HM Submarine A1 Licensee report 2023

By

Martin Davies LRPS

Overview

The wreck remains in a stable condition with no more damage seen since last years report and no more illegal fishing has been observed over the season.

Diving

Once again, the weather has played a major part in diving activities this year on the site and diving did not commence util the 3rd week of June, with all previous dives planned cancelled due to either poor weather and or visibility.

6 visits were recorded over the season with a total of 33 individual dives done.

25th June 2023 – SSAC members visit.

Members of Southsea Sub Aqua Club visited the site for the first time in 2023, the submarine was noted as having no abnormalities.

16th August 2023 – Nautical Archaeology Protected wreck day.

Members of NAS visited the site on a protected wreck day visit, this is also combined with HMS Invincible on the same day. Filming took place on the wreck for the Historic England commissioned film, and I accompanied Mike Pitts while he filmed sequences for the documentary.

1st September 2023

Members of Southsea Sub Aqua Club visited the site again and dived on an around the site, a possible small munition was reported to me being seen near to the stern area after the dive.

8th September 2023

Members of NAS visited the site on a protected wreck day visit, this is also combined with HMS Invincible on the same day.

10th October 2023

Members of NAS visited the site on a protected wreck day visit, this is also combined with HMS Invincible on the same day.

Condition of the A1 Wreck

In general, the wreck remains in a stable condition.

The recent damage to hull plating in the stern area from abandoned fishing gear is still visible. The broken plating has been placed inside the hull at the stern and remains there.

There is much sediment and weed that flows over the site from Chichester harbour and so the site remains in a silty condition, that silt lies on top of the heavily concreted hull. The outer casing much of which has dissolved at the forward area remains more fragile around the stern where it is still intact and visible. The previous damage from potting shows how fragile the wreck is in places and reinforces the need to police the site regarding commercial fishing.



Figure 1 - The main damage to the outer casing one year on.

The crack in the conning tower looks similar to previous years and is difficult to measure accurately as a monitoring activity. Looking at the two images that are 14 years apart they are both very similar indicating that decline is very slow and subtle on the site. There is far more risk of damage from fishing effort and divers shot lines than from the sea and natural forces. Marine growth and concretion build up over 113 years has been one of the best protections for the boat. Looking at the two images below for comparison and although not taken with the same lens, the later image actually looks less, this could be because of some lens distortion (obvious by the curving of the conning tower) and just more marine grown.



Figure 2 Image of the conning tower taken in 2009.



Figure 3 Image of the conning tower taken in 2023.

The Torpedo loading area remain open and the actual hatches are on the seabed one on each side of the boat.

