



YORK ARCHAEOLOGICAL TRUST



OUSE RIVERBANK TIMBER STRUCTURE RECORDING

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INVESTIGATION AND ASSESSMENT

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Non-technical Summary

On 19th July 2018 York Archaeological Trust conducted an initial investigation to record and identify a timber structure on the east bank of the river Ouse south of York city centre (TA 1778 6675), exposed by falling river levels over the summer. The exposed parts of the structure were recorded and appear to be the remains of a river vessel of probable nineteenth century date, sunk at the findspot.

KEY PROJECT INFORMATION

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1 INTRODUCTION

On 18th July 2018 York Archaeological Trust was contacted about a timber structure observed on the east bank of the River Ouse, exposed by falling river levels following a period of very hot weather. (SE 6023 4997) (Figure 1).

The city archaeologist, Mr John Oxley requested an urgent investigation and recording of the exposed parts of the structure with any possible identification of the structure and accurate geolocation of the feature before it became submerged again.

2 METHODOLOGY

The investigation was conducted on the 19th July. A 1:20 scale plan of the portions of the structure above water was made and overall measurements made where parts of the underwater structure were visible. Comprehensive photography was undertaken and wood species identification samples taken. Two fixed points were established using labelled roofing nails driven into the structure for geolocation on the 20th July, equipment being unavailable on the day of the initial visit. Handwritten notes and sketches were made to supplement the drawing and photography. Off-site the plan was imported into Adobe Illustrator CS6 and drawn as a digital file (figure 2).

3 LOCATION & TOPOGRAPHY

The structure is within the river on the east bank of the Ouse approximately halfway between the Millennium Bridge and the riverside end of St Oswalds' Road. The structure was partially submerged at the time of the visit and would normally be underwater. Though riverside trees and shrubs (predominantly *Alnus spp*- Alder) obscure the spot, the structure is visible from the towpath parallel to the river around 3 metres to the east.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

As this was an emergency call-out., there was insufficient time to conduct an investigation into the historical and archaeological background. This could be undertaken should further research be required.

5 RESULTS

The structure is the substantially complete lower part of the hull of a river vessel, sunk on the east bank of the river Ouse. The vessel is parallel to, and partly buried by, the riverbank at this point which runs approximately north and south, and is partly overgrown with vegetation (plate 1). The hull dips slightly down into the river and towards the downstream end of the vessel. As a result, much of the hull to the landward side of the mid-line was exposed and visible while beyond the mid-line and towards the downstream end of the vessel, the rest of the hull was visible below the water (plate 2). The upstream end of the vessel and the hull planking on one side at the turn of the bilge was partly buried by subsidence of the riverbank.

The riverbank below the downstream end is eroding and appears to have been lost below the end of the vessel, allowing this end to collapse into deeper water. It was deemed unsafe to attempt to access this end on foot.

The vessel is of wooden construction with iron fastenings; the remains consist of the lower hull planking, the lower part of each side and parts of most of the frames (plate 3). A stem and stern post are visible but it cannot be determined which was the bow and which the stern as the hull is double ended. A scarf joint is visible on the keel plank and if the vessel follows the traditional orientation of such a joint then the bow should be the upstream or northern end of the vessel. The timber is in generally good condition- exposed surfaces are abraded leaving no surviving tool marks. Patches of raised plank surface, which have been protected until recently by overlying attached (and now lost) frames, show that around 2mm of surface have been lost to erosion since abandonment. The wood itself is waterlogged but hard and significant effort was needed to extract samples for species identification. The iron fittings are corroded but otherwise still sound.

The hull planking (plate 4) is made from straight grained timber with few knots, identified as *Pinus sylvestris L.* (Scots Pine). The planks are generally around 300-320 mm wide and around 30-32 mm thick where measurable. The planks form strakes that are butted together edge to edge, a form of construction known as carvel built. No caulking was visible in the seams though this may have washed out over time. The aforementioned scarf on the plank forming the keel was the only definite joint visible, though the straight ends of some of the planks at the downstream end suggest other strakes were made up of end-to-end joined planks.

The surviving frame elements are cut from *Quercus spp* (oak) branch wood, each piece with irregular grain and several knots. Each surviving piece appears to be single piece- the frames do not appear to be composites of several timbers scarfed together and run across the width of the vessel. One or two have eroded limber holes present- cut outs in the lower edge leaving a sub rectangular gap in the frame where it meets the planking allowing run off of bilge water should the vessel require pumping or bailing. The frames are fastened to the planking with iron nails - there are no visible screw threads or bolts though it must be allowed that these could have corroded away. Iron nails, either single or in pairs, are driven into the upper face of each frame and through into the keel plank while elsewhere nails are driven through the frames into the planking in a more irregular fashion. Many of these nails stand proud of the wood surface and while this may reflect some loss of wood to erosion, it suggests there was an inner layer of planking nailed over the frames either as a deck or as a working surface.

