YORK

ARCHAEOLOGICAL TRUST

METCALFE LANE, OSBALDWICK, YORK

REPORT ON AN ARCHAEOLOGICAL EVALUATION

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METCALFE LANE,

OSBALDWICK, YORK

REPORT ON AN ARCHAEOLOGICAL

EVALUATION

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NON-TECHNICAL SUMMARY

In April and May 2002 York Archaeological Trust conducted an archaeological evaluation at a site adjacent to and west of Metcalfe Lane, Osbaldwick, York. This evaluation involved the excavation of twenty-two trenches, the siting of which was determined by a geophysical survey undertaken in Aril 2002 which had identified a number of areas and features of potential archaeological interest and significance. The evaluation investigated a number of these areas to determine the nature and date of the features identified in the geophysical survey. A series of 15 test-pits excavated for geo-technical purposes were also monitored by a short watching brief.

Features of archaeological interest, often in the position indicated by the geophysical survey but occasionally on a differing alignment, were found and excavated in Trenches 1, 2, 5, 6 and 21. These features included linear gullies and possible postholes. The major anomalies indicated in Trenches 2, 3, 4, 9, 10 and 19 were not located and probably indicate differences in the underlying natural geology. The remnants of medieval ridge and furrow ploughing were evident in all trenches as were 19th and 20th century attempts at land drainage. Several late post-medieval or modern features were also uncovered in Trenches 4, 5, 7, 8, 13, 14, 21, 16 and 18. The number of finds was small but included Roman, medieval, post-medieval and modern pottery. Finds recovered during an Open Day for interested local people indicated that the site had been manured from central York during the medieval and post-medieval periods.

1. INTRODUCTION

1.1 Location and Scope of works

Between April 22nd and May 24th 2002 York Archaeological Trust (YAT) carried out an archaeological evaluation on land, divided into nine unequally sized fields, west of Metcalfe Lane, Osbaldwick, York (NGR SE 6285 5220, Figure 1). The work was carried out on behalf of The Joseph Rowntree Trust, prior to a planning application for a residential development on the site. The proposed development area covers approximately 22 hectares and the evaluation was carried out to a specification prepared by John Oxley, Archaeologist for the City of York Council.

1.2 Aims

The objectives of the evaluation were: -

i) to establish the presence/absence of archaeological remains within the proposed development area.

ii) to determine, as far as reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeology.

iii) to make available the results of the investigation.

1.3 Methodology

The evaluation was based on a 2% sample of the development area, and consisted of twenty-two trenches of varying sizes and orientations. The majority of the trenches evaluated a 200sq metre area either in long thin transects (100m x 2m or 50m x 4m) or open areas (25m x 8m or 20m x 10m). Trenches 1 to 8 were situated to the south of the Sustrans Cycle path that divides the development area into 2 halves, Trenches 1 to 6 being positioned to intercept specific features identified by a geophysical survey carried out in April (Noel 2002). Trenches 9 to 22 were situated to the north of the cycle path, and of these Trenches 9, 10, 14 and 19 were positioned to intercept geophysical anomalies.

In all trenches the overburden was removed to the first significant archaeological level under close archaeological supervision by a Hitachi 360 degree mechanical excavator using a toothless ditching bucket. The trenches were then cleaned by hand and the remaining archaeological deposits were hand excavated to determine their extent and nature and to retrieve finds. All archaeological features were planned at a scale of 1:50. All significant archaeological features, deposits and structures were recorded in section at a scale of 1:10 and representative trench sections were recorded at a scale of 1:20. All of the trenches were photographed after cleaning and significant archaeological deposits were further photographed prior to and after excavation using colour print film. Recording followed procedures laid down in the York Archaeological Trust Context Recording Manual (1996).

A series of 15 geo-technical test-pits were also excavated by hand and machine under archaeological supervision. The deposit sequences were sketched and recorded.

All finds and the site records are currently stored with YAT under the Yorkshire Museum accession code YORYM:2002.451.

2. GEOLOGY AND TOPOGRAPHY

The study area lies on Bunter Sandstone solid geology (Geological Survey of Great Britain (England and Wales) Sheet 62 1967) within the vale of York. The drift geology consists of glacial sands, gravels, clays and boulder clays overlain by a clay that may have been the result of glacial ponding and in one part an area of aeolian (wind blown) sand. No alluvial deposits relating to the meandering course of Osbaldwick Beck were recovered, suggesting that the beck has progressively moved north over time rather than south.

The proposed development is situated to the north-west of the village of Osbaldwick, until recently in the county of North Yorkshire but now within the City of York. The southern edge of the site is flanked by Osbaldwick Beck, the eastern side by Metcalfe Lane, the northern edge by the Meadlands estate and Burnholme Community College and the western edge by the Tang Hall estate. The land appears to be relatively flat at c.12 or 13m Above Ordnance Datum (AOD) but rises gradually to the north to c.15m AOD. Remains of the ridges and dips of medieval ridge and furrow cultivation are clearly visible over most of the site. At present the site is used for agricultural purposes and is open pasture. The route of a former railway runs across the site from WSW to ENE and is now used as a cycle and pedestrian route.

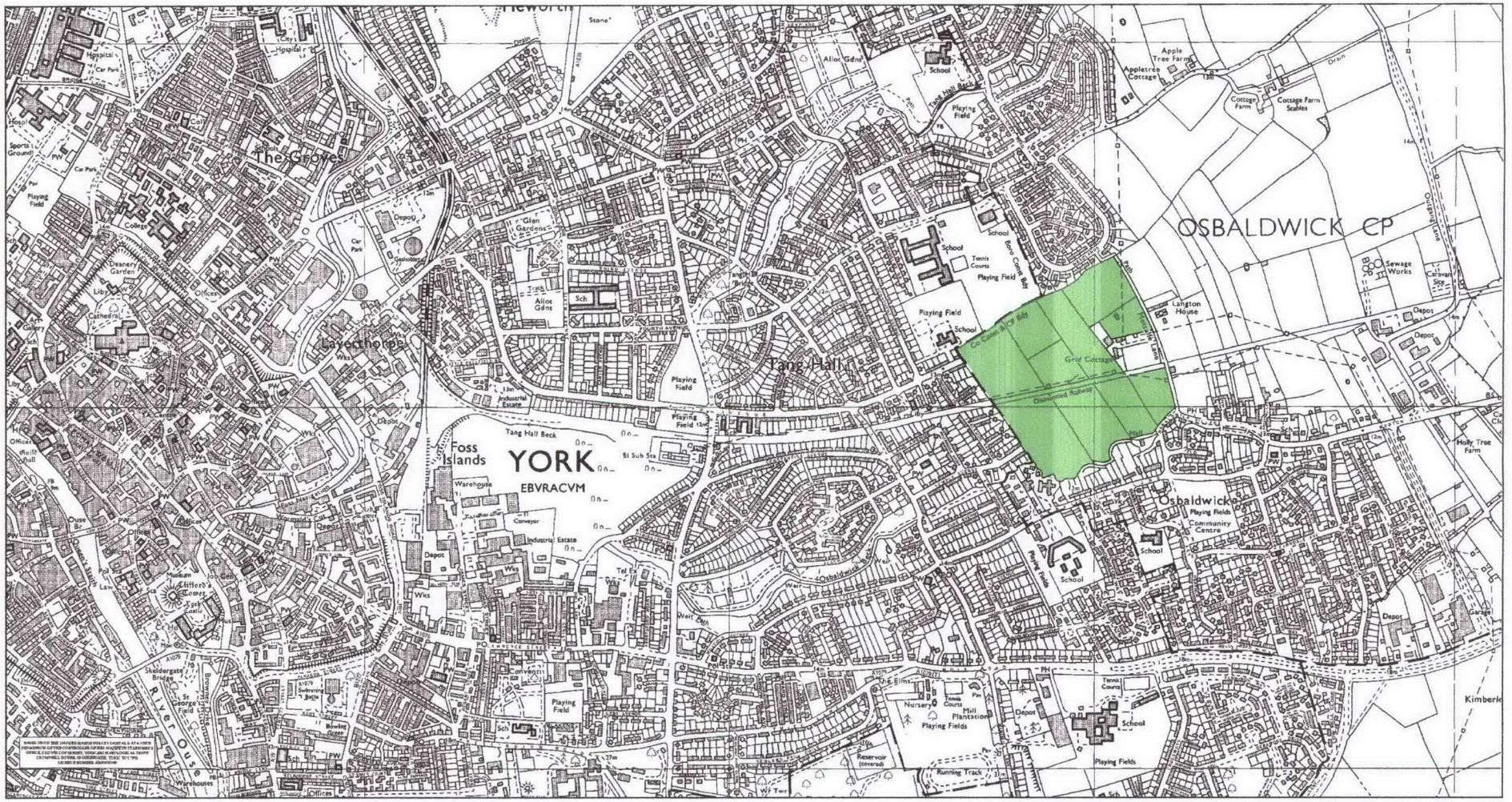


Figure 1 Site Location

Figure 2 Trench and Test Pit Location

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

This has been extensively covered in an earlier desk-top study commissioned by the Joseph Rowntree Trust (Macnab 1999) and only a brief summary is outlined here.

The area to the south of the development contains an east–west orientated glacial moraine, on which the Hull Road is now situated. The area to the north of this was a lake in the immediate post-glacial period, which gradually receded (Radley 1974, 10). Radley suggested that the moraine was used as a prehistoric routeway, and settlement therefore maybe expected to the north or south of it.

A Roman road was constructed along the top of the glacial moraine, fossilizing the prehistoric routeway in c.70 AD. The latter linked the forts of York (*Eboracum*) and Brough (*Petuaria*). To the north-east of the study area a second Roman road crosses just to the north of Apple Tree Farm, and links York with a fort situated at Stamford Bridge. Adjacent to the Roman road at Appletree Farm, several Roman burials have been located, and it was thought that the site of Ashley Park Estate may have housed a Roman Villa (Wenham 1967). More recent research and excavation by Lawton (1993) suggests that the area was used as a pottery kiln site in the early 2nd century AD, prior to a land use change in c.180AD. A further land use change, perhaps linked to the construction of the possible villa and the burials may have occurred in the 4th century AD.

The village of Osbaldwick can be traced back to the pre-conquest (1066) period. The name means Osbald's dwelling place (Smith 1969). The village may date from as early as the late Anglo-Saxon or early Anglo-Scandinavian periods but its original position in relation to the existing village and Osbaldwick Beck is as yet undetermined.

At the Norman Conquest in 1066, the Manor of Osbaldwick was held by the cathedral church of St. Peter's, York (York Minster). At the Domesday Survey (1086) this still appeared to be the case. The prebend (estate) of Osbaldwick was probably created between 1070 and 1100, and was administered by one of the church Canons or Prebendaries. In 1294 Robert de la Ford was the prebendary of Osbaldwick and he held a manor and 13 oxgangs in demesne there (VCH 1914).

In the Anglo-Norman period Osbaldwick was probably within the Royal Forest of Galtres (Cowling no date, 153; Wilde 1980) a large belt of woodland on the east side of the vale of York. Before 1316 King Henry II is said to have deforested the area and after this date Osbaldwick was then outside (on the bounds of) the forest (Wilde 1980).

A moated site, interpreted as the seat of the prebendary of Osbaldwick, was situated at the western end of the village and close to the development area. This was developed for housing in the 1960s. Medieval tofts and crofts were also situated on the south side of Osbaldwick Beck to the east of the moated site, and to the south of these an Old Barn (possibly a medieval Tithe Barn) and a Dove Cote were located (Wilde 1980).

At the eastern end of the present village stands the medieval church of St. Thomas. This is predominantly of 12th century date, with later 13th to 15th century additions. The earliest

reference to a priest is 1137-40 AD (Wilde 1980, 28). The church was appropriated to the prebend of Strensall in 1485, in which year a vicar was ordained.

The prebend of Strensall also acquired land in Osbaldwick, eventually gaining half the land in and around the village. The development area equates well with this as the ownership was c.50:50. The tenements on the south side of Osbaldwick Beck paid rent or tithe to the prebend of Osbaldwick and on the north side to the prebend of Strensall (Wilde 1980, 20-21). The development area was probably cultivated at this time, medieval ridge and furrow still covers the majority of the fields.

Enclosure of the agricultural fields may have occurred in the parish of Osbaldwick as early as the 16th century. However, the first written reference to enclosure is in 1648 when landowners petitioned the Court of Chancery for a division to be made of the common arable fields of the township. This was sanctioned in 1650 (Wilde 1980, 61). It was thought at the time of the desk-top study (Macnab 1999, 8) that some of the hedgerows within the development area may date from as early as this enclosure. In 1660 King Charles II obtained an Act of Parliament for further division and the enclosure of the forest, possibly a reference to the Royal Forest of Galtres. An Enclosure Act specifically for the parish of Osbaldwick was passed in 1769 (VCH 1914).

The field names suggest that the area has been pasture since the 17th century with perhaps seasonally wet water meadows on the north side of Osbaldwick Beck. The ownership of the land remained with the church until 1852 when the Ecclesiastical Commissioners were empowered to sell the lands belonging to both prebends.

A dismantled railway line (now a cycle path), orientated WSW to ENE, bisects the centre of the development area. This was part of the Derwent Valley Light Railway (VCH 1961) which was built in 1912, and which ran from the Foss Islands Branch at Layerthorpe in York to join the Selby to Market Weighton Line. It was opened for freight in 1912 and for passengers in 1913, but the latter declined from 1916 with competition from bus services. Petrol rail motor buses were introduced in 1924, but to no avail and the line was closed for passenger traffic in 1926. Freight traffic consisted mainly of agricultural produce, road mending stone and coal. The line was used during WWII to transport materials and also munitions, as there were supply dumps along the sides of the overgrown railway line and in lanes nearby. After WWII it was used for freight traffic and tourist excursions until its closure in the early 1980s (Reading 1978; Webster, 1996).

In 1932 a small electricity transformer sub-station was built just to the west of Metcalfe Lane, Osbaldwick, which connected York to the new national grid system for the first time. By 1949 its capacity was too small and it was linked to a new larger substation at Melrosegate. This carried a heavier load on large pylons along the side of the Derwent Valley Light Railway track. Eventually with the innovation of the 'supergrid' system the Osbaldwick substation was decommissioned and a new site was constructed on the Hull Road in 1967. The substation, which is immediately adjacent to the development area was finally switched off in 1969.

4. THE EXCAVATIONS

The trenches are discussed in numerical order, and within each trench the contexts are considered in chronological order from the bottom up.

The Area to the South of the Sustrans Cycle Path (Fields 1-4)

4.1 Trench 1

The trench was positioned in the south-eastern corner of the development area (field 1) to investigate several geophysical anomalies and the presence or absence of features relating to the medieval moated manor to the south-east. The trench was orientated north to south and measured 20m long and 10m wide.

The earliest deposit revealed within Trench 1 was compact mid bluish grey and chocolate brown silty clay (1002) situated at c.12.60m AOD. This is thought to have been the result of natural ponding activity in the immediate post-glacial period. In the north-west corner of the trench an odd sub-oval (banana-shaped) feature (1013) was located, with steep sides and an uneven base. This was filled with soft pale yellow gritty sand (1012). It is interpreted as a natural feature, probably the result of a tree fall, and the natural silting of the associated depression that resulted.

Truncating the natural clay on a east-north-east to west-south-west alignment was a linear gully (1011 and 1023). This appears to have been truncated by a later furrow. The longest section (1011) had steep sides and a rounded base and measured c.5m long, 0.30m wide and 0.10m deep. The shorter section (1023) had a similar profile and measured up to 0.25m deep. Linear gully (1011) was filled with reddish brown silty clay (1010) with frequent charcoal flecks whereas (1023) had four separate fills (1006-1009) consisting of interleaved deposits of charcoal and bluish grey and orange brown clay. Deposit 1008 was sampled and produced charred grain including barley, oats and wheat with fragments of oat awn and glume (chaff) suggesting perhaps the burning of the by-products of cereal production or of thatch close by.

To the south-east of (1011) two further sections of possible linear gully were located. The most northerly of these (1014) was aligned north-north-west to south-south-east, had steep irregular sides and an uneven undulating base. It measured up to 1.5m long, 0.45m wide and up to 0.15m deep and was completely filled with soft pale yellow brown gritty sand (1015). This backfill was very clean in comparison to gully fills 1006-1010 and perhaps suggests a natural origin for the feature. Its inclusion here is due to its alignment with a second odd linear spread of material (1021) which perhaps was within a very shallow flat bottomed cut (1022) of only 0.02 to 0.03m depth and 0.25m width. The backfill (1021) consisted of mid yellow brown sandy clay, which again was very clean and without inclusions. It is tentatively suggested that perhaps these features represent the northern limit of a small enclosure or the northern limits of a toft that fronted onto the road to the south (called Osbaldwick Village). This existed prior to the medieval ridge and furrow and probably before the construction of the moated manor to the south, and therefore may date the gullies to the 10th or 11th centuries.

