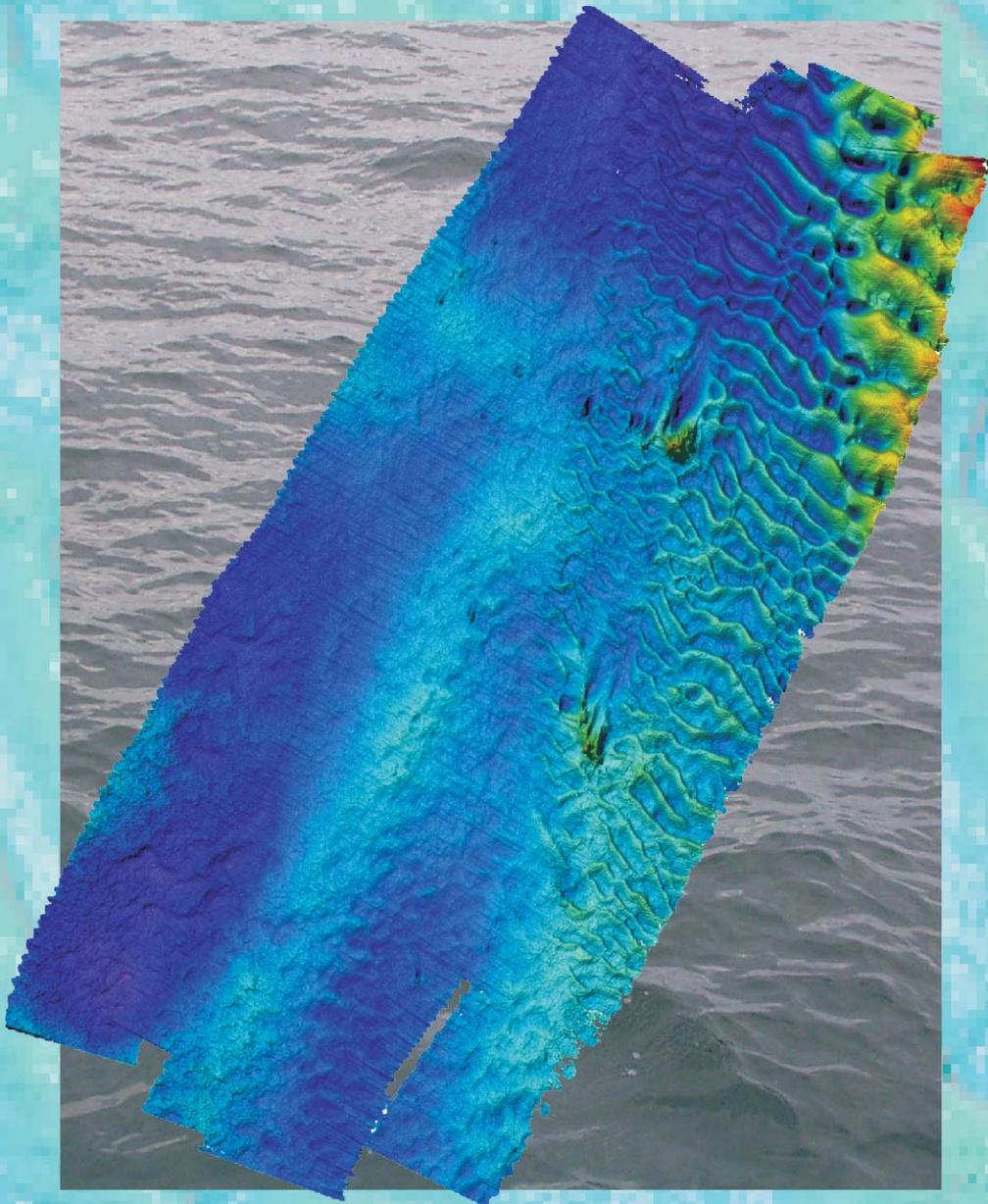




Restoration, Goodwin Sands

Designated Site Assessment

Archaeological Report



**ARCHAEOLOGICAL SERVICES IN RELATION TO THE PROTECTION OF WRECKS
ACT (1973)**

RESTORATION, GOODWIN SANDS

DESIGNATED SITE ASSESSMENT: ARCHAEOLOGICAL REPORT

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November 2006

Ref.: 53111.03pp

RESTORATION, GOODWIN SANDS

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Summary

Wessex Archaeology was commissioned by English Heritage to undertake a Designated Site Assessment of the wreck believed to be that of the *Restoration*. The site lies within the English Channel on the eastern edge of the Goodwin Sands, south-east of Ramsgate, Kent. The work was undertaken as part of the contract for Archaeological Services in Relation to the Protection of Wrecks Act (1973).

Diving operations took place on 25th June 2006. In addition to the diver assessment, the multibeam data collected in 2006 by St Andrews University was processed and analysed, and a limited desk-based assessment was undertaken in order to assist with the interpretation of the wreck.

Local divers found the wreck in 1980 following a systematic investigation of recorded net fastenings. The site comprises two mounds that lie approximately 100m apart, with scattered partly buried wreckage apparent on each mound. The South Mound was the centre point for the original designation, the North Mound, which was discovered in 1999, lay outside of the 50m radius of the original designated area. The area was amended in 2004 to a circle with a 300m radius that covered both sites.

Diving was only conducted on the North Mound in 2006. A small scatter of objects was recorded. The analysis of the multibeam data confirmed the position of the two mounds, and suggested that the North Mound may be the larger of the two sites. The North Mound and associated debris scatter was approximately 45m long, and the South Mound was approximately 28m long.

If correct, these observations may suggest that there are two wrecks within the designated area, and that if they are the *Restoration* and the *Mary* then the smaller 4th Rate *Mary* is more likely to be under the South Mound.

RESTORATION, GOODWIN SANDS

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Acknowledgements

This investigation was commissioned by English Heritage as part of the Contract for Archaeological Services in Relation to the Protection of Wrecks Act (1973). The assistance provided by Ian Oxley and Mark Dunkley of English Heritage is gratefully acknowledged.

Wessex Archaeology would also like to thank the following people:

- Bob Peacock, current Licensee;
- Michael Hunt, Curator, Ramsgate Maritime Museum;
- Simon Adey-Davies, nominated archaeologist;
- MRCC Dover;
- The staff of Ramsgate Marina.

The fieldwork was carried out by WA archaeologists Graham Scott, Jenny Black, Hanna Steyne, Niall Callan and vessel skipper David Burden. Graham Scott supervised the fieldwork and the diving operations. The report was compiled by Hanna Steyne and edited by Steve Webster. Kitty Brandon prepared the illustrations. The project was managed for Wessex Archaeology by Steve Webster.

