HM Submarine A1 Licensee report 2022

by

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Overview

The wreck of A1 remains in a stable condition apart from the recent damage mentioned in the previous report which is updated below. This calendar year has seen a slow return to diving for many people after Covid-19 pandemic despite settled weather over much of the summer.

Diving

The weather over the year has been mixed and the majority of planned visits went ahead. Several groups of divers have dived on the wreck of submarine HMS A1 site over the year they are listed below.

Dive 25th April – Nautical Archaeology Society (NAS) protected wreck dive
This was the first dive of the season to check out the wreck after winter, the site was as expected and had weathered the winter storms well, 4 members of the NAS dived on the site.

Dive 2nd May Southsea Sub-Aqua Club (SSAC)
Myself and Douglas McElvogue from SSAC dived the site to review the fishing tackle prior to its planned removal later in May and to confirm the methodology for the work on the site. Two other SSAC divers also visited the site.

Dive 9th and 10th May Fishing Gear removal
These dives were carried out in accordance with the Historic England (HE) approved work project to remove the illegal commercial fishing gear which was causing damage to the wreck. This activity was financially supported by Historic England with MSDS Marine Ltd as the diving contractor. A total of 5 commercial divers took part in the exercise.

Dive 23rd May – NAS protected wreck dive
Another visit by 4 members of NAS on a protected wreck day visit.

Dive 8th July - Chester BSAC
A group of 12 divers from Chester BSAC visited the site during their week-long visit to the area.

Dive 4th August – BSAC Operation Oyster
Operation Oyster is a British Sub-Aqua Club (BSAC) citizen science initiative to look for European native oysters (*Ostrea edulis*) around the UK and in particular along the south coast and in the Solent area. The project leader had contacted me and asked if a group could dive the wreck and look for Native oysters. A total of 8 divers visited the site surveying for oysters. Several native oysters were seen.

Total number of visits site = 7
Total number of divers = 40

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. Three broken pieces of hull plating are located inside the area where they appear to be safe but not secured. The plates were temporarily removed for photographic purposes and replaced. The broken pieces of hull plate can be seen in the images below.

