



ANDERSON MARINE SURVEYS

Report To: Dawnfresh Farming Limited

Issued By: [REDACTED]

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Cumbrae video survey

Summary

1. Habitats and species were as expected for a moderately tidal location in the Firth of Clyde. Physical disturbance of the seabed through trawling was not observed, and anthropogenic debris was negligible.
2. No Priority Marine Features were observed.
3. No burrows characteristic of *Nephrops norvegicus* were observed. Small burrows were observed, which could not be conclusively identified, but are considered likely to be those of the thalassinid crustacea *Callianassa subterranea* and *Upogebia stellata*.

Introduction

Dawnfresh are considering development of a new cage site south-east of Cumbrae, Firth of Clyde (Figure 1). This report describes findings of a video transect survey carried out in September 2018; with reference to general seabed habitat and condition, visible biota, and the presence of any Priority Marine Features¹.

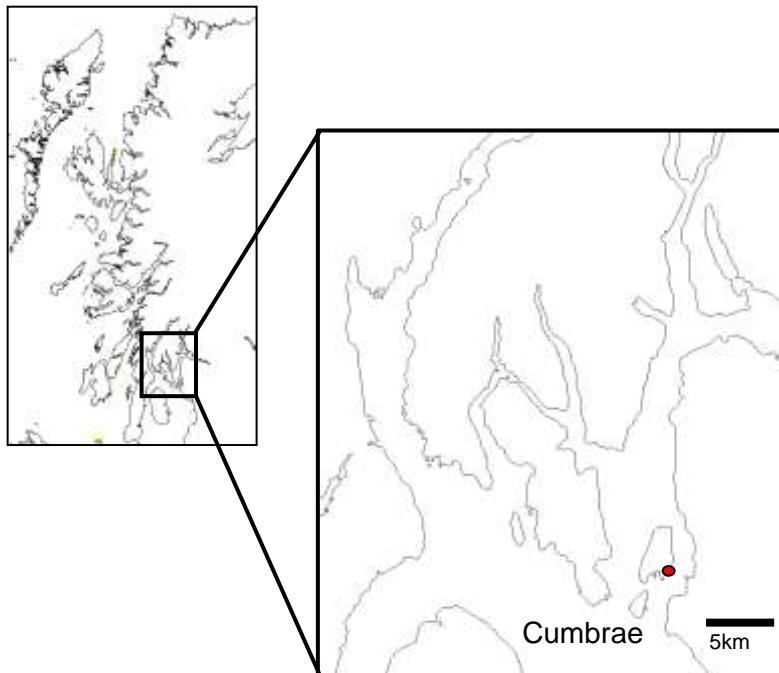


Figure 1
Cumbrae location

The survey was also carried out in accordance with SEPA guidance *BASELINE SURVEY, VISUAL – STANDARD* (15/09/2008).

¹ Listed in Priority Marine Features in Scotlands Seas, SNH 2014.
<https://www.nature.scot/sites/default/files/2018-05/Priority%20Marine%20Features%20in%20Scotlands%20seas.pdf> accessed 17/12/2018

Methods

The survey comprised three transects, and was originally carried out in January 2018. Video quality from that survey was considered inadequate and the survey was repeated on 01 and 04 September 2018. Weather conditions were fair, wind S2, overcast. Benthic sampling was carried out on the later day.

Survey operations were carried out from AMSL's 6.7m survey vessel *Mollie B*. Positioning and depth data were provided by a Simrad NSS7 evo.2 with fixes at 1s intervals logged directly to PC.

Transects were defined by start and end points (Figure 2). Cross-transects (T2 and T3) were run from west to east (shallow-deep), reaching maximum depths of 40.2m and 43.0m respectively.

Video survey of defined transects was carried out using a camera frame fitted with a Bowtech DIVECAM-550C-AL-I4 camera, GoPro video camera and four high intensity LED lights. The system was also equipped with two parallel laser pointers at 20cm separation. The camera frame was towed along a pre-determined transect line at approximately 0.5 knots just above the seabed, and allowed to settle briefly on the seabed at frequent intervals.

Site descriptor, position, elapsed time and depth were overlaid on the video post-survey, and deployment and recovery periods edited from the final video files in mp4 format.

Video footage has been examined and interpreted in 2-minute segments. Fauna was identified using standard sources (primarily Southward and Campbell 2006, Naylor 2011, Porter 2012, Wood 2013, Hayward and Ryland 2017, Bowen et al. 2018). Still images of representative views and individual species were captured from the video.

Results

Total transect lengths, calculated as cumulative distance between successive fixes were:

Transect 1 1390m
Transect 2 457m
Transect 3 529m

The camera frame was off the seabed for 00:02:48 during Transect 1, to allow for re-positioning of the boat on the transect line.

Positions of individual 2-minute transect segments are shown in Figures 3-5. Descriptive notes for each segment are tabulated in Appendix A. Still images are listed in Appendix B and are available on accompanying electronic media.

Substrate along Transect 1 consisted of fine sand and coarse silt, with varying amounts of gravel, shell and pebbles. Water depths varied along Transect 1 from 24.4 – 35.7 m, with greatest depths in the middle part of the transect. Transects 2 and 3 covered a greater bathymetric range, 8.6 to 43.0 m, with sediments grading from gravel and sands at shallower depths to coarse silt at depths >30 m.

Algal detritus, both fucoid and laminarian, was present in considerable quantities.

No burrows characteristic of *Nephrops norvegicus* were observed. Small burrows were observed (Figures 11, 19), which could not be conclusively identified, but are considered likely to be those of the thalassinid crustacea *Callianassa subterranea* and *Upogebia stellata*.

