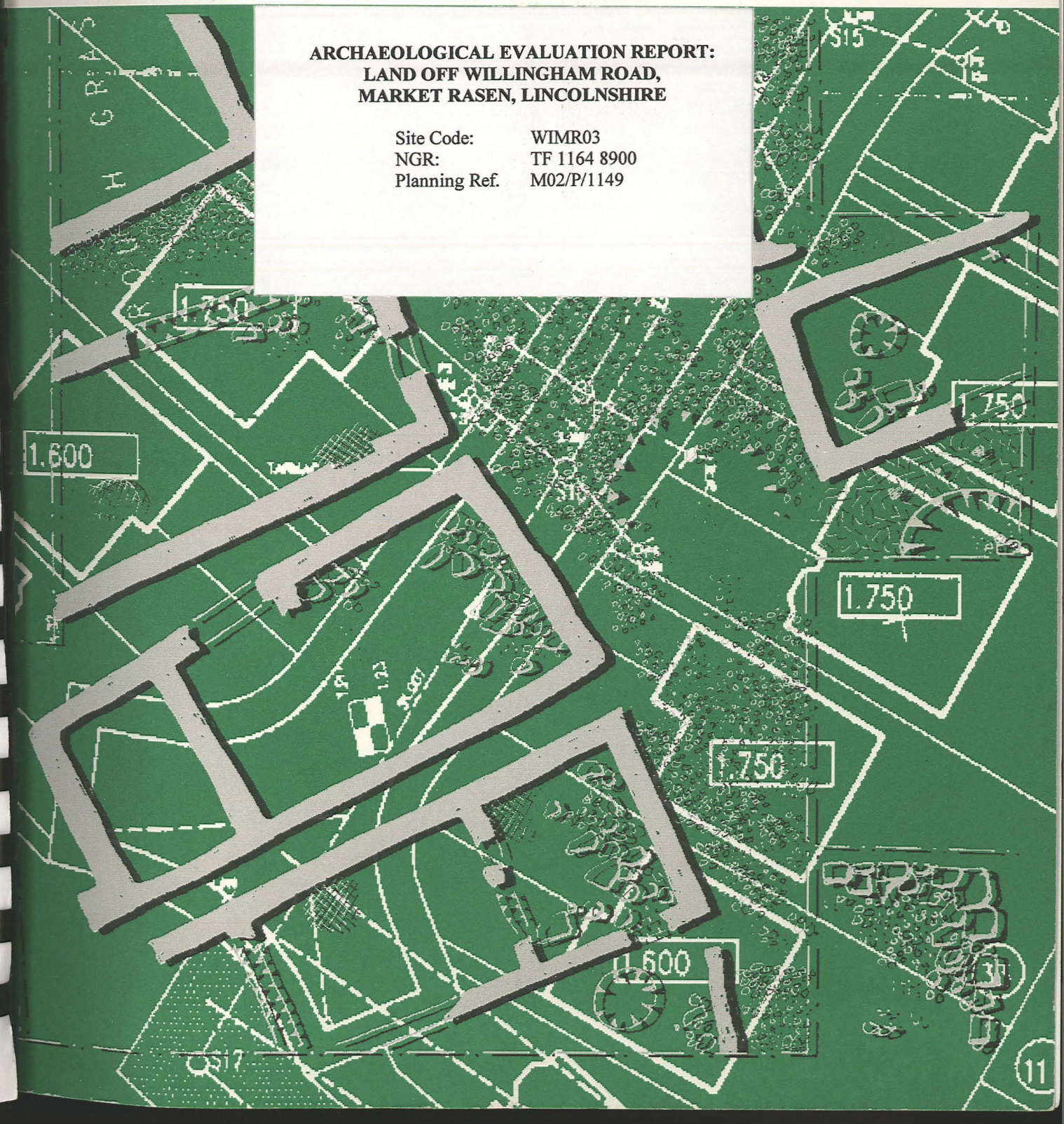
M3/12

PRE-CONSTRUCT ARCHAEOLOGY

LINCOLN

ARCHAEOLOGICAL EVALUATION REPORT: LAND OFF WILLINGHAM ROAD, MARKET RASEN, LINCOLNSHIRE

Site Code:	WIMR03
NGR:	TF 1164 8900
Planning Ref.	M02/P/1149



EVENT L14256 SOURCE L18792 L18793

PRN S4832 - IRON AGE
S4833 - NEOLITHIC
S4834 - UNDATED
S4835 - UNDATED

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Report prepared for Chartdale Homes Ltd.

by

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Summary

- *An archaeological trial excavation was carried out on land off Willingham Road, Market Rasen, Lincolnshire, to inform an application for residential development by Chartdale Homes Ltd.*

- *Cropmark evidence shows traces of later prehistoric activity in the vicinity of Market Rasen, and an extensive Romano-British pottery industry existed towards the south side of the town. There is also tentative evidence of Anglo-Saxon activity in the area.*

- *At the current site, an unanticipated zone of Late Iron Age settlement and/or industrial activity has been defined towards the east side, consisting of possible structural remains, and large enclosure/drainage ditches. Moderately substantial quantities of iron-working slag were recovered from some features; indicative of both smelting and smithing. However, direct evidence of ironworking on site (eg furnace remains) has not been identified; either by geophysics or by trial excavation.*

- *There was a long tradition of industrial working in the area of Market Rasen during the Roman period, centering on pottery manufacture. It may be that this industrial base had its roots firmly established in the preceding later Iron Age*

- *The significance of the archaeological resource cannot be underestimated, and the site could well provide valuable information relating to our understanding of the cultural transition from Iron Age to Romanized British.*

- *It should be noted that the important archaeological remains are situated towards the east side of the site, and that substantial areas (the whole of the west side) are either archaeologically sterile or are considered to be of limited archaeological potential.*

- *The proposed residential development by Chartdale Homes Ltd. will involve the creation of areas of open space, and the developers have already indicated their intention to preserve as much of the archaeological resource as is reasonably possible in situ. Where sensitive archaeological remains occur beyond this preservation zone, further archaeological intervention may be required in advance of/during development of the site.*

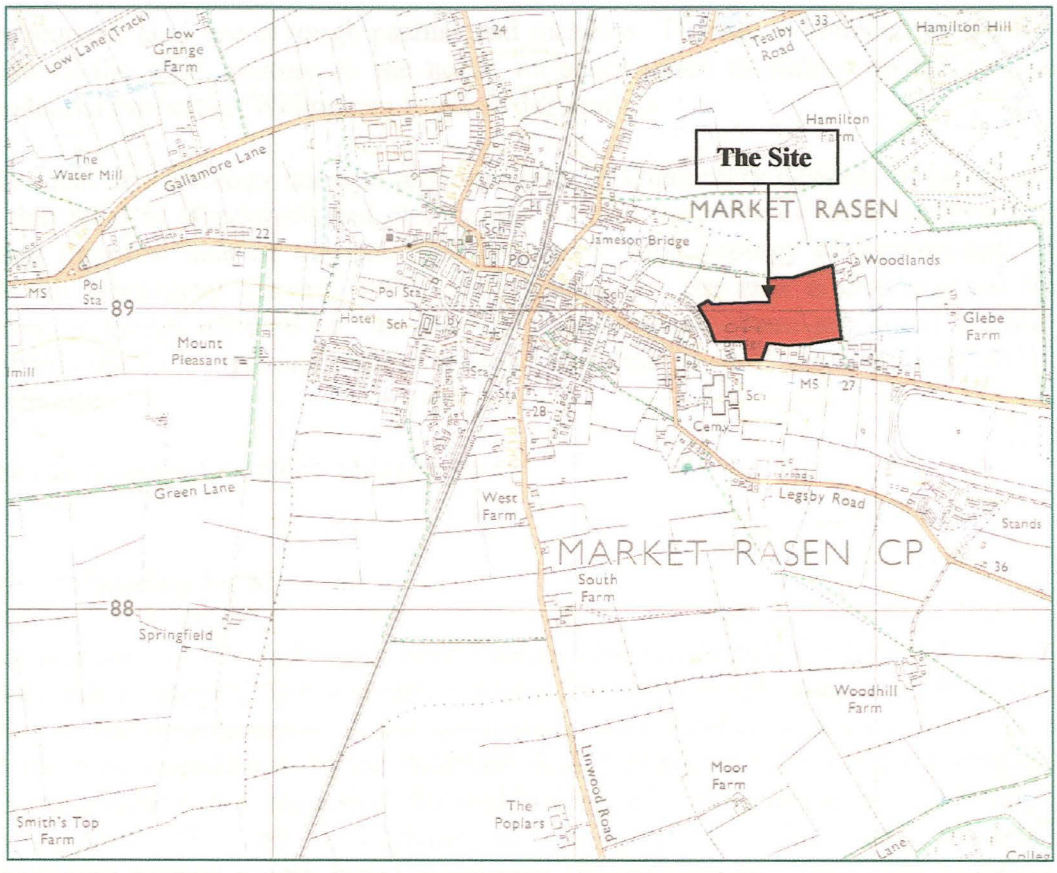

Fig. 1: General site location (scale 1:25,000)
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1.0 Introduction

Pre-Construct Archaeology (Lincoln) was commissioned by Chartdale Homes Ltd. to undertake a programme of archaeological evaluation in advance of residential development on land off Willingham Road, Market Rasen, Lincolnshire. These works were undertaken to fulfil the objectives of a formal project brief issued by the Assistant Built Environment Officer for Lincolnshire County Council, and a project specification prepared by Pre-Construct Archaeology (Lincoln). This approach is consistent with the recommendations of *Archaeology & Planning: Planning Policy Guidance Note 16*, (Department of the Environment, 1990), *Management of Archaeological Projects* (English Heritage, 1991), *Standards and guidance for archaeological excavation*, (IFA, 1999), and the Lincolnshire County Council document *Lincolnshire Archaeological Handbook: a manual of archaeological practice* (LCC, 1998).

2.0 Site location and description

Market Rasen is in the administrative district of West Lindsey, approximately 18km north-east of Lincoln. The proposed development area lies on the east side of the town. It comprises six blocks of land, totalling approximately eight hectares.

The current land use is rough pasture and meadow. The site is bounded by the River Rase to the west, pasture to the north, an access road to stables on the east, and residential properties/Willingham Road to the south.

The local drift geology consists predominantly of Quaternary deposits of blown sand. A thin band of alluvial silt and clay (which follows the route of the River Rase) runs along the west side of the site. This overlies a solid geology of Kimmeridge Clay (British Geological Survey, 1999). Topographically, the area is characterised by a series of gentle undulations that resemble sand dunes. There are noted elevations towards the west side, and there is a broad elevation towards the central-eastern part of the site.

The site is centred on NGR TF 1164 8900.

3.0 Planning background

Planning consent is sought from West Lindsey District Council for the erection of 102 residential properties with associated access and services (planning ref.M02/P/1149). Prior to the determination of this application, West Lindsey District Council, acting on the recommendations of the Assistant Built Environment Officer for Lincolnshire County Council, has requested the undertaking of a programme of archaeological investigation. The first two phases of this programme involved non-intrusive techniques; namely a desk based assessment (Palmer-Brown, 2003), and geophysical survey (Masters, 2003). Based on the results of the latter, a scheme of archaeological trial excavation was informed and devised.

4.0 Archaeological and historical background

Very few remains of prehistoric date have been recovered from the vicinity of Market Rasen, although cropmarks indicative of prehistoric enclosures and field systems have been recorded approximately 600m south-south-east of the site.

There is abundant evidence of Romano-British industrial activity in the area, and the core of this activity appears to have centred to the south of the modern town. Several phases of archaeological fieldwork have investigated a number of Romano-British pottery production sites, where domestic greywares were produced between the 2nd to 4th century AD (Whitwell, 1992). This industry is situated close to a branch road running eastwards from Ermine Street, preserved in the line of the parish boundary between Market Rasen and Linwood (*ibid.*). As of yet, no evidence of an associated settlement has been discovered, although this must have existed.

Isolated findspots of Anglo-Saxon date have been discovered throughout the parish, including two mounts from a hanging bowl, part of a cruciform brooch, and a *sceatta* (ca.720-740 AD), suggesting a limited degree of activity in this period. The Anglo-Saxon settlement of Market Rasen is further suggested by an entry in the Domesday book, as *Rase*, when land was owned by Roger Poitou and Alfred of Lincoln, both of which estates included a mill (Morgan & Thorn, 1986). At this time, the town did not have market status, and was known as *Rase* or *Resne*, a name deriving from the Old

English *raesn*, meaning a plank, or plank bridge. Market status had been bestowed upon the town by at least 1358 (Cameron, 1998).

With regard to the present site, there are no specific entries within the County SMR indicating previous phases of human settlement. Given the large size of the proposed development area, however, the Assistant Built Environment Officer of Lincolnshire County Council submitted a recommendation that development of the area should be preceded by an appropriate programme of assessment and evaluation. The archaeological potential of the area was illuminated by the results of a programme of target gradiometry (Masters 2003), which identified areas of the site that appeared to contain buried ditches and other archaeological remains (fig 2). The current report focuses on a programme of trial excavation that was established to sample some of these anomalies, and to sample areas of the site that appeared to be archaeologically sterile, or which had not been exposed to non-intrusive evaluation techniques.

5.0 Methodology

The initial evaluation methodology required the excavation of twelve trenches. Based on the results of this phase, a further two trenches were requested (contingency).

The evaluation trenches were established to target specific magnetic anomalies detected by gradiometry; to assess magnetically negative areas, or areas that were not surveyed by geophysics. A summary of objectives (by trench) is indicated as follows:

Trench 1: 50m long and aligned approximately east-west in geophysical survey Area E to investigate a feature defined as a possible palaeochannel/oxbow lake. The remainder of the trench traversed an area that was devoid of magnetic anomalies

Trench 2: The 50m trench was aligned east to west in geophysics Area D, where only a small part of the unit was surveyed due to problems with standing water. The trench extended into the south-east corner of the survey grid.

Trench 3: Located on the east side of Area C, the trench was positioned to intercept anomalies interpreted as possible settlement enclosures. It was 30m long and aligned north-north-west to south-south-east.

Trench 4: This was 30m long and aligned south-west to north-east. It was positioned across a large linear feature, believed to be a palaeochannel.

Trench 5: This 20m trench was placed to the east of the Area D survey grids. It was aligned north-south.

Trench 6: This was 50m long and was aligned west-south-west to east-north-east. It was positioned on the west side of survey Area C, in a largely blank area, immediately to the west of the postulated settlement enclosures.

Trench 7: Aligned approximately east to west, this 30m trench was placed on the east side of survey Area B, in an area where no geophysical anomalies had been detected.

Trench 8: This trench was 30m long and was aligned north to south. It was positioned to the east of grid F2, in an area that was not surveyed, but on the projected course of a possible palaeochannel; identified in Area C to the east.

Trench 9: Measuring 20m in length, and aligned east-west, this trench was located on the west side of Area F2, on the edge of a faint linear anomaly indicating a possible palaeochannel.

Trench 10: This was 30m long and was placed across Area F1 on a west-north-west to east-south-east alignment. It was situated in an area where no geophysical anomalies had been detected.

Trench 11: This was aligned north to south in the northern part of Area A, and was 30m long. No geophysical anomalies had been detected in this area.

Trench 12: The 20m trench was positioned in an area that had not surveyed by gradiometry, immediately to the west of Area C. It was aligned approximately south-west to north-east.

