



Bamburgh Castle Beach Wreck



Archaeological Survey



Maritime Archaeology Sea Trust

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|------------------------------|--|
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Introduction

A rarely seen portion of an unknown wreck was reported to Maritime Archaeology Sea Trust (MAST) by Steve Brown, a PADI Basic Archaeological Diver Instructor and local historian, within the intertidal zone of Bamburgh Castle Beach in June 2013. A preliminary survey was conducted by MAST immediately following this report (Berry & Stratford 2013). The site lies within an Area of Outstanding Natural Beauty (AONB). This project to investigate site to including dendrochronology sampling and a further survey on the exposed features was supported by the Northumberland Coast AONB Sustainable Development Fund.

Methodology

The methodology adopted reflects best practice in carrying out archaeological field evaluations, as set out by the Institute for Archaeologists (IfA) Standards and Guidance for Archaeological Field Evaluation (IfA 2008).

The survey was conducted during a spring low tide allowing for maximum time on the exposed timbers. The team consisted of MAST archaeologists (Jessica Berry and Kevin Stratford), dendrochronologist Dr Roderick Bale of University of Wales, Trinity Saint David and volunteers including Steven Brown, local historian and Thomas Cousins and Grant Bettinson both of Bournemouth University. The RTK survey was conducted using an Leica Viva GS10 GPS plotter to accurately map the exposed timbers and the surrounding site environment. A part of this survey also included the use of an air probe to ascertain the level and location of any buried material.

Site Position

The site position was recorded using a hand held Garmin 76Cx with an accuracy of +/- 3 metres.

| | |
|---------------------|-------------|
| Latitude | 55 36.625N |
| Longitude | 001 42.063W |
| Datum: WGS84 | |

The Site Environment

The site lies in the intertidal zone on Bamburgh Beach in Northumberland on the north east coast of England. The beach is made up of fine sand that is well compacted, potentially providing a good level of preservation. The site only appears at certain periods of the tide roughly one hour either side of low water slack. The site itself sits within its own scour which, along with the tidal conditions, means that it may never completely dry out.

Assessment of the Wreck

The site consists of the exposed remains of an unknown wooden sailing vessel 22.5m long by 5m wide. There is considerable evidence for buried material on site which could greatly increase the site dimensions. The orientation of the wreck from stern to the bow is approximately 80 degrees.

The site appears to be stern inshore and lying on its starboard side which is buried with only the eroded port side still showing. The site has several rare features for sites within this environment and even rarer within the UK archaeological records.

The remains of the wreck that were visible during the survey consist of the surviving port side of the vessel. It is likely that the starboard side of vessel still survives mostly intact buried in the sand. The survey of the wreck was undertaken on the exposed timber only.

