

AN ARCHAEOLOGICAL DESK TOP ASSESSMENT  
BY  
PRE-CONSTRUCT ARCHAEOLOGY

# WIDE BARGATE BOSTON LINCOLNSHIRE





**Wide Bargate  
Boston**

**An Archaeological Desk Top Assessment  
for  
ASDA Stores Ltd**

**Pre-Construct Archaeology  
66 School Lane  
Silk Willoughby  
Sleaford  
Lincolnshire  
NG32 8PH**

**Phone and fax 0529 302874**

**© Pre-Construct Archaeology  
December 1993**

## CONTENTS

I.	Non Technical Summary	1
II.	Introduction	3
III.	The Proposed Scheme	4
	i. Location	
	ii. The proposed scheme	
IV.	Planning Background	5
	i. Archaeology in Boston and the LDP	
	ii. Report Objectives	
	iii. Method	
V.	Geology and Topography	6
	VI. The Archaeological and Historical Background	7
	VII. The Archaeological and Archaeo-Environmental Potential	12
	VIII. Impacts on the Buried Archaeological Deposits	16
	i. Previous Land Use	
	ii. The Construction Design	
	iii. Contamination	
IX.	Mitigations	18
X.	Conclusions	20
	i. Summary of potential	
	ii. Damage to existing deposits	
	iii. Further Work	
XI.	Acknowledgements	21
XII.	Appendices	
	i. Bibliography	22
	ii. Maps Consulted	23

### Figures

Cover	The 1906 Ordnance Survey map (Compare with Figure 4)	
Figure 1.	Site and Boston location plan.	2
Figure 2.	The site as existing.	4
Figure 3.	Archaeological findspots	8
Figure 4.	The 1829 Plan of Boston and the 1948 Ordnance Survey map	10
Figure 5.	A schematic north to south section across the site	15
Figure 6.	An outline of the proposed redevelopment with areas of high impact shown	17
Figure 7	The Robert Hall map of 1741	21



## I. NON TECHNICAL SUMMARY

HLM Architects have applied for planning permission to develop 69, Wide Bargate, Boston. (Figure 1) The Site boundaries are Wide Bargate/Horncastle Road in the east, the rear of properties fronting on to Hartley Street in the north, car parking lots of the ASDA Foodstore in the west, and the Access road to the ASDA Foodstore in the south. The Site is approximately 0.2 hectares in extent.<sup>1</sup> The central National Grid Reference is TF 3308 4463.

The archaeological potential The Site is moderately low but palaeo-environmental potential at may be high archaeological features dating from the Roman era to modern possibly present, and archaeo-environmental evidence ranging in date from the pre-Roman to the post-medieval periods.

However, impacts caused to any surviving buried archaeological and archaeo-environmental deposits are anticipated to be high in specific locations, in particular at the location of the petroleum storage tanks and the piles for the petrol pump canopy. Elsewhere the severity of the impacts are likely to be low to moderate.

There have been borehole investigations at The Site to a maximum depth of 8m below the modern ground surfaces and therefore actual depths of surviving deposits are known. There was no borehole investigation along the street frontage.

---

<sup>1</sup> STATS Geotechnical p.4



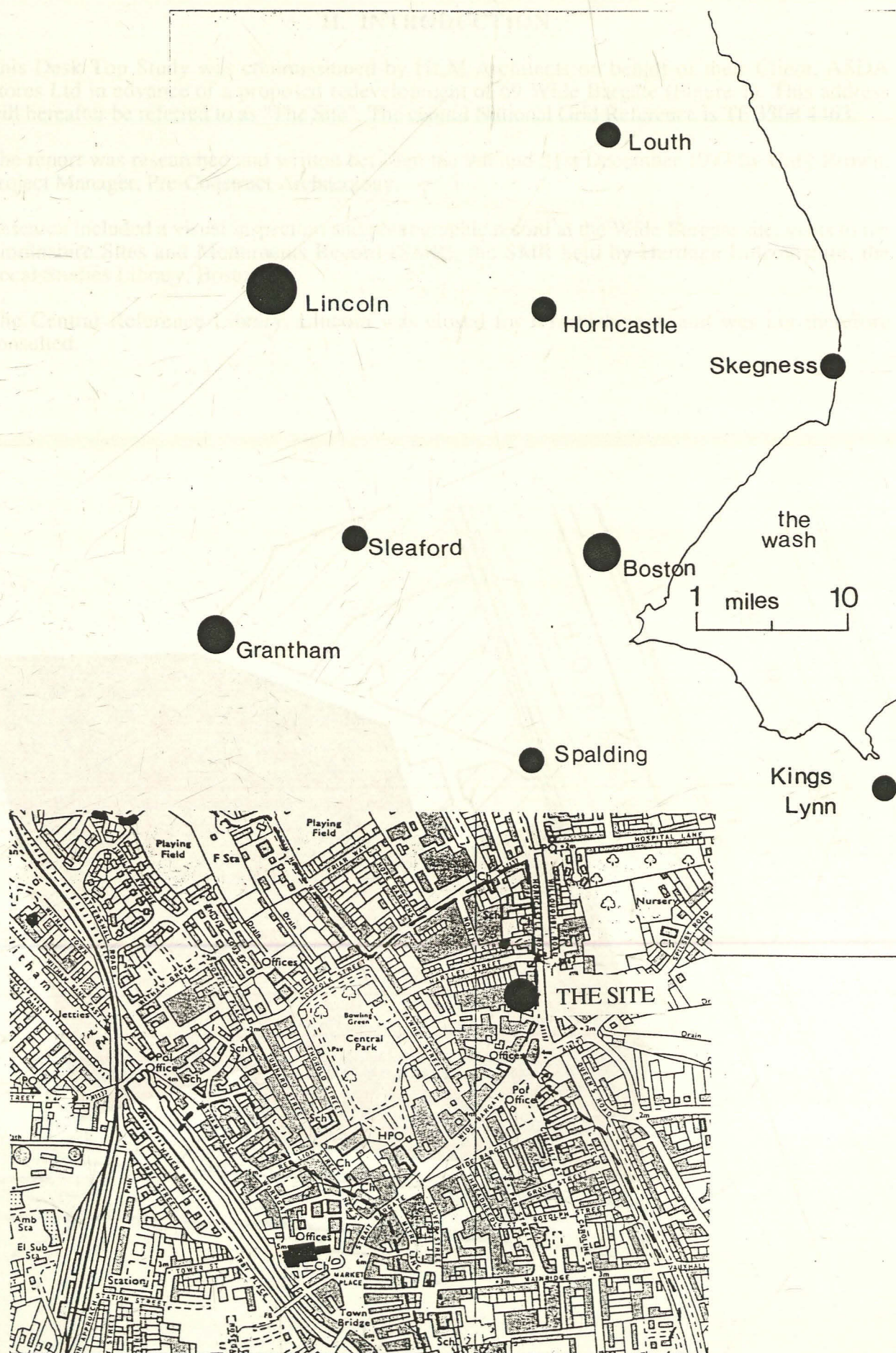


Figure 1. The site location. Plan of principal towns in Lincolnshire, with the location of the development shown on the lower map.



## II. INTRODUCTION

This Desk Top Study was commissioned by HLM Architects on behalf of their Client, ASDA Stores Ltd in advance of a proposed redevelopment of 69 Wide Bargate (Figure 1). This address will hereafter be referred to as "The Site". The central National Grid Reference is TF 3308 4463.

The report was researched and written between the 9th and 21st December 1993 by Gary Brown, Project Manager, Pre-Construct Archaeology.

Research included a visual inspection and photographic record at the Wide Bargate site; visits to the Lincolnshire Sites and Monuments Record (SMR), the SMR held by Heritage Lincolnshire, the Local Studies Library, Boston.

The Central Reference Library, Lincoln was closed for refurbishment, and was not therefore consulted.

