



Inshore Fisheries and
Conservation Authority

Verifying acoustic signals for habitat classification within St.Austell Bay, Veryan Bay and Gerrans Bay 2016 Summary Report



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Glossary of terms and abbreviations

Anthropogenic Produced or caused by human activity

DDV Drop down video

IFCA Inshore Fisheries and Conservation Authority

SPA Special Protection Area

SSS Side-scan sonar

UTC Coordinated Universal Time

1 Project Background

As part of the ongoing Memorandum of Agreement between Cornwall Inshore Fisheries and Conservation Authority (IFCA) and Natural England (NE), Cornwall IFCA undertook acoustic and underwater imaging surveys within St.Austell Bay, Veryan Bay and Gerrans Bay with a view to being able to describe the various habitats within those parts of the Falmouth Bay to St Austell Bay pSPA . This information was ultimately to be compared to site feature occurrence records to see if there was any correlation. Additionally, Natural England were keen to gather information about the distribution of maerl in St Austell Bay. Underwater imaging techniques were used to verify the acoustic signatures so habitat classifications within the three bay could be made.

Cornwall IFCA had been informed that there was a significant amount of maerl within St.Austell Bay on the south coast of Cornwall, however the extent of the habitat and whether the maerl was alive or dead was unknown. The maerl was initially discovered by Seasearch divers in July 2012 (Gall, 2012) in the east of St.Austell Bay as part of a larger survey in Cornwall.

Maerl is a collective term for various species of non-jointed red coralline algae (Hall-Spencer *et al.*, 2010; Grall and Hall-Spencer, 2003) that live unattached and can consist of either live or dead accumulations (Hall-Spencer *et al.*, 2010). They provide complex and extensive habitats which create important ecosystems because of their increased surface area, food availability, provision of shelter and a safe refuge for juveniles as well as having a higher species diversity and richness (JNCC, 2015; Friedlander *et al.*, 2003). Maerl beds grow as unattached nodules on the seabed, especially in areas of coarse clean sediments or muddy mixed sediments which typically occur either on the open coast, in tide-swept channels or in sheltered areas of marine inlets with weak currents (Hall-Spencer *et al.*, 2010; Hall-Spencer *et al.*, 2008). Maerl requires light to photosynthesise and is therefore found in shallow waters to a maximum of 40m (Hall-Spencer *et al.*, 2010).

A number of past studies indicate that maerl beds have declined in both extent and quality mainly caused by anthropogenic impacts, this is in part due to the slow growth rate of the species (Bosence & Wilson, 2003) and the hard exoskeleton which is vulnerable to damage by abrasion and physical disturbance and changes to its environment (Hall-Spencer *et al.*, 2010).

The maerl within St.Austell Bay was thought to be predominantly composed of *Lithothamnion coralliooides*, which is nationally scarce, however nearby maerl beds at St Mawes Bank and Castle Point are known to consist of both *L. coralliooides* and *Phymatolithon calcareum* (Allen *et al.*, 2014).

The three bays (St.Austell Bay, Veryan Bay and Gerrans Bay) lie within the proposed Falmouth Bay to St Austell Bay Special Protection Area (pSPA) (Figure 1). This site is located on the south coast of Cornwall and is recommended for classification under Article 4 of the Birds Directive (2009/147/EC). The pSPA is identified as an important overwintering (non-breeding) site for black-throated diver (*Gavia arctica*), great northern diver (*Gavia immer*) and Slavonian grebe (*Podiceps auritus*) (Pikesley *et al.*, 2016.)

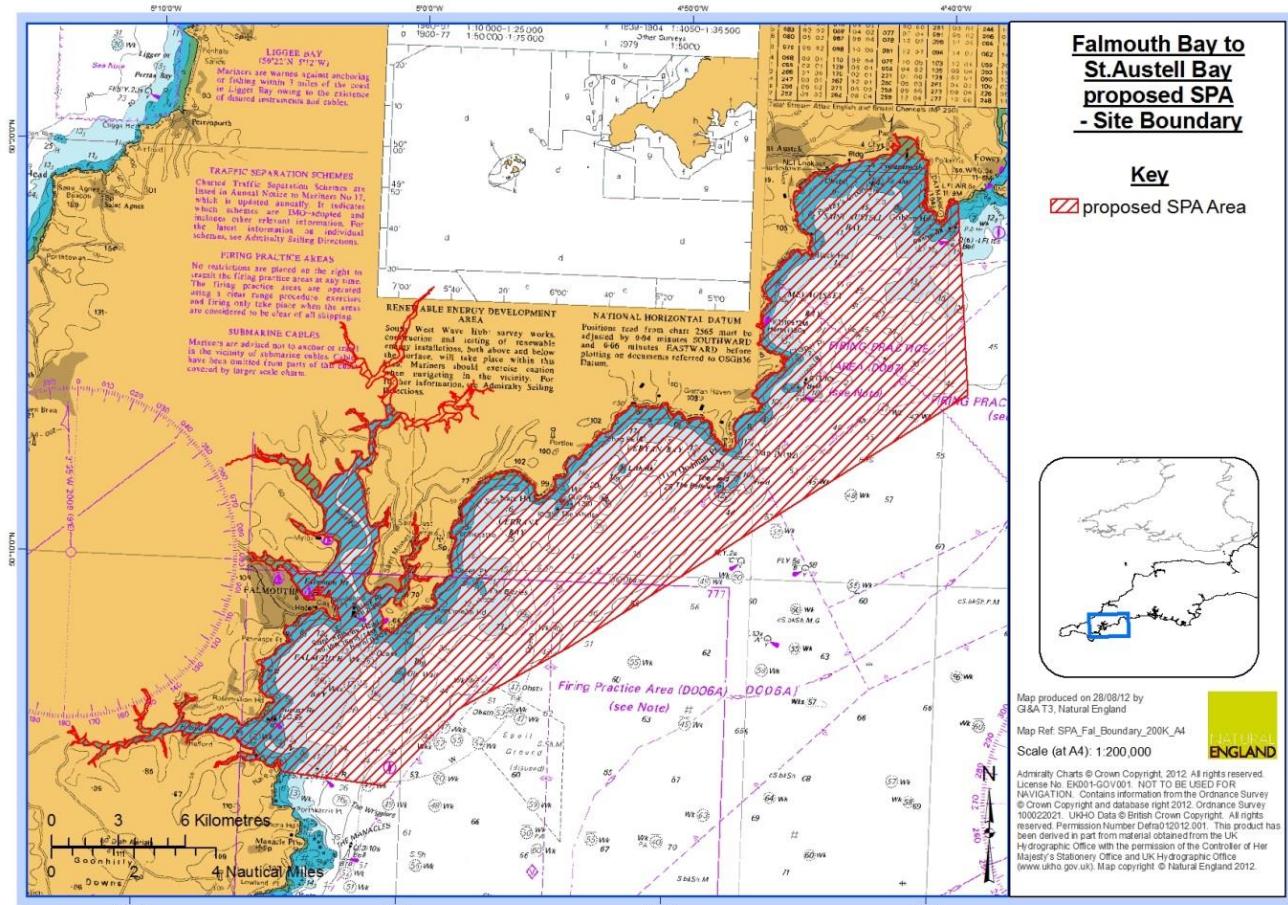


Figure 1: The boundary of the Falmouth Bay to St. Austell Bay proposed Special Protection Area (SPA) site boundary

In order to investigate the habitats within the three bays an acoustic survey was initially carried out using side-scan sonar (SSS). Side-scan (SS) systems measure the quantity of backscatter which can be computed to produce an acoustic image of the seabed. Post-processing of the data can be extremely high resolution enabling seabed topography, sediment types and reef structures to be determined.

The drop down video (DDV) survey was carried out to ground-truth the SSS signatures by selecting suitable locations and varying seabed types within the three bays to classify different habitats.

1.1 Aims and objectives

1.1.1 Aims

- Define the broad-scale habitats within St Austell bay, Gerrans bay and Veryan bay.
- Ground truth acoustic signals to describe the distribution of seabed habitats including maerl within St Austell bay, Gerrans bay and Veryan bay.
- Biotope map broad scale habitats with ground-truthed data within St Austell bay, Gerrans bay and Veryan bay.

1.1.2 Objectives

- Carry out a SSS survey in St Austell bay, Gerrans bay and Veryan bay to identify different habitat types.
- Use the SSS survey results to plan a DDV survey to verify acoustic signatures.

- Use ground-truthed data to define habitat categories within St Austell bay, Gerrans bay and Veryan bay.
- Biotope map the different habitats within St Austell bay, Gerrans bay and Veryan bay by creating polygons using the SSS and DDV data in Mapinfo.

2 Methodology

The survey was carried out in line with Mapping European Seabed Habitats (MESH) recommended operating guidelines for SSS surveys (Henriques *et al.*, 2013) and operating guidelines for underwater video and photographic imaging techniques (Coggan *et al.*, 2017).

2.1 Survey Area

The surveys areas for the three bays are shown in Figure 2 to Figure 4. The survey areas from west to east are Gerrans Bay, Veryan Bay and St.Austell Bay.

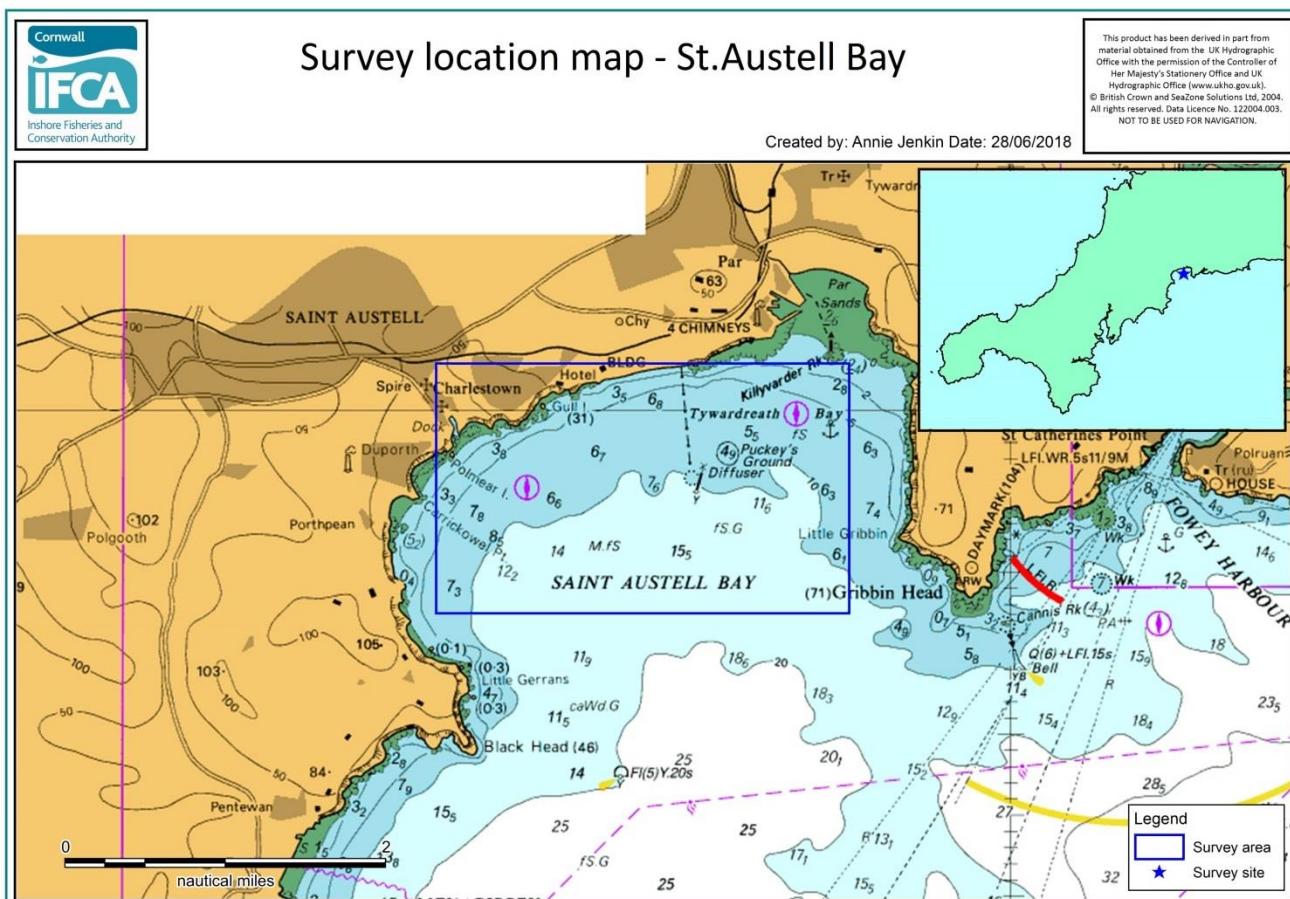


Figure 2: The survey area in St.Austell Bay.

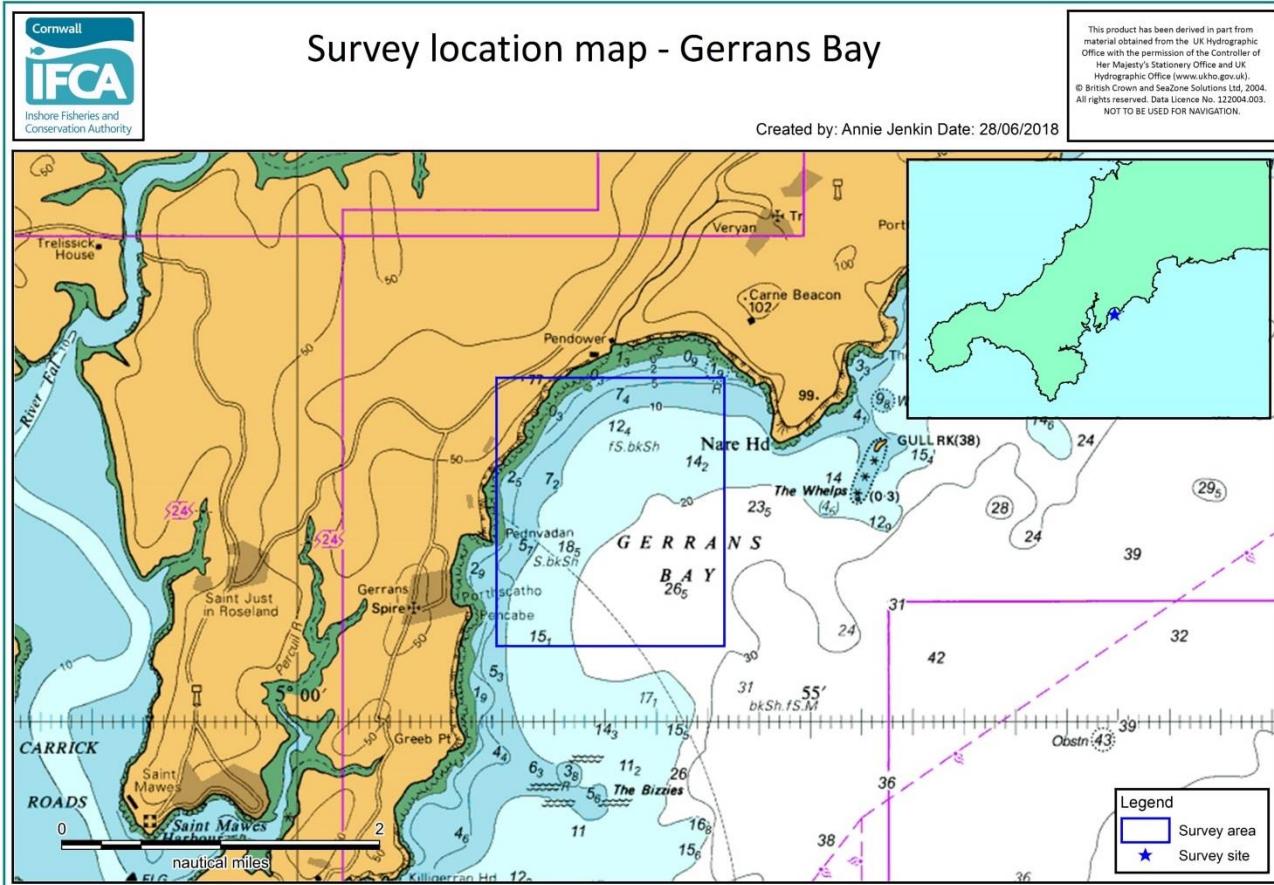


Figure 3: The survey area in Gerrans Bay.

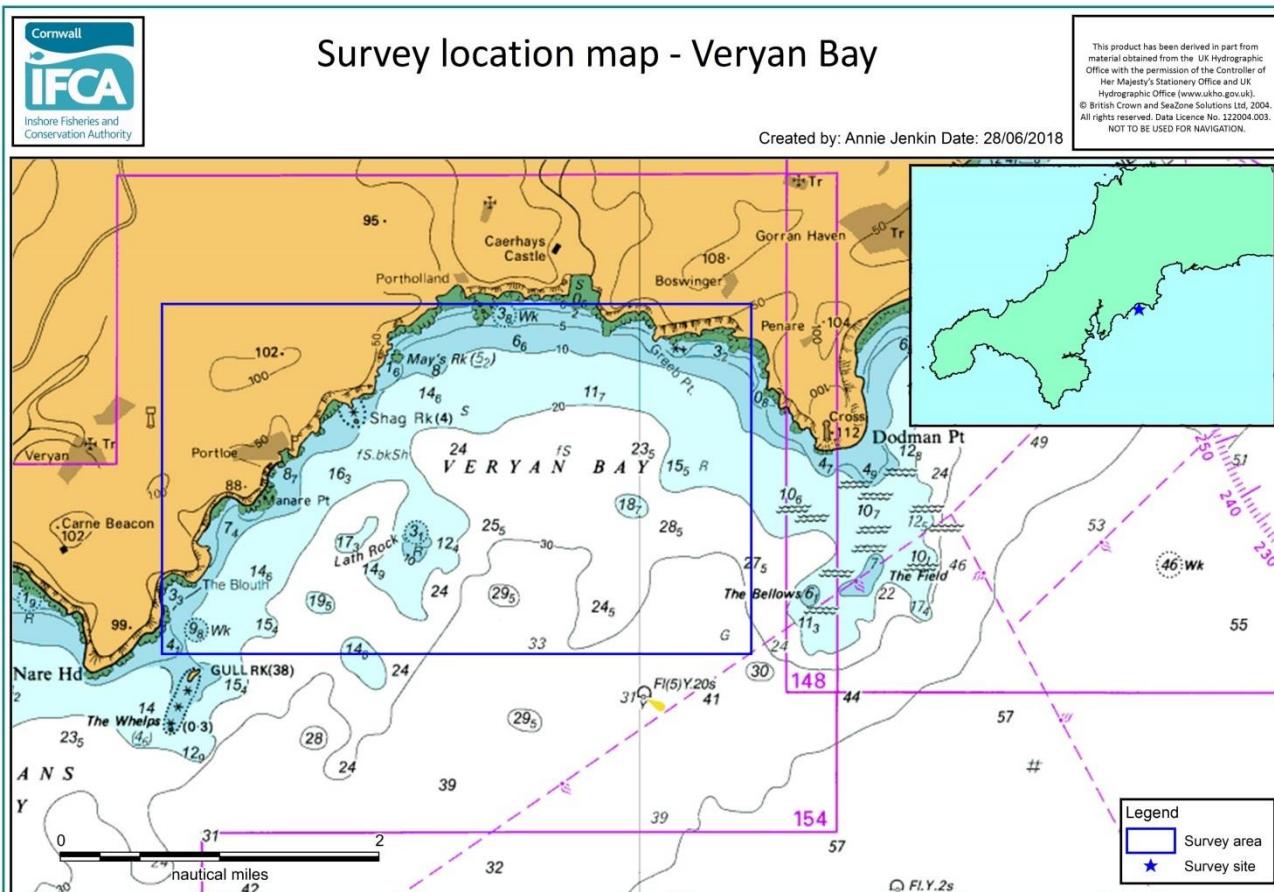


Figure 4: The survey area in Veryan Bay.

2.2 Vessel Specification

Both surveys were undertaken from Cornwall IFCA's Research Vessel (R/V) Tiger Lily VI (Figure 5). This vessel has been refitted for survey work and includes a purpose built survey station within the wheelhouse (See Annex 1). R/V Tiger Lily VI has been fitted with an inverter and uninterruptable power supply (UPS) to provide stable 240 v power, NMEA outputs and a dedicated GPS with WAAS enabled. All position information was recorded in the Long/Lat WGS84 projection and taken from a single GPS (Furuno GP-32). All times are recorded as UTC and taken from the same source as the position data. The clocks on all of the data capture PCs were synched prior to departing the vessel's mooring.

Tiger Lily VI is an MCA coded Cat 2 vessel and is fitted with all necessary safety equipment including life rafts, first aid kits and fire suppression systems.



Figure 5: Cornwall IFCA's survey vessel, R/V Tiger Lily VI.

2.3 Personnel

The crew during the surveys consisted of the skipper and up to four scientific officers. The crew roles rotated during the surveys and roles included deploying and recovering the SSS and DDV units, maintaining observation of the topside SS waterfall display, keeping a log and controlling the camera and video topside units.

2.4 Personal Protective Equipment (PPE)

Appropriate safety footwear and lifejackets with personal location beacons (PLBs) were worn at all times by members of the survey team whilst working on deck. Hard hats were worn during deployment and recovery of the SSS and DDV. There were no reported accidents or near misses reported.

2.5 Acoustic Survey

2.5.1 Equipment specification

An acoustic survey was carried out using a SSS. The SSS system works by emitting an acoustic signal that interacts with the seafloor and returns a signal which is interpreted based on its strength. Based on the reflectivity, different sediment types can be seen.

An EdgeTech 4200: Dual Frequency SSS System (Figure 6), with 300/600 kHz operating frequencies was used to capture acoustic imagery of the seabed. The SSS comes accompanied with a portable topside processor with laptop running Windows 7 and EdgeTech Discover software for data capture. The add on, Discover Coverage, was used to enable the skipper to keep note of the seabed coverage of the acoustic swathe. The acoustic data was captured in both .jsf and .xtf file formats.

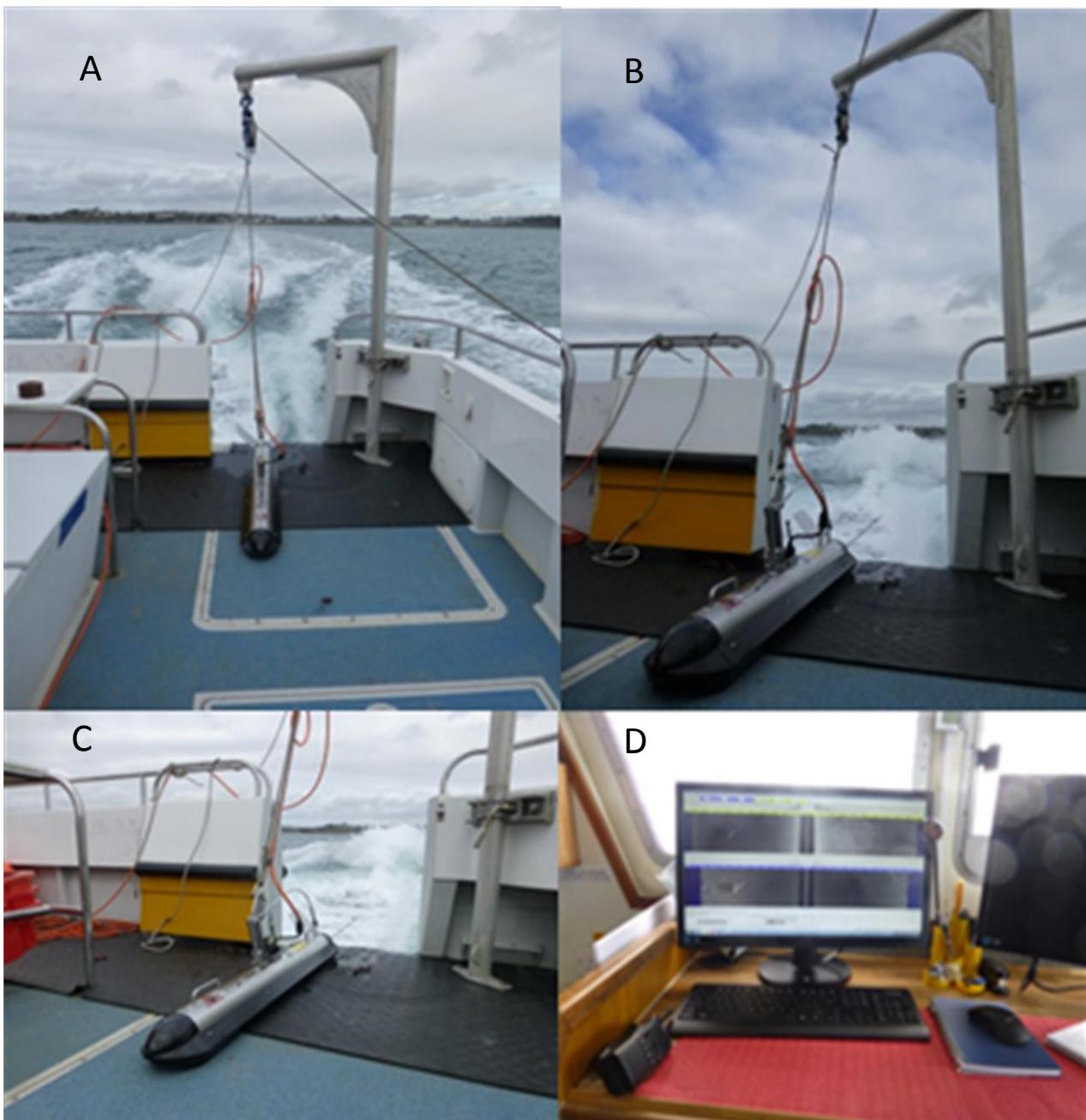


Figure 6: Images of the Edgetech 4200 side-scan sonar in preparation for deployment from the Cornwall IFCA survey vessel R/V Tiger Lily.

The equipment specifications of the side-scan sonar system are shown in Table 1. Details of the system are available online: <http://www.edgetech.com/pdfs/ut/4200-Brochure-122012.pdf>

Table 1: Details of the side-scan sonar system used for the side-scan survey carried out by Cornwall IFCA

Equipment	Camera System
Manufacturer	Edgetech
Model	Edgetech 4200 side-scan sonar
Frequency	Dual frequency (300/ 600 kHz)

2.5.2 Methodology

The SSS was connected to the tow line and data cables on the stern deck of the vessel. The computer was set up on the workbench inside the wheel house. The system was tested prior to deployment on the journey from Mylor Harbour, Falmouth to the survey site. Once on location, the SSS was deployed into the water from a davit point

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located on the stern port quarter. The SSS was then towed on a trial run to determine the correct gain and time viable gain (TVG) levels, after the first survey day the settings were kept constant across other days. This allowed for direct comparison between SS imagery on different survey days. The depth of the SSS was changed by altering the amount of tow line fed away via a hydraulic winch, the altitude (height above the seabed) of the tow fish was determined by the depth of the seabed from the sounder. A best suited altitude (10% of the desired range) was applied where possible. The survey speed (speed over ground SOG) was kept constant at 5.0 knots where possible which was determined to be the best speed on the trial run. Upon completion of the trial run, the vessel transited to the survey site. The stern door was closed when the SSS was in the water or on the deck and only opened for deployment and recovery. Once the SSS and the crew were happy with the in-situ outputs, the SSS was towed into position in line with the start of the first transect. When the vessel was on a steady course and the speed was constant, the start of line (SOL) was recorded. Transect lines were pre-determined that would allow for maximum coverage in all three bays.

2.5.3 Data processing

High frequency data and low frequency data were both recorded at the same time. Data was saved in-situ onto the dedicated Edgetech SS laptop and backed up to an external hard drive at the end of each survey day. The settings on the SS on the day of sampling for the high frequency were Gain = +23 and TVG = +38 and for the low frequency were Gain = +0 and TVG = +33.

The .xtf data was then post processed using CodaOctopus:GEO (GeoSurveyTM v6.1.2). The acoustic image data was adjusted (TVG and image enhancement) to best quality applicable and then converted to a north-up geotiff file using GeoSurvey Mosaic software.

Geotiff images were then imported into MapInfo Pro (v15.2.0) where they were corrected for geographic co-ordinate system Lat/Long WGS84.

2.6 Drop Down Video (DDV) Survey

2.6.1 Equipment specification

The camera used for the DDV survey was an STR SeaSpyder drop camera system contained in a custom built frame, allowing high resolution stills of the seabed to be taken using a surface controlled digital SLR camera (Figure 7). Separate real time video, with user-programmable overlay, allows positional information, time, bearing and depth to be recorded on the video output. Details of the system are available online: <http://www.str-subsea.com/sales/str-SeaSpyder-drop-camera-system>



Figure 7: SeaSpyder drop camera housed in a purpose built frame on the aft deck and in the deployment position onboard R/V Tiger Lily VI.

The camera equipment specifications are shown in Table 2.

Table 2: The camera equipment specifications

Equipment	Camera System
Manufacturer	SeaSpyder
Video	HD video 600 lines PAL
Stills	18 mega pixels
Trigger	Remote from deck
Height control	Video footage
Lighting	Four high density LED 20w lamps
Scale bar	4 Dual lasers for precise imagery scaling
Trigger	Remote from deck
Additional info	<ul style="list-style-type: none"> • Full remote control of camera functions including automatic and manual focus control • ‘On-the-fly’ image download • High speed digital telemetry link to camera and sensors • High power underwater flash

2.6.2 Methodology

The DDV survey was planned from the results of the acoustic survey. Survey sites were chosen where there was a transition across two or more acoustic signatures. Each proposed position was transferred to the vessel’s Olex navigation plotter and a 150 metre radius added. The radius was added to enable a drift tow to pass over the identified transition regardless of the direction.

