LANGWITH HALL FARM, NOSTERFIELD, NORTH YORKSHIRE.

REPORT ON AN ARCHAEOLOGICAL EVALUATION.
OSA REPORT No: OSA05EV10.

DECEMBER 2006.

OSA

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Rec 04 May 07.

Report Summary.

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COUNTY:	North Yorkshire
NATIONAL GRID REFERENCE:	SE 287 813
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PLANNING APPLICATION No:	***
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PERIODS REPRESENTED:	Post-Medieval and Modern.

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1.0 Summary.

In light of a decision by Tarmac Northern Ltd. to extend their current quarrying operations into the Langwith Hall area, a programme of archaeological investigations was undertaken in the site area. This programme included a field surface collection survey, a geophysical survey and trial trenching. The archaeological work was phased so that each element was utilised to inform on the strategy for the next phase of work.

Prior to any fieldwork taking place a Desk Based Assessment (DBA) of the application area was undertaken (MGA 2005). The DBA involved the consultation of primary and secondary resources including historical documents and aerial photographs in order to build up a picture of the archaeological potential of the site area and the surrounding landscape. The DBA highlighted the historical development of the landscape with the gradual enclosure of the study area as it became suitable for agriculture purposes. Enclosure probably initiated in the late 18th early 19th centuries comprising an irregular pattern of sinuous linear ditched boundaries which became more regular as the water table fell and the area became drier.

The surface artefact collection survey involved the complete retrieval of all artefactual material, including modern material, and their subsequent recording in three dimensions using a total station EDM. The assemblage was dominated by post-medieval and early modern finds of which a significant part of the assemblage comprised fragments of field drain. The remainder of the later material represented manuring and showed no obvious concentrations over the survey area suggesting the absence of sub-surface features.

The geophysical survey involved a magnetometer survey over the whole site area, which was undertaken by Archaeological Services, University of Durham (see Appendix 6) on behalf of On-Site Archaeology Ltd. The results from the geophysical survey were more forthcoming and identified negative and positive anomalies from across the site area. The anomalies were interpreted as linear, curvilinear and sinuous linear soil filled ditches, areas of disturbed ground and burning, possible pits and natural features.

Based on the results from the geophysical survey a scheme of trial trenches was located in the site area. The trenches were located in order to test the archaeological potential of the different types of anomalies identified in the geophysical survey. Several trenches were located in blank areas from the survey in order to test the archaeological potential of those areas. The results from the trial trenching identified a plethora of natural features, sinuous curvilinear and linear boundaries, former plough soils and a complex pattern of land-drains. It was also found that three phases of enclosure could be identified which corresponded to the gradual drainage of the site area. The fringes of the application area were known to have been covered by extensive peat deposits until quite recently rendering the land useless to occupation and agriculture until quite recently.

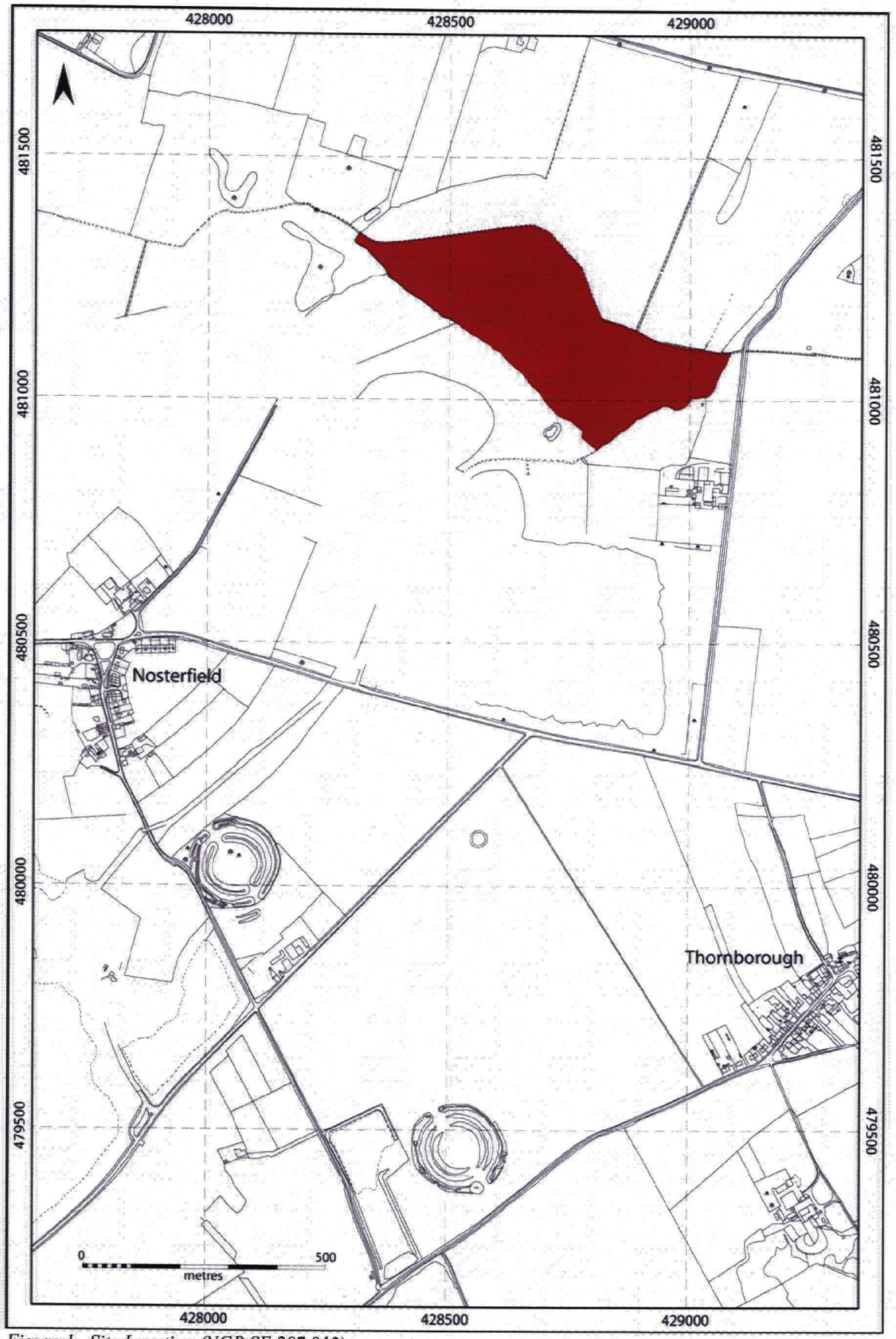

Figure 1. Site Location (NGR SE 287 813).

2.0 Introduction.

This document reports on a programme of archaeological investigations which was undertaken in Area 11, Langwith Hall extension (NGR centre: SE 287 813), as part of an archaeological evaluation of land to the north of Nosterfield Quarry, North Yorkshire. The work was undertaken by On-Site Archaeology on behalf of Mike Griffiths and Associates, for Tarmac Northern Ltd. The fieldwork took place between September 2005 and March 2006.

The site covers an area of approximately fifteen hectares which lies to the south of Langwith Hall Farm, Well, North Yorkshire (Fig.1). A Desk Based Assessment has also been prepared and submitted as part of the planning application. Evaluation and an on going watching brief have already been undertaken in planned and on going extensions to Nosterfield Quarry (FAS 2005a; 2005b). A Desk Based Assessment covering a large area of the landscape surrounding Nosterfield Quarry has also been prepared (FAS 2003).

The aims and objectives of the evaluation were to identify and characterise archaeological deposits within the site area and comprised a programme of non-intrusive and intrusive archaeological investigation. The programme of works was undertaken in phases so that each element could inform on the strategy for the next phase of work. The initial stage of the programme involved the consultation of the information included in the DBA. The second stage involved non-intrusive investigations which comprised surface collection and geophysical survey. Based on the results of this work a programme of machine excavated trial trenches was designed to assess the potential of the archaeological resource which had been identified in the site area.

3.0 Site Location, Geology, Topography and Land Use.

The site area encompasses an irregular field comprising approximately fifteen hectares of arable land situated in the parish of Well, North Yorkshire. The site is located to the north of Nosterfield Quarry (NGR centre: SE 287 813), operated by Tarmac Northern Ltd, and approximately 1km to the northeast of the village of Nosterfield in the Vale of Mowbray (Fig.1). The site is bounded on its northern edge by the course of Ings Goyt, by Nosterfield quarry to the south, while further to the north, east and west of the site lay tracts of enclosed farmland. Langwith Hall farm buildings lie approximately 0.25 km to the north and Ladybridge farm is situated c. 100m from the southeastern boundary of the site area.

In the main the geology comprises fluvio-glacial terrace deposits of sand and gravels. To the north of the site area glacial till deposits are located which infringe slightly into the northern part of the site (FAS 2003). Peat deposits surround the site on its southern, western and eastern boundaries and they represent a former wetland landscape, which extend further to the south, east and west. Immediately to the south the peat deposits are known as the flasks and those situated in the site area are an extension of that area. The peat deposits are known to have started to form in the early Holocene period (*ibid.*).

The topography of the site area consists of low gravel rises surrounded by lower lying level areas of land. The highest gravel rise is known as Howlands Hill (at c. 42.00m AOD), which is located in the south central area of the site and continues into the Nosterfield Quarry to the south (Fig.2). From Howlands Hill the land falls gently to the north (at c. 40.30m AOD) and west (at c. 39.80m AOD) where it forms low lying gently undulating gravel rises (Fig.2). A broad level extent of low lying ground lies to the east of Howland Hill which forms the most extensive area of former peat wetland in the site area (at c. 39.10m AOD) (Fig.2).

The land use in the site area is given over to arable farming, however, the top of Howlands Hill is known to have been modified in the 20th century through mechanical means (Mr. A. Almack pers com.). It was thought that the top of the rise had been truncated by machine/bulldozer to recover gravel.

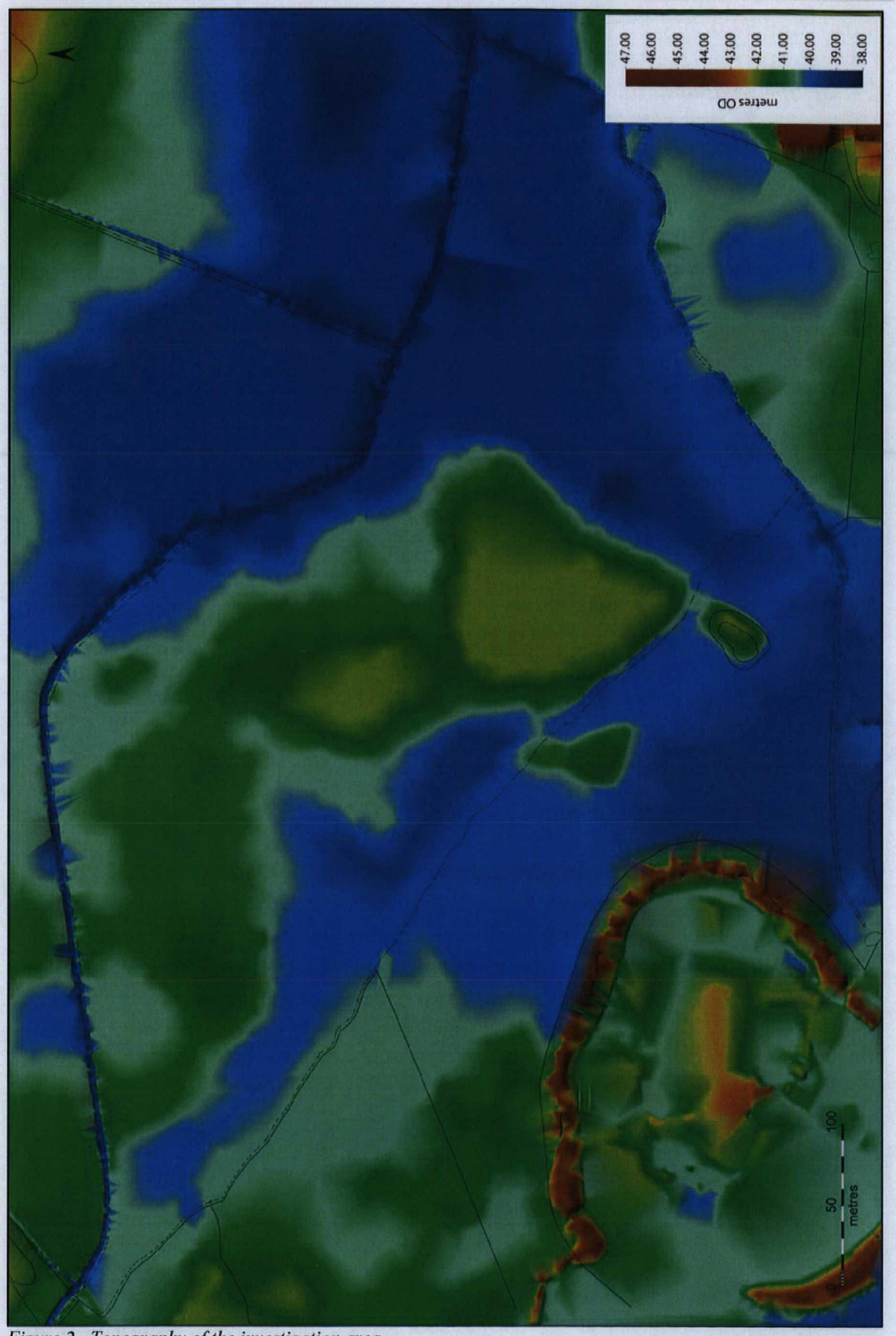

Figure 2. Topography of the investigation area.

4.0 Archaeological Background.

4.1 Introduction.

Langwith Hall extension lies on the periphery of an extensive multi-period landscape centred on three henge monuments known as the Thornborough Rings. The presence of this monument complex has prompted an over-riding interest in the study of landscape development during the Neolithic and Bronze Age periods, however, it is clear that the later use of the landscape was and is as important especially in regards as to how elements of the earlier landscape have been impacted on and survive to this day. In that respect this section seeks to draw on existing archaeological knowledge in order to summarise the development of the local landscape from the Late Upper Palaeolithic to the post-medieval/early modern period.

Although no archaeological work has been undertaken within the Langwith Hall area itself the surrounding landscape has been the focus for a series of excavations and research projects since the 19th century. The archaeological development of this landscape has been recently documented elsewhere (Harding 1994 and 1998; FAS 2003, 2005a and 2005b; Griffiths and Timms 2005) and these documents have been consulted widely in order to produce the brief period based discussions below. Also in addition to published and unpublished sources two websites containing reports on archaeological investigations have also been extensively consulted: www.archaeologicalplanningconsultancy.co.uk/mga/projects/noster/speciali.htm and www.thornborough.ncl.ac.uk . The latter is hosted by Newcastle University and summarises the results from fieldwalking and limited excavation undertaken as the Thornborough Landscape Project under the direction of Dr. Jan Harding.

4.2 Palaeolithic (c. 250,000BC - c.8000BC).

There is no direct archaeological evidence for human occupation within the application area and in the surrounding landscape for this period. However, recent palaeo-environmental analysis of column samples from a series of deep solution holes adjacent to a former lake, which was situated in the existing area of Nosterfield Quarry, has identified a pollen sediment record sequence dating from the early Holocene through to the late Iron Age (FAS 2003). Along side this, the analysis of peat from the margins of the afore mentioned lake indicate that the lake possibly formed in the early Flandarin period and that evidence for Palaeolithic occupation may be contained within these deposits (*ibid.*). However, it is highly likely that much of this evidence has been lost due to peat cutting activity in the early and late historic periods and is still on going through the gradual erosion of the material.

4.3 Mesolithic (c.8000 – c.4500BC).

A similar situation pertains for this period where the palaeo-environmental evidence indicates pine and scrub woodland developing into extensive forest cover of birch and pine. Again no direct evidence for occupation at this time has been forthcoming, however, the discovery of random finds of small quantities of microliths and other diagnostic worked stone tools, during

fieldwalking surveys in the area (Harding 1994 and 1998; FAS 2005b), from this period indicate the presence of Mesolithic communities in the landscape. More recent work in Nosterfield quarry and the area surrounding the henges has identified evidence for a more substantial Mesolithic presence in the area comprising a worked stone assemblage of fifteen artefacts from a (Harding and Lee 2004) triple ditched barrow and a possible pit alignment discovered in Nosterfield quarry. Sediment from the fill of one pit was radiocarbon dated to 4675 BC (Griffiths and Timms 2005), but this remains to be corroborated by other means.

4.4 Neolithic (c.4500BC – c.2500BC).

Palaeo-environmental evidence indicates that during the early Neolithic the area was heavily wooded on the valley sides, while the valley bottoms comprised a wetland environment of lakes and marshes (FAS 2003). In the later Neolithic the environmental evidence is less forthcoming, however, a glimpse was afforded from the analysis of the fills from the ditches of the henges and a cursus monument. This indicated a wooded environment 'under an oceanic climate with plentiful rainfall' (Thomas 1955, 432).

Similar to events in the Mesolithic evidence for settlement in the earlier part of the Neolithic is scarce and much of what can be said regarding the social organisation of communities relies on the evidence from the excavation of several pits, containing sherds of Grimston Ware, in the area of Nosterfield Quarry, evidence from fieldwalking of the wider area around the later henge monuments (Harding 1998) and the limited excavation of a small number of sites (Harding and Johnson 2000 and 2004). The results show limited occupation over a wide spread area, probably taking place within a heavily wooded environment (FAS 2003; FAS 2005b; Griffiths and Timms 2005).

A double ring ditch barrow, located 450m to the southeast of the southern henge has recently been excavated and dated to the earlier Neolithic. The barrow was constructed over three different phases and comprised a ditch and three pits, two of which were associated with human bone from several individuals, within its inner circuit (Harding and Johnson 2004).

A cursus has been identified to the southeast of the village of Thornborough (FAS 2003). The cursus which is aligned northeast/southwest is overlain by the central Thornbrough henge. The monument has been the subject of limited excavation that verified its interpretation (Thomas 1955; Vatcher 1960), however, the date of the feature remains inconclusive. By analogy a late Neolithic date has been proposed, which is in keeping with other examples from the region (Manby 1988), although elsewhere in the country the monuments appear to be of an earlier date (Tilley 1994). Furthermore, the cropmark of a possible termination to a second cursus has been identified to the west of the northern cursus (FAS 2003).

The discovery of isolated monuments and features nearby to the main cursus has lead some researchers to suggest that the monument acted as a focus for later or contemporary activity. An undated cist burial was excavated within the internal area of the monument and a possible long mortuary enclosure has been identified to the east of the cursus (FAS 2003). However, the fact that both sites remain undated and produced no diagnostic artefacts makes this an hypothetical assumption rather than one based on archaeological evidence.

The evidence for activity in the later Neolithic takes the form of pit groups, which have been dated to the late Neolithic from the analysis of pottery fabrics and the radio carbon dating of charred material recovered from the fills of several pits, (FAS 2003, 2005a, 2005b) and lithic scatters containing material produced from stone working technologies generally attributable to the later Neolithic (FAS 2003; Griffiths and Timms 2005).

