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**A REPORT TO  
WESTLEIGH DEVELOPMENTS LTD**

**June 2008**

**RUSTON WAY OFFICE PARK  
LINCOLN**

**ARCHAEOLOGICAL  
WATCHING BRIEF  
IN CONJUNCTION WITH  
GEOTECHNICAL INVESTIGATIONS**

**PREPARED BY  
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**MJAS REPORT No.: 552**



## **RUSTON WAY OFFICE PARK LINCOLN**

### **ARCHAEOLOGICAL WATCHING BRIEF IN CONJUNCTION WITH GEOTECHNICAL INVESTIGATIONS**

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## RUSTON WAY OFFICE PARK LINCOLN

### ARCHAEOLOGICAL WATCHING BRIEF IN CONJUNCTION WITH GEOTECHNICAL INVESTIGATIONS

#### NON-TECHNICAL SUMMARY

- On the 7 April 2008, Mike Jarvis Archaeological Services undertook an archaeological watching brief on behalf of Westleigh Developments Limited, during the excavation of a series of machine excavated geotechnical trial pits on land at Ruston way, Lincoln (hereafter the site). The site forms one element of the Ruston Way Brayford Enterprise Park (RWBEPP) for which outline planning permission was granted on 31 July 2006 (Application No.: 2005/0265/O).
- Natural sand was revealed at between 1.80m and 3.30m OD, suggesting that this area would have for the most part lain above water level during the Mesolithic and later prehistoric Periods.
- Data recovered during previous investigations in this part of the City have indicated that rising water levels from around 1200 BC through to the post-medieval period would have meant that much of the area of the site would have been waterlogged/marshland and prone to seasonal flooding.
- For the most part trench and borehole data indicate that the site probably sits towards the north-west end of a raised sand island that may have been the focus of prehistoric activity.
- An undated peat deposit recorded in TP5 suggested that the pond/marsh area lying immediately adjacent to the north boundary of the site may have originally extended south to this point and subsequently infilled/buried during the formation of the railways and or industrial occupation during the latter half of the 19<sup>th</sup> century.
- Although presently unclear without further on-site investigation, it is probable that the alluvial/organic deposits recorded on the site were laid down sometime during the post-medieval period, possibly at late as the mid 19<sup>th</sup> century.
- Overlying deposits appear to be more recent and probably represent land reclamation events associated with the formation of the railways and industrial development during the second half of the 19<sup>th</sup> century. The extensive dumps of foundry waste present across the site probably derive from factories occupying land immediately to the south of the site and date from the early-mid 20<sup>th</sup> century.
- In conclusion, the watching brief although of limited scale has provided information useful in enhancing and confirming our current understanding of the topographic nature of the area during the prehistoric period although no evidence to suggest occupation on the site predating the 19<sup>th</sup> century was forthcoming. Alluvial/peat deposits whilst believed to be post-medieval in origin warrant further investigation, similarly, it would be desirable to sample the upper levels of the natural sand for the presence of flint artefacts associated with prehistoric activity.
- Overall the results of the watching brief will be of value in future decision making in the management of the archaeological resource in this part of Lincoln.



## • RUSTON WAY OFFICE PARK LINCOLN

### ARCHAEOLOGICAL WATCHING BRIEF IN CONJUNCTION WITH GEOTECHNICAL INVESTIGATIONS

#### 1.0 INTRODUCTION

On the 7 April 2008, Mike Jarvis Archaeological Services (MJAS) undertook an archaeological watching brief on behalf of Westleigh Developments Limited, during the excavation of a series of machine excavated geotechnical trial pits on land at Ruston way, Lincoln (hereafter the site). The site forms one element of the Ruston Way Brayford Enterprise Park (RWBEP) for which outline planning permission was granted on 31 July 2006 (Application No.: 2005/0265/O).