Prior to the deployment of the SeaSpyder for each transect, the video text overlay was checked and adjusted to display the survey name and transect number (e.g. “20160516 Cornwall IFCA DDV_‘Site_Location’_‘Station_no.’_‘Tow_no.’”) and the GPS, heading and depth info was checked to ensure that it was updating correctly. The SeaSpyder camera was deployed from the starboard side davit of R/V Tiger Lily VI (see Annex 1) and lowered to the seabed. The video was set to record once the camera was on the seabed. A waypoint

(mark) was created in OLEX to indicate the start of line (SOL) this was repeated at the end of line (EOL). The SeaSpyder was ‘flown’ with the frame legs just above the seabed and periodically landed on the seabed to allow a high quality still image to be taken. Still images were captured at a frequency of one every 60 seconds; images separation varied slightly to ensure that the stills taken were of good quality (e.g. taken when the frame was stable and the lens unobstructed) this sometimes led to a delay. Immediately upon having captured a stills image a waypoint (mark) was created in OLEX.

2.6.3 Data handling

OLEX navigation software was used to record the vessels track and waypoints/marks at the start and end of each transect and at the location of every stills image. These were transferred out of OLEX in .gz file format. The file was then extracted using 7-Zip (7-Zip V9.20) enabling it to be converted using OLEX to GPSU File Converter (OLEX to GPSU File Converter V1.05). The file could then be converted to a .txt file using Notepad. Once opened in Excel, the file had all irrelevant header data removed and appropriate field headers added. Once completed, the Excel file was transferred to the GI software and data points were created to show the position of each still image.

Stills images from the SeaSpyder camera were initially stored on the internal computer (sub-surface), then on completion of each transect, the still images were transferred to the SeaSpyder topside control unit using FileZilla and filed by transect number.

Video files were captured to the SeaSpyder topside unit data drive (D:/).

The stills and video files were transferred from the topside unit to a WD Passport for transport and storage.

2.7 Proposed sites for the Drop Down Video survey

2.7.1 St.Austell Bay

The planned DDV locations for St.Austell Bay and the rationale for each feature or target are shown in Table 3.

Table 3: The proposed camera sites for St.Austell Bay

Site	Latitude	Longitude	Reason for selecting target or feature
S1	50° N 20.0841	004° W 43.53192	Transition across different sediment types and potential seagrass
S2	50° N 20.16882	004° W 43.0887	Transition across different sediment types and potential seagrass
S3	50° N 19.83018	004° W 43.18338	Transition across different sediment types
S4	50° N 19.88586	004° W 42.7185	Transition across different sediment types
S5	50° N 19.81794	004° W 43.77582	Transition across different sediment types
S6	50° N 19.24134	004° W 44.7558	Transition across different sediment types
S7	50° N 19.31028	004° W 45.22974	Transition across different sediment types
S8	50° N 19.80216	004° W 44.4999	Transition across different sediment types
S9	50° N 18.90912	004° W 42.22632	Transition across different sediment types
S10	50° N 19.356	004° W 42.17874	Transition across different sediment types
S11	50° N 19.2467	004° W 43.72374	Transition across different sediment types
S12	50° N 18.9111	004° W 43.07208	Transition across different sediment types

2.7.2 Gerrans Bay

The planned DDV locations for Gerrans Bay and the rationale for each feature or target are shown in Table 4.

Table 4: The proposed camera sites for Gerrans Bay

Site	Latitude	Longitude	Reason for selecting target or feature
S1	50° N 11.47872	004° W 57.14892	Transition across different sediment types
S2	50° N 11.91666	004° W 56.26938	Transition across different sediment types
S3	50° N 11.20902	004° W 56.90028	Transition across different sediment types
S4	50° N 10.80552	004° W 57.30366	Transition across different sediment types
S5	50° N 11.27814	004° W 57.46002	Transition across different sediment types
S6	50° N 11.66196	004° W 56.66028	Transition across different sediment types
S7	50° N 11.81646	004° W 57.13236	Transition across different sediment types
S8	50° N 09.92622	004° W 57.68436	Transition across different sediment types
S9	50° N 10.67472	004° W 57.03444	Transition across different sediment types
S10	50° N 10.452	004° W 57.2097	Transition across different sediment types

2.7.3 Veryan Bay

The planned DDV locations for Veryan Bay and the rationale for each feature or target are shown in Table 5.

Table 5: The proposed camera sites for Veryan Bay

Site	Latitude	Longitude	Reason for selecting target or feature
S1	50° N 13.853999	004° W 51.48738	Transition across different sediment types
S2	50° N 13.816080	004° W 50.84154	Transition across different sediment types
S3	50° N 13.663080	004° W 50.84154	Transition across different sediment types
S4	50° N 13.526939	004° W 49.57014	Transition across different sediment types
S5	50° N 13.746000	004° W 49.26744	Transition across different sediment types
S6	50° N 13.624679	004° W 51.3756	Transition across different sediment types
S7	50° N 13.715879	004° W 52.08906	Transition across different sediment types
S8	50° N 13.357800	004° W 51.56784	Transition across different sediment types
S9	50° N 13.181340	004° W 52.65948	Transition across different sediment types
S10	50° N 12.826740	004° W 53.1765	Transition across different sediment types
S11	50° N 12.24324	004° W 53.37258	Transition across different sediment types
S12	50° N 12.119580	004° W 54.2076	Transition across different sediment types

2.8 Habitat Classification

The data collected from the SSS and DDV surveys were used to draw polygons defined by the different habitat types recorded within the three survey areas. The common habitats found in all three survey sites were: coarse sediment waves with possible maerl, fine sediment with seagrass, bedrock with fringing sediment waves with possible maerl, bedrock, patchy fine sediment with sediment waves. Most habitats are able to be distinguished apart from one another in the side-scan imagery with the exception of where maerl is present or not present and dead or alive.

3 Results

A total of seven survey days were completed, four SSS survey days and three DDV survey days. The daily logs for the survey days are shown in Annex 2. A breakdown of the survey days is shown in Table 6.

Table 6: A summary of the dates, sites completed and the staff involved for each survey day for the St.Austell Bay, Gerrans Bay and Veryan Bay survey days

Date	Survey area	Survey type	Cornwall IFCA staff	Skipper
30 th March 2016	Gerrans Bay	SSS	Colin Trundle, Kimara Street, Ryan Mathews	Chris Lowe
31 st March 2016	Veryan Bay	SSS	Colin Trundle, Kimara Street, Ryan Mathews	Chris Lowe
10 TH May 2016	Gerrans Bay	DDV	Colin Trundle, Kimara Street, Ryan Mathews	Chris Lowe
27 th June 2016	St.Austell Bay	SSS	Colin Trundle, Kimara Street, Ryan Mathews	Chris Lowe
11 th July 2016	St.Austell Bay	SSS	Colin Trundle, Kimara Street, Ryan Mathews	Chris Lowe
12 th July 2016	Veryan Bay	DDV	Colin Trundle, Kimara Street, Ryan Mathews	Chris Lowe
15 th July 2016	St.Austell Bay	DDV	Colin Trundle, Kimara Street, Ryan Mathews	Chris Lowe

3.1 Side-scan Sonar

It was decided that zero overlap between adjacent tracks would be best suited to provide 100% coverage in the most economical way, although on occasions the tracks did overlap due to incorrect vessel position, change of course due to fishing gear, tide and weather. The high frequency range was 90m and therefore there was lost coverage (~28%) between adjacent tracks on the high frequency coverage.

3.1.1 St Austell Bay

A total of 14 SS transects were completed in St Austell Bay providing coverage of 1078.26 hectares (Figure 8).

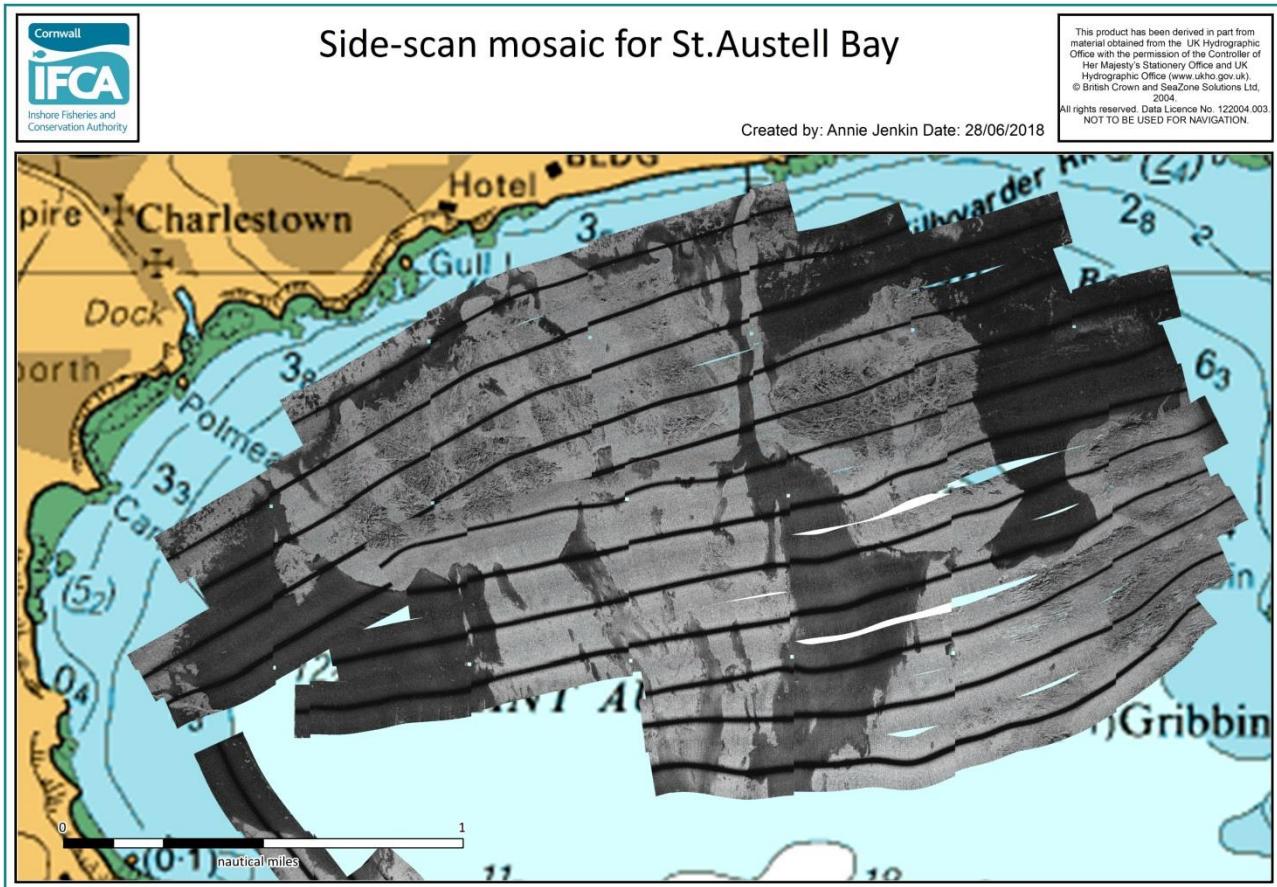


Figure 8: Side-scan mosaic from data collected by Cornwall IFCA in 2016 overlaid onto the admiralty chart within St.Austell Bay.

3.1.2 Gerrans Bay

A total of 19 SS transects were completed in Gerrans Bay providing coverage of 900.2 hectares (Figure 9).

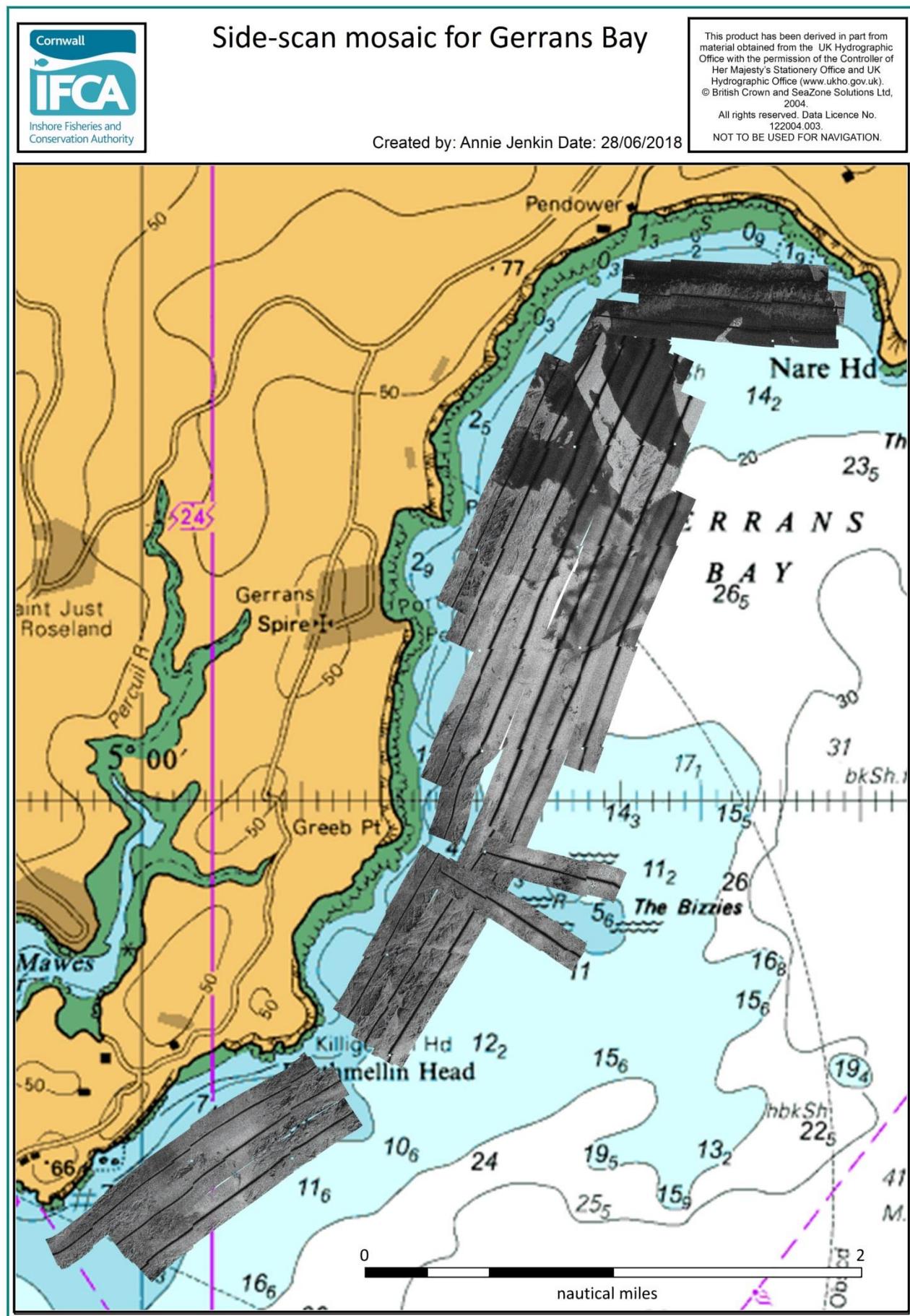


Figure 9: Side-scan mosaic from data collected by Cornwall IFCA in 2016 overlaid onto the admiralty chart within Gerrans Bay.

3.1.3 Veryan Bay

A total of 12 SS transects were completed in Veryan Bay providing coverage of 864.6 hectares (Figure 10).

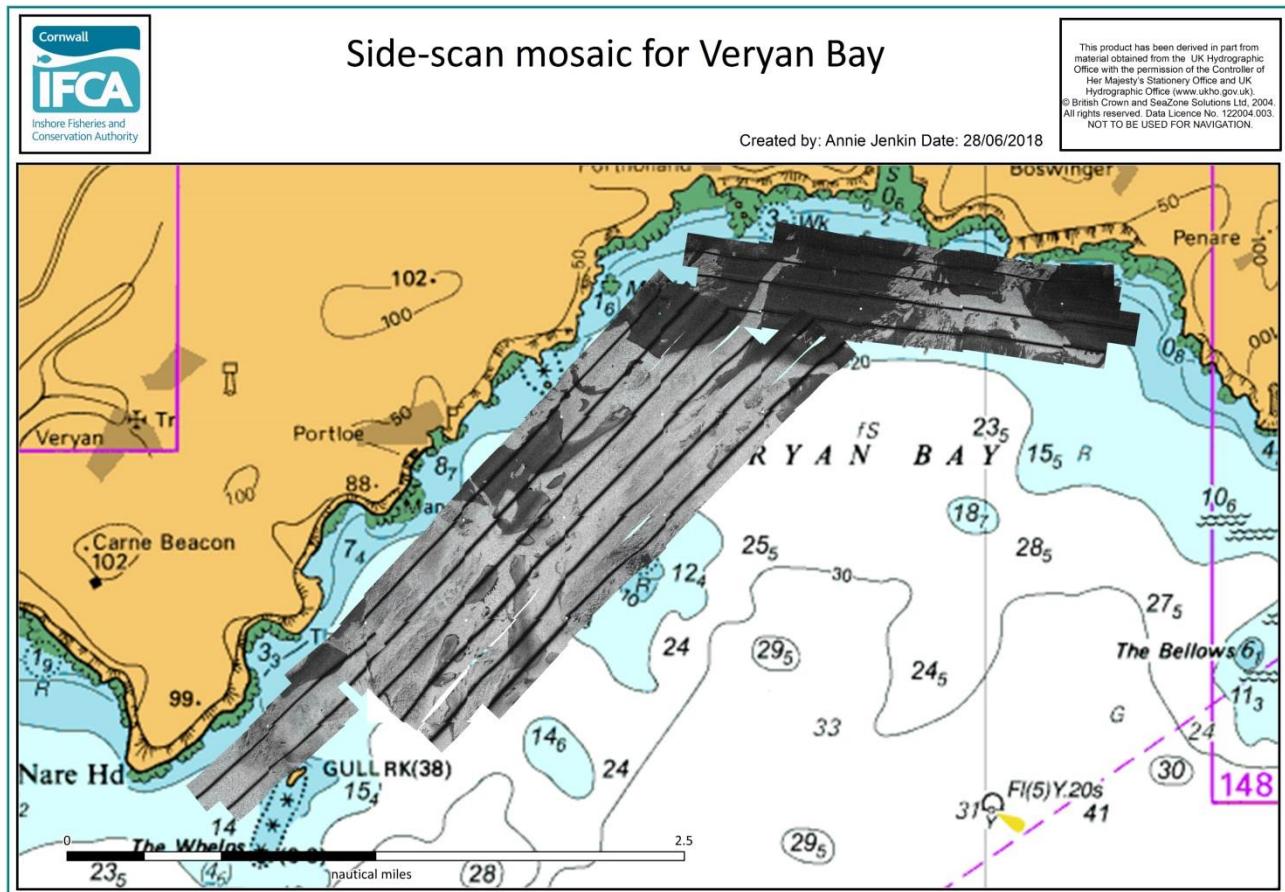


Figure 10: Side-scan mosaic from data collected by Cornwall IFCA in 2016 overlaid onto the admiralty chart within Veryan Bay.

3.2 Drop Down Video Survey

The locations of the video tows were decided based on the results of the SS acoustic imagery. DDV tows were based on transitions over differing sediment types to ground truth the acoustic signatures. A point was defined per site with a 150m radius through which a tow would be run through. The aim was to pass through the central point depending on the tide and wind conditions on the day of survey. Video footage of the seabed and high quality digital stills were collected for broad-scale habitat characterisation. The planned survey locations for the three survey areas are shown in sections 3.2.1 to 3.2.3.

3.2.1 St Austell Bay

A summary of the video data collected during the DDV survey for St.Austell Bay is shown in Annex 3 and the position information for the stills images is shown in Annex 6. A total of 13 tows were completed providing 218 still images in total pre quality control (QC). Still images from the DDV survey showing the representative habitats recorded within St.Austell Bay are shown in section 3.4.1.

3.2.2 Gerrans Bay

A summary of the data collected during the DDV survey for Gerrans Bay is shown in Annex 4 and the position information for the stills images is shown in Annex 7. A total of 9 tows were completed providing 139 still images in total pre QC. Still images from the DDV survey showing the representative habitats recorded within Gerrans Bay are shown in section 3.4.2.

3.2.3 Veryan Bay

A summary of the data collected during the DDV survey for Veryan Bay is shown in Annex 5 and the position information for the stills images is shown in Annex 8. A total of 12 tows were completed providing 248 still images in total pre QC. Still images from the DDV survey showing the representative habitats recorded within Veryan Bay are shown in section 3.4.3.

3.3 Habitat Classification

The processed SS mosaics and the positions of the stills images were loaded into MapInfo (Version 15.2). All positions were uploaded in the WGS84 projection.

3.3.1 Habitat categories included in the analysis

A category was assigned to each point from the following; (as requested by Natural England);

- Live maerl (pale pink point in MapInfo) - Four/five live fragments or 1% coverage
- Dead maerl (red point in MapInfo) - over 5% coverage
- Seagrass bed (bright green point in MapInfo)¹
- Sparse seagrass (dark green point in MapInfo)²
- No targeted habitat (turquoise point)

Examples of each of the habitat categories are shown in Table 7.

¹ Seagrass bed – Cornwall IFCA categorised a seagrass bed if there was more than 5% cover in a stills image as advised by OSPAR 2009.

² Sparse seagrass defined if the root of a plant was visible in a stills image

Table 7: Stills images representing different categories of targeted habitats including live maerl, dead maerl, seagrass beds, and patchy seagrass from data collected by Cornwall IFCA within St.Austell Bay, Gerrans Bay and Veryan Bay.

	Representative habitat: Live Maerl	Representative habitat: Dead Maerl	Representative habitat: Seagrass bed	Representative habitat: Patchy Seagrass
St.Austell Bay	StABay_S9_T1_20160715_08_15_29_0015 	StABay_S3_T1_20160715_09_52_27_0082 	StABay_S8_T1_20160715_12_13_23_0171 	StABay_S1_T2_20160715_11_58_34_0165 
Gerrans Bay	Gerrans_T7_20160511_08_07_48_0016 	Gerrans_T2b_20160511_09_26_43_0061 	Gerrans_T2_20160511_09_02_35_0041 	Gerrans_T2_20160511_09_05_51_0045 
Veryan Bay	No live maerl was recorded in Veryan Bay	Veryan_Bay_S11_T1_20160712_09_31_56_0031 	Veryan_Bay_S-A_T1_20160712_14_29_51_0244 	Veryan_Bay_S1_T1_20160712_12_18_39_0146 

The data was then plotted in MapInfo as categories by each point (each location of a stills image) as shown in Figure 11.

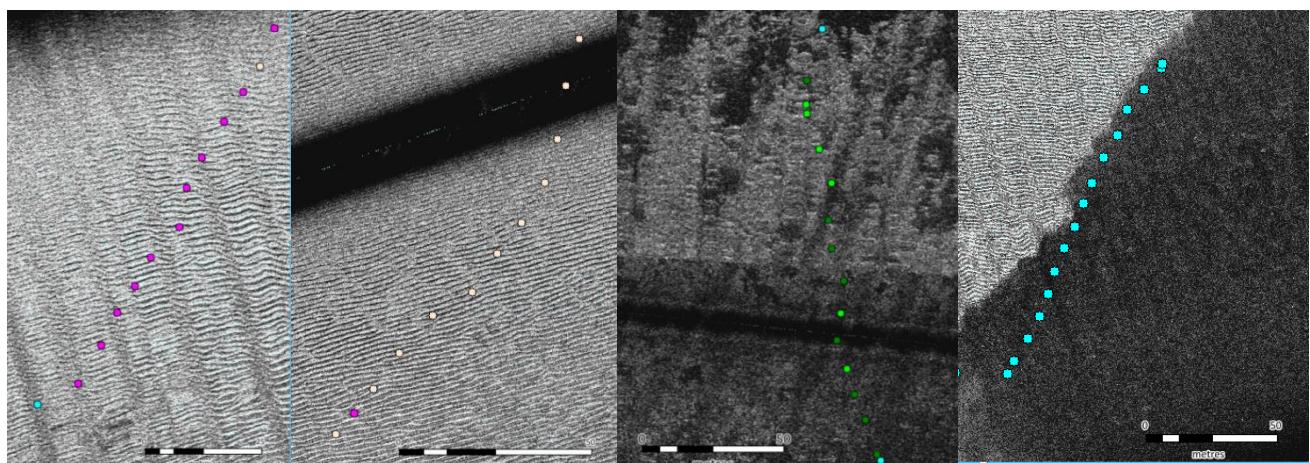


Figure 11: An example of the different point categories plotted in MapInfo, from left to right – live maerl, dead maerl, seagrass bed and sparse seagrass and no category.

3.3.2 Habitat categories not included in the analysis

Apart from the targeted habitats described above, a number of other habitats were seen on the video and stills.

These included the habitats shown in Table 8.

Table 8: Stills images representing different categories of habitats including bedrock with fringing sediment waves with possible maerl and fine sediment from data collected by Cornwall IFCA within St.Austell Bay, Gerrans Bay and Veryan Bay.

Representative habitat: Bedrock with fringing sediment waves with possible maerl		
St.Austell Bay StABay_S4_T1_20160715_09_12_05_0049 	Gerrans Bay Gerrans_T5b_20160511_10_46_56_0119 	Veryan Bay Veryan_Bay_S11_T1_20160712_09_44_13_0040
Position: Latitude: 50.330665 Longitude: 4.712588	Position: Latitude: 50.187687 Longitude: 4.957730	Position: Latitude: 50.204015 Longitude: 4.884870
Representative habitat: Fine sediment		
St.Austell Bay StABay_S2_T1_20160715_11_08_36_0128 	Gerrans Bay Gerrans_T5a_20160511_10_21_31_0092 	Veryan Bay Veryan_Bay_S12_T1_20160712_09_09_43_0019
Position: Latitude: 50.335112 Longitude: 4.718810	Position: Latitude: 50.189053 Longitude: 4.962050	Position: Latitude: 50.203118 Longitude: 4.901360

3.3.3 MapInfo Polygons

It was initially thought that minimum size of 25m could be used as a guide to determine different habitats, however due to the scale of the survey areas and the complexity of these sites, it was not plausible to do this and it was decided that a minimum size of 100m in any direction would be sufficient to determine if a 'patch' should be a separate polygon or not. Examples of 'patches' which were too small to cut are shown in Figure 12.

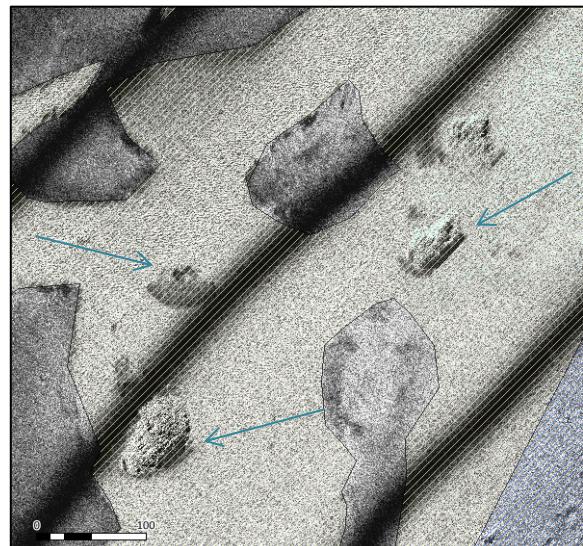


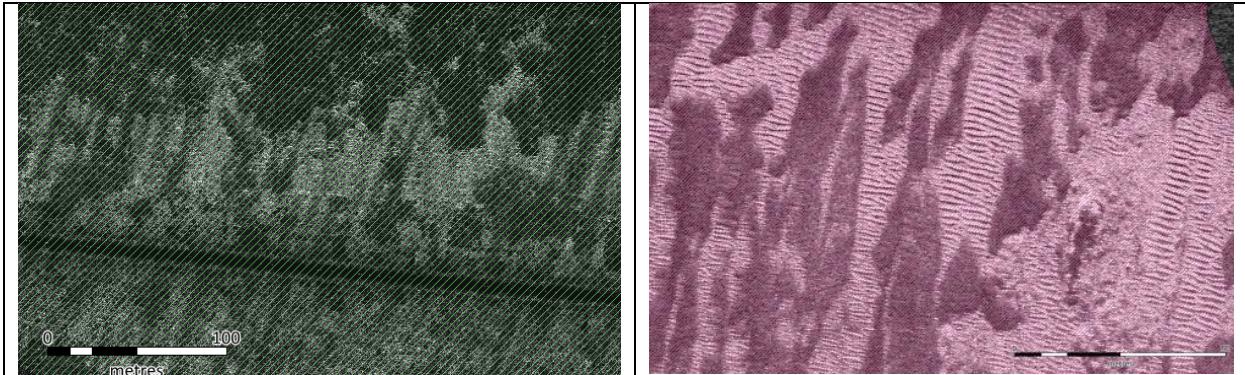
Figure 12: Patches of side-scan data which were not included in the polygons due to their size

It was initially thought that areas of maerl could be determined from the SSS. However, due to difficulties in differentiating from areas of sediment waves with maerl and without, the polygons were drawn around much broader habitats which are detailed below (Table 9);

- Sediment waves with possible maerl (yellow)
- Bedrock with fringing sediment waves with possible maerl (blue)
- Seagrass (green)
- Sediment waves with possible maerl, with patches of fine sediment (pink)

Table 9: Different habitats represented by different coloured polygons drawn in MapInfo over side-scan sonar data collected by Cornwall IFCA within St.Austell Bay, Gerrans Bay and Veryan Bay.

Sediment waves with maerl	Bedrock with fringing sediment waves with possible maerl
Seagrass	Sediment waves with possible maerl, with patches of fine sediment



The areas of seagrass beds and patchy seagrass were included within the same polygons.

The polygons were drawn in MapInfo using the insert polygon tool. The polygons were assigned by colour depending on the habitat type. Large areas were initially drawn and then smaller patches were set as targets and later cropped out from the larger areas after checking the size of each patch using the 100m limit. Polygons were drawn in areas with SSS coverage, however in a couple of areas there were small SSS gaps in between tows. In these areas, the data was interpolated where there appeared to be a habitat continuation either side of the gap.

An example is shown below (Figure 13Figure 1) where bedrock was recorded either side of the gap and so the polygon was combined.