Data Licences

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- Digital use of Chart 1828 (dated 1999)

A copy of the report will be sent to UKHO.

RESTORATION, GOODWIN SANDS

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Front and Back Covers

2005 Multibeam data

RESTORATION, GOODWIN SANDS

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1. BACKGROUND

1.1. INTRODUCTION

1.1.1. This document constitutes a Designated Site Assessment for a programme of archaeological work undertaken as part of the Contract for Archaeological Services in Relation to the Protection of Wrecks Act (1973). The document has been prepared by Wessex Archaeology (WA) for English Heritage (EH). It comprises an assessment of the *Restoration*, a designated wreck site located off the coast of Kent within an area known as the Goodwin Sands (**Figure 1**).

1.1.2. The work was conducted in accordance with a brief produced by EH (2006).

1.1.3. Surface supplied diving operations under the Inshore/Inland ACOP took place on 25th June 2006 from the diving support vessel *Xplorer*, an MCA Category 2 inshore work boat. The slack water period on the site is highly unpredictable, however a bottom time of 35 minutes was achieved.

2. AIMS AND OBJECTIVES

2.1. AIMS

2.1.1. The original overall objective for the site, as defined in the brief (EH 2006) was for recording to Level 3a. This level is defined as follows:

Level	Type	Objective	Sub-level	Character	Scope
3	In situ	A record that enables an archaeologist who has not seen the site to comprehend its components, layout and sequences.	3a	Diagnostic	A detailed record of selected elements of the site.

2.2. PRIMARY OBJECTIVES

2.2.1. The aim was further defined in the brief, specifying the following tasks:

- Contact Bob Peacock, Licensee of the *Restoration*, to assist and participate with the investigation and seek to incorporate recent survey work. Also appraise Simon Adey-Davies, Nominated Archaeologist, of proposed investigations.
- Determine, with echosounder, extent of sediment levels across site and compare to 2003 data (see WA 2003).
- Concentrating at *Restoration* 'north', re-locate and accurately position (plotted by tracked diver survey) any archaeological material. Determine relationship

of this site/feature to the *Restoration* (either as a detached element or another site).

- Provide advice to the Licensee regarding continued survey work and further investigation.
- Produce a structured record of field observations; preferably including a photographic record of the site and a site plan. Key artefacts are to be subject to detailed examination and recording (position by tracked diver survey, taped measurements, photographs and video and written database entries).

2.3. SECONDARY OBJECTIVES

- Provide detailed information on elements of structure currently at risk and identify future elements at risk.
- Supplement the recording of the core of the site by recording profiles across the main axis of the site.
- Provide recommendations on marine environmental monitoring of the site, with particular reference to important features considered to be at risk.
- Identify whether the site lies within other marine statutory / non-statutory designated areas, such as a Marine Special Area of Conservation / Marine Nature reserve etc.

2.4. STAND-BY OBJECTIVES

- Contact Ramsgate Maritime Museum Curator (Michael Hunt) and determine whether the museum has the capacity to receive and conserve material recovered under licence, from the site.
- Through liaison with EH, determine the degree to which Local Authorities (Thanet and Dover DC and Kent CC) support the promotion of marine historic environment interests in the general area of the Goodwins.
- Determine the extent of inclusivity of the marine and coastal historic environment between the KCC Heritage Conservation Team and the County Council’s agenda for ICZM.

2.4.1. The original objectives above were defined on the basis that WA would spend approximately seven days working on the site. However, the time allotted to the site was reduced due to EH requiring additional work on the *Stirling Castle* site, therefore reducing the time available on the *Restoration* to just one day.

3. EXISTING SITE DATA

3.1.1. The position of the centre of the designated area as given in Statutory Instrument number 2004/2395 is:

Lat.	51° 15.6302' N
Long.	01° 30.0262' E
WGS84	

3.1.2. The designated area is a circle with a diameter of 300m. Both the North Mound and the South Mound lie within the designated area.

- 3.1.3. To date there has not been a systematic survey or detailed assessment of the South Mound, and there appears to be no existing plan (sketch or otherwise) of the archaeological remains.
- 3.1.4. A rough sketch plan of the North Mound was produced in 2001 by Jim Smailes and Tim Berkey. WA acquired this through Bob Peacock for use during 2006 fieldwork.
- 3.1.5. WA has seen sidescan sonar data for the site, collected by the ADU, and raw multibeam data from 2002 has been acquired but not processed.
- 3.1.6. The multibeam data collected by St Andrews University in 2005/2006 has been processed by WA and was used as a basis for site navigation during the 2006 fieldwork.

4. METHODOLOGY

- 4.1.1. A four-person diving team, using surface supplied diving equipment, was deployed during fieldwork operations from the diving support vessel *Xplorer*, a 12-metre inshore survey catamaran. A two-point anchoring system was used on the site.
- 4.1.2. Video images were taken using a hat mounted single chip Colourwatch Digital Inspection Camera, recording onto miniDV tape.
- 4.1.3. All data acquired during diving operations, other than images, was recorded in real time within an MS Access database. After the dive the diver produced sketch plans from memory with the aid of video replay.
- 4.1.4. Three of the features identified on the seabed (**2001-2003**) were tagged by the diver, starting a numerical sequence of archaeological context numbers. The numbering sequence has been continued and assigned to all recorded features. At context numbers appear in bold in this report. Features **2004-2010** were not tagged.
- 4.1.5. Echosounder readings were taken using the vessel's echosounder. This was tracked using the GPS and recorded within the project GIS.

5. SITE HISTORY

5.1. VESSEL HISTORY

- 5.1.1. The *Restoration* was a Third Rate ship of 70 guns, built in 1678 by Betts at Harwich as part of Samuel Pepys' 'Thirty Ships' building programme, which also included the construction of the *Northumberland* and the *Stirling Castle*.
- 5.1.2. The *Restoration* is recorded as measuring 45.9m (150.6ft) along the gun deck, 37.6m (123.6 ft) along the keel, a breadth of 12.1m (39.8 ft) and a depth in hold of 5.1m (17 ft). Its tonnage is recorded as 1055 tons (Lyon 1993: 21).
- 5.1.3. The *Restoration* was rebuilt in 1702 in Chatham (Fenwick and Gale 1998: 101) and it is not clear whether the dimensions presented above relate to the original build or the later rebuild.

- 5.1.4. Very little information is readily available for the life of the *Restoration*, and further research needs to be undertaken into this aspect of the wreck.
- 5.1.5. The *Restoration* was anchored along with a large number of naval and other vessels in the Downs off Deal during the ‘Great Storm’ of 26th/27th November 1703 (Ensor 2004). During the storm the ship was lost with all 386 members of her crew (Fenwick and Gale 1998: 101).

