

EL HER

LCNCC 2002.326

M3/29



A report on the

Contents

- 1.0 Introduction
- 2.0 Methodology
- 3.0 Results of the test
- 4.0 Discussion
- 5.0 Conclusions
- 6.0 Figures

**A report on test pit monitoring
at
The Junction, St. Mark's Street, Lincoln
(Planning Application No. 2001/0852/F)**

NGR SK 9735 7085

Produced by

John Samuels Archaeological Consultants

On behalf of

The Davidson Partnership
 Huntingdon Business Centre
 278-290 Huntingdon Street
 Nottingham
 NG31 3LY

Site code: JSMO2
JSAC 943/03/02

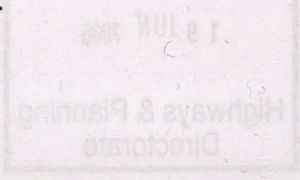
Accession No: 2002.326
April 2003



THE MANOR SOUTH STREET NORMANTON-ON-TRENT NEWARK NOTTINGHAMSHIRE NG23 6RQ
 TELEPHONE 01636 821727 FAX 01636 822080 E-MAIL jsac@btconnect.com



Certificate Number 1967/99



acknowledged receipt 19/9/06

JCO

Conservation
Services

19 JUN 2006

Highways & Planning
Directorate

A report on test pit monitoring at the Junction, St. Mark's Street, Lincoln

Contents

Summary

1.0	Introduction.....	3
2.0	Methodology.....	4
3.0	Results of the test pit monitoring.....	5
4.0	Discussion.....	6
5.0	Conclusions.....	7
6.0	Figures.....	7

Summary

John Samuels Archaeological Consultants monitored the excavation of four test pits cut to explore the extent of diesel contamination on the site of a former bus repair garage at the Junction, St. Mark's, Lincoln (NGR SK 9735 7085). The work was conducted on behalf of The Davidson Partnership, who propose to develop the site for student accommodation.

The results of the test pit monitoring broadly confirm the results of an earlier visit, during which two large diesel tanks and associated bunds were removed. The uppermost 1.2 m is demonstrably modern made ground. Below this is a layer of sand containing modern and Romano-British material, the derivation of which is unclear. Below approximately 1.8 m beneath the current ground surface there are 'in situ' riverine deposits, containing animal bone, worked wood and possibly leather. A single sherd of Romano-British pottery was recorded within this deposit but that is not sufficient to date the layer, especially because it is likely that many of the deposits were recovered as dumps behind revetments. The test pit closest to St. Mark's Street, test pit 3, also contained an organic, snail-rich horizon, which may have a high palaeo-environmental potential at a depth of between 2.5 m and 3 m. This deposit was however highly contaminated with diesel.

The nature of the contamination appeared to suggest a number of sources and contamination at different levels across the site. It is therefore difficult, if not impossible to state whether any particular layer at any particular point on the site is, or is not, contaminated with diesel.

1.0 Introduction

- 1.1 A planning application (2001/0852/F) has been made by the Davidson Partnership for the residential development of land at the Junction, St. Mark's Street, Lincoln (NGR SK 9735 7085). As part of the preparatory works, the site, which was formerly a bus repair depot, requires decontamination. Four test pits were excavated to examine diesel hot spots on Tuesday, 8th April. These test pits were monitored by *John Samuels Archaeological Consultants* in order to obtain more information about the stratigraphic sequence of the site.
- 1.2 The site occupies land to the south of part of Lincoln city centre at the corner of St. Mark's Street and Brayford Wharf East.
- 1.3 The only archaeological investigation to have taken place on the site was also in association with the current planning application. *John Samuels Archaeological Consultants* monitored the removal of two large diesel tanks and associated bunds from the site in October 2002. The extent of the diesel contamination around the tanks made it difficult to assess the nature of the deposits exposed. It was however clear that within 1.8 m of the current ground surface the site consisted of modern made ground and that below that depth riverine deposits were preserved, but that these were contaminated, at least in the vicinity of the diesel tanks.
- 1.4 The desk-based assessment of the site, undertaken by L-P Archaeology (LP/06/75) highlighted the fact that archaeological investigations in the vicinity of the application area had revealed finds from the Iron Age, Roman, Saxon and medieval periods. A Carmelite priory, founded in the mid 13th century was established to the south of the site. The desk-based assessment suggested that if archaeological remains were preserved within the application area these were likely to be Roman or later in date and to consist of waterfront revetments and associated dumps. The possibility of preserved Mesolithic peat deposits was also raised.
- 1.5 This document forms the report on the monitoring of the test pits; it has been written by Simon Mortimer MA (Oxon). It conforms to the requirements of *Planning Policy Guidance Note 16: Archaeology and Planning* (DoE, 1990). It is in accordance with current best archaeological practice and the appropriate national and regional standards and guidelines, including:

Code of Conduct (Institute of Field Archaeologists, 1997);

Management of Archaeological Projects (English Heritage, 1991);

Model Briefs and Specifications for Archaeological Assessments and Field Evaluations (Association of County Archaeological Officers, 1994)

Standards and Guidelines for Archaeological Field Evaluations (Institute of Field Archaeologists, 1999).

2.0 Methodology

- 2.1 Four test pits were excavated as indicated in Figure 2. The test pits were machine excavated with a JCB fitted with a toothed bucket. Machine excavation was conducted until the top of the contaminated deposits was reached. The uncontaminated spoil was mounded at a safe distance from the edges of the test pits. Further excavation through contaminated material was conducted in spits, using the same excavator, with the resultant spoil deposited in skips, to be removed from the site. Excavation ceased at approximately 3 m for each test pit, when it was certain that the base of the pit was below the water table.
- 2.2 The test pits were only 1 m wide, prohibiting access. The excavated material was scanned visually during excavation and the uncontaminated material was dug over in search of finds. The contaminated material was scanned visually but no hand excavation or sampling was undertaken and no finds were removed from the site.
- 2.3 Colour print photographs were taken during the excavation of the test pits and of the full sections exposed. A written record was made on proforma test pit record sheets of the deposits exposed and the test pit locations were recorded by the client.
- 2.4 All work was carried out with respect to all relevant Health and Safety provisions and site specific safety regulations.
- 2.5 A copy of this report will be sent to the client, the Local Planning Authority, the City Archaeologist and to the Lincolnshire SMR.
- 2.6 Following project completion the archive will be deposited with the City and County Museum, Lincoln within 6 months of the completion of field and appropriate post-excavation work. The archive will be produced in the form outlined in the museum's 'Conditions for the acceptance of project archives'. The Accession number for the project archive is 2002.326.

3.0 Results of the test pit monitoring

3.1 Test pit 1 (1 m by 2.5 m)

- 0-0.15 m Type 1 crushed stone over Terram membrane
- 0.15-1.2 m Made ground. Modern brick in very mixed, dirty, coarse silty sand matrix
- 1.2-1.8 m Made ground. Light grey sandy material, contained modern pottery
- 1.8-2.2 m River sands and silts. Dark grey and organic, still quite mixed. Some clay
- 2.2-2.8 m *As above, but contaminated with diesel. Worked wooden planks and a possible piece of leather observed and photographed, but not retained, no dating evidence. No obvious 'in situ' structures.*

3.2 Test pit 2 (1 m by 2.5 m)

- 0-0.15 m Type 1 crushed stone over Terram membrane
- 0.15-1.3 m Made ground. Modern brick in very mixed, dirty, coarse silty sand matrix
- 1.3-1.8 m Made ground. Light grey coarse sandy material. Water encountered within this layer so excavation paused.
- 1.8-3 m *Beginning of diesel contamination. Excavated through water table, dark organic sands exposed containing mussel and oyster shell. One sherd of probable Romano-British grey ware observed and photographed and a large number of animal bones also recorded - none retained.*

