Oby to Stokesby Compartment 9 Broadland Flood Alleviation Project

Monitoring of Works under Archaeological Supervision and Control

ENF 126446

Heather Wallis
December 2016

HW Report No. 195

Project name Oby to Stokesby; Compartment 9

Parishes Ashby with Oby, Fleggburgh, Stokesby with Herringby

Event No. ENF 126446

Grid Refs TG 4036 1506 to TG 4288 1016

Date of Work 21st April 2011 to 15th August 2011

Summary

During flood defence works between Oby and Stokesby on the left bank of the River Bure a number of finds were made. These included pieces of undated waterlogged worked-wood, a Post-medieval/Modern industrial site and Post-medieval and Modern finds.

Introduction

Planning permission was granted to Halcrow Group Ltd, for flood alleviation work along the left bank of the River Bure between Oby Dyke and Stokesby (Fig. 1). This development formed part of the Broadland Flood Alleviation Project, a major project which will renew and strengthen banks and dykes along the Bure, Ant, Thurne, Yare and Waveney rivers.

A condition of the permission required that an archaeological watching brief was carried out during the construction works.

This report covers monitoring works associated with planning application BA/2010/0391.

The Works

Works were undertaken along c.8.4km of the left bank of the Bure. The scale of works along this length varied, in some areas no works were undertaken, while in others existing dykes were widened or old dykes were backfilled and new dykes, up to 18m wide and 2.5m deep, were excavated.

For ease of recording the works were divided into five sections. Chainage numbers are given for reference to drawings held in the site archive.

Obv

TG 4033 1507 to TG 4088 1442 (Chainage 0 to 1800). Between Oby Dyke and South Oby Dyke.

South Oby

TG 4088 1442 to TG 4094 1380 (Chainage 1800 to 2500). Between South Oby Dyke and Oby Mill.

Clippesby

TG 4094 1380 to TG 4086 1253 (Chainage 2500 to 3800). Between Oby Mill and dyke to south of Clippesby Mill.

Acle

TG 4086 1253 to TG 4142 1172 (Chainage 3800 to 5250). Between dyke to south of Clippesby Mill and Acle Bridge.

Stokesby

TG 4168 1144 to TG 4205 1062 (Chainage 5600 to 7400). Between Acle Bridge and Commissioners Mill.

Stokesby East

TG 4215 1049 to TG 4284 1060 (Chainage 7500 to 8400). Between Commissioners Mill and Stokesby.

Geology

(http://mapapps.bqs.ac.uk/qeologyofbritain/home.html).

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 which lay in the river valleys of eastern Norfolk.

Archaeological Background

Prior to work commencing a desk top assessment of the area was undertaken (Halcrow Group Ltd 2010). 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. Within the bounds of the Compartment a total of 80 records were returned from a search of Norfolk Historic Environment Record. Very few sites of the identified sites lay in the marshes alongside the River Bure, the majority of the archaeological evidence being recorded on the 'high' ground above the 5m contour. Within the areas close to the river 20 sites were identified, of which just 11 lay within the working corridor.

The earliest known evidence within the working corridor is an area from which finds of both medieval and post-medieval date have been recovered (Fig 1 Site H). These include a medieval seal matrix, a papal bull and post-medieval jettons. Further east the study of aerial photographs have revealed four ring ditches which are thought to represent post-medieval stack stands (Fig 1 Site K).

Four windpumps are known to lay within the development area, three of which are still standing. Towards the north of the works is Oby Mill (also known as Wisemans Mill). This Grade II* wind pump was built in 1753 and operated up until 1933 when a diesel pump was installed. To the south of this is Clippesby Mill (Lower Davies Mill) which was built about 1830 and is Grade II listed. To the south of Acle Bridge is the site of a windpump, which is marked on Faden's Map of 1797, but has no surviving above ground remains while further south still is Commission Mill (Stokesby Drain Mill). The present Grade II listed building was constructed in the early 19th century, but a mill is also marked on this spot on Faden's late 18th-century map. Adjacent to this mill is Commission Mill Cottage a Grade II late 18th-century cottage.

The remaining known sites within the working corridor date to WWII defences and are grouped around Acle Bridge, an important river crossing. These defences include pill boxes and a spigot mortar emplacement.

On the higher ground, away from the river, a number of sites have been identified from the study of aerial photographs most of which show field boundaries and enclosures. These are likely to represent boundaries dating from the late Iron Age to Roman, Medieval and Post-medieval.