5.2. HISTORY OF ARCHAEOLOGICAL ACTIVITY

- 5.2.1. Local divers found the wreck in 1980 following a systematic investigation of recorded net fastenings. The site comprises two mounds located approximately 100m apart, with scattered partly buried wreckage apparent on each mound. The South Mound was the centre point for the original designation. The North Mound was discovered in 1999 outside of the 50m radius of that designated area. The area was amended in 2004 to a circle with a 300m radius that covered both sites.
- 5.2.2. An English Navy type ship’s copper kettle is reported to have been raised from the site in 1980. This led to the provisional identification of the site as the *Restoration*. However, Michael Hunt at the Ramsgate Maritime Museum thinks that the kettle may have come from the *Northumberland*, although there is no paperwork associated with the object. The copper kettle is currently housed at the museum.
- 5.2.3. The South Mound is reported to consist of one large anchor, several cannons and concretion mounds that include a quantity of galley bricks. However, there is no site plan and raised sand levels meant that it was not possible to verify this during the 2003 WA inspection of the site.
- 5.2.4. The North Mound was reported to be made up of a similar assemblage of cannon, an anchor and brick features. This was confirmed by the WA inspection in 2006, but the site plan of this area is still at a rudimentary stage. The area covered by these features, and the apparent date and nature of the finds recovered, indicate that the wreck is that of a large ship of the line. Four naval vessels are known to have been lost on the Goodwin Sands in the Great Storm in 1703, two of which (*Northumberland* and *Stirling Castle*) have been positively identified, leaving the Third Rate *Restoration* and Fourth Rate *Mary*.
- 5.2.5. The site was designated in 1981 but to date no extensive archaeological investigation has taken place to conclusively prove the identity of either of the mounds as the *Restoration* or the *Mary*. It is possible that the two mounds at the site represent the remains of either one wreck in two fragments, or the remains of both the *Restoration* and the *Mary*.
- 5.2.6. The site has been subject to geophysical investigations since 1998 with multibeam surveys undertaken in 2002 by the ADU and in 2005/2006 by the University of St Andrews as part of the RASSE project (Bates *et al.* 2005).

6. RESULTS

6.1. SITE POSITION

- 6.1.1. The following position for the North Mound was obtained from the 2005 multibeam survey, and confirmed by WA diver survey in 2006.

Lat.	51° 15.692202' N
Long.	01° 30.047283' E
WGS84	

6.2. SITE ENVIRONMENT

Seabed Geology and Hydrodynamic Environment

- 6.2.1. The Goodwin Sands owe their position and origin to small elevations of the pre-Flandrian morphology, and to beach bar cores (D'Olier 1981). Although the sands were once thought to contain a core of older sediments, they are now known to consist of approximately 25m of modern sediment (fine sand) resting on an Upper Chalk platform (British Geological Survey: Thames Estuary Sheet 51°N-00°).
- 6.2.2. The expression 'ship-swallower' has been applied to the Sands since 1570. This is a reference to whole ships sinking into the sandbank until they are entirely engulfed (Larn and Larn 1995).
- 6.2.3. The Goodwin Sands, as defined by the 10m depth contour, form a series of banks off the East Kent coast that dry at low water. Despite a clockwise tidal trend, the Goodwins change morphology on a seasonal and anti-clockwise rotational basis (Cloet 1954: 204). Aerial photography has revealed that North Sand Head may be the pivot for the rotation (Larn and Larn 1995). The *Dover Strait Pilot* notes that the Goodwin Sands are moved by tidal streams and their form can be altered extensively as a result (Hydrographer of the Navy 1999: 89). As a recognised unstable area of seabed, they are routinely resurveyed by the UKHO.
- 6.2.4. Although a body of references exists for the geomorphology and hydrodynamic behaviour of the Goodwin Sands in general, it appears that no detailed work has been done on the area directly surrounding the *Restoration*. WA did not undertake a formal topographic survey of the seabed; therefore the following comments are made on the basis of multibeam assessment and general diver observations only.
- 6.2.5. The North Mound and the South Mound lie to the west of the Goodwin sandbanks in an area of relatively flat seabed. Small, localised echosounder surveys undertaken by WA in 2003 and 2006 suggest that the sediment levels over the site fluctuate. The 1999 Admiralty chart puts the 10m contour approximately 220m to the east of the site, with the wreck charted at 14m below CD.
- 6.2.6. In 2003, a line of echosounder points were taken running north-south to the west of the 10m contour, roughly reflecting the line of the contour (WA 2003b: Figure 3). This survey plotted the wreck at 12.8m below CD with the surrounding seabed to the north and south also at this depth.

- 6.2.7. In 2006 an echosounder survey consisting of four lines covering an area measuring approximately 450m east-west and 280m north-south. This covered both the North Mound and the South Mound, and the edge of the sandbank to the east. The survey plotted the South Mound at 14.3m below CD and the North Mound (which is not plotted on the chart) at 14m below CD. The echosounder survey matched the 10m contour line in the south, and put 10m below CD slightly to the east of the charted position.
- 6.2.8. A comparison of the 2002 and 2005 multibeam images of the area also suggests that there has been some change in the surface sediments in the area. The 2002 multibeam shows the area to the west of the sandbank as being dominated by low relief, wide sandwaves slightly lower than the highest point of the wreck mounds. It also shows the western edge of the sandbank extending further west than in 2005 (**Figure 2**).
- 6.2.9. Diver observations in 2003 and 2006 correlate with the echosounder surveys suggesting that the site is more exposed in 2006 than it was in 2003.
- 6.2.10. Surface sediments in the area consist of loose silty sands with some shell inclusions. The sediment on the mound seems to have gravelly patches within the sand.
- 6.2.11. The 2005 multibeam suggests that seabed in the area directly to the west of the Goodwin sandbank is dominated by small sandwaves that give way to flat seabed in the west. The sediment movement patterns in the area around the wreck have not been investigated, but information gathered over the past three years by WA suggests that the area is mobile and that sediment cover is variable. The heavy marine growth seen on the site in 2006 suggests that the features seen had been exposed for some months.

Marine Biology

- 6.2.12. All exposed features are covered with marine growth dominated by seaweeds and occasional sponges. Shoals of bib are present on the site as are velvet swimming crabs, edible crabs and hermit crabs. Despite the covering of soft marine growth, features of interest could be located, although often not definitively identified.

6.3. ARCHAEOLOGICAL FEATURES

General Description

- 6.3.1. The site is made up of two low mounds lying approximately 100m to the west of the Goodwin Sands. The site lies 280m to the north of the protected wreck of the *Northumberland* and 1.5km to the south of the *Stirling Castle*, both of which are Third Rate ships of the line which sank in the Great Storm of 1703.

