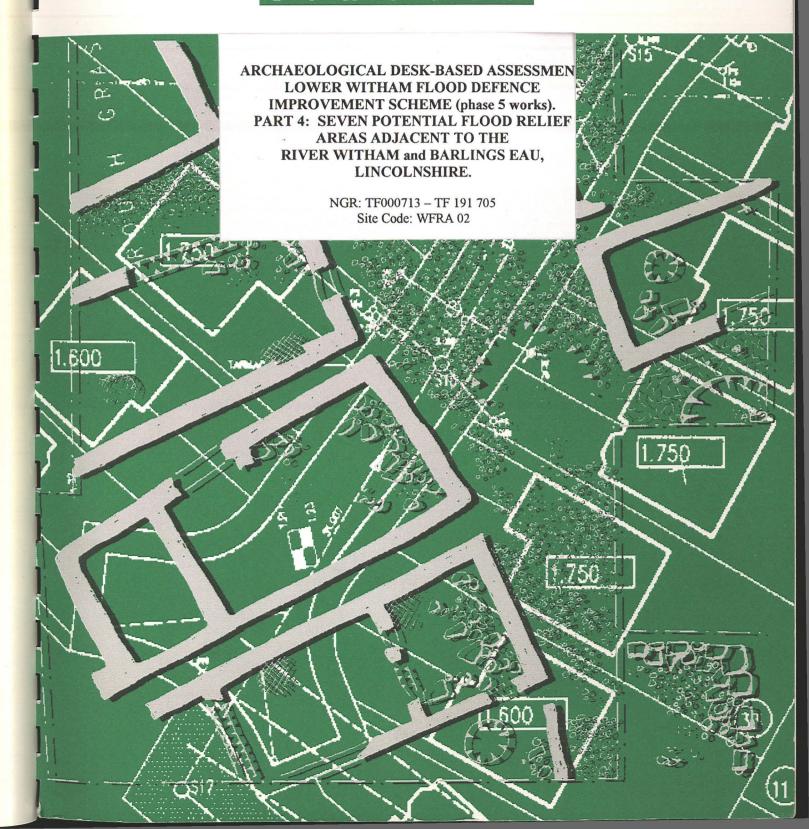
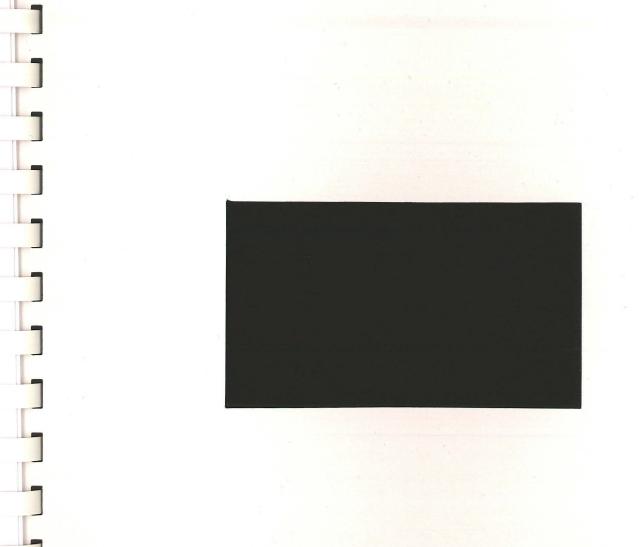




PRE-CONSTRUCT ARCHAEOLOGY

LINCOLN





Conservation Services

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Highways & Planning Directorate

ARCHAEOLOGICAL DESK-BASED ASSESSMENT LOWER WITHAM FLOOD DEFENCE IMPROVEMENT SCHEME (phase 5 works). PART 4: SEVEN POTENTIAL FLOOD RELIEF AREAS ADJACENT TO THE RIVER WITHAM and BARLINGS EAU, LINCOLNSHIRE.

NGR: TF000713 – TF 191 705 Site Code: WFRA 02

Report Prepared for Bullen Consultants, on behalf of the Environment Agency, by Jim Rylatt

September 2002

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Summary

- An archaeological desk based study has been undertaken prior to the implementation of Phase 5 of the Lower Witham Flood Defence Improvement Scheme. This element of the project will seek to create one or more flood relief areas along the northern or eastern banks of the River Witham, or the lower reaches of the Barlings Eau. The study considered seven discrete sections of floodplain.
- The results of this study indicate that the different potential washlands examined exhibit varying archaeological potential. An assessment of existing evidence suggests that works associated with the creation and use of Site 7, is unlikely to expose or affect significant archaeological deposits.
- It is possible that Site 4 may be situated close to a causeway utilised for votive deposition during the post-Roman period. Therefore, works in this area could have an influence on deposits with some archaeological significance.
- Work associated with the creation of Site 5, would probably have an impact upon subsurface archaeological deposits of some importance. The cross-bank that would form the northern edge of the proposed flood storage area would run along the edge of Short Ferry Road, which is thought to overlie a prehistoric or later causeway associated with votive deposits. Another cross-bank that would surround Top Farm, Stainfield would run across an area known to contain Late Neolithic and Early Bronze Age features.
- Site 1 will incorporate unscheduled elements of Kirkstead Abbey, and will surround two sides of the scheduled monument.
- There are Scheduled Ancient Monuments wholly or partially situated within the boundaries of Sites 3, 8, and 9. Each of these areas also contains a number of other archaeological sites, some of which are considered to be nationally or internationally important.

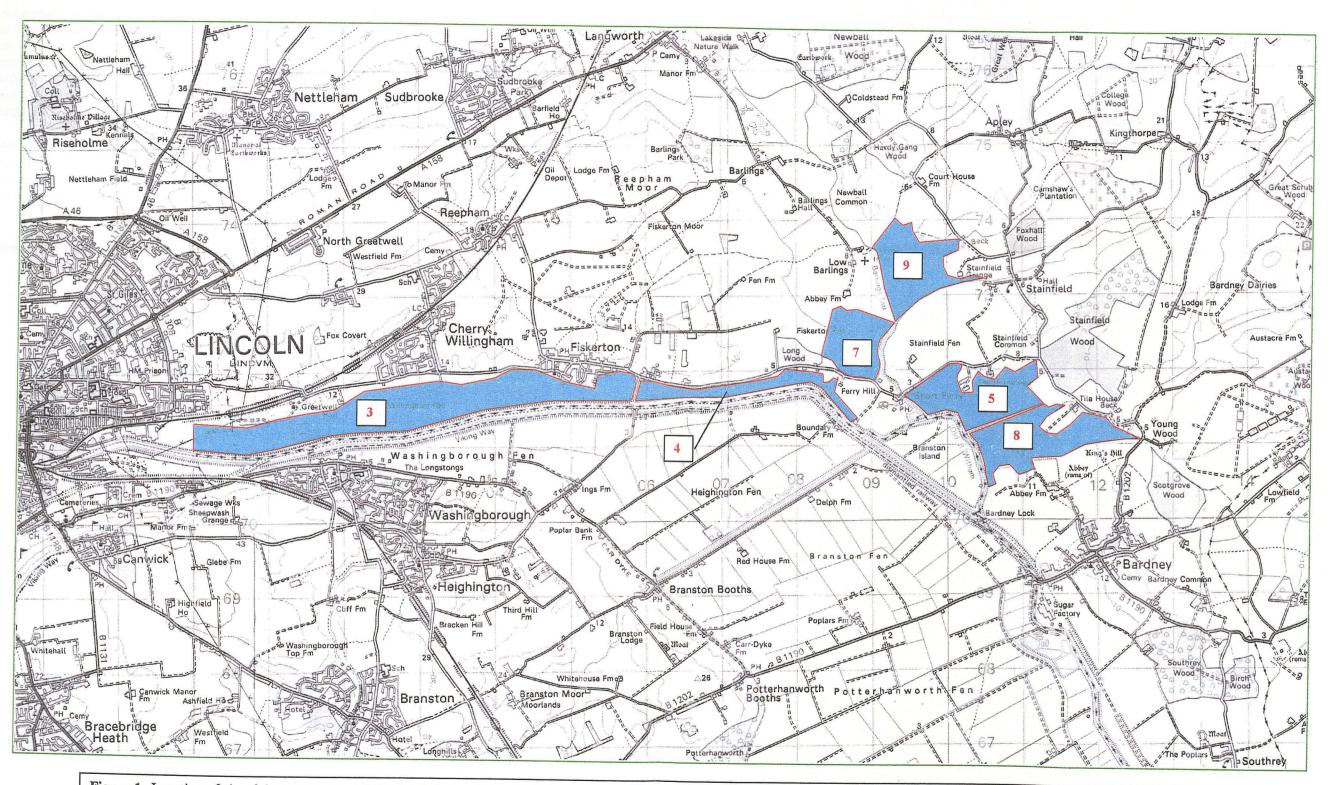


Figure 1: Location of six of the seven potential flood relief areas being considered for construction during Phase 5 of the Lower Witham Flood Defence Improvement Scheme. Site 1 is situated to the south-east of this image, and lies immediately to the south of Woodhall Spa (see Figure 2). Image reproduced at 1: 50, 000.

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1.0 Introduction

Bullen Consultants, on behalf of the Environment Agency, commissioned Pre-Construct Archaeology (Lincoln) to undertake an archaeological desk-based assessment in advance of the detailed design and creation of flood storage areas along the River Witham and Barlings Eau between Lincoln and Tattershall Bridge, Lincolnshire. Seven areas have been selected as potential sites, two on the northern bank and another on the eastern side of the Witham, a further two are situated alongside the Old Witham opposite Branston Island, and the final two abut the Barlings Eau. This element of the scheme will represent Phase 5 of the Lower Witham Flood Defence Improvement Scheme.

This report details the results of the desk-based study, which sought to assess the overall archaeological potential of each section of the river valley being considered as a prospective washland, without the use of intrusive fieldwork. Where relevant the study has also aimed to determine the nature of any potential impact that groundworks would have upon the resource.

Research was conducted in accordance with the procedures set out in the Lincolnshire County Council publication *Lincolnshire Archaeological Handbook: A Manual of Archaeological Practice* (LCC, 1998); national guidelines produced by the Institute of Field Archaeologists were also adhered to (IFA, 1999).

2.1 Location and description

The study area represents a section of the River Witham, which extends approximately 21km from the western edge of Greetwell Parish (TF 000 713), south-eastwards to Old Abbey Farm, Kirkstead (TF 191 705) (*Table 1*). The survey also relates to the southern 3km of a tributary of the Witham, the Barlings Eau, which is situated c. 10km to the east of Lincoln. The proposed flood relief areas are all situated on low-lying ground at, or below, 5.0m OD, which constitutes the bottom of the valley. The archaeological investigation is restricted to the area contained within each of the seven 'Sites' and a 0.5km wide strip of land enveloping them and thus forming their immediate environs (fig. 1).

The most westerly Site, 3, lies on the dip slope of the Lincolnshire Limestone ridge, immediately to the west of Lincoln, and extending between Washingborough and Fiskerton. In contrast, the other elements of the survey lie within the Lincoln Clay Vale. The river channel constitutes the boundary of a number of administrative districts, components of the study area lying within the City of Lincoln, West Lindsey, North Kesteven and East Lindsey.

This desk-based assessment concerns 7 distinct potential flood relief areas, each of which are referred to as 'Sites'. Relatively brief descriptions of the most salient characteristics of each component of the study are provided below:

North-west to south-east aligned section of the River Witham running from a point c. 450m to the south of Kirkstead Bridge, to a point opposite the western end of Timberland Drove. The eastern flood bank of the river forms the western edge of the proposed flood relief area, while the majority of the eastern edge is defined by the 5.0m OD contour. However, it is proposed that one new section of flood bank, c. 250m long, would be constructed along the western edge of Abbey Lane, between Old Hall Farm and the site of Kirkstead Abbey, in order to protect the road from flooding. North-east to south-west orientated cross-banks would also be created to form the ends of this proposed flood relief area. A 750m long bank would form the northern end, following a drain that runs westward from Old Hall Farm, this ditch also defining the parish boundary between Woodhall Spa and Kirkstead. The southern end of 1 would be formed by a 350m long bank

running alongside another drain situated to the north of Kirkstead pumping station. These boundaries define an area of approximately 120ha.

Almost all of this area is utilised as farmland, the majority of the fields in the northern two thirds of the area either containing cereal crops, or have done so until recently. Usage of the southern third is divided equally between further arable production and rough grassland utilised as pasture. A strip of rough ground, partially covered by pasture and small ponds, is situated at the western edge of 1, between the river and the former site of a railway embankment that carried the GNR Lincolnshire Loop Line.

The ground surface slopes very gently toward the river, from 5.0m OD at its eastern edge, to c. 2.0m OD at the riverbank.

3

East-west aligned section of the River Witham running between Lincoln and the eastern edge of Fiskerton village. The northern flood bank of the river, situated immediately beyond the North Delph, delineates the southern edge of the proposed flood relief area. The majority of the northern edge is defined by the 5.0m OD contour, but it is proposed that two new sections of flood bank would be constructed to protect existing properties; the first would be 250m long and run to the south of Fen Farm, Cherry Willingham, while the other would be 1,400m long and protect the southern edge of Fiskerton. North-south orientated cross-banks would also be created to form the ends of this proposed flood relief area; a 350m long bank would form the western end at an arbitrary point marking the interface between the SK and TF Ordnance Survey grid squares, while a 450m long bank at the other end would run along the lane linking Ferry Road, Fiskerton, with the footbridge across the river to the site of the former railway station. These boundaries define a total area of approximately 240ha.

Almost all of this area is utilised as farmland, with it being possible to characterise its present usage by reference to three broad, generalised zones. A: at the western end, between Lincoln and Cherry Willingham, most of the fields have recently been ploughed, or contain relatively young crops. However, the large block of land containing the deserted village of Greetwell is laid out to pasture, with an area of woodland at its southern edge. B: many of the fields between Cherry Willingham and Fiskerton contain, or have until recently contained, mature crops. Additionally, there are one or two areas of set-aside land, or paddocks. C: the rough vegetation of set-aside land covers the area to the south of Fiskerton.

The ground surface slopes very gently toward the river, from 5.0m OD at its northern edge, to c. 2.0m OD at the riverbank.

East-west aligned section of the River Witham running between the eastern edge of Fiskerton village and Short Ferry. The northern flood bank of the river, situated immediately beyond the North Delph, delineates the southern edge of the proposed flood relief area. The majority of the northern edge is defined by the 5.0m OD contour, but it is also proposed that two new sections of flood bank would be constructed to protect existing properties or contain the flood waters; the first would be 500m long and run to the south of Wood End Farm/Willow Lodge, Long Wood, Fiskerton, while the other would be 100m long and be situated a little to the east, at the western end of Ferry Hill, protecting the southern edge of Ferry Road. North-south orientated cross-banks would also be created to form the ends of this proposed flood relief area. A 375m long bank would form the western end, along the eastern edge of the lane linking Ferry Road, Fiskerton, with the footbridge across the river to the site of the former railway station, its northern end would also protect Diamond House from inundation. The eastern end of 4 would be formed by a 75m long bank running along the western edge of the track leading to Fiskerton Sluice. These boundaries

define an area of approximately 45ha.

5

Most of this area is utilised as farmland, it being possible to characterise its present usage by reference to two generalised zones. A: at the western end, just outside Fiskerton, the fields have recently been ploughed, or contain the rough vegetation of set-aside land. B: most of the fields to the east of Woodlands Farm, Fiskerton contain, or have until recently contained, mature crops. The main exception is an area of set-aside land, rough ground and pasture to the south of Wood End Farm and the associated old brick works. Additionally, the field to the east of this farm is currently being used as a clay borrow pit for the extraction of material to reinforce the southern flood bank of the Witham between Short Ferry and Fiskerton (Sections 1-4).

The ground surface slopes very gently toward the river, from 5.0m OD at its northern edge, to c. 2.0m OD at the riverbank.

Situated to the east of the confluence between the Barlings Eau and the channel of the Old River Witham, this proposed flood relief area also skirts the northeastern corner of Branston Island. The eastern flood bank of the Barlings Eau forms the western boundary, with the northern boundary of the Old River Witham forming the south-western boundary. The northern bank of the Snakeholme Drain defines the south-eastern extent, with the eastern edge running along the Bracken Hill Drain. The majority of the north-eastern edge is defined by the 5.0m OD contour, but it is also proposed that a 300m long semi-circular section of flood bank would be constructed to encircle the southern side of Top Farm, Stainfield. The north-western boundary would also be formed by a new cross-bank, this time a 950m long section following the southern side of Short Ferry Road between Short Ferry Bridge and the access road to Top Farm. These boundaries define an area of approximately 55ha.

Almost all of this area is utilised as arable farmland, the majority of the fields either containing cereal crops, or having done so until recently. The main exceptions are a number of small paddocks surrounding The Hermitage.

The ground surface slopes very gently toward the old river channel, from 5.0m OD at the east and north-east, to c. 2.0m OD at the south-west.

Situated to the west of the Barlings Eau and north of Ferry Road, Fiskerton, this proposed flood relief area occupies the eastern part of Fiskerton Fen. The western flood bank of the Barlings Eau forms the eastern edge, with the southern boundary being defined by the 5.0m contour as it skirts along the northern edge of Ferry Road. A 100m long stretch of new flood bank would be constructed near the centre point of this southern boundary, at the western end of Ferry Hill, to protect the road from flooding. Another new cross-bank would form the western edge of the area, traversing the 750m between the corner of Long Wood and the low hill on which Abbey Farm, Low Barlings, is sited. A further new bank would then run the 550m south-eastwards from Abbey Farm back to the Barlings Eau. These boundaries define an area of approximately 60ha.

All of this area is utilised as arable farmland, with the exception of a narrow strip of woodland crossing the centre of the area from east to west. The majority of the fields either contain cereal crops, or have done so until recently.

The ground surface slopes very gently from the northern and southern edges of the area, at c. 5.0m OD, toward the centre of 7, at between 3.0 and 2.0m OD.

This proposed flood relief area is situated to the east of Branston Island and immediately to the south of 5. The eastern flood bank of the Old River Witham forms the western boundary, with the southern bank of the Snakeholme Drain defining its north-western perimeter. The north-eastern edge and much of the eastern and southern edge are defined by the 5.0m OD contour, but this will be

supplemented by three new sections of cross-bank. The first would be 400m long and run from Wragby Road along the Scotgrove Drain, to the south of Tile House Beck. The other two sections would be situated between the site of Bardney Abbey and the Old River Witham, a 150m long section spurring westward off the boundary of the abbey precinct, with another 50m length running just to the north of the pump house situated across the Engine Drain in the lea of the riverbank. These boundaries define an area of approximately 110ha.

Almost all of this area is utilised as arable farmland, the majority of the fields either containing cereal crops, or having done so until recently. There is a small area of woodland toward the north-eastern corner of 8.

The ground surface slopes very gently toward the old river channel, from 5.0m OD at the east, south-east and south, to c. 2.0m OD at the west and north-west.

This proposed flood relief area is situated to the east of Low Barlings and to the west of Stainfield. The Barlings Eau forms the western boundary, with the Stainfield Beck defining its southern edge. Its eastern and north-eastern limits are defined by the 5.0m OD contour, while the north-western perimeter would be formed by a new 500m long cross-bank running along the edge of Apley Beck. These boundaries define an area of approximately 80ha.

The western half of this area is currently utilised as pasture, while much of the remainder contains arable crops. However, there is a narrow strip of set-aside running along the southern edge of the area, adjacent to Stainfield Beck.

The ground surface slopes very gently toward the south-west, declining from 5.0m OD at the north-east and east, to c. 3.5m OD at the junction of the Stainfield Beck and the Barlings Eau.

ite I.D.	Description	NGR of corners
1	Abbey Farm, Kirkstead Kirkstead Bridge to Old Abbey Farm (RHB)	TF 1789 6169 – TF 1873 6209 TF 1870 6038 – TF 1904 6051
3	Willingham Fen Greetwell to Fiskerton (RHB)	TF 0000 7136 – TF 0592 7191 TF 0000 7097 – TF 0580 7158
4	Fiskerton Fiskerton to Short Ferry (RHB)	TF 0590 7180 – TF 0858 7194 TF 0582 7158 – TF 0878 7127
5	Stainfield Short Ferry to Stainfield Wood (RHB)	TF 0943 7165 – TF 1120 7209 TF 1025 7120 – TF 1125 7156
7	Fiskerton Fen Long Wood to Barlings Eau (LHB)	TF 0860 7282 – TF 0930 7261 TF 0835 7217 – TF 0906 7184
8	Bardney Abbey Branston Island to Scotgrove Wood (RHB)	TF 1026 7114 – TF 1166 7154 TF 1054 7047 – TF 1256 7104
9	Low Barlings Apley Beck to Stainfield Beck (RHB)	TF 0902 7362 – TF 0934 7406 TF 0937 7264 – TF 1064 7318

Table 1: The location of the proposed sites of flood storage areas considered in this desk-based assessment of archaeological potential. The identification numbers will be used throughout the following text to refer to each element of the scheme.

2.2 Geology

The uppermost geological strata encountered along the course of the Lower Witham are exclusively Quaternary drift deposits, which extend across the depression of the river valley and along its margins. At the western end of the study area, between Lincoln and Cherry Willingham, the solid geology has constrained the river, limiting it to a relatively narrow valley around 800m wide. The present river channel runs roughly centrally in this basin, through thick deposits of clayey alluvium within which are peaty laminae (I.G.S., 1973). The underlying solid geology in this section is very diverse, being primarily comprised of limestone and clay beds that form the dip slope of the Lincoln Edge.

To the east of Cherry Willingham the valley begins to broaden to c. 1.4km wide, the river channel migrating toward its northern edge. Around 2.5km to the east of Washingborough the southern side of the valley turns southwards to follow the eastern periphery of the limestone edge. This increases the width of the valley to c. 5km. Again the uppermost strata are laminated beds of alluvium and peat. The uppermost deposit is generally a shrunken peat from which protrude sand banks of varying size. These riverine deposits overlie extensive beds of boulder clay/glacial till along both the northern and south-western edges of the valley. These in turn mantle the Kellaways Sand and Clay, and Oxford Clay, both Jurassic formations (*ibid*.).

The Barlings Eau flows through an irregularly shaped valley that fluctuates from c. 750m to 3km in width. This low lying area, Fiskerton Fen and Stainfield Fen, is also blanketed by alluvium, within and above which are peat deposits (*ibid.*). A number of 'islands' of undifferentiated river terrace sands and gravels project through the alluvium, the largest having Barlings Abbey sited upon it. Further river terrace sands and gravels are exposed along the eastern edge of the valley of the Barlings Eau, but comparable deposits do not mantle the boulder clay along the western edge of the basin. A spur of boulder clay projects south-eastward into the angle formed by the confluence of the Witham and the Barlings Eau.

At this point the Witham turns to flow toward the south-west, running along the eastern edge of the valley as it does so. Some 5km to the south, in the vicinity of Potterhanworth, the valley broadens to c. 6km in width, which varies little thereafter until its junction with the silt fens at Kyme Eau. Peat and alluvium are again the uppermost deposits within the valley, but these overlie substantial marine and estuarine deposits. Beds of Upper River Gravel Deposits, and glacial till are exposed along the river's eastern edge (*ibid.*; B.G.S., 1995). The upper strata of the underlying solid geology are composed of the Jurassic Kimmeridgian and Oxfordian Clay Formations.

3.0 Planning background

The Environment Agency has implemented the Lower Witham Flood Defence Improvement Scheme to enhance the flood defences of the River Witham and its tributaries, the Barlings Eau, Stainfield Beck, Sandhill Beck, Billinghay Skirth and River Slea/Kyme Eau, as well as a section of the old river channel encircling Branston Island. It is a five-year programme of works that will target 51 distinct sections of flood bank.

It is also proposed that improvements will also be made to the banks of a number of the larger man-made drains that feed into the river. The latter include Branston Delph, Nocton Delph, Metheringham Delph and Timberland Delph. These works will also affect stretches of the northern end of the Car Dyke, where it runs along and defines the western edge of the river valley. Phase 5 of the scheme concerns the creation of one or more flood relief areas for the temporary storage of water that would exceed the normal discharge capacity of the river channel.

Work on the initial phases of the scheme commenced in 2000/2001 and several components have already been completed. The latter are situated on the northern (LHB) bank of the Witham, the western bank (RHB) of the Barlings Eau and the southern/western bank (RHB) of Branston Island. Archaeological deposits were encountered during the groundworks associated with these initial elements of the scheme. As a consequence the Built Environment Team, Highways and Planning Directorate, Lincolnshire County Council, have requested that archaeological desk-based studies be undertaken to highlight further potential impacts upon the archaeological resource that may arise during the course of the flood defence improvements. The resulting documents will assist in the formulation of mitigation strategies.

Site No.	Location	Geology
1	Abbey Farm, Kirkstead (RHB)	Drift: the north-western third of this site is covered by marine and estuarine deposits - silty clays, with some peat laminations, up to 15m deep. The underlying Upper River Terrace sands and gravels are exposed in the eastern and southern parts of the site. Solid: Kimmeridge Clay Formation over the Ampthill Clay Formation.
3	Willingham Fen (RHB)	Drift: the majority of this area is covered by alluvium, with some peat laminations, except along northern edge of the proposed flood relief area. Uppermost layer is a degraded peat, but occasional sand banks are exposed along the course of the river. Solid: varies greatly from west to east - Upper Lias clay and shale, with Northamptonshire sand and ironstone at western end; Lincolnshire Limestone at Greetwell Hall and the south-western edge of Willingham Fen; Upper estuarine beds and Great Oolite Limestone in rest of Willingham Fen; Blisworth Clay and Cornbrash to south-west of Fiskerton; Kellaways sand and clay to south of Fiskerton; Oxford Clay at eastern end.
4	Fiskerton (RHB)	Drift: the majority of this area is covered by alluvium, with some peat laminations. An extensive deposit of Glacial Till is exposed along the northern edge of the proposed flood relief area to the east of Woodlands Farm. Uppermost layer is a degraded peat, but occasional sand banks are exposed along the course of the river. Solid: Oxford Clay.
5	Stainfield (RHB)	Drift: the south-western half of this area is covered by alluvium, with some peaty laminations, giving way to undifferentiated river terrace sand and gravel toward north-east. Uppermost layer is a degraded peat. Solid: Oxford Clay.
7	Fiskerton Fen (LHB)	Drift: majority of this area is covered by alluvium, with peaty laminations. The underlying undifferentiated river terrace sand and gravel is exposed at the north-east corner, while there is a band of Glacial Till along the southern edge. Uppermost layers are a degraded peat. Solid: Oxford Clay, with Ampthill clay at south-east corner.
8	Bardney Abbey (RHB)	Drift: majority of this area is covered by alluvium, with peaty laminations. The underlying undifferentiated river terrace sand and gravel is exposed at the north-west corner, while Bardney abbey is sited upon a narrow band of older river sand and gravel, which runs along the southern edge. Uppermost layers are a degraded peat, through which sand banks occasionally protrude. Solid: Oxford Clay.
9	Low Barlings (RHB)	<i>Drift</i> : alluvium, with some peat laminations, giving way to undifferentiated river terrace sand and gravel toward north. Uppermost layer is a degraded peat. <i>Solid</i> : Oxford Clay.

Table 2: Summary of the solid and drift geology, with relation to each section of the scheme examined in this study (compiled from I.G.S., 1973 and B.G.S., 1995).

4.0 Objectives and methods

The primary purpose of this report is to identify and assess the nature of *in-situ* archaeological deposits that may be damaged or destroyed either by the groundworks associated with the enhancement of the flood defences, or by the altered hydrology of the completed elements of the scheme. If necessary, the report also indicates further methods by which any such deposits detected may be evaluated in advance of construction works.

Data for this report was drawn from the following sources:

- Records held by the County Sites and Monuments Record for Lincolnshire (SMR)
- Records held at the Lincolnshire Archives Office (LAO)
- Records held at the Lincolnshire Local Studies Library (LSL)
- Aerial photographs held by the National Monuments Record, Swindon (NMR)
- Published and unpublished sources
- Information supplied by the client
- A rapid inspection of the proposed sites

This element of the scheme of works is focussed upon the low-lying ground adjacent to the northern/eastern bank of the River Witham, and both banks of the lower course of the Barlings Eau. The area of investigation extends 0.5km in every direction from the boundaries of each of the proposed flood relief areas, this including an examination of the areas lying up to 0.5km upstream and downstream of each 'Site'. While the study areas for some 'Sites' overlap, more than 1km separates other areas. Therefore, it should be noted that this study does not represent a full analysis of all the archaeological material to be found in the river valley between Lincoln and Tattershall Bridge.

The areas examined represented parts of the parishes/administrative districts of the City of Lincoln, Canwick, Greetwell, Washingborough, Cherry Willingham, Fiskerton, Heighington, Branston and Mere, Stainfield, Barlings, Apley, Newball, Bardney, Martin, Woodhall Spa, Timberland, Kirkstead and Tattershall Thorpe. However, many of these parishes are large, with the river running along their edge forming the boundary. As a consequence only a few modern settlements fall partially within the study area; these are Lincoln, Washingborough, Cherry Willingham, Fiskerton, and Woodhall Spa, and the smaller communities of Short Ferry, Low Barlings and Stainfield.

Much of the data held by the SMR or contained within documentary sources either relates specifically to the villages in each of these parishes, or to their immediate environs. Where there is significant spatial separation between the settlement and the river valley, it has been determined that much of this information was marginal or irrelevant with respect to this study. This was an important factor in structuring the section on the archaeological and historical background of the area (see 5.0 below). This section is intentionally brief and generalised, and intentionally avoids presenting a comprehensive historical narrative for each of the parishes concerned. It is intended merely to provide an indication of the range and date of materials and sites already discovered in the area of interest. More detailed analysis is provided in section 6.0, where data will be presented in a format that enables it to be directly related to each element of the flood defence improvement scheme.

5.0 Archaeological and historical background

The earliest evidence for human activity along the central section of the Witham valley, between Lincoln and Tattershall, is a Mousterian handaxe, which was recovered in the Parish of Fiskerton (TF 0648 7166). This artefact was recovered from ploughsoil and, although plough-damaged, had not been rolled raising the possibility that Middle Palaeolithic (c. 75,000 – 50,000 BP) occupation layers are being exposed by peat shrinkage (author's data).

There are a number of Mesolithic and Earlier Neolithic findspots along the river valley. A programme of field walking undertaken by Washingborough Archaeology Group has recovered worked flint from 43 of the 45 fields walked. Much of this lithic material does not possess datable traits, but several scatters contain diagnostic pieces indicative of activity prior to the Later Neolithic. Most of this early material was recovered from lithic scatters situated on the dip slope of the limestone ridge, immediately to the south of the river valley. Additionally, Mesolithic flints were recovered from the surface of an exposed sand bank beside the Witham in Washingborough Fen (60613 – TF 0410 7140) (Coles, *et al*, 1979), while debitage and blades of Later Mesolithic or Early Neolithic date were recently recovered from another sand bank situated close to the Iron Age timber causeway at Fiskerton (TF 0493 7165) (author's data). Further downstream, trial excavations adjacent to Branston Booths pumping station exposed a small pit that contained 22 pieces of worked flint. This material included a microlith, a micro-burin and blades of later Mesolithic date (60484 - TF 0570 6960).

It has been suggested that an oval cropmark situated at the northern edge of the floodplain at Greetwell (52460 - TF 0070 7124) represents the remains of an Early Neolithic long barrow, although this remains to be verified. A number of Neolithic stone axes have been recovered from Cherry Willingham, Fiskerton, Heighington and along the fen edge to the west of Branston, Nocton, and Metheringham, these having a close spatial relationship to the wetland areas of the Witham Fen (Field & Parker-Pearson, in press). In comparison, there is little analogous evidence for Neolithic activity along the eastern side of the river valley between Branston Island and Southrey. However, five Neolithic stone axes and a pebble mace have been discovered to the south, between Stixwould and Woodhall Spa, these items being recovered within 1km of the eastern edge of the River Witham. Similarly, a number of stone axes have been recovered from a slight ridge of sand and gravel that runs between North and South Kyme. Of this latter group, five axes were found in the immediate environs of Halfpenny Hatch, which is situated at the junction between the Carr Dyke and the River Slea.

The relationship between these artefacts and the rivers is unlikely to be entirely fortuitous. For instance, the faunal resource base is likely to have been richer and more diverse along the margins of the river, with animals being drawn toward easily accessible supplies of drinking water. While this may provide one possible reason for this 'concentration' of activity, there may also be non-functional explanations for this distribution. Unstratified finds of stone axes are often considered to be casual losses, yet the means of their acquisition was anything but casual and often involved long-distance exchange (Edmonds, 1995). This would suggest that these items had a great deal of implicit value, which would tend to contradict notions that their owners would abandon them so readily. Research has indicated that wetland environments were foci for the ritual deposition of axes during the Neolithic (q.v. Bradley, 1990). Such deliberate social processes may better explain the presence and patterning of these stone axes.

The residues of human activity become more extensive and visible during the Late Neolithic and Early Bronze Age when large numbers of round barrows were constructed on the valley floor between Lincoln and Stainfield. The barrows appear to form a number of discrete cemeteries that seem to form pairs facing each other across the river. A group of at least 12 barrows (52841 - TF 0070 7110) appears to have developed around the putative long barrow

at Greetwell, at the western end of the study area. Opposite lies a cluster of 7 barrows to the west of Washingborough (60930 – TF 0020 7070). On the north side of the river, further possible barrows lie to the south of Greetwell Hall and to the south-west of Cherry Willingham (52860, 52855 & 52856). Another 5 barrows line the top of a sand bank situated between Cherry Willingham and Fiskerton. These face the western edge of a very extensive cemetery (c. 145ha) stretching over much of Washingborough Fen (60327). Thirty possible barrows have been identified, these being dispersed along a 1.7km long section of the valley.

At present there do not appear to be any further barrows along the river valley to the east of this large cluster. However, there is another large cemetery in Stainfield Fen within the valley of the Barlings Eau. This is located c. 2km to the north of the confluence between the latter and the Witham, the 32 barrows being sited in two dense groups that face each other across Sambre Beck. Another group of three relatively isolated round barrows have been identified at the centre Branston Fen, c. 2.5km to the east of Branston Booths (61714/5/6 – TF 0877 6926). It is interesting to note that these monuments, and all of the barrows in the cemeteries situated upstream between Lincoln and Stainfield, were constructed on a ground surface lying at, or below 5m OD. This would suggest that there must have been relatively little woodland within this part of the river valley if these mounds were intended to be visible from any appreciable distance (Field & Parker-Pearson, in press).

A range of Late Neolithic and Early Bronze Age artefactual material has also been recovered from the river valley. This includes three perforated stone axe hammers from Fiskerton (52910 – TF 0580 7160; 61453 – TF 0580 7110; 52911 – TF 0482 7199), a stone battle axe from Branston Booths (61681 - TF 0689 6842) and another axe hammer found to east of Metheringham (60454 - TF 0904 6196). A number of barbed and tanged arrowheads have also been recovered from the valley, including a single example from Cherry Willingham (51208 – TF 0366 7159) and two from Branston Booths (61692 - TF 059 691; 61689 - TF 061 691).

There is little evidence for Middle and Late Bronze Age settlement within the river valley or along its margins despite the recovery of a large number of artefacts (*ibid*.). It would appear that peat began to develop over much of the Lower Witham valley around 1000BC, these organic deposits rapidly covering the earlier ground surface. The most compelling evidence for occupation was discovered around the pumping station at Washingborough. Finds recovered from three small trenches and the surrounding ground surface included an antler cheek piece, 59 sherds of Late Bronze Age or Early Iron Age pottery, animal and human bone and worked wood (Coles, *et al*, 1979) (60612 – TF 0423 7138). The Washingborough Archaeology group have also recovered over 300 sherds of comparable pottery from the surface of the field immediately to the south-east (60462 – TF 0445 7115).

Other finds include Middle Bronze Age palstaves from Canwick (61504 – TF 0010 7071) and Southrey and a contemporary dirk from Fiskerton (52882 – TF 0470 7180). There are also at least three hoards of socketed axes found in the parishes of Washingborough and Fiskerton. The Washingborough Fen hoard included at least four axes and the valves of a two part axe mould (61277 – TF 0462 7091). A further hoard was found in a small field to the south of Fiskerton Church and is known to have contained between 4 and 14 axes (52877 – TF 0487 7182)¹, with the third being recovered c. 1910 from a site adjacent to Long Wood (52895 – TF 0770 7200). Another Late Bronze Age socketed axe was recovered from peat in Branston Fen (61680 - TF 0702 6843), while a further example was found in the field containing the barrows at Metheringham Barff (60744 - TF 0851 6240).

¹ Recently collected anecdotal evidence suggests that there were originally 90 socketed and, looped and socketed axes in this hoard, which was immediately split up and dispersed among the occupants of the village.

Late Bronze Age swords have come from the Witham at Lincoln and at Washingborough (61295) and two Bronze Age spearheads were found in or near the river at Fiskerton. Another spearhead of the peg-hole type was found adjacent to the river at Stixwould (40083). Significant quantities of Bronze Age metalwork have also been recovered from the parishes of North and South Kyme. A palstave was recovered from a paddock to the south of North Kyme church in 1922 (TF15SE/E). It is also recorded that bronze spearheads were recovered from a barrow lying c. 1km to the south of the village (Trollope, 1872), while two flat bronze axes were found a little to the south, near Halfpenny Hatch (TF15SE/T). A number of items have been found within the area later occupied by Kyme Priory and manor house. At least five bronze palstaves have come from this area, while two bronze rapiers were found beneath a bank separating the western edge of the manor precinct from the Kyme Eau (*ibid.*).

One of the most unusual items discovered in the river valley is a gold torc found near Linwood Hall Farm in the 19th century (62092 - TF 121 608). This item is likely to have been Bronze Age or Iron Age in date, but it is not possible to verify this, as it was subsequently melted down.

