

# **The Warship Hazardous Project Site Report**

## **November 2013.**

### **Introduction**

After the very poor weather conditions through the winter months, the hoped for early start to the season in March did not materialise. This summer has been generally good with very warm, sunny weather, however the considerable rain through the winter meant a lot of fresh water runoff into the Bay, bringing with it a lot of soft sediment, this has made visibility under water generally poor for much of the time. Strong south westerly winds have prevailed as opposed to past years when the summers have seen mainly light winds from the north.

The shingle movement along the coast from an easterly direction throughout the year continues unabated, both the Environment Agency & Bunn Leisure is carrying out major sea defence works east of the site. This work was programmed for completion early in the summer, but as suspected, it continued at least in part up until early October, when a breach was opened in the shingle bank at Medmerry to allow the Environment Agencies “Managed Realignment” of the coast, (*at a cost of many millions of pounds*). It remains to be seen what effects this work will have on the wreck site & its surroundings, as well as the shape of the bay generally. The slipway at Bracklesham remains unusable for long periods during the predominant south-westerly weather patterns. As stated previously, at the end of September (*this year extended to mid October*) through to the beginning of April, when the district council close their safety boat office & tractor powered launching facility, the slipway is inoperable for normal boat launching & recovery, severely restricting easy access to the site even if weather conditions are favourable.

Launching from Chichester harbour is neither economical nor practical during “out of hour’s times” as it adds another two hours & considerable fuel expense to the diving day. It has however been reported in the local media, that over the winter the District Council intends to carry out removal of “excess shingle” from Bracklesham & transport it further west along the coast, it is hoped that this will include clearing the shingle from the ramp.

In the past various avenues have been explored to see if it was possible to put pressure on the District Council to improve this public access to the sea, however it appears that the council do not see public access as a priority & it seems, there are no funds available for such work.

This year it was decided to use one weekend a month, on the best neap tides to work on the site and run the diver trail, if it became uncovered this year.

Therefore ten site working/diver trail weekends were scheduled for the season with one additional one in October if there was an extension to council launching facilities. It was decided to use as many weekends as possible through the year, when not diving & team members were available, to carry out work on the artefact display, continue work on the archive & to further process the wet-stored artefacts towards drying & packaging.

Some limited electronic survey work was due to be carried out on site early in the season.

Weather conditions improved & a first dive was possible on the 21<sup>st</sup> of April when underwater visibility proved to be between one & two metres & water temperature was eight degrees, average for the time of year (*See “Diver Observations” written by Licensee*). No damage was observed in & around the site at this time; however the considerable sand movement into the site noted last season seems to have stabilized & in some areas there are some signs of sand levels falling slightly, (*see fig. 1*) a limited check of sea bed movement north of the main site was inconclusive at this time.

Sand movement & overburden in the area of the main site, made it impossible to carry out any “diver trail” visits again this year, as most of the site is still covered with sand overburden to similar levels first observed by the author in the early 1980’s.

## **Plans for 2013**

- Continue monitoring variations in seabed levels and timber degradation, using points remaining from those set up in 2002 plus those set up in 2009/10.
- Carry out further planning of areas/artefacts exposed due to continued erosion & sea bed movement.
- Survey and recover artefacts exposed by erosion and under threat of loss or damage.
- Continue with conservation of artefacts in wet storage at present.
- Re-open diver trail if conditions allow.
- Continue developing site exhibit at Earnley Gardens.
- Continue web site development.
- Raise additional funding to continue work on site & artefact conservation.
- Continue development plans for specialist assessment and analysis of the object collection.
- Continue metal detector search in area of gullies for further artefacts as conditions allow.
- Carry out further electronic surveys of surrounding area of site as conditions allow.
- Continue raising public awareness of Hazardous & the project with presentations etc.

## **Field work**

Due to the unusual south westerly weather patterns throughout the summer, only 4 days of diving have taken place on site this season, at these times visual monitoring of seabed levels within the main wreck area were carried out, this showed a small reduction in sand overburden levels throughout the site.

No loose artefacts were recovered from the main site area, or in the gullies north east of the main site. The diver trail cables were found to be completely buried under sand overburden, save a short section just north, east & west of the beak, due to a very localized scour starting at the pile of three large cannon up the west side of the hull timbers, around the beak & for a very short distance down the east side frames (*see fig. 1 light brown zone*).

