Natural England Commissioned Report NECR304

Kingmere MCZ 2018 Survey Report

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Foreword

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties. The views in this report are those of the authors and do not necessarily represent those of Natural England.

Background

Following designation, Natural England started a baseline monitoring programme across all marine protected areas.

This report was commissioned as part of an inshore benthic marine survey of the Kingmere MCZ.

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Natural England Project Manager – Mike Fraser, Senior Specialist
Mike.Fraser@naturalengland.org.uk

Contractor - Nina Godsell, Environment Agency

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Further information
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Kingmere MCZ 2018 Survey Report

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Kingmere MCZ 2018 Survey Report

Project Code: MB0129

Author: Nina Godsell

Produced by:

Environment Agency
Estuarine and Coastal Monitoring and Assessment Service
Kingfisher House
Orton Goldhay
Peterborough
Cambridgeshire
PE2 5ZR

Email: enquiries@environment-agency.gov.uk
Website: www.gov.uk/environment-agency

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A. Atterbury	Natural England Marine Lead Advisor
B. Green	Natural England/Environment Agency Marine Technical Specialist
C. Miller	Natural England/Environment Agency Marine Technical Specialist
K. Nelson	Sussex Inshore Fisheries and Conservation Authority Conservation and Research Manager

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Tables

Figures

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1. Introduction

Following the introduction of the Marine and Coastal Access Act in 2009, the UK Government is creating an ecologically coherent network of Marine Conservation Zones (MCZs) in British waters. The MCZ network will exist alongside other Marine Protected Areas (MPAs), including Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) and Ramsar sites to help conserve marine biodiversity, in particular habitats and species of national importance.

Forming part of this network, the Kingmere MCZ was formally designated on the 21st November 2013. The site has been created to protect valuable infralittoral reef habitat that provides a suitable substratum for the protected species Black Seabream (*Spondyliosoma cantharus*) to nest (Table 1). Following designation, Natural England* and Sussex Inshore Fisheries and Conservation Authority (IFCA) have started a programme of monitoring and the initial datasets gathered will be used to assess feature condition to inform future survey planning and management of the site.

*inshore Statutory Nature Conservation Body

1.1 Site Description

The Kingmere MCZ is located in the English Channel, 5 to 10 km off the West Sussex coast between Littlehampton and Worthing (Figure 1) (Natural England, 2013). The site boundary encompasses an area of approximately 47 km^2 that includes two marine Sites of Nature Conservation Importance (SNCI), Kingmere Rocks and Worthing Lumps (Natural England, 2013). The sandstone and chalk rocky reef features provide an ideal habitat for a diversity of marine animals such as algae, sea squirts and sponges to colonise (Natural England, 2013). In certain areas the infralittoral rock covered with thin layer of mixed sediments provides ideal substratum for Black seabream (*Spondyliosoma cantharus*) to nest upon. The site is potentially one of the most important breeding grounds for this species in United Kingdom coastal waters.

Two aggregate licenses have been granted within the MCZ boundary (Area 453-MMO License L/2016/00350/1 (Cemex UK Marine Ltd); Area 488-MMO License L/2016/00349/1 (Tarmac Marine Ltd). Conditions of both licenses excludes dredging where sediment depth averages 0.5 m or less, and in the areas of nature conservation features, archaeology, war graves and wrecks.

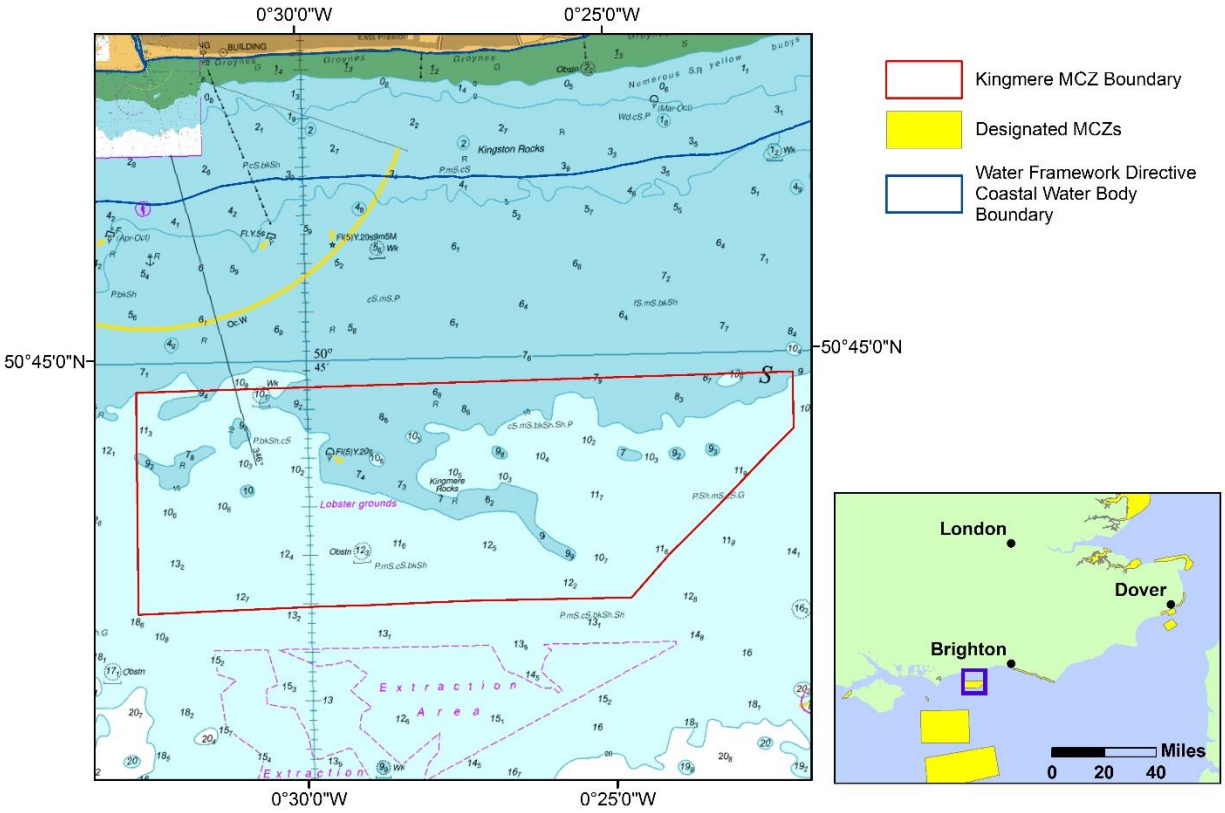

Figure 1. Location of the Kingmere Marine Conservation Zone (MCZ) in the context of other MCZs off the south of England.

The Features of Conservation Importance (FOCI) protected under the MCZ designation order are presented in Table 1 alongside the general management approach. The survey planned here will focus on those features indicated by blue shading (Table 1). Current Sussex Inshore Fisheries and Conservation Authority (IFCA) management measures for the Kingmere MCZ include spatial and temporal restrictions of commercial and recreational fishing activities. The most stringent measure being a ban on all fishing activities during the seabream breeding season (1st April to 30th June inclusive) within Zone 1 where the majority of nests are located. Seabream monitoring will be conducted by Sussex IFCA. Further information can be found on Sussex IFCA's website[1].

[1] http://www.sussex-ifca.gov.uk/kingmere-mcz [Accessed 01/12/2018]

Table 1. Designation status and the current General Management Approach (GMA) for the features of conservation importance present in the Kingmere Marine Conservation Zone. The monitoring survey planned here will focus on those features indicated by blue shading.

Feature Type	Features Present	Designated	GMA
Broadscale Habitat (BSH)	Moderate energy infralittoral rock and thin mixed sediments	✓	Recover
Habitat Feature of Conservation Importance	Subtidal chalk	✓	Recover
Species Feature of Conservation Importance	Black seabream (*Spondyliosoma cantharus*)	✓	Recover

1.2 Survey Aim and Objectives

To undertake a survey of two Kingmere MCZ designated features (Table 1) to obtain improved evidence, ascribe condition and provide a dataset which can be used to detect change over time. This will inform future monitoring and management measures.

Objective 1: Collect data to investigate the structure, function and distribution of MCZ features.

The data acquired will;

- Provide data for a monitoring time series.
- Improve understanding of distribution of MCZ features across the site.

A survey will be undertaken to assess the relative extent, distribution and community composition of the sediment feature based on a survey design of 16 grab stations stratified using the 2017 Broadscale Habitat map (Brown, 2017).

A survey will be undertaken of the infralittoral rock and chalk features to assess extent and community structure based on a broadscale habitat stratified survey design of 50 Drop Down Video (DDV) stations. Incidental records of the species FOCI Black seabream (*Spondyliosoma cantharus*) will also be recorded, but this survey is not designed to obtain data on this feature specifically.

1.3 Survey Team

The Kingmere MCZ survey took place between the 19th and 24th June 2018. The survey team comprised of a collaboration of marine monitoring specialists from the Environment Agency and Natural England. The coastal survey vessel *Solent Guardian,* staffed and operated by Briggs Marine (Figure 2, Annex 7.1) was used to conduct the survey work reported here.

Figure 2. Coastal survey vessel *Solent Guardian,* operated by Briggs Marine.

2. Survey Design and Methods

2.1 Survey Design and Planning Phase

A verification survey using a 0.1m^2 Mini-Hamon grab and underwater camera was undertaken in 2012 within the Kingmere MCZ. Thirty stations yielded valid video data but only one out of 15 stations yielded a valid PSA sample due to the small sediment volumes recovered (further details in Godsell et al., 2013). A full seabed coverage Side-Scan Sonar (SSS) survey was undertaken in 2014 by the Sussex IFCA. A further Multibeam Echosounder bathymetry (MBES) survey was undertaken in five areas within the MCZ in 2015 (Brown, 2017) and Sussex IFCA also undertook a further SSS survey in 2015 in three known bream nest areas within the MCZ but outside of the aggregate consortium's repeat survey sites. Both SSS surveys included associated towed video ground truthing.

The 2018 DDV camera survey design was stratified by the interpreted habitat map produced following the MCZ verification survey (Brown, 2017). Fifty stations targeted areas determined to be 'A3.2 Moderate energy infralittoral rock' to provide information on feature distribution and community structure (Figure 3). Following advice from the Sussex IFCA the survey was scheduled for the latter half of June to avoid the high density of potting undertaken in the planned DDV survey areas and to coincide with the end of the Bream Management Season (1st April-30th June). During the survey, care was taken to prevent disturbance to any Black seabream (*Spondyliosoma cantharus)* nest sites observed (Figure 4).

Sixteen 0.1 m^2 Mini-Hamon grab stations were selected using the interpreted habitat map to target areas of 'A5 Subtidal sediment', with a focus on the area known as the 'paleo channel' located in the western half of the MCZ (Figure 3). Readings of near-seabed temperature, dissolved oxygen and turbidity were obtained at every grab station to provide additional useful information on environmental parameters of the site.

A Before-After-Control-Impact (BACI) style survey was not deemed suitable due to the presence of nearby MCZs, the unique nature of the features within Kingmere MCZ and the lack of benthic data from the 2012 verification survey.

Marine specialists from the Environment Agency and Natural England reviewed the plan. The following hazards were identified from the UKHO Admiralty charts: underwater cables, shallow water depths and underwater obstructions. Sampling stations were relocated to avoid these hazards as far as possible.

A ‘Notification of an exempt activity form’ was submitted to the Marine Management Organisation prior to the survey being carried out.

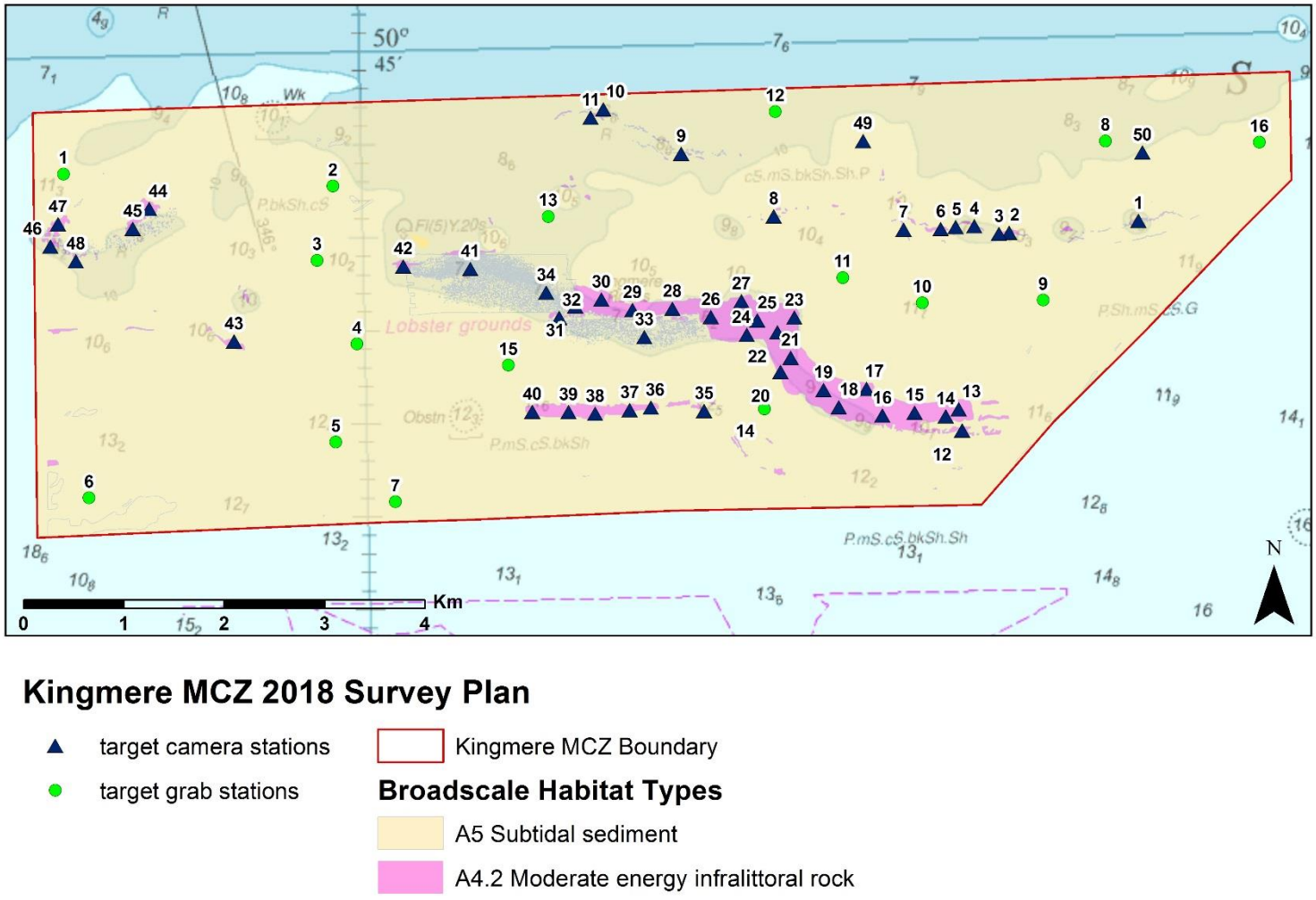

Figure 3. Kingmere MCZ Summer 2018 survey plan, mapped over interpreted broadscale habitat data (Brown, 2017).

Figure 4. Sussex Inshore Fisheries and Conservation Authority Drop Down Video image of Black seabream (*Spondyliosoma cantharus*) nest.

2.2 Sample Collection Methodology

2.2.1 Habitat characterisation and in-situ benthic epifauna identification

Drop video camera equipment (Annex 7.2.2 and 7.2.3) was deployed in accordance with the MESH 'recommended operating guidelines (ROG) for underwater video and photographic imaging techniques' (Coggan et al., 2007). The Subsea Technology & Rentals (STR) SeaSpyder camera system was deployed from the stern of the survey vessel, as shown in Figure 5. Real time navigation data acquisition and manual position fixing when the gear contacted the seabed was captured via Trimble® HYDRO*pro*™ software and logged by the survey officer. The mid-point of the vessel's stern gantry was used as the default offset for position fixing (see Annex 7.2.1 for further details). Video files and digital still images were transmitted via the sea cable to be captured and saved directly to a computer in the survey cabin. The video footage was annotated with time and position using a GPS (SIMRAD MX512 DGPS) referenced video overlay (uncorrected position data). Images of the seabed were captured approximately every 10 to 15 m over a distance of > 150 m. Extra photographs were taken in heterogeneous areas of BSH and if particular habitat/species FOCI were observed. If a BSH habitat boundary was detected towards the end of a tow, the camera deployment was extended to confirm the change. The drop frame depth was controlled via a winch operator receiving instructions from the survey cabin. For further deployment details please see the 'EA underwater video procedure_version 2.4' in Annex 7.3.

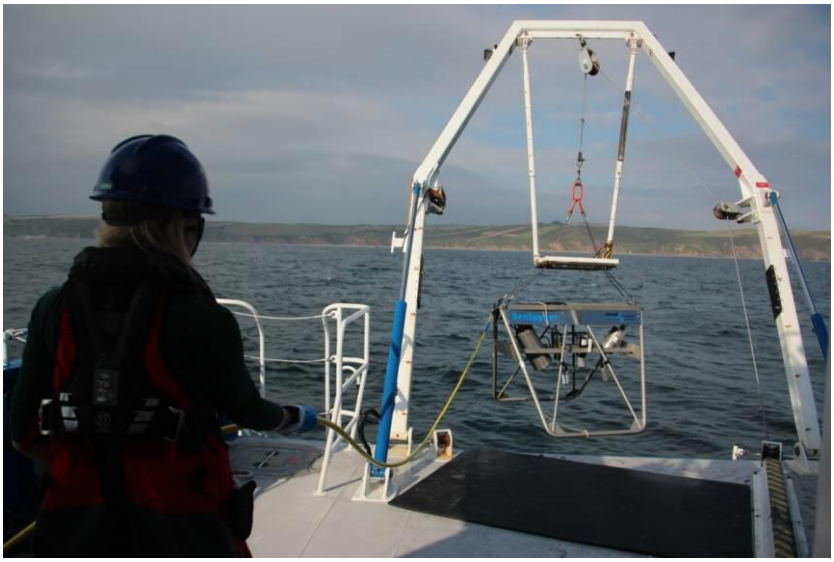

Figure 5. STR SeaSpyder drop camera system being deployed from the stern of the coastal survey vessel.

During each drop camera deployment, a member of the survey team continuously monitored the real-time video feed, recording general station notes, underwater visibility (Annex 7.4), habitat information and fauna observations. Please see Annex 7.5 for a worked example of the video logsheet.

2.2.2 Broadscale Habitat Groundtruthing

A Mini-Hamon grab (Figure 6), with a sampling area of 0.1 m^2, was deployed from the stern gantry of the vessel to collect sediment from the seabed, as described by Ware and Kenny (2011). Sampling positions were recorded (fixed) using Hydropro data acquisition software when the gear contacted the seabed, with the mid-point of the vessel's stern gantry being used as the default offset for position fixing (see Annex 7.2.1 for further details).

Once recovered, the sample was emptied into a suitable container, photographed, and the sample volume measured. A minimum of three attempts was made at each station to obtain a valid grab sample before the station was abandoned. A sample volume of five litres was required to qualify as a valid sample. Samples of less than five litres were ordinarily discarded. When it was difficult to obtain a valid sample however, a sample with less than five litres of material was retained at the discretion of the lead scientist if it was deemed representative of the habitat. For valid samples, a small scoop was used to remove a sub-sample (approx. 0.5 L) of sediment for particle size analysis (PSA). The remaining sample was washed over a 1.0 mm sieve to retain the faunal fraction (Figure 7), photographed and preserved with a buffered 4 % formaldehyde solution for transfer ashore to a specialist laboratory for analysis.

If the volume of sediment collected was insufficient for faunal analysis in each grab attempt made at a particular station, a photograph was taken and, if possible, material removed for PSA. The station was then abandoned.

Figure 6. Mini-Hamon grab (left), and equipment for sieving benthic fauna samples (right)

Preliminary sediment descriptions were recorded for each sample collected. For consistency across all the MCZ benthic habitat surveys, these were based on a pictorial field guide produced by Cefas marine sedimentologists, a modified Folk seabed sediment classification system (Long, 2006) (Figure 7) and the Wentworth Scale (Table 2). These preliminary descriptions aid in the classification of sediment BSHs once results of PSA are available.

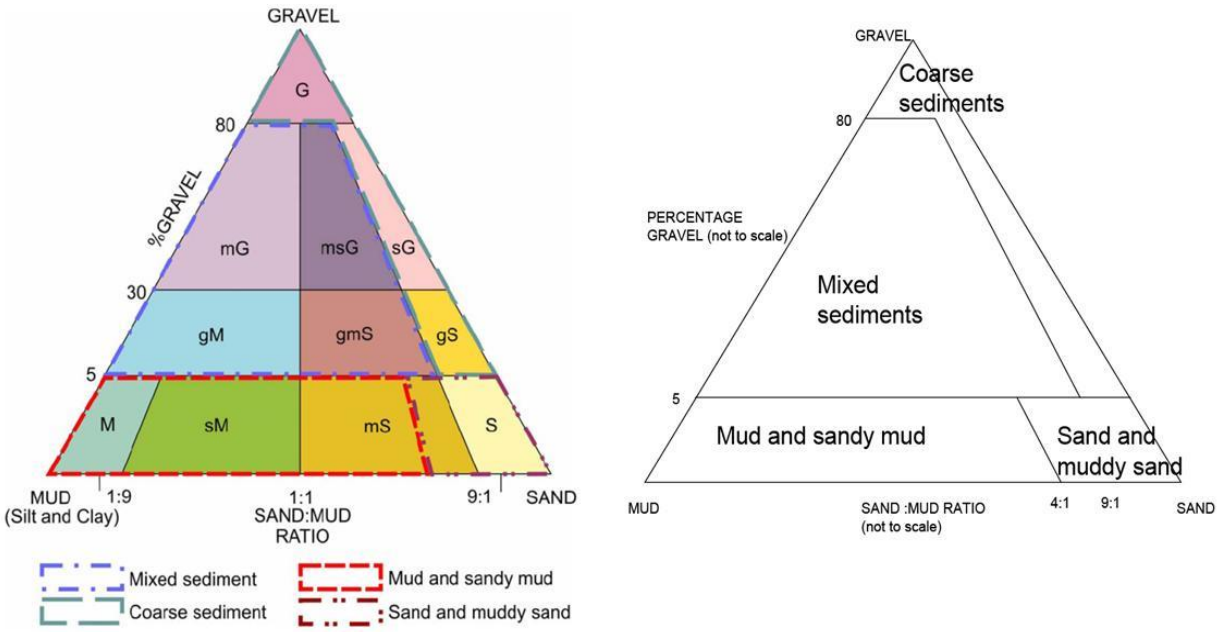

Figure 7. Simplified sediment classification of the Folk triangle for UK SeaMap (Long, 2006).