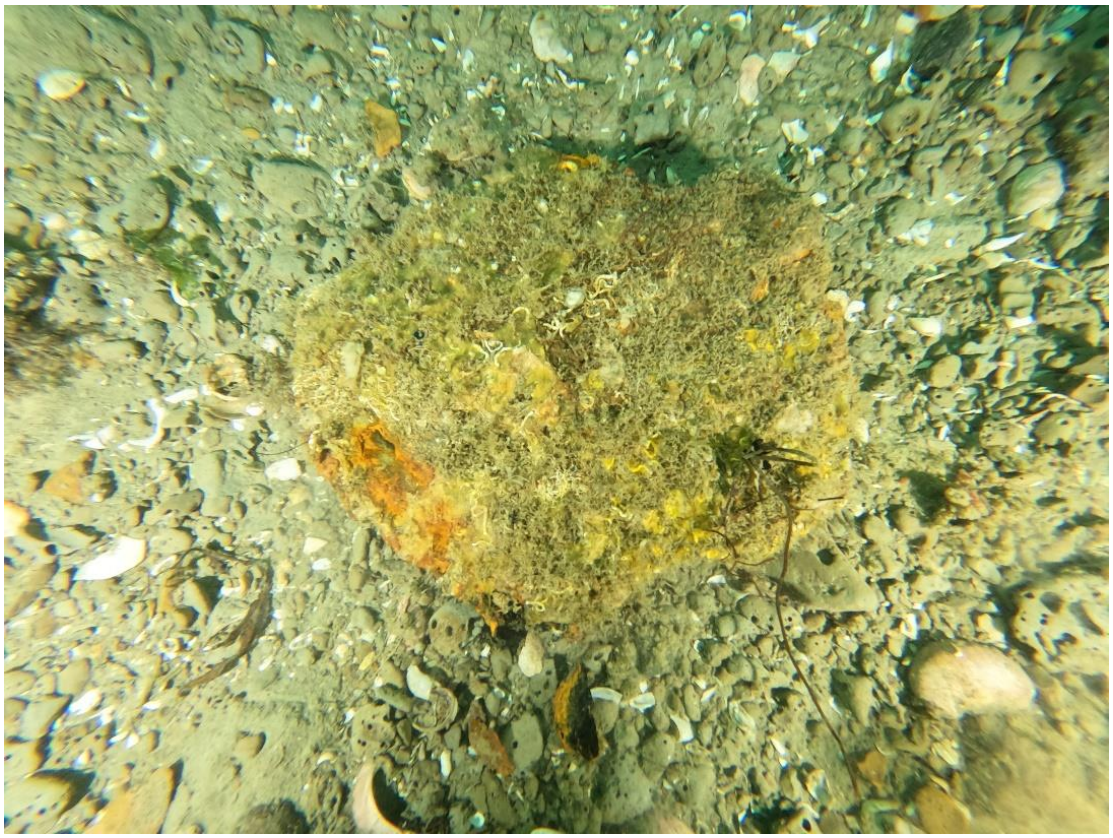


Figure 1- 1st of the broken hull plates stern port side (Image ©Martin Davies)



Figure 2- 2nd of the broken plates stern port side (Image ©Martin Davies)

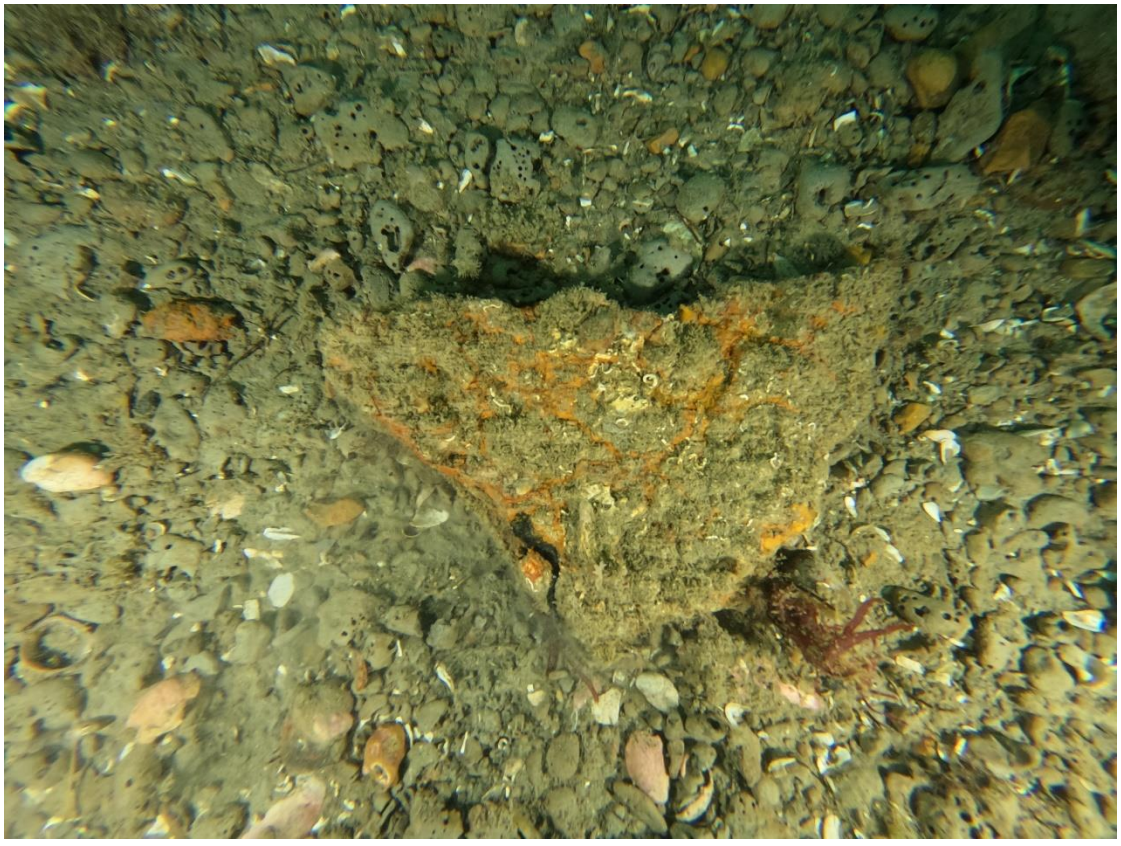


Figure 3- 3rd of the broken hull plates stern port side (Image ©Martin Davies)