Most datum points around the site have been lost or buried by sand overburden over time; one monitoring point was re-sited at the beak to replace one lost by gribble worm activity.

During April high resolution Multibeam survey equipment was passed over the site by Mark James, we await a copy of the data gathered, it is hoped this may reveal the extent of the sand “wave” now passing over the site, when compared with past multibeam surveys conducted on site.

## **Results**

As previously stated, weather conditions were very unstable at the beginning of the diving season making for a later than hoped for first visit to site this year, although the summer has been very warm, at times strong south-westerly winds have made visits to site impractical, this has resulted in over 50% of planned dives being aborted. Underwater visibility in the bay has been poor again this year, we believe, mainly due to fresh water runoff over the winter & early spring, this was worse close in shore & could also be attributed in part to the works by the Environment Agency & Bunn Leisure, to the east of the site, this also resulted in a number of diving dates being cancelled.

It was not possible to re-schedule due to team members other commitments.

Monitoring points were measured during visits to site & noted in diver logs, comparisons between these measurements & those taken in 2011 show a sand reduction around the site of between 175 & 560 mm, varying slightly through the season. It has been necessary to site a new monitoring point at the beak to replace one set in the beak timbers a number of years ago, which was lost over winter due to gribble worm activity, this new monitoring point is approximately 160mm lower than its predecessor, (*see fig. 2*) it will be necessary to allow for this in future calculations. Part of the cannon ball mound & the top of the three large cannon are still visible, although the break in the hull between those points remains well covered in sand. The continued movement of the sand overburden, to the north of the site has now virtually covered the clay fossil beds, in this area the sand overburden has increased by an estimated half a metre in places. This condition could be affected in the future by operations eastwards along the coast approximately one mile, by both the Environment Agency & Bunn Leisure.

Their work involves building large rock revetments, & replenishing the beach between with thousands of tons of sand & shingle, dredged from beyond the Isle of Wight, also opening up an area of coastal defence to form an inland flood plain (*see fig.3*), at the time of writing this report that work has been largely completed. However the Chichester district council have now submitted a plan to collect shingle that has been thrown up on top of the seawall over the last several years, between the ends of East Bracklesham Drive & Shore Road East Wittering (*the area in front of Hazardous*) & transport it further westward along the bay. According to council figures, this amounts to the movement of some 12000 cubic metres of material, which will be moved between December & February. Future monitoring on & around the wreck site next season may well show up some major changes to sediment levels.

No artefacts were recovered from any area of site this season.