The three henges at Thornborough are aligned northwest/southeast, spanning a distance of 1.3km across the landscape. They have been classified as Class IIA based on the criteria that the henges comprise a predominantly regional group of monuments with two entrances and a large bank surrounded by two concentric ditches (FAS 2003). Recent excavation at the henges has revealed that the banks may have been coated with gypsum (Thomas 1955, 433) and that there was three distinct phases of construction comprising the cutting of the outer ditches, followed by further re-excavation of the outer ditch and finally the excavation of the inner ditch. Furthermore, recent archaeological investigation of the southern monument has produced evidence for the restoration and remodelling of the outer ditches along with the remodelling of the causeways associated with the inner ditches suggests some longevity to the construction, use and function of the monuments (Harding 2003), a phenomena which has also been identified during excavation at Ferrybridge Henge c. 60km to the south (Roberts 2005).

4.5 Bronze Age (c. 2500BC - 700 BC).

Environmental evidence indicates that during the early Bronze Age in the area damp woodland conditions gave way to dry warmer conditions and more open vegetation cover. A deterioration in the climate took place in the later Bronze Age (FAS 2003).

The earlier Bronze Age is renowned for the general lack of evidence for settlement and most of the information regarding the organisation of early Bronze Age society is dominated by the results of the barrow excavations. Furthermore, it has recently been suggested that the scarcity of built domestic structures during the early Bronze Age was due to the fact that social groups were still highly mobile and that both spheres of the every day and spiritual life overlapped (Brück 1999). Thus permanent sites of an overtly domestic nature were not of the norm and temporary settlement within a seasonal round associated with important places within the landscape formed the basis of every day existence (*ibid.*).

In contrast the later Bronze Age is characterised by distinct changes in several spheres of social organisation. Where in the early Bronze Age burial and the construction and use of ceremonial monuments played a significant role in society, such activity ceases in the later part of the period. Instead there is an emergence of recognisable settlement sites, often enclosed; alongside a greater emphasis on agricultural production than that witnessed for preceding periods. At this time social organisation apparently revolved around the household level.

Within the area under consideration evidence for settlement for both the early and later Bronze Age is very scarce. That is to say apart from the recovery of beaker pottery (denoting

earlier Bronze Age activity) from several pits in Nosterfield quarry and scattered fragments of pottery from elsewhere in the area no direct evidence for settlements has yet been identified.

A pit alignment comprising a double row of features, running on a northeast/southwest alignment adjacent to the southern henge, has been recently excavated. The pits are believed to have supported timber uprights and it has been suggested that the alignment is broadly contemporary with the construction of the henges (Harding 1998). A second double row of pits has been recently identified as a cropmark to the west of the northern henge and to the north of the terminal of a possible cursus monument. Radio-carbon determinations from charred material from the southern double pit alignment date the monument to the early second millennium BC, although the reliability of the provenance of the charred material put forward for dating has been questioned.

In the earlier Bronze Age the Thornborough Henge complex remained a significant fixture within the landscape and formed a focal point for the location for burials under round barrows and in ring ditches. Theses monuments have been found at several locations around the henge complex suggesting that a different perception of the surrounding landscape was taking place. Within the area at least nine, but it could be as many as fourteen, round barrows have been identified. The majority of the barrows show close spatial associations with the henges. Two barrows have been destroyed during early quarrying activity around the henges and the rest remain in locations where ploughing has seriously denuded their form and extent. The dating of the barrows is problematic and some may date to the late Neolithic period, however, those that have been subjected to excavation have produced skeletal material and early Bronze Age ceramics (FAS 2003).

In Nosterfield quarry two ring ditches were identified which were associated with several urned and un-urned cremations (FAS 2005a). Some of these burials dated to the middle Bronze Age indicating that regionally such burial traditions were longer lived than elsewhere.

4.6 Iron Age & Romano-British (c. 700 BC - AD 410).

The deterioration in climate continued into the Iron Age and this was thought to account for the lack of evidence for occupation in the area during this period due to the abandonment of less favourable areas and a movement in to lowland areas. Additionally soil exhaustion, believed to have taken place during the Bronze Age, is also proposed as being detrimental to occupation in the area (FAS 2003). However, recent excavations in Nosterfield quarry have produced some evidence for occupation. This included possible evidence for funerary activity in the form of two square barrows with only one burial identified in the ditch of one of the features (FAS 2005a). A large pit containing the skeletal remains of four horses was found to the southeast of the square enclosure without a burial. The remains were dated to the late Iron Age/early roman period. Along with the square barrows two pit alignments were also recognised as Iron Age in date and they were associated with a wider rectilinear field system that continues to the northwest of the quarry (*ibid.*).

Evidence for occupation in the Romano-British period is more forthcoming. Forts are known to have been established at Catterick and Aldborough and they were linked by a main arterial

Roman road known as Dere Street whose route is fossilised in part as the modern day A1. It is believed that the forts located along this major route would have been supplied with numerous resources from villas situated within their surrounding hinterlands. Two such villa complexes have been identified in the area under consideration. One was apparently located at Well where evidence for a bathhouse and a tessellated pavement have been identified (FAS 2003). However the location of this site close to a spring may suggest that the structural remains may be associated with a different type of site altogether such as a shrine. Fragments of building material including mosaic pavement have been found at Langwith House in secondary deposits and are assumed to have derived from the structures at Well. A second villa site has been recorded at Castle Dikes to the south of the area (*ibid.*). More prosaic evidence for Romano-British occupation in the area was identified during excavations in Nosterfield quarry and included a drying oven dating to the 2nd century AD. Pottery assemblages recovered from the top fills of earlier features dating to the 2nd and 3rd centuries have also been recovered from the quarry area. These finds suggest that the area around Nosterfield quarry was peripheral to the main focus of Roman settlement which might have been established at Well to the north (Griffiths and Timms 2005).

4.7 Anglo-Saxon to Post-Medieval (AD 410 – AD 1540).

Evidence for early medieval settlement is extremely scarce in the area and is postulated from the presence of burial mounds at How Hill near Carthorpe and Camp Hill, both approximately 4km to the east of the area in question. Evidence for ecclesiastical activity in the Nosterfield area during the early medieval period is also slight with several instances of Anglian sculpture recorded from the wider area and the site of a chapel recorded at Carthorpe. The Domesday book records the village of Well (Fern 2005) indicating that the village may have origins in the early medieval period and it has been suggested that the small number of records for other traceable modern day settlements indicates a dispersed settlement pattern in the early medieval period in the Nosterfield area. Similarly place name evidence indicates a widespread settlement pattern with a variety of settlement types surviving in the area (FAS 2003).

By the 12th and 13th centuries the pattern of dispersed settlement still continued and though the church held much of the land in the wider area, the manor of Well appears to have been under the tutelage of a series of lords and wealthy families, as recorded in the historical documentation (Fern 2005). Much of the land within the Langwith extension was common or meadow lands, with some woodland, which was utilised for grazing and peat cutting. In fact many historical sources refer to the area as swamp. Aerial photographic evidence indicates that much of the surrounding land around Langwith was utilised within the open field system of Well and nearby villages. Further a field in the area, during the 16th century a shift in the organisation of settlement to a more nucleated pattern occurred. Some villages expanded and survive as their modern day equivalent, while the many examples of deserted villages in the area indicate that many centres for one reason or another did not and were abandoned (i.e. East Tanfield).

The largest upheaval to the organisation of the landscape took place in the post-medieval/early modern period when the open field system and much of the common land was divided and re-allocated under the Enclosure Acts. Most of the land in the area under consideration was enclosed during the 18th and 19th centuries, possibly on a local and private basis as no parliamentary enclosure awards survive for Well (*ibid.*). This included the peat and common grazing lands occupying the majority of the area surrounding Langwith. Surviving documentary sources show that much of this area was enclosed as a series of narrow rectilinear fields whose pattern and method of enclosure (ditched hedges) facilitated in the drainage of the newly enclosed fields (*ibid.*).

It was also during this latter period that the exploitation of mineral resources took on an increase in activity. The limestone ridge to the west of the area under consideration had been exploited for building material and lime burning and its related products from earlier times. The presence of many lime burning kilns and quarries testify to the increase of this industry in the late medieval/post-medieval period. Along side this, the quarrying of sand and gravel deposits had also become established as an industry in the 19th and 20th centuries leading to the whole scale quarrying witnessed to this day at Nosterfield quarry.

4.8 Cropmarks and Historic Field Boundaries.

The DBA highlighted the historical development of the landscape with the gradual enclosure of the study area as it became suitable for agriculture purposes and utilised a number of sources including aerial photographs and historic maps (MGA 2005). Cropmarks of features in the survey area were identified on aerial photographs held at the National Monuments Record at Swindon and the North Yorkshire County Record Office at Northallerton, North Yorkshire. The cropmarks included a curvilinear feature associated with a T shaped feature in the north western site area and a linear feature in the southeastern area. A broad earthwork feature was also identified in the southeastern area on a aerial photograph taken in 1971 (MAL 71178, November 1971 © NYCC) (Fig.3).

The earliest map of the area was the 1856 Ordnance Survey and this showed two boundaries: a sinuous linear boundary in the northwestern half of the site area and a curvi-linear boundary to the southeast (Fig.3). A drainage plan dated to 1868 was also consulted which showed a similar sinuous linear boundary in the same area as the one described above and curvilinear boundary in the southeastern area of the site (Fig.3).

Site location

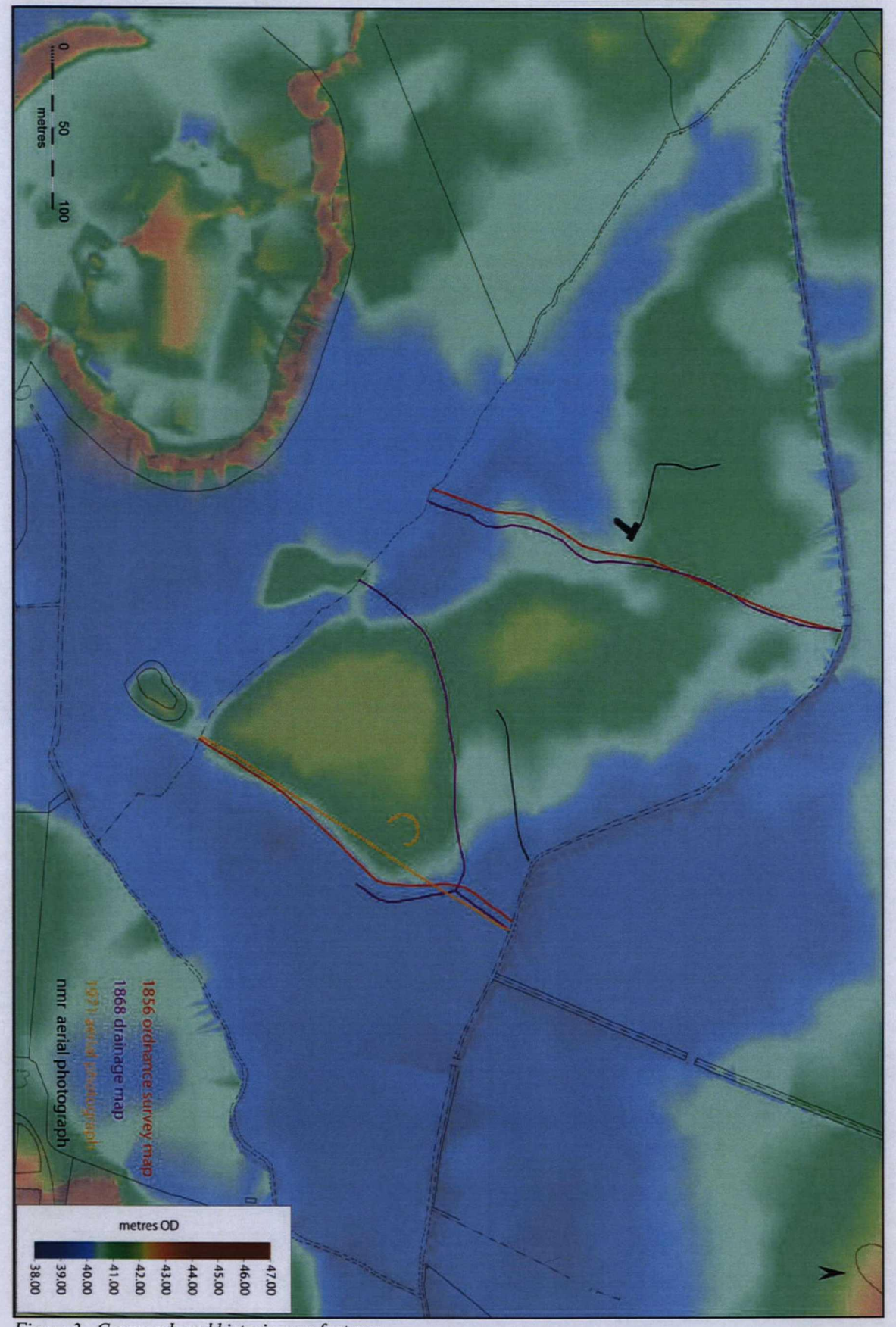

Figure 3. Cropmark and historic map features.

5.0 Methodology.

5.1 Introduction.

The initial phase of investigation the site comprised non intrusive survey methods comprising a field walking survey and a geophysical survey. A second phase of investigation involved a programme of intrusive trial trenching, which was carried out in two stages. The first stage comprised the sample excavation of fourteen trial trenches within the site area. The second stage involved the excavation of a further four trial trenching in the central area of the site.

5.2 Non Intrusive Survey.

5.2.1 Introduction.

The aim of the non intrusive surveys was to aid in the identification of subsurface archaeological deposits. The surface collection survey was undertaken to identify the presence or absence of archaeological deposits through the collection of artefacts from the plough zone. The quantification, dating and spatial analysis of the collected artefactual material was utilised in order to assess the possible location of buried features within the site area without recourse to intrusive investigation. For the purpose of the surface collection survey the site area comprised land that had not been covered by peat deposits which were associated with a former wetland landscape. The extent of the former wetland landscape and its archaeological limitations is discussed below.

The geophysical survey was undertaken in order to reveal the location, form and spatial extent of potential archaeological subsurface features through non-intrusive means. This was undertaken utilising a magnetometer. For the purpose of the geophysical survey the site area comprised the whole of Area 11.

From an early stage in the programme of archaeological investigation it was recognised that the site lay adjacent to an extensive area of former wetland landscape(Fern 2005; MGA 2006). This former landscape is known to have extended to the southeast of the village of Well which is located c. approximately 2km to the west of the site. At that location an extensive area of peat deposits lay in the bottom of a shallow valley in the basin of a former post-glacial lake (Dickson 2005). From there the peat deposits follow the easterly course of Ings Goit and are located to the north and south of the stream. Here their extent is constrained within a narrow, sinuous channel, which probably represented one of the out flow channels from the post-glacial lake. The southeastern end of this channel opens out to the northwest of the present site. Immediately to the south and west of the site the peat deposits open out further, extending into the northern zone of Nosterfield Quarry, where they are known as the Flasks where they occupy another former post-glacial lake (FAS 2005a). They also continue directly to the east of the site at Ladybridge Farm where they occur sporadically in low lying natural depressions (FAS 2005b).

Palaeo-environmental analysis of samples taken from surviving stratified peat deposits within Nosterfield Quarry (often recovered from deep natural features such as sink holes) has been used to discuss the past vegetation and topography of the locality, and environmental change. The dating of the peat deposits from the Flasks places their formation in the Early Holocene at 8705-8440 cal BC (FAS 2005a). Further work in the local area has also acknowledged the truncated and desiccated nature of large areas of the former wetland (Dickson 2005). It is now generally accepted that, in those areas, a mixture of natural and anthropogenic processes, such as oxidisation, desiccation, drainage and peat cutting, have reduced the horizontal profile of the peat to the extent that they have become totally subsumed within the plough zone. Where this has taken place topsoil deposits comprising former peat are usually more friable and humic in character and darker in colour than the surrounding lighter clayey/sandy topsoils. This horizontal shrinkage has obviously had a drastic effect on the palaeo-environmental and archaeological potential of the peat in those areas. For example it is possible that features such as wooden structures, which have been identified in similar environments from else where in the country (, may have existed but have been completely destroyed by the destructive processes highlighted above.

5.2.2 Surface Artefact Collection Survey.

5.2.2.1 Introduction.

Area 11 was irregularly shaped and covered 14.40 hectares of arable land. The surface artefact survey took place over a two-week period: 6th to the 16th September 2005.

The surface artefact collection survey was undertaken in three stages. The first stage involved the mapping of the boundary between peat covered areas and non peat covered areas. This boundary was plotted using a total station and is reproduced as Figure 4. During this exercise several areas of light grey silty sandy were also identified in the site area and it became apparent that these deposits represented backfilling of natural hollows (probably once peat filled). It was recognised that any finds recovered from these deposits would have been brought into the site area and would not reflect the presence of sub surface features or artefact scatters in the plough soil. The backfilled areas were also plotted by total station and are reproduced on Figure 4. The area covered by peat deposits comprised 8.24 hectares leaving 6.16 hectares of non peat covered land. The peat covered areas were defined in this manner because they were omitted from the systematic survey as it was acknowledged (based on the results of fieldwalking peat deposit elsewhere in the local area) that those areas would be bereft of datable finds (see above) other than land drain and modern material.

The second stage in the surface artefact collection survey involved the rapid scan of the peat covered areas in order to double check for the presence or absence of finds other than land drain and modern material. If finds of any material other than land drain and modern material were identified during the scan the area was earmarked for systematic fieldwalking. In the case of the large area of peat deposits in the southeastern end of the site a transect extending from the systematic survey grid in the non peat area was continued as a linear block of 50m squared grid squares to assess the presence and absence of finds other than land drain and

modern material. This was undertaken to provide a controlled systematic sample of this large peat covered area.

The final stage of the surface artefact collection survey involved the systematic collection of finds from the non peat covered part of the site area. In this zone a one hundred percent retrieval of all types of artefacts was employed.

5.2.2.2 Methodology.

A grid measuring comprising 50m x 50m squares was surveyed over the none peat covered area to ensure methodical and ordered fieldwalking. The baseline for the grid was set out parallel to the southern edge of the field on a northwestern / southeastern axis and offset to take in only non peat covered areas. The baseline was then subdivided into 50m intervals. Perpendicular gridlines, also subdivided at 50m intervals, were plotted from the baseline at the 50m intervals using tapes and ranging rods.

Measuring tapes were laid along the northwestern and southeastern axis of each grid square. The 0m mark was always at the northern corner of each grid square. Ranging rods were placed at 2m intervals, starting at 1m, along the tapes to create a line of sight for the fieldwalkers to walk towards. The location of the ranging rods was in direct relation to the number of fieldwalkers. Each fieldwalker walked along the transect towards the corresponding pole across the square and searched 1m on either side, thus ensuring one hundred percent coverage of each grid square. Every grid was walked in this manner.

As artefacts were located they were placed in plastic bags which had been previously marked with the site code (OSA05 EV10), site name (LANGWITH HALL) and area number (11). Each bag was then secured to ground in the exact spot from where it was recovered using a nail. Once the entire area was fieldwalked the finds were allocated a find number, starting at 1, and the location of each find was surveyed in using a total station from several survey stations, which were tied into the National Ordnance Survey grid.