Following completion of the above programme, the Assistant Built Environment Officer for Lincolnshire County Council requested the investigation of an additional two trenches to establish the extent of Iron Age remains that had been exposed in Trench 2 towards the north-east corner of the site (see 6.2 below):

Trench 13: This was 30m long and was located in the north-west corner of Area D. The trench was aligned north-west to south-east.

Trench 14: Measuring 50m in length, this trench was aligned north-west to south-east. It extended from immediately south of Area D, into the northern part of Area E, where no geophysical anomalies had been detected.

Each evaluation trench was cut using a 360° excavator fitted with a 1.6m wide smooth blade. Topsoil and subsoil deposits were removed in spits not exceeding 0.2m, until the first archaeological or natural horizon was encountered. Where archaeological deposits were encountered, all further excavation was by hand.

In each area, archaeological features were sample excavated to establish depths and profiles and, where possible, date and function. Features were recorded in plan and in section at appropriate scales (1:50 and 1:20), and written accounts were prepared on pro forma context record sheets. A colour photographic record was maintained throughout the project, and selected prints have been reproduced in this report.

The author, assisted by a team of five experienced archaeologists, supervised the excavation of Trenches 1-12 over a period of eight days; from Wednesday 23rd April to Friday 2nd May 2003. Trenches 13 and 14 were also excavated by the author with a team of three experienced archaeologists on 11th and 12th June, 2003.

Fig.2: Trench locations in relation to geophysical survey (scale 1:2500). The trenches with minimal archaeological significance are shown in green, the more significant trenches are shown in red. The red dotted line indicates the principal zone of archaeological activity

6.0 Results

6.1 Trench 1 (fig 3)

Three undated linear features were exposed in this trench. The possible palaeochannel/oxbow lake detected by geophysical survey (and visible on site as a slight depression) was machine excavated at the east end of the trench. Approximately 6.5m of this trench was not excavated due to prevailing wet conditions resulting in areas of standing water (see fig 3).

The topsoil, (100), which sealed the archaeological remains, was a dark brown sandy loam 0.2 to 0.4m deep.

At the west end of the trench, was a north to south aligned linear feature, [102]. This was approximately 1.7m wide and it survived to less than 0.1m deep. It may have been the truncated remnant of a medieval furrow (similar features were exposed in Trench 6 to the west).

Approximately 12.5m to the east of [102], was a pair of irregular, north to south aligned linear features, [104] and [106]. [104] varied between 0.65m and 1.25m wide, and a section excavated through the feature exposed a profile of moderately steep sides and concave base. The fill of the feature, (105), was a mixed deposit of orange, yellow, and brown silty sand. The adjacent feature [106] was between 0.65 and 1.1m wide and survived to a depth of 0.3m. It contained a fill of orange/grey silty sand, (107). This context yielded a large secondary flint flake.

Machine excavation at the east end of the trench removed a compact mid brown clay deposit, (110). This was sealed beneath the topsoil, and it extended to approximately 1.25m below the modern ground surface. It appeared to fill a relatively steep sided feature, [109], that corresponded with the possible palaeochannel/oxbow lake detected by geophysical survey. The exact profile of the feature was not determined, as the feature was machine excavated, and the depth of the trench and rapid flooding made it impossible and unsafe to enter the trench.

6.2 Trench 2 (fig 4)

At the west end of the trench, three intercutting ditches were exposed. One of these contained numerous sherds of Late Iron Age pottery. The trench also contained evidence for two possible structures of Iron Age form, and a number of undated linear features. These features are also likely to be of later Iron Age date

A relatively dense cluster of archaeological features was exposed beneath a dark grey-brown sandy loam topsoil (200), which was between 0.2 and 0.5m deep, and contained artefactual remains of 18th – 19th century date. At the west end of the trench, this was beneath a layer of dark brown sandy loam, (235). This was up to 0.4m deep at the west end of the trench, gradually thinning to the east, and disappearing at the 14m point. It is interpreted as a possible ground raising deposit, probably of recent origin. The east edge of a second similar deposit, (236), was identified at the west end of the trench beneath (235), consisting of redeposited natural yellow sand, up to

0.15m deep and extending 0.8m into the trench. This was over 0.3m of very dark grey/black slightly silty sand, (237), indicating a former ground surface that was cut by a complex of three inter-cutting ditches.

The earliest ditch in this complex, [227], ran obliquely across the trench on a broadly north-east to south-west alignment. Only part of its profile was established, as it had been substantially truncated by the later ditches. The north-west facing edge of the feature exhibited a steep, slightly concave profile. It was approximately 0.7m wide and 0.4m deep, and contained a fill of greyish brown sand, (228) that was devoid of artefactual remains.

[227] was cut by a ditch running north to south, [234]. This was approximately 1.85m wide and 0.7m deep. The only surviving edge was on the east side, describing a moderately steep convex profile. The ditch contained a single undated fill of very dark grey sand, (233).

The latest ditch in this succession, [229], ran on a broadly north-west to south-east alignment. Only the western edge of the feature was clearly visible, exhibiting a shallow upper profile, becoming steeper towards a concave base. The ditch was approximately 1.6m wide and 0.7m deep, and it contained three distinct fills:

- on the west edge was a dark grey sand, (230), representing possible slumping of the ditch sides.

- the bulk fill was a very dark grey sand, (231), sealed by a thin lens of compact brownish grey clay 0.06m deep, (232). (231) contained some 62 sherds of late Iron Age pottery (from three vessels) and one heavily burnt and fire-cracked stone.

To the east of the above was an irregular linear feature, running north-north-east to south-south-west, [216]. This was approximately 1.4m wide and 0.3m deep, and it contained an undated fill of brownish grey sand, (217).

Approximately 9.25m east of the west trench end, a curvilinear feature, [214] was exposed. Two sections excavated through this exposed moderately steep sides and a concave base. An homogenous fill of brown-grey sand, (215), was observed.

To the east of the above, a number of shallow linear features were exposed. Two interrelated, but undated, gullies, [218] and [219], formed a T-junction towards the centre of the trench. Another shallow linear feature, [212] ran south-west to north-east, and this traversed an irregular sub-circular pit, [210] at the north edge of the trench. The pit was 1.9m wide and 0.25m deep, and contained two distinct fills of greyish brown sand, (211) and (221). Sherds of late Iron Age pottery were recovered from this feature, along with post-medieval sherds. It is suggested, however, that the post-medieval sherds are out of context, and that they probably derived from the linear ditch [212] that had cut through the pit.

10m from the east end of the trench was a 0.65m wide and 0.25m deep slightly curvilinear feature, with moderately shallow sides and a slightly concave base, [205].

It was filled with very dark brownish grey silty sand, (206). Another curvilinear feature, [202], 3.5m to the east, was of a similar width, but was 0.4m deep, with steeper sides. Its fill, (220), was identical to (206). It is possible that [205] and [202] were in fact part of the same: a penannular ditch of a type commonly associated with later prehistoric structures. Unfortunately, no dating evidence was recovered from either.

Immediately to the east of [202], two intercutting, but undated, ditches were exposed. The earliest, [204] was 0.4m deep, and more than 1.5m wide. It contained an undated fill of mid to light grey silty sand. This feature was cut on its west side by [203], which was 1.9m wide and 0.45m deep, with moderately sloping sides and a concave base. Its basal fill, (208) was yellow grey silty sand, sealed by mid grey sand, (207).

6.3 Trench 3 (fig 5, 5a)

The trench contained several intercutting linear and other features, some of which had been identified by the preceding geophysical survey. Some ditches contained fragments of iron working slag and small amounts of late Iron Age pottery.

The topsoil in this area, (300), was approximately 0.3m deep, and this contained artefactual remains of 18th/19th century date, and a secondary flint flake of probable Neolithic date. Machine excavation of this deposit exposed a series of inter-cutting features, cut through a yellow/brown natural sand, (332).

At the north end of the trench, ditch [327] ran on a north-east to south-west alignment, measuring 1.5m wide and 0.75m deep. It contained three distinct sandy fills; (324), (325) and (326). The basal fill, (326) comprised mid grey sand reflecting alluvial deposition. The upper bulk fill of the feature, (324) incorporated one sherd of late Iron Age pottery, and eleven fragments of slag were recovered from this context: six tap slag, a smelting hearth bottom, one possible fragment of smithing slag, and three undiagnostic fragments (Appendix 2). A fragment of smithing hearth bottom was also recovered from context (325).

The south edge of the above was cut through a spread of dark sandy material, (330). Slots excavated through this deposit suggested that it may have been partially masking and filling an irregular curvilinear gully, [331], which terminated within the excavated area. Context (330) yielded an undiagnostic fragment of slag and a broken secondary flint flake.

Immediately to the east of [331], was an east to west linear feature, [323]; 0.75m wide and 0.35m deep, with c.45° sides and a concave base. It contained two fills, a grey silty alluvial deposit, (322), sealed by a deposit of greyish brown sand, (321). There were no associated finds.

The south edge of [323] had cut through the backfill of what appeared to be one substantial linear feature running broadly north to south, [320]: up to 4m in width. However, slots excavated at the north and south ends of this 'feature' revealed it as a complex of several features, [315], [320], [338] and [340]. From one of these, (318)/[320], two sherds of Iron Age/Romano-British (probably Iron Age) pottery were

recovered, as was a fragment of smithing hearth bottom and a fragment of tap slag. A bulk soil sample from context (310), a fill within feature [315], identified hammerscale and fuel ash slag, as well as charcoal and charred seed. The charcoal from this sample appeared to derive from small twigs or root fragments of shrubs. The hammerscale appears to have been associated with local iron smithing, although not in sufficient quantity to indicate that activity in the immediate neighbourhhod. However, the same context also yielded more than 2kg of slag; the majority of these being associated with the smelting process (Appendix 2). A large fragment of hearth bottom was also identified. Furthermore, the primary fill of [315], context (314), contained a single large piece of tap slag.

Cut through the above complex, towards the centre of Trench 3, was a further straight-sided linear ditch, [336], orientated east-west (1.1m wide, 0.4m deep). The profile of this feature was shallow, and its fill (335) contained sherds of white glazed and red glazed pottery and a single fragment of clay tobacco pipe. This feature is likely to have been a former field drain of probable 17th/18th century date.

Approximately 3m to the south of the above was another linear ditch, [309]: parallel with [323] further north. This was 1.35m wide, 0.55m deep, its base being flat. Two individual sandy fills were identified; (308) underlying (307). Three sherds of 17th – 19th century pottery, and ceramic building materials of a similar date were recovered from the latter, clearly indicating a post-medieval date for this ditch. Context (307) also yielded a single piece of tap slag (?residual).

One further linear ditch was exposed approximately 7.5m to the south of the above, close to the trench end, [302]. The north edge of this feature appeared to clip the edge of a small posthole-type feature [334], although it is possible that the two were contemporary. Ditch [302] was 1.64m wide and 0.6m deep, and it was parallel with the post-medieval ditch [336] further north. Its, possibly water-borne fill, (301), contained three sherds of late Iron Age pottery, as well as a (?residual) flint flake of probable Neolithic date. A bulk soil sample was taken from (301) for environmental assessment. This identified hammerscale and fuel ash slag, as well as charcoal and charred seed/grain. The bulk of the charcoal from this sample appeared to derive from small twigs or root fragments of shrubs. The hammerscale would appear to be indicative of local iron smithing, although apparently not in sufficient quantity to indicate that this activity was undertaken in the immediate neighbourhood (see Appendix 3). However, context (301) also yielded two lumps of iron-working slag (Appendix 2), but these cannot be used to distinguish between smithing and smelting.

Other features in this trench that have not been described above are summarised as follows, working from north to south:

- [329]: a small posthole-type feature, partly beneath the east section face. Possibly animal disturbance

- [317]: a shallow (0.14m) sub-oval feature on immediate west side of ditch [320]: pit or natural disturbance.

- [306]: similar to [329]; possible small posthole.

- [304]: possible terminal of shallow ditch protruding from west section face. Although undated, the fill of this feature contained five fragments of slag, with at least four of these being tap slag, suggesting that the material was dumped into the feature following tapping from a smelting furnace (Appendix 2). A broken tertiary flake of probable Neolithic date was also recovered.

6.4 Trench 4 (fig 6)

A single undated ditch extended across the centre of the trench. At the south end of the trench was a large spread of material containing post-medieval brick, tile and pottery. This appeared to fill the void left by an earlier palaeochannel that had been detected by geophysics. Unfortunately, poor weather/standing water prevented a proper investigation of this feature.

Situated towards the centre of the trench, a linear feature, [402] was exposed on an east to west alignment. This was 2.56m wide and 0.65m deep, with moderately steep sides and a concave base. It contained a fill of mid grey sand, (403) which incorporated a complete smithing hearth bottom and one undiagnostic fragment of slag. A later ceramic land drain ran through the centre of this feature.

At the south-west end of the trench, an area of dark silty sand, (404), was exposed, measuring approximately 13.5m from north-east to south-west. A slot was excavated through this deposit, exposing a gently sloping cut, [405]. The feature was shown to be c.0.6m deep at the north-east end. However, several land drains were exposed in the excavation, which, combined with heavy rain, led to extensive flooding before the feature could be fully investigated. The excavated fill produced numerous fragments of early modern brick, pottery and glass. The location of this feature relates to the position of a suspected palaeochannel that was detected by geophysical survey. One assumes, therefore, that the early modern remains relate to a phase of levelling; possibly associated with filling the upper void of the channel (recalling that the palaeochannel in the vicinity of Trench 1 survives today as a slight depression in the ground surface).

Excluding modern land drains, no other features were exposed in this trench.

6.5 Trench 5 (fig 7)

The trench exposed a single large, undated, linear feature.

A 0.25 – 0.35m deep topsoil, (500) was the uppermost deposit, and this layer contained small amounts of sub-rounded gravel, as well as modern brick, tile and pottery fragments, and nylon bailing twine. It sealed a layer of brown loamy sand, up to 0.15m deep, (502). This also contained fragments of modern pottery, brick and tile, and was interpreted as a ground raising deposit.

A large linear ditch was exposed, [501], running north-north-east to south-south-west. The ditch was approximately 3.5m wide, with a maximum depth of 0.7m. It appeared to have been deliberately capped with a deposit of grey/brown clay, (503). This varied

between 0.1 and 0.35m deep, and was at its deepest towards the centre of the ditch. The feature had a very shallow lip on its south edge, becoming steeper towards the centre. At the base of the ditch was a primary fill of very dark grey silty sand, (506), sealed by a layer of mid grey silty sand, (505). No dating evidence was recovered from either deposit.

6.6 Trench 6 (fig 8)

A north-south ditch at the west end of the trench contained several worked flints. Several shallow undated linear features were also exposed; possibly representing the bases of medieval furrows orientated north-south.

All of the features exposed were sealed beneath a very dark grey topsoil, (600), up to 0.35m deep, and were cut into a deposit of natural sand, (601). At the west end of the trench was a north-south linear ditch, [602]. This was 1.55m wide and 0.8m deep. Four fills were observed within the ditch, (603), (621), (622) and (623). All were silty sands. The primary fill, (623), contained small amounts of decayed organic matter and three worked flints of probable late Mesolithic/Neolithic date. Context (622) yielded four flint flakes; possibly of Neolithic date.