Common sessile epifaunal species attached to pebbles or shells in the sediment included the sponges *Hymedesmia paupertas* (Figure 20), *Suberites ficus* and *S. carnosus*, and *Iophon nigricans*; sea squirts *Ascidia aspersa* and *Ciona intestinalis*; hydroids *Nemertesia antennina* (Figure 21), *N. ramosa*, and *Sertularella* sp.; tubeworm *Spirobranchus* sp. and soft coral *Alcyonium digitatum* (Figure 8). Burrowing anemones *Cerianthus lloydii* were also common.

Mobile epifauna included squat lobster *Munida rugosa* (abundant; e.g. Figures 6, 10, 11, 12), swimming crab *Liocarcinus* spp (probably both *L. depurator* and *L. holsatus* would be present), hermit crab *Pagurus* sp., whelk *Buccinum undatum*, starfish *Asterias rubens* (sometimes in dense aggregations), *Porania pulvillus*, *Crossaster papposus*, *Marthasterias glacialis* and *Luidia ciliaris* (Figure 9); urchin *Echinus esculentus*, scallop *Pecten maximus* and queen scallop *Aequipecten opercularis*.

Other epifaunal species recorded occasionally or singly included the anemones *Urticina* sp. and *Bolocera tuediae*; hydroid *Thuriria articulata?* (possibly *Diphasia* sp.), brown crab *Cancer pagurus* (Figure 9), velvet swimming crab *Necora puber*, spider crab *Hyas* sp. and starfish *Henricia* sp.

Fish observed included dragonet *Callionymus lyra* (common), Norway bullhead *Micronephrys lilljeborgi* (Figure 14), dab *Limanda limanda* (Figure 21) and butterfish *Pholis gunnellus*.

Discussion

Habitats and species were as expected for a moderately tidal location in the Firth of Clyde. Physical disturbance of the seabed through trawling was not observed, and anthropogenic debris was negligible.

No Priority Marine Features were observed.

The conclusive identification of burrows relies on resin-casting (e.g. Atkinson 1986). In the present visual survey, burrows attributable to *Nephrops norvegicus* were not observed. Small burrows (Figures 11, 19) were tentatively attributed to the thalassinid

crustacea *Callianassa subterranea* (previously recorded at this location, Allen 1967 and subsequently recorded at various locations in the Firth of Clyde by the NBN atlas²); and *Upogebia stellata* (also previously collected from the east side of Cumbrae, in water depths 18-25m by Pinn et al. 1999). *Callianassa* burrows are usually characterised by volcano-like exhalent mounds, although these were small or absent in this survey area. However, these two thalassinid species are considered the most likely candidates for small burrows in fine sand sediments, since most other burrowing species prefer softer muds in deeper water.

References

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² <https://scotland-species.nbnatlas.org/species/NBNSYS0000174260>