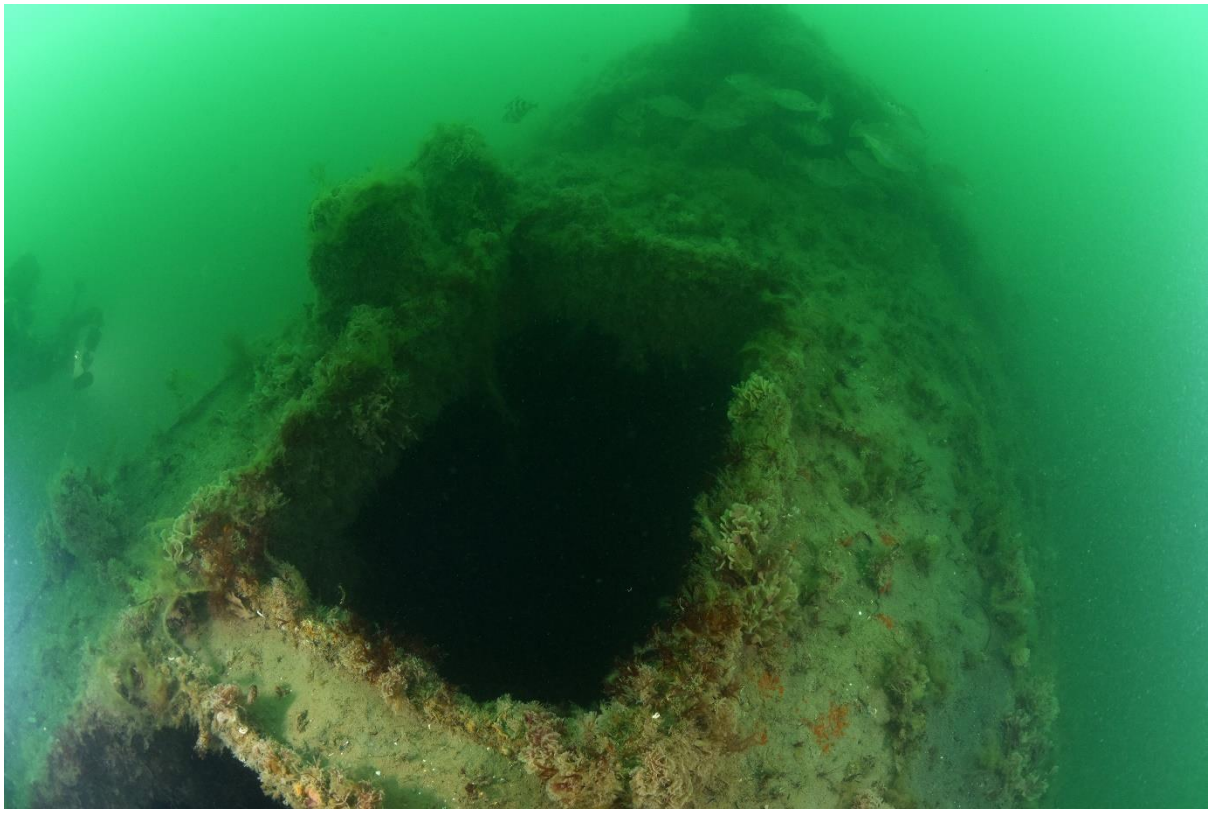


Figure 4 View of the most forward Torpedo loading hatch.

On the Port side of the boat lies one of the hatches, this covers and uncovers depending on the time of year and how much silt has been deposited over the winter season. This hatch looks to be an original hatch and appears to be in poor condition from what can be seen of it.



Figure 5 The port torpedo loading hatch, now on the seabed.

The other Torpedo loading hatch is also disconnected from the boat and lies on an angle on the Starboard side, it is more visible and looks in slightly better condition, although it is not clear that this is an original hatch. The Navy's Southern Diving Unit 2 were instructed in the early years of discovery to replace the hatches and seal the boat up, this only lasted for a short period until local divers ripped them off to gain access to the inside again to carry on the looting.



Figure 6 The Torpedo loading hatch on the Starboard side.

Marine Life

The wreck site has always been a great site for marine life and has supported many species over the years. All the usual fish and crustations can be seen depending on the month you visit. Portsmouth and Southampton water are one of the busiest areas for marine traffic and dredging operations are happening continuously somewhere in the area, whether that be a marina clearing an assess channel or one of the harbours doing maintenance dredging. In 2016 the waters of Bracklesham Bay were turned black for many months while 3 million cubic metres of sediment were removed from Portsmouth harbour and Southampton water and dumped locally at the NAB disposal area. This was to make the channels deeper and wider for even larger vessels to enter the harbours. This polluted water had a serious effect on marine life on the wreck, in that in 2017 there was virtually no life/marine grown left on the surface of the boat. It has taken from 2018 to now for some species to return and colonise the wreck. In 2022 the wreck was densely covered in a species of ascidian called Molgula, these had not been seen in such concentrations on the site and so it was intriguing to know why they has just arrived and how they had multiplied so quickly over the winter period. In the 2023 season when we did the first dive on the site the interesting fact was that they had all disappeared as fast as they had appeared. Most sea squirts are filter feeders, and they siphon water through their bodies, extracting nutrients to grow. in this case through an inlet tube and exhaust through a second tube. Water quality is in important part of their life cycle, although they are very resilient and tolerant of poor water quality.