South Mound

- 6.3.2. The South Mound lies at the centre point of the designated area (**Figure 2**). Based on the 2005 multibeam data, it measures 28m in length by 12m wide lying on an axis north-west-south-east. The highest part of the mound is in the south-east, at which point it stands c.0.9m proud of the seabed. There is an area of scour to the north-west of the mound (**Figure 4**).

- 6.3.3. A small anomaly measuring approximately 5m by 2.5m lies approximately 45m to the north-west of the mound (**Figure 4**). It may be associated with the site, but has not been investigated by divers.
- 6.3.4. Based on 2003 diver inspection, the South Mound appears to be covered in very loose sandy sediment with partially buried features. WA identified iron concretions and timbers during the 2003 fieldwork, however the 2005 multibeam suggests that more features are now likely to be exposed.
- 6.3.5. The South Mound was not inspected by divers in 2006.

North Mound

- 6.3.6. The North Mound lies within the designated area, approximately 110m to the north-north-east of the South Mound (**Figure 2**). Based on an assessment of the 2005 multibeam data, the main part of the mound measures 20m north-south by 15m east-west. In addition, there are a number of smaller anomalies and associated scours stretching for an additional 25m to the west. The site is therefore likely to extend for a total of approximately 45m orientated north-west–south-east, with the main mound to the south-east (**Figure 4**).
- 6.3.7. Two small isolated anomalies lie 35m and 25m to the west and north-west of the North Mound (**Figure 4**). The first, lying to the west, appears to be a scour with no visible height or associated object and measures approximately 2.3m x 2.2m. The second, lying to the north-west, measures 2.2m x 1.6m and lies in a scour measuring 5.6m x 5.6m. It is possible that these features are associated with the wreck site.
- 6.3.8. Two further small anomalies lie 61m and 65m to the north-west of the North Mound. The first, at 61m from the site, measures 1.9m x 1.3m, the second, at 65m from the site, measures 1.5m x 1.5m (**Figure 4**).
- 6.3.9. The North Mound consists of partly buried features including timber, brick structures, a possible gun and concretions (**Figures 3 and 4**). There appears to be very little relief to the North Mound, with 2005 multibeam data suggesting a maximum of 1.4m and depth readings taken by the diver suggest 1m from the bottom of the scour to highest point of the mound.
- 6.3.10. The site sketch drawn by Jim Smailes and Tom Berkey in 2001 shows a cannon and an anchor lying to the north-west of the main wreck site (**Figure 4**). The scale suggests that they lie at distances of 6.5m and 14m from the centre of the site. These features were not seen during the 2006 WA diver inspection, which focused on the main mound and the area to the east. It is possible that they relate to the anomalies and scours seen immediately to the west of the main mound in the multibeam.

Archaeological Features Recorded on the North Mound in 2006

- 6.3.11. Context **2001** records a pre-existing datum point located by WA at a point approximately 9.3m to the east of the mound. Although not clear from the 2001 site sketch, it is possible that the datum corresponds to the point marked '30', implying that it was the end of the site baseline.

- 6.3.12. The main mound is composed of a number of features, including two areas of bricks (**2002** and **2003**), a gun (**2004**), timbers and shaped stones, possibly masonry and unidentifiable concretions.
- 6.3.13. Context **2002** is a large upstanding feature comprised of concretion and bricks but with no discernible structure. The feature also had a shaped stone block in amongst the bricks. The feature was briefly described and tagged.
- 6.3.14. Context **2003** is a second area of concretion and bricks lying approximately 2.5m to the north of **2002**. This feature was small and discrete, measuring approximately 2m x 2m. It also had a block of shaped stone amongst the bricks. The feature was overlying timber, which was lying flush with the seabed and was mostly buried and heavily gribbled.
- 6.3.15. It is likely that **2002** and **2003** represent brick structures associated with the hearth of the vessel's galley. Generally, on smaller ships and two-deck vessels, such as the *Restoration*, the galley areas were situated under the forecastle, forward on the upper deck (Lavery 1987: 196). The position within the overall site of these features may suggest that the vessel's bows lie to the east.
- 6.3.16. An iron gun **2004** lies alongside the larger brick and concretion feature (**2002**). It was orientated approximately east-west. The muzzle of the gun was mostly exposed in the east, and the flare of the muzzle could be felt by the diver as it was only very lightly concreted. The western (cascabel) end of the gun was covered by **2002**.
- 6.3.17. Contexts **2005** and **2006** are irregular shaped concretions with metal sheeting attached to, and protruding from them.
- 6.3.18. An area of lead pipes **2007** lay partially buried 4m to the east of the mound. This feature was identified on the 2001 site sketch and by WA in 2006. The pipes are 0.02m in diameter. Adjacent and to the west of **2007** is an irregularly shaped, partially buried concretion (**2008**). On top of this, also partially buried, is a large rectangular stone block, which appeared to have been shaped.
- 6.3.19. Within the northern part of the mound there is a large area of concretion covered with netting and a layer of fine sediment (**2009**). In most places the netting was too thick to determine the full extent of the concretion.
- 6.3.20. At the northern edge of the mound was a large timber (**2010**) which was recorded. Approximately 3m was exposed, and both ends were buried in the sand. It was 0.25m wide and 10.8m deep. The exposed section was pierced by three holes, 0.06m in diameter and approximately 1m apart. The three exposed faces of the timber were sheathed in 0.5mm thick copper sheet. The underside of the timber could be felt but not seen due to scouring underneath at one point; it did not seem to have any copper covering.
- 6.3.21. The identification of **2010** is not easy to determine due to its large size, partial burial, and lack of obvious relationship to any other timbers and the presence of copper sheathing on three sides. A number of hypotheses can be put forward as to its function based on its size and the presence of sheathing. The large size suggests that the feature was a major structural timber, and suggestions could include part of the

stem or stern post, an external rubbing strake or an internal structural timber such as a beam.

- 6.3.22. The sheathing could be present for a number of reasons, possibly to protect an external timber below the waterline, such as stem or stern post, from gribble or on an external timber above the water line from rubbing or heavy wear from rigging or a dockside for example. If the timber is an internal feature, the copper sheathing could have been used to protect the timber from heat or fire in the area of the hearths, or alternatively to protect a timber from heavy wear or rubbing.
- 6.3.23. Copper sheathing was used in small quantities for the lining of parts of the sternpost and rear face of the rudder for a long time prior to the 18th century. However, it was not used to cover ships' keels and false keels until the late 1750s (Lavery 1987: 62). The exposed stern post on the *Stirling Castle* measured 0.25m x 0.40m, and is larger than the timber exposed here. However, **2010** is of a size appropriate for a leading edge timber associated with either the stern or stem posts.
- 6.3.24. The fact that **2010** lies 5m to the north of **2003**, a brick and concretion mound possibly associated with the hearth and galley area, may be significant. It is possible that the copper sheeting was used to protect timbers in the vicinity of the hearth and galley from the heat and fire, and that the timber therefore represents a beam or other large structural timber from this area of the ship.
- 6.3.25. Approximately 10m south-west of the mound there is a roughly oblong concretion (**2011**) made up of a number of individual, but unidentifiable objects. One of the objects protruding from the concretion is what looks to be a metal wheel, grooved in the middle, similar to a rigging block.
- 6.3.26. Additional concretions were seen and have been included in the site sketch. However, they are not described in any further detail, and they have not been assigned context numbers as accurate position-fixes and details of their form and dimensions were not collected.