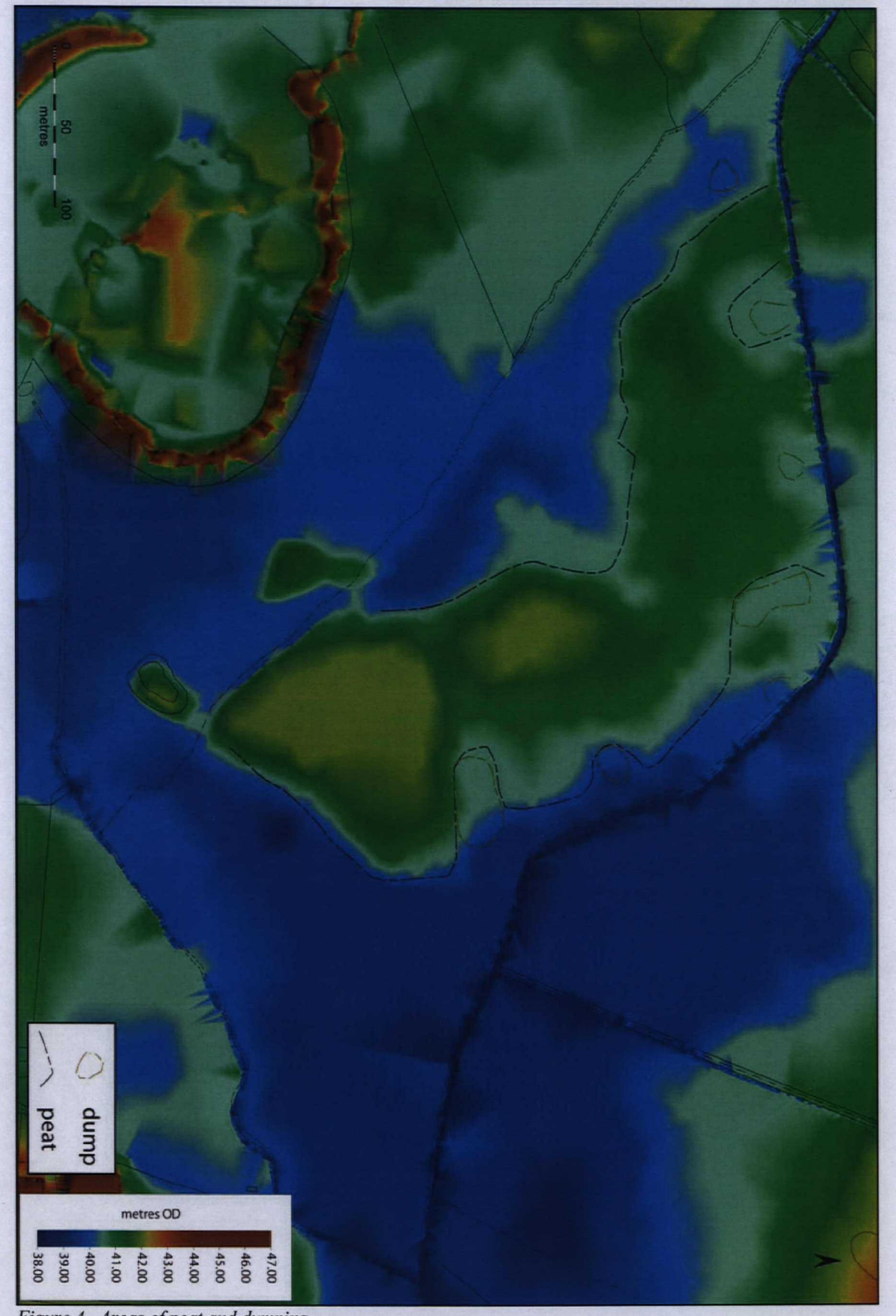

Figure 4. Areas of peat and dumping.

5.2.3 Geophysical Survey.

5.2.3.1 Introduction.

The following methodology and results for the geophysical survey have been reproduced from the report submitted by Archaeological Services, University of Durham (Report 1327), which is included in its entirety as Appendix 6.

The surveys and reporting were conducted in accordance with English Heritage (1995) Research and Professional Services Guideline No.1, Geophysical survey in archaeological field evaluation; the Institute of Field Archaeologists (2002) Paper No.6, The use of geophysical techniques in archaeological evaluations; and the Archaeology Data Service (2001) Geophysical Data in Archaeology: A Guide to Good Practice.

Geophysical surveying enables the relatively rapid and non-invasive identification of potential archaeological features and can involve a variety of complementary techniques such as magnetometry, electrical resistivity, ground-penetrating radar and electromagnetic survey. Some techniques are more suitable than others in particular situations, depending on a variety of site-specific factors including the nature of likely targets; depth of likely targets; ground conditions; proximity of buildings, fences or services and the local geology and drift.

The whole of the site area was subjected to a magnetometer survey. This technique involves the use of hand-held magnetometers to detect and record minute perturbations in the vertical component of the Earth's magnetic field caused by variations in soil magnetic susceptibility or permanent magnetisation; such anomalies can reflect archaeological features.

Recent work in the area has utilised the same survey technique with fairly reliable results in favourable soil conditions (ASUD 2005a, 2005b, FAS 2000b). At Oaklands to the west of the present site area pilot surveys involving both restivity and magnetometry techniques over the location of the cropmark of a possible enclosure provided differing results. The magnetometry survey partially identified the enclosures as two weak linear positive anomalies while the restivity survey identified the enclosure as a series of linear and curvilinear anomalies. Upon sample excavation the assumed enclosure turned out to represent natural features associated with ice wedging (Dickson 2005). In that respect the resistance survey had effectively mapped the soil moisture content contained within the deep natural chasms representing ice wedging. The magnetometry survey had failed to identify the feature due to the fact that the material filling the ice wedges, unsurprisingly, comprised the same magnetic signature as the surrounding natural sub soil deposits. Nevertheless, geomagnetic surveys were utilised elsewhere in the site area where they identified archaeological features associated with a linear field system, ridge and furrow and old field boundaries. It was concluded that magnetometry survey was less suited to detecting deep natural features in areas where soil conditions were unfavourable, however, in the wider site area the survey technique worked well in identifying a range of sub surface archaeological features (ASUD 2005a).

To the east of the present site area further pilot studies using the two geophysical survey techniques were undertaken during an archaeological evaluation at land to the east of Lady bridge Farm (FAS 2005b). Here the pilot surveys were undertaken over the location of cropmarks and concentrations of artefacts recovered during a surface artefact collection survey. The results from the pilot studies indicated that soil resistance surveys corroborated better with the cropmark evidence, however, upon excavation it was found that both techniques worked favourably in the detection of some natural features, modern features and ploughing, but were rather ineffective in identifying archaeological features (FAS 2005b: 166).

Furthermore, the subsequent investigation of sub surface features, at both locations outlined above, has identified the shallow depth of excavated archaeological features. Thus On site Archaeology in agreement with Archaeology Services, the University of Durham agreed that the anticipated shallowness of potential targets in the present site area and the non-igneous geological environment favoured the use of a geomagnetic survey technique. In that respect fluxgate gradiometry was considered appropriate for the survey.

5.2.3.2 Methodology.

A 30m grid was established across each survey area and tied-in by On-Site Archaeology to known, mapped Ordnance Survey points using a total station survey instrument.

Measurements of vertical geomagnetic field gradient were determined using Bartington Grad601-2 fluxgate gradiometers with automatic datalogging facilities. A zig-zag traverse scheme was employed and data were logged in 30m grid units. The instrument sensitivity was set to 0.1nT, the sample interval to 0.25m and the traverse interval to 1.0m, thus providing 3600 sample measurements per 30m grid unit.

Data were downloaded on-site into laptop computers for initial processing and storage and subsequently transferred to a desktop computer for processing, interpretation and archiving.

ArcheoSurveyor v.1.3 software was used to process the geophysical data and to produce a continuous tone greyscale image of the raw data. Geoplot v.3 software was used to produce the trace plot of the raw data.

The following basic processing functions have been applied to the dataset:

Clip – clips, or limits data to specified maximum or minimum values; to eliminate large noise spikes; also generally makes statistical calculations more realistic.

Zero mean traverse – sets the background mean of each traverse within a grid to zero; for removing striping effects in the traverse direction and removing grid edge discontinuities.

Destagger – corrects for displacement of anomalies caused by alternate zig-zag traverses.

Despike – locates and suppresses random iron spikes in gradiometer data.

Interpolate – increases the number of data points in a survey. In this instance the gradiometer data have been interpolated to 0.5 x 0.25m intervals.

5.3 Intrusive Survey.

5.3.1 Introduction.

The aim of the intrusive survey was to investigate the potential of the archaeological resource identified during the non intrusive surveys. The artefact collection survey did not identify any meaningful concentration of artefacts (see below). Therefore, no further investigations were undertaken on the strength of the results of that survey. The geophysical survey was more forthcoming in terms of identifying sub surface features. Therefore a programme of trial trenching was designed in order to identify the archaeological potential, character, spatial extent and date of the anomalies. The programme was also designed to investigate blank areas identified from the geophysical survey and cropmarks recognised in the DBA.

5.3.2 Trial Trenching

5.3.2.1 Introduction.

Trial trenching was carried out over two phases. The first phase involved the excavation of fourteen trial trenches in October 2005, one of which produced evidence for the formation of peat deposits in the late Neolithic/early Bronze Age in what was initially thought to have been a curvilinear archaeological feature in Trenches 9 and 11 (Fig.5). In order to evaluate this feature further a second stage of trial trenching comprising three evaluation trenches where opened in February and March of 2006 (Trenches 15-17, Fig.5). A further trench was also placed over a curvilinear cropmark in the southeast part of the survey area (Trench 18, Fig.5).

The trial trenching survey was designed to evaluate the potential archaeological significance of the geophysical anomalies, crop marks and blank areas whilst trying to minimise damage to the possible archaeological resource. In addition the survey sought to confirm the presence of desiccated peat deposits at several locations in the application area and the degree of erosion of those deposits. Thus a reasonable coverage of the site area was achieved. In that respect an approximate three percent coverage of the site area was undertaken. This involved the positioning of eighteen evaluation trenches within the application area.

The eighteen trenches covered a total area of 4485m². Of the eighteen trenches five (covering an area of 625 m²) were located in peat covered areas. The remaining trenches were located in non peat covered areas.

Table 1 and Figure 5 indicate the location, the size and the relationship to the presence and absence of potential archaeological features of the trial trenches. All the trial trenches were set out using a total station from a series of stations.

Trench No.	Size (m)	Geophysical Anomalies/Cropmarks
1	50 x 6	Feature group 8 (FG8), linear positive & negative anomalies. Feature 16 (F16), discrete positive anomaly.
2	20 x 20	F12 & F13, linear positive magnetic anomalies. F17 & F18, discrete positive anomalies.
3	10 x10	Fg7, group of discrete positive anomalies.
4	20 x 20	FG6, linear positive magnetic anomalies & concentrations of dipolar magnetic anomalies. Linear crop mark.
5	50 x 6	FG8, linear positive & negative anomalies.
6	50 x 6	FG9 & FG10, weak & strong linear & rectilinear positive magnetic anomalies
7	50 x 6	FG4, positive linear magnetic anomalies. F15 isolated positive magnetic linear anomaly.
8	20 x 20	Control trench in blank area.
9	50 x 6	FG2, strong curvilinear positive magnetic anomalies. F23 discrete positive anomaly.
10	20 x 20	Control trench in blank area.
11	50 x 6	FG1, broad & diffuse positive & magnetic anomalies of differing magnitudes.
12	5 x 5	FG1, broad & diffuse positive & magnetic anomalies of differing magnitudes.
13	5 x 5	FG1, broad & diffuse positive & magnetic anomalies of differing magnitudes.
14	5 x 5	FG1, broad & diffuse positive & magnetic anomalies.
15	20 x 4	FG2, broad & diffuse positive & magnetic anomalies.
16	20 x 4	FG2, broad & diffuse positive & magnetic anomalies.
17	10 x 20	FG2, strong curvilinear positive magnetic anomalies, linear sinuous cropmark & linear cropmark
18	20 x 20	Curvilinear cropmark

Table 1. Showing trench number, size and the reason for their positioning.

5.3.2.2 Methodology.

The overburden was removed by a 360° tracked excavator fitted with a toothless bucket down to the level of the first visible archaeological horizon or natural deposits. The exposed surfaces were then cleaned by hand in order to detect any archaeological features revealed through textural or colour changes in the deposits. The investigation of archaeological horizons was done by hand, with cleaning, inspection and recording both in plan and section. Twenty percent of linear features were sample excavated and of pits/postholes were half sectioned. In several cases natural features were identified. These were subjected to box sections in order to define their form and extent and to prove their interpretation as natural features.

As excavation proceeded written descriptions of all features, comprising both factual data and interpretive elements were recorded on standardised context sheets and a register of all contexts was compiled producing a full and proper written record. All recording was undertaken in accordance with the standards and requirements of the *Archaeological Field Manual* (Museum of London Archaeology service 3rd edition 1994).

Where stratified deposits were encountered, a 'Harris' type matrix was compiled as excavation progressed. A full and proper drawn record of archaeological deposits was made: plans of excavated features were drawn at a scale of 1:20 and where relevant 1:50. Sections of excavated features showing layers, deposits, cuts and any relationships were drawn at 1:10 and all sections were accurately related to Ordnance Datum. Heights above Ordnance Datum (AOD) were calculated by taking levels from a Temporary Benchmark (TBM), which was then tied in with an existing Ordnance Survey Benchmark. Registers of sections, plans and levels were kept on standardised sheets.

A full black and white and colour (35mm transparency) photographic record was maintained and was supplemented by digital photographs. This illustrated the principal features and finds both in detail and in a general context. Photographs of features were taken before and after excavation, using appropriate scales. The photographic record also included working shots to represent more generally the nature of the work. A register of all photographs was kept on standardised sheets.

All identified finds were collected and retained for study. Finds were placed into bags labelled with the project code and the context number. The presence of finds within a context was recorded onto the relevant context sheets. The finds were then washed, dried, marked, re-bagged and boxed according to material and were then sent to the appropriate specialists for assessment reports to be prepared.

For palaeo-environmental research, different sampling strategies were employed according to the perceived importance of the strata under investigation. For carbonised remains, bulk samples of a minimum of 10 litres (but usually 30 litres) were collected. Bulk samples of 10 to 30 litres were taken from waterlogged deposits for analysis of macroscopic plant remains and cultural artefacts. Samples of up to 30 litres were taken of any deposit thought to contain useful environmental or dating evidence such as charcoal or molluscs. Samples were sent to the *Palaeoecology Research Services* (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham) for analysis. For each environmental sample recovered a sample record sheet was issued and then the sample number and context information was entered onto an environmental sample register.

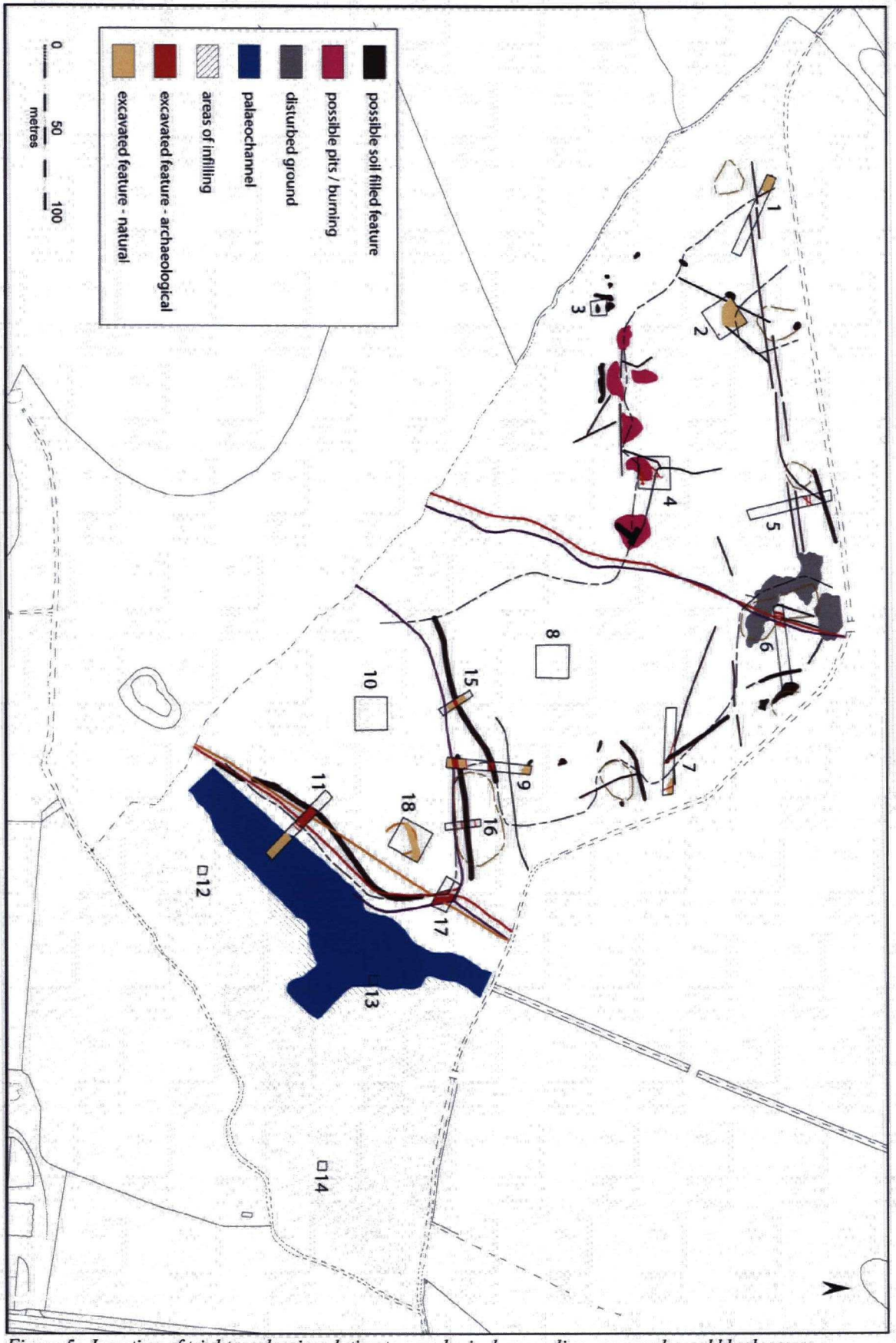

Figure 5. Location of trial trenches in relation to geophysical anomalies, cropmarks and blank areas.

6.0 Results.

6.1 Surface Artefact Collection Survey.

6.1.1 Introduction.

The fieldwalking survey commenced following seeding and compacting of the field. At the beginning of the surface artefact collection survey the visibility of finds was good, the crop had not yet germinated and started to grow, however towards the end of the survey the visibility was moderate to good as the crop had begun to grow at a fast rate. A total of 1393 individual artefacts were recovered during the field walking survey. Of those 635 (45%) finds were identified as modern field drain. The distribution of field drain across the site area showed a fairly even background scatter with three particular heavier concentrations (Fig.6). Those concentrations corresponded with low-lying areas of land on the fringes of a former peat mire on the north, south and east of the survey area. This material along with twenty-eight pieces (2%) of natural stone will form no further part of the following discussion.

The remaining 730 artefacts will form the focus of the discussion below. They comprised five fragments of animal bone (<1%), 592 fragments of ceramic building material (81%), two fragments of clay tobacco pipe (<1%), one lump of concrete (<1%), six pieces of worked and burnt flint (1%), eighteen shards of glass (2%), eleven metal objects (2%) and ninety-four sherds of pottery (13%), (Fig.7).

6.1.2 Prehistoric.

The evidence for prehistoric activity within the survey area was limited to six pieces of flint, one of which was burnt (Fig.8). The small, insignificant assemblage included three flakes, one possible core fragment/irregularly worked flint chunk and a side and end scraper (Appendix 8). On the whole the assemblage is comprised of artefacts whose date range probably spans the Neolithic through to the early Bronze Age. All the pieces display small irregular fractures along their edges consistent with edge damage, suggesting that they may have been in the topsoil for a long period of time. The worked flint was distributed fairly evenly over the survey area with no specific concentrations.