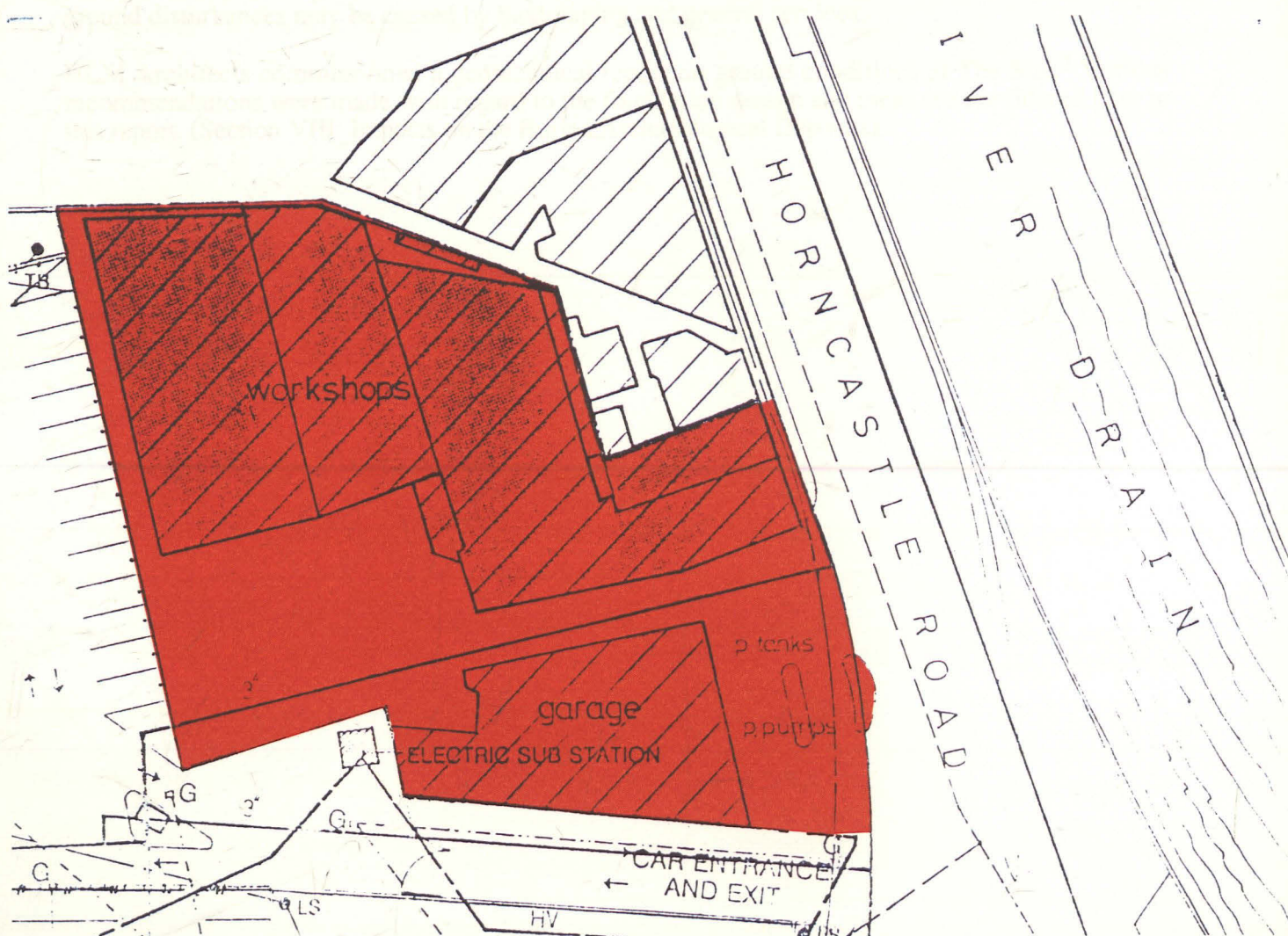


Figure 2. The Site as it currently exists. Note the various components that may have caused impacts to the buried archaeological deposits.



### III. THE PROPOSED SCHEME.

#### i. Location

The Site is located on the east side of Wide Bargate/Horncastle Road, to the north of Bargate End. Currently the greater part of The Site is occupied by a disused garage and workshops (Figure 2). The proposed development will encroach slightly to the west into the existing ASDA Foodstore carparking area.

The Site of the proposed development is irregular in plan, measuring approximately 70m east to west and 42m north to south (maximum dimensions). The redevelopment area covers approximately 0.2 hectares.

#### ii. The Proposed Scheme (Figure 6)

Pre-Construct Archaeology has not received specific construction details concerning the redevelopment of the site, but the plans forwarded by HLM Architects (Drawings A93/0591/01-03) contain sufficient detail for a considered opinion to be made.

Impacts to the buried archaeological heritage may be caused by the construction of a new petrol filling station, kiosks, air and water services and subterranean petroleum storage tanks. Other ground disturbances may be caused by landscaping and general services.

HLM Architects commissioned a geotechnical report on ground conditions at The Site.<sup>2</sup> Various recommendations were made with regard to the foundation design and these are considered later in this report, (Section VIII: Impacts on the Buried Archaeological Deposits).

---

<sup>2</sup> STATS Geotechnical Nov 1993



## IV. PLANNING BACKGROUND

### i. Archaeology in Boston and the Local Development Plan (LDP)

Boston has recognised the importance of the buried archaeological heritage and has included within the LDP (Draft 1993) various conditions regarding the protection or otherwise of buried deposits prior to planning permission being granted (Sections C 11-13). The LDP states that "One important factor to be taken into consideration in evaluating development proposals is the impact on archaeological deposits".<sup>3</sup> The Borough also recognises that where a site "contains archaeological deposits of particular importance it will normally be expected that those deposits should remain undisturbed by development."<sup>4</sup> The document continues, "However where the development proposal is clearly of greater value to the community than the preservation of archaeological remains, or where the minor proposals will involve minimal damage, planning permission may be granted. When planning permission is granted it may be necessary to safeguard the archaeological interest."<sup>5</sup> This Desk Top Study forms the initial phase in the assessment process.

The Boston LDP mirrors advice contained in a Department of the Environment document, "Planning Policy Guidance: Archaeology And Planning (PPG16)." This document identifies the need for early consultation in the planning process to determine the impact of construction schemes upon buried archaeological deposits. Once the results of the Desk Top Assessment and, where necessary, the follow-up trial work is known, an informed decision on the necessity, or otherwise, for further archaeological strategies may be taken. These strategies may include preservation *in situ*, excavation, or a watching brief.

### ii. Report Objectives

This report aims to identify and assess such archaeological remains that might be threatened by construction works associated with the redevelopment at The Site. As noted above, the Desk Top Study forms the first stage in the process of archaeological assessment and may be procedurally followed, if the archaeological potential warrants it, by further assessments, exploratory trial work or watching brief within the defined redevelopment area.

### iii. Method

This survey has been largely based on data recorded in the Boston Sites and Monument Record (SMR) and the Draft Local Development Plan (Sections C11-13) for Boston. Other sources relating to the geological, historical, and archaeological heritage of Boston have also been consulted in order to supplement the above (see Appendix 2, Bibliography).

Square brackets, [] within the text refer to archaeological find spots and historical sites shown on Figure 3.

---

<sup>3</sup> LDP C12 (Explanation)

<sup>4</sup> LDP C13 (Explanation)

<sup>5</sup> LDP *ibid.*



## V. GEOLOGY AND TOPOGRAPHY

Physical examinations of the natural deposits by means of 4 boreholes have been undertaken (October 1993) to a maximum depth of 8m. A mechanically excavated test pit was also undertaken at the same time but the results have not been obtained by Pre-Construct Archaeology.

The nature of the geology below the existing ground level slabs are likely to be rock formations dating from the Jurassic area overlain by a variety of alluvia, including Fen silts. The solid geology likely to be buried at a considerable depth below the alluvia and was not recorded by any of the boreholes.

The alluvia consist predominantly of silts and clays which may be of riverine or marine origins and may also contain horizons of organic peats.