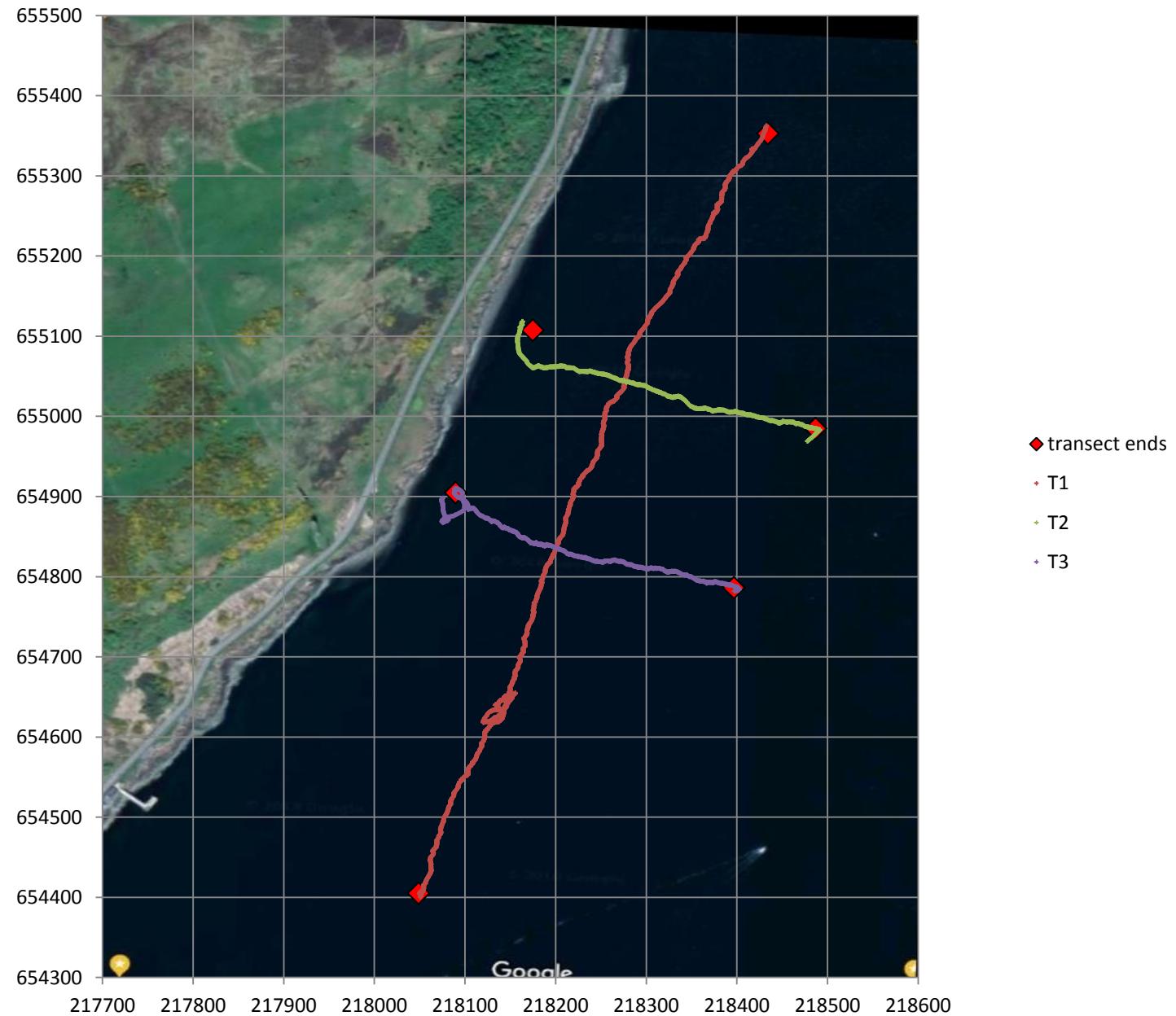


Figure 2. Proposed and actual transects, Cumbrae

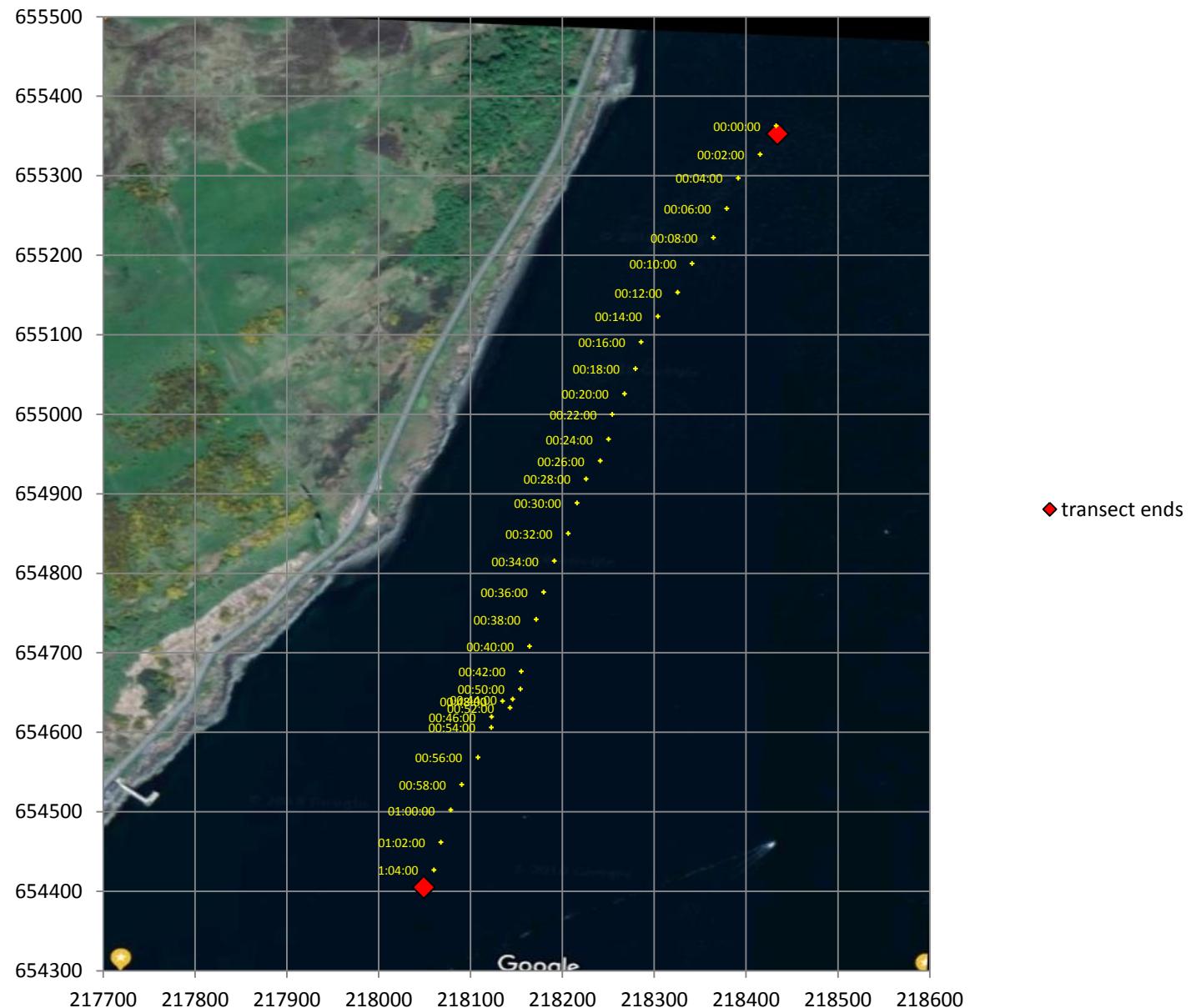


Figure 3. Transect 1, 2-minute interpretation segments

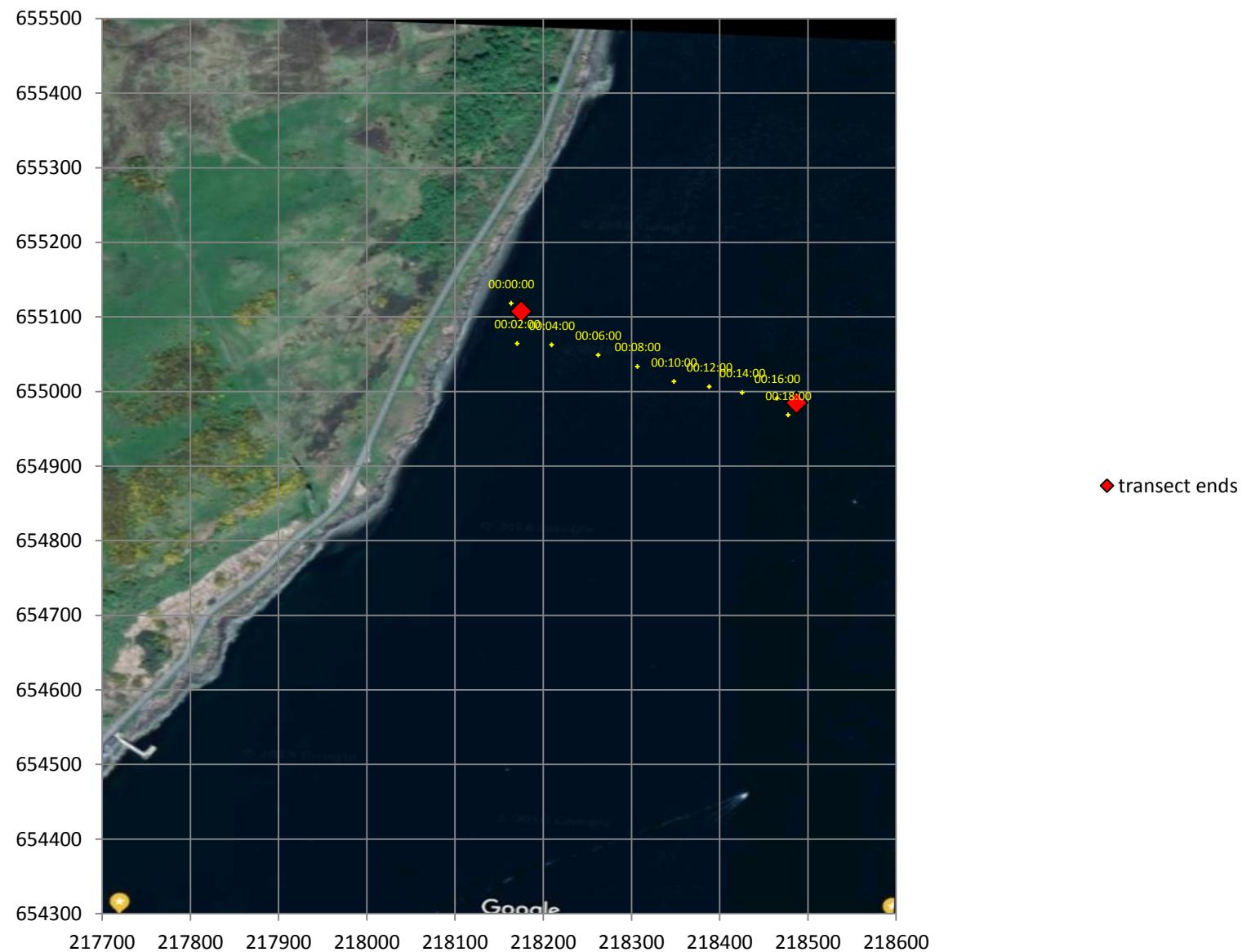


Figure 4. Transect 2, 2-minute interpretation segments

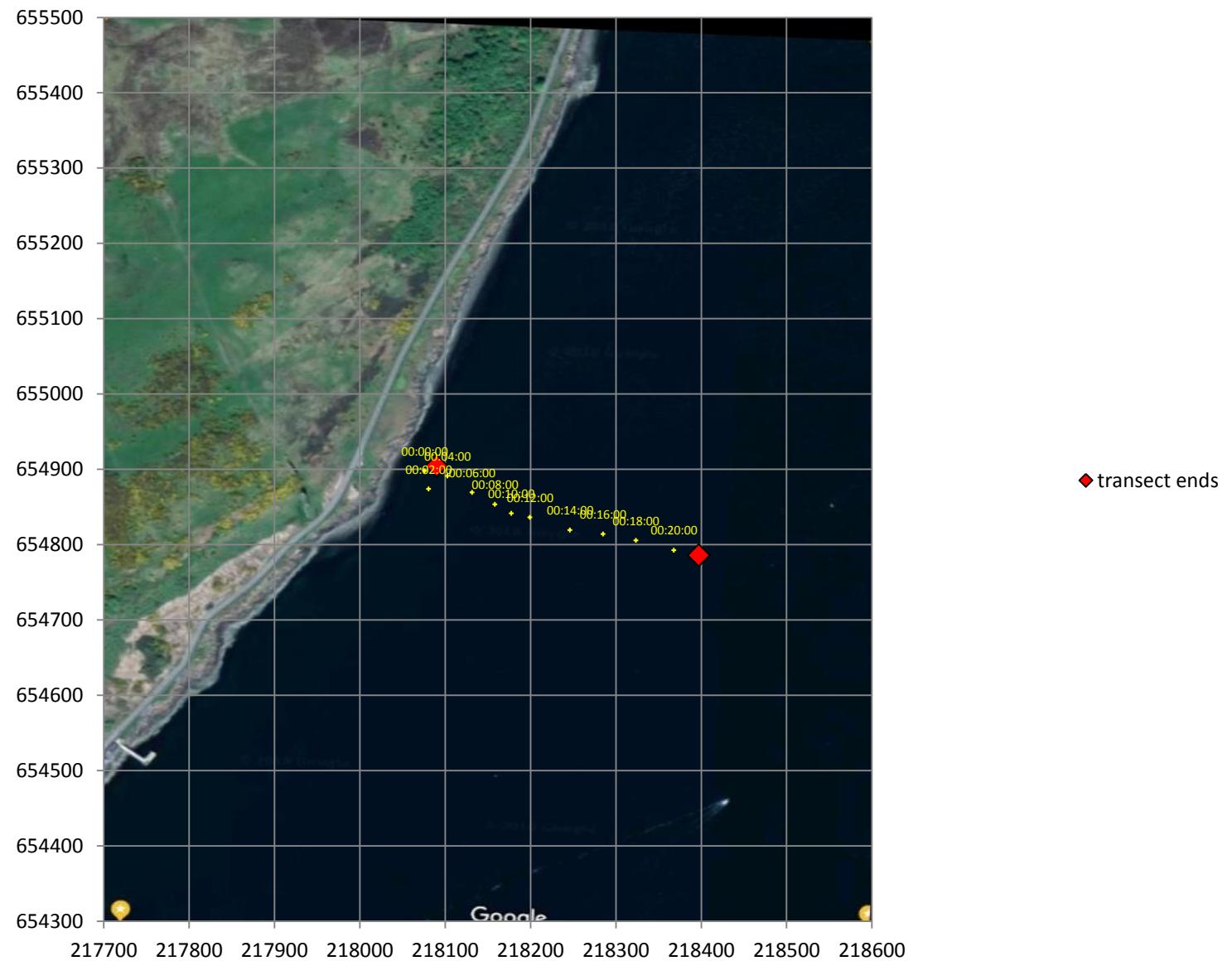


Figure 5. Transect 3, 2-minute interpretation segments



Figure 6 (still 2). *Munida rugosa* in burrow



Figure 7 (still 4). *Asterias rubens*, *Sertularella*, *Liocarcinus*, unidentified siphon