Table 2. Sediment grade terms and size limits (Wentworth, 1922).

Size	Grade Terms
> 256 mm	Boulder
> 64 - 256 mm	Cobble
4 - 64 mm	Pebble

3. Survey Narrative

Between the 19th and 24th June 2018, the Kingmere MCZ monitoring survey took three 'on-task' days to complete (Table 3). Daily progress reports for each survey day are available from the Environment Agency on request.

Table 3. Summary of equipment deployments during the 2018 Kingmere Marine Conservation Zone monitoring survey.

Equipment	Dates	Duration
Drop camera deployments	21st and 22nd June	2 days
Mini-Hamon grab deployments	23rd June	1 day

Environment Agency survey personnel mobilised to the survey vessel *Solent Guardian* berthed in Brighton Marina on Tuesday 19th June. The STR SeaSpyder camera system was assembled and a successful test deployment carried out in the Marina that afternoon. Following a vessel safety briefing for the scientific staff on the morning of the 20th June, the vessel departed the marina at 06:00 UTC and headed out towards the MCZ survey area. EA personnel were joined by a Lead Marine Advisor from Natural England for the day. Upon leaving the shelter of the marina, the team encountered a 0.7 m swell (Rushington Waverider Buoy). Due to the conditions, rather than passaging the vessel all the way to the site, a test deployment was attempted part way. As the team suspected, sea and wind conditions proved unsuitable for camera survey operations and the vessel returned to the marina. The remainder of the afternoon was spent training staff and conducting data processing tasks.

The following morning, with a smooth sea state (0.3 m swell) the vessel arrived on station at 07:15 UTC. Throughout the day, the team captured digital images and video footage at 27 stations within the Kingmere MCZ. Static fishing gear was observed close to the western site boundary at station GT046 (GT denotes Ground Truth), so for safety, the vessel was repositioned approximately 100m m away from the target position. Good/moderate visibility underwater afforded the team views of both sediment and rock dominated habitat, with poor visibility was encountered at stations GT041, 042 and 043. Camera survey operations ceased at 13:30 UTC and the vessel returned to Brighton Marina, arriving alongside at 15:00 UTC.

The remaining 23 camera stations were surveyed between 07:40 and 13:45 UTC on Friday 22nd June. Stations GT041, 042 and 043 were also re-attempted with much improved visibility encountered. Upon arrival in Brighton Marina, the camera equipment was packed away and the Mini-Hamon grab rigged for survey operations.

On Saturday 23rd June, *Solent Guardian* departed Brighton Marina at 06:00 UTC arriving on station at 07:15 UTC. Grab survey operations commenced at GT066, located at the eastern end of the site. Throughout the morning, coarse sublittoral sediment was encountered across the site hampering the recovery of viable samples for infauna analysis. Grab survey operations ceased at 11:30 UTC after the team had attempted all 16 stations. A summary of the samples collected is presented in Section 4 of this report.

4. Data Acquisition

4.1 Sample collection summary

Samples collected during the 2018 Kingmere MCZ monitoring survey are summarised in Table 4.

Table 4. Summary of samples collected during the 2018 Kingmere Marine Conservation Zone monitoring survey.

Equipment	Data Type	No. of samples
Drop Down Video	Video and still images	50
Mini-Hamon grab	Biota and PSA	9
	PSA only	6

Video footage and digital photographs of the seabed were captured to assess extent and community structure of the infralittoral and chalk features at 50 stations within the Kingmere MCZ boundary (Figure 8). EUNIS Level 3 BSH classifications and species identifications will be assigned to each station following detailed independent analysis of the usable video footage and stills.

Viable grab samples to assess the relative extent, distribution and community composition of the sediment feature were successfully recovered from across the survey area. Samples for both infaunal and particle size analyses were collected at nine stations, using the Mini-Hamon grab (Figure 8). At six stations, the quantity of sediment collected was only sufficient for particle size analysis. One station (GT058) selected for ground truthing yielded only discards. Definitive classification of habitat features present was not possible prior to the results of the more detailed sample analyses carried out in the laboratory being available.

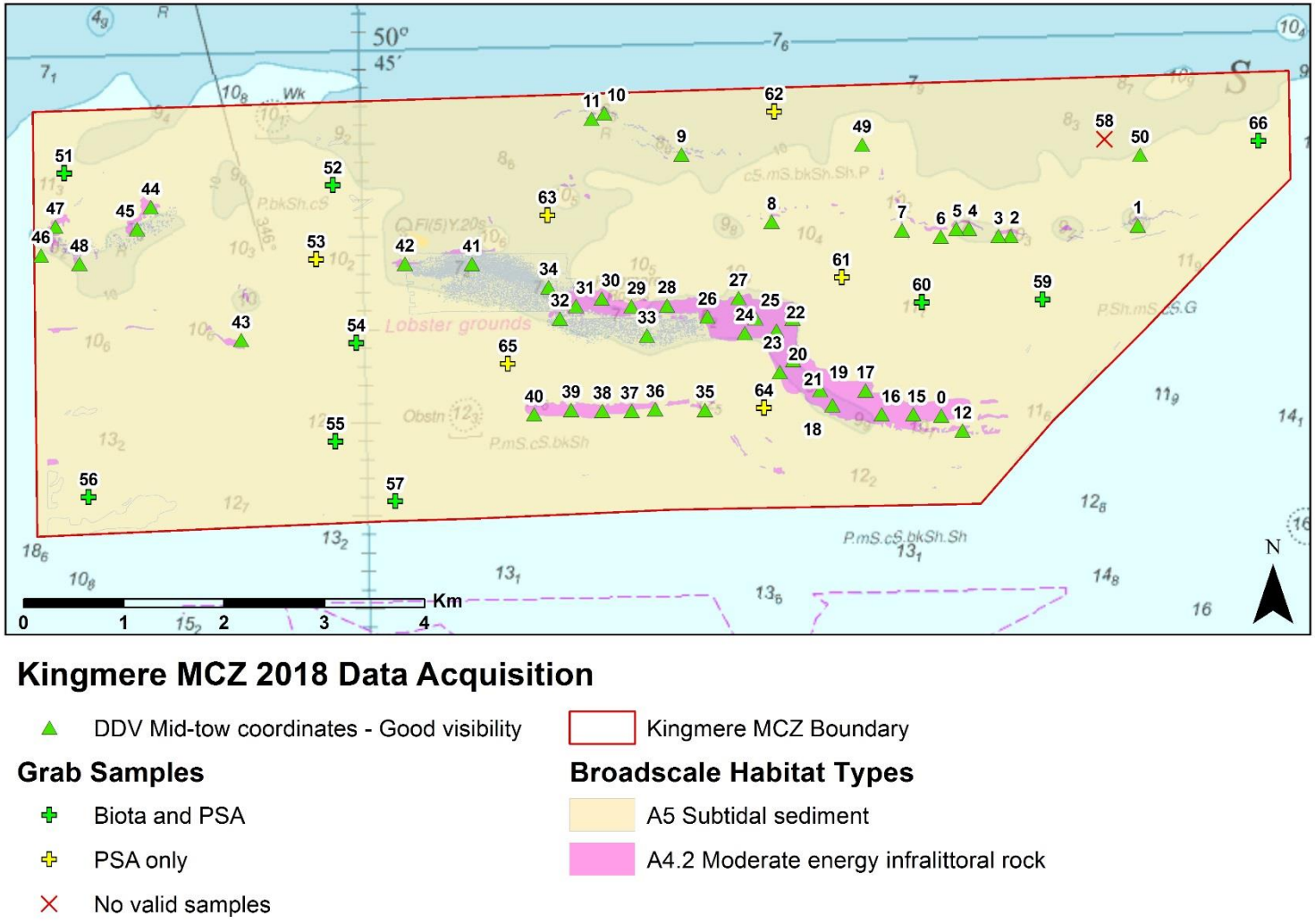

Figure 8. Drop Down Video (DDV) camera and Mini-Hamon grab samples acquired during the Kingmere MCZ Summer 2018 monitoring survey, mapped over interpreted broadscale habitat data (Brown, 2017).

4.2 Evidence of anthropogenic impacts

Static fishing gear was encountered at station GT046 preventing vessel access to the target sampling coordinate. The vessel was relocated by approximately 100 m to avoid propeller entanglement and damage to the gear. The station was located in Zone 4 of the Sussex IFCAs management areas, where potting is permissible however the retention of Black seabream is prohibited (1st April to 30th June inclusive). Further information can be found on Sussex IFCA's website[1].

5. References

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

Wentworth, C.K. (1922). A scale of grade and class terms for clastic sediments. The Journal of Geology 30, 377-392.

6. General List of Abbreviations

BSH	Broadscale Habitat
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CHP	Civil Hydrography Programme
CS	Camera Sledge
CSV	Coastal Survey Vessel
DC	Drop Video Camera
Defra	Department for Environment, Food and Rural Affairs
DG	Day Grab
EA	Environment Agency
ECMAS	Estuarine and Coastal Monitoring & Assessment Service
ENG	Ecological Network Guidance
FOCI	Features Of Conservation Importance
IFCA	Inshore Fisheries and Conservation Authority
MCZ	Marine Conservation Zone
MESH	Mapping European Seabed Habitats
MHM	Mini-Hamon Grab
mSNCI	marine Site of Nature Conservation Importance (Sussex IFCA)
PSA	Particle Size Analysis
REC	Regional Environmental Characterisation
rMCZ	recommended Marine Conservation Zone
RSG	Regional Stakeholder Group
SAC	Special Area of Conservation
SAD	Site Assessment Document
SNCB	Statutory Nature Conservation Body
SOP	Standard Operating Procedure
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
UTC	Coordinated Universal Time

7. Annexes

7.1 Coastal Survey Vessel General Information

Briggs Marine and Environmental Services Ltd.
Seaforth House, Seaforth Place, Burtisland, Fife, KY3 9AX.
Tel: +44(0)1592 872939
Email: marketing@briggsmarine.com
Website: www.briggsmarine.com

Solent Guardian

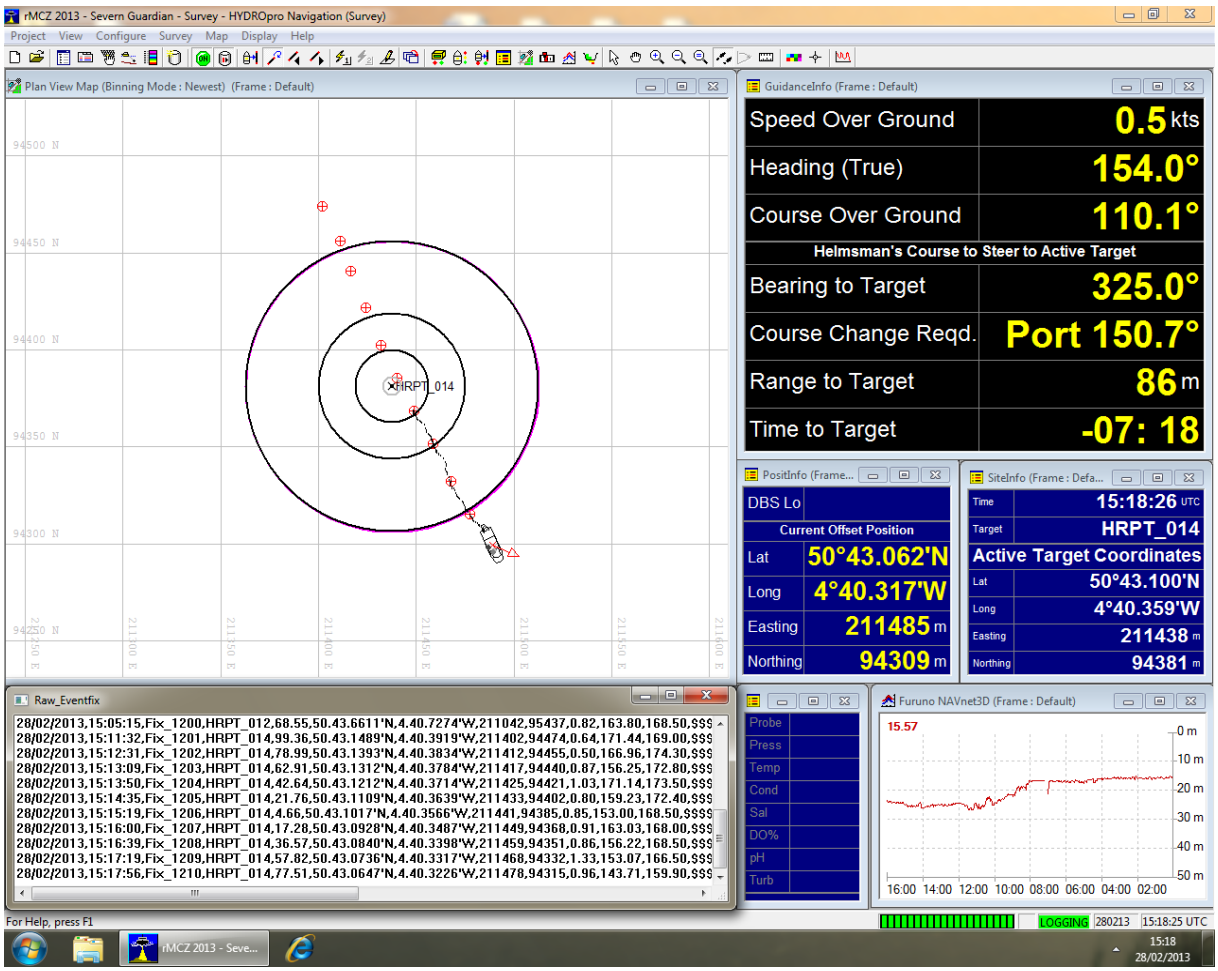
General Information
Length: 18.3 m
Beam: 6.3 m
Draft (baseline): 1.15 m
Draught (skegs): 2.2 m
Displacement (light ship): 22 T
Displacement (full load): 30 T
Service Speed: 16 knots
Maximum Speed: 18 knots

Main Equipment
Main Engines: 2 x Volvo D9-MH 261 bkW @ 2200 rpm. Twin Disc MGX-5075 integral vee-drive
Crew: 7
Scientific Officers: Up to 10
Accommodation: 3 x twin cabins and mess
Data network to share information around vessel
Wet lab/bench for processing water, sediment and ecology samples
Fridge/freezer for sample storage
Dry lab space for two computers and data processing
Large aft deck working area
A frame – 2 T SWL
Double Independent Drum Trawl Winch – 2 T SWL
Hydraulic crane

7.2 Survey Equipment

7.2.1 Navigation and Positioning

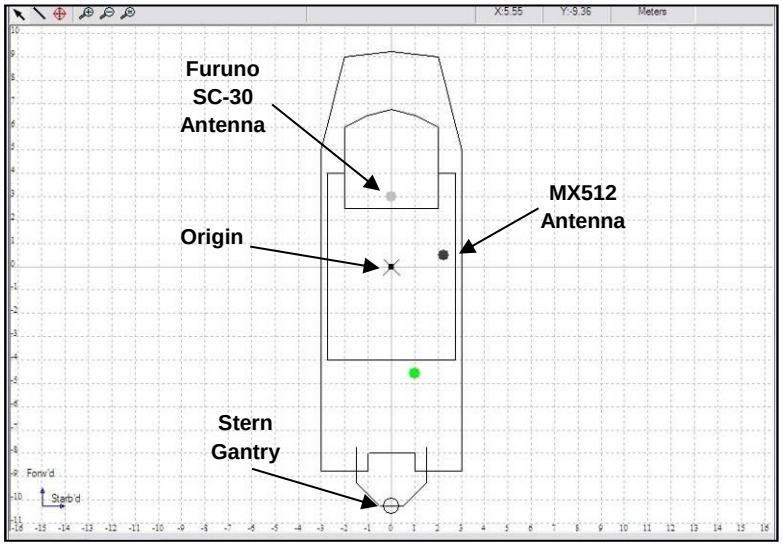
Trimble® HYDRO*pro*™ software is utilised for real-time navigation and survey data acquisition.



Trimble® HYDRO*pro*™ software screen grab displaying real-time navigation and survey data acquisition for a MCZ drop camera survey line.

Navigational and survey equipment offsets on the Coastal Survey Vessel *Solent Guardian* (Environment Agency Estuarine and Coastal Monitoring & Assessment Service).

NMEA Device	Make/Model	Offset Name	Offset (m) X (Starb'd)	Y (Forw'd)	Z +ve (Up)
Gyrocompass	Simrad Robertson RGC50	n/a	-	-	-
Navigation Echosounder	Furuno DFF1, 525ST-MSD transducer	n/a	-	-	-
Survey Echosounder	Kongsberg EA400	n/a	-	-	-
Origin	n/a	Origin	0.0	0.0	0.0
Navigation GPS (Secondary)	Furuno SC-30 DGPS	Furuno SC-30 Antenna	0.0	3.0	0.0
Survey GPS (Primary)	SIMRAD MX512 DGPS	MX512 Antenna	2.25	0.5	0.0
n/a	n/a	Sediment Grab (Stern Gantry)	0.0	-10.25	0.0



Trimble® HYDROpro™ vessel editor screen showing survey equipment offsets from the origin (Environment Agency Estuarine and Coastal Monitoring & Assessment Service).

7.2.2 SeaSpyder Drop Camera System

STR
SUBSEA TECHNOLOGY & RENTALS

SEASPYDER DROP CAMERA SYSTEM

Surface Control Unit & Processor

The SeaSpyder Underwater Drop Camera System is part of a family of field proven camera systems manufactured by STR for the marine survey and environmental communities. The SeaSpyder is ideally suited for operation in shallow-medium water depths with the standard system having a working depth range of 500m. For applications demanding a deeper rating, a "telemetry" model is offered which operates over longer cable lengths for operation down to 1000m. Both models are fitted with a new generation digital SLR Camera offering high resolution digital stills and HD Video for the highest imagery detail. The high specification digital SLR Camera offers an impressive 18.0 mega pixels resolution and both manual and automatic focus for achieving the sharpest images. The captured digital stills are framed with the aid of dedicated real-time video and can be transferred to the topside 'on the fly' for rapid online review.

A 19" rack mount Surface Control Unit and powerful topside processor give full remote control of the camera via the easy to use SeaView GUI software. As standard, the purpose designed camera deployment frame is fitted with a subsea electronics and camera housing, high power underwater flash, an array of four high intensity LED lamps and dual scaling laser pointers to provide accurate imagery scaling. There is the option to install additional sensors with the availability of three user defined serial interfaces with optional power.

