



Toyness

Benthic Video Survey

Version 1

Report to Scottish Sea Farms

Issued by Aquateira Ltd

P969 – August 2021

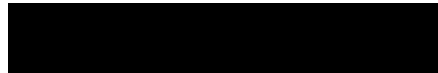


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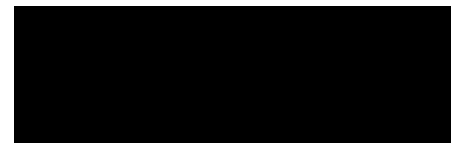
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Issue record

The version number is indicated on the front cover.

Version	Date	Details
V1	20/08/2021	Draft issued to client.

Members of:



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1 INTRODUCTION

Scottish Sea Farms (SSF) are considering proposals to expand two fish farm sites in Scapa Flow; Bring Head and Toyne's. These facilities have been in operation since 2001 and 2000 respectively (under the ownership of SSF since 2007). This report presents the results of a remotely operated vehicle (ROV) survey conducted on 28, 30 July and 12 August 2021 of an area encompassing the Toyne's farm located off the island of Hoy in the north-western part of Scapa Flow, Orkney Islands (Figure 1.1).

To accommodate an increase in production SSF are proposing a reconfiguration and expansion of the farm, replacing the existing infrastructure with larger cages and a feed barge with a larger storage capacity (see Table 1.1 and Figure 1.2). The aim of the survey is to collect benthic habitat information to support an assessment of potential environmental impacts associated with the planned site expansion.

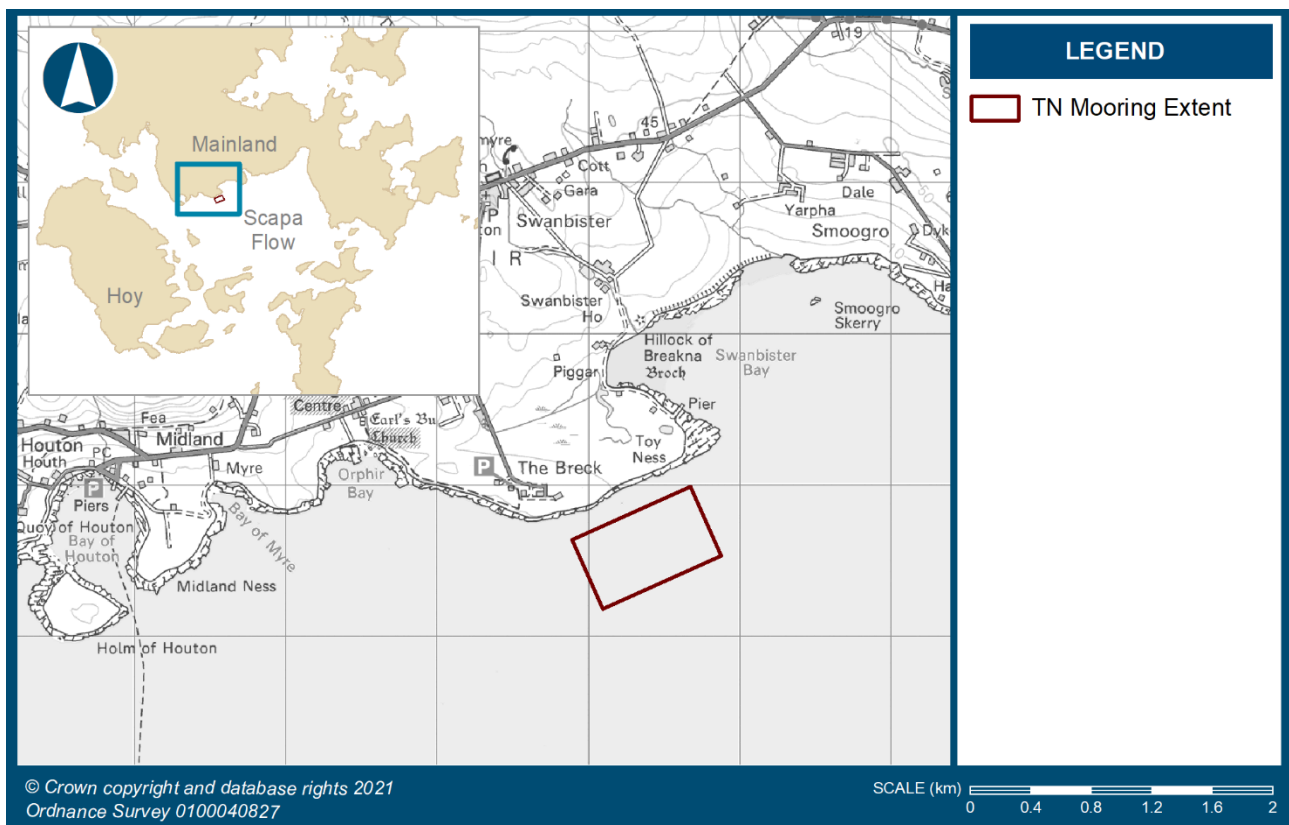


Figure 1.1 Location of Toyne's fish farm

Table 1.1 Details of proposed site expansion at Toyness

Existing configuration	Proposed expansion
10 x 80m cages in a 50m mooring grid	12 x 120m cages in a 80m mooring grid
200 tonne capacity feed barge	420 tonne capacity feed barge
Surface area of 5,286m ²	Surface area of 14,065m ²
1343 tonnes maximum biomass	2500 tonnes maximum biomass

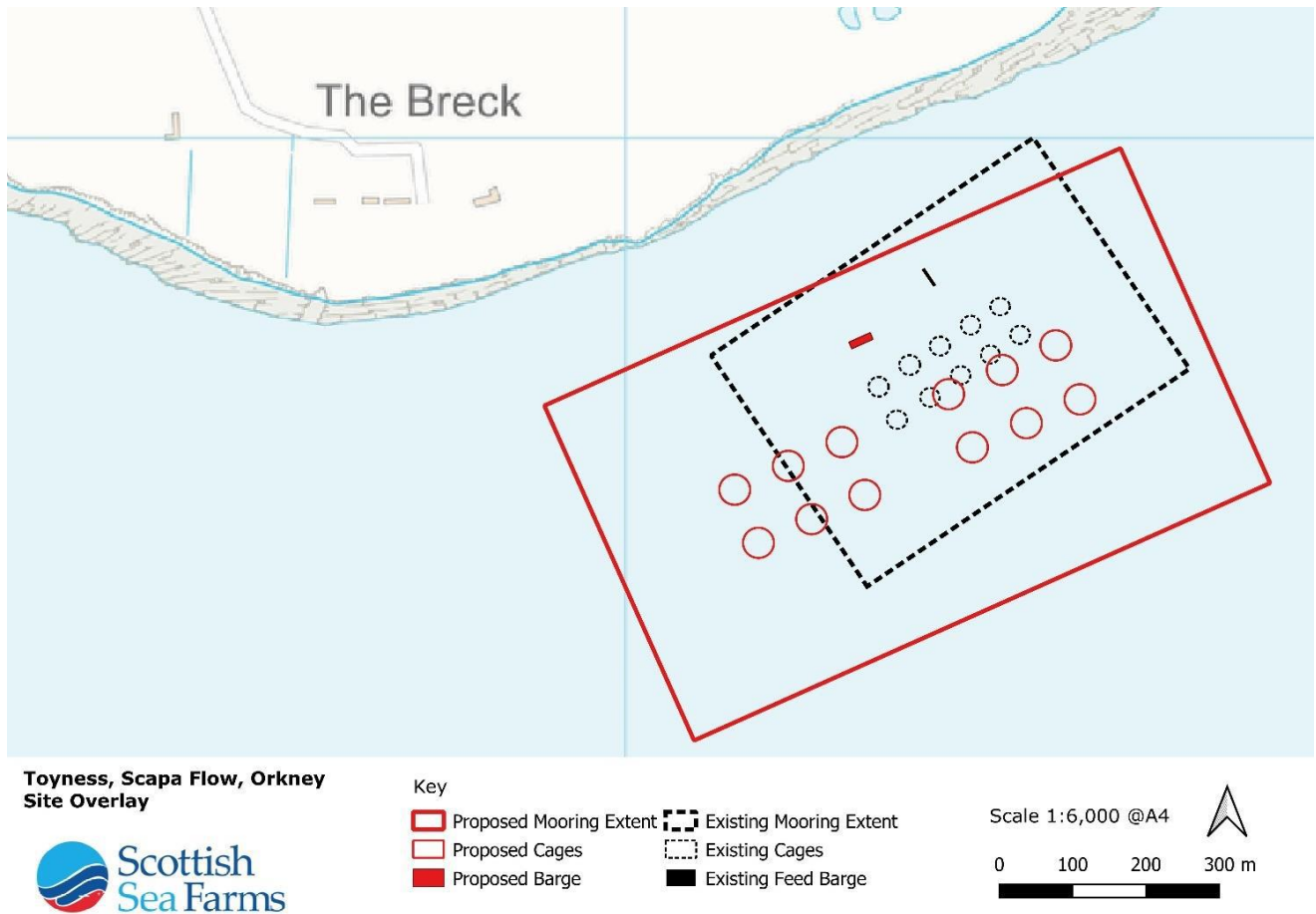


Figure 1.2 Location of proposed expansion of the Toyness site

2 SURVEY METHODOLOGY

2.1 SURVEY OPERATIONS

Specialist contractors RovingEye Enterprises Ltd conducted a ROV survey on behalf of SSF on 28, 30 July and 12 August 2021. Details of the equipment and personnel deployed are summarised in Table 2.1.

