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LINDSEY ARCHAEOLOGICAL SERVICES

Proposed Extension to Welton Gathering Centre Reepham, Lincs

NGR: TF047 751
Site Code: RWGC 05
LCNCC Accn No.: 2005.13

Archaeological Evaluation Phase II

Report for Star Energy

By M. Jordan

LAS Report No. 802
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EVENT: L16022 INTERVENTION: L1 10081
EXCAVATION: L1 10082

PRNs 54983 Undated.
55208 Medieval
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55210 Anglo-Saxon
55211 Roman
55212 Roman.

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Proposed Extension to Welton Gathering Centre, Reepham Archaeological Evaluation, Phase II

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Summary

A second phase of evaluation, comprising 32 trenches, has revealed that only limited archaeological remains in the three fields of the proposed development. In Field 1, evidence for two phases of ridge and furrow cultivation, seen in the first evaluation, was confirmed as was the presence of a curvilinear ditch identified in the geophysical survey. This substantial ditch was found in Trench 7, and may date from Iron Age or Romano British period.

Field 2 had been most affected by modern ploughing and the majority of the trenches contained no archaeological features. A series of palaeochannels was revealed running down the western field edge and a former course of the stream was present along the southern field boundary. A ditch of possible prehistoric date was revealed in Trench 19, but the feature seems land isolated one as the adjacent trenches contained no artefacts or features and no significant anomalies, apart from the ditch, were present on the geophysical survey. The small assemblage of flints recovered suggest the area may seen some transient Mesolithic and Neolithic activity possibly but no evidence for a sustained period of occupation was found. Field 3 contained no significant archaeological features.

Introduction

Lindsey Archaeological Services was commissioned by Star Energy in December 2004 to undertake an archaeological evaluation at the above site (Fig. 1). The work was carried out in accordance with general requirements set out in *Lincolnshire Archaeological Handbook* published by the Archaeology Section, Lincolnshire County Council (1998). Work commenced 28/01/05 and was completed 02/02/05.

Site Location and Description

Star Energy proposes to extend its facilities at the Welton Gathering Centre, Reepham, onto adjacent land to the north. This involves the stripping of topsoil from one field in order to create a site compound, laying of a stone surface and providing an access point across the ditch between the gathering centre and the proposed development site. Access to this site will continue to be from Barfields Lane. The main additional activity will be on part of an arable field, separated by a small stream from the present operations area. Here a series of buildings will be used in association with gas from a proposed pipeline source.

The proposed site of the extension is slightly below 10m OD on the northern edge of a thin band of alluvium, (classified as 813c Fladbury 2 Association, pelo-alluvial gley soils). Immediately to the north is a small area of 512a Aswarby Series gleyic brown calcareous earths, extending to Wragby Road (Soil Survey 1983).

The southern boundary of the site is beside a small stream, which forms a tributary of the Barlings Eau. The topography south of the stream has been altered by the existing Welton Gathering Centre and the adjacent railway. North of the stream, the natural slope is evident in farmland, broken by former field boundaries. At the southeast corner of the site, the ground forms a slight depression beside the stream.

Archaeological Background

Groundworks for the proposed extension of the Welton Gathering Centre will affect part of a block of medieval or later ridge and furrow. The only other features known to be affected are of post-medieval date. A complex of prehistoric and/or Romano-British occupation features is known from cropmarks 500m to the west of the application site, and it was thought there might be potential for similar remains within the site, masked by the ridge and furrow or by alluvium. Geophysical survey confirmed the presence of medieval ridge and furrow with two possible curvilinear ditches in Field 1 which were thought relate to Romano-British occupation in the area. Further linear anomalies were recorded on the west side of Field 2.

Evaluation in October 2004 located former palaeochannels and a buried ground surface in Trench 1 in the westernmost field. An earlier phase of ridge and furrow was found in Trench 2 in the same field. Pottery of potentially Saxon date was found in both trenches but not in any features. Field 2 was not evaluated at the time because the land had been sprayed with potentially hazardous chemicals. On the strength of this information Jim Bonnor requested more intensive evaluation of the whole area incorporating all three fields affected by the development.

Aims and Objectives

The purpose of the evaluation was to

- establish the presence or absence, quality and extent of archaeological remains and their location within the development area
- gather sufficient information to enable an assessment of the potential and significance of any archaeological remains to be made and the impact which development will have upon them
- enable an informed decision to be made regarding the future treatment of any archaeological remains and consider any appropriate mitigatory measures either in advance of and/or during development

Method

The revised requirements comprised the sample excavation of 2% of the proposed development area. 33 trenches, measuring 20m x 1.6 m were located as shown on the accompanying plan (Fig 2). A single 30m trench was excavated in Field 2 across the palaeochannel recorded by the geophysical survey to enable environmental samples to be taken. Each trench was machine excavated, using a 360° excavator. A toothless dyking bucket was used to remove soil to the top of the first recognisable archaeological horizon. All machine excavation was supervised by an archaeologist.

The trenches were hand-cleaned to reveal features in plan and carefully selected cross-sections through the features were excavated to enable sufficient information about form, development date and stratigraphic relationships to be recorded without prejudice to more extensive investigations should these prove to be necessary.

Archaeological recording was carried out by a team of seven experienced archaeologists, including a Site Director. A full written (single context) and photographic record was made of the site. The numbers referred to in the text and on accompanying drawings are context numbers assigned during the recording of the site. Context numbers were assigned in blocks, prefixed by the trench number (i.e. Trench 3 was numbered from **300** onwards, Trench 30 from **3000** etc).

A temporary bench mark 11.05m OD was established from a spot height provided by the client located on Barfields Lane, 15.83m OD.

Results

FIELD 1 (Pl. 1)

Trench 3 (Pl. 4)

Trench 3 was located in the northwest corner of Field 1 and orientated east/west. The dark grey brown sand silt topsoil, **300**, showed traces of the northwest/southeast orientated ridge and furrow and consequently its depth varied from 0.34m thick to 0.20m thick. Two ridges measuring approx 5.5m in width were visible within the trench. Underlying the western ridge was **305,** a dark orange brown silty sand 5.80m wide and 0.10m thick, possibly representing a former topsoil protected by the ridge. Similarly, beneath the eastern ridge was layer **308,** a grey brown sandy silt, 4.30m long and 0.15m thick. These layers overlay **306** a light grey sand 0.38m thick, probably alluvial material or indicative of a flood layer. Underlying **305** and **308** were two areas of mid grey brown sand silt **301** and **303**, possibly indicative of leaching from the greater volume of topsoil material above. These layers overlay the natural orange sand, **307**.

Trench 4 (Fig. 3)

This trench was located to the east of Trench 3 and orientated north/south. Topsoil layer **400** was a mid brown sandy silt 0.20m thick, which due to the oblique angle of the trench to the ridge and furrow did not show significant evidence of these features. Beneath the topsoil was **401** a mid to light brown

sandy silt subsoil 0.40m thick which overlay natural clay **402**. Cutting this was **405** an east/west orientated linear feature 4m in width. It contained a light brown grey sandy silt **406** which overlay **407** a light yellow clay silt. This feature could represent the earlier east/west orientated ridge and furrow identified in the earlier evaluation Trench 2. This is the only trench where this was noted.

Trench 5

Trench 5 lay east of Trench 4 and was orientated east/west. The topsoil **501,** was a mid–dark brown silty sand which was up to 0.65m deep in places and showed evidence of the medieval ridge and furrow. One sherd of Anglo Saxon pottery was recovered from the topsoil layer. This overlay **505** a 0.11m thick layer of dark brown silty sand. This overlay **502** an orange - brown mottled sandy clay subsoil which overlay the natural. Cutting the natural in the western half of the trench was **503** a 1.05m wide linear feature, 0.20m deep it contained **504,** an orange-yellow silty sand. No finds were recovered suggesting the feature represents a palaeochannel or a naturally silted ditch.

Trench 6

South of Trench 5 and on the same orientation was Trench 6. It contained a dark brown silty sand topsoil **600** which was a maximum of 0.35m thick and showed evidence of the former ridge and furrow and contained one flint flake and three sherds of pottery of 16th to 19th century date. This overlay an orange brown sandy silt subsoil **601** which in turn overlay the natural **602** a yellow sandy silt.

Trench 7 (Fig. 4; Pl. 5,6)

Trench 7 was located in the south east corner of Field 1 and orientated northwest/southeast. The southern portion of the field was lower and wetter, which may explain the greater number of alluvial layers seen in this trench and that excavated in the first phase of evaluation. **700** was a 0.20m thick mid brown, sandy silt topsoil which contained one late Mesolithic/early Neolithic flint blade, one sherd of 13th to 14th century pottery and one sherd of possible Anglo Saxon date. This overlay the subsoil layer **703,** an orange-brown silty sand 0.30m thick. In the east of the trench pit **702** cut **703,** it was oval, 0.40m long and contained **709** a dark grey black sand with frequent inclusions of charcoal and slag. **703** overlay **710** and **711** which comprised mixed light orange-brown, and orange- grey sands. These represented alluvial deposits which overlay **712/ 713** the natural which comprised pale yellow and white sands with frequent iron panning. Cutting **710** was **701** a north /south orientated ditch with an irregular stepped profile and flat base, it measured 4.5m wide and 1.20m deep. It contained the sandy silt fills **704**, **705**, **706**, **707** and **708** which represent waterborne sediments. The upper fill **704** contained one fragment of Roman tile. The cut of the ditch appears man-made while the fills appear very natural suggesting the ditch was cut to divert and/or control water in the area. The ditch pre-dates the medieval ridge and furrow but no further evidence of when it was originally dug..

Trench 8 (Fig. 5; Pl. 7)

Trench 8 was orientated east/west and located north of evaluation Trench 1 and south of Trench 3 with which it shared a very similar profile. The most pronounced ridge and furrow in the field was

visible in Trenches 3 and 8 and the ridges seen in Trench 8 are a continuation of those in Trench 3. The topsoil **800** was a dark brown sandy silt which showed clearly the medieval ridge and furrow. Beneath the rides were layers **801** a mid grey silty sand and **802** a dark brown orange sand both of which may represent buried topsoils protected beneath the ridges. These overlay **803** a mid grey sand with inclusions of red brown sand and iron panning which suggests a waterlogged flood deposit. It contained two darker areas beneath the two ridges possibly indicative of leaching from above. The natural **804** was a dark orange sand.