#### 2.0 SITE LOCATION AND BACKGROUND (Fig. 1)

The site is located towards the south-west end of the city to the south of Brayford Pool. To its north the site is bounded by marshland with the railway beyond and to its south & west by commercial premises. To the east is Ruston Way with Ruston Way Innovation Centre and other elements of the RWBEP beyond (National Grid Reference SK 96595 71453 – approximate centre). The area under investigation at the time of the investigation comprised areas of grass together with areas of rough vegetation, boggy/marshy ground and large heaps comprising of building rubble and soil.

Brayford Pool was formed after the last glacial period (c. 10,000 BC) by the convergence of the Rivers Witham and Till and formed an expanse of slow-moving water and although little understood, recent discoveries indicate that the area was much larger than we see today and was subject to fluctuating water levels and comprised a landscape of river channels and marshes that flooded during the winter and exposed a series of meres and pools during the warmer summer months. The Fosdyke Canal (believed to have been originally dug during the Roman Period) lies slightly north of, and roughly parallel to, the now obscured course of the River Till.

The precise location of dry ground to the south of the Brayford Pool has proved somewhat elusive to establish for any given period (especially the prehistoric) although our understanding of the topography continues to improve as more information is gathered (see Fig. 3).

During 2006 an archaeological excavation carried out 600m to the east of the site, during the digging of a floodwater storage pond associated with the development of Lincoln University, revealed nearly 800 pieces of struck or modified flint on a north-south orientated sand ridge (highest point 3.43m OD). The majority of the flints were dated to the Mesolithic period and suggested that the finds probably formed a flint preparation area associated with a hunting camp.

From the later Bronze Age (c. 1200 BC) onwards water levels generally rose and reed peat deposits formed in the area. Little evidence for Roman activity has been found in the vicinity of the site due mainly to the fact that the area to the south of Brayford Pool would have been marshland during this time (the main focus of Roman settlement lay on the east side of the River Witham, closer to the present day High Street on slightly higher ground). Evidence for later Saxon through to Post-medieval land use of the area is similarly elusive although it is almost certain that the area would have been utilised for hunting and fishing.



Map evidence (pre-1848) indicates that the area to the south of the Brayford Pool (then known as Holmes Common – Marratt's *Map of Lincoln* of 1817) remained largely undeveloped until the construction in 1849 of the Great Northern Railway's Loop Line. By the 1920's the area to the south of Brayford Pool had become intensely occupied by both the railways and factories associated with heavy industry.

### 3.0 AIMS AND METHODOLOGY

The aims of the watching brief were:

- To produce an archive record of deposits and remains generally within the constraints of the groundwork contractors' programme and working methods with due regard to current health and safety legislation.
- To produce a report on the archaeological importance of the discoveries.
- To produce a project archive from which the potential for further study and academic research could be assessed.
- To provide information for accession to the Historic Environment Record (HER) and the Lincoln Urban Archaeological Database (UAD).

The watching brief required the monitoring and recording of deposits exposed during the excavation of six (6) geotechnical trial pits (nominally 3m x 600mm wide). Trial pit depth was dependant upon the nature of the deposits encountered. Three (3) boreholes (cable percussive) were also sunk into the site and although not monitored at the time of their excavation, the resulting borehole logs have been included in this report. The archaeological record was secured by means of trench-side notes, scale drawings and photographs.

### 4.0 ANALYSIS AND RESULTS (Fig. 1 - 3 & Pl. I)

Ordnance Datum heights and Trial Pit & borehole locations referred to in this report have been extracted from material provided by Westleigh Developments Limited.

#### 4.1 ANALYSIS

##### TP1

Trial pit 1 was located towards the southern edge of the site approximately midway along its length. Natural sand ([004]) was encountered approximately 2.50m below ground level (c. 2.80m OD). Sealing natural was [003], a dark grey/brown organic alluvial silt with frequent root/twig inclusions (3.30m OD). Above [003] was [002], an extensive (1.89m thick) deposit of fine brown sand (foundry waste) with frequent brick rubble & concrete inclusions, this was sealed by ([001]) a thin topsoil (ground level approximately 5.30m OD).