The keel could not be examined and the stem/sternposts were either too eroded (upstream end) or inaccessible (downstream end) for close examination, but appear to have been of boxed construction *Quercus spp.*. No attachment points ("pintles") for a rudder were observed though an additional piece of timber upon which such might have been mounted is present affixed to the outer edge of the downstream post- If correct, this would support the supposition that the vessel sank with its bow pointing upstream. No evidence for a mast step indicating sail propulsion was present and no fittings that might be associated with an engine were present. Nothing of the gunwale survives to indicate the position of rowlocks. No trace of a cargo, equipment or personal possessions could be seen, nor any means of identifying the boat itself through a name, hull number or registry.

The overall form of the vessel appears to have been double ended with a flat bottom and parallel sides. The angle between the bottom and the sides (the “turn of the bilge”) is quite steep (c. 75° where it could be measured). Overall length (stem-sternpost) is 16.75m and breadth is estimated at 4.2m. Draught and waterline are unknown.

It was noted during the recording of the vessel that the end of a second such vessel (plates 5 and 6) is visible some 3 metres upstream of the upstream end of the vessel described, again embedded in the riverbank but largely inaccessible at the time of the visit.

6 SUMMARY

The observed evidence and boatbuilding technology suggests the vessel is of nineteenth or early twentieth century date. It is a river vessel, possibly a towed barge or lighter of simple but robust construction suitable for transporting bulk cargo in a riverine environment. It does not appear to have suffered any catastrophic accidental damage that would have led to its sinking. Its position- hard up against and parallel to the riverbank - and the close association with at least one more similar and similarly placed vessel suggests it had either been moored up and sank after abandonment and neglect or perhaps deliberately scuttled to help stabilise this area of the riverbank.

The vessel is a significant find in that this may be the first positive identification of a ‘boat graveyard’ near York- a spot on the riverbank where abandoned boats could be moored and left to rot whilst simultaneously assisting in the protection of an area of riverbank perceived as prone to erosion. Future documentary research may be able to shed light on this hitherto apparently unsuspected graveyard, and perhaps on the origins of this vessel.

While important as a feature it is unlikely that the vessel would justify the expense of lifting, cleaning and conservation of a vessel of this size and of relatively recent provenance for permanent display

ACKNOWLEDGEMENTS

York Archaeological Trust would like to thank Damian Robinson and Tim for very useful discussion and assistance on site.



Plate 1. Exposed planking in midships area of vessel looking south (downstream). 1m scales in 0.5m divisions



Plate 2. Submerged in situ frame elements. The row of nails are in the keel plank. Looking south west.



Plate 3. Exposed planking in midships area looking north (upstream). 1m scales in 0.5m divisions.



Plate 4. View of boat on riverbank looking south-south east. Tape runs along line of Keel. 1m scales in 0.5m divisions.



Plate 5. Position of second boat north (upstream) from first boat, looking west. 1m scales in 0.5m divisions.



Plate 6. Submerged hull of second boat visible below water, looking approx. west.