SYSTEM FEATURES

- Latest generation 18 Mega Pixels Digital SLR Camera
- Full remote control of camera functions including automatic and manual focus control
- 'On-the-fly' image download
- Real time HD Video
- High intensity LED Lamps
- Dual lasers for precise imagery scaling
- High speed digital telemetry link to camera and sensors
- Additional user defined RS232 ports and 24VDC power interfaces

SEASPYDER SHALLOW WATER CAMERA SYSTEM

SEASPYDER RACK MOUNT PROCESSOR

Hardware: Standard 19" Rack Mountable
Processor: Intel I5 3.1GHz Quad-Core
Memory: 4GB DDR3 RAM
Storage: 500GB hard drive
Interface: DVD-RW, 2 x 1 GigE, 6 x USB, 4 x RS232
Display: 2 x 22" LED HDMI Monitor
Power: 110/240 VAC, 50 Hz (900W)
Dimensions: 19" 3U rack mountable 550 mm (L) x 485 mm (W) x 132mm (H)

SEASPYDER SEAVIEW SOFTWARE

Key Features:

- Remote control of SeaSpyder Digital Stills Camera
- Digital stills and video capture
- "On-the-fly" image download
- External overlay functions
- Realtime composite video
- HD video capture
- Remote control of lights, scaling lasers and additional sensors

SEASPYDER SURFACE CONTROL UNIT

ELECTRICAL

Power Input: 85 – 264 VAC (47 – 63 Hz) ≈ 500 W max
Cable Power: +/- 48VDC Nominal (≈ 400W max.) with built in electrical leakage detector

SIGNAL INTERFACE

Cable Interface #1: High bandwidth VDSL2
Cable Interface #2: Differential Colour Composite Video with automatic cable length compensation

MECHANICAL

Dimensions: 19" 2U rack mountable 550 mm (L) 485 mm (W), 88 mm (H)

SEASPYDER SUBSEA ELECTRONICS

ELECTRICAL

Power Output: 24VDC Output (200 W Max Subsea Power)
Interface: 1 x SeaSpyder Camera & Underwater Flash
4 x 24VDC LED Lamps
2 x RS232 Ports with 24VDC
1 x RS232 Port with 12 VDC/ 24VDC
1 x Dual Scaling Lasers

MECHANICAL

Diameter: 200mm
Length: 409mm
Standard Housing: Hard Anodised Aluminium
Depth Rating: 500m

SEASPYDER 18 MEGA PIXELS UNDERWATER DIGITAL STILLS CAMERA

ELECTRICAL

Image Size: JPEG (720 x 480) to (5184 x 3456)
Image Size: RAW (5184 x 3456)
Video: Full HD (1920 x 1080)
ISO Sensitivity: Auto (100 – 6400), 100 – 12800
Sensor Type: 22.3 x 14.9mm CMOS
Aspect Ratio: 3:2
Shutter Speed: 30 – 1/4000 Sec
Interface: Ethernet

OPTICAL

Standard Lens: 10 – 24mm
Macro Mode: F/3.5 – 4.5
Zoom: Fixed
Focus: Manual & Automatic mode
Angle of View: ≈65° in water
Vertical View: ≈1m²@ 80cm in water

SEASPYDER COLOUR VIDEO CAMERA

ELECTRICAL

Image Resolution: 600 TV lines
Video Format: PAL Composite Colour Video
Sensitivity: 0.01 Lux
Sensor Type: 1/3 Sony Super HAD CCD
Frame Rate: 50 FPS
Video Output: ≈1.3Vpp into 75Ω

OPTICAL

Lens Type: 3.6 mm Wide Angle

SEASPYDER HIGH POWER CAMERA FLASH

ELECTRICAL

Control: TTL control via digital stills camera
Power Input: Power supply via stills camera

MECHANICAL

Diameter: 150mm
Length: 230mm
Weight in Air: 7.6kg
Weight in Water: 3.54kg
Standard Housing: Hard Anodised Aluminium
Depth Rating: 3000 m

SEASPYDER 20W LED LIGHT

ELECTRICAL

Lighting: LED Lamp
Luminous Flux: 1500Lm
Wavelength: Neutral White
Power Input: 24 VDC @ 1.1 A (Built in thermal protection)

MECHANICAL

Diameter: 70mm
Length: 110mm
Weight in Air: 1kg
Weight in Water: 0.58kg
Standard Housing: Hard Anodised Aluminium
Depth Rating: 3000m

SEASPYDER DUAL SCALING SUBSEA LASERS

ELECTRICAL

Power Input: 8 V – 30VDC; 60 m A @ 24VDC

LASER

Type: 2 X Class II Safety Classification (<1 milliwatt output)
Beam Shape: Elliptical (Approx 6 mm Red Dot output)
Beam Divergence: - 0.75mrad
Wavelength: 650nm
Temperature Range: -10°C to 40°C

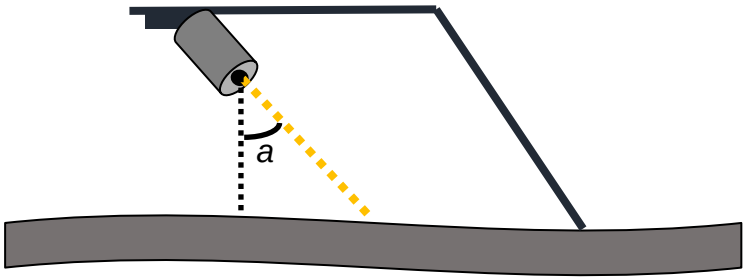
SEASPYDER DROP CAMERA FRAME

MECHANICAL

Length: 2.21m
Width: 1.43m
Height: 1.40m
Weight in Air: 125kg (Inc sensors)

7.2.3 Camera Setup

Manufacturer	Subsea Technology Rentals
Model	**Sea Spyder Drop camera**
Survey Vessel	**Solent Guardian**
Separate video/stills camera	Yes (in same housing)
Approximate video/stills camera line of sight angle (a)	45º
distance of video/stills camera above seabed	55 cm
Flash unit angle relative to the seabed (approx.)	45º
no. of lights (dimmable?)	4 x LED spotlights – non-dimmable
FOV scaling lasers distance apart	4 x laser points arranged in an approx square 23 (left) x 19.5 (furthest from camera) x 19.5 (right) x 20 cm (closest to camera)
Comments: Pinger code	



Camera settings	
Date	**20/06/2018**
Time	**14:00**
Image quality	Large – normal 18 Megapixels
Flash setup	1/3rd (various adjustments made)
Shutter speed	1/80
Aperture size	F8.0
ISO setting	AUTO
White balance	AWB
Light metering mode	Evaluative/Multi-segment [(*)]
Focus	Quick mode, manual selection – centre point selected – click 'ON' and wait for camera to complete focus adjustment. 'ON' will deselect when complete.

7.3 EA underwater video procedure_version 2.4 (STR Systems)

The procedure outlined below has developed through a series of discussions involving the Environment Agency, Cefas and Natural England. Due to the heterogeneous nature of the inshore coastal seabed habitat, strong tidal streams, various underwater hazards and no dynamic positioning system, a flexible approach is recommended for the underwater video camera deployment. The procedure must be used in accordance with the MESH 'recommended operating guidelines (ROG) for underwater video and photographic imaging techniques' (Coggan et al., 2007).

Important points to remember:

- Select stern gantry offset in Hydropro
- Synchronise all survey equipment (camera, laptops, etc.) with primary survey GPS time (UTC).
- Ensure the correct date, station code, STN number, time and position are displayed on the video overlay and Clapperboard.

Overlay Example:
EA ECMAS_2013-0925
WLOB050_STN_25 (annotate if station has been attempted on a previous occasion)
UTC: 133014 (real time feed from survey GPS)
Lat: 5020.6683N (real time feed from survey GPS)
Lon: 00423.5688W (real time feed from survey GPS)

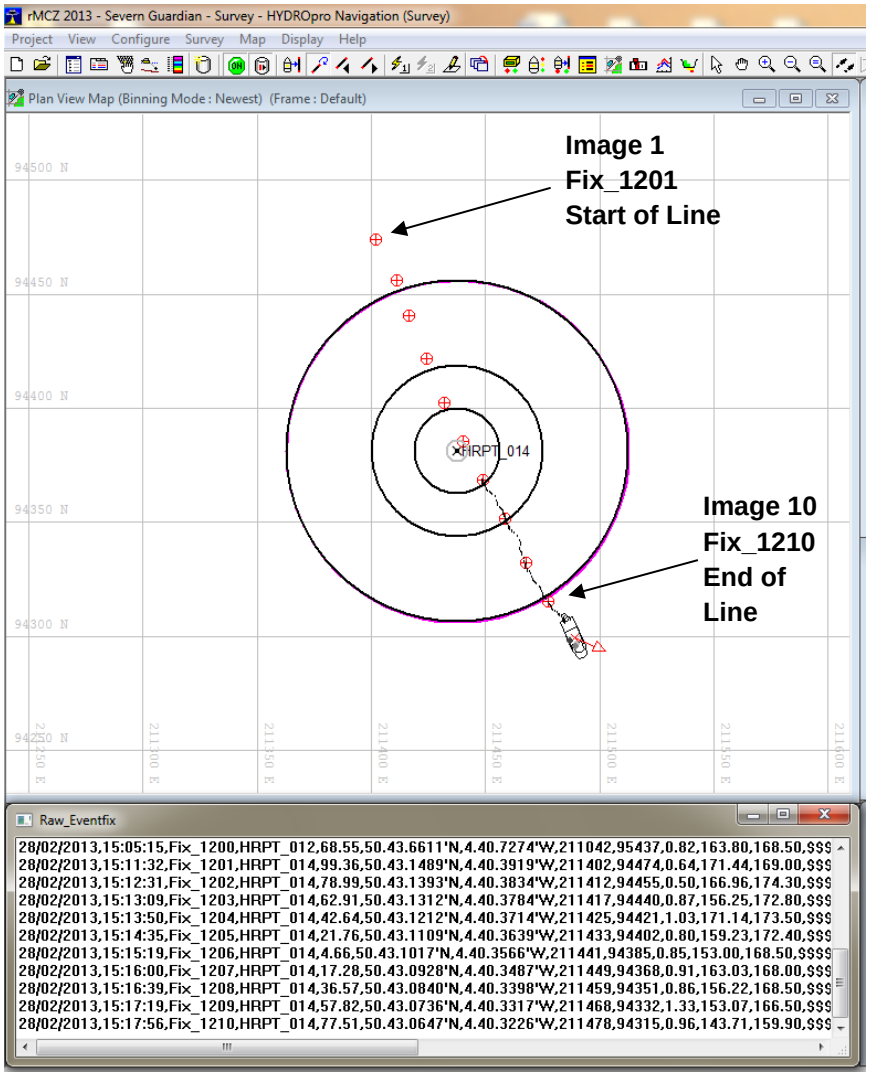
Clapperboard Example:

- Alter the stills prefix to the correct station code.

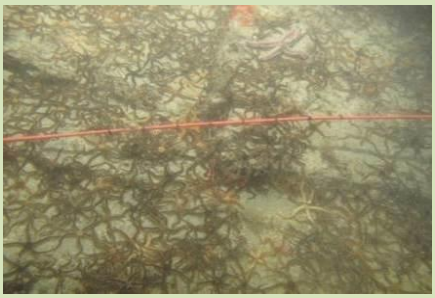
- The field of view scale bar/laser points should be set up/calibrated prior to the survey commencing. Laser pointers are ineffective in moderate/poor visibility conditions; a rope with a visible scale will be required as a replacement
- Set the image resolution to Large Normal (14.7 Mega Pixels, 18 sec upload time)
- Check the camera settings are appropriate for the conditions; the LED lights are on if required and ensure the video is recording throughout the deployment.

- If a broad-scale habitat (BSH) boundary is detected extend the deployment to gather as much information on habitat extent as possible.
- Take extra stills if habitat/species FOCI are observed – note these in the survey log.
- If possible, work a downhill seabed profile to avoid slack cable during deployment.
- Beware of sudden depth changes when surveying rocky areas.
- Abandon the station if survey conditions are hazardous.

Video Camera Type	Survey Conditions	Deployment
Drop down	Good visibility	*Deploy camera initially working across the Hydropro 75 m radius target area, as shown in the diagram below. Hover/rest camera above/on the seabed; take a still every 15 m. If tide/wind conditions do not allow a survey line to be followed across the bull ring, use the outer circle as a guide to ensure a distance of 150 m is covered (minimum) nearby.
	Poor visibility	Hover/rest camera above/on the seabed, take a still every 15 m. If the visibility is very poor, retrieve the equipment after taking 3-4 stills.



7.4 Underwater Visibility Scale

Example image	Scale	Definition
	Excellent	clear, sharp images - no suspended particulate matter
	Good	seabed features and epifauna clearly discernible
	Moderate	seabed features discernible - epifauna difficult to discern
	Poor	both seabed features and epifauna difficult to discern, low confidence in preliminary habitat assessment
	Very Poor	no seabed features or epifauna visible

7.5 MCZ Video logsheet

MCZ Video Logsheet (v1)

Station data

Contract Code: C5433 Vessel: Solent Guardian Date: 09/04/2016

MCZ Name: Mounts Bay Station Code: MNTB071

Nav-Log filename: SW 2016-0409 SL_log Sampling Gear: DC Water Depth: 10·5 m

Cable Out: _____ (metres). Speed Over Ground (SOG): 1·0 (knots)

Notes on Station:
(including any times & adjustments to Cable Out)

Position Reference Point: Stern gantry

Sample data

Digital Video Tape label: n/a

Filename on Hard-Drive: MNTB_2GDK70416_GT071_STN_1_AI_153751

No. of camera stills: 14 Stills folder name: GT071_STN_1

	GPS Time hh:mm		Fix No	Position in Lat/Long (WGS84)	DV tape counter Mins	Secs
Start of Video (SOV)	15	40	3862	50° 06·3266' N; 5° 32·2924' W	n/a	n/a
End of Video (EOV)	15	45	3875	50° 06·3893' N; 5° 32·2093' W	n/a	n/a

Visual / Video notes: (ground-type, terrain, visibility, species, FOCI, sketch of transect)

Broad-scale habitats observed

Infralittoral Rock ✓		Circalittoral Rock		Sediment habitats		Others	
high energy		high energy		subtidal mixed		macrophyte dominated sed's	✓
mod.energy		mod.energy		subtidal coarse			
low energy		low energy		subtidal mud		biogenic reef	
				subtidal sand	✓	deep-sea bed	

Completed by: K· Arnold Checked by: N· Godsell Entered by: K· Arnold

7.6 Video Survey Metadata

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	07:15:10	GT050_A1	50.73947	-0.38951	1	4567	Sol (Start of Line)	KNMR_2GDK70618_GT050_STN_1_A1_0001_011538	14.91	1.23
21/06/2018	07:15:27	GT050_A1	50.73939	-0.38958	1	4568		KNMR_2GDK70618_GT050_STN_1_A1_0002_011604	15.02	1.13
21/06/2018	07:15:39	GT050_A1	50.73934	-0.38963	1	4569		KNMR_2GDK70618_GT050_STN_1_A1_0003_011610	15.02	1.02
21/06/2018	07:15:49	GT050_A1	50.73930	-0.38967	1	4570		KNMR_2GDK70618_GT050_STN_1_A1_0004_011624	15.08	1.00
21/06/2018	07:15:59	GT050_A1	50.73926	-0.38970	1	4571		KNMR_2GDK70618_GT050_STN_1_A1_0005_011636	14.99	1.03
21/06/2018	07:16:12	GT050_A1	50.73920	-0.38975	1	4572		KNMR_2GDK70618_GT050_STN_1_A1_0006_011647	15.14	1.14
21/06/2018	07:16:24	GT050_A1	50.73913	-0.38978	1	4573		KNMR_2GDK70618_GT050_STN_1_A1_0007_011656	14.82	1.20
21/06/2018	07:16:35	GT050_A1	50.73909	-0.38981	1	4574		KNMR_2GDK70618_GT050_STN_1_A1_0008_011716	14.79	1.22
21/06/2018	07:16:45	GT050_A1	50.73902	-0.38984	1	4575		KNMR_2GDK70618_GT050_STN_1_A1_0009_011736	14.81	1.29
21/06/2018	07:17:04	GT050_A1	50.73893	-0.38991	1	4576		KNMR_2GDK70618_GT050_STN_1_A1_0010_011751	14.77	1.24
21/06/2018	07:17:25	GT050_A1	50.73883	-0.38997	1	4577		KNMR_2GDK70618_GT050_STN_1_A1_0011_011811	14.70	1.01
21/06/2018	07:17:39	GT050_A1	50.73877	-0.39001	1	4578		KNMR_2GDK70618_GT050_STN_1_A1_0012_011827	14.62	0.94
21/06/2018	07:18:00	GT050_A1	50.73871	-0.39010	1	4579		KNMR_2GDK70618_GT050_STN_1_A1_0013_011843	14.49	0.84
21/06/2018	07:18:16	GT050_A1	50.73866	-0.39015	1	4580		KNMR_2GDK70618_GT050_STN_1_A1_0014_011857	14.49	0.90
21/06/2018	07:18:31	GT050_A1	50.73859	-0.39019	1	4581		KNMR_2GDK70618_GT050_STN_1_A1_0015_011917	14.46	1.06
21/06/2018	07:18:46	GT050_A1	50.73851	-0.39021	1	4582		No image	14.69	1.16
21/06/2018	07:19:05	GT050_A1	50.73840	-0.39025	1	4583		KNMR_2GDK70618_GT050_STN_1_A1_0016_011947	14.88	1.16
21/06/2018	07:19:36	GT050_A1	50.73825	-0.39026	1	4584	EoL (End of Line)	KNMR_2GDK70618_GT050_STN_1_A1_0017_012000	15.35	1.03
21/06/2018	07:34:49	GT001_A1	50.73342	-0.38989	2	4585	SoL	No image	13.21	1.22
21/06/2018	07:36:02	GT001_A1	50.73313	-0.39011	2	4586		KNMR_2GDK70618_GT001_STN_2_A1_0018_013614	15.10	1.14
21/06/2018	07:36:12	GT001_A1	50.73306	-0.39013	2	4587		KNMR_2GDK70618_GT001_STN_2_A1_0019_013623	15.14	1.30
21/06/2018	07:36:47	GT001_A1	50.73284	-0.39023	2	4588		KNMR_2GDK70618_GT001_STN_2_A1_0020_013658	15.49	1.46
21/06/2018	07:37:02	GT001_A1	50.73277	-0.39028	2	4589		KNMR_2GDK70618_GT001_STN_2_A1_0021_013713	15.68	1.22
21/06/2018	07:37:22	GT001_A1	50.73267	-0.39035	2	4590		KNMR_2GDK70618_GT001_STN_2_A1_0022_013734	15.57	1.05
21/06/2018	07:37:37	GT001_A1	50.73261	-0.39040	2	4591		KNMR_2GDK70618_GT001_STN_2_A1_0023_013748	15.91	1.05
21/06/2018	07:37:49	GT001_A1	50.73256	-0.39044	2	4592		KNMR_2GDK70618_GT001_STN_2_A1_0024_013801	15.67	1.06
21/06/2018	07:38:06	GT001_A1	50.73248	-0.39051	2	4593		KNMR_2GDK70618_GT001_STN_2_A1_0025_013817	15.73	1.12
21/06/2018	07:38:30	GT001_A1	50.73235	-0.39056	2	4594		KNMR_2GDK70618_GT001_STN_2_A1_0026_013842	16.06	1.28
21/06/2018	07:38:49	GT001_A1	50.73224	-0.39062	2	4595		KNMR_2GDK70618_GT001_STN_2_A1_0027_013900	16.12	1.27

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	07:39:14	GT001_A1	50.73209	-0.39070	2	4596	EoL	KNMR_2GDK70618_GT001_STN_2_A1_0028_013926	15.95	1.37
21/06/2018	07:51:42	GT002_A1	50.73253	-0.40789	3	4597	SoL	KNMR_2GDK70618_GT002_STN_3_A1_0029_015225	12.41	1.53
21/06/2018	07:52:13	GT002_A1	50.73239	-0.40804	3	4598		KNMR_2GDK70618_GT002_STN_3_A1_0030_015246	12.98	1.09
21/06/2018	07:52:35	GT002_A1	50.73231	-0.40813	3	4599		KNMR_2GDK70618_GT002_STN_3_A1_0031_015259	13.50	0.98
21/06/2018	07:52:48	GT002_A1	50.73226	-0.40818	3	4600		KNMR_2GDK70618_GT002_STN_3_A1_0032_015334	13.67	0.99
21/06/2018	07:53:23	GT002_A1	50.73211	-0.40831	3	4601		KNMR_2GDK70618_GT002_STN_3_A1_0033_015357	14.34	1.13
21/06/2018	07:53:45	GT002_A1	50.73199	-0.40839	3	4602		KNMR_2GDK70618_GT002_STN_3_A1_0034_015417	14.52	1.27
21/06/2018	07:54:05	GT002_A1	50.73187	-0.40844	3	4603		KNMR_2GDK70618_GT002_STN_3_A1_0035_015451	14.78	1.26
21/06/2018	07:54:40	GT002_A1	50.73169	-0.40852	3	4604		KNMR_2GDK70618_GT002_STN_3_A1_0036_015517	15.26	1.17
21/06/2018	07:55:06	GT002_A1	50.73155	-0.40858	3	4605		KNMR_2GDK70618_GT002_STN_3_A1_0037_015546	15.58	1.16
21/06/2018	07:55:34	GT002_A1	50.73141	-0.40868	3	4606		KNMR_2GDK70618_GT002_STN_3_A1_0038_015602	15.81	1.14
21/06/2018	07:55:50	GT002_A1	50.73134	-0.40871	3	4607	EoL	No image	15.71	1.00
21/06/2018	08:01:05	GT003_A1	50.73262	-0.40969	4	4608	SoL	KNMR_2GDK70618_GT003_STN_4_A1_0039_020116	14.85	1.67
21/06/2018	08:01:27	GT003_A1	50.73248	-0.40981	4	4609		KNMR_2GDK70618_GT003_STN_4_A1_0040_020138	12.51	1.57
21/06/2018	08:02:16	GT003_A1	50.73221	-0.40998	4	4610		KNMR_2GDK70618_GT003_STN_4_A1_0041_020227	13.24	1.05
21/06/2018	08:02:36	GT003_A1	50.73212	-0.41004	4	4611		KNMR_2GDK70618_GT003_STN_4_A1_0042_020247	13.67	1.06
21/06/2018	08:02:57	GT003_A1	50.73201	-0.41008	4	4612		KNMR_2GDK70618_GT003_STN_4_A1_0043_020308	14.12	1.35
21/06/2018	08:03:21	GT003_A1	50.73185	-0.41014	4	4613		KNMR_2GDK70618_GT003_STN_4_A1_0044_020332	14.58	1.50
21/06/2018	08:03:42	GT003_A1	50.73173	-0.41022	4	4614		KNMR_2GDK70618_GT003_STN_4_A1_0045_020354	14.90	1.21
21/06/2018	08:04:10	GT003_A1	50.73158	-0.41032	4	4615		KNMR_2GDK70618_GT003_STN_4_A1_0046_020422	15.12	1.20
21/06/2018	08:04:41	GT003_A1	50.73145	-0.41041	4	4616		KNMR_2GDK70618_GT003_STN_4_A1_0047_020452	15.32	1.09
21/06/2018	08:05:10	GT003_A1	50.73129	-0.41049	4	4617	EoL	KNMR_2GDK70618_GT003_STN_4_A1_0048_020521	15.41	1.34
21/06/2018	08:40:48	GT004_A1	50.73334	-0.41388	5	4618	SoL	KNMR_2GDK70618_GT004_STN_5_A1_0049_024100	13.73	1.12
21/06/2018	08:41:30	GT004_A1	50.73314	-0.41398	5	4619		KNMR_2GDK70618_GT004_STN_5_A1_0050_024142	10.18	1.04
21/06/2018	08:42:00	GT004_A1	50.73299	-0.41405	5	4620		KNMR_2GDK70618_GT004_STN_5_A1_0051_024209	10.58	1.23
21/06/2018	08:42:25	GT004_A1	50.73286	-0.41412	5	4621		KNMR_2GDK70618_GT004_STN_5_A1_0052_024236	11.03	1.13
21/06/2018	08:42:55	GT004_A1	50.73272	-0.41422	5	4622		KNMR_2GDK70618_GT004_STN_5_A1_0053_024304	11.57	1.22
21/06/2018	08:42:55	GT004_A1	50.73272	-0.41422	5	4623		KNMR_2GDK70618_GT004_STN_5_A1_0054_024327	11.75	1.22
21/06/2018	08:43:16	GT004_A1	50.73261	-0.41431	5	4624		KNMR_2GDK70618_GT004_STN_5_A1_0055_024354	12.05	1.24
21/06/2018	08:43:44	GT004_A1	50.73246	-0.41439	5	4625		KNMR_2GDK70618_GT004_STN_5_A1_0056_024419	12.56	1.26
21/06/2018	08:44:08	GT004_A1	50.73233	-0.41448	5	4626		KNMR_2GDK70618_GT004_STN_5_A1_0057_024442	12.97	1.19
21/06/2018	08:44:31	GT004_A1	50.73220	-0.41454	5	4627		KNMR_2GDK70618_GT004_STN_5_A1_0058_024507	13.43	1.21
21/06/2018	08:44:55	GT004_A1	50.73209	-0.41462	5	4628	Eol	No image	13.67	1.10
21/06/2018	08:50:28	GT005_A1	50.73329	-0.41580	6	4629	SoL	KNMR_2GDK70618_GT005_STN_6_A1_0059_025058	10.03	1.28