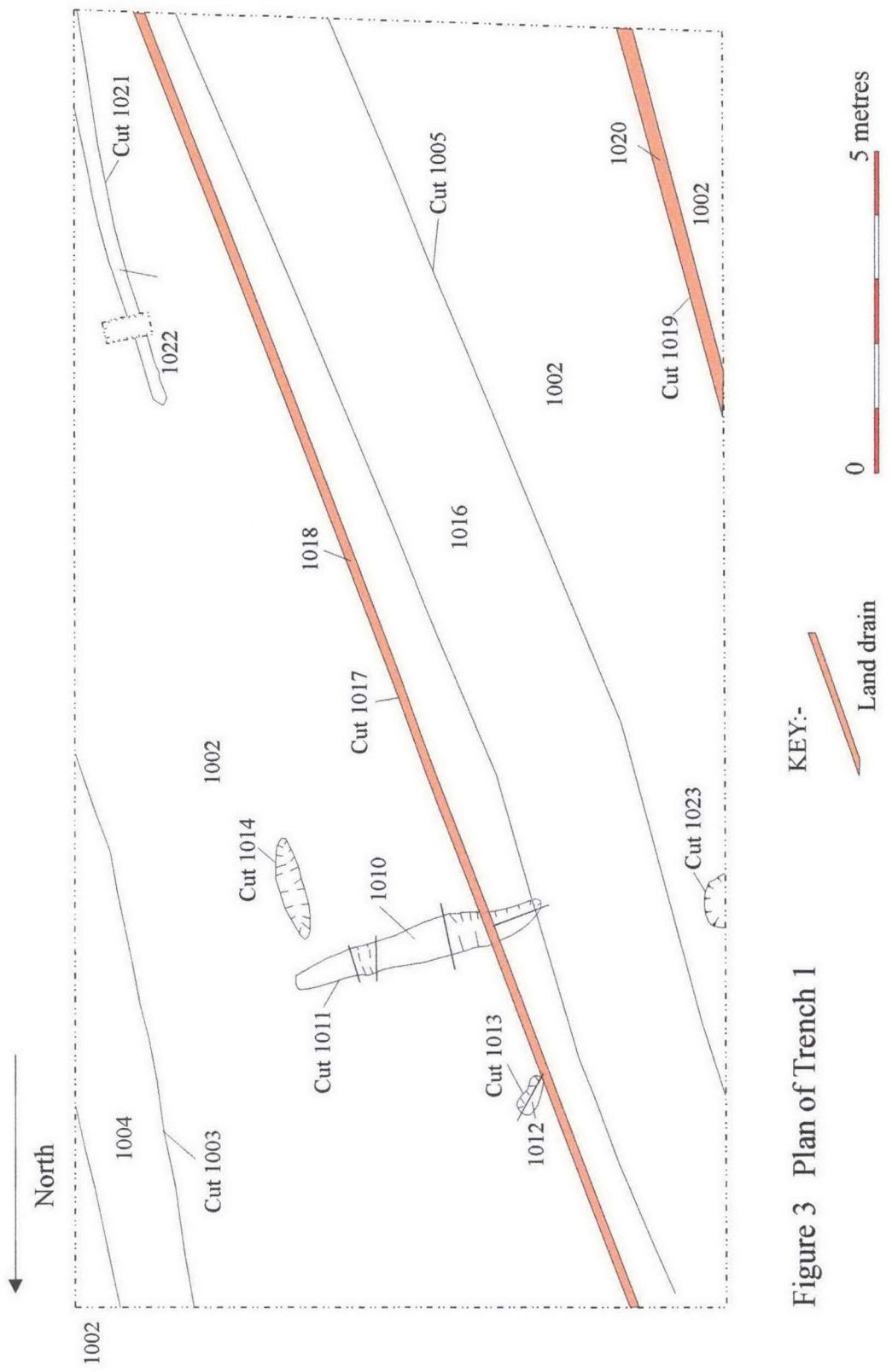


Figure 3 Plan of Trench 1

Two furrows (1003 and 1005) aligned north-west to south-east bisected the earlier enclosure. These were up to 2.5m wide with shallow sides and uneven curved bases. They were completely filled with compact yellow brown sandy clay (1004 and 1016). A compact mid brown sandy clay (1001) layer completely sealed the whole trench and is interpreted as a buried medieval ploughsoil or subsoil.

Several modern land drains (1017-1020 and 1024-1025) on a similar alignment to the furrows truncated the subsoil. The whole trench was sealed with dark brown clay loam (1000) topsoil which raised the ground level to c.13.00m AOD. Extant ridge and furrow earthworks survive in the trench area.

4.2 Trench 2

This trench was the southerly of two trenches situated within field two and its position was specifically chosen to investigate an oval anomaly that was located during the geophysical survey. The trench was orientated north-west to south-east and measured 50m long and 4m wide. The geophysical anomaly was not located and is thought to have been caused by variations in the underlying natural deposits.

A natural glacial ponded clay (2002) which varied in colour from dark reddish brown to mid bluish grey, was the earliest deposit located at c.12.60m AOD at the southern end and at c.13.40m AOD at the northern end of the trench. Up to thirteen natural tree-throw holes (caused by tree felling) were observed to truncate the top of the post-glacial clay. Two of these were investigated at the north end of the trench to prove they were natural in origin, and once proved were left unnumbered.

Approximately 10m from the north-end of the trench two post-holes (2006 and 2008) were located. These had been heavily truncated by ploughing and had moderate sloping sides and flattish bases. They were both oval in shape and measured c.0.30m long by between 0.15m and 0.20m wide and up to 0.09m deep. The post-holes were c.2.5m apart, aligned north-east to south-west and may have formed part of a fence line crossing the area. Both were completely backfilled with mid grey clay silt (2005 and 2007) with very occasional small fragments of pottery which were dated to the post-medieval and Roman periods. A third isolated post-hole (2004) was located c.10.5m to the south of 2006 and 2008. Post-hole 2004 was circular in plan, with near vertical sides and a flat base. It measured 0.20m in diameter and 0.22m deep and was completely filled with (2003) which was similar to 2005 and 2007, and which contained pottery which may be dateable to the Roman period. It is uncertain whether this post-hole could be associated with 2006 or 2008 to the north.

The whole trench was completely sealed by a layer of orange brown silty clay (2001) which was up to 0.19m thick and is interpreted as a buried medieval ploughsoil or subsoil. A layer of dark brown silty clay (2000) topsoil raised the ground level to c.13.00m AOD at the southern end and to c.13.70m AOD at the northern end of the trench. Extant ridge and furrow earthworks survived in the trench area.

4.3 Trench 3

The trench was the northerly of two trenches within field two. It was positioned to intercept a curvilinear geophysical anomaly, and was orientated north-west to south-east, measuring 20m long and 10m wide. The geophysical anomaly was not located and is thought to have resulted from a variation in the underlying natural deposits.

Natural glacial clay (3010) which was orange brown in colour was located at c.13.50m AOD at the southern end and at c.13.80m AOD at the northern end of the trench. This was truncated by about 11 features which were filled with very clean pale yellow and grey sand and sandy clay. The latter were left unexcavated (and unnumbered) and were interpreted as the result of natural tree-falls and the secondary silting of the depressions that resulted.

Truncating the natural deposits on a north-west to south-east alignment were two parallel furrows (3007 and 3009). These had shallow gently sloping sides, undulating rounded bases and measured up to 2.5m wide and between 0.20m and 0.30m deep. The furrows, which extended along the full length of the trench, were completely filled with mottled orange brown sandy clay (3006 and 3008) with charcoal flecks and small fragments of pottery dateable to between the 12th and the 14th century.

Two linear slots (3003 and 3005) with steep near vertical sides and flat bases truncated the central part of each furrow. These measured 0.14m wide and 0.30m deep and contained horse-shoe shaped land drains (3002 and 3004) which were sealed and the whole of the construction backfilled with mixed mottled dark grey silty clay. This type of land drain may date from the late 18th or early 19th century.

A thick layer of compact orange brown silty clay (3001) sealed the entire trench and raised the ground level by c.0.25m. This was interpreted as a buried plough-soil and the fact that it sealed the land drains suggests that this field had been ploughed after their insertion. A friable dark grey brown silty loam (3000) topsoil sealed the entire trench and levelled the ground off at 14.15m AOD at the north end and at 14.00m AOD at the southern end of the trench. As with Trench 2 extant ridge and furrow earthworks survived in the trench area.

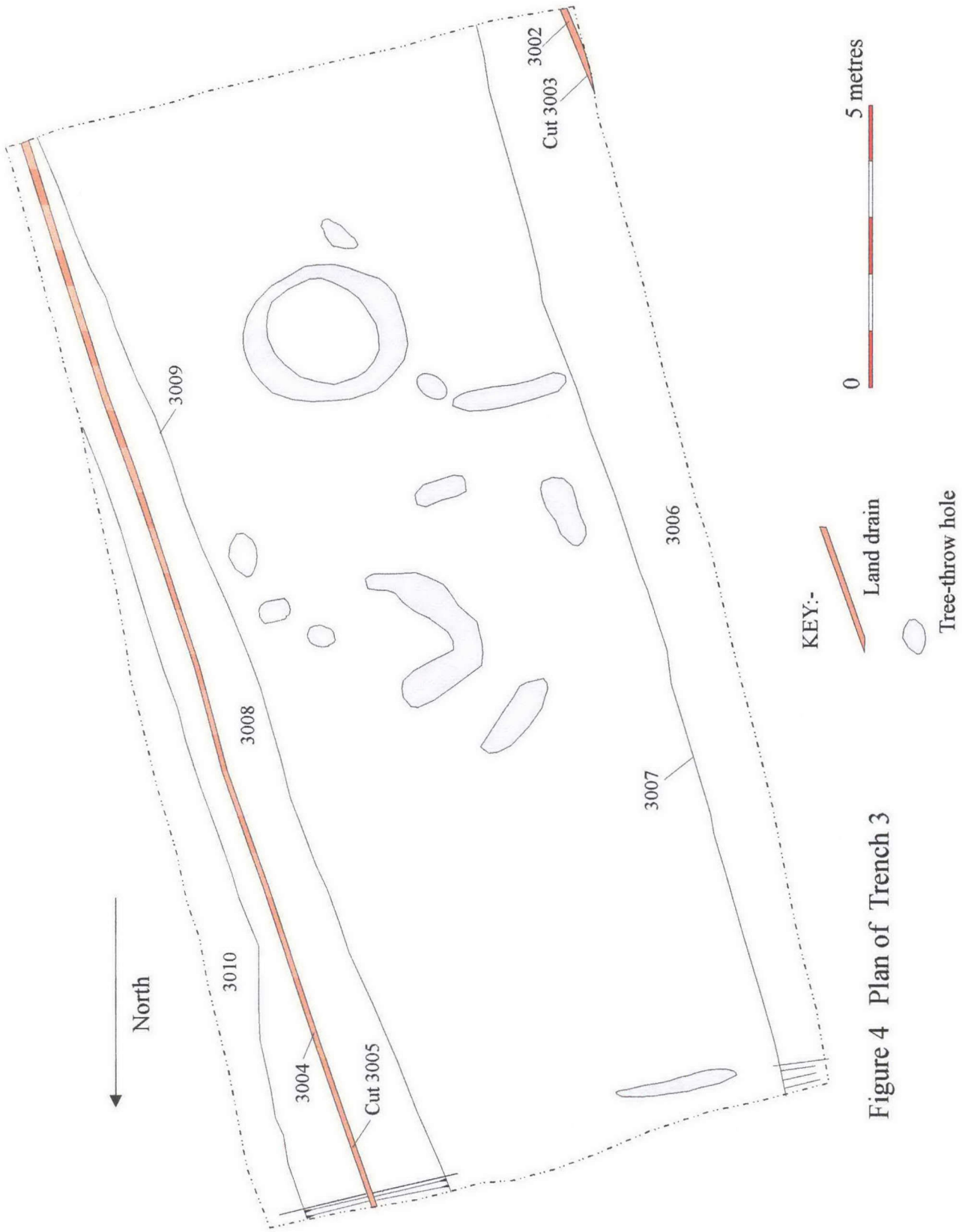


Figure 4 Plan of Trench 3

4.4 Trench 4

One of three trenches within field 3, Trench 4 was positioned on the eastern side of the field on a north-west to south-east orientation. Its location was determined by the presence of two curvilinear geophysical anomalies, only one of which was identified and to look at the deposits close to Osbaldwick Beck. The trench measured 100m long and 2m wide.

The earliest deposits within the trench were orange brown, red brown and bluish grey clays (4004 and 4005) which were located at c.13.60m AOD at the north end and at c.12.00m AOD at the south end of the trench.

Truncating the natural were seven features (4002, 4007, 4009, 4011, 4013, 4015 and 4021) which varied considerably in size and shape. They are all interpreted as natural in origin, probably deriving from tree falls. These features were completely backfilled with orange-red or greyish orange clay (4014 and 4019), light pale cream, light grey and light reddish grey sandy or silty clay (4001, 4006, 4010, 4012 and 4020) and medium grey clay with frequent charcoal (4008). Backfill 4019 contained a probably intrusive sherd of possible Roman pottery and backfill 4006 an intrusive clay tobacco pipe fragment. Deposit 4008 was sampled producing little of interest other than a few tiny fragments of charcoal (which was probably naturally occurring). The most interesting and largest of these features (4021) which was located at the northern end of the trench, may be one of the geophysical anomalies. Its northern edge was water smoothed suggesting that it had silted up naturally by water action from its northern side.

Sealing the whole of the trench was orange brown slightly silty clay (4003) which was up to 0.30m thick and is interpreted as a buried plough soil, possibly of medieval origin.

A modern circular land drain (4018) orientated east west bisected the southern end of the trench. This was truncated by a north-east to south-west orientated service trench (4016-4017) probably holding a sewage pipe. When the service trench was backfilled, the land drain was repaired with a section of grey plastic pipe. A mid to dark brown clay loam (4000) topsoil sealed the entire trench levelling it off at 13.90m AOD at the northern end and at 12.73m AOD at the southern end of the trench. Extant ridge and furrow earthworks survive in the trench area.

4.5 Trench 5

This trench was situated in the south-western corner of field 3. It was orientated north-west to south-east, measured 25m long and 8m wide and was positioned to intersect a geophysical anomaly, which was located within the trenches confines.

Natural orange and blue grey clay (5018) was located from c.12.70m AOD at the northern end and from c.12.05m AOD at the southern end of the trench, becoming increasingly laminated with sandy lenses to the south. On the western side of the trench a possible tree-throw hole (5017) was located. This had moderately steep sloping sides and a rounded base and measured over 1.20m wide and up to 0.35m deep. It was initially filled with blue grey silty clay (5016) with brownish yellow sand mottles, and secondarily with mottled light yellow silty sand (5015).

At the north end of the trench on a west-south-west to east-north-east alignment was a linear gully (5003, 5010 and 5019). This had moderate to steep sloping sides and a flattish base,

measuring between 0.60m to 0.70m wide and up to 0.23m deep. The ditch curved slightly in its 5.5m length and appeared to terminate at this point. It was completely backfilled with mottled orange grey clay (5002, 5004 and 5009) which was sampled for environmental evidence. The sample revealed no further information. Backfill 5009 contained a single sherd of very abraded oxidised possible Roman pottery which may date the gully to the 2nd century AD. The leached colour of the backfill and the fine clay backfill would back-up this date. The geophysical anomaly suggests that this ditch is L-shaped in plan and may suggest that it formed part of a small enclosure. No further features were located to the east or south of the ditch to suggest that occupation was carried out within it. The ditch may simply be an early attempt at drainage or a small enclosure for animals.

A furrow (5008 and 5012) which was orientated north-west to south-east was located on the eastern side of the trench. It had gently sloping sides and an undulating rounded base. The furrow measured c.3m wide and up to 0.35m deep. It noticeably truncated the eastern terminus of ditch (5010). The furrow was completely filled with mottled orange brown silty clay and dark grey brown sandy clay (5007 and 5011) which were pottery dated to the post-medieval period.

Two north-west to south-east aligned circular land drains (5005-5006 and 5013-5014) truncated the earlier deposits and features. Their backfills (5005 and 5013) and the whole of the trench were sealed by light yellow brown silty sand (5001) which was up to 0.30m thick and is interpreted as a buried plough-soil of medieval and later origin. A modern service trench (5020-5021) which is thought to hold a sewage pipe truncated the southern end of the trench, on a north-east to south-west alignment. This service continues into Trench 4. The whole trench was sealed by mid to dark brown sandy clay loam (5000) which levelled the trench off at 13.28m AOD at the north end and 12.60m AOD at the southern end of the trench. Extant ridge and furrow earthworks survive in the trench area.