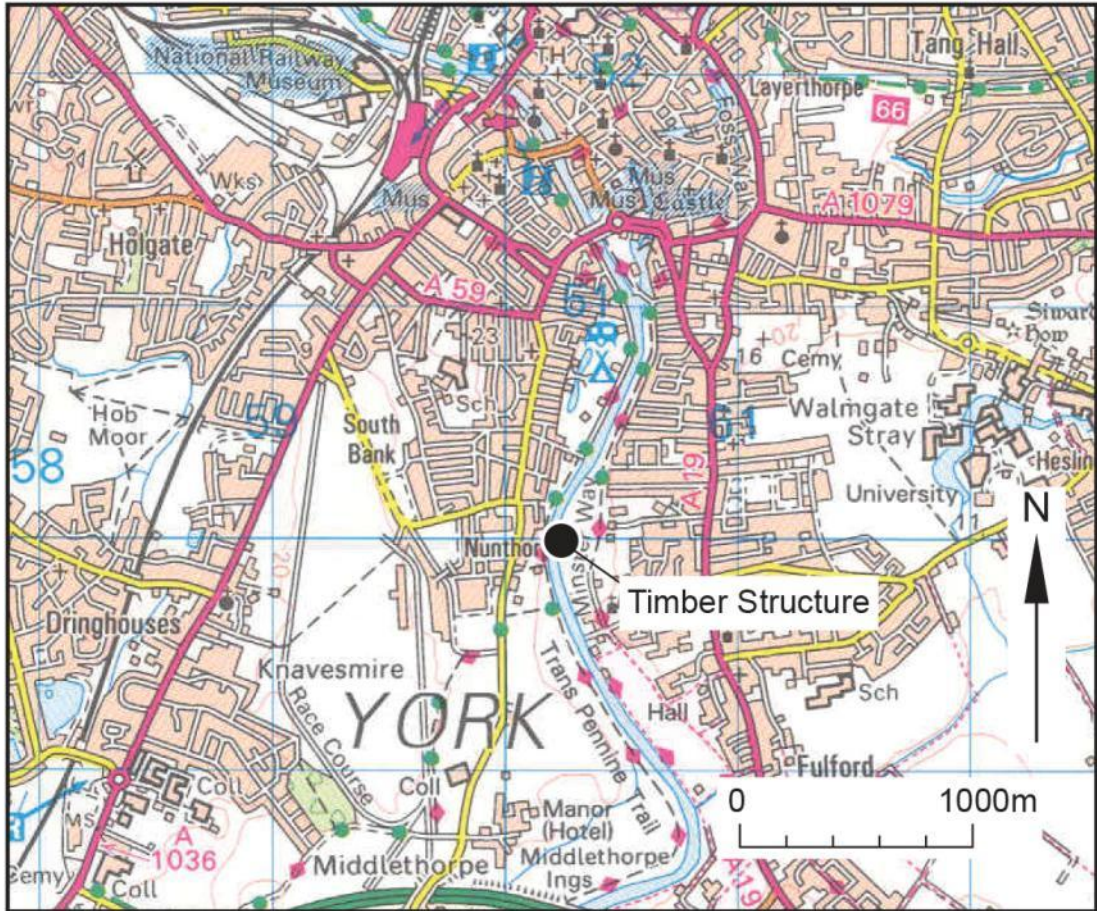


Figure 1. Location of Timber structure

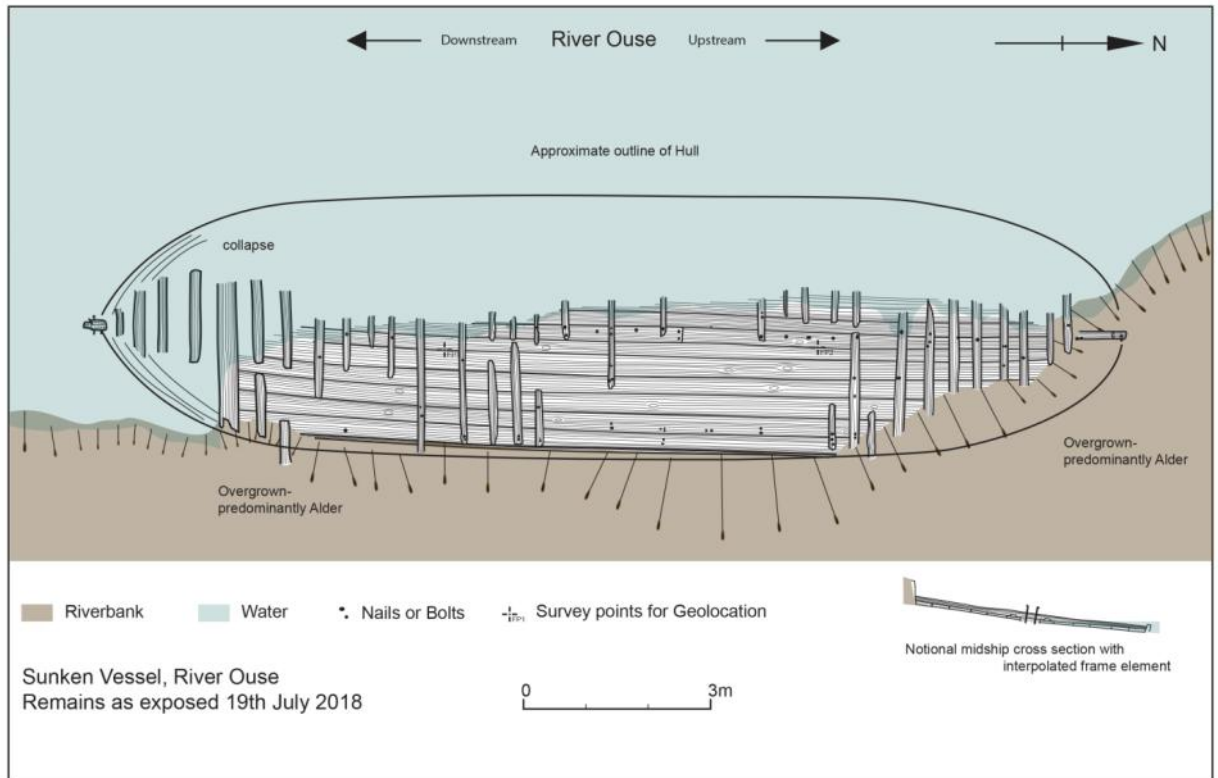


Figure 2. Plan of exposed structure and extent of visible submerged portions, 19th July 2018



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