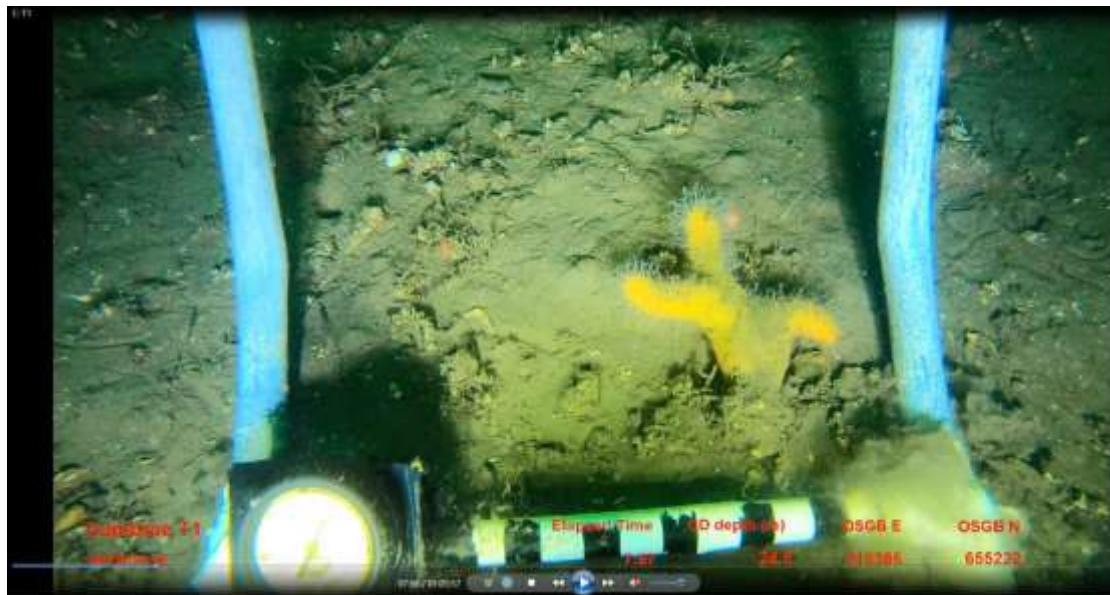


Figure 8 (still 6). *Alcyonium digitatum*



Figure 9 (still 8). *Luidia ciliaris*. Unidentified paired siphons



Figure 10 (still 9). *Cancer pagurus*, *Munida rugosa*, *Suberites carnosus*



Figure 11 (still 11). silty fine sand. *Munida rugosa*, unidentified small burrows (*Upogebia stellata*?)



Figure 12 (still 12). *Munida rugosa* feeding on moribund *Cyanea*



Figure 13 (still 17). *Crossaster papposus*



Figure 14 (still 19). Norway Bullhead *Micronephrys lilljeborgi*



Figure 15 (still 23). fine sand, with shell and pebbles. *Nemertesia antennina*,
Alcyonium digitatum, *Munida rugosa*



Figure 16 (still 26). *Iophon nigracans*, *Sertularella*, *Suberites carnosus*, *Munida rugosa*



Figure 17 (still 2). medium sand with gravel



Figure 18 (still 6). silty fine sand. *Pagurus* in *Turritella* shell. Unidentified tubes (*Sabellidae*?)



Figure 19 (still 8). coarse silt, small burrows (*Callianassa*?)