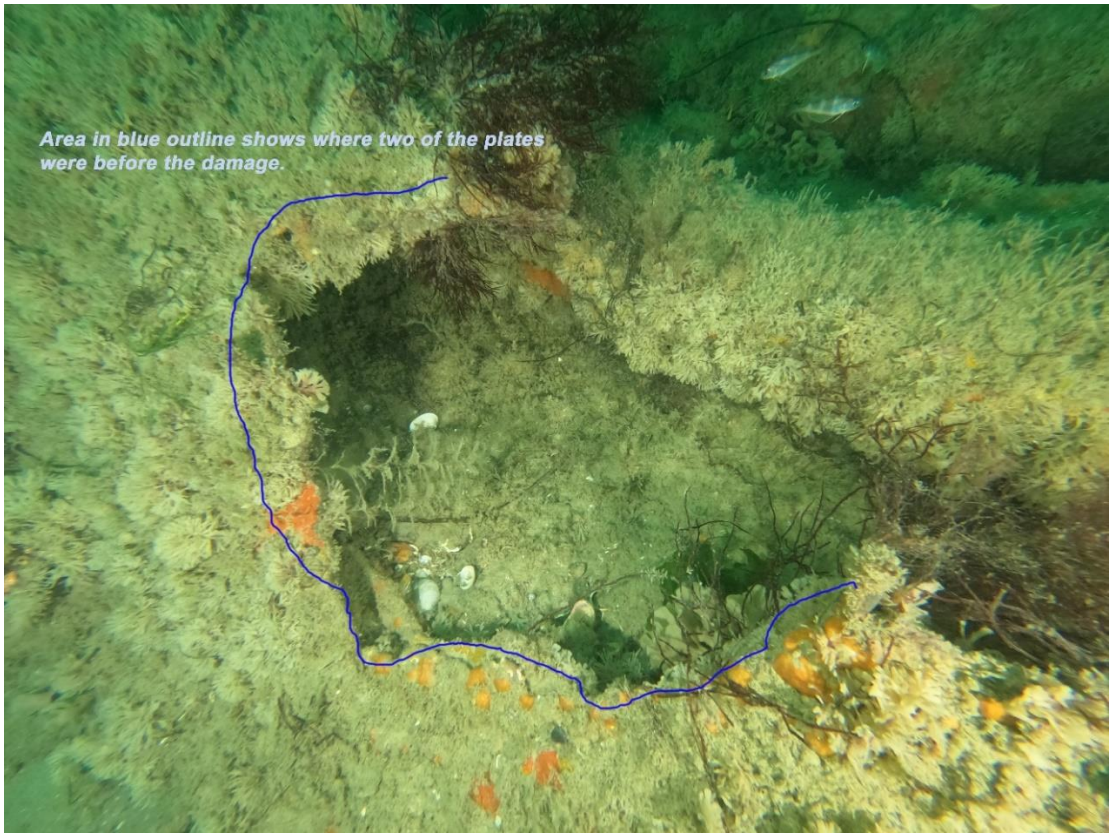


Figure 4 - images shows where two of the plates would have been. (Image ©Martin Davies)