In many respects the Early to Middle Iron Age has become the most renowned aspect of the prehistoric landscape of the Witham Valley, following the discovery of a timber causeway at Fiskerton (52904 – TF 0500 7162). This was constructed from two rows of timber posts, which may have supported a raised superstructure. The timbers had been replaced episodically and were dated by dendrochronology to between 456 and 317BC. Associated with the causeway were a range of artefacts that included several iron swords, iron spears, over 50 bone points, iron axes, files, a saw, part of a ribbed bronze bracelet, shield fittings, pottery, human bone and log boats (Field & Parker-Pearson, in press; author's data). The concentration, range of types and quality of these materials provides strong indications that they were deposited into this watery context during ritual activities.

The riverine contexts of these finds are generally anaerobic and consequently organic materials are well preserved. The two log boats found in association with the Iron Age causeway at Fiskerton are the most recent examples of this kind of vessel, many others having been discovered in the Witham Fen over the last 2 or 3 centuries. Most of these have been found downstream from the confluence of the Witham and the Barlings Eau, being particularly concentrated around Branston Island and Bardney (e.g. 52894 - TF 0896 7120). There are some outliers further down the river including an example recovered from land adjacent to the river at Stixwould in 1848. The date and recorded location (TF 159 648) of the find indicate that it was discovered during the construction of Stixwould Station (White, 1978).

There is a lot of evidence for human activity during the Romano-British period. This is unsurprising given the proximity of Lincoln, which was one of the largest settlements in Roman Britain. The Car Dyke runs along the junction between the limestone ridge and the Witham Fen, to the south of Lincoln (60706). This is an artificial channel, which is thought to have been constructed c. AD125 and has been interpreted either as a canal or a catchwater drain. Several sections are still visible as substantial earthworks, the channel having been c. 15 - 20m wide, with wide flanking banks. Among the best preserved lengths are the stretches running to the north and north-west of Washingborough village (60714 - SAMs 276; 311; 275), the length running down the eastern edge of Nocton Wood (60711 - SAM 312), the earthworks to the south-east of Blankney Wood (60736 - SAM 313), the section to the east of Linwood Hall (60737 - SAM 314), and the components to the west and south of Martin Wood (60707 - SAM 315; 60708 - SAM 298).

Unsurprisingly, a range of Romano-British sites and artefacts has been found close to the Car Dyke. An artefact scatter discovered to the west of Washingborough probably marks the location of a Romano-British farmstead or small settlement (60463 - TF00257050). Other

Roman artefactual material has been found at a number of other sites around the village (61288; 61285; 61278; 61289 61510) suggesting sustained activity. There have also been a large number of Romano-British finds in and around Fiskerton. A number of bowls, pots and whetstones were found in association with the Iron Age timber causeway, providing strong indications that it was being reused for votive deposition (52905; 52902; possibly 52883). Close by, at Perrins Cottages, a Romano-British 'hard' constructed from limestone and roof tile has been discovered (52887). This had been created along the edge of a former channel of the Witham and was probably used for loading and unloading boats using the river. There may have been another Roman settlement at Short Ferry, where pottery was discovered during the construction of the marina (52907 - TF 0965 7134).

A large tile kiln has been identified in a field situated a little to the west of Branston Booths pumping station (61467 - TF 053 696). Excavated in 1976, it was a rectangular structure, c. 7.1m long by 5.4m wide, which was built from rectangular tiles. It was used to produce roof tiles, flue tiles, box tiles, hypocaust tiles and bonding tiles, and the associated pottery suggested that this activity took place in the 4th century AD. Another tile kiln appears to have been situated c. 800m to the south, beside Moor Lane (61466 - TF 0553 6885). It is possible that a proportion of the products of both kilns were transported to Lincoln along Car Dyke.

Evidence of Romano-British activity along the eastern side of the river valley between Branston Island and Holland Fen is relatively sparse, a single sherd of greyware and four fragments of Romano-British tile having been recovered from the riverbank at Chapel Hill during fieldwork undertaken for the Fenland Survey (Lane & Hayes, 1993).

The importance of the River Witham as a focus for the deposition of prestige objects is reemphasised in the Anglo-Saxon and Viking periods. Three ornate Anglo-Saxon silver-gilt disk headed pins were found in the river, just downstream from the Iron Age causeway at Fiskerton (52878 – TF 0498 7152). These were probably manufactured during the first half of the 9th century. A Viking sword, also of the 9th century, was found slightly further downstream on the northern bank of the Witham, opposite Five Mile House (52896 – TF 0564 7155). Another Viking period object, an axe head, was found near Horsley Deeps, Bardney, during dredging, c. 1815 (51163).

Further weaponry, including a sword of Anglo-Saxon/Danish type (probably of the 9th-11th centuries AD), a dagger with a wooden handle and an iron spearhead were found in the river at Kirkstead Wath in 1788 (40084). These items also appear to represent the residues of ritual practices undertaken at watery contexts, possibly in a form analogous to the events surrounding the disposal of Excalibur in Arthurian legend (q.v. Bradley, 1990). Interestingly, further weaponry recovered from the site of Stixwould Station, in 1848, appears to indicate that such practices continued into a period of universal and unambiguous Christian belief and practice. These items included a mass of chain mail, probably a hauberk, an iron sword, an iron spearhead and a human skull (40060 - White, 1979). Typologically they appear to have been manufactured during the 13th or early 14th centuries.

In the same way that the river valley appears to have been a focal point for pagan ritual activity, it also became the setting for a large number of monastic houses and estates. The first abbey was a particularly early foundation that was established at Bardney toward the end of the 7th century, (Stocker, 1993). By the medieval period a remarkable density of ecclesiastical establishments lined the valley (Stocker & Everson, 2002). These included Monk's Abbey at Lincoln, Sheepwash Grange at Washingborough, Barleymouth Grange at Short Ferry, Bullington Priory, Barlings Abbey and Stainfield Priory on the Barlings Eau, Bardney Abbey, Tupholme Abbey, Branston Grange, Nocton Priory, Stixwould Priory, possibly Stixwould Grange, Kirkstead Abbey, Linwood Grange, Catley Priory, Haverholme Priory and Kyme Priory. In addition monastic houses held several of the manors lining the river; among these was the Manor of Fiskerton, which was controlled by St Peter's Abbey, Peterborough.

Secular activity was concentrated around the villages fringing the river valley, most of which have names of Anglo-Saxon origin. Many of these settlements have churches containing surviving medieval fabric, and remnants of associated open field systems are often visible either as earthworks or cropmarks. Some communities have proved more successful than others; Washingborough has expanded massively over the last two centuries while Greetwell Hall is surround by the earthworks of a deserted medieval village. Of especial interest is the village of Southrey, a satellite of Bardney, which has a particularly regular form suggesting that it was a deliberately planned medieval settlement (51182 – TF 1370 6665).

The Witham was navigable during the medieval period and was utilised as an arterial route linking Lincoln with the port of Boston. There are some indications that several of the river's tributaries were canalised to enable monastic houses to access this trade route. Of particular relevance to this study is the section of the Barlings Eau situated to the south of Barlings Abbey (53012), Apley Beck, Stainfield Beck and Bardney Beck. Furthermore, it seems possible that sections of the Car Dyke were similarly used, given the close spatial relationship between this channel and Branston Grange, Nocton Priory and Linwood Grange.

The river was also lined by a large number of fisheries. Many of these appear to have been established during the Anglo-Saxon period, as they are listed in the *Domesday Book*. Among the latter were 2 fisheries at Canwick held by Bishop Geoffrey, 2 at Cherry Willingham held by Gilbert of Ghent, who also had 5 at Bardney and 1 at Southrey '*inland* of Willingham' (Morgan & Thorn, 1986). Another fishery at Southrey, and 2 at Canwick, belonged to Roger of Poitou, while Waldin the Breton held 2 at Stixwould and Walter d'Aincourt had a further 3 within the Parish of Branston. The sites of three fisheries have been identified on the banks of the Witham, near the northern end of Metheringham Delph. At least two of these appear to have been constructed upon artificial mounds, which raised the associated structures above the surrounding waters (40037 - TF 1590 6501; 40062 - TF 1588 6498).

Work to straighten, widen and scour the river in order to create a viable commercial waterway began in earnest after the passing of the Witham Drainage Act in 1762 (White, 1979). The section between Lincoln and Chapel Hill was embanked and improved between 1787 and 1788, the stretch downstream to Boston having already been completed (Thompson, 1856). It was at this time that many artefacts detailed above were observed and recovered. Further improvements to the navigation, including the canalisation of some sections of the river, occurred between 1816 and 1826. These works were complemented by schemes to improve and reclaim the adjacent Witham Fen, with the four delphs being created during the last 15 years of the 18th century to serve as the primary arterial drains. Initially wind pumps fed the delphs (e.g. Nocton Windmill: 61804 - TF 0470 6364), but steam engines replaced the windmills after the passing of an 1831 Act of Parliament that sought to improve the drainage in Branston, Potterhanworth and Nocton Fens.

The Great Northern Railway's Lincolnshire Loop Line was constructed alongside the river during the late 1840s. The track from Lincoln was laid along the southern flood bank of the river, which it crossed at Bardney Lock in order to follow the eastern bank until Langrick Bridge. It then turned eastward to run along the northern bank of the river, before changing direction again at Anton's Gowt for its final stretch southward to Boston.

6.0 Archaeological potential

The information presented below has been collated from a variety of sources. Data from published and unpublished sources has been synthesised with information obtained from map regression studies and aerial photographs, as well as a site inspection. To assist in the rapid assessment of this data, it has been compiled in relation to each of the proposed flood relief areas – 'Sites' 1, 3, 4, 5, 7, 8 and 9. The sub-sections describe the information obtained from each source and are followed by a brief summary. Finally, an estimate of the archaeological potential of each section is provided.

6.1.1 Site 1

A: SMR data and documentary sources

There is ample evidence for a significant level of past human activity in the environs of Site 1 (fig. 2). The hilt of a leaf shaped Late Bronze Age sword is the oldest artefactual material recovered from this area (40102 - TF 1925 6228). It was found to the south of Kirkstead Hall, more than 400m to the east of the proposed flood relief area.

The location of a multivallate Iron Age enclosure, or small 'hillfort', has been identified from cropmarks located c. 460m to the east of Old Abbey Farm (40096 - TF 1960 6100). This oval enclosure is approximately 120m long by 90m wide, and is defined by three substantial concentric ditches that together create a boundary over 30m wide. Two fields of approximately the same dimensions are attached to the south-western and eastern sides. This enclosure is similar in size and form to the Iron Age example excavated at nearby Tattershall Thorpe. Although there are no longer any upstanding remains, the surviving sub-surface features receive statutory protection as a Scheduled Ancient Monument (SAM 29728).

Further Iron Age activity has been identified c. 300m to the north of 1. A number of ditches and a pit were exposed during an archaeological evaluation of a site on Witham Road near Kirkstead Bridge (43238 - TF 1803 6219). These ditches contained Late Iron Age pottery, slag and part of a fired clay loomweight. It has been suggested that one of the ditches formed the boundary of a settlement that was situated to the south-east of the site.

The remains of Kirkstead Abbey are situated on a raised, sub-rectangular terrace that forms an indentation in the north-eastern side of Site 1 (43629 - TF 1880 6170). The *kirk* element of Kirkstead suggests that there had been an earlier Anglo-Saxon monastic house somewhere in the parish, but there is no evidence to indicate the presence or location of such an establishment. Hugh Brito, Lord of Tattershall, founded a Cistercian house in 1139, but it was initially placed elsewhere in the parish. This earlier site was probably c. 4.7km to the southeast, at the location later occupied by Tattershall Castle and the collegiate church (Stocker & Everson, 2002). The 12th century occupants of this first site were less than satisfied, describing it as a

'place of horror like a vast solitude. A level plain surrounded by brushwood and marsh' (ibid.).

Consequently, the Abbey was moved to a new site adjacent to the Witham, at the north-west corner of the parish, at some point between 1155 and 1187.

The main precinct of the abbey covered 5.3ha and was enclosed by a substantial bank and ditch. This ditch also defines the component of the abbey that has been designated as a Scheduled Ancient Monument under the Ancient Monuments and Archaeological Areas Act 1979, as amended (SAM 6). The margins of the proposed flood relief area stop c. 50m from the northern edge of the SAM, c. 40m from its western perimeter and the return to the south is situated approximately 200m from the protected area.

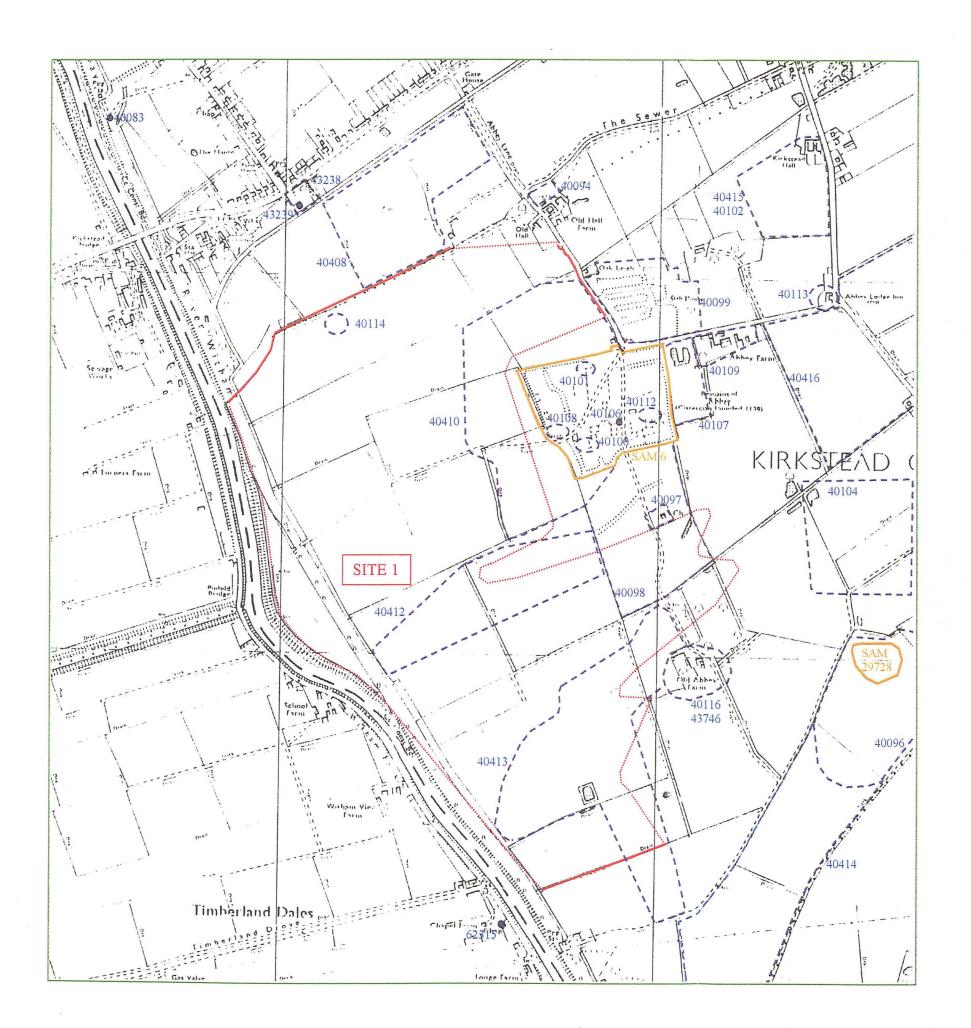


Figure 2: SITE 1
Location of the proposed flood relief area shown by dotted red line, with the positions of the associated crossbanks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire Sites and Monuments Record (see Appendix 12.1 for details); find spots = blue discs, features = blue polygons.

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A curvilinear ditch (40410) defined an outer enclosure, which surrounded a series of outlying features, including a complex of at least six large sub-rectangular fishponds (40099). Although this ditch defined the formal part of the abbey complex, there would have been a variety of more widely dispersed facilities located outside of this boundary. Abbey Lodge Inn, possibly the Abbey's medieval gatehouse or lodge, is situated c. 400m to the east, on the B1192 (40113 - TF 1943 6195). The small church of St Leonard, Kirkstead is situated c. 150m to the south of the main cloistral part of the Abbey. This church was constructed c. 1230-40, and was almost certainly the *chapel ante portas* of the monastery (Pevsner & Harris, 1989) (40097 - TF 1902 6138). The church is surrounded by a series of earthworks and cropmarks, which constitute most of the unscheduled area of Kirkstead Abbey (40098 - TF 1898 6125); some of these features extend into Site 1. The eastern end of a linear cropmark appears to run up to, and respect the western edge of these features, suggesting that it is of medieval or later date (40412).

The abbey was dissolved in 1537 and the buildings were rapidly demolished and their materials dispersed; some has been identified in the yard and garden of Abbey Farm, where it is incorporated into walls and rockeries (40109 - TF 1919 6186). There is a single piece of standing masonry surviving to 17m high and 6m wide, which was part of the south transept of the church. Part of the site was soon being reused for the production of pottery. Although none of the actual kilns have been exposed or identified, spreads of wasters and other pot sherds have been identified at three points, which are dispersed across the western half of the precinct (40100 - TF 1778 6158; 40101 - TF 1882 6177; 40108 - TF 1872 6161). The vessels produced included cooking pots, jars and pancheons, which replicated Toynton and Old Bolingbroke forms, but in very sandy fabrics. It is thought that all of the kilns would have been created and operated only after the Dissolution, as the prevailing wind would have blown fumes across precinct and fouled the cloistral buildings. This proposed dating receives support from the will of a Francis Moody, which indicates that he was a potter at Kirkstead in, or prior to, 1610.

Old Abbey Farm is situated c. 300m to the south of the Abbey and St Leonard's Church. The present building appears to date to the 18th century, and incorporates medieval brick and stone obtained from the Abbey (40116, 43746 - TF 1908 6099). Renovations at the farm exposed a well, and a floor constructed from reused 15th century brick. A complex of cropmarks to the north-east, west and south of the farm may represent elements of an associated field system (40104 - TF 1940 6130; 40413 - TF 1880 6070; 40414 - TF 1920 6045).

A series of inter-related linear features are situated c. 400m to the north-west of the abbey (40408 - TF 183 622). It is likely that the most southerly elements of this group will be traversed by the proposed northern cross-bank. Another group of features have been identified in the area between the Abbey and Kirkstead Hall, which lies to the north-east (40415 - TF 1925 6222). This complex includes several linear ditches, which are associated with small enclosures.

The SMR also records that a mill, possibly a post-mill, was formerly sited near the north-west corner of Site 1 (40114 - TF 1815 6188).

B: Cartographic evidence

The following maps were found to contain data relating specifically to the site:

Ordnance Survey, 1907 – Sheet LXXX.SE, Second Edition, 6": 1 mile (1: 10,560). The
initial surveying for this map was conducted in 1887 (First Edition) and was revised in
1904.

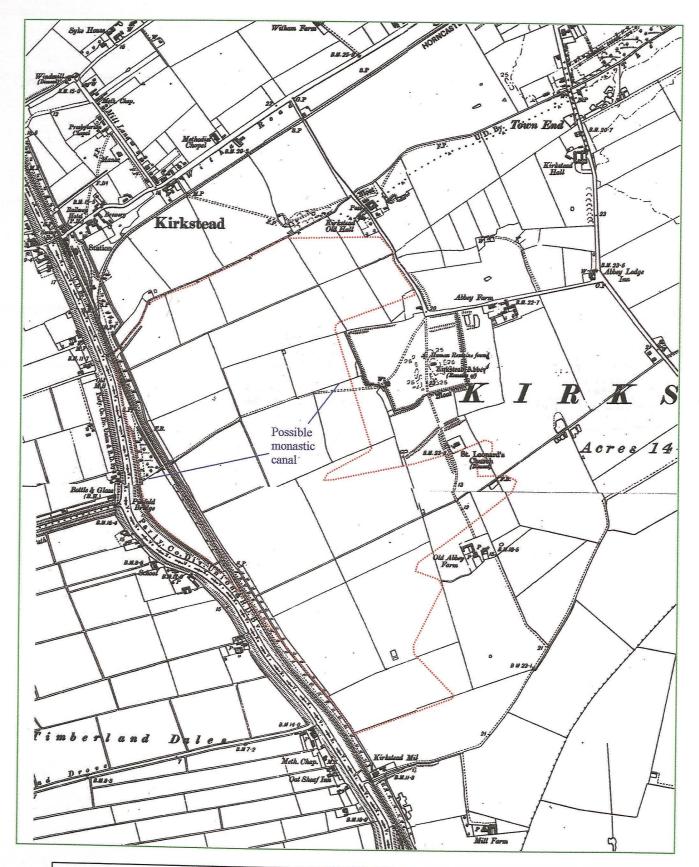


Figure 3: SITE 1

Extract from Ordnance Survey Second Edition 6": 1 mile (1: 10,560) Sheets LXXX.SE, of 1907 and LXXXVIII.NE, of 1906; reproduced at c. 1: 10,000. The dotted red line shows approximate locations of the boundaries of the proposed flood relief area.

Ordnance Survey, 1906 – Sheet LXXXVIII.NE, Second Edition, 6": 1 mile (1: 10,560).
 The initial surveying for this map was conducted in 1887 (First Edition) and was revised in 1904.

The Second Edition map indicates that there have been a number of changes in the area to the north of the proposed flood relief area (fig. 3). It is evident that Woodhall Spa was beginning to expand along Witham Road at the beginning of the 20^{th} century, but there was still an open space c. 600m wide that separated the town from the small settlement of Kirkstead. The latter was located close to the eastern bank of the Witham, adjacent to the bridge at the end of the fen road from Martin. It appears to have been a small but thriving independent community in 1907, with a railway station and sidings, the adjacent Railway Hotel, a brewery, two Methodist chapels and a Presbyterian chapel. Only the latter survives in use, and the community has now been subsumed into a continuous linear development extending from the centre of Woodhall Spa.

The fields immediately to the north of Site 1 have retained their late 19th century forms, but the branch line to Horncastle no longer runs along their northern edge. Kirkstead Old Hall and Old Hall Farm are situated at the north-east corner of 1, a little above the 5m OD contour. The Old Hall appears to have maintained the same ground plan shown in 1907, but there have been some changes to Old Hall Farm. The 19th or early 20th century structures survive, but an additional building has been constructed at the eastern edge of the farmyard. The Second Edition map depicts a sub-rectangular feature described as a 'moat', to the north of the farm buildings (40094). The Ordnance Survey revisited the site in 1964, and decided that this feature was not a moat. Consequently, this area is now covered by a symbol denoting marshy ground on modern maps. Curiously, the early map also indicates the presence of a 'Post', which seems to be situated between the Old Hall and the farm. The nature of this post, or the reason that it was highlighted is not apparent.

A dwelling known as Oak Leigh was constructed to the south of Old Hall Farm at some point after 1904. This building lies immediately to the north of the large fishponds that are themselves located to the north-east of the abbey. These ponds are not depicted on the Second Edition map, although they evidently existed at that time. Abbey Farm is situated to the east of the Abbey precinct. Many of the buildings shown on the early 20th century map still exist, but additional structures have been erected along the eastern side of the farmyard.

The abbey precinct has changed little, the embanked area still being traversed by two tracks. However, an 'L'-shaped projection at the centre of the northern edge of the Abbey precinct has now incorporated into the field to the north. The modern map depicts two 'buildings' within the precinct, both of which were also shown on the Second Edition map. One lies at the centre of the enclosure, and is evidently the surviving fragment of the abbey church. The other lies at the western edge of this area, adjacent to one of the tracks. While the modern map sketches the outlines of a number of structures, its predecessor merely indicates microtopographical variation where features project above the 25 foot contour. The early map also indicates that 'Human Remains [were] found' at TF 1890 6168, which would have been within, or immediately to the north of the abbey church.

The Second Edition map shows further earthworks to the north and west of St Leonard's Church, which was described as 'Disused' at that time. Old Abbey Farm lies to the south of the church. It appears to have maintained a similar size and form throughout the 20th century.

There have been some changes to the form of the surrounding field system during the 20th century, but these have been largely restricted to the area to the west of the Abbey, where a number of small units have been integrated to create larger sub-rectangular fields. The fields that make up the southern half of Site 1 were already relatively large at the beginning of the

last century, while the smaller plots to the north-east of the Abbey have maintained the form and inter-relationships they had in 1904.

There have been changes along the eastern bank of the river, as the GNR's Lincolnshire Loop Line has been decommissioned and the track has been removed. However, the drains and the embankment are still evident of the modern map.

C: Air photographic evidence

The Lincolnshire component of the National Mapping Programme identified a large number of archaeological features in this area. Kirkstead Abbey, with its surrounding channels and ponds form the largest complex of earthworks in the vicinity of 1.

A series of undated boundary features and associated enclosures have been identified immediately to the to the south-west of Old Abbey Farm (40413), and another linear boundary, (40412), extends westward across the centre of the proposed flood relief area. These features may relate to other clusters of cropmarks situated to the north (40408), northeast (40415) and south-east (40104) of the Abbey, which may form part of the same extensive field system, or could represent a palimpsest of features resulting from several phases of activity.

A cropmark complex identified in a field to the east of Abbey Lodge Inn is thought to represent part of a later prehistoric landscape (40416). As such it may be associated with the small mutivallate 'hillfort' situated to the south-east of Site 1 (40096 – SAM 29728).

An examination of the oblique aerial photographs held by the NMR did not reveal the presence of any additional archaeological features.

D: Summary and discussion of the evidence

A large number of archaeological features and deposits have been identified within the environs of this area. Many are to be found along the eastern edge of the proposed flood storage area and represent the various components of Kirkstead Abbey.

The main precinct of the Abbey adjoins the northern half of the eastern edge of Site 1. Most of this edge of the potential flood relief area is defined by the 5.0m contour, which has an unusual form where it runs around three sides of the Abbey. In marked contrast to the irregular, curving form of the contour to the north of this point, the sides of this projection are regular and straight, with the northern and southern edges running parallel to each other, and the western face having a perpendicular alignment. These morphological traits provide an indication that much of the Abbey was constructed upon an artificial terraced platform that protruded slightly onto the flood plain of the Witham. This feature is very large. It extends c. 550m from north to south and approximately 400m east-west, thus covering up to 23ha, depending on the form of the natural topography that it augments and conceals.

The core of the Abbey, as defined by a substantial enclosure bank and ditch, has been classified as a Scheduled Ancient Monument, and it therefore protected under the Ancient Monuments and Archaeological Areas Act, 1979, as amended (SAM 6). It is apparent that if the maximum capacity of floodwater were directed into Site 8 it would come to within 50m of the northern and western edges of the SAM. Consequently, it is possible that such temporary alterations to the hydrology of the eastern margins of 8 could have a direct effect upon subsurface archaeological deposits situated within the scheduled area. Furthermore, these flood

events could also have an impact upon other elements of the monastic complex that are situated outside of the scheduled area.

If Site 1 is chosen for further consideration it will be highly advisable to consult with English Heritage prior to the detailed design and onset of the scheme of works, as the creation of a flood storage area could directly, and will indirectly, affect a Scheduled Ancient Monument (see Section 7.0). A consultation process will determine whether there are any potential incompatibilities regarding the respective objectives of the Environment Agency and English Heritage. Additionally, it should be noted that it will be an absolute priority to ensure that plant, contractors, earth, or anything else associated with the project does not encroach onto the area of the SAM, without first obtaining a scheduled monument class-consent from English Heritage. This is particularly relevant with respect to the 250m long cross-bank that would be constructed along the western edge of Abbey Lane to the south of Old Hall Farm. The southern end of this bank comes to within 70m of the northern edge of the SAM.

Even if the scheduled part of the Abbey is not affected by the construction of this flood bank, it seems highly likely that this process would expose *in-situ* archaeological deposits, as a series of earthworks, primarily large ponds and associated channels, are situated immediately to the east of Abbey Road. If similar features are located within the footprint of the crossbank they will have been truncated and levelled by ploughing. However, this process of denudation probably means that any surviving sub-surface components would be situated directly beneath the ploughsoil.

With the exception of the possible site of a windmill, the only archaeological features identified within the boundaries of Site 1 are known from cropmarks. These have been classified as four separate complexes, but none of these features have been subject to intrusive archaeological investigation and it is therefore possible that they are all contemporary and formed elements of the same landscape. The most northerly group covers more than 2ha and appears to consist of linear boundaries forming part of a rectilinear field system (40408). Some of the components of this complex run up to the drain that defines the northern boundary of the proposed flood storage area. It is therefore possible that these features continue southwards into Site 1, and thus lie within the footprint of the 750m long cross-bank that would be constructed along the southern edge of the drain. Consequently, the groundworks associated with the construction of this barrier could potentially expose archaeological features and deposits. The same is also true for the southern cross-bank, which traverses another group of cropmarks running south-westward from Old Abbey Farm (40413).

The cropmarks identified within and around Site 1 are situated along its eastern edge or to the south, where the uppermost geological deposits are Upper River Terrace sands and gravels (I.G.S., 1973). Such a free draining medium is ideal for the creation of cropmarks. In contrast, the north-western third of this area and the margins of the river are covered by marine and estuarine deposits. These silty clays will inhibit or prevent the formation of cropmarks. Thus, it is entirely possible that further sub-surface features are situated within the part of the proposed flood relief area, but the soil conditions may be such that there are no indications of their presence.

	2000	100			
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Site 1 HIGH

6.1.2 Site 3

A: SMR data and documentary sources

An particularly impressive range and number of archaeological sites and artefacts have been identified along this section of the river valley between Greetwell and Fiskerton (figs. 4 & 5) This material indicates that this area was intensively utilised from the Later Mesolithic onward. Flint tools and debitage from this period have been found just to the north-west of Washingborough pumping station (60613 – TF 0410 7140). Additionally, Later Mesolithic or Early Neolithic flints were discovered on a sandbank c. 50m from the recent archaeological excavations at Fiskerton (TF 0493 7164) (author's data). Residues of Neolithic activity include a small polished stone axe found within Fiskerton Village (52897 – TF 0500 7208), another found on the riverbank to the south-east of Cherry Willingham (52935 – TF 0370 7130), and a fragment of a Group VI stone axe found to the north of Fiskerton Road East, Cherry Willingham (52848 - TF 0358 7206).

A cemetery containing 11 or 12 round barrows has been identified from cropmarks within the fields lying immediately to the north of the river at Greetwell (52841 – TF 0070 7110). This Late Neolithic to Early Bronze Age complex extends along a 900m long stretch of the river, the barrows lying between 70m and 300m from the present channel. It has been proposed that a sub-oval enclosure situated at the northern edge of this cluster represents the remains of a ploughed-out Early Neolithic long barrow (52460 – TF 0070 7124). Another group of 7 round barrows has been identified on the southern side of the river, immediately opposite in Canwick parish (60930 – TF 0020 7070). One of these monuments is still identifiable as a slight mound, which was found to be associated with nine sherds of crude Bronze Age pottery.

Aerial photography has indicated the location of a number of other barrows on the northern side of the river to the east of Greetwell. A group of circular cropmarks situated c. 500m to the south-west of Cherry Willingham suggests the presence of between two and four round barrows in Willingham Fen (52860 - TF 0230 7150; 52855 - TF 0225 7132; 52856 - TF 0210 7128); another of these features may have been the initial context of an Early Bronze Age beaker found on the north bank of the North Delph, in Willingham Fen (52863). A similar funerary complex appears to have been sited c. 1.5km further to the east, and is bisected by the Cherry Willingham/Fiskerton Parish boundary. A line of five barrows can be seen to run along a sand bank, and interestingly this group also includes a possible square barrow, hinting that funerary activity may have continued into the Early Iron Age (52850 – TF 0390 7160). These barrows are close to two further circular cropmarks, which are situated to the south of Fiskerton, and could form part of the same large cemetery (50467 - TF 0457 7168). A comparable, or larger barrow cemetery, with at least 30 round barrows, extends over much of Washingborough Fen on the opposite side of the river (60327). It is necessary to note that all of the barrows situated on the northern side of the river² are located at or below 5.0m OD and are thus within the confines of Site 3.

A number of prestige items of Bronze Age date have been recovered from the environs of Site 3, and they may have been votive deposits reflecting ritual activity associated with these monuments. An Early Bronze Age axe hammer was found in the graveyard of St Clement's Church, Fiskerton (52911 – TF 0482 7199), while two more axe hammers have been found near the eastern end of 3. One was discovered adjacent to the North Delph just to the east of the proposed cross-bank that will form the end of 3 (52910 – TF 0580 7160), while the other was found beside Five Mile House Road, on the other side of the river (61453 – TF 0580 7110).

² At present it seems that there are at least one long barrow, 21 round barrows and one possible square barrow

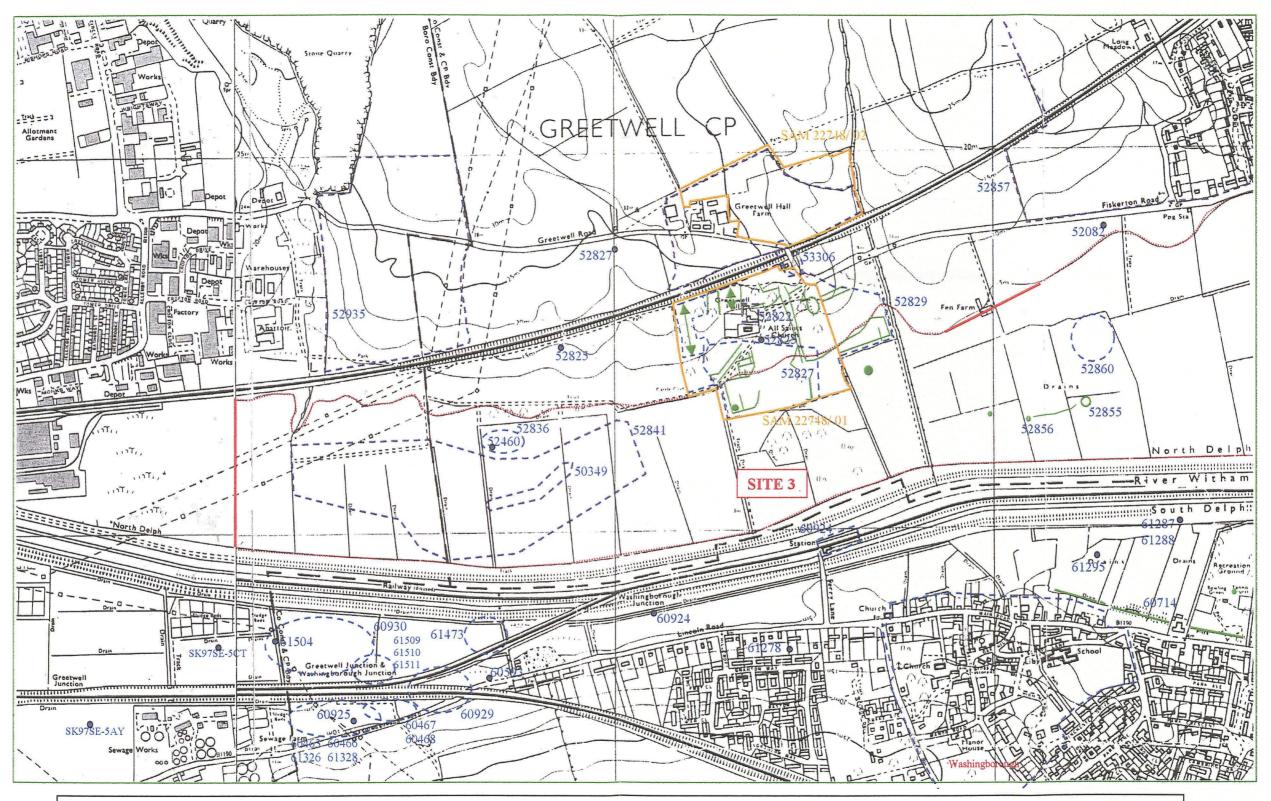


Figure 4: SITE 3 – WESTERN END

Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire Sites and Monuments Record (see Appendix 12.1 for details); find spots = blue discs, features = blue polygons.

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Slightly later material includes a riveted bronze dirk that was manufactured during the Middle Bronze Age, and which was found during dredging of the river at Fiskerton (52882 – stated as TF 0470 7180 in the SMR, but this lies 270m to the north of the river channel). At the western end of this part of the valley a Middle Bronze Age cinerary urn was found near the water treatment works at Canwick. It was situated less than 200m from the Canwick barrow cemetery, and suggests that funerary activity continued in this area after the cessation of monumental construction (61503 – TF 0001 7030). Two bronze palstaves of a similar date have also been found in the immediate environs of these round barrows (61504 – TF 0010 7071).

Small quantities of worked flint have been retrieved from a number of the fields bracketing this stretch of the Witham, but much of this lithic material is debitage and does not possess closely datable traits. Washingborough Archaeology Group has recovered worked flint from 43 of the 45 fields walked along the southern side of the river (see Appendix 12.1 for a full listing). Some of this material was found in close association to the barrow cemetery at Canwick (60466 - TF 0025 7050; 61509 - TF 0030 7070). To the north of the Witham, a small quantity of worked flint was exposed in the side of a drain approximately 200m to the north of the river (51208 - TF 0366 7159). Among this material was a barbed and tanged arrowhead of later Neolithic to Early Bronze Age date. Further lithic material was recovered during trial trenching on land off Church Lane, Cherry Willingham (54514 - TF 0350 7225). This small assemblage of material represented a low level of activity spanning the Early Neolithic to Late Bronze Age. Excavations conducted within the village of Fiskerton have also discovered small amounts of worked lithic material. Tools and debitage were found around the site of the medieval manor house on Nelson Road (54525 - TF 0504 7190), with other material coming from land behind Perrins Cottages (52888 - TF 0485 7190).

It is recorded that a log boat was found in the Witham in 1816 during engineering works associated with the raising and embanking of the channel (60924 – TF 0110 7080). The recorded find spot lies 120m to the north-west of Washingborough, on Longstongs Delph. However, it should be noted that there may be some confusion with regard to provenance, as it could be the same vessel recorded as 'Bardney 1', which was found approximately 10km to the east (see 6.1.6).