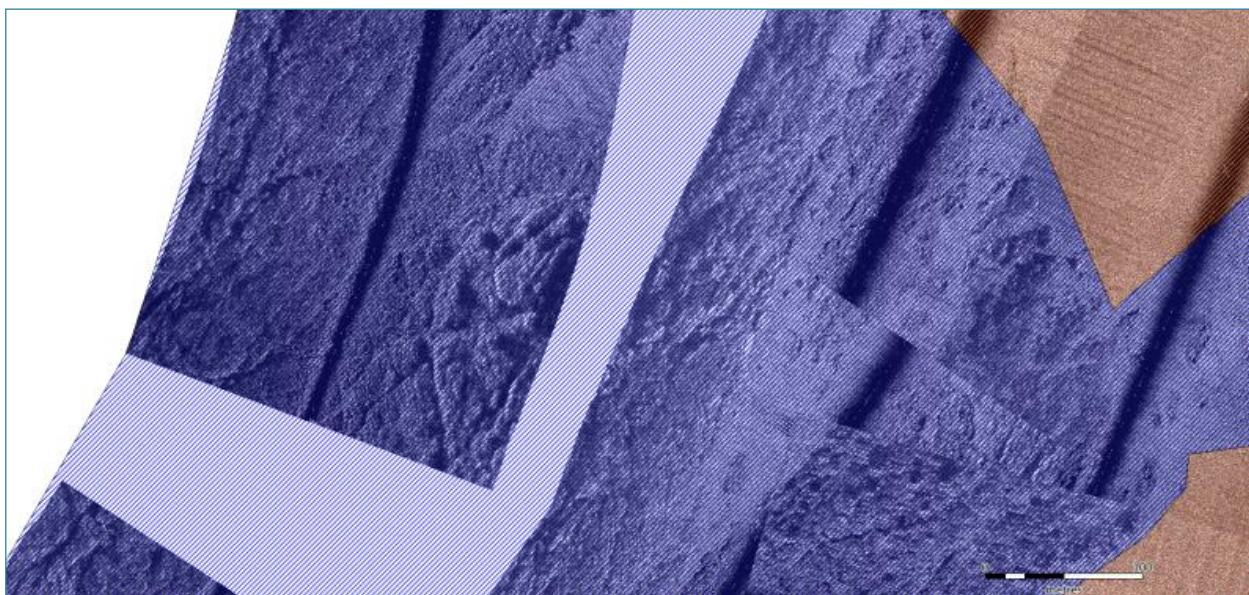
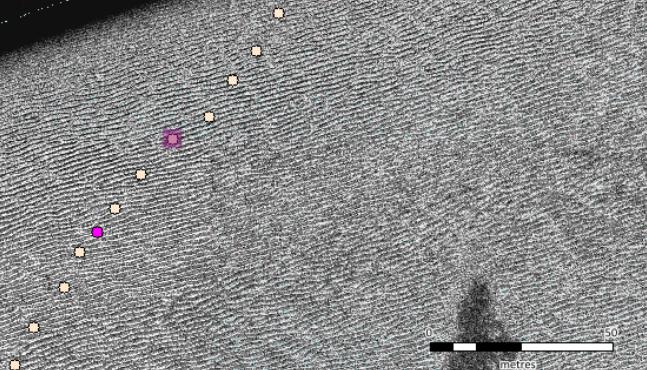
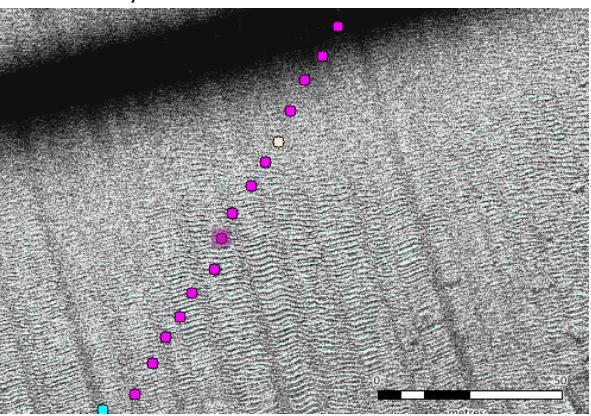
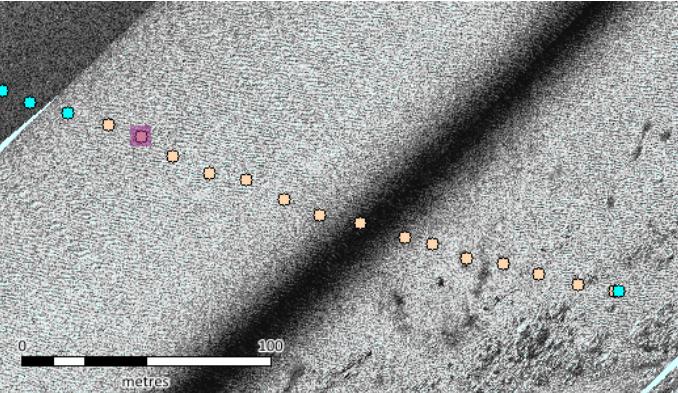


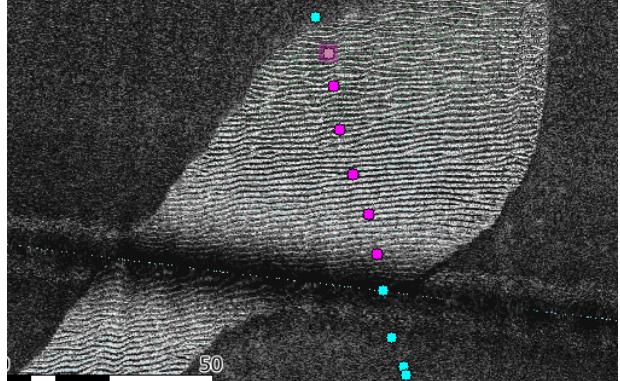
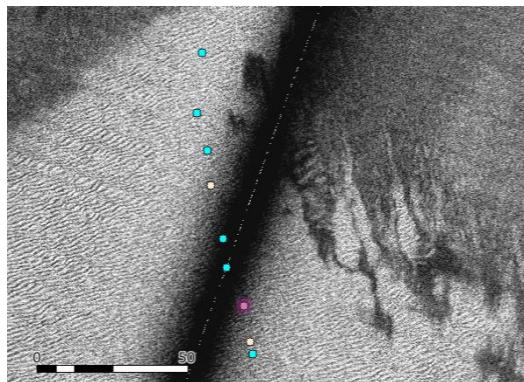
Figure 13: A data gap recorded in the side-scan sonar data

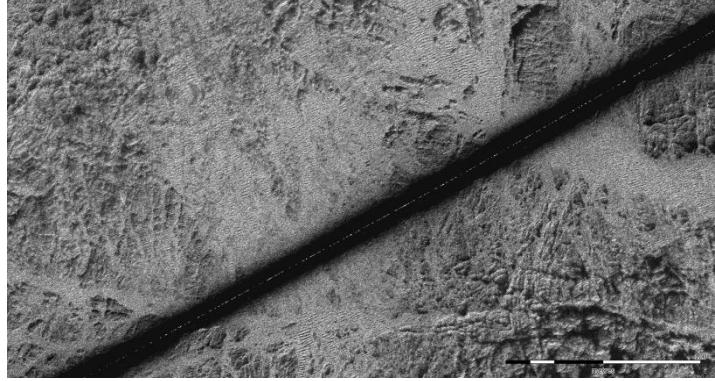
The MapInfo Table was then populated with habitat type and a code for each site (VB – Veryan Bay, StA – St.Austell and GB – Gerrans Bay with a number from 001).

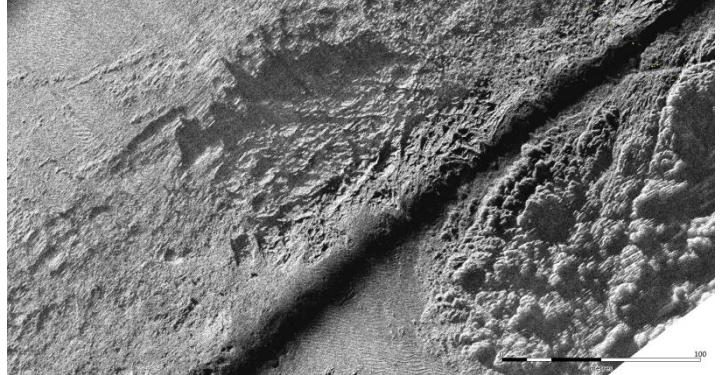
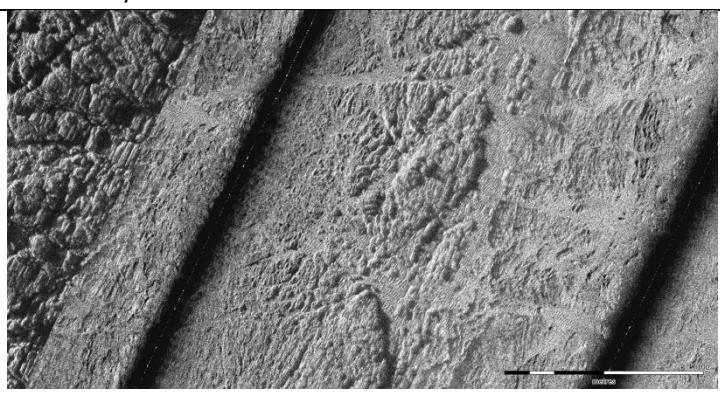
Examples of the SS imagery and representative stills from each of the assigned habitats are shown in Table 10.

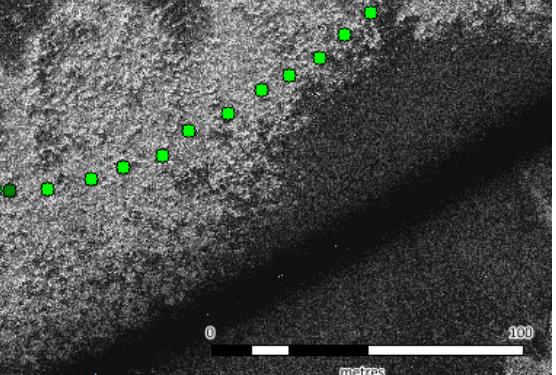
Table 10: Examples of side-scan data used to classify different habitats and a corresponding stills image where available for data collected by Cornwall IFCA within St.Austell Bay, Gerrans Bay and Veryan Bay in 2016.

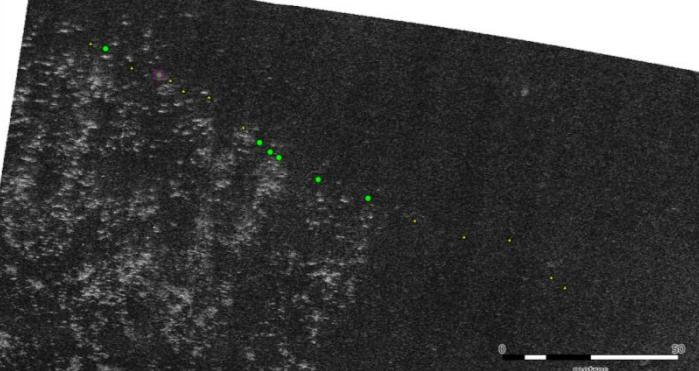
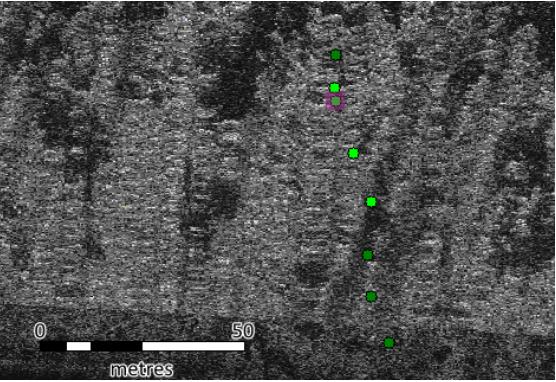
Sediment waves with possible maerl	
Sample from Side Scan	Corresponding Stills Image
St.Austell Bay – dead maerl 	StABay_S5_T1_20160715_10_12_11_0096 
Position: Latitude: 50.330386 Longitude: -4.729596	Position: Latitude: 50.330455 Longitude: -4.729978
Sample from Side Scan	Corresponding Stills Image
St.Austell Bay – live maerl 	StABay_S9_T1_20160715_08_08_31_0008 
Position: Latitude: 50.315438 Longitude: -4.704814	Position: Latitude: 50.315410 Longitude: -4.704957
Sample from Side Scan	Corresponding Stills Image
Veryan Bay – dead maerl 	Veryan_Bay_S8_T1_20160712_10_59_50_0090 
Position: Latitude: 50.222058 Longitude: -4.858243	Position: Latitude: 50.222230 Longitude: -4.858854
Sample from Side Scan	Corresponding Stills Image
Gerrans Bay – live maerl	Gerrans_T2b_20160511_09_24_43_0059

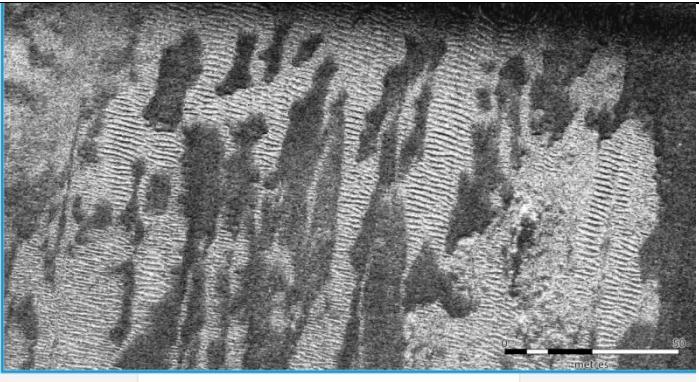
	
Position: Latitude: 50.198689 Longitude: -4.937661	Position: Latitude: 50.198830 Longitude: -4.937928
Sample from Side Scan Gerrans Bay – dead maerl	Corresponding Stills Image Gerrans_T9_20160511_12_06_07_0165
	
Position: Latitude: 50.176837 Longitude: -4.950571	Position: Latitude: 50.17681833 Longitude: -4.950060

Bedrock with fringing sediment waves with possible maerl	
Sample from Side Scan St.Austell	Example Stills Image St.Austell Bay StABay_S4_T1_20160715_09_12_05_0049
	
Position: Latitude: 50.326334 Longitude: -4.739129	Position: Latitude: 50.330665 Longitude: -4.712588
Sample from Side Scan Veryan Bay	Example Stills Image Veryan_Bay_S11_T1_20160712_09_44_13_0040

	
Position: Latitude: 50.209728 Longitude: -4.871925	Position: Latitude: 50.204015 Longitude: -4.884870
Sample from Side Scan Gerrans Bay	Example Stills Image Gerrans_T5b_20160511__10_46_56__0119
	
Position: Latitude: 50.183918 Longitude: -4.961331	Position: Latitude: 50.187687 Longitude: -4.957730

Seagrass	
Sample from Side Scan	Corresponding Stills Image
St.Austell Bay	StABay_S8_T1_20160715__12_13_23__0171
	
Position: Latitude: 50.329720 Longitude: -4.742884	Position: Latitude: 50.329715 Longitude: -4.743797
Sample from Side Scan	Corresponding Stills Image
Veryan Bay	Veryan_Bay_S-A_T1_20160712__14_29_51__0244

	
Position: Latitude: 50.231341 Longitude: -4.863206	Position: Latitude: 50.231613 Longitude: -4.863975
Sample from Side Scan Gerrans Bay 	Corresponding Stills Image Gerrans_T2_20160511_09_02_35_0041 
Position: Latitude: 50.200666 Longitude: -4.939169	Position: Latitude: 50.200943 Longitude: -4.939500

Sediment waves with possible maerl, with patches of fine sediment Sample from Side Scan Veryan Bay 
Position: Latitude: 50.224744 Longitude: -4.837728

Other habitats were recorded within all three survey areas but not included within the polygons as they didn't contain targeted habitats are shown in

Fine sediment

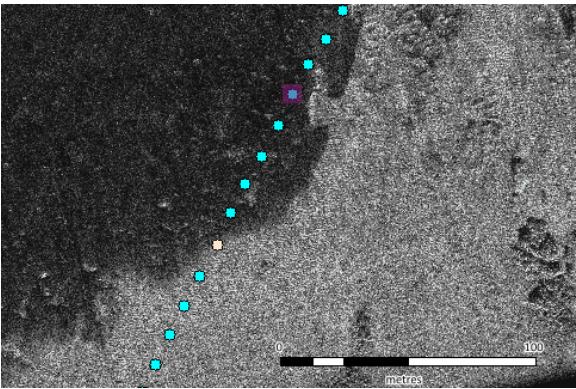
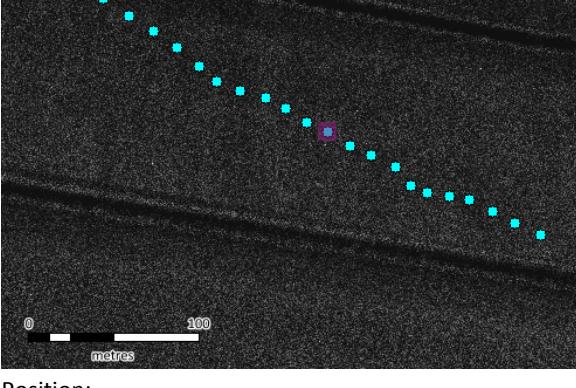
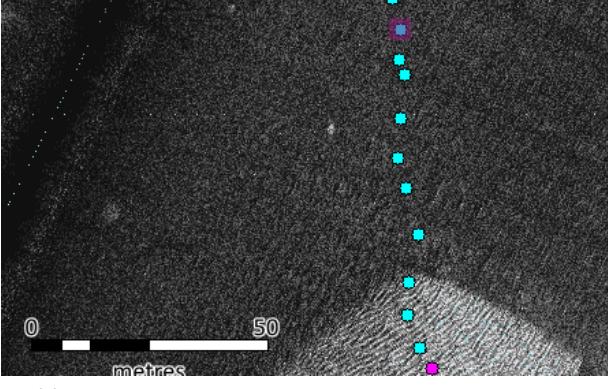
Sample from Side Scan	Corresponding Stills Image
<p>St.Austell Bay</p> 	<p>StABay_S4_T1_20160715_09_24_05_0060</p> 
<p>Position: Latitude: 50.331889 Longitude: -4.711765</p>	<p>Position: Latitude: 50.331918 Longitude: -4.711647</p>
Sample from Side Scan	Corresponding Stills Image
<p>Veryan</p> 	<p>Veryan_Bay_S2_T1_20160712_12_53_15_0174</p> 
<p>Position: Latitude: 50.229610 Longitude: -4.845447</p>	<p>Position: Latitude: 50.229799 Longitude: -4.845638</p>
Sample from Side Scan	Corresponding Stills Image
<p>Gerrans Bay</p> 	<p>Gerrans_T5b_20160511_10_31_33_0097</p> 
<p>Position: Latitude: 50.188554 Longitude: -4.957638</p>	<p>Position: Latitude: 50.188758 Longitude: -4.957855</p>

Table 11. These included areas of fine sediment and areas of bedrock to the south of St.Austell Bay which were not thought to have fringing maerl.

An example of these habitats which have not been included in the polygons is shown below (Figure 14).

Fine sediment	
Sample from Side Scan	Corresponding Stills Image

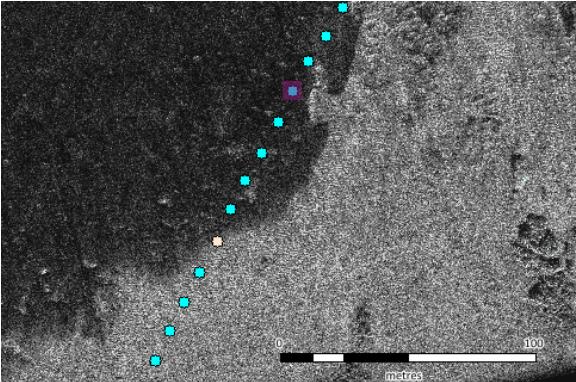
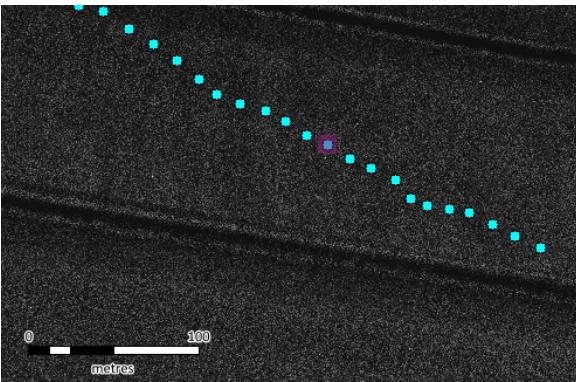
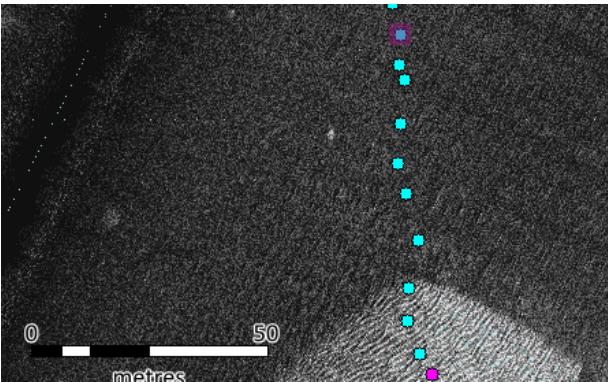
St.Austell Bay		StABay_S4_T1_20160715_09_24_05_0060	
Position: Latitude: 50.331889 Longitude: -4.711765		Position: Latitude: 50.331918 Longitude: -4.711647	
Sample from Side Scan		Corresponding Stills Image	
Veryan		Veryan_Bay_S2_T1_20160712_12_53_15_0174	
Position: Latitude: 50.229610 Longitude: -4.845447		Position: Latitude: 50.229799 Longitude: -4.845638	
Sample from Side Scan		Corresponding Stills Image	
Gerrans Bay		Gerrans_T5b_20160511_10_31_33_0097	
Position: Latitude: 50.188554 Longitude: -4.957638		Position: Latitude: 50.188758 Longitude: -4.957855	

Table 11: Examples of side-scan data used to classify different habitats and a corresponding stills image where available for data for sediment types not included in further analysis. Data collected by Cornwall IFCA within St.Austell Bay, Gerrans Bay and Veryan Bay in 2016

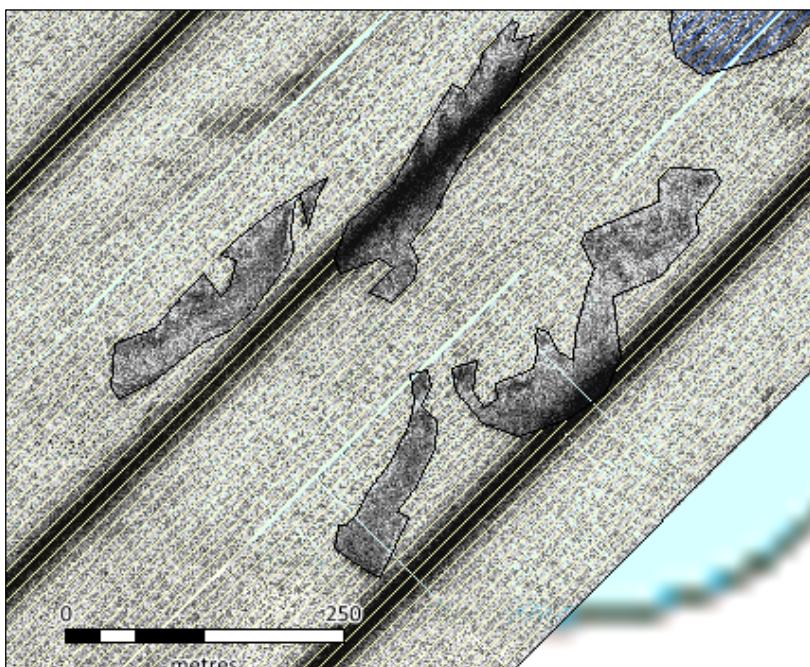
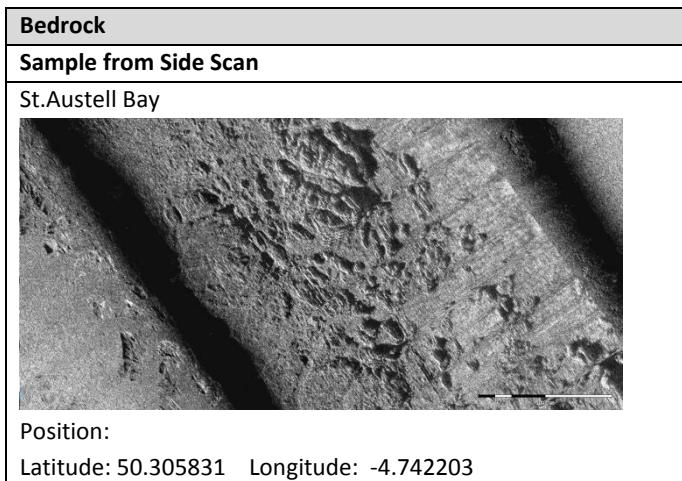


Figure 14: An example of patches of fine sediment which were not included in the polygons.

A breakdown of the stills image categories for all three survey areas is shown in Table 12.

Table 12: Breakdown of habitat categories for data collected within St.Austell Bay, Gerrans Bay and Veryan Bay

	St.Austell Bay	Gerrans Bay	Veryan Bay
Live maerl	20	29	None
Dead maerl	57	8	28
Seagrass bed	42	11	7
Sparse seagrass	1	18	2
No targeted habitat	129	89	248

3.4 Biotope mapping

3.4.1 St.Austell Bay

The biotope map with habitat classification for St.Austell Bay is shown in Figure 15 and for each individual site with representative still images is shown in Annex 9, Figures 1 to 13.

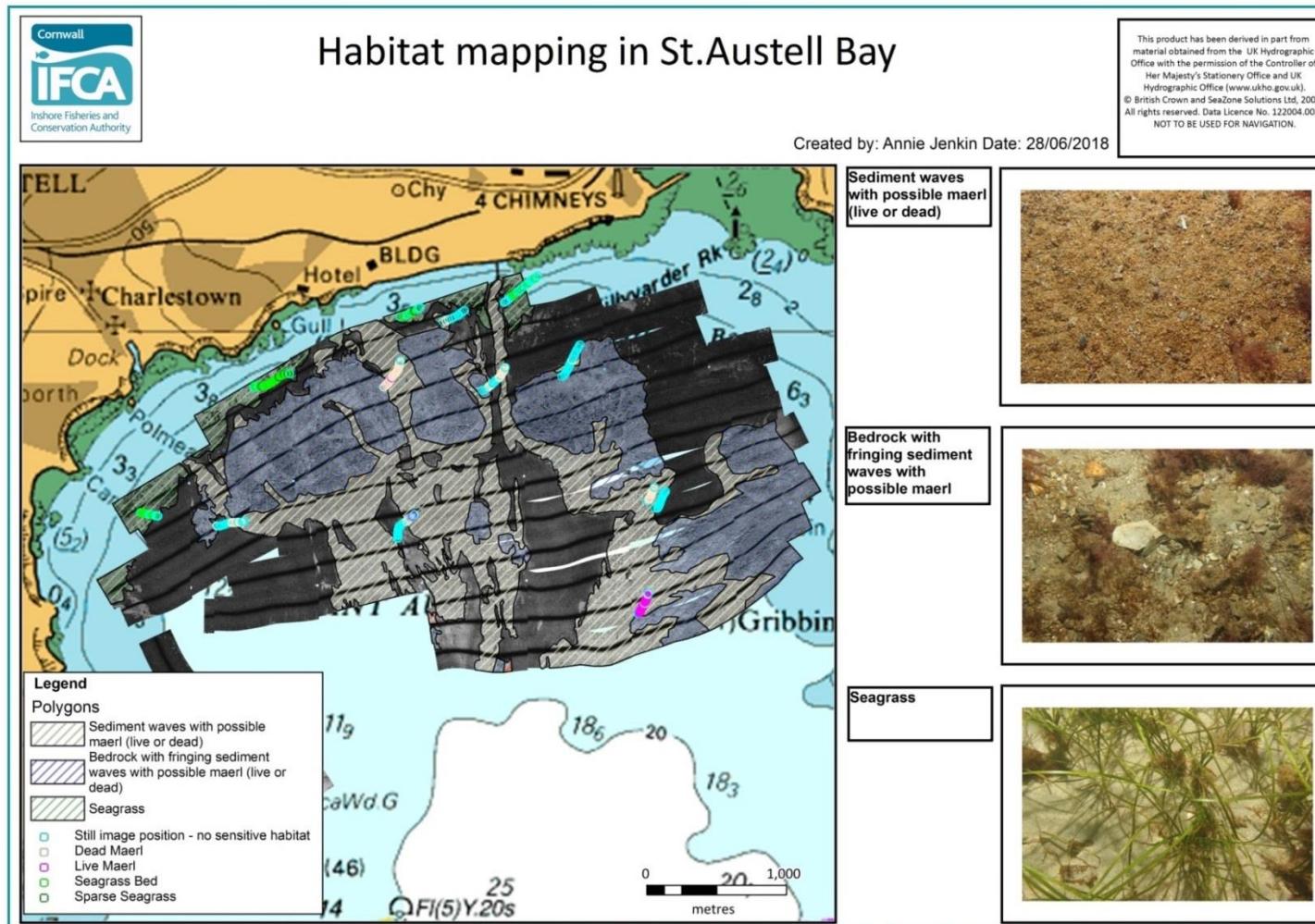


Figure 15: Polygons representing different habitats in St.Austell Bay using side-scan sonar data which was ground-truthed using drop down video.

3.4.2 Gerrans Bay

The biotope map with habitat classification for Gerrans Bay is shown in Figure 15 and for each individual site with representative still images is shown in Annex 10, Figures 1 to 9.