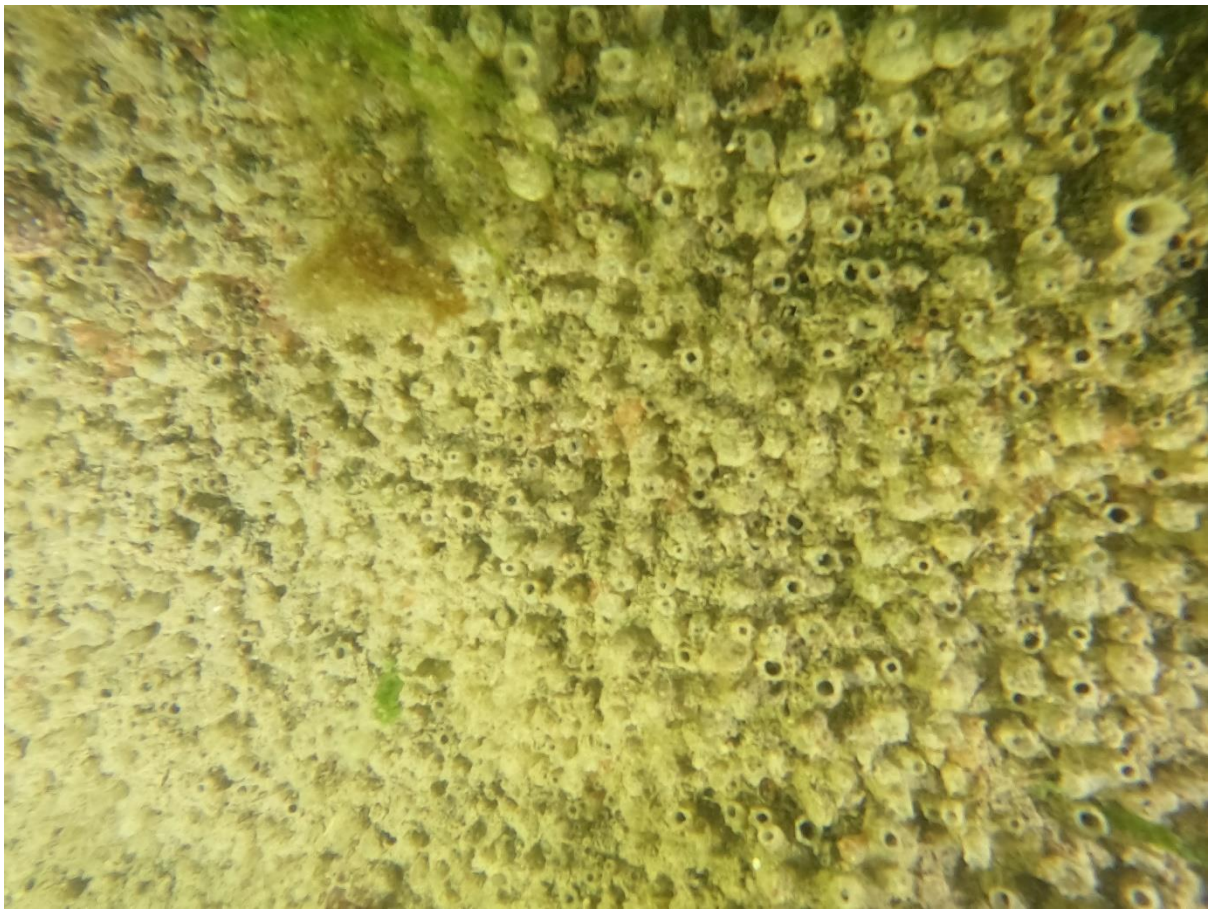


Figure 7 A dense population of Molgula & Polycarpa was seen in 2022.

In the 2023 season it was also noted that there were the begins of some shredded carrot sponge (Amphilectus fucorum) growth around the bow area and on the side of the conning tower. The sponge has always bee present on the bow until the 2016 dredging event, so it is good to see the start of its return after 5 years of not being present. Shredded Carrot Sponge also needs reasonable water quality to survive. Shredded Carrot Sponge can be easily identified by its bright orange tasselled appearance, it is a common species around the UK coast line.