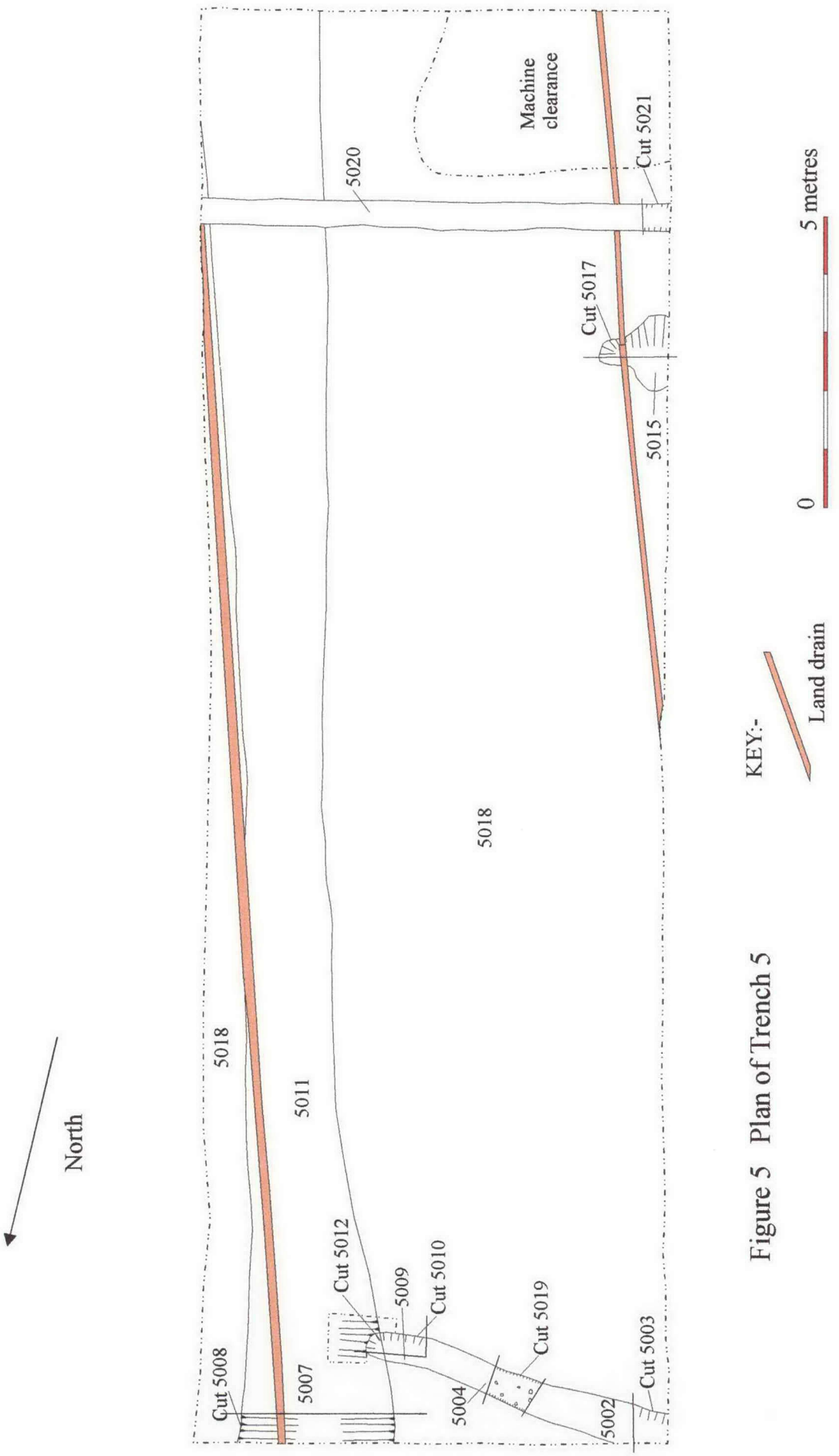


Figure 5 Plan of Trench 5

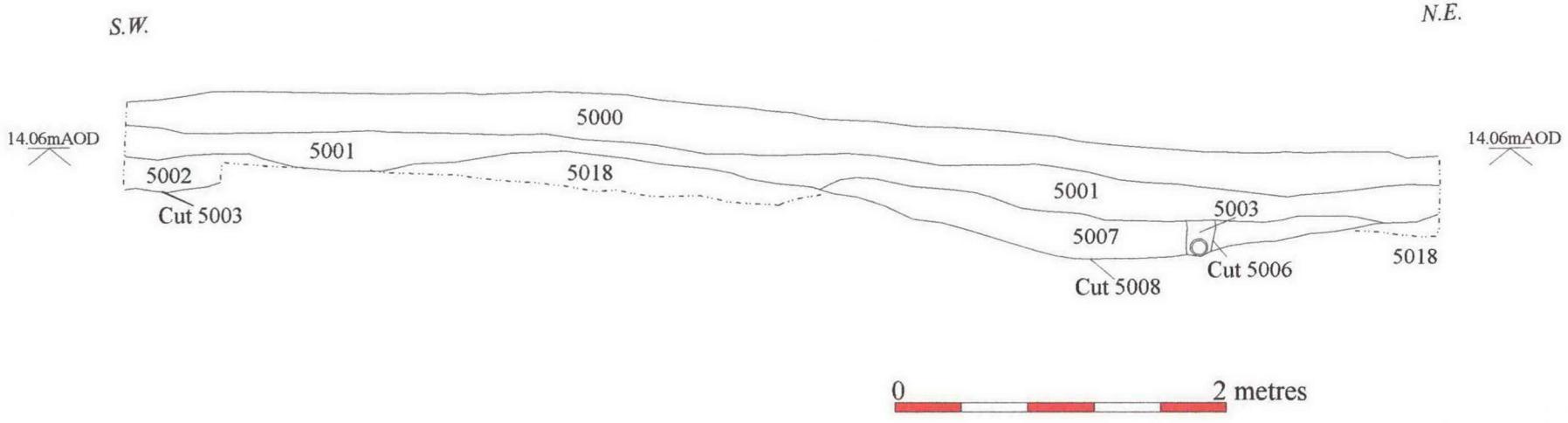


Figure 6 Trench 5 South-East facing Section

4.6 Trench 6

This trench was positioned in the north-west corner of field three and was orientated north-west to south-east. It was positioned to intercept a geophysical anomaly which turned out to be a south-west to north-east land drain (unnumbered). The trench measured 25m long and 8m wide.

Natural deposits (6009) were exposed across the base of the trench which consisted of orange grey to dark red brown and blue grey clay. This was situated at 13.63m AOD at the northern end and at 13.52m AOD at the southern end of the trench suggesting a more level profile than some of the trenches discussed above. Three patches of mid to dark grey clay were investigated and interpreted as tree-throw holes (unnumbered).

A linear ditch (6004, 6015 and 6017) aligned north to south was located on the western side of the trench. This had moderately steep sloping sides, a flattish base and measured up to 0.65m wide and up to 0.20m deep. The northern portion appeared to contain two backfills (6002-6003). The primary fill was light orange grey clay (6003) with occasional charcoal flecks and pottery flecks, whilst the secondary fill (6002) was a purer mid grey clay with similar inclusions. Backfill 6002 was pottery dated to the Roman period (possibly the 2nd Century AD) and was sampled for environmental evidence, the sample revealing nothing further about the deposit. To the south the secondary fill was not observed and only the lighter primary fill was recorded (6014 and 6016). This suggests that the southern portion of the ditch has received a greater amount of attrition by ploughing. The leached colour of the ditch fill and its similarity to enclosure ditch (5003, 5010 and 5019) in Trench five would suggest that they were contemporary. Its function was probably agricultural, relating to drainage and perhaps stock enclosure.

Unusually this trench was covered wih a layer of light yellow brown clay silt (6001) which was up to 0.40m thick and is interpreted as a buried plough-soil or sub-soil, probably dateable to the medieval period.

Two furrows, (6008 and 6013, 6019) truncated the earlier deposits. These were aligned north-west to south-east and had gently sloping sides and rounded but undulating bases. They measured over 1.4m wide and over 0.20m deep and were completely backfilled with light orange greyish brown sandy clay (6007, 6012 and 6018). Furrow backfill 6007 was pottery dated to the 16th century by a fragment of Hambleton ware and 6018 contained residual Roman pottery.

One north-west to south-east aligned circular land drain (numbered 6005-6006 and 6010-6011) truncated furrow (6013). An east-west circular land drain (unnumbered) also truncated the area. Finally a layer of mid to dark brown clay loam (6000) topsoil sealed the trench and levelled the area off at c.14.05m AOD across the whole area of the trench. Extant ridge and furrow earthworks surrounded the trench area.

Field 3 appears to have been agriculturally improved and then deep ploughed so that the subsoil appears to seal the land drains in the majority of the trenches. Also the area in the vicinity of Trench 6 may have been subject to heavier plough attrition as it may have been close to a turning area or headland at the north end of the field.

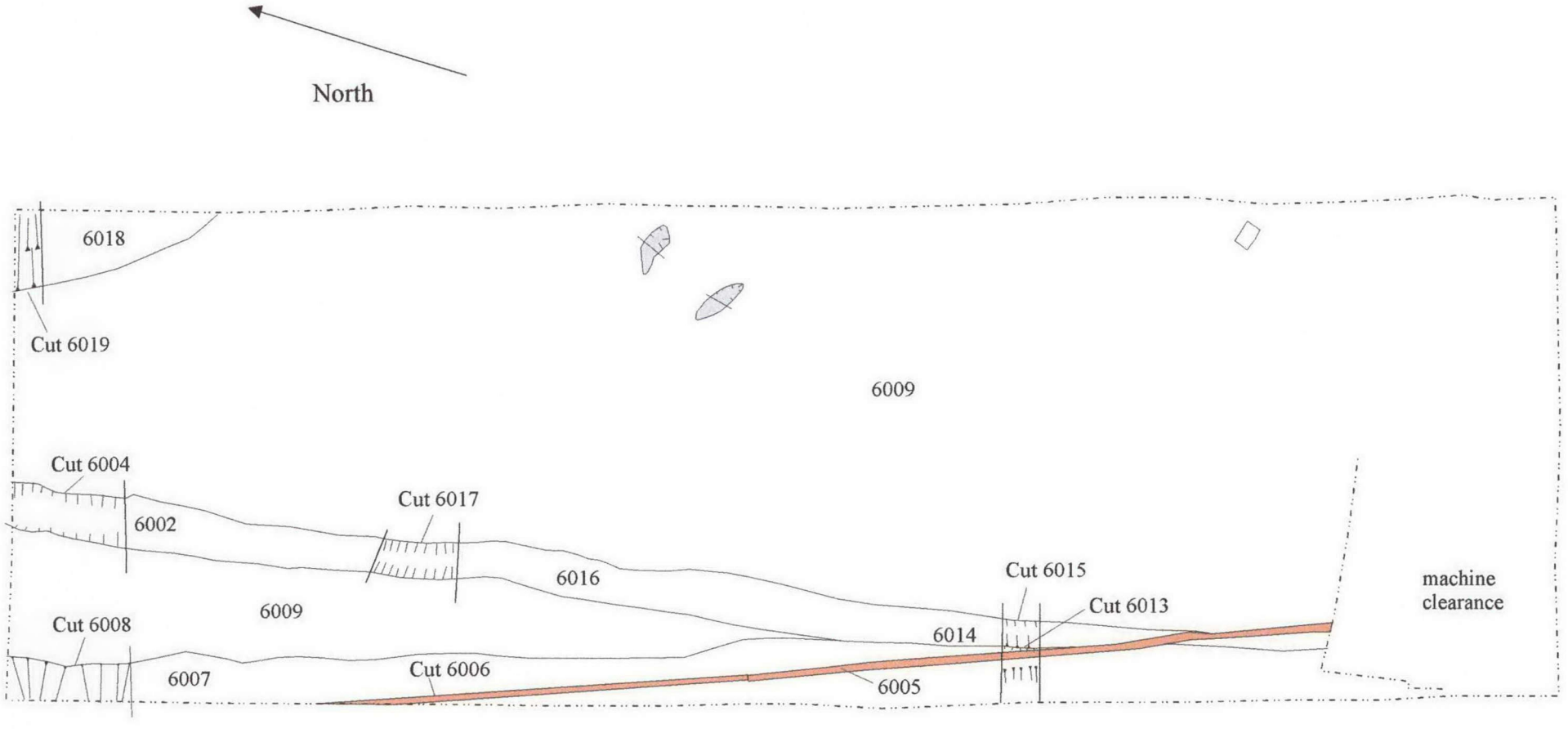


Figure 7 Plan of Trench 6

KEY:-

Land drain

Tree-throw hole

0 5 metres

4.7 Trench 7

The trench was situated in the middle of field 4, was orientated north-east to south-west and measured 50m long and 4m wide. It was randomly placed here to evaluate this particular part of the development area.

The earliest deposit within the trench consisted of natural dark purplish grey clay (7022) which contained bluish grey clay lenses. This was located at 12.74m AOD at the western end and at 13.26m AOD at the eastern end of the trench. At the western end of the trench up to 0.50m of mottled reddish orange sand (7021) sealed the natural glacial ponded clay. This is also interpreted as natural, perhaps being the result of aeolian (wind blown) accumulation in the post-glacial period. Five pale yellow and grey sandy patches towards the eastern end of the trench may represent natural tree-throw holes (unnumbered).

Truncating the natural on a north-west to south-east alignment were three furrows (7018-7020). These were filled with pale orangey brown sandy clay, were roughly 2m wide and none of which were excavated.

An initial phase of horse-shoe shaped land drains (7007, 7011-7012 and 7014) were inserted within and parallel to the furrows. These appear to have silted up and a second series of circular land drains (7003, 7006, 7010 and 7013) were inserted parallel to the original land drains.

Field 4 appears to have been deep ploughed at this point as a layer of compact orange brown slightly silty sandy clay (7001) subsoil which was up to 0.40m thick sealed all the earlier land drain backfills. This is interpreted as a buried ploughsoil, possibly originally of medieval date, but the deep ploughing puts its date to the late 19th or 20th century. A third series of land drains (7004-7005 and 7008-7009) was inserted, on a north-east to south-west alignment, and this may be part of a 20th century deep herring bone land drainage system.

A spread of mottled dark brown silty sand (7017) located at the western end of the trench may represent the base of a modern pit, virtually completely machined out during initial clearance. At the western end of the trench a deep modern trench (7015-7016) truncated the earlier deposits. This had steep near vertical sides and although not completely excavated may have contained a modern culvert or drain. A land drain (7002) that had been disturbed during the excavation of the modern drain or culvert was reinstated after the latters backfill. Sealing the whole trench at c.13.90m AOD was a layer of dark grey brown silty clay (7000) topsoil which was up to 0.27m thick. There were still extant ridge and furrow earthworks surrounding the trench area.

4.8 Trench 8

This trench was situated in the north-western corner of field 4 and was orientated north-west to south-east. It measured 50m long and 4m wide and was randomly placed to evaluate this part of the development area.

A compact bluish grey to dark brown silty clay (8002) was exposed at the limit of excavation, situated at 13.45m AOD at the northern end and 13.13m AOD at the southern end of the trench. This was interpreted as natural ponded glacial clay. No evidence for the extension of the aeolian sand within Trench 7 was discovered within Trench 8, suggesting that this is localised within the development area.

Sealing the natural across the full length of the trench was a layer of orange brown sandy clay (8001), which was up to 0.40m thick and is interpreted as a buried ploughsoil, probably dateable to the medieval period.

A furrow (8003) which was orientated north-west to south-east truncated the subsoil along the full length of the trench. It was completely backfilled with yellow brown clay sand (8004) and was left unexcavated.

Four phases of modern land drain truncated the earlier deposits. The earliest (8005-8006, 8007-8008, 8011-8012, 8015-8016) appeared to be aligned east to west and contained small 0.10m diameter circular pipes. Phases 2 and 3 (8017-8018 and 8013 – 8014 respectively), were perhaps replacements for each other and were aligned roughly north-west to south-east. These contained similar pipes to phase 1. The final phase pipes (Phase 4 - (8010-8009) and (8019-8020)) were aligned north to south and incorporated large circular pipes of 0.20m diameter. This differs markedly from Trench 7 and suggests that each was situated within a different field at one time.

A pit (8021) was located at the southern end of the trench. This had steep sloping sides and an undulating base perhaps suggestive of machine excavation. The pit was completely backfilled with mixed yellow and blue grey clay (8022) with large patches of dark grey silty clay. This was probably a machine dug modern pit for the disposal of rubbish. A layer of dark grey brown clay loam (8000) topsoil levelled the trench off at c.13.90m AOD at the northern end and 13.80m AOD at the southern end of the trench. Extant ridge and furrow earthworks survived in the trench area.

Field 7 appears to have been the most intensively improved of the fields to the south of the Sustrans cyclepath with up to four separate phases of land drain and deep ploughing to level the original medieval ridge and furrow.

Conclusions from fields 1-4

This area produced some evidence of minor archaeological interest including a possible pre-Norman toft enclosure within Trench 1, several post-holes in Trench 2 and Roman field or enclosure ditches or gullies within Trenches 5 and 6.

The Area to the North of The Sustrans Cycle Path (Fields 5-9)

4.9 Trench 9

Trench 9 was the southern most of three trenches situated within field 5, was orientated north-west to south-east and measured 20m long and 10m wide. It was positioned to evaluate a number of geophysical anomalies, none of which appeared within the evaluation trench. These probably relate to underlying changes in the natural geology.