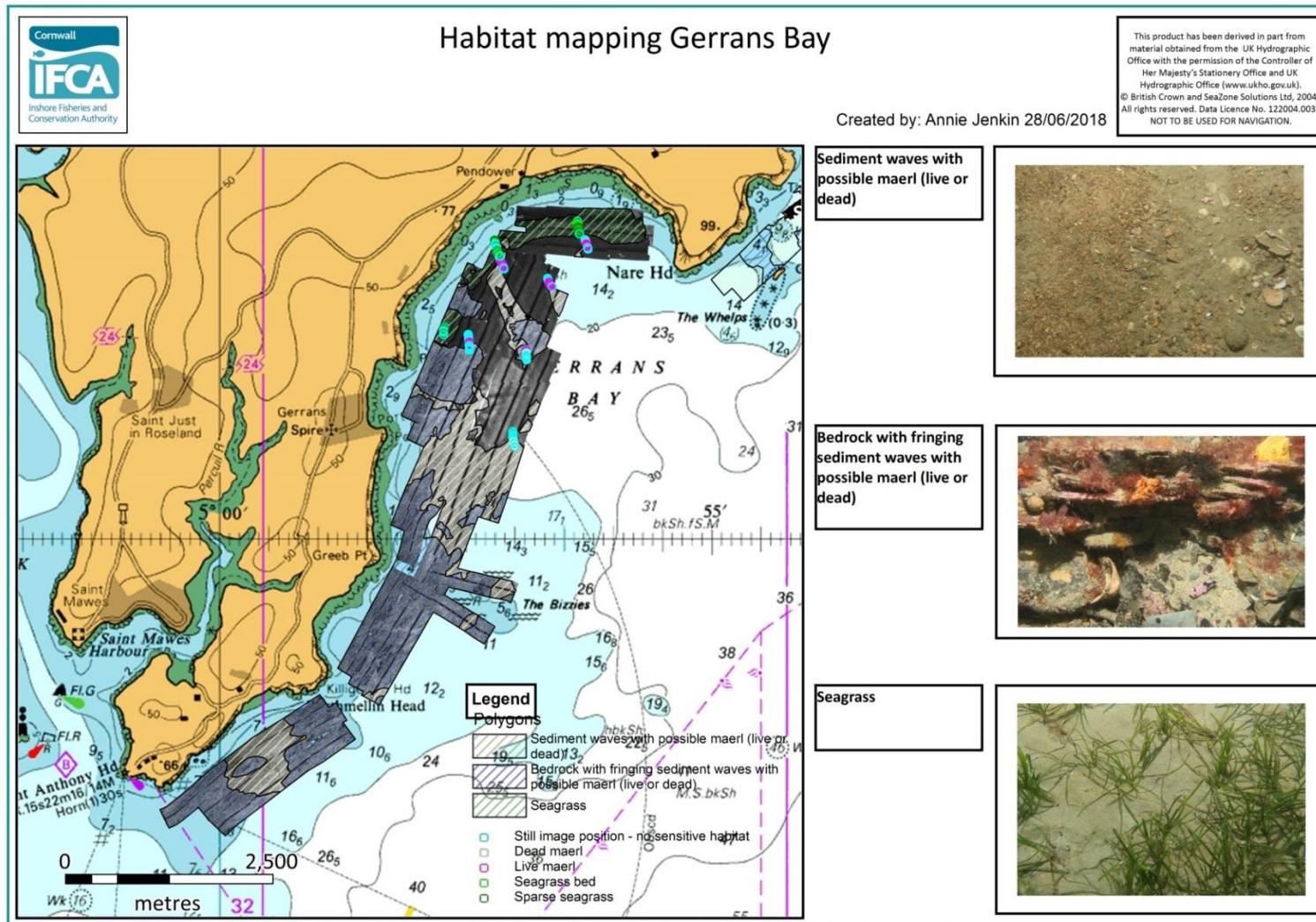


Figure 16: Polygons representing different habitats in Gerrans Bay using side-scan sonar data which was ground-truthed using drop down video.

3.4.3 Veryan Bay

The biotope map with habitat classification for Veryan Bay is shown in Figure 17 and for each individual site with representative still images is shown in Annex 11, Figures 1 to 14.

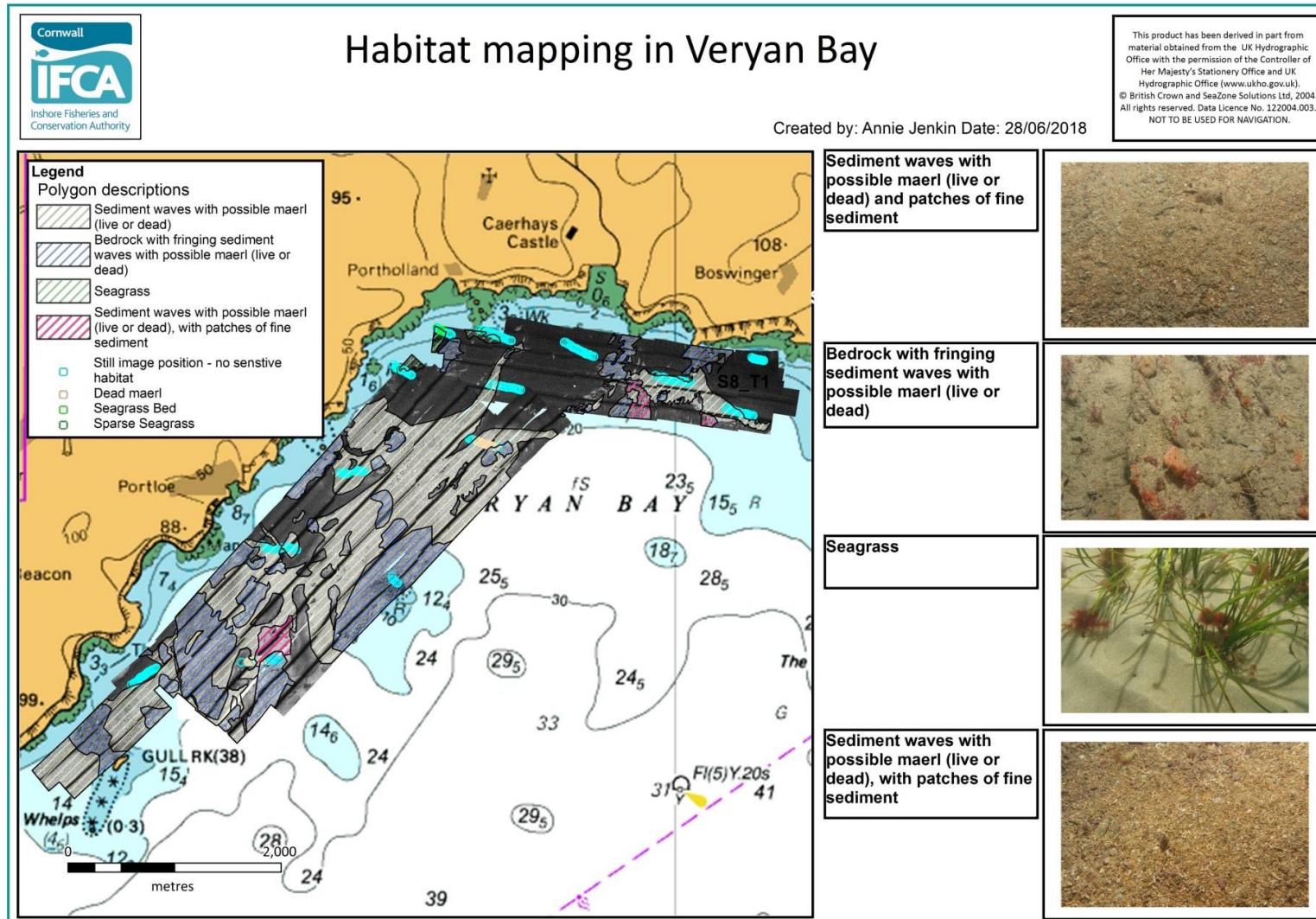


Figure 17: Polygons representing different habitats in Veryan Bay using side-scan sonar data which was ground-truthed using drop down video.

3.5 Anthropogenic Impacts

Fishing gear was observed during the survey and transect lines were run to avoid equipment becoming entangled with this gear.

4 Discussion

The geophysical data (SSS) indicated the presence of differing sediment types across all three survey areas. The DDV survey ground-truthed the varying habitat types which included seagrass beds, areas of bedrock with fringing sediment waves with possible maerl (live or dead), sediment waves with possible maerl (live or dead) and fine sediment. It is possible to distinguish all habitat types apart from the SSS imagery with the exception of whether maerl is present or not and live or dead. All live maerl which was recorded during the surveys was present in the habitat which resembled sediment waves. The species ID of the maerl found during this survey has not been confirmed as no genetic testing was carried out.

4.1 St.Austell Bay

The sediment types in St.Austell Bay consisted of areas of large areas of sediment waves with possible maerl (live and dead), bedrock with fringing sediment waves consisting of possible maerl (live and dead) and fine sediment with smaller areas of seagrass beds in the northern section of the site in shallower water. Live maerl was recorded in one still at S5_T1 and one still at S11_T1 and in most of the images recorded at S9_T1. Dead maerl was recorded in a number of sites including S1_T1, S3_T1, S5_T1, S6_T1, S9_T1, S10_T1, S10_T2 and S11_T1. Seagrass was recorded at sites S1_T2, S2_T1, S7_T1 and S8_T1

Conspicuous fauna included a king scallop (*Pecten maximum*), snakelocks anemone (*Anemonia viridis*), spiny starfish (*Marthasterias glacialis*) and common brittle stars (*Ophiothrix fragilis*).

4.2 Gerrans Bay

The sediment types in Gerrans Bay consisted of large areas of sediment waves with possible maerl (live or dead), bedrock with fringing sediment waves consisting of possible maerl (live or dead) and fine sediment in the northern part of the survey area with smaller areas of seagrass beds in the most northerly part of the survey area. Live maerl was recorded at S2_T2, S3_T1, S5_T2, S6_T1 and S7_T1. Dead maerl was recorded in a number of sites including S2_T2, S3_T1, S7_T1 and S9_T1. Seagrass was recorded at sites S2_T1, S5_T1 and S7_T2.

Conspicuous fauna included ross coral (*Pentapora foliacea*), common urchin (*Echinus esculentus*), sunset cup coral (*Leptopsammia pruvoti*), spiny starfish (*Marthasterias glacialis*), sand star (*Astropecten irregularis*), sea pen and brittle star (*Ophiura albida*).

4.3 Veryan Bay

The sediment types in Veryan Bay consisted mainly of large areas of sediment waves with possible maerl (live or dead), as well as areas of bedrock with fringing sediment waves consisting of possible maerl (live or dead) and fine sediment with small areas of seagrass in the northern part of the survey area. No live maerl was recorded in Veryan Bay. Dead maerl was recorded at sites S6_T1, S8_T1 and S11_T1. Seagrass was recorded at sites S1_T1, S7_T1 and SA_T1. A number of sites in Veryan Bay consisted of fine sediment.

Conspicuous fauna included red algae on the bedrock and anemones in the fine sediment.

Cornwall IFCA has been able to produce valuable background knowledge to the three survey sites which had not been surveyed much previously.

The survey has demonstrated the use of acoustic techniques to spatially map different seabed habitats, including sensitive habitats such as seagrass beds and areas of possible maerl, live or dead.

5 Limitations

- It was initially thought that the sediment waves found within all three bays were maerl waves as the same signature had been seen in previous surveys. Once the positions of the stills photos had been uploaded into MapInfo with the assigned habitat categories it was clear that it could not be determined from SS alone if the sediment was maerl or not. An example is shown in Table 13 from Veryan Bay.

Table 13: Examples of side-scan sonar imagery showing sediment waves with and without maerl in Veryan Bay

Site 8 – Sediment waves with dead maerl	
Site 9 – Sediment waves with no maerl	
Site 10 - Sediment waves with no maerl	

- In parts of St.Austell Bay, there were areas that had a fairly similar signature to the seagrass beds but no ground-truthing was done in those areas so no habitat was determined for them as at this time it can only be assumed that it was seagrass.
- There are two different habitat types with a similar reflectivity on the SS imagery, one which is in wave formation and one which isn't. The areas without the wave formation have not been included in the polygons.
- The Mussel farm in St.Austell Bay was a navigational hazard so a large section of the SS is missing.
- In some areas, stills data is available showing no maerl present, however the polygon has still been assigned as waves with maerl because it is the same signature as areas where maerl was found in other tows.
- The analysis of data could not be done from video alone as it is very hard to identify specific habitats without the better quality stills. They should be used in combination.
- In some of the stills, there is so much epifauna and kelp/algae that it is impossible to tell what the substrate is. In some instances, stills from either side of an image could be used to work out what the substrate type was.

An example is shown in Figure 18.



Figure 18: A still from Veryan Bay, Site B, Transect 1.

6 Recommendations

For all three sites, and especially in Veryan Bay, it was difficult to see where boundaries for habitats with a very similar reflectivity on the SS and a lot of time was spent initially trying to draw polygons for areas with known maerl and areas without which had an almost identical signature before concluding that this was not possible. For future surveys it is recommended that more ground-truthing is done - a grab sampling survey would be carried out alongside the DDV survey to ground-truth these areas in more detail.

7 Acknowledgements

Cornwall IFCA would like to thank Natural England for providing funding through a Memorandum of Agreement (MOA) and for providing assistance during the survey.

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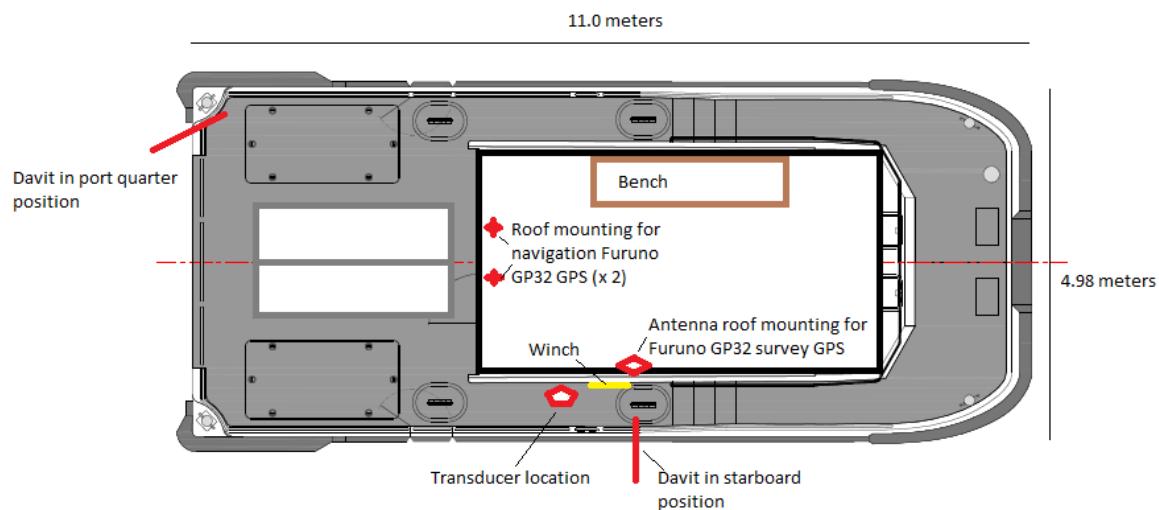
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9 Appendices

Annex 1 – R/V Tiger Lily Deck Plan & Offsets



Builder	South Boats Ltd
Model	Island MkII
Built	2007
LOA	11.0m
Beam	4.98m
Draught	1.1m (aft)
Tonnage	c.10 tonnes
Area of operation	MCA Category 2
Call sign	MRWR7
MMSI Number	235054954
MECAL Certification number	M07WB0111059
Complement	14 (including min 2 crew)
Propulsion	2 x 450hp Iveco NEF series
Speed	Cruising: 16 – 18 knots Top: 24 – 26 knots
Range	c. 400 nautical miles
240v AC supply	Victron 3Kw power inverter 5KvA Volvo-Perkins generator (All 240 AC power is accessed via APC Smart UPS C1500)
Stern Gantry	500kg SWL
Winch (on stern gantry)	Spencer Carter 0.5t with scrolling level wind
Slave hauler	Sea Winch 200m dia.
Electric line hauler	12v Spencer Carter Bandit
Positioning	Hemisphere V100 GNSS 3 x Furuno GP32
NMEA data outputs	4 x USB 4 x Serial 4 x banjo
Navigation	Olex with data export Knockle Hypack Max

Tiger Lily VI General Layout - Plan view**Settings**

Equipment			Offset (m)		
NMEA Device	Make/Model	Offset Name	X (Forw'd)	Y (Port)	Z (+)
Navigation depth sounder	Furuno Navnet	Furuno transducer	5.5	0.75	-0.5
Survey GPS	Furuno GP32	Furuno mushroom antenna	4.8	1.0	

[Annex 2 – Daily logs](#)[30th March 2016 – Gerrans Bay SSS Survey](#)

The daily log for 30th March 2016 is shown in Table 14.

Survey code: 20160330_CIFCA_SSS_GER

Staff: Colin Trundle (Principal Scientific Officer, Cornwall IFCA), Kimara Street (Scientific Officer, Cornwall IFCA), Ryan Matthews (Scientific Officer, Cornwall IFCA), Chris Lowe (CL, Skipper).

Vessel: R/V Tiger Lily. All times are in UTC.

Table 14: Daily log from survey carried on board R/V Tiger Lily on 30th March 2016

Time	Survey log
08:00	Arrive at Mylor Yacht harbour
08:30	Depart Mylor
10:08	Trial tow
10:36	SOL T1
10:57	EOL T1
11:20	SOL T2
11:56	EOL T2
12:24	SOL T3
12:51	EOL T3
13:05	SOL T4
13:20	EOL T4
13:29	SOL T5
13:43	EOL T5
14:07	SOL T6
14:21	EOL T6
14:36	SOL T7
14:50	EOL T7
15:16	SOL T8
15:44	EOL T8
16:01	SOL T9
16:22	EOL T9
17:00	Return to Mylor

The daily log for 31st March 2016 is shown in Table 15.

Survey code: 20160331_CIFCA_SSS_VER

Staff: Colin Trundle (Principal Scientific Officer, Cornwall IFCA), Kimara Street (Scientific Officer, Cornwall IFCA),

Ryan Matthews (Scientific Officer, Cornwall IFCA), Chris Lowe (Skipper).

Vessel: R/V Tiger Lily. All times are in UTC.

Table 15: Daily log from survey carried on board R/V Tiger Lily on 31st March 2016

Time	Survey log
06:00	Arrive at Mylor Yacht harbour
06:30	Depart Mylor
08:05	SOL T1
08:35	EOL T1
08:58	SOL T2
09:24	EOL T2
09:48	SOL T3
10:06	EOL T3
10:37	SOL T4
11:18	EOL T4
11:48	SOL T5
12:19	EOL T5
12:21	SOL T6
12:50	EOL T6
13:10	SOL T7
13:21	EOL T7
13:27	SOL T8
13:32	EOL T8

The daily log for 10th May 2016 is shown in Table 16.

Survey code: 20160510_CIFCA_DDV_GER

Staff: Colin Trundle (Principal Scientific Officer, Cornwall IFCA), Kimara Street (Scientific Officer, Cornwall IFCA),

Ryan Matthews (Scientific Officer, Cornwall IFCA), Chris Lowe (Skipper).

Vessel: R/V Tiger Lily. All times are in UTC.

Table 16: Daily log from survey carried on board R/V Tiger Lily on 10th May 2016

Time	Survey log
06:35	Depart Mylor
07:15	Arrive on site, camera checks whilst camera on board, all OK.
07:20	Camera in water for test run.
07:36	SOL Trial
07:40	EOL Trial
07:58	Arrive on site T7
08:00	SOL T7
08:12	EOL T7
08:26	On site T7b
08:28	SOL T7b
08:43	EOL T7b
09:00	SOL T2
09:14	EOL T2
09:16	On site T2b
09:20	SOL T2b
09:33	EOL T2b
09:34	Camera on board, steam to T6
09:44	SOL T6
10:00	EOL T6
10:12	On site T5a
10:14	SOL T5a
10:24	EOL T5a
10:28	SOL T5b
10:55	EOL T5b
11:08	SOL T3
11:20	EOL T3
11:25	Break for lunch
11:56	SOL T9
12:07	EOL T9
12:10	Camera secured alongside, steam back to Mylor.

The daily log for 27th June 2016 is shown in Table 17.

Survey code: 20160627_CIFCA_SSS_STA

Staff: Colin Trundle (CT, Cornwall IFCA Principal Scientific Officer), Kimara Street (KS, Cornwall IFCA Scientific Officer), Ryan Matthews (RM, Cornwall IFCA Scientific Officer), Chris Lowe (CL, Skipper).

Vessel: R/V Tiger Lily. All times are in UTC.

Table 17: Daily log from survey carried on board R/V Tiger Lily on 27th June 2016

Time	Survey log
08:10	Depart Mylor
08:25	Run up kit – all ok
09:41	Arrive on site
09:46	SOL T1
10:01	EOL T1
10:08	SOL T2
10:32	EOL T2
10:32	SOL T3
11:03	EOL T3
11:07	SOL T4
11:36	EOL T4
11:38	SOL T5
12:10	EOL T5
12:15	SOL T6
12:16	EOL T6 – Error while recording
13:15	Return to Mylor
13:45	Arrive Mylor

The daily log for 11th July 2016 is shown in Table 18.

Survey code: 20160711_CIFCA_SSS_STA

Staff: Colin Trundle (Principal Scientific Officer, Cornwall IFCA), Kimara Street (Scientific Officer, Cornwall IFCA),

Ryan Matthews (Scientific Officer, Cornwall IFCA), Chris Lowe (CL, Skipper).

Vessel: R/V Tiger Lily. All times are in UTC.

Table 18: Daily log from survey carried on board R/V Tiger Lily on 11th July 2016

Time	Survey log
08:00	Depart Mylor
09:05	Arrive on site
09:10	Tow fish in water and begin in water checks – all ok
09:15	Transit to first transect line
09:32	SOL T1
09:56	EOL T1
09:59	SOL T2
10:23	EOL T2
10:25	SOL T3
10:55	EOL T3
10:58	SOL T4
11:29	EOL T4
11:31	SOL T5
11:52	EOL T5
11:54	SOL T6
12:14	EOL T6
12:17	SOL T7
12:35	EOL T7
12:50	SOL T8
12:59	EOL T8
13:00	SOL T9
13:05	EOL T9
13:06	SOL T10
13:12	EOL T10
14:00	Arrive at Mylor

The daily log for 12th July 2016 is shown in Table 19.

Survey code: 20160712_CIFCA_DDVER

Staff: Colin Trundle (Principal Scientific Officer, Cornwall IFCA), Kimara Street (Scientific Officer, Cornwall IFCA),

Ryan Matthews (Scientific Officer, Cornwall IFCA), Chris Lowe (CL, Skipper).

Vessel: R/V Tiger Lily. All times are in UTC.

Table 19: Daily log from survey carried on board R/V Tiger Lily on 12th July 2016

Time	Survey log
09:13	Depart Mylor
09:48	Arrive on site
09:52	SOL T1
10:12	EOL T1
10:20	SOL T2
10:44	EOL T2
10:52	SOL T3
11:14	EOL T3
11:22	SOL T4
11:44	EOL T4
11:53	SOL T5
12:13	EOL T5
12:21	SOL T6
12:41	EOL T6
12:47	SOL T7
13:07	EOL T7
13:14	SOL T8
13:34	EOL T8
13:42	SOL T9
14:03	EOL T9
14:10	SOL T10
14:30	EOL T10
14:36	SOL T11
14:56	EOL T11
15:01	SOL T12
15:14	EOL T12
15:26	SOL T13
15:38	EOL T13
15:49	SOL T14
15:56	EOL T14
16:40	Arrive at Mylor

The daily log for 12th July 2016 is shown in Table 20.

Survey code: 20160715_CIFCA_DDV_STA

Staff: Colin Trundle (Principal Scientific Officer, Cornwall IFCA), Kimara Street (Scientific Officer, Cornwall IFCA),

Ryan Matthews (Scientific Officer, Cornwall IFCA), Chris Lowe (CL, Skipper).

Vessel: R/V Tiger Lily. All times are in UTC.

Table 20: Daily log from survey carried on board R/V Tiger Lily on 15h July 2016

Time	Survey log
07:45	Depart Mylor
08:53	Arrive on site
09:00	SOL T2
09:21	EOL T1
09:28	SOL T2
09:44	EOL T2
09:51	SOL T3
10:00	EOL T3
10:07	SOL T4
10:28	EOL T4
10:34	SOL T5
10:54	EOL T5
11:01	SOL T6
11:21	EOL T6
11:35	SOL T7
11:55	EOL T7
12:08	SOL T8
12:27	EOL T8
12:35	SOL T9
12:46	EOL T9
12:51	SOL T10
13:01	EOL T10
13:09	SOL T11
13:35	EOL T11
13:44	SOL T12
13:55	EOL T12
14:00	SOL T13
14:20	EOL T13
15:00	Arrive at Mylor

Annex 3 – Video position data from the drop down video survey in St.Austell Bay

Cornwall IFCA		Video Positioning Summary										
Area	St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV								
Vessel	Tiger Lily	Sampling position		Starboard davit								
Sample type	TOW_ID		Date	Time SOL	Time EOL	SOL Latitude (decimal degrees)	SOL Longitude (decimal degrees)	EOL Latitude (decimal degrees)	EOL Longitude (decimal degrees)	Video length	Number of stills	Comments
Camera	20160715_CIFCA_StA_S1_T1	15/07/2016	11:35:43	11:46:12	50.33386	-4.72506	50.33456	-4.72291	00:10:29	10		
Camera	20160715_CIFCA_StA_S1_T2	15/07/2016	11:51:02	12:01:40	50.33416	-4.72936	50.33475	-4.72737	00:10:38	10		
Camera	20160715_CIFCA_StA_S2_T1	15/07/2016	11:08:07	11:27:46	50.33509	-4.71889	50.33679	-4.71553	00:19:39	20		
Camera	20160715_CIFCA_StA_S3_T1	15/07/2016	09:34:01	09:54:44	50.32940	-4.72110	50.33088	-4.71878	00:20:43	19		
Camera	20160715_CIFCA_StA_S4_T1	15/07/2016	09:07:34	09:28:11	50.33030	-4.71308	50.33234	-4.71126	00:20:37	18	Images missing due to comm outs	
Camera	20160715_CIFCA_StA_S5_T1	15/07/2016	10:01:32	10:21:22	50.32962	-4.73105	50.33132	-4.72933	00:19:50	20		
Camera	20160715_CIFCA_StA_S6_T1	15/07/2016	13:00:47	13:20:33	50.32066	-4.74788	50.32096	-4.74510	00:19:46	18	Images missing due to comm outs	
Camera	20160715_CIFCA_StA_S7_T1	15/07/2016	12:44:31	12:55:23	50.32151	-4.75555	50.32129	-4.75380	00:10:52	11		
Camera	20160715_CIFCA_StA_S8_T1	15/07/2016	12:09:53	12:35:36	50.32960	-4.74416	50.33048	-4.74054	00:25:43	26		
Camera	20160715_CIFCA_StA_S9_T1	15/07/2016	08:00:40	08:21:35	50.31499	-4.70539	50.31631	-4.70433	00:20:55	21		
Camera	20160715_CIFCA_StA_S10_T1	15/07/2016	08:28:27	08:44:23	50.32179	-4.70371	50.32287	-4.70264	00:15:56	15	Tow cut short and shifted north to cover transition	
Camera	20160715_CIFCA_StA_S10_T2	15/07/2016	08:50:08	09:01:07	50.32226	-4.70450	50.32315	-4.70376	00:10:59	10		
Camera	20160715_CIFCA_StA_S11_T1	15/07/2016	10:35:25	10:55:13	50.31984	-4.72966	50.32138	-4.72794	00:19:48	20		

Annex 4 – Video position data from the drop down video survey in Gerrans Bay

Cornwall IFCA		Video Positioning Summary									
Area	Gerrans Bay	Project name		20160511_CIFCA_GerransBay_DDV							
Vessel	Tiger Lily	Sampling position		Starboard davit							
Sample type	TOW_ID	Date	Time SOL	Time EOL	SOL Latitude (decimal degrees)	SOL Longitude (decimal degrees)	EOL Latitude (decimal degrees)	EOL Longitude (decimal degrees)	Video length	Number of stills	Comments
Camera	20160511_CIFCA_GB_S2_T1	11/05/2016	09:00:26	09:14:08	50.20119	4.93943	50.19981	4.93908	00:13:42	14	
Camera	20160511_CIFCA_GB_S2_T2	11/05/2016	09:20:44	09:32:53	50.19920	4.93815	50.19814	4.93764	00:12:09	12	
Camera	20160511_CIFCA_GB_S3_T1	11/05/2016	11:07:27	11:20:02	50.18723	4.94812	50.18611	4.94801	00:12:35	17	
Camera	20160511_CIFCA_GB_S5_T1	11/05/2016	10:14:56	10:23:37	50.18968	4.96195	50.18887	4.96206	00:08:41	9	
Camera	20160511_CIFCA_GB_S5_T2	11/05/2016	10:29:53	10:54:50	50.18888	4.95792	50.18716	4.95772	00:24:57	27	
Camera	20160511_CIFCA_GB_S6_T1	11/05/2016	09:45:07	10:01:27	50.19497	4.94446	50.19408	4.94373	00:16:20	17	
Camera	20160511_CIFCA_GB_S7_T1	11/05/2016	08:00:32	08:12:20	50.19735	4.95268	50.19598	4.95185	00:11:48	13	
Camera	20160511_CIFCA_GB_S7_T2	11/05/2016	08:27:35	08:43:50	50.19915	4.95345	50.19736	4.95248	00:16:15	18	
Camera	20160511_CIFCA_GB_S9_T1	11/05/2016	11:54:56	12:07:23	50.17832	4.95036	50.17668	4.95002	00:12:27	12	