These peat deposits in particular are of considerable archaeological and palaeo-environmental potential and interest. Since the last glaciation the mean sea level has not remained constant, but has risen and fallen on a number of occasions. When the sea level rose this activity is termed marine transgression and when it dropped, marine regression. Transgression phases survive in the geological record as olive green to blue grey silts and clays and the regression phases by fibrous peats.<sup>6</sup>

Alluvium has been recorded on archaeological sites within the study area. At the Corporation Yard/Old Poultry Market Site, and therefore in a relatively similar position to The Site. Here the basal deposit, interpreted as natural was a blue clay which occurred at c+12.42m OD.<sup>7</sup> Alluvial deposits have also been recorded during excavations at 24 & 28-30 Strait Bargate and at Pescod Square, although in both instances the general level of the modern ground surface was lower than at 69 Wide Bargate.

The borehole survey at The Site indicates that at least two thick bands of silts may be present at the site, although the upper deposit is likely to have been horizontally truncated by various anthropogenic activities. The upper deposit is described as being composed of light brown sandy silt with some black organic staining, the top of which occurs at c1.50m below the modern ground surface (approximately +13.00m OD). The lower deposit is composed of brown silt with possible staining, and some lamination evident. The top of this surface occurs c.2m below the modern ground surface, that is approximately at +12.5m OD.

The alluvia should not be considered to be sterile. For example at Pescod Square ceramic and leather artefacts dating to the 14th century were recovered.<sup>8</sup>

<sup>6</sup> Tyers 1988

<sup>7</sup> Trimble & Brown. unpaginated

<sup>8</sup> Symonds p5



## VI. THE ARCHAEOLOGICAL AND HISTORICAL BACKGROUND (Figure. 3)

### i. Introduction

Boston was in the middle ages a port of considerable importance, though the nature of its antecedents is very poorly understood. For example whilst there are very occasional finds dating from the Neolithic and Bronze age eras, there is no evidence for settlement. There are no finds what so ever for the Iron Age era and few from the Roman period. Archaeological investigations at many sites and over a number of years maybe able to address these and other problems relating to the twilight years of Boston.

### ii. Pre-Roman

Few finds of pre-Roman date have been located from within the settlement area of Boston, and those that have tend to be chance finds and are poorly provenanced. In 1955 a Neolithic greenstone axe <sup>[10]</sup> was found on the site of Hardy and Collins in the High Street<sup>9</sup>, but there is no evidence of it being other than a stray find. To the south west of the study area a Bronze Age socketed axe and bronze rapier were found<sup>10</sup> [8] and from the site of 21 Witham Bank East a Late Bronze Age looped palstave was recovered [9].<sup>11</sup> Harden made the observation that no finds of Iron Age date have been recovered from Boston and its surrounding district,<sup>12</sup> and this may be indicative that the land surface was during this period submerged during a marine transgression.

### iii. Roman

As with the pre-Roman periods there is no overwhelming evidence for Roman occupation within the modern settlement area, but it is not as Harden would claim, that is "there are no known Roman artefacts from the town".<sup>13</sup> Roman artefacts have been recovered, suggesting a certain familiarisation with, if not colonisation of, the district. Roman coins have been recovered from Allington Gardens and near to Husseys Tower<sup>14</sup>. Pottery has been found close to the site of St. Johns Hospital and the Fogarty factory<sup>15</sup>, and a scatter of potsherds and cheese wring was recovered from the Woad Farm Primary School.<sup>16</sup> Excavations on the site of the Corporation Yard/Old Poultry Market, a short distance to the south east of the proposed development located a fragment of Samian pottery [11]. As the authors of the excavation report commented, "(during the Roman period)... it had been thought that this part of Boston, if not all the area occupied by the town was under water, or at least part of salt marshes".<sup>17</sup>

A 1st century fort defending a supply route to Lincoln has been postulated as being close to, or within Boston, but physical remains have not been found. Whitwell suggests that such remains may have been shielded beneath thick deposits of silts.<sup>18</sup>

### v. Saxon and Medieval

Early Saxon material is conspicuous by its absence from the boundaries of Boston. This is almost certainly associated with a relatively high sea level and the flooding it caused. Most Early Saxon settlements in the area were restricted to the higher ground on the fen edge.

Some form of settlement almost certainly existed at Boston prior to the Norman invasion of England, although there is no separate entry in the Domesday Book. Instead the greater influence

<sup>9</sup> Boston SMR 05/025

<sup>10</sup> Boston SMR 05/023

<sup>11</sup> Boston SMR 05/024 & EMAB No.10 p.11

<sup>12</sup> Harden p.5

<sup>13</sup> Harden p.5

<sup>14</sup> Information contained on record cards held by the Boston Community Archaeologist

