

**ARCHAEOLOGICAL
EVALUATION REPORT;
RAYMOTH LANE,
WORKSOP, NOTTINGHAMSHIRE**

NGR: TF 5775 8150
SITE CODE: RLW03

Report prepared for
Knight Frank
by William Munford and Colin Palmer-Brown
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Pre-Construct Archaeology (Lincoln)
Unit G
William Street Business Park
Saxilby
Lincoln
LN1 2LP
Tel. & Fax. 01522 703800
e-mail colin.pca@virgin.net

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Summary

- *To inform a future application for planning permission, an archaeological field evaluation was carried out on land north off Raymoth Lane, Worksop, Nottinghamshire.*
- *The evaluation centred on the selective investigation of a cropmark enclosure, situated towards the north-east corner of the proposed development zone, although apparent blank areas of the site were also examined and these were verified as being archaeologically sterile.*
- *A range of archaeological features was investigated towards the north-eastern corner of the site, reflecting the remains that had already been identified from existing aerial photographs. A series of evaluation trenches sample excavated a substantial enclosure ditch, as well as some internal features. Pottery dating evidence suggests that the majority of activity associated with the enclosure occurred in the 2nd century AD, although occupation of the area may have originated in the pre-Roman era.*
- *The evidence resulting from this investigation suggests that the rural enclosure at Raymoth Lane is atypical, when examined in its local context: the comparatively rich finds assemblage that resulted from the work suggests that the small Romano-British community that resided at Raymoth Lane was in some way culturally superior, when compared with evidence deriving from similar sites of the area.*
- *It is suggested that there are two basic options that require consideration, if this site is to be developed: either to exclude the area of archaeological interest from the proposed development scheme altogether (preservation in situ), or to consider a further programme of archaeological investigation in advance of development (preservation by record).*
- *In addition to the evaluation, a series of test pits were monitored across the site. A description of these can be found in Appendix 6.*



Fig. 1: General site location (scale 1:50,000)
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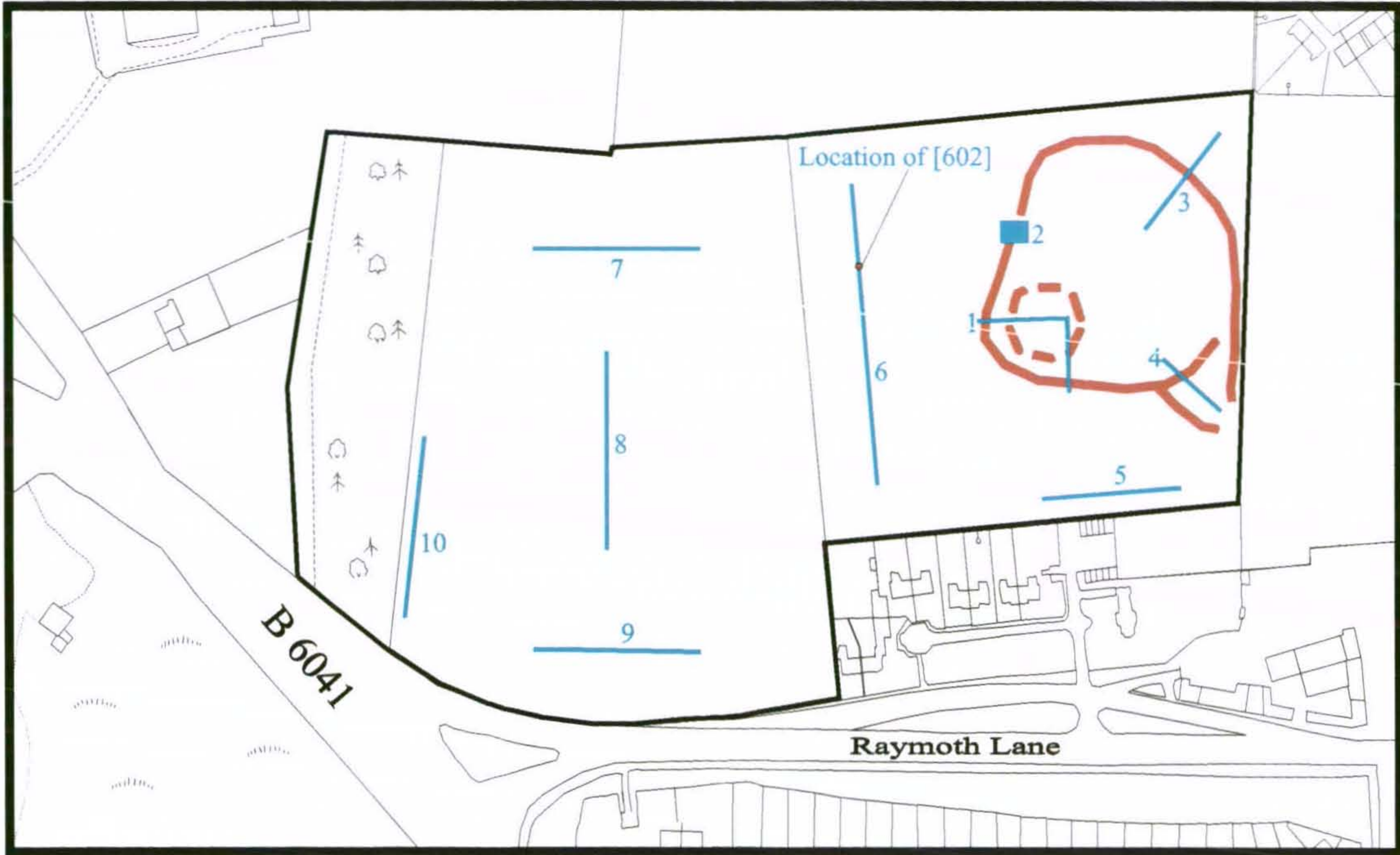


Fig 2: Site Map showing cropmarks plotted from aerial photograph in red and evaluation trenches 1-10 in blue. (Scale 1:2500)



1.0 Introduction

Pre-Construct Archaeology (Lincoln) was commissioned by Knight Frank, on behalf of Mr G Machin, to undertake a programme of archaeological evaluation on land situated to the north of Raymoth Lane in Worksop, Nottinghamshire.

The evaluation has been undertaken to fulfill the objectives of a formal project brief issued by the assistant County Archaeologist for Nottinghamshire 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) and *Standards and guidance for archaeological field evaluation*, (IFA, 1999).

2.0 Site location and description

Worksop is approximately 22km south-east of Sheffield and 13km west of Retford. The site that is the subject of this report is on the north side of the town; immediately north of the B6041/Raymoth Lane junction. It comprises three unequal blocks of land totalling approximately ten hectares, situated 2.5km north of the River Ryton. The predominant land use is rough pasture and meadow, with the westernmost section being wooded. The whole site is situated amongst residential properties; to the north, west and south and by further rough pasture to the east.

The local drift geology comprises a predominance of bunter pebble beds overlying a seam of lower mottled sandstone. Immediately to the west of the development site, the sandstone seam emerges to form the surface stratum. (British Geological Survey, 1999).

The site is centred on NGR TF 5775 8150.

3.0 Planning background

In advance of a formal application for planning consent, preliminary consultations between Knight Frank and the assistant County Archaeologist for Nottinghamshire advised the undertaking of a detailed archaeological assessment and field evaluation to determine the archaeological potential of the site; the results of which will be used to advise any future application for planning permission. This approach is consistent with the recommendations of *PPG16* (1990):

“The key to informed and reasonable planning decisions, as emphasised in paragraphs 19 and 20, is for consideration to be given early, before planning applications are made, to the question of whether archaeological remains exist on a site where development is planned”

4.0 Archaeological and historical background

An area of cropmarks, possibly indicative of later prehistoric activity, has been mapped to the north of Worksop. These cropmarks probably represent field systems and are situated less than 1km from the current site. Three distinctive circular features observed amongst them, with diameters of 12m, 16m and 18m are probably barrows or ritual circles, supporting the idea that the cropmarks are remnants of a prehistoric or early Roman landscape. To the northeast, and apparently associated with the field systems, is a cluster of "Group 4" enclosures, 3 rectangular and 2 quadrant-shaped, between 0.1 and 0.2 hectares in size, (Sites and Monuments Record, sites 4759a, 4759b, 4759c and 4759d).

The general area is dominated by a series of early Roman military sites: Doncaster, Bawtry, Littleborough, Chesterfield, and Templeborough.

The town of Worksop is listed in the Domesday Book as, *Werchesope*, demonstrating that a settlement had existed here from at least the late Saxon period, (Nicholson 2003). Substantial remains associated with a medieval moated hall are located approximately 1km to the west of the site: Gateford hall was the ancient residence of the Lascelles family, and elements of the earliest structure have been incorporated into the existing structure.

A short distance to the south of the site, an English reckoning counter, used as a form of local payment in lieu in the 14th century AD, was recovered during modern farming work.

An enclosure cropmark observed on the site itself has been listed in the Nottinghamshire Sites and Monuments Record, (Site no. 4780), as a large irregular enclosure with one possible entrance (although a review of the aerial photographic data suggests that there may in fact be two entrances; one on the south-east side, and one on the west). Irregular enclosures with broadly similar dimensions and plans have been observed and investigated across the south and east of the country. Examples in the East Midlands include Colsterworth in Lincolnshire, which contained two clusters of hut circles, and a broadly contemporary site at Tallington in the Wellend valley. This classification of monument is often ascribed to the later Iron Age, although 'native-type' enclosures appear to feature throughout much of the Roman period, alongside the more elaborate villa complexes which appear in number during the 2nd century AD (Todd 1991).

5.0 Methodology

The evaluation methodology required the investigation of 10 trial excavation trenches. The trenches were located to target specific features observed as cropmarks in aerial photographs, or to randomly examine adjacent 'blank' areas. They are depicted in fig 2, and are described as follows:

Trench 1: Trench 1 was an inverted L-shape, comprising a 35m long East West oriented arm and a 25m long north south oriented arm. It was located towards the eastern end of the proposed development site to traverse both the large enclosure and a possible internal circular cropmark.

Trench 2: Measuring 10m x 8m, this trench was positioned to investigate a probable western entrance to the large enclosure and identify any structural elements relating to it.

Trench 3: This trench was 50m x 2m. Its purpose was to investigate the enclosure ditch and to sample internal features. It was positioned close to the northeast corner of the site and aligned north-east to south-west.

Trench 4: Trench 4 was 20m long x 2m wide. It was aligned north-west to south-east and positioned towards the south-east corner of the site to evaluate elements of the enclosure; including a second entrance.

Trench 5: Measuring 50m x 2m, this trench was excavated to establish the presence/absence of archaeological remains in the area immediately to the south of the enclosure cropmark

Trenches 6-10: Trenches 6 to 10 varied in length from 20m to 50m and were all positioned with the aim of establishing whether archaeological remains exist in the western half of the site, which is void of any visible cropmarks.

Each of the trenches was opened using a JCB fitted with a 1.6m wide smooth ditching blade. Topsoil and subsoil deposits were removed in spits not exceeding 0.2m, until the first archaeological or natural horizon was exposed. Where archaeological deposits were encountered, all further excavation was by hand.

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.

Mr. C Clay, assisted by a team of five experienced field archaeologists, undertook the excavation and recording of the trenches over a period of 12 days, between Wednesday 29th October and 11th November 2003.

In addition to the evaluation trenching a series of test pits were excavated on the site, and a description of these can be found in Appendix 6.

6.0 Results

6.1 Trench 1 (figs 3 – 4)

The large enclosure and possible circular cropmark observed in aerial photographs were investigated by this trench.

A section of a substantial east-west aligned feature, [101], was exposed towards the south end of the trench; corresponding with the known cropmark enclosure ditch. This was 1.6m deep and 4.5m wide, and the ditch had a fairly typical broad U-shaped profile (fig 4). Three discrete fill deposits were identified. The lower bulk fill, (104), consisted of mid orange-brown silty sand, incorporating the disarticulated bones of dog, red deer, sheep and cattle, and five sherds of pottery dated to the mid-late 2nd century AD. The deposit was 'capped' by a seam of a more compact mid orange-brown silty sand, (103), which was 0.20m deep, and contained Roman pottery of 2nd and 3rd century date, including two sherds from fine ware Nene valley colour coated beakers and body sherds from a dales ware gritted jar. It also included a large amount of cattle, pig, sheep and red deer bones, (particularly teeth), and a single fragment of rotary quern. Several large sandstones further distinguished this horizon from the other fills within the ditch. The uppermost deposit, context (102), comprised brown-red silty sand, up to 0.30m deep.

Approximately 13m to the north of the above, within the east-west aligned arm of the trench, a section of a north-south aligned feature, [108], was exposed. This was approximately 4m wide, but only 0.25m deep. It was filled with mid brown grey silty sand, (109). A layer of dark grey brown loamy sand, (106), was observed above, and extending well beyond, (109). Its maximum depth was 0.30m and it extended almost to the western end of the trench. It contained six sherds of pottery of post-Roman origin.

A further 6m to the west of the above, a second north-south aligned feature was exposed, [110]. This was 4m wide and 0.25m deep and had barely perceptible edges. It was filled with mid brownish grey silty sand, (111), and, like [108], was sealed beneath (106).

Close to the western end of the trench, two further north south-aligned linear features were investigated. The easternmost, [112] had a profile similar to that of [110] and [108]. It was 3.6m wide and 0.40m deep and was sealed by (106). To the immediate west of this, [114] was 4.3m wide, with comparatively steep sides. Its full depth was not established, but it was filled with dark brown silty sand, (115), which contained some very abraded pottery sherds of 2nd and 3rd century date. It was partially overlain by (106). This section corresponded with the known cropmark of the westernmost section of the enclosure ditch.

6.2 Trench 2 (fig 5)

This trench exposed two pit-like features and a short gully. The predicted enclosure ditch was not exposed, suggesting that the evaluation trench had not been positioned over the north terminal of the western entrance (not a total surprise, given that aerial photographs of the site have not been comprehensively rectified).

The terminal (west) end of an east west aligned linear feature, [202], was exposed, where it extended for a distance of 1.4m from the eastern trench edge. In section, this feature had steep sides and a flat base, suggesting perhaps that it was in some way structural (for example, palisade trench). It was 0.88m wide and 0.50m deep. Its primary fill, (203), comprised black silty sand mixed with abundant limestone fragments, 0.10m deep. This was sealed by a bulk fill of dark brown silty sand, (204).

A large irregular pit-like depression, [208], was exposed towards the northwest of the trench. In plan, this was an irregular oval shape, oriented north-west to south-east, and it was 5m long and 2.55m wide. Excavation exposed a shallow, gentle profile and an undulating base. It was filled with mid greyish-brown silty sand, (206).

A second pit-like feature, [207], was exposed towards the northeast of the trench. It was roughly circular in plan with a diameter of 2.1m. Excavation revealed that this also had a gentle profile. Its fill consisted of dark greyish brown silty sand, (208).

No finds were recovered from any of the features in Trench 2.

6.3 Trench 3 (figs 6 and 7)

A section of the enclosure ditch was exposed and excavated in the north-eastern part of this trench. To the south-west of the ditch, a small number of internal features were also investigated.

A substantial linear ditch was examined in the north-eastern half of the trench, orientated north-west south-east. It was 5.96m wide and 1.62m deep, and it appeared to have been re-cut on at least four occasions (see fig 7). A step in the western side of the earliest cut, [317] was filled with dark brown clayey silt, (312), and this contained five sherds of pottery dated to the 2nd century AD. Overlying this and filling the rest of [317] was (310); a bulk fill of mid greyish brown sand that incorporated shell-gritted body sherds of native type / Iron Age tradition, and numerous cow and sheep bone fragments.

Context (310) was truncated by a second cut [316]. A lower fill of this, context (311) contained three sherds of pottery of 2nd century AD date. In the base of [316] was what appeared to be some kind of hearth, (306): comprising an area of pitched rounded cobbles with an infill of burnt grey sand. This yielded four fragments of cow and sheep bones and nine sherds of pottery dating from the 2nd century AD. (311) and

(306) were both sealed by a bulk fill, (305); comprising mid brownish orange silty sand, approximately 0.30m deep, and incorporating two fragments of animal bone.

The fills of [316] and [317] had been truncated by a third re-alignment or re-cut of the enclosure ditch, [318]. This was filled by a bulk deposit of mid brown sand, (303) which incorporated pottery of Iron Age tradition, as well as diagnostic 2nd century sherds (including a fragment of *mortarium*). It also included a group of articulated cattle leg bones.

A final re-cut, [322], capped the entire section. Its primary fill (302) consisted of compact light brown sandy silt, sealed beneath a deposit of mid brown sand, context (301). Both this and (302) contained abraded pottery sherds of possible Iron Age tradition, including vesicular rim sherds from two vessels. The fills of [322] also contained far more numerous and less abraded pottery fragments of 2nd century date, amongst which were sherds from a number of interesting and unusual vessels such as lid-seated jars.

Approximately 8m to the south-west of the enclosure ditch, a spread of burnt stones, [319], was exposed. This was approximately 1.2m x 1m in plan, and it consisted of large sub-angular burnt sandstone blocks, with a dark greyish silty sand infill, (321). Thirty five sherds of pottery of mid 2nd century AD date were recovered from (321), including five sherds of central Gaulish samian and fragments of two grooved rim dishes. In addition, fragments of cattle and sheep bones, some of which had been burnt, were recovered. Excavation revealed an adjacent pit, [320] which was sub-circular in plan and measured 0.80m across. This was filled with dark brown grey silty sand, (304) and contained fifteen sherds of 2nd century AD pottery (it is noteworthy that body sherds from the same vessel were recovered from the enclosure ditch fills (305) and (321), and that sherds from a single oxidised bowl were scattered through layers (302), (303), (320), (312) and (321)).

Approximately 2.7m to the south-west of the above, a possible posthole or gully terminal, [307], was investigated. This was approximately 0.40m wide, and it was filled with a dark greyish brown silty sand with reddish brown lenses, (308). Approximately 10m to the south-west another, possibly similar, feature, [323], was investigated. This was approximately 0.40m wide and it was filled with a very dark reddish brown sand.

6.4 Trenches 4-10 (fig 8)

Trenches 4-10 contained no archaeological remains, excluding a possible pit in Trench 6.