FIELD 2 (Pl. 2)

Trench 9 (Pl. 8)

Trench 9 was located in the southwest corner of Field 2 and orientated east/west. Topsoil **900** overlay **904** a 0.20m thick mid grey sand with orange brown mottling. This layer was cut by the northwest/southeast orientated field drains **902** and **906**. **904** overlay **907** a waterlogged mid grey sand which was located at the west end of the trench and which could represent the fill of a palaeochannel, it cut layer **908** a dark grey sand deposit which overlay the natural **909**.

Trench 10 (Fig. 6)

North of Trench 9, Trench 10 was orientated northeast/southwest. The topsoil **1000**, overlay the mid grey brown sand **1010**. This was cut by the land drains **1009**, **1001**, **1016**, **1012** and **1015** which contained dark brown silty sands and ceramic pipes. Also cutting this layer was palaeochannel **1007** aligned north/south, it was 6m wide and 0.35m deep with a shallow concave profile. It contained the fills **1004** a pale grey brown sand, **1017** a light grey sand with frequent iron panning and **1003**, a mix of light orange and light grey sands with dark orange mottling. These layers were waterlogged and represent the alluvial fills of the palaeochannel. This channel and those in Trenches 9, 11 and 12 were visible as curvilinear anomalies on the geophysical survey results.

Trench 11 (Fig. 7; Pl. 9)

Trench 11 was located north of Trench 10. The mid brown sandy silt topsoil **1100** overlay orange brown sand subsoil layer **1106**. This was cut by three northeast/southwest orientated field drains. Beneath **1106** were alluvial deposits **1107**, **1108**, **1109**, and **1110** which consisted of light grey sands. **1109** and **1110** overlay cut **1101** a linear feature with steeps sides, flat base and gradual breaks of slope it contained **1111** and **1112** which were also light grey sands with heavy iron panning. This feature represents a palaeochannel as identified on the geophysical survey. The west end of the trench contained two features which also cut the orange yellow sand natural **1114**. These were the small pits **1102** and **1103** which contained sand fills **1115**, **1116** and **1117**.

Trench 12

Located north of Trench 11, the topsoil **1200** in Trench 12 overlay a light brown sandy clay silt **1201**. This was cut by **1207** which contained a field drain. Beneath **1201** was linear feature **1210** which cut the natural and contained **1208** a light grey brown sandy silt. This feature may represent a

continuation of the palaeochannels seen in the trenches to the south.

Trench 13 (Fig. 8; Pl. 10)

Trench 13 was located close to the edge of the southern field boundary and orientated northwest/southeast. It was 30m long and was positioned to cross a "distinct zone of variation" identified by the geophysics, which ran along the southern field boundary. It had been tentatively identified as a former alignment of the stream to the south or alluvial deposits and or silty materials dredged from the stream.

The mid to dark brown sandy silt topsoil **1303** overlay subsoil **1302** which in turn overlay the natural **1301** an orange yellow silty clay. Two shallow layers of pale to mid grey clay, **1305,** were alluvial deposits which ran south for 12m to the edge of the palaeochannel **1304**, and then formed the upper fill of this feature. Channel **1304** ran east west across the trench, the cut had a sharp angle of slope and was over 2m deep. (The feature was augered to a depth of 2m where a gravel deposit made deeper augering impossible.) The upper fill **1305,** overlay **1306**, a dark brown silt. This lay above **1307** a dark brown silt deposit which overlay **1308** a waterlogged pale grey silt with frequent gravel inclusions. The channel had been cut by a north/south aligned field drain which ran into a large east/west orientated drain.

Trench 14 (Fig. 9)

Located immediately north of Trench 13 and orientated east/west was Trench 14. The 0.30m thick mid grey brown clay silt topsoil **1400** overlay subsoil **1401** a 0.20m thick orange brown silty sand,which overlay natural **1402** an orange sand with moderate iron panning. No features or land drains were revealed.

Trench 15

Located northeast of Trench 14, Trench 15 contained an identical profile to Trench 14 however natural layer **1502** was cut by two north/west south/east orientated land drains, **1503** and **1504**.

Trench 16

Trench 16 was located to the north of Trench 15. Topsoil **1603**, a mid brown silty clay was 0.40m thick and overlay subsoil **1602** a mid brown silty sand which contained one late Neolithic/Bronze Age flint flake. This overlay the natural **1601,** an orange yellow sand. Cutting the natural was a northeast/ southwest orientated ditch **1606** measuring 0.54m wide and 0.75m deep with steep sides and an uneven base. It contained **1607** a mottled yellow and brown sandy silt. To the east the terminus of a shallow linear feature was revealed. **1608** was a 1m wide and 0.40m deep linear with steep sides and a concave base it contained **1609** a light brown grey silty sand. In the west end of the trench was another gully, 0.50m wide, it contained **1605** a mid brown clay silt. This feature was less regular in shape and may represent a small palaeochannel. The features have the same orientation as the furrows and modern field drains and may represent earlier drainage associated with agricultural

activity.

Trench 17

Located northeast of Trench 16, Trench 17 contained a dark brown sandy silt topsoil **1700**, which contained one Mesolithic/early Neolithic flint blade. This was overlying the orange sandy clay natural **1701/1702** which was cut by two field drains.

Trench 18

Located to the south east of Trench 17, Trench 18 had a similar profile to Trench 16 but contained no features or field drains.

Trench 19 (Fig. 11)

Trench 19 was located south of Trench 18 and near the eastern boundary of Field 2, it was orientated northeast/southwest. The topsoil **1900** a dark brown sandy silt overlay the orange sandy silt subsoil **1901**. This had been cut at the east end of the trench by a field drain and a modern ditch **1909** which was an earlier version of the existing field boundary and contained **1910** a brown sand. Under **1901** was natural layer **1902** an orange sand. In the east of the trench this layer was cut by the east/west orientated ditch **1907**, it had a concave profile measuring 2.5m wide and 0.5m deep. Its upper fill was **1908,** a dark grey sandy silt with inclusions of charcoal, iron pan and burnt stone and contained four flint fragments including one pot boiler fragment. This overlay **1914** a dark grey silt which overlay **1916,** a waterlogged black silt with charcoal inclusions and one Bronze Age flint piercer. The west end of the trench contained a layer of grey sandy silt **1906/1911** overlying the natural, which may represent a former topsoil. This deposit contained charcoal flecks and one flint flake(late Mesolithic/early Neolithic), one flint chunk and one flint pot boiler fragment, it also contained three sherds of possible Iron Age pottery. Just to the west was **1903** a circular pit 0.40m in diameter which contained **1904** a dark grey sandy silt.

Trench 20

Trench 20 was located west of Trench 19 and orientated northwest /southeast. The brown grey clay silt topsoil **2000** overlay the brown grey silty sand subsoil **2001** which was cut by an east/west orientated field drain. This overlay the natural **2002,** an orange sand. Cutting the natural at the southern end of the trench was **2003** a shallow linear feature which contained **2004** a light grey sandy silt with orange brown mottling which may represent a palaeochannel.

Trench 21

Located to the west of Trench 20 this trench had the same profile as Trench 20 and contained one land drain and two flint flakes in its subsoil layer **2101**.

FIELD 3 (Pl. 3)

Trenches 22 -34

All trenches in Field 3 revealed a similar profile. The mid brown grey sandy silt topsoil (c. 0.30m thick) showed some evidence of ridge and furrow; the field had only been ploughed once in recent times (for potatoes during the war). This overlay the subsoil, a mid brown grey clay silt (0.10-0.20m thick) which in turn overlay the natural, an orange yellow clay. Numerous field drains were revealed and occasional patches of boulder clay. One late Neolithic disc scraper was recovered from the subsoil **3102** in trench 31 and one piece of Roman tessera from subsoil layer **2302** in Trench 23, but generally very few archaeological features were present: those identified are discussed below:

Trench 25

Located in the north-west of the field it had the same profile as discussed above but contained a shallow linear feature **2504** which cut the natural. It had shallow sides and a flat base and contained **2505**, a mid brown silty clay with orange flecks.

Trench 28 (Fig. 10)

Trench 28 was located just west of the centre of Field 3 it had the same profile as discussed above. The natural was cut by **2805** an oval pit 1.23m x 0.42m and 0.09m deep which contained **2806** an orange grey silty clay with frequent charcoal inclusions.

Trench 29 (Fig. 12)

Located near the southern edge of Field 3, this contained a possible palaeochannel which cut the natural. The linear feature **2904** was 4.5m wide and 0.75m deep, it contained the light blue grey clay **2905**.

Trench 32 (Fig. 13)

Located at the south-eastern corner of the field, the trench had a similar profile to the other trenches, however it contained clearer evidence of ridge and furrow with **3202** representing a furrow cutting the subsoil **3203** which contained one medieval pot sherd. It was 5.5m wide and 0.20m deep, orientated northwest/southeast, it contained **3201** a light to mid grey brown clay silt. This had been subsequently cut by a land drain. Overlying the natural clay in the western end of the trench were the grey yellow brown clay silt deposits **3206** and **3207**. These represent flood/alluvial deposits which may be present in this lower southern portion of the field.

Discussion

Field 1

The fluxgate gradiometer survey of Field 1 revealed a number of ditch-like linear and curvilinear anomalies in the southern part of the field as well as a number of possible pits and/or discrete areas of burning. The ditch seen in Trench 7 was probably the western end of the curvilinear feature identified by the survey (Fig. 3 in Bunn 2004). This was the most significant feature found in the field, and

contained one Roman tile sherd in its upper fill suggesting an Iron Age or Romano-British date. The possible pits suggested by the survey may relate to the numerous rabbit warrens present in the field, as very few features were found within the trenches. The lack of archaeological features other than the possible ditch suggests that while the area may have been at the periphery of an area of Iron Age/ Romano-British activity or occupation it was not itself a focus of activity. The suggestion of an earlier east/west orientated phase of ridge and furrow is partly supported by the linear feature found in Trench 4. The presence of Anglo Saxon pottery in the topsoil is not matched by features beneath and the quantity of pottery from all periods is insufficient to suggest that agricultural activity could have destroyed any associated archaeological features.