Finds of metalwork and pottery provide evidence for a significant level of activity along this section of the Witham during the Late Bronze Age. A group of three Late Bronze Age swords were found on the southern side of the river during construction of the Lincolnshire Loop Line (61295 - identified as TF 0228 0791, but more probably c. 150m to the north). Additionally, two hoards of Late Bronze Age axes have been found toward the eastern end of 3. One hoard included both socketed axes and a stone axe mould, which were found to the north of North Dales Road, in Washingborough Fen (61277 – TF 0462 7091). The second hoard was found c. 150m to the south of Fiskerton church in 1890 (52877 – TF 0487 7182). Reports from several sources have suggested that there were between 4 and 12 socketed axes in this hoard, but recently received evidence indicated that the total was closer to 90 axes.

A sherd of Late Bronze Age to Early Iron Age pottery was recovered from the field containing most of the round barrows forming the Canwick barrow cemetery (61328 – TF 0025/7050). Other isolated sherds of comparable fabrics were found to the south of the pumping station at Washingborough, which is located at the northern end of Sandhill Beck (61322 – TF 0416 7116), and c. 200m to the south of the river as it passes Fiskerton (61344 – TF 0482 7122).

An important assemblage of Late Bronze Age to Early Iron Age artefactual material was recovered from three small trenches that surrounded Washingborough pumping station (60612 – TF 0423 7138). Finds included a decorated antler cheekpiece from a bridle, pottery,

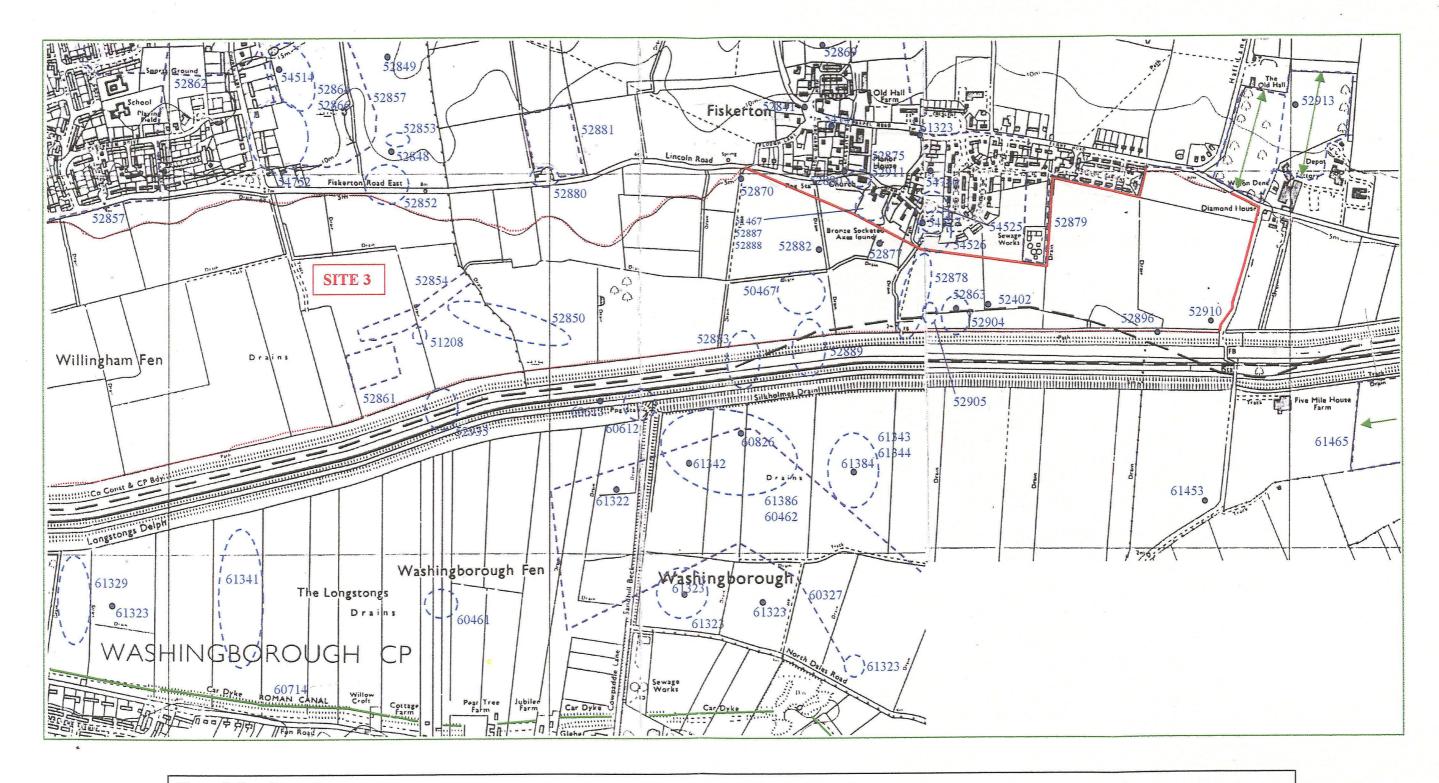


Figure 5: SITE 3 - EASTERN END

Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire Sites and Monuments Record (see Appendix 12.1 for details); find spots = blue discs, features = blue polygons.

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human and animal bone, and worked wood (Coles, et al, 1979). It has been suggested that this material may have been associated with a causeway crossing Washingborough Fen, a precursor to the Early Iron Age causeway a little further downstream (Field & Parker-Pearson, in press). However, it is also possible that the assemblage was derived from an adjacent occupation site, as over 300 sherds of Late Bronze Age/Early Iron Age handmade pottery have been recovered from the surface of the three fields lying immediately to the east of the pumping station (60462 – TF 0445 7115). Associated artefacts included worked flint and further human bone.

The Early Iron Age timber causeway lay c. 750m downstream from Washingborough pumping station (52904 - TF 0500 7162). It was discovered following the recovery of an iron sword, two bone points, part of a ribbed bronze bracelet, an iron lynch-pin (?) and sword handle fittings by a metal detectorist in June 1980. An excavation the following year indicated that these items were associated with two rows of vertical timber posts. Each row was composed of clusters of posts that resulted from successive episodes of activity between 456 and 317BC. Among the posts were significant quantities of prestige metalwork, bone tools and some human remains (Field & Parker-Pearson, in press). An excavation undertaken in August/September 2001, on behalf of the Environment Agency, indicated that the causeway continues southward beneath the northern flood bank of the Witham. Additional artefacts were recovered from among the posts and to the west of the causeway. The most intriguing of these was a complete log boat that had seemingly been manufactured specifically for use as a votive deposit. Other Early Iron Age metalwork recovered from the river at Fiskerton during the 18th and 19th centuries may also have been associated with this causeway. These items include an anthropoid hilted dagger (52889), and possibly even the Witham Shield, which is now held by the British Museum.

Although the timber causeway appears to have been abandoned at the end of the 4th century BC, it started to be reused as a site for votive deposition during the Romano-British period. Deposits included a number of Roman pots and some whetstones (52905; 61292 - TF 0492 7158). It is possible that two bronze bowls, a late Roman Irchester type (52902 - TF 0520 7165) and a skillet (52883 - TF 0460 7150) were also associated deposits.

A range of other Romano-British material has been recovered from the eastern end of Site 3, in the area surrounding the causeway. Most of these discoveries were made on the northern side of the river, and include a 'hard' for loading and unloading boats (52887 – TF 0485 7190). This was constructed from limestone rubble and Roman roof tile (51467), which had been deposited along the edge of a former channel of the Witham, at the rear of Perrins Cottages, c. 320m to the north of the present river channel. Roman pottery was also found at the site of the medieval manor at Fiskerton (54527) and tile was found in association with a layer of large rounded cobbles discovered along Orchard Lane (54140 - TF 0470 7203). An isolated coin has also been recovered from a field at the western edge of the village (52870 – TF 0451 7199). On the southern side of the river, small quantities of pottery have been recovered from three fields in Washingborough Fen, which are situated to the south (61384 – TF 0481 7120) and south-west of Fiskerton (61386 – TF 0450 7130; 61383 – TF 0435 7089).

Further to the west, there is evidence of Romano-British activity along the northern edge of the river valley in and around Cherry Willingham. The possible site of a Romano-British farmstead has been identified adjacent to Fiskerton Road East, immediately to the south-east of the village (52853 - TF 0360 7200). Two pairs of parallel, east-west aligned ditches have been uncovered, each pair appearing to define a trackway c. 15m wide, with the pairs being separated by c. 120m. Large quantities of pottery were found in and around these ditches, most of this material being greyware, but also including some samian and colour-coated fabrics. A loomweight and three 4th century coins have been found immediately to the south of the area defined by the ditches. Other pottery, stone and tile was recovered from land off

Church Lane, immediately to the north-west of the putative farmstead (52851, 52866, 52853); this material dates from the 1st to 4th centuries, and is likely to be associated.

The handle of a Roman amphora was discovered immediately to the south of Fiskerton Road, to the west of Cherry Willingham (52082 - TF 0230 7180). The only Romano-Brtish material found further to west, along the northern side of the river, are two fibulae found in the grounds of Greetwell Hall (52827 - TF 0145 7140).

There also appears to have been significant activity around Washingborough during the Romano-British period. Much of this may have been focussed upon the Car Dyke (60714). It is thought that this channel was created by Roman military engineers as a canal or major drain that followed the eastern edge of the dip slope of the Lincoln Heath, thus dividing the higher ground from the Witham Fen (Whitwell, 1992). The Car Dyke is still visible as a substantial earthwork that runs along the northern edge of Fen Road/Main Street, Washingborough. Cropmarks allow it to be followed a little further to the west, but it cannot be traced beyond TF 0203 7084.

It is recorded that 2 Roman pots were found in close association to the Late Bronze Age swords (JBAA, 1855 – 61295, see above). More Romano-British pottery was discovered in the side of the Longstongs Delph, c. 250m further to the east (61288 – TF 0250 7100). Other contemporary material has been recovered from within the village. A coin of Tetricus II was found to the south of Main Road (61289 – TF 0195 7077), while another coin and an 'urn' were exposed in the vicinity of 15 Main Street (61278 – TF 0147 7068). Another two Roman coins were found in the grounds of Washingborough Hall (61285 – TF 0181 7060).

A Romano-British artefact scatter has been identified in Canwick, in a field lying immediately to the south of the railway line from Lincoln to Spalding. The range and density of the artefacts suggests that they are associated with the site of a farmstead or small settlement (60463 – TF 0025 7050). Further Roman pottery was recovered from a corresponding location in the field to the north of the railway (61510 – TF 0030 7070). Two Anglo-Saxon coins and a sherd of pottery were also found in the same surface scatter of artefactual material (60925, 61326 – TF 0030 7051; 61326 – TF 0025 7050), while other Anglo-Saxon finds have been recovered from a field to the north of Lincoln Road, Canwick, c. 350m to the east (60593 – TF 0066 7062).

On the opposite side of the river a late Anglo-Saxon spearhead was found to the south of Greetwell Church in 1952 (52828 - TF 0140 7150). The remains of the shrunken medieval village of Greetwell surround the church (SAM 22748). This settlement will have been founded during the Anglo-Saxon period, its name, given as Grentewelle in the Domesday Book, derives from two Old English components meaning 'the gravely spring' (Cameron, 1998). Only a few buildings still remain, All Saint's Church itself, a large part of which was constructed in the 11th century (52823), Greetwell Hall, the core of which is late 16th to 17th century (52822), The Lodge, built in 1856, and the more extensive complex of buildings forming Greetwell Hall Farm, which lie to the north of the Lincoln to Grimsby railway line (Everson et al., 1991). The church and hall are surrounded by a complex of earthworks that represent the roads and building platforms of the medieval and early post-medieval village, which appears to have been largely abandoned by the mid-17th century. Superimposed upon the southern area of these remains are other banks and platforms that relate to the formal garden and ancillary buildings constructed around Greetwell Hall in the later part of the 16th to 17th century (52829 - TF 0150 7155). The southern third of this complex of post-Roman features is situated below 5.0m OD and is contained within the northern boundary of Site 3.

The etymology of the place-name suggests that Washingborough was also founded during the Anglo-Saxon period. In the *Domesday Book* it is referred to as *Washingeburg*, which utilised the Old English element *burh*, meaning 'fortified place', and *Wassinga*, the name of a kinship

group (Cameron, 1998). It is generally accepted that the 'fortified place of the Wassingas' was created during the Anglo-Saxon period. However, it is also possible that the defended enclosure referred to by this name may have been created at an earlier time. It has been suggested that the Romans constructed a series of forts at intervals along the Car Dyke. This has not been verified, but in the event that this were true, it is likely that one would have been situated at Washingborough to protect the junction between the Car Dyke and the Witham. It is therefore possible that the burh referred to was originally a Roman fort. In support of this alternative hypothesis, it should be noted that although Wassinga is rendered in an Old English form, it is derived from Wassa a British personal name. It is therefore also a possibility that the personal name had been perpetuated by oral tradition and refers to some individual associated with the burh prior to the arrival of Anglo-Saxon colonists.

The core of Cherry Willingham lies c. 1.5km to the east of Greetwell. Archaeological investigations to the east of Church Lane have uncovered the remains of the Anglo-Saxon settlement (52864 - TF 0328 7238). Anglo-Saxon activity was initially recognised in 1978, following the recovery of 40 sherds of early Saxon pottery during fieldwalking along the eastern edge of the village. Excavations in 1980 exposed the remains of a Sunken Featured Building associated with 9th century pottery, as well as gullies, fence lines and the remains of an iron-smelting furnace. In 1999 an archaeological evaluation was undertaken c. 30 m to the south of the 1980 site, and found a continuation of the Anglo-Saxon activity. Most of the subsurface features were refuse pits that were associated with domestic debris, but there was also further evidence for metalworking, including slag and hammerscale. The remains uncovered by the two phases of fieldwork spanned the 5th to 12th centuries AD.

Three elaborate Anglo-Saxon silver-gilt disk-headed pins were recovered from the Witham at Fiskerton, at approximately the same point as the Iron Age timber causeway intercepts the channel. These pins were probably made during the first half of the 9th century, raising the possibility that the causeway, or a successor, continued to be a focus for ritual activity well into the post-Roman period (52878 – TF 0498 7152). A 9th century Viking sword was found protruding from the northern bank of the river, c. 650m to the east of the causeway (52896 – TF 0564 7155). This may indicate that there is another structure or focus of ritual activity near the south-western corner of Site 3.

The present village of Fiskerton has Anglo-Saxon origins, being named as *Fiscartune* in the *Domesday Book*. This represents a partial Scandinavianisation of Old English elements meaning 'the farmstead/village of the fishermen' (Cameron, 1998). It would appear that the medieval manor house was constructed at the northern landfall of the Iron Age timber trackway. Two phases of substantial stone buildings were exposed during an excavation on the site, the associated artefacts indicating that this was a high status establishment (54526 – TF 0505 7188). The manor was the centre of a land holding belonging to St Peter's Abbey, Peterborough, and which it had held prior to the Norman Conquest.

Activity appears to have intensified along this section of the river valley during the medieval period. While much of this was centred upon the villages founded during the Anglo-Saxon period, there were also a number of important sites located away from these nucleated settlements. It is thought that Sheepwash Grange, a medieval monastic estate belonging to Kirkstead Abbey, lay 150m to the south of the Witham, at the northern edge of Canwick Parish. Two railway embankments cover much of this site (60929 – TF 0052 7058). Scatters of medieval and post-medieval pottery have been recovered from the fields bracketing the embankment c. 75m to the west of the suspected site of the grange (60467, 60468 – TF 0041 7051; 61511 – TF 0030 7070). The grange is known to have had an associated wharf, which was referred to as 'Calscroft' in medieval Hundred Rolls. These documentary sources indicated that the wharf was used for loading and unloading wool and other goods transported along the River Witham, and that it may have been an outstation of the port at Lincoln, which was responsible for the taxation of river traffic. The dry bed of a watercourse, which was cut

off from the river after the latter was embanked during the first quarter of the 19th century, lies 100 – 200m to the north-east of the grange site. A mound containing fragments of masonry flanks one side of this relict channel, suggesting that this is the site of Calscroft (61473 – TF 0060 7070).

A hoard of over 200 silver coins, and two silver rings, was found on the northern side of the river, to the west of Greetwell Village, during the construction of a railway cutting in the mid 19th century (52825 - TF 0090 7150). The coins had been minted during the reigns of William I, Henry I and Stephen, and were very clipped, with many being imperfectly die-struck.

The core of medieval Washingborough appears to have lain around 400m to the south of the river, between Main Road and Manor Road. The church of St John the Evangelist (61275 – TF 0184 7063) and the medieval village cross (60403 – TF 7206 7056) can still be found in this area. The only medieval material to have been identified to the north of Main Road is the base of a medieval baluster jug that was found along with Roman pottery during cleaning of the Longstongs Delph (61287 – TF 0250 7100).

Like its western neighbour Greetwell, the medieval settlement of Cherry Willingham did not prosper (52862 - TF 0300 7240). By the early 14th century it was severely in decline, and it had less than 10 households in 1428. The village remained relatively small until the second half of the 20th century, and as a result a large part of the earthwork remains of the medieval settlement survived until after the Second World War. This included areas of ridge and furrow to the north and west of the old village core, and further ridge and furrow to the east of Church Lane (52857 - TF 0336 7232). The latter was investigated during a recent archaeological evaluation of the area and was found to represent two superimposed field systems. The later one was probably medieval, with the *selions* running from north to south. The earlier arrangement had a perpendicular orientation and is thought to have a later Anglo-Saxon origin. Medieval pottery found to the east of the village may also have been associated with, or deposited in the later field system (52849 - TF 0359 7228).

Further ridge and furrow earthworks have been identified to the north and east of Mill House, which is approximately equidistant from the villages of Fiskerton and Cherry Willingham (52881 - TF 0405 7210). As these features are situated within the Parish of Fiskerton, it seems likely that they represent an outlying component of that village's medieval field system. The remains of further ridge and furrow have been identified to the north and east of the village 52912, 52913 – TF 0600 7214), with medieval pottery having been recovered from Chapel Field (52871 - TF 0468 7220) and to the east of the Old Rectory (52869 - TF 0475 7235).

The medieval settlement of Fiskerton appears to have been large, with its two main foci, the manor and church, both being held by Peterborough Abbey (52886). The church is dedicated to St Clement, and sits on the edge of the floodplain (52875).

Further ridge and furrow exists on the southern side of the river in a field to the east of Five Mile House Farm (61465 – TF 0636 7135). The furrows run parallel to the river and have the reversed 'S'-shaped plan indicative of medieval ploughing. A second field of ridge and furrow abuts the first block along its southern edge, its *selions* being aligned at 75° to those in the adjacent furlongs.

B: Cartographic evidence

The following maps were found to contain data relating specifically to the site:

- Ordnance Survey, 1907 Sheet LXXI.NW, Second Edition, 6": 1 mile (1: 10,560). The
 initial surveying for this map was conducted in 1885 (First Edition) and was revised in
 1905.
- Ordnance Survey, 1906 Sheet LXXI.6, Second Edition, large scale map (1: 2,500). The
 initial surveying for this map was conducted in 1885 (First Edition) and was revised in
 1905.
- Ordnance Survey, 1908 Sheet LXX.NE, Second Edition, 6": 1 mile (1: 10,560). The
 initial surveying for this map was conducted in 1885-6 (First Edition) and was revised in
 1904-5.

The main differences between the Second Edition Ordnance Survey maps and modern editions relate to the later 20th century development in and around the villages of Fiskerton, Cherry Willingham and Washingborough.

At the eastern end of 3, Diamond House and a number of associated structures already occupied the area immediately adjacent to the north- eastern corner at the turn of the 20th century. They sat at the junction between Ferry Road and the lane to Fiskerton Station. There was no bridge at the southern end of this lane at this time, the station being reached via a ferry.

The railway station lay c. 150m to the north-west of Five Mile House Farm. A farm is shown at this location on both the 1907 map and modern editions. However, on the Second Edition it is depicted as an 'F'-shaped structure with two associated outbuildings to the south, while the present house is a single large sub-square building. This indicates that the farm has been rebuilt, but its juxtaposition raises the possibility that it incorporates some of the old fabric.

The boundary separating West Lindsey from North Kesteven follows the centre line of the Witham for much of its course, but curves southwards immediately to the north of Five Mile House Farm. A little further to the west the district and parish boundary deviated to the north of the present river channel and ran through the fields bordering the North Delph; these fields have a different appearance to those surrounding them, having the form of narrow wedges, with their long axes running parallel to the river. At a point c. 550m to the west of the station the boundary turned again to run virtually parallel to the existing embanked channel, which it then rejoined at a point c. 800m further upstream. The gentle, flattened arcs of this boundary deviation suggests that it followed the natural course of the river, as it existed prior to the improvement and canalisation of the channel, which occurred between 1812 and 1830. This in turn raises the possibility that when originally constructed, Five Mile House Farm may have been situated on the riverbank.

In 1907 there were no buildings along the stretch of the river between Fiskerton Station and Cherry Willingham. However, a pumping station has since been constructed at the junction of Sandhill Beck and the South Delph. Otherwise, the southern bank of the river, the South Delph, Silkholmes Drain and Longstongs Drain already had the form that they have today. The northern edges of the fields abutting this complex are depicted as marshy ground on the Second Edition map, but most appear to have had the same form as they do today. The exceptions are a few of the very elongated narrow fields to the west of Sandhill Beck, in the area referred to as The Longstongs, which have been amalgamated since 1907.

The Second Edition map also indicates that the strip of land running between the northern riverbank and the North Delph was marshy. To the north of this was a series of relatively small fields running along the southern and eastern sides of Fiskerton. This area has changed considerably, as the fields to the east of Nelson Road are now covered by later 20th century residential development, while the fields to the south have been combined to form larger blocks. In contrast, the fields extending westward from Nelson Road to Cherry Willingham have changed little.

The Ordnance Survey map of 1907 indicates that the field system lying between Cherry Willingham and Greetwell, on the northern side of the river, has changed very slightly. Contradicting the general trend in the Witham valley, a few of the fields running alongside the North Delph have been further subdivided since the turn of the 20th century.

The river turns slightly toward the south immediately to the east of the site of Greetwell shrunken medieval village. At this point the North Delph deviates away from the base of the flood bank thereby forming an enclosed strip of land c. 40m wide. The intervening space is shown to be marshy ground on the Second Edition map. The parish and district boundary also deviates to the north of the present river channel at this point. It then follows the gentle arc of the North Delph before returning to the river c 500m to the west. The form of this boundary deviation suggests that the North Delph follows the natural channel of the river as it was immediately prior to the improvement and canalisation of the first quarter of the 19th century.

The southern side of the river has changed very little over the last 97 years. Washingborough railway station, built on the embankment between the Witham and the South Delph in the mid 19th century, was, and still is, the only building along this stretch of the river. The northern edges of the fields abutting Longstongs Delph are depicted as marshy ground on the maps of 1907/8, and it is apparent that most still have the same dimensions as they had at that time. The majority of these are long narrow plots that run between the river and Main Road/Fen Road. They are noticeably smaller than the large sub-rectangular fields in The Longstongs immediately to the east. This raises the possibility that they have earlier origins, being some of the first land reclaimed from the fen at the northern margin of the medieval/post-medieval village. The long axes of these small fields are orientated from north-north-east to south-south-west and appear to terminate at a meandering boundary located c. 60m to the south of the South Delph. A number of more irregular plots are situated immediately to the north-west of the long, narrow fields. The boundaries of this second group of fields run from north to south, perpendicular to Main Road, suggesting that they result from a different phase of reclamation.

Given the consistent orientation of the surrounding boundaries, it is interesting to note that there is a single drain that runs from north-west to south-east at the western edge of the complex of irregular fields. The south-eastern end of this drain terminates at the rear of properties situated at the junction of Main Road and Oak Hill, while the other end runs up to Longstongs Delph. The most westerly identifiable section of the Car Dyke is situated c. 10m from the south-eastern end of this drain (TF 0203 7084). It is therefore tempting to see the drain as a fossilisation of the north-western end of this Roman watercourse where it turned slightly northward to effect a union with the River Witham, merging c. 250m to the east of the railway station. Certainly such a pre-medieval origin would explain why this feature did not conform to the surrounding system of land division.

There are no significant differences between the form of the early and late 20th century landscape at the western end of Site 3. The northern side of the river varies only in the disappearance of a small plantation abutting the North Delph to the north of Washingborough Junction. Otherwise, the size and layout of the fields are identical. The southern side of the river was also fairly similar, with the railway embankment connecting the GNR Lincolnshire Loop Line to the Lincoln to Spalding line already being in place. However, it is evident that

the large long, narrow fields between Longstongs Delph and Lincoln Road have been created since 1908 through the amalgamation of a number of much smaller sub-square plots.

C: Air photographic evidence

The Lincolnshire component of the National Mapping Programme (NMP) identified the two areas of ridge and furrow that face each other across the River Witham at the eastern end of 3 (52913 and 61465). It also identified a more extensive complex of ridge and furrow and associated linear boundaries to the north and west of Fiskerton, which undoubtedly represents a large proportion of the settlement's medieval field system. Elements of three or four small ponds were also identified in a small paddock immediately to the south of St Clement's Church.

To the south of the river the NMP ascertained the location of 30 barrows forming the Washingborough Fen barrow cemetery (60327). Another five barrows were identified to the north of the Witham (52850), these forming a line running roughly parallel to the channel between Fiskerton and Cherry Willingham. An east-west aligned linear boundary situated immediately to the north-west of this second group was also transcribed. There were further cropmarks at the western end of this boundary, one of which appeared to form a sub-rectangular enclosure (52861).

Examination of oblique aerial photographs held by the NMR indicated that there were further cropmarks and soilmarks to the south of the river, in the vicinity of Washingborough pumping station. Two very substantial curvilinear cropmarks could be observed c. 350m to the south of the river, at the southern end of the field located immediately to the east of Sandhill Beck (NMR: TF0470/9, -/10 & TF0471/8). One ran north-eastward from the south-east corner of the field. After c. 120m it turned through 90°, before traversing a further 110m to the western perimeter. The other cropmark ran from north-west to south-east for c. 130m, before appearing to curve southwards. The second feature was superimposed upon the first, suggesting that they result from two phases of activity. However, each would appear to form two sides of a large enclosure (centred on TF 0429 7108), the first enclosing at least 0.9ha, with the other sides lying in surrounding fields. These curvilinear cropmarks have a diffuse appearance directly comparable to that of the surrounding round barrows. This suggests that they represent raised banks of sand and gravel that are protruding through the top of surrounding peat deposits. It is interesting to speculate whether these banks provided the inspiration for the name of the adjacent Sandhill Beck.

The NMP also identified features of potential archaeological significance to the south-west of Cherry Willingham. Two possible round barrows and two adjacent circular features were evident to the north of the Witham, (52855, 52856, 52860). An examination of the oblique aerial photographs held by the NMR indicated the location of what appeared to be another round barrow, in this complex (NMR: *TF0271/3*). This was visible as a small circular parchmark located c. 110m to the west of (52856) (at TF 0199 7130). It was also evident that a linear feature ran directly between the two circular features (52855 & 52856) situated at the southern edge of this group.

The complex of earthworks representing the remains of the deserted medieval village of Greetwell, and the subsequent landscaped garden surrounding the hall, was also transcribed as part of the NMP (SAM 22748). These features are complemented by soilmarks and cropmarks situated in the field to the east of the scheduled area. Together these elements extend over c. 19ha.

The southern side of the valley was dominated by the sections of the Car Dyke that survive as earthworks. A further three short sections of this feature were visible as cropmarks situated

immediately to the west of the last raised component. Another oblique image from the NMR (TF0270/6) confirmed that the Car Dyke was visible as a cropmark until it reached a point immediately to the east of the north-west to south-east aligned drain that runs between Main Road and Longstongs Delph (see B, above). A circular parchmark was identified on other oblique photographs, being situated immediately to the north-west of the tennis courts at Washingborough recreation ground (NMR: TF0270/1, -/2, -/3 & -/4). Morphologically this cropmark feature was indistinguishable from the other round barrows identified along the Witham Valley. Consequently, it is possible that there are further undiscovered funerary monuments located along the northern edge of the village. Equally, the close proximity of modern development and the apparent absence of any comparable features in the immediate vicinity might indicate that this cropmark relates to another kind of feature or activity.

The NMP identified the two barrow cemeteries that face each other across this stretch of the River Witham at the western end of Site 3. The locations of 12 round barrows and the putative long barrow were transcribed for the northern complex (52841). An associated cropmark demonstrated the presence of a linear boundary at the centre of this cluster of monuments (50349). Parchmarks pinpointed the location of the seven round barrows forming the Canwick cemetery (60930). An examination of the oblique aerial photographs held by the NMR did not reveal the presence of any additional archaeological features in this area.

D: Summary and discussion of the evidence

An examination of existing sources indicates that the environs of this section of the Witham were heavily utilised, particularly during the prehistoric and medieval periods. One of the most prolific features encountered are round barrows, which can be found along both sides of the river valley between the ends of Site 3. There appear to be two discrete cemeteries situated to the south of the Witham. A small cluster of seven barrows lie adjacent to the river at Canwick, while the other group of over 30 monuments is dispersed across Washingborough Fen to the south of Fiskerton. However, it should be noted that these two complexes of funerary monuments lie either side of Washingborough, and it is therefore possible that postmedieval and modern development has destroyed or obscured the remains of other barrows that were located in the intervening space.

The pattern is similar to the north of the river, with a relatively large cemetery situated between Lincoln and Greetwell, a smaller complex to the south-east of Greetwell and another group between Cherry Willingham and Fiskerton. A number of other circular cropmarks, which could be barrows, have also been identified on this side of the valley, two being situated at the southern edge of Greetwell deserted medieval village and two more to the south-west of Fiskerton. Viewed together, the known distribution potentially represents part of a much larger monument complex that extended along the northern bank of the river for most of the length of Site 3. Consequently, the spaces between the different groups of barrows may be deceptive and merely reflect the topography of the prehistoric ground surface, with the features constructed on the lowest lying ground being more deeply buried beneath a protective layer of peat.

All of the barrows on the northern side of the river are situated below the 5.0m OD contour and thus lie within the boundaries of the potential flood storage area. The most westerly known barrows in this group lie within 150m of the proposed cross-bank forming the end of 3. The possibility must therefore be considered that comparable deposits lie in very close proximity to the footprint of this flood bank. The same may also be true for the proposed cross-bank that would be constructed to the south of Fen Farm, Cherry Willingham.

Cropmarks suggest that the cemetery to the west of Greetwell also incorporates the remains of a long barrow, while there appears to be a square barrow in the group to the south-east of

Cherry Willingham. This implies an extended period of funerary and ritual activity spanning the 4th to mid 1st millennia BC. The recovery of Middle Bronze Age palstaves from the Canwick Barrow cemetery, and Late Bronze Age socketed axes from Washingborough Fen provides supporting evidence for the continuity of ritual activity among these complexes.

Much of the late prehistoric activity relates more directly to the river itself. It appears that the river valley started to become waterlogged in the Late Bronze Age, leading to the formation of peat. This environmental change may have precipitated a shift in the form and focus of ritual activity from the barrows, which were gradually being submerged, to the entity that was effecting their demise. This process is possibly illustrated by the recovery of human bone from the immediate environs of the pumping station adjacent to Sandhill Beck in Washingborough Fen (Coles, et al, 1979). This material was associated with a range of other artefacts, including Late Bronze Age to Early Iron Age pottery, animal bone and a decorated antler bridle cheekpiece. Evidence from the three trenches opened suggested that all of this material had been redeposited by the river, its point of origin lying a little upstream. However, the total area excavated was only c. 10m^2 , making it highly unlikely that any associated structures would have been exposed.

Fieldwalking indicated that the spread of Late Bronze Age to Early Iron Age artefactual material extended across the northern half of the 3 fields lying to the east of Sandhill Beck. Over 200 sherds of pottery were recovered from this area, most coming from two relatively small concentrations. This pottery was typologically dated to the 9th – 8th centuries BC, and was closely comparable to the sherds recovered from the trenches surrounding the pumping station. It has been suggested that this material is associated with a timber causeway of that date (Field & Parker-Pearson, in press: 101). There is a record that in 1966 ploughing exposed two parallel rows of posts situated approximately 400m downstream of the pumping station.

Excavations undertaken in 1981 and 2001 have exposed two sections of an Early Iron Age timber causeway at Fiskerton, c. 750m downstream from Washingborough pumping station. The causeway was constructed from two parallel rows of vertical posts, which in some places were associated with substantial horizontal planks. These timbers were remarkably well preserved due to the prevailing conditions within this part of the peat fen. These investigations also demonstrated that this structure is associated with a large number of well-preserved, high status artefacts, which include swords, a dagger, spearheads and a spear (complete with wooden shaft), axes, chisels, hammers, a decorated saw, bone points, domestic pottery, a currency bar, decorated shield or scabbard fittings, and an iron socketed axe made in a Late Bronze Age tradition. In addition, two dugout log boats were also discovered. The range and quality of the material recovered from this site is exceptional and indicates that it is an international significant monument.

The causeway appears to have continued north-eastward toward higher ground now occupied by the village of Fiskerton. Its landfall was probably near the eastern end of Nelson Road, at the site later occupied by the medieval manor house. The outline plan for Site 3 indicates that a 1400m long cross-bank would be constructed to the south of Fiskerton to protect the lowerlying parts of the village from flood waters. This structure would cross the alignment of the Iron Age causeway.

Although prevailing anaerobic conditions have preserved this wood, it will have become relatively soft and malleable. Consequently, significant localised pressure of the sort that would be applied by heavy machinery, or the compaction of bank material, is likely to result in the deformation or destruction of this element of the archaeological resource. It therefore appears inevitable that these deposits would be detrimentally affected by the construction of flood defences above them. Accordingly, it is probable that preservation by record (i.e. excavation) would be considered to be the only suitable mitigation strategy if these works were to proceed.

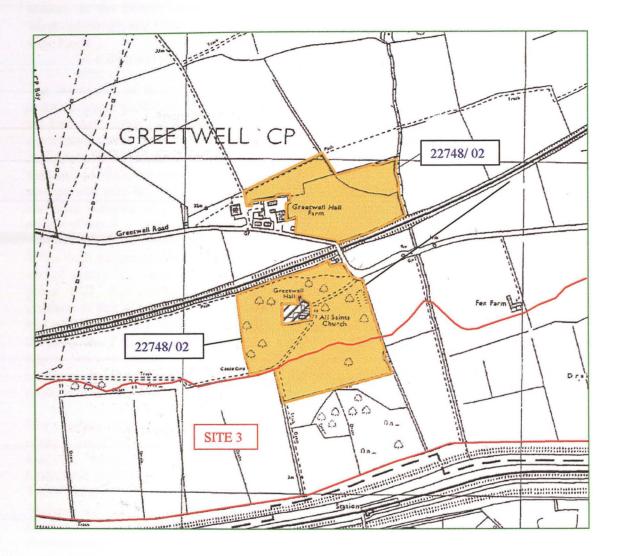


Figure 6: SITE 3
Relationship between the proposed flood relief area and the Scheduled Ancient Monuments situated in its immediate environs.

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Three Late Bronze Age swords were found adjacent to the river during the construction of the railway in the mid-19th century. They were discovered along the section that separates Washingborough and Cherry Willingham, and an account of their recovery indicates that they were found

"at a short distance from...two Roman vessels of grey coloured terra-cotta" (JBAA, 1855: 263).

The description of these pots suggests that they were unbroken or largely complete. The juxtaposition of prehistoric metalwork and complete Roman vessels has also been observed at the Iron Age timber causeway at Fiskerton, where it would appear that the pots contained or represented votive deposits, and indicated a resumption of ritual activity after a hiatus of c. 350 years. It is therefore possible that similar depositional practices were enacted further upstream at Washingborough (in the vicinity of TF 0240 7100). Furthermore, the depositional environment may be directly comparable with Fiskerton, suggesting that there may also be surviving elements of a Late Bronze Age causeway running across river valley near the middle of Site 3.

It has been suggested that the Viking period sword recovered from the river near the eastern end of 3 may be associated with yet another timber causeway (Field & Parker-Pearson, in press: 102). This theory raises the possibility that there are further 9th and 10th century artefacts in this area. While this hypothesis has yet to be proved, it seems relatively unlikely that any such metalwork would be exposed or disturbed if the ground works associated with the creation of the cross-bank form the eastern end of 3 are restricted to the removal of topsoil, prior to the deposition of the clay bank material. However, if structural elements of a causeway do lie within this area, it is likely that any associated waterlogged timbers would be prone to deformation due to pressure applied by machinery and the bank material.

The southern third of the shrunken medieval village of Greetwell is crossed by the 5.0m contour that defines most of the northern edge of the proposed flood storage area (fig. 6). The medieval village, associated cultivation plots, and the superimposed post-medieval landscaped gardens are together classified as a Scheduled Ancient Monument (SAM 22748). These features therefore have statutory protection under the Ancient Monuments and Archaeological Areas Act, 1979, as amended. It is apparent that if the maximum capacity of flood water was directed into Site 3 it would cover approximately 3ha (20%) of the SAM. Furthermore, such an event could also have an impact upon any associated features situated outside of the scheduled area.

If this potential flood storage area is chosen for further consideration it will be necessary to consult with English Heritage prior to the detailed design and onset of the scheme of works, as they will directly affect a Scheduled Ancient Monument (see Section 7.0). This process will determine whether there are any potential incompatibilities regarding the respective objectives of the Environment Agency and English Heritage.