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	08:50:47	GT005_A1	50.73320	-0.41587	6	4630		KNMR_2GDK70618_GT005_STN_6_A1_0060_025126	10.41	0.97
21/06/2018	08:51:19	GT005_A1	50.73309	-0.41594	6	4631		KNMR_2GDK70618_GT005_STN_6_A1_0061_025207	10.62	0.76
21/06/2018	08:51:56	GT005_A1	50.73296	-0.41601	6	4632		KNMR_2GDK70618_GT005_STN_6_A1_0062_025240	11.66	0.77
21/06/2018	08:52:29	GT005_A1	50.73285	-0.41604	6	4633		KNMR_2GDK70618_GT005_STN_6_A1_0063_025308	11.91	0.76
21/06/2018	08:53:00	GT005_A1	50.73273	-0.41605	6	4634		KNMR_2GDK70618_GT005_STN_6_A1_0064_025342	12.26	0.80
21/06/2018	08:53:31	GT005_A1	50.73263	-0.41604	6	4635		KNMR_2GDK70618_GT005_STN_6_A1_0065_025419	12.47	0.63
21/06/2018	08:54:08	GT005_A1	50.73250	-0.41606	6	4636		KNMR_2GDK70618_GT005_STN_6_A1_0066_025506	12.86	0.80
21/06/2018	08:54:55	GT005_A1	50.73233	-0.41610	6	4637		KNMR_2GDK70618_GT005_STN_6_A1_0067_025542	13.02	0.82
21/06/2018	08:55:31	GT005_A1	50.73219	-0.41615	6	4638		KNMR_2GDK70618_GT005_STN_6_A1_0068_025623	13.46	0.88
21/06/2018	08:56:12	GT005_A1	50.73201	-0.41619	6	4639	EoI	No image	13.90	1.01
21/06/2018	09:03:19	GT006_A1	50.73280	-0.41819	7	4640	SoI	KNMR_2GDK70618_GT006_STN_7_A1_0069_030330	13.39	1.32
21/06/2018	09:03:43	GT006_A1	50.73268	-0.41820	7	4641		KNMR_2GDK70618_GT006_STN_7_A1_0070_030354	13.54	1.09
21/06/2018	09:03:59	GT006_A1	50.73259	-0.41821	7	4642		KNMR_2GDK70618_GT006_STN_7_A1_0071_030410	13.82	1.16
21/06/2018	09:04:26	GT006_A1	50.73244	-0.41822	7	4643		KNMR_2GDK70618_GT006_STN_7_A1_0072_030437	13.82	1.21
21/06/2018	09:05:01	GT006_A1	50.73227	-0.41823	7	4644		KNMR_2GDK70618_GT006_STN_7_A1_0073_030511	13.97	1.22
21/06/2018	09:05:39	GT006_A1	50.73208	-0.41823	7	4645		KNMR_2GDK70618_GT006_STN_7_A1_0074_030550	14.08	1.05
21/06/2018	09:06:16	GT006_A1	50.73192	-0.41824	7	4646		KNMR_2GDK70618_GT006_STN_7_A1_0075_030626	13.96	0.91
21/06/2018	09:06:49	GT006_A1	50.73180	-0.41829	7	4647		KNMR_2GDK70618_GT006_STN_7_A1_0076_030700	14.04	0.81
21/06/2018	09:07:30	GT006_A1	50.73166	-0.41834	7	4648		KNMR_2GDK70618_GT006_STN_7_A1_0077_030741	14.27	0.68
21/06/2018	09:08:18	GT006_A1	50.73151	-0.41837	7	4649		KNMR_2GDK70618_GT006_STN_7_A1_0078_030829	14.02	0.71
21/06/2018	09:08:45	GT006_A1	50.73143	-0.41838	7	4650	EoL	KNMR_2GDK70618_GT006_STN_7_A1_0079_030855	14.01	0.64
21/06/2018	09:15:32	GT007_A1	50.73340	-0.42357	8	4651	SoI	KNMR_2GDK70618_GT007_STN_8_A1_0080_031543	13.84	1.45
21/06/2018	09:16:10	GT007_A1	50.73322	-0.42358	8	4652		KNMR_2GDK70618_GT007_STN_8_A1_0081_031621	13.77	0.88
21/06/2018	09:16:49	GT007_A1	50.73309	-0.42363	8	4653		KNMR_2GDK70618_GT007_STN_8_A1_0082_031659	13.37	0.75
21/06/2018	09:17:23	GT007_A1	50.73298	-0.42368	8	4654		KNMR_2GDK70618_GT007_STN_8_A1_0083_031734	13.62	0.68
21/06/2018	09:18:00	GT007_A1	50.73285	-0.42367	8	4655		KNMR_2GDK70618_GT007_STN_8_A1_0084_031811	13.77	0.76
21/06/2018	09:18:42	GT007_A1	50.73271	-0.42369	8	4656		KNMR_2GDK70618_GT007_STN_8_A1_0085_031853	13.78	0.63
21/06/2018	09:19:38	GT007_A1	50.73255	-0.42373	8	4657		KNMR_2GDK70618_GT007_STN_8_A1_0086_031948	13.88	0.71
21/06/2018	09:20:27	GT007_A1	50.73239	-0.42372	8	4658		KNMR_2GDK70618_GT007_STN_8_A1_0087_032037	13.86	0.68
21/06/2018	09:21:08	GT007_A1	50.73227	-0.42372	8	4659		KNMR_2GDK70618_GT007_STN_8_A1_0088_032119	14.03	0.68
21/06/2018	09:21:48	GT007_A1	50.73213	-0.42370	8	4660		KNMR_2GDK70618_GT007_STN_8_A1_0089_032159	13.94	0.72
21/06/2018	09:22:19	GT007_A1	50.73204	-0.42373	8	4661	EOL	KNMR_2GDK70618_GT007_STN_8_A1_0090_032230	13.90	0.60
21/06/2018	09:30:48	GT049_A1	50.74133	-0.42904	9	4662	SoL	KNMR_2GDK70618_GT049_STN_9_A1_0091_033058	13.21	1.10
21/06/2018	09:31:14	GT049_A1	50.74120	-0.42906	9	4663		KNMR_2GDK70618_GT049_STN_9_A1_0092_033125	13.24	1.00

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	09:31:46	GT049_A1	50.74107	-0.42909	9	4664		KNMR_2GDK70618_GT049_STN_9_A1_0093_033157	13.16	0.86
21/06/2018	09:32:28	GT049_A1	50.74092	-0.42908	9	4665		KNMR_2GDK70618_GT049_STN_9_A1_0094_033239	13.20	0.74
21/06/2018	09:33:26	GT049_A1	50.74079	-0.42904	9	4666		KNMR_2GDK70618_GT049_STN_9_A1_0095_033337	13.22	0.47
21/06/2018	09:34:54	GT049_A1	50.74060	-0.42905	9	4667		KNMR_2GDK70618_GT049_STN_9_A1_0096_033505	13.26	0.47
21/06/2018	09:35:34	GT049_A1	50.74046	-0.42908	9	4668		KNMR_2GDK70618_GT049_STN_9_A1_0097_033544	13.74	0.69
21/06/2018	09:36:09	GT049_A1	50.74030	-0.42914	9	4669		KNMR_2GDK70618_GT049_STN_9_A1_0098_033620	12.57	1.05
21/06/2018	09:36:47	GT049_A1	50.74018	-0.42919	9	4670		KNMR_2GDK70618_GT049_STN_9_A1_0099_033658	12.84	0.80
21/06/2018	09:37:28	GT049_A1	50.74001	-0.42927	9	4671		KNMR_2GDK70618_GT049_STN_9_A1_0100_033739	12.95	0.85
21/06/2018	09:38:15	GT049_A1	50.73982	-0.42932	9	4672		KNMR_2GDK70618_GT049_STN_9_A1_0101_033826	13.36	0.96
21/06/2018	09:38:38	GT049_A1	50.73975	-0.42934	9	4673	Eol	KNMR_2GDK70618_GT049_STN_9_A1_0102_033848	13.24	0.69
21/06/2018	09:44:57	GT008_A1	50.73465	-0.44210	10	4674	Sol	KNMR_2GDK70618_GT008_STN_10_A1_0103_034532	12.71	1.26
21/06/2018	09:45:21	GT008_A1	50.73454	-0.44209	10	4675		KNMR_2GDK70618_GT008_STN_10_A1_0104_034611	12.64	0.90
21/06/2018	09:46:00	GT008_A1	50.73436	-0.44201	10	4676		KNMR_2GDK70618_GT008_STN_10_A1_0105_034659	12.51	1.12
21/06/2018	09:46:49	GT008_A1	50.73417	-0.44199	10	4677		KNMR_2GDK70618_GT008_STN_10_A1_0106_034736	12.48	0.91
21/06/2018	09:47:25	GT008_A1	50.73404	-0.44199	10	4678		KNMR_2GDK70618_GT008_STN_10_A1_0107_034821	12.69	0.74
21/06/2018	09:48:10	GT008_A1	50.73388	-0.44204	10	4679		KNMR_2GDK70618_GT008_STN_10_A1_0108_034912	12.73	0.74
21/06/2018	09:49:01	GT008_A1	50.73373	-0.44212	10	4680		KNMR_2GDK70618_GT008_STN_10_A1_0109_035002	12.62	0.60
21/06/2018	09:49:51	GT008_A1	50.73358	-0.44217	10	4681		KNMR_2GDK70618_GT008_STN_10_A1_0110_035038	12.67	1.08
21/06/2018	09:50:28	GT008_A1	50.73342	-0.44222	10	4682		KNMR_2GDK70618_GT008_STN_10_A1_0111_035116	12.63	0.91
21/06/2018	09:51:05	GT008_A1	50.73326	-0.44226	10	4683		KNMR_2GDK70618_GT008_STN_10_A1_0112_035139	12.62	1.00
21/06/2018	09:51:28	GT008_A1	50.73316	-0.44229	10	4684		KNMR_2GDK70618_GT008_STN_10_A1_0113_035212	12.55	0.96
21/06/2018	09:52:02	GT008_A1	50.73302	-0.44233	10	4685	Eol	No image	12.61	0.80

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	10:00:09	GT009_A1	50.74060	-0.45466	11	4686	SoL	KNMR_2GDK70618_GT009_STN_11_A1_0114_035947	11.63	0.74
21/06/2018	10:00:41	GT009_A1	50.74044	-0.45464	11	4687		KNMR_2GDK70618_GT009_STN_11_A1_0115_040020	12.07	1.17
21/06/2018	10:01:08	GT009_A1	50.74029	-0.45464	11	4688		KNMR_2GDK70618_GT009_STN_11_A1_0116_040051	11.97	1.02
21/06/2018	10:01:43	GT009_A1	50.74016	-0.45467	11	4689		KNMR_2GDK70618_GT009_STN_11_A1_0117_040119	11.97	0.87
21/06/2018	10:02:00	GT009_A1	50.74009	-0.45467	11	4690		KNMR_2GDK70618_GT009_STN_11_A1_0118_040154	12.16	0.91
21/06/2018	10:02:40	GT009_A1	50.73992	-0.45466	11	4691		KNMR_2GDK70618_GT009_STN_11_A1_0119_040210	12.17	0.83
21/06/2018	10:03:27	GT009_A1	50.73978	-0.45462	11	4692		KNMR_2GDK70618_GT009_STN_11_A1_0120_040251	12.08	0.54
21/06/2018	10:04:30	GT009_A1	50.73964	-0.45455	11	4693		KNMR_2GDK70618_GT009_STN_11_A1_0121_040338	12.19	0.70
21/06/2018	10:04:57	GT009_A1	50.73949	-0.45456	11	4694		KNMR_2GDK70618_GT009_STN_11_A1_0122_040440	12.07	1.11
21/06/2018	10:05:33	GT009_A1	50.73935	-0.45458	11	4695		KNMR_2GDK70618_GT009_STN_11_A1_0123_040507	12.14	0.78
21/06/2018	10:06:05	GT009_A1	50.73919	-0.45473	11	4696		KNMR_2GDK70618_GT009_STN_11_A1_0124_040544	12.13	1.10
21/06/2018	10:06:37	GT009_A1	50.73907	-0.45480	11	4697	EOL	KNMR_2GDK70618_GT009_STN_11_A1_0125_040616	12.15	0.77
21/06/2018	10:13:50	GT010_A1	50.74470	-0.46564	12	4698	Sol	KNMR_2GDK70618_GT009_STN_11_A1_0126_040648	10.83	1.07
21/06/2018	10:14:25	GT010_A1	50.74457	-0.46555	12	4699		KNMR_2GDK70618_GT010_STN_12_A1_0127_041436	10.95	0.97
21/06/2018	10:15:20	GT010_A1	50.74428	-0.46538	12	4700		KNMR_2GDK70618_GT010_STN_12_A1_0128_041530	8.75	1.01
21/06/2018	10:15:44	GT010_A1	50.74420	-0.46539	12	4701		KNMR_2GDK70618_GT010_STN_12_A1_0129_041555	9.17	0.76
21/06/2018	10:16:12	GT010_A1	50.74402	-0.46541	12	4702		KNMR_2GDK70618_GT010_STN_12_A1_0130_041623	9.81	1.46

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	10:16:38	GT010_A1	50.74389	-0.46545	12	4703		KNMR_2GDK70618_GT010_STN_12_A1_0131_041649	10.33	0.96
21/06/2018	10:17:09	GT010_A1	50.74377	-0.46544	12	4704		KNMR_2GDK70618_GT010_STN_12_A1_0132_041720	10.51	0.71
21/06/2018	10:17:54	GT010_A1	50.74362	-0.46543	12	4705		KNMR_2GDK70618_GT010_STN_12_A1_0133_041804	10.83	0.93
21/06/2018	10:18:38	GT010_A1	50.74345	-0.46546	12	4706		KNMR_2GDK70618_GT010_STN_12_A1_0134_041849	10.90	1.19
21/06/2018	10:19:07	GT010_A1	50.74331	-0.46553	12	4707		KNMR_2GDK70618_GT010_STN_12_A1_0135_041917	10.94	1.06
21/06/2018	10:19:34	GT010_A1	50.74321	-0.46564	12	4708		KNMR_2GDK70618_GT010_STN_12_A1_0136_041945	10.91	0.84
21/06/2018	10:20:00	GT010_A1	50.74313	-0.46570	12	4709	EOL	KNMR_2GDK70618_GT010_STN_12_A1_0137_042010	11.08	0.67
21/06/2018	10:24:00	GT011_A1	50.74408	-0.46751	13	4710	SOL	No image	10.39	0.81
21/06/2018	10:24:22	GT011_A1	50.74400	-0.46743	13	4711		KNMR_2GDK70618_GT011_STN_13_A1_0138_042433	10.52	1.33
21/06/2018	10:24:56	GT011_A1	50.74382	-0.46730	13	4712		KNMR_2GDK70618_GT011_STN_13_A1_0139_042507	10.62	1.13
21/06/2018	10:25:42	GT011_A1	50.74348	-0.46723	13	4713		KNMR_2GDK70618_GT011_STN_13_A1_0140_042553	10.75	1.28
21/06/2018	10:26:02	GT011_A1	50.74338	-0.46724	13	4714		KNMR_2GDK70618_GT011_STN_13_A1_0141_042613	10.69	1.07
21/06/2018	10:26:21	GT011_A1	50.74327	-0.46727	13	4715		KNMR_2GDK70618_GT011_STN_13_A1_0142_042632	10.89	1.13
21/06/2018	10:26:57	GT011_A1	50.74312	-0.46731	13	4716		KNMR_2GDK70618_GT011_STN_13_A1_0143_042708	10.81	1.16
21/06/2018	10:27:28	GT011_A1	50.74298	-0.46747	13	4717		KNMR_2GDK70618_GT011_STN_13_A1_0144_042739	10.76	1.30
21/06/2018	10:27:51	GT011_A1	50.74289	-0.46753	13	4718		KNMR_2GDK70618_GT011_STN_13_A1_0145_042802	10.94	0.88
21/06/2018	10:28:23	GT011_A1	50.74274	-0.46764	13	4719		KNMR_2GDK70618_GT011_STN_13_A1_0146_042833	10.87	1.15

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	10:28:54	GT011_A1	50.74261	-0.46775	13	4720		KNMR_2GDK70618_GT011_STN_13_A1_0147_042904	10.89	1.11
21/06/2018	10:29:15	GT011_A1	50.74251	-0.46782	13	4721	EoL	KNMR_2GDK70618_GT011_STN_13_A1_0148_042926	11.05	0.97
21/06/2018	10:50:01	GT047_A1	50.73535	-0.54279	14	4722	SoL	No image	14.14	1.08
21/06/2018	10:50:27	GT047_A1	50.73525	-0.54285	14	4723		KNMR_2GDK70618_GT047_STN_14_A1_0149_045012	14.15	0.79
21/06/2018	10:51:17	GT047_A1	50.73504	-0.54296	14	4724		KNMR_2GDK70618_GT047_STN_14_A1_0150_045039	14.14	1.03
21/06/2018	10:51:52	GT047_A1	50.73491	-0.54306	14	4725		KNMR_2GDK70618_GT047_STN_14_A1_0151_045127	14.04	0.89
21/06/2018	10:52:37	GT047_A1	50.73472	-0.54324	14	4726		KNMR_2GDK70618_GT047_STN_14_A1_0152_045203	13.99	1.03
21/06/2018	10:53:16	GT047_A1	50.73459	-0.54334	14	4727		KNMR_2GDK70618_GT047_STN_14_A1_0153_045248	13.98	0.78
21/06/2018	10:53:56	GT047_A1	50.73449	-0.54336	14	4728		KNMR_2GDK70618_GT047_STN_14_A1_0154_045326	13.82	0.53
21/06/2018	10:54:39	GT047_A1	50.73438	-0.54338	14	4729		KNMR_2GDK70618_GT047_STN_14_A1_0155_045407	13.59	0.70
21/06/2018	10:55:26	GT047_A1	50.73426	-0.54340	14	4730		KNMR_2GDK70618_GT047_STN_14_A1_0156_045450	13.38	0.55
21/06/2018	10:55:54	GT047_A1	50.73419	-0.54339	14	4731		KNMR_2GDK70618_GT047_STN_14_A1_0157_045536	13.52	0.52
21/06/2018	10:56:38	GT047_A1	50.73409	-0.54339	14	4732	EoL	KNMR_2GDK70618_GT047_STN_14_A1_0158_045605	13.52	0.37
21/06/2018	11:03:00	GT046_A1	50.73220	-0.54399	15	4733	SoL	KNMR_2GDK70618_GT047_STN_14_A1_0159_045648	12.94	0.77
21/06/2018	11:03:01	GT046_A1	50.73220	-0.54400	15	4734	extra fix taken in error	No image	12.89	0.79
21/06/2018	11:04:06	GT046_A1	50.73222	-0.54446	15	4735		KNMR_2GDK70618_GT046_STN_15_A1_0160_050310	13.37	0.86
21/06/2018	11:05:00	GT046_A1	50.73217	-0.54488	15	4736		KNMR_2GDK70618_GT046_STN_15_A1_0161_050417	13.77	1.18

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	11:05:30	GT046_A1	50.73212	-0.54509	15	4737		KNMR_2GDK70618_GT046_STN_15_A1_0162_050510	13.78	1.16
21/06/2018	11:05:57	GT046_A1	50.73208	-0.54524	15	4738		KNMR_2GDK70618_GT046_STN_15_A1_0163_050540	13.80	0.72
21/06/2018	11:06:26	GT046_A1	50.73203	-0.54545	15	4739		KNMR_2GDK70618_GT046_STN_15_A1_0164_050607	13.87	0.98
21/06/2018	11:07:06	GT046_A1	50.73193	-0.54566	15	4740		KNMR_2GDK70618_GT046_STN_15_A1_0165_050636	13.79	1.14
21/06/2018	11:07:27	GT046_A1	50.73189	-0.54582	15	4741		KNMR_2GDK70618_GT046_STN_15_A1_0166_050716	13.90	1.19
21/06/2018	11:08:01	GT046_A1	50.73183	-0.54601	15	4742		KNMR_2GDK70618_GT046_STN_15_A1_0167_050738	13.99	0.71
21/06/2018	11:08:43	GT046_A1	50.73174	-0.54626	15	4743		KNMR_2GDK70618_GT046_STN_15_A1_0168_050812	13.92	0.84
21/06/2018	11:09:20	GT046_A1	50.73168	-0.54646	15	4744	EoL	KNMR_2GDK70618_GT046_STN_15_A1_0169_050854	13.95	1.23
21/06/2018	11:15:39	GT048_A1	50.73141	-0.54127	16	4745	SoL	KNMR_2GDK70618_GT046_STN_15_A1_0170_050931	12.41	0.47
21/06/2018	11:16:06	GT048_A1	50.73140	-0.54106	16	4746		KNMR_2GDK70618_GT048_STN_16_A1_0171_051550	12.14	1.01
21/06/2018	11:16:40	GT048_A1	50.73136	-0.54075	16	4747		KNMR_2GDK70618_GT048_STN_16_A1_0172_051615	12.13	1.38
21/06/2018	11:17:04	GT048_A1	50.73135	-0.54057	16	4748		KNMR_2GDK70618_GT048_STN_16_A1_0173_051650	12.32	1.30
21/06/2018	11:17:42	GT048_A1	50.73130	-0.54036	16	4749		KNMR_2GDK70618_GT048_STN_16_A1_0174_051714	12.24	0.60
21/06/2018	11:18:06	GT048_A1	50.73126	-0.54016	16	4750		KNMR_2GDK70618_GT048_STN_16_A1_0175_051752	11.71	1.02
21/06/2018	11:18:30	GT048_A1	50.73122	-0.54003	16	4751		KNMR_2GDK70618_GT048_STN_16_A1_0176_051817	11.69	0.68
21/06/2018	11:19:11	GT048_A1	50.73117	-0.53979	16	4752		KNMR_2GDK70618_GT048_STN_16_A1_0177_051841	11.55	0.84
21/06/2018	11:19:42	GT048_A1	50.73112	-0.53963	16	4753		KNMR_2GDK70618_GT048_STN_16_A1_0178_051921	11.60	1.26