Field 2

Evaluation Trenches in Field 2 show that archaeological features survived better towards the edge of the field, while the trenches in the centre of the field revealed few, if any, features. This possibly reflects the build up of plough soil that can occur at the edge of fields and can protect underlying archaeology. The anomalies recorded by the geophysical survey were generally identified and confirmed. The anomalies recorded along the southern edge of the site and tentatively identified as a former alignment of the stream, alluvial deposits and/or silty material dredged from the stream were confirmed as a former course of the stream, extending northwards.

The linear anomalies noted along the western edge of the field were identified as palaeochannels. The numerous linear features identified as being either ridge and furrow or land drains are more likely to represent land drains as no trace of ridge and furrow was visible. It is possible the location of the land drains in some cases relates to the location of the former furrows in which land drains were placed before levelling of these features. This was seen in Trench 11 where the cuts of the land drains were wide and contained plough soil in their upper fills.

A diffuse curvilinear anomaly detected at the eastern side of the field may equate to the ditch revealed in Trench 19 which may be of prehistoric date. The ditch, which contained Bronze Age flint and possible Iron Age pottery and associated features revealed in Trench 19 are the most archaeologically significant features revealed in the evaluation. Unfortunately, while the environmental sample taken from the ditch did reveal a few fragments of burnt bone, they were too small to be identified and no further meaningful environmental material was present in the sample. While these features and deposits suggest that some prehistoric/ Iron Age remains have survived in this area they are only very localised as no such remains were revealed in any of the adjacent trenches. This confirms the geophysical survey results, which identified no other anomalies. Anomalies seen in the centre of the field must relate to material in the plough soil as no associated features were visible in the trenches. The limited presence of finds and features in the evaluation trenches from this field suggest there was unlikely to have been much archaeologically significant activity in the area. The small assemblage of flint finds suggests there was no sustained activity in the area during the Mesolithic and Neolithic period due to the lack of tools and absence of large quantities of worked flint. The presence of

potboilers may relate to Bronze Age or Iron Age activity in the area but the lack of features suggest this was very limited.

Field 3

Very few potential archaeological features were identified in Field 3 during the geophysical survey, with the exception of ridge and furrow remains and land drains. Both were revealed in the evaluation trenches, as well as palaeochannels as seen in the other fields and some small isolated undated features. The field was notably wetter than the other two despite the numerous field drains, suggesting it may not have provided a good location for settlement or early agriculture, which would have been located further up the valley. The presence of two fragments of Roman building material fragments found in this field are unlikely to suggest a Roman presence in the immediate vicinity due to the lack of associated features and limited number of finds. The presence of medieval and post-medieval pottery fragments in the plough soil in all three fields is probably indicative of manuring activity.

Conclusion

The evaluation has demonstrated that while the development site may have been on the periphery of areas of activity dating from the Neolithic to the Anglo-Saxon period only very limited surviving archaeological deposits and features were present in the area. It is probable that any archaeological deposits which may have been present have largely been removed by medieval and post-medieval agricultural activity. The potential impact of the proposed development on the archaeology of the area is thus considered to be minimal.

Matthew Jordan
Lindsey Archaeological Services
March 2005

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References

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McDaid, M. 2004. *Welton Gathering Centre, Reepham, Archaeological Evaluation Phase I*, LAS Report 779A

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Photographs: LAS film nos. 05/4, 05/7, 05/12

Specialist reports: Pottery report by Barbara Precious, Dr Alan Vince and Jane Young.

Ceramic building material report by Jane Young

Lithic report by Jim Rylatt

Environmental report by Dr Jane Richardson

APPENDIX 1

Reepham, Welton Gathering Centre, Lincolnshire
RWGC 05

Lithic Materials: Catalogue and Assessment

Report by Jim Rylatt – February 2005

1.0 Introduction

This report relates to a small assemblage of lithic material that was recovered during an archaeological evaluation at Reepham, Lincolnshire. A total of 17 pieces of struck flint were retrieved, which weighed a total of 237 grams, along with three fragments of pot boiler weighing a further 315grams. This assemblage comprised, one disc scraper, one piercer, a retouched secondary flake, one unmodified primary flake, four unmodified secondary flakes, two blade fragments and seven chunks/chips.

2.0 Description

2.1 Raw material

All of the struck lithic artefacts examined were produced from flint. Where cortical surfaces survived it was possible to establish that the raw materials were derived from secondary deposits; the cores and secondary flakes have areas of thin, abraded cortex. Any relatively large areas of this surface generally had a rounded profile, which indicates that it was sourced from pebbles and cobbles that had been transported and deposited by water. This process limits the size of the constituent nodules, and can also account for the variation in the colour and composition of the components of the assemblage.

The assemblage contained a high proportion of irregular waste (35% chunks and chips), many of these pieces being relatively large (19.5g mean weight), with further flint having been used as pot boilers. This suggests that there was a plentiful supply of raw material in the immediate area. The site is situated close to a small tributary of the Barlings Eau, so it therefore seems likely that this small valley contains outcropping glacio-fluvial sheet deposits that incorporate flint pebbles. Such pebbles would have been rolled and battered by glacial and fluvial forces prior to their initial deposition, resulting in the thin, irregular and pockmarked nature of their cortex. Additionally, the extreme temperatures experienced in a glacial or periglacial environment are likely to have caused many of the nodules to fracture. This process accounts for the sub-angular, recorticated surfaces evident on a number of the artefacts examined.

The collection of flint from secondary deposits is likely to have been a relatively expedient process. This may simply have involved the inspection of tree throws, or the banks of streams and other adjacent bodies of moving water (Edmonds, 1995). Alternatively, the creation of slight delves into the upper surface of out cropping gravel beds may have proved to be a more reliable means of acquisition, and could potentially account for some of the more irregular earthcut features encountered in the area.

2.2 Characteristics of the assemblage

This assemblage contained relatively few chronologically diagnostic pieces, but there were sufficient pieces to indicate that this collection represents a palimpsest of activity spanning several millennia.

There were two proximal blade fragments (Trench 17 - *SF 7* & from context 700), which exhibited traits consistent with Mesolithic to Early Neolithic technologies. Although both pieces were fragmentary, neither appeared to be of a narrow bladed form that is indicative of later Mesolithic industries.

The assemblage contains 3 items (15.0%) that have either been transformed into tools (10.0%) or have been modified with minimal retouch (5.0%). The disc scraper (Trench 31 - *SF 1*) is a form indicative of Late Neolithic activity (e.g. Healy, 1993 - fig 61, no 58). Other pieces, such as flakes *3* and *4*, also suggest a Late Neolithic or Earlier Bronze Age presence, but as the latter were recovered from Trenches 21 and 16, respectively, there is no apparent focus of activity.

The piercer (Trench 19 - *SF 15*) is crudely manufactured and may even have expediently utilised a naturally created thermal flake. It would probably have been used for making holes in an organic material such as leather or wood.

A quarter of the assemblage had been burnt, these items either representing knapping waste (e.g. *SF 9*), or flint and sandstone that had been used as pot boilers. The presence of burnt material indicates that a number of fires or hearths must have been created within the environs of the site during the prehistoric period. Given that some late prehistoric pottery has been recovered from the site, but there is an absence of large quantities of worked flint, it seems most likely that the pot boilers relate to later Bronze Age or Iron Age occupation in the immediate vicinity.

Overall, the composition of the assemblage suggests that there may have been some transient Mesolithic or early Neolithic activity, with visitations certainly continuing into the later Neolithic and early Bronze Age. The small number of artefacts and the general absence of tools suggest that there was no sustained activity or occupation. However, given that there appears to have been a source of flint in the immediate vicinity it is possible these early visits were partially or primarily motivated by a desire to obtain raw materials for tool production that took place elsewhere and as such they may not even have necessitated the creation of small, temporary camps.

5.0 References

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Catalogue of worked and modified lithic materials - Key to abbreviations:

Type	(P)	Primary
	(S)	Secondary
	(T)	Tertiary
Date	Mes	Mesolithic
	L.Mes	Late Mesolithic
	E.Neo	Early Neolithic
	Neo	Neolithic
	L.Neo	Late Neolithic
	BA	Bronze Age
Size	comp	complete – (if so, dimensions given*)
	incomp.	Incomplete
Recort	(recorticated)	Yes
		Partly
Burnt		Yes
	poss	Possible
Retouch		Yes
Platf	(platform)	
	abrad	abraded
	comp	complex
	cort	cortical
Bulb	diff	diffuse
	pron	pronounced
	sm.pr	small pronounced
	v.sm.pr	very small pronounced
Term	(termination)	
	feath	feathered
	hinge	hinged
P-dep damage	(post-depositional damage)	
		Yes
		No
Comments	dist	distal
	frag	fragment
	irreg	irregular
	lat	lateral
	poss	possible/possibly
	prob	probable/probably
	prox	proximal
	v	very

*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, and the third to maximum thickness. Figures for the percentage of cortex relate to the total area of the dorsal surface and platform.