Representative sections of the trenches were recorded. The stratigraphy of Trenches 4-6 was a topsoil of mid brown grey silty sand containing rounded river pebbles. This overlay the natural strata, which was orange-red homogenous sand with inclusions of rounded and sub-rectangular river pebbles.

A possible pit [602] was exposed adjacent to the east facing section of Trench 6 approximately 10m from its northern end. Its full dimensions were not established. Its primary fill was (604); reddish brown silty sand. A layer of reddish brown silty sand mottled with pink clay patches, (603), overlay (604). The location of this feature has been indicated in figure 2.

7.0 Discussion and conclusion

Overall, the results of the archaeological evaluation confirm that the site proposed for development contains remnants of a Romano-British enclosure towards its east side, with the majority of the proposed development area being devoid of significant archaeological remains.

Pottery from the enclosure ditch and related internal features indicates that the majority of activity took place during the 2nd century AD, with continuity into the 3rd.

The morphology of the enclosure suggests that it is of Iron Age tradition, and pottery of this custom has been found at the site; complicated by the fact that this pottery was recovered (from more than one context) in association with sherds that can be firmly placed in the 2nd century AD. The independent pottery report (Appendix 2) cites this information solely in terms of residuality, but the possibility of long-term continuity of native cultural tradition should perhaps also be entertained. At Navenby in Lincolnshire, for example, a large stone-capped pit (thought to have been associated with some form of ritual activity) contained 3rd century pottery in association with developed scored ware of Iron Age tradition (Palmer-Brown 1999)

Although the character of occupation on the site has not been fully established, the evidence is indicative of some form of domestic living, with the main thrust of this occupation perhaps occurring during the 2nd century AD.

Features examined within Trench 2 may constitute the remains of structures associated with the entrance to the enclosure, although this was not clarified, and dating is a problem. Trench 1, in the location of the possible circular cropmark within the enclosure, did not reveal a circular feature. Instead, three north-south aligned wide and shallow linear cut features were exposed. These features could represent remnants of a medieval ridge and furrow agricultural system, although it is noteworthy that similar features were not identified elsewhere. It is possible that the overlying deposit recorded as layer (106) represents some form of medieval or post medieval ground raising activity: this context contained medieval pottery.

The successive re-cuts evident in the section of the enclosure ditch excavated in Trench 3 suggest that the monument was maintained over an extended period of time. The apparent occurrence of a hearth within the base of [316] and the recovery of articulated cattle bones within [318] suggests that the nature of activity associated with the life of the enclosure changed over this indefinable period. It is possible that the deposition of animal parts reflects some form of ritual activity: excavations at the Iron Age hill fort of Danebury in Hampshire, for example, have demonstrated that the

burial of animal carcasses of animal carcasses, whole and in joints, within disused features was commonplace, and it has been surmised that this reflects a form of ritual propitiation, (Cunliffe, 1991).

Although the artefactual assemblage from a relatively small sample excavation does not necessarily reflect the material culture of the community that created it, the wealth of the animal bone and pottery recovered from this evaluation point towards a site of relative economic and social sophistication, even though, morphologically, it would appear to be one of low status. This situation is supported by the evidence derived from the few excavations that have taken place on local Iron Age / Romano-British 'peasant' farmsteads, where artefactual remains are generally few in number and tend to be of humble character (Todd 1991).

In the hills north of the Trent, several distinctively upland settlements have been investigated; for example, Edlington Wood near Doncaster and Scratta Wood near Worksop. At the latter, the Iron Age to Romano-British society that occupied it bore all the hallmarks of a rather impoverished community, where pottery was not a major feature of their material culture, and objects of bronze and iron were few in number. This would appear to contrast significantly with Raymoth Lane, where the community appears to have had access to a wide range of local and imported goods (including samian Nene Valley ware, and mortaria), suggesting perhaps that the occupants of Raymoth Lane were in some way socially superior to those who resided at Scratta Wood.

The unequivocal conclusion must be that, although the majority of the site (c. 80%) appears to be almost devoid of archaeological remains, the enclosure that is situated in its north-east corner is an important and locally unusual small settlement of Romano-British date, with possible origins in the later Iron Age. This monument would appear to be atypical, when compared with similar enclosures of the same period and cannot, therefore, be lost without an adequate record.

An understanding of the enclosure and its internal features may enhance the study of other settlements that feature in the prehistoric and Romano-British landscape. North Nottinghamshire contains the remnants of numerous 'brickwork' field systems, (such as those at Dunston's Clump to the West of Retford), which rarely yield sufficient evidence to firmly date them. The extent of these field systems implies a scale of investment, perhaps best associated with Roman administrative efficiency. Excavations by the University of Sheffield at Scooby top, approximately 10km to the north-east of Worksop, provided dating evidence for enclosures, ranging from the mid 1st to mid 3rd centuries AD. However, pre-Roman field systems such as the 2nd millennium BC Dartmoor Reaves and cohesive blocks on the Berkshire downs clearly demonstrate that they were not beyond the capabilities of prehistoric communities (Garton, 1987). Indeed, the system at Dunston's Clump appeared to have late Iron age origins (Sheffield, 1997)

As for their function it has been postulated in the past that brickwork field systems reflect the infrastructure of a largely pastoral economy due to the relatively poor nature of the local soils, coupled with the size of the enclosures themselves. However

the generally poor preservation of faunal remains in the local acidic sandy soils has made this impossible to verify (*ibid*).

The relative rarity of Iron Age and Romano-British settlements in the area compounds these problems of dating and interpretation, although the Raymoth Lane enclosure cannot be directly associated with any particular type of land management regime at present.

8.0 Mitigation

Superficially, it would appear that there are two options that are open to the proposed developers:

1. Preservation *in situ*
2. Preservation by record

Preservation *in situ*

The enclosure is situated in the north-east corner of the site, and it appears to constitute the only significant area of archaeology within the proposed development area. If it were possible to exclude this area in terms of any future development proposal, then the monument could effectively be preserved indefinitely. In this situation, there would be no further archaeological requirement or financial constraint on the part of the proposed developer. It may be possible, for example, to designate the sensitive zone an area of public open space.

Preservation by record

The alternative scenario would be preservation by record (ie excavation). The research potential of the site has already been partially addressed in the contents of this report, and each party must accept that the buried monument is one that could add significant new information to our understanding of the rural settlement structure in this part of Nottinghamshire during the Iron Age/Romano-British period.

The developer, in full consultation with the curating body and the archaeological contractor/consultant, must consider each option carefully. Full excavation, or even partial excavation, can be a costly process, and the developer may need to weigh up the balance. It may be, for example, that a future development of the area would, on the long-term, generate sufficient revenue to more than pay for further archaeological intervention. Alternatively, the expenditure on archaeology may not be justifiable; in which case, a preservation *in situ* strategy may be more appropriate.

9.0 Effectiveness of methodology

The methodology employed at the site has been effective, where a series of evaluation trenches were positioned to assess the nature of features identified by aerial photographs or to test blank areas in the western half of the site. The excavation of selective sections through cropmark remains has confirmed that they represent cut

archaeological features of prehistoric and/or Romano-British date. The confirmation that no archaeological deposits existed within Trenches 4-10 indicates that and future investigation, should this be necessary, should concentrate on the north-eastern part of the site.

10.0 Acknowledgements

Pre-Construct Archaeology (Lincoln) would like to thank Knight Frank for this commission, and their client, Mr G Machin. Thanks are also expressed to the excavation site team, Dave Bower, Dave Brown, Ceann Moran, Isabelle Kendall and Suzie Matthewson. Chris Clay supervised the evaluation on behalf of Pre-Construct Archaeology (Lincoln).

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12.0 Site archive

The documentary archive for the site is currently in the possession of Pre-Construct Archaeology. This will be deposited with Nottinghamshire county council within six months.

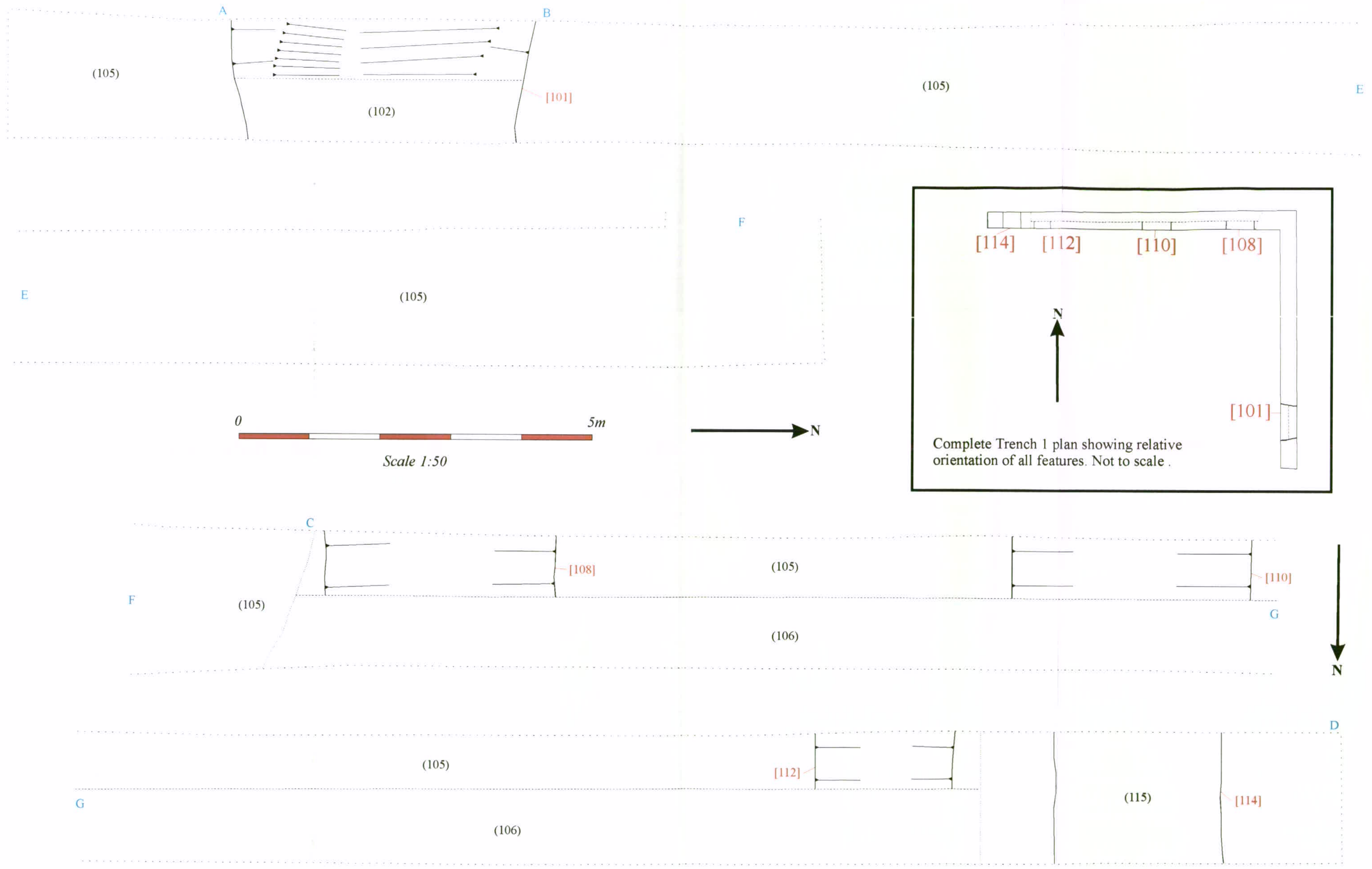


Fig. 3: Trench 1 plan. For sections A-B and C-D, see fig. 4. (Scale 1:50)

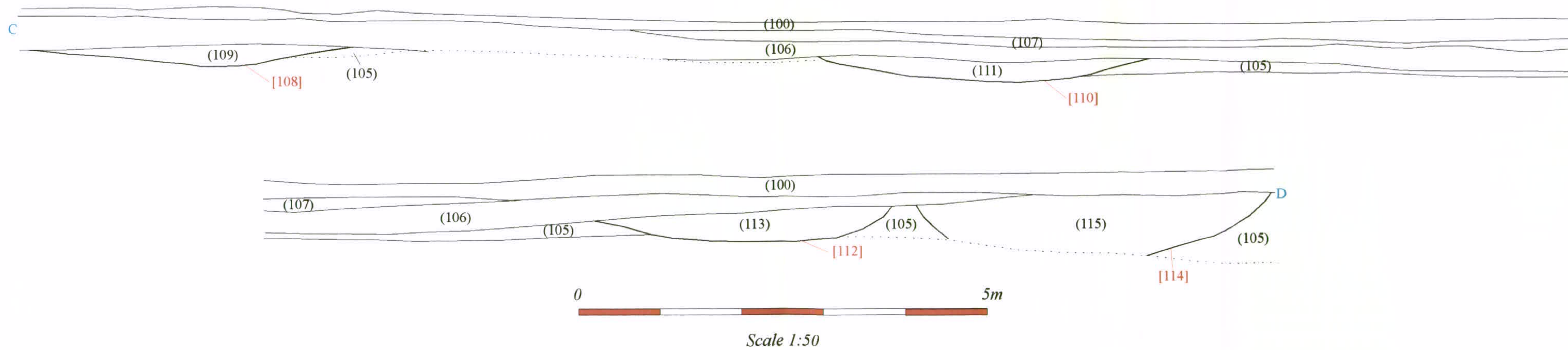
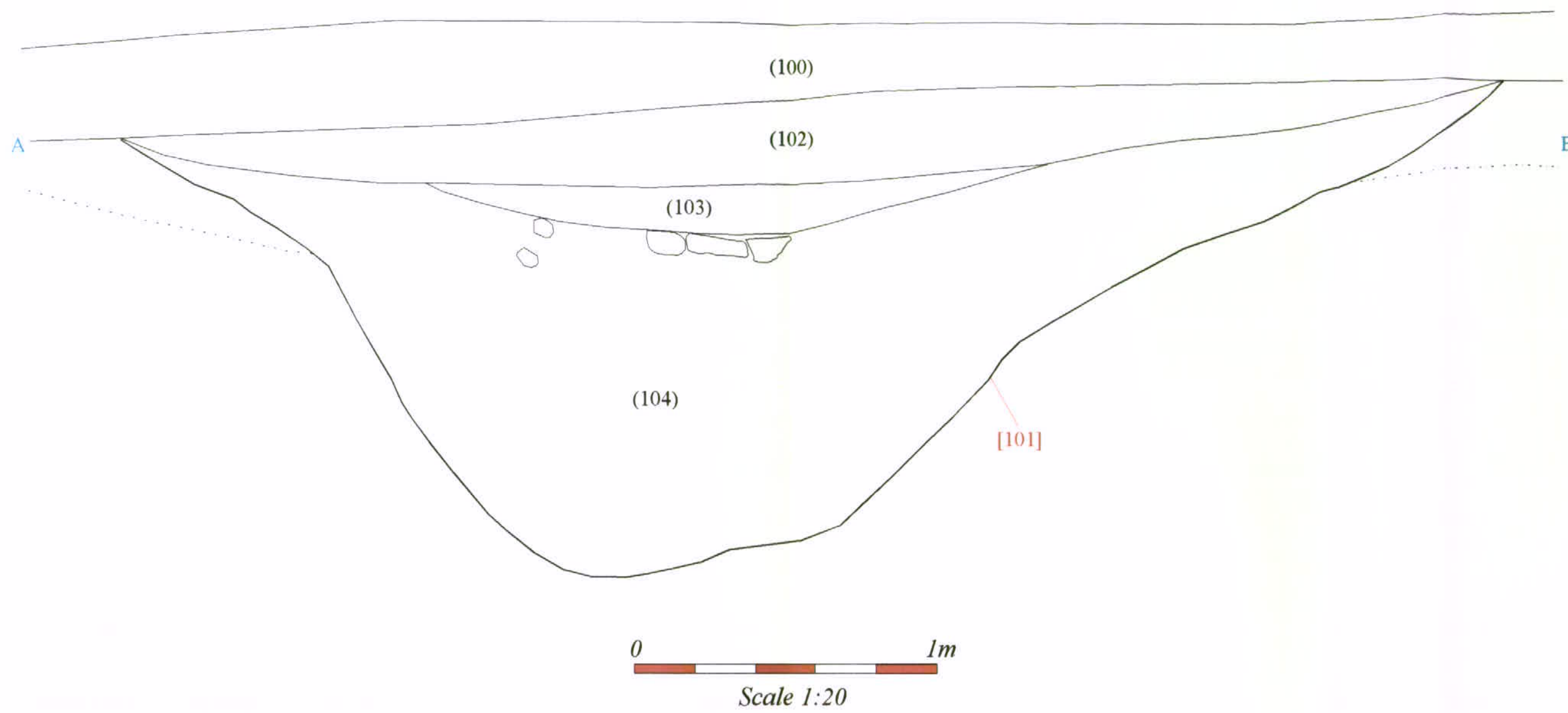


Fig. 4: Trench 1 sections (located on fig. 3) (scales 1:20 and 1:50)