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 timing varying depending on the speed of progress of the works. Where possible 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 in order to identify and record any features which may have been revealed. A majority of the monitoring was undertaken from the top edge of the new dykes as safety concerns prevented access into the new dyke. On two occasions, safe access to investigate finds was achieved. Disturbed soils were also visually checked for finds and metal detected where appropriate. Site staff were briefed on the possibility of

revealing archaeological deposits and were encouraged to report any artefacts or unusual deposits which 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 (2010).

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 Monitoring Works

The natural deposits throughout the length of the woks consisted of a dark grey silty clay overlain by a brownish orange silty clay, above which lay the topsoil and turf.

A number of finds, both features and artefacts, were made during the course of the works including waterlogged wood, a Post-medieval/Modern industrial site and Post-medieval and Modern finds. Their locations are shown on Fig. 1 and they are described below.

Site A (Oby – Chainage 470 to 1200) Post-medieval and modern finds

A number of sherds of post-medieval and pottery were recovered along a c.650m length of topsoil strip, which covered four fields, near to Oby. Although the finds assemblage was unremarkable, the presence of such material in the marshes is somewhat unusual. Finds such as these are probably the result of manuring with material incorporating household refuse. No archaeological features were noted in this area.

The Finds (Appendix 1)
By Sue Anderson

Pottery

A total of 105 sherds (982g) was collected from the topsoil strip of four fields in this area, as shown in Table below. Quantities from each of the fields were as follows: Field 1, 13 sherds; Field 2, 48 sherds; Field 3, 24 sherds; Field 4, 20 sherds.

Description	No	Wt/g
Creamwares	2	52
Staffordshire white salt-glazed stonewares	1	4
English Stoneware	1	102
Late post-medieval unglazed earthenwares	2	33
Late slipped redware	2	24
Porcelain	5	17
Refined white earthenwares	84	615
Yellow Ware	8	135
Totals	105	982

C9 topsoil strip pottery quantification by fabric

Identifiable forms in this group comprised 28 plates, five saucers, ten bowls, two dishes, two jars, a mug, a cup, a bottle and a plantpot. Decoration was again dominated by transfer printing with willow pattern and floral designs being the most common (one floral design was the same as another vessel found in C8). Other decorative techniques included spongeware, moulding and lining, and one yellow ware vessel had slip 'mocha' decoration. As a whole the group dates between the mid-18th and 20th centuries.

Metalwork

A post-medieval copper alloy nail with a square-section shaft and a sub-square sheet head was recovered from Field 3. It is 59mm long.

Clay pipe

Two fragments of stems (3g) were found in Field 3. They are likely to be of 18th/19th-century date.

Miscellaneous

One small fragment (6g) of Welsh-type blue-grey roofing slate was found in Field 4. It is probably of 19th-century date.

Site B (Oby -Chainage 1520) ?Marsh/Pond (Plate 1)

A variation in upper soils in the sides of the new dyke were noted here. An uneven layer of brown organic silty clay lay above the natural silty clays, above which was a lighter deposit. These deposits are thought to represent areas of slightly lower, and hence wetter, land which have since been levelled.



Plate 1. Site B as seen in dyke section, looking north.

Site C (Acle – Chainage 4250) Industrial Site (Plate 2)

An area of brick rubble was seen during the initial topsoil to the south of Clippesby Mill. Because of this, this section of the new dyke was topsoil stripped under archaeological supervision. This revealed a few, heavily truncated industrial features which became subject to archaeological excavation. Details of this site are presented in a separate report (HW Report No. 205, Site ENF 126787).



Plate 2. Site C, Brick in topsoil strip, looking north.

Site D (Acle – Chainage 4400) Horse Skeleton

During the excavation of the dyke the machine driver noted a number of bones and alerted the monitoring archaeologist. On examination this proved to be the remains of a horse which had been buried in an oval pit. The bones were noted at a depth of c.1.2m below present ground surface. The pit had been backfilled with silty clay along with ash, charcoal and lime. This burial was not fully cleaned up nor further excavated as the pit appeared to have been cut from the topsoil and was thought to modern (<60 years) in origin.

Site E (Stokesby – Chainage 7350) ?Pond (Plate 3)

A variation in the soils was noted in both sections of the new dyke towards the east end of the Stokesby section of works. The upper surface of the natural silty clays were discoloured red/orange, probably as the result of mineral staining. Above this horizon was a thin dark peaty silt over which was an orange clayey silt. These deposits appeared to be within a hollow in the upper surface of the natural and have been interpreted as a shallow pond.



Plate 3. Site E as seen in dyke section, looking west.

Site F (Stokesby East – Chainage 7680) Post-medieval artefact

A single metal find was recovered from the topsoil strip of the bank behind Commissioner Cottage. This was oval in shape with decorative perforations. It is likely to be a 19th-century decorative furniture fitting.