The remainder of the trench contained a series of significantly shallower, undated linear features, [604], [606], [608], [610], [612], [614], [616], [618]. The majority of these features ran on a broadly north-south alignment, although two, [606] and [610] were aligned north-west to south-east. Ditches [604], [608], [612] and [614] were evenly spaced (approximately 6.5 – 7.5m apart) suggesting that they may represent the bases of furrows.

6.7 Trench 7 (fig 9)

Three linear features were exposed. One was undated; one contained a sherd of early modern pottery, and one contained a sherd of early modern bottle glass.

The topsoil, (700), sealed four features. At the west end of the trench was a narrow linear feature, [702], approximately 0.8m wide and 0.36m deep. It contained a single fill of dark grey silty sand, (703), that produced one sherd of late 17th – 18th century glazed red earthernware pottery.

Approximately 7.5m east of [702], running north-south, was a wider and shallower linear feature, [704]. Its fill, (705), was a grey/brown silty sand containing a single fragment of early modern bottle glass. This was cut by a small sub-rectangular feature, [708]. The unusual profile of this feature suggested that it may have resulted from animal burrowing.

Approximately 9m from the east end of the trench was another undated linear feature, [706]. This was aligned north to south and was 1.4m wide and 0.18m deep. It seems likely that this feature was a truncated furrow.

All of the features were cut into the natural geology, comprising mottled orange/yellow sand, (701).

6.8 Trench 8 (fig 10)

The trench traversed the projected course of a palaeochannel detected by geophysical survey. The stratigraphy exposed reflected gradual silting of this feature. Four sherds of Romano-British greyware pottery was recovered.

No archaeological features were exposed in this area. The stratigraphy consisted of the following sequence:

upper layer of dark brown loamy topsoil, (800), 0.3 – 0.4m deep

/

0.4m of light brown sandy clay subsoil, (801)

/

mottled blue/grey and yellow sand, (802), containing four sherds of Romano-British pottery

/

A sondage excavated at the south end of the trench exposed a layer of dark grey peaty sand, (803), with abundant organic inclusions, including large fragments of waterlogged wood. This was observed at c.1.3m below the modern ground surface. The trench rapidly flooded precluding any detailed investigation of this deposit.

6.9 Trench 9 (fig 11)

This trench also lay close to the projected course of the same palaeochannel (see fig 2), and exposed a similar stratigraphic sequence as Trench 8.

The stratigraphy in this trench is defined as follows:

The uppermost deposit was a topsoil, (900), approximately 0.3m deep.

/

0.2m subsoil layer, (901), consisting of brown sandy clay.

/

0.2m of compact brownish grey clay, (902). The base of (902) was defined by a thin band of black, decayed organic matter.

/

A layer of mid brown, slightly clayey sand, (903).

No finds were recovered in this trench.

6.10 Trench 10 (fig 12)

No archaeological deposits were exposed in this trench: a 0.35m deep dark brown sandy topsoil, (1000), lay directly over natural sand; a mixed orange, yellow, and dirty white deposit, (1001).

No finds were recovered in this trench, excluding one sherd of 18th century pottery and a fragment of 17th – 19th century tile from the topsoil.

6.11 Trench 11 (fig 13)

Trench 11 was also devoid of archaeological remains. The topsoil, (1100), comprised brownish grey sandy loam, approximately 0.45m deep. This sealed mottled orange, yellow, and reddish brown sand, (1101).

No finds were recovered in this trench.

6.12 Trench 12 (fig 14)

The uppermost deposit was a 0.35 – 0.5m deep topsoil, (1200). This overlay a light yellow brown silty clay, between 0.1 and 0.2m deep, (1201). This in turn sealed a deposit of mottled orange, yellow and light grey sand, (1202). A sondage at the west end of the trench exposed a peaty sand, (1203); very similar to that in Trench 8.

No finds were recovered in this trench.

6.13 Trench 13 (fig 15)

One irregular feature and a small pit were exposed. Both features were undated, but contained significant amounts of charcoal flecks.

The uppermost deposit was a 0.4m deep grey/brown sandy loam topsoil, (1300). Two features were exposed beneath this layer. At the north-west end of the trench was an irregular feature, [1304], 2.54m long, and projecting 0.45m from the north-west section face. It contained a fill of black silty sand, (1305), with abundant charcoal inclusions.

At the opposite end of the trench was a small sub-circular pit, [1302], of approximately 0.54m diameter. This survived to only 0.08m deep, and it contained black silty sand, (1303), with abundant charcoal flecks. Both features were cut into a mixed deposit of yellow, orange and brown natural sand, (1301).

6.14 Trench 14 (fig 16, 16a)

A large linear feature of late Iron Age date extended north-south across the trench. The trench also revealed a number of dated and undated ditches running north-east to south-west, and the edge of the palaeochannel exposed in Trench 1.

The topsoil, (1400) was 0.2-0.3m deep. At the south-east end of the trench, this sealed a layer of orange/brown clay, (1402), that extended 6.5m into the trench, gradually

thinning. It is possible that this represents alluvial accumulation caused by flooding of the nearby palaeochannel/oxbow.

At the south-east end of the trench, sealed beneath (1402), was a linear feature, [1403], aligned north-east to south-west. One slightly uneven, shallow side was exposed, extending 2.7m from the end of the trench. It contained an homogenous undated fill of grey clayey sand, (1404). It is possible that this feature represents the edge of the palaeochannel exposed in Trench 1.

To the north-west of [1403] was another north-east to south-west aligned linear feature, [1409]. This was 2.8m wide and 0.75m deep. It had a shallow lip on its north-west edge, the remainder of the feature having steep sides and a concave base. Two fills were recognised within the ditch; a primary fill of grey sand, (1410), sealed by a mid brown sand, (1420). Within the lower fill was a chunk of fired clay that had been subjected to intense heating. It is possible that this was a fragment of a hearth bloomery furnace associated with iron processing, although this is not certain.

Between [1403] and [1409] was a very shallow feature, 1.6m long and 0.3m wide, [1425], which produced a broken primary flint flake.

To the north-west of [1409], two pit-like features were investigated, [1405] and [1407]. Both were irregular in plan and profile; probably representing animal burrows and tree boles. A land drain ran between the two features.

A third north-east to south-west linear feature, [1411], extended across the trench, less than 1.0m north-west of [1407]. This was 0.85m wide and 0.4m deep, and it contained two fills, (1412) and (1413), both of which were undated.

Approximately 18m further to the north-west, were two inter-cutting linear gullies, [1416] and [1418]. [1416] ran north-north-west to south-south-east and ended with a U-shaped terminus. [1418] was aligned west-south-west to east-north-east. Both features contained dark grey sandy fills, (1417) and (1419) respectively. Due to the similarity of these, a stratigraphic relationship was not established (it is possible that the two were contemporary, and three sherds of late Iron Age pottery were recovered from (1417)).

At the north-west end of the trench, a large linear ditch, [1414] was exposed, on a north-south alignment. The ditch was 1.9m wide and had a total depth of 0.86m. During excavation, a recut was observed, [1422] which survived to a depth of 0.45m. The earlier cut contained a primary fill of very dark grey silty sand with a considerable organic component, (1421). The secondary fill, (1415) was a mixed deposit consisting of laminated bands of grey and yellowish grey sand with occasional lenses of organic material and very dark grey silty sand. This may represent episodic silting and slumping. The recut contained a single fill of yellowish grey and brownish grey sand, (1423), and this deposit incorporated six sherds of late Iron Age pottery.

All features were cut into a mixed pale grey, yellow and orange natural sand, (1401).

7.0 Discussion and conclusion

The evaluation has identified a clear principal focus of archaeological activity, which centres towards the east side of the proposed development area, occupying an area of relatively high ground. Although slightly subjective, this zone has been defined on fig 2: defined largely by geophysics and backed up by the results of trial excavation.

The majority of the archaeology (certainly the most significant of the features) appears to date to the late Iron Age, and 'the site' as we may call it appears to have lain sandwiched between or within a group of palaeochannels: indeed, the main focus of activity appears to be defined on its north and south sides by two clear palaeochannels that extend in a broadly east-west orientation, with features that resemble oxbow lakes towards the east.

There are traces of earlier activity, as identified by thirteen worked flints that were recovered from a variety of contexts (sometimes residual). This small assemblage would suggest activity during the early-middle Neolithic period. Only one feature (?ditch [602], west end of Trench 6) produced any quantity of worked flint (7 fragments), and it is possible therefore that feature [602] really is of Neolithic date.

It should be noted that the west side of the site appears to be relatively sterile, and it is unlikely that development of this area will have any great impact on the archaeological resource: six trenches (Trenches 7 – 12) produced negative or archaeologically insignificant results. Similar results were obtained in the north-eastern part of the site, where Trenches 4 and 13 exposed very few archaeological remains. In contrast, Trenches 2, 3 and 14 exposed a relatively dense array of cut archaeological features, with primary dating evidence placing these features in the later Iron Age: 1st century BC – early 1st century AD (continuity into the Romano-British period is likely, although this has not been clearly expressed in the ceramic assemblage, save for four probable 3rd century AD sherds that were recovered from a water-borne context in Trench 8.

There is good evidence from Trenches 3, 4 and 14 that iron working was taking place either at or near the site in the later Iron Age. Smithing and smelting slag was recovered from a variety of contexts, and there is a possibility that related structures occur within the site environs. A likely area would be the vicinity of Trench 3, which occurs within the greatest cluster of geophysical anomalies.

Iron Age iron working sites in Britain are rare, although we know from sites such as Llyn Fawr in Glamorgan that iron products were being manufactured in Britain from as early as the 7th century BC (Cunliffe 1991), although it was not until the 4th – 3rd centuries BC that iron was used on any great scale (Manning 1972); and then, usually in homestead (as opposed to industrial-scale) circumstances. In south-eastern England, it has been suggested that iron production became more centralised as the Iron Age progressed, requiring the development of more organised redistribution processes, with ironsmiths working from selected locations (Cunliffe 1991).

At Market Rasen, there is no obvious source of raw iron, although it is possible either that bog iron was used (Appendix 2), or that the material was brought in from the rich sources that occur within the Jurassic limestone ridge (Todd 1991).

It is perhaps interesting that Market Rasen is well known to archaeologists as an extensive industrial base that focused on the production of pottery between the 2nd and 4th centuries AD, and there should be no great surprise that this industrial base probably emerged during the preceding Iron Age period. Both Iron working and pottery manufacture demands a ready supply of timber (in the case of iron, usually to create charcoal for smelting). It is likely, therefore, that there was copious amounts of woodland in the vicinity of Market Rasen during the later prehistoric and proto-historic periods, although this situation requires proper attention before any definitive statements are possible. What is clear is that domestic sites of Roman date have not thus far been identified by excavation.

With regard to the proposed development by Chartdale Homes Ltd., the authors have produced an illustration (fig 2) which, in their opinion, defines the principal zone of archaeological sensitivity. Doubtless, this will exclude small areas of archaeological activity, but it goes a good way towards defining a clear zone where residential development would have a negative effect on the archaeological resource, and we have already established that this resource is too important to be simply lost to development. That said, other areas of the site appear, for the most part, to be either archaeologically sterile; or contain low levels of archaeological remains; or contain archaeological remains that are significantly less important (eg ridge and furrow). It is suggested, therefore, that the developers should be relatively free to build outside of the defined zone; but that steps should also be taken to ensure the preservation of remains within the defined zone: that is preservation *in situ*, preservation by record, or a combination of the two.

Informal discussions with Chartdale Homes Ltd. indicate that their scheme of proposed development does include areas of public open space, although such areas have not yet been allocated. The results of this evaluation may now be used to inform an agreed archaeological mitigation strategy for the area.

8.0 Effectiveness of methodology

The methodology that has been applied at the proposed development area has identified a focus of archaeological activity and, at the same time, it has identified areas that are either archaeologically sterile, or that contain archaeological remains that are considered to be of low priority. The results should therefore be of value to the developers, Chartdale Homes Ltd., and to the planners and those that may in due course be charged with the responsibility of proposing a mitigation strategy for the area.

9.0 Acknowledgements

Pre-Construct Archaeology (Lincoln) would like to thank Chartdale Homes Ltd. for this commission. Thanks also go to the excavation staff, Dave Bower, Aaron Chapman, Richard Coe, Katie Cook, Rachel Gardner and Suzy Matthewson.