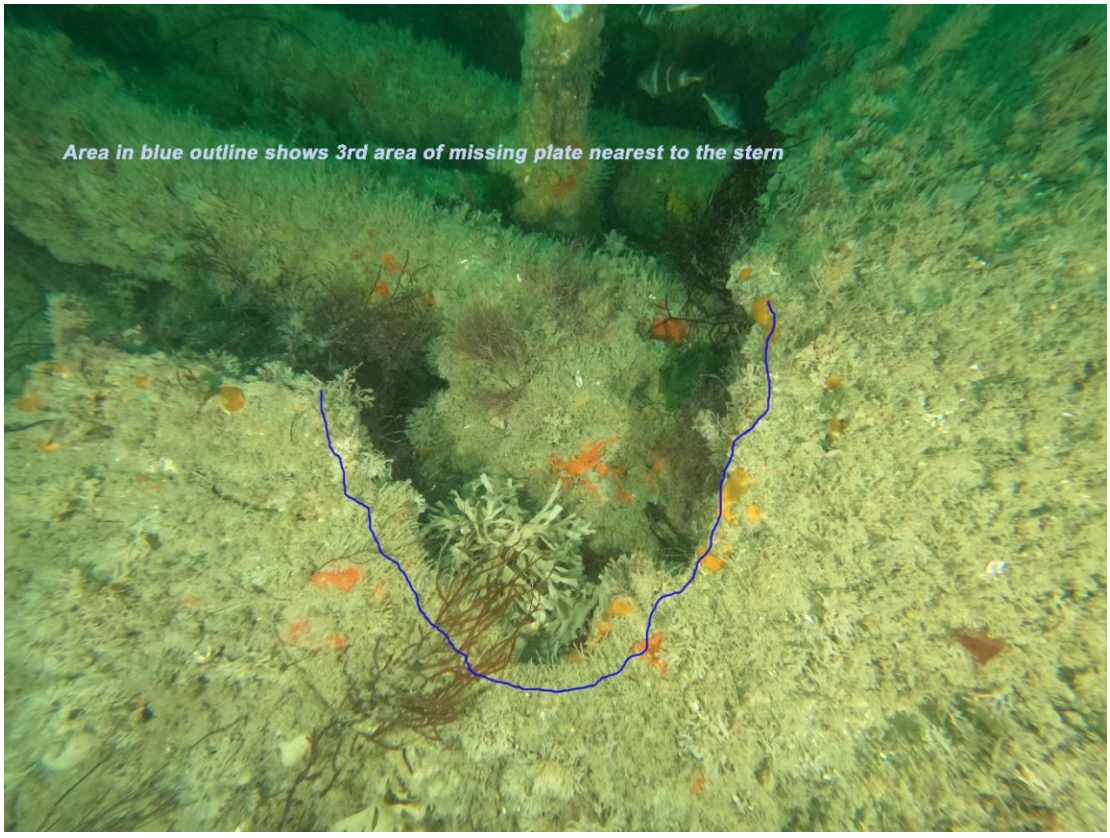


Figure 5- Area shows where the 3rd plate fitted (Image ©Martin Davies)

HE Approved Diving Operation – Removal of Abandoned Fishing Gear

A diving project to remove the remains of the fishing gear comprising of rope and rectangular cuttlefish pots, was approved and funded by HE (Project reference 8519). The diving was conducted in accordance with HSE Diving Regulations. The importance of removal of the tackle was not only to prevent further damage to the wreck site but also to remove the hazard of entanglement to divers visiting the site.

From initial reporting of the pot in October 2020, the main cluster of abandoned pots around the stern had been degrading to a point where they were no longer recognisable as pots and had intertwined with a mass of heavy pot rope. The mass of pots and rope had moved to the south at a right-angle to its original position and was also trapped under a large isolated piece of rock (2x1x1m) that lies 70m to the south. The rock marked the end of the string of pots as there was a chain attached when the line was first followed from the submarine.

It appeared that there may have been an attempt by another party to recover the pots in the period from October 2020 to April 2021 and this action may have contributed to the damage to the hull plating of the submarine. The serviceable pots that had tags on had been removed. We were hoping that if recovered an identification tag could be found in the mass of rope and pot remains. However, this was not possible as the pots with tags have disappeared.

The diving phase of the project took place in May 2022 over two days. The pot rope was cut from around the submarine and a length of rope to the isolated rock around 70m away was removed.