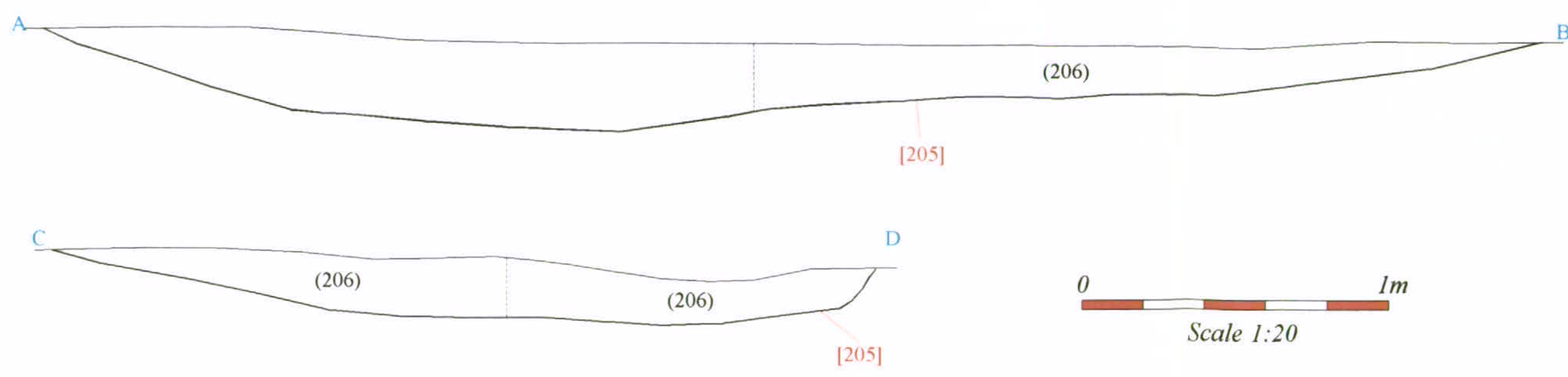
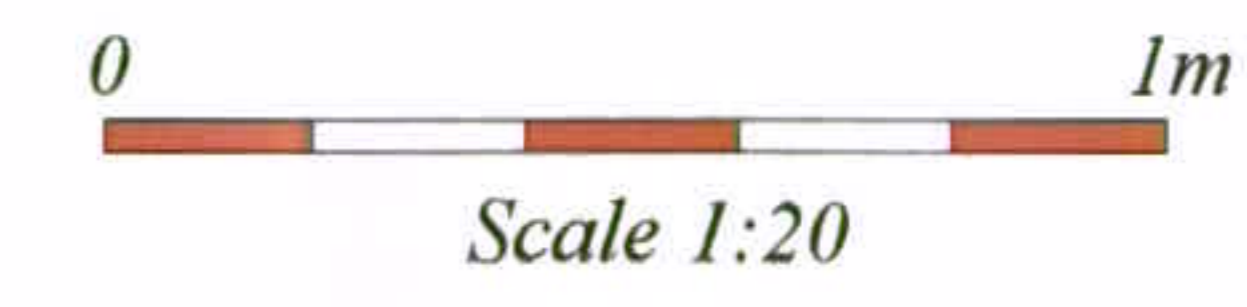
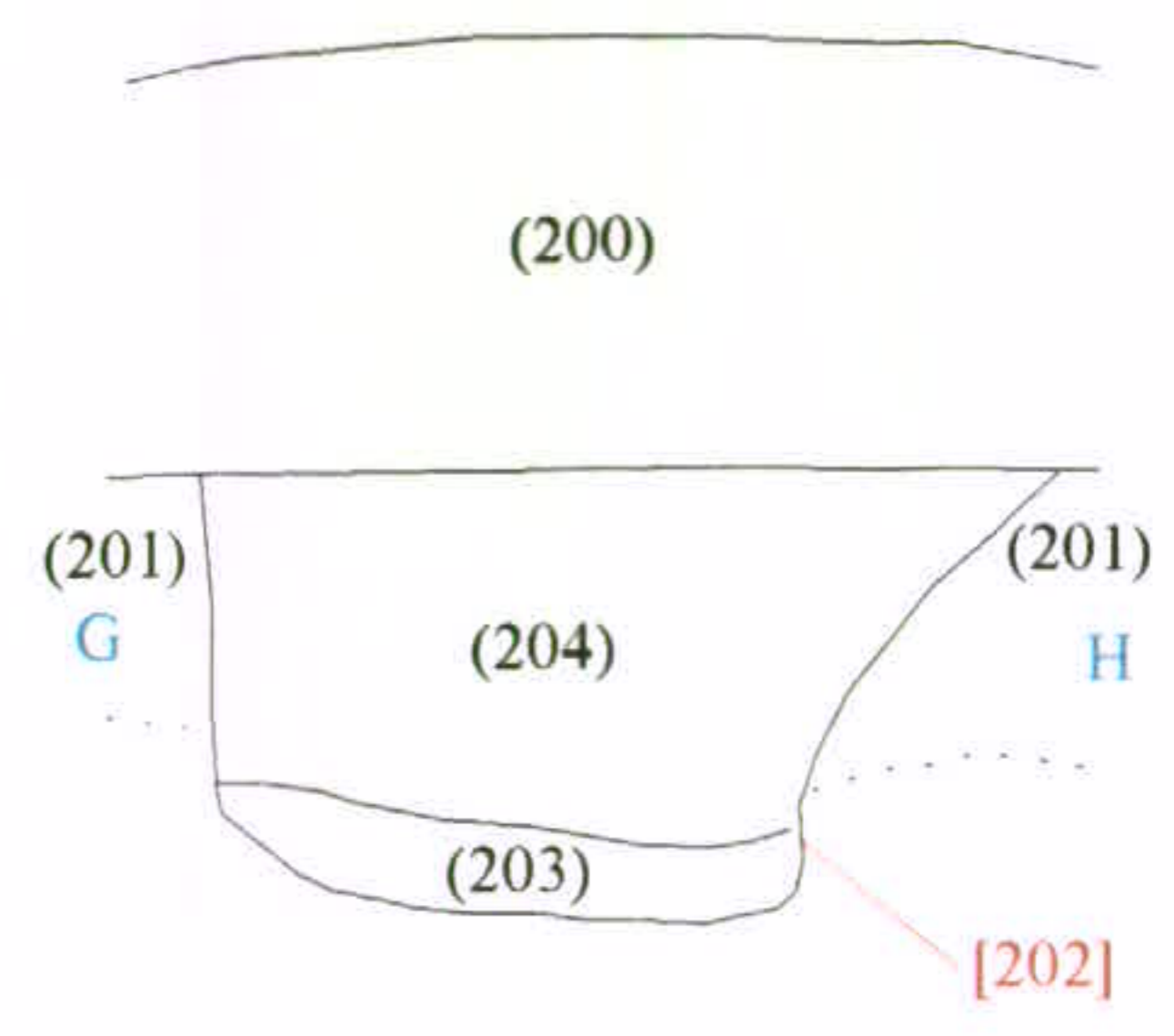
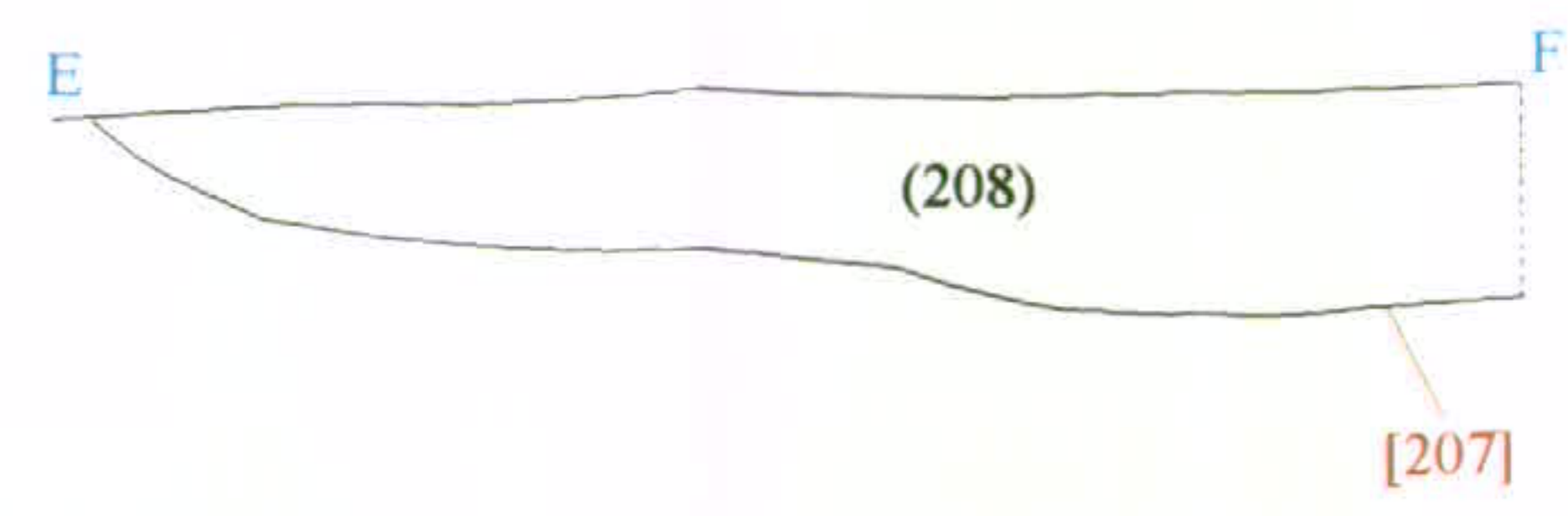
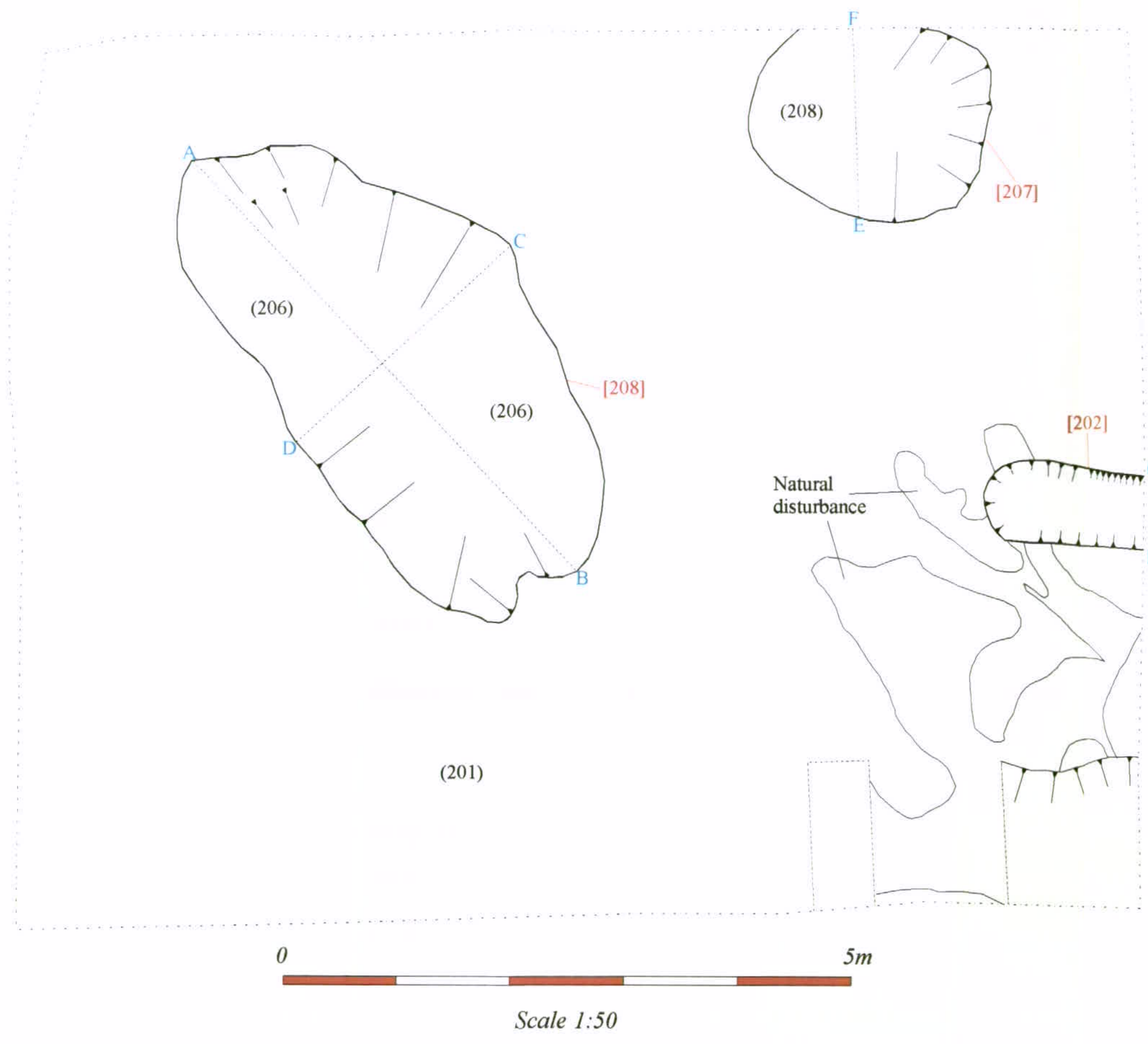


Fig. 5: Trench 2 plan and sections (plan at scale 1:50, sections at 1:20)