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	11:20:33	GT048_A1	50.73100	-0.53932	16	4754		KNMR_2GDK70618_GT048_STN_16_A1_0179_051952	11.72	0.82
21/06/2018	11:21:04	GT048_A1	50.73093	-0.53917	16	4755		KNMR_2GDK70618_GT048_STN_16_A1_0180_052044	11.88	0.94
21/06/2018	11:21:45	GT048_A2	50.73087	-0.53903	16	4756	EoL	KNMR_2GDK70618_GT048_STN_16_A1_0181_052114	11.82	0.46
21/06/2018	11:27:00	GT045_A1	50.73359	-0.53285	17	4757	SoL	KNMR_2GDK70618_GT048_STN_16_A1_0182_052156	11.36	0.43
21/06/2018	11:27:47	GT045_A1	50.73372	-0.53266	17	4758		KNMR_2GDK70618_GT045_STN_17_A1_0183_052711	11.22	0.99
21/06/2018	11:28:32	GT045_A1	50.73389	-0.53242	17	4759		KNMR_2GDK70618_GT045_STN_17_A1_0184_052757	10.38	1.06
21/06/2018	11:29:20	GT045_A1	50.73407	-0.53210	17	4760		KNMR_2GDK70618_GT045_STN_17_A1_0185_052843	10.07	1.16
21/06/2018	11:30:00	GT045_A1	50.73422	-0.53179	17	4761		KNMR_2GDK70618_GT045_STN_17_A1_0186_052931	10.16	1.25
21/06/2018	11:30:26	GT045_A1	50.73427	-0.53168	17	4762		KNMR_2GDK70618_GT045_STN_17_A1_0187_053011	10.42	0.80
21/06/2018	11:30:56	GT045_A1	50.73434	-0.53150	17	4763		KNMR_2GDK70618_GT045_STN_17_A1_0188_053037	10.70	1.16
21/06/2018	11:31:31	GT045_A1	50.73442	-0.53124	17	4764		KNMR_2GDK70618_GT045_STN_17_A1_0189_053106	9.86	1.32
21/06/2018	11:31:55	GT045_A1	50.73446	-0.53110	17	4765		KNMR_2GDK70618_GT045_STN_17_A1_0190_053142	10.51	1.08
21/06/2018	11:32:15	GT045_A1	50.73451	-0.53100	17	4766		KNMR_2GDK70618_GT045_STN_17_A1_0191_053206	9.96	0.77
21/06/2018	11:33:01	GT045_A1	50.73461	-0.53071	17	4767	EoL	KNMR_2GDK70618_GT045_STN_17_A1_0192_053226	10.65	0.93
21/06/2018	11:36:27	GT044_A1	50.73546	-0.53022	18	4768	SoL	KNMR_2GDK70618_GT045_STN_17_A1_0193_053312	11.93	1.18
21/06/2018	11:37:03	GT044_A1	50.73558	-0.53036	18	4769		KNMR_2GDK70618_GT044_STN_18_A1_0194_053714	12.25	1.00
21/06/2018	11:37:47	GT044_A1	50.73578	-0.53043	18	4770		KNMR_2GDK70618_GT044_STN_18_A1_0195_053758	12.43	1.03

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	11:38:23	GT044_A1	50.73591	-0.53024	18	4771		KNMR_2GDK70618_GT044_STN_18_A1_0196_053834	12.06	1.21
21/06/2018	11:39:00	GT044_A1	50.73605	-0.52998	18	4772		KNMR_2GDK70618_GT044_STN_18_A1_0197_053911	12.22	1.22
21/06/2018	11:39:34	GT044_A1	50.73617	-0.52980	18	4773		KNMR_2GDK70618_GT044_STN_18_A1_0198_053944	12.32	1.18
21/06/2018	11:40:01	GT044_A1	50.73626	-0.52967	18	4774		KNMR_2GDK70618_GT044_STN_18_A1_0199_054012	12.20	0.58
21/06/2018	11:40:33	GT044_A1	50.73635	-0.52948	18	4775		KNMR_2GDK70618_GT044_STN_18_A1_0200_054043	12.15	1.13
21/06/2018	11:41:07	GT044_A1	50.73645	-0.52925	18	4776		KNMR_2GDK70618_GT044_STN_18_A1_0201_054118	12.25	1.27
21/06/2018	11:41:50	GT044_A1	50.73652	-0.52905	18	4777		KNMR_2GDK70618_GT044_STN_18_A1_0202_054201	12.16	0.82
21/06/2018	11:42:32	GT044_A1	50.73661	-0.52884	18	4778	EoL	KNMR_2GDK70618_GT044_STN_18_A1_0203_054243	12.20	1.14
21/06/2018	11:54:03	GT043_A1	50.72397	-0.51782	19	4779	SoL	No image	13.38	0.73
21/06/2018	11:54:54	GT043_A1	50.72379	-0.51782	19	4780		KNMR_2GDK70618_GT043_STN_19_A1_0204_055505	13.28	0.56
21/06/2018	11:55:52	GT043_A1	50.72372	-0.51765	19	4781	EoL	KNMR_2GDK70618_GT043_STN_19_A1_0205_055603	13.32	0.50
21/06/2018	12:05:16	GT042_A1	50.73000	-0.49500	20	4782	SoL	KNMR_2GDK70618_GT042_STN_20_A1_0206_060527	11.65	0.49
21/06/2018	12:05:56	GT042_A1	50.73000	-0.49485	20	4783		KNMR_2GDK70618_GT042_STN_20_A1_0207_060607	11.77	0.59
21/06/2018	12:06:58	GT042_A1	50.72995	-0.49459	20	4784		KNMR_2GDK70618_GT042_STN_20_A1_0208_060709	11.97	0.64
21/06/2018	12:07:51	GT042_A1	50.72990	-0.49438	20	4785		KNMR_2GDK70618_GT042_STN_20_A1_0209_060802	11.82	0.57
21/06/2018	12:08:36	GT042_A1	50.72982	-0.49422	20	4786	EoL	KNMR_2GDK70618_GT042_STN_20_A1_0210_060846	11.84	0.66
21/06/2018	12:14:14	GT041_A1	50.73066	-0.48564	21	4787	SoL	KNMR_2GDK70618_GT041_STN_21_A1_0211_061425	9.53	1.01

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	12:14:54	GT041_A1	50.73051	-0.48532	21	4788		KNMR_2GDK70618_GT041_STN_21_A1_0212_061505	9.22	1.26
21/06/2018	12:15:27	GT041_A1	50.73043	-0.48514	21	4789		KNMR_2GDK70618_GT041_STN_21_A1_0213_061537	9.21	0.72
21/06/2018	12:15:54	GT041_A1	50.73039	-0.48500	21	4790		KNMR_2GDK70618_GT041_STN_21_A1_0214_061605	9.29	0.80
21/06/2018	12:16:41	GT041_A1	50.73032	-0.48465	21	4791	EoL	KNMR_2GDK70618_GT041_STN_21_A1_0215_061652	9.49	1.04
21/06/2018	12:30:14	GT040_A1	50.71729	-0.47721	22	4792	SOL	KNMR_2GDK70618_GT040_STN_22_A1_0216_063026	14.07	1.56
21/06/2018	12:30:50	GT040_A1	50.71719	-0.47694	22	4793		KNMR_2GDK70618_GT040_STN_22_A1_0217_063100	13.97	1.09
21/06/2018	12:31:14	GT040_A1	50.71712	-0.47679	22	4794		KNMR_2GDK70618_GT040_STN_22_A1_0218_063124	14.17	1.01
21/06/2018	12:31:41	GT040_A1	50.71705	-0.47664	22	4795		KNMR_2GDK70618_GT040_STN_22_A1_0219_063152	14.30	1.01
21/06/2018	12:32:13	GT040_A1	50.71698	-0.47644	22	4796		KNMR_2GDK70618_GT040_STN_22_A1_0220_063223	14.37	0.96
21/06/2018	12:32:50	GT040_A1	50.71690	-0.47624	22	4797		KNMR_2GDK70618_GT040_STN_22_A1_0221_063300	14.36	1.07
21/06/2018	12:33:27	GT040_A1	50.71677	-0.47597	22	4798		KNMR_2GDK70618_GT040_STN_22_A1_0222_063337	14.64	1.08
21/06/2018	12:34:00	GT040_A1	50.71669	-0.47576	22	4799		KNMR_2GDK70618_GT040_STN_22_A1_0223_063411	14.62	1.05
21/06/2018	12:34:41	GT040_A1	50.71658	-0.47551	22	4800		KNMR_2GDK70618_GT040_STN_22_A1_0224_063451	14.98	1.01
21/06/2018	12:35:15	GT040_A1	50.71649	-0.47531	22	4801		KNMR_2GDK70618_GT040_STN_22_A1_0225_063526	14.94	1.01
21/06/2018	12:35:56	GT040_A1	50.71638	-0.47503	22	4802		KNMR_2GDK70618_GT040_STN_22_A1_0226_063606	15.03	1.14
21/06/2018	12:36:27	GT040_A1	50.71630	-0.47481	22	4803	EOL	KNMR_2GDK70618_GT040_STN_22_A1_0227_063638	15.17	1.14
21/06/2018	12:41:20	GT039_A1	50.71753	-0.47203	23	4804	SOL	KNMR_2GDK70618_GT039_STN_23_A1_0228_064131	14.68	1.26

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	12:41:45	GT039_A1	50.71745	-0.47183	23	4805		KNMR_2GDK70618_GT039_STN_23_A1_0229_064158	14.68	1.27
21/06/2018	12:42:09	GT039_A1	50.71740	-0.47164	23	4806		KNMR_2GDK70618_GT039_STN_23_A1_0230_064220	14.87	1.14
21/06/2018	12:42:35	GT039_A1	50.71736	-0.47144	23	4807		KNMR_2GDK70618_GT039_STN_23_A1_0231_064247	14.87	1.17
21/06/2018	12:43:04	GT039_A1	50.71730	-0.47123	23	4808		KNMR_2GDK70618_GT039_STN_23_A1_0232_064315	14.79	1.09
21/06/2018	12:43:36	GT039_A1	50.71723	-0.47099	23	4809		KNMR_2GDK70618_GT039_STN_23_A1_0233_064347	14.73	1.15
21/06/2018	12:44:01	GT039_A1	50.71717	-0.47081	23	4810		KNMR_2GDK70618_GT039_STN_23_A1_0234_064412	15.11	1.06
21/06/2018	12:44:37	GT039_A1	50.71707	-0.47057	23	4811		KNMR_2GDK70618_GT039_STN_23_A1_0235_064448	15.38	1.06
21/06/2018	12:45:03	GT039_A1	50.71701	-0.47041	23	4812		KNMR_2GDK70618_GT039_STN_23_A1_0236_064514	15.17	1.08
21/06/2018	12:45:31	GT039_A1	50.71693	-0.47023	23	4813		KNMR_2GDK70618_GT039_STN_23_A1_0237_064542	15.29	1.09
21/06/2018	12:45:56	GT039_A1	50.71687	-0.47005	23	4814		KNMR_2GDK70618_GT039_STN_23_A1_0238_064607	15.55	1.14
21/06/2018	12:46:22	GT039_A1	50.71680	-0.46987	23	4815	EOL	KNMR_2GDK70618_GT039_STN_23_A1_0239_064633	15.49	1.07
21/06/2018	12:51:01	GT038_A1	50.71742	-0.46821	24	4816	SOL	KNMR_2GDK70618_GT038_STN_24_A1_0240_065113	15.00	1.49
21/06/2018	12:51:33	GT038_A1	50.71735	-0.46795	24	4817		KNMR_2GDK70618_GT038_STN_24_A1_0241_065145	15.00	1.24
21/06/2018	12:52:03	GT038_A1	50.71729	-0.46771	24	4818		KNMR_2GDK70618_GT038_STN_24_A1_0242_065215	15.09	1.11
21/06/2018	12:52:39	GT038_A1	50.71723	-0.46743	24	4819		KNMR_2GDK70618_GT038_STN_24_A1_0243_065250	14.96	1.08
21/06/2018	12:53:09	GT038_A1	50.71719	-0.46719	24	4820		KNMR_2GDK70618_GT038_STN_24_A1_0244_065319	14.91	1.15
21/06/2018	12:53:48	GT038_A1	50.71714	-0.46688	24	4821		KNMR_2GDK70618_GT038_STN_24_A1_0245_065358	14.99	1.04

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	12:54:29	GT038_A1	50.71708	-0.46657	24	4822		KNMR_2GDK70618_GT038_STN_24_A1_0246_065440	15.04	1.12
21/06/2018	12:54:57	GT038_A1	50.71703	-0.46636	24	4823		KNMR_2GDK70618_GT038_STN_24_A1_0247_065509	14.87	1.19
21/06/2018	12:55:29	GT038_A1	50.71697	-0.46609	24	4824		KNMR_2GDK70618_GT038_STN_24_A1_0248_065539	14.96	1.24
21/06/2018	12:55:57	GT038_A1	50.71693	-0.46587	24	4825		KNMR_2GDK70618_GT038_STN_24_A1_0249_065609	14.96	1.17
21/06/2018	12:56:16	GT038_A1	50.71688	-0.46571	24	4826		KNMR_2GDK70618_GT038_STN_24_A1_0250_065629	15.09	1.16
21/06/2018	12:56:40	GT038_A1	50.71685	-0.46553	24	4827	EOL	KNMR_2GDK70618_GT038_STN_24_A1_0251_065651	15.05	1.10
21/06/2018	13:02:44	GT037_A1	50.71730	-0.46372	25	4828	SOL	KNMR_2GDK70618_GT037_STN_25_A1_0252_070256	15.05	0.72
21/06/2018	13:03:17	GT037_A1	50.71728	-0.46351	25	4829		KNMR_2GDK70618_GT037_STN_25_A1_0253_070328	15.06	0.90
21/06/2018	13:03:51	GT037_A1	50.71725	-0.46328	25	4830		KNMR_2GDK70618_GT037_STN_25_A1_0254_070405	14.96	0.98
21/06/2018	13:04:26	GT037_A1	50.71719	-0.46301	25	4831		KNMR_2GDK70618_GT037_STN_25_A1_0255_070440	14.96	1.13
21/06/2018	13:05:12	GT037_A1	50.71709	-0.46265	25	4832		KNMR_2GDK70618_GT037_STN_25_A1_0256_070523	15.03	1.32
21/06/2018	13:05:36	GT037_A1	50.71703	-0.46244	25	4833		KNMR_2GDK70618_GT037_STN_25_A1_0257_070547	15.31	1.27
21/06/2018	13:06:01	GT037_A1	50.71698	-0.46223	25	4834		KNMR_2GDK70618_GT037_STN_25_A1_0258_070611	15.16	1.17
21/06/2018	13:06:27	GT037_A1	50.71692	-0.46203	25	4835		KNMR_2GDK70618_GT037_STN_25_A1_0259_070640	15.04	1.11
21/06/2018	13:06:50	GT037_A1	50.71687	-0.46187	25	4836		KNMR_2GDK70618_GT037_STN_25_A1_0260_070701	15.17	1.10
21/06/2018	13:07:08	GT037_A1	50.71684	-0.46173	25	4837		KNMR_2GDK70618_GT037_STN_25_A1_0261_070719	15.17	1.06
21/06/2018	13:07:35	GT037_A1	50.71679	-0.46153	25	4838		KNMR_2GDK70618_GT037_STN_25_A1_0262_070745	15.31	1.08

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	13:07:56	GT037_A1	50.71675	-0.46139	25	4839	EOL	KNMR_2GDK70618_GT037_STN_25_A1_0263_070807	15.28	1.04
21/06/2018	13:13:54	GT036_A1	50.71756	-0.46045	26	4840	SOL	KNMR_2GDK70618_GT036_STN_26_A1_0264_071405	15.35	1.71
21/06/2018	13:14:16	GT036_A1	50.71748	-0.46023	26	4841		KNMR_2GDK70618_GT036_STN_26_A1_0265_071427	15.45	1.48
21/06/2018	13:14:47	GT036_A1	50.71741	-0.45998	26	4842		KNMR_2GDK70618_GT036_STN_26_A1_0266_071459	15.33	1.18
21/06/2018	13:15:20	GT036_A1	50.71734	-0.45974	26	4843		KNMR_2GDK70618_GT036_STN_26_A1_0267_071531	15.32	1.16
21/06/2018	13:15:49	GT036_A1	50.71726	-0.45950	26	4844		KNMR_2GDK70618_GT036_STN_26_A1_0268_071600	15.47	1.25
21/06/2018	13:16:14	GT036_A1	50.71720	-0.45929	26	4845		KNMR_2GDK70618_GT036_STN_26_A1_0269_071625	15.28	1.31
21/06/2018	13:16:35	GT036_A1	50.71714	-0.45911	26	4846		KNMR_2GDK70618_GT036_STN_26_A1_0270_071645	15.44	1.26
21/06/2018	13:17:05	GT036_A1	50.71707	-0.45886	26	4847		KNMR_2GDK70618_GT036_STN_26_A1_0271_071716	15.32	1.24
21/06/2018	13:17:28	GT036_A1	50.71702	-0.45868	26	4848		KNMR_2GDK70618_GT036_STN_26_A1_0272_071739	15.46	1.25
21/06/2018	13:17:50	GT036_A1	50.71698	-0.45850	26	4849		KNMR_2GDK70618_GT036_STN_26_A1_0273_071801	15.68	1.22
21/06/2018	13:18:10	GT036_A1	50.71692	-0.45833	26	4850		KNMR_2GDK70618_GT036_STN_26_A1_0274_071822	15.59	1.24
21/06/2018	13:18:34	GT036_A1	50.71687	-0.45812	26	4851		KNMR_2GDK70618_GT036_STN_26_A1_0275_071845	15.74	1.23
21/06/2018	13:25:01	GT035_A1	50.71716	-0.45312	27	4852	SOL	KNMR_2GDK70618_GT035_STN_27_A1_0276_072511	15.79	1.51
21/06/2018	13:25:28	GT035_A1	50.71712	-0.45285	27	4853		KNMR_2GDK70618_GT035_STN_27_A1_0277_072539	15.68	1.38
21/06/2018	13:25:54	GT035_A1	50.71708	-0.45263	27	4854		KNMR_2GDK70618_GT035_STN_27_A1_0278_072605	15.88	1.22
21/06/2018	13:26:15	GT035_A1	50.71704	-0.45244	27	4855		KNMR_2GDK70618_GT035_STN_27_A1_0279_072626	15.80	1.17

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
21/06/2018	13:26:35	GT035_A1	50.71701	-0.45227	27	4856		KNMR_2GDK70618_GT035_STN_27_A1_0280_072646	15.88	1.22
21/06/2018	13:26:56	GT035_A1	50.71697	-0.45211	27	4857		KNMR_2GDK70618_GT035_STN_27_A1_0281_072707	15.86	1.20
21/06/2018	13:27:16	GT035_A1	50.71693	-0.45195	27	4858		KNMR_2GDK70618_GT035_STN_27_A1_0282_072746	15.88	1.20
21/06/2018	13:27:35	GT035_A1	50.71690	-0.45178	27	4859		KNMR_2GDK70618_GT035_STN_27_A1_0283_072816	15.86	1.24
21/06/2018	13:28:05	GT035_A1	50.71683	-0.45155	27	4860		KNMR_2GDK70618_GT035_STN_27_A1_0284_072846	15.94	1.24
21/06/2018	13:28:34	GT035_A1	50.71677	-0.45131	27	4861		KNMR_2GDK70618_GT035_STN_27_A1_0285_072904	15.80	1.13
21/06/2018	13:28:53	GT035_A1	50.71674	-0.45117	27	4862		KNMR_2GDK70618_GT035_STN_27_A1_0286_072928	15.95	1.06
21/06/2018	13:29:16	GT035_A1	50.71671	-0.45100	27	4863	EOL	No image	16.03	1.03
22/06/2018	07:41:44	GT012_A1	50.71415	-0.41689	28	3943	SoL	KNMR_2GDK70618_GT012_STN_28_A1_0001_013604	16.83	0.49
22/06/2018	07:43:07	GT012_A1	50.71420	-0.41657	28	3944		KNMR_2GDK70618_GT012_STN_28_A1_0002_013727	16.60	0.63
22/06/2018	07:43:57	GT012_A1	50.71430	-0.41638	28	3945		KNMR_2GDK70618_GT012_STN_28_A1_0003_013817	16.64	0.51
22/06/2018	07:44:59	GT012_A1	50.71441	-0.41615	28	3946		KNMR_2GDK70618_GT012_STN_28_A1_0004_013919	16.28	0.51
22/06/2018	07:46:03	GT012_A1	50.71453	-0.41593	28	3947		KNMR_2GDK70618_GT012_STN_28_A1_0005_014023	16.07	0.32
22/06/2018	07:46:51	GT012_A1	50.71462	-0.41575	28	3948		KNMR_2GDK70618_GT012_STN_28_A1_0006_014110	15.84	0.38
22/06/2018	07:47:52	GT012_A1	50.71473	-0.41556	28	3949		KNMR_2GDK70618_GT012_STN_28_A1_0007_014212	15.79	0.44
22/06/2018	07:48:58	GT012_A1	50.71486	-0.41537	28	3950		KNMR_2GDK70618_GT012_STN_28_A1_0008_014318	16.53	0.38
22/06/2018	07:50:27	GT012_A1	50.71497	-0.41515	28	3951		KNMR_2GDK70618_GT012_STN_28_A1_0009_014448	16.33	0.42