RWGC 05: worked and modified lithic materials

SF no.	C'text no.	Type	Date	Weight (g)	Size (mm)	Recort.	Burnt	Retouch	Platf	Bulb	Term	P-dep damage	Comments
1	3102	disc scraper (S)	L.Neo	19.3	41x36x13			yes		pron		no	thick flake detached by hard hammer - poss primary flake prior to retouch (c. 50% thin, rounded & abraded cortex); retouch around entire circumference, 75% being abrupt/semi-abrupt, with acute retouch along prox end 1 lat edge; greyish-brown semi-translucent flint
2	600	flake (S)		6.9	34x20x11	yes				diffuse	hinge	yes	irreg flake poss from type A core - prob irreg waste as appears to have 2 ventral surfaces; thin, rounded & abraded cortex (35%); greyish-brown translucent flint
3	2101	flake (S)	L.Neo/BA	19.6	38x27x18			yes	flat		feath	yes	v. thick flake from type Ca core prob worked on anvil; ventral surface of prox end of 1 lat edge abruptly retouched, creating slightly denticulate edge; thin abraded cortex (40%); brownish-grey translucent flint
4	1602	flake (S)	L.Neo/BA	10.7	42x35x8				comp	pron	hinge		irreg flake from type B or C core; crushing & chipping along flake margins; small area of thin abraded cortex (<10%); greyish-brown translucent flint
5	2101	flake (S)		8.6	38x28x8				flat	pron	feath	no	flake, with irreg, rounded abraded cortex (65%); prob L.Neo/EBA; caramel-coloured opaque flint
6	1700	chunk (S)		62.4	no		yes					no	large chunk of heavily burnt flint - calcined with granular structure; number of flake surfaces survive, suggesting that it is a core/core frag - type C - that produced broad flakes (prob L.Neo/BA); small area of thin, rounded & abraded cortex (<5%)

RWGC 05: worked and modified lithic materials

SF no.	C'text no.	Type	Date	Weight (g)	Size (mm)	Recort.	Burnt	Retouch	Platf	Bulb	Term	P-dep damage	Comments
7	1700	blade (S)	Mes/E.Neo	1.3	no				cort	sm.pr		yes	prox frag of broad blade, prob deliberately truncated; thin abraded cortex (65%); greyish-brown translucent flint
9	1908	chip (T)		2	no		yes					yes	small frag of heavily burnt flint - calcined with granular structure; some flake surfaces survive
12	1908	chip (T)		0.8	no							no	small frag of flint with surviving flake surfaces; mid-brown opaque flint
13	1908	pot boiler frag		23.6	no		yes						frag of pale grey sandstone pebble with well-sorted quartz grains c. 0.2mm across; shattered with angular fractures
14	1908	chunk (S)		9.2	no	partly						no	irreg waste, with thin abraded cortex (c. 50%); surviving flake surfaces; mid-brown, 'bubbly' opaque flint
15	1916	piercer (P)	BA	29.6	47x54x16			yes					chunk, or medial & dist frag of large irreg flake that was deliberately truncated; large spurred projection has been enhanced by acute retouch, with irreg semi-abrupt retouch (prob blunting/backing) along an opposing edge; expedient manufacture - not pretty, but functional; greyish-brown translucent flint, with pale brown opaque inclusions
16	1912	flake (P)		2.4	no						hinge	no	dist flake frag, with abraded cortex (85%); brownish-grey translucent flint
18	1902	chunk (S)		17.2	no							no	large piece of irreg waste, with thin, rounded & abraded cortex (c. 35%); surviving flake surfaces; variegated caramel to greyish-brown opaque flint

RWGC 05: worked and modified lithic materials

SF no.	C'text no.	Type	Date	Weight (g)	Size (mm)	Recort.	Burnt	Retouch	Platf	Bulb	Term	P-dep damage	Comments
19	1902	chunk (S)		18.8	no							no	large piece of irreg waste, with thin abraded cortex (c. 50%); surviving flake surfaces; mid-brown opaque flint
20	1906	flake (S)	L.Mes/E.Neo	1.8	25x17x10				cort	diffuse	feath	no	small slightly irreg flake, which appears to have removed base of type A2 blade of blade/flake core - prob core rejuvenation; thin, rounded & abraded cortex (35%); brownish-grey translucent flint
21	1906	chunk (P)		25.9	no								large piece of flint, with numerous small irreg flakes detached from 2 sides, but no clear pattern of working suggesting that it may be of natural origin; thin, rounded & abraded cortex (75%); brownish-grey translucent flint
	700	blade (S)	L.Mes/E.Neo	0.7	no				abrade	v.sm.pr			prox frag of blade, prob deliberately truncated; thin abraded cortex (65%); brownish-grey translucent flint
	1911	pot boiler frag		171.8	no		yes						large frag of white/pale grey sandstone pebble with well-sorted quartz grains c. 0.2mm across; reddened exterior surface; shattered with angular fractures
	1912	pot boiler frag		120.1	no		yes						large frag of burnt flint pebble; cortex is thin & abraded with dimples where pot-lids have detached

RWGC 05: worked and modified lithic materials

Summary:

No. of finds	Type	Date	Weight (g)	Size (mm)	Recort.	Burnt	Retouch	Platf	Bulb	Term	P-dep damage
20	disc scraper **1** piercer **1** flake (P) **1** flake (S) **5** blade (S) **2** chunk/chip **7** pot boiler **3**	Mes/E.Neo **1** L.Mes/E.Neo **2** L.Neo **1** L.Neo/BA **2** BA **1**	**552.7**g	comp **7** incomp **13**	yes **1** partly **1**	yes **5**	yes **3**	flat **2** comp **1** cort **2** abrad **1**	diff **1** v.sm.pr **1** sm.pr **1** pron **3**	feath **3** hinge **3**	yes **4** no **9**

APPENDIX 2

Pottery Archive RWGC04 and RWGC05

Barabara Precious, Alan Vince and Jane Young

site code	context	cname	full name	sub fabric	form type	sherds	vessels	weight	decoration	partdescrip	tion	date
rwgc04	100	FE	Ironstone tempered	fe ore occ chaff	jar ?	1	1	9		BS		Anglo Saxon
rwgc04	115	FE	Ironstone tempered	oolitic ironstone	jar	1	1	19		rim		Anglo Saxon
rwgc04	205	ERRA	erratic	basic igneous chaff voids angular grey mudstone/grog	?	1	1	29		base	fabric includes angular Millstone grit	Anglo Saxon/Prehistoric
rwgc04	207	R	Roman pottery	GREY	dish	1	1	23	burnished loop	rim		
rwgc04	210	SSTMG	Early Saxon Sandstone tempered (Carboniferous)	occ biotite	?	1	1	13		BS		
rwgc05	0001	R	Roman pottery	MOOXR	MBF	1	1	20		rim	draw?;lost white slip;TYP trits;neat vess good EG	late 3rd to 4th
rwgc05	0501	FE	Ironstone tempered	incl oolitic ironstone	jar ?	1	1	10		BS	Frodingham ironstone ?	Anglo Saxon
rwgc05	0600	SLIP	Unidentified slipware		dish	1	1	9		BS		18th to 19th
rwgc05	0600	LERTH	Late earthenwares		?	1	1	6		BS		16th to 19th
rwgc05	0600	BL	Black-glazed wares		large vessel	1	1	8		BS		18th to 19th
rwgc05	0700	MEDLOC	Medieval local fabrics	reduced;fine-med sandy;hard	jug	1	1	4	shoulder cordo	BS	reduced glaze	13th to 14th

site code	context	cname	full name	sub fabric	form type	sherds	vessels	weight	decoration	partdescrip	tion	date
rwgc05	0700	ERRA	erratic		jar ?	1	1	5		BS	burnished int;? ID	Anglo Saxon ?
rwgc05	1900	LSW2	13th to 14th century Lincoln Glazed Ware		jug	1	1	17	combed decora	rim	very abraded	13th
rwgc05	1900	NOTS	Nottingham stoneware		bowl	1	1	23		rim		18th to 19th
rwgc05	1902	PREH	Prehistoric wares	leached shell frags		1	1	2		BS	fe panning;? ID or less poss Mid Saxon	Prehistoric ?
rwgc05	1906	PREH	Prehistoric wares	leached shell frags	CLSD	1	1	4		BS	fe panning;? ID or less poss Mid Saxon	Prehistoric ?
rwgc05	1906	PREH	Prehistoric wares	leached shell frags		2	1	4		BS	fe panning;? ID or less poss Mid Saxon	Prehistoric ?
rwgc05	1908	PREH	Prehistoric wares	leached shell frags	CLSD	2	1	15		BS	fe panning;? ID or less poss Mid Saxon	Prehistoric ?
rwgc05	2103	MEDLOC	Medieval local fabrics	light firing OX/R;med sandy + fe;hard	jug	1	1	15		BS	very abraded	13th to 15th
rwgc05	3203	MISC	Unidentified types	OX/R/OX;leached shell inclusions	?	1	1	4		BS	leached & very abraded	probably 12th to 15th
rwgc05	u/s	MEDLOC	Medieval local fabrics	light OX/R/OX;fine-med sandy;hard	jug	1	1	7		BS	very abraded	13th to 15th

APPENDIX 3

Ceramic Building Material Archive RWGC05

Jane Young

site code	context	cname	full name	fabric	frags	weight	description	date
rwgc05	0704	RTIL	Roman tile		1	55	abraded;20mm thick	Roman
rwgc05	1105	BRK	Brick	marbled red & white	1	613	55mm thick;struck upper surface;sanded base & sides	Roman or post-medieval
rwgc05	1900	MISC	Unidentified types	light firing fine fabric	1	55	very abraded;almost inclusionless;cbm ?	post-medieval ?
rwgc05	2302	TESS	Tessarae	local tile fabric	1	14	24x22mm;probably was from a Tegula	Roman
rwgc05	3001	RTMISC	Roman or post-Roman tile	OX/R/OX;coarse sandy light clay/shale pellets	1	146		Medieval or Roman

APPENDIX 4

RWGC04

context no. ?

1. Introduction

1.1 Archaeological Services WYAS were commissioned by Lindsey Archaeological Services to undertake the analysis of a single soil sample from an Iron Age ditch fill from Reepham Welton Gathering Centre (NGR TF 047 751).

2. Method

2.1 The sample of five litres was processed using an Ankara-style flotation tank. The floating remains (the flot) were collected in a 300μm sieve and the heavy fraction (the retent) was collected in a 1mm mesh. The flot, once dry, was scanned using a binocular microscope and the results are presented below. The retent was scanned by eye for both ecofacts and artefacts.