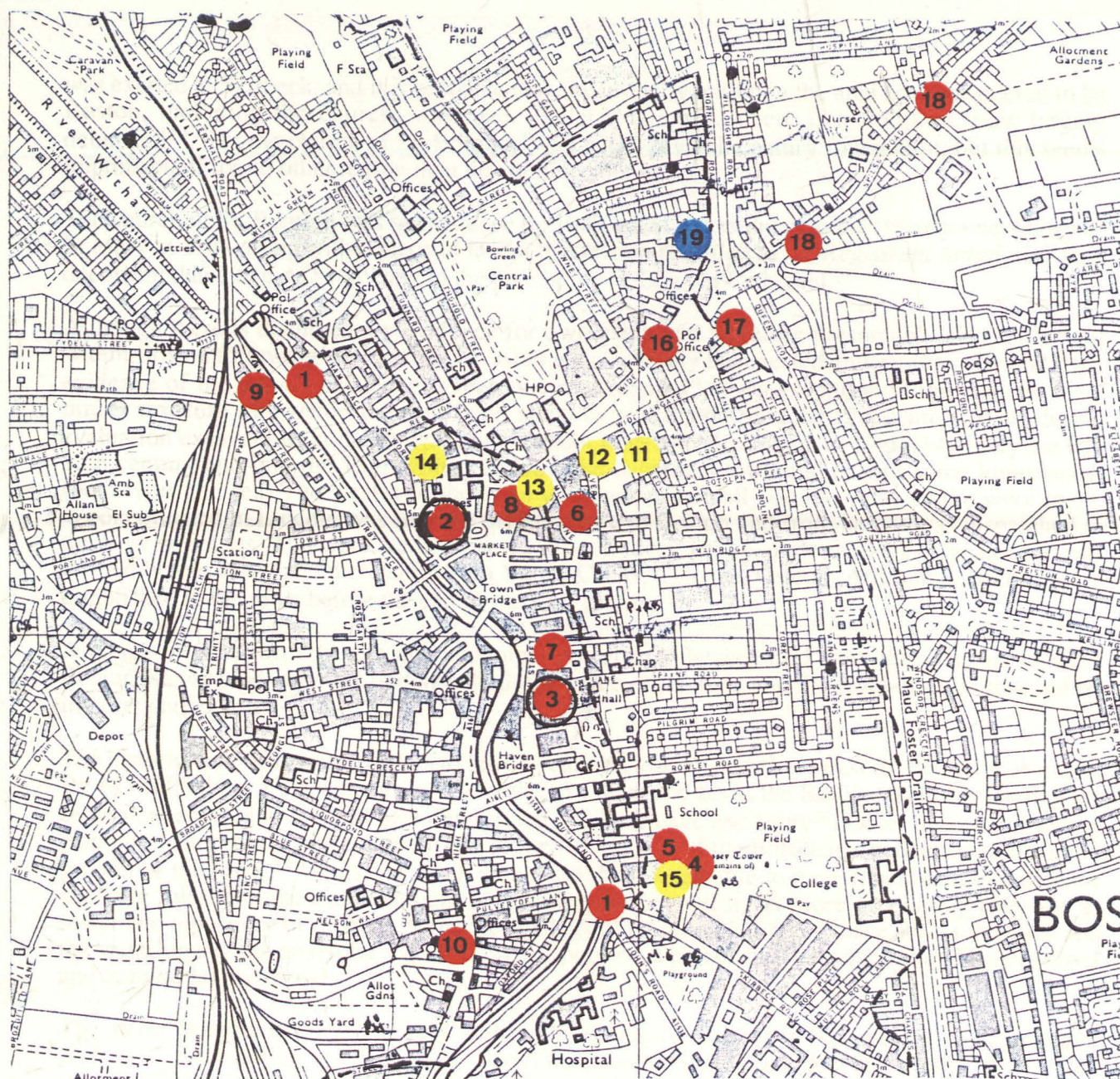
<sup>15</sup> Information as above

<sup>16</sup> EMAB No8 p.14

<sup>17</sup> Trimble & Brown unpaginated

<sup>18</sup> Whitwell p.13





Findspot	SMR	
1	(B) 05/001	Line of the Barditch
2	(B) 05.002	St. Botolph church
3	(B) 05.003	St Mary's Guildhall (15th Century)
4	(B) 05.007	Hussey Tower. Remains of 15th century Hall
5	(B) 05.008	Site of St. John's hospital
6	(B) 05.013	Pescod Hall. (15th century but restored).
7	(B) 05.018	10 South Street. Arches and corbels built into wall. 14th century
8	(B) 05.023	Bronze Age socketed axe and rapier
9	(B) 05.024	Late Bronze Age looped palstave
10	(B) 05.025	Neolithic greenstone axe
11	(B) 05.026	Site of Corporation Yard/Old Poultry Market excavations
12	(B) 05.027	Site of Pescod Square excavations
13	(B) 05.028	Site of Strait Bargate excavations
14	(B) 05.030	Site of Wormgate excavations
15		Site of South End excavations
16	(L)13277	Site of Bargate Pound
17	(L) 13275	Archery butts (documentary evidence)
18	(L) 13280	Spilsby Road. Possibly of medieval origin.
19		The proposed redevelopment site

Figure 3. Archaeological findspots in the vicinity of the proposed redevelopment.



was exerted at Skirbeck, and it is probable that any property within in the area now considered to be Boston, including the church, was made under this entry. There is a tradition, now largely debunked<sup>19</sup>, that the church of St. Botolph<sup>20</sup> [2] was a seventh century foundation, but this seems improbable if for no other reason than that outlined above.

The church of St. Botolph was in existence by 1089 when it was given to the Benedictine Abbey of St Mary at York along with a piece of land a transaction recorded in the *Registrum Antiquissimum*, a document dated to c.AD 1089 and in the possession of Lincoln Cathedral.<sup>21</sup>

Although there is documentary evidence for ownership and therefore presumably also settlement within Boston following the Norman Invasion it has scarcely been tested archaeologically and "the evidence of the town's existence is merely circumstantial".<sup>22</sup> An exception to this may be the a timber structure with wattle and daub walls and provisionally dated to the 12th century found during evaluation excavations at the junction of Fountain Lane and Wormgate in 1989 [14].<sup>23</sup> By the late 12th century and into the 13th century Boston had become a town and port of some importance, (both river and sea). The wealth of the town was built principally on the value of the wool trade. Wool collected in Lincoln was sent via the Fosdyke to Boston and from here it was dispatched to the Low countries. The wool trade attracted other traders, for example the Hansiatic League was formed before 1369, and merchants from Ypres, Calais, Cologne, Ostend, Arras and Gascony were established in the town before the end of the 13th century.<sup>24</sup>

A gauge of the town's wealth and economic power may be assessed from the fact that in 1204 Boston was second only to London in both the value of its trade and the level of duty imposed on imports and exports.<sup>25</sup>

The historic core of Boston appears to have occurred close to, and to the east of, the River Witham. By AD 1200 there are documentary references to a ditch and bank, the Barditch [1], surrounding the settlement areas, and this has been interpreted as a defensive enclosure<sup>26</sup>. Other documents dating from the 13th century make reference to properties outside of the Barditch, a reflection of the rapid growth of the town.<sup>27</sup> Whilst the ditch would still have been able to have functioned in a defence capacity following the establishment of a settlement beyond it, its more productive role was as sewer and repository of rubbish. Some archaeological sampling has taken place across the ditch and the waterlogged and anaerobic conditions have preserved perishable items including leather (shoes and scabbards) and wood.

The street Bargate occurred largely within the enclosure and Strait Bargate and Wide Bargate without it. Excavations at Corporation Yard/Old Poultry Market, of closest proximity to The Site, revealed no structural evidence dating from the medieval period, though ground raising, represented by a series of dumps, had been undertaken.<sup>28</sup> Further west, but outside of the defended enclosure, at Strait Bargate, excavations revealed remains of a similar nature and date [13].

The impression is therefore of land consolidation and reclamation to the north west of the defended enclosure during the 14th and 15th centuries. It is probable that some exploitation of the land occurred during these centuries but this has yet to be determined archaeologically.

Documentary records indicate that by the mid 16th century properties and other uses were being made in Wide Bargate. For example a horse pit is recorded in 1554, and an inn, the Ram was built and in the possession of the manor of Hallgarth in 1564. By the close of the century the Earl of

<sup>19</sup> Dover p.1; Harden p.9

<sup>20</sup> Boston SMR 05/002

<sup>21</sup> Harden p.9

<sup>22</sup> Harden p.9

<sup>23</sup> Thorpe unpaginated

<sup>24</sup> Dover p.9

<sup>25</sup> Dover p.10; Hill p.307

<sup>26</sup> Boston SMR 05/001

<sup>27</sup> Harden p.18

<sup>28</sup> Trimble & Brown Unpaginated



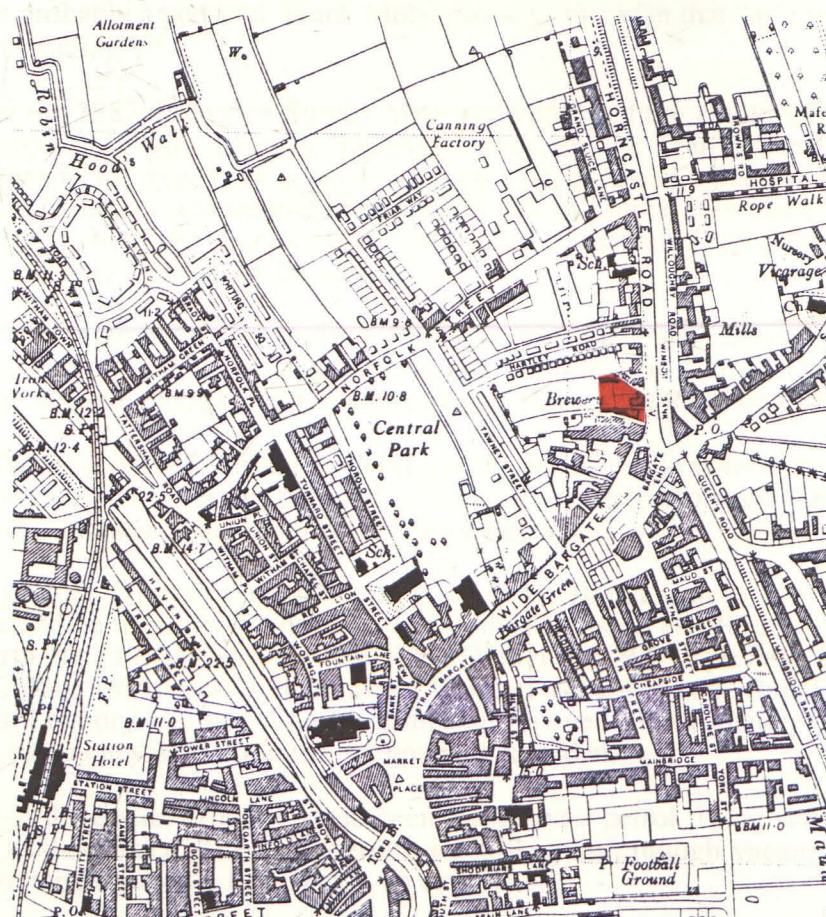


Figure 4. The upper map is a detail from the 1829 Plan of Boston by John Wood, whilst the lower is a detail from the 1947 Ordnance Survey map. The growth of the town to the north east of the site is clearly marked.



Lincoln acquired two acres of land upon which he built a house with two gardens. His neighbour to the south was a Sir Dynsley.<sup>29</sup>

### Post Medieval

In 1601 the Corporation acquired four acres of land in Wide Bargate (including that now known as Corporation Yard?) and in 1623 sheep pens were erected. By 1691 the Bargate Pound [16] had been established, it being to the south-west of The Site.<sup>30</sup> There is no evidence of occupation at the Site and in the absence of other information it is presumed to be open, possibly pasture land.