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	07:50:33	GT012_A1	50.71498	-0.41514	28	3952		KNMR_2GDK70618_GT012_STN_28_A1_0010_014453	16.42	0.46
22/06/2018	07:51:12	GT012_A1	50.71505	-0.41495	28	3953		KNMR_2GDK70618_GT012_STN_28_A1_0011_014532	16.19	0.32
22/06/2018	07:51:47	GT012_A1	50.71508	-0.41479	28	3954		KNMR_2GDK70618_GT012_STN_28_A1_0012_014607	16.60	0.85
22/06/2018	07:52:06	GT012_A1	50.71512	-0.41469	28	3955	EoL	KNMR_2GDK70618_GT012_STN_28_A1_0013_014627	16.55	1.16
22/06/2018	07:59:35	GT013_GT014_A1	50.71696	-0.41584	29_30	3956	SoL	KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0014_015355	15.94	0.86
22/06/2018	08:00:16	GT013_GT014_A1	50.71690	-0.41608	29_30	3957		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0015_015436	16.12	0.90
22/06/2018	08:00:53	GT013_GT014_A1	50.71682	-0.41640	29_30	3958		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0016_015513	15.93	1.75
22/06/2018	08:01:23	GT013_GT014_A1	50.71671	-0.41668	29_30	3959		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0017_015544	15.94	1.48
22/06/2018	08:02:02	GT013_GT014_A1	50.71658	-0.41701	29_30	3960		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0018_015623	16.00	1.32
22/06/2018	08:02:37	GT013_GT014_A1	50.71648	-0.41727	29_30	3961		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0019_015656	15.68	1.19
22/06/2018	08:03:02	GT013_GT014_A1	50.71642	-0.41746	29_30	3962		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0020_015722	15.91	1.11
22/06/2018	08:03:37	GT013_GT014_A1	50.71633	-0.41773	29_30	3963		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0021_015757	16.11	1.21
22/06/2018	08:04:08	GT013_GT014_A1	50.71627	-0.41795	29_30	3964		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0022_015829	15.95	1.15
22/06/2018	08:04:42	GT013_GT014_A1	50.71618	-0.41822	29_30	3965		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0023_015902	16.18	1.21
22/06/2018	08:05:16	GT013_GT014_A1	50.71610	-0.41848	29_30	3966		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0024_015937	16.27	1.19
22/06/2018	08:05:48	GT013_GT014_A1	50.71602	-0.41873	29_30	3967		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0025_020008	16.17	1.17
22/06/2018	08:06:18	GT013_GT014_A1	50.71595	-0.41893	29_30	3968		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0026_020038	16.17	1.12

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	08:06:57	GT013_GT014_A1	50.71585	-0.41922	29_30	3969		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0027_020117	16.03	1.14
22/06/2018	08:07:42	GT013_GT014_A1	50.71576	-0.41953	29_30	3970		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0028_020201	16.05	1.08
22/06/2018	08:08:13	GT013_GT014_A1	50.71568	-0.41976	29_30	3971		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0029_020233	16.12	1.15
22/06/2018	08:08:39	GT013_GT014_A1	50.71562	-0.41995	29_30	3972		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0030_020300	16.10	1.13
22/06/2018	08:09:12	GT013_GT014_A1	50.71554	-0.42020	29_30	3973		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0031_020332	16.05	1.16
22/06/2018	08:09:43	GT013_GT014_A1	50.71548	-0.42044	29_30	3974		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0032_020403	16.07	1.12
22/06/2018	08:10:15	GT013_GT014_A1	50.71540	-0.42067	29_30	3975		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0033_020435	16.19	1.03
22/06/2018	08:11:01	GT013_GT014_A1	50.71532	-0.42101	29_30	3976		KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0034_020521	16.42	1.15
22/06/2018	08:11:38	GT013_GT014_A1	50.71524	-0.42126	29_30	3977	EoL	KNMR_2GDK70618_GT013_GT014_STN_29_STN_30_A1_0035_020558	16.24	1.11
22/06/2018	08:17:00	GT015_A1	50.71655	-0.42133	31	3978	SoL	KNMR_2GDK70618_GT015_STN_31_A1_0036_021121	15.92	0.94
22/06/2018	08:17:39	GT015_A1	50.71647	-0.42156	31	3979		KNMR_2GDK70618_GT015_STN_31_A1_0037_021159	15.77	0.92
22/06/2018	08:18:15	GT015_A1	50.71642	-0.42178	31	3980		KNMR_2GDK70618_GT015_STN_31_A1_0038_021236	15.75	0.93
22/06/2018	08:18:55	GT015_A1	50.71634	-0.42203	31	3981		KNMR_2GDK70618_GT015_STN_31_A1_0039_021315	16.03	0.99
22/06/2018	08:19:35	GT015_A1	50.71628	-0.42231	31	3982		KNMR_2GDK70618_GT015_STN_31_A1_0040_021356	15.78	1.01
22/06/2018	08:20:01	GT015_A1	50.71624	-0.42248	31	3983		KNMR_2GDK70618_GT015_STN_31_A1_0041_021422	15.61	0.98
22/06/2018	08:20:27	GT015_A1	50.71619	-0.42265	31	3984		KNMR_2GDK70618_GT015_STN_31_A1_0042_021447	15.64	0.99
22/06/2018	08:20:57	GT015_A1	50.71616	-0.42284	31	3985		KNMR_2GDK70618_GT015_STN_31_A1_0043_021517	15.38	0.94

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	08:21:27	GT015_A1	50.71611	-0.42303	31	3986		KNMR_2GDK70618_GT015_STN_31_A1_0044_021547	15.70	0.82
22/06/2018	08:22:00	GT015_A1	50.71608	-0.42324	31	3987		KNMR_2GDK70618_GT015_STN_31_A1_0045_021621	15.42	0.93
22/06/2018	08:22:30	GT015_A1	50.71605	-0.42343	31	3988		KNMR_2GDK70618_GT015_STN_31_A1_0046_021651	15.43	0.93
22/06/2018	08:22:58	GT015_A1	50.71602	-0.42362	31	3989	EoL	KNMR_2GDK70618_GT015_STN_31_A1_0047_021718	15.65	0.91
22/06/2018	08:26:22	GT016_A1	50.71653	-0.42600	32	3990	SoL	KNMR_2GDK70618_GT016_STN_32_A1_0048_022042	16.00	1.10
22/06/2018	08:26:52	GT016_A1	50.71648	-0.42622	32	3991		KNMR_2GDK70618_GT016_STN_32_A1_0049_022112	16.01	1.11
22/06/2018	08:27:27	GT016_A1	50.71641	-0.42648	32	3992		KNMR_2GDK70618_GT016_STN_32_A1_0050_022147	15.73	1.07
22/06/2018	08:27:57	GT016_A1	50.71635	-0.42669	32	3993		KNMR_2GDK70618_GT016_STN_32_A1_0051_022218	16.03	0.97
22/06/2018	08:28:25	GT016_A1	50.71632	-0.42688	32	3994		KNMR_2GDK70618_GT016_STN_32_A1_0052_022245	15.93	0.95
22/06/2018	08:28:57	GT016_A1	50.71627	-0.42708	32	3995		KNMR_2GDK70618_GT016_STN_32_A1_0053_022317	15.93	0.94
22/06/2018	08:29:09	GT016_A1	50.71625	-0.42715	32	3996		KNMR_2GDK70618_GT016_STN_32_A1_0054_022330	15.86	0.94
22/06/2018	08:29:40	GT016_A1	50.71620	-0.42735	32	3997		KNMR_2GDK70618_GT016_STN_32_A1_0055_022400	15.77	0.93
22/06/2018	08:30:06	GT016_A1	50.71617	-0.42753	32	3998		KNMR_2GDK70618_GT016_STN_32_A1_0056_022426	15.48	0.93
22/06/2018	08:30:36	GT016_A1	50.71612	-0.42771	32	3999		KNMR_2GDK70618_GT016_STN_32_A1_0057_022457	15.48	0.91
22/06/2018	08:31:03	GT016_A1	50.71608	-0.42789	32	4000		KNMR_2GDK70618_GT016_STN_32_A1_0058_022524	15.63	0.94
22/06/2018	08:31:33	GT016_A1	50.71604	-0.42807	32	4001		KNMR_2GDK70618_GT016_STN_32_A1_0059_022554	15.51	0.93
22/06/2018	08:31:59	GT016_A1	50.71600	-0.42826	32	4002		KNMR_2GDK70618_GT016_STN_32_A1_0060_022619	15.73	1.02

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	08:32:17	GT016_A1	50.71597	-0.42837	32	4003	EoL	KNMR_2GDK70618_GT016_STN_32_A1_0061_022638	15.73	0.96
22/06/2018	08:37:35	GT017_A1	50.71875	-0.42794	33	4004	SoL	KNMR_2GDK70618_GT017_STN_33_A1_0062_023156	15.91	0.85
22/06/2018	08:37:59	GT017_A1	50.71873	-0.42814	33	4005		KNMR_2GDK70618_GT017_STN_33_A1_0063_023219	15.63	1.22
22/06/2018	08:38:26	GT017_A1	50.71869	-0.42835	33	4006		KNMR_2GDK70618_GT017_STN_33_A1_0064_023247	15.65	1.08
22/06/2018	08:38:51	GT017_A1	50.71866	-0.42853	33	4007		KNMR_2GDK70618_GT017_STN_33_A1_0065_023311	15.52	0.98
22/06/2018	08:39:12	GT017_A1	50.71863	-0.42865	33	4008		KNMR_2GDK70618_GT017_STN_33_A1_0066_023332	15.40	0.94
22/06/2018	08:39:53	GT017_A1	50.71855	-0.42891	33	4009		KNMR_2GDK70618_GT017_STN_33_A1_0067_023414	15.44	0.95
22/06/2018	08:40:29	GT017_A1	50.71848	-0.42915	33	4010		KNMR_2GDK70618_GT017_STN_33_A1_0068_023449	15.29	0.99
22/06/2018	08:41:02	GT017_A1	50.71843	-0.42935	33	4011		KNMR_2GDK70618_GT017_STN_33_A1_0069_023523	15.11	0.90
22/06/2018	08:41:31	GT017_A1	50.71837	-0.42954	33	4012		KNMR_2GDK70618_GT017_STN_33_A1_0070_023551	15.29	0.93
22/06/2018	08:42:00	GT017_A1	50.71832	-0.42971	33	4013		KNMR_2GDK70618_GT017_STN_33_A1_0071_023621	15.33	0.96
22/06/2018	08:42:23	GT017_A1	50.71827	-0.42984	33	4014		KNMR_2GDK70618_GT017_STN_33_A1_0072_023644	15.16	0.93
22/06/2018	08:42:42	GT017_A1	50.71824	-0.42995	33	4015		KNMR_2GDK70618_GT017_STN_33_A1_0073_023702	15.07	0.95
22/06/2018	08:43:09	GT017_A1	50.71819	-0.43014	33	4016		KNMR_2GDK70618_GT017_STN_33_A1_0074_023729	14.71	0.95
22/06/2018	08:43:32	GT017_A1	50.71815	-0.43029	33	4017	EoL	KNMR_2GDK70618_GT017_STN_33_A1_0075_023753	14.75	0.92
22/06/2018	08:52:50	GT018_A1	50.71772	-0.43281	34	4018	SoL	KNMR_2GDK70618_GT018_STN_34_A1_0076_024710	14.35	1.56
22/06/2018	08:53:25	GT018_A1	50.71758	-0.43307	34	4019		KNMR_2GDK70618_GT018_STN_34_A1_0077_024745	14.46	1.33

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	08:53:53	GT018_A1	50.71748	-0.43326	34	4020		KNMR_2GDK70618_GT018_STN_34_A1_0078_024813	14.38	1.22
22/06/2018	08:54:16	GT018_A1	50.71740	-0.43342	34	4021		KNMR_2GDK70618_GT018_STN_34_A1_0079_024837	14.49	1.18
22/06/2018	08:54:47	GT018_A1	50.71731	-0.43363	34	4022		KNMR_2GDK70618_GT018_STN_34_A1_0080_024908	14.38	1.12
22/06/2018	08:55:19	GT018_A1	50.71722	-0.43384	34	4023		KNMR_2GDK70618_GT018_STN_34_A1_0081_024939	14.69	1.09
22/06/2018	08:55:52	GT018_A1	50.71715	-0.43408	34	4024		KNMR_2GDK70618_GT018_STN_34_A1_0082_025012	14.81	1.02
22/06/2018	08:56:22	GT018_A1	50.71710	-0.43428	34	4025		KNMR_2GDK70618_GT018_STN_34_A1_0083_025042	14.69	1.00
22/06/2018	08:56:55	GT018_A1	50.71704	-0.43449	34	4026		KNMR_2GDK70618_GT018_STN_34_A1_0084_025116	14.89	1.00
22/06/2018	08:57:21	GT018_A1	50.71700	-0.43467	34	4027		KNMR_2GDK70618_GT018_STN_34_A1_0085_025141	14.84	0.99
22/06/2018	08:57:45	GT018_A1	50.71694	-0.43483	34	4028		KNMR_2GDK70618_GT018_STN_34_A1_0086_025206	14.55	1.01
22/06/2018	08:58:04	GT018_A1	50.71690	-0.43496	34	4029		KNMR_2GDK70618_GT018_STN_34_A1_0087_025225	14.92	0.96
22/06/2018	08:58:31	GT018_A1	50.71685	-0.43511	34	4030	EoL	KNMR_2GDK70618_GT018_STN_34_A1_0088_025252	15.05	0.96
22/06/2018	09:03:14	GT019_A1	50.71875	-0.43449	35	4031	SoL	No image	13.88	1.57
22/06/2018	09:03:48	GT019_A1	50.71869	-0.43477	35	4032		KNMR_2GDK70618_GT019_STN_35_A1_0089_025809	13.94	0.99
22/06/2018	09:04:14	GT019_A1	50.71867	-0.43493	35	4033		KNMR_2GDK70618_GT019_STN_35_A1_0090_025835	13.53	0.91
22/06/2018	09:04:44	GT019_A1	50.71866	-0.43514	35	4034		KNMR_2GDK70618_GT019_STN_35_A1_0091_025904	13.85	0.89
22/06/2018	09:05:25	GT019_A1	50.71864	-0.43536	35	4035		KNMR_2GDK70618_GT019_STN_35_A1_0092_025947	13.87	0.78
22/06/2018	09:06:10	GT019_A1	50.71858	-0.43557	35	4036		KNMR_2GDK70618_GT019_STN_35_A1_0093_030030	14.05	0.70

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	09:06:49	GT019_A1	50.71852	-0.43575	35	4037		KNMR_2GDK70618_GT019_STN_35_A1_0094_030109	13.53	0.73
22/06/2018	09:07:27	GT019_A1	50.71847	-0.43595	35	4038		KNMR_2GDK70618_GT019_STN_35_A1_0095_030148	12.97	0.85
22/06/2018	09:07:54	GT019_A1	50.71842	-0.43611	35	4039		KNMR_2GDK70618_GT019_STN_35_A1_0096_030214	12.82	0.94
22/06/2018	09:08:12	GT019_A1	50.71839	-0.43622	35	4040		KNMR_2GDK70618_GT019_STN_35_A1_0097_030233	13.49	0.94
22/06/2018	09:08:38	GT019_A1	50.71833	-0.43638	35	4041		KNMR_2GDK70618_GT019_STN_35_A1_0098_030259	12.64	0.97
22/06/2018	09:09:17	GT019_A1	50.71828	-0.43661	35	4042		KNMR_2GDK70618_GT019_STN_35_A1_0099_030338	14.02	0.85
22/06/2018	09:09:43	GT019_A1	50.71824	-0.43677	35	4043	EoL	KNMR_2GDK70618_GT019_STN_35_A1_0100_030403	14.05	0.89
22/06/2018	09:16:23	GT021_GT020_A1	50.72234	-0.43888	36_37	4044	SoL	KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0101_031129	13.31	0.79
22/06/2018	09:17:08	GT021_GT020_A1	50.72235	-0.43910	36_37	4045		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0101_031129	13.13	0.77
22/06/2018	09:17:44	GT021_GT020_A1	50.72230	-0.43942	36_37	4046		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0102_031204	13.26	1.46
22/06/2018	09:18:13	GT021_GT020_A1	50.72224	-0.43970	36_37	4047		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0103_031233	13.25	1.26
22/06/2018	09:18:47	GT021_GT020_A1	50.72220	-0.44003	36_37	4048		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0104_031308	13.23	1.48
22/06/2018	09:19:24	GT021_GT020_A1	50.72205	-0.44031	36_37	4049		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0105_031345	12.59	1.43
22/06/2018	09:20:01	GT021_GT020_A1	50.72187	-0.44062	36_37	4050		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0106_031421	13.59	1.58
22/06/2018	09:20:37	GT021_GT020_A1	50.72169	-0.44083	36_37	4051		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0107_031458	13.40	1.45
22/06/2018	09:21:51	GT021_GT020_A1	50.72133	-0.44109	36_37	4052		No image	13.74	1.08
22/06/2018	09:22:22	GT021_GT020_A1	50.72120	-0.44122	36_37	4053		No image	14.07	1.20

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	09:22:59	GT021_GT020_A1	50.72104	-0.44138	36_37	4054		No image	14.29	1.17
22/06/2018	09:26:22	GT021_GT020_A1	50.72039	-0.44027	36_37	4055		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0108_032043	14.00	0.84
22/06/2018	09:26:59	GT021_GT020_A1	50.72044	-0.44049	36_37	4056		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0109_032119	13.99	0.89
22/06/2018	09:27:33	GT021_GT020_A1	50.72044	-0.44071	36_37	4057		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0110_032154	13.74	0.95
22/06/2018	09:28:07	GT021_GT020_A1	50.72043	-0.44091	36_37	4058		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0111_032228	14.00	0.74
22/06/2018	09:28:50	GT021_GT020_A1	50.72039	-0.44118	36_37	4059		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0112_032311	13.88	0.94
22/06/2018	09:29:44	GT021_GT020_A1	50.72033	-0.44153	36_37	4060		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0113_032404	13.98	0.94
22/06/2018	09:30:29	GT021_GT020_A1	50.72027	-0.44179	36_37	4061		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0114_032449	14.11	0.93
22/06/2018	09:31:11	GT021_GT020_A1	50.72020	-0.44203	36_37	4062		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0115_032531	14.23	0.94
22/06/2018	09:31:43	GT021_GT020_A1	50.72014	-0.44222	36_37	4063		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0116_032604	14.50	0.84
22/06/2018	09:32:28	GT021_GT020_A1	50.72007	-0.44246	36_37	4064		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0117_032650	14.61	0.82
22/06/2018	09:33:07	GT021_GT020_A1	50.72002	-0.44267	36_37	4065		KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0118_032728	14.74	0.75
22/06/2018	09:33:40	GT021_GT020_A1	50.71995	-0.44284	36_37	4066	EoL	KNMR_2GDK70618_GT021_GT020_STN_36_STN_37_A1_0119_032802	14.79	0.78
22/06/2018	09:41:34	GT021_B1	50.72176	-0.43806	38	4067	SoL	KNMR_2GDK70618_GT021_STN_38_B1_0120_033554	13.00	0.78
22/06/2018	09:42:30	GT021_B1	50.72161	-0.43845	38	4068		KNMR_2GDK70618_GT021_STN_38_B1_0121_033651	12.91	0.84
22/06/2018	09:43:11	GT021_B1	50.72151	-0.43869	38	4069		KNMR_2GDK70618_GT021_STN_38_B1_0122_033731	12.97	1.15
22/06/2018	09:43:43	GT021_B1	50.72142	-0.43895	38	4070		KNMR_2GDK70618_GT021_STN_38_B1_0123_033803	13.11	1.34

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	09:44:06	GT021_B1	50.72135	-0.43913	38	4071		KNMR_2GDK70618_GT021_STN_38_B1_0124_033826	13.20	1.20
22/06/2018	09:44:53	GT021_B1	50.72128	-0.43947	38	4072		KNMR_2GDK70618_GT021_STN_38_B1_0125_033913	13.30	0.94
22/06/2018	09:45:27	GT021_B1	50.72121	-0.43969	38	4073		KNMR_2GDK70618_GT021_STN_38_B1_0126_033947	13.00	1.00
22/06/2018	09:46:05	GT021_B1	50.72113	-0.43992	38	4074		KNMR_2GDK70618_GT021_STN_38_B1_0127_034025	13.01	0.95
22/06/2018	09:46:39	GT021_B1	50.72106	-0.44014	38	4075		KNMR_2GDK70618_GT021_STN_38_B1_0128_034059	12.45	0.95
22/06/2018	09:47:13	GT021_B1	50.72100	-0.44033	38	4076		KNMR_2GDK70618_GT021_STN_38_B1_0129_034133	13.61	0.89
22/06/2018	09:47:42	GT021_B1	50.72094	-0.44049	38	4077		KNMR_2GDK70618_GT021_STN_38_B1_0130_034202	13.42	0.90
22/06/2018	09:48:03	GT021_B1	50.72090	-0.44062	38	4078	EoL	No image	13.53	0.89
22/06/2018	09:50:33	GT020_B1	50.72059	-0.43995	39	4079	SoL	KNMR_2GDK70618_GT020_STN_39_B1_0131_034453	13.63	0.38
22/06/2018	09:51:17	GT020_B1	50.72057	-0.44014	39	4080		KNMR_2GDK70618_GT020_STN_39_B1_0132_034538	13.60	0.64
22/06/2018	09:52:06	GT020_B1	50.72054	-0.44037	39	4081		KNMR_2GDK70618_GT020_STN_39_B1_0133_034626	13.50	0.69
22/06/2018	09:52:46	GT020_B1	50.72049	-0.44058	39	4082		KNMR_2GDK70618_GT020_STN_39_B1_0134_034706	13.37	0.79
22/06/2018	09:53:29	GT020_B1	50.72043	-0.44080	39	4083		KNMR_2GDK70618_GT020_STN_39_B1_0135_034749	13.84	0.78
22/06/2018	09:54:13	GT020_B1	50.72036	-0.44103	39	4084		KNMR_2GDK70618_GT020_STN_39_B1_0136_034833	13.60	0.84
22/06/2018	09:54:44	GT020_B1	50.72029	-0.44120	39	4085		KNMR_2GDK70618_GT020_STN_39_B1_0137_034904	13.64	0.90
22/06/2018	09:55:18	GT020_B1	50.72023	-0.44138	39	4086		KNMR_2GDK70618_GT020_STN_39_B1_0138_034938	13.81	0.87
22/06/2018	09:55:35	GT020_B1	50.72018	-0.44148	39	4087		KNMR_2GDK70618_GT020_STN_39_B1_0139_034956	13.73	0.92