6.1.3 Late Medieval.

One sherd of medieval pottery was recovered during the fieldwalking survey near the northern field boundary (Fig.9). The pottery sherd came from a Yorkshire Gritty Ware jar and dated to the late 11th to 14th century AD (Appendix 7).

6.1.4 Post-Medieval.

A total of 683 artefacts of a post-medieval were recovered from the fieldwalking survey area. They included 580 fragments of ceramic building material, two fragments of clay pipe, fourteen shards of glass and eighty-seven sherds of pottery. The ceramic building material assemblage comprised fragments of brick, flat tile and pan tile, with brick being the most

frequent type. The glass mainly included shards of bottle glass. The pottery assemblage comprised eleven different fabric types, which included Black Glazed Earthenware, Black Glazed Wares, Creamware, Glazed Red Earthenware, Sunderland Coarsewares, Transfer Printed Wares and Modern White Ware. By far the most common fabric types were Transfer Printed Wares and Modern White Wares. The sherds came from a variety of vessels including jars, bowls, cups, plates and bowels (Appendix 7).

The ceramic building material was dispersed over the survey area apart from the southeastern end (Fig.10). There was a large concentration in the northwestern and north-central areas of the survey (Fig.10). The rest was scattered evenly throughout the area with the exception of the centre of the field, where relatively few pieces of the material were recovered.

The glass shards were concentrated in the northern part of the survey area and showed no particular concentrations (Fig.10).

The vast majority of the pottery sherds were concentrated near the northern edge of the survey area (Fig.10). The remaining sherds of post-medieval pottery were evenly spread over the south-central survey area with ever-larger gaps between sherds towards the western extent of the area.

6.1.5 Modern.

A total of thirty-two finds of a modern date were recovered from the survey area. They included twelve fragments of ceramic building material, one fragment of concrete, nine metal objects, four shards of glass and six sherds of pottery. The ceramic building material assemblage comprised fragments of brick and tile. The metal objects included five pieces of agricultural machinery, one modern drinks can and fragments of a cast iron drain. The fragments of glass were all from bottles and the pottery sherds included three sherds of 19th century buff ware, a sherd of Staffordshire/Bristol Mottled-Glazed Ware, a fragment of clay pigeon and a fragment of fine clay moulded mouth piece (Appendix 7).

All the finds showed a random distribution the majority of which were confined to the northern edge of the survey area (Fig.11).

6.1.6 Other Finds.

A total of eight other finds were recorded from the survey area. This group of finds could not be assigned a date and they included five fragments of animal bone, two iron nails and a hone stone (Appendix 7).

These items hand a random distribution throughout the survey area (Fig.12).

6.1.7 Summary.

The surveyed margin of peat deposits corresponded well with the same boundary between peat and non peat covered areas identified during the geophysical survey. The few prehistoric finds and medieval finds were on the whole confined to the non peat covered areas and the

margin between the two zones. Whether, this distribution reflects their primary depositional context is a mute point as their quantity and spatial representation indicates that they do not reflect occupation activity in the site area. The distribution of post-medieval and later finds was wide spread throughout the non peat covered areas, and extended further into the margins of the peat covered areas, suggesting that when these finds were deposited the former wetland areas were shrinking and were becoming incorporated into the agricultural regime. In the peat covered areas the distribution of finds (excluding modern land drain) away from the margins between peat covered and non peat covered zones was insignificant. This is probably a result of later activity such as medieval peat cutting removing possible evidence for early occupation activity along with the fact that the peat covered areas were not drained sufficiently to be brought into cultivation until quite recently.

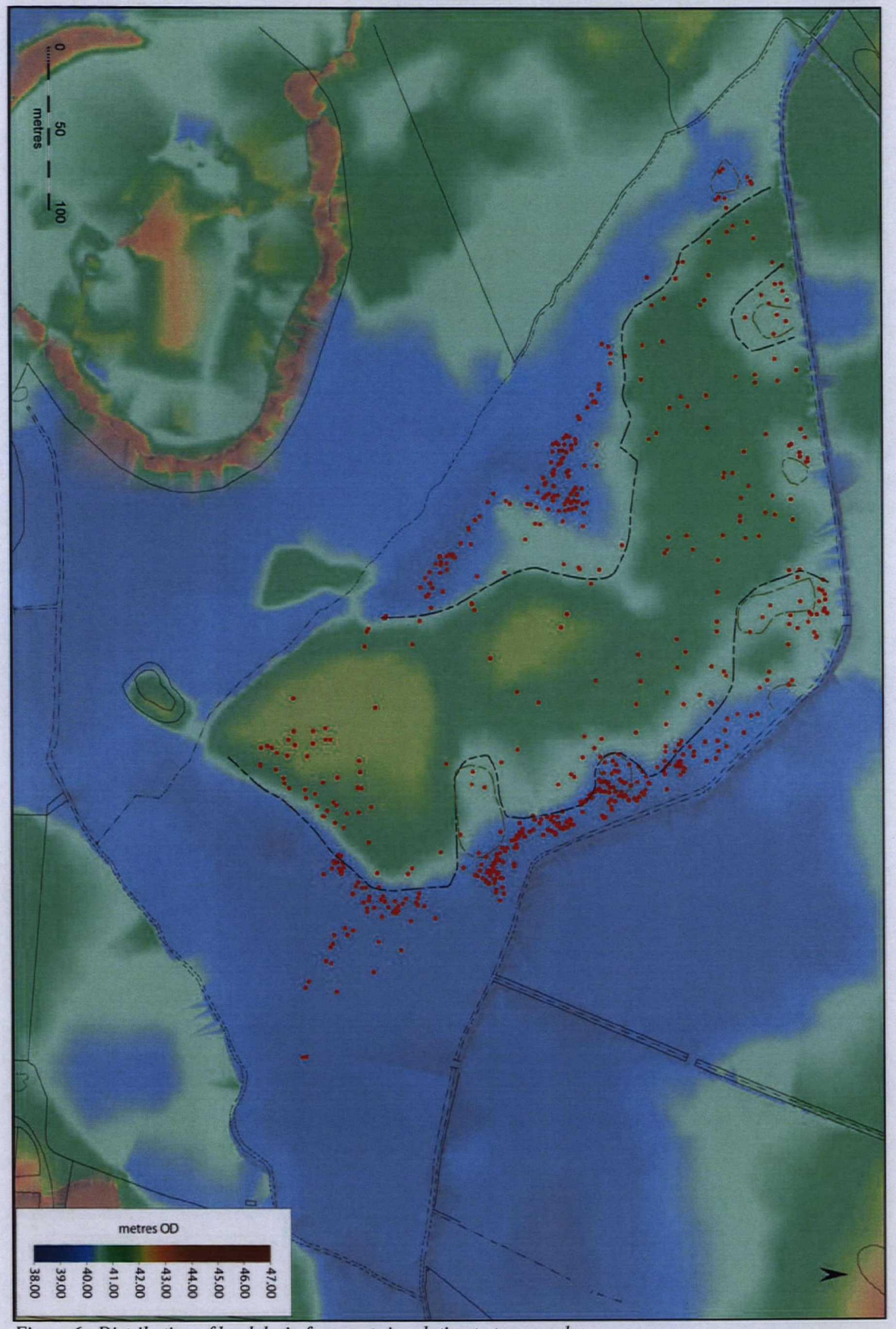

Figure 6. Distribution of land drain fragments in relation to topography.

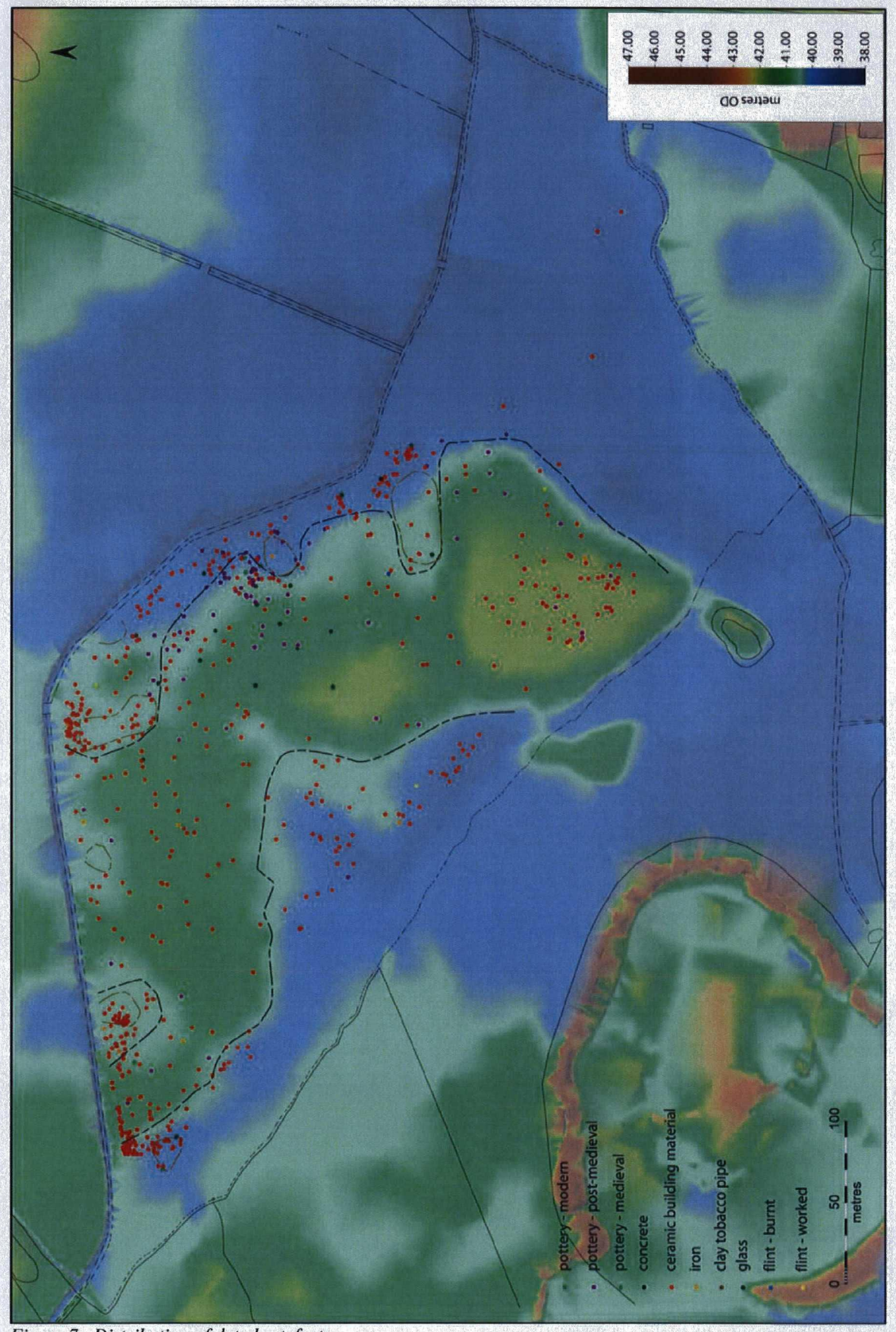

Figure 7. Distribution of dated artefacts.

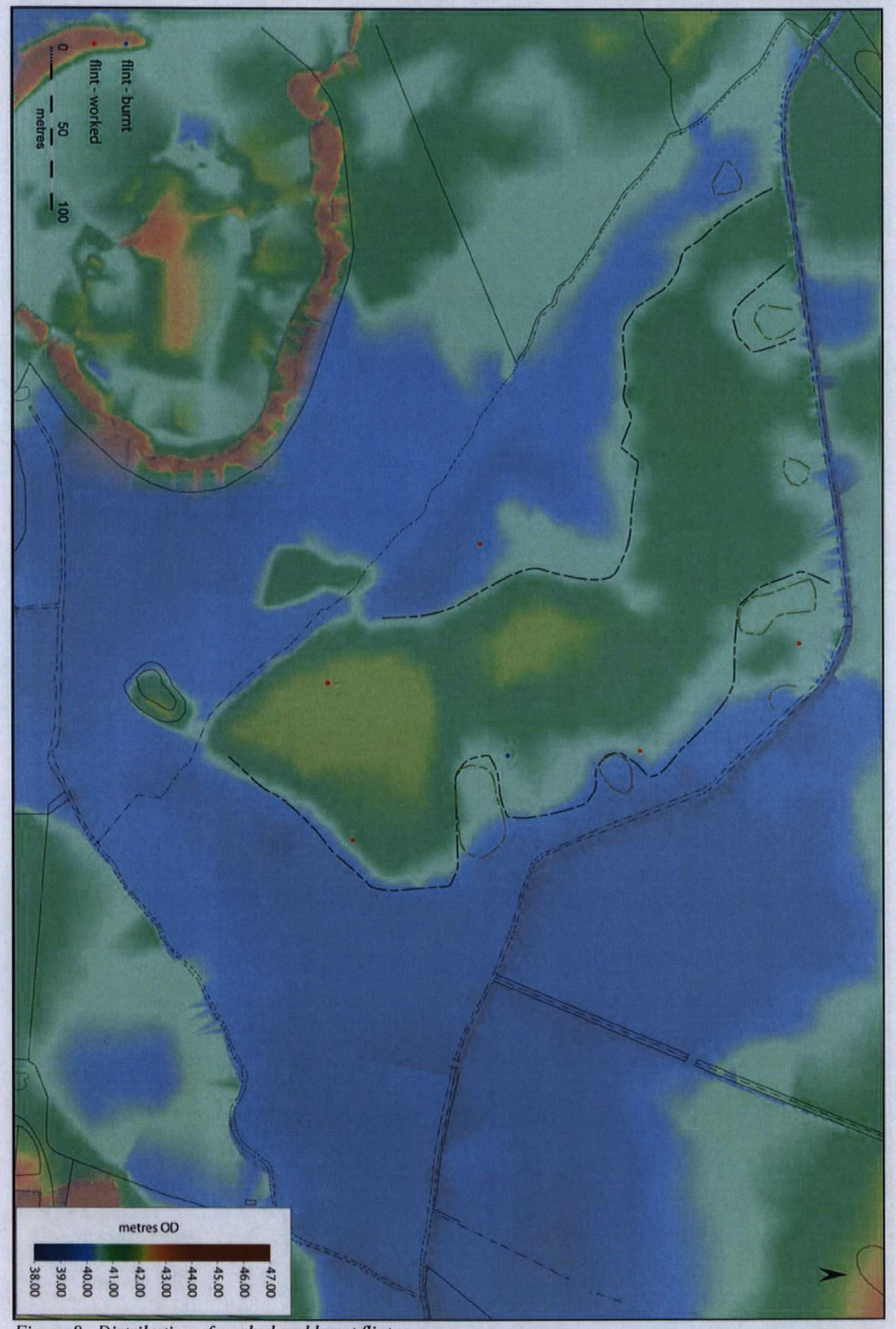

Figure 8. Distribution of worked and burnt flint.

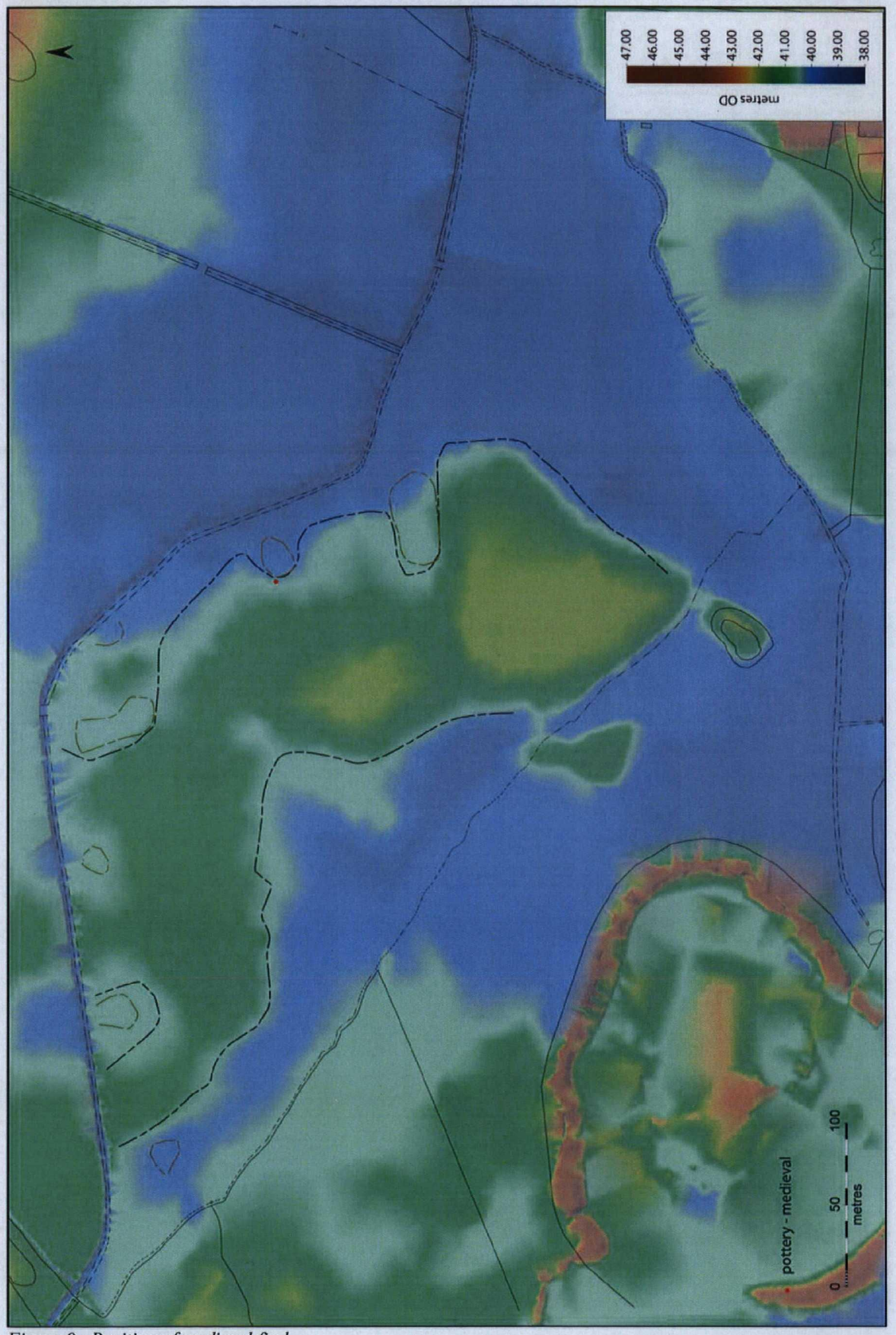

Figure 9. Position of medieval find.