Dendrochronology Survey

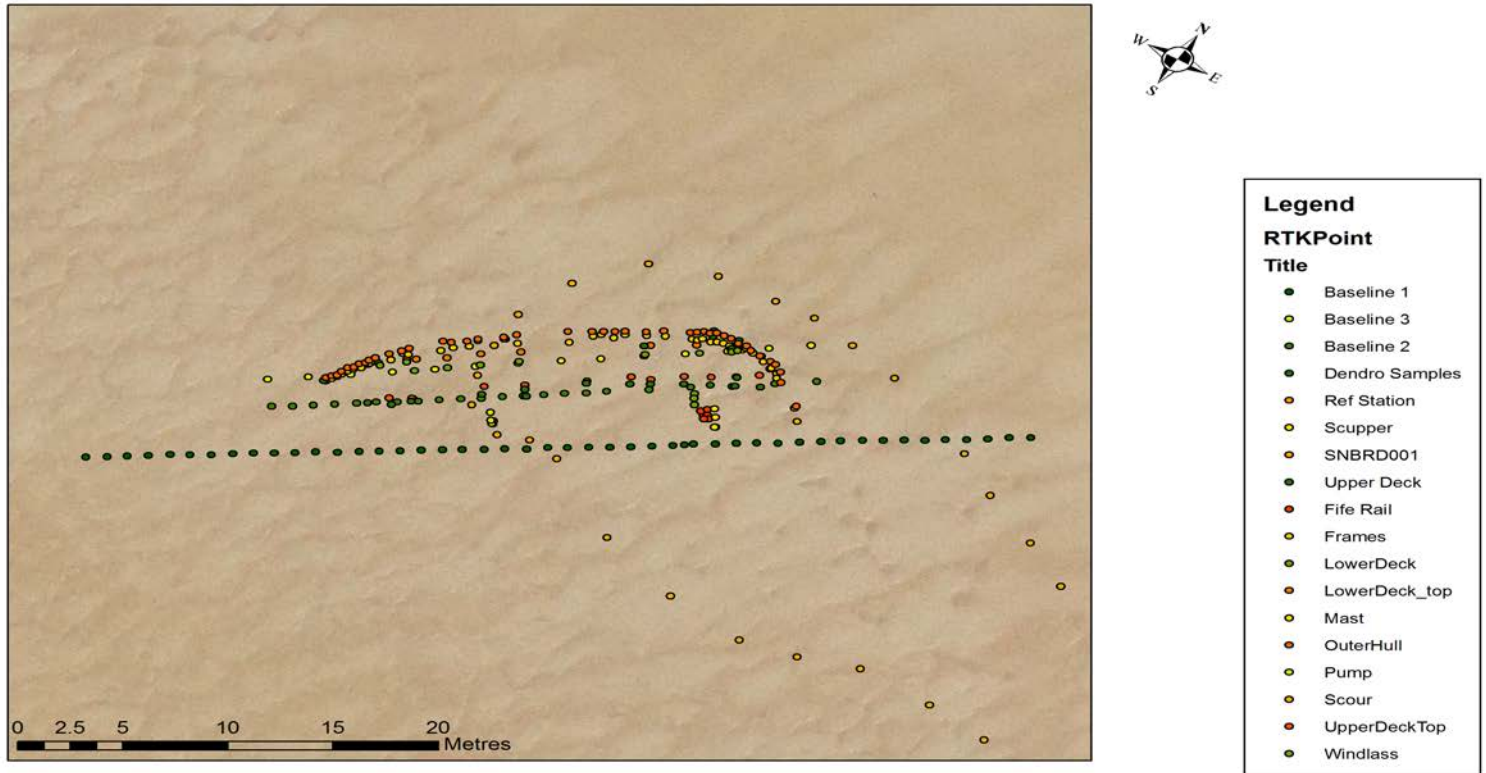
Six samples contained sufficient rings to warrant analysis. Unfortunately none of the samples matched against each other. Five samples showed no match against British, European and North American oak tree ring chronologies. One of the samples proved to cross date against a variety of reference chronologies (figure 3), with a date range of AD1677-1758. As no sapwood survives on this sample only a *terminus post quem* of AD1768 (counting for at least ten sapwood rings after the last known heartwood ring AD1758) can be inferred for the felling date of the parent tree. (See **Image 1** below for sample locations). (See attached report by Dr Bale.)



Image 1: Dendrochronology sample locations

Archaeological Survey

The general dimensions and description of the exposed features is covered in MAST's previous report (Berry & Stratford 2013). A continuation of the survey was completed using a Leica Viva GS10 GPS recording system to accurately position the wreck features and how they relate to each other



(see **Image 2** below).

Image 2: Bamburgh wreck RTK survey locations

In order to establish the depth of any buried material an air probe survey was conducted using three baselines at different cross sections of the potentially buried starboard side of the wreck. The locations of these baselines can be seen in **Image 2**. (The air probe has a maximum depth of 1.86m)

| Baseline 1 | |
|------------|-------|
| 0m | 1.86m |
| 2m | 1.86m |
| 4m | 1.1m |
| 6m | 1.3m |
| 8m | 0.72m |
| 10m | 1.46m |
| 12m | 1.02m |
| 14m | 1.32m |

| | |
|-----|-------|
| 16m | 0.82m |
| 18m | 1.34m |
| 20m | 1.01m |
| 22m | 1.86m |
| 24m | 1.86m |
| 26m | 1.86m |
| 28m | 1.86m |
| 30m | 1.86m |
| 32m | 1.86m |
| 34m | 1.77m |
| 36m | 1.86m |

Table 1

| Baseline 2 | |
|-------------------|-------|
| 0m | 1.86m |
| 2m | 0.8m |
| 4m | 1.86m |
| 6m | 1.86m |
| 8m | 1.86m |
| 10m | 1.69m |
| 12m | 1.86m |
| 14m | 1.2m |
| 16m | 0.82m |
| 18m | 1.86m |
| 20m | 1.86m |
| 22m | 1.17m |
| 24m | 0.72m |
| 26m | 1.86m |

Table 2

| Baseline 3 | |
|-------------------|-------|
| 0m | 1.86m |
| 2m | 1.86m |
| 4m | 0.81m |
| 6m | 1.35m |
| 8m | 1.86m |
| 10m | 1.86m |
| 12m | 1.86m |
| 14m | 1.86m |
| 16m | 1.58m |
| 18m | 0.7m |
| 20m | 1.12m |
| 22m | 1.86m |
| 24m | 1.86m |

| | |
|-----|-------|
| 26m | 1.86m |
|-----|-------|

Table 3

The depth of the probes taken along the baseline indicates some possible buried material within the first metre of sand at 21 locations across the site. Due to the nature of the sediment it is likely that some of the material may be natural. The shallowest material as expected appears to be within the stern section (further inshore) and the amount of contacts reduced towards the bow of the wreck. The nature and extent of buried material could be further investigated by undertaking a targeted test pit from the GPS located probe depths.