Assessment of archaeological potential:

Site 3	HIGH

6.1.3 Site 4

A: SMR data and documentary sources

Relatively few archaeological features, deposits, or artefacts have been identified along this stretch of the river, between Fiskerton and Short Ferry (fig. 7). The oldest item recorded in the SMR is a broken leaf-shaped flint 'point', possibly a Neolithic arrowhead, which was uncovered while digging a drain at Short Ferry Marina (52898 – TF 0940 7140). Two Early Bronze Age axe hammers have been found at the opposite end of Site 4. One was discovered adjacent to the North Delph just 30m beyond the western end of 4 (52910 – TF 0580 7160), while the other was found beside Five Mile House Road, on the other side of the river (61453 – TF 0580 7110). The more southerly pebble axe hammer was situated only 250m from the most north-easterly known round barrow of the large Washingborough Fen barrow cemetery (60327 – TF 0520 7050) and may have been a votive deposit resulting from ritual activity associated with these monuments.

Two worked flint flakes found at Woodlands Farm, Ferry Road, Fiskerton (54512 – TF 0636 7187), provide further, albeit limited, evidence of prehistoric activity along the northern bank of this section of the river. However, one of the most significant discoveries in this area was a hoard of four Bronze Age socketed axes that were found around 1910 (52895). The precise location of the find spot has not been positively determined, but it is thought to lie between Wood End Cottages and Long Wood, Fiskerton (TF 0770 7200), less than 50m beyond the northern edge of Site 4.

Two swords have been found in the environs of 4, which, together with the hoard of socketed axes, provide limited evidence for the deposition of prestige metalwork along this section of the Witham and Barlings Eau. A 9th century Viking sword was found protruding from the northern bank of the Witham at Fiskerton in 1954, c. 160m beyond the western end of the proposed flood relief area (52896 – TF 0564 7155). The blade was plain, but the pommel and handgrip would have been decorated, and there were the mineralised remains of a wooden scabbard adhering to the blade. The other sword was found in 1872 at the opposite end of 4, while cleaning and deepening the Barlings Eau immediately adjacent to Short Ferry Bridge (52892 – TF 0937 7166). It was described as a 'two-edged' weapon, and was between 1.37 and 1.42m long.

A log boat, 7.3m long by 0.6m wide, was found sealed beneath peat, c. 150m from the eastern end of 4 (52894 – TF 0896 7120). This vessel was subsequently excavated and deposited with Lincoln City and County Museum. It was found adjacent to Fiskerton Sluice, which was constructed as part of the scheme to raise and embank the river that was undertaken between 1812 and 1830 (52901 – TF 0890 7120). A new canalised channel was excavated between the sluice and Bardney Lock, thereby creating Branston Island. The sluice was built to allow excess water to be diverted into the old river channel.

Evidence of medieval activity along the western half of 4 is restricted to the survival of small blocks of ridge and furrow earthworks, situated on both sides of the river. Three blocks of selions survive in the fields immediately to the north of Ferry Road and east of Hall Lane, Fiskerton (52913 – TF 0600 7214). Further ridge and furrow exists on the southern side of the river in a field to the east of Five Mile House Farm (61465 – TF 0636 7135). The furrows run parallel to the river and have the reversed 'S'-shaped plan indicative of medieval ploughing. A second field of ridge and furrow abuts the first block along its southern edge, its selions being aligned at 75° to those in the adjacent furlongs.

Medieval activity in the eastern half of this area was centred around a monastic grange and fishery, likely to be the example known as 'Barling Mouth' or 'Barleymouth', which belonged to Stainfield Priory (52906 – TF 0960 7130). The grange buildings were located in the angle

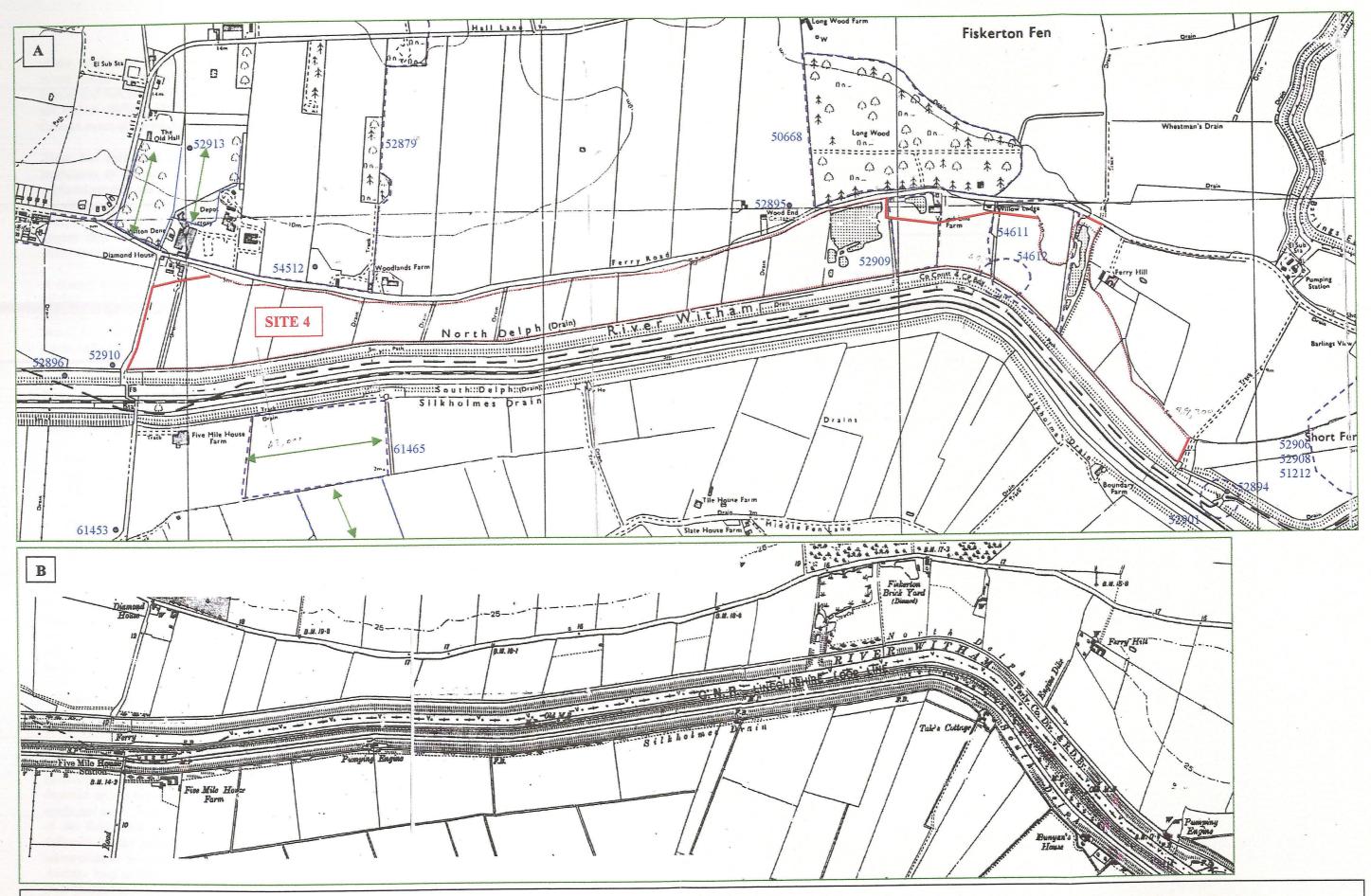


Figure 7: STTE 4

A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire A: Location of the proposed flood relief area shown by dotted red line, with the position of the associated cross-banks depicted in the Lincolnshire A:

of the confluence of the River Witham and the Barlings Eau and were constructed upon a raised mound. An excavation revealed remains of a stone structure, which was associated with fishing and fish processing equipment, including pieces of a stamped curfew, fish smokers and net sinkers (White, 1977). Associated pottery indicated that activity at the site continued through much of the medieval period and into the 16th century.

There has only been one excavation in the immediate area, this being an archaeological evaluation of the field to the east of Willow Lodge. Most of the field was found to be archaeologically sterile, but a small number of shallow features, including a ditch and a curvilinear gully, were exposed at its southern edge, adjacent to the North Delph (54611, 54622 - Brett, 2001). Artefacts were not recovered from any of these features, but it did appear that they had initially been cut through a layer of peat that had subsequently desiccated, resulting in a truncated profile.

A disused brickyard, which was created after 1830, lies c. 200m to the west of Willow Lodge (52909 – TF 0800 7190). A number of large ponds in the field to the west and another adjacent to Wood End Farm are likely to be abandoned clay pits associated with this industry. Wood End Farm is named in reference to Long Wood, Fiskerton, which is listed in the Nature Conservancy Council's inventory of ancient woodland (50668 - TF 0800 7215).

B: Cartographic evidence

The following maps were found to contain data relating specifically to the site:

- Ordnance Survey, 1906 Sheet LXXI.NE, Second Edition, 6": 1 mile (1: 10,560). The
 initial surveying for this map was conducted in 1885 (First Edition) and was revised in
 1904.
- Ordnance Survey, 1907 Sheet LXXI.NW, Second Edition, 6": 1 mile (1: 10,560). The initial surveying for this map was conducted in 1885 (First Edition) and was revised in 1905.

The relevant First Edition sheet could not be located at either the LAO or the LSL. A number of maps and plans of the River Witham that are held by the LAO were also consulted, but these either depicted the course of the river channel between 1743 and 1768 at a very small scale (estimated to be c. 1: 50,000) or provided very detailed cross sections across the river and its flood defences (e.g. LAO 3 LRA 8). None of this material was found to provide any further detail relevant to the study.

With the exception of the two ends of this stretch of the river valley, there are few significant differences between the Second Edition Ordnance Survey map and modern editions in most of the area surrounding Site 4 (fig.7). By 1906/7 the northern bank of the Witham and the North Delph were essentially as they are today, as were the comparable elements on the southern side of the river. There have however, been significant changes at Short Ferry, particularly as a result of the creation of the marina during 1974-5. In 1906 this area was depicted as a normal field bounded by flood banks to the south and east, and drains to the north and west. A short section of curving drain is shown to cut across the south-east corner of the field. This latter feature almost certainly represents a relict river channel, as it is followed by the parish boundary dividing Fiskerton from Branston. This deviation of the administrative boundary is still shown on modern maps, although the drain no longer exists. Another loop in the boundary dips southward into Branston Island midway between the new river channel and the Barlings Eau.

The only group of buildings depicted in the immediate vicinity of Short Ferry Bridge on the Second Edition map was the Tyrwhitt Arms public house. This pub still survives, standing beside Ferry Road where it turns abruptly to cross the Barlings Eau. The area immediately to the south of the pub was developed into a static caravan park in the latter part of the 20th century, and two dwellings have also been constructed beside Ferry Road to the north-west.

A pumping engine was depicted a little to the north of Fiskerton Sluice, on the eastern bank of the Witham. It appears to have been recessed into the flood bank at the eastern end of the North Delph, The structure has been demolished, but its site is still evident on modern maps, lying at the south-east corner of 4, at the southern end of the proposed cross-bank.

Ferry Hill, a farm at the western end of Short Ferry 'peninsula', was already in existence in the early 20th century. There have been subsequent alterations to the form and layout of some of its buildings, but the surrounding field system is essentially the same. A large, elongated pond lies to the west of Ferry Hill, but this has been created since 1904, as at that time the area formed part of the field that is now being utilised as the Fiskerton clay borrow pit for the Environment Agency's scheme of flood bank improvements.

Willow Lodge did not exist at the time that the Second Edition map was created, but an unnamed smallholding occupied the area immediately to the south. The remains of the most northerly of this group of buildings may be exposed during the creation of the flood bank protecting Willow Lodge and Wood End Farm.

Wood End Farm incorporates the remains of Fiskerton Brick Yard. The early map indicated that the brickworks were 'disused' in 1904, suggesting that it had a relatively short lifespan. The ponds along the northern edge and to the west of the farm were already in existence at the beginning of the 20th century, providing further support for the idea that they were clay extraction pits. It is notable that there is a large inlet from the Witham at the south-west corner of the field containing the larger ponds. This inlet is rectangular and surrounded by flood defences indicating that it is likely to have been a quay used to load bricks for transportation along the river. It appears that this feature had already partially silted up by 1904, and that the North Delph had been cut across it. It has now been almost entirely backfilled, probably with material from the encircling banks, and a continuation of the northern flood bank of the Witham has been constructed across its southern end.

The dimensions of Long Wood do not appear to have changed during the course of the 20th century. However, Wood End Cottages, situated to the west, have been constructed since that date. Similarly, Woodlands Farm, situated on the outer edge of the village, c.1km to the west, was also built after 1904. On the northern side of the river the pattern of the early 20th century field system is still relatively unchanged in the modern landscape. In contrast, a number of the smaller fields on the southern side have been amalgamated since that time.

Diamond House and a number of associated structures already occupied the north-west corner of 4, on the eastern side of the junction between Ferry Road and the lane to Fiskerton or 'Five Mile House Station', at the turn of the 20th century. However, there was no bridge at the southern end of the lane at this time, the station being reached via a ferry.

The railway station lay c. 150m to the north-west of Five Mile House Farm. A farm is shown at this location on both the 1907 map and modern editions. However, on the Second Edition it is depicted as an 'F'-shaped structure with two associated outbuildings to the south, while the present house is a single large sub-square building. This indicates that the farm has been rebuilt, but its juxtaposition raises the possibility that it incorporates some of the old fabric.

The boundary separating the parishes of Washingborough and Heighington changes direction frequently to the south of Five Mile House Farm. It follows Middle Fen Lane north-eastwards

until it reaches a point opposite the blocks of ridge and furrow noted in 6.1.3.A (above). It then turns to the north-west to run up the south-western side of the most southerly block of furlongs. It rotates three more times through 90° before passing c. 200m to the south of the farm to meet Five Mile Lane. After following this road for 350m the parish boundary again turns, this time through 140°, and runs northwards to the Witham. The numerous changes of direction provide strong indications that the boundary follows the edges of fields that originally belonged to Five Mile House Farm.

The district boundary separating West Lindsey from North Kesteven follows the centre line of the Witham for much of its course, but curves southwards immediately to the north of Five Mile House Farm. The gentle, flattened arc of this boundary deviation suggests that it followed the natural course of the river, as it existed prior to the improvement and canalisation of the channel between 1812 and 1830. This raises the possibility that when originally constructed, the farm may have been situated on the riverbank.

C: Air photographic evidence

The Lincolnshire component of the National Mapping Programme identified the two areas of ridge and furrow that face each other across this stretch of the River Witham (52913 and 61465). It also indicated the location of the most north-easterly known barrow in the Washingborough Fen barrow cemetery (60327), which lies 550m to the south of Five Mile House Farm.

An examination of the oblique aerial photographs held by the NMR did not reveal the presence of any additional archaeological features.

D: *Summary and discussion of the evidence*

In relative terms, there appears to have been very little activity along this section of the river valley, in stark contrast to the length passing Washingborough and Fiskerton. In 1999 a Middle Palaeolithic handaxe, classified as Mousterian of Aechulean Tradition (MAT – c. 75,000 – 50,000BP), was recovered from the south-west corner of the field situated to the south of Woodlands Farm (TF 0648 7166) (author's data). Its unabraded condition suggested that it was dragged from a contemporary ground surface that had only recently been subjected to plough damage as a result of peat shrinkage. Its find spot was located only 35m to the north of the northern flood bank of the river, at the southern edge of 4.

The recovery of two Late Neolithic to Early Bronze Age stone axe-hammers from the western end of Site 4 raises the possibility that there may be a series of votive or funerary deposits along the margins of this stretch of the river. The fact that this material appears to be restricted to the western end of 4 suggests that it is associated with the large contemporary barrow cemetery that extends over much of Washingborough Fen, to the south. The closest round barrow lies c. 700m from the proposed flood relief area. However, it is possible that further monuments, as yet undetected, are situated in the intervening space.

It has been suggested that the Viking period sword recovered from the river around 160m beyond the south-west corner of 4 may be associated with a timber causeway analogous to the Iron Age example located c. 700m to the west (Field & Parker-Pearson, in press: 102). This theory raises the possibility that there are further 9th and 10th century artefacts in this area. While this hypothesis has yet to be proved, it seems relatively unlikely that any such metalwork would be exposed or disturbed if the ground works associated with the creation of the cross-bank at the western end of 4 are restricted to the removal of topsoil, prior to the deposition of the clay bank material. However, if structural elements of a causeway do lie

within this area, it is likely that any associated waterlogged timbers would be prone to deformation due to the localised pressure applied by heavy plant and the bank material.

It has been observed that the boundary between Heighington and Washingborough encircles Five Mile House Farm. This suggests that this isolated farmstead has early origins predating the fixing of the parish boundaries. It was presumably assessed as part of a manor centred on Heighington, which necessitated the adjustment of the boundaries to allow this holding to project into the area belonging to Washingborough. This hypothesis receives support from the fact that at least two of these fields contain ridge and furrow that has morphological traits consistent with medieval activity. The isolated position of this block of land, c. 3.5km from the medieval core of Heighington and over 4km from the older part of Washingborough, indicates that these fields are unlikely to be part of an open field system surrounding either of these communities. Consequently, it would appear that this might have been an isolated outpost of a secular or ecclesiastical estate. The existence of ridge and furrow suggests that it was a medieval grange or a similar secular farm, while its location on the edge of the river raises the possibility that there was an associated fishery. A further implication of its isolated location is that there must have been buildings to house a manager/agent, labourers and equipment. The existence of such structures is conjectural and consequently their position, if any, unknown. However, the most likely location for such dwellings would be adjacent to, or beneath the existing buildings forming Five Mile House Farm. Additionally, the possibility that associated facilities were also located on the northern bank of the Witham cannot be discounted.

Archaeological activity at the eastern end of 4 is concentrated around the stretch of the Barlings Eau between Short Ferry Bridge and the marina. Past human activity appears to have been far more sporadic away from the mouth of the Barlings River and prehistoric material is largely limited to a hoard of Late Bronze Age socketed axes from the western edge of Long Wood, and a log boat found near the river bank just to the south of 4. The discovery of both the hoard and the boat indicates that such isolated finds are always possible, but impossible to predict.

An archaeological evaluation conducted to the east of Willow Lodge exposed a small number of shallow features at the south-west corner of the field (see 6.1.1.A; Brett, 2001). Following the completion of the fieldwork, a farm worker reported that years earlier a polished stone axe had been found stuck to a plough share after the field had been ploughed. This item was handed to the farm manager and is thought to currently be in the possession of Hugh Borne. The field is now being utilised as a borrow pit to provide clay for the reinforcement of the flood banks along this section of the river.

The early 20th century maps have provided indications that groundworks associated with the construction of cross-banks toward the eastern end of 4 may expose the sub-surface remains of two groups of structures. The first is a pumping engine, which was located c. 140m to the north of Fiskerton Sluice. The pumphouse appears to have been a large rectangular structure situated at the south-west corner of a polygonal compound, and seems to have been partly recessed into the flood bank at the eastern end of the North Delph. There appear to have been two smaller structures to its north and east. The boundaries of the compound still exist and the site of the pumping engine is therefore easy to determine. It is likely that the pumphouse and the small building to its north will fall partially within the footprint of the 75m long cross-bank forming the eastern end of 4.

The other group of buildings was situated at the southern end of the plot now occupied by Willow Lodge. The Second Edition map shows a short footpath running between these structures and the brickyard, c.150m away. This suggests that these buildings were cottages that had been occupied by people working at *Fiskerton Brick Yard*. The works were already described as 'disused' in 1906, and the consequent lack of employment may have led to the

eventual demolition of these structures. The most northerly, and smallest of these structures appears to have been located at the point that a new cross-bank will pass to the south of Willow Lodge.

Assessment of archaeological potential:

Site 4 LOW-MEDIUM

6.1.4 Site 5

A: SMR data and documentary sources

It appears likely that the oldest recorded item from this area is a broken leaf-shaped flint 'point', possibly an earlier Neolithic arrowhead, which was uncovered while digging a drain at Short Ferry Marina (52898 – TF 0940 7140) (fig.8). A range of slightly later material has been recovered from the slightly lower ground to the south and east of the confluence between the two original river channels. The earliest components of this group were found immediately to the west of Top Farm, Stainfield, during archaeological trial trenching. Several sherds of Late Neolithic to Early Bronze Age Pottery were recovered from a pit, located in the vicinity of the proposed cross-bank that would surround the farmyard (54161 – TF 1022 7173). A number of other features were also identified during the same watching brief, these including further pits, gullies, ditches and a curvilinear ditch that may have encircled a ploughed out round barrow (Palmer-Brown, 1997; 54162 – TF 1020 7172).

Aerial photography has identified four round barrows close to the farm, one lying only 100m to the west (53836 – TF 1014 7167), and another 450m to the east (53835 - TF 1074 7181), both being located within the confines of the proposed flood relief area. The other two barrows are situated to the south of Site 5, one lying immediately to the south of Snakeholme Drain (53840 - TF 1081 7128), with the other closer to Bardney Abbey (53842 - TF 1103 7113).

Of similar antiquity to the barrows was an Early Bronze Age food vessel that was found on the northern edge of Branston Island, c. 1869. It was recovered from relatively deeply stratified deposits adjacent to the old channel of the River Witham (61454 – TF 0973 7122). The other Early Bronze Age artefact recovered from the area is a perforated axe hammer, manufactured from stone originating in County Durham (51197 - TF 1126 7246). It was found while ploughing, just to the north-east of the Old Posthouse, Stainfield.

The remains of five log boats are likely to relate to further prehistoric activity around the mouth of the Barlings Eau. Two were found whilst recutting a drain running along the foot of the eastern bank of the Eau (51205 – TF 0962 7150). A fragment of another was found c. 130m further to the east in 1976 (51206 – TF 0974 7157). A small portion of the fourth example was exposed in 1953, still only 300m from the confluence of the Barlings River and the Old Witham (51203 – TF 0990 7158). All three sites are situated with the area of Site 5. The fifth log boat was found c. 280m to the south of 5, during ploughing along the eastern edge of Branston Island (60478 - TF 103 709). Part of the bottom and side of the boat was exposed in 1976, but it is thought that the remainder is still *in-situ*. Known as 'Bardney 3', it was an oak vessel, the exposed portion being 2.25m long, by 0.6m wide, and up to 0.12m thick.

Some Romano-British pottery was found during the initial construction of Short Ferry Marina, raising the possibility that there may have been a small farmstead situated at the end of this spur of glacial till (52907 – TF 0965 7134). Further Romano-British pottery was

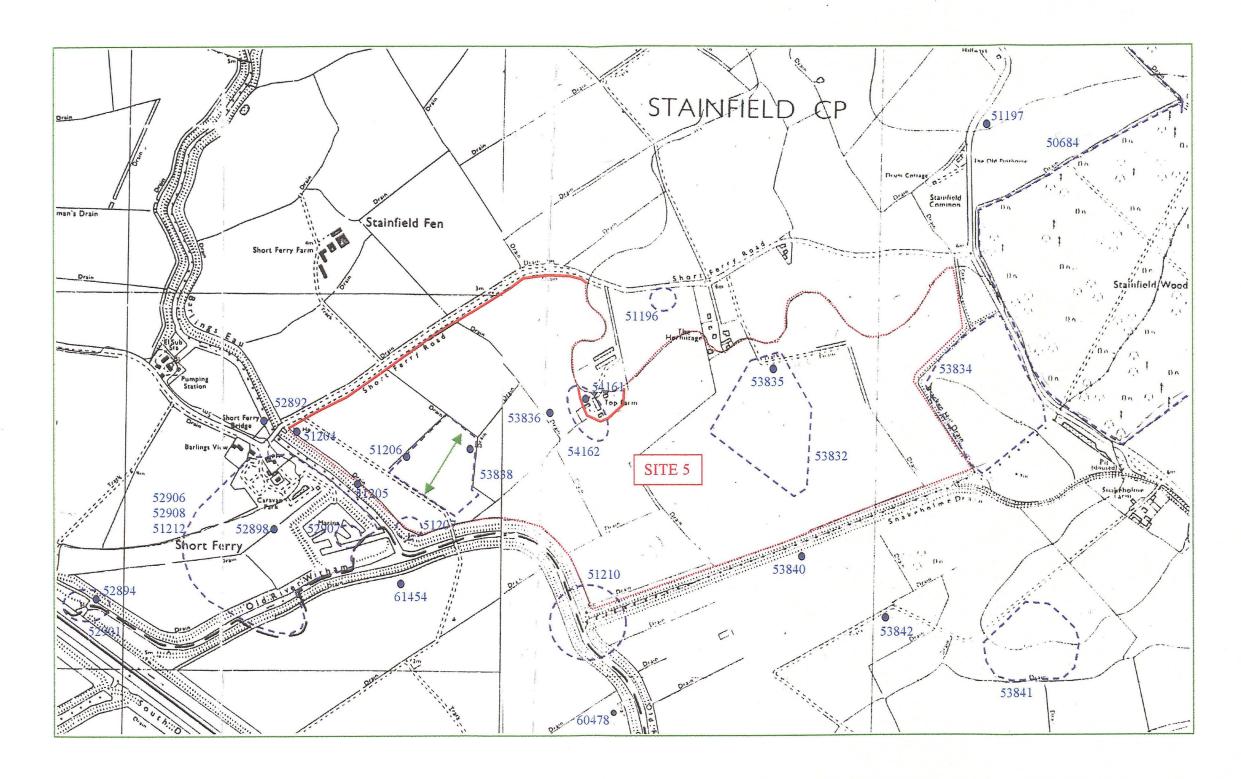


Figure 8: SITE 5

Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire Sites and Monuments Record (see Appendix 12.1 for details); find spots = blue discs, features = blue polygons.

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recovered from the northern edge of the field between Top Farm and The Hermitage, Stainfield, near to Short Ferry Road (51196 - TF 1044 7200). It is possible that all of the sherds came from a single vessel.

Two artefacts have been found in the immediate vicinity of Short Ferry Bridge. The first was a sword discovered while cleaning and deepening the Barlings Eau in 1872 (52892 – TF 0937 7166). Described as 'two-edged', this weapon was c. 1.37 to 1.42m long. The other item was a penny of Edward the Confessor found on the riverbank, immediately adjacent to the northeastern end of the bridge.

The area to the south of the bridge became a focus for activity in the medieval period, with the construction of a monastic grange and fishery in the angle of the confluence of the River Witham and the Barlings Eau (52906 – TF 0960 7130). The grange is likely to be the example known as 'Barling Mouth' or 'Barleymouth', which belonged to Stainfield Priory. Excavation revealed that its buildings were constructed upon an artificial mound, and were associated with fishing and fish processing equipment, including pieces of a stamped curfew, fish smokers and net sinkers (White, 1977). A large quantity of medieval and post-medieval pottery was also found at this time (52908 – TF 0965 7134). Most of the sherds were produced in the East Midlands, but there were also fragments of French Polychrome and, German and Flemish stonewares.

Eleven limestone net sinkers were found on the eastern bank of the Barlings Eau in May 1960 (51207 - TF 0975 7136). These items were situated only 40m from the remains of the medieval grange, and are likely to be directly associated. Aerial photographs indicate that there was a block of north-east to south-west orientated ridge and furrow located c. 110m to the north-east of the confluence between the Witham and the Barlings River; it seems likely that these *selions* would have formed part of a field system associated with the grange (53838 – TF 0984 7155). Another monastic fishery, which was known as 'Maidengarth' and also belonged to Stainfield Priory, was situated at the junction between the River Witham and the Snakeholme Drain, c. 550m to the south-east of 'Barleymouth' (51210 – TF 103 712).

Little South and Holme Woods, collectively referred to as Stainfield Wood by the Ordnance Survey, are situated to the east of Site 5 (50684 - TF 1190 7200). They form a 67ha block of woodland that is thought to have medieval or post-medieval origins, and which is comprised of 34ha classified as semi-natural woodland, and 33ha of plantation in the Nature Conservancy Council's inventory of Ancient Woodland.

There are a relatively large number of undated cropmarks to the south of Short Ferry Road, these features resolving into three discrete groups. A couple of irregular linear boundary features have been identified c. 100- 200m to the south-east of The Hermitage (53832 - TF 1082 7167). A larger complex of features, including a possible rectilinear enclosure, two dark elliptical areas, a number of linear boundaries and other potential features have been identified in the field situated between Bracken Hill Drain and Stainfield Wood (53834 - TF 113 716). The third group, which includes an enclosure and associated linear features, lies a little over 200m to the north of Bardney Abbey (53841 - TF 1140 7108).

B: Cartographic evidence

The following map was found to contain data relating specifically to the site:

Ordnance Survey, 1906 – Sheet LXXI.NE, Second Edition, 6": 1 mile (1: 10,560). The
initial surveying for this map was conducted in 1885 (First Edition) and was revised in
1904.

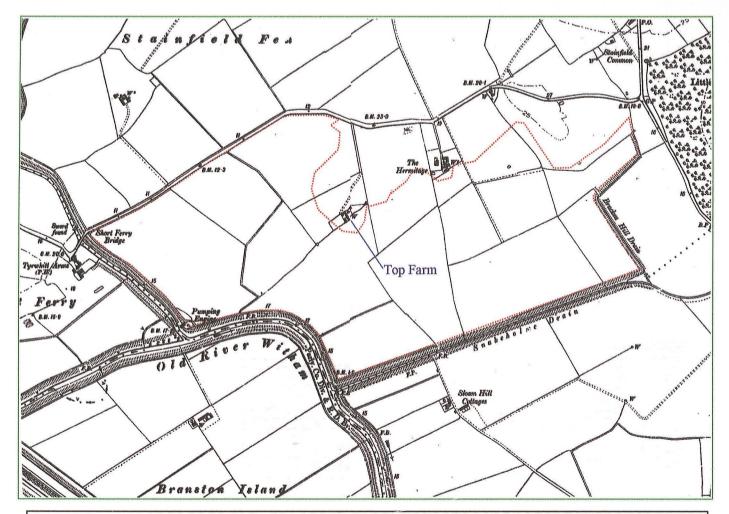


Figure 9: SITE 5
Extract from Ordnance Survey Second Edition 6": 1 mile (1: 10,560) Sheet LXXI.NE, of 1906; reproduced at c. 1: 10,000. The dotted red line shows approximate locations of the boundaries of the proposed flood relief area.

The Second Edition map indicates that there have been considerable changes along the western edge of Site 5 over the last 97 years, the most obvious of which was the creation of Short Ferry Marina during 1974-5. In 1906 this area was depicted as a normal field bounded by flood banks to the south and east, and drains to the north and west (fig. 9). A short section of curving drain was shown to cut across the south-east corner of the field. This latter feature almost certainly represented a relict river channel, as it was followed by the parish boundary dividing Fiskerton from Branston. This deviation of the administrative boundary is still shown on modern maps, although the drain no longer exists.

Four groups of buildings are depicted at Short Ferry on the Second Edition map. The most northerly collection of buildings that existed in 1906 was Short Ferry Farm, which still occupies a small field to the north of Short Ferry Road. There are more buildings now than were depicted at the onset of the 20^{th} century. Furthermore, their form and arrangement is markedly different, suggesting that the earlier structures have been completely replaced. Lying approximately 500m to the south-west, the Tyrwhitt Arms public house still stands beside Ferry Road where it turns abruptly to cross the Barlings Eau. The area immediately to the south of the pub was developed into a static caravan park in the latter part of the 20^{th} century, and two dwellings have also been constructed beside Ferry Road to the north-west.

The third complex of buildings included a pumping engine depicted at the south-west corner of 5. It was located in the angle created by the confluence of the Old River Witham and the Barlings Eau and appears to have been recessed into the flood bank. This indentation has now been filled and there is no evidence that the pump house ever existed. The final group of buildings that existed in 1906 was a small farm complex located at the centre of the northern quarter of Branston Island. Its position can still be determined by reference to existing trackways (and spreads of brick rubble), but there are no surviving elements of the superstructure.

The Second Edition Ordnance survey map indicates the findspot of the sword (52892) recovered in 1872; it is shown at the centre of the river channel, c. 30m to the north of Short Ferry Bridge.

The Second Edition map indicates that the form of the river banks, Short Ferry Road and the bridge have not changed since the beginning of the 20th century. The pattern of the late 19th century field system is still discernable in the modern landscape, although a number of the smaller fields to the north of Short Ferry Road have been amalgamated. The field boundaries have been even more persistent and stable to the south of the road, in the western half of 5. These fields surround Top Farm, Stainfield, which was already in existence at the time that the surveys for the Second Edition map were conducted. Comparison with modern editions indicates that two of the 19th or early 20th century structures survive, while others have been replaced by large, modern buildings to the north and along the western edge of the farmyard.

There have been significant changes to the field system occupying the eastern half of the 5. This area is now divided between two large fields, but these have been created through the integration of a number of smaller units. Five irregular fields were incorporated into the south-western field, while four plots combined to create the 'L'-shaped field to the north-east. The Hermitage sits at the north-west corner of these two large fields. Most of the existing structures were already in existence at the beginning of the 20th century, but a few small buildings have been added around the margins of the farmyard. The Second Edition map also depicts a small group of buildings constructed on the southern side of Short Ferry Road, to the north-east of The Hermitage. These structures are still in existence. Further buildings are shown on Stainfield Common, to the north-east of the proposed flood relief area. The more westerly of these is now known as Drum Cottage, while The Old Posthouse, to the east, was a functional post office in 1906, despite its isolated location.

The southern edge of Site 5 is defined by Snakeholme Drain, which has maintained the form depicted on the Second Edition map. Similarly, Bracken Hill Drain forms the eastern edge of 5. The early map depicts a bank running along the western edge of this feature. This convention is not adopted on modern editions.

C: Air photographic evidence

The Lincolnshire component of the National Mapping Programme (NMP) identified a block of ridge and furrow situated to the north-east of the confluence between the Barlings Eau and the Old River Witham (53838). This has been ploughed flat since the aerial photograph was taken. Further to the east, the NMP identified the sites of two probable round barrows emerging from beneath their mantle of peat (53835, 53836). A linear boundary feature situated to the south of the more easterly barrow has also been transcribed.

An examination of the oblique aerial photographs held by the NMR did not reveal the presence of any additional archaeological features.

D: Summary and discussion of the evidence

Archaeological features and deposits have been identified across Site 5, but a significant number of these discoveries are concentrated around the confluence of the Old River Witham and the Barlings Eau, which constitutes the western boundary of the proposed flood relief area. This material provides indications that there has been episodic human activity at Short Ferry since the Neolithic. A single lithic artefact recovered from the marina, suggests that there was some form of limited activity here in the 4th or 3rd millennia BC.

Evidence of activity in the Late Neolithic and Early Bronze Age is more plentiful. A Food Vessel was found on Branston Island, on the southern side of the old river channel, providing an indication that there may have been funerary or ritual activity in the immediate vicinity during the Early Bronze Age. Comparable material could extend northwards into the area of Short Ferry Marina, where several 'circular stone settings' were observed in a contractor's trench during the construction of the harbour (Stocker & Everson, 2002). Unfortunately, water flooding the new basin engulfed these features before they could be properly examined, but it is possible that they may have been barrows or similar monuments.

Cropmarks have betrayed the locations of what appear to be four round barrows that occupied the slightly lower ground to the south and east of the two rivers. Two of these monuments are situated within the perimeter of Site 5, one c. 100m to the west of Top Farm, Stainfield, and the other c. 150m to the south-east of The Hermitage, while the others are located in Site 8. These features are widely separated, and are dispersed over c. 30ha of Stainfield Fen. Such diffuse spatial relationships are at variance with the barrow cemeteries identified to the north and west, thus raising the possibility that these barrows form part of a larger complex of such features, the majority of which are still buried beneath a protective layer of peat.

Evidence supporting the proposal that the circular cropmark features represent round barrows was recovered during an archaeological watching brief undertaken at Top Farm. Several sherds of Late Neolithic to Early Bronze Age pottery were discovered in a pit located immediately to the north-west of the existing farm buildings (54161). Further pits, gullies and ditches were identified at the same time. One of these was a curvilinear feature that appeared to be the surviving component of a ploughed out round barrow (Palmer-Brown, 1997; 54162). The selection of Site 5 would necessitate the construction of a 300m long semi-circular crossbank to surround and protect the southern side of Top Farm. In light of the previous discoveries made here, it seems likely that this process would expose other archaeological

deposits. This would be particularly true of plough damaged barrows and other 'upstanding' features, the surviving remains of which would probably be situated directly beneath the ploughsoil.

The recovery of an Early Bronze Age stone axe-hammer from a field to the north-east of the Old Posthouse could indicate that further funerary monuments are located in the environs of north-eastern corner of 5. This item was manufactured from stone originating in County Durham, a provenance potentially providing it with a relatively exotic and prestigious status that would be more indicative of votive deposition than casual loss.

Elements of four different log boats have been identified within the area of Site 5 lying adjacent to the Barlings Eau. Part of a fifth vessel was found to the south of this proposed flood relief area. These discoveries indicate that there is a high probability that further boats or other wooden structures are preserved in the peats flanking this section of the Witham and Barlings Eau.

The recovery of a small quantity of Romano-British pottery from the marina raises the possibility that there may have been a small farmstead situated at the end of this spur of glacial till. The fact that this raised ground was surrounded by wetland on three sides, abutted the junction between two navigable water courses and coincided with a major reorientation of the main channel of the River Witham, is likely to have made it a prime location for a settlement.

Certainly there was a monastic establishment here in the medieval period. Excavations conducted along the foot of the flood bank have identified structures and deposits relating to 11^{th} - late 13^{th} century activity (White, 1977). Foremost amongst these was the northern side of a quay or other raised structure that ran along the edge of the river. This had been constructed using a dump of sand and gravel that was revetted by pitched limestone slabs. The associated material included limestone net sinkers, pottery and kiln props. Subsequent deposits incorporated stone roof tiles and 16^{th} - 18^{th} century pottery. The nature of these deposits suggested that there was an associated medieval to post-medieval dwelling in the immediate vicinity, but this was never located (White, 1984). It is possible that it lies beneath the existing flood defences, or further along the foot of the bank outside the area already subjected to archaeological investigation.