7. CONCLUSIONS AND DISCUSSION

7.1. GENERAL DISCUSSION

- 7.1.1. To date, the *Restoration* site has been subject to very little archaeological investigation. There is a sketch of the North Mound sketch produced in 2001, and no known drawing of the features present on the South Mound.
- 7.1.2. Work undertaken by Wessex Archaeology in 2006 has produced a site sketch of the North Mound with a number of features identified and position-fixed using an acoustic diver tracking system.
- 7.1.3. A comparison of rough echosounder surveys undertaken by WA in 2003 and 2006 has demonstrated that the site has lost approximately 1.5m of sediment in three years, although the 2006 data reflects more closely the 1999 Admiralty charted depths for the area. Comparative assessment of multibeam data collected in 2002 and 2005 suggests that the sandbank to the east of the wreck site has moved to the east by approximately 20m. On the basis of these observations it appears that the site is

unstable. The changing sediment levels are likely to be having a detrimental affect upon the condition and survival of exposed features of the wreck.

- 7.1.4. A study of the multibeam data from 2006 has provided approximate dimensions for both the North and South Mound, of 45m x 15m and 28m x 12m respectively. These dimensions suggest that it is possible that the two mounds represent two wrecks, rather than one broken, dispersed wreck.
- 7.1.5. The *Restoration* measured 45.9m along the gun deck with a beam of 12.1m as built, which would compare favourably with the measurements taken for the North Mound. The South Mound measures 28m x 12m, which seems to suggest that it is more likely to relate to the smaller Fourth Rate ship the *Mary*, rather than the Third Rate *Restoration*.
- 7.1.6. A number of distinctive features have been identified and mapped on the North Mound, including two mounds of brick and concretion which could relate to the hearths and galley area of the ship. One iron gun was identified on the site, and the 2001 site sketch suggests that a second lies further to the west. The discovery of what is likely to be a large structural timber coated on three sides by thin copper sheeting is of particular interest and positive identification of the feature could prove useful in positively dating and identifying the site.

7.2. STATUS OF THE ARCHAEOLOGICAL RECORD

- 7.2.1. At present the level of survey relating to the South Mound, as established in 2003 by WA, can be classified as of Level 1b. No site plan exists for the site and the extent and character of the wreck is still largely unknown.
- 7.2.2. The level of survey relating to the North Mound can be classified as of Level 1b with some work progressing towards Level 2b, with a partial site sketch with features of interest positioned by acoustic diver tracking.
- 7.2.3. Assessment of echosounder and multibeam data suggests that the sandbank has moved approximately 20m to the east between 2002 and 2005, whilst approximately 1.5m of sediment has been lost over the southern mound between 2003 and 2006. As such the site may be considered to be unstable.
- 7.2.4. The overall character of the exposed archaeological material on the seabed can be summarised as follows:

Area and distribution of surviving ship structure:	The South Mound appears from multibeam data to measure 28m x 12m, and be upstanding 0.9m. The extent of surviving structure is unknown. The North Mound appears from multibeam to measure 45m x 15m, and upstanding by 1.4m. The two mounds lie 110m apart and appear to be discrete, with no debris in between. Isolated small anomalies have been identified to the west of both mounds.
Description of seabed environment:	Mobile medium to fine sand to an unknown depth.
Character of ship structure:	Observed features include timbers, iron guns, an anchor, brick structures and unidentified concretions.
Depth and character of stratigraphy:	Unknown.

Volume and quality of artefactual and environmental evidence, including cargo, ordnance, domestic assemblage, etc.:	The South Mound has not been recently assessed, but is likely to be more exposed than was reported in 2003. The North Mound appears to consist of heavily concreted artefacts, mostly unidentifiable, with some timber exposed often in poor condition.
Site formation and transformation processes:	Unknown. Very little research undertaken on the sites, although multibeam data suggests that the remains of the full length of the vessels may survive to some degree. The site is currently highly unstable and further loss of covering sediments will lead to further deterioration of exposed remains.
Apparent date of ship's construction and/or loss:	The <i>Restoration</i> was built in 1678 and lost in 1703 in the 'Great Storm'.
Apparent function:	Third Rate warship of the English Restoration Navy.
Apparent origin:	English, built Harwich.

8. ARCHIVE

- 8.1.1. The project archive consisting of an Access database, a GIS work space containing shape files and other data linked to the database and other computer records, together with digital photographs, miniDV tapes, dive logs and miscellaneous hardcopy photographs are currently stored at WA under project code 53111.