Figure 20 (still 3). fine sand and gravel. *Cerianthus lloydii*. *Hymedesmia paupertas*.
Nemertesia antennina. *Hyas sp.*



Figure 21 (still 7). coarse silt. *Nemertesia antennina*. Dab *Limanda limanda*



Figure 22 (still 11). coarse silt with gravel

Table 1. Cumbrae 01 and 04 September 2018 transect start and end positions

transect	start						end					
	deg-N	min-N	deg-W	min-W	OSGB E	OSGB N	deg-N	min-N	deg-W	min-W	OSGB E	OSGB N
1	55	44.920	4.000	54.035	218049	654405	55	45.439	4	53.705	218434	655353
2	55	45.301	4.000	53.943	218175	655107	55	45.242	4	53.640	218487	654985
3	55	45.190	4.000	54.016	218090	654905	55	45.133	4	53.718	218397	654786

CUMBRAE APPENDIX A. VIDEO INTERPRETATION

	depth	
T1	26.5	00:00:00 fine sand with shell and pebbles. Sparse hydroids. Ascidella. Still C T1 1. Munida. Asterias. Spirobranchus. Alcyonium. Nemertesia antennina. Siphon. Sertularella sp. Dab. Still 2. Cerianthus. Pecten.
	23.9	00:00:00 fine sand, shell and pebbles. Nemertesia antennina. Cerianthus. Sertularella. Pecten. Spirobranchus. Munida. Echinus. Hymedesmia paupertas. Alcyonium. Buccinum. Porania. Ciona.
	24.4	00:04:00 fine sand, shell and pebbles. Sertularella. Nemertesia. Pecten. Alcyonium. Pagurus. Munida. Still 3. Echinus. Asterias. Siphons. Still 4. Liocarcinus.
	24.4	00:06:00 fine sand, shell and pebbles. Nemertesia. Echinus. Spirobranchus. Alcyonium. Hymedesmia. Munida. Liocarcinus. Cerianthus. Still 5. Pecten. Crossaster. Still 6.
	24.5	00:08:00 fine sand, shell and pebbles. Sertularella. Liocarcinus. Alcyonium. Pecten. Cerianthus. Nemertesia. Still 7. Pagurus. Sabella tube. Ascidella.
	25.4	00:10:00 fine sand, shell and pebbles. Spirobranchus. Alcyonium. Nemertesia. Luidia. Buccinum. Sertularella. Pecten. Cerianthus. Small burrows - poss Upogebia? Paired siphons. Still 8. Munida. Ciona.
	26.4	00:12:00 fine sand, shell and pebbles. Sertularella. Nemertesia. Liocarcinus. Alcyonium. Dragonet. Cerianthus. Pecten. Spirobranchus. Cancer. Munida. Subarites. Balanus. Still 9. Ascidella.
	28.6	00:14:00 silty sand, shell and pebbles. Hydroids. Cancer. Nemertesia. Sertularella. Asterias aggregations. Alcyonium. Pecten. Munida. Still 10.
	31.1	00:16:00 silty sand, shell and pebbles. Nemertesia. Munida. Sertularella. Fucus spiralis detritus. Asterias. Buccinum. Kelp detritus. Echinus.
	32.7	00:18:00 silty fine sand. Shell and pebbles. Munida. Nemertesia. Hymedesmia. Dragonet. Aequipecten. Cerianthus. Still 11.
	33.6	00:20:00 coarse silt. Munida. Kelp detritus. Munida feeding on moribund Cyanea still 12. Aequipecten. Sparse hydroids. Pecten. Pagurus. Asterias.
	34.6	00:22:00 coarse silt. Munida. Nemertesia. Pecten. Porania. Asterias. Algal detritus. Aequipecten still 13. Liocarcinus. Cerianthus.
	35.7	00:24:00 coarse silt. Munida. Hydroids. Siphon. Cerianthus. Asterias. Still 14. Liocarcinus. Aequipecten. Echinus.
	35.7	00:26:00 coarse silt. Kelp detritus. Pecten. Small burrows. Pagurus in Turrilella shells. Philine? Luidia. Munida. Aequipecten. Cerianthus. Sponge? 27:30. Crossaster. Echinus.
	35.1	00:28:00 coarse silt. Scattered pebbles. Hyas? With encrusting Suberites? 28:05. Small burrows - Upogebia? Munida. Hymedesmia. Liocarcinus. Pecten. Still 15. Echinocardium, probably dead. Pagurus. Dragonet. Aequipecten.
	35.0	00:30:00 coarse silt, scattered shells and pebbles. Munida. Algal detritus. Small burrows. Dead Metridium? Still 16. Aequipecten. Pagurus. Liocarcinus. Necora. Echinus. White sponge
	35.3	00:32:00 coarse silt with patches of pebbles and cobbles. Munida. Algal detritus. Echinus. Crossaster still 17. White sponge lophon nigricans? Still 18. Hymedesmia. Aequipecten.
	35.1	00:34:00 coarse silt with patches of pebbles and cobbles. Algal detritus. Iophon? 34:02. Hymedesmia. Crossaster. Munida. Asterias. Liocarcinus. Pecten. Alcyonium. Aequipecten. Echinus. Pholis. Cerianthus.
	34.5	00:36:00 coarse silt with patches of pebbles and cobbles. Algal detritus. Hymedesmia. Liocarcinus. Munida. Asterias. Echinus. Dragonet. Sertularella. Aequipecten.
	34.0	00:38:00 coarse silt with gravel and patches of pebbles and cobbles. Algal detritus. Aequipecten. Munida. Pagurus. Cerianthus. Asterias. Dab. Sertularella. Echinus. Alcyonium. Porania.
	32.5	00:40:00 fine sand with gravel and patches of pebbles and cobbles. Algal detritus. Cerianthus. Sertularella. Norway Bullhead Micronephrys illigeborgi 40:02 still 19. Munida. Alcyonium. Pagurus. Dragonet. Small Urticina? Nemertesia.
	30.4	00:42:00 silty fine sand and shells. Dragonet. Pagurus. Still 20. Munida. Aequipecten. Buccinum. Nemertesia. Cerianthus. Pecten. Alcyonium. Pholis.
	33.4	00:44:00 silty fine sand and shells. Pecten. Munida. Nemertesia. Sertularella. Liocarcinus. Alcyonium. Asterias. Henricia. Cerianthus. Iophon.