Status of the Archaeological Record

The overall character of the exposed material can be summarised as follows:

| | |
|--|--|
| Area and distribution of surviving ship structure | The exposed site is approximately 23m long by 5m wide. The site is likely larger with possible buried material taken into account. |
| Character of ship structure | The ship survives from the keel to around the turn of the bilge on the starboard side. Two layers of deck beams on the port side survive along with one, possibly two masts and a windlass. It is possible that the entirety of the starboard side could be buried and may have high levels of preservation. |
| Depth and character of stratigraphy | The character of the stratigraphy is that of wet sand. There is likely buried material on the site and the width of the vessel could suggest structural remains could survive up to 5m below the current level. |
| Volume and quality of artefactual evidence | No small finds to date, however there is some potential for buried remains. |
| Apparent date of ship's construction and/or loss | Likely pre 1850 Dendrochronology date; terminus post quem 1768 |
| Apparent function | Possible coastal trader |
| Apparent origin | Timber origin from East of England, therefore the wreck is likely British |

The National Monuments Register (NMR) data has been reviewed following the dendrochronology results providing a list of possible site candidates (see **Table 4** below).

| Name | Date of Loss | Type | named location |
|-----------------------|---------------------|-----------------------|-----------------------|
| Elizabeth and Johanna | 1763 | wooden sailing vessel | Y |
| Katy | 1777 | wooden sailing vessel | y |
| Harmony | 1784 | wooden sailing vessel | Y |
| Blackbird | 1784 | wooden sailing vessel | Y |
| Good Design | 1785 | wooden sailing vessel | y |
| Unknown | 1793 | wooden sailing vessel | y |
| Unknown | 1797 | wooden sailing vessel | y |
| Johns Adventure | 1797 | wooden sailing vessel | y |
| Unknown | 1797 | wooden sailing vessel | Y |
| Britannia | 1799 | wooden sailing vessel | y |
| Nancy | 1802 | wooden sailing vessel | y |
| Russell | 1812 | wooden sailing vessel | y |
| Active | 1823 | wooden sailing vessel | y |
| Charlotte | 1823 | wooden sailing vessel | y |
| Mermaid | 1823 | wooden sailing vessel | y |
| Lucy | 1823 | wooden sailing vessel | y |
| Bravo | 1850 | wooden sailing vessel | y |
| Margaret and Ann | 1851 | wooden sailing vessel | y |
| Harmonie | 1857 | wooden sailing vessel | y |
| Cairnduna | 1875 | wooden sailing vessel | y |
| Marrie | 1876 | wooden sailing vessel | y |
| Wibbiena Siverdina | 1890 | wooden sailing vessel | y |
| Jantje Baas | 1894 | wooden sailing vessel | y |
| Paragon | 1895 | wooden sailing vessel | y |

Table 4

The identity of the Bamburgh wreck is to date unknown. In order to narrow down the above list (which consists of only named locations not charted wreck positions) further desk-based research must be completed.

The maritime history of the castle along with newspaper cuttings/artwork on display within the museum presents a very interesting story. Some of the artwork shows a familiar scene of the castle in the background with the beach in the foreground. Throughout history the beach where the wreck lies was used as a landing site for loading/unloading of trade goods/supplies for the castle and the people of Bamburgh. Though the beach itself is relatively free of hazards it is safe to say that the wider environment including the Farne Islands and Holy Island presented a formidable hazard to sailors throughout history. The number of wrecks lost within this region is predominantly down to these two major hazards. However the current evidence points towards a different fate for the Bamburgh wreck. The location of the wreck on the beach suggests two possible options. We know from the iconography that the beach was used for landing boats at various times which could have led to the boat becoming wrecked during this landing process. Alternatively the vessel could have

been purposefully beached during bad weather or when under difficulties in order to prevent it from hitting the surrounding rocky islands.

The castle holds an order from Trinity House of Newcastle Upon Tyne from 1771 (three years after the latest felling date for the timber of the wreck) which tells how the castle saw the need for a system for dealing with stricken vessels on their coast along with facilities of dealing with any stranded sailors (**see Appendix One**). The article states how the castle had a signal gun placed to sound when a vessel wrecks with a different number of shots for different areas. It also states that during any great storm the castle would send riders along the coast to watch for vessels in distress. A monetary reward was offered to the first person/s to report a vessel in distress. The castle's warning system wasn't established solely to locate the stricken vessels: assistance, stores and provisions were also often provided. These included room and board for wrecked sailors and the provision of storage rooms for any recovered cargo material. This appears to be one of the earliest forerunners to the coastguard in the UK and highlights the need for succour and threat to shipping that the treacherous north east coastline presented.

