

LICENSEE REPORT FOR THE SITE OF HMS *INVINCIBLE*

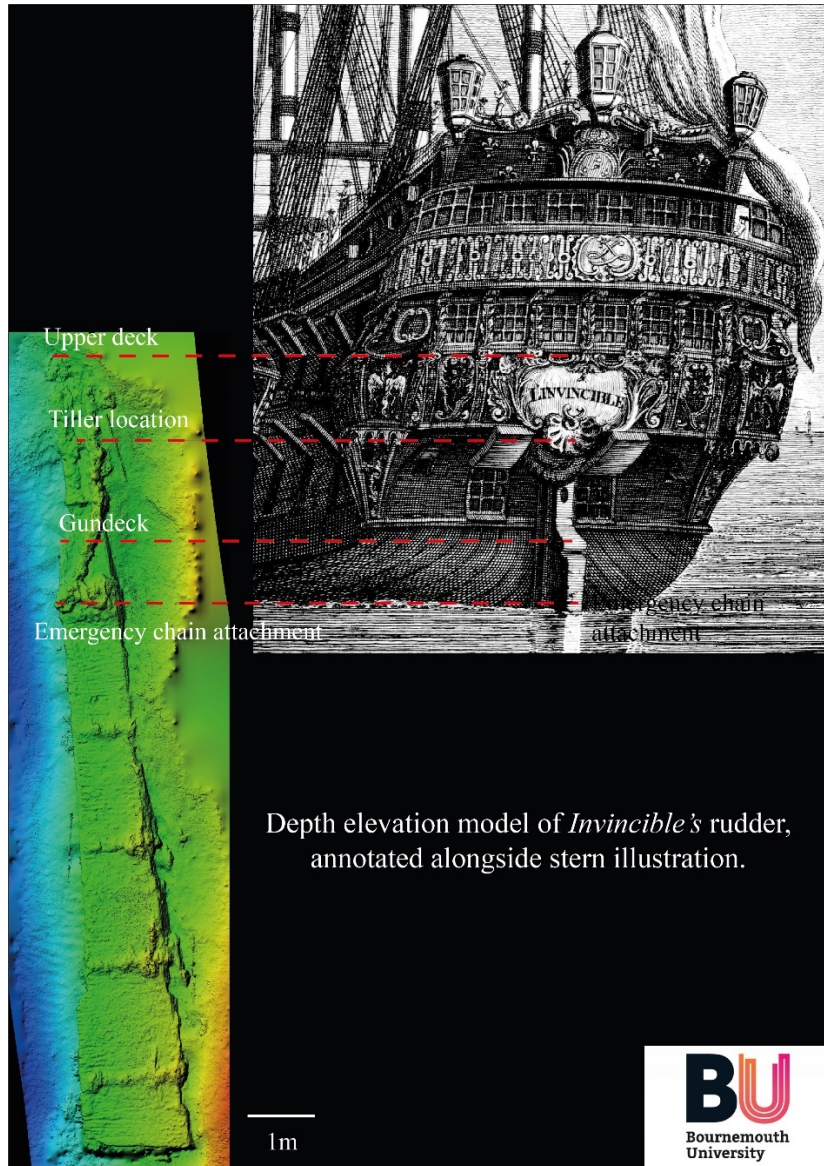


Image showing DEM of rudder annotated alongside stern illustration of *Invincible*.

2022

Compiled by
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DIVING

NAS Protected Wreck dives

This year there were three successful protected wreck diving days with the NAS and NAS diving club.

Bournemouth University Dives

On the 24th May 2022 the rudder was discovered 55m ESE from the stern end (SE end) of the remains of the port side. This was during an annual inspection of the site to check that the in-situ protection placed over the 2017-2019 excavation areas was still in place. After divers reported that the in-situ protection was still secure and also covered by natural infill, exploratory dives were conducted to investigate anomalies around the site.

One such anomaly was off the stern end and had shown up periodically on past multi-beam bathymetry. This anomaly had been ground-truthed by Wessex Archaeology in 2003. At that time, it was described as: *'The anomaly appears to be a rectangular concretion measuring approximately 4 metres long and 1.5 metres wide. It was a composite of wood and iron, and had no clearly identifiable form, though all of the components were consistent with the remains of a wooden vessel. Close inspection revealed that the anomaly consisted of layers of wood, iron concretion and unidentified organic material'* (WA 2003, 6-7)..

From this description, the shape of the anomaly visible on the 2003 bathymetry and its location off the stern, the Licensee suspected it was the rudder. The Licensee has been diving the position since 2012 in the hope of confirming its identification. It has, however, always been buried until now. The current exposure is the result of local seabed erosion, likely linked to the movement of Horse tail Sand in a southerly direction.