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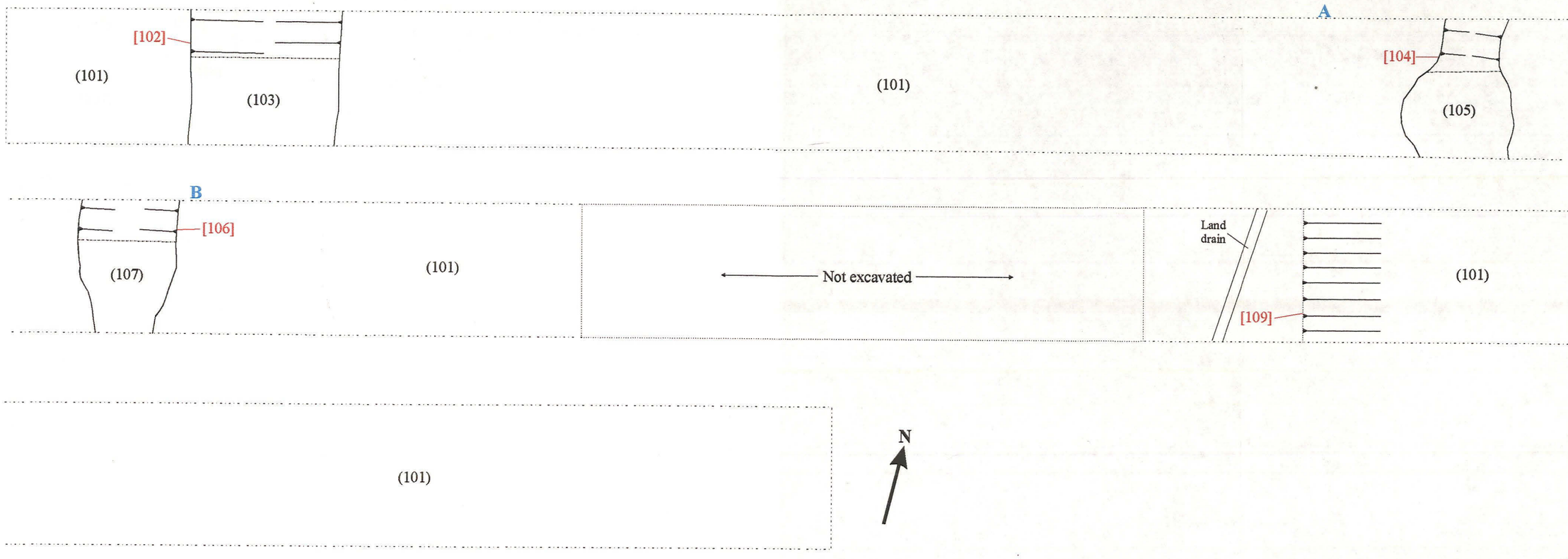
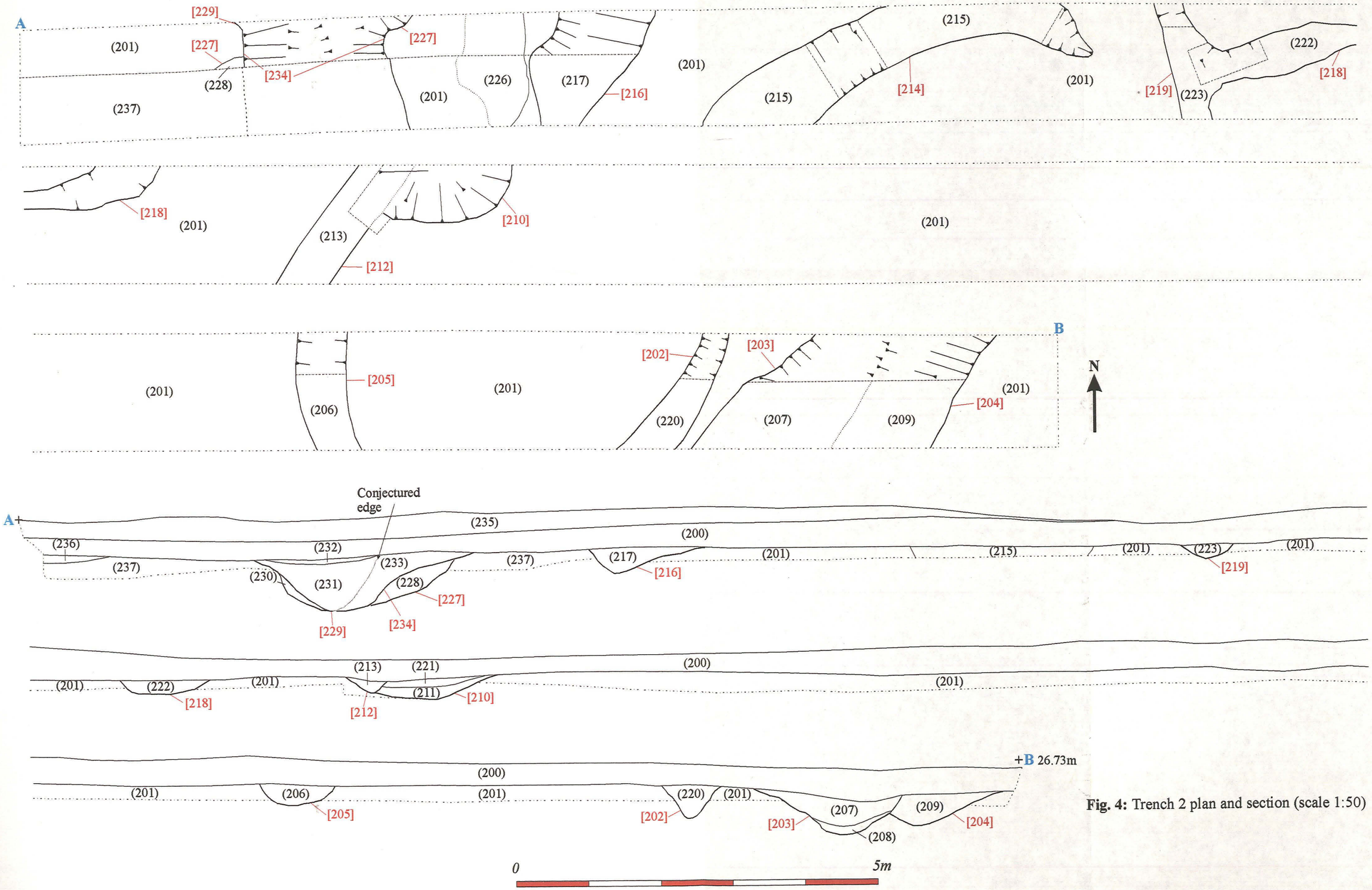
11.0 Site archive

The documentary archive for the site is currently in the possession of Pre-Construct Archaeology. This will be deposited at Lincoln City and County Museum within six months. Access to the archive may be gained by quoting the global accession number 2002.434.



Scale 1:50

Fig. 3: Trench 1 plan and section (scale 1:50)



Scale 1:50

Fig. 4: Trench 2 plan and section (scale 1:50)

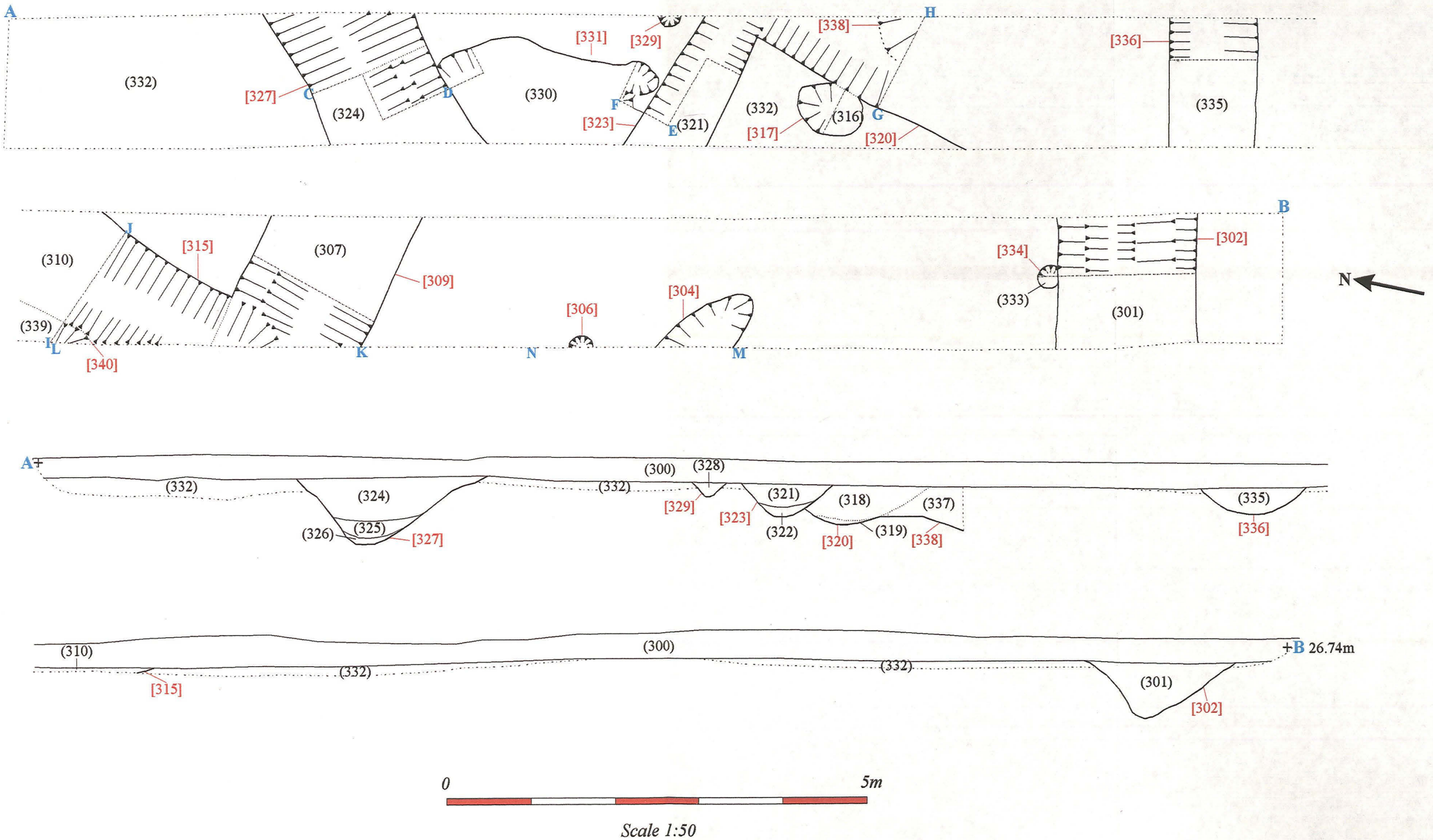
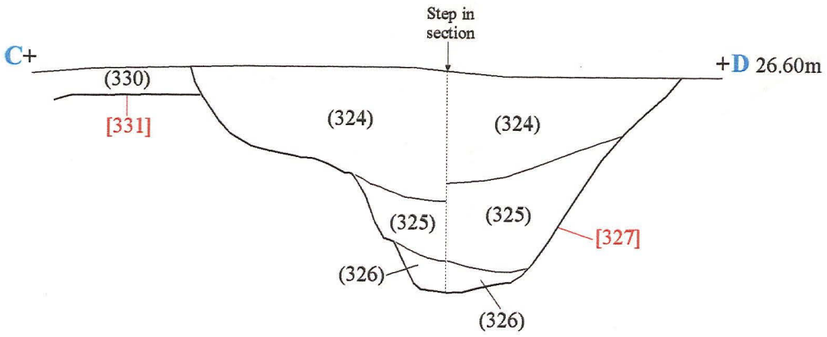
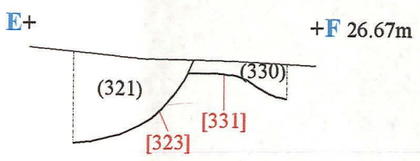
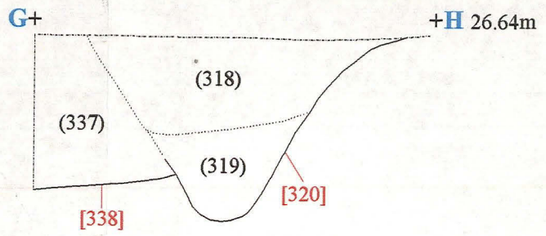
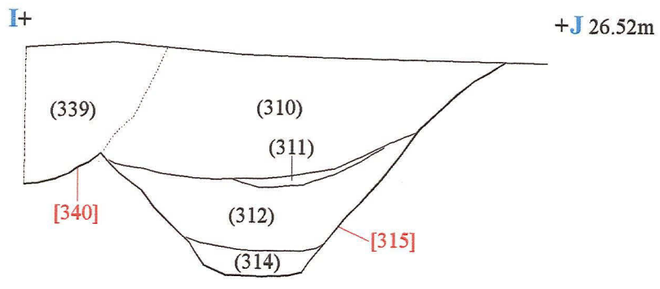


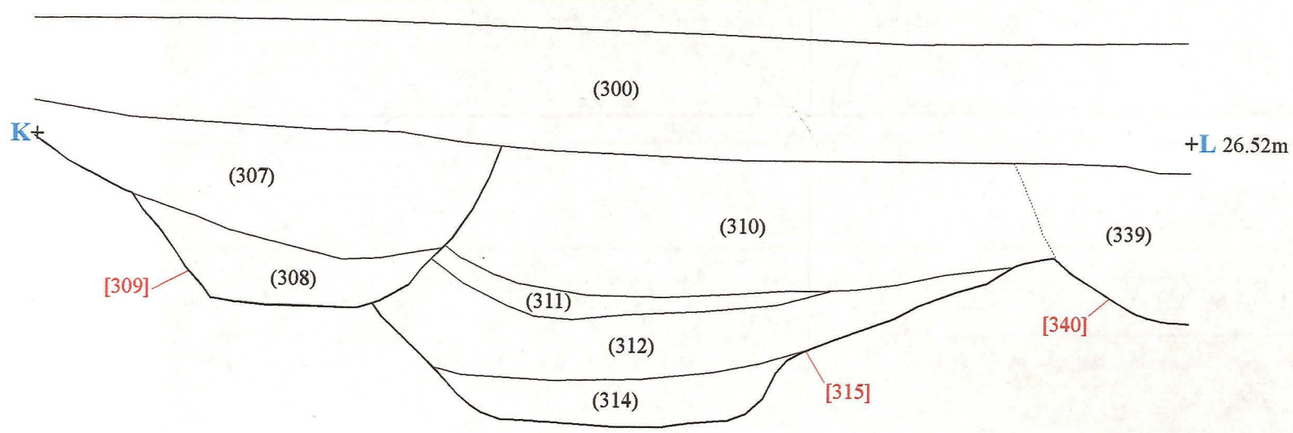
Fig.5: Trench 3 plan and section (scale1:50)











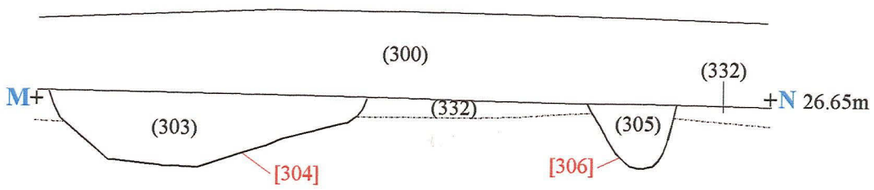
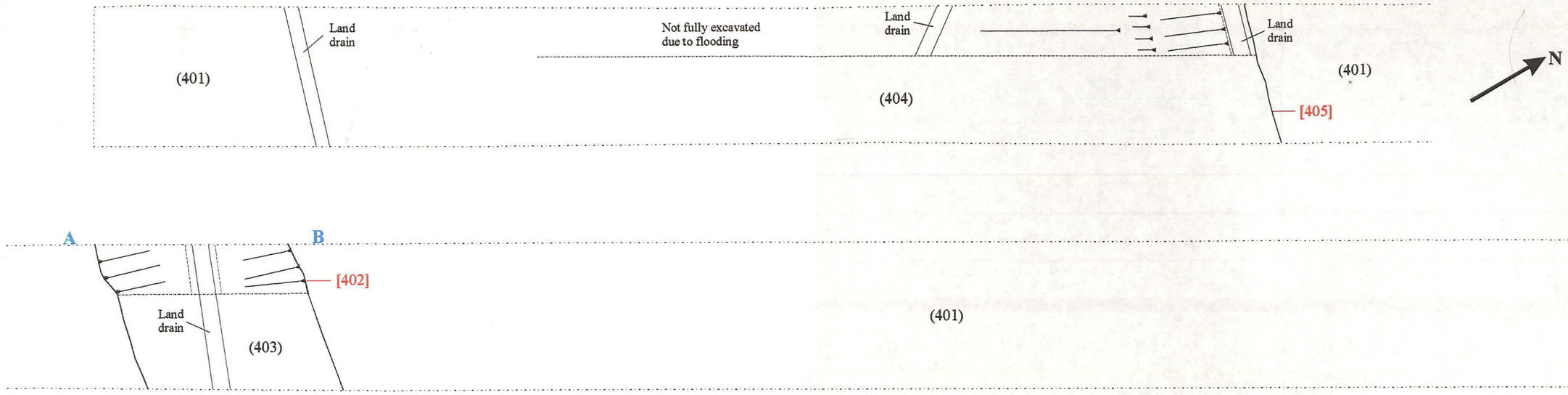


Fig. 5a: Trench 3 sections (scale 1:20)



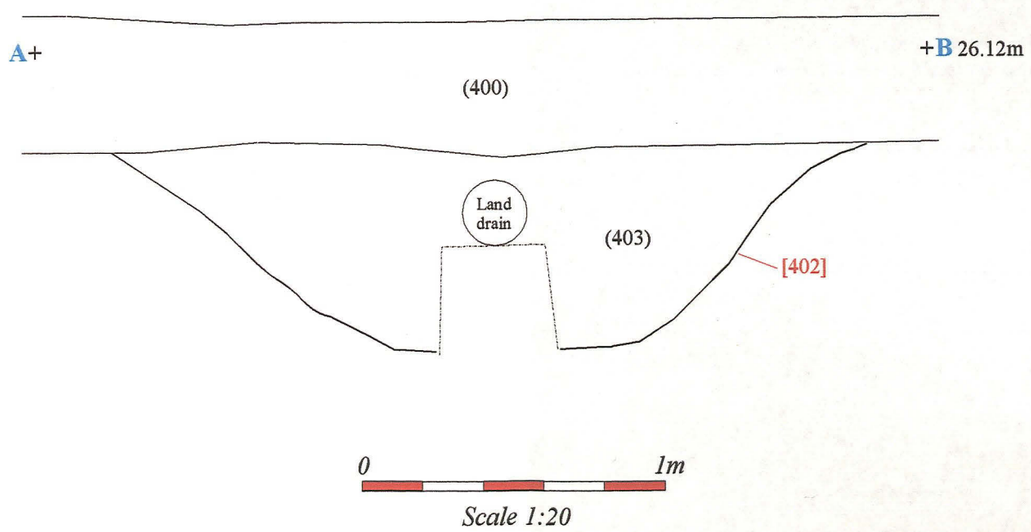


Fig. 6: Trench 4 plan and section (scales 1:50 and 1:20)