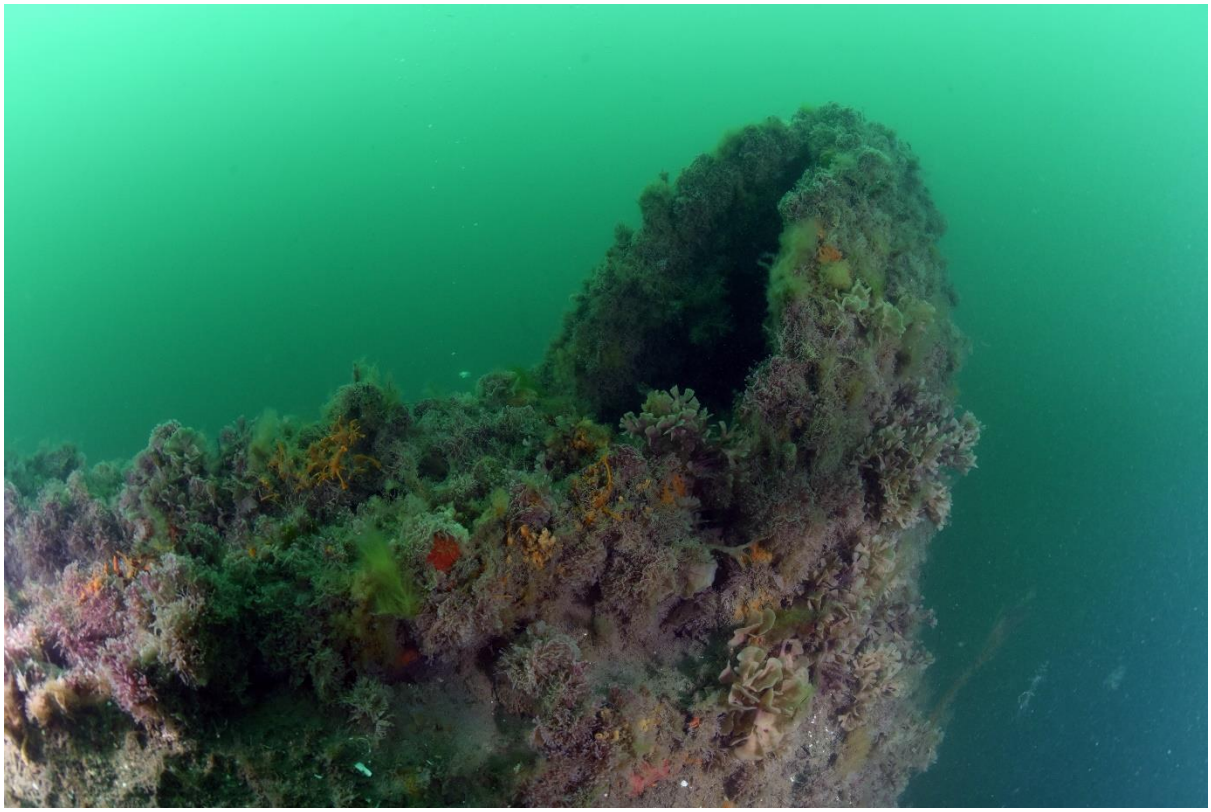


Figure 8 Shredded Carrot sponge can be seen growing again for the first tim in 5 years.

Observations

During one of the visits this season there was talk of a possible sighting of a munition, on a subsequent visit I located the object and took a few pictures of it along with some measurements. The object does resemble that of a 4-inch projectile approximately 10 inches long and 4 inches in diameter and has the possibility of being fired from a 4-inch BL gun which was used by the Royal Navy around 1908. If this were correct then this ties in with some recent research that states that when the A1 was being used for experimental purposes, one of the experiments conducted was to fire Lyddite shells at the submarine. This was to ascertain the effects of explosions on the hull of the submarine and how easy the vessel would sink. Some of the research suggest that the shells were to explode under the water and not directly to impact on the boat. As Lyddite had been successfully used in the Boer war it had been observed that the shell could produce a very powerful pressure wave which in itself killed many solders and horses. Though its destructive capability with regard to destroying building was noted as not up to expectation, however the pressure wave was very effective in killing personnel. The thinking behind the shells exploding underwater was to create a pressure wave that could break open the hull and, hence destroying the enemy. This is believed the first thoughts of the development of the depth charge, although it was not until 1915 the that explosives with “hydrostatic pistol” were trialled successfully which was developed into the modern-day depth charge that was used extensively throughout the two world wars as an anti-submarine weapon.