The earliest deposit consisted of compact yellow brown silty clay (9002) which formed the top of the glacial natural deposits over the whole of the trench. This was situated at c.13.60m AOD and was truncated by two north-west to south-east aligned furrows (9003 and 9009) which flanked the eastern and western sides of the trench. These measured over 2.8m wide, up to 0.30m deep and had gently sloping sides and slightly rounded undulating bases. They were completely backfilled with compact yellowish brown clay sand (9004 and 9010), which contained charcoal inclusions.

Truncating the furrow backfills were two phases of land drains. The first involved the insertion of horse-shoe shaped drains (9005-9006 and 9013-9014), aligned with and situated within the medieval furrows. The second phase involved the insertion of deeper circular shaped land drains (9007-9008 and 9011-9012) aligned north-south, perhaps as part of a herring bone style layout.

The whole of the trench area was sealed with mid yellow brown clay sand (9001) which was up to 0.21m thick and is interpreted as a buried plough-soil. This suggests that the field was deep ploughed after the insertion of the second set of land drains. A layer of dark brown sandy clay loam (9000) topsoil levelled the whole of the trench area off at c.13.90m AOD. There were still traces of medieval ridge and furrow earthworks surrounding this trench.

4.10 Trench 10

The trench was positioned centrally within field 5, was orientated north-west to south-east and measured 25m long and 8m wide. The siting of this trench was determined by the presence of a feature on the geophysical survey plot. This feature was not located within the trench and may be the result of natural variation within the underlying glacial deposits.

A dark greyish brown natural glacial clay (10010) was the earliest deposit found and this covered the base of the entire trench. It was situated at c.13.75m AOD at the northern end and at 13.55m AOD at the southern end of the trench. Several rounded cobbles were located within this deposit towards the north end of the trench, probably the result of glacial erratic deposition. Truncating the clay were five features which were filled with light orange brown sand. These were randomly scattered over the base of the trench and are interpreted as natural tree throw holes (unnumbered).

On the eastern and the western sides of the trench two furrows (10007 and 10009) truncated the natural deposits. These had gently sloping sides and rounded but slightly undulating bases. They measured over 1.20m wide, over 0.16m deep and were completely backfilled with dark brown silty clay (10006 and 10008).

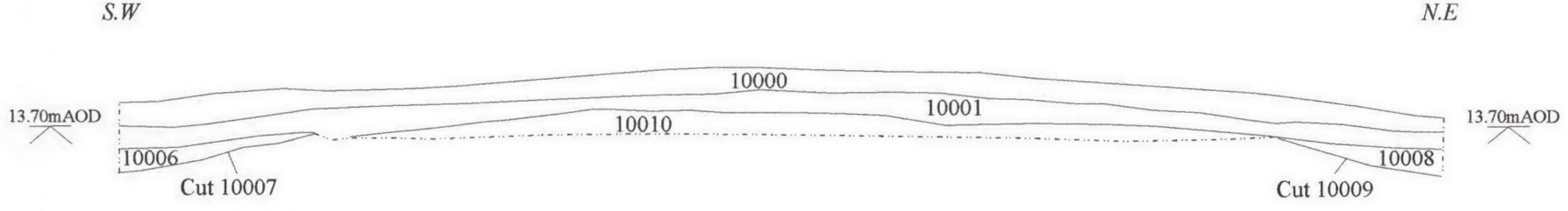


Figure 8 Trench 10 South-East facing Section

0 2 metres

Three north-south aligned circular land drains (10002, 10003-10004, and 10005), possibly part of a herring bone land drain pattern truncated the earlier deposits. The whole trench was sealed with dark orange brown silty clay (10001) which was up to 0.18m thick and is interpreted as a buried plough-soil. This was sealed by a layer of dark grey sandy silt (10000) topsoil which levelled the whole of the trench area off at c.13. 90m AOD. Extant ridge and furrow earthworks survived in the trench area.

4.11 Trench 11

The trench was situated at the north end of field 5, was orientated north-east to south-west and measured 50m long and 4m wide. It was randomly placed to evaluate this part of the development area.

Natural deposits were located at the base of the trench and consisted of compact dark orange, yellow and blue grey silty clay (11002). There were occasional spreads of possible aeolian orangey red sandy silt and occasional spreads of light grey silty sand, the latter possibly indicating the presence of tree-throw holes of natural origin. The top of the natural was situated at between 13.00m AOD and 13.20m AOD.

Four furrows (11003, 11007, 11013 and 11019) were identified in the base of the trench. These had similar profiles and were on the same alignment as those described in Trenches 9 and 10. They were all backfilled with dark yellow brown sandy clay (11004, 11008, 11014, and 11020).

Two phases of land drain were inserted, both aligned north-west to south-east. The first were horse-shoe shaped (11011-11012, 11015-11016, 11021-11022) and the second circular (11005-11006, 11009-11010, 11017-11018, 11023-11024). All of them appeared to use the furrows as a guide for their insertion.

A dark yellow brown clay sand (11001) subsoil or buried ploughsoil up to 0.30m thick sealed the entire trench. This was covered completely by dark brown sandy clay loam (11000) topsoil which levelled the whole trench area off at c.13.60m AOD. There were still extant ridge and furrow earthworks surrounding the trench area.

4.12 Trench 12

The trench was situated at the north end of field 6, and was one of five trenches (12, 13, 14, 21 and 22) situated within this field. It was orientated north-east to south-west, measured 50m long and 4m wide and was randomly placed within this part of the development area.

The earliest deposits within the trench area were yellow and orange clay (12007) with patches of grey sandy clay. These natural glacial deposits were situated between c.13.60m AOD and 13.92m AOD across the whole trench. A thin linear band of very pale grey sand and orange brown clay (12013), and three sub oval or banana shaped deposits of pale grey sandy clay, interpreted as natural variations and tree-throw hole backfills, were observed sealing the sandy clay. These were sealed by an intermittent spread of grey brown clay silt (12005 and 12006) and brownish yellow silty clay (12002), which are interpreted as the remnants of a former plough-soil or subsoil, up to 0.12m thick in places.

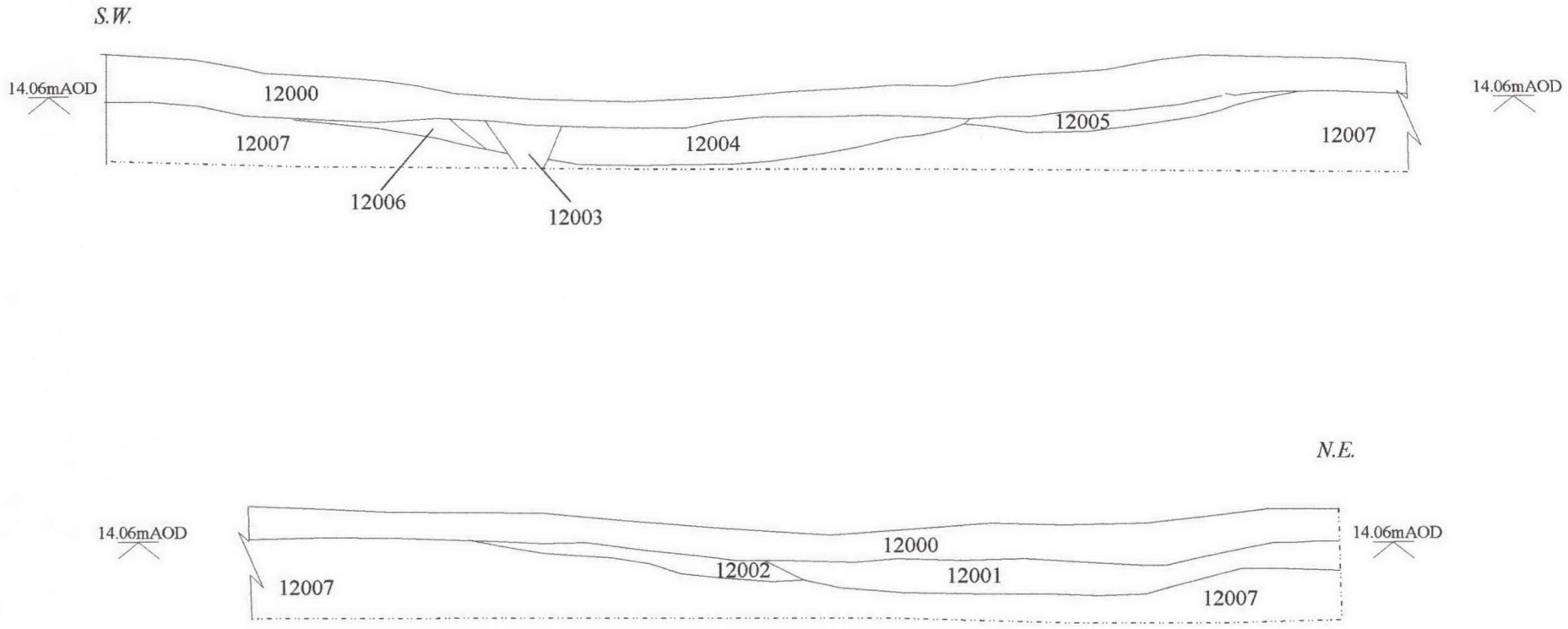


Figure 9 Trench 12 South-East facing Section

Six furrows (12001, 12004, 12008, 12010, 12012 and 12014) up to 3.6m wide and up to 0.26m deep were observed crossing the trench on a north-west to south-east alignment.

Three circular land drains were inserted within and aligned to the furrows. A layer of dark brown clay silt (12000) sealed the whole of the trench area and levelled it up to between 14.06m AOD and 14.25m AOD. Extant ridge and furrow earthworks are still evident in the area of field 6 when the trench was excavated.

4.13 Trench 13

The trench was situated in the centre of field 6 and was orientated north-west to south-east. It measured 30m long and 4m wide and was placed here to investigate a backfilled depression that appeared to truncate the medieval ridge and furrow ploughing.

A compact greyish orange clay (13002) interpreted as being of natural origin was the earliest deposit recorded within the trench. It was located at c.13.70m AOD at the south end and at 13.31m AOD at the north end of the trench.

Sealing this was yellow brown mixed silty sand (13001), probably derived from medieval or earlier plough action. A north-west to south-east aligned furrow, over 2.5m wide, bisected the buried plough-soil and was filled with mottled greyish orange brown clay sand (13009).

A large cut (13007) truncated the medieval ridge and furrow at the north end of the trench. This measured over 4.15m long, over 4m wide and had a steep southern side and an undulating base. It would appear that the undulations may have been caused by machine clearance of the cut which was interpreted as a modern pond. The fill was a fairly mixed coarse yellow brown sand with yellow, mid brown and blue grey silty clay (13008) which contained frequent small to large cobbles, moderate tile and pottery fragments dateable to the 19th or the early 20th century. Fill (13008) completely filled the pond which was up to 0.25m deep, where it was hand excavated.

Truncating pond fill 13008 were two land drains. The earliest (13003-13004) was aligned north-west to south-east and was inserted within and aligned parallel with the earlier furrow (13009). The second (13005-13006) was orientated west to east and truncated (13004). Both contained circular pipes. The whole of the trench was sealed with mid to dark brown sandy clay loam (13000) topsoil, which levelled the trench area up to between c.14.06m AOD and 14.23m AOD. The medieval ridge and furrow and the modern pond were still in evidence as earthworks prior to the commencement of the excavation of this trench.

4.14 Trench 14

The trench was positioned at the south end of field 6 to evaluate a south-west to north-east aligned linear feature which appeared as an anomaly on the geophysical plots. Trench 14 was itself aligned north-west to south-east and measured 20m long and 4m wide.

The earliest deposits were glacial in origin and consisted of bluish grey brown clay (14008) which was situated at c.13.65m AOD across the whole of the base of the trench area. A large sandstone boulder (14009) which measured 1.20m long, 0.90m wide and over 0.40m deep was discovered within the natural at the northern end of the trench. This appeared to have been

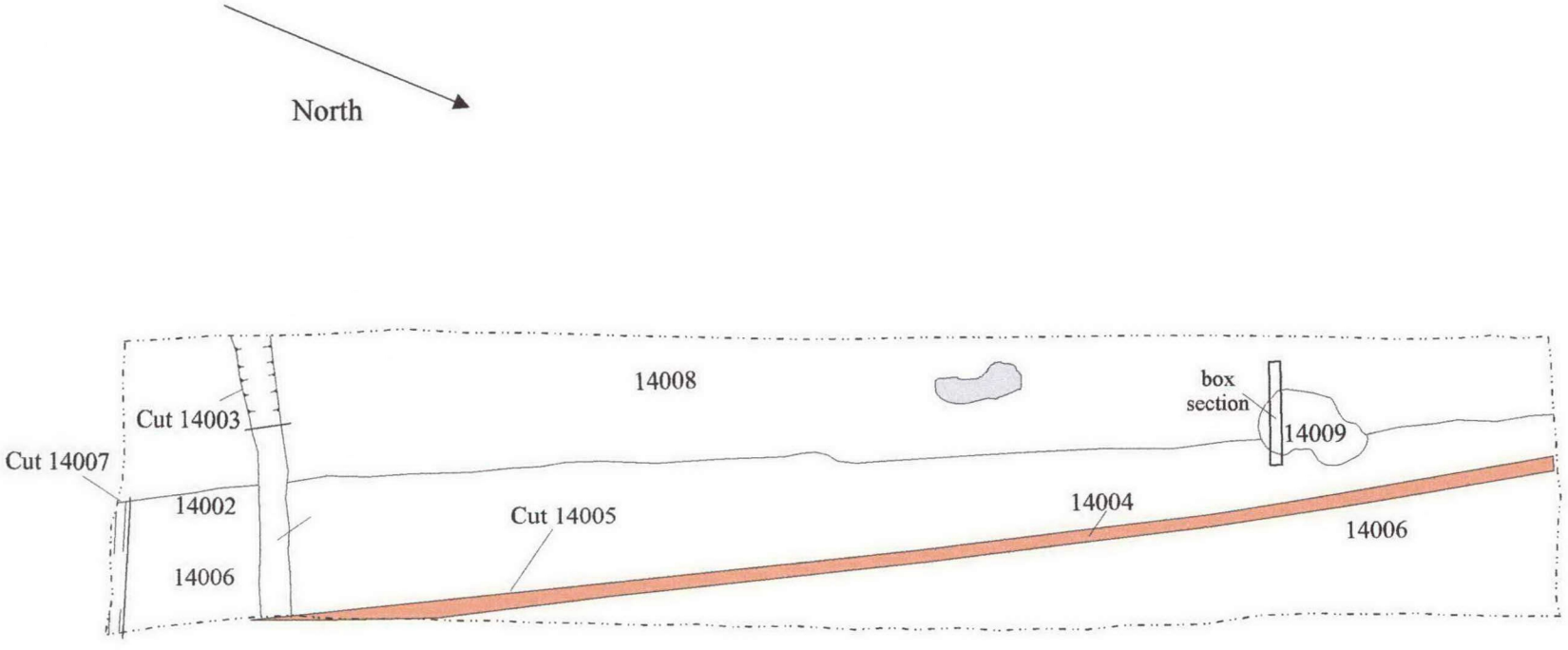


Figure 10 Plan of Trench 14

KEY:-

Land drain

Tree-throw Hole

0 5 metres

heavily scored by glacial action and was interpreted as a glacial erratic. To the south-east of this, a banana shaped spread of light grey clay sand may indicate the presence of a natural tree-throw hole.

A furrow (14007) aligned north-west to south-east was located on the eastern side of the trench. It measured over 2.75m wide, up to 0.26m deep and was completely filled with mottled orangey brown and grey silty clay (14006) which was pottery dated to the 16th century. This and the whole of the trench was sealed with dark greyish brown silty clay (14001) subsoil or buried plough-soil which was up to 0.34m thick.

A linear feature (14003) orientated north-east to south-west truncated all of the earlier deposits at the southern end of the trench. This had steep, near vertical, sides and a V-shaped profile. It measured 0.55m wide and 1.04m deep and was completely backfilled with mottled orange brown silty clay (14002) with patches of orange and blue grey clay. The function of the feature is uncertain but the mixed nature of the backfill, the steep profile of the cut, its similarity to a culvert construction cut in Trenches 16 and 21, and the features parallel orientation to a hedge-line to the south of the trench would suggest that it was of post-medieval or modern date. The backfill also contained pottery which dated the feature to the late 19th or 20th century.

Truncating backfill deposit (14002) was a circular land drain (14004-14005) which was positioned within and on the same alignment as the earlier medieval furrow (14007). A layer of friable dark brown silty clay (14000) topsoil levelled the whole of the trench area up to between c.14.10m and 14.33m AOD. Ridge and furrow earthworks were evident in the area of the trench prior to its excavation.

4.15 Trench 15

Trench 15 was situated at the southern end of field 7, it was orientated north-west to south-east and measured 50m long and 4m wide. It was placed randomly in this part of the development area rather than being focussed on a geophysical anomaly.