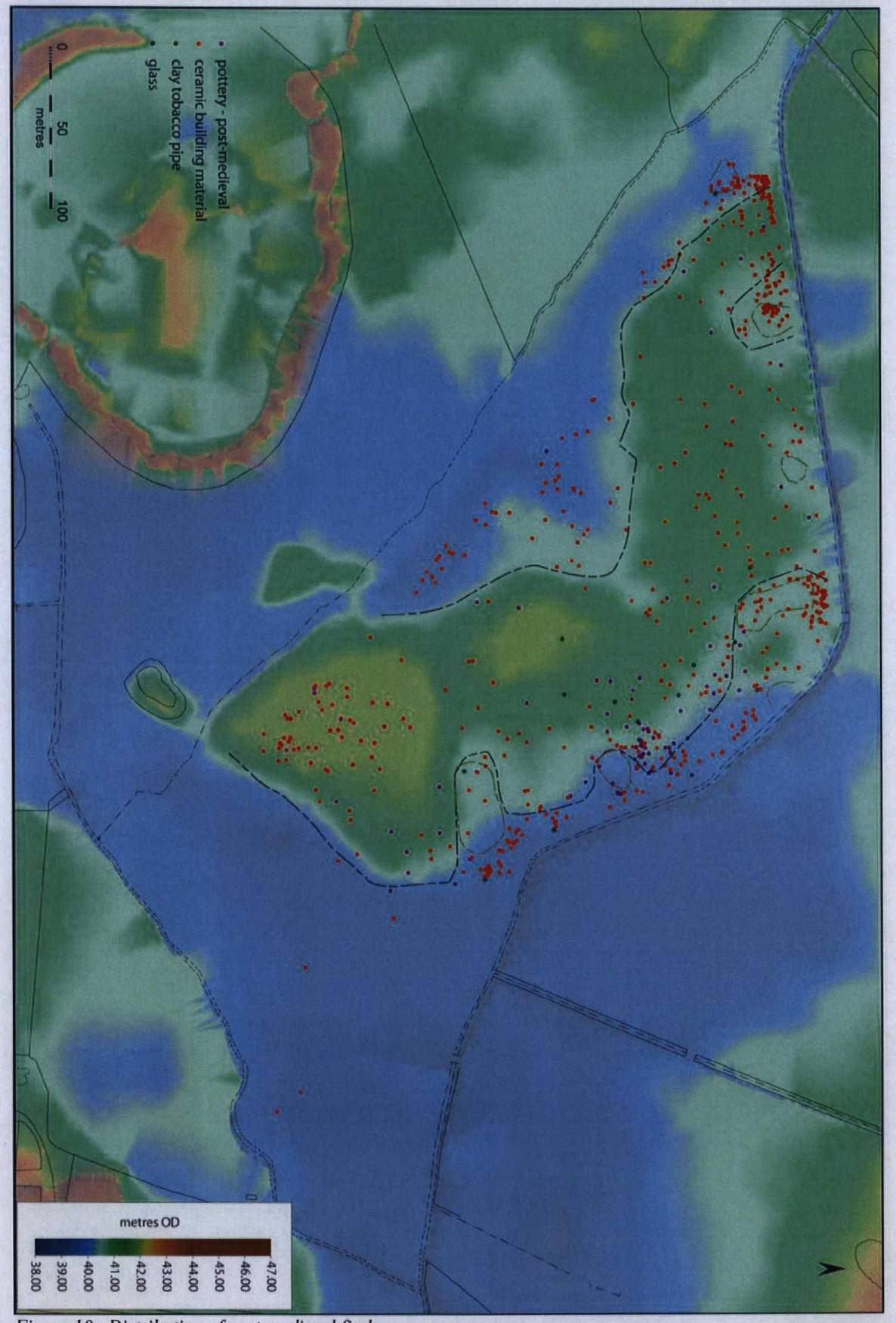

Figure 10. Distribution of post-medieval finds.

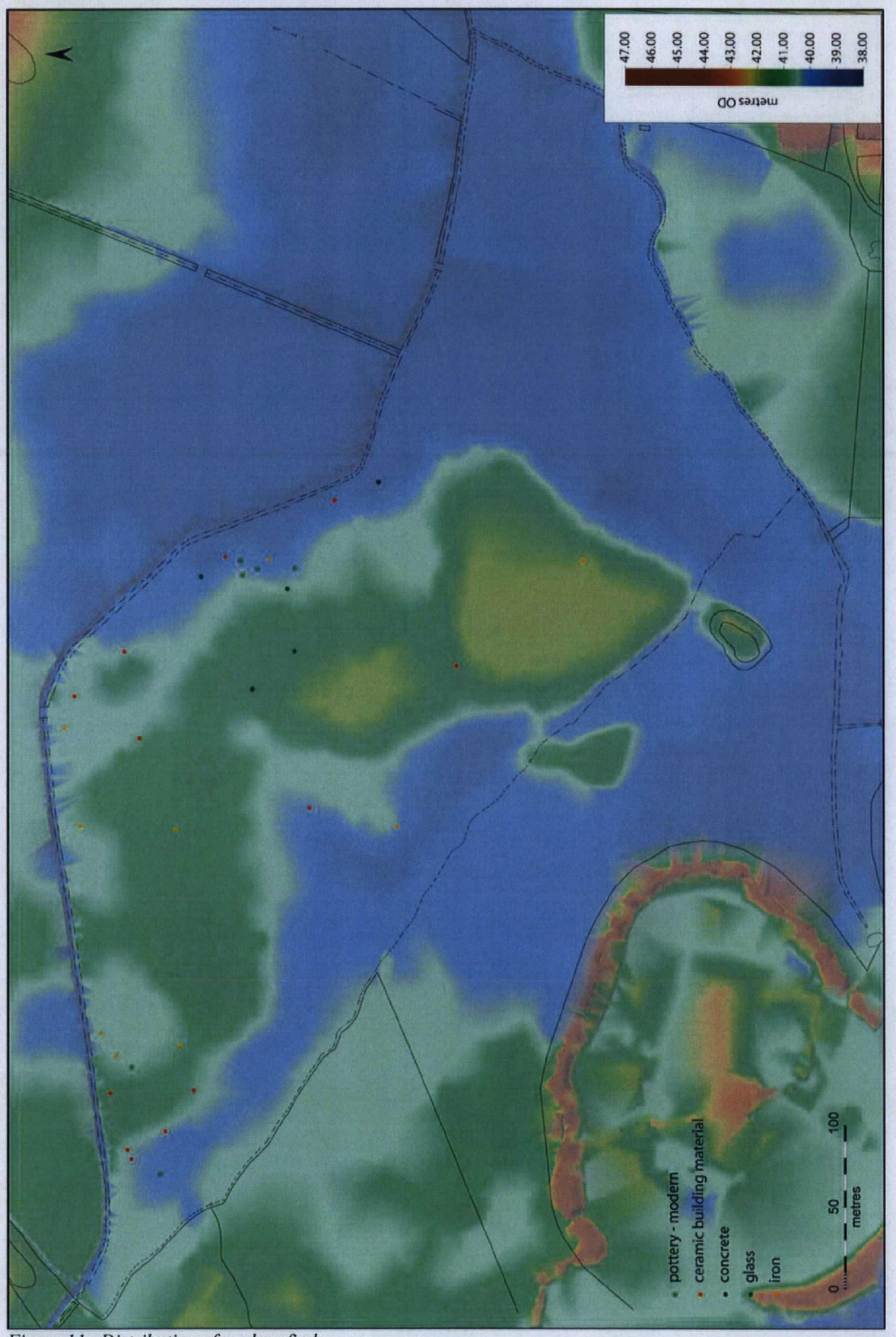

Figure 11. Distribution of modern finds.

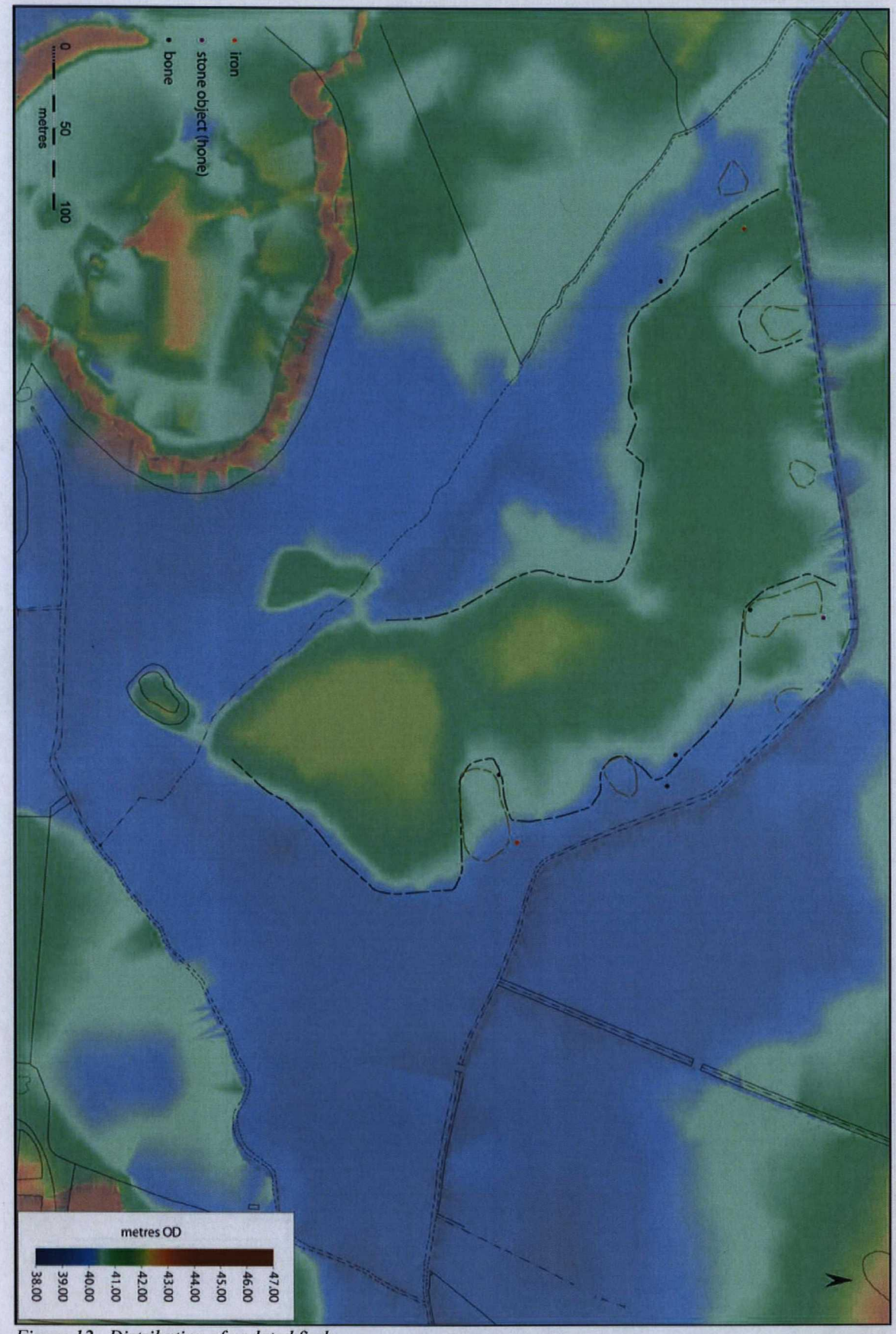

Figure 12. Distribution of undated finds.

6.2 Geophysical Survey.

6.2.1 Introduction.

The geophysical survey recorded a total of twenty-seven features/feature groups (see Appendix 6) across the site which fell into one of three categories:

Positive magnetic regions of anomalously high or positive magnetic field gradient, which may be associated with high magnetic susceptibility soil-filled structures such as pits and ditches.

Negative magnetic regions of anomalously low or negative magnetic field gradient, which may correspond to features of low magnetic susceptibility such as wall footings and other concentrations of sedimentary rock or voids.

Dipolar magnetic paired positive-negative magnetic anomalies, which typically reflect ferrous or fired materials (including fences and service pipes) and/or fired structures such as kilns or hearths.

A colour-coded geophysical interpretation plan is provided in Figure 13.

6.2.2 Interpretation of Features.

A colour-coded archaeological interpretation plan is provided in Figure 13. The anomalies detected are referred to as individual features [F numbers] or as feature groups [FG numbers] in the following discussion.

The majority of the survey area was characterised by a magnetic 'texture', recorded as closely spaced weak linear positive and negative magnetic anomalies aligned north-west/south-east. A weaker underlying textural effect aligned north/south has also been detected. Both of these textures were more marked in the western half of the survey area. These anomalies almost certainly reflect modern ploughing regimes; the north-west/south-east alignment matches that of the current plough direction. The difference in intensity of these textures to the east and west was most likely explained by differences in the soil substrates. The land to the east was at a lower elevation than that to the west and is often subject to inundation during periods of prolonged rainfall (information supplied by landowners).

A scatter of discrete dipolar magnetic anomalies across the extent of the survey area almost certainly reflected fired and ferrous materials within the topsoil.

A large dipolar magnetic anomaly [F27] in the northeastern corner of the survey area corresponded to the location of an electricity pylon.

An area of broad, diffuse positive and negative magnetic anomalies of differing magnitudes [FG1] crossing the eastern half of the survey area were likely to reflect former courses of a palaeo-channel. This may explain the contrasting smoothness of the data in the eastern part of the survey area relative to the more elevated western part; the area to the east may have

been subject to flooding from the relict palaeo-channel in the past, with drier terraces existing to the west. An existing drain follows the course of the probable palaeo-channel to the immediate north. A lake is known to have existed during the Holocene directly to the south of the current survey area, later becoming infilled with peat deposits (FAS 2000b); [FG1] may be directly related to this landform.

A series of strong curvilinear positive magnetic anomalies together with some larger concentrations of dipolar magnetic anomalies [FG2] trace the outline of a relatively level plateau. The positive magnetic anomalies were likely to reflect soil-filled features, but there was a possibility that these features were of modern origin, and related to agricultural improvements carried out to level areas of the field to provide more cultivatable land (information provided by landowners); such activities can leave greater depths of more magnetically susceptible topsoil along the edges of truncated areas, as evidenced elsewhere (e.g. ASUD 2001 & 2005c). Concentrations of dipolar magnetic anomalies such as those detected at [FG2] are often indicative of disturbed ground, containing ferrous/fired litter.

A series of positive linear and rectilinear magnetic anomalies along the northeastern edge of the survey area [FG3, FG4 and FG11] almost certainly reflected soil-filled features such as ditches or gullies. These may be the remains of enclosures or field boundaries.

An area of broad, diffuse magnetic anomalies [FG5] on the southern periphery of the survey area extending into the centre may reflect another palaeo-channel or area of infill, possibly again, associated with the former lake to the south or with the more recent landscaping.

An interconnected series of linear positive magnetic anomalies [FG6] probably reflected soil-filled features and may be remains of ditches or gullies. This group of features also incorporated concentrations of dipolar magnetic anomalies. Those anomalies may reflect areas of burning or pits infilled with fired and ferrous debris.

A group of discrete positive magnetic anomalies [FG7] situated to the west of [FG6] may reflect a collection of pits, or possibly natural sink-holes, which have been found in similar clusters elsewhere in this region (FAS 2000b).

A feature consisting of linear positive and negative magnetic anomalies running parallel to the field boundary [FG8] corresponded to the boundary between ploughed cropland and uncultivated set-aside.

Weak linear and rectilinear positive magnetic anomalies [FG9] almost certainly reflected soil-filled features such as gullies or ditches. They were obscured by areas of dipolar magnetic anomalies [FG10], probably due to vehicular disturbance and sub-surface debris around the access bridge into the field.

A number of other isolated linear positive magnetic anomalies have been detected [F12, F13, F14, F15] which were likely to reflect soil-filled features such as ditches or gullies.

A number of other discrete positive magnetic anomalies [F17, F18, FG19, and F20 - F26] have also been detected in the survey area. Those may represent soil-filled features such as

pits, or could also reflect natural phenomena such as sink-holes which are known to occur over the Magnesian limestone in this area (FAS 2000b).

6.2.3 Summary.

The geophysical survey identified the existence of a former wetland landscape to the south, west and southeast of the site area. The boundary between the former peat deposits and non peat covered areas and the extent of the peat corresponded closely with the same boundary surveyed in the field prior to the surface artefact collection survey taking place, as did the distribution of finds from the peat covered areas other than land drain and post-medieval and modern finds. Within the peat covered areas the survey identified a number of sub circular features which were interpreted a possible pits or natural features. Linear and curvilinear features interpreted as soil filled ditches or areas of greater soil depth were almost exclusively confined to higher, drier ground in the centre of the site. A linear grouping of dipolar magnetic anomalies in the northwestern area of the site was interpreted as areas of burning. It is also likely that many of the narrow straight linears revealed during the geophysical survey reflect modern farming practices and land drains. Furthermore, it is likely that the features interpreted as soil filled ditches are of recent date judging by the date of the finds recovered during field walking.

Figure 13. Interpretation plan of geophysical anomalies (after ASUD, unpublished report. Land at Langwith Farm, Nosterfield, North Yorkshire. Report No.1327).

6.3 *Evaluation Trenches.*

6.3.1 Introduction.

A total of eighteen machine excavated trial trenches were opened in the application area (Fig.5) and no archaeological features earlier than post-medieval activity were found. The fieldwork took place between October and December 2005. A total of five trenches produced evidence relating to the presence of former field boundaries of a probable post-medieval date (Table 2). The only other features of note were modern land drains, which were identified in six of the trenches (Table 2). Other than features of a recent date the trenches produced evidence for a series of natural features (Table 2).

Size (metres)	Features
50 x 6	Natural glacial features, desiccated peat and a modern land drain.
20 x 20	Natural features, desiccated peat and modern land drains.
10 x 10	Natural glacial features and desiccated peat.
20 x 20	Tree throw, burnt desiccated peat, post medieval/early modern hedge line and modern land drain
50 x 6	Desiccated peat, modern land drain and modern wheel ruts.
50 x 6	Desiccated peat and post-medieval field boundaries.
50 x 6	Desiccated peat, post-medieval/early modern gullies and a modern land drain.
20 x 20	Possible undated post hole
50 x 6	Natural sink holes, post-medieval/early modern hedge boundaries, a modern land drain and possible evidence for recent landscaping activity.
20 x 20	No archaeological features revealed.
50 x 6	Palaeo-channel, post-medieval hedge boundary, early modern drainage ditch and a modern land drain
5 x 5	No archaeological features revealed.
5 x 5	No archaeological features revealed.
5 x 5	No archaeological features revealed.
20 x 4	Possible palaeo-channel, post-medieval early modern hedge boundary, modern land drains and evidence for recent landscaping activity
20 x 4	Post-medieval hedge boundary, post-medieval early modern land drain, a buried plough soil and evidence for recent backfilling.
10 x 20	Palaeo-channel, post-medieval hedge boundary, early modern drainage ditch, a modern land drain and a buried plough soil.
20 x 20	Natural curvilinear feature.

Table 2. Showing trench number and features recorded during sample excavation.

6.3.2 Trench 1.

Trench 1 was located in the northeastern area of Area 11 (Fig.5). After machining natural deposits, context (124), were identified extending from the southeastern end of the trench up to 41.85m from the northwestern end of the trench (Fig.14). The natural deposits comprised a firm mixed light to mid grey and orangish brown gravely sand. In the northwestern end of the trench an irregular patch of clay rich material, context (215), was identified overlaying the natural (Fig.27). This deposit comprised a compact bluish grey sandy clay with rare rounded small stones, c4.00m in diameter and 0.18m deep. The material probably represented a fluvio-glacial deposit, which was highly likely to represent Feature 16 (F16) identified as a discrete positive anomaly in the geophysical survey (Fig.13). Overlying the clay was a layer

of patchy desiccated peat deposits, context (123). The peat extended for a distance of 10.28m from the northwestern end of the trench, continued under the northern and southern limits of the trench (Fig.14) and was up to 0.16m thick.