It is entirely possible that the Bamburgh Beach wreck was subjected to the above processes possibly saving sailors' lives along with any cargo. Local and national archives are therefore key to try to identify the wreck as they may hold records of the vessels that were assisted under the castle's direction as forerunner to the coastguard. The site therefore requires a period of historical research in order to identify the remains and tell the story of the wreck and the people associated with its build, use and loss.

MAST'S proposed site investigations

A number of proposed future site investigations that MAST proposes to further enhance our understanding of the site are:

- Further dendrochronology samples should be taken of the buried wreck material in order to sample less eroded timber surface for a more accurate date range for the site.
- A test pit in the stern section of the site in order to establish the nature of the buried material seen from the air probe results.
- Desk-based research at local and national archives to enhance our understanding and potential identity of the wreck.

REFERENCES

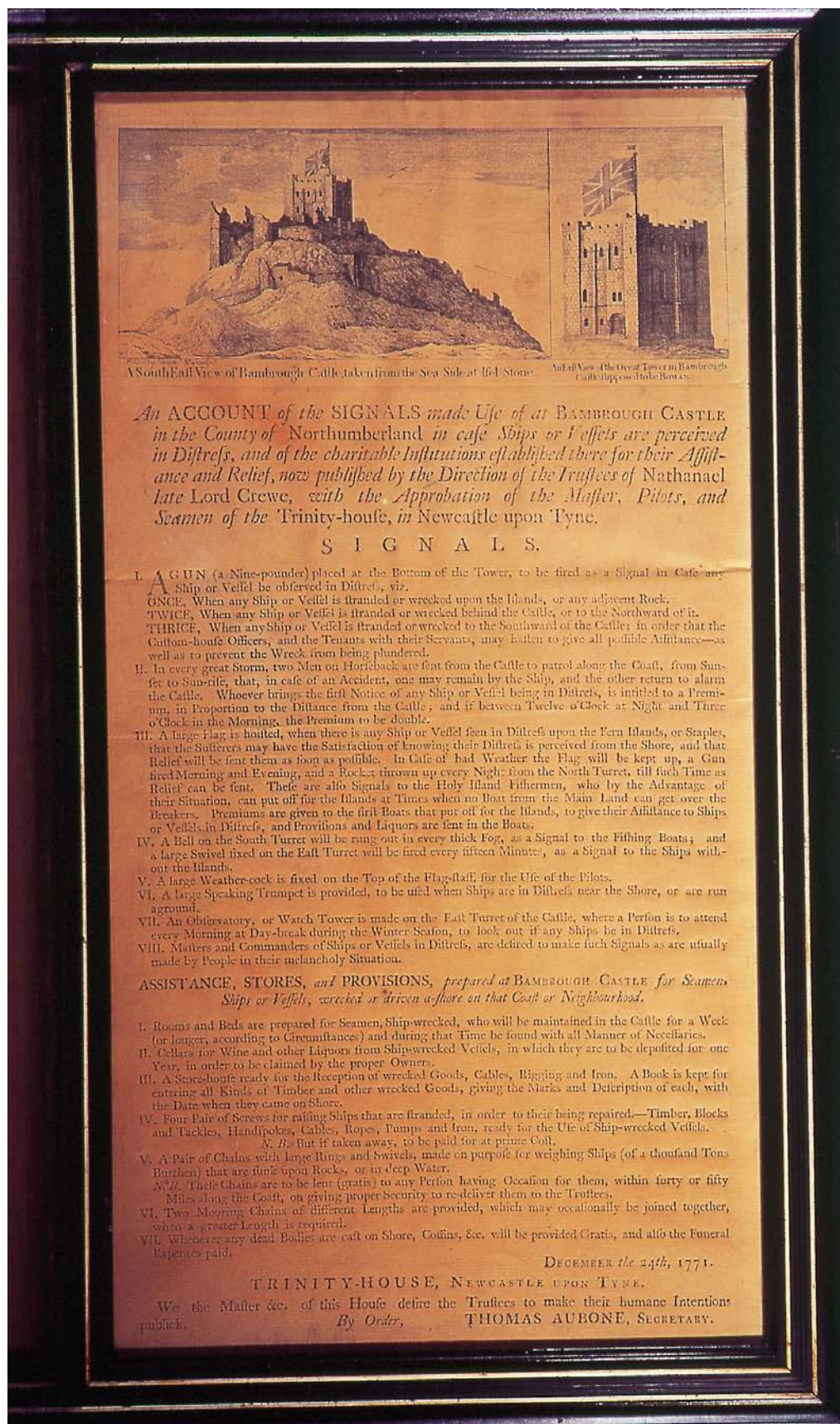
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Appendix One

Trinity House order for Bambrough Castle, 1771



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