Table 2.1 Equipment and personnel summary

Resource	Details
Survey vessel	<i>MV Advance</i>
ROV specifications	<i>Seaeye Falcon</i> ROV fitted with high-definition and standard definition digital cameras to provide high quality footage for the identification of seabed flora and fauna.
Position fixing	Vessel GPS system and <i>EIVA Navipac</i> online navigation system. Easytrak USBL system for subsea ROV positioning. Vessel GPS system and <i>EIVA Navipax</i> online navigation system.
Survey personnel	Skipper - ██████████ Umbilical man/deckhand - ██████████ ROV pilot - ██████████ Marine Scientist/SSF rep - ██████████
Communications	Vessel VHF radio, mobile telephones.

2.2 SURVEY DESIGN

The overall survey design was established by SSF prior to mobilisation. The ROV survey focused on the collection of footage along four transects, running parallel to the coast and covering the maximum predicted extent of deposition of the proposed expanded facility (Figure 2.1). The ROV was directed over the seabed at a suitable height to provide a general overview of the seabed characteristics. The transit of the ROV was paused to obtain still images of notable seabed features, habitats or species encountered along the survey transects. The location of the actual transects performed during the survey are shown in Figure 2.2.

2.3 VIDEO DATA INTERPRETATION

Video footage was used to describe seabed characteristics in terms of physical structure (i.e. main substrate, sediment composition) and species assemblages in the area. Where possible, species were identified to the highest taxonomic level and quantified using the Marine Nature Conservation Review (MNCR) SACFOR¹ abundance scale (Hiscock, 1996). Descriptions of physical and biological attributes of the seabed were compared to biotope complex and biotope classifications as listed in the Joint Nature Conservation Committee (JNCC) Marine Habitat Classification for Britain and Ireland (JNCC, 2015). Observed habitats were noted for their conservation status, including whether they are a Priority Marine Feature (PMF) designated as nature conservation priorities in Scotland (Tyler-Walters et al., 2016).

¹ The SACFOR abundance scale: S = Superabundant, A = Abundant, C = Common, F = Frequent, O = Occasional, R = Rare. A complete list of species observations using the SACFOR abundance is presented in Appendix B.



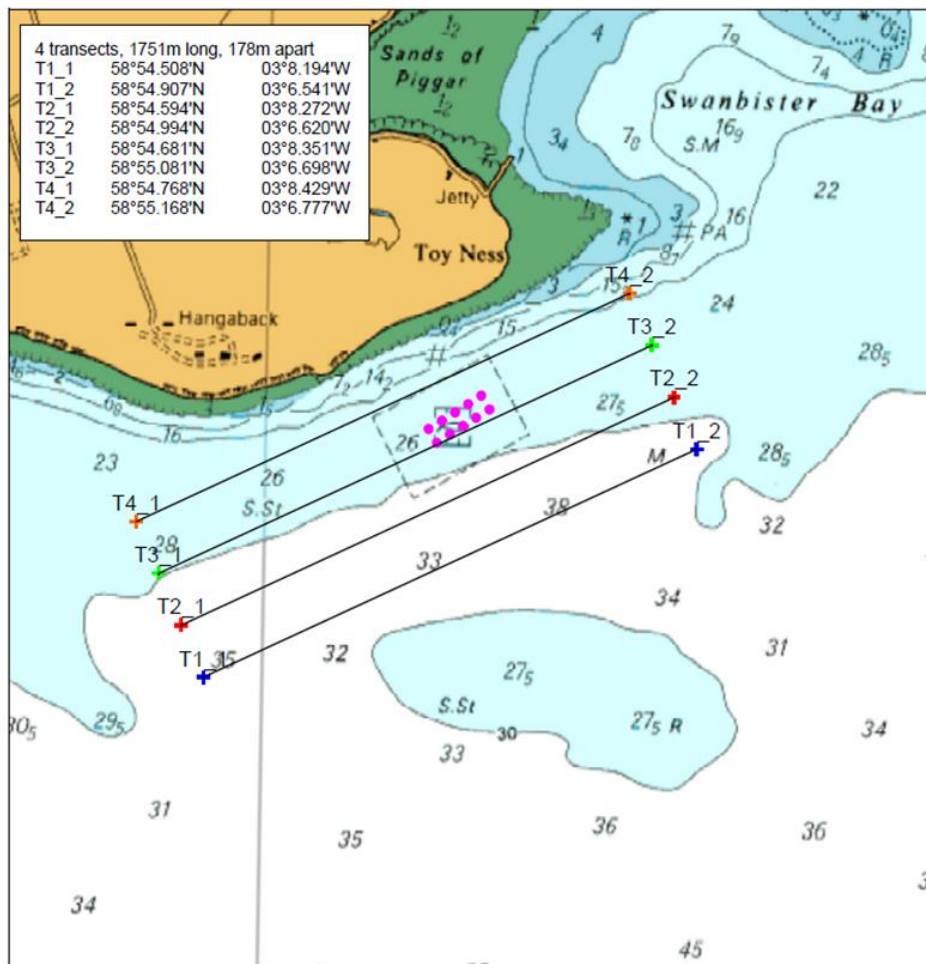


Figure 2.1 Proposed survey transects at Toy Ness site

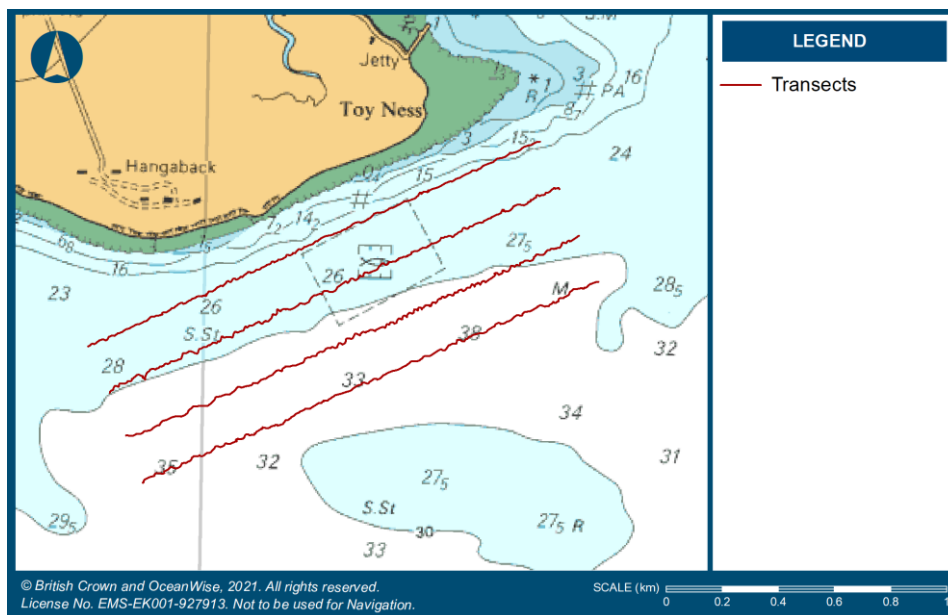


Figure 2.2 Actual survey transects at Toy Ness site

3 SURVEY OBSERVATIONS

The sediment characteristics were consistent throughout the Toyness survey area and dominated by muddy sands with very occasional rocky outcrops, sparsely scattered pebbles and gravel and patches of shell debris. In the sheltered, shallower waters present in the north of the survey area near the coast (depths of around 20 to 25m) the seabed was covered to varying extents by loosely attached red seaweed (most likely *Phyllophora crispa*). Water depths increased slightly with distance from the coast, to around 30 m along Transect 3 and between 35 to 40 m on Transects 1 and 2.

Crustaceans were the most frequently observed epibenthic fauna within the survey area, several crab species were observed; Harbour crab (*Liocarcinus depurator*), spider crabs (most notably the Scorpion spider crab (*Inachus dorsettensis*) which was frequently observed camouflaged in and around *Phyllophora crispa* patches) and hermit crabs (Paguridae). Echinoderms were also widely observed in the area with brittle stars (Ophiuroidea), urchins and starfish (*Asterias rubens* and *Luidia ciliaris*) present.

Live bivalves were mainly restricted to scallops (Pectinidae), which were regularly sighted in the survey area, although empty shells of other species were also observed (razor shells and clams). The most common gastropod recorded was the tower shell mollusc (*Turritella communis*) and a small number of whelks were observed. It should be noted that on some occasions the turritella shells observed may have been occupied by small hermit crabs rather than the original mollusc and it is not possible to conclusively determine the animal present from the video footage.