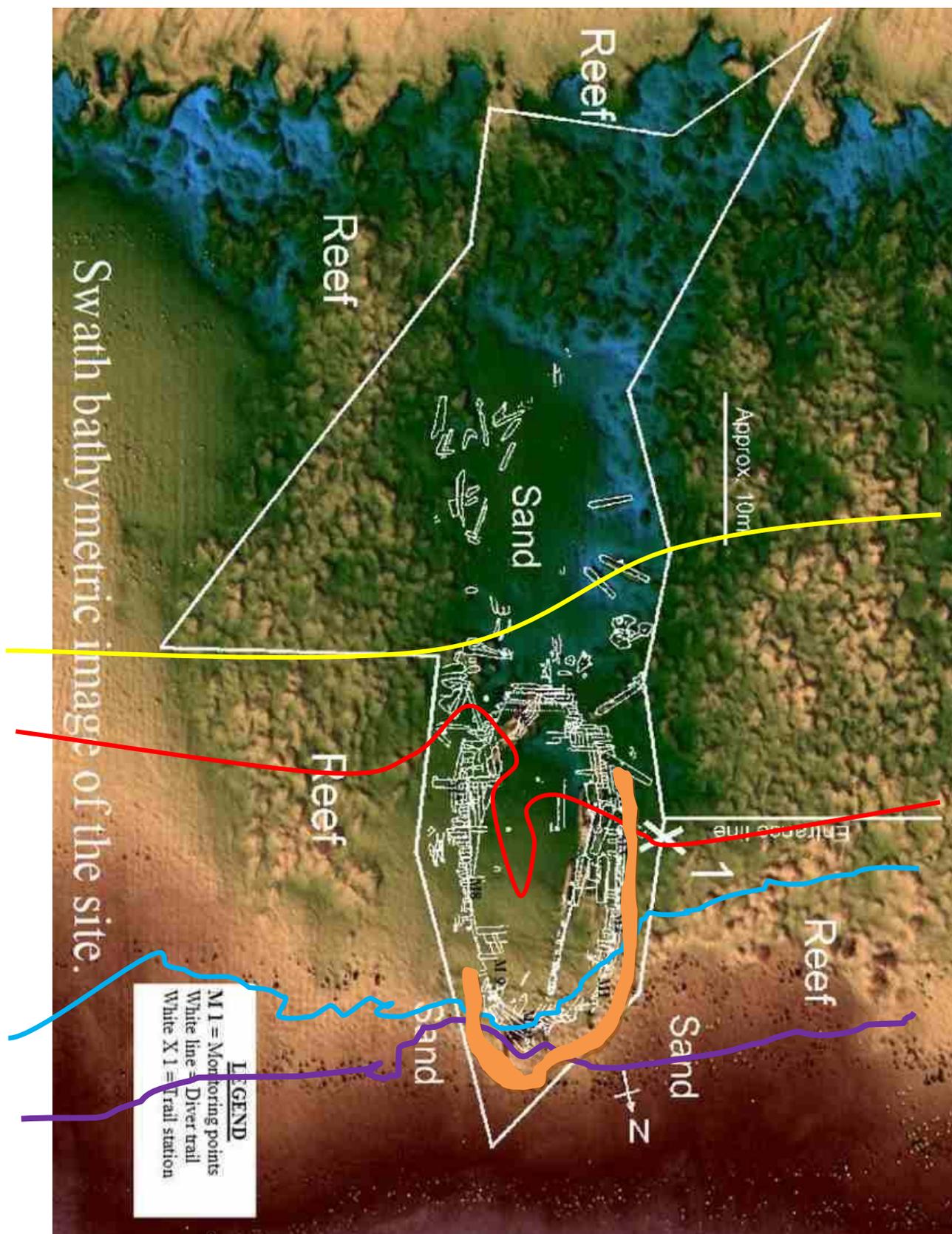
In view of the continued movement of seabed material in & around the main site & too the north, it has not been possible to evaluate the possible need to increase the protected area, as mentioned in last year's report.

Although it was not possible to carry out a lot of work underwater on site, a number of hours by team members were devoted to improving the artefact displays, maintenance work on the display building & signage, also work on wet stored artefacts has been progressed, in some cases to packaging & storage, the treatment in PEG of elements of a gun carriage recovered from site previously & held in wet store is ongoing.

The development of a digitised site database is continuing, whilst team members are looking into the possibilities of mounting small displays at other venues around the locality, along with continuing presentations too interested groups to further public awareness.

Swath bathymetric image of the site.

**Figure 1.** showing site plan & diver trail overlain on swath bathymetric survey results.



*Yellow line = 2008 sand movement from the south to the north.*

*Red line = 2009 sand movement from the south to the north.*

*Blue line = sand movement from the south to the north as at 17<sup>th</sup> October 2010.*

*Purple line = sand movement from the south to the north as at 21<sup>st</sup> August 2011.*

*Light brown = 2013 localized scour.*

## Observations

### Diver Observations 21<sup>st</sup> April 2013.

By Iain Grant.

Sea conditions were good with a very slight swell caused by light airs from the south west, water temperature at 8metres depth was recorded as 8 degrees, and visibility was 1-2 metres with lots of suspended material in evidence.

Various measurements were taken from datum's to seabed, these have been used in previous years, so comparison can be made to the measurements taken in 2011 (*no measurements taken in 2012 due to very poor season with no vis*).

A lot of seabed movement was observed locally around the pile of three large cannon, this extends along the west side of the remaining hull structure towards the beak, more sand movement has taken place on the outside of the hull than on the inside & in this area the diver trail cable has become uncovered from just north of the three cannon, up the west side & around the beak, where it disappears beneath sand overburden again.