Site W1 and W2 (Oby - Chainage c.400-500 and c.700)

At both locations a single piece of wood at a depth of c.2m was noted by the machine driver during the excavation of the dyke. These was not retained and not seen by an archaeologist.

Site W3 (Oby - Chainage c.1150) (Plates 4 and 5)

Pieces of wood were noted by the machine driver. This area was inspected from the top of the bank and partially cleaned by the machine. Four pieces of wood were counted in the disturbed material in the edge of the new dyke, however once retrieved by the machine these items could not be found in the machine bucket of spoil. One of the pieces remained *in situ* and the area around it was cleaned by hand. This single piece of wood was a stake with one pointed end, which was lying horizontally. No further pieces of wood were seen in the cleaned area.



Plate 4. Site W3, looking north-east



Plate 5. Site W3, looking southeast

Site W4 (Oby - Chainage c.1350) (Plates 6 and 7)

One piece of wood was noted by the machine driver. On cleaning the area this pieces of wood was seen to be isolated and irregular in shape, being an un worked branch. Tool marks were present on the end of the branch where it had been hewn from the tree, however these marks were undiagnositic.



Plate 6. Site W4, looking north.



Plate 6. Site W4, detail.

Site W5 (Oby South – Chainage 2320)

A wooden post was in advertently pulled from the ground during the excavation of the dyke and retained by the machine driver until the next scheduled archaeological monitoring visit. This piece was a single pile point. No other pieces of wood were noted in this area of the site.

Conclusions

In two areas, different soils were noted in the upper horizons of the dyke sides (Sites B and E). The origin for these was unclear but they were thought to represent natural infilling of ponds or other low-lying marshy areas.

Waterlogged wood was found in five location, although only three of these were seen by the monitoring archaeologist. These were generally isolated items, two of which showed evidence of having been worked or cut and none of which were 'upright' or *in situ*. The date of these is unknown. Scientific dating was not carried out as none of the pieces formed part of an identified structure. The presence of wood within the marsh silts is relatively rare and it was unusual that several pieces were found along a 1.4km stretch of the River Bure. The reason for this remains unclear

The finds of Post-medieval and Modern date found at the northern end of the works (Site A) were the result of distributing domestic waste. This may have been part of a scheme of manuring. A single Post-medieval item was found close to Commission Mill (Site F) and modern horse burial (Site D) was also revealed.

The works also revealed a Post-medieval/Modern industrial site to the north of Acle Bridge (Site C). This area was fully excavated and is reported on elsewhere (Wallis 2016)

Bibliography

Halcrow Group Ltd, 2010, Broadland Flood Alleviation Project

Compartment 9, Thurne Mouth to Stokesby.

Environmental Statement.

Wallis, H., 2016 Site near Acle Bridge. Compartment 9,

Broadland Flood Alleviation Project.

Excavation Report. HW Report No. 205.

Acknowledgements

My thanks go to all those involved with the project at Halcrow and BamNuttall who were helpful and vigilant throughout the works. Sarah Bates helped with the excavation around the waterlogged wood and Richard Darrah commented on the pieces of wood retrieved. Sue Anderson identified and reported on the finds.