Evidence of burrowing infauna was also observed throughout the survey area. Much of the seabed was covered by polychaete burrows and mounds and a range of small burrowing anemones and/or polychaetes were also observed (the conspicuous Sand Mason worm, *Lanice conchilega*, was identified in some of the video footage). Slender sea pens (*Virgularia mirabilis*) were observed in the survey area, but numbers present were very low.

Encrusting fauna (mainly barnacles, keel worm (*Pomatoceros triqueter*) and hydroids were observed on the available hard substrate (including manmade structures such as fish farm moorings and lost fishing gear) and Plumose anemones were also recorded. Unidentified small demersal fish and flatfish and were occasionally observed throughout the survey area.

Transect 3 passed under the southwest corner of the Toyness fish farm cages. Evidence of organic waste (fish faeces/waste feed) originating from the facility, accompanied by the presence of small, scattered patches of white bacterial growth (Beggiatoa) and dense polychaete communities, was observed on the seabed within 60-70 m from the fish cages.

Footage capture points from the ROV survey are plotted in Figure 3.1, with corresponding seabed images presented in Figure 3.2 to Figure 3.5. Details of all images and a description of observations recorded, including SACFOR abundance estimates where possible, is presented in Appendix B.



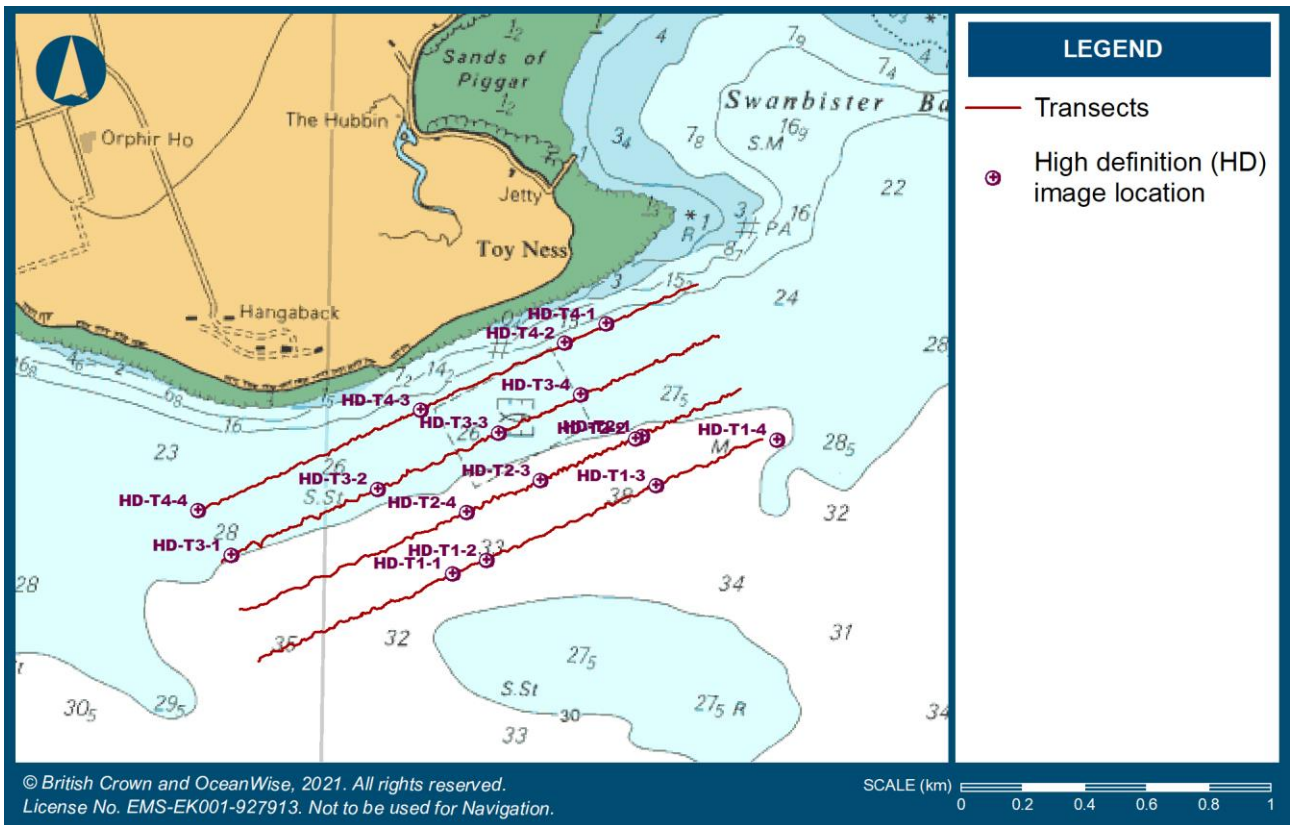
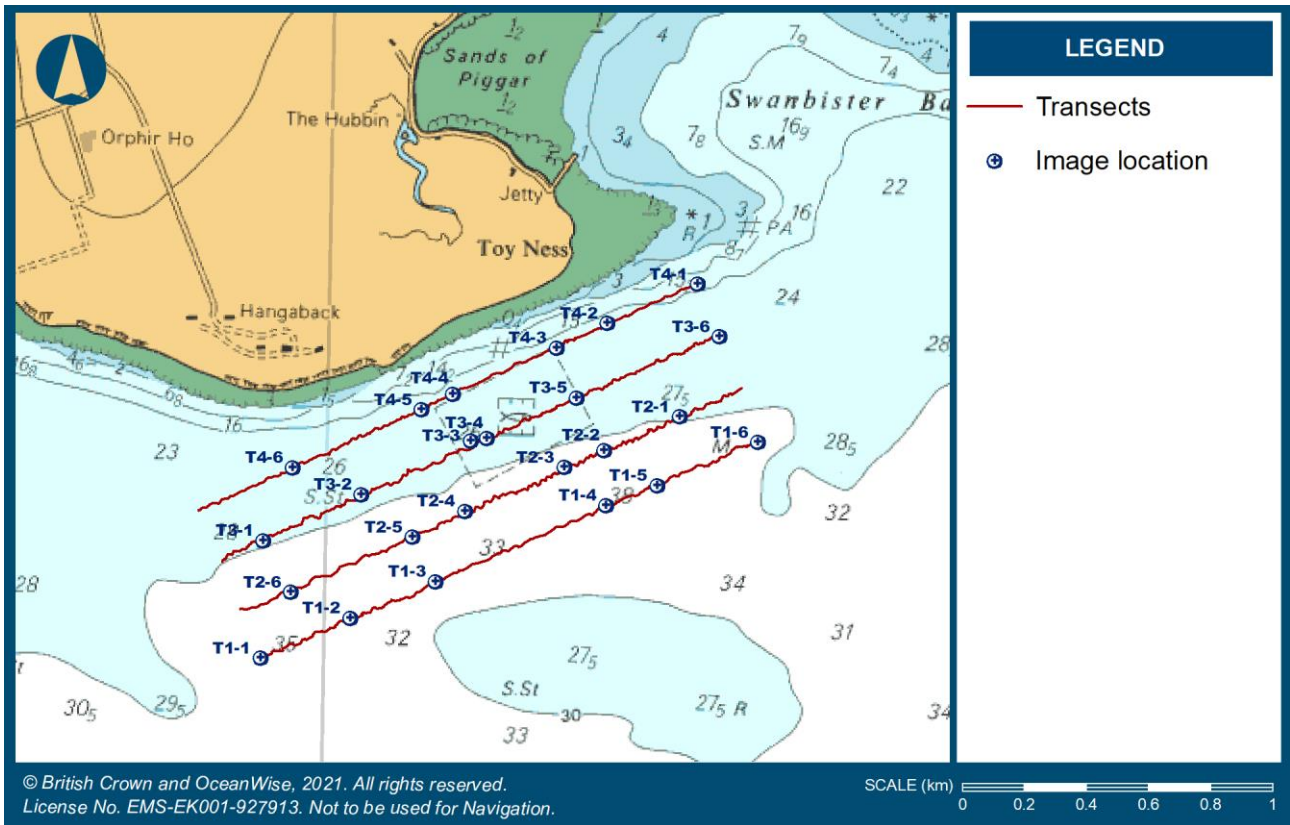
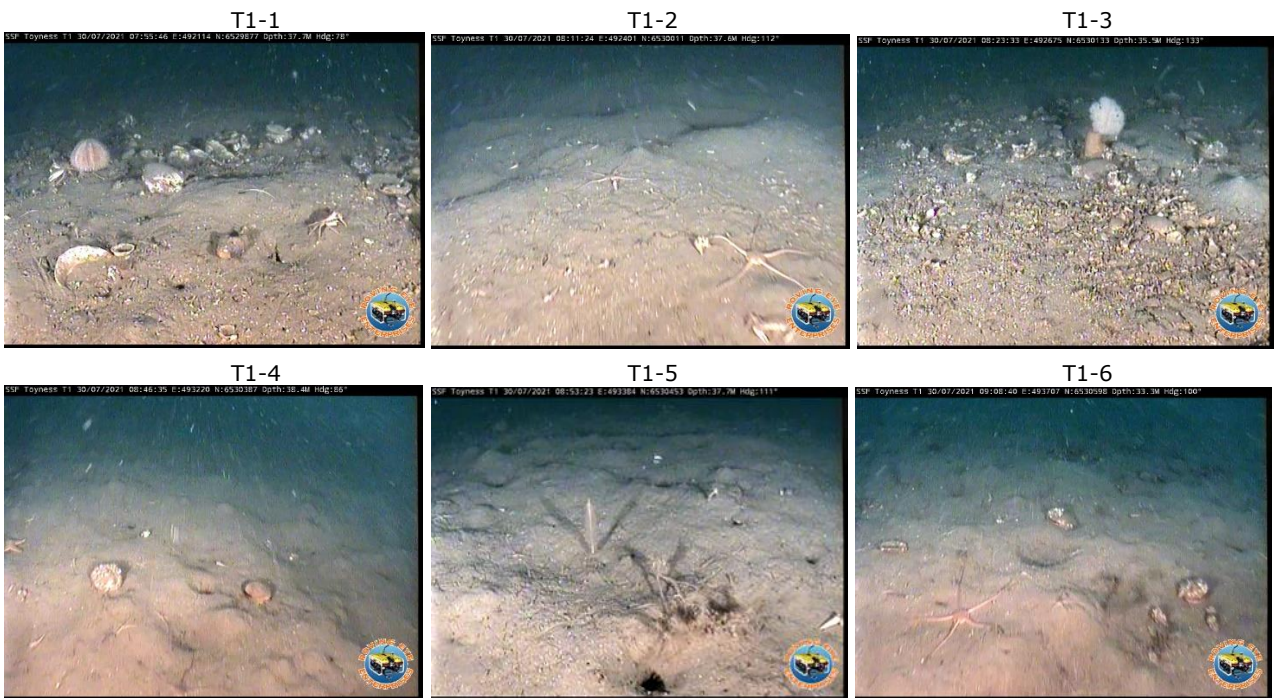