From the middle of the 18th century there are surviving cartographic representations of the town which can aid in the interpretation of land use.

The earliest of these, that of Robert Hall and dated 1741, is of the highest quality but unfortunately only includes a very small part of The Site, the remainder being beyond the limits of the map. However, it appears that large properties with equally large gardens lined both sides of Wide Bargate right up to the junctions with the Horncastle and Spilsby Roads. Incidentally the sheep pens referred to above are clearly marked and were situated to the south-west of The Site.

Rocque and Dury's pen and wash plan of 1770 is drawn at a small scale and adds no further detail to that provided by Hall. In 1741 a cattle pound was built in Wide Bargate to be followed in 1799 by a pig market.

The 1829 Plan of Boston by John Wood extends north and west of The Site, and indicates that the development area was largely open. A small property with a single outbuilding, and belonging to P. Fold, was located towards the north of the development site. The 1837 2" to the mile Ordnance Survey map is of little use in determining land use but does mark the old and proposed borough boundaries. Moule's plan of 1839 only partly encompasses the study area and adds no further details, which is probably a godsend. Frank Molyneux says this plan that "as a record of the town it is completely misleading".<sup>31</sup>

By the time that the 1887 Ordnance Survey Map was published the empty space at The Site had been filled in, apparently with domestic housing. A brewery, the Rout Green Brewery, forms the southern boundary to the site, (and is better seen on Charles Goad's plan of 1900). The curious diagonal northern boundary was imposed by this date and still remains in place today. Goad's plan indicates that at the turn of the century shops and dwellings extended along the west side of Wide Bargate to the north and south of the brewery.

The 1894 Kelly Trade Directory lists that at 69 Wide Bargate there were in occupancy: M. Crowden of Holland House; Mrs A Woodthorpe, blacksmith; Thorns Son & Co., Cigar manufacturers, whilst at 71 there was the Three Crowns Inn. Number 6 Horncastle Road was vacant.

Neither the 1906 nor the 1947 Ordnance Survey maps are of use in determining land use, though they indicate that extending over this period there had been no redevelopment. Of note for this study is that the frontages had been built upon but the rears were open.

The 1935 Kelly Trade Directory records that at 69 Wide Bargate there was in occupancy: J.H. Thomas & Sons, Mineral Water Manufacturers; Henry Bettison; and Reginald Moulder, Dentist while to the north, at 71 there was: still the Three Crowns Inn; P.C. Rysedale, Coal Merchant, J.S. Towell Ltd, Timber Importers; J. Robinson, Dentist; N. Chapman, Bee Supply Stores; the Skegness Steam Laundry Co. Ltd; Charles Simpson, Lawyer. Unfortunately quite how all these individuals and companies were arranged has not been recorded.

By 1967 many of the earlier properties had been razed and a petrol filling station and workshops had been built in their place. These properties are still extant, though vacant, and will be razed themselves when the proposed scheme has been considered.

<sup>29</sup> Information from record cards held by the Boston Community Archaeologist.

<sup>30</sup> Lincolnshire SMR 13277

<sup>31</sup> Molyneux & Wright p.20



## VII. THE ARCHAEOLOGICAL AND ARCHAEO-ENVIRONMENTAL POTENTIAL

The development at 69 Wide Bargate is located within an area of limited archaeological potential but relatively high archaeo-environmental potential. By defining that potential mitigation strategies may be developed following the recommendations contained within the Department of the Environment's "Planning Policy Guidance 16", that is preferably to preserve the deposits *in situ*, and where this is not possible, to preserve by record.

### 1.i Archaeological Potential

This section briefly assesses the entire site's potential based on the various criteria outlined above, and if relevant will include evidence contained in the borehole results.

#### 1.ii Pre-Roman

There have to date been no finds of pre-Roman date found in the vicinity of the proposed development site and few from Boston itself. It is probable that intermittently the area was submerged and for this reason was not attractive for settlement. During regression phases there may have been some exploitation for reeds, water fowl and small mammals and the possibility exists for the recovery of discarded tools and weapons, kill and butchery sites, and temporary camps. The likelihood of any one of the above occurring at The Site are small and should not be considered a research priority.

#### 1.iii Roman

As with the earlier period there is little evidence of Roman artefacts and no features from Boston. However the presence of a small sample of Roman pottery from the site of the Corporation Yard/Old Poultry Market excavations, albeit in a residual position, must be taken as a serious research objective. It is possible that the ground surface of the 1st to 4th centuries is buried under thick deposits of alluvia, and may not be threatened by the proposed development.

#### 1.iv Saxon and Medieval.

There is little chance that early Saxon deposits or structures will be located at The Site. As with the pre-Roman periods it is likely that this period coincided with a marine transgression. This activity will almost certainly be recorded in the sedimentary record. The limited evidence that exists for the late Saxon settlement suggests that it grew up close to the church of St. Botolph and the river and this remained the case through the 12th and 13th centuries. Expansion past the Barditch defences commenced in the 13th century but there is no evidence that they extended as far north west as The Site. If any thing, archaeological evidence at sites on Strait Bargate and Corporation Yard/Old Poultry Market, suggest that much of the middle ages was spent on land reclamation by means of ground raising dumps. It is extremely important to date these dumps in order to determine whether they occurred over a relatively short space of time or extended over a number of centuries. Equally, another important question that needs to be addressed is whether between each period of dumping structures (sheds and the like) were built on to them, and if they were what was the nature of the occupation and how long did they remain in use?

#### 1.v Post Medieval

Documentary evidence records that large town houses were constructed on Wide Bargate from the mid 16th century, but these are likely to have been located east of the development site. Hall's map of 1741 indicates that a large house may have been sited on, or near to the proposed development site. However later maps suggest that if any house or building was erected in this location it was subsequently cleared and the plot remained relatively undeveloped until the second half of the 19th century.



## 2.i. Archaeo-environmental Potential

Environmental work on river and flood plain sediments can provide at least two sets of information:

- i) it may demonstrate the former direction of the watercourse/s, the phases of alluvial deposition, and mark buried or eroded landscapes
- ii) it may allow the study of changes to the surrounding environment.

Deposition of alluvium is often related to a change in the micro-environment, often as a result of human interference, such as forest clearance for arable or pastoral farming. Such changes may be revealed by analysis of the environmental data, usually in the form of sediments, pollen, molluscs, micro and macro fossils.

Sediments can be analysed in order to recognise periods of alluvial and colluvial deposition. Pollen studies may show a variation in the amount of tree cover and evidence for cultivation or pastoralism. The combined results may provide evidence for deforestation and an increase in agricultural practices.

Where archaeological settlement evidence is found its excavation and sampling follows a standard routine for the recovery of the environmental data relevant to the diet and economy of the settlement. Environmental sampling involves soil sampling from the archaeological features and the collection of organic remains (micro and macro fossils). Dendrochronological samples are taken where it is relevant or practical for dating and/or species identification. Column sampling is undertaken where a stratigraphic sequence of sediments or deposits is selected in column form to analyse floral and faunal remains. Radio Carbon dating might be taken on a sample from the Flood Plain Gravels, or from its interface with the overlying alluvium in order to obtain a dated sequence.

There are likely to be two major types of sediment present at The Site peat and alluvial silt, though from the evidence of the bore holes the peat may be absent. They are very different in character and the information which they provide is similarly diverse. The potential of each is discussed below.<sup>32</sup>

a) Peat deposits: The generally wet and anaerobic conditions have served to inhibit organic breakdown resulting in the accumulation of partially decomposed vegetable matter. The peat deposits are not uniform in character. Where there has been a degree of organic breakdown due to drying out or exposure to the air, a structureless and highly humified peat results.

Within the peat matrix macroscopic plant remains, diatoms and pollens are all preserved. Detailed analysis of these through a peat profile can provide an accurate picture of the changing environment. Plant macrofossils will provide data relating to the local conditions in which the peat developed, for example fen or alder carr. Pollens and diatoms will then provide a complementary regional picture, though it should be recognised that pollen being wind dispersed may be transported over some distance from its point of origin.

b) Alluvial deposits: Water-borne sediments are deposited in thick bands of blue grey clay-silt, (though there may be some variation in the colour). The sediments are the result of periodic flooding, and are also a symptom of rising river levels. Although often apparently uniform in consistency, laminations of darker material or lenses of grit and mollusc shells are also frequently observed. Variations in particle size, magnetic susceptibility, and phosphate concentrations are probably the result of different depositional regimes, for example whether deposited in a static or slight flow.