Roughly in the centre of the trench a narrow linear feature was identified (Fig 14). Upon excavation this feature turned out to be a land drain. The land drain comprised a linear straight edged cut, context [122], which contained a ceramic pipe and backfill, context (121). The drain was approximately 9.60m in length as it crossed the trench, between 0.36m and 0.45m wide and approximately 0.90m deep (Fig.14). The feature was orientated northwest/southeast. The orientation of the feature indicated that the land drain was not responsible for the linear positive anomalies identified from the geophysical survey: Feature Group 8 (FG8) (Fig.13). They were more likely to reflect the boundary between the ploughed area and set aside along the field edge.

The peat deposit in the northwestern end of the trench was overlain by context (120) (Fig.27). Context (120) comprised a compact dark reddish brown sandy silt with frequent small to medium rounded stones, occasional charcoal flecks and occasional flecks of possible fired clay. The deposit was interpreted as a compact lower, layer of plough soil. Context (120) was overlain by topsoil, context (119), which comprised a friable dark brownish grey sandy silt with frequent small to medium rounded stones, occasional charcoal flecks and occasional flecks of possible fired clay. The topsoil varied between 0.27m to 0.37m thick.

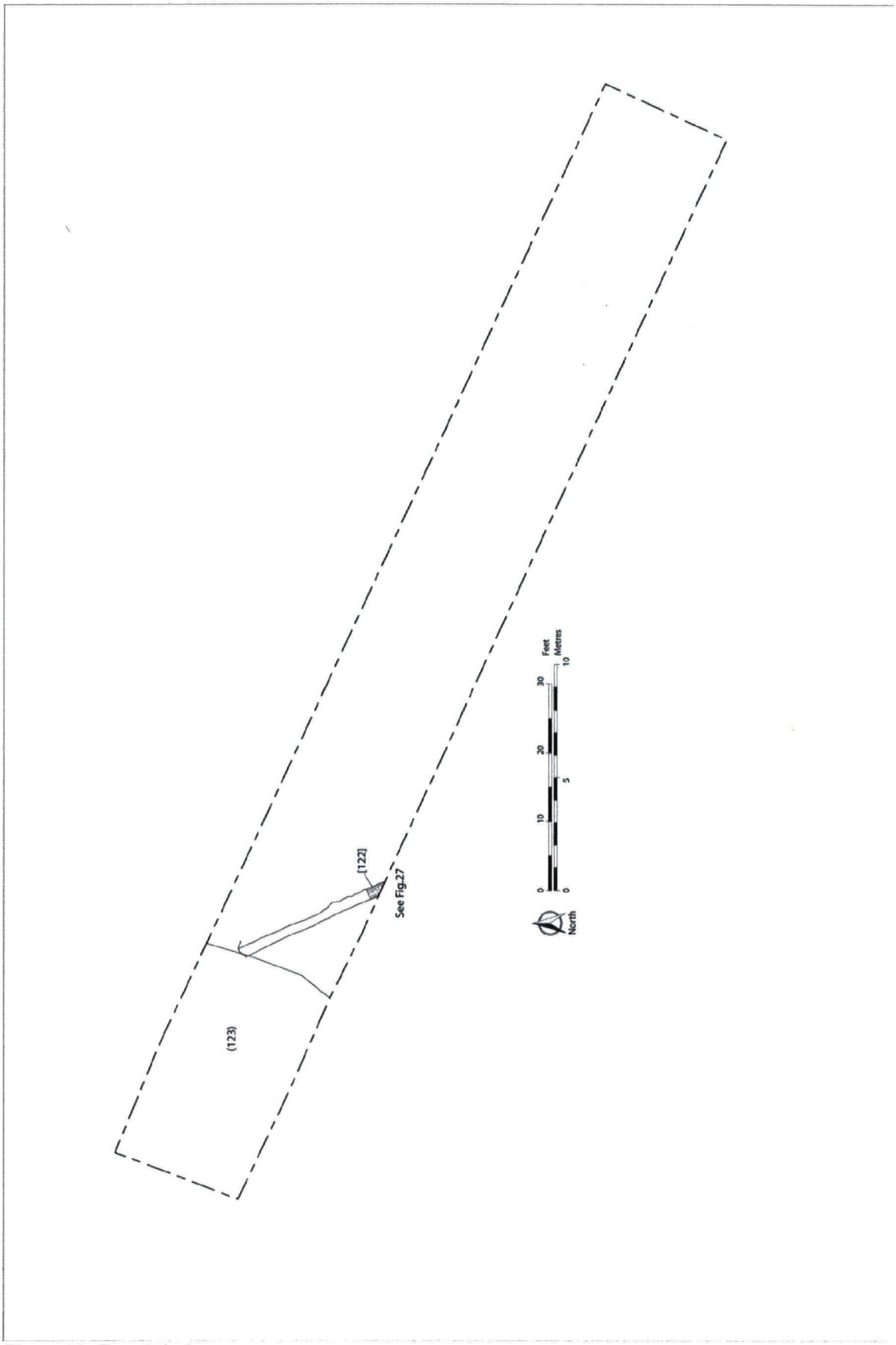

Figure 14. Trench 1 plan.

6.3.3 Trench 2.

Trench 2 was located in the northwestern end of Area 11, approximately 26m to the east of Trench 1 (Fig.5). Natural deposits were identified across the whole area of the trench (Fig.15). The natural, context (212) comprised a loose light greyish brown to light orangish brown sandy gravel and clay sand. In the eastern corner of the trench a possible feature was identified, which upon excavation it turned out to be natural in origin. Context [209], which was irregular in plan with shallow/moderate irregular sides and an irregular base (Fig.15). The feature contained a single deposit, context (208), which was a soft/spongy desiccated peat. Further peat deposits were identified in the northwestern end of the trench. At this point the ground level fell gradually to form a shallow depression, which was 16.86m wide and 0.60m deep (Fig.15; Plate 1).

The desiccated peat was cut by a modern land drain, context [173] (Plate 1). The drain was aligned northeast/southwest and ran across the northeastern end of the trench for a distance of 18.00m (Fig.15). The land drain was intersected by a further length of drain (same context number) just before it continued under the southeast facing section of the trench (Fig.15). This latter section of drain was aligned northwest/southeast for a distance of 6.20m (Fig.15). The land drain cut, context [173], had vertical straight edges with a flat base which was 0.30m wide and 0.20m deep. The cut contained a ceramic pipe and backfill, context (172). These features represented F12 and F13 identified during the geophysical survey (Fig.13). However, F17 and F18 were not identified within the trench area and it is possible that these features represented variations in natural deposits, which could not be identified on the surface.

Overlying the whole of the trench area were topsoil deposits (Fig.27), context (210) which comprised a firm dark brownish grey sandy silt with frequent small rounded and angular stones and occasional charcoal flecks. The topsoil was up to 0.35m thick.

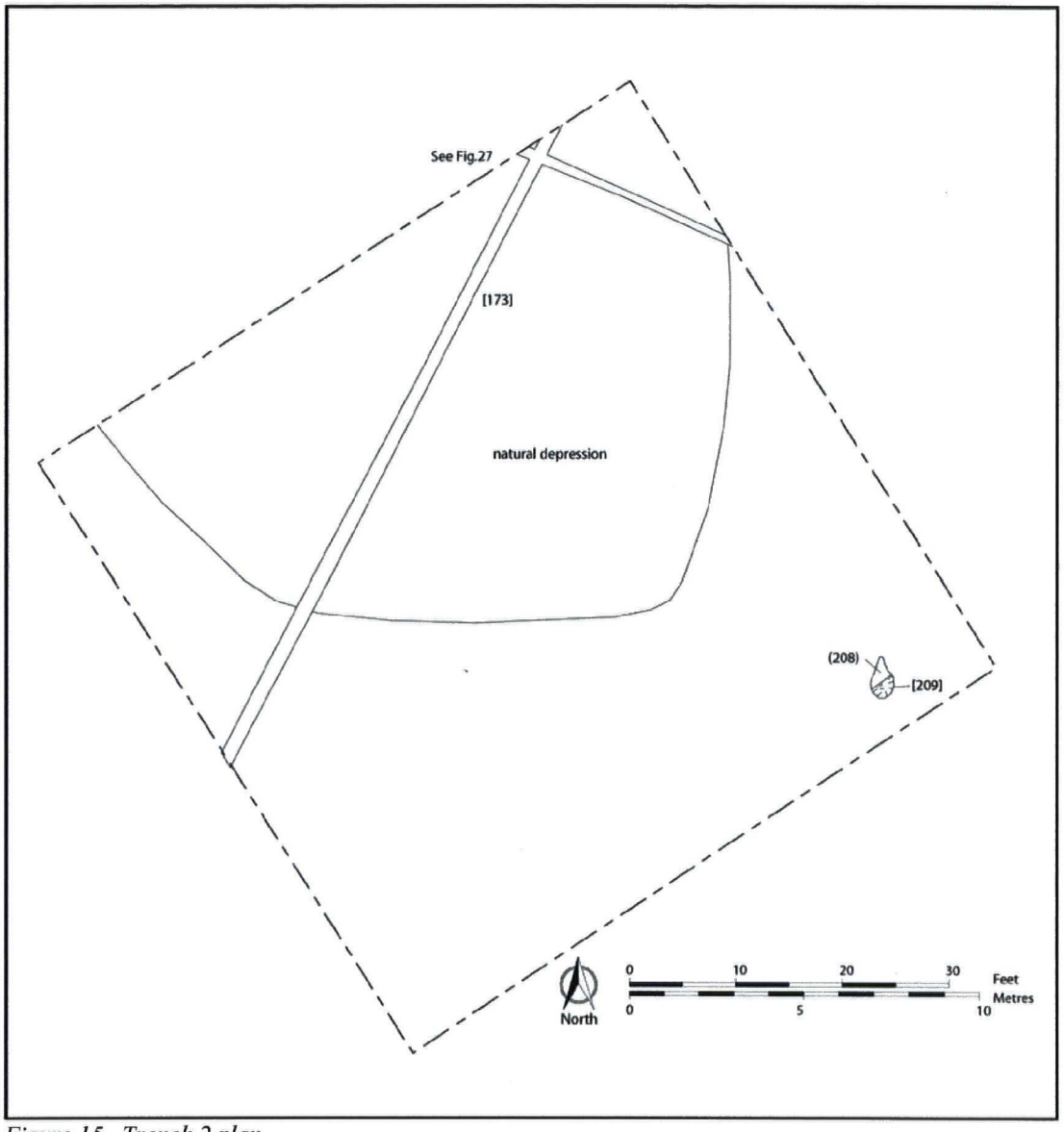

Figure 15. Trench 2 plan.

6.3.4 Trench 3.

Trench 3 was in the southwestern zone of Area 11adjacent to the southern field boundary of the site (Fig.5). Across the base of the trench natural deposits, context (214), were identified (Fig.27). The natural comprised hard to firm greyish/yellowish/dark brown sandy clays with occasional dispersed gravel inclusions. The dark brown sandy clay patches within the natural deposits were similar in form and composition to context (215) recorded in Trench 1 and appeared to represent the same type of fluvio-glacial activity. They also represented FG7 identified during the geophysical survey (Fig.13). Overlying the natural was context (213), which represented a topsoil deposit comprising a firm/spongy mid to dark brown desiccated peat with occasional sub-rounded stones and very fine gravel. At the interface between the natural and the topsoil deposits there was a c. 0.10m thick transitional zone where the topsoil became more silty in its composition. Deposit (213) was 0.40m thick.

6.3.5 Trench 4.

Trench 4 was located in the northwestern end of the site area (Fig.5). Natural deposits were identified across the base of the trench: context (223). The natural comprised a friable yellowish brown sandy clay with frequent sub-angular and sub-rounded small to medium stones. Within this general deposit occasional patches of mid grey gravels were identified, which probably represented the underlying sand and gravel deposits protruding through essentially the subsoil deposits.

In the southern half of the trench a large spread of desiccated peat was identified (Fig.16; Plate 2). The peat was situated within a shallow, natural low lying area recorded as interface [182] which had shallow irregular sides and an irregular base. This hollow was identified in a sondage cut through the feature and was interpreted as representing an area of root disturbance (Fig.16). The hollow was 7.00m in length. 4.70m wide and up to 0.19m deep. The feature continued under the southern limits of the trench. The hollow contained deposit (181) which comprised a soft dark brown desiccated peat with occasional gravel and grit and lenses of modern topsoil. The spread of desiccated peat represented the area of dipolar magnetic anomalies, part of FG6, identified during the geophysical survey in Area 11 (Fig.13).

On the surface of (181) small discrete patches of burning were identified (Plate 3). The sample excavation of a couple of these patches revealed that they represented the burning of peat deposit (181). Whether the burnt patches were natural or humanly derived could not be ascertained, however, it was clear that they were probably recent in date as they occurred immediately below the topsoil.

The burnt patches were represented archaeologically as interfaces which were created as the maximum penetration of the effects of heat e.g. context [163] (Fig.16). That interface had shallow irregular sides and an irregular base with maximum dimensions of 0.24m in length, 0.17m wide and between 0.01 and 0.04m in depth. The interface contained a single deposit (effectively representing heat effected deposits of (181)), context (162), a compact to friable reddish brown/greyish black burnt desiccated peat.

To the east of the desiccated peat deposit an irregular feature was recorded, context [149] (Fig.16). Context [149] comprised an interface with irregular stepped sides and a concave base. The feature was 2.58m in length, 1.46m wide and up to 0.43m deep. Three deposits were contained within the feature. The primary deposit, context (148), comprised a 0.32m thick friable dark brownish black desiccated peat with occasional rounded stones and gravel/grit at the base of the deposit. The secondary deposit, context (152), was up to 0.26m thick and comprised a firm mid/dark bluish grey sandy clay with moderate stones and gravel/grit at the edges. The tertiary deposit, context (153) was up to 0.14m thick and comprised a compact yellowish brown silt clay with occasional small stones and /grit at the edges. The feature was interpreted as a probable tree throw.

In the northern and eastern area of the trench a curvilinear feature, which comprised a series of linear irregular hollows in the natural was recorded, context [133] and [137] (Fig.16). The

north/south aligned part of the feature, context [137], comprised an irregular, shallow interface with irregular sides and base (Fig.16; Plate 2). The interface was 1.46m in length, 0.44m wide and up to 0.13m deep. The shallow feature contained a single deposit, context (136), which comprised a soft mid reddish brown silty clay with occasional rounded stones. The east/west aligned part of the feature, context [133], like its southern counterpart, was represented as a shallow irregular interface with irregular sides and an irregular base (Fig.16). The feature was 1.12m in length, 0.40m wide and up to 0.17m deep. The interface contained a single fill, context (132), which comprised a compact dark reddish brown silty clay. The curvilinear feature represented a crop mark identified from aerial photographs, shown on Figure 3, and was interpreted as a former hedgeline.

In the western part of the trench a curvilinear land drain was identified, context [127] (same as [129] and [131]) (Fig.16). The feature had vertical straight sides with a flat base, with a maximum width of 0.60m and a maximum depth of 0.60. The feature contained a single fill, context (126) (same as (128) and (130)), which comprised a ceramic drain and backfill. A fragment of probable agricultural machinery was recovered from the feature which is likely to be 19th century in date (Appendix 3). The feature had a maximum length of 15.00m and butted out at its northeastern end (Fig.16; Plate 2). This feature represented the curvilinear anomaly, part of FG6, identified during the geophysical survey (Fig.13).

Overlying the natural features, the hedgeline and the land drain was a 0.35m thick layer of topsoil, context (224). The topsoil comprised a firm dark brownish grey sandy silt with frequent small rounded and angular stones and occasional charcoal flecks.

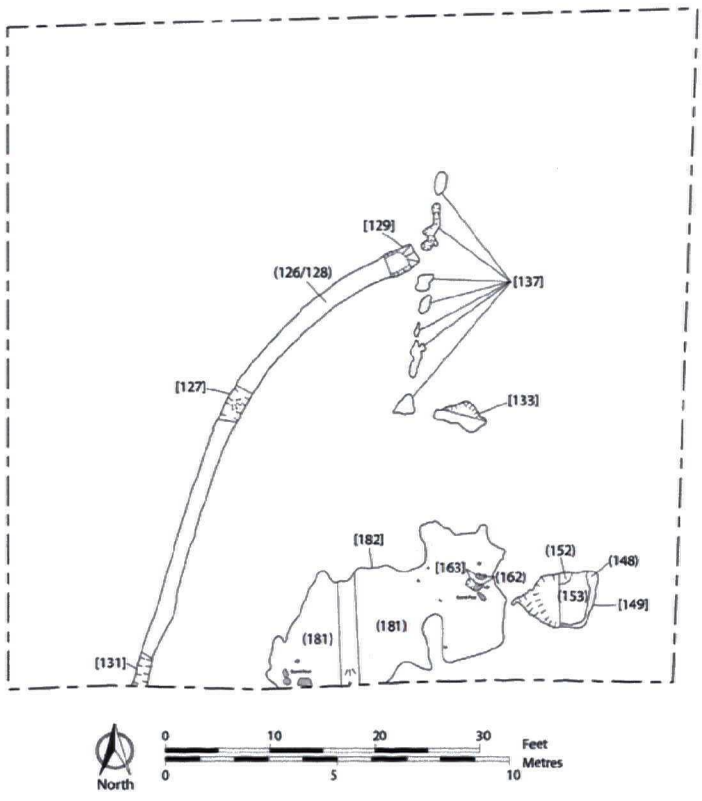

Figure 16. Trench 4 plan.

6.3.6 Trench 5.

Trench 5 was located perpendicular to the northern boundary of the site area (Fig.5). Natural deposits, context (176), extended across the base of the trench and comprised a weakly cemented grey brown sandy gravel with clay patches. In the northern end of the trench the natural was overlain by a layer of desiccated peat, context (175), which comprised a soft dark brownish black silty sand with rare gravel (Fig.17). The desiccated peat which was 0.14m thick extended 5.20m southwards from the northern end of the trench (Fig.15) and continued under the eastern and western edges of the trench. Overlying the desiccated peat was a 0.06m thick layer of firm brownish grey clay, context (174) (Fig.28). This deposit has been interpreted as the mineral element leached from former peat deposits which have degraded in-situ and has been identified elsewhere in the quarry (FAS 2005a).

Three linear features were recorded in the northern end of the trench (Fig.17). The earliest feature was a land drain, context [167] (Fig.17), which contained a ceramic pipe (166) and was 0.25m wide and 0.20m deep. The land drain was cut by two further linear features which were interpreted as a farm machinery wheel ruts. (Fig.17).

The most southerly of these was context [178] (Fig.17). Context [178] was orientated east/west and crossed the width of the trench for a distance of 6.40m, was 0.40m wide and 0.04m deep. The feature contained a single fill, context (177), which comprised a soft dark brownish grey sand with frequent sub-angular and sub-rounded gravel.

Context [169] (Fig.17;Plate 4) ran parallel to context [178], crossed the width of the trench for a distance of 6.36m and was 0.42m wide and 0.12m deep. The feature contained a single fill, context (168), which comprised a soft mid brownish grey sand with moderate sub-angular and sub-rounded gravel. It is likely that the linear features identified in Trench 5 were recorded as FG8 in the geophysical survey (Fig.13).

Overlying all the features and deposits was a thin layer of sub-soil, context (165). This deposit was up to 0.22m thick and comprised a soft mid brownish grey sand with frequent sub-angular and sub-rounded gravel. Overlying the subsoil was a layer of topsoil, context (164). The topsoil was up to 0.68m thick and comprised a hard dark brownish grey silty sand with sub-angular and sub-rounded gravel.