A sword was recovered from the Barlings Eau at Short Ferry Bridge, less than 100m from the north-west corner of 5. Other less well provenance metalwork also seems to have come from the vicinity, including an iron knife of 13th – 14th century date, which was found at the 'mouth of the Barlings Eau' in 1788 (Stocker & Everson, 2002). The nature of these finds, combined with a comparison to other sites in the Witham Valley, suggests that there was an associated focus for ritual activity that was analogous to the timber causeway at Fiskerton. Stocker & Everson (*ibid*.) indicate that Short Ferry Road is the most likely location for this activity. This road runs along an embankment that crosses Stainfield Fen between the Barlings Eau at Short Ferry Bridge, and another spur of high ground near The Hermitage, c. 1km to the east.

The presence of a grange at the western end of this causeway provides support for the argument that there was a pre-Christian ritual focus here, as there appears to have been a direct spatial relationship between the location of votive sites and later monastic establishments. Furthermore, excavations at Fiskerton have established a direct correlation between prehistoric votive deposits and the placing of complete or near complete Roman vessels during the subsequent reuse of these sites. It is therefore useful to note that a number of sherds that were potentially from a single Romano-British pot were found on the slightly higher ground at the eastern end of the putative Short Ferry causeway.

Short Ferry Road forms the north-western perimeter of Site 5, and it is intended that a 950m long cross-bank would be constructed along the southern edge of the road if this flood relief area was selected. If, as suspected, the present roadway does fossilise the course of an earlier causeway, it is highly likely that the scheme of works associated with the construction of this cross-bank would have an impact upon any surviving sub-surface elements. The effects would be particularly acute if the earlier structure was partly or wholly constructed from timber. Although prevailing anaerobic conditions may have preserved this wood, it will have become relatively soft and malleable. Consequently, significant localised pressure of the sort that would be applied by heavy machinery, or by the compaction of bank material, is likely to result in the deformation or destruction of this element of the archaeological resource. In order to minimise such damage it would be necessary to establish whether organic deposits were present in this area. It would then be possible to devise an appropriate mitigation strategy.

The only archaeological features identified in and around the eastern half of Site 5 are a series of cropmarks. These form two groups, an irregular linear boundary and associated features located to the south-east of The Hermitage, and a larger complex that are situated immediately beyond the eastern boundary. The uppermost geological deposits across much of the eastern half of 5 are river terrace sands and gravels (I.G.S., 1973). Such a free draining medium is ideal for the creation of cropmarks. In contrast, the south-western half of this area is cloaked by alluvium, which will inhibit or prevent the formation of cropmarks. Thus, it is entirely possible that further sub-surface features extend into the western half of 5, but the soil conditions may be such that there are no indications of their presence.

On the present evidence it is not possible to determine whether the identified features form part of the same field system, or relate to different periods of activity. Consequently, some of these features may have been created as elements of the post-medieval landscape, while others could be much earlier in date. The distinction is relatively important. The relatively modern features could provide further information on the form of the landscape at that time that the programme of intensive drainage was implemented in the Lower Witham Valley, but little else. Earlier features on the other hand could provide far greater insights into past human activities. They may have remained waterlogged from the time of their creation, in which case the fills could incorporate a range of organic materials that would provide insights into the forms and routines of daily life.

Assessment of archaeological potential:

Site 5	HIGH
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6.1.5 Site 7

A: SMR data and documentary sources

A limited number of archaeological features or artefacts have been identified within this part of Fiskerton Fen (fig. 10). The oldest item recorded in the SMR is a broken leaf-shaped flint 'point', possibly a Neolithic arrowhead, which was uncovered while digging a drain at Short Ferry Marina (52898 – TF 0940 7140). The most southerly round barrows of the Barlings barrow cemetery lie approximately 450m to the north of 7, on the opposite side of the Barlings Eau (50187 – TF 0939 7324). This cemetery consists of at least 4 bowl barrows (SAM 20809), with a many as 16 other small barrows situated to their north and south. The Stainfield barrow cemetery lies immediately to the east, just beyond the Sambre Beck, and contains at least 11 more round barrows of varying form (SAM 21472).

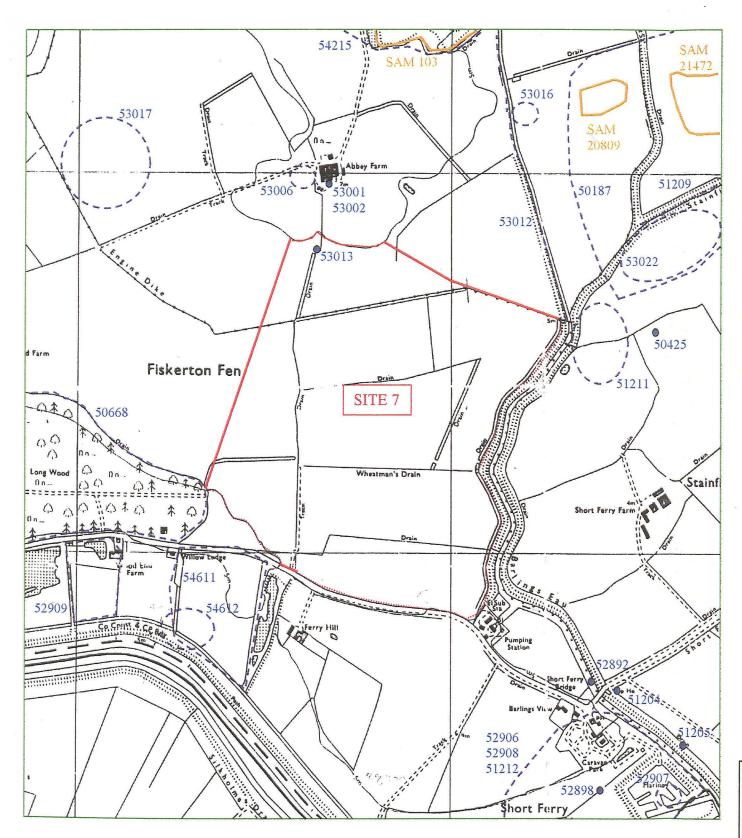
A large complex of cropmarks/soilmarks are situated approximately 200m beyond the north-east corner of Site 7 (53021 – TF 0960 7280). The most substantial element of this group appears to be a wide gravel bank, which forms a large sub-oval enclosure of c. 4.5ha. The morphological traits of this enclosure suggest that it is likely to be of prehistoric date. Additional features are visible within it, including a square enclosure (53022) and five penannular features, which may represent further barrows or round houses. A flint scraper was found close to these features (50425 - TF 0953 7359).

The upper stones of two Iron Age or Romano-British beehive querns can now be seen outside the farmhouse at Abbey Farm, Low Barlings (53001, 53002 - TF 0865 7299). However, there is no record of their original provenance, raising the possibility that they were brought to the farm rather than being found there.

Two artefacts have been found in the immediate vicinity of Short Ferry Bridge. The first was a sword discovered while cleaning and deepening the Barlings Eau in 1872 (52892 – TF 0937 7166). Described as 'two-edged', this weapon was c. 1.37 to 1.42m long. The other item was a penny of Edward the Confessor found on the riverbank, immediately adjacent to the northeastern end of the bridge.

The more southerly elements of Barlings Abbey, a Premonstratensian house founded in 1154, lie within 500m of 7 (see Everson, et al. 1991: 66-70). Only a small portion of the church stands above ground, while the rest of the monastic complex is evident as an extensive area of well defined earthworks, which include building foundations and fishponds (SAM 103; 54215 – TF 0891 7351). The present course of the Barlings Eau immediately to the south of Barlings Abbey is particularly straight and runs along the eastern edge of the Abbey. Its form and position raise the possibility that it was a canal constructed in the medieval period to link the abbey to the pre-existing channel of the Barlings Eau, thereby integrating the monastic house into the transport and communications system centred upon the Witham (53012 – TF 0915 7320). There are two parallel linear banks running from the eastern bank of this section of the modern Barlings Eau, c. 450m to the north of 7. It is possible that these features are also of medieval date (53016 – TF 0917 7313).

The natural river channel appears to have continued toward the north-east from the point at which it was intercepted by the putative canal to Barlings Abbey. However, it only progressed another 300m upstream before another straight, deep channel branched off it. This is the Stainfield Beck, which heads eastward to the site of Stainfield Priory. Again it seems likely that this watercourse was also a piece of medieval engineering, another canal that linked the nuns at Stainfield to the commercial activity centred upon the Witham Valley (51209 – TF 1000 7310).



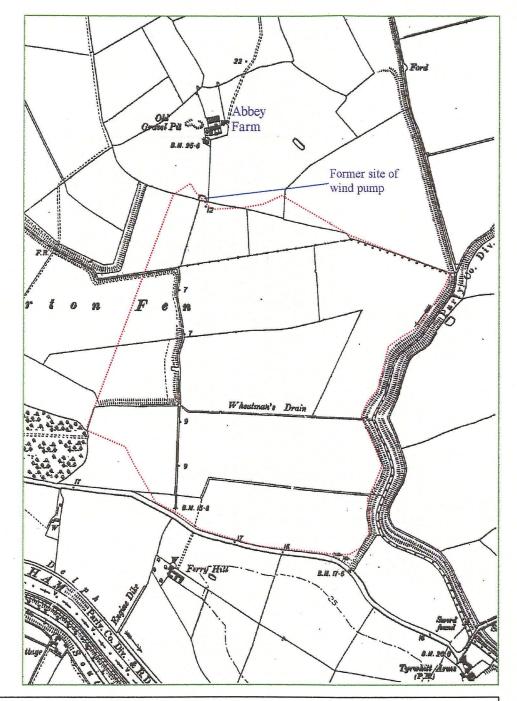


Figure 10: SITE 7

A: Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire Sites and Monuments Record (see Appendix 12.1 for details); find spots = blue discs, features = blue polygons. B: Extract from Ordnance Survey Second Edition 6": 1 mile (1: 10,560) Sheet LXXI.NE, of 1906; reproduced at c. 1: 10,000.

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The north-east corner of Site 7 is thought to lie immediately opposite the site of a medieval fishery situated at the junction between Sambre Beck/Stainfield Beck and the canalised section of the Barlings Eau (51211 – TF 0940 7260). It has been suggested that this was the fishery belonging to Stainfield Priory that was referred to as 'The Odds' ('Le Aldra') in a document of 1538.

There was another medieval fishery, and monastic grange, at Short Ferry, at the south-eastern corner of the proposed flood relief area. It is likely to have been the example known as 'Barling Mouth' or 'Barleymouth', which belonged to Stainfield Priory (52906 – TF 0960 7130). The grange buildings were located in the angle of the confluence of the River Witham and the Barlings Eau and were constructed upon a raised mound. An excavation revealed remains of a stone structure, which was associated with fishing and fish processing equipment, including pieces of a stamped curfew, fish smokers and net sinkers (White, 1977). A large quantity of medieval and post-medieval pottery was also found at this time (52908 – TF 0965 7134). Most of the sherds were produced in the East Midlands, but there were also fragments of French Polychrome and, German and Flemish stonewares.

Another excavation was conducted immediately to the south of the south-west corner of 7. An archaeological evaluation of the field to the east of Willow Lodge found only a small number of shallow features, including a ditch and a curvilinear gully, which were exposed at its southern edge, adjacent to the North Delph (54611, 54622 - Brett, 2001). Artefacts were not recovered from any of these features, but it did appear that they had initially been cut through a layer of peat that had subsequently desiccated, resulting in a truncated profile.

A disused brickyard that was created after 1830 lies c. 200m to the west of Willow Lodge (52909 – TF 0800 7190). A number of large ponds in the field to the west and another adjacent to Wood End Farm are likely to be abandoned clay pits associated with this industry. Wood End Farm is named in reference to Long Wood, Fiskerton, which is listed in the Nature Conservancy Council's inventory of ancient woodland (50668 - TF 0800 7215).

The SMR database records the presence of a windmill, c. 170m to the south of Abbey Farm (53013 - TF 0863 7280). This structure was probably erected in the second half of the 18th century, and was shown as a 'water engine' on the Ordnance survey map of 1824. It sat at the end of a short drain connecting to a much longer east-west aligned ditch, still referred to as 'Engine Drain' on modern maps. Other early modern activity in this area included the creation of a small gravel pit immediately to the west of Abbey Farm, Low Barlings (53006 - TF 0860 7299). This feature was depicted on an Ordnance Survey map of 1956, but has since been backfilled.

B: Cartographic evidence

The following map was found to contain data relating specifically to the site:

Ordnance Survey, 1906 – Sheet LXXI.NE, Second Edition, 6": 1 mile (1: 10,560). The
initial surveying for this map was conducted in 1885 (First Edition) and was revised in
1904.

The Second Edition map indicates that there have been few changes in the area to the north-west of Short Ferry since the beginning of the 20th century (fig. 10). The section of the Barlings Eau upstream of Short Ferry Bridge defines the eastern edge of 7. This has the same form as depicted in 1906, being continuous along the eastern side of the river, but branching away from the river on the western side to terminate against Ferry Road, thus forming the south-eastern corner of the proposed flood relief area. This cross-bank left the low-lying paddocks to the east without flood defences, and it is presumed that they were intended to

serve as an area of washland. A pumping station and electricity sub station were constructed at the north-western end of this small block of land, just to the east of the cross-bank, during the second half of the 20th century.

The map of 1906 depicts five groups of buildings in the immediate environs of Site 7. The Tyrwhitt Arms public house and its associated structures were situated c. 400m to the southeast of 7, beside Ferry Road where it turned abruptly to cross the Barlings Eau. There was also a farm called Ferry Hill at the western end of the Short Ferry 'peninsula' at the beginning of the 20th century. The farm still exists, although there have been subsequent alterations to the form and layout of some of its buildings. The surrounding field system is essentially the same, but a large, elongated pond situated to the west of Ferry Hill has been created since 1904, as at that time, the area formed part of the field that is now being utilised as the Fiskerton clay borrow pit for the Environment Agency's scheme of flood bank improvements.

A dwelling called Willow Lodge currently occupies a site adjacent to Ferry Road c. 250m to the west of Ferry Hill. This building did not exist at the time that the Second Edition map was created, but a series of structures occupied the area immediately to the south. It seems likely that they were cottages and outbuildings created for the employees of the nearby Fiskerton Brick Yard.

Abbey Farm, Low Barlings lies approximately 1.3km to the north of Ferry Road. A farm is depicted on the Second Edition map, but the layout of the buildings differs significantly from their present form and disposition. This suggests that either the farm has been completely rebuilt during the course of the 20th century, or that the earlier crew yard has been totally enclosed, giving the impression of a single large building.

The other group of buildings that existed in 1906 was Short Ferry Farm, lying c. 400m to the east of Site 7. This complex consisted of a detached dwelling that is located to the north-west of a larger group of buildings, which appear to have been arranged around a yard. A farm still occupies the same small site to the north of Short Ferry Road, but there are now more buildings than were depicted at the onset of the 20th century. Furthermore, their form and arrangement is markedly different, again suggesting that the earlier structures have been completely replaced. The field in which Short Ferry Farm stands, along with the two fields to the north, have a form that contrasts with those surrounding them. They have relatively irregular shapes, with slightly curving boundaries, which differ from the rectilinear units that abut them to the south and east. This difference suggests that they predate the more regular areas, and it is possible that they developed organically through episodic reclamation from the fen.

The modern field pattern surrounding Barlings Abbey is now comparable with the other areas of Fiskerton Fen and Stainfield Fen. However, the Second Edition map demonstrates that in 1906 the fields lying immediately to the south and west of the abbey had a form that contrasted with those surrounding them. They were generally much smaller and had very irregular shapes. This implies that they were the product of piecemeal land reclamation. Their proximity to the abbey suggests that they were created during the medieval period. This theory is possibly supported by the presence of Abbey Farm toward the south-western corner of this block. It has been suggested that this establishment may have monastic origins, being the site of the Abbey's home farm (Everson, et al. 1991).

The early 20th century map depicts a very small enclosure at the northern end of a short drain, c. 170m to the south of Abbey Farm. This enclosure coincides with the known location of a wind driven 'water engine', which had evidently been demolished prior to 1906.

The pattern of the late 19th century field system is still discernable in the area constituting Site 7. The boundaries of most of the fields have not been altered, but a few of the smaller fields

have been amalgamated. The Second Edition map indicates that several of the boundary ditches running along the western edge of 7 had substantial flood banks running along their western edges. The most northerly bank started at the south-eastern edge of Oxeney Island and ran south to the Engine Dike. Banks enclosed both sides of the western end of the Engine Dike. The more southerly of these banks continued a little further to the east, before turning southward to terminate near the north-east corner of Long Wood. The modern map provides no indication of the continuing survival of any of these flood defences, which together exceeded 1800m in length.

C: Air photographic evidence

A large proportion of the archaeological features around Site 7 have been identified from aerial photographs. The Lincolnshire component of the National Mapping Programme (NMP) transcribed the location and form of the components of a large enclosure, presumed to be prehistoric, situated 200m to the north-east of 7 (53021, 53022). The NMP survey also plotted the location of the monuments forming the two barrow cemeteries separated by Sambre Beck (50187). It also identified the two low banks flanking the ford on the eastern side of the river (53016).

Further archaeological features were identified from aerial photographs of the area to the west of Abbey Farm, Low Barlings. Cropmarks indicated the location of a linear ditch system and associated enclosures, none of which have been assigned a provisional date (53017).

An examination of the oblique aerial photographs held by the NMR did not reveal the presence of any additional archaeological features in the immediate environs of 7.

D: Summary and discussion of the evidence

Most of the archaeological sites and deposits seem to be concentrated around the Barlings Eau in this area. This small river forms the eastern boundary of Site 7. Extensive and important prehistoric remains have been detected in the area to the north-east of the proposed flood relief area, these primarily consisting of two groups of round barrows, a total of 31 monuments having been identified. While a few of the barrows are still visible as slight mounds, most of these features have been identified from aerial photographs. This latter source of evidence does not provide any indications that comparable deposits extend into area that will be affected by this element of the flood defence improvement scheme, but this does not prove that they do not.

A large embanked enclosure has also been identified from cropmarks, the south-west corner of this feature lying only 200m from the north-eastern corner of 7. A number of pen-annular cropmarks have been noted within the large enclosure. These features may represent drip gullies or construction trenches surrounding later prehistoric circular buildings. However, there is no consistent orientation to the break in each circle, in contrast to the doors in round houses, which are generally orientated toward the east or south. This raises the prospect that these circular features may be round barrows rather than houses. One of these features lies only 230m to the east of 7. It is therefore possible that further barrows or associated funerary deposits lie in close proximity to the proposed works. In this respect, it should be noted that the course of the Barlings Eau and its tributary streams might have changed significantly since the barrows and enclosure were created. Therefore, its present position should not be taken to be a true reflection of the partitioning of the prehistoric landscape. Consequently, it is possible that the eastern part of 7 may have been contiguous with the section of the eastern bank on with the enclosure and barrow cemeteries are located.

It has been suggested that a medieval fishery known as 'le Aldra' was located on the riverbank opposite the north-eastern corner of Site 7. The existence of this establishment has yet to be verified, as contemporary artefactual material has not been recovered from this part of the river. However, a site visit has indicated that there is a gravel mound adjacent to the Barlings Eau (at TF 0930 7246), c. 100m to the south-west of the position previously indicated as the location of this fishery. Most, if not all, of the sites in the Witham Valley that have been positively identified as fisheries appear to have been situated on the top of mounds designed to raise them out of the surrounding water. Consequently, this gravel bank would appear to be a more likely location for 'le Aldra'.

A sword was recovered from the Barlings Eau at Short Ferry Bridge, c. 380m from the south-eastern corner of 7. Other less well provenance metalwork also seems to have come from the vicinity, including an iron knife of $13^{th} - 14^{th}$ century date, which was found at the 'mouth of the Barlings Eau' in 1788 (Stocker & Everson, 2002). The nature of these finds, combined with a comparison to other sites in the Witham Valley, raises the possibility that there was an associated focus for ritual activity that was analogous to the timber causeway at Fiskerton. Stocker & Everson (*ibid*.) indicate that Short Ferry Road is the most likely location for this activity. This road runs along an embankment that crosses Stainfield Fen between the Barlings Eau at Short Ferry Bridge, and another spur of high ground near The Hermitage, c. 1km to the east. The presence of a grange at the western end of this causeway provides further support for the argument that there was a pre-Christian ritual focus here, as there appears to have been a direct spatial relationship between the location of votive sites and later monastic establishments.

It seems unlikely that any elements of a causeway, or associated votive deposits would extend into, or be affected by the proposed flood relief area, given the orientation of Short Ferry Road and the distance between Short Ferry Bridge and Site 7.

The site of a ford has been identified c. 500m to the north of 7, and a little over 200m to the south of Barlings Abbey. A significant kink in the flood bank makes its location readily identifiable. While the purpose of a ford is immediately comprehendible, it is more difficult to determine why one was constructed at this point along the Barlings Eau. In some respects it would appear to have been an unnecessary development, because there was a ferry located toward the northern end of the abbey complex, c. 450m from the ford; the adjacent modern farm is called Ferry House.

It is possible that the ferry and the ford were created at roughly the same time and merely reflect the need to access different post-medieval land holdings. Certainly, access to the ferry necessitates the negotiation of the abbey ruins, which implies that this is a post-Dissolution feature. The ford was certainly in existence in 19th century, but it is possible that it has much earlier origins, potentially having been constructed while the abbey site was still occupied. This spans the period from the Abbey's initial construction in the mid-12th century, until the post-Dissolution house was abandoned in the later 17th or early 18th century. There is some evidence to suggest that the section of the Barlings Eau on which the ford is situated was a canal constructed in the medieval period. If this were true, its creation would have isolated the land immediately to the west of Sambre Beck, which, given its proximity, probably belonged to the abbey.

The only buildings within 1km of the southern edge of the abbey are those forming Abbey Farm. The present Abbey Farm is thought to overlie a medieval monastic predecessor. The farm is situated almost due west of the ford, and an adjacent diversion of the flood bank formerly headed directly toward it. It is therefore probable that the ford was created to allow the occupants of Abbey Farm to access the eastern bank of the river. The fields in this area are essentially located on an island, which is surrounded by the Barlings Eau, Stainfield Beck and Sambre Beck. Consequently, further progress to the east, toward Stainfield, is not easy. This

suggests that the fields were the actual focus of this access. Furthermore, the creation of a ford rather than a ferry also implies that the ability to move livestock or machinery was an important objective. Together, these factors raise the possibility that the ford was initially created as an element of the medieval landscape, providing a means for livestock and the lay brothers to reach the fields to east of the river/monastic canal without needing to traverse the abbey precinct.

Assessment of archaeological potential:

Site 7 LOW

6.1.6 Site 8

A: SMR data and documentary sources

Prehistoric artefacts and features have been identified during an archaeological investigation of the southern edge of a low mound that is now occupied by Top Farm, Stainfield (fig.11). The earliest material, several sherds of Late Neolithic to Early Bronze Age Pottery, was recovered from a pit immediately to the west of the farm buildings, in the immediate vicinity of the proposed cross-bank that would surround the farmyard (54161 – TF 1022 7173). A number of other features were also identified during the same watching brief, these including further pits, gullies, ditches and a curvilinear ditch that may have encircled a ploughed out round barrow (Palmer-Brown, 1997; 54162 – TF 1020 7172).

Aerial photography has identified four round barrows close to Top Farm, one lying only 100m to the west (53836 – TF 1014 7167), and another 450m to the east (53835 - TF 1074 7181), both being situated to the north of Site 8. The other two barrows are located within the confines of the proposed flood relief area, one lying immediately to the south of Snakeholme Drain (53840 - TF 1081 7128), with the other c. 400m to the north of Bardney Abbey (53842 - TF 1103 7113).

Part of the bottom and side of a log boat was ploughed up near the eastern edge of Branston Island, c. 130m to the west of 8, in 1976. Referred to as 'Bardney 3', it was an oak vessel, the exposed portion being 2.25m long, 0.6m wide and up to 0.12m thick. It is thought likely that the remainder of this vessel is still *in-situ* (60478 – TF 103 709). The remains of two more log boats have been found at Horsley Deeps, c. 500m to the south-west of 8. The first was found in 1814 during the creation of a drain next to the river (this may have been the South Delph) (51162 – TF 1050 6990). This is potentially the same vessel that was recorded as 'Bardney 1', which was found c. 1815, and was 9.15m long by 1.4m wide. The second log boat was found around 1829 (51142 – TF 1037 7004), during the construction of Horsley Deeps Lock/Bardney Lock, c. 100m upstream from the first example. Known as 'Bardney 2', it was an oak vessel 9.3m long by 0.9m wide, which was found 2.4m below the ground surface. Again its dimensions corresponded to those of another vessel found c. 1816, '2 miles east of Lincoln'. The similarity in the size of these two vessels raises the possibility that were actually the same boat that had been recorded twice.

There is very little Romano-British material from this area. An isolated fragment of Romano-British tile was found in a field to the east of Bardney Abbey, and c. 110m to the south of 8 (52594 - TF 1205 7085). Additionally, a small quantity of Romano-British pottery was found during early 20th century excavations on a vestry forming part of the north aisle of the choir of the church at Bardney Abbey. (51138 - TF 1136 7061). It is also possible that some fragmentary prehistoric pottery was found at the same time, but the fabric identifications are

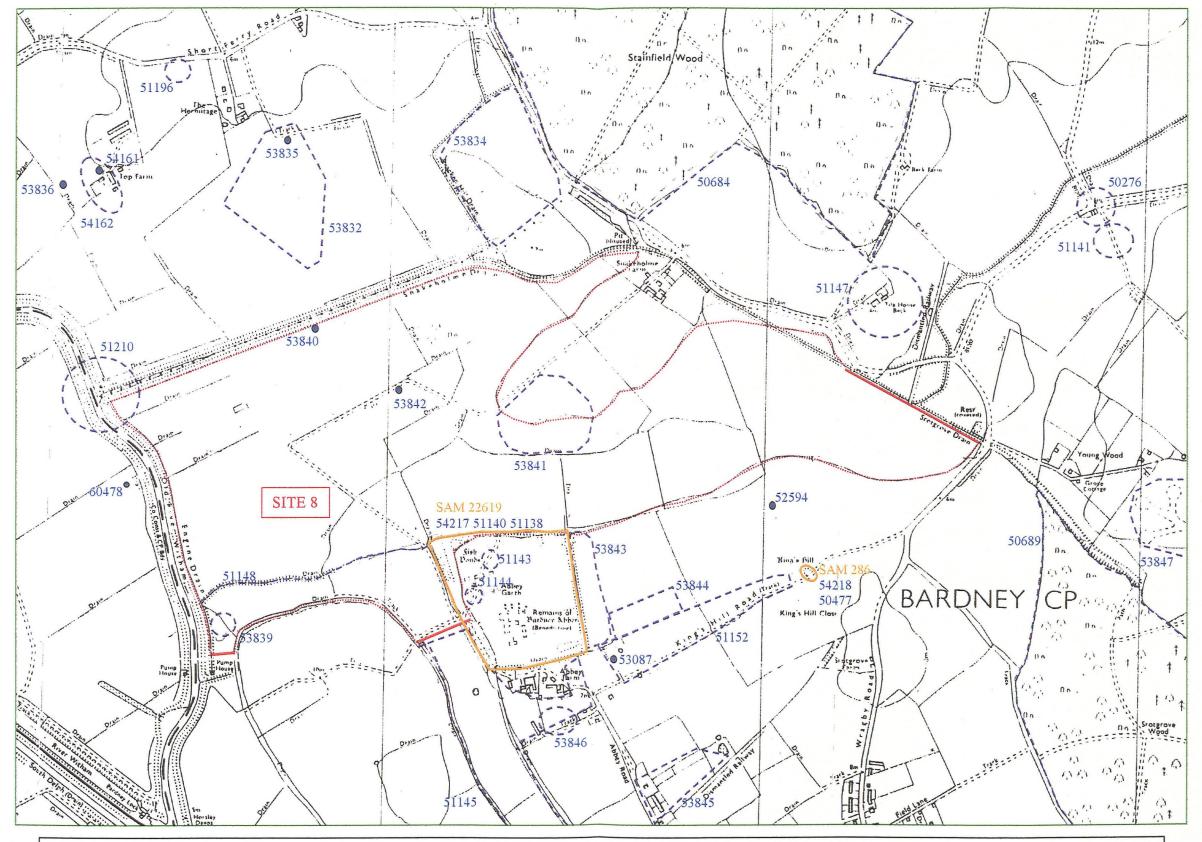


Figure 11: SITE 8

Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire Sites and Monuments Record (see Appendix 12.1 for details); find spots = blue discs, features = blue polygons.

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equivocal, and it is equally possible that these sherds could have been derived from Anglo-Saxon or medieval coarse wares (51140 - TF 1136 7061).

An iron axe head of 10th – 11th century manufacture (51163) was found in the area of Horsley Deeps at around the same time that the log boat known as Bardney 1 was discovered. This appears to be the most northerly recorded item from a large body of prehistoric and, Anglo-Scandinavian to medieval metalwork that has been retrieved from the river between Horsley Deeps and Bardney village. Two other iron axe heads of similar date are recorded as being retrieved from the river 'at Bardney' in 1787-8. Comparable material appears to have continued entering the river during the medieval period, a felling axe, parade axe, an iron sword, 2 spearheads and 3 daggers are recording as being found 'at' or 'near' the village (Field & Parker-Pearson, in press). It is likely that this represents a fraction of the total found, as George Pearson recorded that the two axes found in 1787-8 were associated 'with other axes, chopping instruments, and carpenter's tools' (cited in Stocker & Everson, 2002).

The abbey at Bardney was a particularly early foundation, being the first monastic house in the Lower Witham valley (54217 - TF1135 7061). It is likely to have been established after AD 675, but was certainly in existence before AD697, and probably represented a physical expression of the Mercian Royal family's interest in the fenland edge (Stocker, 1993). Indeed, Aethelred, the Mercian king, and probably the founder, abdicated a few years after his wife's murder to become the Abbot in AD704/5. The abbey is mentioned in early 8th century texts, particularly by Bede, the place-name being derived from Old English elements meaning 'B(e)arda's island of land' (Cameron, 1998). The house was principally famous for the shrine containing the relics of St Oswald, formerly a Northumbrian king and the main rival of Mercia for control of Lindsey. His remains had been brought to the abbey at the instigation of Queen Osthryth, his niece, and wife of the Mercian, Aethelred.

It has been suggested that the Anglo-Saxon abbey effectively incorporated the whole island of Bardney, with the principal focus being at the highest point, where the modern village now stands (Stocker, 1993). The Danish army destroyed this abbey in AD870, but Gilbert de Gant refounded a monastic house at Bardney in 1087. Gilbert endowed the monastery with lands at Bardney and Southrey, and the new house was sited at the northern end of the island. This Benedictine establishment was a priory dependent upon the Abbey at Charroux, but achieved independence and was raised to abbey status in 1116. The Abbey was Dissolved in 1538, and six of the monks were executed due to their involvement in the Lincolnshire Rising.

There have been three campaigns of archaeological excavation at the Abbey, in 1909-14, 1933 and 1974. As well as investigating the abbey church, many of the surrounding buildings were also examined. Fieldwork in 1910 exposed a possible monastic barn situated within the outer courtyard of the Abbey precinct (51144 - TF 1122 7064). The surviving foundations indicated that it was 77.9m long by 7.2m wide, with walls 0.75m thick. Subsequently, an 85m long stable block was also excavated in the area to the north. The circular foundation of a windmill or dovecote, c. 6.5m in diameter, was also examined within the Abbey precinct (51143 - TF 1126 7071). The site of Bardney Abbey receives statutory protection as a Scheduled Ancient Monument under the Ancient Monuments and Archaeological Areas Act, 1979, as amended (SAM 22619).

The immediate environs of the scheduled monument are surrounded by a series of other archaeological features that have a direct or indirect association with the Abbey. The most enigmatic of these is King's Hill, situated c. 600m to the east of the Abbey (50477, 54218 - TF 1211 7069). This sub-oval mound is 25m long, by 13m wide, and 2.5m high, and is also protected as a Scheduled Ancient Monument (SAM 286). King's Hill is associated with an oral tradition that it was an Anglo-Saxon barrow containing Aethelred of Mercia (died AD716). It was excavated in 1912, but although this demonstrated that it was an artificial mound, there was no obvious stratification. Additionally, there was no evidence of prehistoric

activity and four skull fragments were the only archaeological remains recovered. This lack of material has called into question whether King's Hill was even a barrow, and it has been suggested that it is actually a medieval pillow mound belonging to the Abbey. This association with rabbits is derived from place-name evidence, as the field in which it sits was known as 'Coneygarth'. However, there may be other origins for the 'coney' element, and in this respect it should be noted that undated rabbit warrens and an associated enclosure have been identified along the eastern edge of the precinct of the Abbey (53843 - TF 1155 7064). While it is possible that the latter may post-date the Dissolution, and thus a potential warren at King's Hill, it is also feasible that they were created and operated by the Benedictines.

Aerial photographs indicate that there was a block of north-east to south-west orientated ridge and furrow located c. 100m to the east of the Abbey; it seems likely that these *selions* would have formed part of a field system associated with the monastery (53844 - TF 1170 7058). Running along the western edge of the Abbey precinct is a strip of low ground, c. 120m wide, probably the relict channel of a former watercourse. This area contains a group of fishponds and associated earthworks, which are likely to have created and used during the lifetime of the Abbey (51145 - TF 1124 7037).

It has been noted that the lower part of Bardney Beck, to the west of Bardney Abbey, is relatively straight and wide. Its form and position raise the possibility that it was a canal constructed in the medieval period to link the abbey to the River Witham, thereby integrating the monastic house into the regional transport and communications system (51148 - TF10877069). There was a monastic fishery located approximately 600m to the north of the junction between this putative canal and the River Witham. The fishery was known as 'Maidengarth' and belonged to Stainfield Priory (51210 – TF 103 712). It was situated at the point that Snakeholme Drain enters the Old Witham, at the north-west corner of 8.

Tile House Beck, c. 100m to the east of 8, is reputed to be the site of a late medieval brickworks (51147 - TF 123 714). This is supposed to be the site that produced the bricks used to construct the chancel of St Lawrence's Church, Bardney, which took place c. 1434. The drift deposits of this area are certainly suitable for manufacturing bricks, and a 19th century brickyard operated from a site c. 600m to the east (51141 - TF 1282 7158). The Ordnance Survey map of 1886 shows a series of ponds that are clearly clay pits associated with the brickworks. A record made in 1926 indicated that it had ceased to work by that time, but had been in operation within living memory. Ploughing in this area exposes spreads of brick and tile, which are almost certainly a residue of the brickworks. Immediately to the north of the site of this brickworks is the supposed former moated site of Butyate (50276 - TF 128 717). Butchett Farm occupied the site during the 19th century, and there are reports that there was a small moated area adjacent to the farm buildings. A series of earthworks, including the supposed moat, were levelled in 1967. However, examination of the 1886 map only shows the clay pits of the adjacent brickyard. Consequently, it is debatable as to whether there was ever a 'moat' at this site, or whether the attribution was based upon the misidentification of a series of post-medieval or early modern features.

Little South and Holme Woods, collectively referred to as Stainfield Wood by the Ordnance Survey, are situated to the east of Site 5 (50684 - TF 1190 7200). They form a 67ha block of woodland that is thought to have medieval or post-medieval origins, and which is comprised of 34ha classified as semi-natural woodland, and 33ha of plantation in the Nature Conservancy Council's inventory of Ancient Woodland. Scotgrove Wood, situated to the south-east, is also listed as Ancient Woodland, with 28ha considered to be semi-natural and 17ha of plantation (50689 - TF 1300 7030).

There are a relatively large number of undated cropmarks in this area, these features resolving into four discrete groups. To the north of 8, c. 100-200m to the south-east of The Hermitage, lie a couple of irregular linear boundary features (53832 - TF 1082 7167). A larger complex

of features, including a possible rectilinear enclosure, two dark elliptical areas, a number of linear boundaries and other potential features have been identified in the field situated between Bracken Hill Drain and Stainfield Wood (53834 - TF 113 716).

The other two groups are situated within the confines of Site 8. The larger cluster, which includes an enclosure and associated linear features, is situated at the centre of the area, a little over 200m to the north of Bardney Abbey (53841 - TF 1140 7108). A small sub-rectangular cropmark enclosure has been identified along the boundary of a small field located at the south-west corner of 8 (53839 - TF 1058 7051). This feature remains undated. However, it appears to be orientated along the existing boundary, which suggests that it is of medieval or later date.

During the summer of 2001 excavations were conducted along the western edge of the channel of the Old River Witham, on the part of Branston Island immediately opposite this enclosure (TF 1044 7050 – author's data). With the exception of a small quantity of Romano-British pottery, these investigations revealed a series of medieval features and deposits, including waterlogged post-built structures thought to be fish weirs, larger amounts of medieval pottery and some limestone net sinkers.

B: Cartographic evidence

The following maps were found to contain data relating specifically to the site:

- Ordnance Survey, 1906 Sheet LXXI.NE, Second Edition, 6": 1 mile (1: 10,560). The
 initial surveying for this map was conducted in 1885 (First Edition) and was revised in
 1904.
- Ordnance Survey, 1906 Sheet LXXI.SE, Second Edition, 6": 1 mile (1: 10,560). The initial surveying for this map was conducted in 1885 (First Edition) and was revised in 1904.
- Ordnance Survey, 1906 Sheet LXXII.NW, Second Edition, 6": 1 mile (1: 10,560). The
 initial surveying for this map was conducted in 1885-6 (First Edition) and was revised in
 1904.
- Ordnance Survey, 1906 Sheet LXXII.SW, Second Edition, 6": 1 mile (1: 10,560). The
 initial surveying for this map was conducted in 1885-6 (First Edition) and was revised in
 1904.

The northern edge of Site 8 is defined by Snakeholme Drain, which has maintained the form depicted on the Second Edition map (fig. 12). At its eastern end it follows a sinuous route to its junction with Scotgrove Drain immediately to the north of Snakeholme Farm. The latter was in existence at the beginning of the 20th century, when it was known as Snakeholme House, but the farmhouse has been extended, and the main farm building has been replaced by five newer structures.