3.3 Test pit 3 (1 m by 2.5 m)

- 0-0.15 m Type 1 crushed stone over Terram membrane
- 0.15-1.2 m Made ground. Modern brick in very mixed, dirty, coarse silty sand matrix
- 1.2-2.5 m Layer of fairly fine light grey sand with undulating surface. One piece of Romano-British tile and a sherd of grey ware recovered from a depth of c. 1.7 m.
- 2.5-3.5 m *Light yellow natural sands and very thick, stiff horizontally laminated humic material contains abundant snails, shells and organics. Some bone preservation. Contamination begins towards base of this layer.*

3.4 Test pit 4 (1 m by 2.5 m)

- 0-0.15 m Type 1 crushed stone over Terram membrane
- 0.15-1 m Made ground. Modern brick in very mixed, dirty, coarse silty sand

1-3.1 m *matrix. This layer had diesel running through it.
Light grey sand onto blue sand some clay and stench of diesel.
Some grayish sands and darker, more organic riverine deposits-no
obvious finds*

4.0 Discussion

- 4.1 The locations of the test pits were determined by hot spots of diesel identified in the monitored boreholes across the site. The test pits were deliberately sited over areas of known, high contamination and therefore the picture of the site derived from the test pit monitoring exaggerates the actual amount of contamination over the site as a whole.
- 4.2 Each of the test pits had a remarkably similar stratigraphic sequence. The top 0.15 m of the profile was make-up over a Terram membrane, which was deposited as part of the current development. Below this, to a maximum depth of 1.3 m, was a dirty, mixed deposit of modern made ground, made up largely of brick rubble, probably from the demolition of the bus repair garage. Below this to a maximum depth of approximately 1.9 m was a light grey coarse sandy deposit, the nature of which is slightly unclear. It is likely that this was derived from river deposits, but it is not clear whether these are 'in situ' or what date they were deposited. Roman and modern material was recovered from this horizon, but the conditions were not suitable for determining horizon dates.
- 4.3 The dark grey, organic, sandy silt deposits found below c. 1.8 m were clearly 'in situ' riverine layers. These were difficult to assess, because they were largely coincident with the diesel contamination. A wooden plank which may have been part of a revetting structure was recovered from this layer, although it is not clear if it was 'in situ'. A sherd of Romano-British pottery was also found, together with large amounts of animal bone. It is likely that there was Romano-British activity on the site, associated with use of the river frontage, however these deposits are also likely to have been reworked in the medieval period and possibly later. This makes it difficult to establish reliable dates for any horizon, especially in the limited and contaminated space of the test pits.
- 4.4 The deposit with the greatest archaeological potential observed on the site was the layer found between 2.5 and 3 m below the current ground surface in test pit 3. Although the layer contained no cultural material, the density of snails and the apparent organic preservation within it suggest that it has considerable potential, if it could be dated. This layer was also however heavily contaminated with diesel. The best explanation for the fact that this layer was only identified within this test pit is that this pit is closest to one of the banks of the river channel and that it therefore occurs closest to the current ground surface.