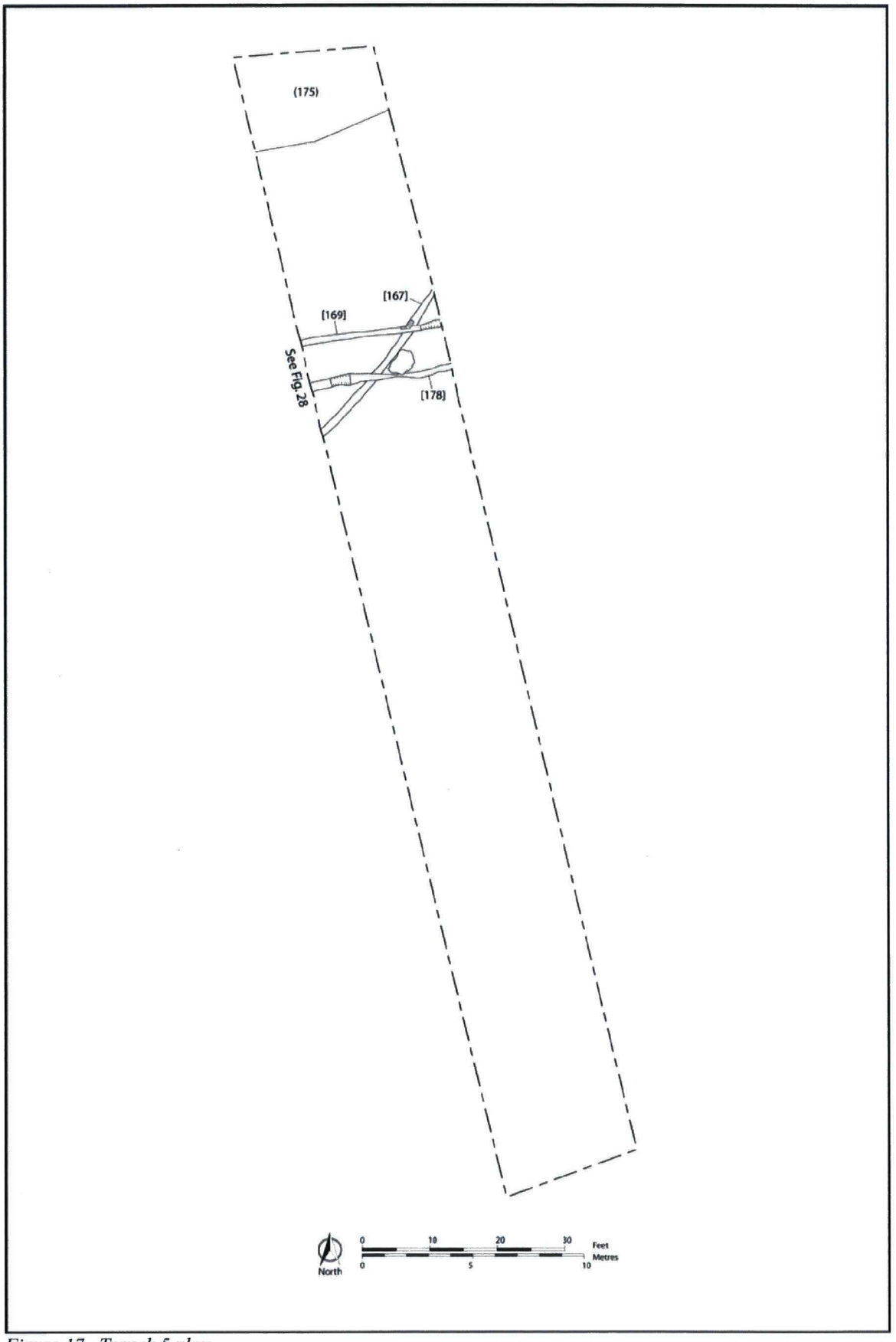

Figure 17. Trench 5 plan.

6.3.7 Trench 6.

Trench 6 was located in the north central area of the site (Fig.5). Natural deposits, context (180), were identified in the base of the trench and comprised a weakly cemented mid grey/brown sandy gravel with sub-angular and sub-rounded gravel (Fig.18). In the eastern end of the trench the natural sandy gravels were overlain by context (179), which comprised a firm dark brown/black clayey sand (Fig.18). In some respects this deposit resembled the desiccated peats identified elsewhere in the site area, however it was much more clayey in composition and it probably represents the same deposit identified overlaying the peat in Trench 5: context (174) (see above). Context (179) was approximately 7.00 in length, extended beyond the northern and southern edges of the trench and was 0.20m deep.

Three linear features were identified in the western end of the trench (Plate 5). Context [141], a probable ditch, was the most westerly of these features (Fig.18). The feature was north/south aligned, 1.24m wide and 0.11m deep and had moderate concave sides and a flat base (Fig.28). The ditch was filled with a deposit of firm dark brown silty clayey sand with occasional sub-angular and sub-rounded gravel, context (140). No finds were recovered from the feature.

A second linear feature was identified 0.30m to the west of ditch [141] (Fig.18). Context [151] had moderate irregular sides and a concave base (Fig.28). The feature ran parallel to ditch [141] and proved to be 0.82m wide and 0.12m deep. Its single fill, context (150) comprised a soft dark brown silty sand with frequent gravel. The slightly irregular character of the feature indicated that it probably represented a former hedgeline which might have been associated with ditch [141]. Several fragments of unidentifiable land drain were recovered from the deposit (Appendix 3)

A third north/south orientated linear feature, context [143], was identified 5.40m to the east and parallel to hedgeline [151] (Fig.18). Upon excavation this feature proved to be a ditch 1.00m wide and 0.18m deep with moderate concave sides and a concave base (Fig.28). The ditch contained a single fill, context (142), of soft dark brown sandy silt with occasional sub-angular and sub-rounded gravel. No finds were recovered from the feature.

It appears that ditch [141] and [143] formed successive phases of a ditched boundary, of which one phase , context [141], was probably associated with a hedged boundary on its western side, context [151]. It is clear that the two ditches represented elements of FG8 identified during the geophysical survey, also the features represent the sinuous linear boundaries identified on the 1856 OS map and the 1868 drainage map (Figs.35 and 36).

Overlying the features in Trench 6 was a 0.30m thick layer of sub-soil, context (139). The sub-soil comprised a firm dark brown clayey silty sand with moderate gravel deposits. A Fragment of unidentifiable ceramic building material was recovered from the deposit (Appendix 3). The sub-soil was overlain by a layer of topsoil, context (138), comprised of a soft dark brown silty sand with frequent sub-angular and sub-rounded gravel which reached a maximum depth of 0.36m at the western end of the trench.

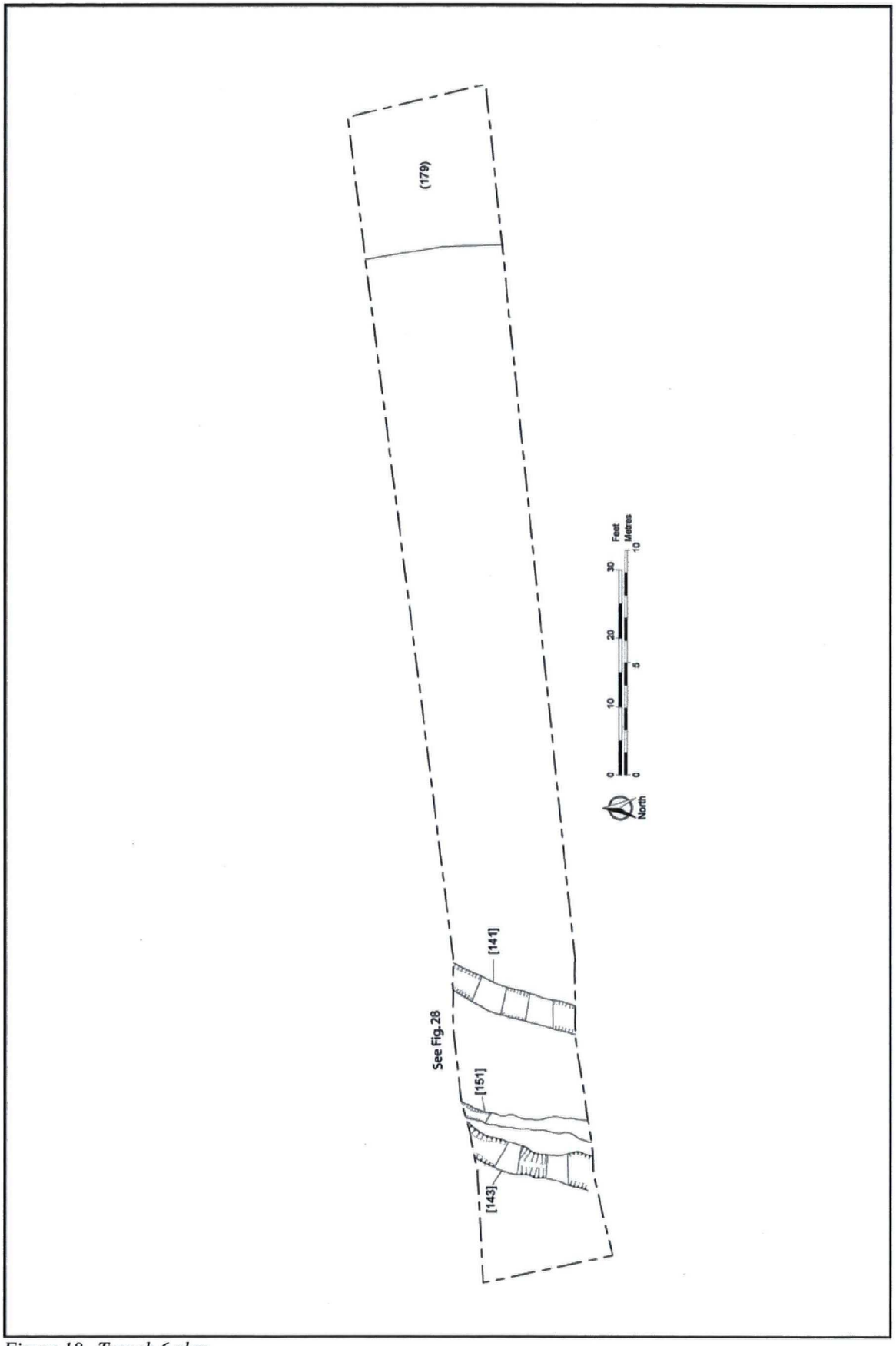

Figure 18. Trench 6 plan.

6.3.8 Trench 7.

Trench 7 was located adjacent to the northeastern boundary of the site area (Fig.5). Natural deposits, context (198), comprised hard greyish brown sandy gravels (Fig.19). Overlying the sandy gravels in the northeastern corner of the trench was a layer of desiccated peat, context (197) (Fig.29), which in turn was overlain by a layer of stiff bluish grey clay context (203). This deposit was similar in composition and probably formed under the same conditions as context (174) recorded in Trench 5 (see above).

In Trench 7 three linear features were identified and sample excavated (Fig.19). A possible gully, context [190], was recorded traversing the trench for a distance of 11.38m on an east/west alignment. The gully had moderate irregular sides and a flat base (Fig.29; Plate 6). The feature had been heavily truncated by ploughing and it was not clear whether it terminated at its eastern end or had been truncated at this point. Context [190] was 0.44m wide and 0.12m deep and contained a single fill, context (189), which comprised a firm mid greyish brown silty sand with moderate sub-angular and sub-rounded gravel.

A second linear feature was recorded 19.40m from the eastern end of the trench. This feature, context [192], was aligned north/south (Fig.19) and on excavation was found to be 0.16m wide and 0.06m deep with moderate concave sides and a concave base (Fig.29; Plate 7). The cut contained a single fill, context (191), which comprised a soft greyish brown gravely sand. The feature was very shallow and insubstantial in form and may represent a plough scar, although an archaeological origin cannot be ruled out. The feature might have represented a component of FG 4 identified during the geophysical survey (Fig.13).

A land drain (cutting the peat and clay deposits) was identified in the eastern end of the trench, context [200] (Fig.19). The feature was identified in plan over a distance of 6.96m and only the top of the ceramic drain was revealed. The cut for the land drain, context [200], had steep irregular sides, was 0.25m wide and contained context (199) a ceramic pipe and a back fill. The land drain was aligned north/south and may represent an element of FG4 identified during the geophysical survey (Fig.13).

Overlying the features and the natural deposits in Trench 7 was a 0.24m thick layer of sub-soil, context (192), which comprised a firm dark grey/dark brown clayey silt with frequent sub-angular and sub-rounded gravel. Overlying the subsoil was a 0.30m thick layer of topsoil, context (195), which comprised a soft dark brown silty sand with frequent sub-angular and sub-rounded gravel.

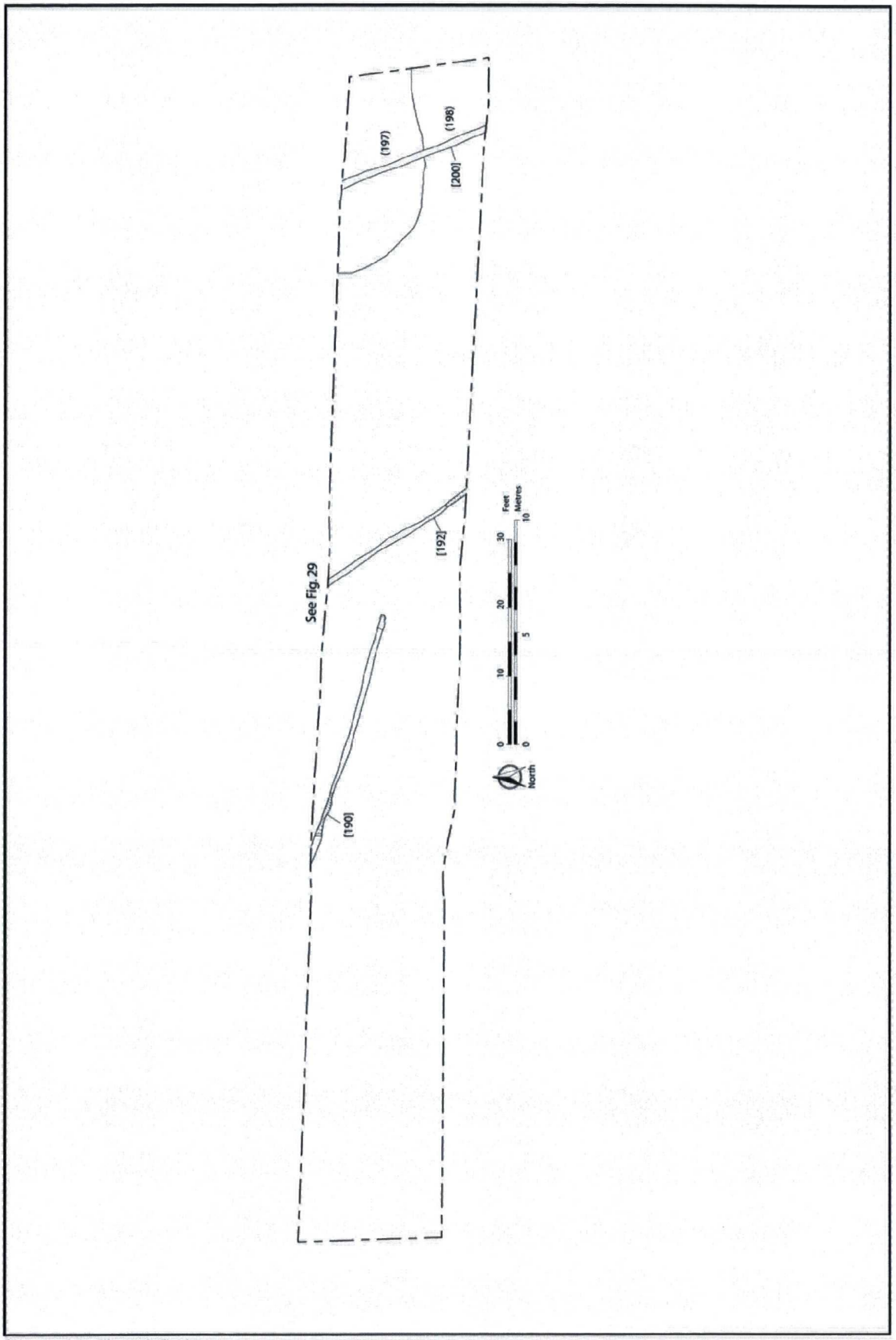

Figure 19. Trench 7 plan.

6.3.9 Trench 8.

Trench 8 was located on the summit of a low rise in the centre of the site (Fig.5). Natural deposits, context (205), comprising weakly cemented orangish/yellowish brown sand and gravels, were identified in the base of the trench.

A possible posthole, context [207] was recorded in the northeastern corner of the trench (Fig.20). Context [207] had steep straight sides with a flat base (Fig.29) and was 0.35m in diameter and 0.20m deep. The feature contained a single fill, context (206), which comprised a compact greyish brown sandy silt with occasional small stone fragments and gravel. The deposit was sampled for environmental analysis but was not submitted for analysis.

Overlying the possible posthole was a 0.30m thick layer of topsoil, context (204), which comprised a dark brown clay silty sand with occasional stone fragments and gravel.

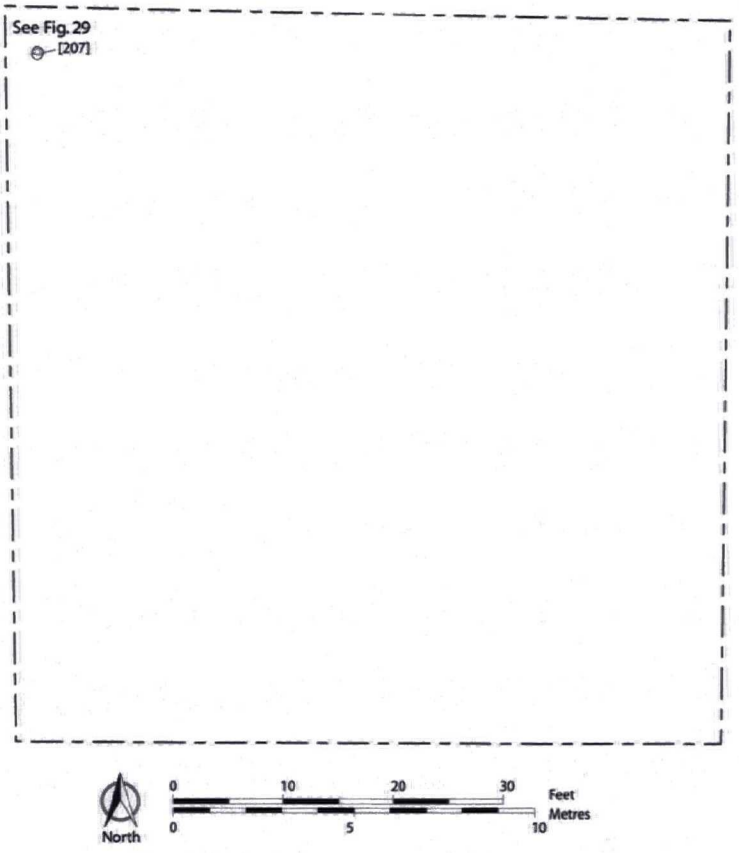

Figure 20. Trench 8 plan.

6.3.10 Trench 9.

Trench 9 was located in the central eastern area of the site area (Fig.5). Natural deposits context (147) were identified in the base of the trench (Fig.30) and comprised an orangish grey clay with up to 70% gravel inclusions.