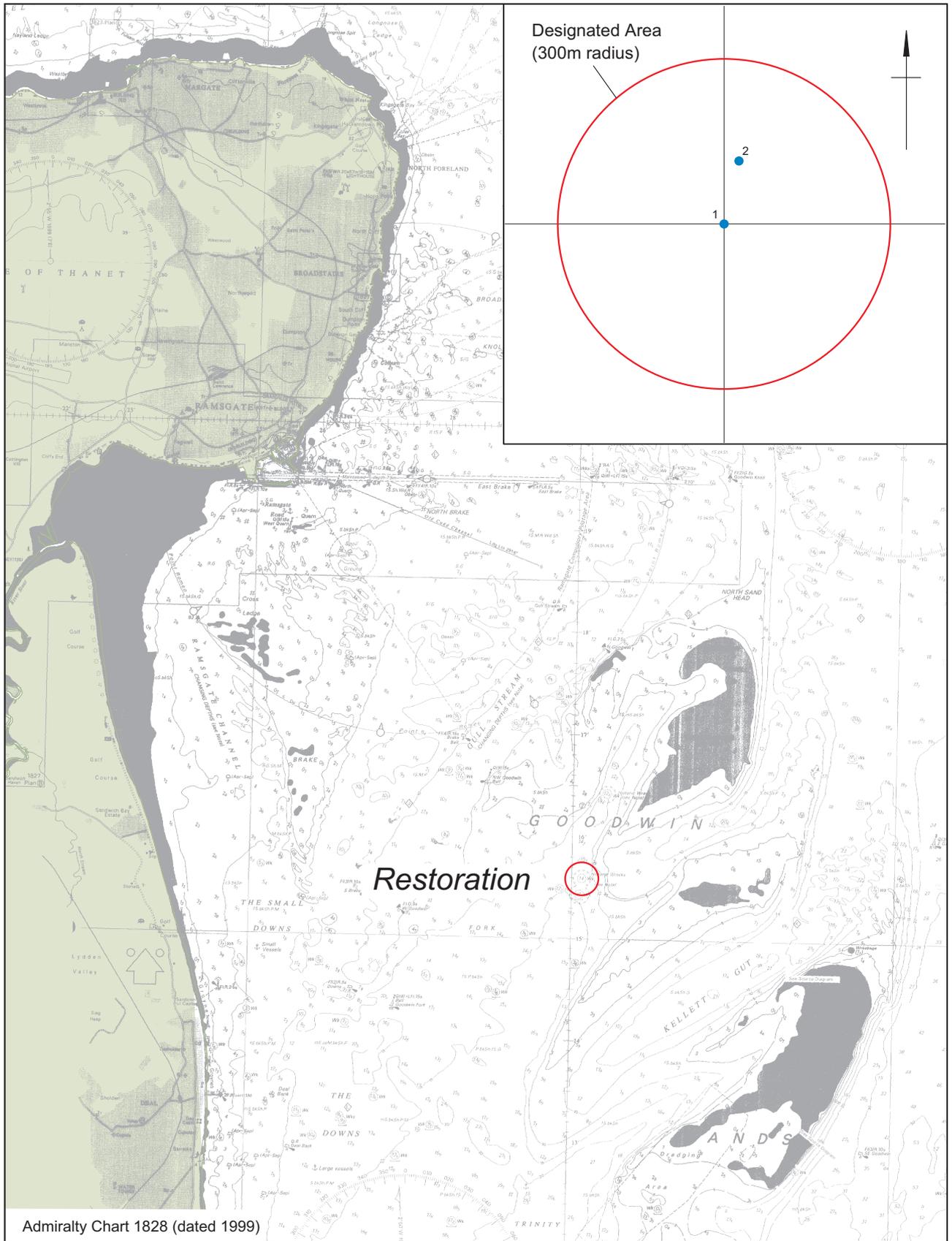
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APPENDIX I: CONTEXT RECORDS

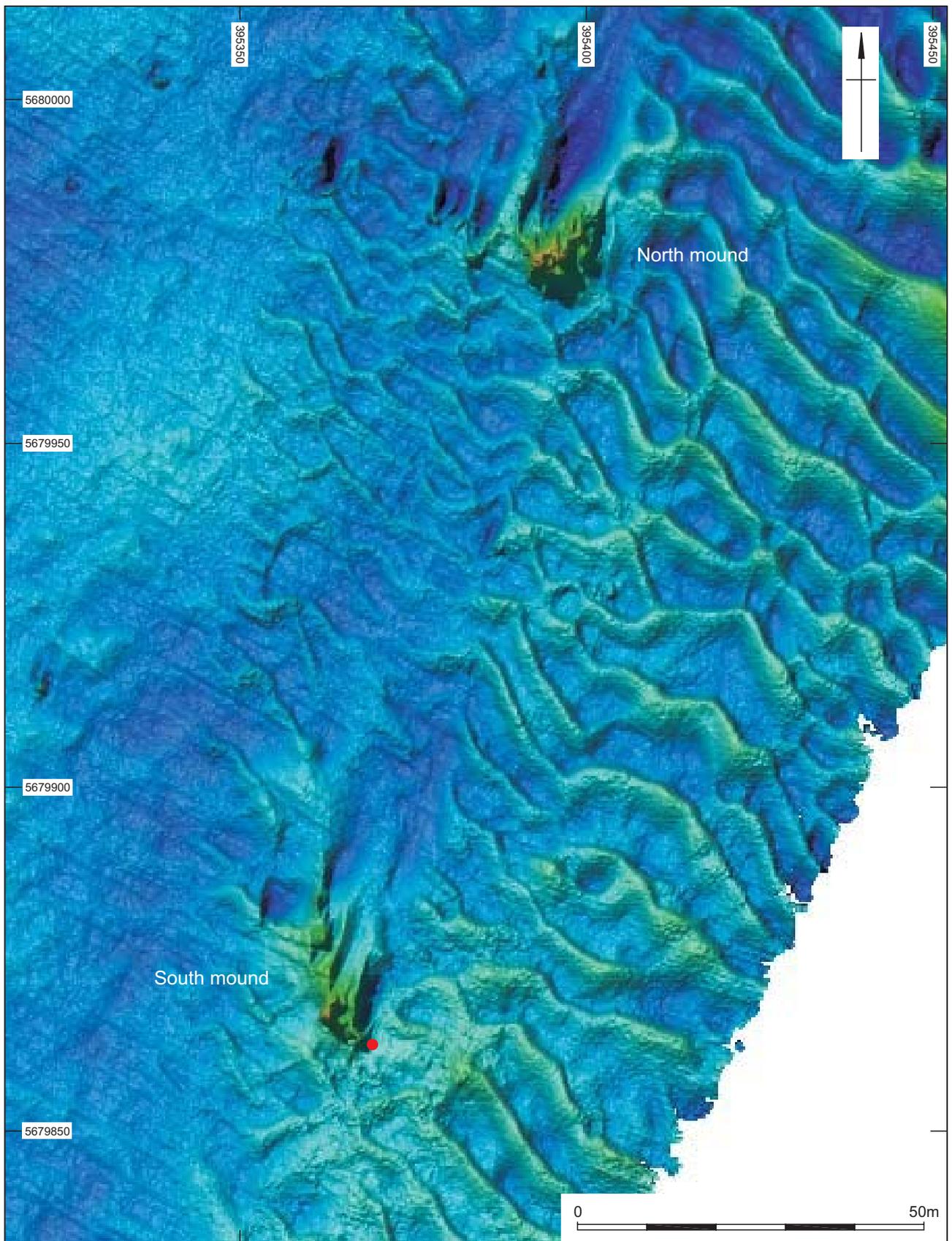
Context No.	Tagged?	ID on 2001 Site Sketch	Description
2001	Yes	Possibly marked '30'	Datum point
2002	Yes	No	Mound of bricks and concretion
2003	Yes	No	Mound of bricks and concretion
2004	No	Possibly inferred by area marked 'wood, cannon and concretions'	Cannon
2005	No	No	Concretion with metal sheeting
2006	No	No	Concretion with metal sheeting
2007	No	Yes	Lead pipes
2008	No	No	Concretion with stone (masonry?)
2009	No	No	Concretion buried under netting
2010	No	No	Large timber with copper sheeting on three sides
2011	No	No	Concretion with metal wheel