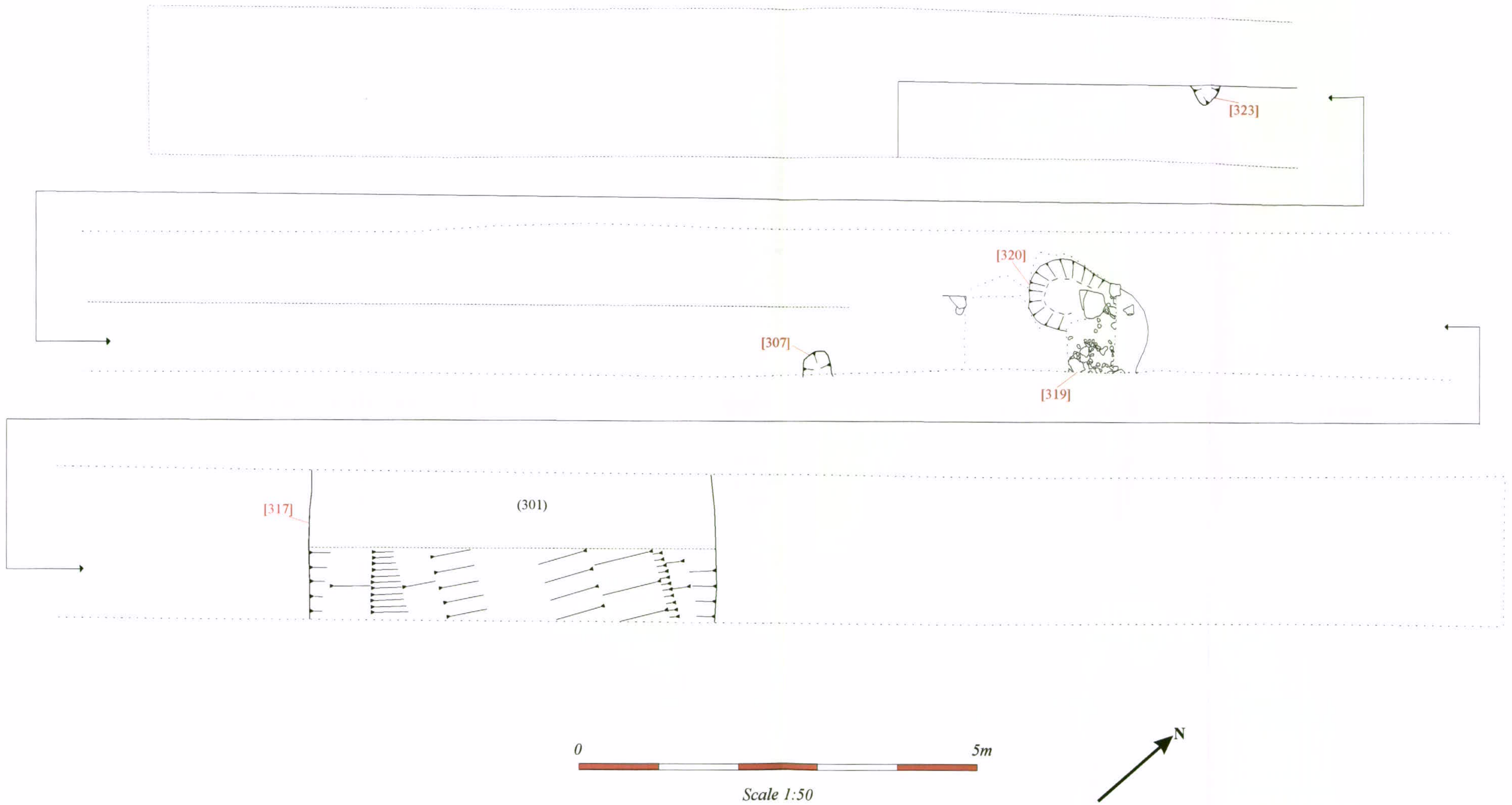


Fig. 6: Trench 3 plan. (scale 1:50). For section of [317] see Fig. 7

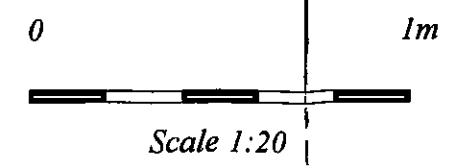
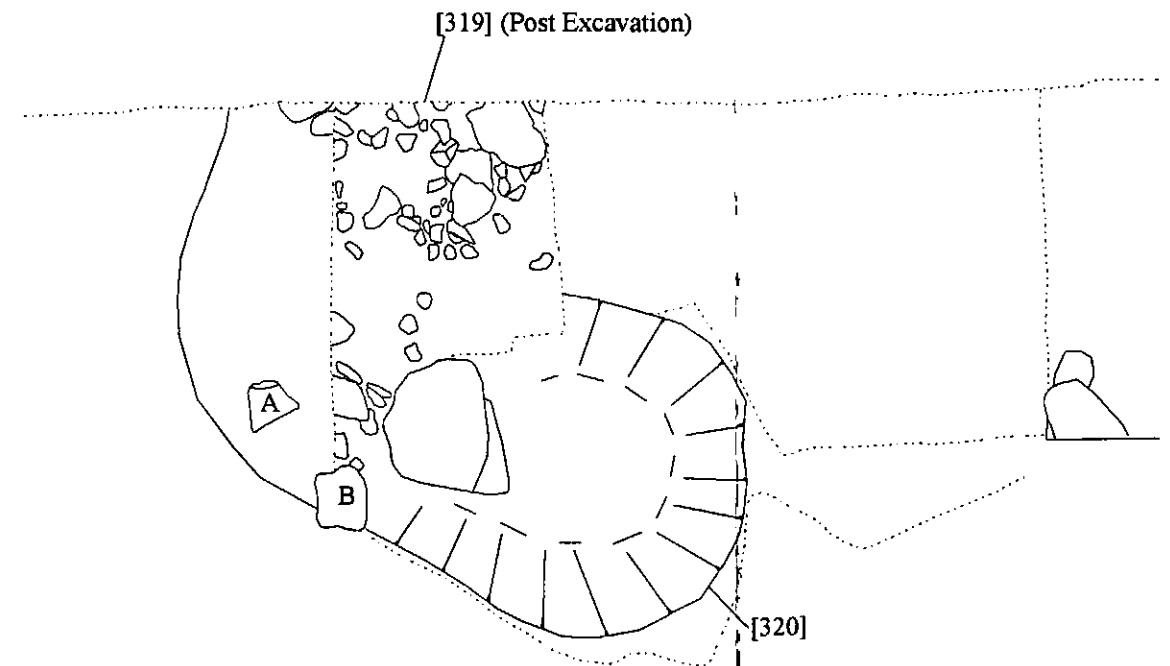
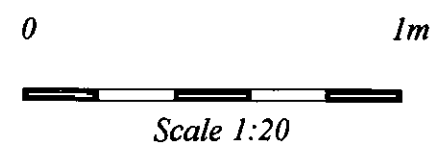
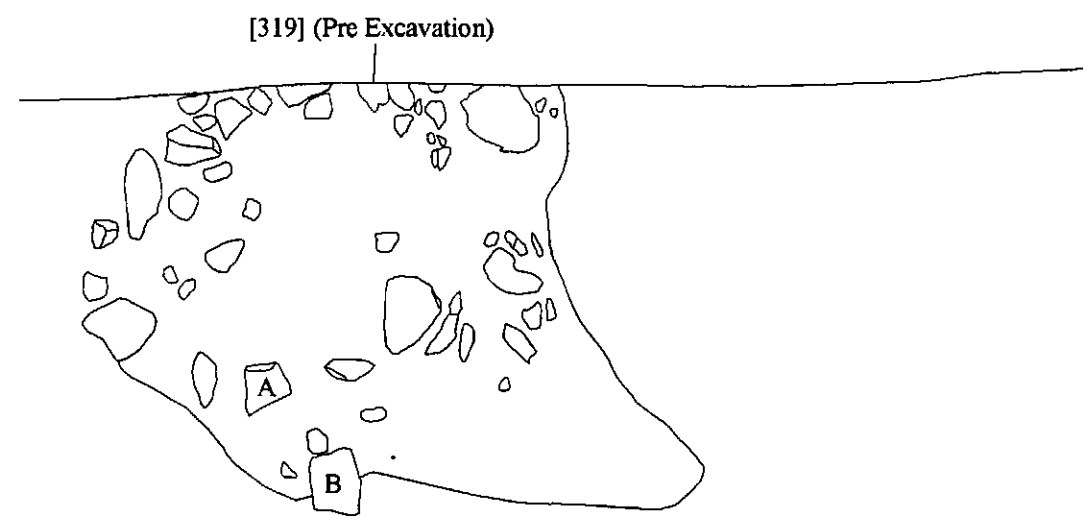
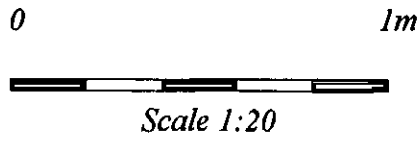
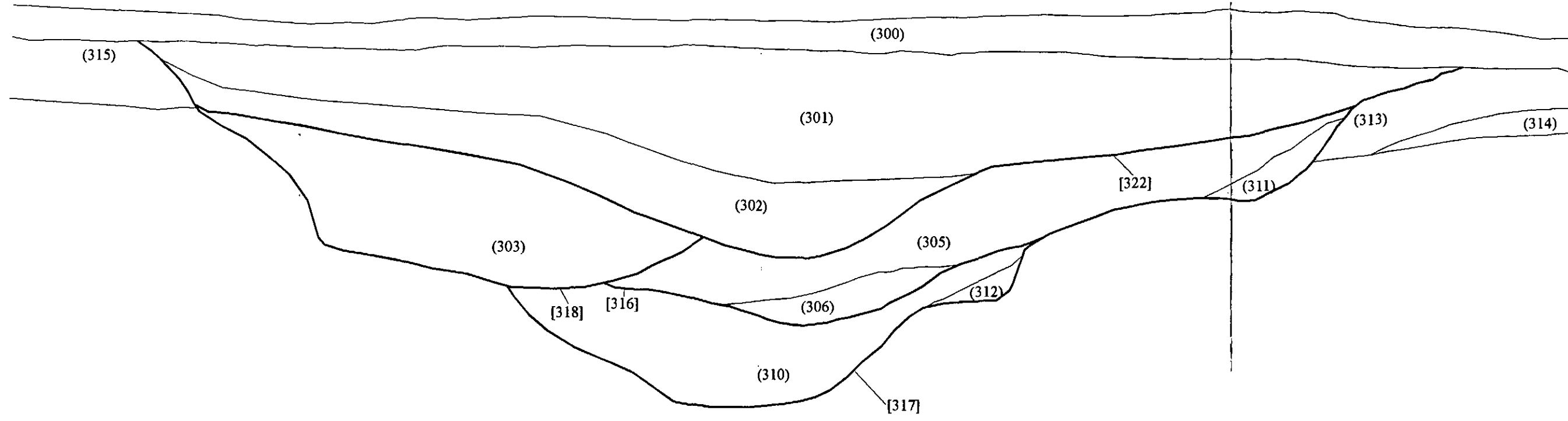
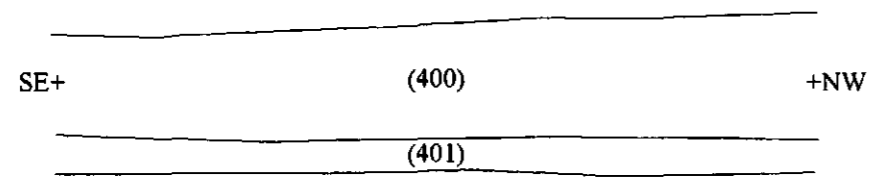
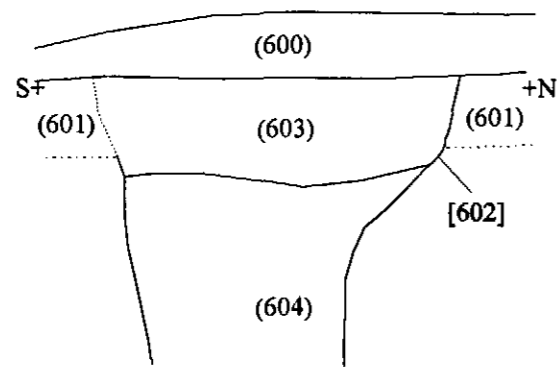


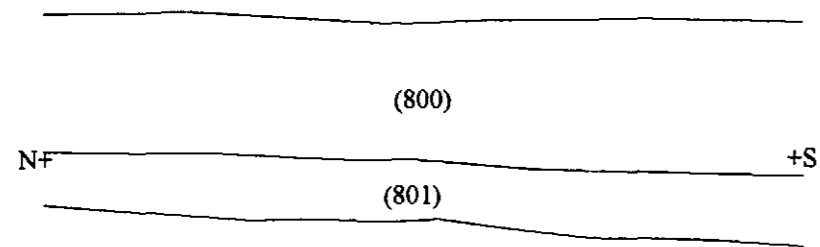
Fig. 7: Trench 3 section and feature 319 plans (Scales 1:20)



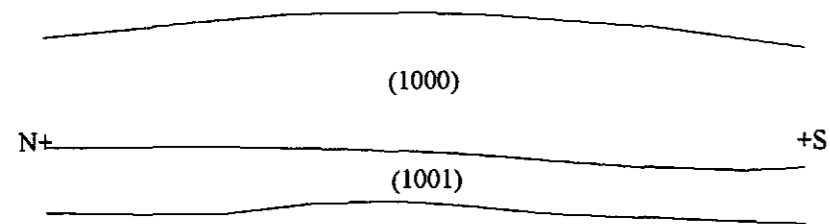
Trench 4 sample section (scale 1:20)



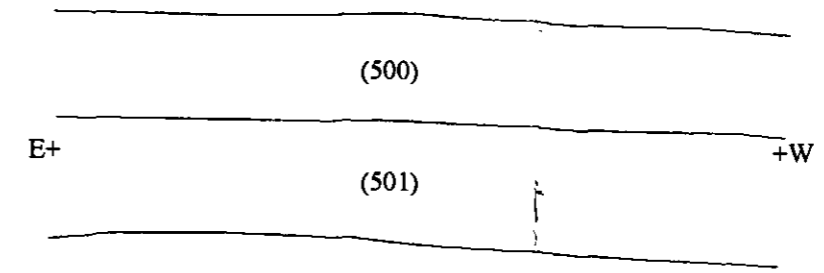
Possible pit [602], Trench 6 (scale 1:20)



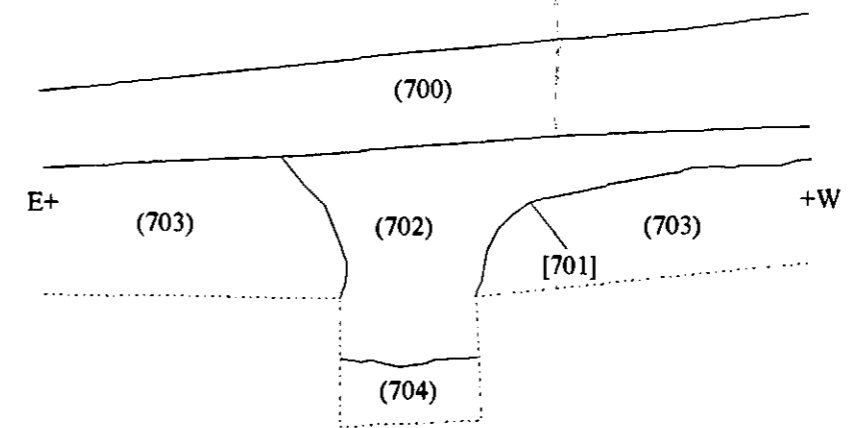
Trench 8 sample section (scale 1:20)



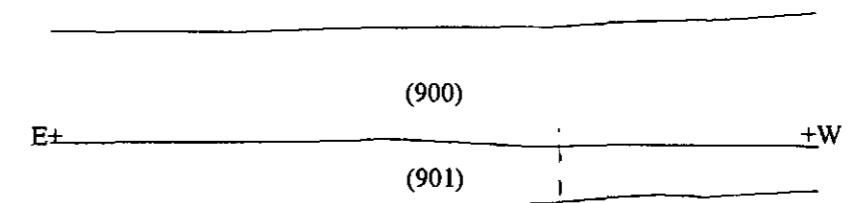
Trench 10 sample section (scale 1:20)



Trench 5 sample section (scale 1:20)



Natural feature [701], Trench 7 (scale 1:20)



Trench 9 sample section (scale 1:20)

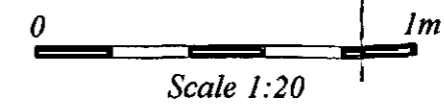


Fig. 8: Trenches 4-10 sections (Scales 1:20)

Appendix 1: Colour plates.



Plate 1: Slot through deposit 106 exposing possible ridge and furrow. Trench 1, looking east



Plate 2: Section through enclosure ditch. Trench 1, looking north west.



Plate 3: Pre-excavation shot of Trench 2, looking south east.



Plate 4: Cobbled surface (306) exposed within enclosure ditch [317]. Trench 3, looking south east.



Plate 5: Section through enclosure ditch. Trench 1, looking north west.



Plate 6: Possible hearth [319] and rake out pit [320]. Trench 3, looking south.



Plate 7: Pre-excavation shot of trench 9, looking west.



Plate 8: Pre-excavation shot of trench 10, looking west.

Appendix 2

REPORT 152 ON POTTERY FROM AN EVALUATION AT RAYMOTH LANE, WORKSOP, NOTTINGHAMSHIRE, RLW03

for PRE-CONSTRUCT ARCHAEOLOGY

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

2 December 2003

The pottery amounted to 742 sherds, weighing 10.528kg from fifteen deposits. The pottery is in average condition, although some fairly fragmented and abraded sherds occurred, particularly from Trench 1. The average sherd weight overall is 14.2g sherd. 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 Appendix 1, and available on disk) will be curated for future study. The archive codes are in Appendix 2. Vessels for which illustration would be desirable have been separated and assigned drawing numbers (Appendix 3), some referred to in the following discussion.

INTRODUCTION

Apart from 82 sherds (1.623kg) from Trench 1, the main group of pottery came from Trench 3. Details of the pottery quantities and dating are in Table 1.

Table 1 Quantities and dating by context

Tr	Cut	Deposit	Cxt	Sherds	Weight	Date	Comments
1	-	Ground raising?	106	10	64	POSTRO	Very abraded
1	101	Encl.ditch secondary	103	58	1102	ML3	Mixed;abraded
1	101	Encl.ditch ?primary	104	5	107	ML2	
1	114	Probable Encl.ditch	115	9	350	L2-?3	
3	-	Topsoil	300	1	1	POSTRO	
3	316	Encl.ditch recut	305	26	192	2C	More fragmented;some abraded; Link >321
3	316	Encl.ditch cobbles	306	9	162	2C	
3	316	Encl.ditch slumping	311	6	25	2C?	Link > 302; fragmented
3	317	Encl.ditch primary	310	7	45	2C?	Most SHCM;same 302;303;312;321
3	317	Encl.ditch slumping	312	5	25	2C?	Link > 302;303;310;321; fragmented
3	318	Encl.ditch cattle burial	303	64	855	M2	Links >302;310;312;321
3	319	Hearth fill	321	35	1315	M2?	Link >302;303;305;310;312
3	320	Rake out pit	304	15	149	2C	
3	322	Encl.ditch recut final	301	102	1364	2C	Links > 302
3	322	Encl.ditch recut primary	302	390	4772	2C	Links > 301;303;310;311;312;321
				742	10528		

All sherd links, both joins and sherds from the same vessel, were observed between the various deposits in the enclosure ditch, as: 301 and 302; 302 and 303, 311; and between 305 and hearth fill 321. There were also sherds from the same oxidized bowl scattered through contexts 302, 303, 320, 312 and 321.

OVERVIEW OF FABRICS AND VESSEL FORMS

The fabrics are detailed on Table 2 below.

Table 2 Fabrics

Fabric	Code	Sherds	%	Weight	%
Grey quartz-gritted	GREY	627	84.50	9101	86.45
Grey fairly fine	GRFF	23	3.10	373	3.54
Grog-tempered	GROG	5	0.67	186	1.77
Mortaria not sourced	MORT	1	0.13	10	0.09
Nene Valley colour-coated ware	NVCC	2	0.27	7	0.07
Oxidized quartz-gritted	OX	18	2.43	72	0.68
Oxidized light	OXL	1	0.13	3	0.03
Samian Central Gaul	SAMCG	8	1.08	72	0.68
Shell-gritted common medium shell	SHCM	9	1.21	111	1.05
Vesicular	VESIC	34	4.58	303	2.88
Shell-gritted	SHEL	1	0.13	4	0.04
Shell-gritted dales ware?	DWSH?	6	0.81	117	1.11
Tile building material	TILE	2	0.27	148	1.41
Post-Roman	PRO	5	0.67	21	0.2
Total		742	99.04	10528	98.39

The shell-gritted (SHCM) body sherds are likely to be amongst the earliest sherds, five sherds from a single vessel coming from the primary fill of the ditch in Trench 3 (cxt 310), and four sherds from the secondary fill of the ditch in Trench 1, some showing internal burning, often seen on Iron Age cooking vessels. The only other sherd in the primary fill of context 310 is a fragment from an oxidized (OX) bowl (Dwg 15), other sherds of which are scattered throughout the ditch fills in Trench 3. Unfortunately these are very fragmentary and abraded, and it is difficult to be certain of the bowl type, although the fragments suggest it might have been a carinated bowl, with cordon or cordons on the upper wall. This type derives from a late La Tene type and continues into the early Roman period, and the oxidized fabric is of Roman rather than earlier date. The shell-gritted body sherds are not closely datable.

Also probably of early date, possibly Iron Age, are the vesicular sherds (VESIC), represented by rims from two vessels with a lid-seating from the successive layers of the recut of the ditch (cut 322; cxts 301 and 302), and single body sherds from the cattle burial 318 (cxt 303) and the recut 316 (cxt 305), and two very abraded body sherds from 101, the secondary fill of the ditch in Trench 1. The sherds are dark grey with occasional oxidized exterior, and in poor condition, but it is clear that the lost tempering is shell. The fragmentary rims appear similar to vessels from the site at Holme Pierrepont, Nottinghamshire, particularly a lid-seated jar (Elsdon 1993, B.2a, no 78) from Site 3, illustrated with a late native type bowl, both wheel-made. Site 3 was primarily a Roman site, so that the dating may be very late Iron Age or early Roman. There is another lid-seated vessel from enclosure 4a at Holme Pierrepont of late Iron Age date (*ibid.*, no 59). Although

lid-seated jars are extremely common in the East Midlands and into South Yorkshire, perhaps derived from earlier Iron Age types, no clear parallels have been traced for these particular rims from Worksop amongst the Roman pottery.

The joining sherd evidence indicates the major effect of the recutting of the ditch, and it is clear that the bulk of the pottery, and the freshest sherds, came from these later deposits. The sherds from cuts 316-317 are notably more fragmented. Such recutting would certainly have disturbed any earlier sherds, and these few remnants could therefore be either the sole, and slight, evidence for a possible late Iron Age date for the enclosure, or they may be simply residual in the ditch.

The rest of the pottery from Trench 3 all appears to date to the 2nd century. This includes five sherds of Central Gaulish samian, one of which is from a decorated bowl and can be more closely dated once the potter is identified (from hearth 319). The other sherds are fragmentary and abraded, including three very abraded sherds from the probable ditch in Trench 1 (cut 114). A fragment of the bottom of a hook or flange from a mortarium (from cattle burial 318), in a cream fabric has been burnt, making definite identification of the source impossible, although the micaceous nature could indicate a mortarium from one of the 2nd century Lincolnshire kilns. The only fine wares are two body sherds from Nene Valley colour-coated beakers, one decorated with contrasting white barbotine, the other with a rouletted zone, both in light red-brown fabrics, both fabric and decoration typical of the later 3rd century. Both came from the secondary fill of the ditch in Trench 1 (cxt 103), which contained pottery of mixed dates with many abraded sherds.