3. Results

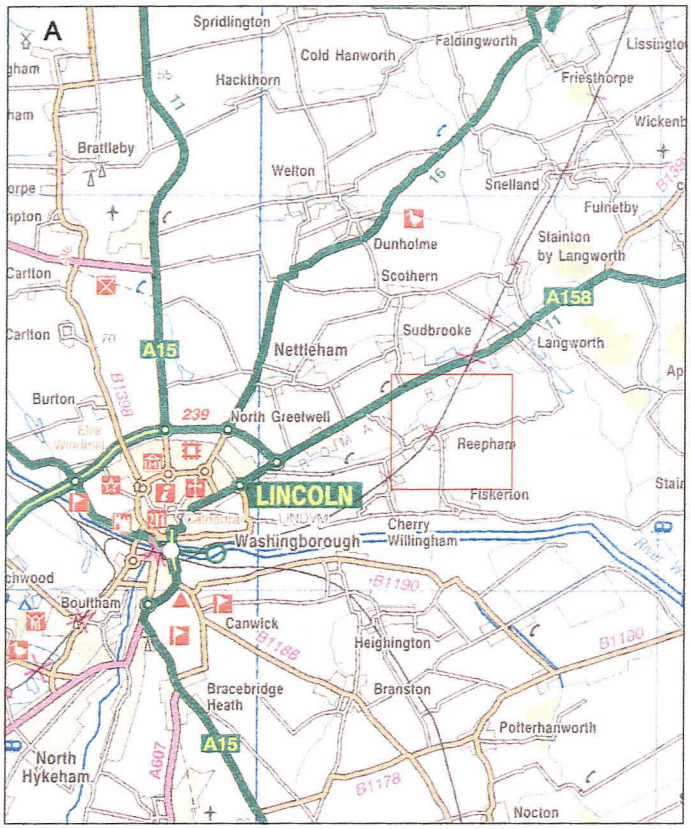
Barely any flot was recovered and no ecofacts were present. Contamination of all the flot by modern plant fibres was minimal. The retent contained only rare flakes of charcoal, but these were of insufficient size to be identified and were subsequently discarded. A few fragments of burnt bone were noted and have been retained. These are too small to be identified by the author, and as a result human cremation cannot be ruled out.

4. Conclusions

4.1 No meaningful environmental material was recovered during the processing of the sample. Only the burnt bone may warrant further attention.

Jane Richardson 28/02/2004

THE FIGURES



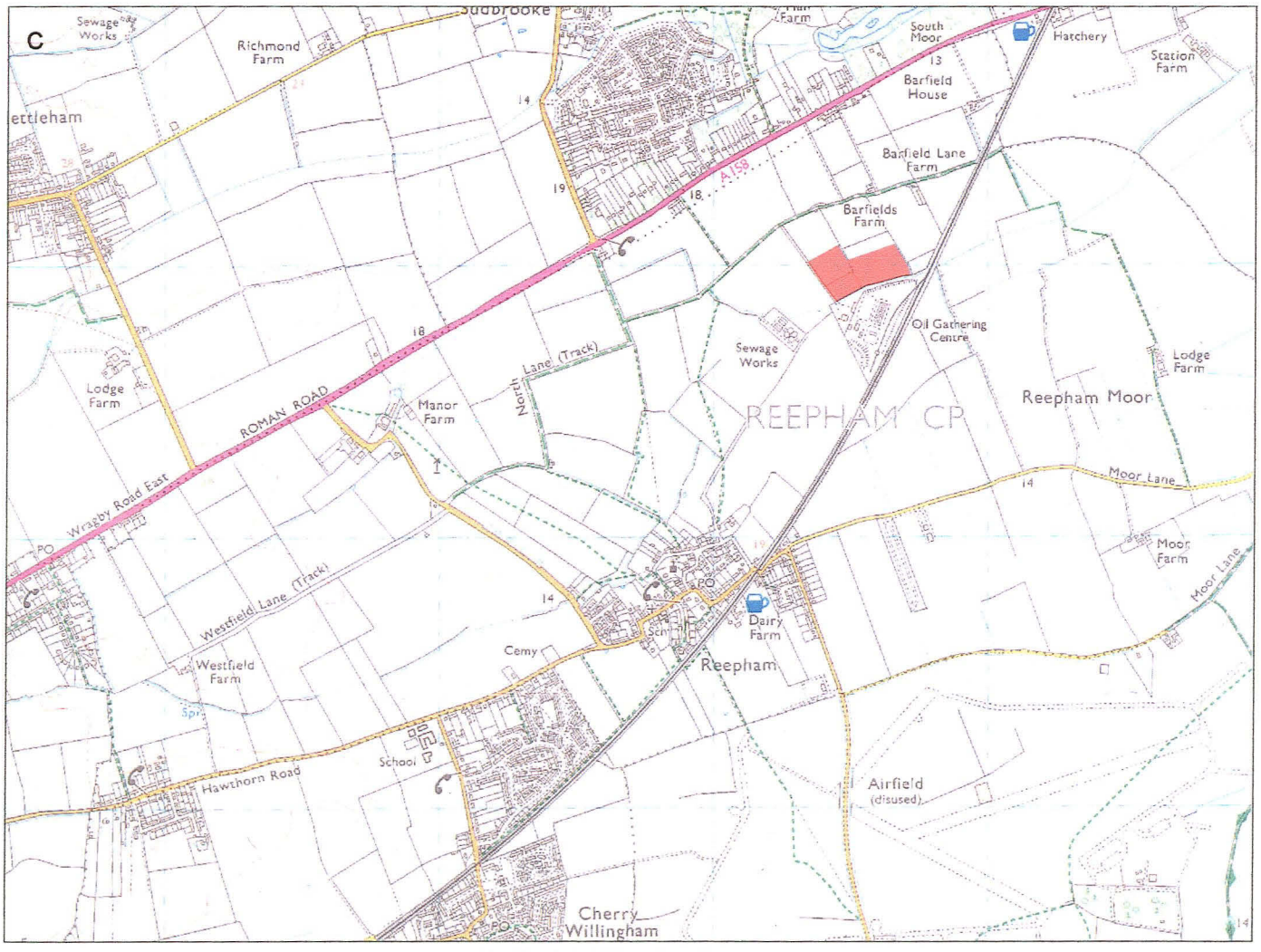


Fig. 1 Location of Welton Gathering Centre, Reepham (C based on 2000 1:25,000 Ordnance Survey Explorer map Sheet 272. Crown copyright, reproduced with the permission of the Controller of HMSO. LAS Licence no. AL 100002165).

Fig. 2 Plan of Trenches

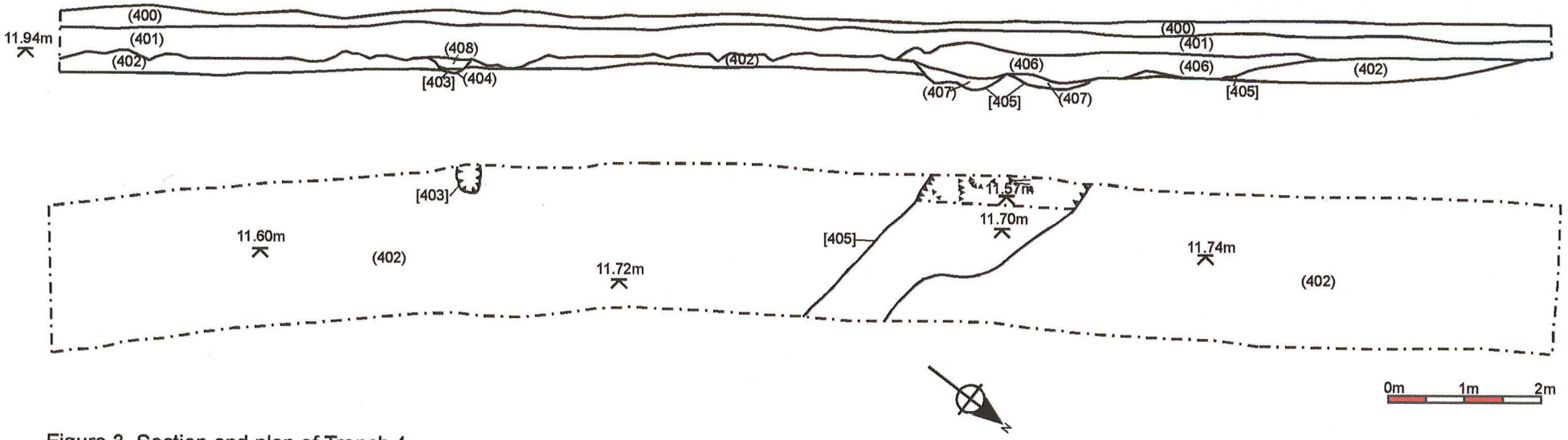


Figure 3. Section and plan of Trench 4.

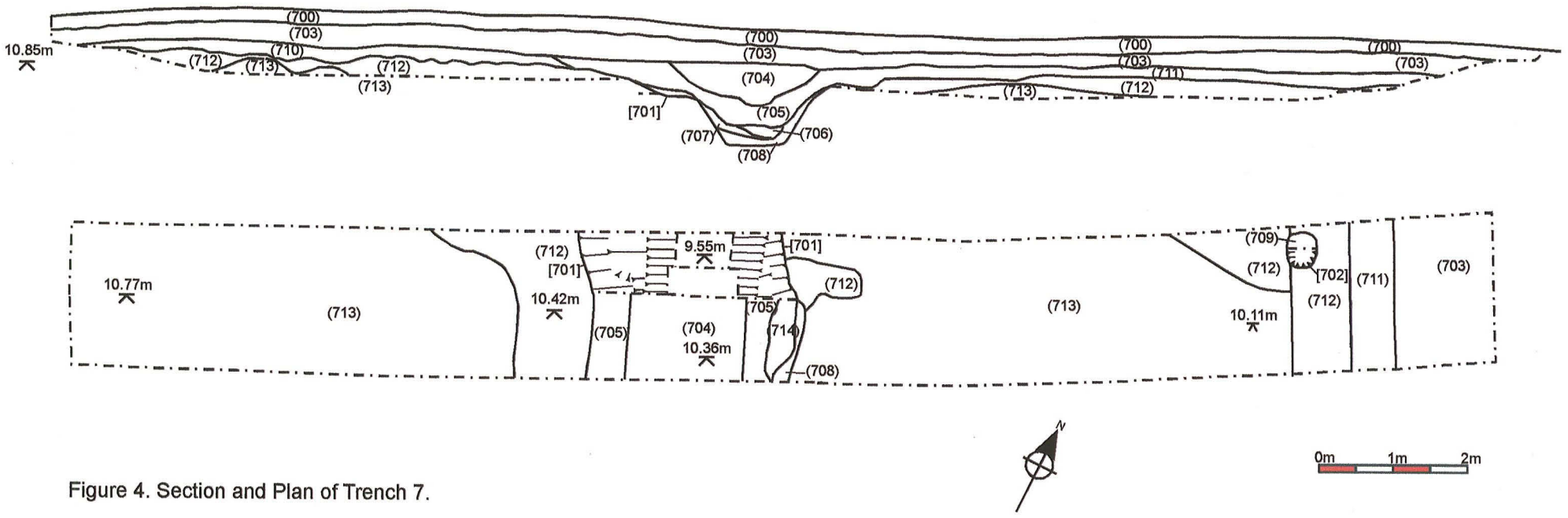


Figure 4. Section and Plan of Trench 7.