The earliest deposit within the trench was blue grey silty clay (15002) which was situated across the base of the whole trench at c.14.00m AOD and is interpreted as being of glacial origin. Sealing the natural clay were thirteen spreads of pale yellow coarse sand, which are thought to be natural in origin and the result of the silting up of tree throw holes. One of these (15003) was quarter sectioned. It was oval in plan and had steep sloping sides, a rounded base and measured 1.90m in diameter and c.0.50m deep. The tree-throw hole was initially filled with loose pale yellow sandy silt (15004), which was capped by a layer of compact blue grey clay (15005).

Sealing the whole of the trench was a layer of pale yellow sandy clay (15001) which was up to 0.40m thick and is interpreted as a buried ploughsoil or subsoil. A layer of dark brown clay loam (15000) topsoil levelled the whole trench up to c.14.60m AOD. Ridge and furrow earthworks were evident in the trench area prior to excavation.

4.16 Trench 16

The trench was situated east of centre of field 7 and measured 25m long and 8m wide. It was orientated south-west to north-east and was randomly placed in this part of the development area.

The earliest deposit consisted of a clay natural (16009) similar to that located within Trench 15 at c.14.00m AOD. On the eastern side of the trench the natural clay was sealed with patches of orange sand which contained heavy iron oxide staining. The latter deposits are thought to have had similar aeolian origins to the more widespread sandy natural deposit located within Trench 7. To the west, two patches of light grey clay sand are interpreted as natural tree-throw holes.

The natural deposits were sealed by a layer of compact light orangey brown silty clay (16001), up to 0.40m in depth and interpreted as a buried plough-soil or subsoil. Three furrows (16006-16008) truncated the natural. These were all aligned north-west to south-east and were completely filled with light grey brown sandy clay.

A deep post-medieval or modern culvert (16003) aligned approximately north-south truncated the three furrows. This had steep near vertical sides, and measured up to 0.50m wide and over 1.25m deep. A tile capping to the culvert, which measured 0.15m wide was located, and this was where excavation of this particular feature ceased. The culvert construction cut and tile culvert were backfilled with mottled orange and blue grey silty clay (16002) which contained one abraded sherd of white ware pottery that may be of medieval date. The culvert appears to extend south-west into Trench 21.

On the eastern side of the trench an isolated modern post-hole (16005) was located. This was sub-rectangular in plan, measured 0.35m long, 0.22m wide and 0.20m deep and had steep vertical sides and a rounded base. It was completely filled with dark grey sandy silt (16004) which was pottery dated to the 18th or 19th century. The function of this isolated post-hole is not known. A loose dark brown sandy silt (16000) topsoil sealed the whole trench at c.14.45m AOD. Ridge and furrow earthworks were still clearly visible prior to the excavation of this trench.

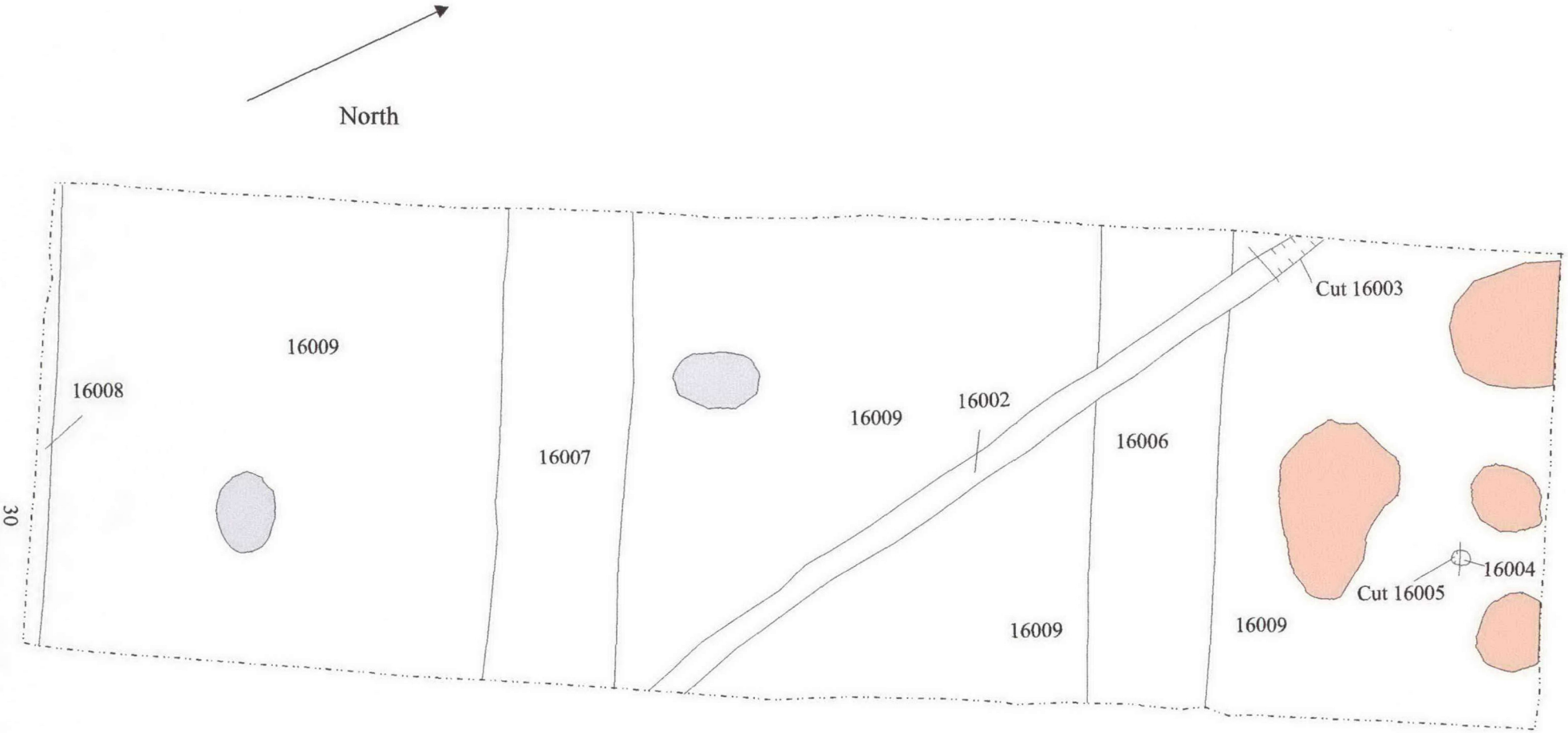
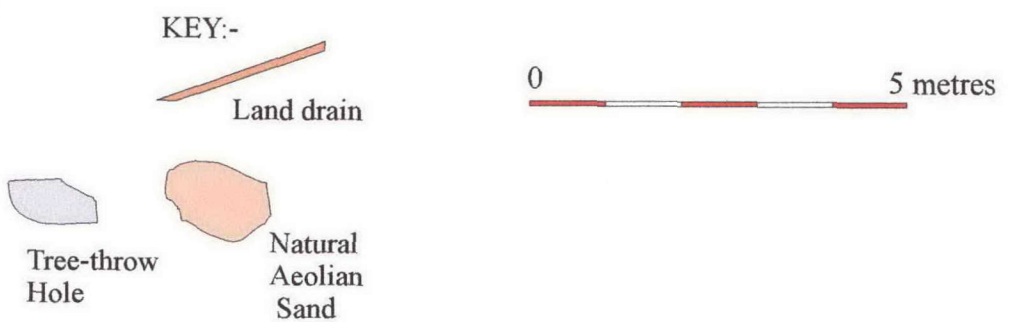


Figure 11 Plan of Trench 16



4.17 Trench 17

This trench was situated at the northern end of field 7 and was orientated north-east to south-west. It measured 25m long and 8m wide and was randomly placed to evaluate this part of the development area.

The natural clay (17006) in this trench was similar to that in Trenches 15 and 16, and contained several light grey sandy patches interpreted as the silting of natural tree-throw holes or hollows of post-glacial date. The natural was situated at c.13.50m AOD.

The natural was sealed by a layer of mottled silty sandy clay (17001) which was up to 0.40m thick and is interpreted as a buried plough-soil or subsoil. This was truncated by three furrows, two of which were completely machine cleared prior to recording commencing. The single remaining furrow (17005) was orientated north-west to south-east across the eastern end of the trench and was completely filled with mid brown sandy clay with orange clay mottling.

Three circular land drains (17002-17004) were inserted in the lowest portions of each furrow and therefore parallel to them. These were probably of modern date. The whole trench was sealed with a thick layer of dark grey clay loam (17000) topsoil which raised the ground level to c.14.25m AOD. Ridge and furrow earthworks were still visible in the trench area prior to excavation.

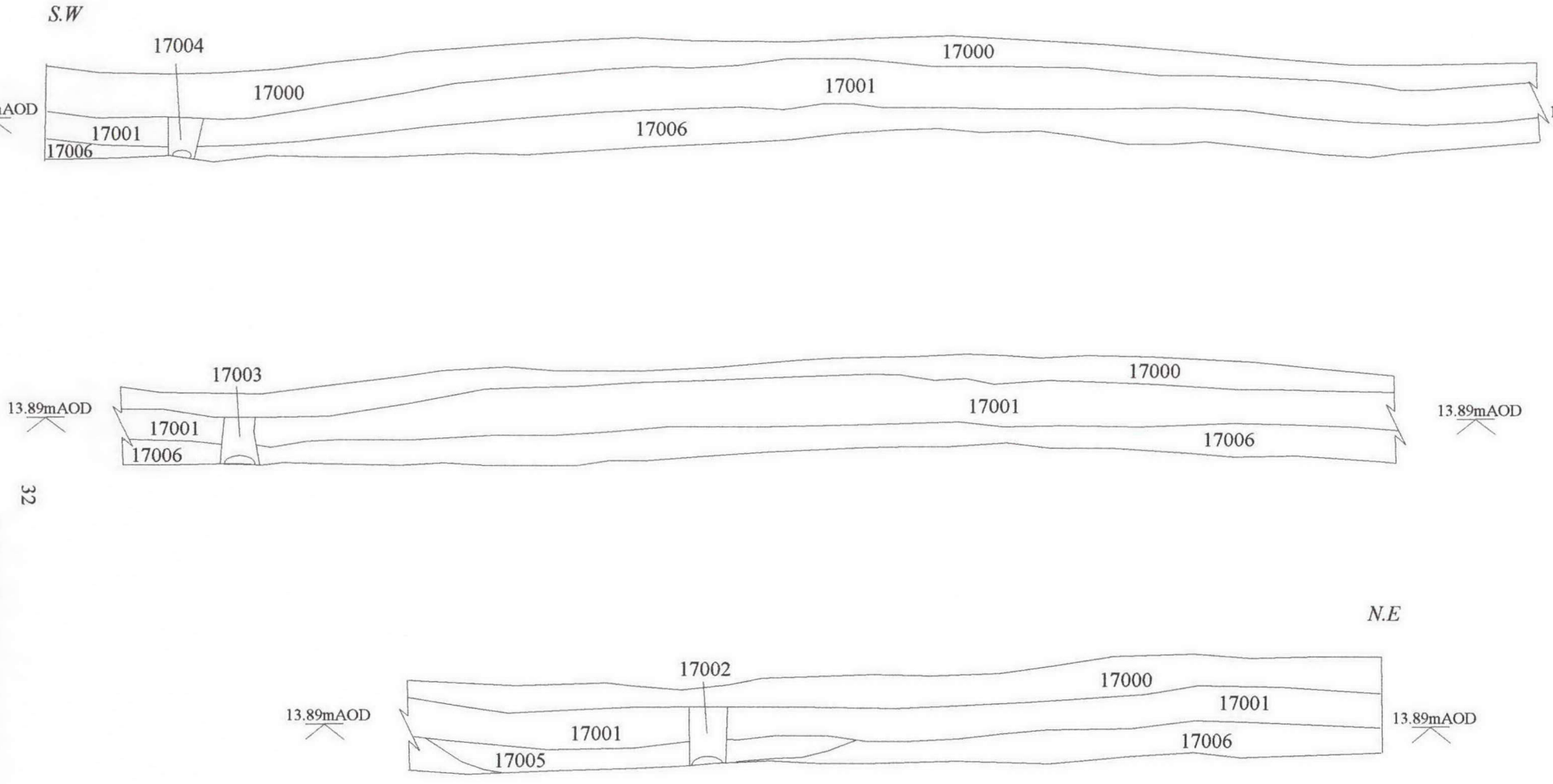


Figure 12 Trench 17 South-East facing Section

4.18 Trench 18

Trench 18 was one of two trenches in field 8 and was located on the north side of the field. It measured 50m long and 4m wide, was orientated south-west to north-east and was positioned randomly within this part of the development area.

The earliest deposits were of natural origin consisting of reddish brown and grey clays with mixed orange and yellow silty sands and gravels (18002). These may be associated with glacial action within the area and the deposition of glacial erattics as opposed to the ponded clays and aeolian sands located elsewhere within the development area. The natural was located at between c.14.00m AOD at the western end of the trench and c.14.50m AOD at its eastern end.

All of the archaeological deposits within the trench dated from the 18th through to the 20th centuries. The earliest of these was a sequence of land drains. Three of these (18009-18010, 18011-18012 and 18015-18016) were aligned north-west to south-east and consisted of horse-shoe shaped drains, one of which (18010) had a flat tile base. The western most of these (18012) which was pottery dated to the 18th century, was truncated by a second land drain (18013-18014) which was circular in shape and aligned approximately north-south.

Towards the eastern end of the trench a large sub-rectangular pit (18007) had been dug into the natural. This had steep sides, a flattish base and measured 2.5m long, 1.15m wide and up to 0.38m deep. It contained the partial remnants of an articulated modern horse skeleton (18017). As the date of the burial was recent, it was decided that only the south-eastern quarter of the pit would be excavated to partially expose the horse burial. This revealed the rib cage, front left leg and shoulder and the lower jaw. The horse was buried on its left side and it was covered with, and the burial cut completely backfilled with, dark brown silt (18008) which was pottery dated to the late 19th or early 20th century. Much of the right hand side of the animal appears to have been disturbed by later ploughing/levelling of the ridge and furrow earthworks within the field.

Close to the western end of the trench a curvilinear gully, ditch or elongated pit (18003) was located. This had steep sides, a rounded base and measured over 2m long, 0.80m wide and up to 0.57m deep. It was backfilled with three deposits (18004-18006) which consisted of loose silty sand or sandy silt, 18005 was heavily mottled with orange sandy clay patches and 18006 was pale yellow brown in colour as opposed to the dark brownish grey of the other two backfills. The backfills were dated by modern pottery and glass to the early 20th century.

Sealing all of the earlier deposits was a thick layer of mid orangey brown sandy clay (18001) which is interpreted as a subsoil or buried ploughsoil. It is probable that this was originally the medieval plough-soil associated with the ridge and furrow within this field but it is likely that this deposit has been heavily altered by modern deep ploughing to level the ridge and furrow. Modern topsoil (18000) finally levelled the area up to c.14.50m AOD at the western end and c.15.20m AOD at the eastern end of the trench.