From the same context, and of similar later Roman date, are body sherds probably from a dales ware shell-gritted jar; another less certainly identified body sherd also came from the probable ditch in Trench 1 (cxt 115). Over 88% of the pottery comprises grey wares, many of which can be paralleled by pottery from Doncaster (Buckland & Magilton 1986), the various kilns adjacent to Doncaster at Cantley (Cregeen 1957; Annable 1960), Blaxton (Buckland & Dolby 1980) and Rossington Bridge (Buckland et al 2001). There are also parallels for a number of vessels in the kiln products from the Torksey kilns (Oswald 1937) and Lea (Field & Palmer-Brown 1991), both located in the Trent valley. These kilns, adjacent to Doncaster and to the south by the Trent, all start in the 2nd century, and have many forms in common, making it difficult to determine the source of vessels found at Worksop; such questions are best approached when more evidence relating to the nature and dating of the occupation is available.

There are, however, some very interesting and unusual vessels from this evaluation, including some jars characteristic of products of the Trent valley kilns, but also appearing at the kilns at Cantley and Blaxton. These are distinctive lid-seated jars with rilled surfaces and cordons, known to be made at Torksey (Oswald 1937, 30, pl V, 116-7, 120-1, 124), Lea (Field & Palmer-Brown 1991, fig 16, 35-38), Cantley (Annable 1960, 41, fig 9, 69-75, type 4a, from kiln 2), and Blaxton (Buckland & Dolby 1980, nos 123-127). The examples at Worksop appear in different fabrics, grog-tempered (GROG, dwg 5) and a vesicular grey (dwg 6), the grog-tempered example being rilled. There is also a further lid-seated jar in a standard grey fabric, of a different type but still showing the classic cordon (dwg 4). All these jars came from the recut 322. These jars may be amongst the earliest of the Roman vessels, pre-dating the main development of lid-seated jars in these industries.

Another early type is the carinated bowl or jar of Lincoln type B334 (dwg 20; as Petch 1962, fig 5, 8-10), a form made by many of the Lincolnshire kilns of 2nd century date. There is also a hemispherical bowl decorated with ring-stamps (dwg 23). While the carinated bowl B334 derives

from a late La Tene type and occurs earlier, its main incidence in this area is in the mid to late 2nd century, and the stamped bowl has a similar date. An unusual jar with an inturned rim came from the probable enclosure ditch in Trench 1 (115), and may be similar to one published from Doncaster (although mis-drawn, Buckland & Magilton 1986, fig 39, no 198). Otherwise many of the bowls are types known from the Doncaster area kilns, but including important new types.

The vessel forms from these deposits in the ditch can be evaluated by examination of the commonest fabrics, grey quartz- and grog-tempered wares, over 650 sherds, and is summarised in Table 3. This excludes the untyped body sherds (431 sherds).

Table 3 Vessel forms in grey and grog-tempered wares

	Sherds	%	Weight	%
Bowl	62	27.7	1848	31.5
Bowl or dish	13	5.8	186	3.2
Dish	28	12.5	991	16.9
Open forms		46.0		51.5
Closed	8	3.6	92	1.6
Jar	91	40.6	1663	28.3
Jar or bowl	21	9.4	789	13.4
Jar large	1	0.4	303	5.2
Closed forms		54.0		48.5
	224		5872	

The relatively large percentage of open forms, bowls and dishes, appears to be consistent with the ratios between open and closed forms encountered on the kiln sites, based on the information from Rossington Bridge (Buckland et al, 2001, 35, table 3), where bowls and dishes accounted for nearly 50% of the production. A particular feature of the South Yorkshire kilns in the Doncaster area is the high proportion of wide-mouthed bowls, and this appears in this assemblage, several of them being unusual and rare types. Two grooved rim dishes (dwgs 28-9) came from the hearth 319 (cxt 321), datable to the mid 2nd century, perhaps contemporary with the use of the hearth. This type with sagging base was made at the Rossington Bridge kilns (Buckland et al 2001, fig 40, 38-48), and from the earlier kilns at Cantley (Annable 1960, 37, type 1, fig 8, 1-19).

The dating of such pottery is tied to the evidence from the various Doncaster kiln fields, and there seems little doubt that pottery production there started *c.* AD 135 when some mortarium potters moved from the large Mancetter/Hartshill kilns in Warwickshire to exploit the markets trading to the Roman army on the northern frontier (Buckland et al 1980, 146). These were joined by potters from Dorset making black-burnished kitchen wares. Where parallels for the vessels from Worksop have been traced, it is to the earlier 2nd century products of these kilns. The only sherds which date to the 3rd century came from Trench 1, specifically the Nene Valley colour-coated beakers and probable dales ware jars, from the ditch, context 103, an abraded group of mixed dates, and context 115.

Since nearly all this pottery came from the single enclosure ditch, its range is unlikely to be representative of whatever settlement produced it. As a 2nd century group, the paucity of samian is notable, as is the almost complete absence of mortaria. There is also little in terms of fine wares, and no amphora sherds. Otherwise, the analysis of the forms of the main grey wares is generally

unexceptional, given the higher proportions of bowls in use in this area at this period, unlike further east in Lincolnshire.

CONCLUSIONS AND RECOMMENDATIONS

As a group from a single enclosure ditch, this is a very interesting group, the main dating centring on the 2nd century, with some evidence for activity in the area in the 3rd century coming from the upper fills of the ditch in Trench 1. There is also some evidence to suggest Iron Age activity in the area, perhaps in terms of the construction of the enclosure, although the recutting of the ditch may have removed crucial evidence, and these sherds may be residual. Any Iron Age date would lie in the latest pre-Roman Iron Age, although this is based solely on the sherds in the ditch, which could be substantially later than the original digging.

The plan of the enclosure suggests an Iron Age origin, and there is therefore a problem if context 104 is considered to be a primary fill of ditch in Trench 1. The section of the enclosure ditch in this trench 1 shows context 104 has being the main fill of the ditch. However, the section shows a profile suggesting that there was a recut, as found in Trench 3. This is particularly important to the possibility of an Iron Age date for the enclosure since, if it is the primary fill rather than the fill of a recut, then the 2nd century date from the pottery is implicit, based on vessels with secure parallels to bowls produced at the Cantley kilns.

34 vessels have been selected as necessary for illustration of this group of pottery. Since further excavation is envisaged on this site, these should be reserved to be available for illustration, if needed, when the material from future work is prepared for publication. Equally the decorated samian probably has sufficient evidence for the potter to be identified and dated by a specialist. The assemblage is very important due to the paucity of evidence for Roman activity in this area, and the probable varied sources of the pottery. Romanization of this area started with the 1st century forts and the Roman army continued to have strong influence into the 2nd century and later. Worksop is surrounded by Roman military sites, Doncaster, Bawtry, Littleborough, Chesterfield, and Templeborough, some of which were in use in the 2nd century. In view of the 2nd century dating, the identification of the type of occupation on this site is potentially of great interest.

FABRIC DEFINITION

Publication of *The National Roman Fabric Reference Collection*, abbreviated NRFRC (Tomber and Dore 1998), obviate the need to describe the major imported and widely traded Romano-British wares in detail.

- DWSH Shell-gritted dales ware jars, hand-made and wheel-finished from sources in north Lincolnshire around the Humber area. **NRFRC: DAL SH**
- GREY Grey, undifferentiated quartz-gritted grey fabrics, hard wares with sparse to common quartz inclusions.
- GRFF Grey, fairly fine fabric. This code covers fabrics intermediate between the common grey wares with sparse to common quartz and the very fine fabrics used for Parisian and 'London' wares, which are fired from silty clays with very few minute inclusions. Usually used for finer vessels for the table, particularly beakers but here as bowls, at least two typical of Cantley and Rossington Bridge types.

GROG	Grog-tempered. Miscellaneous grog-tempered fabrics, here a lid-seated rilled jar (dwg 5) with split rim, and a heavy bowl with triangular rim.
MORT	Mortaria, unknown source. Fragment of hook or flange only in cream burnt fabric, fairly micaceous.
NVCC	Nene Valley colour-coat NRFC: LNVCC
OX	Oxidized, miscellaneous oxidized wares. This coding comprises all miscellaneous oxidized sherds, usually in varying red-brown shades and degrees of grittiness, Only a single bowl, dwg 15, fragments scattered throughout the fill of the ditch.
OXL	Oxidized lighter red-brown. Fabrics in light cream-brown shades, usually relatively fine-textured, often used for flagons, but here as a single beaker, dwg 24.
PRO	Post-Roman sherds
SAMCG	Samian Central Gaul, from Lezoux. NRFC : LEZ SA
SHCM	Shell-gritted, common medium shell inclusions. Body sherds only, dark grey fabric with light brown exterior, hand-made, some evidence for internal burning.
SHEL	Shell, miscellaneous. A single tiny rim fragment from a jar with an everted rim, wheel-made, comparatively thin-walled, grey fabric with light red-brown interior surface, fairly common fine shell inclusions, from cxt 104, enclosure ditch Trench 1.
TILE	Tile fragments, usually building material.
VESIC	Vesicular, vesicular sherds, due to loss of shell-gritting. At least two hand-made lid-seated jars, dwg 16, dark grey fabric, some sherds with light brown exterior surfaces.

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**APPENDIX 1
ARCHIVE DATABASE**

Cxt	Fabric	Form	Manuf+	Ves	D?	Dno	Details	Lnk	Sherds	Weight
103	DWSH?	J	HM	-	-	-	BSS;ALMOST DEFINITE JDW;NR RIM & LWR TYPICAL HM	-	5	108
103	GREY	-	-	-	-	-	BSS;MIXED;ABR-VABR	-	30	328
103	GREY	B	-	-	D	31	RIM/PT WALL;UNUS;GROOVED;DIAM25;CF D11	-	1	59
103	GREY	BD	-	-	-	-	BASE FRAG W CHAMFER	-	1	26
103	GREY	BWM	-	1	D	32	RIM/SHLDR;DKGRY;THK/HEAVY;DIAM36	-	3	175
103	GREY	JB	-	-	-	-	RIM FRAG;VABR	-	1	16
103	GREY	JB?	-	3	-	-	BASE FRAGS;ABR;CHIPPED	-	3	67
103	GREY	JUR	-	-	-	-	RIM FRAG	-	1	20
103	GRFF	B	-	1	D?	-	RIMS;FINE F.MICAC.FAB;ABR&CHIPPED;CF D'CAST 346	-	3	62
103	NVCC	BKBARB	BACC;ROUL	-	-	-	BS GRY/LTRB FAB;DKBN CC;CREAM BARB;ROUL	-	1	3
103	NVCC	BKROU	ROUZ	-	-	-	BS LTRB FAB;ABR	-	1	4
103	SHCM	-	HM?	-	-	-	BSS;LTBN EXT;VISIBLE SHELL;BURNT INTERIORS	-	4	71
103	TILE	-	-	-	-	-	FRAG;BURNT & DAMAGED	-	1	26
103	TILE	-	-	-	-	-	FRAG;ONE EDGE 23MM-28MM;FLAT;BURNT TOP SURF	-	1	122
103	VESIC	-	HM?	-	-	-	BSS;VABR;PART LTRB	-	2	15
103	ZDATE	-	-	-	-	-	ML3	-	-	-
103	ZZZ	-	-	-	-	-	MIXED;ABRADED	-	-	-
104	GREY	-	-	-	-	-	BSS	-	2	16
104	GREY	BNAT	-	-	D?	-	RIM/PT WALL;INT MOULD;GROOVE EXT RIM & BELOW;DIAM30	-	1	56
104	GRFF	BNNK	-	-	D?	-	RIM/PT WALL;SIMILAR CANT60/150;DIAM26;FFINE FB;F.MICAC	-	1	31
104	SHEL	JEV	-	-	-	-	RIM FR;THIN WALL;5MM;WM GRY/BN FB/EXT;LTRB INT;FINE SHELL	-	1	4
104	ZDATE	-	-	-	-	-	ML2	-	-	-
106	GREY	-	-	-	-	-	BSS;VABR	-	4	34
106	GREY	DFL?	-	-	-	-	RIM FRAG	-	1	5
106	GREY	JCUR	-	-	-	-	RIM FRAG	-	1	5
106	PRO	-	-	-	-	-	GLAZED RIM;BS;RB BS	-	4	20
106	ZDATE	-	-	-	-	-	POSTRO	-	-	-
106	ZZZ	-	-	-	-	-	VABR	-	-	-
115	DWSH?	J	HM	-	-	-	BS DKGRY FB;SPARSE FINE SHELL;LTBN EXT;SABR	-	1	9
115	GREY	J	-	-	-	-	BS NECK/SHLDR HARD HARSH GRITTY FB;RB CORE;GRY SURFS	-	1	27
115	GREY	JIR	-	1	D	34	RIM/PT WALL;NONJ BSS;DIAM18?;CF DONC198;L4GRP	-	3	52
115	GRFF	BNNK	-	-	D	33	RIM/PT WALL;SL.PIMPLY FB;CANT60;130-2;ROSB/293-9;DIAM40	-	1	229
115	SAMCG	31 OR 31R?	-	1	-	-	BSS;VABR;THICK 8-10MM	-	3	33
115	ZDATE	-	-	-	-	-	L2-?3	-	-	-
300	PRO	-	-	-	-	-	GLAZED RB FAB CHIP	-	1	1
300	ZDATE	-	-	-	-	-	POSTRO	-	-	-
301	GREY	-	-	2	-	-	BASES;PLAIN	-	2	56

301	GREY	-	-	-	-	BSS;MANY THIN WALL;CRISP;OCC ABR	-	58	446
301	GREY	B	-	-	-	RIM SIMPLE FLANGED OVER;PT WALL	-	1	35
301	GREY	BDFL	-	-	-	RIM FR ONLY	-	1	14
301	GREY	BDFL	-	2	-	RIM FR ONLY	-	2	9
301	GREY	BEV	-	1	D 03	RIM/PT WALL;DIAM22;WIDE GROOVES;HARSH GRITTY FB;SIMIL D27	-	2	61
301	GREY	BNAT	-	-	D 01	RIM INT MOULDING;PT CURVING WALL;DIAM26;HARSH GRITTY FB	-	1	60
301	GREY	CLSD	-	-	-	BASE FTM;DKGRY;DIAM8	-	1	14
301	GREY	CLSD	-	-	-	BASE FTM;DKGRY;LGER VESS	-	1	42
301	GREY	CP	-	-	-	RIM FR ONLY;BURNT;SIMPLE CURVE	-	1	15
301	GREY	CP	-	2	-	RIM FR;CURVED	-	2	9
301	GREY	CP?	LA	-	-	BSS;THIN WALLS;ONE SL.DISTORTED	-	9	73
301	GREY	DFL	-	1	D 02	COMP PROF;DIAM20	-	4	108
301	GREY	J?	-	-	-	BASE;PLAIN	-	1	57
301	GREY	J?	-	-	-	BASE;STRING;DKGRY	-	1	88
301	GREY	JB	-	1	-	BASE;PLAIN;DIAM12?	-	2	105
301	GREY	JBK?	-	-	-	BASE;DIAM8	-	1	25
301	GREY	JLS	-	-	D 04	RIM/PT WALL;GROOVED EXT RIM;TV TYPE?;DIAM16;CORDON BELOW RIM	-	1	29
301	VESIC	-	HM	-	-	BSS;POOR COND;ABR;ONE W LTRB EXT	302	9	83
301	VESIC	JLS	HM?	-	D?	RIM FR ONLY;BURNT;DIAM16?;GRY FAB;DKER SURFS	302	1	15
301	VESIC	JLS	HM?	-	D?	RIM FR.NECK;GRY FB;DKER ?BURNT SURFS	-	1	20
301	ZDATE	-	-	-	-	2C	-	-	-
302	GREY	-	-	-	-	BSS W FEATURES;NR RIMS ETC	-	31	328
302	GREY	-	-	1	-	BASE FTM;JAR OR BOWL?;LTGRY	-	3	40
302	GREY	-	-	-	-	BSS	-	100	1056
302	GREY	-	-	-	-	BSS	-	111	865
302	GREY	-	-	-	-	BS;SL.VESIC;LTGRY;?D6	-	1	14
302	GREY	-	-	-	-	BSS;DKGRY EXT;SOME COARSER MISC FAB	-	18	162
302	GREY	-	-	-	-	CHIPS;UNMARKED	-	15	29
302	GREY	B	-	-	-	RIM/WALL;SIMILAR D11;TRIANG.RIM	-	1	19
302	GREY	BCUR	-	1	D 07	RIM/PT WALL;LTGRY SURF;LTRB CORE;DIAM16	-	3	63
302	GREY	BD	-	-	-	BASE W CHAMFER;THIN WALL;LTGRY	-	1	23
302	GREY	BDFL	-	1	D?	RIM FR;LTGRY;DIAM22	-	3	44
302	GREY	BDFL	-	-	D?	RIM/PT WALL;LTGRY;DIAM20	-	1	23
302	GREY	BDFL	-	-	-	RIM/PT WALL FRAG	-	1	13
302	GREY	BDFL	-	-	D?	RIM/PT WALL;THIN WALL;HEAVY RIM;DIAM27?	-	1	20
302	GREY	BDFL	-	2	-	RIM FRAGS ONLY;LTGRY	-	2	14
302	GREY	BEV	-	1	D 09	RIMS/PT WALL;RB FAB;DKGRY;ABR EXT;DIAM20	-	2	74
302	GREY	BNAT	-	-	D?	RIM/PT WALL;DIAM28;INT RIM MOULDING	-	1	69
302	GREY	BRR	-	1	D 14	RIM/PT WALL;SHALLOW GROOVE EXT RIM;DIAM30	-	2	128
302	GREY	BUR	-	1	D 11	RIM/WALL;SQUASHED OVER RIM;DIAM22;CF D31	-	3	85
302	GREY	CP	-	1	D 08	RIMS/PT WALL;NO TRACE LA;DIAM11	-	3	60
302	GREY	DFL	-	1	D 12	RIM/WALL;LT-M GRY;UNDEC;DIAM20	-	4	139