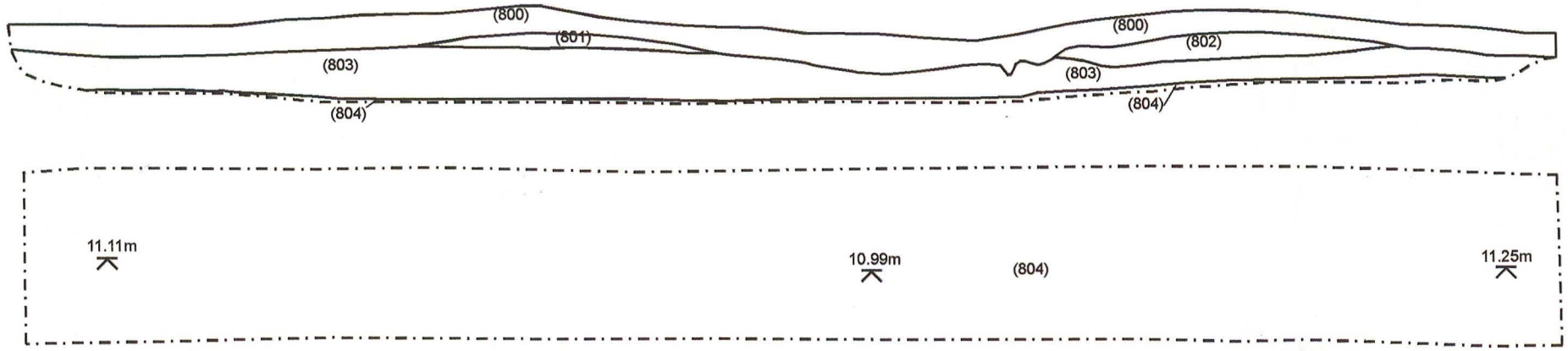


Fig. 5 Section and Plan of Trench 8

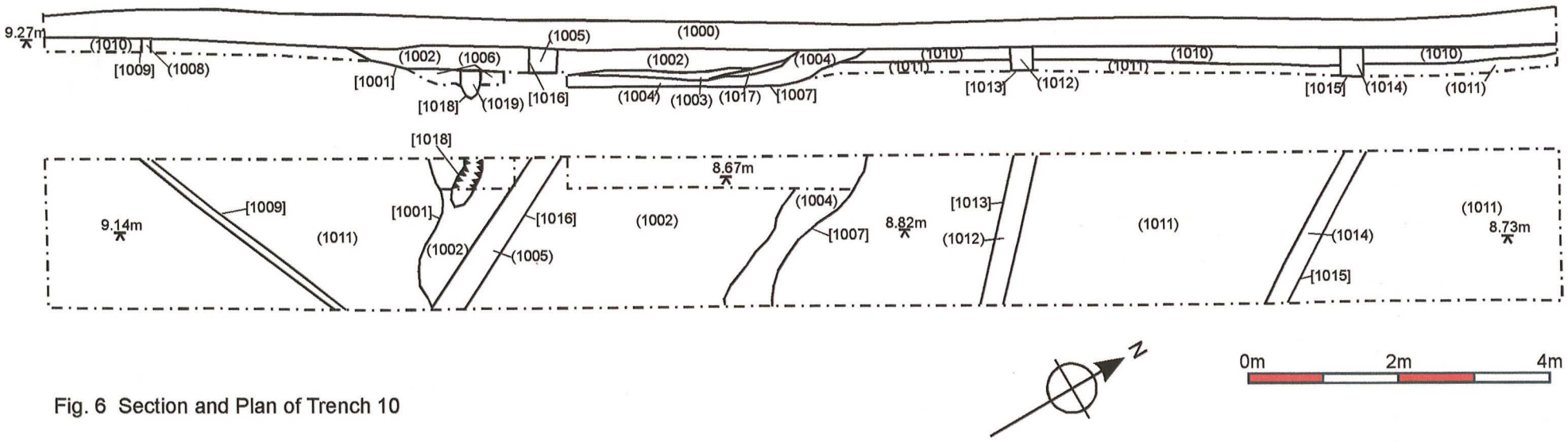


Fig. 6 Section and Plan of Trench 10

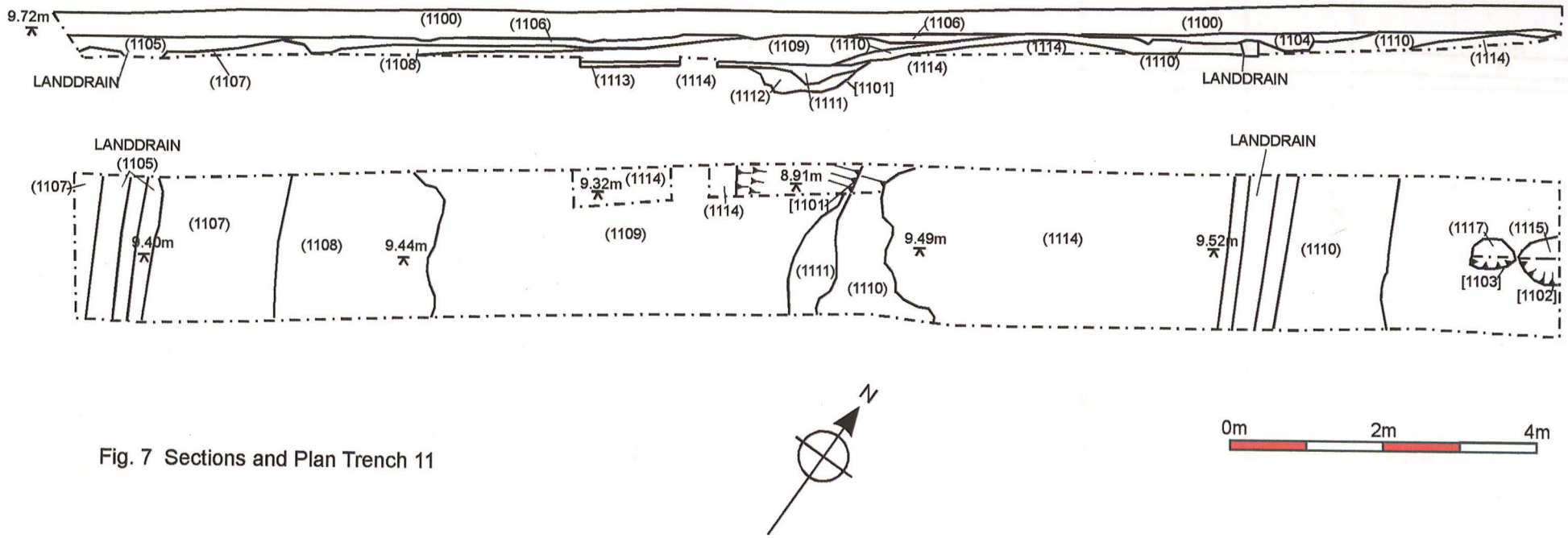


Fig. 7 Sections and Plan Trench 11

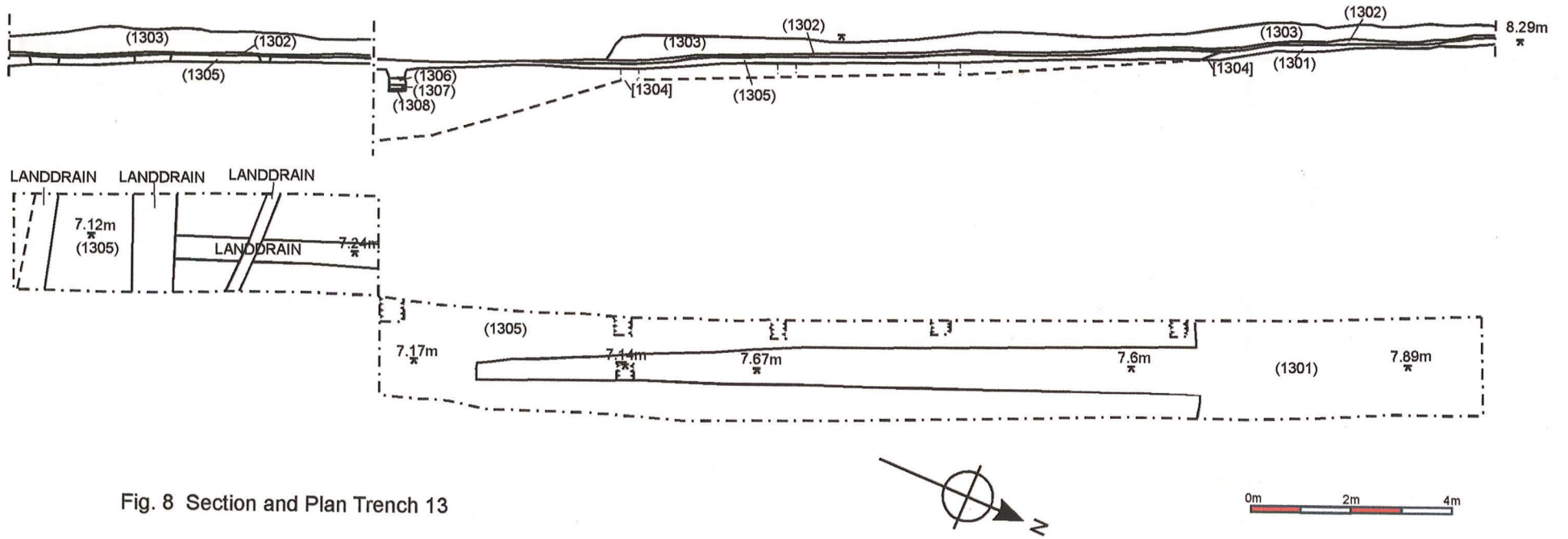


Fig. 8 Section and Plan Trench 13

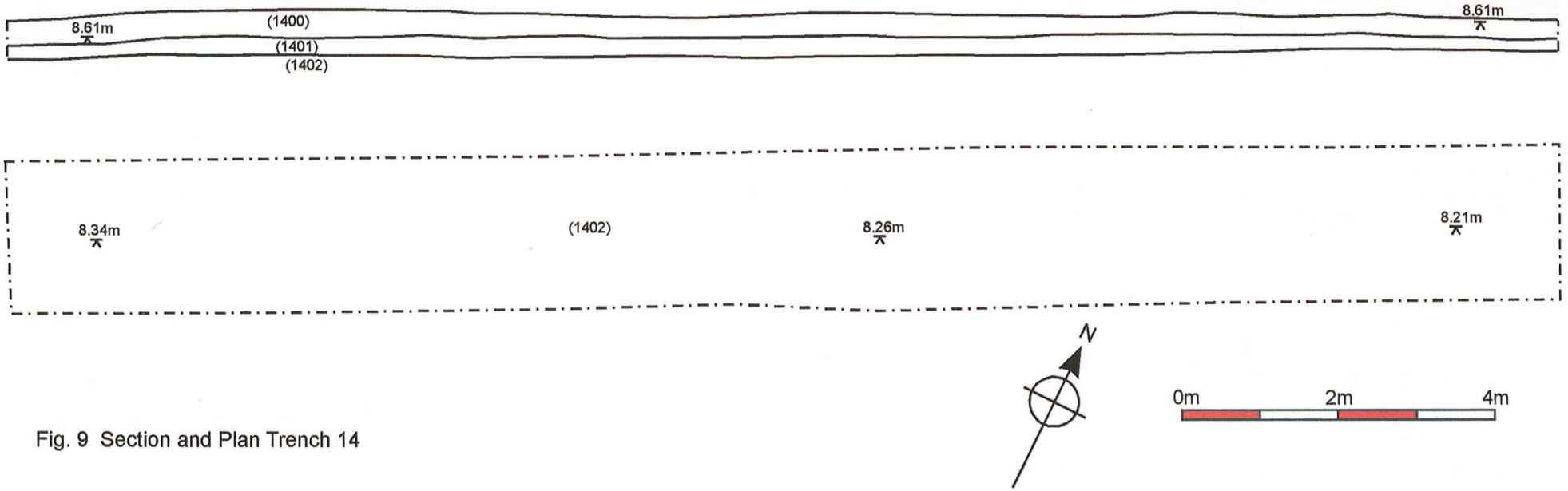


Fig. 9 Section and Plan Trench 14

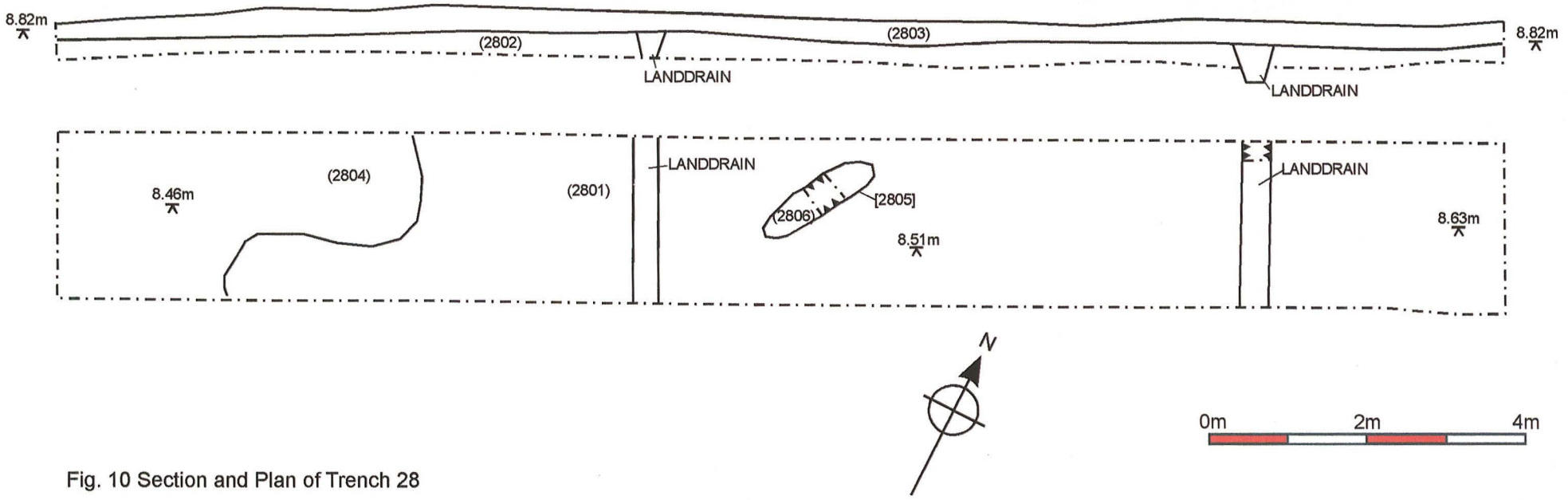


Fig. 10 Section and Plan of Trench 28