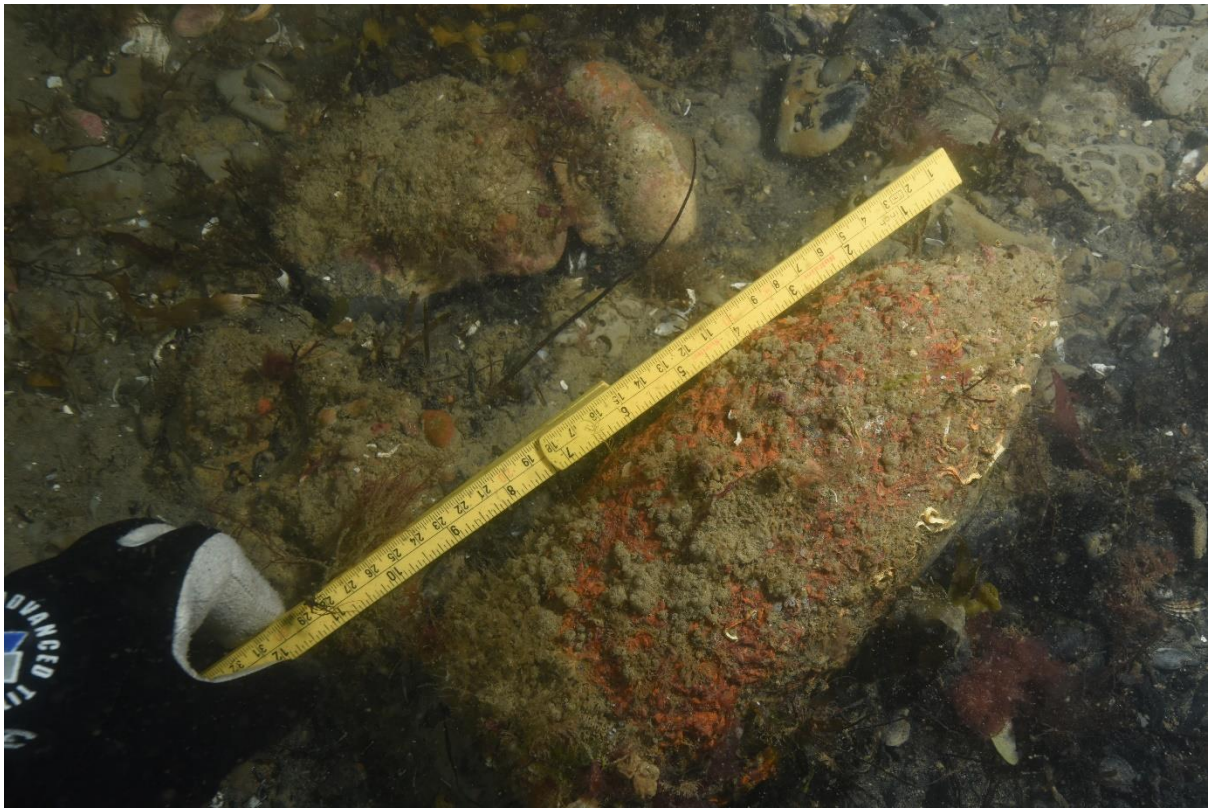


Figure 9 Possible 4-inch shell seen near to the submarine.

Other activities

This year a grant was received from Historic England to produce a Conservation Statement & Management Plan for the site. The aim of the document is to set out a clear and concise plan for the site coupled with extensive research to understand and expand the knowledge of the early years of the submarine service and the development of British submarines. The team has conducted a large amount of research on the submarine over the summer months to establish new information. Visits to National Archives, the National Museum of the Royal Navy, The Submarine Museum, Greenwich Maritime Museum, and the Shipwreck Centre on the Isle of Wight were conducted. As a result of the extensive research carried out in the first tranche which also accessed the British Newspaper Archives, a paper was given at the NAS Conference this year outlining some of the new information that had come to light about the boat. The Presentation was delivered by myself and D. Douglas M^{c}Elvogue who is assisting the team with the production of the plan.

A1 and Art

Back in 2018, I was contacted by an artist who was doing a project in underwater scanned images and turning the into art. Oscar Eaton, visual Artist and Printmaker, took many of my images of A1 I had taken and turned them into art. They were finally exhibited called “Sub Solent” in London this year at the Espacio Gallery over the week 1st to the 6th August.