This cable has not been visible since the end of 2011.

There has been a drop in overburden levels around the east side of the cannonball mound, all though little if any changes west of it where the break in the hull is still not visible above the sand as in the past (2010). The two large guns lying south of the pile of three are showing signs of sand movement around them, datum D31 in this area is now showing above the seabed by 260mm, observed during the July of last season, this datum was virtually level with the seabed.

The timber of the beak shows considerable degradation from the activity of gribble worm on the exposed high points, the lead sheeting sandwiched between the timber lay up of this area appears to be more exposed also.

Datum T187 just east of the beak is loose due to the loss of sand overburden; this datum was installed as one end of a base line for planning frame positioning in 2009/2010, to assist with planning a section of hull which had become uncovered at that time. Further examination of this area will take place on future dives. North of the beak sand levels are such that clay fossil bed material is visible, at least to last year's levels; however it was not possible to see the extent of the area, due to the cold curtailing dive times.

Measurements taken are as follows:

1. Top of three cannon to seabed = 1.250m.
2. Top of cannonball mound to seabed = 1.050m.
3. M9 to seabed = 720mm.
4. Beak (M10 approx) = 500mm.

Measurements taken 31<sup>st</sup> July 2011:

1. 3 cannon pile = 840mm.
2. Cannonball mound = 730mm.
3. M9 = 600mm.
4. Beak (M10) = 710mm.

Generally there appears to be localized reductions in sand overburden of between 120mm & 410mm where some structure has historically remained above the sand levels, this appears to be causing some undercutting around the outside of the remaining hull.

The positive difference of 210 mm at the beak is difficult to evaluate accurately, due to the loss of some timber structure in that area, a new datum will need to be established here.

29<sup>th</sup> June 2013.

By Iain Grant.

Visibility was poor at a dark 1 metre, (*equinox springs*) water temperature was 15 degrees on the seabed.

David J entered the water at 10.40am to set the mooring for the rib, this took longer than usual due to the very poor visibility, he then returned to the surface for a tape & board, returning to the seabed he laid out the tape 30 metres in a northerly direction towards the gullies that had been showing last season, the area is now completely covered with sand, leaving only isolated small areas of clay/fossil bed showing.

Further observations & measurements were undertaken by Dan Pascoe & Iain Grant.

The area to north east of site appears to be sand covered as well, although cannon on the east side of the site appear a little more uncovered at this time.

A new monitoring point M10-13 was established just north of the beak to replace the one on the beak which was lost due to gribble worm activity, this new datum is approximately 160mm below the original, therefore all comparisons with previous years measurements should be adjusted by + this amount.

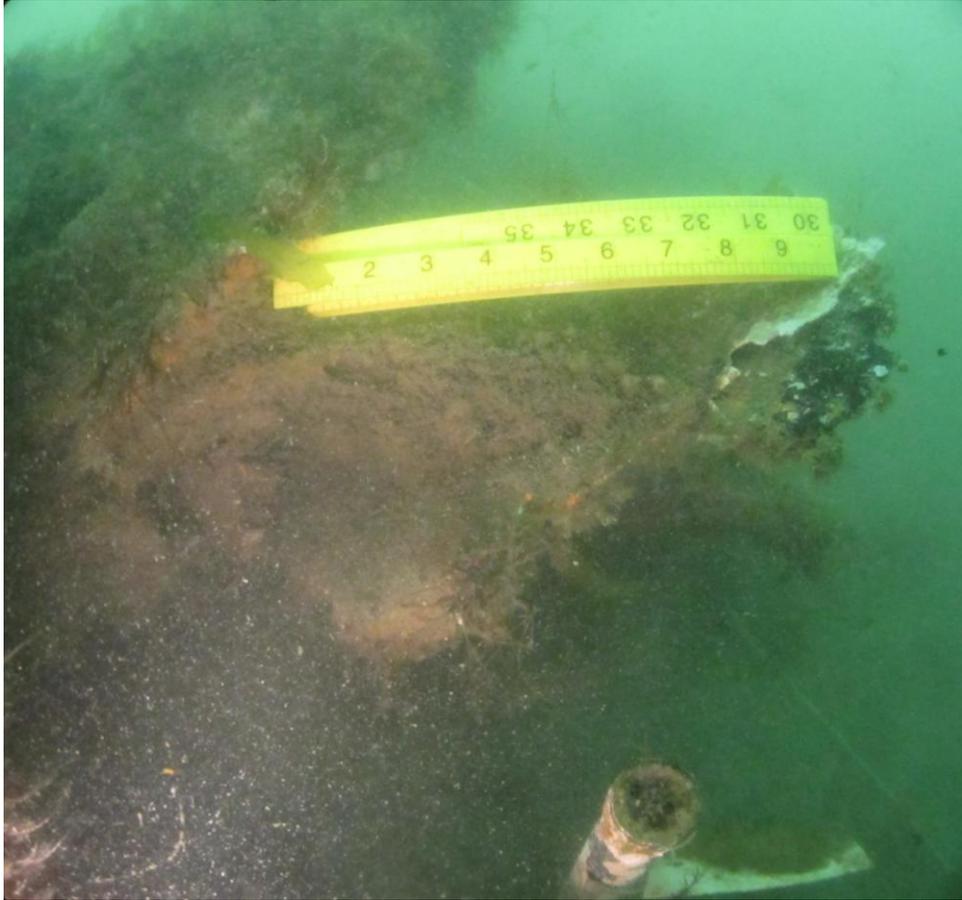
It was noted that datum points D31 & D32 near the cannon in the centre of the site are now standing proud of the sea bed, so can in future be used to monitor seabed levels in that area.