A detailed knowledge of the history of the Wash in the post glacial period is crucial if we are to understand the nature of human occupation and the environment in which they operated. It is clear that major factors which have influenced human activity are the changing climate, sea levels, the course of the river, the vegetation and the topography. Information regarding all these is preserved within the gravels, peats and alluvial sediments in the form of various biological remains. The

<sup>32</sup> Rackham, J.. 1992:



character of the sediments themselves and the evidence of past man-made structures, for example river defences, provide a framework in which the sediments can be interpreted.

Little detailed information relating to the sediments and landscape formation has been recovered from locations within Boston and it is one of the major research objectives of field work within the town and its hinterland. It is only in recent years that palaeo-environmental sampling has been included within research strategies and much new evidence has been produced by the Fenland Survey.

### Archaeo-environmental Considerations

- 1) At The Site the deposits are likely to range from at least the Neolithic to post-medieval eras, but this has yet to be archaeologically tested.
- 2) Previous excavations from the vicinity of The Site suggest that flood deposits were occurring in the 14th century. Such horizons need to be tested again and the over and underlying sequences examined.
- 3) An examination of the molluscs within a vertical column should be examined to determine whether the sediments were deposited under fresh water, saline, or brackish conditions.

Figure 5. A schematic north to south section through deposits at the site, showing the location of the barholes.



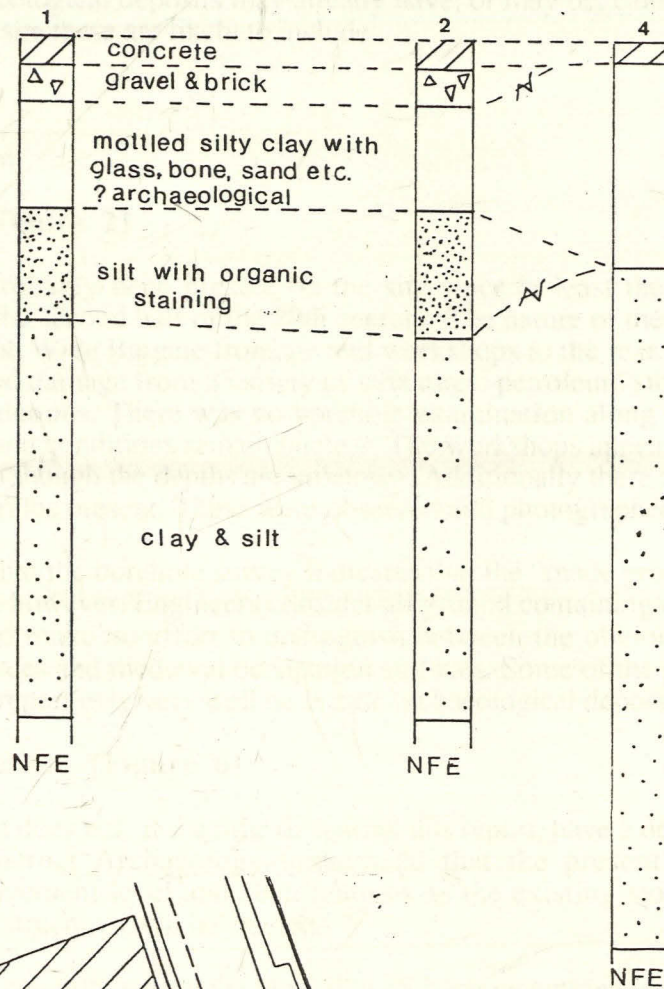


Figure 5. A schematic north to south section through deposits at the site. Inset, the location of the boreholes.



## VIII. IMPACTS ON THE BURIED ARCHAEOLOGICAL DEPOSITS

Impacts on the buried archaeological deposits may already have, or may be, caused by a number of factors. At this development site these are likely to include:

- i. the previous land use
- ii. the construction design
- iii. ground soil contamination.

### i. Previous Land Use (Figure 2)

Domestic buildings have probably been present on the site since at least the 18th century and commercial premises since the second half of the 20th century. The nature of these premises were a petrol filling station along the Wide Bargate frontage and workshops to the rear. The filling station will undoubtedly have caused damage from a variety of structures: petroleum storage tanks, drains, services, and building foundations. There was no borehole examination along the street frontage and therefore the actual ground conditions remain unclear. The workshops appear to have both strip and internal piled foundation though the depths are unknown. Additionally there are deep inspection and sump pits and various drains present. These were observed and photographed by the author.

It should be borne in mind that the borehole survey indicates that the "made ground" may be up to 2m thick. A word of caution however. Engineers consider all ground containing evidence of human activity as made ground and make no effort to distinguish between the obvious 19/20th century make-up or demolition surfaces and medieval occupation surfaces. Some of the horizons identified in the STATS Geotechnical report may very well be *in situ* archaeological deposits.

### ii. The Construction Design. (Figure 6)

The proposed redevelopment does not, at the time of writing this report, have a detailed construction design. However Pre-Construct Archaeology understand that the present building will be demolished down to the pavement level and such features as the existing storage tanks will be removed. In their place new structures will be erected.

Two kiosks are to be placed centrally within the plot. STATS have recommended that at least 1m of existing material is removed in these locations.

To the west of the kiosk will be the location of at least four petrol pumps and a pump canopy. Here the recommendation is that for the canopy pad foundations are extended at least 100mm into the silt deposits Borehole 1, 2 and 4 indicate that the top of the silts occur at between 1.5 and 2m below the present ground surface.

The petroleum storage tanks will of course need to be buried at a suitable depth safety and security reasons. The location has not yet been finalised, but are likely to be north of the tanker standing area. The severity of the impact will be determined not only by the depth to which they will be buried, possibly to 4.5m below the modern ground surface, but also their storage capacity. Three tanks are planned, one of 45,000 litres and two of 27,500 litres, a total capacity of 90,000 litres.<sup>33</sup>

Other impacts may be caused by access roads, hardstandings, landscaping, drainage and general services.

The water table was determined to be between 2 and 3m below the modern ground surface though STATS recommend that the water table should be assumed to occur at 2m.<sup>34</sup>

### iii. Contamination.

A soil contamination survey has not to date been undertaken. Soil contamination may have occurred during the working life of the previous filling station, and possibly from the timber yard recorded at 71 Wide Bargate, if it actually extended into the proposed site.

<sup>33</sup> Mr. A. Clifton. pers. comm.