The dive team from Bournemouth University carried out a preliminary photogrammetry survey and video record. The exposed extent of the rudder is 11.6m long, 1.62m wide at the lower end and 0.65m at the head end (Figures 1). It is to be complete with all its identifiable features, such as pine sheathing over the hard wood timber structure; five iron pintles and iron strapping at the head end; emergency chain attached to a ring on the outer edge, which lies across the upper end of the rudder; and two pedant hole between 3rd and 4th and 4th and 5th pintel. It also has a carved feature on the outer side of the rudder where aligns just below entry into the gundeck (Figure 1).



Figure 1: Showing the textured model of the rudder as recorded in May 2022.

In August Historic England commissioned Bournemouth University to conduct diving operations to record and rebury the rudder. This project was successfully carried out on the 28-30 September. A combination of geotextile sheets and ten tons of gravel sandbags were placed over the rudder (Figure 2 and 3). The rudder was recorded in detail before it was reburied (Figure 4). The Licensees is extremely grateful for the funding which has assured the protection of this unique object for the short to medium term. Monitoring of the rudder will continue next year to make sure it remains covered.



Figure 2: Diver covering the rudder with geotextile sheet.



Figure 3: Section of rudder buried by geotextiles and sand bags.



Figure 4: Showing textured model of rudder as recorded in September 2022.

INVINCIBLE 1744 DIVING DEEP EXHIBITION

The Diving Deep exhibition moved from Portsmouth Historic Dockyard to Chatham Historic Dockyard in November 2021 and was on display until the end of November 2022. From Chatham it moves up to NMRN Hartlepool for a third exhibition.

CONSERVATION

The first phase of the PEG treatment has finished on the cut-water. When the PEG solution reached 40% the second phase of heat treatment began. The tank has been fully insulated and a heating system installed to heat the PEG solution (Figures 5 and 6). This will continue until the solution reaches 80%.

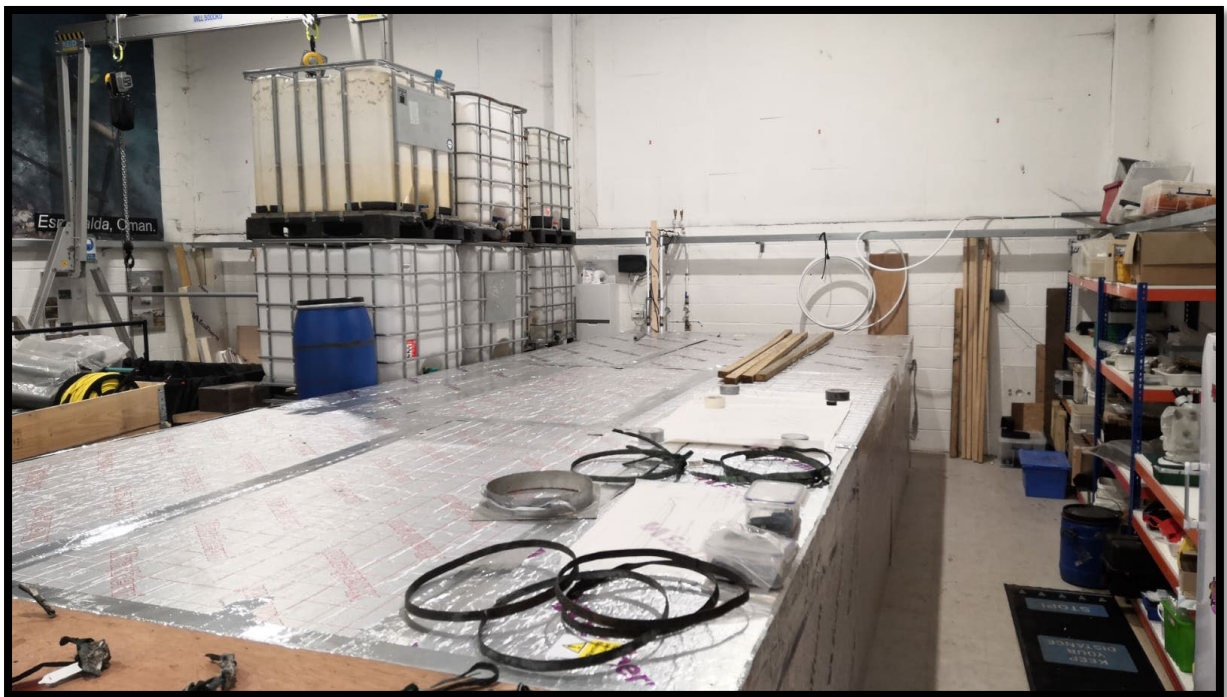


Figure 5: The cut-water tank, sealed and fully insulated for hot PEG treatment.



Figure 6; The gas heating system heating the PEG inside the tank.

Finds recovered

A turned wooden bowl was found exposed outside the gun deck structure of the port side (Figure 7). This area has only recently been uncovered and demonstrates the potential for further small finds in this area and at risk. This area will be monitored closely next season. The bowl is currently desalinating at Bournemouth University's conservations facilities. Following desalination PEG treatment will start followed by freeze drying at York Archaeological trust.



Figure 7: Wooden bowl recovered this season.