Annex 5 – Video position data from the drop down video survey in Veryan Bay

Cornwall IFCA		Video Positioning Summary										
Area	Veryan Bay	Project name		20160511_CIFCA_VeryanBay_DDV								
Vessel	Tiger Lily	Sampling position		Starboard davit								
Sample type	TOW_ID	Date	Time SOL	Time EOL	SOL Latitude (decimal degrees)	SOL Longitude (decimal degrees)	EOL Latitude (decimal degrees)	EOL Longitude (decimal degrees)	Video length	Number of stills	Comments	
Camera	20160712_CIFCA_VB_S1_T1	12/07/2016	12:13:57	12:35:14	50.23152	-4.85864	50.23062	-4.85458	00:21:17	20		
Camera	20160715_CIFCA_VB_S2_T1	12/07/2016	12:41:37	13:02:41	50.23049	-4.84769	50.22929	-4.84388	00:21:04	21		
Camera	20160715_CIFCA_VB_S3_T1	12/07/2016	13:08:45	13:30:39	50.22772	-4.83586	50.22715	-4.83132	00:21:54	20		
Camera	20160715_CIFCA_VB_S4_T1	12/07/2016	13:36:06	13:56:30	50.22503	-4.82671	50.22438	-4.82320	00:20:24	20		
Camera	20160715_CIFCA_VB_S5_T1	12/07/2016	14:01:43	14:15:12	50.22922	-4.82335	50.23157	-4.86388	00:13:29	10		
Camera	20160715_CIFCA_VB_S6_T1	12/07/2016	11:20:12	11:39:29	50.22699	-4.85742	50.22652	-4.85336	00:19:17	20		
Camera	20160715_CIFCA_VB_S7_T1	12/07/2016	11:47:06	12:08:48	50.22862	-4.86993	50.22775	-4.86753	00:21:42	19		
Camera	20160715_CIFCA_VB_S8_T1	12/07/2016	10:52:34	11:12:25	50.22247	-4.86006	50.22172	-4.85616	00:19:51	20		
Camera	20160715_CIFCA_VB_S9_T1	12/07/2016	10:23:06	10:44:25	50.21963	-4.87670	50.21974	-4.87377	00:21:19	20		
Camera	20160715_CIFCA_VB_S10_T1	12/07/2016	09:51:58	10:15:01	50.21361	-4.88694	50.21320	-4.88245	00:23:03	21		
Camera	20160715_CIFCA_VB_S11_T1	12/07/2016	09:20:41	09:44:55	50.20385	-4.88959	50.20401	-4.88483	00:24:14	17	Comm out resulting in 5 missing images	
Camera	20160715_CIFCA_VB_S12_T1	12/07/2016	08:52:09	09:13:22	50.20198	-4.90387	50.20336	-4.90064	00:21:13	20		
Camera	20160715_CIFCA_VB_SA_T1	12/07/2016	14:26:26	14:38:30	50.23169	-4.86425	50.23110	-4.86234	00:12:04	15		
Camera	20160715_CIFCA_VB_SB_T2	12/07/2016	14:48:56	14:56:40	50.21101	-4.87006	50.21049	-4.86952	00:07:44	5		

Annex 6 – Still image locations and metadata from the drop down video survey in St.Austell Bay

Cornwall IFCA							Camera Positioning Summary	
Area		St.Austell Bay		Project name		20160715_CIFCA_StaBay_DDV		
Vessel		Tiger Lily		Sampling position		Starboard davit		
Projection		WGS84						
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S9	S9_T1_SOL		15/07/2016	08:00:40	50.314987	-4.705392	
Camera	S9	S9_T1_001	20160715_StABay_S9_T1_08_02_21_0001.JPG	15/07/2016	08:02:22	50.315028	-4.705270	
Camera	S9	S9_T1_002	20160715_StABay_S9_T1_08_03_28_0002.JPG	15/07/2016	08:03:27	50.315103	-4.705205	
Camera	S9	S9_T1_003	20160715_StABay_S9_T1_08_04_28_0003.JPG	15/07/2016	08:04:28	50.315167	-4.705158	
Camera	S9	S9_T1_004	20160715_StABay_S9_T1_08_05_31_0005.JPG	15/07/2016	08:05:31	50.315218	-4.705107	
Camera	S9	S9_T1_005	20160715_StABay_S9_T1_08_06_25_0006.JPG	15/07/2016	08:06:27	50.315275	-4.705062	
Camera	S9	S9_T1_006	20160715_StABay_S9_T1_08_07_28_0007.JPG	15/07/2016	08:07:27	50.315335	-4.704977	
Camera	S9	S9_T1_007	20160715_StABay_S9_T1_08_08_31_0008.JPG	15/07/2016	08:08:29	50.315410	-4.704957	
Camera	S9	S9_T1_008	20160715_StABay_S9_T1_08_09_25_0009.JPG	15/07/2016	08:09:25	50.315470	-4.704915	
Camera	S9	S9_T1_009	20160715_StABay_S9_T1_08_10_29_0010.JPG	15/07/2016	08:10:28	50.315540	-4.704848	
Camera	S9	S9_T1_010	20160715_StABay_S9_T1_08_11_27_0011.JPG	15/07/2016	08:11:27	50.315597	-4.704793	
Camera	S9	S9_T1_011	20160715_StABay_S9_T1_08_12_28_0012.JPG	15/07/2016	08:12:28	50.315647	-4.704745	
Camera	S9	S9_T1_012	20160715_StABay_S9_T1_08_13_29_0013.JPG	15/07/2016	08:13:28	50.315722	-4.704705	
Camera	S9	S9_T1_013	20160715_StABay_S9_T1_08_14_23_0014.JPG	15/07/2016	08:14:24	50.315800	-4.704652	
Camera	S9	S9_T1_014	20160715_StABay_S9_T1_08_15_29_0015.JPG	15/07/2016	08:15:28	50.315858	-4.704585	
Camera	S9	S9_T1_015	20160715_StABay_S9_T1_08_16_28_0016.JPG	15/07/2016	08:16:27	50.315930	-4.704530	
Camera	S9	S9_T1_016	20160715_StABay_S9_T1_08_17_30_0017.JPG	15/07/2016	08:17:29	50.316010	-4.704492	
Camera	S9	S9_T1_017	20160715_StABay_S9_T1_08_18_28_0018.JPG	15/07/2016	08:18:28	50.316090	-4.704457	
Camera	S9	S9_T1_018	20160715_StABay_S9_T1_08_19_29_0019.JPG	15/07/2016	08:19:27	50.316165	-4.704423	
Camera	S9	S9_T1_019	20160715_StABay_S9_T1_08_20_28_0020.JPG	15/07/2016	08:20:27	50.316228	-4.704393	
Camera	S9	S9_T1_020	20160715_StABay_S9_T1_08_21_29_0021.JPG	15/07/2016	08:21:29	50.316303	-4.704342	
Camera	S9	S9_T1_EOL		15/07/2016	08:21:35	50.316313	-4.704332	
Camera	S10	S10_T1_SOL		15/07/2016	08:28:27	50.321790	-4.703707	

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S10	S10_T1_001	20160715_StABay_S10_T1_08_30_21_0022.JPG		15/07/2016	08:30:20	50.321790	-4.703432	
Camera	S10	S10_T1_002	20160715_StABay_S10_T1_08_31_10_0023.JPG		15/07/2016	08:31:09	50.321835	-4.703398	
Camera	S10	S10_T1_003	20160715_StABay_S10_T1_08_32_14_0024.JPG		15/07/2016	08:32:14	50.321912	-4.703328	
Camera	S10	S10_T1_004	20160715_StABay_S10_T1_08_33_14_0025.JPG		15/07/2016	08:33:14	50.321992	-4.703268	
Camera	S10	S10_T1_005	20160715_StABay_S10_T1_08_34_15_0026.JPG		15/07/2016	08:34:13	50.322067	-4.703223	
Camera	S10	S10_T1_006	20160715_StABay_S10_T1_08_35_15_0027.JPG		15/07/2016	08:35:14	50.322147	-4.703188	
Camera	S10	S10_T1_007	20160715_StABay_S10_T1_08_36_14_0028.JPG		15/07/2016	08:36:13	50.322228	-4.703142	
Camera	S10	S10_T1_008	20160715_StABay_S10_T1_08_37_13_0029.JPG		15/07/2016	08:37:13	50.322302	-4.703090	
Camera	S10	S10_T1_009	20160715_StABay_S10_T1_08_38_12_0030.JPG		15/07/2016	08:38:14	50.322382	-4.703043	
Camera	S10	S10_T1_010	20160715_StABay_S10_T1_08_39_12_0031.JPG		15/07/2016	08:39:12	50.322450	-4.703003	
Camera	S10	S10_T1_011	20160715_StABay_S10_T1_08_40_20_0032.JPG		15/07/2016	08:40:13	50.322542	-4.702942	
Camera	S10	S10_T1_012	20160715_StABay_S10_T1_08_41_16_0033.JPG		15/07/2016	08:41:15	50.322618	-4.702872	
Camera	S10	S10_T1_013	20160715_StABay_S10_T1_08_42_14_0034.JPG		15/07/2016	08:42:14	50.322705	-4.702820	
Camera	S10	S10_T1_014	20160715_StABay_S10_T1_08_43_14_0035.JPG		15/07/2016	08:43:12	50.322778	-4.702732	
Camera	S10	S10_T1_015	20160715_StABay_S10_T1_08_44_14_0036.JPG		15/07/2016	08:44:12	50.322853	-4.702645	
Camera	S10	S10_T1_EOL			15/07/2016	08:44:23	50.322865	-4.702640	
Camera	S10	S10_T2_SOL			15/07/2016	08:50:08	50.322263	-4.704497	
Camera	S10	S10_T2_001	20160715_StABay_S10_T2_08_51_52_0037.JPG		15/07/2016	08:51:49	50.322342	-4.704297	
Camera	S10	S10_T2_002	20160715_StABay_S10_T2_08_52_57_0038.JPG		15/07/2016	08:52:54	50.322428	-4.704233	
Camera	S10	S10_T2_003	20160715_StABay_S10_T2_08_53_57_0039.JPG		15/07/2016	08:53:55	50.322512	-4.704157	
Camera	S10	S10_T2_004	20160715_StABay_S10_T2_08_55_19_0040.JPG		15/07/2016	08:55:17	50.322630	-4.704073	
Camera	S10	S10_T2_005	20160715_StABay_S10_T2_08_55_57_0041.JPG		15/07/2016	08:55:54	50.322688	-4.704052	
Camera	S10	S10_T2_006	20160715_StABay_S10_T2_08_56_57_0042.JPG		15/07/2016	08:56:54	50.322772	-4.704010	
Camera	S10	S10_T2_007	20160715_StABay_S10_T2_08_57_58_0043.JPG		15/07/2016	08:57:55	50.322858	-4.703955	
Camera	S10	S10_T2_008	20160715_StABay_S10_T2_08_58_57_0044.JPG		15/07/2016	08:58:54	50.322963	-4.703883	

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Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S10	S10_T2_009	20160715_StABay_S10_T2_08_59_57_0045.JPG		15/07/2016	08:59:54	50.323028	-4.703842	
Camera	S10	S10_T2_010	20160715_StABay_S10_T2_09_00_57_0046.JPG		15/07/2016	09:00:54	50.323127	-4.703778	
Camera	S10	S10_T2_EOL			15/07/2016	09:01:07	50.323145	-4.703762	
Camera	S4	S4_T1_SOL			15/07/2016	09:07:34	50.330302	-4.713075	
Camera	S4	S4_T1_001			15/07/2016	09:08:54	50.330393	-4.712873	Comm out – no image available
Camera	S4	S4_T1_002	20160715_StABay_S4_T1_09_10_12_0047.JPG		15/07/2016	09:10:03	50.330480	-4.712760	
Camera	S4	S4_T1_003	20160715_StABay_S4_T1_09_11_05_0048.JPG		15/07/2016	09:11:03	50.330570	-4.712670	
Camera	S4	S4_T1_004	20160715_StABay_S4_T1_09_12_05_0049.JPG		15/07/2016	09:12:03	50.330665	-4.712588	
Camera	S4	S4_T1_005	20160715_StABay_S4_T1_09_13_07_0050.JPG		15/07/2016	09:13:04	50.330758	-4.712500	
Camera	S4	S4_T1_006	20160715_StABay_S4_T1_09_14_06_0051.JPG		15/07/2016	09:14:03	50.330860	-4.712432	
Camera	S4	S4_T1_007	20160715_StABay_S4_T1_09_15_06_0052.JPG		15/07/2016	09:15:03	50.330958	-4.712363	
Camera	S4	S4_T1_008			15/07/2016	09:16:04	50.331063	-4.712287	Comm out – no image available
Camera	S4	S4_T1_009	20160715_StABay_S4_T1_09_17_04_0053.JPG		15/07/2016	09:17:02	50.331165	-4.712215	
Camera	S4	S4_T1_010	20160715_StABay_S4_T1_09_18_05_0054.JPG		15/07/2016	09:18:03	50.331273	-4.712130	
Camera	S4	S4_T1_011	20160715_StABay_S4_T1_09_19_05_0055.JPG		15/07/2016	09:19:02	50.331383	-4.712037	
Camera	S4	S4_T1_012	20160715_StABay_S4_T1_09_20_05_0056.JPG		15/07/2016	09:20:02	50.331497	-4.711970	
Camera	S4	S4_T1_013	20160715_StABay_S4_T1_09_21_07_0057.JPG		15/07/2016	09:21:05	50.331597	-4.711892	
Camera	S4	S4_T1_014	20160715_StABay_S4_T1_09_22_05_0058.JPG		15/07/2016	09:22:03	50.331698	-4.711807	
Camera	S4	S4_T1_015	20160715_StABay_S4_T1_09_23_04_0059.JPG		15/07/2016	09:23:03	50.331808	-4.711717	
Camera	S4	S4_T1_016	20160715_StABay_S4_T1_09_24_05_0060.JPG		15/07/2016	09:24:03	50.331918	-4.711647	
Camera	S4	S4_T1_017	20160715_StABay_S4_T1_09_25_04_0061.JPG		15/07/2016	09:25:02	50.332025	-4.711560	
Camera	S4	S4_T1_018	20160715_StABay_S4_T1_09_26_04_0062.JPG		15/07/2016	09:26:02	50.332115	-4.711465	
Camera	S4	S4_T1_019	20160715_StABay_S4_T1_09_27_06_0063.JPG		15/07/2016	09:27:04	50.332217	-4.711380	
Camera	S4	S4_T1_020	20160715_StABay_S4_T1_09_28_06_0064.JPG		15/07/2016	09:28:02	50.332327	-4.711275	

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Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S4	S4_T1_EOL			15/07/2016	09:28:11	50.332338	-4.711262	
Camera	S3	S3_T1_SOL			15/07/2016	09:34:01	50.329398	-4.721095	
Camera	S3	S3_T1_001	20160715_StABay_S3_T1_09_35_23_0066.JPG		15/07/2016	09:35:19	50.329442	-4.720837	
Camera	S3	S3_T1_002	20160715_StABay_S3_T1_09_36_39_0067.JPG		15/07/2016	09:36:37	50.329503	-4.720677	
Camera	S3	S3_T1_003	20160715_StABay_S3_T1_09_37_27_0068.JPG		15/07/2016	09:37:25	50.329563	-4.720580	
Camera	S3	S3_T1_004	20160715_StABay_S3_T1_09_38_27_0069.JPG		15/07/2016	09:38:25	50.329648	-4.720435	
Camera	S3	S3_T1_005	20160715_StABay_S3_T1_09_39_28_0070.JPG		15/07/2016	09:39:25	50.329718	-4.720293	
Camera	S3	S3_T1_006	20160715_StABay_S3_T1_09_40_27_0071.JPG		15/07/2016	09:40:25	50.329787	-4.720148	
Camera	S3	S3_T1_007	20160715_StABay_S3_T1_09_41_27_0072.JPG		15/07/2016	09:41:25	50.329858	-4.720035	
Camera	S3	S3_T1_008			15/07/2016	09:42:26	50.329940	-4.719888	
Camera	S3	S3_T1_009	20160715_StABay_S3_T1_09_43_28_0073.JPG		15/07/2016	09:43:25	50.330047	-4.719773	
Camera	S3	S3_T1_010	20160715_StABay_S3_T1_09_44_27_0074.JPG		15/07/2016	09:44:24	50.330097	-4.719662	
Camera	S3	S3_T1_011	20160715_StABay_S3_T1_09_45_35_0075.JPG		15/07/2016	09:45:33	50.330175	-4.719512	
Camera	S3	S3_T1_012	20160715_StABay_S3_T1_09_46_27_0076.JPG		15/07/2016	09:46:25	50.330240	-4.719402	
Camera	S3	S3_T1_013	20160715_StABay_S3_T1_09_47_28_0077.JPG		15/07/2016	09:47:26	50.330315	-4.719263	
Camera	S3	S3_T1_014	20160715_StABay_S3_T1_09_48_30_0078.JPG		15/07/2016	09:48:27	50.330438	-4.719172	
Camera	S3	S3_T1_015	20160715_StABay_S3_T1_09_49_28_0079.JPG		15/07/2016	09:49:25	50.330510	-4.719097	
Camera	S3	S3_T1_016	20160715_StABay_S3_T1_09_50_28_0080.JPG		15/07/2016	09:50:25	50.330588	-4.719027	
Camera	S3	S3_T1_017	20160715_StABay_S3_T1_09_51_28_0081.JPG		15/07/2016	09:51:25	50.330647	-4.718963	
Camera	S3	S3_T1_018	20160715_StABay_S3_T1_09_52_27_0082.JPG		15/07/2016	09:52:24	50.330713	-4.718913	
Camera	S3	S3_T1_019	20160715_StABay_S3_T1_09_53_27_0083.JPG		15/07/2016	09:53:25	50.330815	-4.718890	
Camera	S3	S3_T1_020	20160715_StABay_S3_T1_09_54_28_0084.JPG		15/07/2016	09:54:26	50.330868	-4.718802	
Camera	S3	S3_T1_EOL			15/07/2016	09:54:44	50.330883	-4.718782	
Camera	S5	S5_T1_SOL			15/07/2016	10:01:32	50.329622	-4.731047	
Camera	S5	S5_T1_001	20160715_StABay_S5_T1_10_01_58_0086.JPG		15/07/2016	10:01:55	50.329633	-4.730992	

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Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S5	S5_T1_002	20160715_StABay_S5_T1_10_03_12_0087.JPG		15/07/2016	10:03:09	50.329735	-4.730817	
Camera	S5	S5_T1_003	20160715_StABay_S5_T1_10_04_17_0088.JPG		15/07/2016	10:04:12	50.329820	-4.730667	
Camera	S5	S5_T1_004	20160715_StABay_S5_T1_10_05_12_0089.JPG		15/07/2016	10:05:09	50.329892	-4.730560	
Camera	S5	S5_T1_005	20160715_StABay_S5_T1_10_06_15_0090.JPG		15/07/2016	10:06:10	50.329983	-4.730490	
Camera	S5	S5_T1_006	20160715_StABay_S5_T1_10_07_12_0091.JPG		15/07/2016	10:07:10	50.330083	-4.730380	
Camera	S5	S5_T1_007	20160715_StABay_S5_T1_10_08_10_0092.JPG		15/07/2016	10:08:08	50.330173	-4.730323	
Camera	S5	S5_T1_008	20160715_StABay_S5_T1_10_09_10_0093.JPG		15/07/2016	10:09:09	50.330222	-4.730258	
Camera	S5	S5_T1_009	20160715_StABay_S5_T1_10_10_11_0094.JPG		15/07/2016	10:10:09	50.330280	-4.730190	
Camera	S5	S5_T1_010	20160715_StABay_S5_T1_10_11_11_0095.JPG		15/07/2016	10:11:10	50.330365	-4.730097	
Camera	S5	S5_T1_011	20160715_StABay_S5_T1_10_12_11_0096.JPG		15/07/2016	10:12:09	50.330455	-4.729978	
Camera	S5	S5_T1_012	20160715_StABay_S5_T1_10_13_11_0097.JPG		15/07/2016	10:13:09	50.330512	-4.729837	
Camera	S5	S5_T1_013	20160715_StABay_S5_T1_10_14_10_0098.JPG		15/07/2016	10:14:08	50.330603	-4.729750	
Camera	S5	S5_T1_014	20160715_StABay_S5_T1_10_15_13_0099.JPG		15/07/2016	10:15:11	50.330675	-4.729663	
Camera	S5	S5_T1_015	20160715_StABay_S5_T1_10_16_11_0100.JPG		15/07/2016	10:16:08	50.330770	-4.729582	
Camera	S5	S5_T1_016	20160715_StABay_S5_T1_10_17_14_0101.JPG		15/07/2016	10:17:09	50.330872	-4.729540	
Camera	S5	S5_T1_017	20160715_StABay_S5_T1_10_18_10_0102.JPG		15/07/2016	10:18:09	50.330998	-4.729515	
Camera	S5	S5_T1_018	20160715_StABay_S5_T1_10_19_11_0103.JPG		15/07/2016	10:19:09	50.331107	-4.729468	
Camera	S5	S5_T1_019	20160715_StABay_S5_T1_10_20_12_0104.JPG		15/07/2016	10:20:11	50.331202	-4.729422	
Camera	S5	S5_T1_020	20160715_StABay_S5_T1_10_21_14_0105.JPG		15/07/2016	10:21:09	50.331303	-4.729352	
Camera	S5	S5_T1_EOL			15/07/2016	10:21:22	50.331320	-4.729330	
Camera	S11	S11_T1_SOL			15/07/2016	10:35:25	50.319838	-4.729657	
Camera	S11	S11_T1_001	20160715_StABay_S11_T1_10_35_55_0107.JPG		15/07/2016	10:35:56	50.319880	-4.729623	
Camera	S11	S11_T1_002	20160715_StABay_S11_T1_10_37_15_0108.JPG		15/07/2016	10:37:13	50.320005	-4.729610	
Camera	S11	S11_T1_003	20160715_StABay_S11_T1_10_38_04_0109.JPG		15/07/2016	10:38:02	50.320075	-4.729617	
Camera	S11	S11_T1_004	20160715_StABay_S11_T1_10_39_05_0110.JPG		15/07/2016	10:39:02	50.320138	-4.729605	

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Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S11	S11_T1_005	20160715_StABay_S11_T1_10_40_04_0111.JPG		15/07/2016	10:40:02	50.320223	-4.729610	
Camera	S11	S11_T1_006	20160715_StABay_S11_T1_10_41_05_0112.JPG		15/07/2016	10:41:02	50.320295	-4.729593	
Camera	S11	S11_T1_007	20160715_StABay_S11_T1_10_42_05_0113.JPG		15/07/2016	10:42:02	50.320388	-4.729588	
Camera	S11	S11_T1_008	20160715_StABay_S11_T1_10_43_05_0114.JPG		15/07/2016	10:43:02	50.320477	-4.729560	
Camera	S11	S11_T1_009	20160715_StABay_S11_T1_10_44_05_0115.JPG		15/07/2016	10:44:02	50.320575	-4.729507	
Camera	S11	S11_T1_010	20160715_StABay_S11_T1_10_45_04_0116.JPG		15/07/2016	10:45:02	50.320600	-4.729400	
Camera	S11	S11_T1_011	20160715_StABay_S11_T1_10_46_08_0117.JPG		15/07/2016	10:46:02	50.320702	-4.729305	
Camera	S11	S11_T1_012	20160715_StABay_S11_T1_10_47_05_0118.JPG		15/07/2016	10:47:03	50.320793	-4.729158	
Camera	S11	S11_T1_013	20160715_StABay_S11_T1_10_48_04_0119.JPG		15/07/2016	10:48:02	50.320840	-4.729028	
Camera	S11	S11_T1_014	20160715_StABay_S11_T1_10_49_06_0120.JPG		15/07/2016	10:49:04	50.320883	-4.728863	
Camera	S11	S11_T1_015	20160715_StABay_S11_T1_10_50_04_0121.JPG		15/07/2016	10:50:03	50.320955	-4.728718	
Camera	S11	S11_T1_016	20160715_StABay_S11_T1_10_51_06_0122.JPG		15/07/2016	10:51:04	50.321045	-4.728573	
Camera	S11	S11_T1_017	20160715_StABay_S11_T1_10_52_06_0123.JPG		15/07/2016	10:52:03	50.321147	-4.728448	
Camera	S11	S11_T1_018	20160715_StABay_S11_T1_10_53_03_0124.JPG		15/07/2016	10:53:01	50.321215	-4.728303	
Camera	S11	S11_T1_019	20160715_StABay_S11_T1_10_54_05_0125.JPG		15/07/2016	10:54:03	50.321295	-4.728140	
Camera	S11	S11_T1_020	20160715_StABay_S11_T1_10_55_04_0126.JPG		15/07/2016	10:55:02	50.321367	-4.727972	
Camera	S11	S11_T1_EOL			15/07/2016	10:55:13	50.321380	-4.727938	
Camera	S2	S2_T1_SOL			15/07/2016	11:08:07	50.335087	-4.718888	
Camera	S2	S2_T1_001	20160715_StABay_S2_T1_11_08_36_0128.JPG		15/07/2016	11:08:38	50.335112	-4.718810	
Camera	S2	S2_T1_002	20160715_StABay_S2_T1_11_09_42_0129.JPG		15/07/2016	11:09:40	50.335177	-4.718655	
Camera	S2	S2_T1_003	20160715_StABay_S2_T1_11_10_42_0130.JPG		15/07/2016	11:10:40	50.335277	-4.718485	
Camera	S2	S2_T1_004	20160715_StABay_S2_T1_11_11_44_0131.JPG		15/07/2016	11:11:42	50.335373	-4.718305	
Camera	S2	S2_T1_005	20160715_StABay_S2_T1_11_12_42_0132.JPG		15/07/2016	11:12:40	50.335453	-4.718158	
Camera	S2	S2_T1_006	20160715_StABay_S2_T1_11_13_41_0133.JPG		15/07/2016	11:13:39	50.335538	-4.717993	
Camera	S2	S2_T1_007	20160715_StABay_S2_T1_11_14_35_0134.JPG		15/07/2016	11:14:36	50.335637	-4.717830	

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S2	S2_T1_008	20160715_StABay_S2_T1_11_15_41_0135.JPG		15/07/2016	11:15:39	50.335718	-4.717662	
Camera	S2	S2_T1_009	20160715_StABay_S2_T1_11_16_44_0136.JPG		15/07/2016	11:16:41	50.335797	-4.717478	
Camera	S2	S2_T1_010	20160715_StABay_S2_T1_11_17_40_0137.JPG		15/07/2016	11:17:39	50.335878	-4.717298	
Camera	S2	S2_T1_011	20160715_StABay_S2_T1_11_18_47_0138.JPG		15/07/2016	11:18:45	50.336000	-4.717112	
Camera	S2	S2_T1_012	20160715_StABay_S2_T1_11_19_45_0139.JPG		15/07/2016	11:19:42	50.336078	-4.716957	
Camera	S2	S2_T1_013	20160715_StABay_S2_T1_11_20_43_0140.JPG		15/07/2016	11:20:41	50.336167	-4.716790	
Camera	S2	S2_T1_014	20160715_StABay_S2_T1_11_21_41_0141.JPG		15/07/2016	11:21:40	50.336268	-4.716620	
Camera	S2	S2_T1_015	20160715_StABay_S2_T1_11_22_41_0142.JPG		15/07/2016	11:22:39	50.336355	-4.716462	
Camera	S2	S2_T1_016	20160715_StABay_S2_T1_11_23_42_0143.JPG		15/07/2016	11:23:43	50.336470	-4.716287	
Camera	S2	S2_T1_017	20160715_StABay_S2_T1_11_24_42_0144.JPG		15/07/2016	11:24:40	50.336527	-4.716093	
Camera	S2	S2_T1_018	20160715_StABay_S2_T1_11_25_42_0145.JPG		15/07/2016	11:25:39	50.336603	-4.715907	
Camera	S2	S2_T1_019	20160715_StABay_S2_T1_11_26_36_0146.JPG		15/07/2016	11:26:34	50.336670	-4.715755	
Camera	S2	S2_T1_020	20160715_StABay_S2_T1_11_27_43_0147.JPG		15/07/2016	11:27:41	50.336782	-4.715543	
Camera	S2	S2_T1_EOL			15/07/2016	11:27:46	50.336788	-4.715527	
Camera	S1	S1_T1_SOL			15/07/2016	11:35:43	50.333860	-4.725062	
Camera	S1	S1_T1_001	20160715_StABay_S1_T1_11_36_59_0148.JPG		15/07/2016	11:36:58	50.333873	-4.724748	
Camera	S1	S1_T1_002	20160715_StABay_S1_T1_11_38_07_0149.JPG		15/07/2016	11:38:05	50.333977	-4.724523	
Camera	S1	S1_T1_003	20160715_StABay_S1_T1_11_39_08_0150.JPG		15/07/2016	11:39:05	50.334022	-4.724268	
Camera	S1	S1_T1_004	20160715_StABay_S1_T1_11_40_08_0151.JPG		15/07/2016	11:40:05	50.334085	-4.724087	
Camera	S1	S1_T1_005	20160715_StABay_S1_T1_11_41_08_0152.JPG		15/07/2016	11:41:06	50.334157	-4.723870	
Camera	S1	S1_T1_006	20160715_StABay_S1_T1_11_42_14_0153.JPG		15/07/2016	11:42:13	50.334237	-4.723605	
Camera	S1	S1_T1_007	20160715_StABay_S1_T1_11_43_08_0154.JPG		15/07/2016	11:43:05	50.334295	-4.723467	
Camera	S1	S1_T1_008	20160715_StABay_S1_T1_11_44_07_0155.JPG		15/07/2016	11:44:05	50.334387	-4.723280	
Camera	S1	S1_T1_009	20160715_StABay_S1_T1_11_45_08_0156.JPG		15/07/2016	11:45:06	50.334478	-4.723073	
Camera	S1	S1_T1_010	20160715_StABay_S1_T1_11_46_09_0157.JPG		15/07/2016	11:46:07	50.334553	-4.722922	