The Second Edition map depicts a cluster of structures called *Sloam Hill Cottages*, located c. 350m in from the north-west corner of 8. This small community no longer exists and all the buildings have been demolished. The modern map shows a small, isolated, sub-rectangular enclosure at this location, which is likely to have defined the garden of the more westerly group of structures. The form of the flood defences along the old river channel to the west of *Sloam Hill Cottages* does not appear to have changed during the last 97 years. To the west of

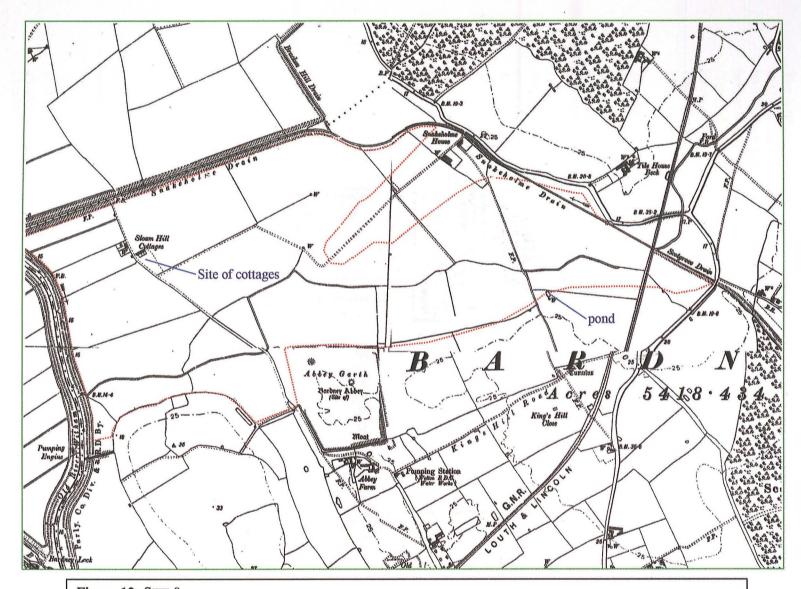


Figure 12: SITE 8

Extract from Ordnance Survey Second Edition 6": 1 mile (1: 10,560) Sheets LXXI.NE, LXXI.SE, LXXII.NW and LXXII.SW of 1906; reproduced at c. 1: 10,000. The dotted red line shows approximate locations of the boundaries of the proposed flood relief area.

the river, adjoining pairs of the long, thin north-east to south-west orientated fields on Branston Island have been amalgamated, so that they now form larger sub-rectangular blocks.

The form of the field system has changed little over most of Site 8, with virtually all of the field boundaries surviving. The exception is the south-eastern corner, where five fields have been integrated to form the northern half of a large 'L'-shaped unit. The Second Edition map indicates why this adaptation has taken place. A section of the Great Northern Railway's 'Louth & Lincoln' line is shown to cut across the corner of the proposed flood relief area from north-east to south-west. This railway has been decommissioned, and all traces of the element running north-eastward from Scotgrove Farm, at the northern edge of Bardney, to Scotgrove Drain have been erased from the landscape.

The early 20th century map depicts a small pond and well c. 500m to the west of the southeast corner of 8. This feature, which appears to have straddled the 5m OD contour forming the southern edge of the flood relief area, has been filled and is no longer discernible in the modern landscape.

The maps of 1906 demonstrate that there have been a few changes within or immediately surrounding the site of Bardney Abbey. The survey for the Second Edition map was conducted less than ten years before the onset of an extended programme of excavation at the Abbey. Consequently, there are some differences between the depictions of the interior of the 'Abbey Garth'. The early 20th century map shows two circular mounds at the centre of the precinct, which is enclosed to the north, east, south and south-west by a substantial boundary ditch, or moat. This ditch is still shown on the modern map, but the two mounds are no longer indicated. They have been replaced by the outlines of a number of buildings and archaeological trenches, which occupy the western half of the enclosure. A track has also been created since 1906, this feature running from north-east to south-west across the north-western corner of the Abbey Garth.

C: Air photographic evidence

The Lincolnshire component of the National Mapping Programme identified a large number of archaeological features in this area. The earliest features pinpointed from aerial photographs appear to be four round barrows dispersed over c. 30ha of Stainfield Fen (53835, 53836, 53840, 53842). The large distances between each of these barrows suggest that they form part of a larger complex of such features, the majority of which are still buried beneath a protective layer of peat.

Barlings Abbey (54217) and its surrounding ponds (51145) and fields (53844) form the largest complex of earthworks in the vicinity of 8. To the east of the Abbey lies the sub-oval mound known as King's Hill (54218).

A series of undated boundary features and associated enclosures have been identified immediately to the west of Little South and Holme Woods (53834). These features may relate to another linear ditch that is situated to the south-east of The Hermitage, Stainfield (53832), or to an enclosure and associated linear features, situated to the north of Bardney Abbey (53841). A small sub-rectangular enclosure of unknown date has also been identified. It is situated immediately to the east of the Old River Witham at the south-west corner of 8 (53839).

An examination of the oblique aerial photographs held by the NMR did not reveal the presence of any additional archaeological features.

D: Summary and discussion of the evidence

A range of archaeological features and deposits have been identified within and around Site 8, but a significant number of these discoveries are concentrated along the southern edge of the proposed flood relief area and relate to the medieval Abbey of Bardney.

It seems likely that the earliest features identified in, or immediate around Site 8 are four discrete cropmarks, which probably indicate the locations of round barrows occupying the relatively low-lying ground to the east of the Old River Witham. Two of these monuments are situated within the perimeter of Site 8, one adjacent to Snakeholme Drain, and the second c. 270m to the south-east. The others are located in Site 5, to the north. These features are widely separated, and are dispersed over c. 30ha of Stainfield Fen. Such diffuse spatial relationships are at variance with the barrow cemeteries identified to the north and west, thus raising the possibility that these barrows form part of a larger complex of such features, the majority of which are still buried beneath a protective layer of peat.

Evidence supporting the proposal that the circular cropmark features represent round barrows was recovered during an archaeological watching brief undertaken at Top Farm, Stainfield. Several sherds of Late Neolithic to Early Bronze Age pottery were discovered in a pit located immediately to the north-west of the existing farm buildings (54161). Further pits, gullies and ditches were identified at the same time. One of these was a curvilinear feature that appeared to be the surviving component of a ploughed out round barrow (Palmer-Brown, 1997; 54162).

Part of a log boat was found 130m to the west of this proposed flood relief area, at the eastern edge of Branston Island. Recently, an archaeological excavation was conducted c. 450m to the south of this point, opposite the south-west corner of 8. These investigations exposed the remains of a number of post-built structures that are thought to be medieval fish weirs. The large vertical timbers had become waterlogged and were preserved *in-situ*. These discoveries suggest that there is a high probability that further wooden structures or boats are preserved in the peats flanking this section of the old river channel.

Stocker (1993) has suggested that the Anglo-Saxon Abbey at Bardney was a relatively diffuse establishment spread right across the island. This would make its location and form comparable with other contemporary ecclesiastical establishments, such as Crowland and Lindisfarne, which were sited on islands to ensure a degree of isolation from their secular surroundings. However, Bardney was not a true island, as a low ridge linked its north-eastern edge to the to the main area of higher ground forming the eastern side of the valley. This isthmus would be the only dry, overland route onto the island prior to the creation of the Branston Causeway and the implementation of a comprehensive scheme of drainage in the Witham Basin during the 18th century.

A section of Scotgrove Drain defines the eastern edge of Site 8. This major drainage channel can be traced for approximately 2.8km between Snakeholme Farm and Lowfield Farm, its south-eastern end looping around the southern side of Bardney airfield. This alignment effectively cuts across the low ridge connecting the 'island' to Bardney Dairies. This spatial relationship has led to a consideration of the drain's archaeological significance.

"This is not an easy monument to assess; in its present form it appears entirely modern, but given its position cutting across the isthmus from one side to the other, it might represent a more ancient boundary ditch cutting off the island from the mainland...[I]f Bardney is an island enclosure...it seems likely that a boundary dividing the enclosed monastic island from the secular mainland should have existed somewhere in this vicinity" (Stocker, 1993: 108).

While natural features, such as a strip of woodland, could also have defined such a border, it is necessary to consider the possibility that Scotgrove Drain may have originally been constructed as a 7th century boundary. This is particularly important with respect to the 400m long section of cross-bank that would be constructed along Scotgrove Drain at the south-east

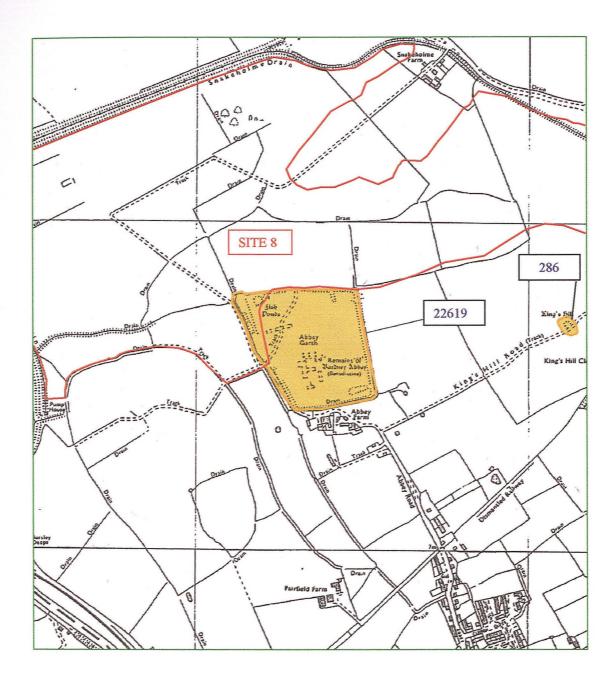


Figure 13: <u>SITE 8</u>
Relationship between the proposed flood relief area and the Scheduled Ancient Monuments situated in its immediate environs.

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corner of 8. Such works have the potential to expose *in-situ* archaeological remains that could provide greater insight and confirm the age of this feature.

The main precinct of Bardney Abbey adjoins the centre of the southern edge of Site 8. Indeed, the 5.0m contour, which defines the limits of the proposed flood relief area, runs along two sides of the substantial ditch that encloses the Abbey Garth. This ditch represents part of a Scheduled Ancient Monument (SAM 22619), together with the earthworks its encloses and a series of fishponds situated in a shallow depression immediately outside the north-west corner of the precinct; these features are protected by the Ancient Monuments and Archaeological Areas Act, 1979, as amended. It is apparent that if the maximum capacity of flood water was directed into Site 8 it would cover the fish ponds to the north-west, one third of the encircling ditch and the lower part of the enclosure bank, all of which are afforded statutory protection to ensure their continued survival (fig. 13). Furthermore, such an event could also have an impact upon any associated features situated outside of the scheduled area.

If this potential flood storage area is chosen for further consideration it will be necessary to consult with English Heritage prior to the detailed design and onset of the scheme of works, as they will directly affect a Scheduled Ancient Monument (see Section 7.0). This process will determine whether there are any potential incompatibilities regarding the respective objectives of the Environment Agency and English Heritage. Additionally, an examination of the outline proposal for Site 8 also indicates that a 150m long cross-bank would be constructed between the Abbey and a low ridge situated to its west. The eastern end of this cross-bank would abut the medieval bank enclosing the Abbey, just to the south of the point where the trackway exits the precinct. Although a detailed design proposal has not been examined, this suggests that these works would have a direct physical impact upon the monument. If this is the case, it will be essential to obtain a Scheduled Monument class-consent from English Heritage in order to the undertake this component of the works.

A series of cropmark features have been identified in the eastern half of Site 8. These form two groups, an enclosure and associated linear features, situated to the north of Bardney Abbey, and a larger complex that are situated immediately to the north-east of Snakeholme Drain. The uppermost geological deposits across much of the eastern part of 8 are river terrace sands and gravels (I.G.S., 1973). Such a free draining medium is ideal for the creation of cropmarks. In contrast, the western half of this area is cloaked by alluvium, which will inhibit or prevent the formation of cropmarks. Thus, it is entirely possible that further subsurface features extend into the western half of 8, but the soil conditions may be such that there are no indications of their presence.

On the present evidence it is not possible to determine whether the identified features form part of the same field system, or relate to different periods of activity. Consequently, some of these features may have been created as elements of the post-medieval landscape, while others could be much earlier in date. The distinction is relatively important. The relatively modern features could provide further information on the form of the landscape at that time that the programme of intensive drainage was implemented in the Lower Witham Valley, but little else. Earlier features on the other hand could provide far greater insights into past human activities. They may have remained waterlogged from the time of their creation, in which case the fills could incorporate a range of organic materials that would provide insights into the forms and routines of daily life.

Assessment of archaeological potential:

Site 8	HIGH
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6.1.7 Site 9

A: SMR data and documentary sources

There are many archaeological sites and find spots surrounding this section of the Barlings Eau and Sambre Beck (fig. 14). The round barrows of the Barlings barrow cemetery occupy the central part of the western half of Site 9 (50187 – TF 0939 7324). This cemetery contains at least 4 bowl barrows, which are protected as Scheduled Ancient Monuments under the Ancient Monuments and Archaeological Areas Act 1979, as amended (SAM 20809). Up to 16 smaller barrows are situated in the areas immediately to the north and south of the scheduled monuments. The Stainfield barrow cemetery lies to the east, on the opposite side of the Sambre Beck, in the eastern half of 9. It contains at least 11 more round barrows of varying form, three of which have two encircling ditches, with the largest of them being around 40m in diameter. All of the monuments in the Stainfield cemetery have been given statutory protection as Scheduled Ancient Monuments (SAM 21472).

A series of cropmarks/soilmarks are situated around 200m to the south of the barrow cemeteries, and immediately south of the confluence between Sambre Beck and Stainfield Beck (53021 – TF 0960 7280). The most substantial of these appears to be a wide gravel bank, which forms a large sub-oval enclosure of c. 4.5ha. Morphological characteristics suggest that this enclosure is likely to be of prehistoric date. Additional features are visible within it, including a square enclosure (53022) and five pen-annular features, which may represent further barrows or round houses. A flint scraper was found close to these features (50425 - TF 0953 7359).

Further extensive cropmark complexes lie to the east of this enclosure, near the south-east corner of 9. This palimpsest of features is situated to the west of Stainfield Manor House and extends over 10ha (50373 – TF 1036 7300). These cropmarks appear to relate to two distinct phases of activity. The earlier elements include a series of linear and curvilinear features, which appear to define a field system and associated trackways. Associated with these are a ring ditch, a number of pits and a rectangular enclosure. Morphologically these features resemble components of the later prehistoric or Romano-British landscape (Winton, 1998). Later activity appears to be restricted to the northern edge of this complex, where further cropmarks indicate the presence of components of a ridge and furrow field system.

The upper stones of two Iron Age or Romano-British beehive querns can now be seen outside the farmhouse at Abbey Farm, Low Barlings (53001, 53002 - TF 0865 7299). However, there is no record of their original provenance, raising the possibility that they were brought to the farm rather than being found there.

The north-western corner of Site 9 incorporates the eastern edge of an island of river terrace sand and gravel, which was known as Oxeneye during the medieval period. This name meant 'island of the oxen', and was derived from Old English elements oxa and $\bar{e}g$ (Cameron, 1998). At present there is no evidence of prehistoric activity on this slight prominence, although it should be noted that the remains of Barlings Abbey (54215) cloak much of the 'island'. The earliest material that has been discovered at the site of the abbey are two Anglo-Saxon spearheads, which were found at the north-east corner of the abbey precinct, adjacent to the Barlings Eau (53004, 53058 – TF 090 736). This is the point at which a putative monastic canal usurps the original course of this small river (see below).

Barlings Abbey was a Premonstratensian house founded in 1154 by Ralf de Haia (see Everson, et al. 1991: 66-70). This initial monastic establishment lay c. 600m to the north, but migrated to the more isolated position on Oxeney Island shortly afterwards. The majority of the Abbey is situated within a single field, the boundaries of which define the limits of the area designated as a Scheduled Ancient Monument (SAM 103, 54215 – TF 0891 7351). Only

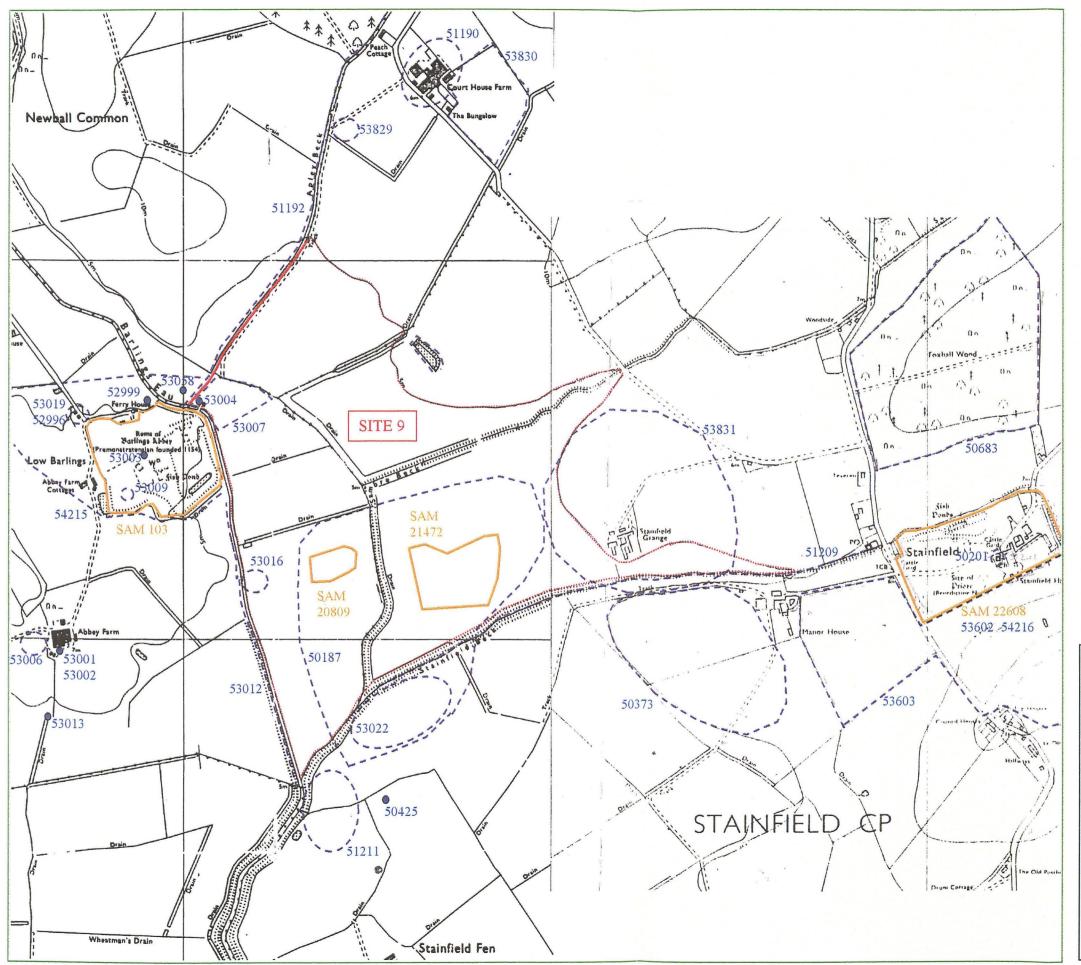


Figure 14: SITE 9
Location of the proposed flood relief area shown by dotted red line, with the positions of the associated cross-banks depicted in solid red, at a scale of 1: 10,000. Also shown are the locations of archaeological features and materials recorded in the Lincolnshire Sites and Monuments Record (see Appendix 12.1 for details); find spots = blue discs, features = blue polygons.

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a small portion of the fabric of the abbey church stands above ground, the rest of the complex being evident as a series of well-defined earthworks, which include building foundations and fishponds. There are further earthworks to the north and north-east, which are situated outside of the scheduled area, and appear to represent further reservoirs, drains, fish sorting tanks and ponds (53007 - TF 0870 7350). Most of these features surround Ferry House, but the most easterly elements are situated within 9. A medieval limestone net sinker found among these earthworks, adjacent to the Barlings Eau (52999 - TF 0890 7360), raises the possibility that the abbev also had a fishery along this section of the river.

The section of the Barlings Eau that forms the western edge of 9 is particularly straight. It runs southward along the eastern edge of the Abbey continuing to a junction with Stainfield Beck, its form and position raising the possibility that it was a canal constructed in the medieval period to link the abbey to the pre-existing channel of the Barlings Eau (53012 – TF 0915 7320). If so, this would have served to integrate the monastic house into the transport and communications system centred upon the Witham. At the centre of the western edge of 9 are two parallel linear banks spurring off the eastern bank of this section of the river. It is possible that these features are also of medieval date, but early maps suggest that they relate to a ford that was situated here at the beginning of the 20th century (53016 – TF 0917 7313).

It appears likely that the present course of Apley Beck, from Bullington Priory to its confluence with the Barlings Eau, was also created, or adapted to act as another monastic canal (51192 - TF 0935 7414). This feature forms the north-western boundary of Site 9 and the channel, as with the section of the Barlings Eau to the south, is relatively straight and deep. Documentary sources indicate that a grant for the construction of a canal was made to Bullington Priory at the end of the 12th century. This award made provision for a channel 10.0m broad to enable 'the easy transit of ships'.

At the south-west corner of 9, the natural channel of the Barlings Eau appears to have continued north-eastward from the point at which it was intercepted by the putative canal leading to Barlings Abbey. However, it only progressed another 300m upstream before another straight, deep channel branched off it. This is the Stainfield Beck, which heads eastward to the site of Stainfield Priory. Again it seems likely that this watercourse was also a piece of medieval engineering, another canal that linked the nuns at Stainfield to the commercial activity centred upon the Witham Valley (51209 – TF 1000 7310).

It is thought that the site of a medieval fishery is situated on the southern side of the junction between Stainfield Beck and the canalised section of the Barlings Eau (51211 – TF 0940 7260). It has been suggested that this was a property belonging to Stainfield Priory that was referred to as 'The Odds' ('Le Aldra') in a document of 1538. The 'priory' itself was a Benedictine nunnery founded before or during the reign of Henry II (1154 - 89) (54216 - TF 1115 7322). It was situated to the south of Stainfield Beck. A series of fishponds were located along the margins of the stream, with most of the conventual buildings being situated in the south-east quadrant of precinct, in the area now occupied by the church and hall (*ibid.*). St Mary's nunnery was Dissolved in 1536, after which time the buildings were demolished. This part of the precinct was then chosen as the site of Stainfield Hall, a mansion that was constructed in the 1580s for the Tyrwhitt family (53602 - TF 1115 7322). The Tyrwhitts continued to live at the hall until the mid 18th century, altering the structure significantly in 1611, and again at the beginning of the 18th century. Much of the building was dismantled in 1773, following the departure of the Tyrwhitts, and fire destroyed the remaining portion in 1855. The present Stainfield Hall was constructed in the following year.

To the south of the hall are the remains of an early 17th century formal garden, while to the east lie the surviving components of an early 18th century walled garden. St Andrew's Church is a brick built structure of 1711 that is situated a little to the north-west of Stainfield Hall (50201 - TF 1118 7320). It is unusual because it was erected on a north-south orientation, a

design feature that incorporated it into a vista in the formal parkland that was being created at that time. The superimposed remains of Stainfield Priory, the post-Dissolution house and its landscaped gardens are classified as a Scheduled Ancient Monument (SAM 22608).

The remains of the deserted medieval village of Stainfield are situated immediately to the south of the nunnery and later hall (53603 - TF 1130 7290). The *Domesday Book*, recorded the presence of a settlement at Stainfield, but it is debatable whether this directly equates to any of the features adjacent to the nunnery. The surviving earthwork remains appear to be those of a planned settlement, which is likely to have been laid out in the 12th century as an adjunct to the nunnery; this hypothesis is based upon the form and layout of the settlement, combined with the observation that the crofts and tofts are superimposed upon earlier ridge and furrow. The village was cleared in the first decade of the 17th century as part of Sir Philip Tyrwhitt's scheme of emparking, landscaping and the creation of the formal gardens.

An extensive area of ridge and furrow lies to the north of Stainfield Beck in the fields surrounding Stainfield Grange, the latter being situated c. 700m to the west of the 'priory' (53831 – TF 1031 7321). These furlongs may indicate that this large farm has medieval origins, potentially being the home farm of the Benedictine nunnery. Other ridge and furrow has been identified to north of Site 9, in the fields immediately to the east of 'Court House Farm', Apley (53830 - TF 0982 7440). These earthworks probably represent the remains of another medieval field system, which given the distance to the nearest nucleated settlement, may have been another grange, or comparable outlying farm.

Court House Farm was formerly known as Apley Low House, a post-medieval building with a rear wall constructed from ashlar blocks (51190 - TF 0970 7450). Similar high quality stone was also used in some of the associated outbuildings and these materials are likely to have been removed from Barlings Abbey, which is located 1km to the south-west. Elements of the medieval abbey may also have been incorporated into a substantial 17th century house that was constructed over the southern part of the precinct (53009 – TF 0890 7345). Further masonry was used in the construction of Tudor House (53019 - TF 0870 7360), and a neighbouring structure, which incorporates a blocked, mullioned window reused as the back of a 15th - 16th century style fireplace (52996).

B: Cartographic evidence

The following maps were found to contain data relating specifically to the site:

- Ordnance Survey, 1906 Sheet LXXI.NE, Second Edition, 6": 1 mile (1: 10,560). The
 initial surveying for this map was conducted in 1885 (First Edition) and was revised in
 1904.
- Witham Drainage: Old River Witham and Barlings Eau section from Bardney Lock to Barlings Abbey – 1": 200 feet (1: 2,400). Undated plan on linen, with an annotation of 26 February 1866 (LAO: 3LRA 8/3)

The Second Edition Ordnance Survey map demonstrates that the form of this part of Stainfield Fen and Fiskerton Fen has changed little during the course of the 20th century. The western edge of 9 is defined by the Barlings Eau, which was already embanked along its western side in 1904 (fig. 15). This flood bank did not extend as far north as the remains of the Abbey, stopping 220m short. At this point it turned away from the river, before petering out at the junction of two field boundaries, c. 70m to the west. The Second Edition map indicates that this adaptation to the flood defences lay immediately opposite a 'Ford' marked on the eastern bank of the Barlings Eau. The earlier Witham drainage plan (3LRA 8/3) provides further detail regarding the area immediately surrounding the ford. To the south of

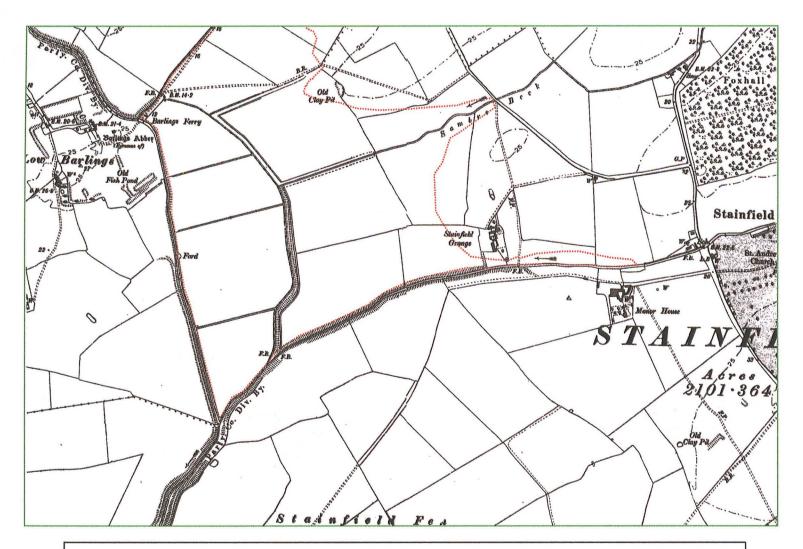


Figure 15: SITE 9
Extract from Ordnance Survey Second Edition 6": 1 mile (1: 10,560) Sheet LXXI.NE of 1906; reproduced at c. 1: 10,000. The dotted red line shows approximate locations of the boundaries of the proposed flood relief area.

the actual fording point, the bank appeared to slope down to the water's edge in three stages, each separated by a narrow terrace. The ford itself utilised roughly 30m of the riverbank, although the actual crossing point, defined by a slight widening of the channel, was more confined. A small, sub-rectangular, terraced platform, c. 40m long by c. 6m wide, was recessed into the riverbank immediately to the north of the ford. The western bank of the river had an even more complicated format. There was a flood bank to the south of the ford, which narrowed and then turned toward the west. This deviation created a triangular terraced platform, of c. 250m^2 , just above and adjacent to the edge of the channel. The ford is no longer marked on modern Ordnance Survey maps and the river channel at this point is shown merely as two parallel straight lines.

The large field to the west of the ford has been 'created' since the early 20th century through the amalgamation of four smaller units. The modern field pattern surrounding Barlings Abbey is now comparable with the other areas of Fiskerton Fen and Stainfield Fen. However, the Second Edition map demonstrates that in 1906 the fields lying immediately to the south and west of the abbey had a form that contrasted with those surrounding them. They were generally much smaller and had very irregular shapes. This suggests that they developed organically, possibly through episodic reclamation from the fen. Their proximity to the abbey suggests that they were created during the medieval period, a theory possibly supported by the presence of Abbey Farm near the south-western corner of this block; this establishment may have had monastic origins (Everson, et al. 1991).

It has also been suggested that the section of the Barlings Eau to the south of the abbey originated as a monastic canal. This proposal receives some support from an examination of the Ordnance Survey maps. The parish boundary between Fiskerton and Stainfield can be seen to follow the sinuous course of the Barlings Eau northwards from its confluence with the Old River Witham to the south-west corner of 9. At this point the boundary deviates from the modern straight course of the river. It turns north-eastward to follow Stainfield Beck to its junction with Sambre Beck. It then follows the latter northward for c. 550m, until the beck turns to the east. The parish boundary then follows a drain that curves towards the north-west, before rejoining the Barlings Eau at its confluence with Apley Beck at the north-eastern corner of the abbey precinct. The meandering route of this detour from the modern river channel suggests that the boundary follows the natural course of the river, which would have been an obvious landscape division when the parishes were initially created.

A comparison of the Second Edition map and an issue of 1982 indicates that the scheduled area of Barlings Abbey has changed very little in the intervening period. In 1906 there were two small paddocks to the south of Ferry House, and a track ran eastwards from the bottom of the eastern enclosure to Barlings Ferry. This track is now depicted as a hollow way, with the ferry having been replaced by a footbridge giving access to the north-west corner of Site 9. A small structure is depicted alongside the track c. 20m to the east of the ferry crossing. This building no longer exists.

The field system in the western part of 9, between the Barlings Eau and Sambre Beck, is essentially the same as it was in 1906, although the large field occupying the southern half of the 'island' has been created from two smaller units since that time. The area to the east of Sambre Beck has changed more significantly, as all six fields to the west of Stainfield Grange have been integrated to form one large unit. Stainfield Grange was a sprawling complex even in 1906. Modern maps indicate that it has expanded slightly since that time, but it is still possible to confirm the continued existence of most of the buildings standing at the beginning of the 20th century.

The appearance of Stainfield Beck does not appear to have changed since 1906, the flood bank has the same form, being continuous along both sides of Stainfield Beck as far east as Stainfield Grange. The field system on the southern side of the beck has also been relatively

stable. One or two boundaries have been removed, but this has had little overall effect on the appearance of the landscape.

C: Air photographic evidence

Many of the archaeological features in and around Site 9 have been identified from aerial photographs prior to and during the National Mapping Programme (NMP). The latter transcribed elements of the large prehistoric enclosure to the south of 9 (53021, 53022) and the two barrow cemeteries at its centre (50187). It also identified the two low banks flanking the ford on the eastern side of the river (53016).

However, the largest concentration of features examined in this area represent elements of Barlings Abbey. These archaeological remains are evident as earthworks within the scheduled area, but cropmarks and soilmarks indicate that the monastic enclosure originally extended a further 130m to the west. Linear features surrounding Ulster Cottage, at the north-west corner of the precinct, appear to represent ponds and elements of a surrounding field system. Additional earthworks are evident along the northern edge of the scheduled component of the abbey. A sub-rectangular mound surrounded by substantial ditches was situated in the field to the north of Ferry House. Two small ponds were set into this mound; these may have been fish breeding or sorting tanks (Everson, et al. 1991: 68). A larger pond lay to the south-east, between Ferry House and the river, while a series of parallel linear channels were situated to the north of the embanked ponds. Further features were identified in two fields to the east of the Barlings Eau, in what must have been an annex to the precinct. The most southerly features are five parallel channels running perpendicular to the river, which occupy the northwest corner of 9. Beyond them lie two small ponds. An large irregular cropmark lies adjacent to the river channel at the northern end of this group of features. It evidently represents an earlier, meandering course of the river. A leet runs eastward from the southern end of this relict channel, before turning southward to meet Apley Beck and enclose the two ponds.

The NMP also transcribed two extensive complexes of features that flank the Stainfield Beck toward the south-eastern corner of 9 (53831, 50373). It is likely that both of the latter groups represent field systems, although the more southerly group appears to represent at least two distinct phases of activity.

An examination of the oblique aerial photographs held by the NMR did not reveal the presence of any additional archaeological features in the immediate environs of 9.

D: Summary and discussion of the evidence

There are two complexes of archaeological features situated at the centre of Site 9, both of which are considered to be particularly important. The round barrows of the Barlings cemetery lie to the west of Sambre Beck, with the Stainfield barrow cemetery to the east. Elements of both have been classified as Scheduled Ancient Monuments (SAM 20809 and 21472, respectively), and thus are afforded statutory protection under the Ancient Monuments and Archaeological Areas Act, 1979, as amended. It is apparent that these monuments would be submerged if this Site was ever used as a flood storage area (fig. 16). Such an event would also have an impact upon the other barrows and associated features situated outside of the scheduled area. Consequently, if Site 9 is chosen for further consideration it will be necessary to consult with English Heritage prior to the detailed design and onset of the scheme of works, as they will be concerned about the likely effects upon these Scheduled Ancient Monuments (see Section 7.0). This process will determine whether there are any potential incompatibilities regarding the respective objectives of the Environment Agency and English Heritage.

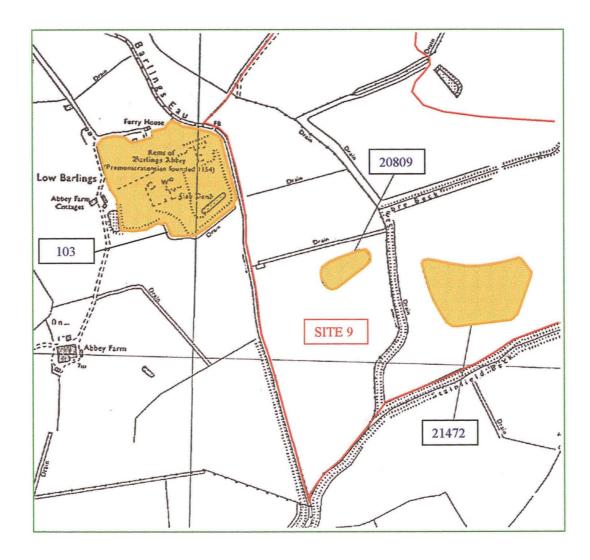


Figure 16: SITE 9
Relationship between the proposed flood relief area and the Scheduled Ancient Monuments situated in its immediate environs.

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Only one cross-bank would be constructed at this Site. This would run along the along the southern edge of Apley Beck for 500m. It is presumed that plant involved in the construction would enter the site along the track from Court House Farm, in which case vehicles would not approach any of the known barrows. However, it should be stressed that it would be essential to obtain a scheduled monument class-consent from English Heritage if it proves necessary for construction traffic to cross any part of either of the Scheduled Ancient Monuments.

It should also be noted that while some of the barrows are still visible as slight mounds, many of these features have been identified from aerial photographs. Consequently, it is probable that there are other monuments, or features that are not visible as cropmarks, or soilmarks. The possibility must therefore be considered that comparable deposits lie in very close proximity to the footprint of the proposed cross-bank.

This could be particularly pertinent if, as suspected, this section of Apley Beck was a medieval canal, because associated archaeological features and deposits could be exposed at any point along its 500m length. However, this is especially likely at the south-western end of the bank, the last 100m of which would traverse a series of ponds and associated channels representing outlying elements of Barlings Abbey. Some of these features may survive as earthworks, while others could have been truncated and levelled by ploughing, However, any surviving sub-surface components would be situated directly beneath the ploughsoil and it is therefore likely that the flood defence improvements would directly impact upon these elements of the monastic complex. These features form part of a larger group that lie outside of the north-east corner of the main abbey precinct, which is classified as a Scheduled Ancient Monument. This SAM is situated on the opposite side of the Barlings Eau, making it is extremely unlikely that plant would encroach onto this area. However, given the proximity of the protected area, it would also be advisable to consult English Heritage regarding this component of the scheme of works.

Almost all of the archaeological evidence from the environs of Barlings Abbey relates to medieval or later activity. However, the discovery of 2 Anglo-Saxon spearheads at the north-eastern corner of the abbey precinct is notable and worthy of further comment. Comparable post-Roman metalwork has been found in a number of concentrations along the adjacent Witham Valley (Stocker & Everson, 2002). These appear to result from ritual activities performed at specific locations along the river. This activity has been directly related to the presence and use of a series of causeways crossing the fen basin. One such causeway lies in close proximity to the Barlings Eau, connecting Oxeney Island with the higher ground to the north. While this was evidently in existence during the medieval period, providing access to and from Barlings Abbey, it is possible that its initial construction significantly predated the foundation of the monastic house. Stocker & Everson (*ibid.*) suggest that a pre-Viking church represented the initial Christian presence on the island. It is therefore possible that an earlier manifestation of the causeway existed at this time. On the other hand, it is also necessary to acknowledge that many of the Witham causeways appear to have originated in the later prehistoric period.

