




Appendix A: Equipment List

Vessel	Description
<p data-bbox="108 309 384 338">Patrol Vessel St. Aidan</p> 	<ul style="list-style-type: none"> <li>- Built 2014/2015 at Goodchild Marine (Great Yarmouth)</li> <li>- 16metre GRP Catamaran, coded to MCA category 2</li> <li>- Top Speed 23knts</li> <li>- Multi-Purpose Enforcement/Survey Vessel</li> <li>- Carries 5.3m RIB onboard (TT St. Aidan), deployed via A-frame on stern</li> <li>- Without RIB, 'A' frame can be used to carryout grab-sampling, trawling and towing of multi beam equipment.</li> <li>- 1 ton starboard pot hauler</li> <li>- 1 ton twin drum north sea winch</li> <li>- Electronics include: Olex navigation, WASSP Multi Beam echo sounder, Hemisphere VS330 GNSS receiver, GNNS Global Correction Service, SMC IMU motion sensor. Nav-net 3 in 1, Furuno Sat compass, GPS, Furuno radar and Furuno comms suite. 2x computer stations operating windows 10 desktop PCs</li> </ul>
<p data-bbox="108 840 268 869">T.T. St. Aidan</p> 	<ul style="list-style-type: none"> <li>- Built 2014/2015</li> <li>- On-board P.V. St. Aidan</li> <li>- 5.3metre Ribcraft</li> <li>- 90 HP Suzuki outboard engine</li> <li>- Multi-purpose RIB used primarily for enforcement boardings but can also be used for close inshore survey work e.g. towing Starfish Side-scan Sonar. Garmin echomap 65 GPS plotter, iComm ICM 330 fixed V.H.F.</li> </ul>
<p data-bbox="108 1245 363 1274">Robert Arckless MBE</p> 	<ul style="list-style-type: none"> <li>- Built 2018/2019</li> <li>- 9.5 metre shore-based RIB (Ribcraft) coded MCA category 3</li> <li>- Twin 250 HP Suzuki outboard engines</li> <li>- Used primarily for enforcement work</li> </ul>

Inflatable dinghy



- Flat bottomed Zodiac inflatable
- 4 hp Suzuki outboard engine
- Used for estuary surveys

Equipment category	Item description	
Positional	HYPACK software and laptop	
	Garmin etrex 20 handheld GPS x2 Garmin etrex 22 handheld GPS x1	
	Garmin map 60Cx handheld GPS	
Acoustic	Starfish Sidescan 452F Including 50metres of tow cable and software key for Sonar TRX mosaic program	

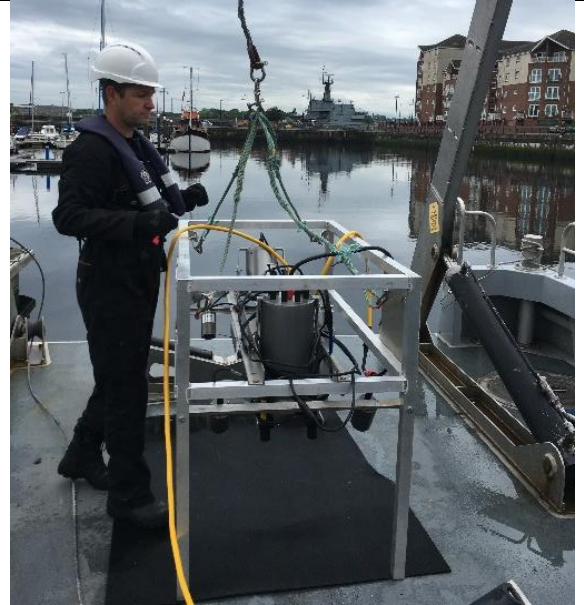
Linux laptop running OLEX software and multibeam, hardness licence



Video & stills

STR Seaspyder Camera with custom frame.  
Equipment consists of:

- STR Seaspyder 18Mp U/W digital still camera (18 mega pixels)
- STR Seaspyder High power U/W camera flash
- 4 STR Seaspyder 20W High intensity LED light
- 2 STR Seaspyder Subsea scaling laser (Red; 100mm spacing) (not 100mm spaced)
- Seaspyder camera frame (Figure 6)
- Recording Equipment
- Seaspyder top side equipment (2 monitors and 2 PCs) running SeaSpyder software



Custom camera sledge for UWTV Nephrops surveys, designed to best align with ICES WGNEPS member institutes.