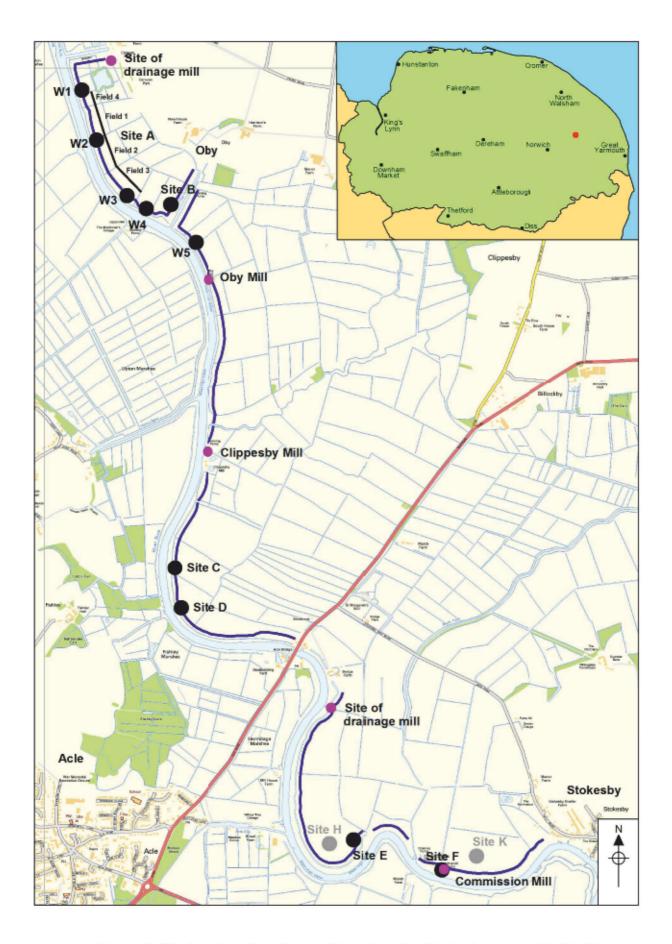


Figure 1. Site location plan showing line of works (blue), drainage mills (pink) and sites mentioned in text.

Appendix 1

Finds. Site A. Oby Topsoil Strip

Pottery

Context	Fabric	Form	Rim	No	Wt/g	Spotdate
Field 1	PORC			1	3	18th-20th c.
Field 1	REFW			1	3	L.18th-20th c.
Field 1	REFW			1	2	L.18th-20th c.
Field 1	REFW			1	9	L.18th-20th c.
Field 1	REFW	PL	EV	1	30	L.18th-20th c.
Field 1	REFW	MG	UPPL	2	4	L.18th-20th c.
Field 1	REFW	PL	EV	2	7	L.18th-20th c.
Field 1	YELW	BL		3	55	L.18th-19th c.
Field 1	LSRW			1	16	18th-19th c.
Field 2	REFW	PL	EV	1	2	L.18th-20th c.
Field 2	REFW	PL	EV	1	4	L.18th-20th c.
Field 2	LSRW			1	8	18th-19th c.
Field 2	REFW	CU	UPPL	1	1	L.18th-20th c.
Field 2	REFW	BL	EV	1	12	L.18th-20th c.
Field 2	REFW	PL	EV	1	2	L.18th-20th c.
Field 2	REFW	JR?	BD	1	4	L.18th-20th c.
Field 2	REFW	PL	EV	1	2	L.18th-20th c.
Field 2	PORC	PL	EV	1	2	18th-20th c.
Field 2	YELW	BL	PL	1	33	L.18th-19th c.
Field 2	YELW	BL	PL	1	8	L.18th-19th c.
Field 2	YELW	BL	EV	1	22	L.18th-19th c.
Field 2	YELW	BL		1	11	L.18th-19th c.
Field 2	REFW	PL	EV	1	5	L.18th-20th c.
Field 2	REFW	PL	EV	1	15	L.18th-20th c.
Field 2	REFW	SA?	EV	1	2	L.18th-20th c.
Field 2	REFW	PL	EV	1	9	L.18th-20th c.
Field 2	REFW			8	72	L.18th-20th c.
Field 2	REFW	PL	EV	1	14	L.18th-20th c.
Field 2	REFW	DS	EV	1	13	L.18th-20th c.
Field 2	REFW	PL	EV	1	8	L.18th-20th c.
Field 2	REFW	PL	EV	1	4	L.18th-20th c.
Field 2	REFW	PL	EV	1	24	L.18th-20th c.

Context	Fabric	Form	Rim	No	Wt/g	Spotdate
Field 2	REFW	PL	EV	2	28	L.18th-20th c.
Field 2	REFW	PL	EV	3	32	L.18th-20th c.
Field 2	REFW	PL		1	3	L.18th-20th c.
Field 2	REFW			1	5	L.18th-20th c.
Field 2	REFW	PL	EV	1	10	L.18th-20th c.
Field 2	REFW			1	10	L.18th-20th c.
Field 2	REFW	JR	BD	2	17	L.18th-20th c.
Field 2	REFW			1	2	L.18th-20th c.
Field 2	REFW			1	13	L.18th-20th c.
Field 2	REFW			1	20	L.18th-20th c.
Field 2	REFW			1	10	L.18th-20th c.
Field 2	REFW	1		1	2	L.18th-20th c.
Field 2	REFW			1	7	L.18th-20th c.
Field 2	REFW			1	11	L.18th-20th c.
Field 3	PORC			1	3	18th-20th c.
Field 3	REFW	PL	EV	1	8	L.18th-20th c.
Field 3	REFW			1	3	L.18th-20th c.
Field 3	REFW	DS?	EV	1	28	L.18th-20th c.
Field 3	REFW	PL	EV	1	4	L.18th-20th c.
Field 3	REFW	PL?		2	16	L.18th-20th c.
Field 3	REFW			2	8	L.18th-20th c.
Field 3	REFW	PL	EV	1	6	L.18th-20th c.
Field 3	REFW			1	3	L.18th-20th c.
Field 3	REFW			1	4	L.18th-20th c.
Field 3	REFW			2	5	L.18th-20th c.
Field 3	REFW			1	3	L.18th-20th c.
Field 3	REFW			1	2	L.18th-20th c.
Field 3	CRW			1	16	1730-1760
Field 3	SWSW			1	4	18th c.
Field 3	PORC	SA	EV	1	4	18th-20th c.
Field 3	PORC	SA	EV	1	5	18th-20th c.
Field 3	REFW	PL	EV	1	13	L.18th-20th c.
Field 3	REFW	PL	EV	2	14	L.18th-20th c.
Field 3	YELW	BL	PL?	1	6	L.18th-19th c.
Field 4	CRW	BL	1	1	36	1730-1760
Field 4	ESW	ВТ	1	1	102	17th-19th c.
Field 4	LPME			1	18	18th-20th c.
Field 4	LPME	PP	BD	1	15	18th-20th c.
Field 4	REFW	SA	PL	2	14	L.18th-20th c.