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S1	S1_T1_EOL			15/07/2016	11:46:12	50.334558	-4.722910	
Camera	S1	S1_T2_SOL			15/07/2016	11:51:02	50.334160	-4.729362	
Camera	S1	S1_T2_001	20160715_StABay_S1_T2_11_52_28_0159.JPG		15/07/2016	11:52:23	50.334188	-4.729105	
Camera	S1	S1_T2_002	20160715_StABay_S1_T2_11_53_34_0160.JPG		15/07/2016	11:53:32	50.334243	-4.728917	
Camera	S1	S1_T2_003	20160715_StABay_S1_T2_11_54_34_0161.JPG		15/07/2016	11:54:32	50.334290	-4.728678	
Camera	S1	S1_T2_004	20160715_StABay_S1_T2_11_55_34_0162.JPG		15/07/2016	11:55:33	50.334352	-4.728502	
Camera	S1	S1_T2_005	20160715_StABay_S1_T2_11_56_34_0163.JPG		15/07/2016	11:56:32	50.334425	-4.728345	
Camera	S1	S1_T2_006	20160715_StABay_S1_T2_11_57_33_0164.JPG		15/07/2016	11:57:32	50.334460	-4.728115	
Camera	S1	S1_T2_007	20160715_StABay_S1_T2_11_58_34_0165.JPG		15/07/2016	11:58:32	50.334533	-4.727940	
Camera	S1	S1_T2_008	20160715_StABay_S1_T2_11_59_34_0166.JPG		15/07/2016	11:59:32	50.334600	-4.727727	
Camera	S1	S1_T2_009	20160715_StABay_S1_T2_12_00_34_0167.JPG		15/07/2016	12:00:32	50.334688	-4.727550	
Camera	S1	S1_T2_010	20160715_StABay_S1_T2_12_01_35_0168.JPG		15/07/2016	12:01:33	50.334738	-4.727383	
Camera	S1	S1_T2_EOL			15/07/2016	12:01:40	50.334745	-4.727367	
Camera	S8	S8_T1_SOL			15/07/2016	12:09:53	50.329597	-4.744155	
Camera	S8	S8_T1_001	20160715_StABay_S8_T1_12_11_29_0169.JPG		15/07/2016	12:11:26	50.329683	-4.744042	
Camera	S8	S8_T1_002			15/07/2016	12:12:23	50.329708	-4.743913	
Camera	S8	S8_T1_003	20160715_StABay_S8_T1_12_12_48_0170.JPG		15/07/2016	12:12:44	50.329713	-4.743887	
Camera	S8	S8_T1_004	20160715_StABay_S8_T1_12_13_23_0171.JPG		15/07/2016	12:13:23	50.329715	-4.743797	
Camera	S8	S8_T1_005	20160715_StABay_S8_T1_12_14_26_0172.JPG		15/07/2016	12:14:25	50.329672	-4.743598	
Camera	S8	S8_T1_006	20160715_StABay_S8_T1_12_15_26_0173.JPG		15/07/2016	12:15:24	50.329660	-4.743467	
Camera	S8	S8_T1_007	20160715_StABay_S8_T1_12_15_59_0174.JPG		15/07/2016	12:15:58	50.329670	-4.743382	
Camera	S8	S8_T1_008	20160715_StABay_S8_T1_12_16_26_0175.JPG		15/07/2016	12:16:24	50.329668	-4.743318	
Camera	S8	S8_T1_009	20160715_StABay_S8_T1_12_17_26_0176.JPG		15/07/2016	12:17:24	50.329677	-4.743147	
Camera	S8	S8_T1_010	20160715_StABay_S8_T1_12_18_26_0177.JPG		15/07/2016	12:18:24	50.329708	-4.742950	
Camera	S8	S8_T1_011	20160715_StABay_S8_T1_12_19_27_0178.JPG		15/07/2016	12:19:25	50.329743	-4.742808	

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S8	S8_T1_012	20160715_StABay_S8_T1_12_20_26_0179.JPG		15/07/2016	12:20:25	50.329780	-4.742632	
Camera	S8	S8_T1_013	20160715_StABay_S8_T1_12_21_27_0180.JPG		15/07/2016	12:21:24	50.329853	-4.742517	
Camera	S8	S8_T1_014	20160715_StABay_S8_T1_12_22_26_0181.JPG		15/07/2016	12:22:24	50.329908	-4.742345	
Camera	S8	S8_T1_015	20160715_StABay_S8_T1_12_23_27_0182.JPG		15/07/2016	12:23:25	50.329978	-4.742195	
Camera	S8	S8_T1_016	20160715_StABay_S8_T1_12_24_25_0183.JPG		15/07/2016	12:24:23	50.330020	-4.742068	
Camera	S8	S8_T1_017	20160715_StABay_S8_T1_12_25_26_0184.JPG		15/07/2016	12:25:24	50.330073	-4.741933	
Camera	S8	S8_T1_018	20160715_StABay_S8_T1_12_26_26_0185.JPG		15/07/2016	12:26:23	50.330142	-4.741827	
Camera	S8	S8_T1_019	20160715_StABay_S8_T1_12_27_26_0186.JPG		15/07/2016	12:27:24	50.330208	-4.741707	
Camera	S8	S8_T1_020	20160715_StABay_S8_T1_12_28_26_0187.JPG		15/07/2016	12:28:24	50.330268	-4.741605	
Camera	S8	S8_T1_021	20160715_StABay_S8_T1_12_29_29_0188.JPG		15/07/2016	12:29:25	50.330343	-4.741442	
Camera	S8	S8_T1_022	20160715_StABay_S8_T1_12_30_28_0189.JPG		15/07/2016	12:30:25	50.330388	-4.741287	
Camera	S8	S8_T1_023	20160715_StABay_S8_T1_12_31_26_0190.JPG		15/07/2016	12:31:47	50.330465	-4.741077	
Camera	S8	S8_T1_024	20160715_StABay_S8_T1_12_32_35_0191.JPG		15/07/2016	12:32:33	50.330438	-4.740947	
Camera	S8	S8_T1_025	20160715_StABay_S8_T1_12_33_26_0192.JPG		15/07/2016	12:33:24	50.330477	-4.740832	
Camera	S8	S8_T1_026	20160715_StABay_S8_T1_12_34_28_0193.JPG		15/07/2016	12:34:24	50.330475	-4.740677	
Camera	S8	S8_T1_027	20160715_StABay_S8_T1_12_35_27_0194.JPG		15/07/2016	12:35:24	50.330482	-4.740565	
Camera	S8	S8_T1_EOL			15/07/2016	12:35:36	50.330482	-4.740540	
Camera	S7	S7_T1_SOL			15/07/2016	12:44:31	50.321505	-4.755548	
Camera	S7	S7_T1_001	20160715_StABay_S7_T1_12_45_07_0195.JPG		15/07/2016	12:45:10	50.321495	-4.755457	
Camera	S7	S7_T1_002	20160715_StABay_S7_T1_12_46_11_0196.JPG		15/07/2016	12:46:09	50.321502	-4.755327	
Camera	S7	S7_T1_003	20160715_StABay_S7_T1_12_47_11_0197.JPG		15/07/2016	12:47:14	50.321462	-4.755178	
Camera	S7	S7_T1_004	20160715_StABay_S7_T1_12_48_12_0198.JPG		15/07/2016	12:48:09	50.321423	-4.755033	
Camera	S7	S7_T1_005	20160715_StABay_S7_T1_12_49_12_0199.JPG		15/07/2016	12:49:10	50.321398	-4.754877	
Camera	S7	S7_T1_006	20160715_StABay_S7_T1_12_50_13_0200.JPG		15/07/2016	12:50:12	50.321372	-4.754640	
Camera	S7	S7_T1_007	20160715_StABay_S7_T1_12_51_15_0201.JPG		15/07/2016	12:51:12	50.321355	-4.754467	

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Cornwall IFCA							Camera Positioning Summary		
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV				
Vessel		Tiger Lily	Sampling position		Starboard davit				
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S7	S7_T1_008	20160715_StABay_S7_T1_12_52_11_0202.JPG		15/07/2016	12:52:09	50.321335	-4.754333	
Camera	S7	S7_T1_009	20160715_StABay_S7_T1_12_53_12_0203.JPG		15/07/2016	12:53:10	50.321312	-4.754185	
Camera	S7	S7_T1_010	20160715_StABay_S7_T1_12_54_16_0204.JPG		15/07/2016	12:54:09	50.321287	-4.754003	
Camera	S7	S7_T1_011	20160715_StABay_S7_T1_12_55_11_0205.JPG		15/07/2016	12:55:11	50.321288	-4.753837	
Camera	S7	S7_T1_EOL			15/07/2016	12:55:23	50.321285	-4.753803	
Camera	S6	S6_T1_SOL			15/07/2016	13:00:47	50.320657	-4.747878	
Camera	S6	S6_T1_001	20160715_StABay_S6_T1_13_01_12_0207.JPG		15/07/2016	13:01:09	50.320635	-4.747825	
Camera	S6	S6_T1_002	20160715_StABay_S6_T1_13_02_23_0208.JPG		15/07/2016	13:02:22	50.320628	-4.747653	
Camera	S6	S6_T1_003	20160715_StABay_S6_T1_13_03_25_0209.JPG		15/07/2016	13:03:23	50.320657	-4.747522	
Camera	S6	S6_T1_004	20160715_StABay_S6_T1_13_04_24_0210.JPG		15/07/2016	13:04:22	50.320673	-4.747387	
Camera	S6	S6_T1_005	20160715_StABay_S6_T1_13_05_23_0211.JPG		15/07/2016	13:05:22	50.320702	-4.747243	
Camera	S6	S6_T1_006	20160715_StABay_S6_T1_13_06_24_0212.JPG		15/07/2016	13:06:22	50.320732	-4.747095	
Camera	S6	S6_T1_007	20160715_StABay_S6_T1_13_07_25_0213.JPG		15/07/2016	13:07:23	50.320773	-4.746950	
Camera	S6	S6_T1_008	20160715_StABay_S6_T1_13_08_25_0215.JPG		15/07/2016	13:08:22	50.320803	-4.746818	
Camera	S6	S6_T1_009	20160715_StABay_S6_T1_13_09_24_0216.JPG		15/07/2016	13:09:22	50.320843	-4.746683	
Camera	S6	S6_T1_010	20160715_StABay_S6_T1_13_10_25_0217.JPG		15/07/2016	13:10:22	50.320858	-4.746550	
Camera	S6	S6_T1_011	20160715_StABay_S6_T1_13_11_29_0218.JPG		15/07/2016	13:11:27	50.320865	-4.746432	
Camera	S6	S6_T1_012	20160715_StABay_S6_T1_13_12_25_0219.JPG		15/07/2016	13:12:25	50.320860	-4.746332	
Camera	S6	S6_T1_013	20160715_StABay_S6_T1_13_13_25_0220.JPG		15/07/2016	13:13:24	50.320867	-4.746193	
Camera	S6	S6_T1_014	20160715_StABay_S6_T1_13_14_27_0221.JPG		15/07/2016	13:14:22	50.320862	-4.746017	
Camera	S6	S6_T1_015	20160715_StABay_S6_T1_13_15_24_0222.JPG		15/07/2016	13:15:22	50.320880	-4.745848	
Camera	S6	S6_T1_016	20160715_StABay_S6_T1_13_16_25_0223.JPG		15/07/2016	13:16:23	50.320880	-4.745703	
Camera	S6	S6_T1_017	20160715_StABay_S6_T1_13_17_24_0224.JPG		15/07/2016	13:17:22	50.320882	-4.745583	
Camera	S6	S6_T1_018	20160715_StABay_S6_T1_13_18_25_0225.JPG		15/07/2016	13:18:24	50.320888	-4.745418	
Camera	S6	S6_T1_019			15/07/2016	13:19:23	50.320907	-4.745278	

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Cornwall IFCA							Camera Positioning Summary
Area		St.Austell Bay	Project name		20160715_CIFCA_StaBay_DDV		
Vessel		Tiger Lily	Sampling position		Starboard davit		
Projection		WGS84					
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)
Camera	S6	S6_T1_020		15/07/2016	13:20:23	50.320953	-4.745130
Camera	S6	S6_T1_EOL		15/07/2016	13:20:33	50.320960	-4.745103

Annex 7 – Still image locations and metadata from the drop down video survey in Gerrans Bay

Cornwall IFCA							Camera Positioning Summary			
Area			Gerrans Bay	Project name		20160511_CIFCA_Gerrans_DDV				
Vessel			Tiger Lily	Sampling position		Starboard davit				
Projection			WGS84							
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	TOW 7	T7_SOL		11/05/2016	08:00:32	50.197353	4.952683			
Camera	TOW 7	T7_001	20160511_Gerrans_DDV_T7_08_01_00_0009.JPG	11/05/2016	08:01:05	50.197313	4.952650			
Camera	TOW 7	T7_002	20160511_Gerrans_DDV_T7_08_02_09_0010.JPG	11/05/2016	08:02:08	50.197233	4.952620			
Camera	TOW 7	T7_003	20160511_Gerrans_DDV_T7_08_03_09_0011.JPG	11/05/2016	08:03:09	50.197111	4.952540			
Camera	TOW 7	T7_004	20160511_Gerrans_DDV_T7_08_04_07_0012.JPG	11/05/2016	08:04:06	50.196988	4.952480			
Camera	TOW 7	T7_005	20160511_Gerrans_DDV_T7_08_05_08_0013.JPG	11/05/2016	08:05:07	50.196865	4.952407			
Camera	TOW 7	T7_006	20160511_Gerrans_DDV_T7_08_06_08_0014.JPG	11/05/2016	08:06:07	50.196737	4.952313			
Camera	TOW 7	T7_007	20160511_Gerrans_DDV_T7_08_07_10_0015.JPG	11/05/2016	08:07:09	50.196622	4.952204			
Camera	TOW 7	T7_008	20160511_Gerrans_DDV_T7_08_07_48_0016.JPG	11/05/2016	08:07:47	50.196545	4.952159			
Camera	TOW 7	T7_009	20160511_Gerrans_DDV_T7_08_08_15_0017.JPG	11/05/2016	08:08:14	50.196495	4.952123			
Camera	TOW 7	T7_010	20160511_Gerrans_DDV_T7_08_09_09_0018.JPG	11/05/2016	08:09:08	50.196400	4.952043			
Camera	TOW 7	T7_011	20160511_Gerrans_DDV_T7_08_10_09_0019.JPG	11/05/2016	08:10:08	50.196261	4.951937			
Camera	TOW 7	T7_012	20160511_Gerrans_DDV_T7_08_11_09_0020.JPG	11/05/2016	08:11:08	50.196118	4.951892			
Camera	TOW 7	T7_013	20160511_Gerrans_DDV_T7_08_12_09_0021.JPG	11/05/2016	08:12:08	50.196000	4.951865			
Camera	TOW 7	T7_EOL		11/05/2016	08:12:20	50.195983	4.951850			
Camera	TOW 7b	T7b_SOL		11/05/2016	08:27:35	50.199154	4.953449			
Camera	TOW 7b	T7b_001	20160511_Gerrans_DDV_T7b_08_28_08_0023.JPG	11/05/2016	08:28:01	50.199110	4.953440			
Camera	TOW 7b	T7b_002	20160511_Gerrans_DDV_T7b_08_29_11_0024.JPG	11/05/2016	08:29:09	50.198998	4.953428			
Camera	TOW 7b	T7b_003	20160511_Gerrans_DDV_T7b_08_30_26_0025.JPG	11/05/2016	08:30:24	50.198839	4.953331			
Camera	TOW 7b	T7b_004	20160511_Gerrans_DDV_T7b_08_31_26_0026.JPG	11/05/2016	08:31:25	50.198707	4.953325			
Camera	TOW 7b	T7b_005	20160511_Gerrans_DDV_T7b_08_32_25_0027.JPG	11/05/2016	08:32:24	50.198603	4.953273			
Camera	TOW 7b	T7b_006	20160511_Gerrans_DDV_T7b_08_33_25_0028.JPG	11/05/2016	08:33:25	50.198436	4.953191			
Camera	TOW 7b	T7b_007	20160511_Gerrans_DDV_T7b_08_34_18_0029.JPG	11/05/2016	08:34:18	50.198358	4.953180			

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Cornwall IFCA					Camera Positioning Summary				
Area		Gerrans Bay		Project name		20160511_CIFCA_Gerrans_DDV			
Vessel		Tiger Lily		Sampling position		Starboard davit			
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	TOW 7b	T7b_009	20160511_Gerrans_DDV_T7b_08_35_27_0030.JPG		11/05/2016	08:35:26	50.198250	4.953090	
Camera	TOW 7b	T7b_010	20160511_Gerrans_DDV_T7b_08_36_27_0031.JPG		11/05/2016	08:36:28	50.198112	4.953030	
Camera	TOW 7b	T7b_011	20160511_Gerrans_DDV_T7b_08_37_25_0032.JPG		11/05/2016	08:37:24	50.198025	4.952992	
Camera	TOW 7b	T7b_012	20160511_Gerrans_DDV_T7b_08_38_18_0033.JPG		11/05/2016	08:38:17	50.197932	4.952897	
Camera	TOW 7b	T7b_013	20160511_Gerrans_DDV_T7b_08_39_24_0034.JPG		11/05/2016	08:39:23	50.197790	4.952850	
Camera	TOW 7b	T7b_014	20160511_Gerrans_DDV_T7b_08_40_25_0035.JPG		11/05/2016	08:40:24	50.197708	4.952805	
Camera	TOW 7b	T7b_015	20160511_Gerrans_DDV_T7b_08_41_15_0036.JPG		11/05/2016	08:41:14	50.197619	4.952704	
Camera	TOW 7b	T7b_016	20160511_Gerrans_DDV_T7b_08_41_27_0037.JPG		11/05/2016	08:41:25	50.197592	4.952682	
Camera	TOW 7b	T7b_017	20160511_Gerrans_DDV_T7b_08_42_28_0038.JPG		11/05/2016	08:42:27	50.197485	4.952617	
Camera	TOW 7b	T7b_018	20160511_Gerrans_DDV_T7b_08_43_24_0039.JPG		11/05/2016	08:43:23	50.197412	4.952533	
Camera	TOW 7b	T7b_EOL			11/05/2016	08:43:50	50.197360	4.952475	
Camera	TOW 2	T2_SOL			11/05/2016	09:00:26	50.201185	4.939427	
Camera	TOW 2	T2_001	20160511_Gerrans_DDV_T2_09_01_53_0040.JPG		11/05/2016	09:01:52	50.201017	4.939498	
Camera	TOW 2	T2_002	20160511_Gerrans_DDV_T2_09_02_35_0041.JPG		11/05/2016	09:02:34	50.200943	4.939500	
Camera	TOW 2	T2_003	20160511_Gerrans_DDV_T2_09_02_51_0042.JPG		11/05/2016	09:02:50	50.200913	4.939492	
Camera	TOW 2	T2_004	20160511_Gerrans_DDV_T2_09_03_52_0043.JPG		11/05/2016	09:03:51	50.200800	4.939428	
Camera	TOW 2	T2_005	20160511_Gerrans_DDV_T2_09_04_52_0044.JPG		11/05/2016	09:04:51	50.200693	4.939363	
Camera	TOW 2	T2_006	20160511_Gerrans_DDV_T2_09_05_51_0045.JPG		11/05/2016	09:05:50	50.200575	4.939372	
Camera	TOW 2	T2_007	20160511_Gerrans_DDV_T2_09_06_53_0046.JPG		11/05/2016	09:06:52	50.200485	4.939355	
Camera	TOW 2	T2_008	20160511_Gerrans_DDV_T2_09_07_53_0047.JPG		11/05/2016	09:07:52	50.200383	4.939288	
Camera	TOW 2	T2_009	20160511_Gerrans_DDV_T2_09_08_52_0048.JPG		11/05/2016	09:08:51	50.200278	4.939300	
Camera	TOW 2	T2_010	20160511_Gerrans_DDV_T2_09_09_52_0049.JPG		11/05/2016	09:09:51	50.200192	4.939315	
Camera	TOW 2	T2_011	20160511_Gerrans_DDV_T2_09_10_53_0050.JPG		11/05/2016	09:10:52	50.200103	4.939263	
Camera	TOW 2	T2_012	20160511_Gerrans_DDV_T2_09_11_55_0051.JPG		11/05/2016	09:11:54	50.200023	4.939220	
Camera	TOW 2	T2_013	20160511_Gerrans_DDV_T2_09_12_51_0052.JPG		11/05/2016	09:12:50	50.199942	4.939165	

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Cornwall IFCA					Camera Positioning Summary				
Area		Gerrans Bay		Project name		20160511_CIFCA_Gerrans_DDV			
Vessel		Tiger Lily		Sampling position		Starboard davit			
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	TOW 2	T2_014	20160511_Gerrans_DDV_T2_09_13_53_0053.JPG		11/05/2016	09:13:52	50.199832	4.939103	
Camera	TOW 2	T2_EOL			11/05/2016	09:14:08	50.199812	4.939083	
Camera	TOW 2b	T2b_SOL			11/05/2016	09:20:44	50.199200	4.938145	
Camera	TOW 2b	T2b_001	20160511_Gerrans_DDV_T2b_09_21_26_0054.JPG		11/05/2016	09:21:29	50.199118	4.938112	
Camera	TOW 2b	T2b_002	20160511_Gerrans_DDV_T2b_09_22_36_0056.JPG		11/05/2016	09:22:38	50.199008	4.938052	
Camera	TOW 2b	T2b_003	20160511_Gerrans_DDV_T2b_09_23_46_0058.JPG		11/05/2016	09:23:45	50.198907	4.937975	
Camera	TOW 2b	T2b_004	20160511_Gerrans_DDV_T2b_09_24_43_0059.JPG		11/05/2016	09:24:42	50.198830	4.937928	
Camera	TOW 2b	T2b_005	20160511_Gerrans_DDV_T2b_09_25_43_0060.JPG		11/05/2016	09:25:42	50.198757	4.937907	
Camera	TOW 2b	T2b_006	20160511_Gerrans_DDV_T2b_09_26_43_0061.JPG		11/05/2016	09:26:42	50.198663	4.937882	
Camera	TOW 2b	T2b_007	20160511_Gerrans_DDV_T2b_09_27_43_0062.JPG		11/05/2016	09:27:42	50.198568	4.937832	
Camera	TOW 2b	T2b_008	20160511_Gerrans_DDV_T2b_09_28_43_0063.JPG		11/05/2016	09:28:42	50.198483	4.937775	
Camera	TOW 2b	T2b_009	20160511_Gerrans_DDV_T2b_09_29_43_0064.JPG		11/05/2016	09:29:42	50.198397	4.937743	
Camera	TOW 2b	T2b_010	20160511_Gerrans_DDV_T2b_09_30_42_0065.JPG		11/05/2016	09:30:41	50.198317	4.937720	
Camera	TOW 2b	T2b_011	20160511_Gerrans_DDV_T2b_09_31_45_0067.JPG		11/05/2016	09:31:44	50.198217	4.937688	
Camera	TOW 2b	T2b_012	20160511_Gerrans_DDV_T2b_09_32_43_0068.JPG		11/05/2016	09:32:42	50.198153	4.937647	
Camera	TOW 2b	T2b_EOL			11/05/2016	09:32:53	50.198135	4.937635	
Camera	TOW 6	T6_SOL			11/05/2016	09:45:07	50.194973	4.944463	
Camera	TOW 6	T6_001	20160511_Gerrans_T6_09_45_39_0069.JPG		11/05/2016	09:45:42	50.194935	4.944447	
Camera	TOW 6	T6_002	20160511_Gerrans_T6_09_46_50_0070.JPG		11/05/2016	09:46:50	50.194873	4.944400	
Camera	TOW 6	T6_003	20160511_Gerrans_T6_09_47_52_0071.JPG		11/05/2016	09:47:52	50.194828	4.944348	
Camera	TOW 6	T6_004	20160511_Gerrans_T6_09_48_52_0072.JPG		11/05/2016	09:48:53	50.194757	4.944338	
Camera	TOW 6	T6_005	20160511_Gerrans_T6_09_49_51_0073.JPG		11/05/2016	09:49:51	50.194695	4.944357	
Camera	TOW 6	T6_006	20160511_Gerrans_T6_09_50_53_0074.JPG		11/05/2016	09:50:52	50.194657	4.944327	
Camera	TOW 6	T6_007	20160511_Gerrans_T6_09_51_53_0075.JPG		11/05/2016	09:51:52	50.194598	4.944275	

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Cornwall IFCA					Camera Positioning Summary				
Area		Gerrans Bay		Project name		20160511_CIFCA_Gerrans_DDV			
Vessel		Tiger Lily		Sampling position		Starboard davit			
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	TOW 6	T6_008	20160511_Gerrans_T6_09_52_51_0076.JPG		11/05/2016	09:52:50	50.194542	4.944233	
Camera	TOW 6	T6_009	20160511_Gerrans_T6_09_53_53_0077.JPG		11/05/2016	09:53:51	50.194488	4.944200	
Camera	TOW 6	T6_011	20160511_Gerrans_T6_09_54_53_0078.JPG		11/05/2016	09:54:52	50.194453	4.944148	
Camera	TOW 6	T6_012	20160511_Gerrans_T6_09_55_52_0079.JPG		11/05/2016	09:55:52	50.194387	4.944080	
Camera	TOW 6	T6_013	20160511_Gerrans_T6_09_56_52_0080.JPG		11/05/2016	09:56:51	50.194333	4.944027	
Camera	TOW 6	T6_014	20160511_Gerrans_T6_09_57_49_0081.JPG		11/05/2016	09:57:49	50.194290	4.943983	
Camera	TOW 6	T6_015	20160511_Gerrans_T6_09_58_56_0082.JPG		11/05/2016	09:58:55	50.194227	4.943882	
Camera	TOW 6	T6_016	20160511_Gerrans_T6_09_59_54_0083.JPG		11/05/2016	09:59:53	50.194182	4.943822	
Camera	TOW 6	T6_017	20160511_Gerrans_T6_10_00_53_0084.JPG		11/05/2016	10:00:52	50.194122	4.943768	
Camera	TOW 6	T6_EOL			11/05/2016	10:01:27	50.194080	4.943725	
Camera	TOW 5a	T5a_SOL			11/05/2016	10:14:56	50.189675	4.961947	
Camera	TOW 5a	T5a_001	20160511_Gerrans_DDV_T5a_10_15_31_0086.JPG		11/05/2016	10:15:31	50.189628	4.961987	
Camera	TOW 5a	T5a_002	20160511_Gerrans_DDV_T5a_10_16_34_0087.JPG		11/05/2016	10:16:33	50.189538	4.962032	
Camera	TOW 5a	T5a_003	20160511_Gerrans_DDV_T5a_10_17_33_0088.JPG		11/05/2016	10:17:32	50.189438	4.962065	
Camera	TOW 5a	T5a_004	20160511_Gerrans_DDV_T5a_10_18_33_0089.JPG		11/05/2016	10:18:32	50.189342	4.962088	
Camera	TOW 5a	T5a_005	20160511_Gerrans_DDV_T5a_10_19_31_0090.JPG		11/05/2016	10:19:30	50.189253	4.962080	
Camera	TOW 5a	T5a_006	20160511_Gerrans_DDV_T5a_10_20_31_0091.JPG		11/05/2016	10:20:31	50.189142	4.962048	
Camera	TOW 5a	T5a_007	20160511_Gerrans_DDV_T5a_10_21_31_0092.JPG		11/05/2016	10:21:30	50.189053	4.962050	
Camera	TOW 5a	T5a_008	20160511_Gerrans_DDV_T5a_10_22_31_0093.JPG		11/05/2016	10:22:30	50.188968	4.962068	
Camera	TOW 5a	T5a_009	20160511_Gerrans_DDV_T5a_10_23_30_0094.JPG		11/05/2016	10:23:29	50.188877	4.962060	
Camera	TOW 5a	T5a_EOL			11/05/2016	10:23:37	50.188865	4.962058	
Camera	TOW 5b	T5b_SOL			11/05/2016	10:29:53	50.188878	4.957917	
Camera	TOW 5b	T5b_001	20160511_Gerrans_DDV_T5b_10_30_26_0096.JPG		11/05/2016	10:30:25	50.188820	4.957900	
Camera	TOW 5b	T5b_002	20160511_Gerrans_DDV_T5b_10_31_33_0097.JPG		11/05/2016	10:31:32	50.188758	4.957855	

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Cornwall IFCA					Camera Positioning Summary			
Area		Gerrans Bay		Project name		20160511_CIFCA_Gerrans_DDV		
Vessel		Tiger Lily		Sampling position		Starboard davit		
Projection		WGS84						
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	TOW 5b	T5b_003	20160511_Gerrans_DDV_T5b_10_32_34_0098.JPG	11/05/2016	10:32:33	50.188700	4.957828	
Camera	TOW 5b	T5b_004	20160511_Gerrans_DDV_T5b_10_33_36_0099.JPG	11/05/2016	10:33:35	50.188642	4.957833	
Camera	TOW 5b	T5b_005	20160511_Gerrans_DDV_T5b_10_34_33_0100.JPG	11/05/2016	10:34:32	50.188613	4.957813	
Camera	TOW 5b	T5b_006	20160511_Gerrans_DDV_T5b_10_35_33_0101.JPG	11/05/2016	10:35:33	50.188528	4.957823	
Camera	TOW 5b	T5b_007	20160511_Gerrans_DDV_T5b_10_36_34_0102.JPG	11/05/2016	10:36:34	50.188452	4.957828	
Camera	TOW 5b	T5b_008	20160511_Gerrans_DDV_T5b_10_37_34_0103.JPG	11/05/2016	10:37:33	50.188395	4.957802	
Camera	TOW 5b	T5b_009	20160511_Gerrans_DDV_T5b_10_38_32_0104.JPG	11/05/2016	10:38:31	50.188307	4.957762	
Camera	TOW 5b	T5b_010	20160511_Gerrans_DDV_T5b_10_39_34_0105.JPG	11/05/2016	10:39:33	50.188215	4.957787	
Camera	TOW 5b	T5b_011	20160511_Gerrans_DDV_T5b_10_40_33_0106.JPG	11/05/2016	10:40:32	50.188150	4.957787	
Camera	TOW 5b	T5b_012	20160511_Gerrans_DDV_T5b_10_41_33_0107.JPG	11/05/2016	10:41:32	50.188088	4.957747	
Camera	TOW 5b	T5b_013	20160511_Gerrans_DDV_T5b_10_42_35_0108.JPG	11/05/2016	10:42:33	50.188050	4.957708	
Camera	TOW 5b	T5b_014	20160511_Gerrans_DDV_T5b_10_43_34_0111.JPG	11/05/2016	10:43:33	50.187982	4.957685	
Camera	TOW 5b	T5b_015	20160511_Gerrans_DDV_T5b_10_44_33_0112.JPG	11/05/2016	10:44:31	50.187876	4.957719	
Camera	TOW 5b	T5b_016	20160511_Gerrans_DDV_T5b_10_45_34_0113.JPG	11/05/2016	10:45:33	50.187780	4.957737	
Camera	TOW 5b	T5b_017	20160511_Gerrans_DDV_T5b_10_46_56_0119.JPG	11/05/2016	10:46:58	50.187687	4.957730	
Camera	TOW 5b	T5b_018	20160511_Gerrans_DDV_T5b_10_47_30_0120.JPG	11/05/2016	10:47:29	50.187652	4.957713	
Camera	TOW 5b	T5b_019	20160511_Gerrans_DDV_T5b_10_48_15_0121.JPG	11/05/2016	10:48:14	50.187608	4.957682	
Camera	TOW 5b	T5b_020	20160511_Gerrans_DDV_T5b_10_48_35_0122.JPG	11/05/2016	10:48:34	50.187593	4.957678	
Camera	TOW 5b	T5b_021	20160511_Gerrans_DDV_T5b_10_49_22_0123.JPG	11/05/2016	10:49:21	50.187572	4.957687	
Camera	TOW 5b	T5b_022	20160511_Gerrans_DDV_T5b_10_50_38_0126.JPG	11/05/2016	10:50:37	50.187505	4.957688	
Camera	TOW 5b	T5b_023	20160511_Gerrans_DDV_T5b_10_51_07_0127.JPG	11/05/2016	10:51:06	50.187483	4.957685	
Camera	TOW 5b	T5b_024	20160511_Gerrans_DDV_T5b_10_51_33_0128.JPG	11/05/2016	10:51:34	50.187462	4.957680	
Camera	TOW 5b	T5b_025	20160511_Gerrans_DDV_T5b_10_52_35_0129.JPG	11/05/2016	10:52:35	50.187400	4.957682	
Camera	TOW 5b	T5b_026	20160511_Gerrans_DDV_T5b_10_53_37_0130.JPG	11/05/2016	10:53:37	50.187302	4.957677	
Camera	TOW 5b	T5b_027	20160511_Gerrans_DDV_T5b_10_54_36_0131.JPG	11/05/2016	10:54:35	50.187185	4.957697	