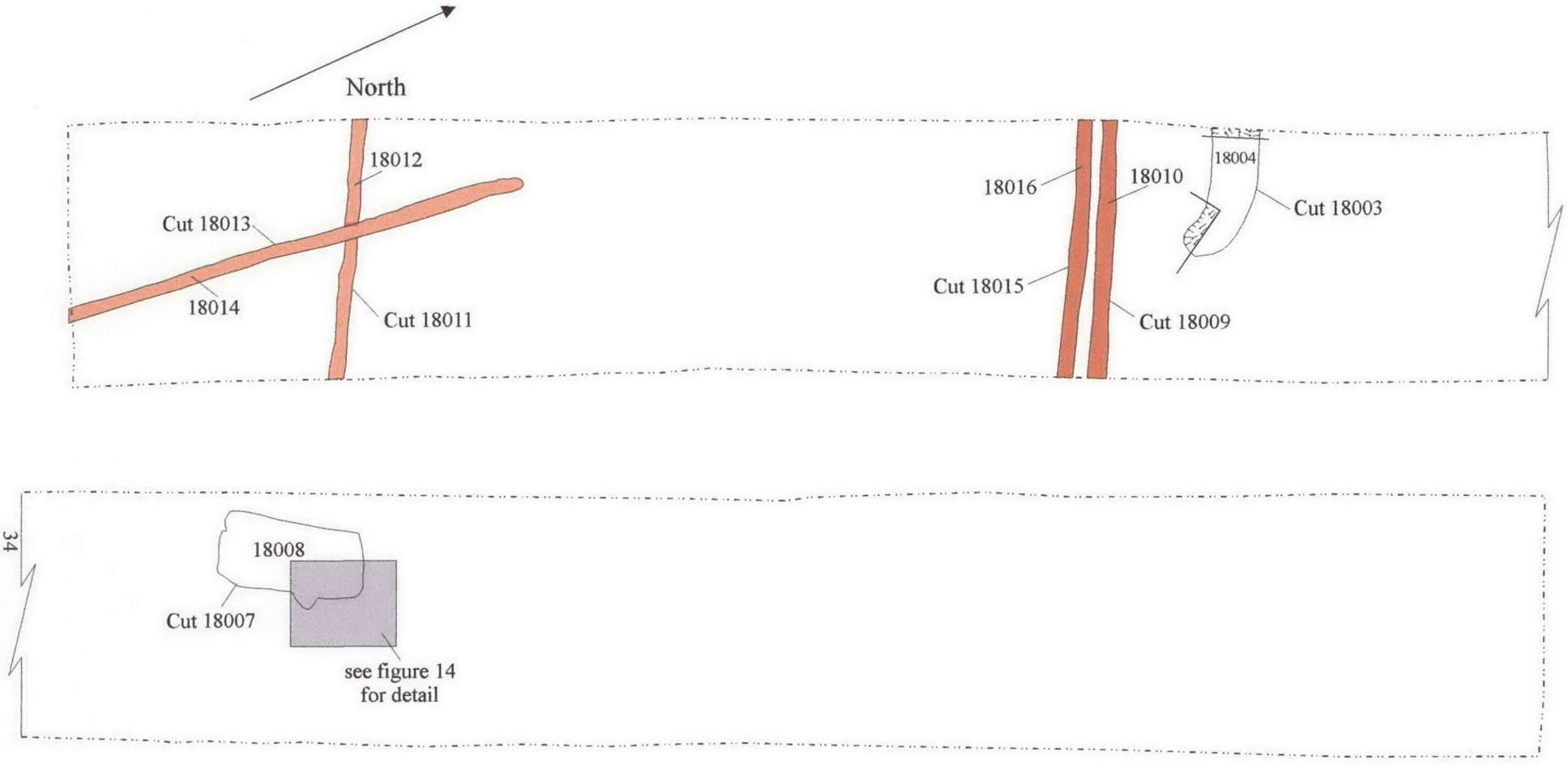


Figure 13 Plan of Trench 18

KEY:-

Land drain

0 5 metres

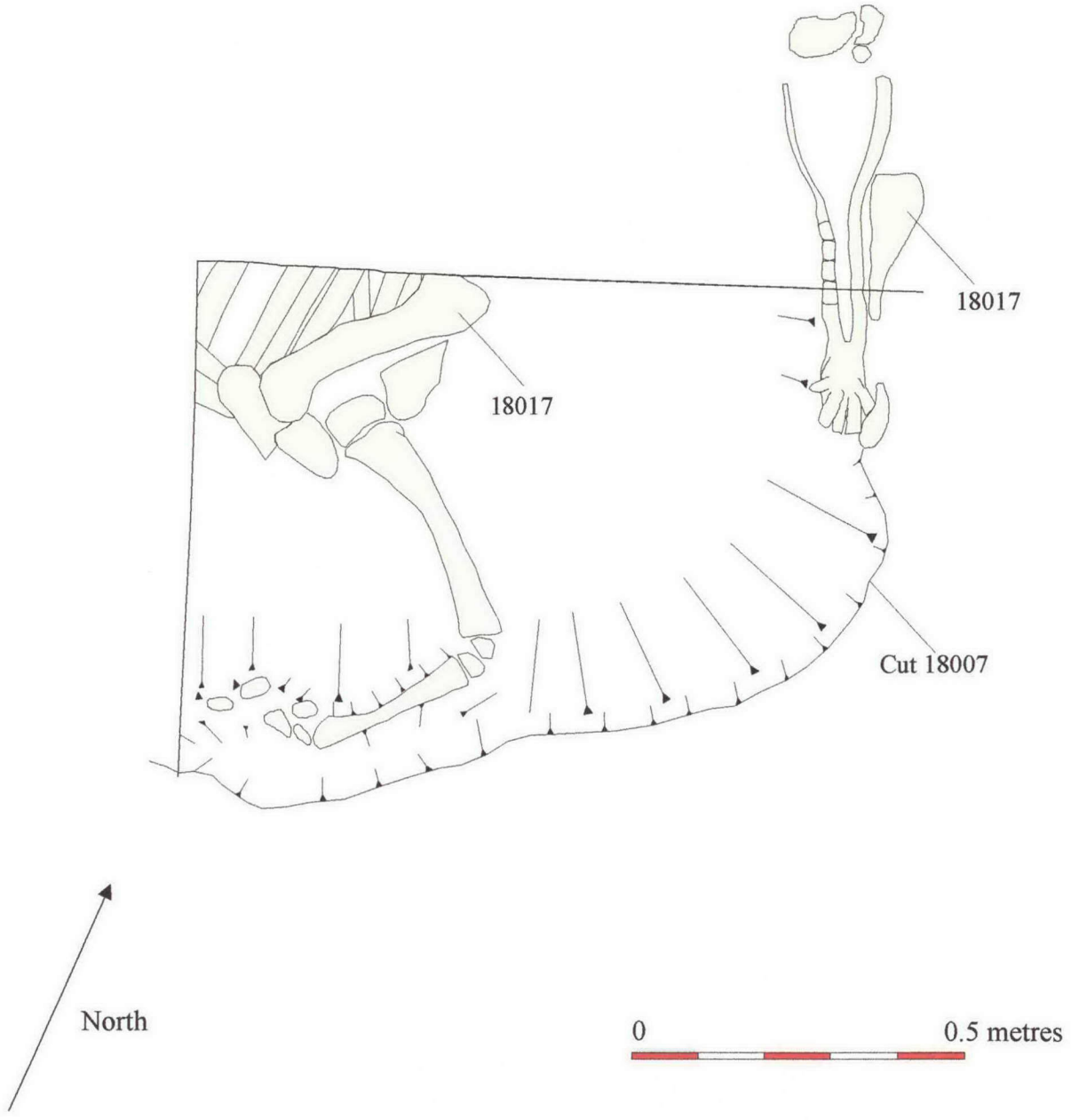


Figure 14 Detailed plan of Horse Skeleton 18017

4.19 Trench 19

This trench was located on the southern side of field 8 and was positioned to intercept a geophysical anomaly, thought to represent an enclosure ditch. The trench measured 25m long and 8m wide and was orientated north-west to south-east.

The earliest deposit (19006) within the trench was of natural origin and was very similar in composition and colour to the natural (18002) located within Trench 18. The natural was situated between 14.40m AOD and 14.50m AOD across the whole trench.

Traversing the entire length of the trench was a furrow (19005) which measured c.3.5m wide, c.0.40m deep and had shallow sloping sides and a flattish, although slightly undulating base. It was completely backfilled with mid to dark brown gritty silt (19004) which contained moderate gravel and occasional charcoal flecks. This suggests that field 8 originally contained medieval ridge and furrow, as was suggested by the geophysical survey. No evidence for the suggested enclosure ditch was recovered.

A circular land drain (19002) was inserted within a deep cut (19003). This was aligned north-west to south-east and was situated on the eastern side of the furrow.

A thick layer of mid brown mottled silty clay (19001) sealed the entire trench, probably the result of the deep ploughing of this particular area, to level off the medieval ridge and furrow. This was sealed by a thick layer of modern topsoil (19000) which levelled the trench area up to 15.10m AOD at the north end of the trench and 14.90m AOD at the southern end of the trench.

4.20 Trench 20

This particular trench was located on the northern side of field 9. It was orientated north-east to south-west and measured 25m long and 8m wide. It was randomly positioned here to evaluate this part of the development area.

The earliest deposit consisted of mixed yellow and red clays, red brown and pale yellow sandy silts and large spreads of gravel, cobbles and boulders (20002). These are all interpreted as of natural glacial origin and along with Trenches 18 and 19 form an area were glacial erratics appear to have been deposited within the development area. The top of the natural was situated between c.14.00m AOD and 14.40m AOD across the base of the trench.

Three furrows (20003, 20005 and 20007) truncated the glacial natural. These had shallow sloping sides, flattish bases and measured up to 3.5m wide and up to 0.40m deep. They were completely backfilled with pale yellow silty sand (20004, 20006 and 20008). The field appears not to have been improved at all, no land drains being located within the trench.

The furrow backfills were sealed by a layer of pale yellow and orange brown silty sand (20001) which was up to 0.45m thick in places. This was interpreted as a buried ploughsoil or subsoil associated with the medieval ridge and furrow. A thick layer of dark brown silty clay loam (20000) topsoil sealed the whole trench area and raised the ground level to between 14.90m AOD on the ridges and 14.50m AOD within the furrow earthworks.

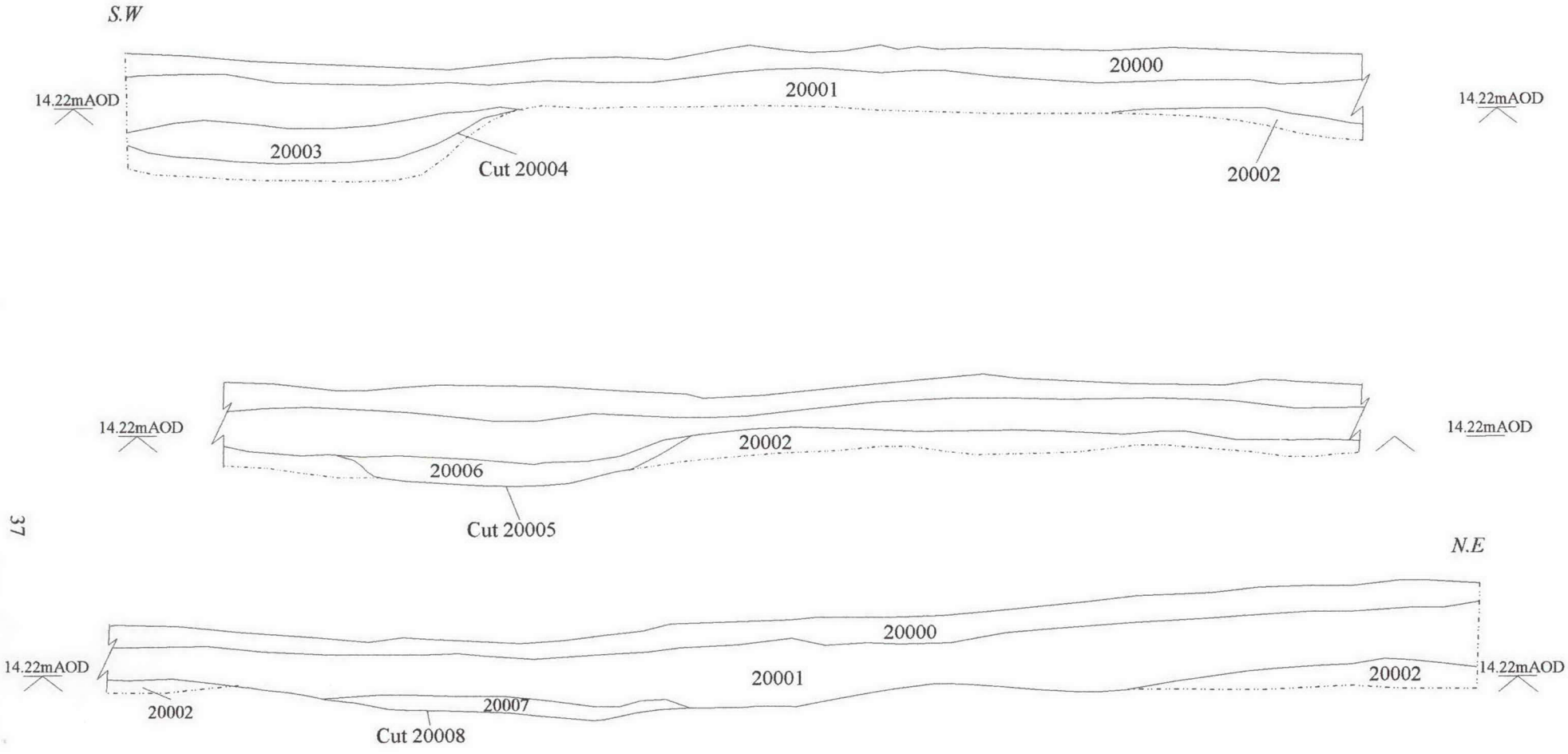


Figure 15 Trench 20 South-East facing Section

0 2 metres

4.21 Trench 21

This trench spanned the hedge boundary between fields 6 and 7, and was positioned here to investigate the boundary. It was orientated north-east to south-west and measured 20m long and 4m wide.

A dark blue grey silty clay (21002) with occasional patches of yellow silty clay was the earliest deposit within the trench. This is interpreted as a natural glacial deposit and was situated at c.13.90m AOD across the base of the trench.

Three furrows were observed to cross the base of the trench, on a north-west to south-east alignment. All of these were machined away and could not be distinguished from the subsoil when the section was drawn, so they remained unnumbered.

An isolated post-hole (21009) was located towards the western end of the trench. This had steep sides, a rounded base and measured 0.20m in diameter and 0.07m in depth. It was completely filled with dark reddish brown sandy silt (21010). Its function and date are not known.

To the east of the modern hedge line a small linear gully (21005) was located. This paralleled the modern hedge, had steep sides, a rounded uneven base and measured 0.68m wide and 0.20m deep. It was completely filled with dark reddish brown sandy silt (21006). The uneven base of the cut and its almost indistinguishable merger with the natural suggests that either this gully held an earlier hedge boundary slightly further to the east of the modern alignments, or that it contained plants whose root systems, over time, destroyed the base of the original cutting.

The construction cut (21003) for a deep culvert had been excavated across the trench. This was orientated roughly north-south, had steep near vertical sides and measured over 0.82m deep and up to 0.50m wide. It contained a tile capping (21008) for a culvert which was 0.15m wide. The capping was identical to that found within Trench 16 and it appears to be the same culvert crossing the development area. The culvert may date from the 18th century. It was completely backfilled with mottled blue grey and yellow brown sandy and silty clay (21004).

To the east of the boundary gully or former hedge row 21005 described above, and parallel with it, a service trench (21011) was found. This had steep near vertical sides, a flat base and measured 0.25m wide and 0.14m deep. A circular iron water pipe (21007) 0.02m in diameter was found within this and the service trench completely backfilled with mottled yellow brown silty clay (21012) with patches of dark brown sandy silt.

The whole trench was sealed with a layer of orange brown silty sand (21001) interpreted as a buried plough-soil or subsoil. The latter was up to 0.35m thick and may have originally formed as a medieval plough-soil prior to being deep ploughed occasionally in the post-medieval and modern periods, thus giving the illusion of it sealing the modern features. A layer of modern topsoil (21000) sealed the whole trench area and levelled it up to between 14.15m AOD and 14.40m AOD.

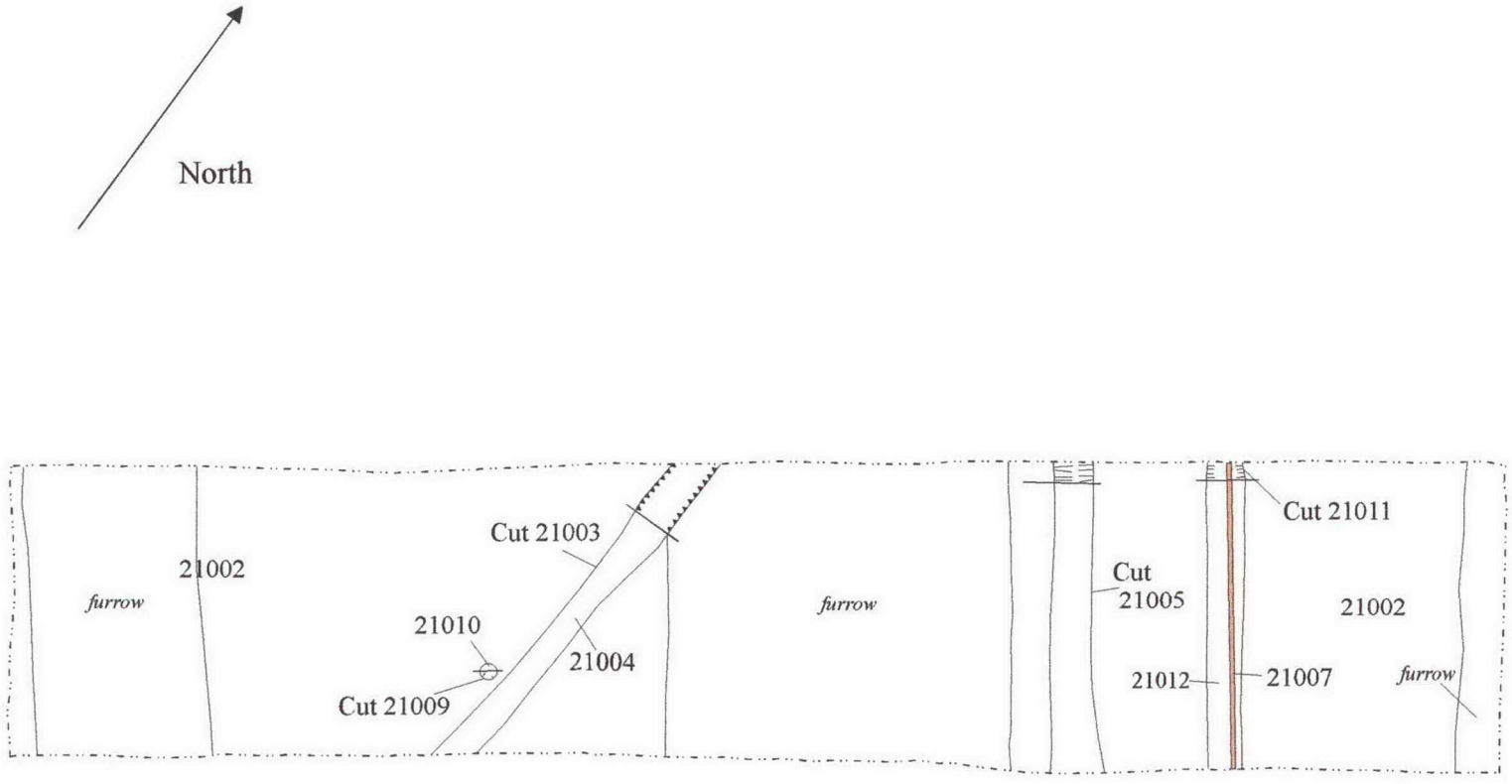


Figure 16 Plan of Trench 21

KEY:-

Land drain

0 5 metres

4.22 Trench 22

This trench was situated on the western side of field 6, was aligned north-west to south-east and measured 30m long and 4m wide. It was randomly placed to evaluate this part of the development area.