5.0 Conclusions

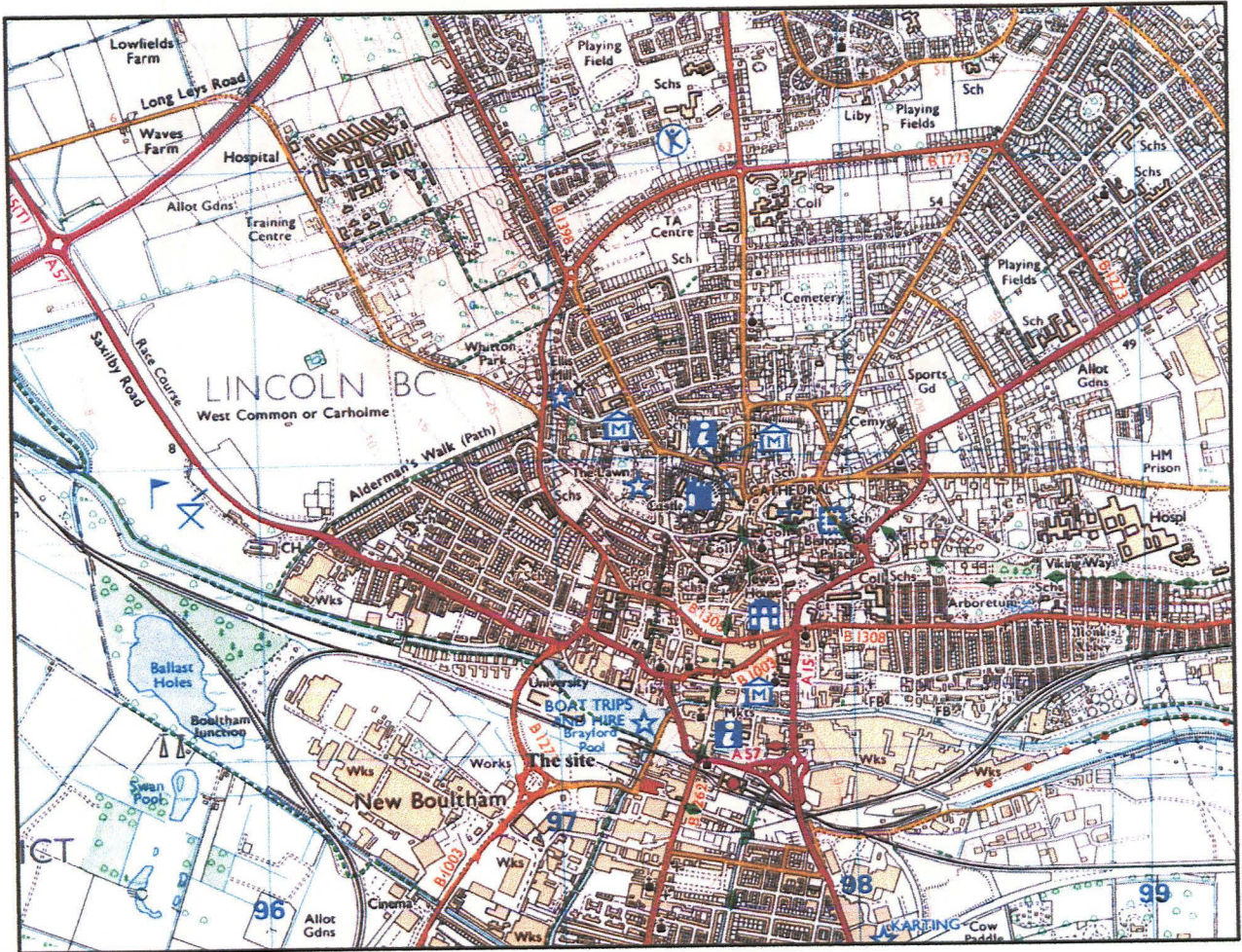
- 5.1 The results of the test pit monitoring are broadly in line with the earlier visit to monitor the removal of the bunds around the large diesel tanks on the site. Within 1.2 m of the current ground surface the site contains demonstrably modern made ground. Below that level to 1.8 m the site contains a light grey sandy layer, which produced Romano-British and modern material. Below this level the first clearly 'in situ' horizon contains material deposited within a river channel. Part of a probable wooden revetting structure was identified, but not dated and the material was not removed from site, because of the heavy diesel contamination. The fact that the diesel contamination occurs in hot spots at different levels within the site, possibly from different sources, makes it difficult to determine the likelihood of any level being contaminated. In places, across the site all of the river deposits are contaminated. No post-Roman cultural material was recovered from below 1.7 m, but many of these deposits were not fully investigated.
- 5.2 It is likely that there was Romano-British activity within the river channel on the site. The stiff, organic, snail-rich horizon found within test pit 3 appeared to have a high potential for recovery of palaeo-environmental material. It was however, highly contaminated within that test pit and at a depth of between 2.5 and 3 m below the current ground surface, it is unclear whether it would be impacted upon during the proposed development.

6.0 Figures

Figure 1 Site location

Figure 2 Test pit location plan

A report on test pit monitoring at the Junction, St. Mark's Street, Lincoln



Note: Map based upon Ordnance Survey with the sanction of the Controller of H.M. Stationary Office, Crown Copyright Reserved.