Context	Fabric	Form	Rim	No	Wt/g	Spotdate
Field 4	REFW	PL		3	18	L.18th-20th c.
Field 4	REFW			1	3	L.18th-20th c.
Field 4	REFW	SA	PL	1	6	L.18th-20th c.
Field 4	REFW			2	12	L.18th-20th c.
Field 4	REFW		T	1	1	L.18th-20th c.
Field 4	REFW			1	5	L.18th-20th c.
Field 4	REFW	BL	PL	1	2	L.18th-20th c.
Field 4	REFW			1	4	L.18th-20th c.
Field 4	REFW	BL		1	6	L.18th-20th c.
Field 4	REFW	PL	EV	2	9	L.18th-20th c.

Fabrics

SA

CRW Creamwares

ESW English Stoneware

LPME Late post-medieval unglazed earthenwares

LSRW Late slipped redware

saucer

PORC Porcelain

REFW Refined white earthenwares

SWSW Staffordshire white salt-glazed stonewares

YELW Yellow Ware

Forms Rims ΒL bowl BD bead BT bottle ΕV everted CP PLcup plain UPPL DS dish upright plain JR jar MG mug PLplate PΡ plant pot

Metalwork

Context	Material	Find type	No	Wt/g	Description	Length (mm)	Width (mm)	Thickness	Period
Field 3	Ae	nail	1	5	square section shaft, sub-square sheet head	59	2.5	2.5	pmed

Miscellaneous

Context	Find type	No	Wt (g)	Notes	Date
Field 3	clay pipe	2	3	stems	18th-19th c.
Field 4	slate	1	6	roofing?	19th c.+

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Project details

Project name C9 River Bure Oby to Stokesby

project

Short description of the During flood defence works between Oby and Stokesby on the left bank of the River Bure a number of finds were made. These included pieces of undated

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Post-medieval and Modern finds.

Start: 11-04-2011 End: 15-08-2011 Project dates

Previous/future work No / No

reference codes

Any associated project ENF 126446 - HER event no.

Type of project Recording project

Monument type INDUSTRIAL Post Medieval

INDUSTRIAL Modern Monument type

POTTERY Post Medieval Significant Finds

Significant Finds POTTERY Modern

WATERLOGGED WOOD Uncertain Significant Finds

Investigation type "Watching Brief" Prompt Planning condition

Project location

Country England

Site location NORFOLK GREAT YARMOUTH ASHBY WITH OBY C9 River Bure Oby to

Stokesby

Site location NORFOLK GREAT YARMOUTH FLEGGBURGH Oby to Stokesby

Site location NORFOLK GREAT YARMOUTH STOKESBY WITH HERRINGBY Oby to

Stokesby

Study area 8.5 Kilometres

Site coordinates TG 4034 1509 52.67955699369 1.555965942435 52 40 46 N 001 33 21 E Line Site coordinates TG 4291 1057 52.637845413605 1.590580507676 52 38 16 N 001 35 26 E Line

Project creators

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Project brief originator Local Authority Archaeologist and/or Planning Authority/advisory body Project design

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None

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Project archives

Physical Archive

recipient

Norfolk Museums Service

Physical Contents

"Ceramics", "Metal"

Digital Archive

recipient

Norfolk Museums Service

Digital Contents

"Stratigraphic"

Digital Media available

"Images raster / digital photography", "Text"

Paper Archive recipient Norfolk Museums Service

Paper Contents

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