Figure 3.1 Standard and high-definition images, Toyneess, July 2021





High-definition images

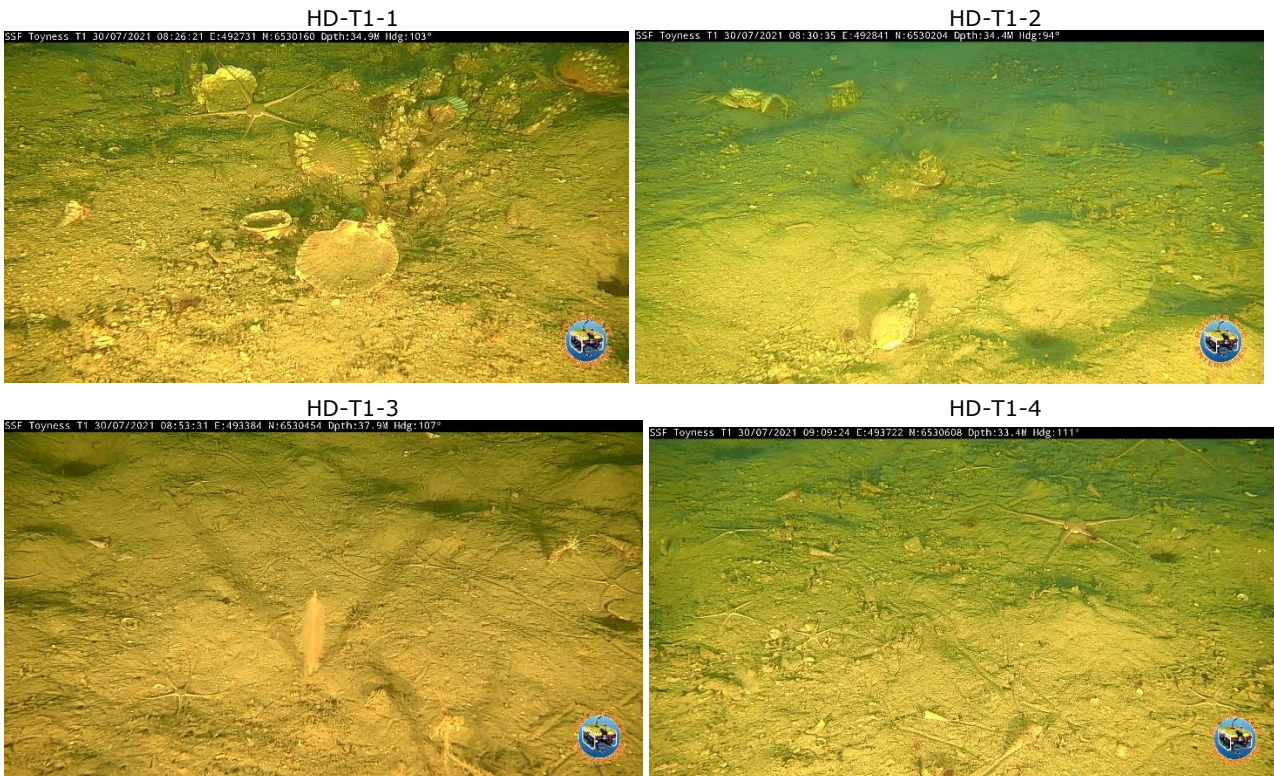
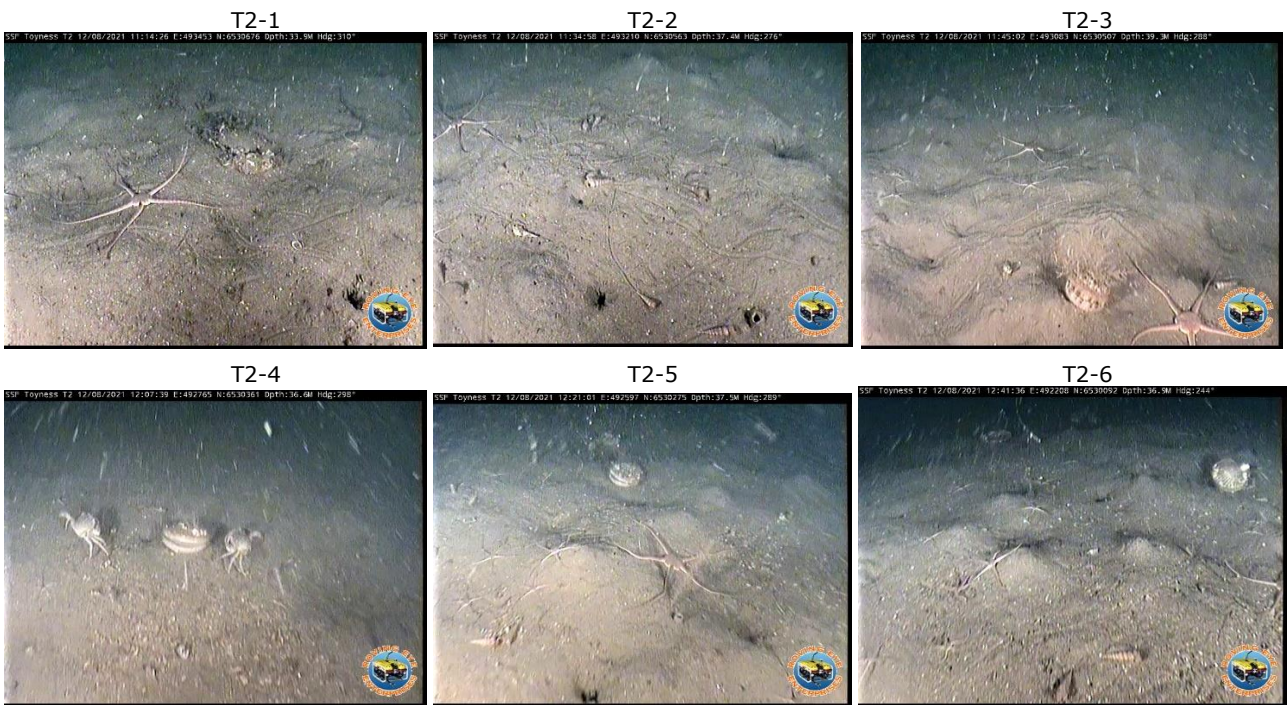


Figure 3.2 Seabed Images, Transect 1 (southwest-northeast), Toyness survey, July 2021