302	GREY	DFL?	-	1	D	13	RIM/WALL;LTGRY;DKER FB;DIAM22	-	2	60
302	GREY	DGR	-	1	D	17	RIM/WALL FRAGS;LTGRY;JOINS	303	2	22
302	GREY	DGR	-	-	D	17	RIM/WALL FRAG;LTGRY;PROB SAME;AS	303	1	13
302	GREY	J	-	6	-	-	RIM FRAGS	-	6	26
302	GREY	J	-	-	-	-	BASE PLAIN;LTGRY;SL.VESIC;CF D6	-	1	54
302	GREY	J	-	1	-	-	BASE PLAIN	-	2	51
302	GREY	J?	-	2	-	-	BASE PLAIN	-	2	83
302	GREY	J?	-	1	-	-	BSS;DKGRY;HORIZ WIPING/FINE RILLING;COARSISH	-	2	38
302	GREY	JB	-	-	-	-	RIM FRAG;GROOVED EXT RIM	-	1	8
302	GREY	JB	-	-	-	-	BASE PLAIN;THICK	-	1	121
302	GREY	JB	-	3	-	-	BASES;PLAIN	-	3	250
302	GREY	JBEV	-	-	-	-	RIM FRAG	-	1	14
302	GREY	JBK	-	-	-	-	BASE PLAIN;SMALL	-	1	4
302	GREY	JCUR	-	-	D?	-	RIM/PTWALL;GRY FB/TNT;DKER EXT;DIAM14	-	1	43
302	GREY	JCUR	-	-	D?	-	RIM/PTWALL;LTGRY F/S;DIAM14	-	1	17
302	GREY	JCUR	-	-	D?	-	RIM/PTWALL;GRY;DKER EXT;BURNT;DIAM12	-	1	14
302	GREY	JCUR	-	8	-	-	RIM FRAGS	-	9	83
302	GREY	JEV	-	1	D	10	RIM/PTWALL;GRY;LTBN INT;DKGRY EXT;DIAM14;BURNT EXT	-	4	113
302	GREY	JSPR	-	1	D	06	RIM/PT WALL;LTGRY FB/S;SL.VESIC;DIAM18;SAME	311	3	59
302	GREY	JSPR	-	-	-	-	RIM FRAG ONLY;LTGRY	-	1	9
302	GRFF	CLSD	-	1	-	-	BSS;LTGRY;FAIRLY FINE;SOME MICA	-	6	36
302	GROG	BTR	-	-	D?	-	RIM FR;HEAVY;LTGRY;THIN WALL;VABR	-	1	19
302	GROG	JB?	-	1	-	-	BASE PLAIN;LTGRY GROG	-	2	108
302	GROG	JSPR	RIL	1	D	05	RIM/PT WALL;GRY FB;DKGRY EXT ?BURNT;DIAM14;RILLED BELOW CORDON	-	2	59
302	OX	B?	-	1	D	15	RIM FR;NONJ BSS & FTRG FRS;LTRB;DIAM18?;BASE DIAM6;SAME	303;310;312;321	7	39
302	SAMCG?	33	-	-	-	-	RIM FR;SABR	-	1	6
302	VESIC	-	HM	-	-	-	BSS;SOME DEF SHELL-GRIT;DKGRY;1 W LTRB EXT;AS IN	301	16	115
302	VESIC	JLS	HM	1	D	16	RIM FRS;DKGRY/BLK;VESIC ?SHELL;AS IN	301	3	40
302	ZDATE	-	-	-	-	-	2C	-	-	-
303	GREY	-	-	-	-	-	BASE FTM;DKGRY EXT	-	1	13
303	GREY	-	-	-	-	-	BSS	-	9	52
303	GREY	-	-	-	-	-	BSS;COARSER;DKGRY;LTBN EXT & BS DKGRY EXT	-	2	18
303	GREY	B?	-	1	-	-	BASE PLAIN;F.THK WALL;?SMOOTH INT	-	6	80
303	GREY	B334	-	1	D	20	RIM;BODY>CARINATION;DKGRY ON GRYSORE RB FB;DIAM14	-	10	94
303	GREY	BCAR	BWL	1	D	19	RIM;BODY;CARINATED;BWL LWR WALL;DIAM17;FFINE FB	-	11	193
303	GREY	BWM	-	-	D	22	RIM FRAG/BODY;LTGRY ON RB FB;DIAM?	-	1	40
303	GREY	DGR	-	1	D	17	RIM>CHAMFER;LTGRY;UNDEC;DIAM18;JOINS	302	2	58
303	GREY	J	-	1	-	-	BSS J;LGE SHS;50% BODY?	-	6	147
303	GREY	JB	-	1	D	21	RIM;PT BODY;DIAM23;LTGRY ON RB FB	-	5	67
303	GREY	JCUR	-	1	D	18	RIM/PT WALL;LTGRY;DIAM16;FFINE FB	-	2	51
303	MORT	M	-	-	-	-	BOTTOM FLANGE/HOOK;CR FB;F.MICAC	-	1	10
303	OX	B?	-	1	D	15	RIM FRAGS;BSS;LTRB;DIAM18?;SAME	302;310;312;321	7	24

303	VESIC	-	HM	-	-	-	BS DKGRY;LTBN EXT;SHELL-GRITTED	-	1	8
303	ZDATE	-	-	-	-	-	M2	-	-	-
304	GREY	-	-	-	-	-	BSS	-	10	73
304	GREY	J	-	-	-	-	BASE PLAIN	-	1	37
304	GREY	JCUR	-	-	D?	-	RIM/SHLDR;DIAM14	-	1	19
304	GREY	JCUR	-	-	-	-	RIM FRAG ONLY	-	1	6
304	GREY	JEV?	-	-	-	-	RIM FRAG ONLY	-	1	8
304	SAMCG	36	-	-	-	-	BS NEAR RIM	-	1	6
304	ZDATE	-	-	-	-	-	2C	-	-	-
305	GREY	-	-	-	-	-	BSS	-	16	102
305	GREY	-	-	-	-	-	BS COARSER;DKGRY INT	-	1	4
305	GREY	BHEM	STRO	-	D	23	RIM/PT WALL;DIAM17-18;SAME IN	321	1	13
305	GREY	J	-	4	-	-	RIM FRAGS ONLY;CURVED;BURNT	-	4	23
305	GREY	J	-	-	-	-	BASE PLAIN	-	1	10
305	GREY	JB	-	2	-	-	BASES;PLAIN	-	2	33
305	VESIC	-	HM?	-	-	-	BS RB FAB;DKGRY SURFS;DEF SHELL INCLS	-	1	7
305	ZDATE	-	-	-	-	-	2C	-	-	-
305	ZZZ	-	-	-	-	-	MORE FRAGMENTED;SOME ABR	-	-	-
306	GREY	-	-	-	-	-	BSS	-	3	41
306	GREY	B	-	1	D	26	RIM/PT WALL;DIAM30;THICK UNUS	-	2	86
306	GREY	DFL	-	-	D	25	RIM/WALL;DIAM17	-	1	26
306	GREY	JCUR	-	-	-	-	RIM FR ONLY	-	1	5
306	OXL	BK	-	-	D	24	RIM/PT WALL;DIAM8	-	1	3
306	SAMCG	-	-	-	-	-	FLAKE ONLY	-	1	1
306	ZDATE	-	-	-	-	-	2C	-	-	-
310	OX	B	-	-	D	15	BSS;SAME	302;303;312;321	2	5
310	SHCM	-	HM	1	-	-	BSS DKGRY FB;LTBN EXT;VISIBLE SHELL	-	5	40
310	ZDATE	-	-	-	-	-	2C?	-	-	-
310	ZZZ	-	-	-	-	-	MOST SHCM;SAME 302;303	-	-	-
311	GREY	-	-	-	-	-	BSS	-	3	8
311	GREY	JCUR	-	2	-	-	RIM FRAGS ONLY	-	2	9
311	GREY	JSPR	-	-	D	06	BS VESIC FAB FROM DWG6	302	1	8
311	ZDATE	-	-	-	-	-	2C?	-	-	-
312	GREY	-	-	-	-	-	BASE FRAG	-	1	11
312	GREY	-	-	-	-	-	BSS	-	2	6
312	GREY	JCUR	-	-	-	-	RIM FRAG	-	1	6
312	OX	B	-	-	D	15	BS ABR AS DWG15	302;303;310;321	1	2
312	ZDATE	-	-	-	-	-	2C?	-	-	-
321	GREY	-	-	-	-	-	BSS	-	8	86
321	GREY	B	-	-	D	27	RIM/PT WALL;UNUS;DIAM34?;HARSH GRITTY FB;SIMIL D3	-	1	74
321	GREY	B	-	1	-	-	BSS WALL BOWL;POSSIBLY FLANGED W GROOVE/BEAD?	-	2	34
321	GREY	BHEM	STRO	-	D	23	RIM/PT WALL;SINGLE RING-STMP;SAME	305	1	9

321	GREY	DGR	-	1	D	28	RIM & BASE;NON-J;GRY W RB CORTEX;DKGRY SURFS;CROSS BURNISH;DIAM21	-	2	252
321	GREY	DGRV	-	1	D	29	COMP PROF;RIMS;GRY;BN CORT;DKGRY SURFS;DIAM20	-	9	308
321	GREY	J	LA	-	-	-	BS	-	1	9
321	GREY	J	-	-	-	-	BASE PLAIN	-	1	85
321	GREY	J	-	-	-	-	BASE PLAIN;BURNT;GRY CORE RB FAB;GRY SURFS	-	1	51
321	GREY	JCUR	-	1	D	30	RIM/PT WALL;DIAM12;THIN WALL;BURNT EXT	-	5	76
321	GREY	JL	-	-	-	-	WALL;BASE PLAIN;LGE;L'SCALE INT GIRTH AREA	-	1	303
321	OX	B	-	-	D	15	BS ABR;SAME	302;303;310;312	1	2
321	SAMCG	-	-	-	-	-	BS FLAKED	-	1	5
321	SAMCG	37	-	-	D?	-	BS OVOLO;PANTHER;BEADROW;CIRCLE	-	1	21
321	ZDATE	-	-	-	-	-	M2?	-	-	-

APPENDIX 2 ARCHIVE CODES

FORMS

Code	Expansion
31 or 31R	Samian dish or bowl 31 or 31R
33	Samian cup form 33
36	Samian dish form 36
37	Samian decorated bowl form 37
B	Bowl
B334	Bowl/beaker carinated as Lincoln type Petch 1962, fig 5, 8-10.
BCAR	Bowl carinated
BCUR	Bowl curved rim
BD	Bowl or dish
BDFL	Bowl or dish flanged
BEV	Bowl everted rim
BHEM	Bowl hemispherical
BK	Beaker
BKBARB	Beaker with barbotine
BKROU	Beaker rouletted
BNAT	Bowl native LIA type
BNNK	Bowl neckless as Cantley types
BRR	Bowl round rim
BTR	Bowl triangular rim
BUR	Bowl undercut rim
BWM	Bowl wide-mouth

CLSD	Closed form
CP	Cooking pot
DFL	Dish flanged
DGR	Dish grooved rim
DGRV	Dish grooved rim variant
J	Jar
JB	Jar or bowl
JBEV	Jar or bowl everted rim
JBK	Jar small or beaker
JCUR	Jar curved rim
JEV	Jar everted rim
JIR	Jar inturned rim
JL	Jar large
JLS	Jar lid-seated rim
JSPR	Jar split-rim
JUR	Jar undercut rim
M	Mortarium

DECORATION ETC

Code	Expansion
BACC	Barbotine contrasting colour
BWL	Burnished wavy line
HM	Hand-made
LA	Latticed
ROUL	Rouletted line
ROUZ	Rouletted zone
STRO	stamped round

**APPENDIX 3
VESSELS FOR ILLUSTRATION**

Cxt	Fabric	Form	Manuf+	Ves	D?	Dno	Details	Lnk
301	GREY	BNAT	-	-	D	1	RIM INT MOULDING;PT CURVING WALL;DIAM26;HARSH GRITTY FB	-
301	GREY	DFL	-	-	1 D	2	COMP PROF;DIAM20	-
301	GREY	BEV	-	-	1 D	3	RIM/PT WALL;DIAM22;WIDE GROOVES;HARSH GRITTY FB;SIMIL D27	-
301	GREY	JLS	-	-	D	4	RIM/PT WALL;GROOVED EXT RIM;TV TYPE?;DIAM16;CORDON BELOW RIM	-
302	GROG	JSPR	RIL	-	1 D	5	RIM/PT WALL;GRY FB;DKGRY EXT ?BURNT;DIAM14;RILLED BELOW CORDON	-
302	GREY	JSPR	-	-	1 D	6	RIM/PT WALL;LTGRY FB/S;SL.VESIC;DIAM18;SAME	311
311	GREY	JSPR	-	-	D	6	BS VESIC FAB FROM DWG6	302
302	GREY	BCUR	-	-	1 D	7	RIM/PT WALL;LTGRY SURF;LTRB CORE;DIAM16	-
302	GREY	CP	-	-	1 D	8	RIMS/PT WALL;NO TRACE LA;DIAM11	-
302	GREY	BEV	-	-	1 D	9	RIMS/PT WALL;RB FAB;DKGRY;ABR EXT;DIAM20	-
302	GREY	JEV	-	-	1 D	10	RIM/PTWALL;GRY;LTBN INT;DKGRY EXT;DIAM14;BURNT EXT	-
302	GREY	BUR	-	-	1 D	11	RIM/WALL;SQUASHED OVER RIM;DIAM22;CF D31	-
302	GREY	DFL	-	-	1 D	12	RIM/WALL;LT-M GRY;UNDEC;DIAM20	-
302	GREY	DFL?	-	-	1 D	13	RIM/WALL;LTGRY;DKER FB;DIAM22	-
302	GREY	BRR	-	-	1 D	14	RIM/PT WALL;SHALLOW GROOVE EXT RIM;DIAM30	-
310	OX	B	-	-	D	15	BSS;SAME	302;303;312;321
312	OX	B	-	-	D	15	BS ABR AS DWG15	302;303;310;321
321	OX	B	-	-	D	15	BS ABR;SAME	302;303;310;312
302	OX	B?	-	-	1 D	15	RIM FR;NONJ BSS & FTRG FRS;LTRB;DIAM18?;BASE DIAM6;SAME	303;310;312;321
303	OX	B?	-	-	1 D	15	RIM FRAGS;BSS;LTRB;DIAM18?;SAME	302;310;312;321
302	VESIC	JLS	HM	-	1 D	16	RIM FRS;DKGRY/BLK;VESIC ?SHELL;AS IN	301
302	GREY	DGR	-	-	1 D	17	RIM/WALL FRAGS;LTGRY;JOINS	303
302	GREY	DGR	-	-	D	17	RIM/WALL FRAG;LTGRY;PROB SAME;AS	303
303	GREY	DGR	-	-	1 D	17	RIM>CHAMFER;LTGRY;UNDEC;DIAM18;JOINS	302
303	GRFF	JCUR	-	-	1 D	18	RIM/PT WALL;LTGRY;DIAM16;FFINE FB	-
303	GRFF	BCAR	BWL	-	1 D	19	RIM;BODY;CARINATED;BWL LWR WALL;DIAM17;FFINE FB	-
303	GREY	B334	-	-	1 D	20	RIM;BODY>CARINATION;DKGRY ON GRYCORE RB FB;DIAM14	-
303	GREY	JB	-	-	1 D	21	RIM;PT BODY;DIAM23;LTGRY ON RB FB	-
303	GREY	BWM	-	-	D	22	RIM FRAG/BODY;LTGRY ON RB FB;DIAM?	-
305	GREY	BHEM	STRO	-	D	23	RIM/PT WALL;DIAM17-18;SAME IN	321
321	GREY	BHEM	STRO	-	D	23	RIM/PT WALL;SINGLE RING-STMP;SAME	305
306	OXL	BK	-	-	D	24	RIM/PT WALL;DIAM8	-
306	GREY	DFL	-	-	D	25	RIM/WALL;DIAM17	-

306	GREY	B	-	1	D	26 RIM/PT WALL;DIAM30;THICK UNUS	-
321	GREY	B	-	-	D	27 RIM/PT WALL;UNUS;DIAM34?;HARSH GRITTY FB;SIMIL D3	-
321	GREY	DGR	-	1	D	28 RIM & BASE;NON-J;GRY W RB CORTEX;DKGRY SURFS;CROSS BURNISH;DIAM21	-
321	GREY	DGRV	-	1	D	29 COMP PROF;RIMS;GRY;BN CORT;DKGRY SURFS;DIAM20	-
321	GREY	JCUR	-	1	D	30 RIM/PT WALL;DIAM12;THIN WALL;BURNT EXT	-
103	GREY	B	-	-	D	31 RIM/PT WALL;UNUS;GROOVED;DIAM25;CF D11	-
103	GREY	BWM	-	1	D	32 RIM/SHLDR;DKGRY;THK/HEAVY;DIAM36	-
115	GREY	BNNK	-	-	D	33 RIM/PT WALL;SL.PIMPLY FB;CANT60;130-2;ROSB/293-9;DIAM40	-
115	GREY	JIR	-	1	D	34 RIM/PT WALL;NONJ BSS;DIAM18?;CF DONC198;L4GRP	-

Appendix 3
Raymoth Lane Worksop (RLW03) Evaluation: Animal Bone
Richard Moore

Animal bone weighing just over 3.5kg in total was recovered from eleven contexts in Evaluation Trenches 1 and 3. The bulk of this assemblage came from the fills of Enclosure Ditch [101]/[317] and its re-cuts. There was a smaller amount of material associated with Hearth [319].

Of the identified bones, cattle predominate, with sheep (or goat), pig, deer and dog also identified. Horse bone appeared to be absent, but may be represented among the unidentified 'cow-sized' fragments. The proportion of sheep to cattle was low, which may in part be a result of preservation conditions, or collection bias.

The bone tended to be brittle and flaky, splitting easily and having a flaky surface and eroded ends. In these conditions, larger, more robust bones will survive better and are likely to be over-represented in the collected assemblage.

Differential preservation is also likely to account for the relatively large number of teeth recovered, in comparison to other skeletal material. Vertebrae are also relatively frequent while lower leg and especially foot bones are scarce.