<sup>34</sup> STATS Geotechnical p.8



R 1 7

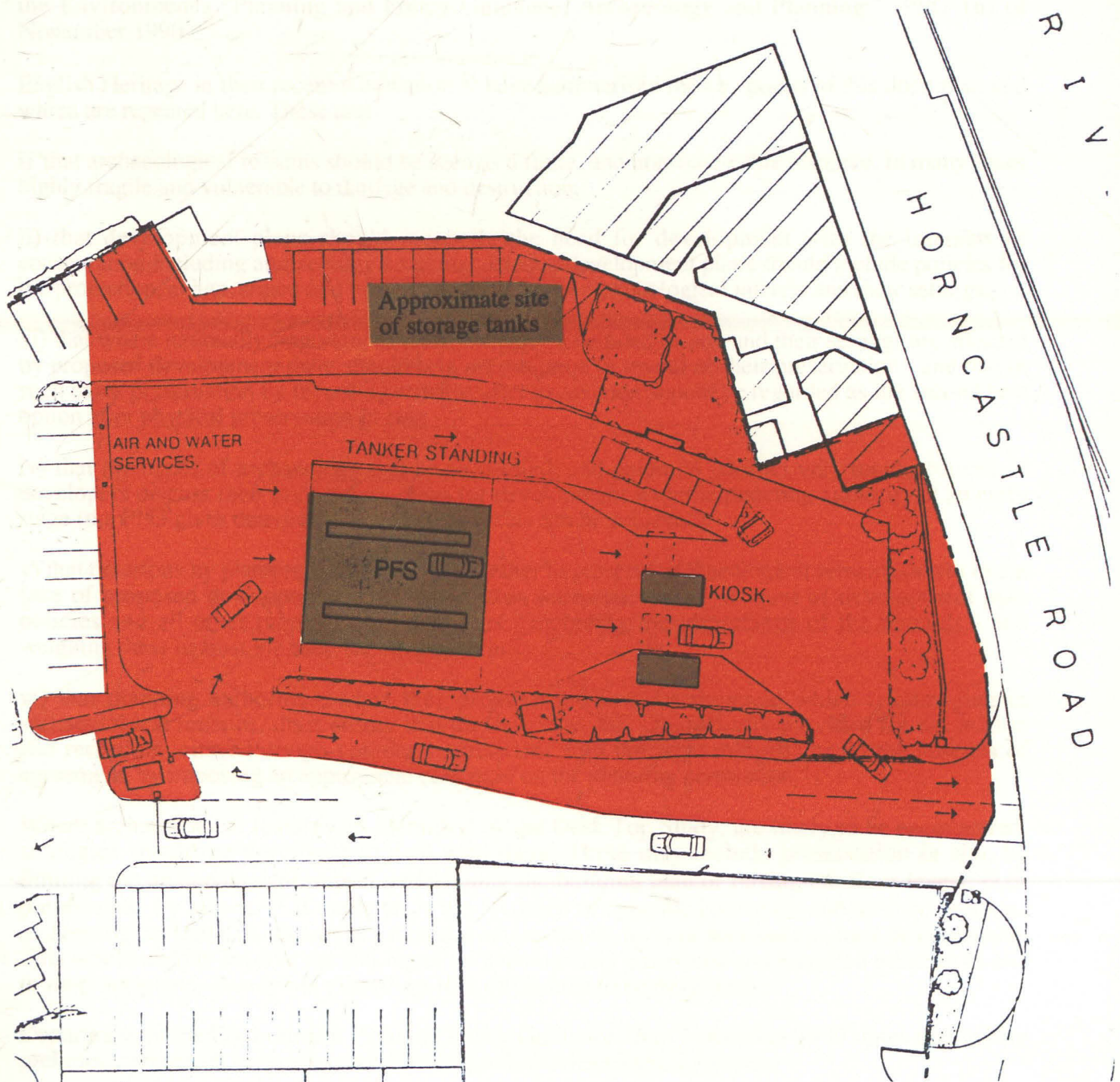


Figure 6. The proposed redevelopment is coloured red, and the areas where the impacts to the buried deposits may be greatest have been coloured green.



## IX. MITIGATIONS

As stated above, the Boston Local Development Plan contains procedures for dealing with the archaeological heritage. These procedures are based on advice contained within the Department of the Environment's "Planning and Policy Guidance; Archaeology and Planning." (PPG 16) of November 1990.

English Heritage in their recent publication <sup>35</sup> have summarised the key points of this document and which are repeated here. These are:

- i) "that archaeological remains should be seen as a finite, and non-renewable resource, in many cases highly fragile and vulnerable to damage and destruction;
- ii) that development plans should reconcile the need for development with the interests of conservation including archaeology - and that detailed development plans should include policies for the protection, enhancement and preservation of sites of archaeological interest and their settings;
- iii) that where nationally important remains, whether scheduled or not, and their settings are affected by proposed development there should be a presumption in favour of their preservation - and that in such cases preservation by recording remains after excavation should be regarded as the second best option after physical preservation *in situ*;
- iv) that the needs of archaeology can be reconciled, and potential conflict very much reduced, if developers discuss their preliminary plans for development with the planning authority at an early stage (the PPG gives detailed guidance on how this can be achieved);
- v) that decisions by planning authorities on whether to preserve archaeological remains *in situ* in the face of proposed development have to be taken on merit, taking account of development plan policies and all other material considerations - including the importance of the remains - and weighing these against the need for development;
- vi) that planning authorities, when they propose to allow development which is damaging to archaeological remains, must ensure that the developer has satisfactorily provided for excavation and recording, either through voluntary agreement with the archaeologists or, in the absence of agreement, by imposing an appropriate condition on the planning permission."

Where archaeological features, as identified by the Desk Top Study, are likely to be encountered, strategies should be developed to deal with them. These may include preservation *in situ*, by limiting the archaeological impact, redesigning the building plan or raising the floor levels, <sup>36</sup> or preservation by record. <sup>37</sup> If the latter is the favoured or apposite course for sub-surface deposits, archaeological trial excavations to assess the nature, depth, level of survival etc. may be conducted. This would usually involve the sinking of archaeologically excavated and recorded trenches in one or more locations, usually not exceeding 10% of the area to be developed.

Department of the Environment Planning Policy Guidance 16 of November 1990 states that, where preliminary research suggests survival of important archaeological remains,

"it is reasonable for the planning authority to request the prospective developer to arrange for an archaeological field evaluation to be carried out before any decision on the planning application is taken. This sort of evaluation is quite distinct from full archaeological excavation. It is normally a rapid and inexpensive operation, involving ground survey and small scale trial trenching, but it should be carried out by a professionally qualified archaeological organisation or archaeologist. Evaluations of this kind help to define the character and extent of the archaeological remains that exist in the area of a proposed development, and thus indicate the weight which ought to be attached to their preservation. They also provide information useful for identifying potential options for

<sup>35</sup> Wainwright et al.

<sup>36</sup> PPG 16 paragraph 10

<sup>37</sup> PPG 16 paragraph 11



minimising or avoiding damage. On this basis, an informed and reasonable planning decision can be taken." <sup>38</sup>

It continues,

"Local planning authorities can reasonably expect developers to provide this information as part of their application for sites where there is good reason to believe there are remains of archaeological importance. If developers are not prepared to do so, the planning authority may wish to consider whether it is appropriate to direct the applicant to supply further information under the provisions of Article 4 of the Town and Country Planning (Applications) Regulations 1988". <sup>39</sup>

The results of the trial work may lead to a redesign or realignment of the proposed structure, further trial or survey work or open area archaeological excavations.

As stated above, the detailed construction design is not at present known though from various plans and telephone conversations with HLM Architects the broad outline is understood. Piled foundations have been recommended in the location of the petrol pump canopy but given the nature of the ground conditions it is unlikely that an alternative, less destructive method can be employed. Deep excavations should be limited to the petroleum storage tanks, but these may destroy all archaeological and palaeo-archaeological evidence in this location.

<sup>38</sup> PPG 16 paragraph 21

<sup>39</sup> PPG 16 paragraph 22



## X. CONCLUSIONS

### i. Summary of potential

This report has identified that The Site is one of moderately low archaeological potential, particularly for the pre-medieval deposits. Roman artefacts have been located in the vicinity of the site and medieval land reclamation consolidation may have occurred at The Site. The archaeo-environmental is considered to be moderately high.

### ii. Damage to existing archaeological deposits

Although the properties shown on the historic maps may have damaged or destroyed remains along the Wide Bargate/Horncastle Road frontage (although this has not yet been determined) the area to the rear (west) has, as far as may be determined, remained relatively undeveloped. Some damage will undoubtedly have been caused by the garage work shops.

### iii. Further work.

Impacts will undoubtedly be caused to the surviving archaeological and archaeo-environmental resource, though the severity of the impacts may be slight in some locations and high in others.

The nature of the archaeological and archaeo-environmental resource are largely unknown within this area of Boston and field evaluations at the site may answer some pressing questions. These will include:

- i) Is there any evidence for any pre-Roman activities at the site, be they permanent, seasonal or transient?
- ii) Is the absence, or not, of cultural occupation, a reflection of the environmental conditions at those times, and if so what were these conditions?
- iii) Can a dating framework be determined for marine and riverine transgressions and regressions?
- iv) Does the pottery found on the site of Corporation Yard/Old Poultry Market reflect the presence of Roman settlement or landuse of the area? Will this site raise the potential of determining whether a more extensive artefact data set, structures or landscape can be examined?
- v) What is the nature of the ground raising dumps? Are they in response to rising ground water or threat of flooding?
- vi) When was The Site first structurally developed, in the 16th, 17th or 18th centuries and what was the nature and extent of the development?