Unmanned Aerial Vehicles (UAV)  
DJI Mavic 2 Pro + 6 batteries



FIFISH V6 Expert Remotely Operated  
Underwater Vehicle



Olympus Tough digital camera x3  
2.1m shockproof, 15m waterproof






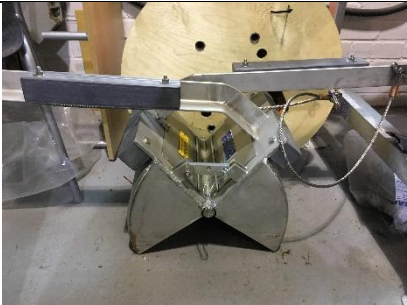





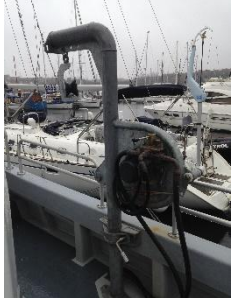
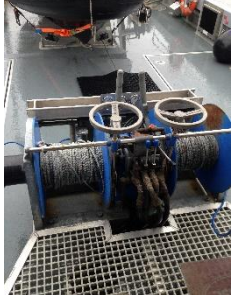
2 x GoPro 3+ black edition camera with  
accessories




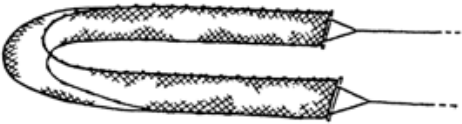






Sony HDR 260 8.9 megapixel camera  
Seapro waterproof housing  
Colour filters, L.E.D. light rig and two laser  
scale pointers  
Aluminium 'drift' frame



	<p>Waterproof Seapro housing To install GoPro camera (for live surface feed)</p>	
	<p>60 metres umbilical cable</p>	
	<p>160 metres umbilical cable (with video amplifier)</p>	
	<p>Surface box: GPS and text overlay, Lynn Hawk video enhancer, Pinnacle dazzle HD screen capture card, 7-inch LED screen, Getac fully rugged laptop including additional storage</p>	
<p>Seabed sampling</p>	<p>0.1m<sup>2</sup> offset Day grab and stand</p>	
	<p>0.1m<sup>2</sup> Van Veen grab</p>	

	<p>Grab table, damper and separator</p>	
	<p>Wilson Auto-Siever</p>	
<p>Deploy &amp; recovery</p>	<p>1000kg lift A-frame (St. Aidan)</p>	
	<p>1000kg Spencer Carter pot hauler</p>	
	<p>1000kg Spencer Carter trawl winch with 200 metres warp</p>	

<p>Fishing equipment</p>	<p>Assortment of lobster pots/fish traps, ropes, anchors and buoys</p>	
	<p>Beam Trawl 1.6m mouth</p>	
	<p>Standard estuary survey seine net Estuary Survey Seine Net 43m x 4m deep – 210/12 6.5mm &amp; 14mm</p>	
	<p>Sand eel seine net Knotless netting, fully rigged, in 17mm, 10mm and 5mm in the centre. Five Panels per net, 25 yards x 6ft deep</p>	
	<p>2 x Standard fyke nets (including anchors and buoys) 7-hoop large double dee fyke net 10 &amp; 14mm – 100cm x (2 x 5.3mtrs) – 32ft Leader</p>	
	<p>Fish storage buckets, air pumps, measuring boards and hand nets</p>	
<p>Intertidal survey</p>	<p>2 x 'Dutch wand'</p>	
	<p>2 x 6mm mesh aluminium sieve</p>	
	<p>2 x 1m<sup>2</sup> stainless steel quadrat</p>	

Sea temperature monitoring

2 x Surface Units  
20 x Temperature logger