In the northern end of Trench 9 a large area of soil discoloration forming a semi-circular feature was identified (Fig.21). The feature, context [157] interpreted as a probable sink-hole

extended c. 6.00m in to the northern end of the trench and continued under the eastern and western limits of the trench (Fig.21). A box section was excavated in the northeastern corner of the feature (Fig.21). Here the earliest deposit identified was context (158), a hard orangish grey sandy clay with occasional rounded to sub-rounded stones whose depth was not fully identified. Overlying the sandy clay was context (156), comprised a 0.20m thick soft dark brownish black desiccated peat with rare gravel inclusions. Overlying the desiccated peat deposit was context (155), which represented a 0.30m thick layer of light orangish brown sandy clayey silt with small sub-angular to sub-rounded stones. This feature represented part of F23 identified during the geophysical survey (Fig.13).

A second natural feature was identified in the southern end of Trench 9. The latest deposits of the feature were identified during hand excavation in Trench 9 (Fig.30; Plate 9), but its full extent was not realised until, prior to back filling, the hand excavated area in the southern end of the trench was deepened by machine excavation (Plate.10). This revealed a c. 1.20m deep-dished feature which was c.8.00m wide in section. Prior to the machine excavation of the feature it had been interpreted as a ditch. This interpretation was based on the (misleading) results of the geophysical survey in this part of the site, the profile of the feature in section and the subsequent dating of the peat deposits contained in the base of the feature.

The peat was dated throughout, (see below), its profile, which produced a date for the peat formation at Cal BC 2200 to 1870 and Cal BC 1840 to 1780 (Beta laboratory number: 211367). The date contrasts strongly with dated peat deposits from elsewhere in the area, which indicate that the peat started to form in the early Holocene period (FAS 2003). This early date seen in conjunction with the regular profile of the feature and the presence of an archaeological feature with a similar profile in Trench 11, apparently on the same circuit as the geophysical anomaly (Fig.13), suggested that the peat may have begun to form in a cut archaeological feature. However further hand excavation (Fig.30) of the feature revealed a complex strata of deposits underlying the peat which were apparently contained within a wider and deeper cut/interface. Further machine excavation (Plate 10) revealed a uniform gravel deposit, which was identified under the stratified deposits and exposed the real form of the feature as a probable sinkhole. Furthermore, the siting of three more trenches (see Trenches 16, 17 and 18 below) along the circuit of the geophysical anomaly (FG2) revealed that it represented a narrow former hedged boundary skirting the base of an area of raised gravels.

The interface for the natural feature, context [221], had steep straight edges (Fig.30). Stratigraphically above the interface was deposit (220), which comprised a compact mid greenish brown silt clay with occasional sub-angular/sub-rounded small to medium stones. Deposit (222) overlay context (220), which comprised a mid greenish brown sand. Context (219) overlay the sand and comprised a 0.35m thick loose greenish brown gravel with well-sorted small rounded stone. The final deposit in this sequence was context (218), which was similar in composition to deposit (220) and comprised a compact light greenish brown silty clay with orange mottling and occasional sub-angular/sub-rounded small to medium stones.

Context (216), which overlay context (220), comprised a 0.20m thick compact mid brownish grey silty clay with occasional sub-angular/sub-rounded small to medium stones. The colour of this material suggested that it was gleyed. Overlying the silty clay was a layer of desiccated peat, context (145). This material was sampled for environmental analysis (Sample No. 7), however when it became clear that the feature was natural no further analysis of the sample was undertaken. The deposit was also subjected to radiometric dating (Appendix 4) through its profile (Samples 1, 2 and 3; Fig.30).

The bottom sample (OSA05EV10, Sample No 3) returned a dual range 2-sigma calibrated date of Cal BC 2200 to 1870 (Cal BP 4150 to 3820) and Cal BC 1840 to 1780 (Cal BP 3780 to 3730) (Beta laboratory number: 211367). The middle sample (OSA05EV10 Sample No. 2) (Beta laboratory number: 211366) returned a 2-sigma calibrated date of Cal BC 1010 to 790 (Cal BP 2960 to 2740). The top sample (Beta laboratory number: 211365) returned a 2-sigma calibrated date of Cal BC 1300 to 1000 (Cal BP 3250 to 2940). There is discrepancy in the top and middle dates, which may have been caused by intrusive contamination from roots or might indicate that the later part of the deposit formed over a quicker period than the dates suggest. However, the bottom date indicates that the peat deposits started to form in the early Bronze Age around 4150 BP (2200 BC) suggesting that the sinkhole formed just prior to this date.

A possible hedge boundary identified as part of FG2 in the geophysical survey was identified as cutting the top of the peat deposit (see Plate 9) to the south during post-excavation analysis. This possible feature was not recorded in the field.

Overlying the peat was a 0.50m thick layer, context (144), of firm light orangish brown sandy clayey silt with occasional sub-angular/sub-rounded small to large stones. A sherd of pottery and ceramic building material of a probable were recovered from the deposit. The pottery was of a 19th century or later date (Appendix 3).

A section was cut across a linear feature, context [161], in the central area of Trench 9 (Fig.21; Plate 11). Here a possible shallow cut was identified. The feature had shallow straight sides with a concave base (Fig.30). The feature was orientated east/west and spanned the width of the trench and was 4.60m wide and 0.30m deep. The possible cut contained two deposits. The primary deposit, context (160), was a firm greyish brown sandy silt with occasional small stone fragments. The deposit was 0.20m thick. The secondary deposit, context (159), comprised a firm reddish brown sandy silt with occasional small stone fragments, which was 0.30m thick. No finds were recovered from any of the deposits. The latest fill was overlain by topsoil, context (146). The feature corresponded with FG2 (Fig.13) identified in the geophysical survey and was interpreted as a probable hedged boundary.

A modern land drain was recorded in the northern end of the trench (Fig.21). The cut, context [171], had steep straight sides, a flat base and was aligned east/west (Fig.30). The land drain traversed the width of the trench and was 0.25m wide and 0.80m deep. The cut contained a ceramic pipe and a backfill, context (170).

Overlying the fills of the archaeological features and the natural features was context (146) (same as (154)), a 0.30m thick layer of topsoil, which comprised a friable mid/dark brown sandy clay silt with small sub-rounded to sub-angular stones.

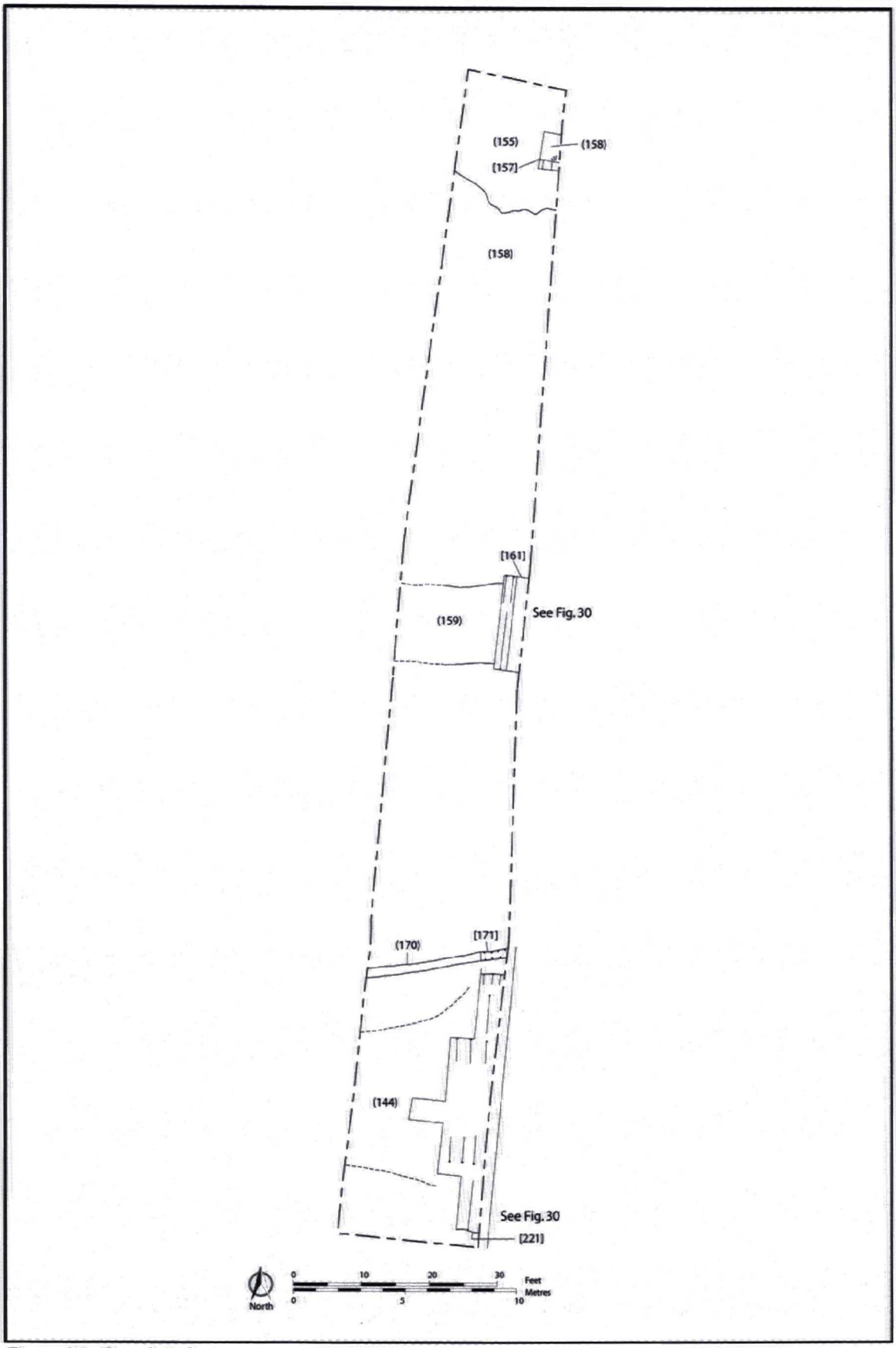

Figure 21. Trench 9 plan.

6.3.11 Trench 10.

Trench 10 was located on the summit of a low gravel rises in the southeastern area of the site (Fig 5).

Natural deposits, context (194), were identified in the base of the trench which comprised a compact orangish brown sand and gravel. Overlying the natural was context (193), a 0.40m thick layer of topsoil, which consisted of a friable dark brownish black clayey silty sand with occasional small stone fragments and gravel. No archaeological features were identified.

6.3.12 Trench 11.

Trench 11 was located on the southeastern slope of the same gravel rise where Trenches 9 and 10 were situated (Fig.5).

In the southeastern end of the trench a large linear natural feature aligned northeast/southwest was identified (Fig.22). The natural feature, context [114], was c. 20m wide and continued under the northeastern and southwestern edges of the trench. The feature was identified as a palaeo-channel and an auger survey undertaken across the width of the feature identified the earliest deposits in the silting of the feature as sands and gravels which formed an irregular series of fluvio-channels in the base of the feature (Fig 34 & Appendix 9). The deepest of these channels was recorded at 0.90m below the existing ground level while the highest ridge between the channels was recorded at 0.30m below the existing ground surface (Fig 34 & Appendix 9). The channels were filled by a lower deposit comprising a brown sandy clay which probably represented degraded peats (Fig 34 & Appendix 9). Overlying the brown clay sands was a brown clay loam which represented the peat deposits identified on the surface. These reached a maximum depth of 0.52m below the existing ground surface towards the southeastern edge of the feature (Fig 34 & Appendix 9).

The results of the auger survey confirmed the depth of the feature at nearly 1m below the existing ground surface, however the complexity behind the depositional history of the deposits filling the channel was not clearly revealed. In that respect sample hand excavation of the feature was more forthcoming in detailing the sequence of deposits contained in the channel.

A 1.00m x 2.00m box section was excavated into the northwestern edge of the palaeo-channel along the northeastern facing section of the trench (Fig.22; Plate 12). In the base of the box section the edge of the palaeo-channel was identified, context [114], which comprised a shallow irregular slope (Fig.31). The earliest deposit was a 0.17m thick layer of spongy dark reddish brown peat with moderate small rounded to sub-angular stones and root disturbance, context (113). Context (113) was sealed by context (112), a 0.13m thick layer of firm light to mid grey fine silt which was laminated with silty peat deposits. That was in turn overlain by a 0.14m thick layer of spongy dark orangish brown (with lenses of light orangish brown) peat with frequent fragments of wood and decayed wood (the light orangish brown component of the deposit), context (111). A thin layer of marl, context (110) sealed context (111). Overlying the marl was a 0.07m thick layer of spongy dark reddish black/dark grey silty

desiccated peat with occasional small fragments of wood and occasional small rounded stones, context (109). The feature corresponded with FG1 (Fig.13) identified in the geophysical survey.

In the centre of Trench 11 a 4.10m long section of hedgeline/boundary was identified, context [118] (Fig.31; Plate 13). The linear cut was aligned southwest/northeast (it continued under the southwestern limit of excavation) and proved to be 0.54m wide and 0.25m deep. The feature had shallow concave sides and a concave base. The cut contained a single fill context (117), which comprised a friable dark orangish grey brown sandy silt with occasional stone fragments and gravel. The feature has been interpreted as a former hedged boundary which is known to have skirted the foot of the gravel rise and was further identified in Trenches 17 and 16. No finds were recovered from the feature.

Immediately to the northwest of [118] a broad ditch, context [107], was identified and sample excavated. This feature skirted the base of the southeastern edge of the gravel rise (Fig.22; Plate 14) and was cut into the deposits of natural sand and gravel contexts (101) and (106). Upon excavation it proved to be 11.05m wide and 0.80m deep (Fig.31), aligned northwest/southeast with steep irregular sides and an irregular concave base. The feature had a broad shallow U shaped profile (Fig.31). The cut contained four deposits of which context (105) was the earliest (Fig.31). The primary deposit context (105) was a 0.25m thick friable dark reddish brown organic silt and was interpreted as a possible turf line. Context (105) contained few large stone inclusions and apparently had been worked over and well sorted by soil fauna suggesting that the deposit represented a period of stability allowing the material to form as a turf line (see Appendix 5).

Overlying context (105) was a 0.32m thick layer of loose greyish brown sandy silt with frequent small fragments of stone and rounded cobbles, context (104) (Fig.31). A nail and a fragment of unidentified ceramic building material were recovered from the deposit (Appendix 3). Context (104) was in turn overlain by a0.25m thick deposit of firm greyish brown sandy silt, context (103). The deposit was thought to represent another period of stability (see Appendix 5). A probable metal bucket handle (undated) and an unidentified fragment of ceramic building material were recovered from it (Appendix 3). Overlying context (103) was a, 4.80m wide and 0.15m thick, loose dark brownish black sandy silt with occasional small stone fragments, frequent charcoal flecks, context (102). An undated iron nail (probably of recent date), shards of modern milk bottle glass and a fragment of ceramic building material were recovered from the deposit (Appendix 3).

The feature corresponded with context [226] recorded in Trench 17 (see below). It was also identified as an open feature on an aerial photograph taken in 1971 (Fig.3) and represents a ditched field boundary.

Overlying the archaeological features was a layer of topsoil, context (100). The topsoil was approximately 0.35m thick and comprised a friable dark brown/black loam with occasional small stone fragments.

The topsoil was cut by a landrain, context [116], which had steep straight sides and a flat base (Fig.31; Plate 13). The landrain contained a ceramic pipe, in its base, and a backfill deposit, context (115). The drain traversed the width of the trench on a northeast/southwest alignment and was 0.20m wide and 0.20m deep.

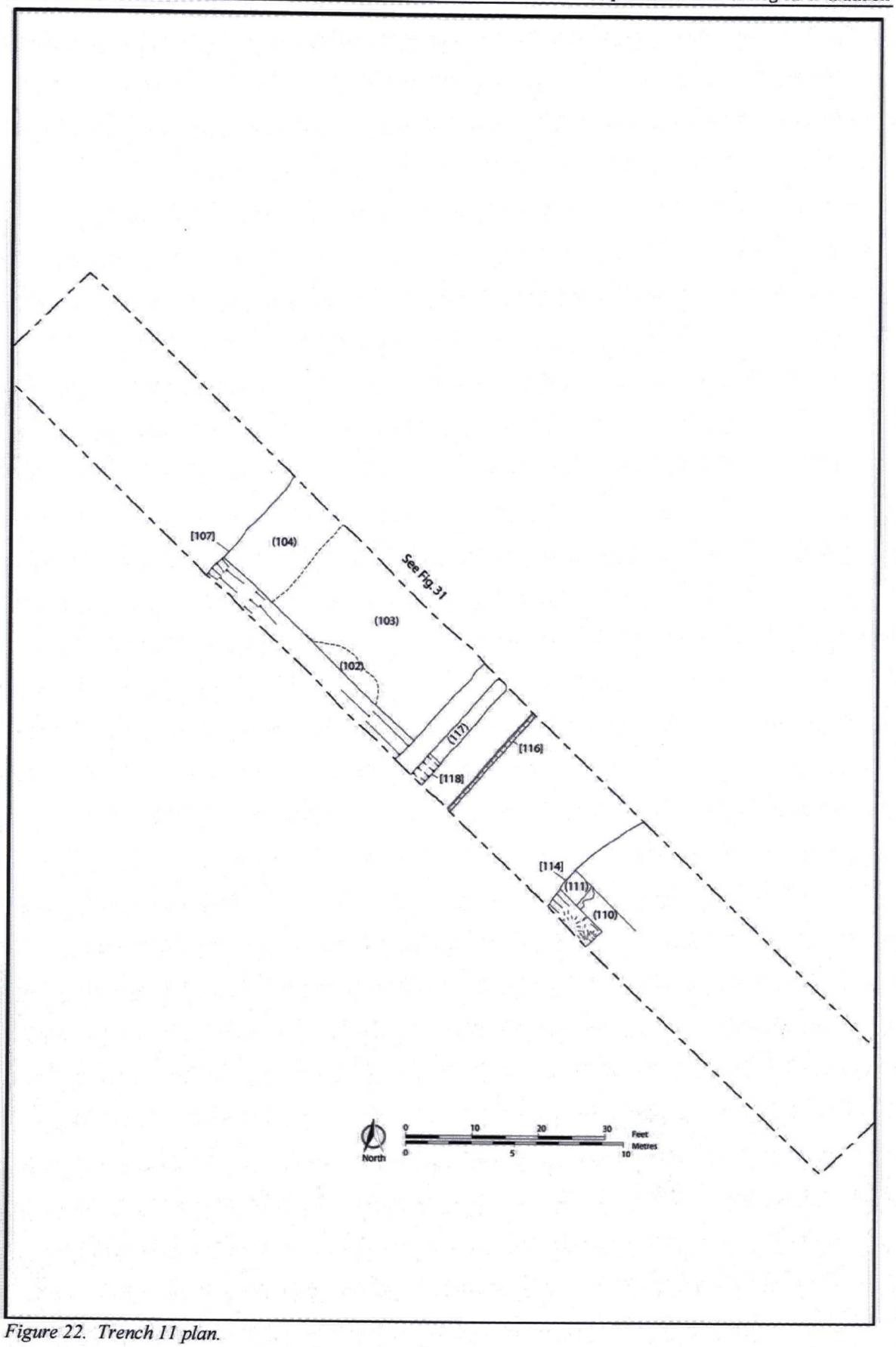

Figure 22. Trench 11 plan.