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Cornwall IFCA					Camera Positioning Summary			
Area		Gerrans Bay		Project name		20160511_CIFCA_Gerrans_DDV		
Vessel		Tiger Lily		Sampling position		Starboard davit		
Projection		WGS84						
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	TOW 5b	T5b_EOL		11/05/2016	10:54:50	50.187157	4.957717	
Camera	TOW 3	T3_SOL		11/05/2016	11:07:27	50.187225	4.948117	
Camera	TOW 3	T3_001	20160511_Gerrans_DDV_T3_11_08_01_0133.JPG	11/05/2016	11:08:05	50.187160	4.948127	
Camera	TOW 3	T3_002	20160511_Gerrans_DDV_T3_11_08_55_0135.JPG	11/05/2016	11:08:55	50.187088	4.948147	
Camera	TOW 3	T3_003	20160511_Gerrans_DDV_T3_11_09_55_0136.JPG	11/05/2016	11:09:54	50.187027	4.948075	
Camera	TOW 3	T3_004	20160511_Gerrans_DDV_T3_11_10_55_0137.JPG	11/05/2016	11:10:54	50.186975	4.948058	
Camera	TOW 3	T3_005	20160511_Gerrans_DDV_T3_11_11_41_0138.JPG	11/05/2016	11:11:41	50.186897	4.948065	
Camera	TOW 3	T3_006	20160511_Gerrans_DDV_T3_11_12_44_0139.JPG	11/05/2016	11:12:44	50.186793	4.948055	
Camera	TOW 3	T3_007	20160511_Gerrans_DDV_T3_11_12_57_0140.JPG	11/05/2016	11:12:56	50.186768	4.948053	
Camera	TOW 3	T3_008	20160511_Gerrans_DDV_T3_11_13_55_0141.JPG	11/05/2016	11:13:54	50.186685	4.948053	
Camera	TOW 3	T3_009	20160511_Gerrans_DDV_T3_11_14_50_0143.JPG	11/05/2016	11:14:50	50.186597	4.948045	
Camera	TOW 3	T3_010	20160511_Gerrans_DDV_T3_11_15_20_0144.JPG	11/05/2016	11:15:20	50.186553	4.948040	
Camera	TOW 3	T3_011	20160511_Gerrans_DDV_T3_11_16_00_0145.JPG	11/05/2016	11:16:00	50.186497	4.948025	
Camera	TOW 3	T3_012	20160511_Gerrans_DDV_T3_11_16_58_0146.JPG	11/05/2016	11:16:58	50.186392	4.948010	
Camera	TOW 3	T3_013	20160511_Gerrans_DDV_T3_11_17_53_0149.JPG	11/05/2016	11:17:52	50.186303	4.948022	
Camera	TOW 3	T3_014	20160511_Gerrans_DDV_T3_11_18_09_0150.JPG	11/05/2016	11:18:09	50.186282	4.948027	
Camera	TOW 3	T3_015	20160511_Gerrans_DDV_T3_11_18_25_0151.JPG	11/05/2016	11:18:24	50.186253	4.948017	
Camera	TOW 3	T3_016	20160511_Gerrans_DDV_T3_11_18_54_0152.JPG	11/05/2016	11:18:53	50.186215	4.948015	
Camera	TOW 3	T3_017	20160511_Gerrans_DDV_T3_11_19_53_0153.JPG	11/05/2016	11:19:52	50.186123	4.948008	
Camera	TOW 3	T3_EOL		11/05/2016	11:20:02	50.186108	4.948010	
Camera	TOW 9	T9_SOL		11/05/2016	11:54:56	50.178323	4.950360	
Camera	TOW 9	T9_001	20160511_Gerrans_T9_11_56_01_0155.JPG	11/05/2016	11:56:01	50.178160	4.950310	
Camera	TOW 9	T9_002	20160511_Gerrans_T9_11_57_08_0156.JPG	11/05/2016	11:57:07	50.177960	4.950345	
Camera	TOW 9	T9_003	20160511_Gerrans_T9_11_58_07_0157.JPG	11/05/2016	11:58:07	50.177832	4.950325	

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Cornwall IFCA						Camera Positioning Summary			
Area		Gerrans Bay		Project name		20160511_CIFCA_Gerrans_DDV			
Vessel		Tiger Lily		Sampling position		Starboard davit			
Projection		WGS84							
Sample type	Station number	ID	Image_ID		Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	TOW 9	T9_004	20160511_Gerrans_T9_11_59_09_0158.JPG		11/05/2016	11:59:09	50.177731	4.950349	
Camera	TOW 9	T9_005	20160511_Gerrans_T9_12_00_08_0159.JPG		11/05/2016	12:00:07	50.177573	4.950287	
Camera	TOW 9	T9_006	20160511_Gerrans_T9_12_01_10_0160.JPG		11/05/2016	12:01:11	50.177393	4.950303	
Camera	TOW 9	T9_007	20160511_Gerrans_T9_12_02_07_0161.JPG		11/05/2016	12:02:07	50.177280	4.950253	
Camera	TOW 9	T9_008	20160511_Gerrans_T9_12_03_08_0162.JPG		11/05/2016	12:03:08	50.177176	4.950230	
Camera	TOW 9	T9_009	20160511_Gerrans_T9_12_04_07_0163.JPG		11/05/2016	12:04:07	50.177017	4.950167	
Camera	TOW 9	T9_010	20160511_Gerrans_T9_12_05_07_0164.JPG		11/05/2016	12:05:07	50.176932	4.950147	
Camera	TOW 9	T9_011	20160511_Gerrans_T9_12_06_07_0165.JPG		11/05/2016	12:06:06	50.176818	4.950060	
Camera	TOW 9	T9_012	20160511_Gerrans_T9_12_07_07_0166.JPG		11/05/2016	12:07:07	50.176711	4.950028	
Camera	TOW 9	T9_EOL			11/05/2016	12:07:23	50.176675	4.950017	

Annex 8 – Still image locations and metadata from the drop down video survey in Veryan Bay

Cornwall IFCA							Camera Positioning Summary			
Area			Veryan Bay	Project name		20160511_CIFCA_VeryanBay_DDV				
Vessel			Tiger Lily	Sampling position		Starboard davit				
Projection			WGS84							
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S12	S12_T1_SOL		12/07/2017	08:00:32	50.197353	4.952683			
Camera	S12	S12_T1_001	20160712_VeryanBay_S12_T1_08_54_36_0004.JPG	12/07/2017	08:01:05	50.197313	4.952650			
Camera	S12	S12_T1_002	20160712_VeryanBay_S12_T1_08_55_42_0005.JPG	12/07/2017	08:02:08	50.197233	4.952620			
Camera	S12	S12_T1_003	20160712_VeryanBay_S12_T1_08_56_43_0006.JPG	12/07/2017	08:03:09	50.197111	4.952540			
Camera	S12	S12_T1_004	20160712_VeryanBay_S12_T1_08_57_42_0007.JPG	12/07/2017	08:04:06	50.196988	4.952480			
Camera	S12	S12_T1_005	20160712_VeryanBay_S12_T1_08_58_42_0008.JPG	12/07/2017	08:05:07	50.196865	4.952407			
Camera	S12	S12_T1_006	20160712_VeryanBay_S12_T1_08_59_41_0009.JPG	12/07/2017	08:06:07	50.196737	4.952313			
Camera	S12	S12_T1_007	20160712_VeryanBay_S12_T1_09_00_42_0010.JPG	12/07/2017	08:07:09	50.196622	4.952204			
Camera	S12	S12_T1_008	20160712_VeryanBay_S12_T1_09_01_43_0011.JPG	12/07/2017	08:07:47	50.196545	4.952159			
Camera	S12	S12_T1_009	20160712_VeryanBay_S12_T1_09_02_42_0012.JPG	12/07/2017	08:08:14	50.196495	4.952123			
Camera	S12	S12_T1_010	20160712_VeryanBay_S12_T1_09_03_43_0013.JPG	12/07/2017	08:09:08	50.196400	4.952043			
Camera	S12	S12_T1_011	20160712_VeryanBay_S12_T1_09_04_41_0014.JPG	12/07/2017	08:10:08	50.196261	4.951937			
Camera	S12	S12_T1_012	20160712_VeryanBay_S12_T1_09_05_44_0015.JPG	12/07/2017	08:11:08	50.196118	4.951892			
Camera	S12	S12_T1_013	20160712_VeryanBay_S12_T1_09_06_42_0016.JPG	12/07/2017	08:12:08	50.196000	4.951865			
Camera	S12	S12_T1_014	20160712_VeryanBay_S12_T1_09_07_42_0017.JPG	12/07/2017	08:12:20	50.195983	4.951850			
Camera	S12	S12_T1_015	20160712_VeryanBay_S12_T1_09_08_41_0018.JPG	12/07/2017	08:27:35	50.199154	4.953449			
Camera	S12	S12_T1_016	20160712_VeryanBay_S12_T1_09_09_43_0019.JPG	12/07/2017	08:28:01	50.199110	4.953440			
Camera	S12	S12_T1_017	20160712_VeryanBay_S12_T1_09_10_42_0020.JPG	12/07/2017	08:29:09	50.198998	4.953428			
Camera	S12	S12_T1_018	20160712_VeryanBay_S12_T1_09_11_42_0021.JPG	12/07/2017	08:30:24	50.198839	4.953331			
Camera	S12	S12_T1_019	20160712_VeryanBay_S12_T1_09_12_43_0022.JPG	12/07/2017	08:31:25	50.198707	4.953325			
Camera	S12	S12_T1_020	20160712_VeryanBay_S12_T1_09_13_43_0023.JPG	12/07/2017	08:32:24	50.198603	4.953273			
Camera	S12	S12_T1_EOL		12/07/2017	08:33:25	50.198436	4.953191			

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Cornwall IFCA							Camera Positioning Summary	
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV			
Vessel		Tiger Lily		Sampling position	Starboard davit			
Projection		WGS84						
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S11	S11_T1_SOL		12/07/2017	08:34:18	50.198358	4.953180	
Camera	S11	S11_T1_001		12/07/2017	08:35:26	50.198250	4.953090	
Camera	S11	S11_T1_002	20160712_VeryanBay_S11_T1_09_25_52_0024.JPG	12/07/2017	08:36:28	50.198112	4.953030	
Camera	S11	S11_T1_003	20160712_VeryanBay_S11_T1_09_26_54_0025.JPG	12/07/2017	08:37:24	50.198025	4.952992	
Camera	S11	S11_T1_004	20160712_VeryanBay_S11_T1_09_27_53_0026.JPG	12/07/2017	08:38:17	50.197932	4.952897	
Camera	S11	S11_T1_005	20160712_VeryanBay_S11_T1_09_28_54_0027.JPG	12/07/2017	08:39:23	50.197790	4.952850	
Camera	S11	S11_T1_006	20160712_VeryanBay_S11_T1_09_29_52_0029.JPG	12/07/2017	08:40:24	50.197708	4.952805	
Camera	S11	S11_T1_007	20160712_VeryanBay_S11_T1_09_30_52_0030.JPG	12/07/2017	08:41:14	50.197619	4.952704	
Camera	S11	S11_T1_008	20160712_VeryanBay_S11_T1_09_31_56_0031.JPG	12/07/2017	08:41:25	50.197592	4.952682	
Camera	S11	S11_T1_009	20160712_VeryanBay_S11_T1_09_32_52_0032.JPG	12/07/2017	08:42:27	50.197485	4.952617	
Camera	S11	S11_T1_010	20160712_VeryanBay_S11_T1_09_33_52_0033.JPG	12/07/2017	08:43:23	50.197412	4.952533	
Camera	S11	S11_T1_011	20160712_VeryanBay_S11_T1_09_34_53_0034.JPG	12/07/2017	08:43:50	50.197360	4.952475	
Camera	S11	S11_T1_012	20160712_VeryanBay_S11_T1_09_35_52_0035.JPG	12/07/2017	09:00:26	50.201185	4.939427	
Camera	S11	S11_T1_013	20160712_VeryanBay_S11_T1_09_36_53_0036.JPG	12/07/2017	09:01:52	50.201017	4.939498	
Camera	S11	S11_T1_014	20160712_VeryanBay_S11_T1_09_37_52_0037.JPG	12/07/2017	09:02:34	50.200943	4.939500	
Camera	S11	S11_T1_015		12/07/2017	09:02:50	50.200913	4.939492	
Camera	S11	S11_T1_016	20160712_VeryanBay_S11_T1_09_39_53_0038.JPG	12/07/2017	09:03:51	50.200800	4.939428	
Camera	S11	S11_T1_017		12/07/2017	09:04:51	50.200693	4.939363	
Camera	S11	S11_T1_018		12/07/2017	09:05:50	50.200575	4.939372	
Camera	S11	S11_T1_019	20160712_VeryanBay_S11_T1_09_42_53_0039.JPG	12/07/2017	09:06:52	50.200485	4.939355	
Camera	S11	S11_T1_020	20160712_VeryanBay_S11_T1_09_44_13_0040.JPG	12/07/2017	09:07:52	50.200383	4.939288	
Camera	S11	S11_T1_021	20160712_VeryanBay_S11_T1_09_45_14_0041.JPG	12/07/2017	09:08:51	50.200278	4.939300	
Camera	S11	S11_T1_EOL		12/07/2017	09:09:51	50.200192	4.939315	
Camera	S10	S10_T1_SOL		12/07/2017	09:10:52	50.200103	4.939263	

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Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S10	S10_T1_001	20160712_VeryanBay_S10_T1_09_55_19_0042.JPG	12/07/2017	09:11:54	50.200023	4.939220			
Camera	S10	S10_T1_002	20160712_VeryanBay_S10_T1_09_56_21_0043.JPG	12/07/2017	09:12:50	50.199942	4.939165			
Camera	S10	S10_T1_003	20160712_VeryanBay_S10_T1_09_57_21_0044.JPG	12/07/2017	09:13:52	50.199832	4.939103			
Camera	S10	S10_T1_004	20160712_VeryanBay_S10_T1_09_58_21_0045.JPG	12/07/2017	09:14:08	50.199812	4.939083			
Camera	S10	S10_T1_005	20160712_VeryanBay_S10_T1_09_59_22_0046.JPG	12/07/2017	09:20:44	50.199200	4.938145			
Camera	S10	S10_T1_006	20160712_VeryanBay_S10_T1_10_00_21_0047.JPG	12/07/2017	09:21:29	50.199118	4.938112			
Camera	S10	S10_T1_007	20160712_VeryanBay_S10_T1_10_01_20_0048.JPG	12/07/2017	09:22:38	50.199008	4.938052			
Camera	S10	S10_T1_008	20160712_VeryanBay_S10_T1_10_02_23_0049.JPG	12/07/2017	09:23:45	50.198907	4.937975			
Camera	S10	S10_T1_009	20160712_VeryanBay_S10_T1_10_03_20_0050.JPG	12/07/2017	09:24:42	50.198830	4.937928			
Camera	S10	S10_T1_010	20160712_VeryanBay_S10_T1_10_04_20_0051.JPG	12/07/2017	09:25:42	50.198757	4.937907			
Camera	S10	S10_T1_011	20160712_VeryanBay_S10_T1_10_05_22_0052.JPG	12/07/2017	09:26:42	50.198663	4.937882			
Camera	S10	S10_T1_012	20160712_VeryanBay_S10_T1_10_06_20_0053.JPG	12/07/2017	09:27:42	50.198568	4.937832			
Camera	S10	S10_T1_013	20160712_VeryanBay_S10_T1_10_07_21_0054.JPG	12/07/2017	09:28:42	50.198483	4.937775			
Camera	S10	S10_T1_014	20160712_VeryanBay_S10_T1_10_08_20_0055.JPG	12/07/2017	09:29:42	50.198397	4.937743			
Camera	S10	S10_T1_015	20160712_VeryanBay_S10_T1_10_09_23_0056.JPG	12/07/2017	09:30:41	50.198317	4.937720			
Camera	S10	S10_T1_016	20160712_VeryanBay_S10_T1_10_10_20_0057.JPG	12/07/2017	09:31:44	50.198217	4.937688			
Camera	S10	S10_T1_017	20160712_VeryanBay_S10_T1_10_11_22_0058.JPG	12/07/2017	09:32:42	50.198153	4.937647			
Camera	S10	S10_T1_018	20160712_VeryanBay_S10_T1_10_12_25_0059.JPG	12/07/2017	09:32:53	50.198135	4.937635			
Camera	S10	S10_T1_019	20160712_VeryanBay_S10_T1_10_13_21_0060.JPG	12/07/2017	09:45:07	50.194973	4.944463			
Camera	S10	S10_T1_020	20160712_VeryanBay_S10_T1_10_14_20_0061.JPG	12/07/2017	09:45:42	50.194935	4.944447			
Camera	S10	S10_T1_021	20160712_VeryanBay_S10_T1_10_15_20_0062.JPG	12/07/2017	09:46:50	50.194873	4.944400			
Camera	S10	S10_T1_EOL		12/07/2017	09:47:52	50.194828	4.944348			
Camera	S9	S9_T1_SOL		12/07/2017	09:48:53	50.194757	4.944338			
Camera	S9	S9_T1_001	20160712_VeryanBay_S9_T1_10_24_15_0063.JPG	12/07/2017	09:49:51	50.194695	4.944357			

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Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S9	S9_T1_002	20160712_VeryanBay_S9_T1_10_25_29_0064.JPG	12/07/2017	09:50:52	50.194657	4.944327			
Camera	S9	S9_T1_003	20160712_VeryanBay_S9_T1_10_26_29_0065.JPG	12/07/2017	09:51:52	50.194598	4.944275			
Camera	S9	S9_T1_004	20160712_VeryanBay_S9_T1_10_27_29_0066.JPG	12/07/2017	09:52:50	50.194542	4.944233			
Camera	S9	S9_T1_005	20160712_VeryanBay_S9_T1_10_28_32_0067.JPG	12/07/2017	09:53:51	50.194488	4.944200			
Camera	S9	S9_T1_006	20160712_VeryanBay_S9_T1_10_29_28_0068.JPG	12/07/2017	09:54:52	50.194453	4.944148			
Camera	S9	S9_T1_007	20160712_VeryanBay_S9_T1_10_30_29_0069.JPG	12/07/2017	09:55:52	50.194387	4.944080			
Camera	S9	S9_T1_008	20160712_VeryanBay_S9_T1_10_31_28_0070.JPG	12/07/2017	09:56:51	50.194333	4.944027			
Camera	S9	S9_T1_009	20160712_VeryanBay_S9_T1_10_32_29_0071.JPG	12/07/2017	09:57:49	50.194290	4.943983			
Camera	S9	S9_T1_010	20160712_VeryanBay_S9_T1_10_33_30_0072.JPG	12/07/2017	09:58:55	50.194227	4.943882			
Camera	S9	S9_T1_011	20160712_VeryanBay_S9_T1_10_34_30_0073.JPG	12/07/2017	09:59:53	50.194182	4.943822			
Camera	S9	S9_T1_012	20160712_VeryanBay_S9_T1_10_35_30_0074.JPG	12/07/2017	10:00:52	50.194122	4.943768			
Camera	S9	S9_T1_013	20160712_VeryanBay_S9_T1_10_36_29_0075.JPG	12/07/2017	10:01:27	50.194080	4.943725			
Camera	S9	S9_T1_014	20160712_VeryanBay_S9_T1_10_37_30_0076.JPG	12/07/2017	10:14:56	50.189675	4.961947			
Camera	S9	S9_T1_015		12/07/2017	10:15:31	50.189628	4.961987			
Camera	S9	S9_T1_016	20160712_VeryanBay_S9_T1_10_39_29_0077.JPG	12/07/2017	10:16:33	50.189538	4.962032			
Camera	S9	S9_T1_017	20160712_VeryanBay_S9_T1_10_40_30_0078.JPG	12/07/2017	10:17:32	50.189438	4.962065			
Camera	S9	S9_T1_018	20160712_VeryanBay_S9_T1_10_41_29_0079.JPG	12/07/2017	10:18:32	50.189342	4.962088			
Camera	S9	S9_T1_019	20160712_VeryanBay_S9_T1_10_42_30_0080.JPG	12/07/2017	10:19:30	50.189253	4.962080			
Camera	S9	S9_T1_020	20160712_VeryanBay_S9_T1_10_43_30_0081.JPG	12/07/2017	10:20:31	50.189142	4.962048			
Camera	S9	S9_T1_021	20160712_VeryanBay_S9_T1_10_44_30_0082.JPG	12/07/2017	10:21:30	50.189053	4.962050			
Camera	S9	S9_T1_EOL		12/07/2017	10:22:30	50.188968	4.962068			
Camera	S8	S8_T1_SOL		12/07/2017	10:23:29	50.188877	4.962060			
Camera	S8	S8_T1_001	20160712_VeryanBay_S8_T1_10_53_43_0083.JPG	12/07/2017	10:23:37	50.188865	4.962058			
Camera	S8	S8_T1_002	20160712_VeryanBay_S8_T1_10_54_54_0084.JPG	12/07/2017	10:29:53	50.188878	4.957917			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary	
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV			
Vessel		Tiger Lily		Sampling position	Starboard davit			
Projection		WGS84						
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S8	S8_T1_003	20160712_VeryanBay_S8_T1_10_55_52_0085.JPG	12/07/2017	10:30:25	50.188820	4.957900	
Camera	S8	S8_T1_004	20160712_VeryanBay_S8_T1_10_56_52_0086.JPG	12/07/2017	10:31:32	50.188758	4.957855	
Camera	S8	S8_T1_005	20160712_VeryanBay_S8_T1_10_57_53_0088.JPG	12/07/2017	10:32:33	50.188700	4.957828	
Camera	S8	S8_T1_006	20160712_VeryanBay_S8_T1_10_58_51_0089.JPG	12/07/2017	10:33:35	50.188642	4.957833	
Camera	S8	S8_T1_007	20160712_VeryanBay_S8_T1_10_59_50_0090.JPG	12/07/2017	10:34:32	50.188613	4.957813	
Camera	S8	S8_T1_008	20160712_VeryanBay_S8_T1_11_00_51_0091.JPG	12/07/2017	10:35:33	50.188528	4.957823	
Camera	S8	S8_T1_009	20160712_VeryanBay_S8_T1_11_01_50_0092.JPG	12/07/2017	10:36:34	50.188452	4.957828	
Camera	S8	S8_T1_010	20160712_VeryanBay_S8_T1_11_02_51_0093.JPG	12/07/2017	10:37:33	50.188395	4.957802	
Camera	S8	S8_T1_011	20160712_VeryanBay_S8_T1_11_03_51_0094.JPG	12/07/2017	10:38:31	50.188307	4.957762	
Camera	S8	S8_T1_012	20160712_VeryanBay_S8_T1_11_04_50_0095.JPG	12/07/2017	10:39:33	50.188215	4.957787	
Camera	S8	S8_T1_013	20160712_VeryanBay_S8_T1_11_05_51_0096.JPG	12/07/2017	10:40:32	50.188150	4.957787	
Camera	S8	S8_T1_014	20160712_VeryanBay_S8_T1_11_06_50_0097.JPG	12/07/2017	10:41:32	50.188088	4.957747	
Camera	S8	S8_T1_015	20160712_VeryanBay_S8_T1_11_07_50_0098.JPG	12/07/2017	10:42:33	50.188050	4.957708	
Camera	S8	S8_T1_016	20160712_VeryanBay_S8_T1_11_08_51_0099.JPG	12/07/2017	10:43:33	50.187982	4.957685	
Camera	S8	S8_T1_017	20160712_VeryanBay_S8_T1_11_09_55_0100.JPG	12/07/2017	10:44:31	50.187876	4.957719	
Camera	S8	S8_T1_018	20160712_VeryanBay_S8_T1_11_10_51_0101.JPG	12/07/2017	10:45:33	50.187780	4.957737	
Camera	S8	S8_T1_019	20160712_VeryanBay_S8_T1_11_11_52_0102.JPG	12/07/2017	10:46:58	50.187687	4.957730	
Camera	S8	S8_T1_020	20160712_VeryanBay_S8_T1_11_12_51_0103.JPG	12/07/2017	10:47:29	50.187652	4.957713	
Camera	S8	S8_T1_EOL		12/07/2017	10:48:14	50.187608	4.957682	
Camera	S6	S6_T1_SOL		12/07/2017	10:48:34	50.187593	4.957678	
Camera	S6	S6_T1_001	20160712_VeryanBay_S6_T1_11_21_01_0104.JPG	12/07/2017	10:49:21	50.187572	4.957687	
Camera	S6	S6_T1_002	20160712_VeryanBay_S6_T1_11_21_59_0105.JPG	12/07/2017	10:50:37	50.187505	4.957688	
Camera	S6	S6_T1_003	20160712_VeryanBay_S6_T1_11_22_58_0106.JPG	12/07/2017	10:51:06	50.187483	4.957685	
Camera	S6	S6_T1_004	20160712_VeryanBay_S6_T1_11_23_59_0107.JPG	12/07/2017	10:51:34	50.187462	4.957680	