If a field evaluation is required by the Boston Community Archaeologist trenches will be strategically located across the site. It may be borne in mind that within the existing workshop area in the north west of the site there are two inspection pits. One or both of these could have one or more of the protective faces removed in order to provided a quick and inexpensive "window" into the nature of the archaeological deposits in that area.



## XI. ACKNOWLEDGEMENTS

Pre-Construct Archaeology (PCA) would like to thank HLM Architects, and their Client, ASDA Stores Ltd for commissioning this report. The report was researched and written by Gary Brown, Project Manager, PCA. He would like to thank in particular Mr Andy Clifton, HLM Architects and Mr Jim Bonnor, Boston Community Archaeologist, for their help and co-operation freely given. Thanks are also given to Ian George, the Assistant Archaeological Officer and Julia Wise the Sites and Monuments Record Assistant, both of the Lincolnshire County Council Archaeology Section. Help provided by the staff of the Boston Library and ASDA Foodstores, Boston, is acknowledged. Finally thanks to all the archaeologists who over the years have raised the profile of the undoubtedly fine archaeological heritage of Boston.

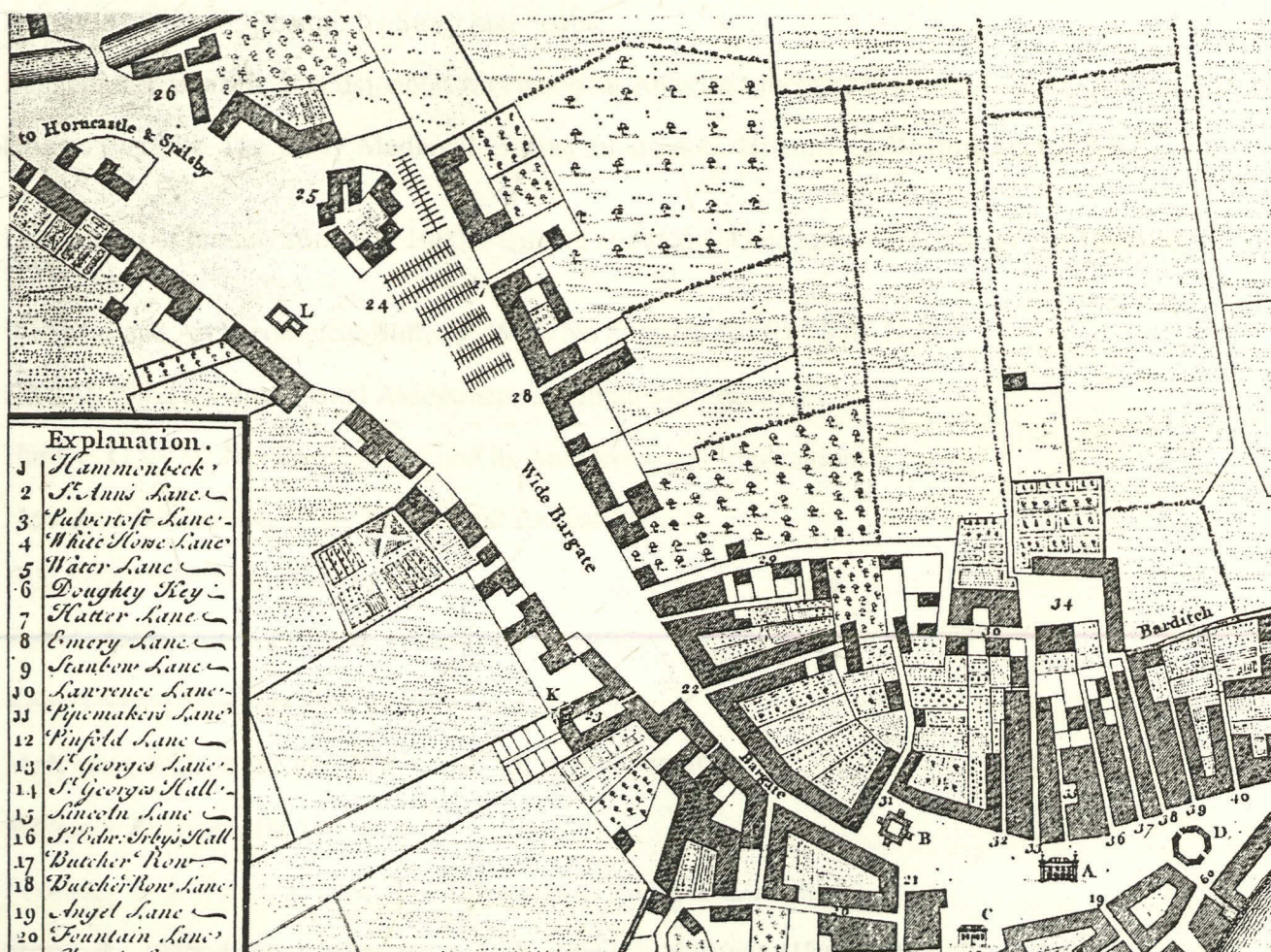


Figure 7. Robert Hall's map of 1741. The site is just beyond the left hand corner, but an impression of the landscape in the area is given.



# APPENDIX 1

## BIBLIOGRAPHY

### (i) Archaeological Evaluations

Author/s Unknown. 1992: Archaeological Evaluation at 24 & 28-30 Strait Bargate, Boston.

Davies, G & Symonds, J. 1988: South End Boston. An Archaeological Evaluation.

Symonds, J. 1988: Pescod Square, Boston. An Archaeological Evaluation.

Thorpe, R. 1989: Excavations on Wormgate, Boston Lincolnshire. An Interim Report.

Trimble, D & Brown, M. 1990: Excavations at the Corporation Yard/Old Poultry Market, Boston, Lincolnshire.

### (ii) Other Printed Sources

Bagley, G.S. 1986: Boston. Its Story and People.

Bennett, S & Bennett, N (Eds) 1993: An Historical Atlas Of Lincolnshire

Dover, P. 1970: The Early Medieval History of Boston. **History of Boston Series No.2**

Department of the Environment. 1990: Planning and Policy Guidance: Archaeology and Planning (PPG16)

East Midland Archaeological Bulletin. 1965: No.8; 1974: No.10; 1978: No.12

HMSO. 1992: Environmental Assessment. A Guide To Procedures.

Harden, G. 1978: Medieval Boston and its Archaeological Implications

Heritage Lincolnshire. 1992: The Second Annual Report

Hill, Sir F 1990: Medieval Lincoln

Kelly's Trade Directory. 1894: Boston and District

Kelly's Trade Directory. 1935: Boston and District

Molyneux, F.H. & Wright, N.R. 1974: An Atlas of Boston.

Morton's Almanac. 1861

Pevenser, N & Harris, J. 1964: The Buildings of England. Lincolnshire

Straw, A. 1969: Lincolnshire Soils. **Lincolnshire Natural History Brochure No 3.**

Trust for Lincolnshire Archaeology 1987: Third Annual Report

Trust for Lincolnshire Archaeology 1988: Fourth Annual Report

Wainwright, G. et al. 1991: Exploring Our Past. Strategies For The Archaeology Of England.

Whitwell, J.B. 1992: Roman Lincolnshire. (Revised Edition)

Wright, N.R. 1986: The Book Of Boston



## APPENDIX 2

## MAPS CONSULTED

Robert Hall 1741

Rocque & Dury 1770

Ordnance Survey 1837 2" = 1m

Moule's Plan of Boston 1839

Ordnance Survey 1867 25" = 1m

Goad Plan of Boston October 1900

Ordnance Survey 6" = 1m Sheet CIX SW. 1906

Ordnance Survey 6" = 1m Sheet CIX SW 1947

Ordnance Survey 1: 2500 (TF 3344) 1966

Ordnance Survey 1: 1250 (TF 3344) 1967

HLM Architect Plans

Drawing A93/059/01

Drawing A93/059/02

Drawing A93/059/03