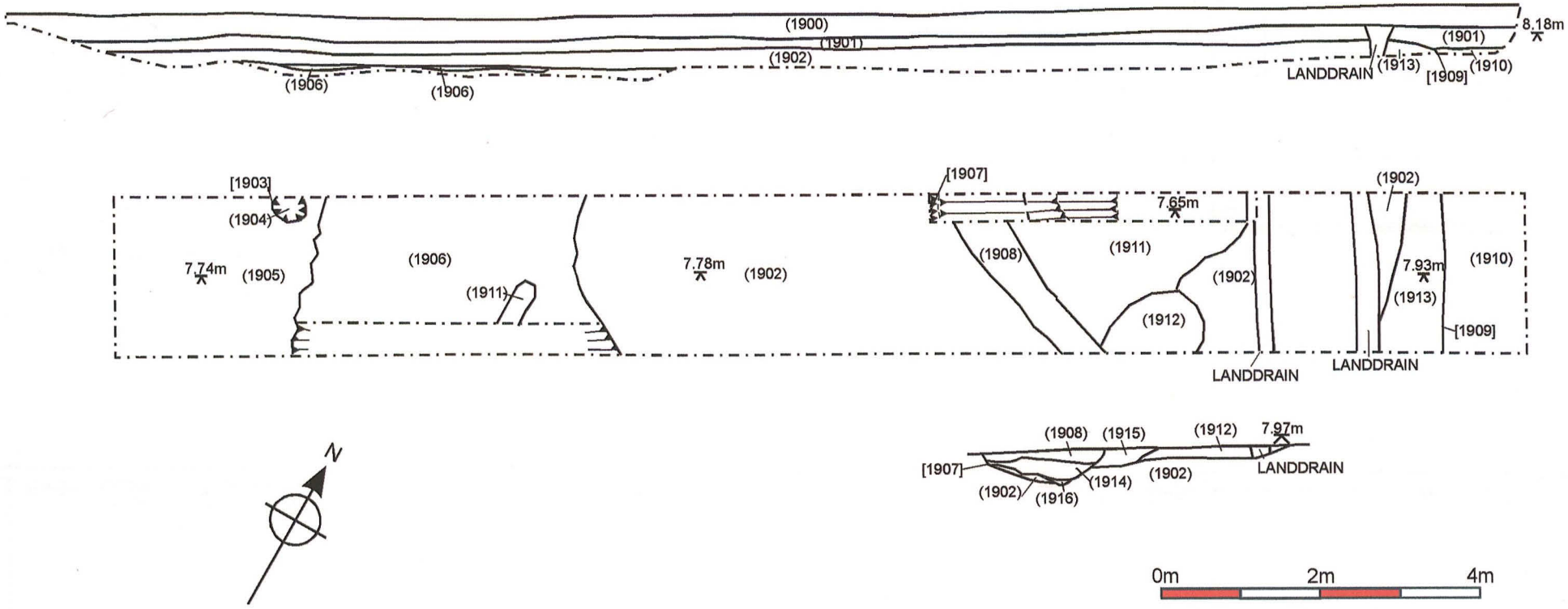


Fig. 11 Sections and plan Trench 19

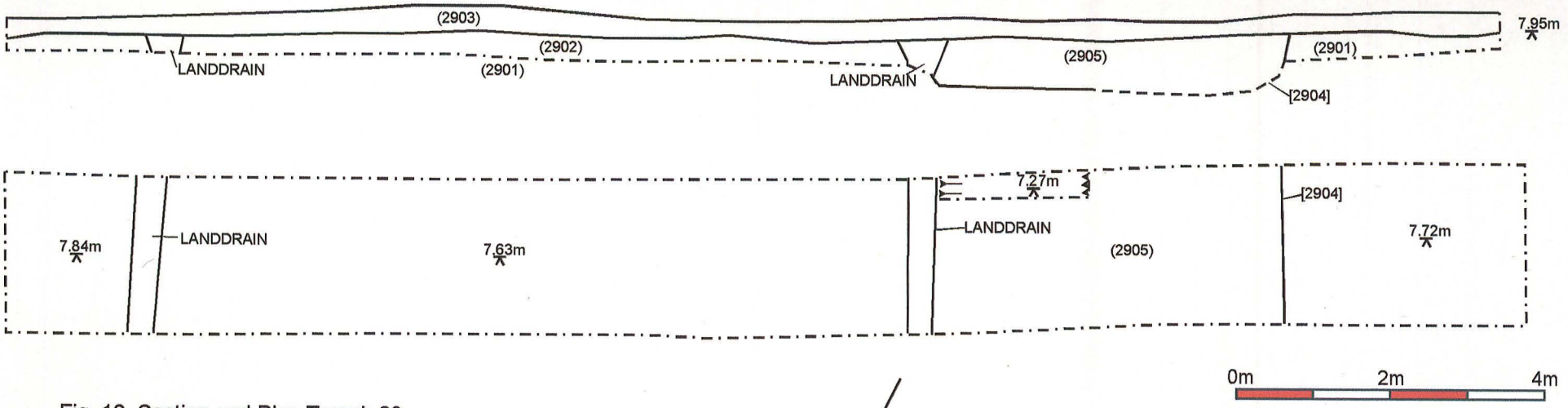


Fig. 12 Section and Plan Trench 29

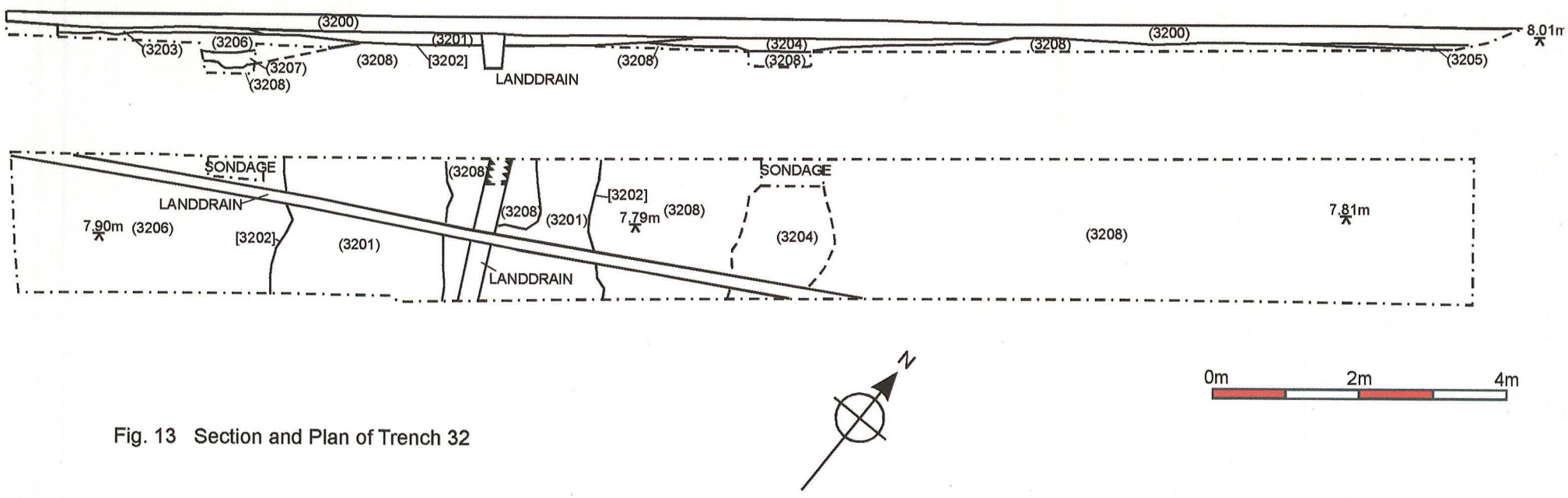


Fig. 13 Section and Plan of Trench 32

THE PLATES

Pl. 1 Field 1, looking north.

Pl. 2 Field 2, Looking northwest.

Pl. 3 Field 3, Looking north.

Pl. 4 Trench 3, looking north. Scale 1m verticle, 2m horizontal

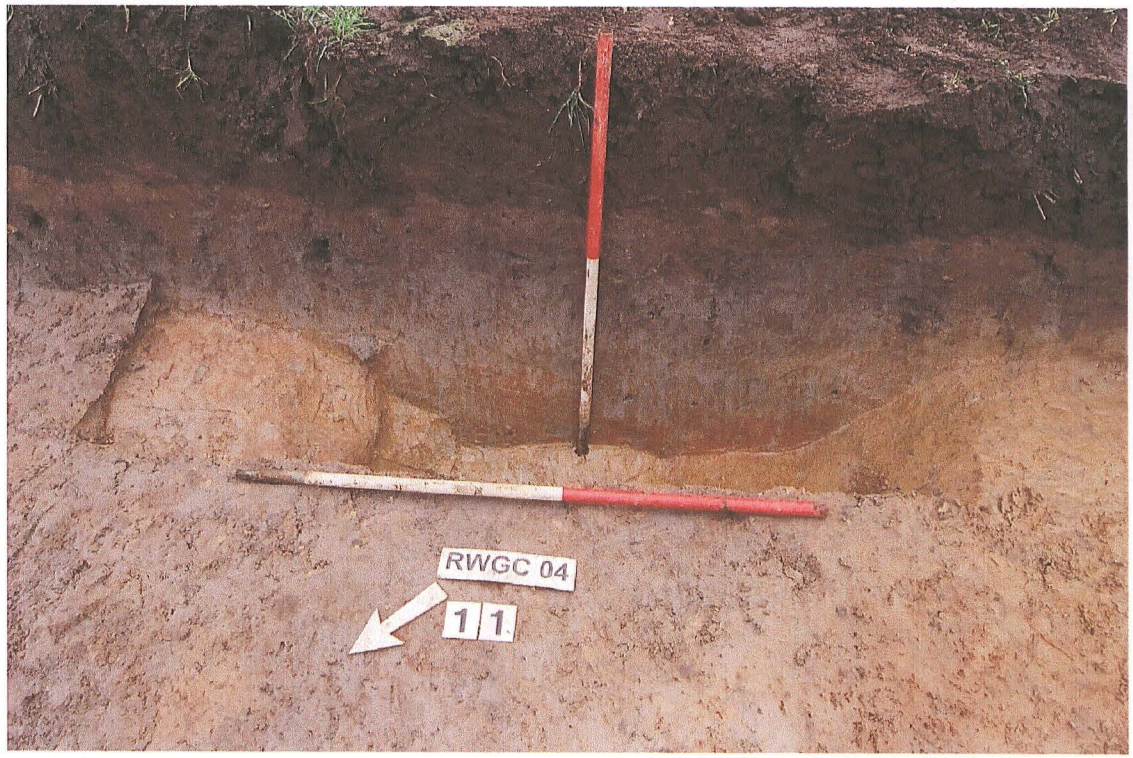
Pl. 5 Trench 7, looking west. Scales 2m (foreground) and 1m.