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	09:56:08	GT020_B1	50.72013	-0.44167	39	4088		KNMR_2GDK70618_GT020_STN_39_B1_0140_035029	13.95	0.93
22/06/2018	09:56:35	GT020_B1	50.72008	-0.44184	39	4089		KNMR_2GDK70618_GT020_STN_39_B1_0141_035055	13.98	0.90
22/06/2018	09:57:06	GT020_B1	50.72003	-0.44201	39	4090		KNMR_2GDK70618_GT020_STN_39_B1_0142_035126	14.09	0.84
22/06/2018	09:57:37	GT020_B1	50.71999	-0.44219	39	4091		KNMR_2GDK70618_GT020_STN_39_B1_0143_035158	14.13	0.80
22/06/2018	09:57:59	GT020_B1	50.71996	-0.44231	39	4092	EoL	KNMR_2GDK70618_GT020_STN_39_B1_0144_035222	14.25	0.75
22/06/2018	10:24:47	GT023_A1	50.72624	-0.43807	40	4093	SoL	KNMR_2GDK70618_GT023_STN_40_A1_0145_041908	12.90	0.63
22/06/2018	10:26:21	GT023_A1	50.72594	-0.43881	40	4094		KNMR_2GDK70618_GT023_STN_40_A1_0146_042042	12.78	0.94
22/06/2018	10:27:03	GT023_A1	50.72580	-0.43893	40	4095		KNMR_2GDK70618_GT023_STN_40_A1_0147_042124	12.57	0.84
22/06/2018	10:27:48	GT023_A1	50.72567	-0.43901	40	4096		KNMR_2GDK70618_GT023_STN_40_A1_0148_042209	12.48	0.60
22/06/2018	10:29:07	GT023_A1	50.72547	-0.43916	40	4097		KNMR_2GDK70618_GT023_STN_40_A1_0149_042327	12.25	1.02
22/06/2018	10:29:51	GT023_A1	50.72533	-0.43925	40	4098		KNMR_2GDK70618_GT023_STN_40_A1_0150_042412	12.28	0.64
22/06/2018	10:30:44	GT023_A1	50.72515	-0.43935	40	4099		KNMR_2GDK70618_GT023_STN_40_A1_0151_042542	12.20	0.82
22/06/2018	10:31:21	GT023_A1	50.72501	-0.43944	40	4100		KNMR_2GDK70618_GT023_STN_40_A1_0152_042607	12.07	1.18
22/06/2018	10:31:46	GT023_A1	50.72492	-0.43952	40	4101		KNMR_2GDK70618_GT023_STN_40_A1_0153_042629	11.75	0.83
22/06/2018	10:32:07	GT023_A1	50.72485	-0.43958	40	4102		KNMR_2GDK70618_GT023_STN_40_A1_0154_042710	12.05	0.86
22/06/2018	10:32:49	GT023_A1	50.72472	-0.43971	40	4103		KNMR_2GDK70618_GT023_STN_40_A1_0155_042738	12.14	0.71
22/06/2018	10:33:17	GT023_A1	50.72462	-0.43982	40	4104		KNMR_2GDK70618_GT023_STN_40_A1_0156_042743	11.93	0.85

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	10:33:22	GT023_A1	50.72462	-0.43983	40	4105		KNMR_2GDK70618_GT023_STN_40_A1_0157_042823	11.77	0.83
22/06/2018	10:34:02	GT023_A1	50.72453	-0.43998	40	4106	EoL	No image	11.73	0.68
22/06/2018	10:37:22	GT022_A1	50.72404	-0.44074	41	4107	SoL	KNMR_2GDK70618_GT022_STN_41_A1_0158_043142	12.11	0.71
22/06/2018	10:38:00	GT022_A1	50.72403	-0.44093	41	4108		KNMR_2GDK70618_GT022_STN_41_A1_0159_043220	12.10	0.60
22/06/2018	10:38:53	GT022_A1	50.72401	-0.44116	41	4109		KNMR_2GDK70618_GT022_STN_41_A1_0160_043313	12.15	0.64
22/06/2018	10:39:48	GT022_A1	50.72398	-0.44138	41	4110		KNMR_2GDK70618_GT022_STN_41_A1_0161_043410	11.64	0.56
22/06/2018	10:40:25	GT022_A1	50.72395	-0.44153	41	4111		KNMR_2GDK70618_GT022_STN_41_A1_0162_043446	12.01	0.60
22/06/2018	10:41:22	GT022_A1	50.72394	-0.44176	41	4112		KNMR_2GDK70618_GT022_STN_41_A1_0163_043543	11.80	0.61
22/06/2018	10:41:43	GT022_A1	50.72396	-0.44187	41	4113		KNMR_2GDK70618_GT022_STN_41_A1_0164_043604	11.64	0.78
22/06/2018	10:42:09	GT022_A1	50.72398	-0.44201	41	4114		KNMR_2GDK70618_GT022_STN_41_A1_0165_043630	12.10	0.65
22/06/2018	10:42:58	GT022_A1	50.72400	-0.44224	41	4115		KNMR_2GDK70618_GT022_STN_41_A1_0166_043718	12.08	0.68
22/06/2018	10:43:43	GT022_A1	50.72398	-0.44244	41	4116		KNMR_2GDK70618_GT022_STN_41_A1_0167_043803	11.33	0.60
22/06/2018	10:44:25	GT022_A1	50.72399	-0.44269	41	4117		KNMR_2GDK70618_GT022_STN_41_A1_0168_043846	11.36	0.84
22/06/2018	10:45:00	GT022_A1	50.72400	-0.44288	41	4118		KNMR_2GDK70618_GT022_STN_41_A1_0169_043921	11.58	0.68
22/06/2018	10:46:09	GT022_A1	50.72399	-0.44319	41	4119	EoL	KNMR_2GDK70618_GT022_STN_41_A1_0170_044030	11.56	0.54
22/06/2018	10:52:36	GT025_A1	50.72509	-0.44324	42	4120	SoL	KNMR_2GDK70618_GT025_STN_42_A1_0171_044658	11.17	0.76
22/06/2018	10:53:10	GT025_A1	50.72510	-0.44343	42	4121		KNMR_2GDK70618_GT025_STN_42_A1_0172_044731	11.11	0.94

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	10:53:30	GT025_A1	50.72510	-0.44357	42	4122		KNMR_2GDK70618_GT025_STN_42_A1_0173_044750	10.96	1.00
22/06/2018	10:54:16	GT025_A1	50.72514	-0.44389	42	4123		KNMR_2GDK70618_GT025_STN_42_A1_0174_044837	11.37	1.24
22/06/2018	10:54:51	GT025_A1	50.72513	-0.44418	42	4124		KNMR_2GDK70618_GT025_STN_42_A1_0175_044911	9.89	1.02
22/06/2018	10:55:29	GT025_A1	50.72509	-0.44439	42	4125		KNMR_2GDK70618_GT025_STN_42_A1_0176_044950	10.09	0.68
22/06/2018	10:56:16	GT025_A1	50.72509	-0.44466	42	4126		KNMR_2GDK70618_GT025_STN_42_A1_0177_045036	10.88	0.85
22/06/2018	10:56:42	GT025_A1	50.72510	-0.44480	42	4127		KNMR_2GDK70618_GT025_STN_42_A1_0178_045103	10.75	0.70
22/06/2018	10:57:21	GT025_A1	50.72511	-0.44499	42	4128		KNMR_2GDK70618_GT025_STN_42_A1_0179_045141	10.94	0.58
22/06/2018	10:58:04	GT025_A1	50.72517	-0.44521	42	4129		KNMR_2GDK70618_GT025_STN_42_A1_0180_045225	10.64	0.96
22/06/2018	10:58:07	GT025_A1	50.72517	-0.44523	42	4130		KNMR_2GDK70618_GT025_STN_42_A1_0181_045227	10.59	0.93
22/06/2018	10:59:01	GT025_A1	50.72521	-0.44548	42	4131		KNMR_2GDK70618_GT025_STN_42_A1_0182_045322	10.68	0.54
22/06/2018	11:00:00	GT025_A1	50.72525	-0.44582	42	4132	EoL	KNMR_2GDK70618_GT025_STN_42_A1_0183_045421	10.70	0.74
22/06/2018	11:03:36	GT024_A1	50.72377	-0.44486	43	4133	SoL	KNMR_2GDK70618_GT024_STN_43_A1_0184_045756	12.03	0.66
22/06/2018	11:05:02	GT024_A1	50.72370	-0.44525	43	4134		KNMR_2GDK70618_GT024_STN_43_A1_0185_045924	12.03	1.27
22/06/2018	11:05:39	GT024_A1	50.72374	-0.44552	43	4135		KNMR_2GDK70618_GT024_STN_43_A1_0186_050000	12.40	0.94
22/06/2018	11:05:47	GT024_A1	50.72374	-0.44557	43	4136		KNMR_2GDK70618_GT024_STN_43_A1_0187_050009	12.16	0.88
22/06/2018	11:06:59	GT024_A1	50.72375	-0.44600	43	4137		KNMR_2GDK70618_GT024_STN_43_A1_0188_050118	12.50	0.59
22/06/2018	11:08:02	GT024_A1	50.72380	-0.44624	43	4138		No image	12.22	0.49

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	11:08:45	GT024_A1	50.72382	-0.44644	43	4139		KNMR_2GDK70618_GT024_STN_43_A1_0189_050305	11.23	0.75
22/06/2018	11:09:42	GT024_A1	50.72388	-0.44660	43	4140		KNMR_2GDK70618_GT024_STN_43_A1_0190_050405	11.49	0.42
22/06/2018	11:10:33	GT024_A1	50.72394	-0.44683	43	4141		KNMR_2GDK70618_GT024_STN_43_A1_0191_050454	11.68	1.24
22/06/2018	11:11:17	GT024_A1	50.72397	-0.44702	43	4142		KNMR_2GDK70618_GT024_STN_43_A1_0192_050538	11.48	0.50
22/06/2018	11:12:16	GT024_A1	50.72406	-0.44712	43	4143		KNMR_2GDK70618_GT024_STN_43_A1_0193_050636	11.42	0.41
22/06/2018	11:12:58	GT024_A1	50.72412	-0.44723	43	4144	EoL	KNMR_2GDK70618_GT024_STN_43_A1_0194_050719	11.31	0.49
22/06/2018	11:16:28	GT027_A1	50.72660	-0.44545	44	4145	SoL	KNMR_2GDK70618_GT027_STN_44_A1_0195_051048	11.24	1.15
22/06/2018	11:17:33	GT027_A1	50.72673	-0.44555	44	4146		KNMR_2GDK70618_GT027_STN_44_A1_0196_051153	11.48	0.51
22/06/2018	11:18:07	GT027_A1	50.72680	-0.44578	44	4147		KNMR_2GDK70618_GT027_STN_44_A1_0197_051227	11.48	1.08
22/06/2018	11:18:55	GT027_A1	50.72691	-0.44598	44	4148		KNMR_2GDK70618_GT027_STN_44_A1_0198_051315	11.54	1.00
22/06/2018	11:19:39	GT027_A1	50.72696	-0.44631	44	4149		KNMR_2GDK70618_GT027_STN_44_A1_0199_051359	11.67	1.18
22/06/2018	11:20:18	GT027_A1	50.72696	-0.44659	44	4150		KNMR_2GDK70618_GT027_STN_44_A1_0200_051439	11.56	1.06
22/06/2018	11:20:39	GT027_A1	50.72695	-0.44673	44	4151		KNMR_2GDK70618_GT027_STN_44_A1_0201_051459	11.49	1.03
22/06/2018	11:21:17	GT027_A1	50.72694	-0.44700	44	4152		KNMR_2GDK70618_GT027_STN_44_A1_0202_051538	11.54	0.94
22/06/2018	11:21:58	GT027_A1	50.72694	-0.44719	44	4153		KNMR_2GDK70618_GT027_STN_44_A1_0203_051618	11.55	0.50
22/06/2018	11:22:24	GT027_A1	50.72700	-0.44733	44	4154		KNMR_2GDK70618_GT027_STN_44_A1_0204_051645	11.50	1.16
22/06/2018	11:22:56	GT027_A1	50.72704	-0.44757	44	4155		KNMR_2GDK70618_GT027_STN_44_A1_0205_051717	11.31	0.95

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	11:23:23	GT027_A1	50.72708	-0.44771	44	4156		KNMR_2GDK70618_GT027_STN_44_A1_0206_051744	11.35	0.65
22/06/2018	11:24:00	GT027_A1	50.72715	-0.44796	44	4157	EoL	KNMR_2GDK70618_GT027_STN_44_A1_0207_051820	11.21	1.29
22/06/2018	11:27:46	GT026_A1	50.72622	-0.45021	45	4158	SoL	KNMR_2GDK70618_GT026_STN_45_A1_0208_052208	10.53	0.89
22/06/2018	11:28:31	GT026_A1	50.72601	-0.45026	45	4159		KNMR_2GDK70618_GT026_STN_45_A1_0209_052252	10.37	1.01
22/06/2018	11:29:32	GT026_A1	50.72581	-0.45043	45	4160		KNMR_2GDK70618_GT026_STN_45_A1_0210_052352	9.73	0.88
22/06/2018	11:30:46	GT026_A1	50.72570	-0.45095	45	4161		KNMR_2GDK70618_GT026_STN_45_A1_0211_052507	9.83	0.59
22/06/2018	11:31:53	GT026_A1	50.72551	-0.45139	45	4162		KNMR_2GDK70618_GT026_STN_45_A1_0212_052613	9.27	0.99
22/06/2018	11:32:48	GT026_A1	50.72533	-0.45145	45	4163		KNMR_2GDK70618_GT026_STN_45_A1_0213_052709	9.26	1.14
22/06/2018	11:33:07	GT026_A1	50.72525	-0.45146	45	4164		KNMR_2GDK70618_GT026_STN_45_A1_0214_052727	9.93	0.65
22/06/2018	11:33:46	GT026_A1	50.72510	-0.45142	45	4165		KNMR_2GDK70618_GT026_STN_45_A1_0215_052807	10.57	1.07
22/06/2018	11:34:15	GT026_A1	50.72498	-0.45140	45	4166		KNMR_2GDK70618_GT026_STN_45_A1_0216_052835	10.38	0.95
22/06/2018	11:34:45	GT026_A1	50.72488	-0.45138	45	4167		KNMR_2GDK70618_GT026_STN_45_A1_0217_052906	10.91	0.55
22/06/2018	11:35:22	GT026_A1	50.72470	-0.45127	45	4168		KNMR_2GDK70618_GT026_STN_45_A1_0218_052943	10.20	0.86
22/06/2018	11:36:04	GT026_A1	50.72455	-0.45121	45	4169	EoL	KNMR_2GDK70618_GT026_STN_45_A1_0219_053025	11.36	1.25
22/06/2018	11:40:51	GT028_A1	50.72522	-0.45673	46	4170	SoL	KNMR_2GDK70618_GT028_STN_46_A1_0220_053513	10.52	0.77
22/06/2018	11:41:50	GT028_A1	50.72538	-0.45666	46	4171		KNMR_2GDK70618_GT028_STN_46_A1_0221_053610	9.39	0.58
22/06/2018	11:42:50	GT028_A1	50.72552	-0.45657	46	4172		KNMR_2GDK70618_GT028_STN_46_A1_0222_053710	10.43	0.59

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	11:43:33	GT028_A1	50.72564	-0.45656	46	4173		KNMR_2GDK70618_GT028_STN_46_A1_0223_053754	10.37	0.55
22/06/2018	11:45:26	GT028_A1	50.72594	-0.45680	46	4174		KNMR_2GDK70618_GT028_STN_46_A1_0224_053946	10.47	1.43
22/06/2018	11:46:34	GT028_A1	50.72627	-0.45703	46	4175		KNMR_2GDK70618_GT028_STN_46_A1_0225_054055	11.15	0.93
22/06/2018	11:47:07	GT028_A1	50.72640	-0.45713	46	4176		KNMR_2GDK70618_GT028_STN_46_A1_0226_054128	11.14	1.11
22/06/2018	11:47:58	GT028_A1	50.72658	-0.45709	46	4177		KNMR_2GDK70618_GT028_STN_46_A1_0227_054218	11.50	0.64
22/06/2018	11:49:03	GT028_A1	50.72676	-0.45708	46	4178		KNMR_2GDK70618_GT028_STN_46_A1_0228_054323	11.75	0.58
22/06/2018	11:50:10	GT028_A1	50.72691	-0.45706	46	4179		KNMR_2GDK70618_GT028_STN_46_A1_0229_054431	11.85	0.38
22/06/2018	11:51:17	GT028_A1	50.72711	-0.45729	46	4180		KNMR_2GDK70618_GT028_STN_46_A1_0230_054538	12.24	0.93
22/06/2018	11:52:08	GT028_A1	50.72727	-0.45753	46	4181	EoL	KNMR_2GDK70618_GT028_STN_46_A1_0231_054629	12.39	1.58
22/06/2018	11:57:00	GT033_A1	50.72317	-0.45935	47	4182	SoL	KNMR_2GDK70618_GT033_STN_47_A1_0232_055120	12.18	0.38
22/06/2018	11:57:43	GT033_A1	50.72334	-0.45943	47	4183		KNMR_2GDK70618_GT033_STN_47_A1_0233_055203	11.91	0.96
22/06/2018	11:58:31	GT033_A1	50.72350	-0.45963	47	4184		KNMR_2GDK70618_GT033_STN_47_A1_0234_055251	11.90	0.94
22/06/2018	11:59:07	GT033_A1	50.72358	-0.45980	47	4185		KNMR_2GDK70618_GT033_STN_47_A1_0235_055328	11.61	0.77
22/06/2018	11:59:47	GT033_A1	50.72370	-0.45996	47	4186		KNMR_2GDK70618_GT033_STN_47_A1_0236_055408	11.44	0.80
22/06/2018	12:00:11	GT033_A1	50.72375	-0.46006	47	4187		KNMR_2GDK70618_GT033_STN_47_A1_0237_055431	11.54	0.82
22/06/2018	12:00:36	GT033_A1	50.72380	-0.46023	47	4188		KNMR_2GDK70618_GT033_STN_47_A1_0238_055456	11.35	0.95
22/06/2018	12:01:22	GT033_A1	50.72386	-0.46055	47	4189		KNMR_2GDK70618_GT033_STN_47_A1_0239_055542	11.83	0.83

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	12:02:01	GT033_A1	50.72393	-0.46075	47	4190		KNMR_2GDK70618_GT033_STN_47_A1_0240_055621	11.87	0.88
22/06/2018	12:02:40	GT033_A1	50.72403	-0.46097	47	4191		KNMR_2GDK70618_GT033_STN_47_A1_0241_055702	11.32	0.98
22/06/2018	12:03:46	GT033_A1	50.72420	-0.46130	47	4192		KNMR_2GDK70618_GT033_STN_47_A1_0242_055807	11.49	0.88
22/06/2018	12:04:27	GT033_A1	50.72431	-0.46149	47	4193	EoL	KNMR_2GDK70618_GT033_STN_47_A1_0243_055848	11.24	0.93
22/06/2018	12:07:22	GT029_A1	50.72551	-0.46124	48	4194	SoL	KNMR_2GDK70618_GT029_STN_48_A1_0244_060142	10.90	0.88
22/06/2018	12:08:08	GT029_A1	50.72569	-0.46126	48	4195		KNMR_2GDK70618_GT029_STN_48_A1_0245_060229	10.61	0.85
22/06/2018	12:08:43	GT029_A1	50.72583	-0.46142	48	4196		KNMR_2GDK70618_GT029_STN_48_A1_0246_060305	11.12	1.11
22/06/2018	12:09:30	GT029_A1	50.72598	-0.46164	48	4197		KNMR_2GDK70618_GT029_STN_48_A1_0247_060350	11.26	0.99
22/06/2018	12:10:13	GT029_A1	50.72612	-0.46181	48	4198		KNMR_2GDK70618_GT029_STN_48_A1_0248_060434	11.42	0.94
22/06/2018	12:11:00	GT029_A1	50.72625	-0.46200	48	4199		KNMR_2GDK70618_GT029_STN_48_A1_0249_060521	11.39	0.66
22/06/2018	12:11:52	GT029_A1	50.72640	-0.46217	48	4200		KNMR_2GDK70618_GT029_STN_48_A1_0250_060612	11.62	0.71
22/06/2018	12:12:36	GT029_A1	50.72653	-0.46235	48	4201		KNMR_2GDK70618_GT029_STN_48_A1_0251_060657	11.76	0.98
22/06/2018	12:13:21	GT029_A1	50.72663	-0.46260	48	4202		KNMR_2GDK70618_GT029_STN_48_A1_0252_060742	11.92	0.71
22/06/2018	12:13:23	GT029_A1	50.72663	-0.46262	48	4203		KNMR_2GDK70618_GT029_STN_48_A1_0253_060744	11.76	0.68
22/06/2018	12:14:18	GT029_A1	50.72657	-0.46292	48	4204		KNMR_2GDK70618_GT029_STN_48_A1_0254_060838	11.70	1.15
22/06/2018	12:15:04	GT029_A1	50.72666	-0.46323	48	4205		KNMR_2GDK70618_GT029_STN_48_A1_0255_060924	11.92	1.23
22/06/2018	12:15:29	GT029_A1	50.72677	-0.46338	48	4206	EoL	KNMR_2GDK70618_GT029_STN_48_A1_0256_060949	12.12	1.13

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	12:18:43	GT030_A1	50.72648	-0.46554	49	4207	SoL	No image	10.58	0.95
22/06/2018	12:19:26	GT030_A1	50.72662	-0.46568	49	4208		KNMR_2GDK70618_GT030_STN_49_A1_0257_061346	10.95	0.73
22/06/2018	12:20:18	GT030_A1	50.72680	-0.46593	49	4209		KNMR_2GDK70618_GT030_STN_49_A1_0258_061438	11.29	0.84
22/06/2018	12:20:55	GT030_A1	50.72692	-0.46605	49	4210		KNMR_2GDK70618_GT030_STN_49_A1_0259_061516	11.43	0.80
22/06/2018	12:21:35	GT030_A1	50.72704	-0.46616	49	4211		KNMR_2GDK70618_GT030_STN_49_A1_0260_061555	11.41	0.74
22/06/2018	12:22:17	GT030_A1	50.72716	-0.46634	49	4212		KNMR_2GDK70618_GT030_STN_49_A1_0261_061637	11.73	0.76
22/06/2018	12:22:43	GT030_A1	50.72723	-0.46642	49	4213		KNMR_2GDK70618_GT030_STN_49_A1_0262_061703	11.95	0.66
22/06/2018	12:23:21	GT030_A1	50.72732	-0.46657	49	4214		KNMR_2GDK70618_GT030_STN_49_A1_0263_061741	11.83	0.55
22/06/2018	12:23:55	GT030_A1	50.72738	-0.46674	49	4215		KNMR_2GDK70618_GT030_STN_49_A1_0264_061815	11.64	0.80
22/06/2018	12:24:29	GT030_A1	50.72749	-0.46687	49	4216		KNMR_2GDK70618_GT030_STN_49_A1_0265_061849	11.80	0.79
22/06/2018	12:25:19	GT030_A1	50.72757	-0.46674	49	4217		KNMR_2GDK70618_GT030_STN_49_A1_0266_061939	11.89	0.59
22/06/2018	12:26:00	GT030_A1	50.72775	-0.46689	49	4218	EoL	KNMR_2GDK70618_GT030_STN_49_A1_0267_062020	12.08	1.11
22/06/2018	12:29:27	GT031_A1	50.72595	-0.46897	50	4219	SoL	KNMR_2GDK70618_GT031_STN_50_A1_0268_062347	10.71	0.10
22/06/2018	12:30:08	GT031_A1	50.72615	-0.46908	50	4220		KNMR_2GDK70618_GT031_STN_50_A1_0269_062426	10.58	1.00
22/06/2018	12:30:13	GT031_A1	50.72616	-0.46910	50	No fix		KNMR_2GDK70618_GT031_STN_50_A1_0270_062428	10.56	0.88
22/06/2018	12:30:43	GT031_A1	50.72626	-0.46920	50	4221		KNMR_2GDK70618_GT031_STN_50_A1_0271_062503	10.81	0.78
22/06/2018	12:31:14	GT031_A1	50.72635	-0.46936	50	4222		KNMR_2GDK70618_GT031_STN_50_A1_0272_062534	10.64	1.06