	33.9	00:46:00 silty fine sand with gravel, shells. Still 21. Stopped 46:00-46:53. Pecten. Munida. Lifted 46:59
	33.8	00:48:00 lifted to 49:47. Fine sand and shells. Camera sledge track? Cerianthus. Sabella tube.
	31.7	00:50:00 fine sand and shells. Stopped to 50:58. Nemertesia. Munida. Sertularella.
	34.3	00:52:00 fine sand and shells. Pecten. Iophon. Thuiaria articulata? (poss. Diphasia) 52:18 still 22 and 53:37. Aequipecten. Small dab. Asterias. Spirobranchus. Nemertesia. Munida. Pagurus. Alcyonium. Dragonet
	33.4	00:54:00 fine sand and shells. Nemertesia. Asterias. Alcyonium. Echinus. Munida. Still 23. Suberites. Pecten. Bullhead. Sertularella. Suberites carnosus 55:33. Hymedesmia. Nemertesia ramosa still 24
	31.2	00:56:00 fine sand and shells. Alcyonium. Munida. Hymedesmia. Cerianthus. Nemertesia ramosa. Suberites carnosus. Asterias. Sertularella. Crossaster. Echinus. Nemertesia antennina. Iophon.
	29.6	00:58:00 silty fine sand and gravel, cobbles. Alcyonium. Munida. Sertularella. Nemertesia antennina, ramosa. Hymedesmia. Iophon. Suberites ficus. Liocarcinus.
	29.0	01:00:00 fine sand and gravel, cobbles. Small burrow (Upogebia?)? Cerianthus. Iophon. Alcyonium. Still 25. Munida. Sertularella. Crossaster. Asterias. Pagurus. Nemertesia antennina. Suberites ficus. N. antennina. Still 26 (Iophon, hydroids). Small Urticina.
	28.8	01:02:00 fine sand and gravel. Sertularella. Alcyonium. Munida. Asterias. Nemertesia antennina. Henricia. Aequipecten. Suberites carnosus. Iophon. Cerianthus. Pecten. Aequipecten with Suberites 63:42. Buccinum.
	29.1	01:04:00 silty fine sand and gravel. Munida. Asterias. Alcyonium. Nemertesia antennina. Cerianthus.
T2	8.7	00:00:00 sand and gravel with Laminaria on cobbles. Ascidella aspersa. Suberites ficus. Luidia. Still C T2 1. Hymedesmia. Spirobranchus. Necora. Marthasterias. Cerianthus. Liocarcinus.
	16.9	00:02:00 medium sand with gravel, shell and cobbles. Cerianthus. Hymedesmia. Still 2. Aequipecten. Liocarcinus. Still 3. Egg masses. Pecten.
	25.6	00:04:00 silty fine sand and gravel. Cerianthus. Still 4. Liocarcinus. Nemertesia antennina. Hymedesmia. Burrows - Upogebia? Munida. Aequipecten. Asterias. Dragonet.
	34.3	00:06:00 silty fine sand and gravel. Cerianthus. Sparse hydroids. Pecten. Alcyonium. Echinus. Nemertesia antennina. Munida. Still 5. Asterias.
	36.4	00:08:00 silty fine sand. Asterias. Munida. Liocarcinus. Nemertesia antennina. Still 6. Cerianthus. Burrows - Upogebia? Dragonet. Chaetopterus? Tube. Pecten.
	36.4	00:10:00 coarse silt. Munida. Porania still 7. Aequipecten. Pagurus. Burrows - no mounds but possibly Callianassa? Nemertesia ramosa. Alcyonium. Liocarcinus. Sabella tubes.
	35.9	00:12:00 coarse silt. Munida. Burrows. Dab. Nemertesia. Dragonet. Pecten.
	36.1	00:14:00 coarse silt. Suberites. Burrows, probably Callianassa. Nemertesia. Munida. Still 8. small Suberites carnosus. Bolocera tuediae still 9.
	38.3	00:16:00 coarse silt. Nemertesia. Liocarcinus. Algal detritus. Munida. Pecten with Alcyonium. Pagurus. Still 10.
T3	16.0	00:00:00 fine sand and gravel. Cerianthus. Hymedesmia. Still C T3 1. Marthasterias. Off-bed 0:37 to 3:21
	18.0	00:02:00 fine sand and gravel. Still 2. Cerianthus. Metridium, Alcyonium on boulder. Hymedesmia. Pecten.
	21.3	00:04:00 fine sand and gravel. Cerianthus. Pecten. Hymedesmia. Marthasterias. Nemertesia. Hyas. Munida. Still 3.
	28.2	00:06:00 silty fine sand and gravel. Cerianthus. Munida. Still 4. Egg masses. Kelp detritus. Echinus. Asterias. Still 5. Pecten.
	35.0	00:08:00 coarse silt and gravel. Cobbles with hydroids. Asterias. Small burrows - Upogebia? Munida. Siphons. Pholis. Liocarcinus. Still 6. Nemertesia. Suberites carnosus. Alcyonium.
	36.9	00:10:00 coarse silt. Algal detritus. Munida. Cerianthus. Nemertesia antennina. Dab still 7. Suberites.
	37.6	00:12:00 coarse silt and gravel. Still 8. Munida. Echinus. Cerianthus. Algal detritus. Liocarcinus. Pecten. Alcyonium. Asterias.
	34.5	00:14:00 coarse silt with gravel and scattered cobbles. Hymedesmia. Munida. Echinus. Liocarcinus. Small Urticina. Sertularella. Burrows - Upogebia? Dab. Nemertesia. Cerianthus. Dragonet. Alcyonium. Pecten.
	31.6	00:16:00 coarse silt and gravel. Boulders. Munida. Pecten. Nemertesia ramosa. Liocarcinus. Crossaster. Echinus. Marthasterias. Dragonet. N. antennina. Cerianthus. Asterias. Alcyonium. Pagurus. Still 9. Ascidella.
	38.5	00:18:00 coarse silt and gravel. Munida. Hydroids. Echinus. Nemertesia antennina. Pecten. Asterias. Still 10. Balanus. Aequipecten. Pagurus. Pholis.
	43.4	00:20:00 coarse silt and gravel. Munida. Cerianthus. Liocarcinus. Aequipecten. Nemertesia antennina. Asterias. Hyas. Pagurus. Still 11.