##### TP2

Trial Pit 2 lay at the south-east end of the site immediately adjacent an area currently utilised as an unofficial car park. Here natural ([004]) was recorded at c. 2.95m OD. Above [004] was alluvial deposit [003] (c. 4.09m OD), above which lay [007] a grey silt soil with frequent modern building material and [006] a layer of obviously re-deposited organic silt (4.70m OD). Sealing [006] was [005] a recently deposited dump of coarse sand and gravel with frequent brick rubble (ground level c. 5.60m OD).

##### TP3

TP3 was sited slightly to the east of the sites centre on a relatively flat part of the site adjacent to an extensive reedy/marshy area to its south. Natural ([004]) lay at c. 3.00m OD and was in



turn sealed by deposit [003] (c. 3.50m OD). Above [003] was [009], grey sand with frequent visible rootlets (c. 4.10m OD) and was itself sealed by foundry waste deposit [002]. [002] was overlain by [008], small limestone chippings in a fine silt matrix (ground level c. 5.30m OD).



Plate 1: General view looking west during the excavation of Trial Pit 3.

#### TP4

Trial Pit 4 lay approximately 40m to the north-west of TP3. Natural sand [004] was revealed at 3.30m OD and was in turn sealed by deposit [003] (3.60m OD). This was sealed by [010] a mottled red/brown sand/silt with frequent visible rootlets (c. 4.35m OD) and above [010] was topsoil [001] (ground level 5.00m OD).

#### TP5

TP5 was positioned 35m north-west of TP4 approximately 20m south of a low-lying pond/marsh lying against the north boundary of the site. Natural ([004]) was recorded 3m below ground level (1.90m OD). Sealing natural was [012] a 700mm thick deposit of pale brown peat (2.60m OD). Lying above the peat was [011] a dark grey silt containing frequent brick rubble (3.20m OD) that was itself sealed by foundry waste deposit [002], here noted to be 1.70m thick (Ground level c. 4.90m OD).

#### TP6

Located in the far south-west corner of the site the excavation of TP6 revealed natural ([004]) at c. 2.60m OD and [003] at 3.00m OD. Sealing [003] was [013], a grey silt with frequent brick rubble inclusions (c. 3.40m OD). Foundry deposit [002] overlay the aforementioned and was itself sealed by topsoil [001] (5.30m OD).

#### CPBH1 (G)

Borehole 1 was positioned in the south-east corner of the site and revealed natural ([004]) at approximately 3.10m OD with 2.20m of made ground above ([014] ground level c. 5.30m OD).



#### **CPBH2 (G)**

Borehole 2 was located within an area of reed/marshy ground in the approximate centre of the site. Natural [004] was encountered at c. 1.80m OD with 3.50m of made ground above ([014] ground level c. 5.30m OD).

#### **CPBH3 (G)**

Located towards the north-west corner of the site, approximately 20m west of TP5, borehole 3 encountered natural [004] at c. 2.40m OD with 2.40m of made ground above ([014] ground level approximately 4.80m OD).

### **4.2 RESULTS**

Natural sand was revealed at between 1.80m and 3.30m OD, suggesting that this area would have for the most part lain above water level during the Mesolithic and later prehistoric Periods.

Data recovered during previous investigations in this part of the City have indicated that rising water levels from around 1200 BC through to the post-medieval period would have meant that much of the area of the site would have been waterlogged/marshland and prone to seasonal flooding.

Figure 3 of this report shows an updated contour plot showing our current understanding of the upper surface of the natural glacial sands and gravels beneath post-glacial deposits in the Brayford pool basin and includes recently recorded data.

For the most part trench and borehole data indicate that the site probably sits towards the north-west end of a raised sand island that may have been the focus of prehistoric activity.

The undated peat deposit recorded in TP5 suggests that the pond/marsh area lying immediately adjacent to the north boundary of the site may have originally extended south to this point and subsequently infilled/buried during the formation of the railways and or industrial occupation during the latter half of the 19<sup>th</sup> century.