The earliest deposit, located across the whole of the base of the trench was clay (22004) very similar in colour and composition to 21002 located within Trench 21. This was interpreted as being of natural origin and was situated between 13.65m AOD and 13.90m AOD.

Truncating the eastern side of the trench was a furrow (22003) aligned north-west to south-east which was backfilled with mottled light orangey brown sandy clay. The furrow backfill was sealed by a layer of dark orange brown silty clay (22001) which was up to 0.30m thick and is interpreted as a buried ploughsoil or subsoil.

A circular land drain (22002) orientated north-west to south-east truncated all of the earlier deposits within the trench. This was sealed by modern topsoil (22000) which raised the ground surface to between c.14.00m AOD and c.14.25m AOD.

Conclusions from Fields 5-9

The only things of minor archaeological significance within this area were located within Trench 21 where an undated post-hole and a probable post-medieval boundary gully or hedgerow were located.

4.23 Test pits and bore-holes

Summary: *The 15 test-pits (TP1-TP15) described below reveal further the absence of significant archaeological deposits across the site, the majority revealing a sequence of glacial deposits sealed by layers of subsoil and topsoil. Only one test-pit (TP9) contained anything else, which was a circular land drain and test-pits 14 and 15 held modern services which predated and post-dated the clinker make-up for the Derwent Valley Light Railway track.*

TP1 This test-pit was situated just to the north of Trench 22 within field 6 and was machined to a maximum depth of 2.75m. The earliest deposits were of glacial natural origin, the top of which was situated at 0.35m Below Ground Surface (BGS). These deposits comprised coarse orange, yellow brown and grey sands with gravels and cobbles (at 1.80m BGS) dark blue grey and purplish brown clay (at 0.95m BGS) and orange and grey clay (at 0.35m BGS). These were sealed by mid orange brown clay sand subsoil (at 0.19m BGS) and a mid to dark brown sandy loam topsoil.

TP2 Test-pit 2 was positioned on the eastern side of field 6, 102m from the north end of the field and was excavated to a maximum depth of 3.1m. Glacial natural was located at 0.47m BGS and consisted of dark brown boulder clay (at 2.1m BGS) orange brown fine grained sand, gravel and cobbles (at 1.8m BGS), stiff dark brown and light grey clay (at 0.75m BGS) becoming laminated (at 1.2m BGS) and stiff orange brown sandy clay (at 0.47m BGS). A mottled orange and grey clay sand subsoil (at 0.28m BGS) and dark brown sandy loam topsoil sealed the top of the test-pit.

TP3 This particular test-pit was situated on the western side of field 8, c.35m to the south of the northern boundary and was machined to a maximum depth of 2.3m. The earliest deposits were of natural origin, the top of which was situated at 0.35m BGS. These deposits comprised mid brown compact sandy boulder clay (at 2.3m BGS), mid reddish orange brown slightly silty sand with gravel and boulders (at 1.45m BGS), blue

grey and chocolate brown clays (at 0.65m BGS) becoming laminated (at 1.10m BGS) and with cobbles and boulders (at 1.15m BGS) and orange and grey clay (at 0.35m BGS). These were sealed by mid orange brown sandy clay subsoil (between 0.05m and 0.20m thick) and mid brown sandy clay loam topsoil.

TP4 The test-pit was located c.3.5m to the south-east of Trench 10 in field 5 and was excavated to a maximum depth of 2.6m. Natural geology appeared within this test-pit from 0.38m BGS and consisted of firm to stiff brown sandy boulder clay (at 2.1m BGS), fine orange brown sand with occasional cobbles (at 1.4m BGS), finely laminated dark brown and blue grey clay (at 1.2m BGS), dark brown and blue grey clay (at 0.65m BGS) and a mottled orange and grey clay (at 0.38m BGS). These were sealed by mottled orange and grey clay sand subsoil which was 0.16m thick and dark grey brown sandy clay loam topsoil which was 0.22m thick.

TP5 Test-pit 5 was positioned in the south-eastern corner of field 6 between Trenches 21 and 14 and was excavated to a maximum depth of 2.7m. Natural geology was located at 0.25m BGS and consisted of stiff dark grey brown boulder clay (at 1.95m BGS) greyish orange brown sand, gravel and cobbles (at 1.7m BGS) dark brown and blue grey clay (at 0.66m BGS) becoming laminated (at 1.3m BGS) and stiff orange and grey clay (at 0.25m BGS). These deposits were sealed by mottled orange and grey brown clay sand subsoil (at 0.17m BGS) and dark grey brown sandy clay loam topsoil.

TP6 This test-pit was situated to the south of Trench 20 within field 9, c.28m north of the southern boundary, and was machined to a maximum depth of 2.5m. The earliest deposits were natural in origin, the top of which was situated at 0.60m BGS. These consisted of mid purplish brown boulder clay (at 1.65m BGS), mid yellow brown sandy clay (at 1.5m BGS), rounded pebbles, cobbles and boulders with fine slightly clayey pinkish orange brown and grey sands (at 1.2m BGS), blue grey and chocolate brown clay (at 0.75m BGS) and light orange brown clay (at 0.60m BGS). These were sealed by pale orange brown clay sand subsoil (at 0.24m BGS) and dark grey brown sandy clay loam topsoil.

TP7 The test-pit was positioned between Trenches 7 and 8 in field 4 and was machined to a maximum depth of 3.4m BGS. The top of the glacial natural was located at 0.53m BGS and it consisted of orange brown sand (at 2.6m BGS), laminated silts and clays with occasional sand (at 2.3m BGS) dark brown grey veined clays (at 0.90m BGS) becoming laminated with silts (at 1.5m BGS) and mottled bright orange and light grey clay (at 0.53m BGS). A mottled orangey brown clay sand subsoil (at 0.26m BGS) and mid to dark grey brown sandy clay loam topsoil were the only archaeological deposits recorded within the test-pit.

TP8 This test-pit was situated c.35m south-east of Trench 6 in field 3 and was excavated to a maximum depth of 3.1m. The underlying natural appeared at 0.26m BGS and consisted of fine orange brown sand (at 2.05m BGS), laminated orange sands and red brown silty clays (at 1.9m BGS), laminated chocolate brown and light grey silty clays and fine silts (at 1.3m BGS), dark brown and blue grey clay (at 0.55m BGS) and orange and grey clays (at 0.26m BGS). These were sealed by mottled orange and grey brown clay sand subsoil which was only 0.06m thick and dark grey brown sandy clay loam topsoil.

TP9 The test-pit was positioned c.5m east of Trench 3 in field 2 and was excavated to a maximum depth of 2.85m. Glacial natural was located at 0.36m BGS, consisting of dark red brown boulder clay (at 2.5m BGS), grey sand with gravel, cobbles and boulders (at 1.88m BGS), fine to medium grained orange brown sand (at 1.4m BGS), dark brown and blue grey clay (at 0.56m BGS) which became finely laminated (at 1.25m BGS), and mottled orange and grey clay (at 0.36m BGS). These deposits were sealed by mottled orangey grey brown clay sand subsoil (at 0.20m BGS), which was truncated by a north-east to south-west aligned circular land drain. The latter was covered with dark yellowish brown sandy loam topsoil.

TP10 The test-pit was situated on the western side of field 3, 85m from the north bank of Osbaldwick Beck and was excavated to a maximum depth of 3.6m. Natural was located from 0.39m BGS and consisted of stiff dark red brown sandy clay with sand, gravel and occasional cobbles and small boulders (at 2.3m BGS), Dark brown and blue grey clay (at 0.82m BGS) becoming more laminated (at 1.5m BGS) and mottled orange and grey clays (at 0.39m BGS). Mottled orange and grey clay sand subsoil (at 0.17m BGS) and dark grey brown silty clay topsoil sealed the top of the test-pit.

TP11 Test-pit 11 was positioned c.12m to the east of Trench 4 within field 3 and was machined to a maximum depth of 3.1m BGS. The earliest deposits within TP11 were of natural origin, the top of these being situated at 0.40m BGS. These natural deposits consisted of stiff dark grey boulder clay (at 2.9m BGS), initially laminated orange brown sands and sandy clays (at 2m BGS) becoming increasingly sandy and containing cobbles and boulders (at 2.4m BGS), orange brown and mid brown silts and clays (at 1.4m BGS), blue grey and chocolate brown clays (at 0.62m BGS) and orange and grey clay (at 0.40m BGS). Mottled orange clay sand subsoil and dark grey brown sandy clay loam topsoil sealed the top of the test-pit.

TP12 The test-pit was located on the eastern side of field 2 c.30m to the north of a galvanised iron water trough and was excavated to a maximum depth of 3.0m. Natural geology appeared from 0.28m BGS and comprised stiff reddish brown boulder clay (at 2.3m BGS), orange and grey sands, gravels and boulders which dipped to the maximum depth limit to the south (from 1.9m BGS), dark brown and blue grey clays (at 0.73m BGS) becoming laminated (at 1.2m BGS) and orange grey streaked clay (at 0.28m BGS). These were sealed by mottled orangey grey clay sand subsoil (at 0.19m BGS) and mid brown silty loam topsoil.

TP13 This particular test-pit was situated on the eastern side of field 8, c.15m from the cycle track and was excavated to a maximum depth of 0.70m. It was positioned here to investigate an area identified by the soil auger survey as "impossible to penetrate" and was thought to maybe represent a surface of some kind. The earliest deposit located was a very compact blue grey boulder clay with frequent cobbles and rounded gravel. The latter appeared natural in origin and was not redeposited, or laid down in beds (as a Roman road surface would have been constructed). This was sealed by mid orange brown sandy clay subsoil (at 0.30m BGS) and mid brown sandy clay loam topsoil.

TP14 and TP15 These test-pits, situated across the cyclepath were hand excavated by the contractors and were only briefly observed by an archaeologist. No sketches of the test-pits were made, as they comprised modern services which pre- and post-dated black ashy slag and clinker which was interpreted as railway embankment make-up for the Derwent Light Valley Railway.

Bore-holes 1, 2 and 3 These were not monitored by an archaeologist as it was considered that the test-pits described above gave a comprehensive record of the archaeological potential of the areas not covered by the archaeological evaluation trenches.

5. FINDS ASSESSMENT

5.1 Pottery

Context	Quantity	Spot date	Description
0	1	?Roman	One abraded Roman sherd
1000	11	L19th/20th	One post medieval reduced ware, ten late 19th/early 20th wares
2000	11	L19th/20th	Five modern, two post-medieval, two abraded medieval and two abraded oxidised sherds
2003	1	?Roman	One very abraded oxidised ?Roman sherd
2005	1	Roman	One scrap of abraded oxidised ?Roman pottery
2007	2	Roman; Post-Medieval	One abraded oxidised ?Roman sherd, One post medieval earthenware
3000	22	L19th/20th	Fourteen late modern kitchen wares, post-medieval tripod pitcher foot, three post-medieval sherds, four oxidised scraps ?Roman
3008	3	12th , 14th	Two abraded gritty wares, One Humber ware
4000	17	19th/20th	Ten late 19th/20th century kitchen wares, two mortaria fragments, one Cistercian ware, two abraded grey wares, one abraded medieval, one abraded white ware
4019	1	?Roman	One oxidised abraded sherd
5000	8	L19th/E20th	Three post-medieval sherds, five modern
5007	1	Post-medieval	Scrap
5009	1	Roman	One abraded oxidised scrap ?Roman
5011	2	?Roman	Two very abraded oxidized sherds, possibly Roman
6000	15	Roman; 18th	Ten very abraded oxidised sherds ?Roman, two medieval abraded sherds, one Cistercian ware, one Blackware, one post-medieval red earthenware
6002	4	Roman	Four abraded oxidised ?Roman sherds
6007	3	?Roman; 16th	Two abraded ?Roman oxidised; one abraded Hambleton handle attachment
6018	3	Roman	Two abraded oxidised wares, ? Roman
7000	18	L19th/20th	Range of tin-glazed earthenwares, kitchenwares and late stonewares; five very abraded oxidized sherds, possibly Roman
7004	2	19th/20th	One tin-glazed earthenware, one post medieval ware
7008	1	12th	One scrap gritty ware

7015	4	Roman; L19th/20th	Two abraded Roman, two late 19th/early 20th century
8021	6	Roman; 12th; L19th/E20th	One abraded Roman oxidized wares, one gritty ware rim, four late 19th/early 20th century
9000	4	19th	Three 19th century wares, one 16th century Hambleton type ware
10000	9	L19th/20th	Six late post-medieval and late 19th/20th century, one Cistercian, two abraded medieval sherds ?14th century.
11000	18	L19th/20th	Twelve late 19th/early 20th century, one gritty ware, two medieval, three abraded oxidised wares ?Roman
12000	12	18th/19th	Four 18th/19th century slip wares, brown glazed wares and tin-glazed earthenwares, five post-medieval wares, three abraded oxidised wares
13000	10	L19th/20th	Nine late 19th/early 20th century kitchen wares, one abraded oxidised sherd
13008	27	L19th/E20th	Twenty-seven late 19th/early 20th century kitchen wares
14000	30	Roman, Medieval, Post-Medieval	Eleven abraded oxidised sherds, one ?Roman grey ware, one abraded oxidised medieval, one gritty ware, four abraded medieval white wares, one post medieval black ware, one post medieval green ware, four 19th century tin-glazed earthenware, one 19th century Brown ware, five Cistercian wares
14002	10	Roman; L19th/20th	Four post medieval, one tin-glazed earthenware, five oxidised ?Roman scraps
14006	5	16th	One Cistercian, one gritty ware, one late medieval, two abraded oxidised sherds
15000	4	L19th/E20th	Three modern kitchen wares
16000	17	L19th/20th	Twelve late 19th/early 20th century, one Hambleton lobed-bowl fragment, four abraded oxidised sherds
16002	1	?Medieval	One abraded white ware
16004	2	18th/19th	One abraded sherd, one abraded white ware fragment
17000	10	L19th/20th	Ten late kitchen wares
18000	4	?Roman; Modern	Three late 19th/early 20th century, one abraded ?Roman
18005	1	E20th	tin-glazed earthenware
18008	10	Roman; 12th L19th/20th	Seven late 19th/early 20th kitchen wares, one gritty ware, two scraps of very abraded oxidised wares ?Roman
18012	1	18th	One slipware

19000	17	L19th/20th	mixed late 19th/early 20th century kitchen wares, tin-glazed earthenwares, stonewares
20000	4	L19th/E20th	Four kitchen wares
22000	10	L19th/E20th	Two oxidised abraded sherds, one medieval sherd, one Cistercian, six late 19th/early 20th century wares

The majority of this pottery was of late post-medieval and modern date. Sherd sizes were generally small. There was a small amount of Roman and medieval pottery but this was all generally very abraded and worn, presumably from ploughing over a long period. Most of the Roman pottery is very abraded oxidised wares which would suggest broadly a 2nd century date. This must be treated with caution, however, as much of the possibly Roman pottery is so abraded that identifications are very uncertain, some of the oxidised wares might equally be abraded medieval and later wares. There is no material of the Anglian or Anglo-Scandinavian date and little recognisable medieval pottery. The late post-medieval and modern wares include typical household rubbish.