High-definition images

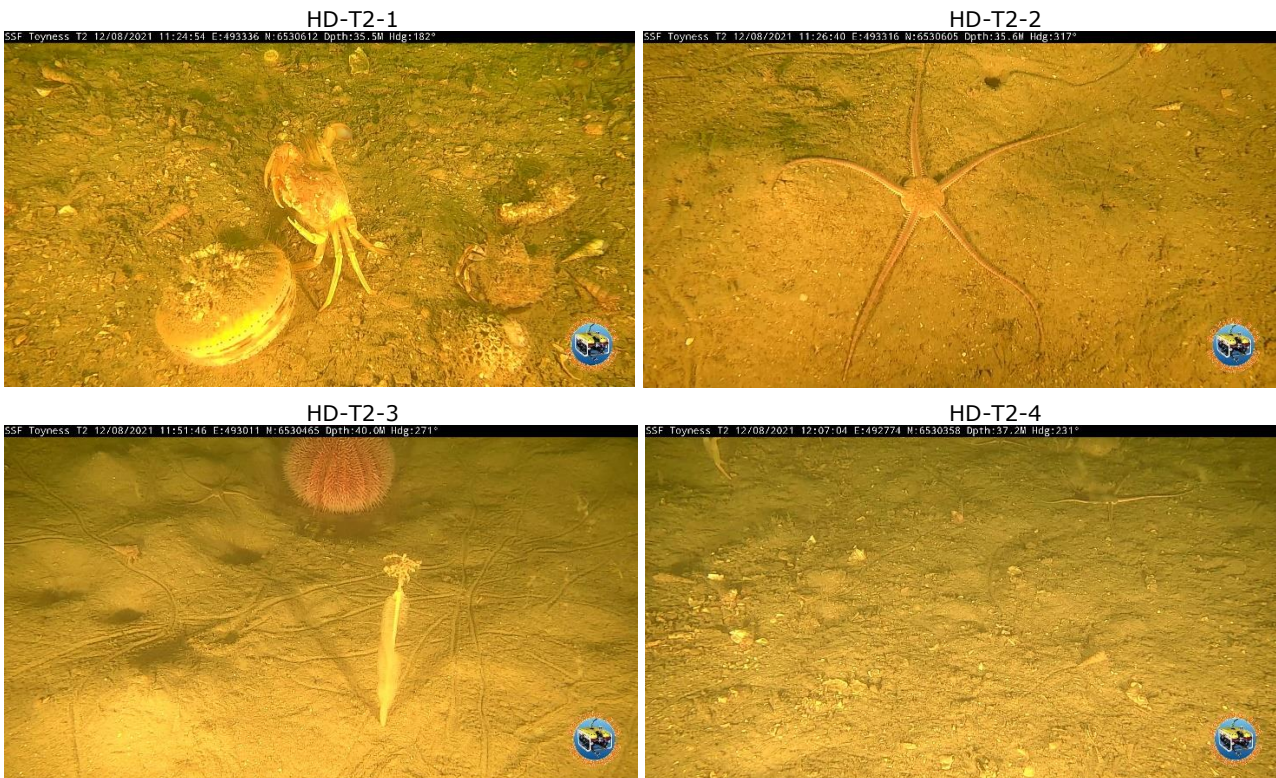
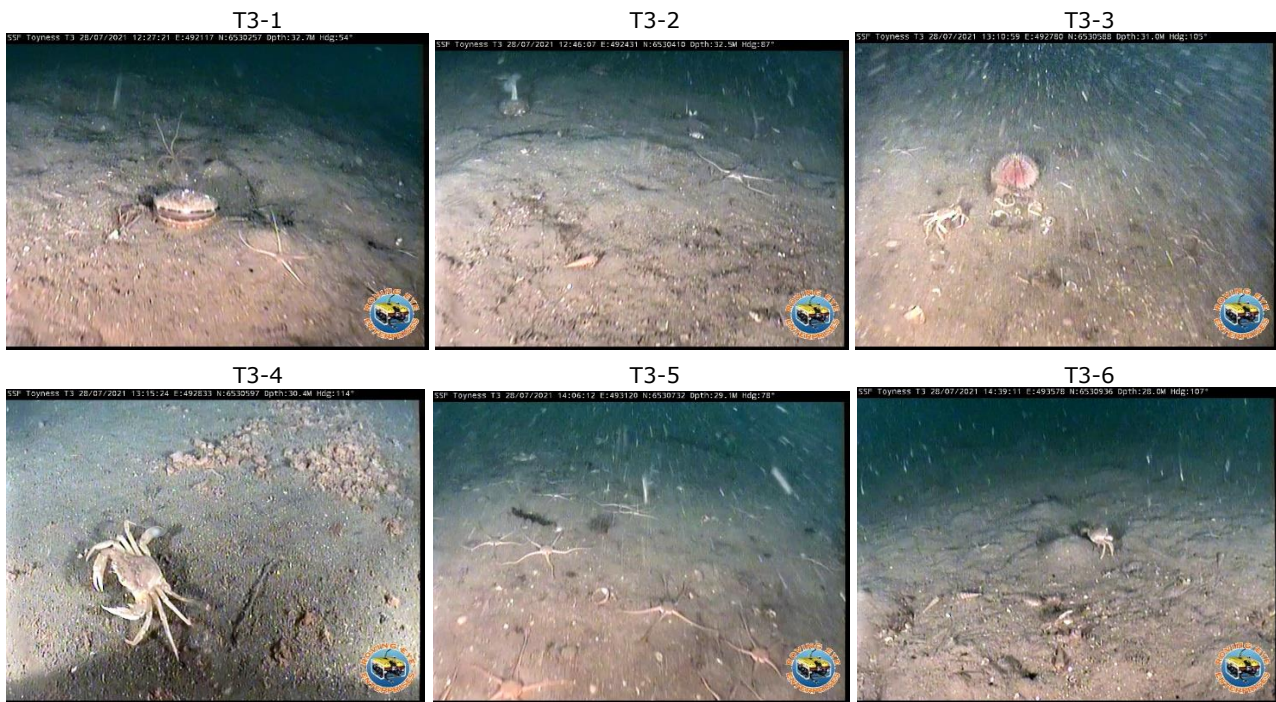


Figure 3.3 Seabed Images, Transect 2 (northeast-southwest), Toyness survey, August 2021



High-definition images

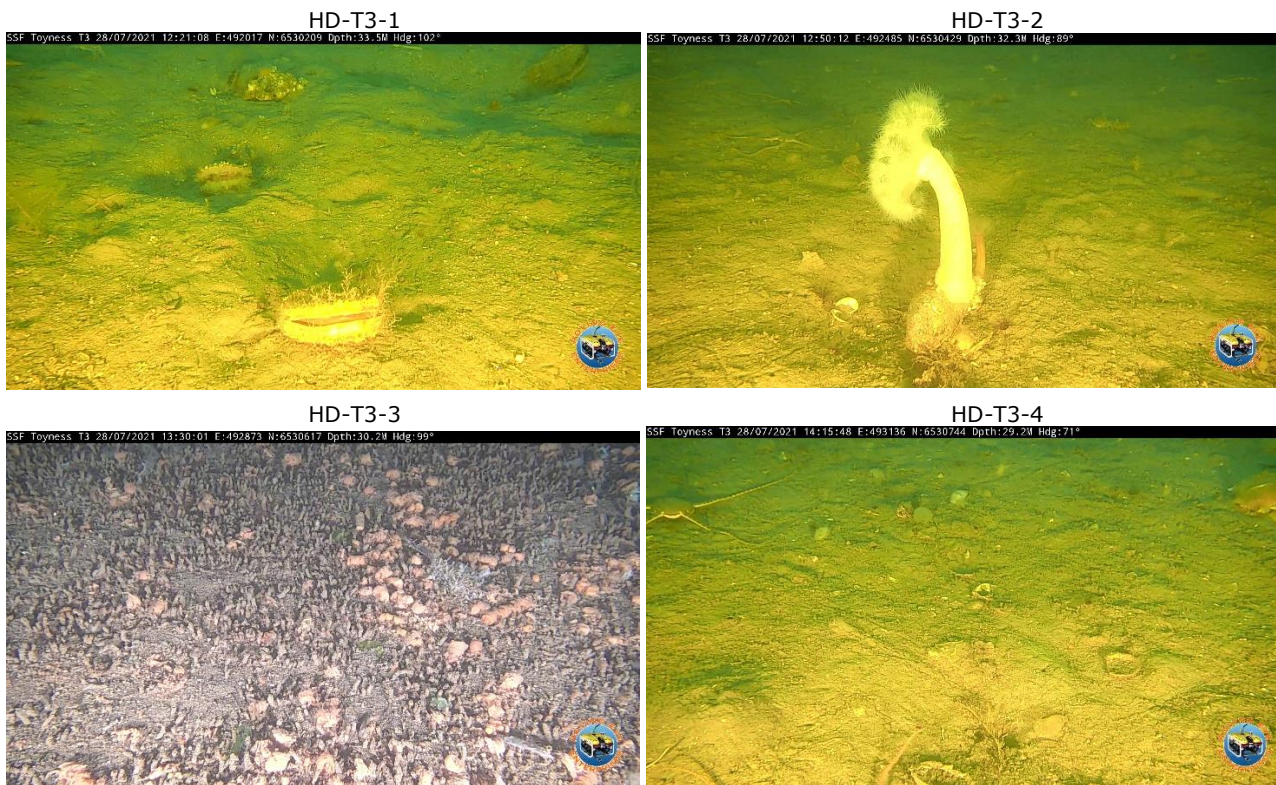
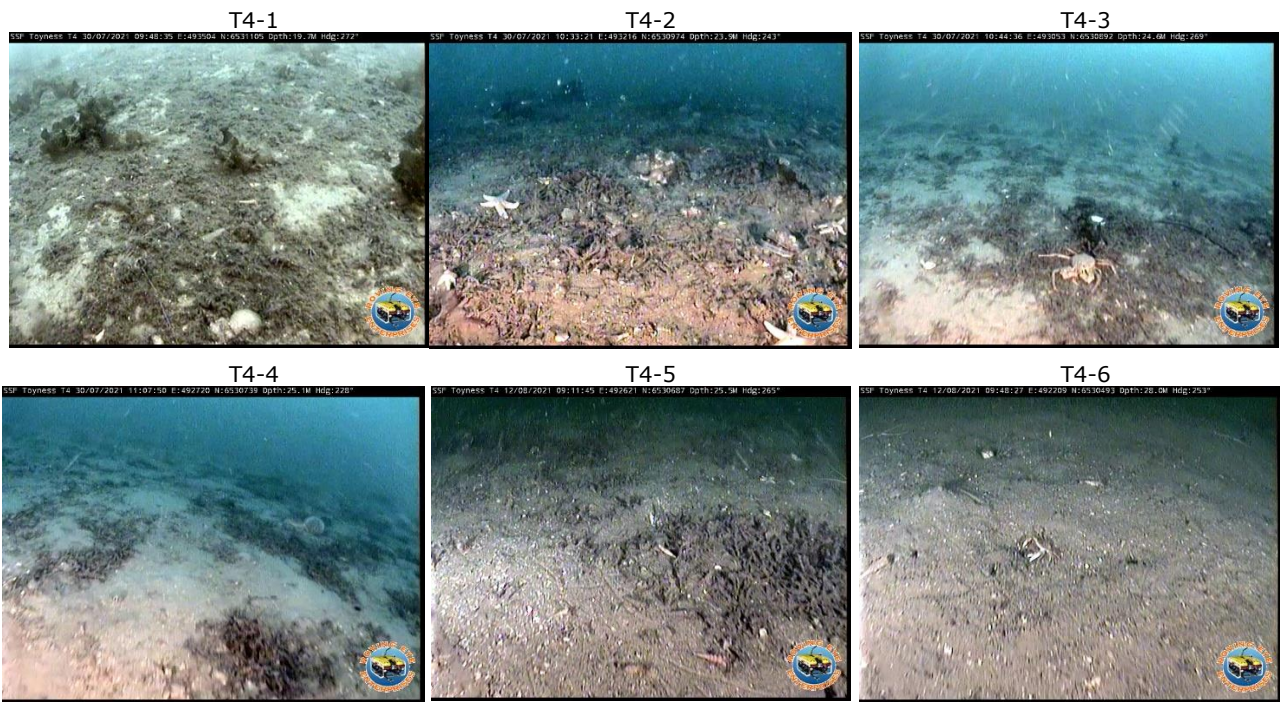