The sheep bones were all from very small animals, much smaller than typical modern breed. The cattle were also all relatively small. Cattle metapodials show marked sexual dimorphism, and the robust metacarpal in Fill (103) was probably from a bull rather than a cow. The dog represented in Fill (104) was comparatively large.

Where teeth are present, it is possible to make a broad estimate the age of the animal at death from the degree of tooth-wear. Old animals, with heavy tooth wear, included the cattle represented one of the molar teeth in Fill (103) and by the mandible in Fill (301). Cattle of this age are likely to have been either working draught animals or dairy cows. The heavily worn pig molar in Fill (103) and the dog canine in Fill (104) also showed very heavy wear.

By contrast, the calf mandible in the possible hearth deposit (321) had the first molar tooth erupting, indicating that it was from an animal around 6 months old (Hillson, 1990, p206). If it was not an accidental death, this would have been slaughtered for veal.

Epiphysial fusion can also be used to estimate the age of animals, although in this assemblage there were few unfused or newly fused bones apart from vertebrae which are generally the latest to fuse (Schmid, 1975, p 75). The cattle tibia in Context (125) would have been from an animal in its third year. The unfused first phalanx in Fill (103) could have come from a very young calf, or from a deer less than two years old.

The range of cattle ages perhaps hints at a mixed farming economy, including dairying and veal production, but a much larger assemblage would be needed in order to draw any reliable conclusions about husbandry practice.

There were few butchery marks apart from shallow knife cuts, probably from skinning, on a few of the bones. A number of the long-bones had breakage patterns typical of deliberate cracking for marrow extraction, but similar fracture patterns can also be caused during butchery.

There was a small quantity of burnt bone, the most notable being the cattle mandible and right tooth in the hearth deposit (319). This seemed to match the unburnt left mandible in the same context. This suggests that the feature may have been a bonfire for disposal of waste, rather than a domestic hearth.

Of particular interest is the articulated group of cattle bones in Feature (303). This feature was recorded during excavation as being deliberately dug as a possible 'grave for cow' within the fills of the enclosure ditch. Most of the left hind limb bones were recovered, with the exception of part of the femur, the patella and five of the phalanges. In this case, preservation and recovery was good and the material included the smaller tarsal bones. A rather random selection of other cattle bones in the same context had a similar appearance, and could have been from the same animal, although there was a humerus probably from a different animal, and several bones from other species also present.

The presence of other parts of the skeleton as well as the leg suggests that it was buried as a whole animal, but that either part of it was beyond the limit of the evaluation trench or that preservation conditions varied and only some parts of the skeleton survived well. Deterioration of the proximal part of the femur suggests the latter explanation may be true.

The deliberate burial of whole or parts of cattle in Iron-Age or Romano-British ditches as 'special deposits' is a well-attested phenomenon, but disposal of dead animals in convenient ditches could also have been common practice. It is difficult to say which interpretation would apply in this case.

References

Hillson S 1990 *Teeth*, Cambridge University Press, Cambridge.

Schmid E 1975 *Atlas of Animal Bones*, Elsevier, Amsterdam.

von den Driesch A 1976 *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum of Archaeology and Ethnology, Harvard University.

Bone List

Tooth-wear stages (Hillson, 1990, p 329) are given as small letters (e.g. m2g is second molar, wear-stage g). Codes for bone measurements follow von den Driesch (1976).

Context	Bone	Animal	Side	Comments
103	Tooth	Cattle	Right	Upper m1.
103	Tooth	Cattle	Left	Upper m1; ?matches above.
103	Tooth	Cattle	Right	Upper m2.
103	Tooth	Cattle	Left	Upper m2; very worn.
103	Tooth	Cattle	Right	Lower m2 (b).
103	Tooth	Cattle	Right	Lower m2 (m).
103	Tibia	Cattle	Right	Shaft and distal end; Bd=56.3, SD=33.1.
103	Metacarpal	Cattle	Right	Proximal end missing; Bd=63.8, SD=37.2.
103	Scapula	Cattle	Right	Proximal end, blade fragmentary; GLP=64.0.
103	Radius/Ulna	Cattle	Right	Fused proximal ends.
103	Atlas	Pig	Right	Right transverse process missing, otherwise complete.
103	Tooth	Pig	Left	Lower m3, not in wear.
103	Tooth	Pig	Right	Upper m3, broken, posterior cusps only, very heavy wear.

Context	Bone	Animal	Side	Comments
103	Tooth	Pig	Left	Lower dpm4, distal cusp and roots missing, little wear.
103	Tooth	Pig	Right	Lower di?2.
103	Tooth	Pig		Fragment of molar.
103	Tooth	Sheep	Left	Lower m1 (g).
103	Tooth	Sheep	Left	Upper m1, fairly heavy wear.
103	Tooth	Sheep	Right	Upper m2, little wear.
103	Tooth	Sheep	Left	Upper m3, fairly heavy wear.
103	Tooth	Red deer	Left	Upper m1, m2.
103	Tooth	Red deer	Right	Upper m2, matches above.
103	Mandible	Sheep-sized		Fragment from angle region.
103	Skull	?Sheep-sized		3 fragments.
103	Vertebra	Cow-sized		Neural spine.
103	Phalanx	Cow-sized		Proximal; small, may be deer, unfused proximal epiphysis missing.
103	Rib	Cow-sized		8 blade fragments.
103	Radius	Cow-sized		Fragment of proximal end.
103	Unidentified	Cow-sized		9 shaft fragments including ?radius distal end.
103	Unidentified	Cow-sized		4 ?skull or vertebra fragments.
103	Horn core	?Sheep-sized		Very small, may be from young calf.
103	Unidentified	Sheep-sized		4 shaft fragments.
103	Unidentified	Sheep-sized		5 rib fragments.
103	Rib	Small mammal		?Dog.
Total weight 103: 812g				
104	Atlas	Dog		Lateral process missing; GR=36.4, Lad=15.5.
104	Tooth	Dog	?Left	Canine, large, heavy wear.
104	Vertebrae	?Dog		2 centrums and fragments of neural arch from third vertebra.
104	Fibula	?Dog	?Left	Proximal end and part of shaft.
104	Ribs	?Dog		4 rib fragments.
104	Metatarsal	?Red deer	Left	Proximal end of shaft with part of articular surface.
104	Mandible	Sheep	Left	Diastema region.
104	Radius	Cattle	Left	Proximal end; ?deliberately cracked.
104	Tooth	Cattle		Fragment of lower molar, split vertically.
104	Rib	Cow-sized		Blade fragment.
104	Unidentified	Unidentified		Tiny fragment of shaft.
Total weight 104: 189g				
125	Innominate	Cattle	Right	Acetabular region.
125	Tibia	Cattle	Left	Distal end; newly fused epiphysis, ?deliberately cracked.
125	Humerus	Cattle	Right	Distal end of shaft; transverse cut mark.
125	Metatarsal	Cattle	?Right	Fragment of proximal end.
125	Vertebra	Cow-sized		Cervical vertebra; fairly complete; unfused epiphyses absent.
125	Unidentified	Sheep-sized		Shaft fragment; small cut mark.
Total weight 125: 444g				
301	Humerus	Cattle	Left	Distal part of shaft.
301	Mandible	Cattle	Left	Diastema to angle region & fragments, single tooth - pm4 (g).
301	Tooth	Cattle	Left	Lower i1.
301	Metacarpal	Cattle	Left	Lateral side of proximal end.
301	Vertebra	Cow-sized		Thoracic centrum, cranial end unfused, caudal newly fused.
301	Vertebra	Cow-sized		Fragment of neural arch and base of spine.
301	Vertebra	Cow-sized		Fragment of lateral process.
301	Rib	Cow-sized		Small fragment.
301	Unidentified	Cow-sized		2 ?cranial fragments.
301	Radius	Sheep	Left	Shaft fragment with part of ulna scar.
301	Unidentified			Small fragment, burnt - part carbonised.
Total weight 301: 297g				
302	Tooth	Cattle	Right	Upper m3.

Context	Bone	Animal	Side	Comments
302	Tooth	Cattle		Single cusp of split lower molar, just coming into wear.
302	Unidentified			Fragment of ?scapula.
Total weight 302: 32g				
303	Articulating group; hind leg bones:	Cattle	Left	Femur, broken, proximal end missing; Tibia, complete apart from damage to distal end, SD=32.2, Bp=80.5, GL=313.4; Calcaneum, complete apart from damage to distal end; Astragalus, complete, GL=56.1, GLm=53.1; Navicular, complete, GB=45.5, Two other tarsal bones, one complete other split; Metatarsal, complete, GL=199.3, CD=23.0, BD=47.8, BP=42.9; Single proximal phalanx, complete, GLp=53.3, SD=22.4, BD=23.8, Bp=25.2.
303	Radius	Cattle	Right	Fragmentary, but more or less complete.
303	Ulna	Cattle	Right	Ulna process.
303	Ulna	Cattle	Left	Ulna process.
303	Metacarpal	Cattle	Left	Proximal end.
303	Vertebra	Cattle		Caudal; all of above bones possibly from same animal.
303	Innominate	Cow-sized		Fragment of iliac crest.
303	Sternum	Cow-sized		Fragment.
303	Humerus	Cattle	Left	Distal end.
303	Ulna	Cow-sized	Right	Fragment of proximal end of shaft.
303	Rib	Cow-sized		11 blade fragments.
303	Unidentified	Cow-sized		Shaft fragment.
303	Unidentified	Cow-sized		Scapula fragment.
303	Mandible	Pig	Left	Fragment with m2 (c), m3 (b).
303	Humerus	Sheep	Left	Distal end.
303	Unidentified	Sheep-sized		2 shaft fragments.
303	Unidentified	Sheep-sized		Rib fragment.
Total weight 303: 1101g				
304	Unidentified	Cow-sized		Fragment of ?metapodial shaft.
Total weight 304: 9g				
305	Unidentified	Cow-sized		Fragment of ?radius shaft.
305	Unidentified	Sheep-sized		Fragment of ?rib.
Total weight 305: 14g				
306	Scapula	Cow-sized		Fragment of glenoid.
306	Metatarsal	Sheep		Shaft.
306	Unidentified	Sheep-sized		Shaft fragment.
306	Unidentified			Rib blade fragment.
Total weight 306: 32g				
310	Scapula	Cattle	Left	Blade fragmentary but mostly complete; GLP=61.0, SLC=43.2.
310	Sacrum	Cattle		Fairly complete; damaged transverse processes, unfused cranial end.
310	Vertebra	Cow-sized		Lumbar, unfused ends, damaged to transverse processes and centrum.
310	Vertebra	Cow-sized		Centrum, unfused.
310	Vertebra	Cow-sized		2 fragments.
310	Tooth	Cattle	Right	Upper pm3.
310	Tooth	Cattle		Fragment of molar.
310	Ulna	Pig	Left	Fragment of shaft distal to articulation.
310	Metatarsal III	Pig	Left	Fairly complete, damage to proximal end; LeP=78.1, B=12.4.
310	Calcaneum	Dog	Left	Complete; GL=42.0, GB=15.8.
310	Fibula	Small mammal		?Dog-sized fragment of fibula.
310	Rib	Cow-sized		4 fragments of rib blade.
310	Unidentified	Sheep-sized		Rib fragment.
310	Unidentified	Sheep-sized		Shaft fragment.
Total weight 310: 516g				
321	Mandible	Cattle	Left	Angle region with dpm4 (f), m1 erupting.
321	Mandible	Cattle		Hinge region, probably same bone as above.
321	Tooth	Cattle		Fragment of molar.

Context	Bone	Animal	Side	Comments
321	Tooth	Cattle	Right	Lower m1, not in wear, burnt - carbonised.
321	Mandible	Cow-sized		Fragment of angle region, burnt - carbonised.
321	Metacarpal	Sheep	Left	Proximal end and part of shaft.
321	Rib	Sheep-sized		Fragment.
Total weight 321: 105g				

Appendix 4

A Rotary Quern from Worksop, Nottinghamshire (RLW03)

Alan Vince

Excavations by Pre-Construct Archaeology Lincolnshire on a prehistoric crop mark site at Raymoth Lane, Worksop, Nottinghamshire (Site Code RLW03) produced a fragment of a rotary quern. The deposit in which the quern was found is provisionally dated to the 2nd century AD and this is consistent with the form and source of the quern.

Description

RWL03 (103) The fragment is part of the upper stone from a rotary quern. The upper surface and edge have been worked but no evidence of tooling survives, mainly because of the coarse texture of the rock. The lower surface shows considerable polish and the quern had clearly been used for some time before loss. The quern varies from 40 to 45mm in thickness and was between 400 and 450mm in diameter.

The quern is made from a coarse sandstone consisting of an illsorted quartz and feldspar sand with a moderate quantity of pores. The largest grains are up to 4mm across. Some of the quartz grains show signs of overgrowth. The source of the rock is the Lower Carboniferous Millstone Grit which outcrops in the Pennines and Peak District, to the west of Worksop.

Rotary querns of this sort were introduced to Britain during the early Roman period, replacing saddle querns, in which a rubber stone was moved backwards and forwards on the quern surface to grind the grain, and the beehive quern, which was a rotary quern in which the upper stone has a tall dome shape.

Assessment

The exploitation of Millstone Grit for the production of rotary querns began early in the Roman period, continued to the end of the Roman period and then began again at some stage in the Anglo-Saxon or medieval period. Production continued into recent times. Examples of querns from datable contexts are required in order to determine if there are any trends in size or typology over this long period of production.

Appendix 5
Evaluation at Raymoth Lane, Worksop, Notts (RLW03)

Context Summary

<i>Context</i>	<i>Type</i>	<i>Description</i>
<i>Trench 1</i>		
100	Layer	Topsoil
101	Cut	Enclosure ditch, contains (102), (103), (104)
102	Fill	Upper fill of [101]
103	Fill	Secondary fill of [101]
104	Fill	Primary fill of [101]
105	Layer	Natural sand/gravel
106	Layer	Poss. ground raising deposit, seals ridge & furrow
107	Layer	Thin band of sand overlying (106) – further ground raising?
108	Cut	Shallow linear feature, possible furrow
109	Fill	Fill of [108]
110	Cut	Shallow linear feature, possible furrow
111	Fill	Fill of [110]
112	Cut	Shallow linear feature, possible furrow
113	Fill	Fill of [112]
114	Cut	Ditch cut, probable enclosure ditch
115	Fill	Fill of [114]
<i>Trench 2</i>		
200	Layer	Topsoil
201	Layer	Natural
202	Cut	?modern pit/ditch terminus
203	Fill	Charcoal rich primary fill of [202]
204	Fill	Secondary fill of [202]
205	Cut	Large, shallow sub-oval pit
206	Fill	Fill of [205]
207	Cut	Subcircular pit
208	Fill	Fill of [207]
<i>Trench 3</i>		
300	Layer	Topsoil
301	Fill	Final fill of enclosure ditch, contained by recut [322]
302	Fill	Primary fill of recut [322], sealed by (301)
303	Fill	Fill of cattle burial [318] within enclosure ditch
304	Fill	Fill of rake out pit [320]
305	Fill	Fill of enclosure ditch, contained by recut [316]
306	Layer	Linear spread of cobbles within enclosure ditch. Contained by [316]
307	Cut	Possible post hole
308	Fill	Fill of [307]
309	Fill	Primary fill of enclosure ditch [317]
310	Fill	Same as (309)
311	Fill	Slumping deposit, contained by recut [316]
312	Fill	Slumping deposit, contained by [317]

<i>Context</i>	<i>Type</i>	<i>Description</i>
313	Layer	Natural deposit
314	Layer	Natural deposit
315	Layer	Natural deposit
316	Cut	Primary recut of enclosure ditch
317	Cut	Enclosure ditch
318	Cut	Poss. grave for cow in enclosure ditch
319	Cut	Possible stone lined hearth
320	Cut	Rake out pit adjacent to [319]
321	Fill	Fill of hearth [319]
322	Cut	Secondary recut of enclosure ditch
323	Cut	Possible post hole
324	Fill	Fill of [323]
<i>Trench 4</i>		
400	Layer	Topsoil
401	Layer	Natural
<i>Trench 5</i>		
500	Layer	Topsoil
501	Layer	Natural
<i>Trench 6</i>		
600	Layer	Topsoil
601	Layer	Natural
602	Cut	Steep sided pit
603	Fill	Upper fill of pit [602]
604	Fill	Primary fill of pit [602]
<i>Trench 7</i>		
700	Layer	Topsoil
701	Cut	?natural feature
702	Fill	Fill of [701]
703	Layer	natural sand/gravel mix
704	Layer	natural sand
<i>Trench 8</i>		
800	Layer	Topsoil
801	Layer	Natural
<i>Trench 9</i>		
900	Layer	Topsoil
901	Layer	Natural
<i>Trench 10</i>		
1000	Layer	Topsoil
1001	Layer	Natural

Appendix 6

A PROGRAM OF GEOTECHNICAL TEST PITTING; RAYMOTH LANE, WORKSOP, NOTTINGHAMSHIRE

NGR: TF 5775 8150
SITE CODE: RLW03

Summary.

- *A series of 31 test pits were excavated on land off Raymoth Lane, Worksop, Nottinghamshire for the purpose of a geotechnical survey. The sections of the pits were observed for archaeological deposits in order to compliment the archaeological evaluation conducted on the site previously. The evaluation report attached should be consulted for the relevant sections concerning site location and description, planning background and historical and archaeological background. In addition, 3 soakaway trial pits were excavated. The sections of these were also checked for archaeological deposits.*

1.0 Methodology.

For the purpose of a geotechnical survey, 31 test pits and 3 soakaway trial pits were excavated at the site using a machine fitted with a 1m trenching bucket. They varied in depth between 2.10m and 3.20m and measured 1m wide and 3m long. The revealed sections were examined for archaeological deposits. Deposits were recorded in section at scale 1:50 and written accounts were prepared on pro forma context record sheets. A colour photographic record was maintained. The location of each Test pit and soakaway trial pit is depicted on Fig 1. These works were carried out between 18th and 20th November, 2003, by Mr Julian Sleaf on behalf of Pre-Construct Archaeology (Lincoln).

2.0 Results

Test Pits 1-26

No archaeological deposits were identified.