Although presently unclear without further on-site investigation, it is probable that the alluvial/organic deposits recorded on the site were laid down sometime during the post-medieval period, possibly at late as the mid 19<sup>th</sup> century.

Overlying deposits appear to be more recent and probably represent land reclamation events associated with the formation of the railways and industrial development during the second half of the 19<sup>th</sup> century. The extensive dumps of foundry waste present across the site probably derive from factories occupying land immediately to the south of the site and date from the early-mid 20<sup>th</sup> century.

In conclusion, the watching brief although of limited scale has provided information useful in enhancing and confirming our current understanding of the topographic nature of the area during the prehistoric period although no evidence to suggest occupation on the site predating the 19<sup>th</sup> century was forthcoming. Alluvial/peat deposits whilst believed to be post-medieval in origin warrant further investigation, similarly, it would be desirable to sample the upper levels of the natural sand for the presence of flint artefacts associated with prehistoric activity.

Overall the results of the watching brief will be of value in future decision making in the management of the archaeological resource in this part of Lincoln.

### **5.0 ACKNOWLEDGEMENTS**

MJAS would like to Westleigh Developments Limited for funding the watching brief and post-fieldwork analysis. Thanks are also extended Claire Moreira (Principal GeoEnvironmental

Engineer, Geodyne Limited) and to the City Archaeologist (Mr M J Jones) for his advice and guidance. Access to the City of Lincoln Council archaeological records was provided by Mr J Herridge.

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## 6.0 BIBLIOGRAPHY

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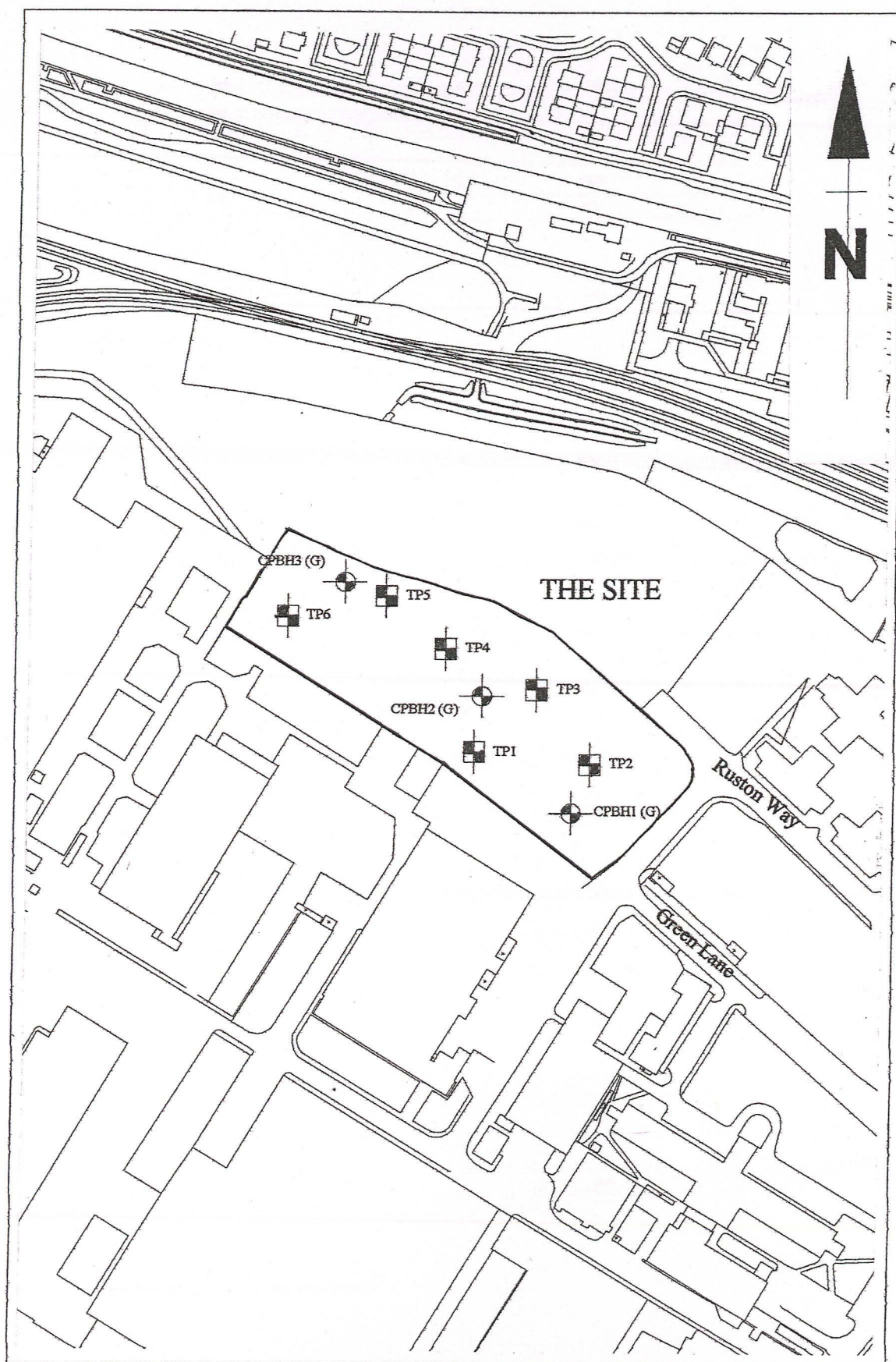