CUMBRAE APPENDIX B. CAPTURED STILL IMAGES

Figure	transect	still	video file time
		1 fine sand with shell and pebbles. <i>Ascidia aspersa</i> .	00:00:15
6	T1	2 <i>Munida rugosa</i> in burrow	00:00:52
		3 fine sand, shell and pebbles. <i>Sertularella</i> .	00:04:33
7	T1	4 <i>Asterias rubens</i> , <i>Sertularella</i> , <i>Liocarcinus</i> , unidentified siphon	00:04:53
		5 fine sand, shell and pebbles. <i>Sertularella</i> , <i>Cerianthus lloydii</i>	00:06:21
8	T1	6 <i>Alcyonium digitatum</i>	00:07:57
		7 <i>Sertularella</i>	00:09:01
9	T1	8 <i>Luidia ciliaris</i> . Unidentified paired siphons	00:11:29
10	T1	9 <i>Cancer pagurus</i> , <i>Munida rugosa</i> , <i>Suberites carnosus</i>	00:13:05
		10 silty sand, shell and pebbles. <i>Munida rugosa</i> .	00:14:57
11	T1	11 silty fine sand. <i>Munida rugosa</i> , unidentified small burrows (<i>Upogebia stellata</i> ?)	00:19:59
12	T1	12 <i>Munida rugosa</i> feeding on moribund <i>Cyanea</i>	00:20:24
		13 coarse silt. <i>Aequipecten opercularis</i> , small burrows	00:23:07
		14 coarse silt. <i>Asterias rubens</i>	00:24:37
		15 coarse silt	00:28:52
		16 coarse silt, small burrows. <i>Liocarcinus depurator</i> . Dead/moribund <i>Metridium dianthus</i> ?	00:30:40
13	T1	17 <i>Crossaster papposus</i>	00:32:21
		18 <i>Iophon nigracans</i>	00:32:54
14	T1	19 Norway Bullhead <i>Micronephrys lilljeborgi</i>	00:40:02
		20 silty fine sand and shells. <i>Pagurus</i> sp.	00:41:59
		21 silty fine sand with gravel, shells	00:46:06
		22 <i>Thuiuria articulata</i> ? (possibly <i>Diphasia</i>)	00:52:18
15	T1	23 fine sand, with shell and pebbles. <i>Nemertesia antennina</i> , <i>Alcyonium digitatum</i> , <i>Munida rugosa</i>	00:54:19
		24 <i>Antennina ramosa</i> , <i>Munida rugosa</i>	00:56:00
		25 fine sand, gravel and cobbles. <i>Iophon nigracans</i> , <i>Alcyonium digitatum</i>	01:00:02
16	T1	26 <i>Iophon nigracans</i> , <i>Sertularella</i> , <i>Suberites carnosus</i> , <i>Munida rugosa</i>	01:01:13
	T2	1 sand and gravel	00:00:28
17	T2	2 medium sand with gravel	00:02:26
		3 medium sand with gravel. Unidentified siphon	00:02:38
		4 silty fine sand and gravel. <i>Cerianthus lloydii</i>	00:04:05
		5 silty fine sand and gravel.	00:06:58
18	T2	6 silty fine sand. <i>Pagurus</i> in <i>Turritella</i> shell. Unidentified tubes (<i>Sabellidae</i> ?)	00:08:40
		7 coarse silt. <i>Porania pusillus</i>	00:10:09
19	T2	8 coarse silt, small burrows (<i>Callianassa</i> ?)	00:15:16
		9 <i>Bolocera tuediae</i> , <i>Nemertesia antennina</i>	00:15:13
		10 coarse silt	00:17:11
	T3	1 fine sand and gravel. <i>Cerianthus lloydii</i> . <i>Hymedesmia paupertas</i>	00:00:03
		2 fine sand and gravel. <i>Cerianthus lloydii</i> .	00:03:21
20	T3	3 fine sand and gravel. <i>Cerianthus lloydii</i> . <i>Hymedesmia paupertas</i> . <i>Nemertesia antennina</i> . <i>Hyas</i> sp.	00:04:17
		4 silty fine sand and gravel. <i>Munida rugosa</i>	00:06:09
		5 silty fine sand and gravel. Egg mass (nudibranch?)	00:07:06
		6 silty fine sand and gravel	00:08:47
21	T3	7 coarse silt. <i>Nemertesia antennina</i> . Dab <i>Limanda limanda</i>	00:11:39
		8 coarse silt with gravel. <i>Suberites carnosus</i>	00:12:01
		9 coarse silt with gravel. <i>Munida rugosa</i>	00:17:48
		10 coarse silt with gravel. <i>Nemertesia antennina</i> , <i>Asterias rubens</i> , <i>Munida rugosa</i> , <i>Cerianthus lloydii</i>	00:18:59
22	T3	11 coarse silt with gravel.	00:21:42