Figure 3.4 Seabed Images, Transect 3 (southwest-northeast), Toyness, July 2021



High-definition images

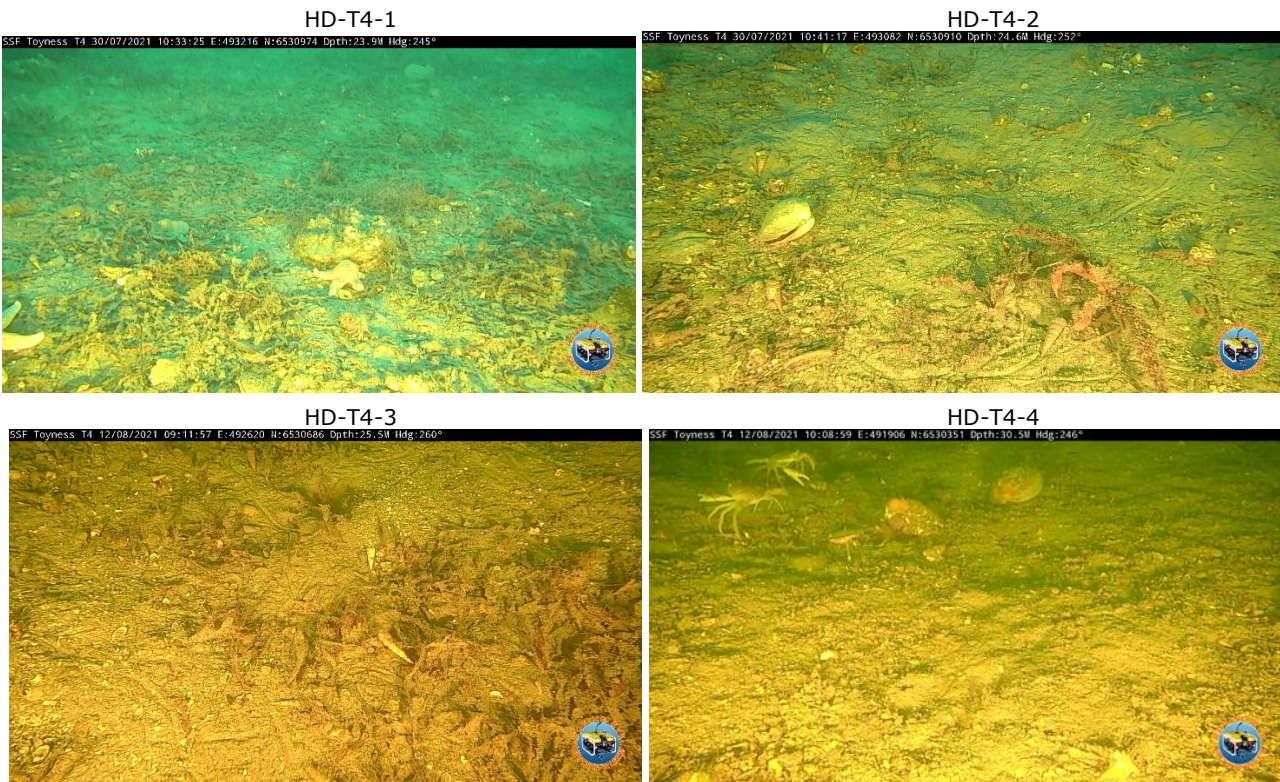


Figure 3.5 Seabed Images, Transect 4 (northeast-southwest), Toyness, July 2021

4 DESCRIPTION OF BIOTOPES AND CONSERVATION STATUS

4.1.1 Biotope classifications

The seabed habitats observed within the Toyness area in July 2021 displayed the characteristics of the following biotope types as described in the JNCC Marine Habitat Classification for Britain and Ireland (JNCC, 2015):

*Loose-lying mats of *Phyllophora crista* on infralittoral muddy sediment (SS.SMp.KSwSS.Pcri)*

- The medium-fine muddy sands covered by loosely attached red seaweed observed in the shallow waters (approximately 20 to 25 m) close to the coast in the northern part of the survey area is representative of the SS.SMp.KSwSS.Pcri biotope complex. The epifauna observed in this biotope was similar to other parts of the survey area with echinoderms (starfish and urchins), crabs and scallops being the most commonly observed species. The scorpion spider crab (*Inachus dorsettensis*) was regularly observed camouflaged in and around patches of *Phyllophora crista*.

Circalittoral muddy sand (SS.SSa.CMuSa)

- The medium-fine muddy sands that dominated from around 30 to 40 m and deeper may be characterised as the circalittoral muddy sand biotope complex (SS.SSa.CMuSa). Visible epifauna was relatively sparse in these areas but echinoderms (mainly brittle stars and starfish), crabs and scallops were the most commonly observed fauna.

Capitella capitata in enriched sublittoral muddy sediments (SS.SMu.ISaMu.Cap)

- Some sediments within the footprint of the fish cages have been modified by waste deposits from aquaculture activities and patches of sediment dominated by polychaete communities and may be characterised as the SS.SMu.ISaMu.Cap biotope.

Figure 4.1 shows the distribution of indicative biotope types within the Toyness survey area. Within the footprint of the fish cages, the area of seabed habitat resembling the SS.SMu.ISaMu.Cap biotope is considered artificial due to modification of the sediment communities by organic waste deposits originating from the farm, and therefore is omitted from the figure.