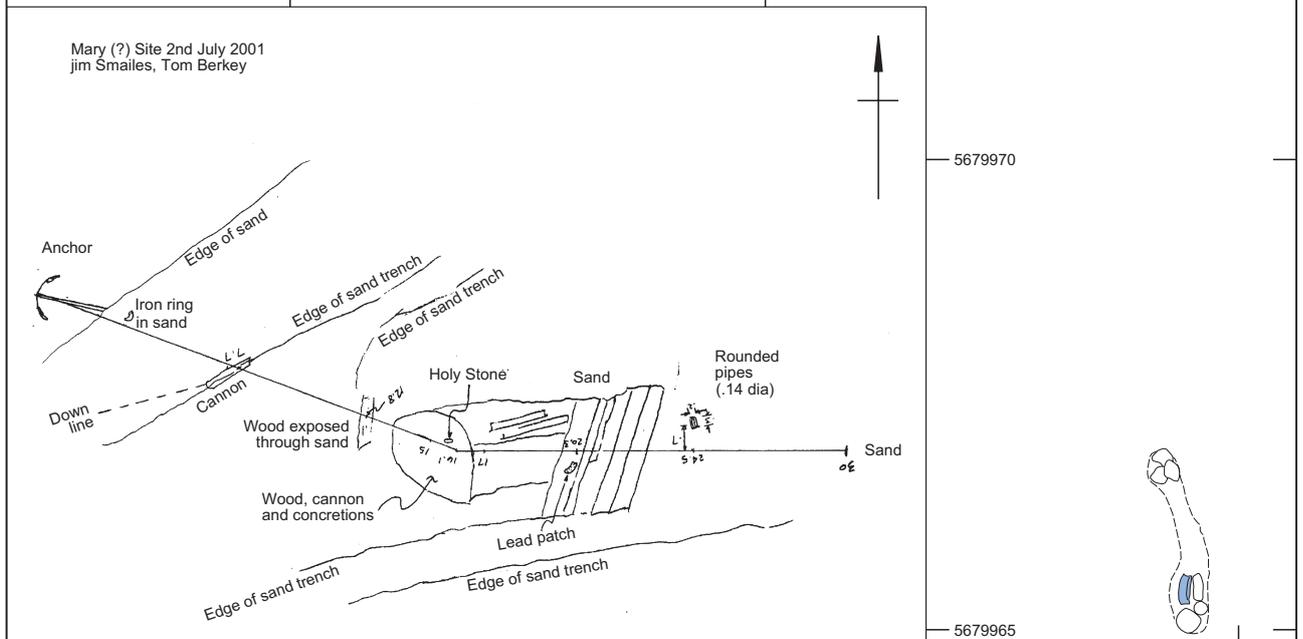
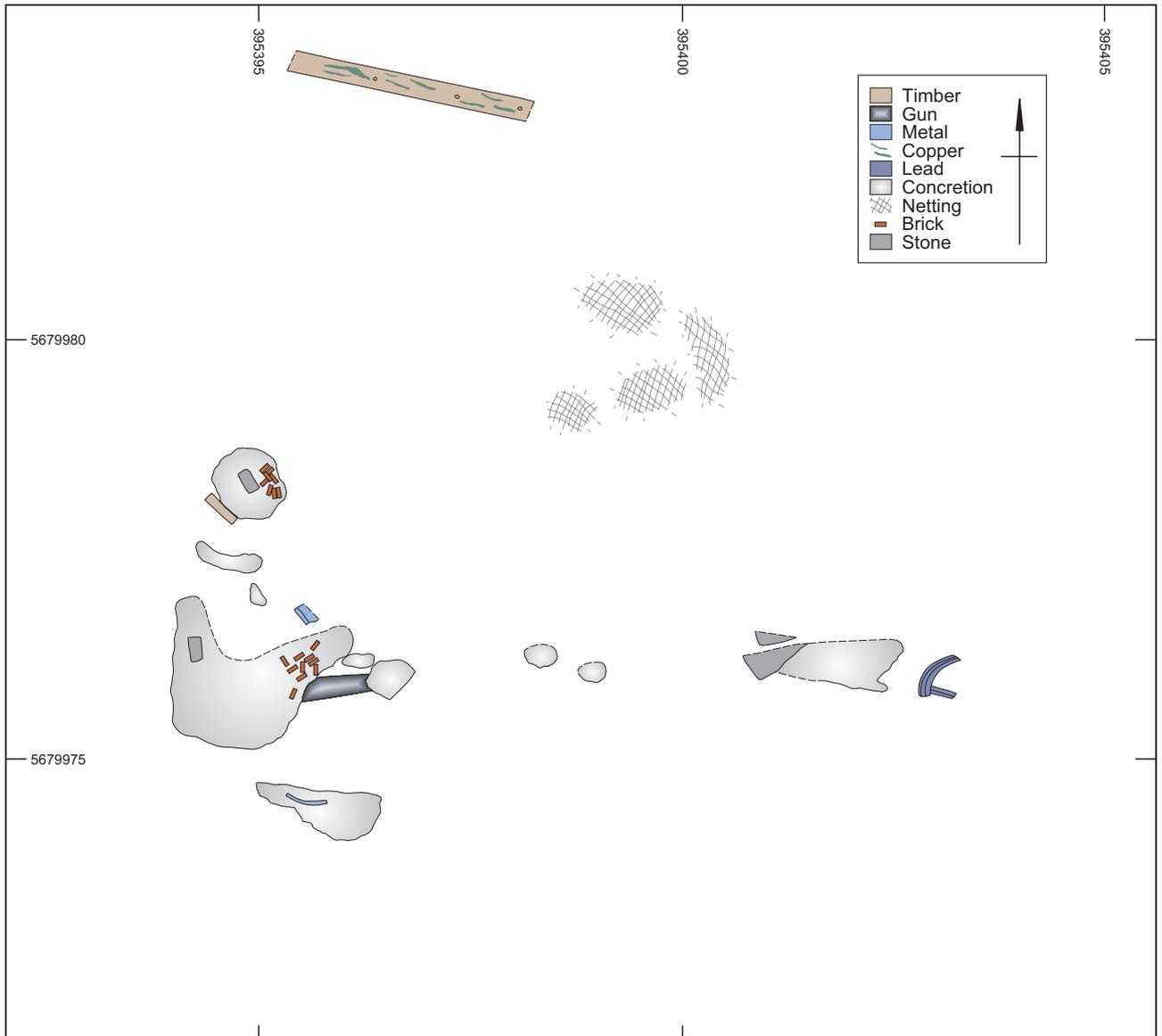
<p>1 ● SI position 51°15.6302' N, 01°30.0262' E</p> <p>2 ● Diver position for north mound 51°15.6922' N, 01°30.0473' E</p> <p>WGS. 84 coordinates</p>	<p>This product has been derived, in part, from Crown Copyright Material with the permission of the UK Hydrographic Office and the Controller of Her Majesty's Stationary Office (www.ukho.gov.uk) All rights reserved. (Wessex Archaeology Licence Number 820/020220/11) NOT TO BE USED FOR NAVIGATION</p> <p>WARNING: The UK Hydrographic Office has not verified the information within this product and does not accept liability for the accuracy of reproduction or any modifications made thereafter.</p>		
	Date: 11/07/06	Revision Number: 0	
	Scale: 1:100,000 (inset 1:2000)	Illustrator: KJB	
	Path: U:\Projects\53111\Drawing Office\Report Figures\2006\z31_Restoration		