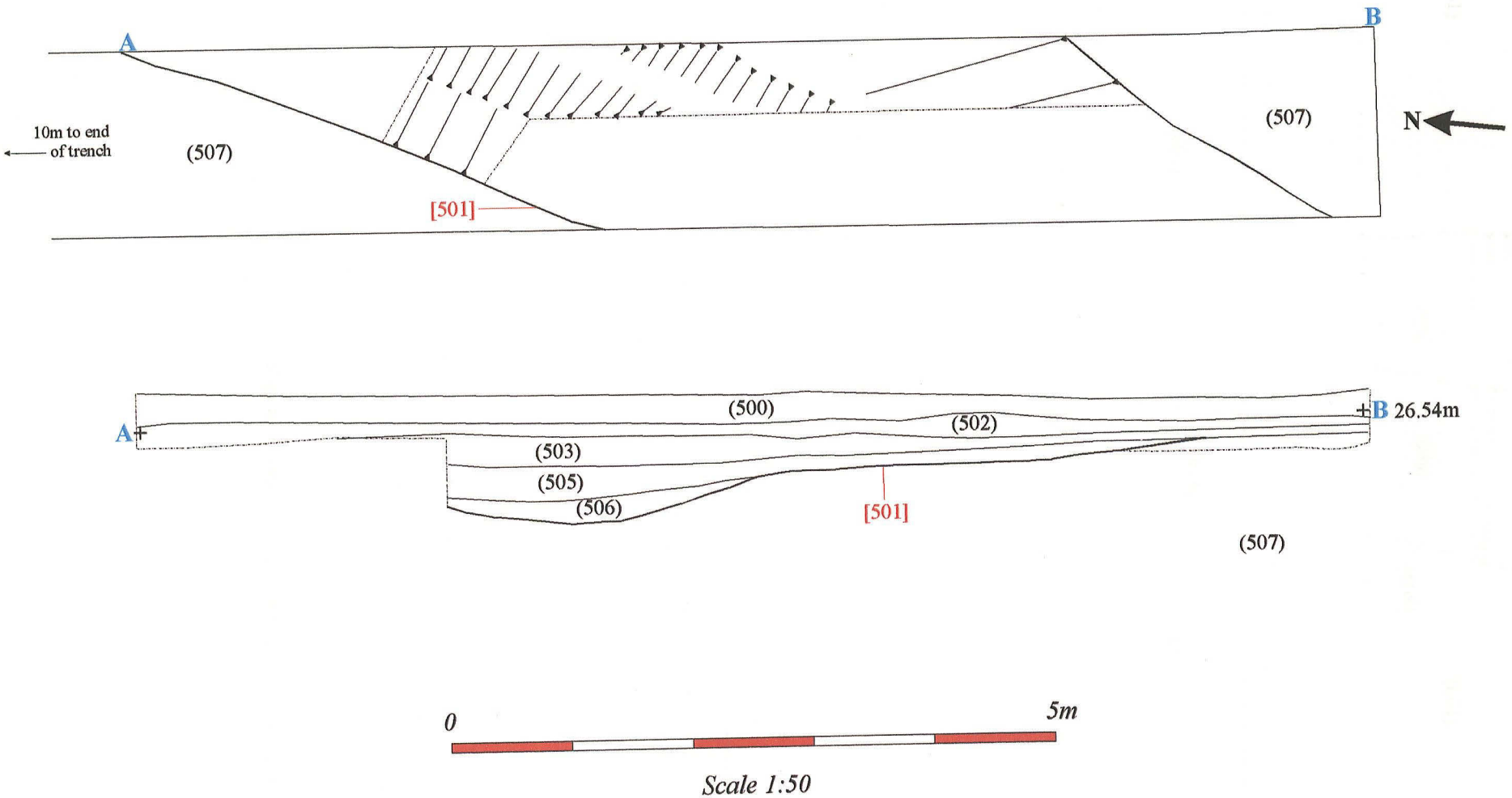


Fig. 7: Trench 5 plan and section (scale 1:50)

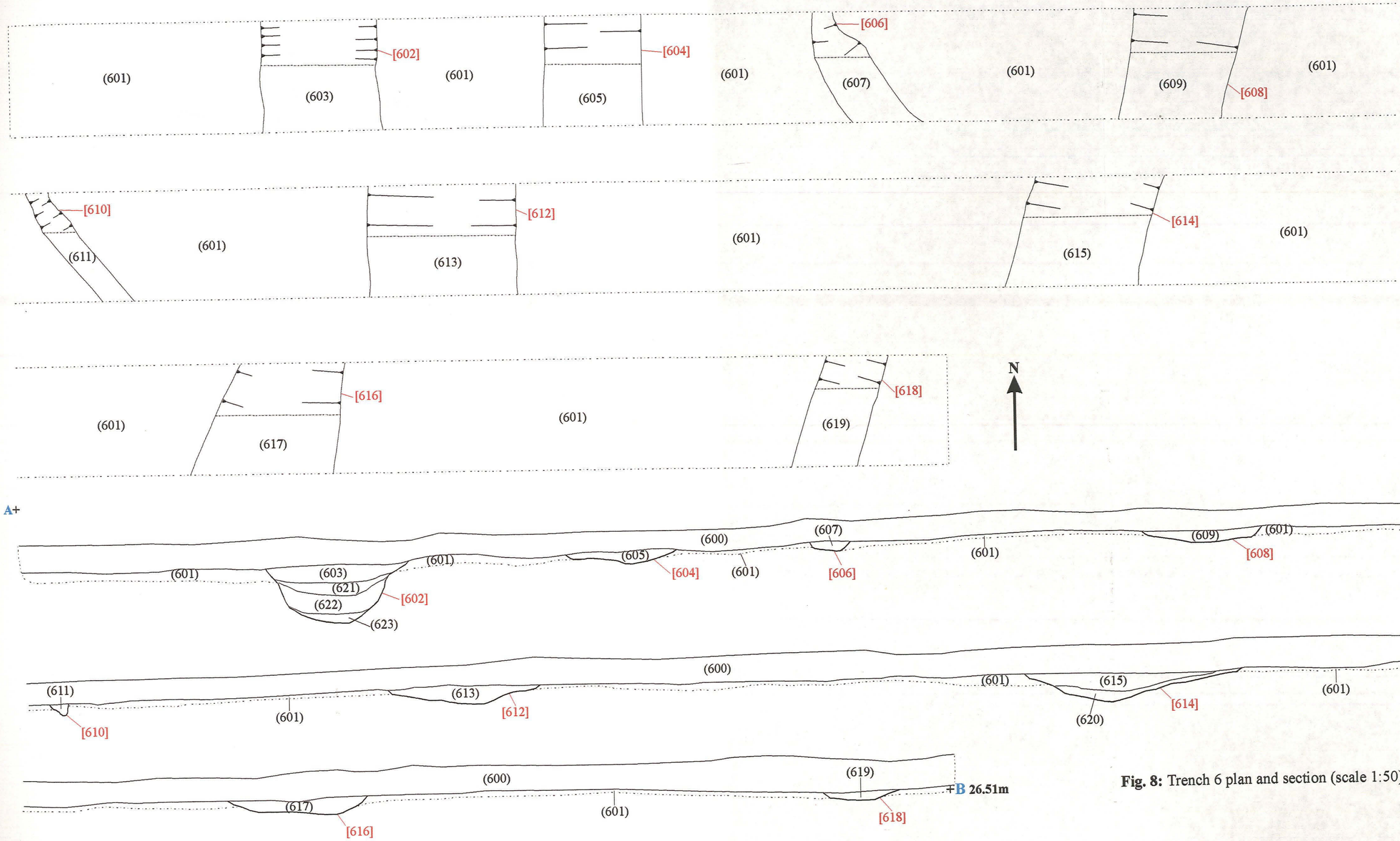


Fig. 8: Trench 6 plan and section (scale 1:50)

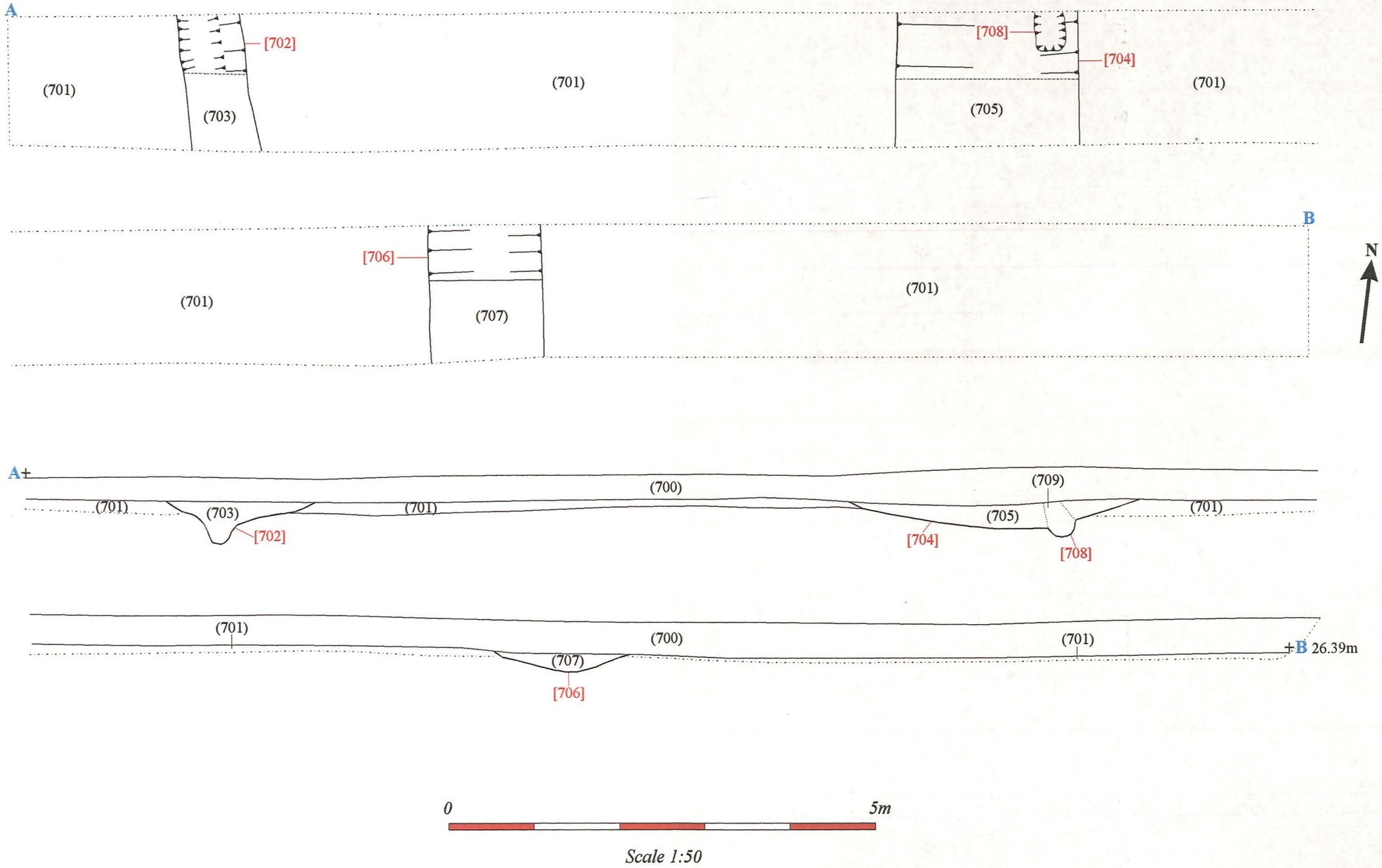


Fig. 9: Trench 7 plan and section (scale 1:50)

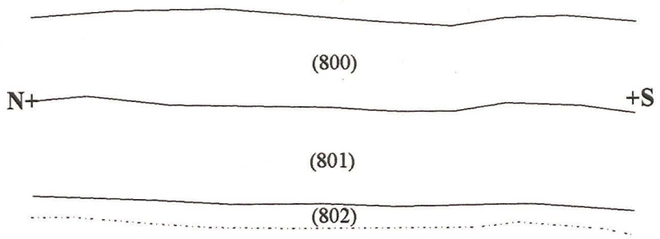


Fig. 10: Trench 8 sample section (scale 1:20)

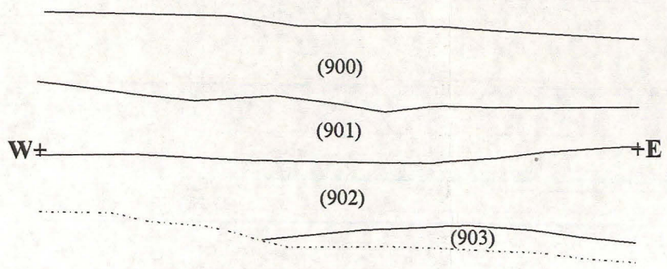


Fig. 11: Trench 9 sample section (scale 1:20)

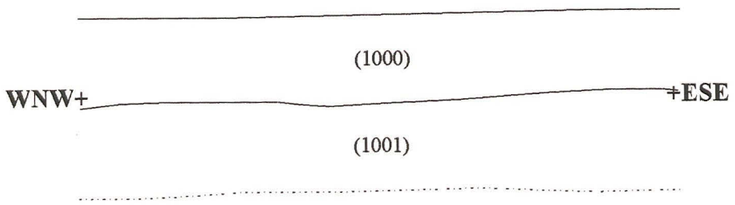


Fig. 12: Trench 10 sample section (scale 1:20)

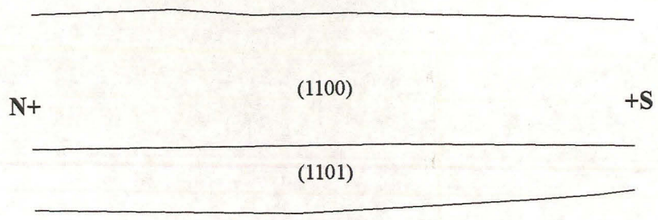


Fig. 13: Trench 11 sample section (scale 1:20)

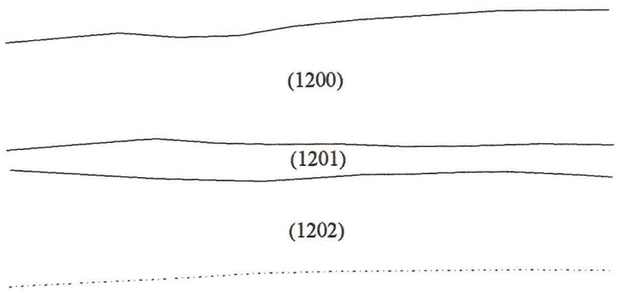


Fig. 14: Trench 12 sample section (scale 1:20)