Fig. 1: Site location Map showing Trial Pit & Borehole locations (1:2500).



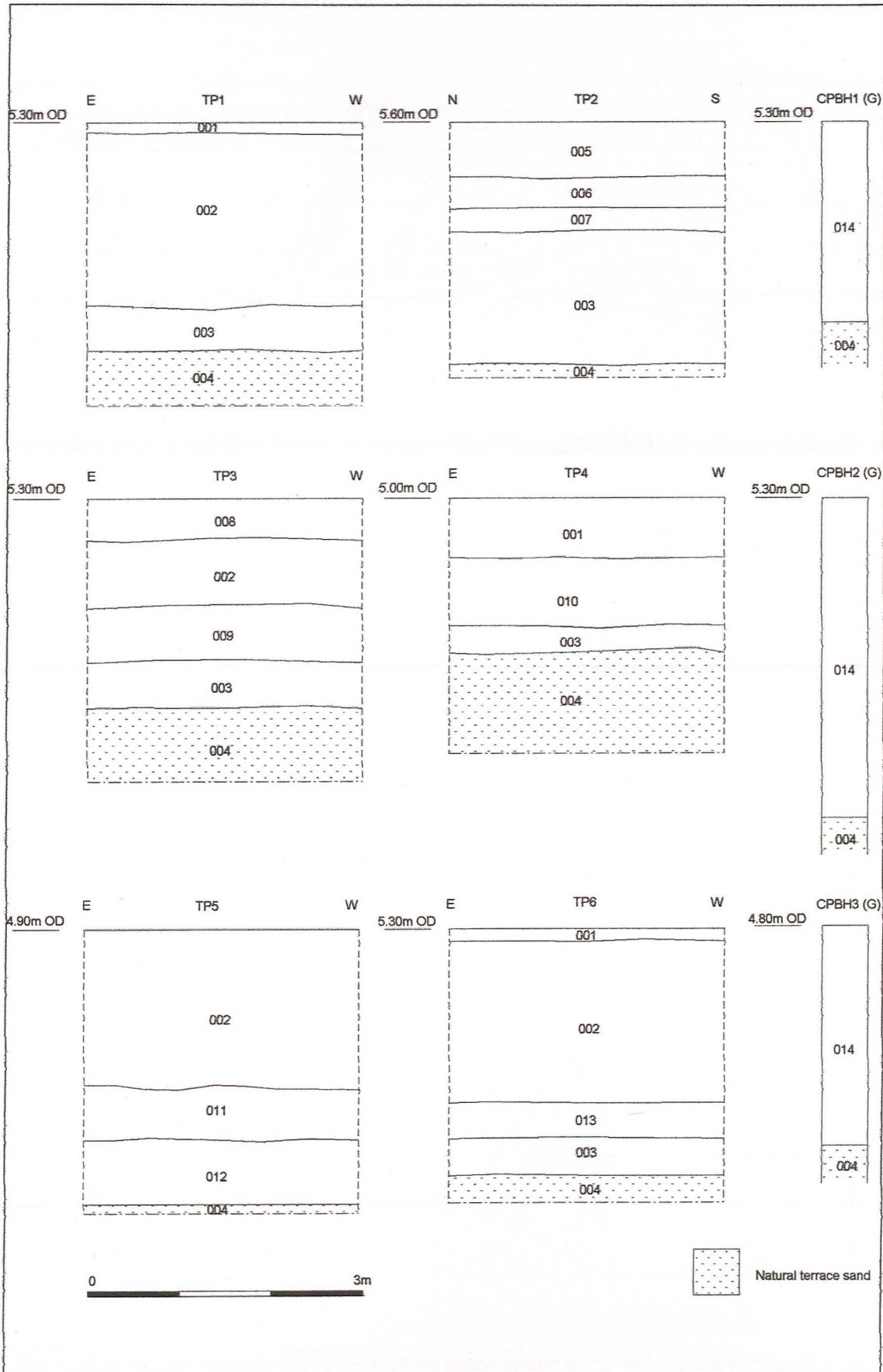


Fig. 2: Trial Pit Sections 1-6 & Borehole 1-3 (not to scale).