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S6	S6_T1_005	20160712_VeryanBay_S6_T1_11_24_58_0108.JPG	12/07/2017	10:52:35	50.187400	4.957682			
Camera	S6	S6_T1_006	20160712_VeryanBay_S6_T1_11_25_59_0109.JPG	12/07/2017	10:53:37	50.187302	4.957677			
Camera	S6	S6_T1_007	20160712_VeryanBay_S6_T1_11_26_59_0110.JPG	12/07/2017	10:54:35	50.187185	4.957697			
Camera	S6	S6_T1_008	20160712_VeryanBay_S6_T1_11_28_02_0111.JPG	12/07/2017	10:54:50	50.187157	4.957717			
Camera	S6	S6_T1_009	20160712_VeryanBay_S6_T1_11_28_59_0112.JPG	12/07/2017	11:07:27	50.187225	4.948117			
Camera	S6	S6_T1_010	20160712_VeryanBay_S6_T1_11_29_59_0113.JPG	12/07/2017	11:08:05	50.187160	4.948127			
Camera	S6	S6_T1_011	20160712_VeryanBay_S6_T1_11_31_04_0114.JPG	12/07/2017	11:08:55	50.187088	4.948147			
Camera	S6	S6_T1_012	20160712_VeryanBay_S6_T1_11_32_01_0115.JPG	12/07/2017	11:09:54	50.187027	4.948075			
Camera	S6	S6_T1_013	20160712_VeryanBay_S6_T1_11_33_00_0116.JPG	12/07/2017	11:10:54	50.186975	4.948058			
Camera	S6	S6_T1_014	20160712_VeryanBay_S6_T1_11_33_59_0117.JPG	12/07/2017	11:11:41	50.186897	4.948065			
Camera	S6	S6_T1_015	20160712_VeryanBay_S6_T1_11_34_59_0118.JPG	12/07/2017	11:12:44	50.186793	4.948055			
Camera	S6	S6_T1_016	20160712_VeryanBay_S6_T1_11_35_59_0119.JPG	12/07/2017	11:12:56	50.186768	4.948053			
Camera	S6	S6_T1_017	20160712_VeryanBay_S6_T1_11_36_58_0120.JPG	12/07/2017	11:13:54	50.186685	4.948053			
Camera	S6	S6_T1_018	20160712_VeryanBay_S6_T1_11_37_59_0121.JPG	12/07/2017	11:14:50	50.186597	4.948045			
Camera	S6	S6_T1_019	20160712_VeryanBay_S6_T1_11_38_59_0122.JPG	12/07/2017	11:15:20	50.186553	4.948040			
Camera	S6	S6_T1_020	20160712_VeryanBay_S6_T1_11_39_59_0123.JPG	12/07/2017	11:16:00	50.186497	4.948025			
Camera	S6	S6_T1_EOL		12/07/2017	11:16:58	50.186392	4.948010			
Camera	S7	S7_T1_SOL		12/07/2017	11:17:52	50.186303	4.948022			
Camera	S7	S7_T1_001	20160712_VeryanBay_S7_T1_11_49_49_0124.JPG	12/07/2017	11:18:09	50.186282	4.948027			
Camera	S7	S7_T1_002	20160712_VeryanBay_S7_T1_11_50_58_0125.JPG	12/07/2017	11:18:24	50.186253	4.948017			
Camera	S7	S7_T1_003	20160712_VeryanBay_S7_T1_11_51_59_0126.JPG	12/07/2017	11:18:53	50.186215	4.948015			
Camera	S7	S7_T1_004	20160712_VeryanBay_S7_T1_11_52_58_0127.JPG	12/07/2017	11:19:52	50.186123	4.948008			
Camera	S7	S7_T1_005	20160712_VeryanBay_S7_T1_11_54_00_0128.JPG	12/07/2017	11:20:02	50.186108	4.948010			
Camera	S7	S7_T1_006	20160712_VeryanBay_S7_T1_11_54_58_0129.JPG	12/07/2017	11:54:56	50.178323	4.950360			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S7	S7_T1_007	20160712_VeryanBay_S7_T1_11_56_00_0130.JPG	12/07/2017	11:56:01	50.178160	4.950310			
Camera	S7	S7_T1_008	20160712_VeryanBay_S7_T1_11_56_59_0131.JPG	12/07/2017	11:57:07	50.177960	4.950345			
Camera	S7	S7_T1_009	20160712_VeryanBay_S7_T1_11_57_59_0132.JPG	12/07/2017	11:58:07	50.177832	4.950325			
Camera	S7	S7_T1_010		12/07/2017	11:59:09	50.177731	4.950349			
Camera	S7	S7_T1_011	20160712_VeryanBay_S7_T1_11_59_59_0133.JPG	12/07/2017	12:00:07	50.177573	4.950287			
Camera	S7	S7_T1_012	20160712_VeryanBay_S7_T1_12_00_58_0134.JPG	12/07/2017	12:01:11	50.177393	4.950303			
Camera	S7	S7_T1_013	20160712_VeryanBay_S7_T1_12_01_59_0135.JPG	12/07/2017	12:02:07	50.177280	4.950253			
Camera	S7	S7_T1_014	20160712_VeryanBay_S7_T1_12_02_59_0136.JPG	12/07/2017	12:03:08	50.177176	4.950230			
Camera	S7	S7_T1_015	20160712_VeryanBay_S7_T1_12_03_58_0137.JPG	12/07/2017	12:04:07	50.177017	4.950167			
Camera	S7	S7_T1_016	20160712_VeryanBay_S7_T1_12_04_59_0138.JPG	12/07/2017	12:05:07	50.176932	4.950147			
Camera	S7	S7_T1_017	20160712_VeryanBay_S7_T1_12_05_59_0139.JPG	12/07/2017	12:06:06	50.176818	4.950060			
Camera	S7	S7_T1_018	20160712_VeryanBay_S7_T1_12_06_59_0140.JPG	12/07/2017	12:07:07	50.176711	4.950028			
Camera	S7	S7_T1_019	20160712_VeryanBay_S7_T1_12_07_58_0141.JPG	12/07/2017	12:07:23	50.176675	4.950017			
Camera	S7	S7_T1_020	20160712_VeryanBay_S7_T1_12_08_58_0142.JPG	12/07/2017	12:08:25	50.227755	-4.867587			
Camera	S7	S7_T1_EOL		12/07/2017	12:08:48	50.227748	-4.867528			
Camera	S1	S1_T1_SOL		12/07/2017	12:13:57	50.231518	-4.858635			
Camera	S1	S1_T1_001	20160712_VeryanBay_S1_T1_12_16_34_0143.JPG	12/07/2017	12:16:00	50.231463	-4.858354			
Camera	S1	S1_T1_002	20160712_VeryanBay_S1_T1_12_17_39_0144.JPG	12/07/2017	12:17:04	50.231420	-4.858173			
Camera	S1	S1_T1_003	20160712_VeryanBay_S1_T1_12_18_39_0146.JPG	12/07/2017	12:18:04	50.231398	-4.857975			
Camera	S1	S1_T1_004	20160712_VeryanBay_S1_T1_12_19_38_0147.JPG	12/07/2017	12:19:03	50.231388	-4.857806			
Camera	S1	S1_T1_005	20160712_VeryanBay_S1_T1_12_20_38_0148.JPG	12/07/2017	12:20:03	50.231320	-4.857617			
Camera	S1	S1_T1_006	20160712_VeryanBay_S1_T1_12_21_39_0149.JPG	12/07/2017	12:21:03	50.231278	-4.857393			
Camera	S1	S1_T1_007	20160712_VeryanBay_S1_T1_12_22_38_0150.JPG	12/07/2017	12:22:03	50.231273	-4.857227			
Camera	S1	S1_T1_008	20160712_VeryanBay_S1_T1_12_23_40_0151.JPG	12/07/2017	12:23:03	50.231247	-4.857061			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S1	S1_T1_009	20160712_VeryanBay_S1_T1_12_24_37_0152.JPG	12/07/2017	12:24:02	50.231168	-4.856863			
Camera	S1	S1_T1_010	20160712_VeryanBay_S1_T1_12_25_38_0153.JPG	12/07/2017	12:25:03	50.231106	-4.856688			
Camera	S1	S1_T1_011	20160712_VeryanBay_S1_T1_12_26_38_0154.JPG	12/07/2017	12:26:03	50.231060	-4.856510			
Camera	S1	S1_T1_012	20160712_VeryanBay_S1_T1_12_27_41_0155.JPG	12/07/2017	12:27:02	50.231024	-4.856313			
Camera	S1	S1_T1_013	20160712_VeryanBay_S1_T1_12_28_37_0156.JPG	12/07/2017	12:28:02	50.230976	-4.856127			
Camera	S1	S1_T1_014	20160712_VeryanBay_S1_T1_12_29_38_0157.JPG	12/07/2017	12:29:03	50.230910	-4.855930			
Camera	S1	S1_T1_015	20160712_VeryanBay_S1_T1_12_30_40_0158.JPG	12/07/2017	12:30:02	50.230874	-4.855705			
Camera	S1	S1_T1_016	20160712_VeryanBay_S1_T1_12_31_41_0159.JPG	12/07/2017	12:31:03	50.230837	-4.855537			
Camera	S1	S1_T1_017	20160712_VeryanBay_S1_T1_12_32_37_0160.JPG	12/07/2017	12:32:03	50.230781	-4.855348			
Camera	S1	S1_T1_018	20160712_VeryanBay_S1_T1_12_33_41_0161.JPG	12/07/2017	12:33:03	50.230728	-4.855118			
Camera	S1	S1_T1_019	20160712_VeryanBay_S1_T1_12_34_39_0162.JPG	12/07/2017	12:34:02	50.230668	-4.854879			
Camera	S1	S1_T1_020	20160712_VeryanBay_S1_T1_12_35_38_0163.JPG	12/07/2017	12:35:04	50.230626	-4.854623			
Camera	S1	S1_T1_EOL		12/07/2017	12:35:14	50.230615	-4.854578			
Camera	S2	S2_T1_SOL		12/07/2017	12:41:37	50.230490	-4.847694			
Camera	S2	S2_T1_001	20160712_VeryanBay_S2_T1_12_43_30_0164.JPG	12/07/2017	12:42:36	50.230465	-4.847494			
Camera	S2	S2_T1_002	20160712_VeryanBay_S2_T1_12_44_15_0165.JPG	12/07/2017	12:43:42	50.230375	-4.847275			
Camera	S2	S2_T1_003	20160712_VeryanBay_S2_T1_12_45_15_0166.JPG	12/07/2017	12:44:40	50.230302	-4.847080			
Camera	S2	S2_T1_004	20160712_VeryanBay_S2_T1_12_46_15_0167.JPG	12/07/2017	12:45:41	50.230217	-4.846886			
Camera	S2	S2_T1_005	20160712_VeryanBay_S2_T1_12_47_16_0168.JPG	12/07/2017	12:46:42	50.230122	-4.846693			
Camera	S2	S2_T1_006	20160712_VeryanBay_S2_T1_12_48_16_0169.JPG	12/07/2017	12:47:42	50.230048	-4.846547			
Camera	S2	S2_T1_007	20160712_VeryanBay_S2_T1_12_49_15_0170.JPG	12/07/2017	12:48:41	50.230002	-4.846358			
Camera	S2	S2_T1_008	20160712_VeryanBay_S2_T1_12_50_15_0171.JPG	12/07/2017	12:49:41	50.229966	-4.846152			
Camera	S2	S2_T1_009	20160712_VeryanBay_S2_T1_12_51_15_0172.JPG	12/07/2017	12:50:41	50.229912	-4.845985			
Camera	S2	S2_T1_010	20160712_VeryanBay_S2_T1_12_52_16_0173.JPG	12/07/2017	12:51:42	50.229843	-4.845812			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S2	S2_T1_011	20160712_VeryanBay_S2_T1_12_53_15_0174.JPG	12/07/2017	12:52:40	50.229799	-4.845638			
Camera	S2	S2_T1_012	20160712_VeryanBay_S2_T1_12_54_15_0175.JPG	12/07/2017	12:53:42	50.229724	-4.845455			
Camera	S2	S2_T1_013	20160712_VeryanBay_S2_T1_12_55_14_0176.JPG	12/07/2017	12:54:40	50.229680	-4.845281			
Camera	S2	S2_T1_014	20160712_VeryanBay_S2_T1_12_56_14_0177.JPG	12/07/2017	12:55:41	50.229620	-4.845074			
Camera	S2	S2_T1_015	20160712_VeryanBay_S2_T1_12_57_23_0178.JPG	12/07/2017	12:56:50	50.229527	-4.844948			
Camera	S2	S2_T1_016	20160712_VeryanBay_S2_T1_12_58_15_0179.JPG	12/07/2017	12:57:41	50.229495	-4.844813			
Camera	S2	S2_T1_017	20160712_VeryanBay_S2_T1_12_59_21_0180.JPG	12/07/2017	12:58:48	50.229475	-4.844632			
Camera	S2	S2_T1_018	20160712_VeryanBay_S2_T1_13_00_15_0181.JPG	12/07/2017	12:59:42	50.229458	-4.844468			
Camera	S2	S2_T1_019	20160712_VeryanBay_S2_T1_13_01_15_0182.JPG	12/07/2017	13:00:41	50.229403	-4.844282			
Camera	S2	S2_T1_020	20160712_VeryanBay_S2_T1_13_02_15_0183.JPG	12/07/2017	13:01:41	50.229344	-4.844098			
Camera	S2	S2_T1_EOL	20160712_VeryanBay_S2_T1_13_03_15_0184.JPG	12/07/2017	13:02:41	50.229289	-4.843880			
Camera	S3	S3_T1_SOL		12/07/2017	13:08:45	50.227722	-4.835857			
Camera	S3	S3_T1_001	20160712_VeryanBay_S3_T1_13_11_47_0186.JPG	12/07/2017	13:11:10	50.227568	-4.835287			
Camera	S3	S3_T1_002	20160712_VeryanBay_S3_T1_13_12_53_0187.JPG	12/07/2017	13:12:17	50.227550	-4.835055			
Camera	S3	S3_T1_003	20160712_VeryanBay_S3_T1_13_13_59_0188.JPG	12/07/2017	13:13:22	50.227580	-4.834849			
Camera	S3	S3_T1_004	20160712_VeryanBay_S3_T1_13_14_59_0189.JPG	12/07/2017	13:14:22	50.227495	-4.834586			
Camera	S3	S3_T1_005	20160712_VeryanBay_S3_T1_13_15_58_0190.JPG	12/07/2017	13:15:22	50.227388	-4.834452			
Camera	S3	S3_T1_006	20160712_VeryanBay_S3_T1_13_16_58_0191.JPG	12/07/2017	13:16:22	50.227367	-4.834300			
Camera	S3	S3_T1_007	20160712_VeryanBay_S3_T1_13_17_59_0192.JPG	12/07/2017	13:17:22	50.227355	-4.834074			
Camera	S3	S3_T1_008	20160712_VeryanBay_S3_T1_13_18_58_0193.JPG	12/07/2017	13:18:22	50.227331	-4.833830			
Camera	S3	S3_T1_009	20160712_VeryanBay_S3_T1_13_19_59_0194.JPG	12/07/2017	13:19:22	50.227305	-4.833619			
Camera	S3	S3_T1_010	20160712_VeryanBay_S3_T1_13_20_57_0195.JPG	12/07/2017	13:20:22	50.227263	-4.833429			
Camera	S3	S3_T1_011	20160712_VeryanBay_S3_T1_13_22_00_0197.JPG	12/07/2017	13:21:22	50.227275	-4.833235			
Camera	S3	S3_T1_012	20160712_VeryanBay_S3_T1_13_23_01_0198.JPG	12/07/2017	13:22:25	50.227289	-4.833044			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S3	S3_T1_013	20160712_VeryanBay_S3_T1_13_23_57_0199.JPG	12/07/2017	13:23:22	50.227265	-4.832857			
Camera	S3	S3_T1_014	20160712_VeryanBay_S3_T1_13_24_58_0200.JPG	12/07/2017	13:24:23	50.227268	-4.832636			
Camera	S3	S3_T1_015	20160712_VeryanBay_S3_T1_13_25_58_0201.JPG	12/07/2017	13:25:23	50.227249	-4.832398			
Camera	S3	S3_T1_016	20160712_VeryanBay_S3_T1_13_26_59_0202.JPG	12/07/2017	13:26:22	50.227209	-4.832197			
Camera	S3	S3_T1_017	20160712_VeryanBay_S3_T1_13_27_58_0203.JPG	12/07/2017	13:27:21	50.227198	-4.832000			
Camera	S3	S3_T1_018	20160712_VeryanBay_S3_T1_13_28_58_0204.JPG	12/07/2017	13:28:22	50.227180	-4.831817			
Camera	S3	S3_T1_019	20160712_VeryanBay_S3_T1_13_29_57_0205.JPG	12/07/2017	13:29:21	50.227161	-4.831591			
Camera	S3	S3_T1_020	20160712_VeryanBay_S3_T1_13_30_57_0206.JPG	12/07/2017	13:30:22	50.227162	-4.831398			
Camera	S3	S3_T1_EOL		12/07/2017	13:30:39	50.227154	-4.831319			
Camera	S4	S4_T1_SOL		12/07/2017	13:36:06	50.225032	-4.826708			
Camera	S4	S4_T1_001	20160712_VeryanBay_S4_T1_13_37_15_0208.JPG	12/07/2017	13:36:35	50.225018	-4.826615			
Camera	S4	S4_T1_002	20160712_VeryanBay_S4_T1_13_38_43_0209.JPG	12/07/2017	13:38:08	50.224940	-4.826317			
Camera	S4	S4_T1_003	20160712_VeryanBay_S4_T1_13_39_44_0210.JPG	12/07/2017	13:39:08	50.224870	-4.826134			
Camera	S4	S4_T1_004	20160712_VeryanBay_S4_T1_13_40_43_0211.JPG	12/07/2017	13:40:07	50.224828	-4.825942			
Camera	S4	S4_T1_005	20160712_VeryanBay_S4_T1_13_41_44_0212.JPG	12/07/2017	13:41:08	50.224815	-4.825802			
Camera	S4	S4_T1_006	20160712_VeryanBay_S4_T1_13_42_44_0214.JPG	12/07/2017	13:42:08	50.224771	-4.825600			
Camera	S4	S4_T1_007	20160712_VeryanBay_S4_T1_13_43_44_0215.JPG	12/07/2017	13:43:07	50.224723	-4.825382			
Camera	S4	S4_T1_008	20160712_VeryanBay_S4_T1_13_44_44_0216.JPG	12/07/2017	13:44:08	50.224705	-4.825228			
Camera	S4	S4_T1_009	20160712_VeryanBay_S4_T1_13_45_43_0217.JPG	12/07/2017	13:45:07	50.224670	-4.825060			
Camera	S4	S4_T1_010	20160712_VeryanBay_S4_T1_13_46_43_0218.JPG	12/07/2017	13:46:06	50.224643	-4.824903			
Camera	S4	S4_T1_011	20160712_VeryanBay_S4_T1_13_47_44_0219.JPG	12/07/2017	13:47:08	50.224583	-4.824720			
Camera	S4	S4_T1_012	20160712_VeryanBay_S4_T1_13_48_44_0220.JPG	12/07/2017	13:48:08	50.224557	-4.824507			
Camera	S4	S4_T1_013	20160712_VeryanBay_S4_T1_13_49_43_0221.JPG	12/07/2017	13:49:07	50.224542	-4.824360			
Camera	S4	S4_T1_014	20160712_VeryanBay_S4_T1_13_50_45_0222.JPG	12/07/2017	13:50:09	50.224563	-4.824247			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary	
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV			
Vessel		Tiger Lily		Sampling position	Starboard davit			
Projection		WGS84						
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	S4	S4_T1_015	20160712_VeryanBay_S4_T1_13_51_44_0223.JPG	12/07/2017	13:51:11	50.224543	-4.824078	
Camera	S4	S4_T1_016	20160712_VeryanBay_S4_T1_13_52_44_0224.JPG	12/07/2017	13:52:08	50.224503	-4.823957	
Camera	S4	S4_T1_017	20160712_VeryanBay_S4_T1_13_53_43_0225.JPG	12/07/2017	13:53:07	50.224482	-4.823823	
Camera	S4	S4_T1_018	20160712_VeryanBay_S4_T1_13_54_43_0226.JPG	12/07/2017	13:54:07	50.224423	-4.823642	
Camera	S4	S4_T1_019	20160712_VeryanBay_S4_T1_13_55_50_0229.JPG	12/07/2017	13:55:10	50.224365	-4.823452	
Camera	S4	S4_T1_020	20160712_VeryanBay_S4_T1_13_56_51_0230.JPG	12/07/2017	13:56:14	50.224394	-4.823255	
Camera	S4	S4_T1_EOL		12/07/2017	13:56:30	50.224381	-4.823197	
Camera	S5	S5_T1_SOL		12/07/2017	14:01:43	50.229222	-4.823345	
Camera	S5	S5_T1_001		12/07/2017	14:02:53	50.229138	-4.823152	
Camera	S5	S5_T1_002		12/07/2017	14:03:56	50.229107	-4.823067	
Camera	S5	S5_T1_003	20160712_VeryanBay_S5_T1_14_04_33_0231.JPG	12/07/2017	14:03:59	50.229107	-4.823063	
Camera	S5	S5_T1_004	20160712_VeryanBay_S5_T1_14_05_32_0232.JPG	12/07/2017	14:04:56	50.229112	-4.822955	
Camera	S5	S5_T1_005	20160712_VeryanBay_S5_T1_14_06_32_0233.JPG	12/07/2017	14:05:56	50.229097	-4.822848	
Camera	S5	S5_T1_006	20160712_VeryanBay_S5_T1_14_07_34_0234.JPG	12/07/2017	14:06:56	50.229065	-4.822735	
Camera	S5	S5_T1_007	20160712_VeryanBay_S5_T1_14_08_32_0235.JPG	12/07/2017	14:07:57	50.229040	-4.822645	
Camera	S5	S5_T1_008	20160712_VeryanBay_S5_T1_14_09_33_0236.JPG	12/07/2017	14:08:57	50.229040	-4.822523	
Camera	S5	S5_T1_009	20160712_VeryanBay_S5_T1_14_10_33_0237.JPG	12/07/2017	14:09:57	50.229022	-4.822368	
Camera	S5	S5_T1_010	20160712_VeryanBay_S5_T1_14_11_33_0238.JPG	12/07/2017	14:10:56	50.229030	-4.822260	
Camera	S5	S5_T1_011		12/07/2017	14:12:01	50.228977	-4.822128	
Camera	S5	S5_T1_012	20160712_VeryanBay_S5_T1_14_13_32_0239.JPG	12/07/2017	14:12:59	50.228987	-4.821963	
Camera	S5	S5_T1_013	20160712_VeryanBay_S5_T1_14_14_32_0241.JPG	12/07/2017	14:13:56	50.228962	-4.821832	
Camera	S5	S5_T1_014		12/07/2017	14:14:14	50.228955	-4.821813	
Camera	S5	S5_T1_EOL		12/07/2017	14:15:12	50.231574	-4.863877	
Camera	SA	SA_SOL		12/07/2017	14:26:26	50.231688	-4.864253	

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	SA	SA_001	20160712_VeryanBay_S-A_T1_14_28_37_0242.JPG	12/07/2017	14:27:03	50.231677	-4.864192			
Camera	SA	SA_002	20160712_VeryanBay_S-A_T1_14_29_32_0243.JPG	12/07/2017	14:28:02	50.231630	-4.864087			
Camera	SA	SA_003	20160712_VeryanBay_S-A_T1_14_29_51_0244.JPG	12/07/2017	14:28:56	50.231613	-4.863975			
Camera	SA	SA_004	20160712_VeryanBay_S-A_T1_14_30_44_0245.JPG	12/07/2017	14:29:15	50.231600	-4.863930			
Camera	SA	SA_005	20160712_VeryanBay_S-A_T1_14_31_43_0246.JPG	12/07/2017	14:30:07	50.231559	-4.863775			
Camera	SA	SA_006	20160712_VeryanBay_S-A_T1_14_32_15_0247.JPG	12/07/2017	14:31:07	50.231485	-4.863635			
Camera	SA	SA_007	20160712_VeryanBay_S-A_T1_14_32_32_0248.JPG	12/07/2017	14:31:40	50.231447	-4.863568			
Camera	SA	SA_008	20160712_VeryanBay_S-A_T1_14_32_34_0249.JPG	12/07/2017	14:31:57	50.231425	-4.863525			
Camera	SA	SA_009	20160712_VeryanBay_S-A_T1_14_32_44_0250.JPG	12/07/2017	14:32:08	50.231410	-4.863490			
Camera	SA	SA_010	20160712_VeryanBay_S-A_T1_14_33_33_0251.JPG	12/07/2017	14:32:57	50.231358	-4.863333			
Camera	SA	SA_011	20160712_VeryanBay_S-A_T1_14_34_41_0252.JPG	12/07/2017	14:34:06	50.231313	-4.863132			
Camera	SA	SA_012	20160712_VeryanBay_S-A_T1_14_35_43_0253.JPG	12/07/2017	14:35:07	50.231258	-4.862943			
Camera	SA	SA_013	20160712_VeryanBay_S-A_T1_14_36_42_0254.JPG	12/07/2017	14:36:07	50.231220	-4.862745			
Camera	SA	SA_014	20160712_VeryanBay_S-A_T1_14_37_44_0255.JPG	12/07/2017	14:37:08	50.231215	-4.862562			
Camera	SA	SA_015	20160712_VeryanBay_S-A_T1_14_38_44_0256.JPG	12/07/2017	14:38:08	50.231122	-4.862392			
Camera	SA	SA_EOL		12/07/2017	14:38:30	50.231098	-4.862338			
Camera	SB	SB_SOL		12/07/2017	14:48:56	50.211009	-4.870057			
Camera	SB	SB_001	20160712_VeryanBay_S-B_T1_14_51_09_0257.JPG	12/07/2017	14:50:34	50.210737	-4.869962			
Camera	SB	SB_002	20160712_VeryanBay_S-B_T1_14_52_17_0258.JPG	12/07/2017	14:51:39	50.210665	-4.869822			
Camera	SB	SB_003	20160712_VeryanBay_S-B_T1_14_53_17_0259.JPG	12/07/2017	14:52:40	50.210586	-4.869660			
Camera	SB	SB_004	20160712_VeryanBay_S-B_T1_14_54_16_0261.JPG	12/07/2017	14:53:40	50.210494	-4.869486			
Camera	SB	SB_005	20160712_VeryanBay_S-B_T1_14_55_15_0262.JPG	12/07/2017	14:54:39	50.210432	-4.869333			
Camera	SB	SB_EOL		12/07/2017	14:56:40	50.210486	-4.869523			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary			
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV					
Vessel		Tiger Lily		Sampling position	Starboard davit					
Projection		WGS84								
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments		
Camera	S5	S5_T1_SOL		12/07/2017	14:01:43	50.229222	-4.823345			
Camera	S5	S5_T1_001		12/07/2017	14:02:53	50.229138	-4.823152			
Camera	S5	S5_T1_002	20160712_VeryanBay_S5_T1_14_04_33_0231.JPG	12/07/2017	14:03:56	50.229107	-4.823067			
Camera	S5	S5_T1_003	20160712_VeryanBay_S5_T1_14_05_32_0232.JPG	12/07/2017	14:03:59	50.229107	-4.823063			
Camera	S5	S5_T1_004	20160712_VeryanBay_S5_T1_14_06_32_0233.JPG	12/07/2017	14:04:56	50.229112	-4.822955			
Camera	S5	S5_T1_006	20160712_VeryanBay_S5_T1_14_07_34_0234.JPG	12/07/2017	14:05:56	50.229097	-4.822848			
Camera	S5	S5_T1_007	20160712_VeryanBay_S5_T1_14_08_32_0235.JPG	12/07/2017	14:06:56	50.229065	-4.822735			
Camera	S5	S5_T1_008	20160712_VeryanBay_S5_T1_14_09_33_0236.JPG	12/07/2017	14:07:57	50.229040	-4.822645			
Camera	S5	S5_T1_009	20160712_VeryanBay_S5_T1_14_10_33_0237.JPG	12/07/2017	14:08:57	50.229040	-4.822523			
Camera	S5	S5_T1_010	20160712_VeryanBay_S5_T1_14_11_33_0238.JPG	12/07/2017	14:09:57	50.229022	-4.822368			
Camera	S5	S5_T1_011		12/07/2017	14:10:56	50.229030	-4.822260			
Camera	S5	S5_T1_012	20160712_VeryanBay_S5_T1_14_13_32_0239.JPG	12/07/2017	14:12:01	50.228977	-4.822128			
Camera	S5	S5_T1_013	20160712_VeryanBay_S5_T1_14_14_32_0241.JPG	12/07/2017	14:12:59	50.228987	-4.821963			
Camera	S5	S5_T1_014		12/07/2017	14:13:56	50.228962	-4.821832			
Camera	S5	S5_T1_EOL		12/07/2017	14:14:14	50.228955	-4.821813			
Camera	SA	SA_SOL		12/07/2017	12:23:03	50.231247	-4.857061			
Camera	SA	SA_001	20160712_VeryanBay_S-A_T1_14_28_37_0242.JPG	12/07/2017	12:24:02	50.231168	-4.856863			
Camera	SA	SA_002	20160712_VeryanBay_S-A_T1_14_29_32_0243.JPG	12/07/2017	12:25:03	50.231106	-4.856688			
Camera	SA	SA_003	20160712_VeryanBay_S-A_T1_14_29_51_0244.JPG	12/07/2017	12:26:03	50.231060	-4.856510			
Camera	SA	SA_004	20160712_VeryanBay_S-A_T1_14_30_44_0245.JPG	12/07/2017	12:27:02	50.231024	-4.856313			
Camera	SA	SA_005	20160712_VeryanBay_S-A_T1_14_31_43_0246.JPG	12/07/2017	12:28:02	50.230976	-4.856127			
Camera	SA	SA_006	20160712_VeryanBay_S-A_T1_14_32_15_0247.JPG	12/07/2017	12:29:03	50.230910	-4.855930			
Camera	SA	SA_007	20160712_VeryanBay_S-A_T1_14_32_32_0248.JPG	12/07/2017	12:30:02	50.230874	-4.855705			

2016_CIFCA_SSS/DDV_STA_VER_GER_Field Report

Cornwall IFCA							Camera Positioning Summary	
Area		Veryan Bay		Project name	20160511_CIFCA_VeryanBay_DDV			
Vessel		Tiger Lily		Sampling position	Starboard davit			
Projection		WGS84						
Sample type	Station number	ID	Image_ID	Date	Time	Latitude (decimal degrees)	Longitude (decimal degrees)	Comments
Camera	SA	SA_008	20160712_VeryanBay_S-A_T1_14_32_34_0249.JPG	12/07/2017	12:31:03	50.230837	-4.855537	
Camera	SA	SA_009	20160712_VeryanBay_S-A_T1_14_32_44_0250.JPG	12/07/2017	12:32:03	50.230781	-4.855348	
Camera	SA	SA_010	20160712_VeryanBay_S-A_T1_14_33_33_0251.JPG	12/07/2017	12:33:03	50.230728	-4.855118	
Camera	SA	SA_011	20160712_VeryanBay_S-A_T1_14_34_41_0252.JPG	12/07/2017	12:34:02	50.230668	-4.854879	
Camera	SA	SA_012	20160712_VeryanBay_S-A_T1_14_35_43_0253.JPG	12/07/2017	12:35:04	50.230626	-4.854623	
Camera	SA	SA_013	20160712_VeryanBay_S-A_T1_14_36_42_0254.JPG	12/07/2017	12:35:14	50.230615	-4.854578	
Camera	SA	SA_014	20160712_VeryanBay_S-A_T1_14_37_44_0255.JPG	12/07/2017	12:41:37	50.230490	-4.847694	
Camera	SA	SA_015	20160712_VeryanBay_S-A_T1_14_38_44_0256.JPG	12/07/2017	12:42:36	50.230465	-4.847494	
Camera	SA	SA_EOL		12/07/2017	12:43:42	50.230375	-4.847275	
Camera	SB	SB_SOL		12/07/2017	12:44:40	50.230302	-4.847080	
Camera	SB	SB_001	20160712_VeryanBay_S-B_T1_14_51_09_0257.JPG	12/07/2017	12:45:41	50.230217	-4.846886	
Camera	SB	SB_002	20160712_VeryanBay_S-B_T1_14_52_17_0258.JPG	12/07/2017	12:46:42	50.230122	-4.846693	
Camera	SB	SB_003	20160712_VeryanBay_S-B_T1_14_53_17_0259.JPG	12/07/2017	12:47:42	50.230048	-4.846547	
Camera	SB	SB_004	20160712_VeryanBay_S-B_T1_14_54_16_0261.JPG	12/07/2017	12:48:41	50.230002	-4.846358	
Camera	SB	SB_005	20160712_VeryanBay_S-B_T1_14_55_15_0262.JPG	12/07/2017	12:49:41	50.229966	-4.846152	
Camera	SB	SB_EOL		12/07/2017	12:50:41	50.229912	-4.845985	

[**Annex 9 – Biotope map with habitat classification for each individual site for St.Austell Bay**](#)

Separate document displaying Figures 1 to 13.

[**Annex 10 – Biotope map with habitat classification for each individual site for Gerrans Bay**](#)

Separate document displaying Figures 1 to 9.

[**Annex 11 – Biotope map with habitat classification for each individual site for Veryan Bay**](#)

Separate document displaying Figures 1 to 14.