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**Womack Water to Hickling Broad  
Compartment 6  
Broadland Flood Alleviation Project**

**Monitoring of Works under Archaeological  
Supervision and Control**

**ENF 126448**

**Heather Wallis  
October 2016**

**HW Report No. 175**

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<b>Project name</b>	<b>Womack Water to Hickling Broad</b>
<b>Parishes</b>	<b>Ludham, Potter Heigham</b>
<b>Event No.</b>	<b>ENF 126448</b>
<b>Grid Ref.</b>	<b>TG 3965 1765 to TG 4130 2079</b>
<b>Date of Work</b>	<b>September 2008 to September 2011</b>

## **Introduction**

Planning permission granted to Halcrow Group Ltd, for flood alleviation work on the River Thurne between Womack Water and Hickling Broad (Fig. 1) required an archaeological watching brief to be carried out during the construction works. This development forms part of the Broadland Flood Alleviation Project, a major project which will renew and strengthen banks and create dykes along the Bure, Ant, Thurne, Yare and Waveney valleys. This section of the project ran for c.10km along the right bank of the River Thurne through the parishes of Ludham and Potter Heigham. The majority of the works included the excavation of new soke dykes up to 12m wide and 2m deep. The material from these excavations was used to infill old soke dykes and both raise and widen the floodbanks. Works to the south of Hickling Broad and Heigham Sound were smaller in scale removing material from the edge of the present dyke to raise the floodbank.

This report covers monitoring works associated with three planning applications; emergency works at Horse Fen (BA/2008/0189), Phase 1 works at Candle Dyke (BA/2009/0187) and Phase 2 works Womack Water to Hickling Broad (BA/2010/0084).

## **Geology**

The bedrock geology of eastern Norfolk consists of Crag group sand and gravel. This sedimentary material is made up of shallow water marine and estuarine sands, gravels, silts and clays deposited up to 5 million years ago. The superficial geology is Breydon Formation silts and clays. These occupy the river valleys here and across much of the low lying areas in eastern Norfolk (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>). This formation is dominated by unconsolidated silt and clay with a shelly marine fauna. Peat, of freshwater and brackish origins, is also a major component on the marshland margins particularly and is present to the south of Hicking Broad and Heigham Sound.

## **Archaeological Background**

Prior to work commencing a desk top assessment of the area was undertaken. This identified all known sites of archaeological interest which may have been affected by the flood defence works and a mitigation strategy was formulated to limit the impact of the works on these sites.

The known archaeological sites which lay on the line of the works were identified through the study of aerial photography. Two areas of possible clay extraction lay at the south end of the works (NHER 45079 and NHER 45080) while at the north of the works the peat diggings which now form Hickling Broad, were once more extensive (NHER 43721 and NHER 43725).

Post-medieval ditches and banks have also been identified in two areas (NHER 45086 and NHER 43716). Buildings close to the working corridor include wind and steam pumps, and an early eel sett is located to the south of Candle Dyke.

## **Aims of the work**

The watching brief was intended to identify and record any previously unknown sites as well as record any known remains which were disturbed by the works. Advice was also given where necessary to reduce the impact of the works on any archaeological deposits.

## **Watching Brief Methods**

Regular visits were made to the site throughout the course of the excavations. Each area of machine works was visited on an approximately weekly basis, the exact timing of visits varying slightly depending on the speed of progress of the works. A visual scan was made of areas when the topsoil strip had been completed in order to identify any archaeological deposits. Similarly, the sides of the new soke dykes were visually assessed to identify and record any features which may have been revealed. Monitoring was undertaken from the top of the new dykes as safety concerns prevented access into the new dyke. Disturbed soils were also visually checked for finds and metal detected where appropriate. All site operatives were briefed on the possibility of revealing archaeological deposits and were encouraged to report any artefacts or unusual deposits they encountered.

All work was carried out in full accordance with national and regional guidelines for the treatment of archaeological remains, and in particular the guidance set out in *Standards for Field Archaeology in the East of England* (Gurney 2003) and the Institute of Field Archaeologists *Standard and Guidance for an Archaeological Watching Brief* (2001).

Records of the watching brief consist of a site diary and digital photographs. Where archaeological sites were identified, full recording was undertaken using single context recording, with plans and sections drawn at appropriate scales, and black & white photographic negatives.

## Results of the Watching Brief

### Boat frame (c. TG 4183 2225)

Located close to the Eel Sett to the south of Candle Dyke an iron frame was revealed during strimming of the undergrowth. This appeared to be remains of a boat. It was c.10m long with a pointed prow and rounded stern. The right side of the frame retained its shape while the left side was twisted and mangled. A single fragment of wood remained attached to the frame which was inscribed with the words '86 persons'.



Iron frame prow



Iron frame stern



Inscription '86 persons'

## Deposits

The deposits revealed during the works fell into two main categories; peat along the south of Hickling Broad and clayey silts throughout the rest of the works. Dark grey clayey silts lay below similar brownish orange material, which was topped by thin topsoil. In many places the lower deposit was remarkably soft. These deposits are similar to those seen throughout the flood defence works across the eastern rivers of Norfolk. In one area, close to Womack water, peat was visible below the clayey silts.



Typical silty clay deposits

## Conclusions

The only discovery made during the works was part of an iron frame belonging to a boat. The attached plaque, indicating a capacity of 86 persons, suggests that this may have started out as a lifeboat for a commercial vessel as this seems to have been the standard size for such vessels (James Albone pers. comm.). It is possible it was later used as a river pleasure-craft before being abandoned alongside Candle Dyke.

## Acknowledgements

My thanks go to all those involved with the project at Halcrow and BamNuttall who were helpful throughout the works.