Seabed monitoring points measured as follows:

- Pile of three cannon = 1.2m
- M9 = .740mm
- Cannon ball pile = .990mm
- M10-13 = .400mm

It would appear that very little useful work can be carried out on site this season, apart from seabed level monitoring, unless major changes take place, which seems unlikely in the short term.

**Figure 2.** *Beak showing new monitoring point & lead sandwiched between timbers.*



*Image by D. McElvouge.*

### **Artefacts**

No artefacts were recovered this season.

### **Diver Trail**

As last year, due to the continued sediment movement over the winter & continued through the summer months, it has been impossible to run the diver trail this season, unless there is a major change over winter this may well continue to be the case in future.

### **Website**

It is hoped to make further improvements to the website at <http://hazardousproject.info>

We will continue to add material as time allows.

### **Looking to the Future.**

As mentioned earlier in this document, major works in progress along the coast to the east of the *Hazardous* wreck site, by the Environment Agency & others, could have considerable side effects in the area as a whole & in particular on the wreck site.

Therefore it should be noted that, Warship *Hazardous* is on the *English Heritage at Risk Register South East* (English Heritage 2010), where it is listed as having ‘extensive significant problems’, with the trend being ‘significant decline’ (EH 2010: 84). As stated in last year’s site report, although the movement of sand over the main wreck site during the past few years has temporarily reduced the risk for some of the seabed archive, it is likely that future movements of sand will re-expose artefacts and structure. Should this occur then a further Recording Phase of work will need to be formulated to enable rescue recording, which is likely to include the need for excavation at short notice.

**Figure 3.** View from within the new flooded area looking southwest towards Hazardous approximately a mile away.



*Image by A. Chater.*

### **Diving Schedule**

Diving operations were carried out on four separate days. This resulted in 471 working minutes underwater by five divers plus boatman.

### **Plans for 2014**

- Continue monitoring variations in seabed levels, using points remaining from those set up in 2002 plus those set up in 2009/10 & more recently, adding more if required.
- Carry out further planning of areas/artefacts exposed due to continued erosion & sea bed movement.
- Survey and recover artefacts exposed by erosion and under threat of loss or damage.
- Continue with conservation of artefacts in wet storage at present & those in chemicals, under guidance from Paul Simpson.
- Re-open diver trail if conditions allow (*unlikely*).
- Continue developing site exhibit at Earnley Gardens.
- Continue web site development.
- Raise additional funding to continue work on site & artefact conservation.
- Continue metal detector search in area of gullies for further artefacts as conditions allow.

- Carry out further electronic surveys of surrounding area of site as conditions allow.
- Continue raising public awareness of Hazardous & the project with presentations etc.

**Licensee**



**Archaeological Adviser.**