Restoration site location

Figure 1



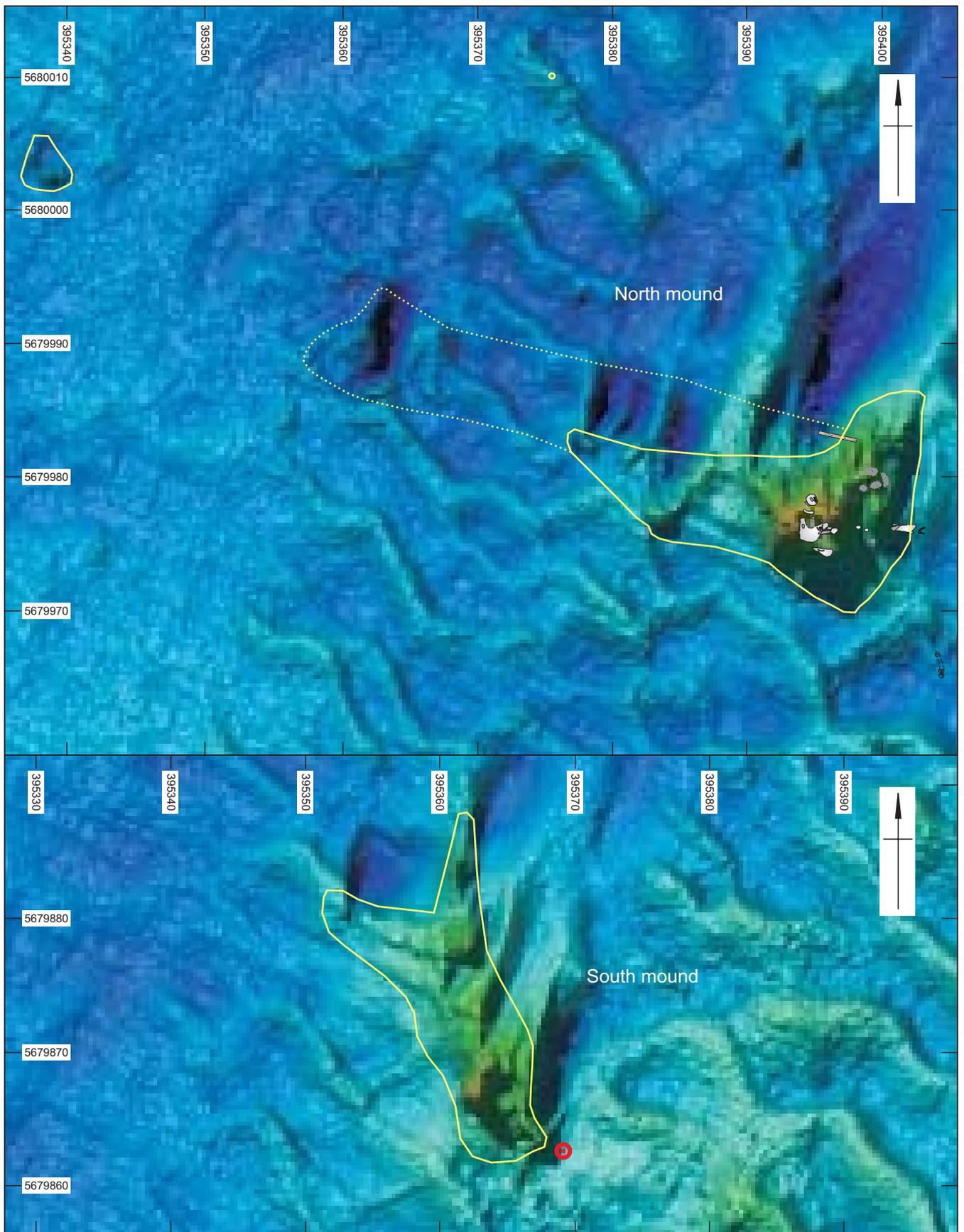
 SI position	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.			
	Date:	03/08/06	Revision Number:	0
	Scale:	1:800	Illustrator:	KJB
	Path:	U:\PROJECTS\53111\DO\Report Figs\2006\z31_Restoration\Archaeological report		



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Date:	03/08/06	Revision Number:	0
Scale:	1:250	Illustrator:	KJB
Path:	U:\PROJECTS\53111\DO\Report Figs\2006\z31_Restoration\Archaeological report		

2006 WA site plan and (inset) 2001 licensee site plan

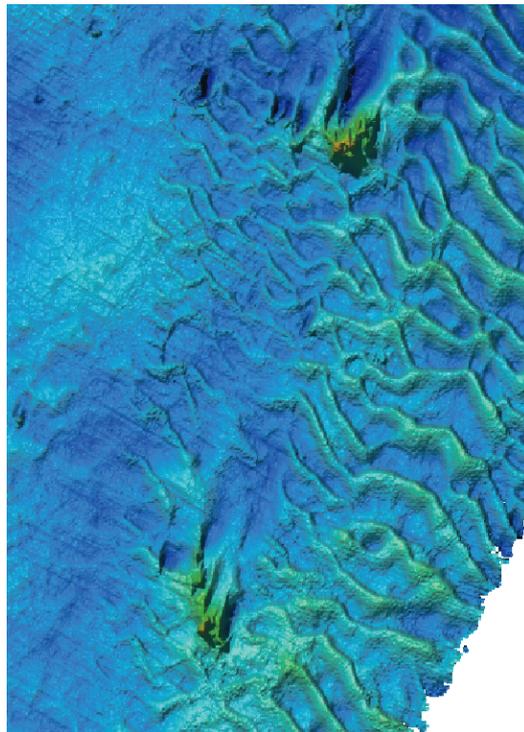
Figure 3



<ul style="list-style-type: none"> ● SI position ○ Extent of site 	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.			
	Date:	03/08/06	Revision Number:	0
	Scale:	1:400	Illustrator:	KJB
	Path:	U:\PROJECTS\53111\DO\Report Figs\2006\z31_Restoration\Archaeological report		

WA site plan over 2005 multibeam data

Figure 4



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