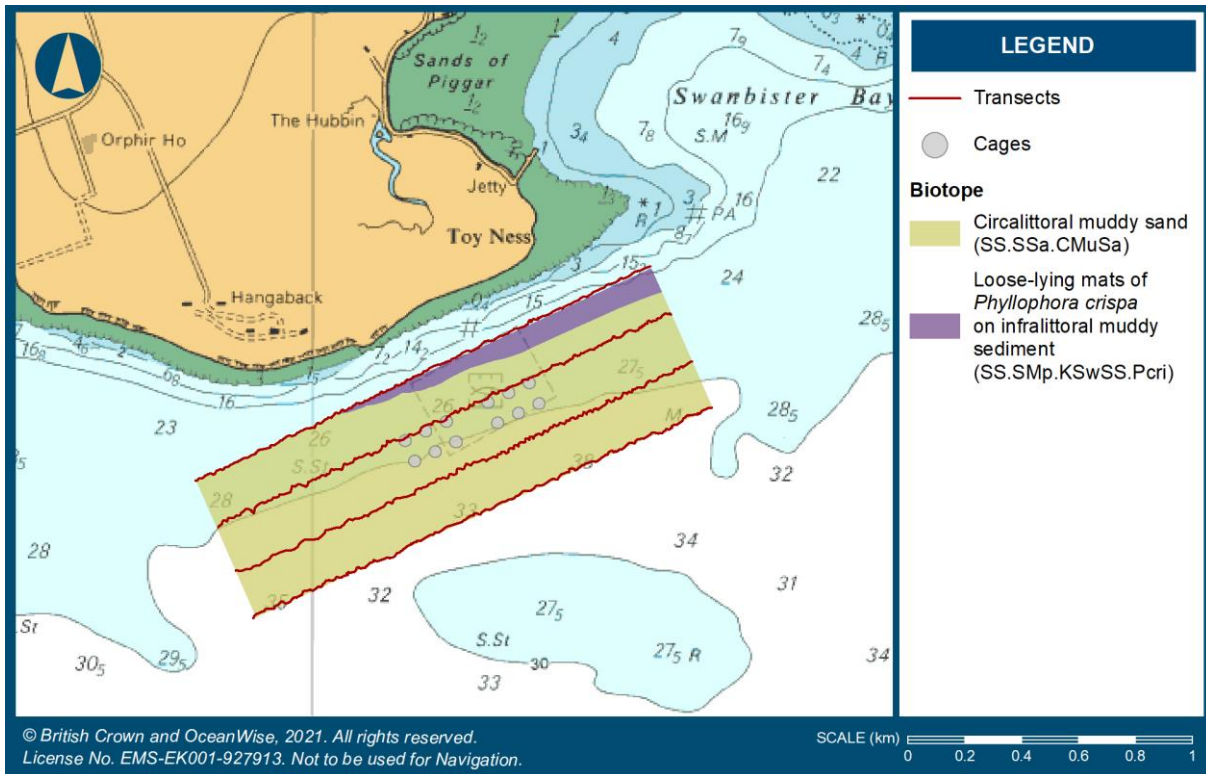


Figure 4.1 Biotope map, Toyneess, July 2021

4.1.2 Conservation Status of habitats and species

The Toyneess site is currently not within any Marine Protected Area designated for benthic habitats or species (Marine Scotland, 2021) and no Priority Marine Features (PMF - habitats and species designated as nature conservation priorities in Scotland) were observed. A small number of slender sea pens (*Virgularia mirabilis*) were recorded in the muddy sand areas. This species contributes to the SS.SMu.CFiMu.SpMmeg (sea pens and burrowing megafauna in circalittoral fine mud) PMF, but the habitat cannot be classified as this biotope due to the low numbers present and the absence of megafauna such as *Nephrops norvegicus*.

5 REFERENCES

Hiscock, K., (1996) Marine Nature Conservation Review: Rationale and methods. Coasts and seas of the United Kingdom. MNCR series. JNCC [online]. Available from: <https://mhc.jncc.gov.uk/media/1009/sacfor.pdf> (Accessed 07/08/2021).

JNCC (2015) The Marine Habitat Classification for Britain and Ireland Version 15.03 [online]. Available from: <https://mhc.jncc.gov.uk> (Accessed 07/08/2021).

Marine Scotland (2021) Biological analyses of seabed imagery from within and around Marine Protected Areas in Orkney, Shetland, Inner Sound, and Islay and Jura in 2019. Scottish Marine and Freshwater Science Vol 12 No 2. Published by Scottish Government ISSN: 2043-7722 DOI: 10.7489/12364-1.

Tyler-Walters, H., James, B., Carruthers, M. (eds.), Wilding, C., Durkin, O., Lacey, C., Philpott, E., Adams, L., Chaniotis, P.D., Wilkes, P.T.V., Seeley, R., Neilly, M., Dargie, J., Crawford-Avis, O.T. (2016) Descriptions of Scottish Priority Marine Features (PMFs). Scottish Natural Heritage Commissioned Report No. 406 [online]. Available from: <https://www.nature.scot/snh-commissioned-report-406-descriptions-scottish-priority-marine-features-pmfs> (Accessed 07/08/2021).



APPENDIX A TRANSECT LOCATIONS

Table 5.1 Planned survey transects at the Toyness site

Transect	Location WGS84			
	Start		End	
	Easting	Northing	Easting	Northing
T1	58°54.508'N	03°08.194'W	58°54.907'N	03°06.541'W
T2	58°54.594'N	03°08.272'W	58°54.994'N	03°06.620'W
T3	58°54.681'N	03°08.351'W	58°55.081'N	03°06.696'W
T4	58°54.768'N	03°08.429'W	58°55.168'N	03°06.777'W



Table 5.2 Approximate start-finish transects of the ROV survey, detailing corresponding video files

Transect	Filenames (Standard Def)	Location WGS84					
		Start		Depth (m)	End		Depth (m)
		Easting	Northing		Easting	Northing	
T1	VIDEO_30-07-2021_07-51-05 VIDEO_30-07-2021_08-06-05 VIDEO_30-07-2021_08-21-05 VIDEO_30-07-2021_08-36-05 VIDEO_30-07-2021_08-51-05	492112	6529869	37.5	493723	6530608	33.4
T2	VIDEO_12-08-2021_10-56-50 VIDEO_12-08-2021_11-11-50 VIDEO_12-08-2021_11-26-50 VIDEO_12-08-2021_11-41-50 VIDEO_12-08-2021_11-56-51 VIDEO_12-08-2021_12-10-07 VIDEO_12-08-2021_12-11-32 VIDEO_12-08-2021_12-26-32 VIDEO_12-08-2021_12-41-32	493648	6530765	32.1	492060	6530027	39.0
T3	VIDEO_28-07-2021_12-14-17 VIDEO_28-07-2021_12-29-17 VIDEO_28-07-2021_12-44-17 VIDEO_28-07-2021_12-59-17 VIDEO_28-07-2021_13-23-00 VIDEO_28-07-2021_13-40-24 VIDEO_28-07-2021_13-58-32 VIDEO_28-07-2021_14-11-47 VIDEO_28-07-2021_14-26-47	491987	6530186	33.3	493576	6530939	28.0
T4	VIDEO_30-07-2021_09-44-13 VIDEO_30-07-2021_10-26-32 VIDEO_30-07-2021_10-41-32 VIDEO_30-07-2021_10-59-08 VIDEO_12-08-2021_08-39-07 VIDEO_12-08-2021_08-54-07 VIDEO_12-08-2021_09-09-07 VIDEO_12-08-2021_09-24-07 VIDEO_12-08-2021_09-39-07 VIDEO_12-08-2021_09-54-07	493505	6531105	20.0	491907	6530350	30.5



APPENDIX B SURVEY IMAGES/OBSERVATIONS LOG

Table 5.3 provides summary observations of substrate and biota observed in footage image captures (presented in Figure 3.2 to Figure 3.5). Descriptions of abundance, where possible, and the corresponding density or percentage cover are based on the SACFOR scale (Superabundant S; Abundant A; Common C; Frequent F; Occasional O; Rare R). Present (P) is used to describe biota observed in footage but where their abundance could not be reliably determined.

Table 5.3 Notes on observations of the RovingEye ROV survey

Image ID	Easting (m E)	Northing (m N)	Depth (m)	Substrate	Biota observed	Estimated Abundance	Density / % cover
T1-1	492114	6529877	37.7	Medium-fine muddy sand and shell debris	Polychaete burrows/mounds	P	-
					Urchin (<i>Echinus esculentus</i>)	O	1-9/100 m ²
					Harbour crab (<i>Liocarcinus depurator</i>)	F	1-9/10 m ²
T1-2	492401	6530011	37.6	Medium-fine muddy sand	Polychaete burrows/mounds	P	-
					Brittle star (Ophiuroidea)	C	1-9/1 m ²
					Harbour crab (<i>Liocarcinus depurator</i>)	F	1-9/10 m ²
T1-3	492675	6530133	35.5	Medium-fine muddy sand and shell debris	Plumose anemone	P	-
					Scallop	F	1-9/10 m ²
T1-4	493220	6530387	38.4	Medium-fine muddy sand	Polychaete burrows/mounds	P	-
					Scallop	F	1-9/10 m ²
					Brittle star (Ophiuroidea)	F	1-9/10 m ²
					Hermit crab (Paguridae)	O	1-9/100 m ²
					Common Starfish (<i>Asterias rubens</i>)	O	1-9/100 m ²
T1-5	493384	6530453	37.7	Medium-fine muddy sand	Polychaete burrows/mounds	P	-
					Hydroid	P	-
					Brittle star (Ophiuroidea)	F	1-9/10 m ²
					Slender sea pen (<i>Virgularia mirabilis</i>)	P	-
					Sand Mason (<i>Lanice conchilega</i>)	P	-
T1-6	493707	6530598	33.3	Medium-fine muddy sand	Polychaete burrows/mounds	P	-
					Scallop	F	1-9/10 m ²
					Brittle star (Ophiuroidea)	F	1-9/10 m ²



