm)						
	Polychaeta (3 cm - 15 cm)						
	Echiura (3 cm - 15 cm)						
	Possible Tunicate (3cm - 15 cm)						
	<i>Munida</i> sp. (3 cm - 15 cm)						
	Actiniaria (3 cm - 15 cm)						
	Anthozoa (3 cm - 15 cm)						
	<i>Halcampoides</i> sp. (3 cm - 15 cm)						
	Ceriantharia (3 cm - 15 cm)						
	Hormathiidae (3 cm - 15 cm)						
	<i>Calliactis palliata</i> (3 cm - 15 cm)						
	Pectinidae (3 cm - 15 cm)						
	Gastropoda (3 cm - 15 cm)						
	Caridea (3 cm - 15 cm)						
	<i>Necora puber</i> (3 cm - 15 cm)						
	Paguroidea (3 cm - 15 cm)		R	R	O		R
	<i>Pagurus prideaux</i> (3 cm - 15 cm)						
	<i>Henricia</i> sp. (3 cm - 15 cm)						
	Ophiuroidea (including <i>Ophiothrix fragilis</i> ) (> 15 cm)						O
	<i>Ophiura ophiura</i> (> 15 cm)						
	possible Holothuroidea (3 cm - 15 cm)						
	possible <i>Arctica islandica</i> (3 cm - 15 cm)						
	Cephalopoda (3 cm - 15 cm)						
	Loliginidae (3 cm - 15 cm)		R				
	<i>Sepiola</i> sp. (3 cm - 15 cm)						
	Asciacea (3 cm - 15 cm)						R
	Gobiidae (3 cm - 15 cm)						
	Brachyura (3 cm - 15 cm)	O	O	O	O	O	R
	<i>Liocarcinus</i> sp. (3 cm - 15 cm)						
	Osteichthyes (> 15 cm)		F		F		
	Possible Ammodytidae (> 15 cm)						
	Gadidae (> 15cm)						
Clupeidae (> 15 cm)							
Triglidae (> 15 cm)							
<i>Mertangius mertangus</i> (> 15 cm)							
<i>Scomber scombrus</i> (> 15 cm)							
<i>Clupea harengus</i> (> 15 cm)							
<i>Trisopterus</i> sp. (> 15 cm)							
<i>Callionymus</i> sp. (> 15 cm)			O				
<i>Lumpenus lampretaeformis</i> (> 15 cm)							
Pleuronectiformes (> 15 cm)		O		F			
Soleidae (> 15 cm)							
<i>Microchirus variegatus</i> (> 15 cm)							
<i>Buglossidium luteum</i> (> 15 cm)							
<i>Pleuronectes platessa</i> (> 15 cm)							

Geodetic Parameters: ETRS89 UTM Zone 29 N

Transect/Section		MCW-D-ST95A	MCW-D-ST100A	MCW-D-ST101	MCW-D-ST103A	MCW-D-ST104	MCW-D-ST108A
	<i>Limanda limanda</i> (> 15 cm)						
	Rajiformes (> 15 cm)						
	<i>Raja clavata</i> (> 15 cm)						
	<i>Cancer pagurus</i> (> 15 cm)						
	<i>Echinus esculentus</i> (> 15 cm)						
	Asteroidea (> 15 cm)						O
	<i>Marthasterias glacialis</i> (> 15 cm)						
	<i>Astropecten irregularis</i> (> 15cm)						
	<i>Asterias rubens</i> (> 15 cm)						
	<i>Crossaster papposus</i> (> 15 cm)						
	<i>Luidia sarsi</i> (> 15 cm)						
	<i>Luidia ciliaris</i> (> 15 cm)						
	Blenniidae (3 - 15 cm)						
	<i>Atelecyclus rotundatus</i> (3 - 15 cm)						
	<i>Corystes cassivelaunus</i> (3 - 15 cm)						
	<i>Calliostoma</i> sp. (1 - 3 cm)						
	<i>Urticina</i> sp. (3 - 15 cm)						
	Galatheidae (3 - 15 cm)						R
	<i>Lanice conchilega</i> (3 - 15 cm)						
	Serpulidae (3 - 15 cm)						
	<i>Chelidonichthys cuculus</i> (> 15 cm)		O				
	<i>Agonus cataphractus</i> (> 15 cm)		O				
	<i>Flustra foliacea</i> (Massive/Turf)						
	Encrusting Porifera (Crust/Meadow)						P
	<i>Alcyonium digitatum</i> (Massive/Turf)						
	Flustridae (Massive/Turf)				R		R
	Faunal turf (Hydrozoa/Bryozoa) (Massive/Turf)					R	




# Appendix H

## Correlations

	Depth	Median [ $\mu\text{m}$ ]	PSD Mean [phi]	Gravel [%]	Sand [%]	Fines [%]	Taxa	Individuals	Margalef	Shannon-Wiener [H' Log2]	Simpson Dominance [ $\lambda$ ]
Depth											
Median [ $\mu\text{m}$ ]	-0.134										
PSD Mean [phi]	-0.129	0.998									
Gravel [%]	0.057	0.479	0.491								
Sand [%]	-0.549	-0.101	-0.107	-0.598							
Fines [%]	0.632	-0.342	-0.341	-0.120	-0.618						
Taxa	0.376	-0.515	-0.512	0.067	-0.375	0.483					
Individuals	0.442	-0.305	-0.313	0.189	-0.460	0.432	0.812				
Margalef	0.306	-0.564	-0.557	0.039	-0.298	0.418	0.976	0.695			
Shannon-Wiener [H' Log2]	0.216	-0.595	-0.584	-0.024	-0.154	0.345	0.881	0.526	0.939		
Simpson's Dominance [ $\lambda$ ]	-0.119	0.544	0.533	0.068	0.027	-0.248	-0.704	-0.305	-0.785	-0.938	

**Notes**

Correlations based on n = 38 (Zar, 1984)

Significance  P < 0.05 at 0.271 ≤ rs ≤ 0.378  P < 0.01 at rs ≥ 0.378  P < 0.05 at -0.271 ≥ rs ≥ -0.378  P < 0.01 at rs ≤ -0.378  Not significant (-0.271 ≤ rs ≤ 0.271)