Scale 1:20

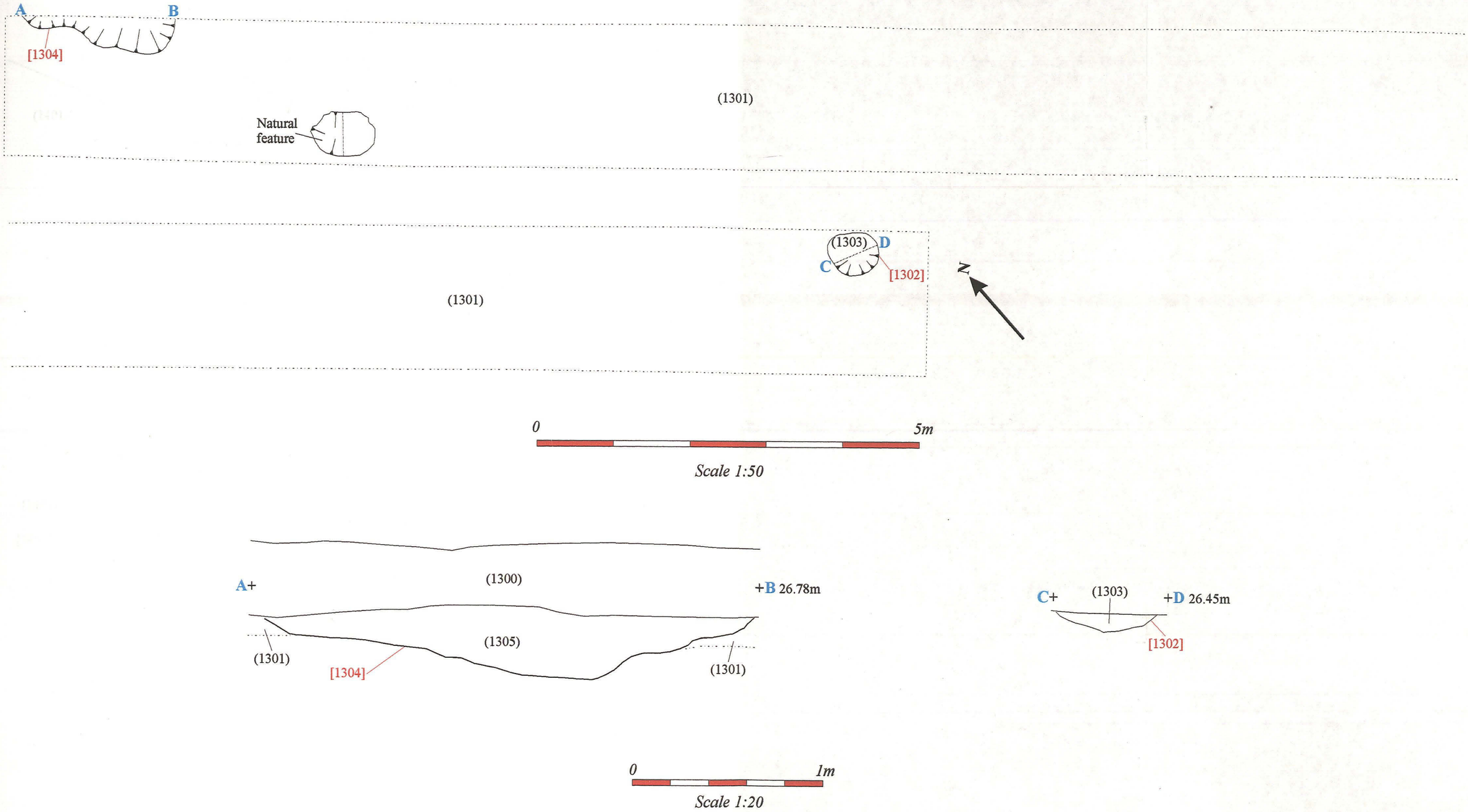


Fig. 15: Trench 13 plan and sections (scales 1:50 and 1:20)

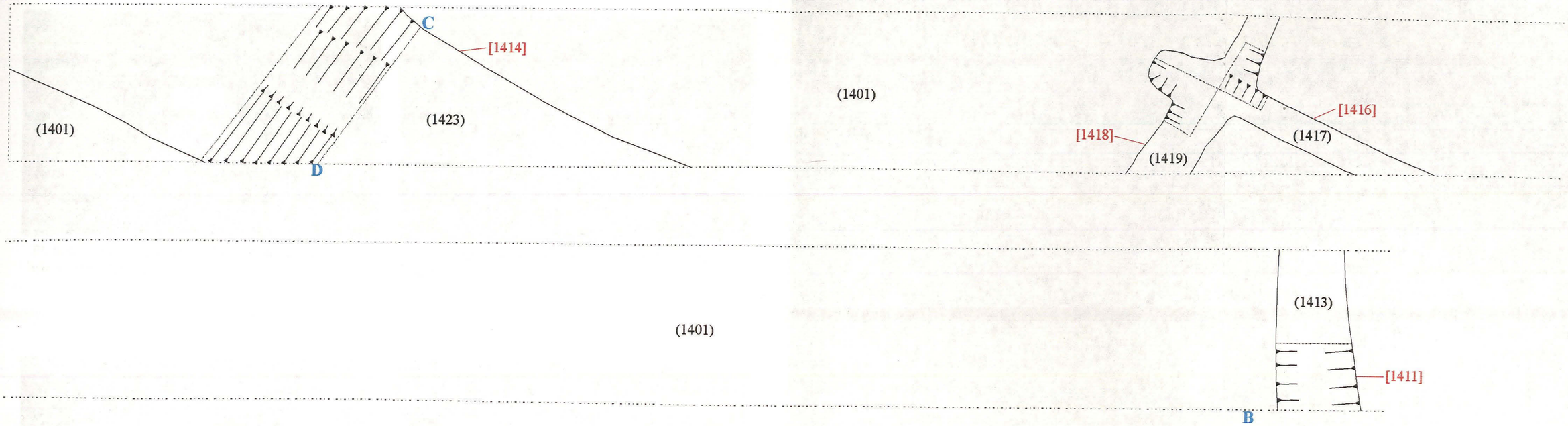


Fig. 16: Trench 14 plan and section (scale 1:50)

APPENDIX 1: Colour Plates

Pl. 1: General view, Trench 1, looking east from unexcavated 'island'

Pl. 2: General pre-excavation view, Trench 2, looking west

Pl. 3: Iron Age ditches 227/229/234, looking north-east (Trench 2)

Pl. 4: Ditches 202, 203/204, looking north (Trench 2)

Pl. 5: Pre-excavation view, Trench 3, looking south

Pl. 6: Iron Age ditch 302, looking east (Trench 3)

Pl. 7: Iron Age ditch 327, looking west (Trench 3)

Pl. 8: Iron Age ditch 320, pit 317, looking north (Trench 3)

Pl. 9: Trench 4, pre-excavation shot, looking north-east

Pl. 10: Trench 5, pre-excavation shot, looking south

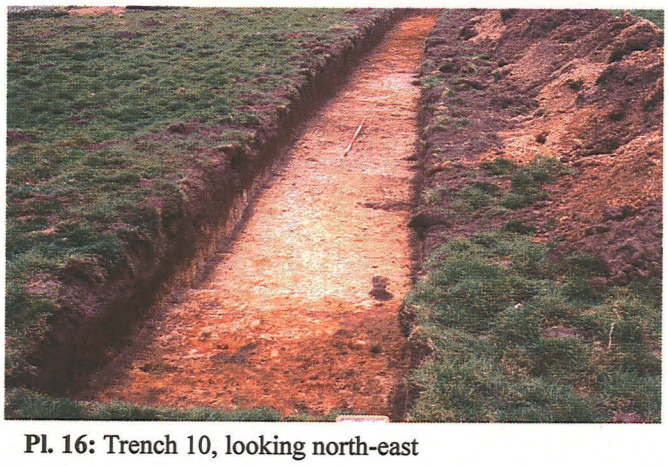
Pl. 11: Trench 6, pre-excavation shot, looking east

Pl. 12: Possible Neolithic feature 602, Trench 6, looking north

Pl. 13: Trench 7, pre-excavation shot, looking east

Pl. 14: Trench 8, looking north

Pl. 15: Trench 9, looking east



Pl. 16: Trench 10, looking north-east

Pl. 17: Trench 12, looking north-east

Pl. 18: Trench 13, pre-excavation view, looking south-east

Pl. 19: Trench 14, pre-excavation view, looking north-west

Pl. 20: Section through Iron Age ditch 1414, looking south

APPENDIX 2: Archaeometallurgical report by M Allen

A moderate assemblage of metallurgical waste (weighing 7.236kg) was recovered from archaeological deposits during an evaluation off Willingham Road, Market Rasen, Lincolnshire (Table 1).

The material was almost exclusively from contexts within Trench 3, with two pieces recovered from Trench 4 nearby, and a piece of fired clay from Trench 14.

Context No.	Weight (g)	Identification	Notes
301	78g	Undiagnostic piece	-
301	62g	Undiagnostic piece	-
303	80g	Tap slag	Grey, fairly fluid
303	32g	Tap slag	Grey, fairly fluid
303	28g	Tap slag	Grey, fairly fluid
303	12g	Tap slag	Grey, fairly fluid
303	44g	Undiagnostic piece	Imprint of charcoal
307	46g	Tap slag	Maroon upper surface
310	994g	Smithing hearth bottom	Plano-convex with impressions of hearth-lining on side and charcoal impression on base
310	214g	Smelting furnace bottom	-
310	272g	Tap slag	Dark grey dense slag, fairly fluid
310	34g	Tap slag	Dark grey dense slag
310	50g	Tap slag	Grey, relatively dense
310	24g	Tap slag	-
310	32g	Reduced ore	Dense, partially slagged
310	254g	Undiagnostic piece	-
310	136g	Undiagnostic piece	-
310	84g	Undiagnostic piece	-
314	1200g	Tap slag	Very diagnostic piece, furnace lining still attatched
318	34g	Smithing hearth bottom	Small fragment, fairly magnetic on one side only (upper surface), relatively dense, some charcoal impressions
318	34g	Tap slag	Fairly fluid, grey slag
318	192g	undiagnostic piece	Slightly magnetic in places
324	306g	Smelting furnace bottom	-
324	272g	Tap slag	-
324	104g	Tap slag	-
324	62g	Tap slag	-
324	30g	Tap slag	-
324	26g	Tap slag	-
324	26g	Tap slag	-
324	78g	?smithing hearth bottom	Small fragment
324	598g	Undiagnostic piece	-
324	192g	Undiagnostic piece	-
324	106g	Undiagnostic piece	-
325	354g	Smithing hearth bottom	Fairly diagnostic, good charcoal impressions on base
330	26g	Undiagnostic piece	Very small fragment with charcoal impression
403	920g	Smithing hearth bottom	Complete. Some charcoal impressions
403	200g	Undiagnostic piece	Some fired clay attached to surface
1410	158g	?furnace/oven lining	Overfired clay

Table 1: Summary of material by context.

Context 301
Two pieces of undiagnostic slag were recovered from the single fill of ditch [302]. Although indicative of iron-working they cannot be used to distinguish between smithing and smelting.

Context 303
Of the five pieces of slag recovered from this context, four were pieces of tap slag (fifth was possibly tap slag). This high proportion suggests material was dumped after tapping from a smelting furnace during a single firing event. The feature from which the archaeometallurgical debris was recovered, [304], was identified as a possible ditch terminal or pit

Context 307
A single piece of tap slag with a maroon upper surface was recovered from the upper fill of ditch [309].

Context 310
Approximately 2.094kg of slag were recovered from the upper fill of ditch [315]. Seven of the ten fragments were recognisable, with the majority being associated with smelting (smelting furnace bottom, tap slags and reduced ore). The piece of reduced ore was partially slagged, and would have lain in the bottom of the furnace. A single large piece of smithing hearth bottom was also identified.

Context 314
A single large piece of tap slag was recovered from this context. The slag appears to have solidified against the furnace side upon contact with the air, suggesting it occurred during winter and that the slag was particularly dense.

Context 318
Three pieces of archaeolmetallurgical debris were recovered from the secondary fill of a ditch, [320]. One small piece, a fragment of smithing hearth bottom was slightly magnetic indicating the presence of hammerscale or iron that had detached from the bloom during the smithing process. The small piece of tap slag is indicative of smelting rather than smithing.

Context 324
Eleven fragments of slag were recovered from the upper fill of a Late Iron Age Ditch, [327]. The majority are indicative of smelting (six pieces of tap slag and a smelting hearth bottom fragment); a single piece of slag may be from the smithing process (possible smithing hearth bottom), however this is far from certain. Three pieces did not display and diagnostic forms.

Context 325
A single piece of a smithing hearth bottom was recovered from the secondary fill of Late Iron Age ditch [327].

Context 330
A single piece of undiagnostic slag was recovered from the fill of possible ditch [331].

Context 403
Two pieces of metallurgical debris, including a complete smithing hearth bottom were found during the excavation of a ditch ([402]).

Context 1410
A piece of fired clay that had been the subject of intense heating was recovered from Trench 14. A depression within the structure may be evidence of wattling (diameter of 11mm), although this is not clear. One possible interpretation is the piece may be a fragment of a hearth or bloomery furnace associated with the iron-processing and iron-working that occurred on or near the site. Without further evidence this is far from certain.

Conclusions
The assemblage shows that all processes of iron-processing, from roasting of the ore through smelting to working the prepared iron bloom (smithing) are represented. The volume of material indicates these processes occurred close-to, or on the site during the Late Iron Age. Smelting is likely to have taken place on the majority of good sized settlements from the Iron Age onwards. Smelting and smithing are both likely to have occurred on a small scale, probably by a single individual.

No evidence of iron tool/artefact production was present on the site. No scrap and waste were present, and no tools were found (hammers, tongs, etc). It is possible the prepared blooms were taken from the site for the final stage of tool production, however it should also be born in mind that scrap and waste would be recycled and tools would not be carelessly discarded.

The source of the raw material remains unknown; the majority of iron production in Lincolnshire was in the north-west and south-west of the county, adjacent to the ironstone-rich geology of the Jurassic Ridge (Todd 1991). In this case either the material was transported to the site, or, more likely, a localised source of bog iron was used.

To produce a single bloom, 10's of kilogrammes of charcoal are required. To maintain such an industry coppicing (forest management) of the woodland would be essential. Any hardwoods would make good fuel, especially hazel and beech as they maintain their structure following firing.

Structural elements of this industry that were not identified but may be present nearby, include charcoal production pits, ore roasting pits, bloomery furnaces, smithing hearths, workshops and shelters. Any of the above are rarely discovered, and if found would greatly enhance our understanding of the iron industry in the region during the Iron Age.

There is also likely to be large quantities of metallurgical debris nearby, dumped in waste pits, ditches or middens, or in part re-used for surfacing paths and tracks.

Assessment of potential
This is an important assemblage of metallurgical debris that provides evidence of a previously unknown Late Iron Age industry in the Market Rasen area. The material should be retained for future study.

Glossary

Hammerscale
Minute fragments of hammerslag, typically 1-3mm across. Can be spheroidal or flakes.

Smelting furnace bottom
These form in the base of the furnace, directly below the blow-hole, during the smelting process

Smithing hearth bottom
Normally plano-convex to concavo-convex in section, and circular or oval in plan. Form at the base of the hearth during smithing.