5.2 Other Recorded Finds

The overwhelming majority of the 64 small finds appear to be post-medieval/modern in date, comprising mainly tobacco pipes and vessel glass; the only certain exceptions to this are a silver coin dated 1553-54 (sf51, c.1000), a medieval (?14th century) strap-end (sf53, c.6000), and a copper alloy vessel foot (sf46, c.10000), also likely to be medieval. Possibly medieval or post-medieval are a shield-shaped weight (sf47, c.5000), and two copper alloy mounts (sf52, c.2000; sf56, c.11000). (NB – the majority of the small finds from context numbers 1000, 2000, 3000 etc. were unstratified and were picked up during a metal-detecting exercise on the spoil heaps of the trenches during an open day on the 12th May).

FIND	CONTEXT	MATERIAL
Sf1	7015	Slag Fragment
Sf2	7015	Fired Clay Tobacco Pipe Fragment
Sf3	7015	Glass Fragment
Sf4	8021	Glass Fragments
Sf5	7000	Glass Fragments
Sf6	7000	Copper Alloy Button
Sf7	7000	Fired Clay Tobacco Pipe Fragments
Sf8	3000	Iron Sheet
Sf9	3000	Fired Clay Tobacco Pipe Fragments
Sf10	10000	Fired Clay Tobacco Pipe Fragment
Sf11	10000	Iron Nail
Sf12	6000	Fired Clay Tobacco Pipe Fragments
Sf13	12000	Fired Clay Tobacco Pipe Fragments
Sf14	14000	Fired Clay Tobacco Pipe Fragment
Sf15	4000	Fired Clay Tobacco Pipe Fragments
Sf16	11000	Fired Clay Tobacco Pipe Fragments
Sf17	5011	Iron Nail

Sf19	17000	Glass Vessel Fragment
Sf20	15000	Glass Vessel Fragment
Sf21	15000	Fired Clay Tobacco Pipe Fragments
Sf22	7008	Iron Screw
Sf23	7008	Glass Fragment
Sf24	1000	Copper Alloy Bar
Sf25	1000	Fired Clay Tobacco Pipe Fragments
Sf26	1000	Glass Fragments
Sf27	7000	Fired Clay Tobacco Pipe Fragment
Sf28	4006	Fired Clay Tobacco Pipe Fragment
Sf29	7017	Copper alloy Button
Sf31	6000	Copper alloy glass Button
Sf32	13000	Glass Vessel
Sf33	18005	Glass Vessel Fragments
Sf34	17000	Fired Clay Tobacco Pipe Fragment
Sf35	18000	Fired Clay Tobacco Pipe Fragments
Sf36	7000	Fired Clay Tobacco Pipe Fragment
Sf37	7000	Slag Fragment
Sf38	9000	Fired Clay Tobacco Pipe Fragments
Sf39	20000	Fired Clay Tobacco Pipe Fragments
Sf40	16000	Iron Nail
Sf41	11000	Fired Clay Tobacco Pipe Fragment
Sf42	11000	Fired Clay Tobacco Pipe Fragments
Sf43	19000	Fired Clay Tobacco Pipe Fragments
Sf44	19000	Iron Fragments
Sf45	18002	Iron Horseshoe
Sf46	10000	Copper Alloy Vessel
Sf47	5000	Lead Alloy Weight
Sf48	5000	Silver Coin
Sf49	11000	Copper Alloy Coin
Sf50	7000	Copper Alloy Coin
Sf51	1000	Silver Coin
Sf52	2000	Copper Alloy Gold Mount
Sf53	6000	Copper Alloy Textile Strap-end
Sf54	3000	Copper Alloy Thimble
Sf55	3000	Copper Alloy Ring
Sf56	11000	Silver Mount
Sf57	16000	Lead Alloy Musket Ball
Sf58	11000	Lead Alloy Fragment
Sf59	13008	Leather Iron copper alloy Shoe
Sf60	13008	Copper Alloy Disc
Sf61	13008	Glass Vessel Fragments
Sf62	13008	slag fragment
Sf63	13008	Iron Strip
Sf64	13008	Iron Strip
Sf65	13008	Iron Horseshoe

6. CONSERVATION ASSESSMENT

6.1 Aims and Objectives

This report aims to meet the requirements of MAP2 (English Heritage, 1991) to produce a stable site archive (Phase2: Fieldwork). This has involved X-radiography and an assessment of the condition, stability and packaging of the finds. Urgent first-aid treatments have been undertaken as required, to enable safe storage for the long term.

The potential of the assemblage for further analysis and research is also discussed (MAP2 Phase 3: Assessment). The condition of the various classes of material is summarised and indicators of unusual preservation are noted. There are recommendations for investigative conservation, for additional specialist support, and topics for further research are raised.

6.2 Procedures

Selected metal finds were X-rayed using standard Y.A.T. procedures and equipment. Two sheets of film were used to produce a duplicate for archive purposes, and given a reference number in the YAT Conservation Laboratory series. The X-ray number was written on the packaging for each object X-rayed. Each image on the X-ray was labeled with its small find number. The plates were packaged in acid-free archival envelopes. The plate number was added to the YAT Online Photo Archive and linked to the IADB find record for each object.

All finds were examined under a binocular microscope at X20 magnification as well as viewing the X-rays were they existed. The material identifications were checked and observations made the condition and stability of the finds. Remedial conservation treatments were carried out where appropriate in order to stabilise the material for long term storage. Assessment and treatment details were recorded in the Conservation Work Record area on IADB, the information can be printed out through SQL Query.

6.3 Quantification

A total of 64 small finds were assessed and two X-rays produced. The number of objects in each material category is listed below:

Copper alloy	12
Fired clay/tobacco pipe	21
Glass	10
Iron	11
Lead alloy	3
Leather	1
Silver	3
Slag	3

6.4 Assessment

6.4.1 Iron

The condition of the iron varies although much of it is heavily mineralised, with bulky orange/brown corrosion products obscuring surface detail in all cases. This suggests that the survival of any surface detail is relatively poor. The corrosion products are in keeping with iron from a well-aerated, damp burial environment, not favourable to the survival of organic material. Although some damage has been noted, the majority of the iron appears to be stable in its current desiccated storage environment with little sign of active corrosion since excavation. All are suitable for long-term storage, with no further conservation recommended.

6.4.2 Non-ferrous Metals including Coins

The condition of the copper alloy varies but is generally poor, with some loss of surface detail in almost all cases. Extensive corrosion of the metal core has occurred in a few cases, and one object, (sf55) has possible 'bronze disease'. Two of the copper alloy small finds were obviously modern buttons (sf 29 and 31), and these were not X-rayed. Sf46, a large cast vessel foot and sf 49, a 1910 penny were also not x-rayed. Some additional technological features were revealed though x-radiography such as rivets and rivet holes. Secondary materials were noted, namely gilding on sf52, and mineralised textile fibres on sf53, (see individual assessment details on IADB records for details). Further removal of soil etc. from between the plates may reveal more of the textile for identification. However, no further investigative conservation has been recommended at this stage. All are suitable for long-term storage although sf55 would benefit from stabilisation treatment to avoid further deterioration through bronze disease.

Three silver items were assessed, one being a modern 1928 shilling (sf48), which was not X-rayed. Sf 51 is also a coin fragment which has survived remarkably well, with little or no mineralisation of the metal core. Its burial conditions seem to have favoured the survival of silver, since almost all surviving surface detail was visible, without being obscured by corrosion products. The third item, sf56 is a thin, decorative sheet fragment in poorer condition. Mineralisation of the surface has left the remaining metal core relatively weak and fragile. All are stable and suitable for long-term storage in desiccated conditions <35% RH, with no further conservation recommended.

There were three lead alloy small finds, all in fairly good condition. The surfaces are covered with thin layers of protective cream-coloured lead oxides, resulting in good survival of surface detail. All are suitable for long-term storage if kept desiccated. No further investigative conservation is recommended.

6.4.3 Organic Materials

One leather item was recovered, a modern shoe heel with iron and copper alloy studs in situ. It was dry on arrival in the lab, requiring no further treatment.

6.4.4 Fired clay

There are 21 fired clay small finds, all of which are tobacco pipe fragments. They have been

washed and are dry and stable. They are in suitable condition for long-term storage, with no further conservation input required.

6.4.5 Glass

Ten glass small finds were assessed. Some had been washed and all were dry and stable. All appeared to be modern. No further conservation is recommended.

6.4.6 Slag

Three fragments of slag assessed. No further conservation input was recommended.

6.5 Statement of Potential

6.5.1 Indicators of preservation

The burial environment does not appear to be favourable to the survival of organic material. It also indicates poor preservation of the iron and copper alloy finds, which although surviving, are in poor condition. The silver and lead finds had in contrast survived well.

6.5.2 Dating evidence

Four coins were recovered, three of which were modern in date. This reflects the majority of the other recorded finds, many of which appear to be modern. Other datable finds included a strapend.

6.6 Recommendations

6.6.1 Further Investigative Conservation

No further conservation work has been recommended at this stage. The coins were either legible or modern, and none of the other finds were thought to merit further investigation. No other analysis or specialist support was identified.

6.6.2 Storage

6.6.3.1 Packaging

The finds have been packaged appropriately for long-term storage. All materials used are archive stable and acid-free. Plastic bags have been pierced to allow airflow within microclimates, reducing the risk of condensation and mould growth. 'Jiffy', (polythene) foam inserts have been added to the bags to provide additional support and protect against mechanical damage during transit. Any replacement of packaging materials should be carried out in consultation with a conservator. Avoid paper or card labels in association with metals, especially lead and lead alloys. Acid vapours will cause active corrosion, (Cronyn, 1990).

6.6.3.2 Storage Environment

Metals and slag are packed in polythene 'Stewart' boxes with silica gel to provide a dry microclimates of less than 15% Relative Humidity which will halt any further corrosion,

(Knight, 1992). Each box should contain at least 2x100g bags of silica gel and a humidity indicator strip. It is necessary to monitor the indicator strips regularly; **if any part of the strip turns pink the gel will need to be regenerated.**

7. ENVIRONMENTAL ASSESSMENT

7.1 Summary

Nine sediment samples recovered from excavations of deposits of ?prehistoric to modern date at Metcalfe Lane, Osbaldwick, York, were submitted to PRS for an evaluation of their bioarchaeological potential. All of the hand-collected bone recovered was from 'modern' contexts and was not included for evaluation.

Three of the samples yielded no more than a little charcoal in rather small fragments. The plant material in the single sample yielding modest numbers of charred cereal grains was not generally well preserved. Examination of a larger subsample is unlikely to provide specimens from which closer identification will be possible.

It is probably not worth pursuing further analysis of this material unless a reasonably narrow date can be achieved, and, even then, the possibility that it is not primary material means it is of limited value.

The present material need not be retained.

7.2 Introduction

An archaeological evaluation excavation was carried out by York Archaeological Trust at Metcalfe Lane, Osbaldwick, York (NGR SE 6285 5220), between 22 April and 24 May 2002.

Nine sediment samples ('GBA'/'BS' sensu Dobney et al. 1992) were recovered from the deposits for which provisional dating ranged from ?prehistoric to modern. All of the hand-collected bone recovered was from 'modern' contexts and was not included for evaluation.

All of the samples were submitted for an evaluation of their bioarchaeological potential.

7.3 Methods

The sediment samples were inspected in the laboratory and four were selected for examination. Descriptions of the lithologies of these samples were recorded using a standard pro forma prior to processing (following the methods of Kenward et al. 1980; 1986) for the recovery of plant and invertebrate macrofossils.

The washovers and residues resulting from processing were examined for plant and invertebrate macrofossils and the residues were examined for larger plant macrofossils and artefactual remains.

7.4 Results

The results of the investigation are presented in context number order. Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers.

No invertebrate remains were recovered from the samples.

Context 1008 [fill of linear gully 1023. Predates ridge and furrow so perhaps 10th or 11th century in date (though there was no pottery to substantiate this)]. Sample 4/T (2 kg sieved to 300 microns with washover; approximately 2 litres of unprocessed sediment remain).

Just moist, light to mid grey to mid brown to dark grey-brown, stiff to crumbly (working plastic), slightly silty clay with some ?rotted charcoal, charred grain and modern rootlets present.

There was a small washover consisting of a few cm3 of modern roots with a modest-sized concentration of charred cereals, perhaps a few tens of grains per kilogramme of sediment. They mainly comprised some rather puffed and shrunken barley (Hordeum) and much better-preserved oats (Avena), with perhaps no more than a single wheat (Triticum) grain. The finer fractions contained rather numerous broken fragments of cereal. Chaff was confined to a few scraps of oat awn and glume, and there were a few charred and uncharred weed seeds, the latter probably of recent origin. Also present were traces of charcoal (to 5 mm in maximum dimension) and coal (to 3 mm), the latter perhaps from the local drift. The small residue of about 75 cm3 was mainly iron-rich concreted sediment (?pan) to 5 mm with some ?burnt soil clasts to 15 mm.

Context 4008 [fill of natural tree-throw or hollow 4009. ?Post-glacial/prehistoric in date]. Sample 2/T (2 kg sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain).

Moist, varicoloured (buff to dark grey-brown in shades of brown, grey, and grey-brown), stiff to brittle (working plastic), clay with a few modern rootlets.

The washover comprised a few cm3 of modern roots with a little coal and charcoal (both to 5 mm); the tiny residue of a few cm3 was of sand and gravel (to 10 mm).

Context 5004 [backfill of curvilinear gully/ditch 5019 of probable Roman date]. Sample 3/T (2 kg sieved to 300 microns with washover; approximately 7 litres of unprocessed sediment remain).

Just moist, light to mid grey-brown to light to mid orange-brown (?oxidation), stiff to brittle (working plastic), clay with a few modern rootlets.

The washover comprised a few cm3 of modern roots with a little coal (to 5 mm); there was a small residue of barely 50 cm3 of sand and gravel (to 10 mm), most of the sand grade consisting of concreted iron-rich material (?pan).

Context 6002 [secondary backfill of linear gully 6004 of probable Roman date]. Sample 1/T (2 kg sieved to 300 microns with washover; approximately 8 litres of unprocessed sediment remain).

Moist, light brown to light grey (and light to mid orange-brown in places), stiff to brittle (working plastic), clay with a little ?rotted charcoal and a few modern rootlets.

The washover comprised a few cm3 of modern roots with a little coal (to 5 mm) and charcoal (10 mm); there was a tiny residue of less than 5 cm3 of concreted sediment (?pan), sand, and gravel (to 10 mm), with a trace of brick/tile fragments (<2 mm).

7.5 Discussion and statement of potential

Three of the samples yielded no more than a little charcoal in rather small fragments. The plant material in the single sample yielding modest numbers of charred cereal grains was not generally well preserved and examination of a larger subsample is unlikely to provide specimens from which closer identification will be possible.

7.6 Recommendations

It is probably not worth pursuing further analysis of this material unless a reasonably narrow date can be achieved, and, even then, the possibility that it is not primary material means it is of limited value.

7.7 Retention and disposal

The present material need not be retained.

7.8 Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

8. CONCLUSIONS

The excavations have shown that beneath the modern topsoil, little of archaeological interest survives within the development area. No waterlogged deposits were encountered and deposits appeared to show that much of the original ground surface had been truncated by medieval ploughing (ridge and furrow) and, where the land had been improved, by modern levelling.

The earliest activity on the site appears to have been a series of gullies on the western side of field 3 (located within Trenches 5 and 6). These may form a sequence of field boundaries or enclosures for the purpose of drainage or possibly stock enclosure. These features may date to the Roman period, possibly being 2nd or 3rd century AD in date. Several small post-holes within Trenches 2 and 21 may also be of Roman date. A possible toft enclosure, possibly dating to the 10th or 11th century in the south-eastern corner of the site, may be the most significant feature discovered, pre-dating the ridge and furrow (and possibly the medieval moated manor to the south). The toft enclosure gully contained burnt cereal grain amongst its backfills. Medieval ridge and furrow probably dating from at least the 12th century truncated the whole of the development area. This appears to have been used through to the 16th century when the fields may have been enclosed and used for pasture, one of the field enclosure gullies or original hedge lines being located within Trench 21. A number of attempts had been made in the 18th, 19th and 20th centuries to improve the land, with the insertion of land drains. The most extensive of these being in field 4 and the least in field 9, which appears to have been unimproved. A modern culvert crossed Trenches 16 and 21, a second perhaps similar culvert may have crossed Trench 14 and a third perhaps crossed the western end of Trench 7. Modern features including pits, post-holes, backfilled ponds, a horse burial, gullies and a sewer trench appeared in Trenches 4, 5, 8, 13, 16 and 18.

9. ARCHAEOLOGICAL IMPLICATIONS

The evaluation revealed evidence for possible Roman agricultural gullies or enclosures within field 3, and a possible 10th or 11th century toft enclosure within field 1. These were truncated by medieval ridge and furrow, land drains and modern features. The extensive evaluation has provided evidence to suggest that the land has probably been wet and low lying for a considerable length of time, and has therefore been of limited appeal for settlement or agriculture.

A watching brief may add further information to the scale of the agricultural ditch systems of Roman date in field 3 and the area of the possible 10th or 11th century toft enclosure in field 1. Much depends on the scale of the developer's foundation scheme and their plans for other ground-works.

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