Image ID	Easting (m E)	Northing (m N)	Depth (m)	Substrate	Biota observed	Estimated Abundance	Density / % cover
HD-T1-1	492731	6530160	34.9	Medium-fine muddy sand and shell debris	Brittle star (Ophiuroidea) Hermit crab (<i>Paguridae</i>) Tower shell mollusc (<i>Turritella communis</i>) Unidentified burrowed polychaete or anemone Encrusting fauna on shells, hard substrate	F F F P P	1-9/10 m ² 1-9/10 m ² 1-9/1m ² - -
HD-T1-2	492841	6530204	34.4	Medium-fine muddy sand and shell debris	Polychaete burrows/mounds Tower shell mollusc (<i>Turritella communis</i>) Harbour crab (<i>Liocarcinus depurator</i>) Brittle star (Ophiuroidea) Unidentified burrowed polychaete or anemone Whelk Encrusting fauna on shells, hard substrate	P F F F P P P	- 1-9/1 m ² 1-9/10 m ² 1-9/10 m ² - - -
HD-T1-3	493384	6530454	37.9	Medium-fine muddy sand	Polychaete burrows/mounds Tower shell mollusc (<i>Turritella communis</i>) Brittle star (Ophiuroidea) Slender sea pen (<i>Virgularia mirabilis</i>) Sand Mason (<i>Lanice conchilega</i>)	P F F P P	- 1-9/1 m ² 1-9/10 m ² - -
HD-T1-4	493772	6530608	33.4	Medium-fine muddy sand	Polychaete burrows/mounds Tower shell mollusc (<i>Turritella communis</i>) Brittle star (Ophiuroidea) Unidentified burrowed polychaete or anemone	P F C P	- 1-9/1 m ² 1-9/1 m ² -
T2-1	493453	6530676	33.9	Medium-fine muddy sand and shell debris	Polychaete burrows/mounds Brittle star (Ophiuroidea)	P F	- 1-9/10 m ²
T2-2	493210	6530563	37.4	Medium-fine muddy sand	Polychaete burrows/mounds Tower shell mollusc (<i>Turritella communis</i>) Brittle star (Ophiuroidea) Unidentified polychaete tube	P F F P	- 1-9/1 m ² 1-9/10 m ² -



Image ID	Easting (m E)	Northing (m N)	Depth (m)	Substrate	Biota observed	Estimated Abundance	Density / % cover
T2-3	493083	6530507	39.3	Medium-fine muddy sand	Polychaete burrows/mounds Scallop Brittle star (Ophiuroidea) Unidentified polychaete tube	P F C P	- 1-9/10 m ² 1-9/1 m ² -
T2-4	492765	6530361	36.6	Medium-fine muddy sand	Polychaete burrows/mounds Harbour crab (<i>Liocarcinus depurator</i>) Scallop	P F F	- 1-9/10 m ² 1-9/10 m ²
T2-5	492597	6530275	37.5	Medium-fine muddy sand	Polychaete burrows/mounds Scallop Brittle star (Ophiuroidea) Tower shell mollusc (<i>Turritella communis</i>) Unidentified polychaete tube	P F C O P	- 1-9/10 m ² 1-9/1 m ² 1-9/10 m ² -
T2-6	492208	6530092	36.9	Medium-fine muddy sand	Polychaete burrows/mounds Scallop Brittle star (Ophiuroidea) Tower shell mollusc (<i>Turritella communis</i>)	P F C O	- 1-9/10 m ² 1-9/1 m ² 1-9/10 m ²
HD-T2-1	493336	6530612	35.5	Medium-fine muddy sand and shell debris	Tower shell mollusc (<i>Turritella communis</i>) Harbour crab (<i>Liocarcinus depurator</i>) Hermit Crab (Paguridae) Scallop Unidentified burrowed polychaete or anemone Encrusting fauna on shells, hard substrate	F F F F P P	1-9/1 m ² 1-9/10 m ² 1-9/10 m ² 1-9/10 m ² - -
HD-T2-2	493316	6530605	35.6	Medium-fine muddy sand	Polychaete burrows/mounds Brittle star (Ophiuroidea) Tower shell mollusc (<i>Turritella communis</i>)	P F F	- 1-9/10m ² 1-9/1 m ²
HD-T2-3	493011	6530465	40.0	Medium-fine muddy sand	Polychaete burrows/mounds Brittle star (Ophiuroidea) Urchin (<i>Echinus esculentus</i>) Slender sea pen (<i>Virgularia mirabilis</i>) Hermit Crab (Paguridae)	P F P P P	- 1-9/10m ² - - -



Image ID	Easting (m E)	Northing (m N)	Depth (m)	Substrate	Biota observed	Estimated Abundance	Density / % cover
HD-T2-4	492774	6530358	37.2	Medium-fine muddy sand	Brittle star (Ophiuroidea) Tower shell mollusc (<i>Turritella communis</i>)	F F	1-9/10m ² 1-9/1 m ²
T3-1	492117	6530257	32.7	Medium-fine muddy sand	Polychaete burrows/mounds Scallop Brittle star (Ophiuroidea)	P F F	- 1-9/10 m ² 1-9/10 m ²
T3-2	492431	6530410	32.5	Medium-fine muddy sand	Polychaete burrows/mounds Brittle star (Ophiuroidea) Tower shell mollusc (<i>Turritella communis</i>) Plumose anemone	P F F P	- 1-9/10m ² 1-9/1 m ² -
T3-3	492780	6530588	31.0	Medium-fine muddy sand	Polychaete burrows/mounds Urchin (<i>Echinus esculentus</i>) Harbour crab (<i>Liocarcinus depurator</i>)	P O O	- 1-9/100 m ² 1-9/100 m ²
T3-4	492833	6530597	30.4	Medium-fine muddy sand with fish farm waste deposits	Harbour crab (<i>Liocarcinus depurator</i>)	O	1-9/100 m ²
T3-5	493120	6530732	29.1	Medium-fine muddy sand	Polychaete burrows/mounds Brittle star (Ophiuroidea)	P C	- 1-9/1m ²
T3-6	493578	6530936	28.0	Medium-fine muddy sand	Polychaete burrows/mounds Brittle star (Ophiuroidea) Tower shell mollusc (<i>Turritella communis</i>) crab	P F F P	- 1-9/10m ² 1-9/1 m ² -
HD-T3-1	492017	6530209	33.5	Medium-fine muddy sand	Polychaete burrows/mounds Scallop Brittle star (Ophiuroidea) Hydroid	P F F P	- 1-9/10 m ² 1-9/10 m ² -
HD-T3-2	492485	6530429	32.3	Medium-fine muddy sand	Polychaete burrows/mounds Sand Mason (<i>Lanice conchilega</i>) Brittle star (Ophiuroidea) Unidentified burrowed polychaete or anemone Plumose anemone	P F C P P	- 1-9/1 m ² 1-9/1 m ² - -



Image ID	Easting (m E)	Northing (m N)	Depth (m)	Substrate	Biota observed	Estimated Abundance	Density / % cover
HD-T3-3	492873	6530617	30.2	Medium-fine muddy sand with fish farm waste deposits	Dense polychaete community	P	-
HD-T3-4	493136	6530744	29.2	Medium-fine muddy sand	Polychaete burrows/mounds Brittle star (Ophiuroidea) Hermit crab (Paguridae)	P F P	- 1-9/10 m ² -
T4-1	493504	6531105	19.7	Medium-fine muddy sand with red seaweed	Urchin (<i>Echinus esculentus</i>)	P	-
T4-2	493216	6530974	23.9	Medium-fine muddy sand with red seaweed	Scallop Common Starfish (<i>Asterias rubens</i>)	F F	1-9/10 m ² 1-9/10 m ²
T4-3	493053	6530892	24.6	Medium-fine muddy sand with red seaweed	Unidentified spider crab	P	-
T4-4	492720	6530739	25.1	Medium-fine muddy sand with red seaweed	Urchin (<i>Echinus esculentus</i>)	P	-
T4-5	492621	6530687	25.5	Medium-fine muddy sand with red seaweed	Tower shell mollusc (<i>Turritella communis</i>) Common Starfish (<i>Asterias rubens</i>)	P P	- -
T4-6	492209	6530493	28	Medium-fine muddy sand	Harbour crab (<i>Liocarcinus depurator</i>)	P	-
HD-T4-1	493216	6530974	23.8	Medium-fine muddy sand with red seaweed and shell debris	Common Starfish (<i>Asterias rubens</i>) Scallop Hermit Crab (Paguridae) Hydroid	F F F P	1-9/10 m ² 1-9/10 m ² 1-9/10 m ² -
HD-T4-2	493082	6530910	24.6	Medium-fine muddy sand with red seaweed and shell debris	Scorpion Spider crab (<i>Inachus dorsettensis</i>) Tower shell mollusc (<i>Turritella communis</i>) Hermit Crab (Paguridae)	F F F	1-9/10 m ² 1-9/1 m ² 1-9/10 m ²
HD-T4-3	492620	6530686	25.5	Medium-fine muddy sand with red seaweed and shell debris	Tower shell mollusc (<i>Turritella communis</i>)	P	-



Image ID	Easting (m E)	Northing (m N)	Depth (m)	Substrate	Biota observed	Estimated Abundance	Density / % cover
HD-T4-4	491906	6530351	30.5	Medium-fine muddy sand and shell debris	Polychaete burrows/mounds Harbour crab (<i>Liocarcinus depurator</i>) Scallop	P F F	- 1-9/10 m ² 1-9/10 m ²