Smithing pan
Debris concretion, largely hammerscale that has been trodden down within the working area and corroded together.

Tap slag
A dense slag, with few relatively large bubbles, that is generally grey or black in colour. Forms when hot fluid slag is tapped from the furnace.

Undiagnostic
Pieces that do not have diagnostic surfac morphology.

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M. Allen 25/06/03

APPENDIX 3: Environmental Archaeology Assessment

Land off Willoughby Road, Market Rasen – WIMR03

Introduction

Two soil samples were taken on an evaluation excavation conducted by Pre-Construct Archaeology (Lincoln) on land off Willoughby Road, Market Rasen. Both samples were taken from deposits in ditches of Iron Age/Romano-British date which also produced some slag. The samples were submitted to the Environmental Archaeology Consultancy for processing and assessment (Table 1), along with a small collection of animal bones.

Methods

The soil sample was processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet sieve of 1mm mesh for the residue. Both residue and flot were dried and the residue subsequently re-floated to ensure the efficient recovery of charred material. The dry volume of the flots was measured and the volume and weight of the residues recorded.

The residues were sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheets and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill. The residues were then discarded. The flots were studied using x10 magnifications and the presence of environmental finds (i.e. snails, charcoal, carbonised seeds, bones etc) were noted and their abundance and species diversity recorded on the assessment sheet. The flots were then bagged and along with the finds from the sorted residues, constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Table 1.

Results

The samples contained a number of recent rootlets and several uncharred seeds of taxa such as *Chenopodium* sp., which are presumed to be intrsuive. The residues were composed largely of burnt stone and fired earth.

Archaeological finds in the two samples include a little pottery, a few flakes of hammerscale, a tiny corroded piece of iron, a few tiny fragments of animal bone and rare small pieces of fuel ash slag and coal. The latter might be a contaminant that has moved down through the soil.

Table 1: WIMR03. Finds from the processed samples

Samp no.	cont no.	samp vol (l)	residue vol. (ml)	flot vol (ml)	pot no/wt g.	ham'r scale #	Fe object	fuel ash slag	coal	char-coal *	charr'd grain *	charr'd chaff *	charr'd seed *	bone wt g.
1	301	10	25	20	4/3	12	1	+	+	4	1	1	1	<1
2	310	12	40	12	1/<1	13		+	+	4			1	<1

* = abundance: 1=1-10, 2=11-50, 3=51-150, 4=151-250, 5=250+
# number of items
+ present as small fragments

The flots of both samples are small and have produced a little charcoal, the bulk of which appears to be small twig or root fragments of shrubs and some root tubers of herbaceous plants. Some of the twiggy material may be heather stem but this cannot be confirmed without specialist study. Two charred cereal grains and a single fragment of chaff were recovered from context 301, while a few charred weed seeds are present in both samples.

Animal Bone

Two contexts produced animal bone. Context 307 contains an ulnal carpal of cattle, while context 330 includes the fragmented molars from a cattle maxilla. The latter have partially broken up, and the absence of the bone of the upper jaw and this fragmentation suggests that the burial environment was poor and bone may not have survived in some contexts.

Discussion and Recommendations

The samples have produced relatively little and although the hammerscale in the samples is indicative of local iron smithing its density is insufficient to indicate that this activity was undertaken in the immediate neighbourhood. The charcoal assemblage is certainly not consistent with a smithing hearth and if the twigs are heather these would be more appropriate as fire debris from a baking oven.

The deposit seems to contain low levels of material from a variety of activities, smithing, fire debris (but unlikely to be from a smithing hearth) and limited domestic waste. The charred twig and tuber assemblage may be the only clue as to the origin of the material in the deposit but the identification of this type of material is difficult. No further work is presently warranted upon either of the samples.

If further work is undertaken at the site the charred plant remains are likely to have the highest potential. Sampling and analysis should be concentrated on the palaeoeconomic aspects of the site such as industrial activities, fuel types, crop types and crop processing activities,. Other aspects are likely to prove uninformative although some samples might illustrate the location of the smithing activities. Some animal bone is poorly preserved but more extensive excavations may yield useful assemblages.

Acknowledgements

I should like to thank Alison Foster for the sample washing and processing.

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The Environmental Archaeology Consultancy
27th May 2003

APPENDIX 4: Later prehistoric and Romano-British pottery report

REPORT 137 ON POTTERY FROM WILLINGHAM ROAD, MARKET RASEN, LINCOLNSHIRE, WIMR03

for PRE-CONSTRUCT ARCHAEOLOGY

by Margaret J. Darling, M.Phil., F.S.A., M.I.F.A.

24 June 2003

The pottery amounted to 86 sherds, weighing 2.841 from nine contexts. The condition is average, with some slight abrasion and fragmentation. One context (231), however, contained notably large sherds, although some of these were in poor condition. No problems are anticipated for long term storage. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by *The Study Group for Roman Pottery*. The archive record (below) will be curated for future study.

INTRODUCTION

The quantities and dating by context is on Table 1

Table 1 Quantities and dating

Tr.	Deposit	Context	Sherds	Weight	Date	Comments
2	Shallow pit?	211	3	43	PMED/IA	
2	N-S ditch	231	62	2486	LIA	LGE SHS;3 VESS
3	E-W linear ditch	301	3	33	LIA	
3	N/E-S/W ditch secondary fill	318	2	23	IA/ROM?	GRY BS ATYPICAL ROM?
3	E-W ditch upper fill	324	1	25	LIA	
8	Deposit palaeochannel	802	4	148	M3	
14	N-S ditch 1414 secondary fill	1415	2	56	IA	PROB LIA;BSS ONLY
14	Narrow gully	1417	3	6	IA	
14	N-S ditch 1414 upper fill	1423	6	21	IA	
		Total	86	2841		

No sherd links were noted between contexts. Most of the pottery came from the ditch in Trench 2, which contained large sherds from three vessels, illustration Nos 3-5. The only definite Roman sherds came from Trench 8, 302, a water-borne deposit in a palaeochannel. A single sherd from the ditch, context 318, in Trench 3 might be Roman but is atypical, and could be very late Iron Age. A flake of what might be tile came from Trench 14, context 1423, but cannot be certainly identified, or dated. The only post-Roman find stratified with earlier pottery was a fragment of a clay pipe from Trench 2, context 211, where it is likely to have been intrusive from a later gully

cutting the pit-like feature. The sherds from Trench 14 were all body sherds and/or flakes, and are dated to the Iron Age on the basis of the fabrics and manufacture.

OVERVIEW OF FABRICS

A summary of the fabrics represented is on Table 2.

Table 2 Fabrics

Fabric	Code	Sherds	%	Weight	%
Vesicular ?shell	VESIC	65	75.58	2019	71.07
IA tradition quartz-gritted	IASA	13	15.12	661	23.27
Grey quartz-gritted	GREY	5	5.81	152	5.35
Oxidised quartz-gritted	OX	1	1.16	5	0.18
Post-Roman	PRO	1	1.16	2	0.07
Tile?	TILE?	1	1.16	2	0.07
Total		86	100	2841	100

All the sherds apart from four of the grey sherds and the post-Roman fragment can be dated to the later Iron Age. The vesicular sherds (VESIC), probably originally shell-gritted on the basis of the laminar vesicules in the fabric, appear to come from jar or bowls of Iron Age type, all seemingly hand-made, although some may have been finished on a slow-wheel or turntable. The sherds of quartz-gritted Iron Age type (IASA) all come from a single hand-made jar base No 5 from the N-S ditch in Trench 2 (context 231), together with the two bowls, Nos 3-4. The single oxidized quartz-gritted (OX) sherd is possibly from a wheel-thrown butt-beaker, with rouletted decoration below a burnished zone; this came from Trench 3, context 301, the E-W ditch. One of the grey (GREY) sherds is a wheel-thrown body sherd from a closed form, with traces of a possible latticed decoration with notably wide burnished stripes. The application of this decoration is not a common Roman type, and may therefore belong to the late Iron Age; from Trench 3, context 318, NE - SW ditch. The sherd is too small for certainty on the dating.

DISCUSSION

All the Iron Age vessels are types typical of the latest Iron Age in the area, particularly Nos 3 and 4, basic cooking vessels which continue in use into the early Roman period. Such bowls occur amongst the late Iron Age pottery at Dragonby (Elsdon 1996, fig 19.5, type group 20), in the earliest deposits at Old Winteringham (Rigby & Stead 1976, fig 74, 7-11), and similar types appear in legionary deposits in the Lincoln fortress (although usually of smaller size). The curved rim of No 1 is a simple form, but the cordoned vessel No 2 is unusual. While no clear parallel has been traced for this jar, the use of cordons is common place among late La Tene vessels. The base type and the vertical trimming on the base No 5 is also seen in the pottery from Dragonby. Sooting and burnt deposits occur on Nos 1-3 (particularly heavy on Nos 2 and 3), while No 4 has traces of burning on the exterior. All the vessels appear to be normal domestic vessels, used for cooking.

The dating suggests the latest phase of the Iron Age. The wheel-thrown body sherd from a probable butt-beaker is the sole evidence for finer wares, and fits into a similar period. This type of pottery could conceivably still be in use in the early Roman period.

The sole Roman vessel, the wide-mouthed bowl, No 6, is a type datable to the middle of the 3rd century. Such bowls were common products of the kilns at Linwood Road, Market Rasen.

FABRIC DEFINITION

GREY	Grey, undifferentiated quartz-gritted grey fabrics, hard wares with sparse to common quartz inclusions.
IASA	Sand-tempered IA tradition. Quartz-gritted fabrics used for forms of late Iron Age type, usually continuing into the Roman period.
OX	Oxidized, miscellaneous oxidized wares. The only sherd is a thin-walled body sherd, wheel-thrown, probably from a butt-beaker. Grey fabric with fairly common small quartz inclusions, light red-brown surfaces, the interior surface being largely lost, the exterior showing burnishing above a zone of fine rouletting, probably from the girth area of the beaker.
VESIC	Vesicular, vesicular sherds, the vesicules being mostly laminar suggesting the loss of shell inclusions. Fabrics are dark grey, the two bowls Nos 3-4 having red-brown cortex below surfaces of mottled grey to light brown.
PRO	Post-Roman sherds

CATALOGUE

Sequence of catalogue: Illustration No., Fabric, details, Context, Trench, Deposit details, original drawing number.

1	VESIC. Jar with slack curved rim, dark grey fabric, laminar texture, sooted on neck and shoulder. 301, Tr 3, E-W ditch. D5.
2	VESIC. Jar, inward sloping, slight curved rim, with cordon below. Dark grey laminar fabric. Heavily sooted on exterior, interior surface pitted. 211, Tr 2, shallow pit-like feature. D4.
3	VESIC. Bowl, grey fabric with red-brown cortex, light brown to grey exterior, heavily sooted on rim and shoulder. 231, Tr 2, large N-S ditch. D2.
4	VESIC. Bowl, similar fabric to No 3, with traces of burning on exterior wall. 231, Tr 2, large N-S ditch. D1.
5	IASA. Base large jar or bowl, dense dark grey fabric, fairly common ill-sorted quartz and black iron-ore inclusions, moulded base forming a shallow footring, with extensive vertical trimming/burnishing above, creating a smooth light-brown surface. Traces of burning on exterior wall. 231, Tr 2, large N-S ditch. D3.
6	GREY. Wide-mouthed bowl, fairly common quartz inclusions, originally burnishing interior of rim and shoulder, now abraded, and with iron staining. 802, Tr 8, water-borne deposit in natural palaeo-channel. D6.

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ARCHIVE DATABASE

Cxt	Fabric	Form	Manuf +	V	D?	DNo	Details	Link	Sherds	Weight
231	VESIC	BNAT	HM?	1	D	01	RIM;MOST BODY;DIAM27;GRY W RB CORT;LTBN EXT;BURNING SHLDR;LGE SHS	-	19	978
231	VESIC	BNAT	HM?	1	D	02	RIM;WALL;BASE;DIAM20;GRY W RB CORT;LTBN EXT;H.SOOT RIM/SHLDR;POOR COND	-	28	779
231	IASA	J	HM	1	D	03	BASE MOULDED;WALL;VERT SMOOTHING;DKGRY DENSE FB;LGE SHS;SOME ABR	-	13	661
231	VESIC	-	HM	-	-	-	BSS;THICK >20MM;VABR;?JS	-	2	68
231	ZDATE	-	-	-	-	-	LIA	-	-	-
231	ZZZ	-	-	-	-	-	LGE SHS;3 VESS	-	-	-
211	VESIC	J	HM?	-	D	04	RIM;PT WALL;INTURN SL.CURVE RIM;CORDON BASE NECK;H.SOOTED;DKGRY LAM.FB;DIAM18	-	1	36
211	VESIC	JB	HM?	-	-	-	BASE LOW FTRG;CONCAVE ABOVE AS D3	-	1	5
211	PRO	-	-	-	-	-	PM CLAY PIPE FRAG	-	1	2
211	ZDATE	-	-	-	-	-	PMED/IA	-	-	-
301	VESIC	JB	HM?	-	D	05	RIM/PT WALL;DKGRY LAM.FB;DIAM16;SOOT NECK/SHLDR	-	1	22
301	VESIC	JB	HM?	-	-	-	BASE LOW FTRG;CONCAVE ABOVE;DKGRY FB;BURNISH EXT	-	1	6
301	OX	BKBB?	ROUZ	-	-	-	BS GRY FB;LTRB SURFS;INT PT LOST;FINE ROUZ BELOW BURNISH ?ZONE	-	1	5
301	ZDATE	-	-	-	-	-	LIA	-	-	-
318	VESIC	-	HM	-	-	-	BS DKGRY LAM;LTRB EXT;SOME BURNING	-	1	19
318	GREY	CLSD	BL	-	-	-	BS BNFB;GRY SURF;WM;BL ?POSS LA;WIDE STRIPES	-	1	4
318	ZDATE	-	-	-	-	-	IA/ROM?	-	-	-
318	ZZZ	-	-	-	-	-	GRY BS ATYPICAL ROM?	-	-	-
324	VESIC	JL?	HM; COMB	-	-	-	BS DKGRY;>14MM THICK;LOW PROF VERT COMB/WIPING	-	1	25
324	ZDATE	-	-	-	-	-	LIA	-	-	-
802	GREY	BWM	-	-	D	06	RIM>SHLDR;CURVE SL.U'CUT	-	1	126
802	GREY	CLSD	-	-	-	-	BSS POSS 1 VES	-	3	22
802	ZDATE	-	-	-	-	-	M3?	-	-	-
1415	VESIC	-	HM	-	-	-	BS GRY LTRB CORT/EXT;LTGRY INT	-	1	23
1415	VESIC	-	HM	-	-	-	BS GRY FB;PART OX EXT W BURNING;SMOOTH SURF	-	1	33
1415	ZDATE	-	-	-	-	-	IA	-	-	-

1415	ZZZ	-	-	-	-	-	PROB LIA;BSS ONLY	-	-	-	
1417	VESIC	-	-	-	-	-	FLAKES ONLY	-		3	6
1417	ZDATE	-	-	-	-	-	IA	-	-	-	
1423	VESIC	-	HM	1?	-	-	BSS;DKGRY FB;LTBN EXT;FLAKES	-		5	19
1423	ZDATE	-	-	-	-	-	IA	-	-	-	
1423	TILE?	-	-	-	-	-	FLAKE LTRB ONLY;POT/TILE?	-		1	2
										86	2841