The spearheads were recovered from the vicinity of the section of the Barlings Eau that lies closest to the southern end of the Barlings causeway. There is some evidence to suggest that the natural channel of the river turned eastward at this point, but the waters were later diverted southward along a monastic canal (see B).

The site of a ford across the Barlings Eau has been identified c. 220m to the south of the Abbey. A significant kink in the flood bank makes its location readily identifiable. While the purpose of a ford is immediately comprehendible, it is more difficult to determine why one was constructed at this point along the river. In some respects it would appear to have been an

unnecessary development, because there was a ferry located toward the northern end of the abbey complex, c. 450m from the ford; the adjacent modern farm is called Ferry House.

It is possible that the ferry and the ford were created at roughly the same time and merely reflect the need to access different post-medieval land holdings. Certainly, access to the ferry necessitates the negotiation of the abbey ruins, which implies that this is a post-Dissolution feature. The ford was certainly in existence in 19th century, but it is possible that it has much earlier origins, potentially having been constructed while the abbey site was still occupied. This spans the period from the Abbey's initial construction in the mid-12th century, until the post-Dissolution house was abandoned in the later 17th or early 18th century. If the section of the Barlings Eau on which the ford is situated was a medieval canal, its creation would have isolated the land immediately to the west of Sambre Beck, which, given its proximity, probably belonged to the abbey.

The only buildings within 1km of the southern edge of the abbey are those forming Abbey Farm. The present Abbey Farm is thought to overlie a medieval monastic predecessor. The farm is situated almost due west of the ford, and an adjacent diversion of the flood bank formerly headed directly toward it. It is therefore probable that the ford was created to allow the occupants of Abbey Farm to access the eastern bank of the river. The fields in this area are essentially located on an island, which is surrounded by the Barlings Eau, Stainfield Beck and Sambre Beck. Consequently, further progress to the east, toward Stainfield, is not easy. This suggests that the fields were the actual focus of this access. Furthermore, the creation of a ford rather than a ferry also implies that the ability to move livestock or machinery was an important objective. Together, these factors raise the possibility that the ford was initially created as an element of the medieval landscape, providing a means for livestock and the lay brothers to reach the fields to east of the river/monastic canal without needing to traverse the abbey precinct.

It appears likely that the stretch of the Stainfield Beck forming the southern edge of 9 also represents part of a medieval canal, which linked Stainfield Priory with the Barlings Eau. The possibility that the present channel is artificial increases the likelihood that the present location of the division between the northern and southern banks was created during the last one thousand years. The remains of a large embanked enclosure have been identified on the southern side of Stainfield Beck, opposite its confluence with Sambre Beck. While the extent of this feature was clearly defined, it was also apparent that there were a series of associated cropmarks representing less substantial features, including linear boundaries, a square enclosure and five pen-annular features. These elements were not wholly contained within the enclosure, raising the possibility that associated sub-surface remains may extend beyond the known limits of this complex. If the size of both the Stainfield barrow cemetery and the cropmark enclosure complex were not constrained by the beck; the presence of ring gullies within the large enclosure could indicate that the barrow cemetery continues into the area to the south of Stainfield Beck.

Extensive cropmark complexes have also been identified on both sides of the beck at the south-east corner of 9. The group of features to the south of the channel appears to be comprised of superimposed elements of a later prehistoric and a medieval field system, which together extend over 10ha. In contrast, the northern group appears to result from a single phase of activity, and is likely to represent the medieval field system surrounding Stainfield Grange; components of this complex are situated within the catchment of Site 9.

Assessment of archaeological potential:

Site 9	HIGH
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6.2 Archaeo-environmental potential

Previous archaeological discoveries within the Lower Witham Valley indicate that the archaeo-environmental potential of this area is very high. The uppermost deposits within the valley itself are generally dark grey to black humic soils, a large component of which is degraded peat. In the conditions under which peat forms, organic macro- and micro-fossils, wood, leather and pollen are all likely to survive. Additionally, such environments are so deoxygenated that the ferrous components of composite artefacts can also be extremely well preserved.

The proximity of the River Witham and the Barlings Eau suggests that there has always been a continuous source of groundwater for adjacent sector of each of the proposed flood relief areas. Where present, deposits of alluvium and clay rich glacial till will have acted as an impermeable membrane, also helping to ensure that the soils remained waterlogged. In such anaerobic conditions buried organic remains are unlikely to have degraded, and some of this material may have been constantly saturated since the later 2nd or early 1st millennium BC.

These general observations have been borne out by archaeological investigations and chance finds made within or close to some of the sites selected as potential washlands. An excavation was recently undertaken between the bank of the Witham and the North Delph, at Fiskerton, toward the eastern end of Site 3. Organic material exposed included a log boat and the partial remains of another, wooden posts, stakes and pegs, the hafts and handles of composite tools and, worked and unworked bone. In addition there were a range of macroscopic plant fragments, including seeds and twigs, and microscopic remains including pollen. Comparable material was recovered from another section of the same timber causeway, in the field to the north. While there were still large quantities of waterlogged organic material, the effects of land drainage had resulted in some degradation of these objects (q.v. Field & Parker-Pearson, in press).

Components of another four log boats have been found within Site 5, with further example being discovered close to 8. Excavations on Branston Island have identified surviving timbers from a number of post-built structures (possibly fish weirs); these remains were also situated near to Site 8.

7.0 Impacts to the archaeological resource

It is probable that the most significant impact upon *in-situ* deposits will have resulted from the effects of the systematic and sustained drainage of the surrounding landscape. The extensive drainage scheme that was implemented at the time that the river was straightening, between 1787 and 1788, will have initiated this process. However, the most significant effects undoubtedly relate to the raising of the channel between 1812 and 1830, and the installation of steam powered pumps during the first half of the 19th century. Prolonged dewatering will have exposed buried organic materials to aerobic bacteria, thereby reinitiating the decay process. Desiccated organics will have completely decomposed, while those that periodically dry out will have become fragmentary.

It is also likely that the actual process of constructing the present flood embankments will have had some physical effects upon archaeological deposits. Much of the bank material is likely to have been generated as a by-product of the scouring of the river channel and the creation of adjacent drains. However, the recent excavation at Fiskerton suggested that this material had been supplemented by collecting sediment from the adjacent area. Removal of the topsoil revealed a mixed deposit containing 19th century brick and tile, which was deposited directly upon stratified Roman deposits. The latter had a significant organic component, but the larger pieces of wood were fragmentary, suggesting temporary or periodic

desiccation. If this process has been extensively applied along the edge of the present river channel, it is possible that medieval and post-medieval deposits have been either truncated or removed, and that underlying stratified organic material has been degraded.

Away from the riverbank, plough damage poses another significant threat to the integrity of the archaeological resource. Modern agricultural activity will have truncated *in-situ* deposits and spread archaeological materials throughout the ploughsoil, and this will be particularly acute where the overlying peat has eroded away and exposed buried ground surfaces. For example, excavations in a field to the south of Ferry Road, near the eastern end of 3, indicated that the ploughsoil, which was 0.2m deep, sat directly upon glacial till deposits due to the desiccation of the peat beds. It is also likely that the introduction of agro-chemicals to the water table will have compromised the integrity of buried archaeological assemblages.

In addition to existing and ongoing impacts to the archaeological resource, there are also likely to be some effects resulting from the creation and use of the flood storage areas. The most immediate and obvious influences will be relate to the creation of cross-banks to help retain flood water within the designated area. Removing topsoil could expose buried archaeological deposits, and the weight of vehicles and bank material is likely to compress underlying strata.

It is also anticipated that the use of these areas could create a range of problems for subsurface deposits. The introduction and subsequent removal of flood water could result in gleying, a process where the soil profile is leached. This leaching would occur as the flood waters receded. The water saturating the upper soil horizons would move down the soil profile to the ground water table. This would also drag fine clay particles and humic material down the profile, and over successive events would result in the fills of archaeological features becoming bleached, and thus invisible and impossible to distinguish (D.J. Rackham, pers. comm.).

Of even more concern are the potential effects of flood water on the soil chemistry and the burial environment (e.g. Edwards, 1998; Millard, 1998). Given the nature of these potential problems, it was necessary to obtain technical advice from the English Heritage Science advisor for Lincolnshire. His response, in full, is replicated below:

"Areas with archaeological potential, where either sites are known to exist, or favourable conditions existed in the past that may have led to the preservation of organic or metallic artefacts, and environmental evidence, may be affected by deliberate seasonal or occasional flooding. Material in artificially drained areas, may at present, be fairly stable. The local groundwater environment (unless locally contaminated) is likely to be low in oxygen and nutrients, with stable pH and redox potential. The introduction of flood water and subsequent drying out of the site may de-stabilise this burial environment, allowing oxygen to enter, and reactivating corrosion processes on metal artefacts. These processes may be further exacerbated by the presence in flood waters of agricultural discharge or fertiliser run-off from fields, containing high levels of chlorides and other mineral salts, heightening the potential for corrosion. These changes may also locally alter the redox potential, pH and other characteristics of the groundwater quality at the site.

The quality of the flood water is an issue for preservation of organic material as well, and an influx of nutrient rich water may lead to increased biological activity, increasing the decay of wood and other organic matter. Where peat and peat rich deposits are wetted and then drained, shrinkage and cracking of the sediment provides pathways for oxygen and contaminant transport to lower parts of the deposit. Aerobic organisms feeding on preserved wood that has been unveiled through drying and cracking, may also continue to threaten this material even if the site is waterlogged and an anaerobic environment is created for the surrounding deposit. This is because air will tend to enter the pore structure of the decayed wood, maintaining local aerobic conditions until exhausted by biological activity. In addition to continued attack by

organisms already present within the deposits, archaeological features will also be contaminated by new microflora and fauna.

It is also worth emphasising the control of water onto the potential sites should also be carefully managed, and a rapid influx of water onto a field may cause erosion of either buried or upstanding archaeological material. Erosion and down-cutting of land surfaces will uncover previously buried material, again increasing oxygen ingress."

(J. Williams, EH Science Advisor, 8 August 2002)

8.0 Conclusions

Analysis and synthesis of existing sources has indicated that there is varying archaeological potential among the seven sections of river valley that were examined in this study. This potential has been ranked as high, medium or low according to its perceived significance and the degree to which it is considered that archaeological deposits could be disturbed by works associated with the flood defence improvement scheme (see, Table 3).

The most archaeologically sensitive areas are those where the anticipated deposits are generally atypical of routine activity, and are either situated close to the present ground surface, or contain fragile organic materials. Of these, Site 3 and its surrounding area is particularly important, as it contains a wealth of prehistoric deposits. One timber causeway is known to lie in this area, and there is complimentary evidence to suggest the existence of two or three more. The wooden structural elements of such features are relatively fragile and susceptible to damage through compression, compaction and changes to their burial environment. Site 3 also contains a large number of funerary monuments, which potentially include structures created in the Neolithic, Bronze Age and Iron Age. The southern edge of a Scheduled Ancient Monument is also situated within this area. As a consequence of its protected status, consultation with English Heritage would be a necessary prerequisite to any change of land use.

A similar situation pertains to Sites 8 and 9, where further Scheduled Ancient Monuments are wholly or partially situated within each of the proposed flood relief areas. The eastern edge of Site 1 also runs close to another archaeological site with statutory protection, Kirkstead Abbey.

Site no.	Archaeological potential	Archaeological deposits anticipated
1	HIGH	 Kirkstead Abbey – the flood relief area extends to within 40m of the edge of the main precinct - THIS IS A SCHEDULED ANCIENT MONUMENT. Further components of the Abbey situated outside of the scheduled area. Possible elements or one or more field systems of unknown date
3	HIGH	 Three round barrow cemeteries and associated funerary deposits situated along the length of the Site. A possible Late Bronze Age to Early Iron Age timber causeway. A northerly continuation of the Fiskerton Early Iron Age timber causeway Deposits or structures associated with a possible Anglo-Saxon to medieval causeway/site of votive deposition at Fiskerton. The southern edge of the shrunken medieval village of Greetwell. This is a scheduled ancient monument.
4	LOW-MEDIUM	 Possible funerary deposits associated with nearby barrow cemetery. Deposits or structures associated with a possible Anglo-Saxon to medieval causeway/site of votive deposition. Outlying elements of a possible medieval farmstead/ grange and/or fishery under or adjacent to Five Mile House Farm. Remains of 19th century pumping station at the south-east corner of 4. Remains of cottages, probably 19th century, to the south of Willow Lodge.
5	HIGH	 Late Neolithic and Early Bronze Age features surrounding Top Farm, Stainfield. Barrows and other funerary deposits dispersed across the area. Deposits or structures associated with a possible prehistoric or later causeway and site of votive deposition, which is thought to have preceded Short Ferry Road. Outlying elements of a medieval grange and fishery called 'Barleymouth' at Short Ferry. The remains of log boats or other preserved wooden structures.
7	LOW	 Possible outlying elements of a medieval fishery called 'le Aldra', at north-east corner. Possible features associated with a large (prehistoric?) cropmark enclosure, at north-east corner. Possible round barrows or associated funerary deposits.
8	HIGH	 Barrows and other prehistoric funerary deposits dispersed across the area. Scotgrove Drain, a possible Anglo-Saxon boundary feature associated with the 7th century Bardney Abbey. Bardney Abbey – the flood relief area extends onto edge of main precinct, and cross-bank may abut medieval enclosure bank. THIS IS A SCHEDULED ANCIENT MONUMENT. Possible remains of log boats or other preserved wooden structures, including medieval fishery possibly located at the western end of Snakeholme Drain.

Site no.	Archaeological potential	Archaeological deposits anticipated
9	HIGH	 Two round barrow cemeteries and associated funerary deposits situated at the centre of the Site. PARTS OF BOTH COMPLEXES ARE SCHEDULED ANCIENT MONUMENTS. Unscheduled elements of Barlings Abbey, which include the earthwork remains of ponds and ditches. There is a strong possibility that the adjoining sections of the Barlings Eau, Apley Beck and Stainfield Beck are all monastic canals. Deposits associated with their construction and use may be encountered. The site of a ford, possibly with an associated quay, which may be of medieval or post medieval date. Cropmark complexes bracketing Stainfield Beck; include a large prehistoric enclosure, a later prehistoric field system, and medieval field systems.

Table 3: Summary of the archaeological potential of each of the proposed sites of the Phase 5 works that are considered in this study (compiled from Section 6.1).

9.0 Mitigation

It has been deduced from the sources assessed that some of the proposed flood relief areas appear to have little archaeological potential. The current state of knowledge suggests that significant deposits will not be encountered at Site 7 and unlikely in all but the western end of Site 4. However, it should be noted that not all of the artefacts either cast into the river or deposited in the adjacent valley bottom would have a close association with structures such as causeways or barrow cemeteries. Consequently, there will always be an element of such assemblages that will in effect be randomly distributed. This limits the value of predictive analysis for determining the location of further buried objects in this class.

Where groundworks take place, they will be largely restricted to the removal of the topsoil, followed by the deposition and compaction of clay. Consequently, it is anticipated that this element of the project will only have a direct impact on two types of deposit; those that lie directly beneath the topsoil (A) and those that contain waterlogged timbers (B).

- A: This is likely to affect features associated with the three abbeys located on the peripheries of proposed flood defence areas, as other elements of each of these establishments survive as earthworks. It seems likely that the construction of a crossbank along the western edge of Abbey Lane, Kirkstead, at the north-east corner of Site 1, would expose sub-surface remains, given the presence of fish ponds on the opposite side of the road. The south-western end of the bank running along the northern edge of 9 would similarly traverse an area containing a series of ponds forming part of Barlings Abbey. At Bardney Abbey, the proposed cross-bank situated toward the centre of the southern edge of 8 would abut earthworks defining the abbey precinct.
- B: Excavations at Fiskerton have exposed the remains of part of an Iron Age timber causeway projecting into the Witham Fen. This structure appears to continue northwards to make a 'landfall' at or near the site of the medieval manor, at the eastern end of Nelson Road. The proposed cross-bank (3) that would run along the southern edge of Fiskerton would cross the projected alignment of the causeway. This prehistoric structure was constructed from vertical timber posts and associated horizontal planks. Few of these elements would be exposed or affected by topsoil stripping, but all of them are fragile and susceptible to deformation or destruction during the deposition and compaction of the bank material. These forces would also have some effect upon the cultural deposits that are known to be associated with this structure.

Existing archaeological data indicates that there is a possibility that there may be two comparable timber structures that would be similarly affected by bank construction in Sites 3 or 4 and Site 5. Metalwork recovered from the river close to Fiskerton Station/Five Mile House Farm has raised the possibility that there may be another causeway situated at or close to the site of the 19th century ferry. As the banks forming the ends of 3 and 4 would flank the lane leading to the station there is a possibility that they could expose or impact upon a buried timber structure. Similarly, work by Stocker & Everson (2002) has indicated that Short Ferry Road is likely to represent a modern incarnation of a much earlier structure. The bank defining the north-western edge of Site 5 would run alongside this road, and thus has the potential to affect any sub-surface components.

While the presence of the causeway to the south of Fiskerton has been established, the existence of the other two examples is at present conjectural. Consequently, if Sites 4 or 5 were selected for further consideration or development it may be advisable to undertake a programme of limited archaeological trial trenching to

establish the presence or absence of waterlogged timber structures. This would rapidly indicate whether further mitigation would be necessary prior to the onset of groundworks.

In addition to the physical effects occasioned by the construction of cross-banks, it is also anticipated that the temporary inundation of the land surface within the flood storage areas would also have an effect upon buried archaeological remains. It is anticipated that modifications to the groundwater environment will result in localised changes to soil chemistry, which in turn could impact upon buried archaeological materials. This is of particular significance with respect to Sites 3, 8 and 9, where the proposed flood relief areas incorporate or overlap Scheduled Ancient Monuments, as it will not be possible ensure that this process would not degrade the buried deposits. In respect to Sites 3 and 8 it may be possible to construct additional cross-banks to provide each of the SAMs with a dry buffer zone. However, this would not be possible at Site 9, as the two scheduled monuments are situated at the centre of the enclosed area. It is also possible that the rerouting of cross-banks could prove to be the most expedient method of minimising the impact on significant archaeological deposits situated within Sites 1 and 5.

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Appendix 12.1:		Catalogue of sites and finds derived from the Lincolnshire County Sites and Monuments Record
SMR Code	NGR	Description
		SITE 1
	(29 entr	ies - those in italics being situated within the proposed flood storage area)
40102	TF 1925 6228	Fragment of a Late Bronze Age sword found to the south of Kirkstead Hall. Part of the hilt of a leaf shaped type, which was found in 1932. Now in LCCM 79.52.
43238	TF 1803 6219	Late Iron Age ditches and a pit found during an evaluation on Witham Road, Kirkstead Bridge. The ditches contained pottery, slag and part of a fired clay loomweight. The site had been sealed beneath alluvium. It is thought that one of the ditches represents the boundary of a settlement predominantly situated to the south-east of the site.
40096	TF 1960 6100	Cropmarks defining a multivallate Iron Age enclosure. A triple ditched ovoid feature, 120m long by 90m wide, with annexes to the south and east. It is similar in size and form to the example excavated nearby at Tattershall Thorpe. It would probably have been surrounded by marshland at the time of its construction. It has also been interpreted as a medieval duck decoy. Protected as a Scheduled Ancient Monument (SAM 29728).
40416	TF 1974 6190	Cropmarks of linear ditches and enclosures, possibly prehistoric in date, lying to the east of Abbey Lodge Inn, Kirkstead.
43629	TF 1880 6170	Kirkstead Abbey – It was a Cistercian house founded elsewhere in the parish in AD 1139, by Brilo, but moved to this site in 1187. The main precinct of 5.3ha was enclosed by a substantial bank and ditch. It was dissolved in 1537 and is now primarily an earthwork site, with small piece of standing masonry surviving to 17m high and 6m wide, which was part of the south transept of the church. Protected as a Scheduled Ancient Monument (SAM 6).
40099	TF 1850 6192	Fishpond complex, with at least six large sub-rectangular ponds and associated leets. Lies outside the scheduled area of Kirkstead Abbey.
40410	TF 1860 6170	Medieval boundary ditch – encloses and defines precinct of Kirkstead Abbey.
40106	TF 1890 6170	Pottery found at Kirkstead Abbey, including a pipkin handle and the base and part of the body of a tyg, along with fragments of encaustic tiles carrying a floral motif. Exact findspot unlocated.
40112	TF 1895 1660	Possible site of Abbot's kitchen at Kirkstead Abbey. Molehills contain concentrations of animal bone and shell. Sherds of 15 th -16 th century pottery and painted window glass also found at this point.
40098	TF 1898 6125	Earthworks and cropmarks of the unscheduled area of Kirkstead Abbey, which are situated to the south of the main complex.
40097	TF 1902 6138	St Leonard's Church, Kirkstead – built in the 13 th century and restored in 1913-14. This is likely to have been a chapel <i>ante portas</i> of Kirkstead Abbey. It contains the effigy of a knight in helmet and chain mail.
40113	TF 1943 6195	Abbey Lodge Inn, reputedly the lodge or gatehouse for Kirkstead Abbey. It is known to have had extensive vaulted cellars, which have now been filled in.

SMR Code	NGR	Description
40100	TF 1778 6158	Wasters and other pottery sherds found in molehills, possibly related to 40108, and representing residue of kiln site at Kirkstead Abbey.
43239	TF 1803 6219	Post-medieval boundary or drainage ditches exposed during evaluation of a site on Witham Road, Kirkstead Bridge. One of features contained sherd of post-medieval pottery.
40108	TF 1872 6161	Pottery and tile wasters found within the scheduled area of Kirkstead Abbey. Forms include Toynton and Old Bolingbroke types in very sandy fabrics. Kilns probably post-Dissolution, as prevailing wind would have blown fumes across precinct. Will of Francis Moody, a potter at Kirkstead in 1610, has been noted in SMR file.
40101	TF 1882 6177	Waster mound composed of fragments of cooking pots, jars and pancheons, which are all thought to be post-Dissolution products. Produced in a sandy fabric identical to the other kiln site at Kirkstead Abbey (40100). Identified in 1976 by A. White.
40107	TF 1904 6158	An early 16 th century pewter plate dredged from a ditch at the edge of the precinct of Kirkstead Abbey.
43746	TF 1908 6099	Old Abbey Farm is situated to the south of Kirkstead Abbey, the present building dating to the 18 th century. A floor constructed from reused 15 th century brick was exposed, along with a well, during renovations and raises the possibility that the farm may be somewhat older than surface evidence suggests.
40116	TF 1909 6099	Reused medieval brick and stone found at Old Abbey Farm, Kirkstead, during alteration of an existing farm building. Material has come from the abbey site.
40109	TF 1919 6186	Worked stone located in the yard and garden of Abbey Farm, Kirkstead. Large quantities of this material that must be derived from the abbey and is now incorporated into walls and rockeries.
40114	TF 1815 6188	Site of a mill, possibly a post mill, situated to the south-east of Kirkstead Bridge.
62315	TF 1861 6029	Wesleyan Methodist Chapel situated on the western bank of the Witham in Timberland Dales. Its existence was recorded in 1856 and the structure still appears to survive.
40094	TF 1865 6223	Moated site adjacent to Old Hall Farm, Kirkstead, which was noted on Ordnance Survey map of 1956 (1: 10, 560). However, site visit in 1964, also by OS, decided that it was not a moat.
40408	TF 183 622	Undated linear cropmarks to the east of Kirkstead Bridge and north-west of the abbey.
40412	TF 1854 6116	Undated linear ditch - linear feature visible as cropmark to west of Kirkstead Abbey.
40414	TF 1920 6045	Undated cropmarks – linear features and field system; close to possible Iron Age enclosure, to south of Old Abbey Farm, Kirkstead.
40413	TF 1880 6070	Undated linear features – linear features, both single and double-ditched visible as cropmarks to west of Kirkstead Abbey.

SMR Code	NGR	Description
40415	TF 1925 6222	Undated cropmarks of linear ditches and small enclosures to the south of Kirkstead Hall; possibly define part of a small field system.
40104	TF 1940 6130	Undated cropmark complex to the south-east of Kirkstead Abbey. Appears to be part of a field system and includes at least one circular feature, with two double-ditched droveways. A watching brief in the area identified ten undated linear features orientated north-south, east-west and north-west – south-east. At least one appeared to have a relationship with an earthwork feature representing an outer circuit of the abbey.
-		SITE 3
	(127 entr	ries - those in italics being situated within the proposed flood storage area)
60613	TF 0410 7140	Mesolithic flint scatter, including tools and debitage, found to the northwest of the pumping station at Washingborough in 1972.
52848	TF 0358 7206	A medial fragment of a Group VI stone axe, found by P. Rollins in 1970, to the north of Fiskerton Road East, Cherry Willingham.
52935	TF 0370 7130	A stone axe of Tremolite Fels, found in Willingham Fen.
52897	TF 0500 7208	Small polished stone axe, found in Fiskerton.
52460	TF 0070 7124	Cropmark, probably of a Neolithic long barrow, in Greetwell Fen.
60930	TF 0020 7070	Round barrow cemetery to the south of the Witham and visible on aerial photographs. Six lie in Canwick Parish, with a further example within the City of Lincoln. A glebe terrier of 1602 supports the theory that there are barrows at this location. One barrow to the south-west corner of the field was prominent as a slight mound and was found to be associated with nine sherds of crude Bronze Age pottery, probably from a plain bucket urn.
52841	TF 0070 7110	Round barrow cemetery containing at least 11 barrows visible as cropmarks/soilmarks, in Greetwell Fen and extending west into City of Lincoln.
52856	TF 0210 7128	Undated cropmark mound and/or ring ditch.
52855	TF 0225 7132	Undated cropmark enclosure.
52860	TF 0230 7150	Two cropmarks, suggesting presence of round barrows or other mounded features.
52850	TF 0390 7160	Probable Bronze Age round barrow cemetery, possibly with an associated square barrow. Bisected by the Cherry Willingham/Fiskerton Parish boundary.
60327	TF 0520 7050	Round barrow cemetery comprised of approximately 30 barrows dispersed over a large part of Washingborough Fen.
50467	TF 0457 7168	Two possible round barrows seen as cropmarks. May be part of the Washingborough barrow cemetery (60338).
52863	-	Early Bronze Age beaker found on the north bank of the North Delph, in Willingham Fen, c. 1982.
52910	TF 0580 7160	Early Bronze Age axe hammer found just to north of riverbank at

SMR Code	NGR	Description
		Fiskerton, near to footbridge to former railway station and Five Mile House; reported to museum in 1966.
52911	TF 0482 7199	Bronze Age axe hammer found in churchyard of St Clement's, Fiskerton.
61453	TF 0580 7110	Perforated stone axe hammer found to the south of the Witham on Five Mile House Road, Heighington Parish.
60466	TF 0025 7050	Worked flint recovered from a field running along the southern edge of the railway line, Canwick (Washingborough Archaeology Group field 18).
61509	TF 0030 7070	Flint scatter (19 worked pieces) recovered from a field running along the southern edge of the Witham, Canwick (Washingborough Archaeology Group field C1).
61329	TF 0275 7080	Six worked flints found to the north of Fen Road, Washingborough, in 1993 (Washingborough Archaeology Group field 19).
61323	TF 0288 7084	Three worked flints found to the north of Fen Road, Washingborough, in 1993 (Washingborough Archaeology Group field 12).
61341	TF 0320 7080	One worked flint found to the north of Fen Road, Washingborough, in 1995 (Washingborough Archaeology Group field 29).
54514	TF 0350 7225	Flints – 39 worked flints recovered during trial trenching on land off Church Lane, Cherry Willingham. Palimpsest ranging from Early Neolithic to Late Bronze Age. Spread across site, but higher concentrations on higher ground at northern edge. Further flints found during later watching brief – included blade, laurel leaf, fabricator, core and thumbnail scraper.
51208	TF 0366 7159	Flint scatter on a rodden to the south of Fiskerton Road East, Cherry Willingham. Eight pieces were exposed in a drainage cutting; these include a barbed and tanged arrowhead.
60614	TF 0438 7090	Three worked flints recovered during field walking to the east of Sandhill Beck (Washingborough Archaeology Group field 27).
61343	TF 0482 7122	Worked flint recovered during field walking to south of Witham opposite Fiskerton (Washingborough Archaeology Group field 33).
60826	TF 0450 7130	Three worked flints found to the east of Sandhill Beck in 1995 (Washingborough Archaeology Group field 31).
61337	TF 0457 7086	Two worked flints recovered during field walking to north of North Dales Road (Washingborough Archaeology Group field 24).
52888	TF 0485 7190	Worked flints recovered from Perrins Cottages, Fiskerton.
61359	TF 0533 7074	Three worked flints recovered during field walking from north of Five Mile Lane (Washingborough Archaeology Group field 1).
54525	TF 0504 7190	Prehistoric worked flints found on site of medieval manor, Nelson Road, Fiskerton.
54512	TF 0636 7187	Two worked flint flakes found at Woodlands Farm, Ferry Road, Fiskerton.
61503	TF 0001 7030	Middle Bronze Age cinerary urn found near the water treatment works,

SMR Code	NGR	Description
		Canwick.
61504	TF 0010 7071	Two bronze palstaves found to the south of the Witham, Canwick.
52882	TF 0470 7180	Middle Bronze Age riveted bronze dirk found during dredging of the river at Fiskerton (also stated as coming from TF047715 or TF050715).
61328	TF 0025 7050	A sherd of Late Bronze Age/Early Iron Age pottery recovered from a field running along the southern edge of the railway line, Canwick (Washingborough Archaeology Group field 18).
61295	TF 0228 0791	Three Late Bronze Age swords found during the construction of the railway, Washingbororugh.
61322	TF 0416 7116	Sherd of Late Bronze Age/Early Iron Age pottery recovered during field walking, Washingborough Fen (Washingborough Archaeology Group field 3).
60612	TF 0423 7138	Late Bronze Age and Early Iron Age artefacts from the environs of the pumping station on the South Delph, Washingborough. Surface finds and an excavation in 1973 recovered an antler cheekpiece from a bridle, pottery, animal and human bone, and worked wood. Possibly associated with a causeway crossing Washingborough Fen, a continuation of Mareham Lane.
60462	TF 0445 7115	Pottery scatter – 300+ sherds of Late Bronze Age/Early Iron Age handmade pottery extending over three fields near the Washingborough pumping station. Worked flint and a human clavicle and femur were also recovered (Washingborough Archaeology Group fields 13, 31 and 32).
61277	TF 0462 7091	Bronze Age axe mould and socketed axes found in Washingborough Fen within the area of the barrow cemetery (60338).
61344	TF 0482 7122	Sherd of Late Bronze Age/Early Iron Age pottery recovered during field walking in Washingborough Fen (Washingborough Archaeology Group field 33).
52877	TF 0487 7182	Late Bronze Age metalwork hoard. Four socketed bronze axes were found in the field called Church Piece at Fiskerton in 1890. A fifth (LM 76.30) is probably from the same group. A sixth owned by J.E. Thompson, the blacksmith, may also belong to the group. Three other looped and socketed axes seen by J.B. Whitwell at Fiskerton may also be part of the hoard. Recently received anecdotal evidence suggests that there were originally c. 90 axes in the hoard, which were dispersed among the residents of the village.
60924	TF01107080	Log boat found in the Witham in 1816. Reported to be 9.35m long by 0.9m wide. Site recorded as being in Washingborough, but date and dimensions raise possibility that this may be the same vessel as 'Bardney 1' found c. 1815, which was c. 9.15m long by 1.4m wide (51162).
52889	TF 0470 7150	Anthropoid dagger, Early Iron Age, the handle terminating in a small grotesque figure. Found in Fiskerton, the dagger and scabbard are now lost.
52904	TF 0500 7162	Iron Age timber causeway at Fiskerton – discovered following the recovery of metal artefacts by V. Stuffins in June 1980; the latter included an iron sword, two bone points, part of a ribbed bronze bracelet, an iron

SMR Code	NGR	Description
		lynch-pin (?) and sword handle fittings. Excavation in 1981 revealed that these items were associated with two rows of vertical posts. Further bone points, domestic and military metalwork and pottery was recovered. Dendrochronology indicated that the posts were erected episodically between 456 and 317BC.
60714	TF 0203 7084 - TF 0417 7055	Car Dyke, a Roman canal or drain running along the northern edge of Washingborough.
60463	TF 0025 7050	Romano-British artefact scatter recovered from a field running along the southern edge of the railway line, Canwick (Washingborough Archaeology Group field 18). Density and range of materials suggests the presence of a farmstead or settlement.
61510	TF 0030 7070	Six sherds of Romano-British pottery recovered from a field running along the southern edge of the Witham, Canwick (Washingborough Archaeology Group field C1).
52827	TF 0145 7140	Two Romano-British fibulae found in the grounds of Greetwell Hall.
61278	TF 0147 7068	Roman urn and coin found in the vicinity of 15 Main Street, Washingborough.
61285	TF 0181 7060	Two Romano-British coins of the 3 rd century found in the grounds of Washingborough Hall.
61289	TF 0195 7077	Roman coin of Tetricus II found to the south of Main Road, Washingborough.
52082	TF 0230 7180	Handle of a Roman amphora, probably from a globular type - found to the south of Fiskerton Road, Cherry Willingham.
61288	TF 0250 7100	Neck of a Romano-British flagon found during cleaning of the Longstongs Delph, Washingborough, in 1973.
52851	TF 0319 7241	Romano-British pottery discovered while building houses on Church Lane, Cherry Willingham.
52866	TF 0325 7245	Romano-British pottery - a few sherds discovered on land to the east of Church Lane, Cherry Willingham, in the late 1970s.
52853	TF 0360 7200	Possible Romano-British farmstead, adjacent to Fiskerton Road East, Cherry Willingham. Mr P. Rollin found two pairs of east-west aligned ditches, the pairs separated by c. 120m, with each pair defining a corridor c. 15m wide. Considerable quantities of greyware were found in association, along with some samian and colour-coated wares. Mr Bee
		found further coarse wares and a loomweight to the south of the site. Three coin s have also been recovered from this area by Mr Rollin – A <i>follis</i> of Constantine I, the Great AD 306-337 – obv: IMP CONSTANTIUS PF AVG; rev: SOLI INVICTO COMITI. An Ae of Constantius II, AD 337-
		361 – rev: FEL TEMP REPARATIO (soldier spearing fallen horseman). Another coin of Constantius II – obv: CONSTANTIUS PF AVG; rev: FEL TEMP REPARATIO. A small quantity of later 1 st to 3 rd century AD pottery was recovered during an evaluation and watching brief on land immediately to the north-west.
52853	TF 0360 7207	Romano-British pottery of the 2 nd and 3 rd centuries AD, and building stone

SMR Code	NGR	Description
		and tile, found in Cherry Willingham, in 1957.
61383	TF 0435 7089	Two sherds of Romano-British pottery recovered during field walking to the north of North Dales Road, Washingborough Fen (Washingborough Archaeology Group field 27).
61386	TF 0450 7130	Three sherds of Romano-British pottery recovered during field walking, Washingborough Fen (Washingborough Archaeology Group field 13).
52870	TF 0451 7199	Roman coin found to south of Lincoln Road, Fiskerton.
52883	TF 0460 7150	Roman skillet (military saucepan) found during dredging of river (Recorded in Fiskerton, but possibly in Washingborough Parish; now in Sheffield Museum.
54140	TF 0470 7203	Roman tile found in association with a layer of large rounded cobbles, which were seen in the section of a mains relay trench in Orchard Lane, Fiskerton.
61384	TF 0481 7120	Sherd of Romano-British pottery recovered during field walking, Washingborough Fen (Washingborough Archaeology Group field 33).
52887	TF 0485 7190	Romano-British 'hard' at Fiskerton, used for loading and unloading ships by the side of a former channel of the Witham.
51467	TF 0485 7190	Romano-British pottery and tile associated with the 'hard' at Fiskerton.
61292	TF 0492 7158	Romano-British pottery, including part of a $2^{nd} - 3^{rd}$ century jar or flagon, found during cleaning of a dyke to the north of the Witham. Now in Fiskerton, but originally in Washingborough – probably associated with the Iron Age timber causeway.
52905	TF 0500 7162	Romano-British pottery associated with the Iron Age timber causeway at Fiskerton. These included Black Burnished Ware and Colour Coated Ware.
54527	TF 0505 7188	Romano-British pottery recovered from the site of the medieval manor at Fiskerton.
52902	TF 0520 7165	Nearly complete late Roman copper alloy Irchester type bowl found by V . Stuffins in a field adjacent to the Witham at Fiskerton; 0.2m diameter and 0.11m high, it was created from a single sheet of metal.
61326	TF 0025 7050	One possible sherd of Anglo-Saxon pottery recovered from a field running along the southern edge of the railway line, Canwick (Washingborough Archaeology Group field 18).
60925	TF 0030 7051	Two Saxon coins recovered from a field running along the southern edge of the railway line, Canwick (Washingborough Archaeology Group field 18).
60593	TF 0066 7062	Anglo-Saxon finds from a field to the north of Lincoln Road, Canwick.
52828	TF 0140 7150	Late Anglo-Saxon spearhead, with bronze ring on the ferrule, found to south of All Saints Church, Greetwell, after ploughing, in 1952.
52864	TF 0328 7238	Anglo-Saxon settlement to the east of Cherry Willingham churchyard. First recognised following fieldwalking in 1978, which recovered 40

SMR Code	NGR	Description
		sherds of early Saxon pottery. Excavations in 1980 recovered 6 th to 12 th century pottery, along with the remains of a Sunken Featured Building, associated with 9 th century pottery. Gullies, fence lines and the remains of an iron-smelting furnace were also found. An evaluation in 1999 found a continuation of this activity, situated c. 30 m to the south of the 1980 site. Settlement remains spanned the 5 th to 10 th centuries. Most of this evidence comprised a large number of refuse pits associated with domestic debris, but there was also further evidence for metal working, including slag and hammerscale.
61342	TF 0436 7122	Possible sherd of Anglo-Saxon pottery recovered during field walking, Washingborough Fen (Washingborough Archaeology Group field 31).
52878	TF 0498 7152	Three Anglo-Saxon pins – silver-gilt disk headed pins linked by narrow plates. Probably made in first half of the 9 th century or later. Found in Witham at Fiskerton, now in British Museum.
52896	TF 0564 7155	Viking Sword of the 9 th century found in 1954 on the northern bank of the Witham at Fiskerton, just upstream of the Five Mile House. The blade is plain, but the pommel and handgrip would have been decorated. Vestiges of a wooden scabbard adhere to the blade.
61511	TF 0030 7070	Seventeen medieval sherds and 667 post-medieval sherds of pottery recovered from a field running along the southern edge of the Witham, Canwick (Washingborough Archaeology Group field C1).
60467	TF 0041 7051	Medieval pottery recovered from a field running along the southern edge of the railway line, Canwick (Washingborough Archaeology Group field 18).
60929	TF 0052 7058	Original site of Sheepwash Grange, a medieval monastic estate belonging to Kirkstead Abbey – in Canwick.
61473	TF 0060 7070	Possible medieval wharf on the River Witham at Calscroft. It is recorded in Hundred Rolls that Sheepwash Grange had an associated wharf for loading and unloading wool and other goods. It may have been an outstation of the port at Lincoln and as such may have been a transhipment point for goods from other estates besides the grange belonging to Kirkstead Abbey. Probably located to the north-east of the grange where there is the dry bed of a watercourse cut off from the river following the embankment of the $18^{th} - 19^{th}$ centuries. Associated with this is a mound and fragments of masonry.
52825	TF 0090 7150	Hoard of 200+ silver coins and two silver rings dating to William I, Henry I and Stephen found during construction of railway cutting at Greetwell Hill. Coins were very clipped and imperfectly die-struck.
52823	TF 0135 7153	All Saint's Church, Greetwell.
61275	TF 0184 7063	The church of St John the Evangelist, Washingborough.
60403	TF 0206 7056	Village cross, on the Green, Washingborough.
61287	TF 0250 7100	Base of a medieval baluster jug found during cleaning of the Longstongs Delph, Washingborough, in 1973.
52862	TF 0300 7240	Medieval settlement of Cherry Willingham - severely in decline by early 14^{th} century and reduced to less than 10 households by 1428. Continued to

SMR Code	NGR	Description
		be small throughout 19 th and first half of the 20 th centuries, but expanded rapidly after the Second World War.
52857	TF 0336 7232	Ridge and furrow field system along the eastern edge of Cherry Willingham. Actually two superimposed field systems - later one probably medieval (now ploughed flat), and was recorded as north-south earthworks by RCHME. Earlier system ran east-west, and was exposed in 1999, during an evaluation of site – possibly Anglo-Saxon in origin.
52849	TF 0359 7228	Medieval pottery scatter to east of Cherry Willingham village, reported by Mr Pepper.
52881	TF 0405 7210	Ridge and furrow earthworks to the north and east of Mill House, Fiskerton - probably part of medieval field system.
52871	TF 0468 7220	Medieval pottery found in Chapel Field, Fiskerton, in 1953, during building works.
52869	TF 0475 7235	Medieval pottery – body sherds and a handle for a 13 th century Lincoln Ware jug, found to the east of the Old Rectory, Fiskerton, by Mrs S Newby.
52886	TF 0480 7215	Medieval settlement of Fiskerton.
52875	TF 0482 7199	St Clement's Church, Fiskerton.
54526	TF 0505 7188	Site of the medieval manor house at Fiskerton, which belonged to St Peter's Abbey, Peterborough. Stone buildings relating to at least two phases of activity were exposed by excavation.
52912	TF 0510 7245	Ridge and furrow earthworks on the eastern side of Fiskerton - probably part of late medieval field system.
52913	TF 0600 7214	Ridge and furrow earthworks north of the Witham and to the east of Fiskerton.
61465	TF 0636 7135	Ridge and furrow earthworks south of the Witham, probably part of medieval field system surrounding Five Mile House Farm in Heighington Parish.
60468	TF 0041 7051	Post-medieval pottery recovered from a field running along the southern edge of the railway line, Canwick (Washingborough Archaeology Group field 18).
52822	TF 0136 7155	Greetwell Hall, 'L'-shaped Jacobean structure with 19 th century addition. Associated lodge dated to 1856.
52829	TF 0150 7155	Post-medieval garden remains surrounding Greetwell Hall.
61282	TF 0176 7067	Silver penny of Henry VIII found at The Acorns, Church Hill, Washingborough.
61207	TF 0180 7076	Post-medieval culvert at the front of 6 Main Road, Washingborough.
61276	TF 0185 7059	Washingborough Hall, situated to the south of the church.
61308	TF 0191 7059	The Rectory, High Street, Washingborough – this structure and an attached cottage were constructed in the 18 th century.