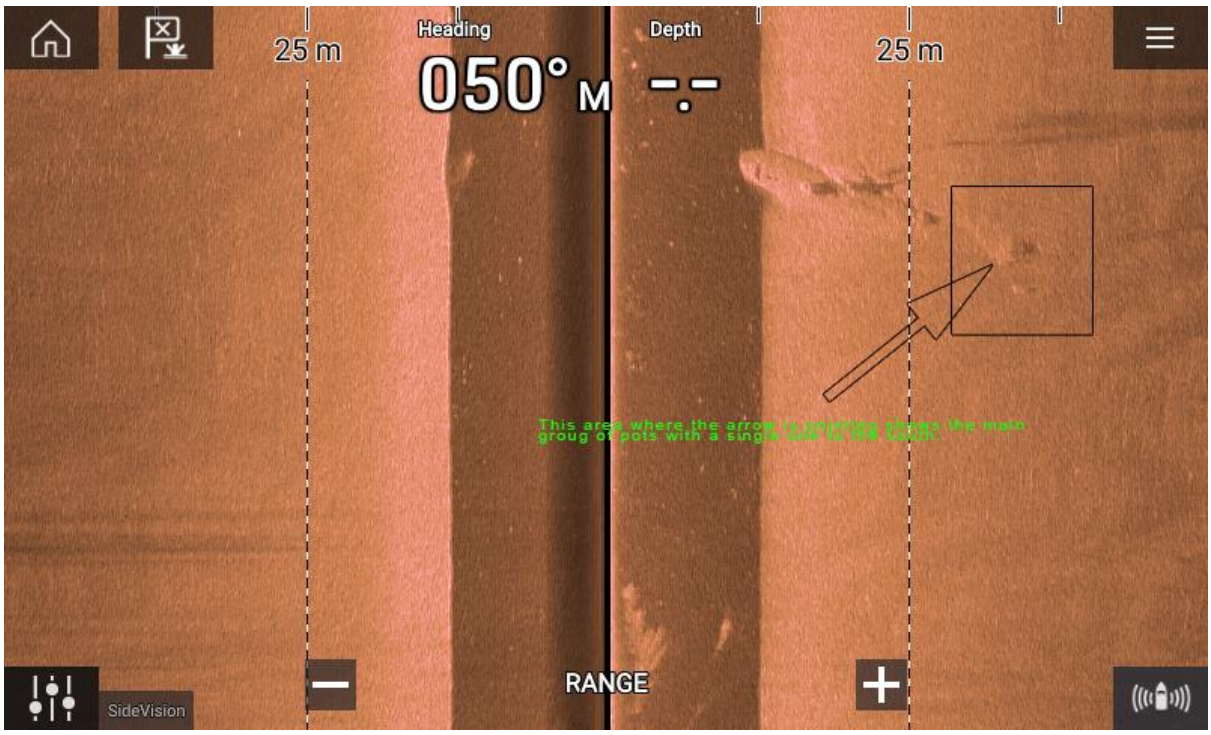


Figure 6 – side scan sonar image showing the main cluster of pots and rope in October 2020 (Image ©Martin Davies)

Police investigation into illegal fishing activity

Under Designation Order No 2393, 2004 Made: 12th September 2004 and coming into force: 5th October 2004 a Protected area 300 metres of the wreck which makes it an offence to conduct activities such as fishing, anchoring or diving the within the Protected area without express

permission. The presence of abandoned fishing equipment was initially reported to Sussex police and Sussex IFCA[1] in late 2020. To my knowledge the Sussex Police investigation was closed in 2021 as no new evidence had been found by their investigation.

The project aims were to not only recover the mass of tackle but to search the remains for an identification tag. Whilst the recovery of the mass was successful, we did not find any remains of an identification tag that had previously been seen on one of the pots.

Douglas McElvogue of Trendive Ltd had arranged for a solicitor to be present to witness the recovery and had we found an identification tag then it would have been seen and witness by a legal entity. All images taken were digitally signed by the solicitor and memory cards erased prior to work beginning witnessed by the solicitor. This methodology we deemed right and appropriate should a tag have been located and this would have bolstered up the case for prosecution.



Figure 7- Some of the rope and pot remains that were recovered (Image ©Martin Davies)

During our work to recover the fishing tackle in May another fishing boat was observed by the team and Terry Newman from Historic England who was on the boat on Monday the 9th May 2022. The fishing vessel was laying pots we believe very close to the exclusion zone and so this has been reported to Hampshire Police and the investigation and I believe this investigation ongoing.

[1] Inshore Fisheries and Conservation Authority https://www.sussex-ifca.gov.uk/



Figure 8- The fishing boat seen laying pots close to A1 9th May 2022 (Image ©Martin Davies)

CHASM Project

The CHASM[2] project (Crustaceans, Habitat and Sediment Movement) is an initiative co-ordinated by Chichester District council on behalf of Selsey fishermen who have seen diminishing catches over many recent years. The CHASM project is taking a holistic approach to examine factors that may have impacted on the local crustacean population including trends in water quality such as sediment and chemical pollutants. Sediment samples from around the West Sussex coast are being taken for analysis and future monitoring. One of the sites identified in support of the CHASM project is the submarine A1 as it has been used in the past for sampling (2008) and therefore already has baseline data. Small samples have been taken from around the outside of the wreck in 2021 and analysed for basic composition. However, there is potential to obtain valuable data from the silt deposits within the submarine itself.