For the most part, the matrix recorded within these test pits consisted of a 0.40m deep layer of mid brown friable topsoil, (100), above a natural bed of red-brown sand, (105).

The matrix within Test Pit 26, (located within the enclosure), comprised of 4 layers beneath the topsoil. At the base of the section was (105), consisting of sandstone fragments. Above this was a 2m deep layer of reddish-brown sand, (103) which was covered by (117); a layer of pale grey sand, 0.10m deep. The layer directly beneath

the topsoil was red-brown sand with a depth of 0.50m; recorded as (118). None of these were deemed to be archaeological.

Test Pit 27

A layer of compact silty sand recorded in Test Pit 27 may represent an artificial surface within the enclosure.

Four layers were recorded in the section of Test Pit 27. At the base of the section was (124); a layer of compact grey marl. Above this was (123), which consisted of compact reddish brown marl. A layer of light yellow brown sand overlay (123). Above (123) and directly beneath the topsoil (100) was (122); a layer of yellow brown compact silty sand containing frequent flecks of limestone. It is possible that this represents an artificially compacted surface within the enclosure, although this is impossible to verify as no archaeological finds were recovered.

Test Pit 28

In the east facing section of Test Pit 28, the edge of a large ditch was recorded. This corresponds with the known cropmark of the western stretch of the enclosure ditch.

The cut of a substantial steep-sided linear feature, [126], was observed in the east facing section of Test Pit 28, (see fig. 2). It had a flat base, was 1.70m deep and was filled with dark brown silty sand, (125) which contained animal bone and Romano-British pottery. Some large fragments of limestone and dispersed cobbles were observed at the base of the cut.

Test Pit 29

A significant quantity of limestone slabs and fragments set in a silty sand infill were discovered within test pit 29.

Two distinct layers were observed within test pit 29, (see fig. 3). At the base of the section was a 0.80m deep layer of mid brown silt containing large limestone fragments and cobbles. Above this was a 0.40m deep deposit of light brown sandy silt, which included frequent limestone fragments and slabs.

Test Pit 30

An east-west oriented ditch was observed within test pit 30.

The cut of an east west oriented ditch, [130], was revealed within test pit 30, (see fig. 4). It was approximately 0.90m deep and its visible edge was moderately sloped. Its basal fill, (129), comprised of light brown silty sand with occasional limestone flecks and was 0.60m deep. Above this was a 0.30m deep layer of mid brown silty sand, (128), containing frequent limestone fragments.

Test Pit 31

No archaeological deposits were observed.

Soak away pits 1-3

No archaeological deposits were observed.

3.0 Discussion and Conclusion

Analysis of the deposits revealed within the test pits supports many of the conclusions drawn within the attached evaluation report. Test pits excavated within the enclosure contained archaeological deposits, with the exception of Pit 26 and soakaway pit 3. This indicates that internal features and elements not apparent as cropmarks survive within the enclosure. The limestone fragments in Test pit 29, the possible compacted surface within Test Pit 27 and linear feature in Test Pit 30 suggest that these internal elements will vary in composition and interpretation.

The fact that the test pits positioned in the western half of the site were void of archaeological remains supports the conclusion that the archaeology on the site is confined to the vicinity of the enclosure.

It is noteworthy that the two pits excavated within the enclosure that were void of archaeological deposits were both in the south-west corner, close to the possible circular cropmark, (see main evaluation report). The absence of archaeological deposits may reflect the proximity of layers (106) and (107) which, within the confines of a test soakaway pits, could appear as natural deposits.

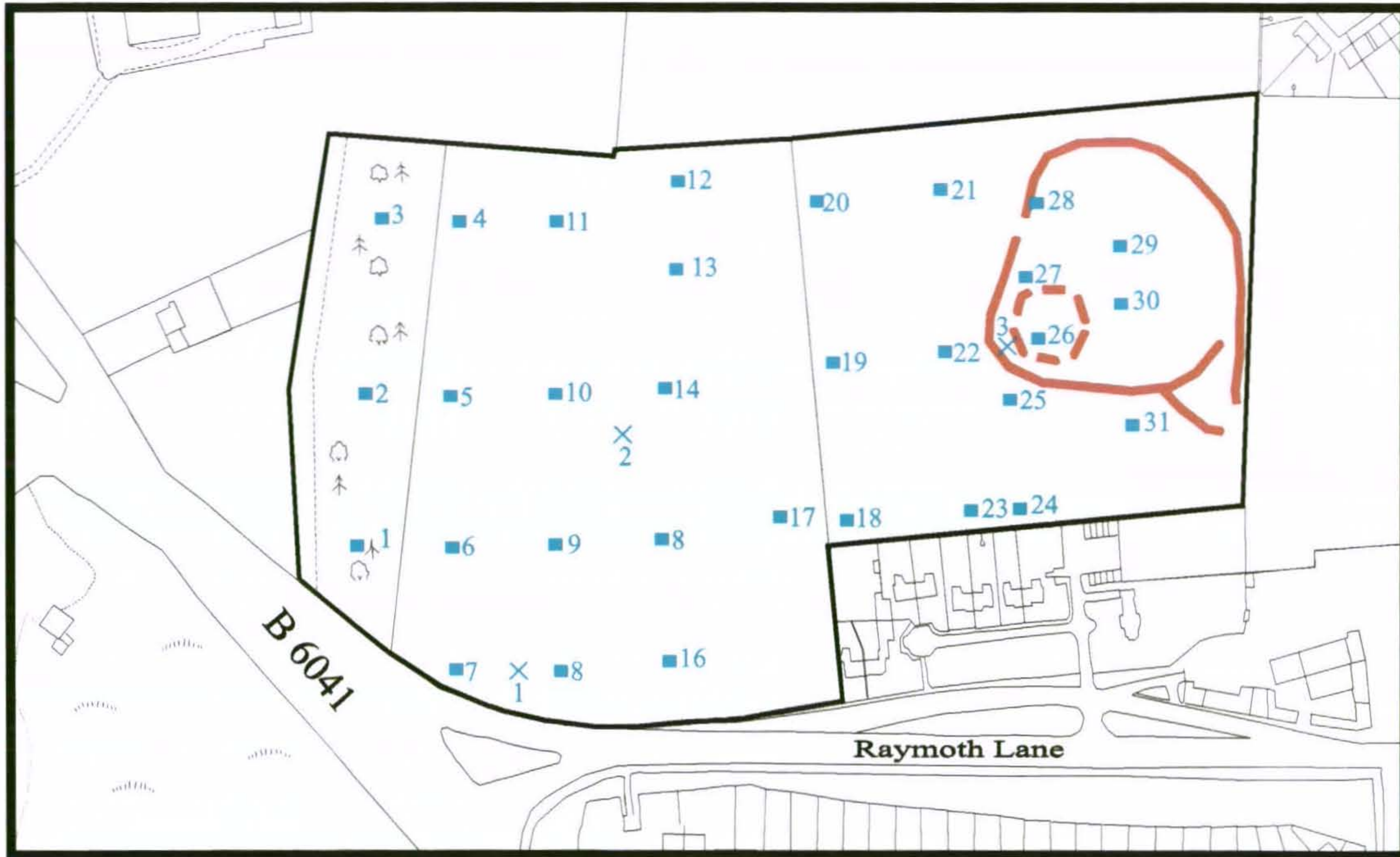


Fig 1: Site Map showing cropmarks plotted from aerial photograph in red and test pits 1-31 (squares) and soakaway pits 1-3 (crosses) in blue. (Scale 1:2500)



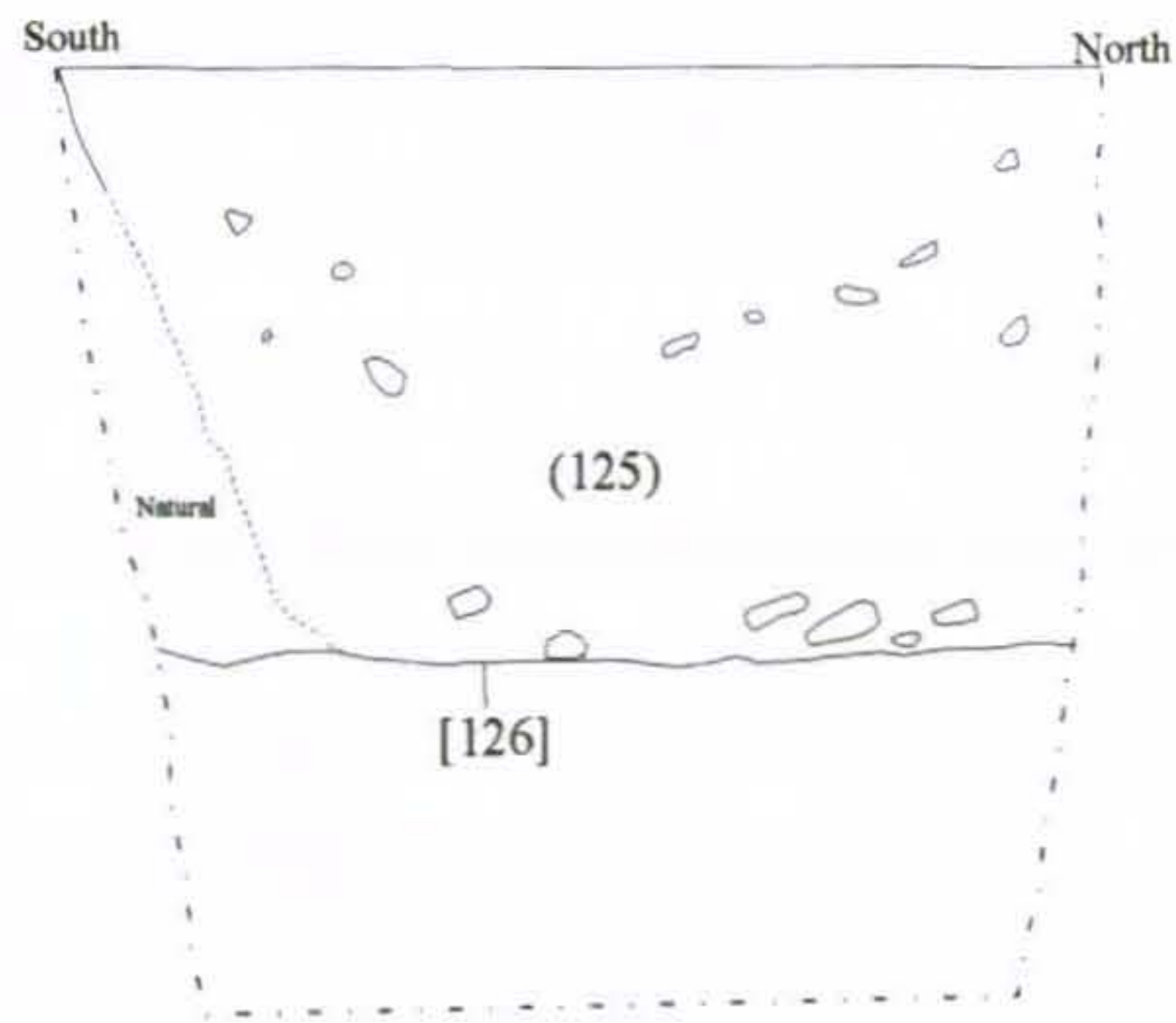


Fig. 2: Test Pit 28 east facing section (Scale 1:50)

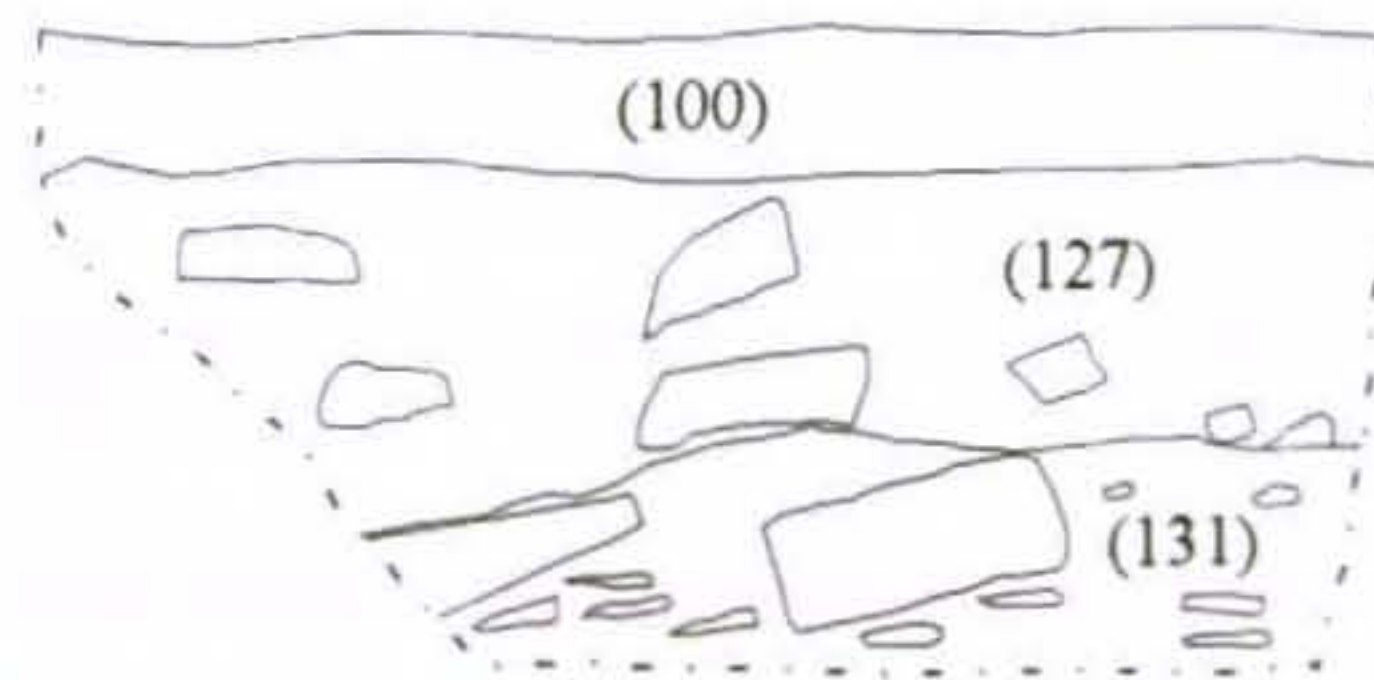


Fig. 3: Test Pit 29 section (Scale 1:50)

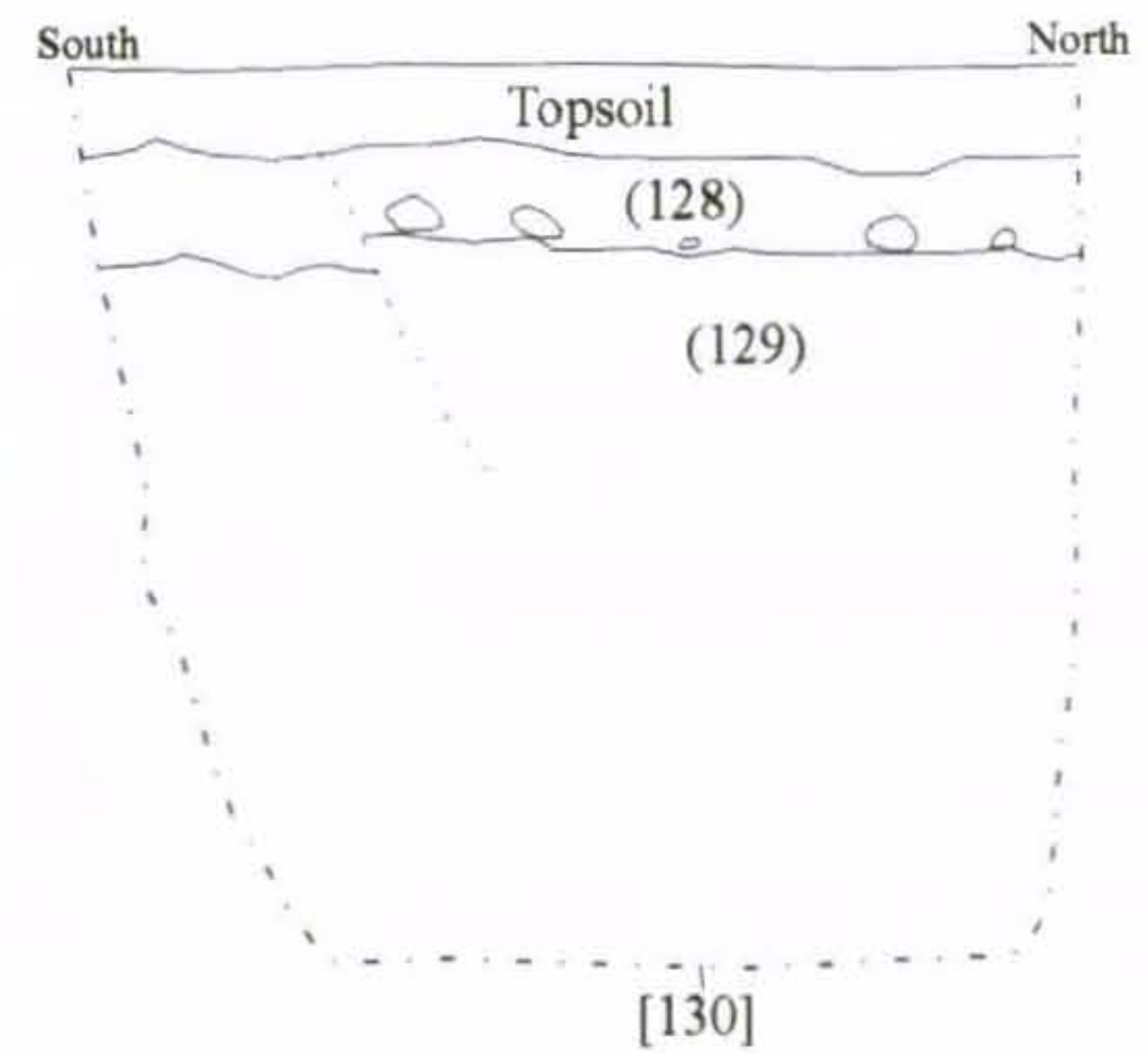


Fig. 4: Test Pit 30 section (Scale 1:50)