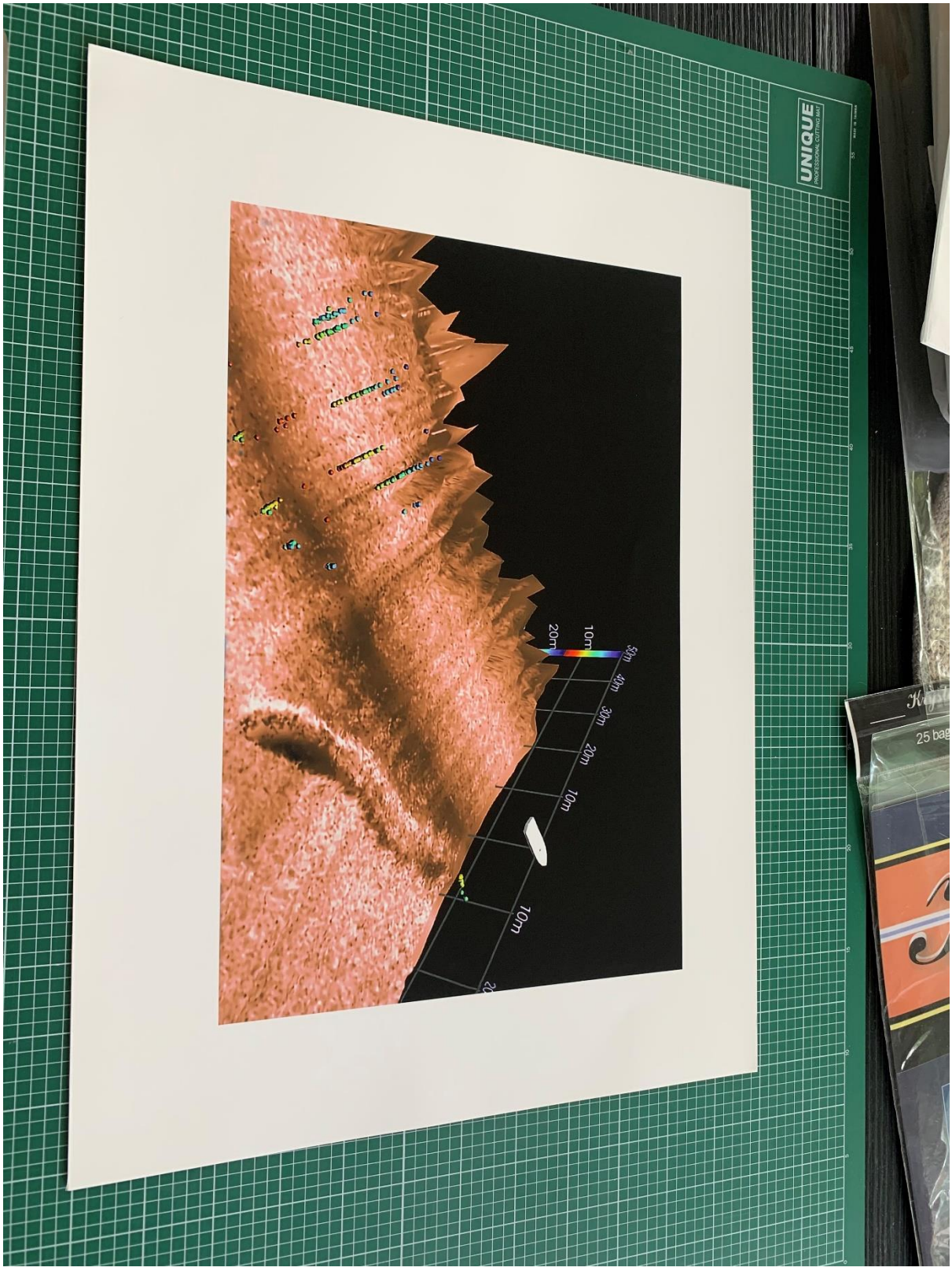


Figure 10 One of the sonar images that was turned into visual art by Oscar Eaton.

Sediment Sample

The planned sediment sample removal that was going to be taken from the inside of the boat has not taken place yet as it has taken a while to manufacture the equipment to take the sample. This activity will now take place in 2024.

Plans for 2024

As Licensee my main aims for 2024 are:

- Continue to promote the historical importance of the wreck and facilitate access under the terms of my License.
- Continued monitoring of the wreck condition/structure including the development of a plan for consideration by HE to conduct hull thickness testing for comparison against previous measurements taken by Wessex Archaeology.
- Sediment sampling from inside the hull of the wreck in support of project CHASM.
- Continue support to Operation Oyster.
- Get a specialist team of Seasearch surveyors to look at the marine life in detail on the boat.

Copyright Statement

© Martin Davies

This report has been produced by Martin Davies. Unless otherwise stated, Martin Davies holds copyright for the written content of this report. All images belong to Martin Davies must not be further used or reproduced without prior express permission of the copyright owner, Martin Davies. Permission shall be granted to reproduce this content for personal and educational use only with prior written permission of the copyright owner. Commercial use is prohibited without prior written agreement of the copyright owner.