Pl. 6 Ditch 701, Trench 7. Looking northwest. Scales 1m.

Pl. 7 Trench 8, looking northwest. Scales 1m.

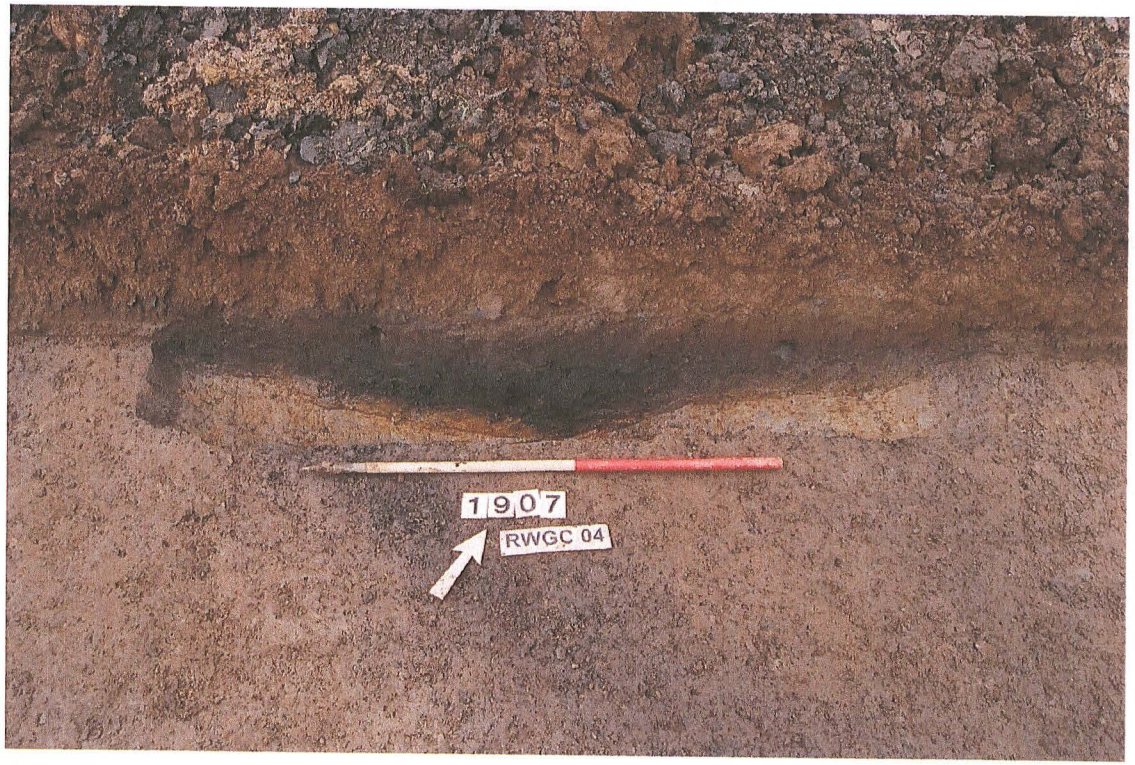
Pl. 8 Trench 9, looking southeast. Scale 1m verticle, 2m horizontal.

Pl. 9 Trench 13, looking northwest. Scale 1m.



Pl. 10 Ditch in Trench 11, looking southeast. Scales 1m.

Pl. 11 Trench 19, looking southwest. Scales 2m (foreground) and 1m.



Pl. 12 Ditch 1907, Trench 19, looking northwest. Scale 1m.