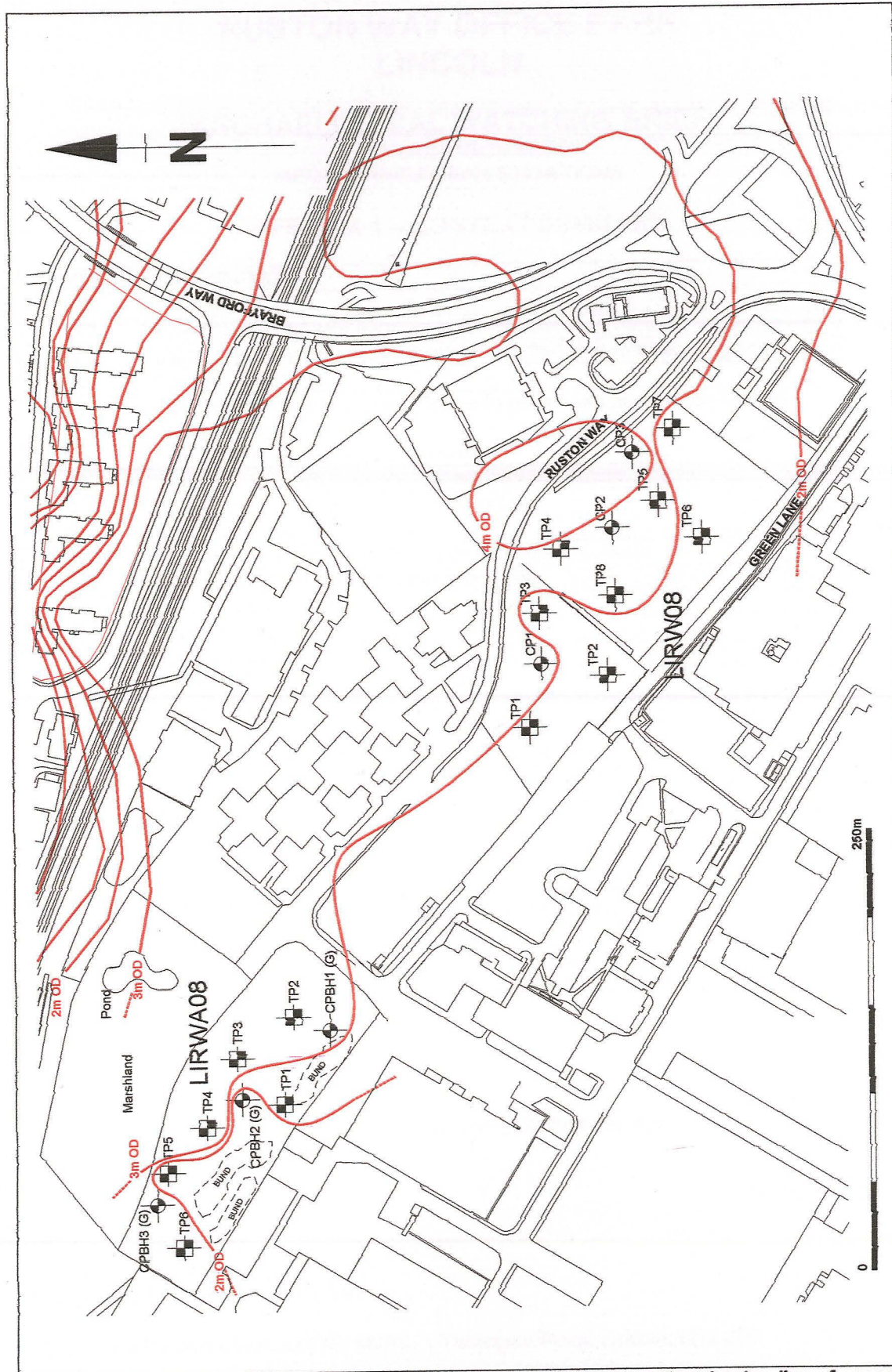


Fig. 3: Contour plot showing TP & borehole locations showing current understanding of upper surface of the natural glacial sands & gravels within the Brayford pool basin (not to scale).



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#### **APPENDIX 1 – CONTEXT SUMMARY**

<b>CONTEXT</b>	<b>DESCRIPTION</b>
001	Topsoil
002	Fine brown sand with frequent brick and concrete rubble (foundry waste)
003	Dark grey/brown organic alluvial silt with frequent root/twig fragments
004	Natural sand
005	Pale brown coarse sand with frequent gravel and brick rubble (raised area to east end of site)
006	Peat/organic material (re-deposited)
007	Dark grey soil with frequent modern building debris
008	Small limestone chippings in a silt matrix
009	Grey sand with frequent rootlets
010	Mottled pale reddy brown sand/silt with rootlets visible
011	Dark grey silt with frequent building rubble
012	Light-mid brown peat (frequent reed stems)
013	Grey sand silt with frequent building rubble
014	Light brown sandy silt
015	Black silty sand with faint organic odour
016	Made ground (borehole data only)

#### **APPENDIX 2 – ARCHIVE SUMMARY**

**SITE NAME:** Ruston Way Office Park, Lincoln

**SITE CODE:** LIRWA08

**MJAS REPORT No:** 552

**NGR:** SK 96595 71453 – centre

**PROJECT TYPE:** Watching Brief in conjunction with geotechnical investigations

**PROJECT DATE:** 7 April 2008

**PLANNING APPLICATION No.:** 2005/0265/O

**CLIENT:** Westleigh Developments Ltd, Tudorgate, Grange Business Park, Enderby Road, Whetstone, Leicestershire LE8 6EP

**SMR No.:** N/A

**CIVIL PARISH:** Lincoln

**MUSEUM ACCESSION No.:** 2008.67

**ARCHIVE PRESENT LOCATION:** MJAS, 1 Torrington Road, Lincoln, LN2 2DP

**ARCHIVE FINAL LOCATION:** The City and County Museum, Friars Lane, Lincoln