SMR Code	NGR	Description
61286	TF 0198 7069	Two 18 th century dessertspoons found at 'Hunter's Leap', Washingborough.
61312	TF 0204 7068	The Old Hall, Washingborough – an 18 th century structure.
61309	TF 0208 7076	69 Main Road, Washingborough – a late 16 th century farmhouse with an attached wall and barn.
52836	TF 0072 7129	Ironstone mines, Greetwell.
53306	TF 0150 7180	Railway bridge at Greetwell, built c. 1848, as part of the Lincoln to Grimsby line. Constructed by the Manchester, Sheffield and Lincolnshire Railway. Built across two track line situated in cutting. Built in brick with stone coping.
61318	TF 0154 7094	Washingborough railway station, which is situated between the Witham and the South Delph. Built c. 1848 to service the GNR's Lincolnshire Loop Line.
61319	TF 0172 7077	Methodist Church situated on Main Road, Washingborough.
61310	TF 0217 7076	Wellington House, 83 Main Road, Washingborough – early $19^{\rm th}$ century structure.
61320	TF 0218 7057	Stone quarry, formerly known as the 'hills and hollows', Washingborough.
52880	TF 0400 7200	Possible site of mill at Mill House, Fiskerton. Curving boundary at the north-east corner of the property probably preserves the outline of one side of the mill.
52891	TF 0465 7236	The Old Rectory, Fiskerton. Possibly built by James Foster in 1871, it is in a Tudor style, with a tall gothic staircase window.
54141	TF 0476 7213	Cobbled road surface seen during insertion of water mains in Fiskerton. The linear spread of rounded pebbles was aligned toward Plough Lane and probably meets the post-medieval lane, which has since been realigned to run to the south of Chapelside.
54741	TF 0505 7188	Post-medieval pottery recovered during watching brief on land at Nelson Road, Fiskerton.
50349	TF 0084 7120	Single linear cropmark to the north of the Witham.
54515	TF 0329 7214	Undated linear features on land off Church Lane, Cherry Willingham – complex identified by geophysical survey and investigated during evaluation in 1999, but no associated dating evidence.
54752	TF 0333 7211	Undated linear features identified by geophysical survey on The Hawthorns, off Church Lane, Cherry Willingham.
52861	TF 0340 7150	Undated cropmarks forming a rectangular enclosure.
52854	TF 0360 7160	Undated cropmark trackways and enclosure.
61313	TF 0208 7060	Second World War searchlight battery on School Lane, Washingborough.
52879	TF 0300 7270	RAF Fiskerton and associated buildings - airfield opened in 1943 and

SMR Code	NGR	Description closed in 1946.
		SITE 4
	(19 entri	ies – those in italics being situated within the proposed flood storage area)
52898	TF 0940 7140	Broken leaf shaped 'point' (arrowhead?) found while digging a drain at Short Ferry Marina by Mr and Mrs Shooter. Probably Neolithic.
52910	TF 0580 7160	Early Bronze Age axe hammer found just to north of riverbank at Fiskerton, near to footbridge to former railway station and Five Mile House; reported to museum in 1966.
61453	TF 0580 7110	Perforated stone axe hammer found to the south of the Witham on Five Mile House Road, Heighington Parish.
54512	TF 0636 7187	Two worked flint flakes found at Woodlands Farm, Ferry Road, Fiskerton.
52895	TF 0770 7200	Probable site of second Bronze Age hoard from Fiskerton Parish. Four socketed axes are recorded, one of which is now lost while the others were in the possession of Market Rasen Grammar School.
52892	TF 0937 7166	Sword found in 1872 by William Buckle while cleaning and deepening the Barlings Eau at Short Ferry; 1.37 to 1.42m long.
52894	TF 0896 7120	Log boat (Fox type IIB) found sealed beneath peat at Short Ferry, in March 1952. Excavated and deposited with Lincoln City and County Museum; 7.3m long by 0.6m wide.
52896	TF 0564 7155	Viking Sword of the 9 th century found in 1954 on the northern bank of the Witham at Fiskerton, just upstream of the Five Mile House. The blade is plain, but the pommel and handgrip would have been decorated. Vestiges of a wooden scabbard adhere to the blade.
52913	TF 0600 7214	Ridge and furrow earthworks north of the Witham and to the east of Fiskerton.
61465	TF 0636 7135	Ridge and furrow earthworks south of the Witham in Heighington Parish, probably part of medieval field system.
52906	TF 0960 7130	Medieval monastic grange and fishery belonging to Stainfield Priory and known as 'Barling Mouth', in the angle of the confluence of the River Witham and the Barlings Eau, Short Ferry. Constructed on a raised mound, excavation revealed remains of a stone building, fishing and fish processing equipment. Artefacts included the remains of a stamped curfew, fish smokers and net sinkers. Pottery continued into the post-medieval period.
52908	TF 0965 7134	Medieval and post-medieval material recovered during the construction of Short Ferry Marina, among which was a considerable quantity of pottery. Latter included Nottingham, Toynton, Bourne, shelly, Tudor-Green, Cistercian, Midlands Yellow, French Polychrome, Lincoln wares and German and Flemish stonewares.
51212	-	Unlocated sites of medieval fisheries belonging to Stainfield Priory, which had a number of such stations on the Witham and Barlings Eau.

Long Wood, Fiskerton: listed in the Nature Conservancy Council's inventory of ancient woodland. Ancient woodland status considered

50668

TF 0800 7215

SMR Code	NGR	Description
		probable.
52901	TF 0890 7120	Fiskerton Sluice, Short Ferry. Situated one mile upstream of Bardney Lock, this sluice was constructed as part of the scheme to improve the navigation and drainage of the river; the river was raised and embanked between 1812 and 1830 under the supervision of John Rennie. The sluice allowed excess water to be diverted into the old river channel surrounding Branston Island.
52909	TF 0800 7190	Disused brickyard at Wood End Farm, Fiskerton, not shown on First Edition Ordnance survey of 1830 map, so probably later.
54611	TF 0839 7185	Boundary ditch and land drains, probably 19 th century in date, exposed during evaluation of field to east of Wood End Farm, Fiskerton.
52879	TF 0300 7270	RAF Fiskerton and associated buildings – airfield opened in 1943 and closed in 1946.
54612	TF 0831 7178	Undated ditches and associated features exposed during excavation near Short Ferry.
		SITE 5
	(27 entri	ies - those in italics being situated within the proposed flood storage area)
52898	TF 0940 7140	Broken leaf shaped 'point' (arrowhead?) found while digging a drain at Short Ferry Marina by Mr and Mrs Shooter. Probably Neolithic.
54162	TF 1020 7172	Late Neolithic to Early Bronze Age features, including pits, gullies, ditches and a possible round barrow ditch, found to west of Top Farm, Stainfield, during an evaluation by PCA.
54161	TF 1022 7173	Late Neolithic to Early Bronze Age Pottery found to west of Top Farm, Stainfield, during an evaluation by PCA.
53836	TF 1014 7167	Cropmark indicating presence of round barrow or other mounded feature to west of Top Farm, Stainfield.
53835	TF 1074 7181	Cropmark defining ring ditch of round barrow, situated to the south-east of The Hermitage, Stainfield.
53840	TF 1081 7128	Cropmark defining ring ditch of round barrow, situated just inside Bardney Parish, to the south of The Hermitage, Stainfield.
53842	TF 1103 7113	Cropmark defining ring ditch of round barrow, situated a little to the north of Bardney Abbey.
61454	TF 0973 7122	Food vessel found on northern edge of Branston Island – 'a curious urn with four feet' found around 1869, at a considerable depth in sand adjacent to the River Witham. Possibly the same item as a food vessel in the Trollope Collection (LM 88.50); 0.15m diameter and 0.13m high. (see <i>Arch. Jour.</i> XXVI: 288)
51197	TF 1126 7246	Early Bronze Age axe hammer found while ploughing just to the north of Little South Wood and north-east of the Old Posthouse, Stainfield Parish. Made from stone originating in County Durham.
51205	TF 0962 7150	Two log boats found whilst recutting a drain close to the present course of the Witham, south-east of Short Ferry. Broken up and reburied.

SMR Code	NGR	Description
51206	TF 0974 7157	Fragment of a log boat found in 1976, south-east of Short Ferry Bridge.
51203	TF 0990 7158	Fragment of a log boat found in 1953 to the east of Short Ferry.
60478	TF 103 709	Part of bottom and side of a log boat found in 1976 during ploughing – remainder may still be <i>in-situ</i> . Known as 'Bardney 3', it was an oak vessel, the exposed portion being 2.25m long by 0.6m wide and up to 0.12m thick.
52892	TF 0937 7166	Sword found in 1872 by William Buckle while cleaning and deepening the Barlings Eau at Short Ferry; 1.37 to 1.42m long.
52907	TF 0965 7134	Romano-British pottery found during the construction of Short Ferry Marina.
51196	TF 1044 7200	Romano-British pottery – number of sherds, possibly from a single pot, recovered after part of the field to the north-west of The Hermitage, Stainfield, had been bulldozed. Found by Mr Allerton, now in LCCM 134.56.
51204	TF 0944 7165	Penny of Edward the Confessor found on the bank of the Barlings Eau by Short Ferry Bridge. A trefoil quadrilateral (BM type 3), obv. '+EDP RD REX' rev. '+COIGRIM ON LONCOL'.
52906	TF 0960 7130	Medieval monastic grange and fishery belonging to Stainfield Priory and known as 'Barling Mouth', in the angle of the confluence of the River Witham and the Barlings Eau, Short Ferry. Constructed on a raised mound, excavation revealed remains of a stone building, fishing and fish processing equipment. Artefacts included the remains of a stamped curfew, fish smokers and net sinkers. Pottery continued into the post-medieval period.
52908	TF 0965 7134	Medieval and post-medieval material recovered during the construction of Short Ferry Marina, among which was a considerable quantity of pottery. Latter included Nottingham, Toynton, Bourne, shelly, Tudor-Green, Cistercian, Midlands Yellow, French Polychrome, Lincoln wares and German and Flemish stonewares.
53838	TF 0984 7155	Ridge and furrow earthworks to the east of Short Ferry Marina, probably later medieval.
51210	TF 103 712	Medieval monastic fishery belonging to Stainfield Priory and known as 'Maidengarth', situated at the junction of the River Witham and the Snakeholme Drain, to the south-east of Short Ferry.
51212	-	Unlocated sites of medieval fisheries belonging to Stainfield Priory, which had a number of such stations on the Witham and Barlings Eau.
50684	TF 1190 7200	Little South and Holme Woods – post-medieval woodland south of Stainfield: 34ha classified as semi-natural and 33ha as plantation; included in Nature Conservancy Council's inventory of Ancient Woodland.
53832	TF 1082 7167	Undated cropmark of linear boundary ditch, situated to the south-east of The Hermitage, Stainfield Parish.
53834	TF 113 716	Undated cropmarks of linear features, possible rectilinear enclosures, two dark elliptical areas and other possible features, situated to the east of The

SMI Cod		Description
		Hermitage, Stainfield and immediately west of Little South and Holme Woods.
5384	TF 1140 7108	Undated cropmarks, including an enclosure and associated linear features, situated to the north of Bardney Abbey.
-		SITE 7
	`	ries - those in italics being situated within the proposed flood storage area)
5289	7140 TF 0940 7140	Broken leaf shaped 'point' (arrowhead?) found while digging a drain at Short Ferry Marina by Mr and Mrs Shooter. Probably Neolithic.
5018	7 TF 0939 7324	Barlings and Stainfield round barrow cemetery in two groups. Western scheduled area (SAM 20809) contains 4 bowl barrows. The eastern area (SAM 21472) contains at least 11 round barrows of varying form – at least 3 have two encircling ditches.
5042	25 TF 0953 7359	Flint scraper found by N Field while surveying Stainfield Barrow cemetery.
5300	TF 0865 7299	Upper stone of an Iron Age or Romano-British beehive quern situated outside the farmhouse at Abbey Farm, Low Barlings.
5300	75 TF 0865 7299	Upper stone of an Iron Age or Romano-British beehive quern situated outside the farmhouse at Abbey Farm, Low Barlings.
5302	TF 0960 7280	Cropmarks of possible prehistoric enclosure at north-west corner of Stainfield Fen.
5289	72 TF 0937 7166	Sword found in 1872 by William Buckle while cleaning and deepening the Barlings Eau at Short Ferry; 1.37 to 1.42m long.
5120	04 TF 0944 7165	Penny of Edward the Confessor found on the bank of the Barlings Eau by Short Ferry Bridge. A trefoil quadrilateral (BM type 3), <i>obv</i> . '+EDP RD REX' <i>rev</i> . '+COIGRIM ON LONCOL'.
5421	TF 0891 7351	Barlings Priory/Abbey – a Premonstratensian house founded in 1154. Only a small portion of the church stands above ground, this having 13 th century components. Rest of complex evident as extensive area of well defined earthworks including fishponds and leets (SAM 103).
5301	TF 0915 7320	Possible monastic canal – the present course of the Barlings Eau to the south of Barlings Abbey is relatively straight and runs against the eastern edge of the Abbey on Oxeney Island. This suggests the possibility that this is a monastic construction to enable navigation to the Witham.
512	TF 0940 7260	Possible site of a medieval fishery on the Barlings Eau at north-west corner of Stainfield Fen. Possibly the fishery belonging to Stainfield Priory known as 'The Odds' ('Le Aldra) in 1538.
5290	06 TF 0960 7130	Medieval monastic grange and fishery belonging to Stainfield Priory and known as 'Barling Mouth', in the angle of the confluence of the River Witham and the Barlings Eau at Short Ferry. Constructed on a raised mound, excavation revealed remains of a stone building, fishing and fish processing equipment. Artefacts included the remains of a stamped curfew, fish smokers and net sinkers. Pottery continued into the post-medieval period.

SMR Code	NGR	Description
52908	TF 0965 7134	Medieval and post-medieval material recovered during the construction of Short Ferry Marina, among which was a considerable quantity of pottery. Latter included Nottingham, Toynton, Bourne, shelly, Tudor-Green, Cistercian, Midlands Yellow, French Polychrome, Lincoln wares and German and Flemish stonewares.
51209	TF 1000 7310	Possible monastic canal – the present course of the Stainfield Beck from the Barlings Eau, east to Stainfield Priory is relatively straight and deep, raising the possibility that this is a monastic construction to enable navigation to the Witham.
51212	-	Unlocated sites of medieval fisheries belonging to Stainfield Priory, which had a number of such stations on the Witham and Barlings Eau.
53016	TF 0917 7313	Earthwork mounds, possibly of medieval date, to south-east of Barlings Abbey.
50668	TF 0800 7215	Long Wood, Fiskerton: listed in the Nature Conservancy Council's inventory of ancient woodland. Ancient woodland status considered probable.
53013	TF 0863 7280	Water pumping engine - wind-powered pump erected to the south of Abbey Farm. Site indicated on 1824 Ordnance Survey map as 'water engine'.
52909	TF 0800 7190	Disused brickyard, not shown on First Edition Ordnance survey or 1830 map, so probably later.
54611	TF 0839 7185	Boundary ditch and land drains, probably 19 th century in date, exposed during evaluation of field to east of Wood End Farm, Fiskerton.
53006	TF 0860 7299	Old gravel pit next to Abbey Farm, Low Barlings, which was depicted on Ordnance Survey map of 1956 (1: 10, 560).
53017	TF 0810 7310	Undated linear ditch system and enclosures to west of Abbey Farm, Low Barlings; observed on aerial photographs.
54612	TF 0831 7178	Undated ditches and associated features exposed during excavation near Short Ferry.
53022	TF 0955 7275	Undated probable cropmark enclosure at north-west corner of Stainfield Fen.
		SITE 8
	(36 entr	ies - those in italics being situated within the proposed flood storage area)
54162	TF 1020 7172	Late Neolithic to Early Bronze Age features, including pits, gullies, ditches and a possible round barrow ditch, found to west of Top Farm, Stainfield, during an evaluation by PCA.
54161	TF 1022 7173	Late Neolithic to Early Bronze Age Pottery found to west of Top Farm, Stainfield, during an evaluation by PCA.
53836	TF 1014 7167	Cropmark indicating presence of round barrow or other mounded feature to west of Top Farm, Stainfield.
53835	TF 1074 7181	Cropmark defining ring ditch of round barrow, situated to the south-east of The Hermitage, Stainfield.

SMR Code	NGR	Description
53840	TF 1081 7128	Cropmark defining ring ditch of round barrow, situated just inside Bardney Parish, to the south of The Hermitage, Stainfield.
53842	TF 1103 7113	Cropmark defining ring ditch of round barrow, situated a little to the north of Bardney Abbey.
60478	TF 103 709	Part of bottom and side of a log boat found in 1976 during ploughing – remainder may still be <i>in-situ</i> . Known as 'Bardney 3', it was an oak vessel, the exposed portion being 2.25m long by 0.6m wide and up to 0.12m thick.
51162	TF10506990	Log boat found in 1814 when a drain was cut near Horsley Deeps. Possibly the same as 'Bardney 1' found c. 1815, which was 9.15m long by 1.4m wide.
51142	TF 1037 7004	Remains of a log boat uncovered at Bardney Lock; possibly the same as 51162.
51140	TF 1136 7061	Possible prehistoric pottery found during early 20 th century excavations at Bardney Abbey. Found in the area of the north aisle of the choir of the abbey church, may also be medieval.
51138	TF 1136 7061	Romano-British pottery found during excavations on a vestry running along the north aisle of the choir of the abbey church at Bardney Abbey.
52594	TF 1205 7085	Romano-British tile found in field to the east of Bardney Abbey.
54218	TF 1211 7069	King's Hill - east of Bardney Abbey and north of Bardney village. A suboval mound 25m long, by 13m wide and 2.5m high, it is traditionally thought to be an Anglo-Saxon barrow containing Aethelred of Mercia – no evidence of prehistoric origins when excavated in 1912, and only four skull fragments were found. Has since been suggested that it is a medieval pillow mound as field is called 'Coneygarth'. Protected as a Scheduled Ancient Monument (SAM 286).
50477	TF 1211 7069	King's Hill, east of Bardney Abbey and north of Bardney village. A sub- oval mound 25m long, by 13m wide and 2.5m high, it is traditionally thought to be an Anglo-Saxon barrow containing either Oswald of Northumbria or Aethelred of Mercia. It was excavated in 1912, but only four skull fragments were found and there was no obvious stratification. Has since been suggested that it is a medieval pillow mound as field is called 'Coneygarth'. Protected as a Scheduled Ancient Monument (SAM 286).
51163	-	Viking period axe head found near Horsley Deeps c. 1815. Now in the Society of Antiquaries collection.
51210	TF 103 712	Medieval monastic fishery belonging to Stainfield Priory and known as 'Maidengarth', situated at the junction of the River Witham and the Snakeholme Drain, to the south-east of Short Ferry.
51148	TF10877069	Possible monastic canal – the lower part of the Bardney Beck to the west of Bardney Abbey is relatively straight and may have been widened to enable navigation to the Witham.
54217	TF1135 7061	Bardney Abbey – founded pre AD697, with Aethelred of Mercia becoming its abbot in AD705. It was destroyed by the Danish army in 870 and refounded by Gilbert de Gant in 1087. Latter foundation was a

SMR Code	NGR	Description
		Benedictine Priory on the present site, which was dependent on Charroux, but was raised to abbey status in 1115. Dissolved in 1538, with six monks being executed after the Lincolnshire Rising. Excavated in 1909-14, 1933 and 1974. Protected as a Scheduled Ancient Monument (SAM 22619).
51144	TF 1122 7064	Foundations of a possible monastic barn situated within the outer courtyard of the Bardney Abbey precinct. It was excavated in 1910 and found to be 77.9m long by 7.2m wide, with walls 0.75m thick, and later sub-divisions. An 85m long stable block was also excavated to the north
51145	TF 1124 7037	Group of fishponds and associated earthworks to the west and south-west of Bardney Abbey.
51143	TF 1126 7071	A circular foundation of a windmill or dovecote, of c. 6.5m diameter, situated within the precinct of Bardney Abbey.
53844	TF 1170 7058	Ridge and furrow earthworks to the east of Bardney Abbey; probably part of associated medieval field system.
51147	TF 123 714	Supposed site of late medieval brickworks at Tile House Beck, to the north-east of Bardney Abbey. Reputed to be the site producing bricks that were used to construct the chancel of St Lawrence's Church, Bardney, in c. 1434.
50276	TF 128 717	Supposed former moated site at Butyate, south-west of Grange Farm, Bardney. Site was occupied during 19 th century by a small farm, Butchett Farm, which is reported to have included a small moated area that was levelled in 1967. However, the Ordnance survey map of 1886 shows a series of ponds that are clearly clay pits associated with a brickyard. The latter had ceased to work by 1926, but had operated within living memory at that time. Spreads of brick and tile visible after ploughing this area is almost certainly a residue of the brickworks. It is therefore debatable as to whether 'moat' ever existed.
50684	TF 1190 7200	Little South and Holme Woods – post-medieval woodland south of Stainfield: 34ha classified as semi-natural and 33ha as plantation; included in Nature Conservancy Council's inventory of Ancient Woodland.
50689	TF 1300 7030	Scotgrove Wood – post-medieval woodland north-east of Bardney: 28ha classified as semi-natural and 17ha as plantation; included in Nature Conservancy Council's inventory of Ancient Woodland.
53087	TF 1160 7050	A red brick water tower of two storeys, probably of 19 th century, with an iron tank on the top.
51141	TF 1282 7158	Site of brickyard south-west of Grange Farm, Bardney, which had ceased to work by 1926, but had operated within living memory at that time. Spreads of brick and tile visible after ploughing this area is almost certainly a residue of the brickworks. The Ordnance survey map of 1886 shows a series of ponds that are clearly clay pits associated with the
		brickworks.
51152	TF 1185 7053	Possible trackway or road running between Abbey Farm and King's Hill Bardney. Situated in field called 'Coney Green' or 'Kale Green' to the east of the abbey, the road was 5.5m wide and 0.45m thick, it surface being
		composed of stones, shells and fossils. It was observed in 1920s, at a depth of 3.35m, raising the possibility that it was actually a gravel filled Pleistocene palaeo-channel.
		r

SMR Code	NGR	Description
53839	TF10587051	Undated cropmark enclosure to the west of Bardney Abbey and adjacent to the Old Witham.
53832	TF 1082 7167	Undated cropmark of linear boundary ditch, situated to the south-east of The Hermitage, Stainfield Parish.
53834	TF 113 716	Undated cropmarks of linear features, possible rectilinear enclosures, two dark elliptical areas and other possible features, situated to the east of The Hermitage, Stainfield and immediately west of Little South and Holme Woods.
53841	TF 1140 7108	Undated cropmarks, including an enclosure and associated linear features, situated to the north of Bardney Abbey.
53843	TF 1155 7064	Undated enclosure and rabbit warrens running along the eastern edge of the precinct of Bardney Abbey.
53846	TF 1146 7030	Earthwork remains of Second World War searchlight battery situated to the south of Abbey Farm, Bardney.
53847	TF 1463 7069	RAF Bardney - airfield and associated buildings opened in April 1943 and closed in 1945. It was reopened in 1959, remaining in operation until finally closed in 1963.
		SITE 9
	(33 entr	ies - those in italics being situated within the proposed flood storage area)
50187	TF 0939 7324	Barlings and Stainfield round barrow cemetery in two groups. Western scheduled area (SAM 20809) contains 4 bowl barrows. The eastern area (SAM 21472) contains at least 11 round barrows of varying form – at least 3 have two encircling ditches.
50425	TF 0953 7359	Flint scraper found by N Field while surveying Stainfield Barrow cemetery.
53001	TF 0865 7299	Upper stone of an Iron Age or Romano-British beehive quern situated outside the farmhouse at Abbey Farm, Low Barlings.
53002	TF 0865 7299	Upper stone of an Iron Age or Romano-British beehive quern situated outside the farmhouse at Abbey Farm, Low Barlings.
53021	TF 0960 7280	Cropmarks of possible prehistoric enclosure at north-west corner of Stainfield Fen.
53058	TF 0900 7365	Anglo-Saxon spearhead, found at Barlings Abbey.
53004	TF 0904 7362	Broken late Anglo-Saxon spearhead found in the bank of the Barlings Eau, at Barlings Abbey.
53003	TF 0890 7350	Medieval lead spindle whorl and flat bronze ring found at Barlings Abbey.
53007	TF 0890 7350	Unscheduled components of Barlings Abbey, which include reservoirs, drains, fish sorting tanks and ponds.
52999	TF 0890 7360	Medieval limestone net sinker found in Barlings Eau at Barlings Abbey.
54215	TF 0891 7351	Barlings Priory/Abbey – a Premonstratensian house founded in 1154. Only

SMR Code	NGR	Description
		a small portion of the church stands above ground, this having 13 th century components. Rest of complex evident as extensive area of well defined earthworks including fishponds and leets (SAM 103).
53012	TF 0915 7320	Possible monastic canal – the present course of the Barlings Eau to the south of Barlings Abbey is relatively straight and runs against the eastern edge of the Abbey on Oxeney Island. This suggests the possibility that this is a monastic construction to enable navigation to the Witham.
51192	TF 0935 7414	Monastic canal – the present course of Apley Beck from the Barlings Eau, north-east to Bullington Priory, where it is relatively straight and deep. The provision for the construction of a canal is mentioned in a grant to the priory at the end of the 12 th century, this proposed feature being described as a fosse or ditch two perches (10.0m) broad 'for the easy transit of ships' from the Barlings Eau.
51211	TF 0940 7260	Possible site of a medieval fishery on the Barlings Eau at north-west corner of Stainfield Fen. Possibly the fishery belonging to Stainfield Priory known as 'The Odds' ('Le Aldra) in 1538.
53830	TF 0982 7440	Ridge and furrow earthworks immediately east of 'Court House Farm', Apley, probably part of late medieval field system.
51209	TF 1000 7310	Possible monastic canal – the present course of the Stainfield Beck from the Barlings Eau, east to Stainfield Priory is relatively straight and deep, raising the possibility that this is a monastic construction to enable navigation to the Witham.
53831	TF 1031 7321	Cropmarks relating to the medieval grange (Stainfield Grange) and associated ridge and furrow.
50373	TF 1036 7300	Cropmark complex to south-west of Stainfield Manor House, includes linear and curvilinear features (possible trackways), a ring ditch, pits, a rectangular enclosure, and field boundaries. The northern edge of this complex is overlain by further cropmarks representing ridge and furrow.
54216	TF 1115 7322	Stainfield nunnery – earthwork site surviving in parkland surrounding Stainfield Hall and representing part of a palimpsest of pre-monastic village, nunnery, new village site, 16^{th} century house, 17^{th} century formal garden, early 18^{th} century garden. House of Benedictine nuns founded in or before reign of Henry II (1154 - 89) and dissolved in 1536 when nuns were transferred to Stixwould. Protected as a Scheduled Ancient Monument (SAM 22608).
53603	TF 1130 7290	Stainfield deserted medieval village – a settlement was recorded in the Domesday Book, but the surviving earthwork remains appear to be those of a planned settlement, probably laid out in the 12 th century after the founding of the nunnery. The village was finally cleared during Sir Philip Tyrwhitt's emparking and creation of the formal gardens in the first decade of the 17 th century.
53016	TF 0917 7313	Earthwork mounds, possibly of medieval date, lying just to south-east of Barlings Abbey.
52996	TF 0870 7360	Part of ruined building with a blocked, mullioned window reused as the back of a fireplace, the latter of 15 th - 16 th century type. Possibly part of Barlings Abbey or a post-Dissolution structure.

SMR	NGR	Description
53019	TF 0870 7360	Fragments of masonry of medieval date (some 14 th century), incorporated into Tudor House next to Barlings Abbey (see also 52996).
53009	TF 0890 7345	Site of post-medieval hall constructed within the precinct of Barlings Abbey. An early 17 th century structure, which may have incorporated elements of the medieval monastic fabric.
51190	TF 0970 7450	Apley Low House a post-medieval building, now called 'Court House Farm', which has a rear wall built from ashlar blocks, with similar high quality stone being used in some of the associated outbuildings. This stone was probably brought from nearby Barlings Abbey, which lies to southwest
53602	TF 1115 7322	Stainfield Hall – post-medieval manor house and landscaped garden remains. The garden remains lie to the south, east and west of the hall, and overlie the remains of the nunnery. The Tyrwhitt family, who occupied the hall from the Dissolution to the late 18th century, constructed the garden, which includes a bowling green, terraces, ponds, wilderness and kitchen gardens. The gardens are protected as a Scheduled Ancient Monument (SAM 22608).
50201	TF 1118 7320	St Andrew's Church, Stainfield – built in brick in 1711 on a north-south orientation to form a vista in the early 18 th century park of the adjacent hall.
50683	TF 1100 7380	Foxhall Wood – post-medieval woodland north of Stainfield Hall: 5ha classified as semi-natural and 17ha as plantation; included in Nature Conservancy Council's inventory of Ancient Woodland.
53006	TF 0860 7299	Old gravel pit next to Abbey Farm, Low Barlings, which was depicted on Ordnance Survey map of 1956 (1: 10, 560).
53829	TF 0943 7431	Old gravel pit to west of Court House Farm, Apley, which was depicted on Ordnance Survey map of 1956 (1: 10, 560).
53837	TF 0966 7375	Old clay pit to the east of Barlings Abbey and south of Court House Farm, Apley, which was depicted as such on Ordnance Survey map of 1956 (1: 10, 560).
53008	TF 0833 7408	Earthworks, possibly representing a post-medieval drainage system, to north of Barlings Abbey.
53022	TF 0955 7275	Undated probable cropmark enclosure at north-west corner of Stainfield Fen.

Appendix 12.2: Aerial photographs

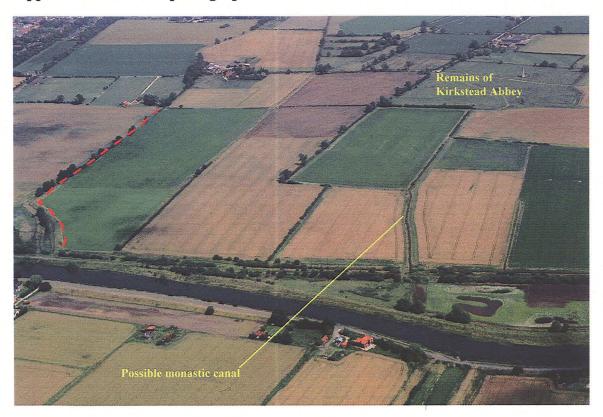


Plate 1: Site 1, northern half, looking east. The proposed location of the cross-bank forming the northern perimeter of the flood relief area is shown in red.



Plate 2: Site 1 – the precinct of Kirkstead Abbey, looking south-east. The location of the southern end of the cross-bank situated at the north-eastern corner of the proposed flood relief area is shown in red.

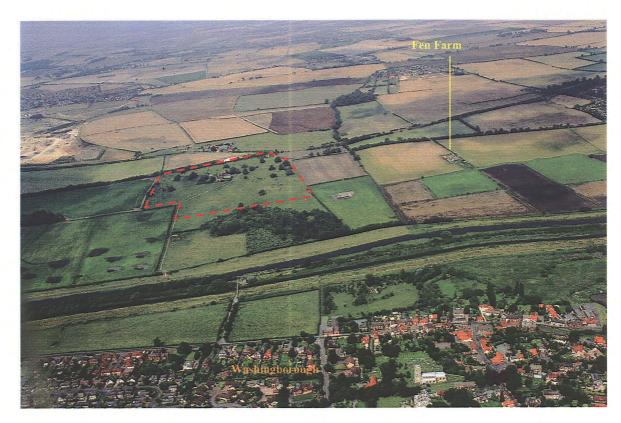


Plate 3: Site 3 – the western end at Greetwell, looking north. Greetwell shrunken medieval village is outlined in red.



Plate 4: Site 3 – the central section to the south of Cherry Willingham, looking north-west.



Plate 5: Site 3 – the eastern end at Fiskerton, looking west. The projected alignment of the Iron Age timber causeway is shown in red.



Plate 6: Site 5, looking west. A: Short Ferry; B: Top Farm, Stainfield; C: The Hermitage; D: Branston Island; E: Snakeholme Drain, with Site 8 situated to its left.



Plate 7: Sites 5 and 8, looking south-west. A: The Hermitage; B: Site 5; C: Snakeholme Drain; D: Site 8; E: Old River Witham.



Plate 8: Sites 7 (and 4), looking south-east. A: Site 7; B: Short Ferry; C: Branston Island; D: Site 4, with 'Fiskerton borrow pit' visible adjacent to code letter; E: Long Wood.



Plate 9: Sites 7 and eastern end of Site 4, looking north. A: Site 4, with location of proposed cross-bank at eastern end shown in green; B: 'Fiskerton borrow pit'; C: Site 7; D: Abbey Farm, Low Barlings; E: Barlings Abbey; F: Site 9.



Plate 10: Site 8, looking east. A: Site 8; B: Snakeholme Drain; C: Site 5; D: Abbey Garth, site of Bardney Abbey; E: Branston Island.



Plate 11: Site 8, south-west corner showing site of Bardney Abbey, looking south-east. The location of the proposed cross-bank is shown in red.