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	12:31:57	GT031_A1	50.72641	-0.46954	50	4223		KNMR_2GDK70618_GT031_STN_50_A1_0273_062617	10.56	0.89
22/06/2018	12:32:31	GT031_A1	50.72648	-0.46980	50	4224		KNMR_2GDK70618_GT031_STN_50_A1_0274_062651	10.34	0.96
22/06/2018	12:33:14	GT031_A1	50.72656	-0.47001	50	4225		KNMR_2GDK70618_GT031_STN_50_A1_0275_062734	10.62	0.91
22/06/2018	12:33:37	GT031_A1	50.72663	-0.47010	50	4226		KNMR_2GDK70618_GT031_STN_50_A1_0276_062757	11.13	0.91
22/06/2018	12:34:00	GT031_A1	50.72669	-0.47021	50	4227		KNMR_2GDK70618_GT031_STN_50_A1_0277_062821	10.56	1.02
22/06/2018	12:34:53	GT031_A1	50.72686	-0.47050	50	4228		KNMR_2GDK70618_GT031_STN_50_A1_0278_062913	10.72	1.18
22/06/2018	12:35:30	GT031_A1	50.72701	-0.47062	50	4229		KNMR_2GDK70618_GT031_STN_50_A1_0279_062950	10.96	0.99
22/06/2018	12:35:54	GT031_A1	50.72710	-0.47071	50	4230		KNMR_2GDK70618_GT031_STN_50_A1_0280_063014	10.78	0.87
22/06/2018	12:36:16	GT031_A1	50.72715	-0.47075	50	4231	EoL	KNMR_2GDK70618_GT031_STN_50_A1_0281_063036	10.80	0.75
22/06/2018	12:40:03	GT032_A1	50.72488	-0.47152	51	4232	SoL	No image	11.42	0.61
22/06/2018	12:40:36	GT032_A1	50.72502	-0.47164	51	4233		KNMR_2GDK70618_GT032_STN_51_A1_0282_063456	11.56	0.40
22/06/2018	12:41:22	GT032_A1	50.72520	-0.47173	51	4234		KNMR_2GDK70618_GT032_STN_51_A1_0283_063543	11.82	0.87
22/06/2018	12:41:52	GT032_A1	50.72528	-0.47185	51	4235		KNMR_2GDK70618_GT032_STN_51_A1_0284_063611	11.63	0.76
22/06/2018	12:42:14	GT032_A1	50.72531	-0.47189	51	4236		KNMR_2GDK70618_GT032_STN_51_A1_0285_063634	11.66	0.21
22/06/2018	12:42:52	GT032_A1	50.72529	-0.47199	51	4237		KNMR_2GDK70618_GT032_STN_51_A1_0286_063712	11.58	0.22
22/06/2018	12:43:37	GT032_A1	50.72531	-0.47222	51	4238		KNMR_2GDK70618_GT032_STN_51_A1_0287_063757	11.54	0.82
22/06/2018	12:44:07	GT032_A1	50.72544	-0.47231	51	4239		KNMR_2GDK70618_GT032_STN_51_A1_0288_063827	11.83	1.10

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	12:44:49	GT032_A1	50.72561	-0.47231	51	4240		KNMR_2GDK70618_GT032_STN_51_A1_0289_063909	11.71	1.25
22/06/2018	12:45:22	GT032_A1	50.72575	-0.47242	51	4241		KNMR_2GDK70618_GT032_STN_51_A1_0290_063942	11.60	0.61
22/06/2018	12:45:57	GT032_A1	50.72588	-0.47254	51	4242		KNMR_2GDK70618_GT032_STN_51_A1_0291_064017	11.55	0.97
22/06/2018	12:46:33	GT032_A1	50.72598	-0.47251	51	4243		KNMR_2GDK70618_GT032_STN_51_A1_0292_064053	11.34	0.81
22/06/2018	12:47:16	GT032_A1	50.72618	-0.47247	51	4244		KNMR_2GDK70618_GT032_STN_51_A1_0293_064136	11.35	0.67
22/06/2018	12:47:49	GT032_A1	50.72631	-0.47248	51	4245	EoL	KNMR_2GDK70618_GT032_STN_51_A1_0294_064209	11.40	0.79
22/06/2018	12:51:01	GT034_A1	50.72738	-0.47401	52	4246	SoL	KNMR_2GDK70618_GT034_STN_52_A1_0295_064553	10.28	0.90
22/06/2018	12:51:33	GT034_A1	50.72751	-0.47400	52	4247		KNMR_2GDK70618_GT034_STN_52_A1_0296_064632	10.65	0.95
22/06/2018	12:52:12	GT034_A1	50.72764	-0.47394	52	4248		KNMR_2GDK70618_GT034_STN_52_A1_0297_064720	10.27	1.00
22/06/2018	12:52:59	GT034_A1	50.72784	-0.47386	52	4249		KNMR_2GDK70618_GT034_STN_52_A1_0298_064755	10.01	1.20
22/06/2018	12:53:35	GT034_A1	50.72800	-0.47385	52	4250		KNMR_2GDK70618_GT034_STN_52_A1_0299_064841	9.39	0.90
22/06/2018	12:54:48	GT034_A1	50.72828	-0.47380	52	4251		KNMR_2GDK70618_GT034_STN_52_A1_0300_064908	10.01	0.79
22/06/2018	12:55:06	GT034_A1	50.72835	-0.47380	52	4252		KNMR_2GDK70618_GT034_STN_52_A1_0301_064926	9.92	0.91
22/06/2018	12:55:43	GT034_A1	50.72846	-0.47385	52	4253		KNMR_2GDK70618_GT034_STN_52_A1_0302_065003	9.97	0.47
22/06/2018	12:56:24	GT034_A1	50.72857	-0.47390	52	4254		KNMR_2GDK70618_GT034_STN_52_A1_0303_065045	10.36	0.72
22/06/2018	12:57:05	GT034_A1	50.72862	-0.47404	52	4255		KNMR_2GDK70618_GT034_STN_52_A1_0304_065125	10.09	0.64
22/06/2018	12:57:33	GT034_A1	50.72869	-0.47415	52	4256		KNMR_2GDK70618_GT034_STN_52_A1_0305_065153	10.17	0.82

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	12:58:03	GT034_A1	50.72881	-0.47419	52	4257	EoL	KNMR_2GDK70618_GT034_STN_52_A1_0306_065224	10.27	0.95
22/06/2018	13:11:14	GT043_A2	50.72363	-0.51873	53	4258	SoL	KNMR_2GDK70618_GT043_STN_53_A2_0307_070534	13.41	0.89
22/06/2018	13:11:38	GT043_A2	50.72371	-0.51859	53	4259		KNMR_2GDK70618_GT043_STN_53_A2_0308_070559	13.17	1.06
22/06/2018	13:12:08	GT043_A2	50.72380	-0.51840	53	4260		KNMR_2GDK70618_GT043_STN_53_A2_0309_070628	13.19	1.11
22/06/2018	13:12:39	GT043_A2	50.72388	-0.51817	53	4261		KNMR_2GDK70618_GT043_STN_53_A2_0310_070700	13.50	1.14
22/06/2018	13:13:07	GT043_A2	50.72393	-0.51795	53	4262		KNMR_2GDK70618_GT043_STN_53_A2_0311_070727	13.68	1.10
22/06/2018	13:13:36	GT043_A2	50.72400	-0.51771	53	4263		KNMR_2GDK70618_GT043_STN_53_A2_0312_070757	13.64	1.35
22/06/2018	13:14:09	GT043_A2	50.72408	-0.51740	53	4264		KNMR_2GDK70618_GT043_STN_53_A2_0313_070829	13.94	1.26
22/06/2018	13:14:43	GT043_A2	50.72416	-0.51713	53	4265		KNMR_2GDK70618_GT043_STN_53_A2_0314_070903	14.00	1.29
22/06/2018	13:15:45	GT043_A2	50.72432	-0.51655	53	4266		KNMR_2GDK70618_GT043_STN_53_A2_0315_071005	14.22	1.26
22/06/2018	13:17:11	GT043_A2	50.72470	-0.51598	53	4267		KNMR_2GDK70618_GT043_STN_53_A2_0316_071131	14.27	1.15
22/06/2018	13:17:38	GT043_A2	50.72476	-0.51582	53	4268		KNMR_2GDK70618_GT043_STN_53_A2_0317_071158	14.26	0.95
22/06/2018	13:18:07	GT043_A2	50.72484	-0.51560	53	4269		KNMR_2GDK70618_GT043_STN_53_A2_0318_071227	14.23	1.33
22/06/2018	13:18:38	GT043_A2	50.72492	-0.51541	53	4270	EoL	KNMR_2GDK70618_GT043_STN_53_A2_0319_071258	14.28	0.79
22/06/2018	13:29:00	GT042_A2	50.73002	-0.49493	54	4271	SoL	KNMR_2GDK70618_GT042_STN_54_A2_0320_072321	12.27	0.33
22/06/2018	13:29:39	GT042_A2	50.73009	-0.49474	54	4272		KNMR_2GDK70618_GT042_STN_54_A2_0321_072359	12.01	1.08
22/06/2018	13:30:09	GT042_A2	50.73018	-0.49452	54	4273		KNMR_2GDK70618_GT042_STN_54_A2_0322_072429	11.57	1.50

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	13:30:35	GT042_A2	50.73034	-0.49442	54	4274		KNMR_2GDK70618_GT042_STN_54_A2_0323_072452	11.31	1.38
22/06/2018	13:30:59	GT042_A2	50.73045	-0.49428	54	4275		KNMR_2GDK70618_GT042_STN_54_A2_0324_072519	11.06	1.41
22/06/2018	13:31:20	GT042_A2	50.73053	-0.49416	54	4276		KNMR_2GDK70618_GT042_STN_54_A2_0325_072541	11.26	1.03
22/06/2018	13:31:45	GT042_A2	50.73064	-0.49404	54	4277		KNMR_2GDK70618_GT042_STN_54_A2_0326_072605	11.21	1.04
22/06/2018	13:32:25	GT042_A2	50.73072	-0.49384	54	4278		KNMR_2GDK70618_GT042_STN_54_A2_0327_072646	11.08	1.03
22/06/2018	13:33:04	GT042_A2	50.73073	-0.49351	54	4279		KNMR_2GDK70618_GT042_STN_54_A2_0328_072725	10.67	1.27
22/06/2018	13:33:24	GT042_A2	50.73071	-0.49339	54	4280		KNMR_2GDK70618_GT042_STN_54_A2_0329_072745	10.91	0.91
22/06/2018	13:33:51	GT042_A2	50.73074	-0.49317	54	4281		KNMR_2GDK70618_GT042_STN_54_A2_0330_072811	11.04	1.28
22/06/2018	13:34:11	GT042_A2	50.73078	-0.49300	54	4282		KNMR_2GDK70618_GT042_STN_54_A2_0331_072831	11.23	1.21
22/06/2018	13:34:33	GT042_A2	50.73083	-0.49283	54	4283	EoL	KNMR_2GDK70618_GT042_STN_54_A2_0332_072854	11.35	1.37
22/06/2018	13:38:49	GT041_A2	50.73003	-0.48568	55	4284	SoL	KNMR_2GDK70618_GT041_STN_55_A2_0333_073309	1.64	0.67
22/06/2018	13:39:19	GT041_A2	50.73009	-0.48550	55	4285		KNMR_2GDK70618_GT041_STN_55_A2_0334_073340	9.85	1.10
22/06/2018	13:39:50	GT041_A2	50.73018	-0.48531	55	4286		KNMR_2GDK70618_GT041_STN_55_A2_0335_073411	9.82	0.93
22/06/2018	13:40:14	GT041_A2	50.73021	-0.48518	55	4287		KNMR_2GDK70618_GT041_STN_55_A2_0336_073434	9.82	1.01
22/06/2018	13:40:40	GT041_A2	50.73032	-0.48496	55	4288		KNMR_2GDK70618_GT041_STN_55_A2_0337_073500	9.48	1.41
22/06/2018	13:41:10	GT041_A2	50.73040	-0.48473	55	4289		KNMR_2GDK70618_GT041_STN_55_A2_0338_073530	9.77	0.78
22/06/2018	13:41:40	GT041_A2	50.73048	-0.48458	55	4290		KNMR_2GDK70618_GT041_STN_55_A2_0339_073600	9.77	1.19

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN number	Hpro fix no.	Fix Description	Still Label	Water depth (m)	SOG (knots)
22/06/2018	13:42:04	GT041_A2	50.73051	-0.48446	55	4291		KNMR_2GDK70618_GT041_STN_55_A2_0340_073624	9.55	0.70
22/06/2018	13:42:26	GT041_A2	50.73055	-0.48435	55	4292		KNMR_2GDK70618_GT041_STN_55_A2_0341_073646	9.92	0.72
22/06/2018	13:42:56	GT041_A2	50.73063	-0.48412	55	4293		KNMR_2GDK70618_GT041_STN_55_A2_0342_073716	10.17	1.53
22/06/2018	13:43:35	GT041_A2	50.73066	-0.48383	55	4294		KNMR_2GDK70618_GT041_STN_55_A2_0343_073755	10.04	1.18
22/06/2018	13:44:03	GT041_A2	50.73068	-0.48359	55	4295		KNMR_2GDK70618_GT041_STN_55_A2_0344_073823	10.01	1.30
22/06/2018	13:44:30	GT041_A2	50.73070	-0.48333	55	4296		KNMR_2GDK70618_GT041_STN_55_A2_0345_073851	10.28	1.13
22/06/2018	13:44:59	GT041_A2	50.73074	-0.48310	55	4297	EoL	KNMR_2GDK70618_GT041_STN_55_A2_0346_073919	10.41	1.06

7.7 Grab Survey Metadata

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN (event) number	Hpro fix no.	Water depth (m)	Sediment depth (cm)	Sediment use
23/06/2018	07:17:00	KNMR_66	50.74005	-0.37307	56	4298	16.60	3.20	Biota + PSA
23/06/2018	07:25:00	WQ_KNMR_66	50.73983	-0.37323	56	4299	16.52	-	salinity
23/06/2018	07:33:00	KNMR_58	50.74038	-0.39485	57	4300	14.91	-	empty
23/06/2018	07:36:00	KNMR_58	50.74036	-0.39470	57	4301	14.81	-	Grab Misfired
23/06/2018	07:38:00	KNMR_58	50.74038	-0.39487	57	4302	15.08	-	empty
23/06/2018	07:40:00	KNMR_58	50.74050	-0.39482	57	4303	14.89	-	empty
23/06/2018	07:42:00	WQ_KNMR_58	50.74052	-0.39485	57	4304	14.97	-	salinity
23/06/2018	07:52:00	KNMR_59	50.72631	-0.40421	58	4305	17.03	-	empty
23/06/2018	07:55:00	KNMR_59	50.72624	-0.40407	58	4306	17.10	2.80	Biota + PSA
23/06/2018	07:58:00	KNMR_59	50.72636	-0.40413	58	4307	17.06	1.00	Discarded
23/06/2018	08:00:00	KNMR_59	50.72625	-0.40401	58	4308	17.17	0.80	Discarded
23/06/2018	08:04:00	WQ_KNMR_59	50.72639	-0.40428	58	4309	17.12	-	salinity
23/06/2018	08:11:00	KNMR_60	50.72628	-0.42130	59	4310	16.73	1.00	Discarded
23/06/2018	08:13:00	KNMR_60	50.72623	-0.42110	59	4311	16.83	2.10	Biota + PSA
23/06/2018	08:16:00	KNMR_60	50.72624	-0.42118	59	4312	16.79	1.00	Discarded
23/06/2018	08:19:00	WQ_KNMR_60	50.72602	-0.42124	59	no fix	16.84	-	salinity
23/06/2018	08:25:00	KNMR_61	50.72863	-0.43237	60	4313	15.78	1.60	PSA only
23/06/2018	08:27:00	KNMR_61	50.72869	-0.43230	60	4314	15.62	1.00	Discarded
23/06/2018	08:30:00	KNMR_61	50.72865	-0.43232	60	4315	15.68	0.80	Discarded
23/06/2018	08:33:00	WQ_KNMR_61	50.72876	-0.43232	60	4316	15.56	-	salinity
23/06/2018	08:44:00	KNMR_64	50.71706	-0.44374	61	4317	16.44	1.60	PSA only
23/06/2018	08:46:00	KNMR_64	50.71705	-0.44372	61	4318	16.52	0.80	Discarded
23/06/2018	08:49:00	KNMR_64	50.71698	-0.44380	61	4319	16.41	0.50	Discarded
23/06/2018	08:51:00	WQ_KNMR_64	50.71710	-0.44366	61	4320	16.39	-	salinity
23/06/2018	09:04:27	KNMR_62	50.74361	-0.44143	62	4321	13.76	1.00	PSA only
23/06/2018	09:06:16	KNMR_62	50.74361	-0.44133	62	4322	13.71	0.50	Discarded
23/06/2018	09:08:05	KNMR_62	50.74366	-0.44134	62	4323	13.62	0.80	Discarded
23/06/2018	09:09:53	WQ_KNMR_62	50.74368	-0.44142	62	4324	13.60	-	salinity
23/06/2018	09:20:47	KNMR_63	50.73475	-0.47375	63	4325	14.12	1.40	PSA only
23/06/2018	09:22:51	KNMR_63	50.73468	-0.47376	63	4326	14.05	0.80	Discarded
23/06/2018	09:24:37	KNMR_63	50.73468	-0.47370	63	4327	14.04	0.80	Discarded

Date	Time UTC	Station Code	WGS84 Latitude DD.DDDDD	WGS84 Longitude DD.DDDDD	STN (event) number	Hpro fix no.	Water depth (m)	Sediment depth (cm)	Sediment use
23/06/2018	09:29:09	WQ_KNMR_63	50.73452	-0.47397	63	4328	13.97	-	salinity
23/06/2018	09:36:53	KNMR_65	50.72150	-0.47979	64	4329	15.64	1.00	PSA only
23/06/2018	09:39:49	KNMR_65	50.72144	-0.47972	64	4330	15.58	0.80	Discarded
23/06/2018	09:41:50	KNMR_65	50.72139	-0.47976	64	4331	15.60	0.50	Discarded
23/06/2018	09:45:34	WQ_KNMR_65	50.72133	-0.47976	64	4332	15.52	-	salinity
23/06/2018	09:54:11	KNMR_57	50.70937	-0.49607	65	4333	18.89	3.20	Biota + PSA
23/06/2018	09:58:25	WQ_KNMR_57	50.70935	-0.49635	65	4334	18.70	-	salinity
23/06/2018	10:04:16	KNMR_55	50.71483	-0.50427	66	4335	18.33	1.90	Discarded
23/06/2018	10:06:28	KNMR_55	50.71484	-0.50441	66	4336	18.52	3.30	Biota + PSA
23/06/2018	10:09:13	WQ_KNMR_55	50.71489	-0.50419	66	4337	18.31	-	salinity
23/06/2018	10:17:13	KNMR_54	50.72364	-0.50113	67	4338	15.45	2.10	Biota + PSA
23/06/2018	10:19:49	KNMR_54	50.72367	-0.50112	67	4339	15.50	1.30	Discarded
23/06/2018	10:22:07	KNMR_54	50.72368	-0.50111	67	4340	15.45	1.00	Discarded
23/06/2018	10:24:02	WQ_KNMR_54	50.72364	-0.50121	67	4341	15.28	-	salinity
23/06/2018	10:30:53	KNMR_53	50.73112	-0.50653	68	4342	13.74	1.00	Discarded
23/06/2018	10:33:43	KNMR_53	50.73121	-0.50659	68	4343	13.79	1.50	PSA only
23/06/2018	10:37:32	KNMR_53	50.73119	-0.50661	68	4344	13.57	1.00	Discarded
23/06/2018	10:39:30	WQ_KNMR_53	50.73123	-0.50649	68	4345	13.68	-	salinity
23/06/2018	10:47:51	KNMR_52	50.73780	-0.50400	69	4346	14.84	5.00	Biota + PSA
23/06/2018	10:50:23	WQ_KNMR_52	50.73785	-0.50386	69	4347	14.94	-	salinity
23/06/2018	11:02:20	KNMR_51	50.73935	-0.54193	70	4348	13.93	2.10	Biota + PSA
23/06/2018	11:05:28	KNMR_51	50.73936	-0.54208	70	4349	13.93	1.00	Discarded
23/06/2018	11:08:55	KNMR_51	50.73939	-0.54188	70	4350	13.57	1.00	Discarded
23/06/2018	11:10:47	WQ_KNMR_51	50.73942	-0.54208	70	4351	13.79	-	salinity
23/06/2018	11:24:01	KNMR_56	50.71030	-0.53942	71	4352	17.26	2.10	Biota + PSA
23/06/2018	11:26:59	KNMR_56	50.71040	-0.53945	71	4353	17.06	1.00	Discarded
23/06/2018	11:30:00	KNMR_56	50.71040	-0.53948	71	4354	17.16	1.20	Discarded
23/06/2018	11:32:23	WQ_KNMR_56	50.71039	-0.53957	71	4355	16.92	-	salinity

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