Licence No: AL 100020447

Figure 1: Site location, based on OS Explorer map at 1:25000

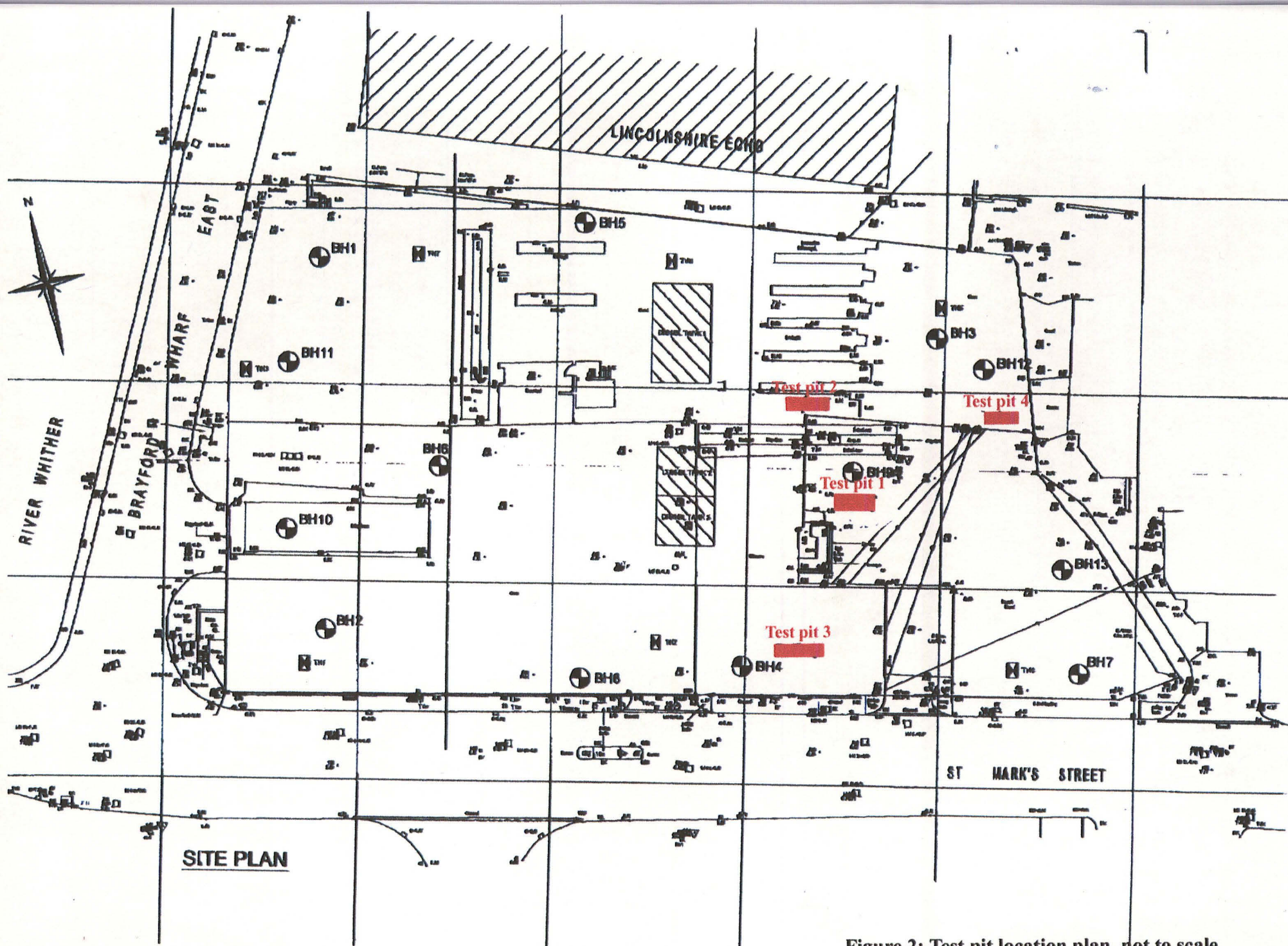


Figure 2: Test pit location plan, not to scale