APPENDIX 5: Pottery Archive WIMR03

Jane Young

context	cname	full name	form type	sherds	vessels	weight	part	date
0200	BL	Black-glazed wares	large bowl	2	1	47	BS	18th to 19th
0300	GRE	Glazed Red Earthenware	large bowl rim	1	1	70	rim	18th to 19th
0307	BL	Black-glazed wares	chamber pot/jar	1	1	8	base	mid 17th to 18th
0307	BL	Black-glazed wares	hollow	1	1	2	BS	mid 17th to 18th
0307	CREA	Creamware	?	1	1	3	BS	late 18th to 19th
0703	GRE	Glazed Red Earthenware	large bowl	1	1	11	BS	17th to 18th
1000	BL	Black-glazed wares	jar	1	1	18	rim	18th

Ceramic Building Material Archive WIMR03

Jane Young

context	cname	full name	frags	weight	description	date
0301	FIRED CLAY	fired clay	2	1	mixed white & red clay	-
0307	BRK	Brick	1	88	handmade;fine silty fabric	16th to 18th
0307	BRK	Brick	1	163	handmade;fine sandy fabric;semi vitrified	17th to 19th
0307	BRK	Brick	1	58	handmade;medium sandy fabric	17th to 19th
0307	BRK	Brick	2	46	handmade;fine sandy fabric	17th to 19th
0307	PANT	Pantile	3	266		18th to 20th
0603	FIRED CLAY	fired clay	1	1		-
1000	PNR	Peg, nib or ridge tile	1	33	flat roofer ?	17th to 19th

APPENDIX 6: Lithics Report by J Rylatt

Land off Willingham Road, Market Rasen, Lincolnshire
WIMR 03

Lithic Materials: Catalogue and Assessment

Report by Jim Rylatt – June, 2003

1.0 Catalogue

Twelve pieces of worked flint and a fragment of burnt stone were recovered during the evaluation:

No.	Context		Description	Prob. Date
1	*107*	Utilised secondary flake	Large flake, with flat platform, pronounced bulb and feathered termination. Scars on dorsal surface indicate removal of similar broad flakes from a single platform. Approximately 15% of dorsal surface is cortical; cortex thin, abraded and slightly rounded. A rounded section of the distal end has been retouched by the removal of small abrupt and semi-abrupt flakes. Straighter lateral edge possibly used unmodified as cutting surface, although slight post-depositional damage to flake margins prevents conformation. Mid greyish-brown translucent flint, with opaque caramel inclusions. 39 x 32mm.	Neo/ E.B.A.
2	*300*	Secondary flake	Flake, with cortical platform, pronounced bulb and feathered termination. Dorsal surface indicates platform edge preparation prior to removal of flake, as well as controlled removal of similar relatively broad flakes from single platform. Slight post-depositional damage to the flake margins. Greyish-brown translucent flint. 33 x 24mm.	Neo
3	*301*	Secondary flake	Small flake, with flat platform, diffuse bulb and feathered termination. Approximately 50% of dorsal surface is cortical, cortex being thin and abraded. Scars on dorsal surface indicate removal of flakes from two perpendicular platforms. Dark brownish-grey translucent flint, with dark inclusions. 22 x 27mm.	Neo?
4	*303*	Broken tertiary flake	Proximal fragment of flake, with small flat platform and diffuse bulb. Dorsal surface indicates platform edge preparation prior to removal of flake. Pale greyish-brown translucent flint.	Neo

No.	Context		Description	Prob. Date
5	*330*	Broken secondary flake	Distal fragment of flake, with (slightly) hinged termination. Dorsal surface is approximately 50% cortical; a flat recorticated surface possibly indicating that this flake was struck from a reused core. Mid greyish-brown translucent flint, with grey opaque inclusions.	
6	*622*	Primary flake	Flake with flat platform, relatively pronounced bulb having eraillure flake removals and feathered termination. Dorsal surface has thin, abraded cortex, with a rounded profile. Flake removed from ventral face adjacent to platform may be an accident of manufacture, post-depositional damage, or expedient retouch to create slightly notched cutting edge. Greyish-brown translucent flint, with grey opaque inclusions. 36 x 38mm.	
7	*622*	Secondary flake	Flake with very small flat platform (soft hammer, indirect percussion), relatively diffuse bulb and hinged termination. Dorsal surface indicates platform edge preparation prior to removal of flake; it has thin, abraded cortex, with a rounded profile covering c. 80%. Mid greyish-brown translucent flint – from same core as 8, below. 29 x 30mm.	Neo
8	*622*	Secondary flake	Large irregular flake with complex flat platform, irregular ventral surface (due to large coarse inclusion) and hinged termination. Dorsal surface indicates removal of flakes from three platforms; it has thin, abraded cortex, with a rounded profile covering c. 40%. Mid greyish-brown translucent flint, with light brown coarse grained inclusions – from same core as 7, above. 49 x 42mm.	Neo
9	*622*	Tertiary flake	Irregular flake, with flat platform, diffuse bulb and feathered termination. Dorsal surface has scars indicating removal of similar flakes from two opposed platforms. Pale pinkish-brown coarse grained opaque flint, with large chalky inclusions. 25 x 32mm	
10	*623*	Broken blade	Proximal fragment of blade, with very small platform (soft hammer, indirect percussion) and diffuse bulb. Dorsal surface indicates platform edge preparation prior to removal of flake. Greyish-brown translucent flint.	L.Mes/ E. Neo
11	*623*	Broken secondary flake	Distal fragment of blade-like flake, with feathered termination. Approximately 50% of the surviving dorsal surface is cortical; cortex is thin and abraded. Much of ventral face has become detached, leaving granular surface indicative of thermal alteration to matrix of flint (probably due to burning). Greyish-brown translucent flint.	L.Mes/ E. Neo

No.	Context		Description	Prob. Date
12	*623*	Secondary flake	Squat flake, with complex (prepared) platform, relatively diffuse bulb having eraillure flake removal, and hinged termination. Dorsal surface indicates some platform edge preparation prior to removal of flake, and has scars indicating removal of similar flakes from single platform. One lateral edge is cortical, representing <5% of dorsal surface. Greyish-brown translucent flint. 18 x 28mm	Neo
13	*1424*	Broken primary flake	Distal flake fragment, with feathered termination; distal end curves (similar to plunging termination) mirroring the curvature of the external surface of the pebble core, thereby more efficiently removing cortical surface. Cortex is very thin, abraded and has curved profile. Break indicates that flake may have been deliberately truncated. Post-depositional damage to flake margins. Greyish caramel brown opaque flint with small chalky inclusions.	

NB: Measurements are given only for complete flakes. The first figure relates to the maximum length, measured perpendicular to the striking platform; the second to maximum breadth, measured at a right angle to the length. Figures for the percentage of cortex relate to the total area of the dorsal surface and platform.

2.0 Raw materials

The flint all appears to be derived from secondary deposits, such as pebbles found within river gravels. The secondary flakes have a thin, abraded cortex, and where relatively large areas of this surface survive, often exhibit a rounded profile. This indicates that the nodules utilised were water-transported pebbles and cobbles, which would have been rolled and battered by glacial or fluvial forces prior to their initial deposition. This has resulted in the thin, irregular and pockmarked nature of their cortex. The depositional processes of river gravels also limit the size of the nodules and consequently have an effect upon the methods of working employed. Additionally, the widely divergent sources of the nodules incorporated into the gravels account for the considerable variation in colour and composition. However, it should be noted that eleven of the twelve pieces recovered have been produced on relatively high quality glassy translucent flint, which indicates deliberate selection of certain nodules, possibly after testing at the point of procurement. This suggests that, although the pieces are generally small, there was no resource stress.

3.0 Dating

The different elements of the assemblage appear to be relatively consistent in the morphological attributes that they display. Two of the pieces from (*623*), a blade fragment (**10**) and a fragment from a blade-like flake (**11**) both exhibit characteristics consistent with Later Mesolithic and Early Neolithic industries.

The other item from (*623*) is a relatively squat flake (**12**), with a prepared platform edge suggestive of Early to Middle Neolithic lithic technology. Comparable pieces were recovered from Trench 1 ((*107*) – **1**) and Trench 3 ((*300*) – **2**; (*301*) – **3**; (*303*) – **4**). This suggests that most, if not all of the lithic material recovered from the site at Willingham Road results from Early to Middle Neolithic activity.

It should be noted that 50% of this small assemblage was recovered from a single feature, ditch [602]. As it is not known whether the fills also contained later ceramic materials, this 'concentration' of worked flint raises the possibility that [602] may have been created during the Neolithic period. Alternatively, this ditch may have been cut through *in-situ* deposits representing an earlier knapping floor.

APPENDIX 7: List of archaeological contexts

Context	*Type*	*Description*
100	Layer	Topsoil
101	Layer	Natural sand
102	Cut	Shallow linear feature, contains (103)
103	Fill	Fill of [102]
104	Cut	Irregular linear feature, possibly natural, contains (105)
105	Fill	Fill of [104]
106	Cut	Irregular linear feature, possibly natural, contains (107), (108)
107	Fill	Secondary fill of [106]
108	Cut	Palaeochannel, contains (109)
109	Fill	Clay rich fill of palaeochannel [108]
200	Layer	Topsoil
201	Layer	Natural sand
202	Cut	Curvilinear gully, possible roundhouse eavesdrip gully (same as [205]?), contains (220)
203	Cut	Linear ditch, cuts [204], contains (207), (208)
204	Cut	Linear ditch, cut by [203], contains (209)
205	Cut	Curvilinear gully, possible roundhouse eavesdrip gully (same as [202]?), contains (206)
206	Fill	Fill of [205]
207	Fill	Secondary fill of [203]
208	Fill	Primary (alluvial?) fill of [203]
209	Fill	Fill of [204]
210	Cut	Irregular, subcircular pit, possible tree bole, contains (211), (221)
211	Fill	Fill of [210]
212	Cut	Cut of shallow linear gully, contains (213)
213	Fill	Fill of [212]
214	Cut	Curvilinear gully, possible roundhouse eavesdrip gully, contains (215)
215	Fill	Fill of [214]
216	Cut	Linear ditch, contains (217)
217	Fill	Fill of [216]
218	Cut	Shallow irregular gully, merges with [219], contains (222)
219	Cut	Shallow irregular gully, merges with [218], contains (223)
220	Fill	Fill of gully [202]
221	Fill	Secondary fill of [210]
222	Fill	Fill of gully [218]
223	Fill	Fill of gully [219]
224	Void	-
225	Void	-
226	Layer	Spread of material, possible irregular feature
227	Cut	Linear ditch, cut by [234], contains (228)
228	Fill	Fill of ditch [227]
229	Cut	Linear ditch, cuts [234], contains (230), (231), (232)
230	Fill	Fill of ditch [229], slumping?
231	Fill	Main fill of ditch [229]
232	Fill	Upper clay fill of ditch [229]
233	Fill	Fill of ditch [234]
234	Cut	Linear ditch, cuts [227], cut by [229], contains (233)
235	Layer	Ground make up layer
236	Layer	Redeposited natural sand – ground make up
237	Layer	Buried soil/former ground surface
300	Layer	Topsoil
301	Fill	Fill of ditch [302]
302	Cut	Linear ditch, contains (301)
303	Fill	Fill of [304]
304	Cut	Poss ditch terminus/pit

305	Fill	Fill of post hole [306]
306	Cut	Post hole
307	Fill	Upper fill of ditch [309]
308	Fill	Primary fill of ditch [309]
309	Cut	Linear ditch, contains (307), (308)
310	Fill	Upper fill of [315]
311	Fill	Fill of [315]
312	Fill	Tertiary fill of [315]
313	Void	-
314	Fill	Primary fill of [315]
315	Cut	Linear ditch, contains (310-314)
316	Fill	Fill of [317]
317	Cut	Shallow feature, possible pit
318	Fill	Secondary fill of [320]
319	Fill	Primary fill of [320]
320	Cut	Linear ditch cut
321	Fill	Fill of [323]
322	Void	-
323	Cut	Linear ditch cut, contains (321)
324	Fill	Upper fill of [327]
325	Fill	Secondary fill of [327]
326	Fill	Primary fill of [327]
327	Cut	Linear ditch cut, contains (324), (325), (326)
328	Fill	Fill of [329]
329	Cut	Post hole cut
330	Fill	Fill of [331]
331	Cut	Irregular feature, possible ditch
332	Layer	Natural sand
333	Fill	Fill of [334]
334	Cut	Possible post hole
335	Fill	Fill of [336]
336	Cut	Linear ditch cut
337	Fill	Fill of [338]
338	Cut	Possible ditch, same as [340]?
339	Fill	Fill of [340]
340	Cut	Ditch cut, same as [338]?
400	Layer	Topsoil
401	Layer	Natural sand
402	Cut	Linear ditch cut
403	Fill	Fill of [402]
404	Fill	Fill of [405]
405	Cut	Possible backfilled palaeochannel
500	Layer	Modern topsoil, contains baling twine etc
501	Cut	Linear ditch cut
502	Layer	Ground make up layer
503	Fill	Clay layer, sealing ditch [501]
504	Void	-
505	Fill	Secondary fill of [501]
506	Fill	Primary(?) fill of [501]
507	Layer	Natural sand
600	Layer	Topsoil
601	Layer	Natural sand
602	Cut	Linear ditch cut, contains (603), (621), (622), (623)
603	Fill	Upper fill of [602]
604	Cut	Linear ditch cut, contains (605)
605	Fill	Fill of [604]
606	Cut	Linear ditch cut, contains (607)
607	Fill	Fill of [606]
608	Cut	Linear ditch cut, contains (609)
609	Fill	Fill of [608]
610	Cut	Linear ditch cut, contains (611)

611	Fill	Fill of [610]
612	Cut	Linear ditch cut, contains, (613)
613	Fill	Fill of [612]
614	Cut	Linear ditch cut, contains (615), (620)
615	Fill	Secondary fill of [614]
616	Cut	Linear ditch cut, contains (617)
617	Fill	Fill of [616]
618	Cut	Linear ditch cut, contains (619)
619	Fill	Fill of [618]
620	Fill	Primary fill of [614]
621	Fill	Tertiary fill of [602]
622	Fill	Secondary fill of [602]
623	Fill	Primary fill of [602]
700	Layer	Topsoil
701	Layer	Natural sand
702	Cut	Linear ditch cut, contains (703)
703	Fill	Fill of [702]
704	Cut	Linear ditch cut, contains (705)
705	Fill	Fill of [704]
706	Cut	Linear ditch cut, contains (707)
707	Fill	Fill of [706]
708	Cut	Pit cut, contains (709)
709	Fill	Fill of [708]
800	Layer	Topsoil
801	Layer	Clayey subsoil/alluvial deposit
802	Layer	Sand/clay alluvial deposit
803	Layer	Organic peaty sand
900	Layer	Topsoil
901	Layer	Clayey subsoil/alluvial deposit
902	Layer	Compact alluvial clay layer
903	Layer	Alluvial sand, slightly clayey
1000	Layer	Topsoil
1001	Layer	Natural sand
1100	Layer	Topsoil
1101	Layer	Natural sand
1200	Layer	Topsoil
1201	Layer	Clayey subsoil/alluvial deposit
1202	Layer	Alluvial sand layer
1203	Layer	Organic peaty sand