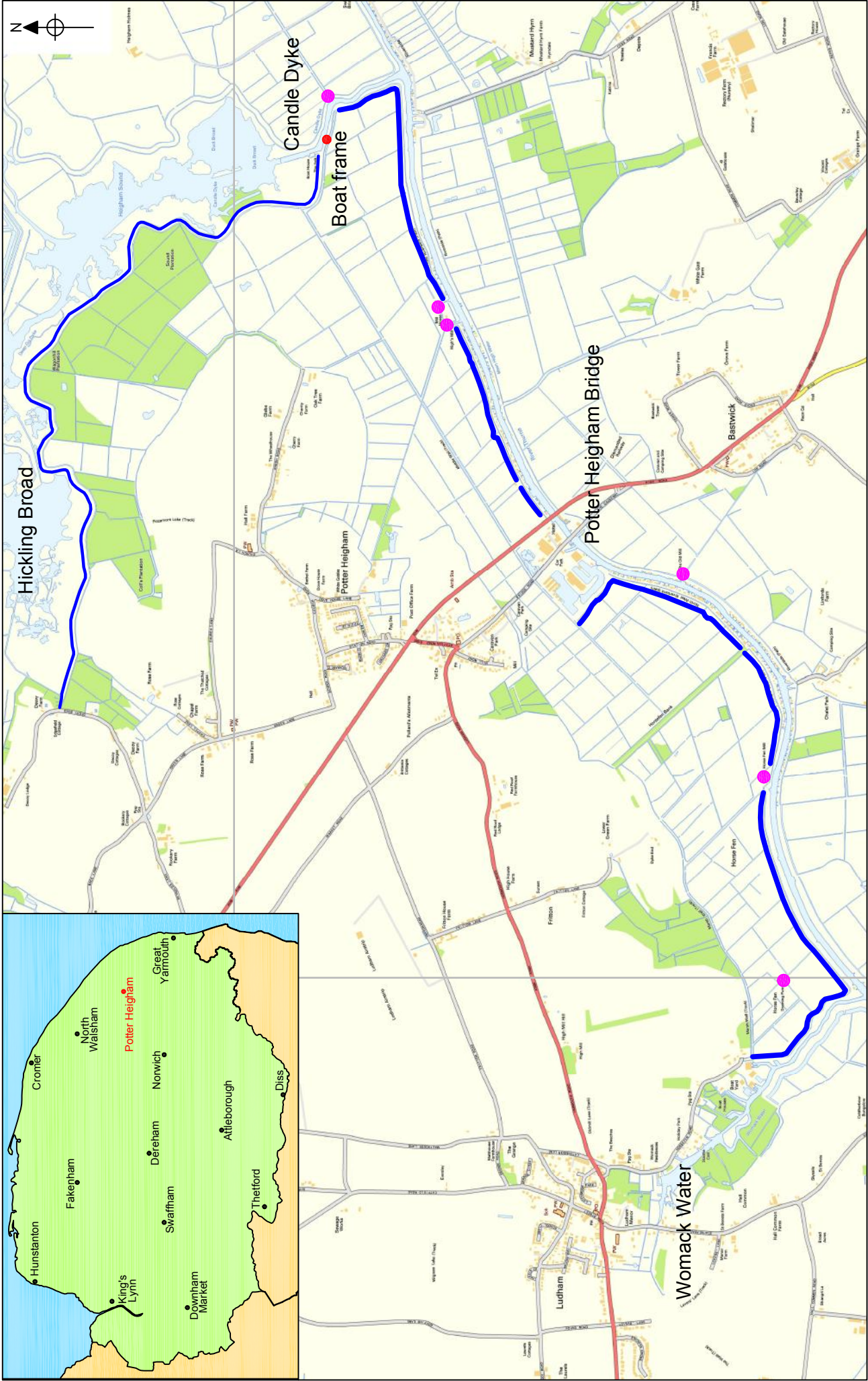


Figure 1. Site location plan  
 Showing line of works (blue), mill and steam pump sites (magenta) and location of boat frame (red).

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## Project details

Project name	C6 River Thurne. Womack Water to Hickling Broad
Short description of the project	Watching brief along line of new flood defences from Womack Water, along the right bank of the River Thurne and the south of Candle Dyke and Hickling Broad. These works formed part of the Broadland Flood Alleviation Project. No features or finds were noted during the excavations but the iron frame of a river pleasure-craft was noted in the undergrowth on one of the existing banks alongside Candle Dyke.
Project dates	Start: 03-09-2008 End: 30-09-2011
Previous/future work	No / No
Any associated project reference codes	ENF 126448 - HER event no.
Type of project	Recording project
Monument type	NONE None
Significant Finds	NONE None
Investigation type	"Watching Brief"
Prompt	Planning condition

## Project location

Country	England
Site location	NORFOLK NORTH NORFOLK POTTER HEIGHAM C6 River Thurne, Womack Water to Hickling Broad
Study area	10 Kilometres
Site coordinates	TG 3965 1765 52.702836333 1.547642175225 52 42 10 N 001 32 51 E Line
Site coordinates	TG 4130 2079 52.730273306849 1.574321644246 52 43 48 N 001 34 27 E Line

## Project creators

Name of Organisation	Heather Wallis
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Heather Wallis

Project director/manager Heather Wallis

### Project archives

Physical Archive Exists? No

Digital Archive recipient Norfolk Museums Service

Digital Contents "Stratigraphic","other"

Digital Media available "Images raster / digital photography","Text"

Paper Archive recipient Norfolk Museums Service

Paper Contents "other"

Paper Media available "Report"

### Project bibliography 1

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