In 2022 I had asked permission of HE to remove a core sample from inside the submarine torpedo loading hatches, as it is believed that there is a greater timeline of sediment that can be analysed should such a sample be gained. HE has approved the request[3] and it has been confirmed that the removal of sediment is permissible under a scientific exemption of the MMO regulations. Equipment is being developed to undertaking the task. The internal sample has not been taken to date and this will be planned into 2023 diving season.

Operation Oyster -British Sub-Aqua Club

[2] https://peninsulapartnership.org.uk/projects/chasm/
[3] Email Terrance Newman to Martin Davies 24 February 2022

Operation Oyster[4] is one of the largest environmental projects ever organised by BSAC, Operation Oyster aims to engage members, divers and snorkellers in helping to rehabilitate the UK's vulnerable native oyster (Ostrea *edulis*) beds. Operation Oyster is a nationwide citizen science project through which divers and snorkellers can contribute to the data held on the native oyster populations around the British Isles.

Working with BSAC's partners[5] all the data gathered by Operation Oyster will directly support the long-term restoration of the native oysters' natural habitat and ultimately increase their population numbers around the UK.

As part of this project "Solent Oyster" was to visit several areas of the Solent looking for the species. The dive on the wreck of A1 was to establish sightings of native oysters currently and also to look for evidence of historic (dead) oyster shells.

The divers observed a small number of native oysters over the wreck in various places but no significant volume. Divers noted the large amounts of empty slipper limpet (Crepidula *fornicate*)[6] shells at the bow, which I have not observed for a long time. This is possibly a reflection of how mobile the seabed is in the area. Being relatively shallow the action of tide and wave action can easily move small items around and the scour at the bow acts as a collection point.



Figure 9- Large amount of Slipper Limpets shells at the bow area. (Image courtesy Andrew Hunt)

[4] https://www.bsac.com/advice-and-support/protect-our-seas/operation-oyster/
[5] The Zoological Society London (ZSL), University of Portsmouth, the Blue Marine Foundation and Seawilding.
[6] https://www.wildlifetrusts.org/wildlife-explorer/marine/sea-snails-and-sea-slugs/slipper-limpet



Figure 10- Observation of a dead native oyster on the seabed. (Image courtesy Andrew Hunt)

The Operation Oyster project is ongoing and likely to be something I can support to see if there is any increase in the small population of native oysters on the wreck over a period of years. There are synergies with the CHASM project mentioned earlier in this report in that water quality is important as oysters are filter feeders. The large population of empty slipper limpets may be an indicator of other species being impacted by changes in the marine environment.

Risks

Whilst the deterioration of the wreck is very slow action is needed to minimise any activity that accelerates the wrecking process. The risk of changes to the marine environment through climate change and water quality are unknown and this may be an area for investigation in the future.

The main threat to the wreck is believed to be that from commercial fishing as highlighted in this report. A secondary risk is the placing of heavy shot weights on or close to the wreck by diving groups and divers should be conscious of this when shotting the site prior to diving. In order to reduce the risk of damage by shot weights it is recommended that consideration be given to a semi-permanent buoy marking the site over the summer months. This would also serve as a reminder and deterrent to commercial fishing boats who are either unaware of the Restricted area under the Protection of Wrecks Act or who target the site in the hope of yielding extra catch due to the protection afforded by the legislation.

Plans for 2023

As Licensee my main aims for 2023 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.
- Support to Operation Oyster and other citizen science projects such as Seasearch.

Conclusion

The A1 remains one of the UK's finest examples of a Royal Navy A class submarine which continues to be of interest to the public and to the recreational diving community. The wreck of A1 is also being recognised in the wider scientific world as a resource which may help develop a greater understanding of the threats to the marine environment.

However, the wreck itself remains under threat and regular monitoring is essential to assess the impact of these risks.