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EARCROFT JUNCTION M65
DARWEN
LANCASHIRE

Archaeological
Evaluation Report

Earcroft Junction M65, Darwen
Lancashire

Archaeological Evaluation Report

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SUMMARY

An archaeological evaluation was undertaken in July 2000 of the area to the south of Oakenhurst Farm, Darwen, Lancashire (centred at NGR SD 6870 2453), by Lancaster University Archaeological Unit, on behalf of White Young Green Environmental Ltd. The work comprised a desk-based study, geophysical survey, topographical survey and trial trenching.

The desk-based study was undertaken so as to maximise the work already carried out as part of an earlier documentary study (GMAU 1994) and involved a search of records held by the Lancashire Sites and Monuments Record, and the Lancashire County Record Office in Preston. The study established that there were two principal landscapes: one of agricultural origin centred on the former Oakenhurst Farm, the north of the study area, and also an industrial landscape around the periphery of the farm.

The geophysical survey was undertaken by Geophysical Surveys of Bradford between 7th and 9th August 2000. Gradiometer scanning showed the majority of the site to be magnetically quiet, with areas of magnetic disturbance in the southern fields, and this was largely confirmed by detailed survey. The principal activity was in the approximate centre of the development area, and revealed ditches, possible pits, and also a linear response which was probably a field boundary. There were also several linear trends which probably reflect ridge and furrow cultivation.

The topographical survey revealed a series of boundary ditches extending across the study area. These defined the outline of some irregularly-shaped fields, which clearly pre-dated the present enclosure field system. In addition, there was a series of tracks and hollow-ways, including one which linked Oakenhurst Farm to Darwen.

The evaluation involved the excavation of 2% of the site and comprised 47 trenches, each 30m in length. Trenches were targeted in areas of least disturbance, and greatest archaeological potential, as informed by the desk-based, topographic and geophysical surveys. The south-eastern part of the site, currently Crown Paints' playing field, was not evaluated due to continued use of the football pitch.

The evaluation produced evidence typical of an agricultural landscape within the region, revealing evidence for ditches, drains, and ploughing. The stratigraphy of the whole site was very shallow, with modern disturbance in the south, and along the northern edge. Two trenches were excavated across a path / track between the Oakenhurst settlement and Darwen, which revealed an absence of path or track surface, although a linear row of sub-rectangular stones, on the same alignment, was observed within one trench. In both trenches the present path was bounded on either side by a stepped ditch. Evidence of a track surface was revealed in the south-eastern part of the site, within a hollow-way, and comprised a cambered lens of clay overlain by a thin layer of pebbles, forming the surface, within which were fragments of modern brick. V-shaped ditches were observed on both sides of the track, the western having been recut for a later ceramic drain.

The agricultural landscape identified by the archaeological programme is of local archaeological importance and it is thus recommended that a limited watching brief be undertaken in the area of the Crown Paint's playing field, which could not be evaluated as part of the present programme.

ACKNOWLEDGEMENTS

Lancaster University Archaeological Unit (LUAU) would like to thank the staff of the Lancashire Record Office in Preston Library Archives Department, Peter Iles of Lancashire County Council Archaeology Service for SMR information, and Susan Parr of White Young Green Environmental Ltd.

The documentary research was undertaken by Andrea Scott. The geophysical survey was by Geophysical Surveys of Bradford, and undertaken by Louis Harvey, assisted by J Leigh, F Robertson and A Shields. The topographic survey was undertaken by Matt Town; the trial trenching was undertaken by Chris Wild, John Trippier and Gunnar Hellström. The report was written by Andrea Scott and Chris Wild, with contributions by Dan Elsworth; it was edited by Jamie Quartermaine and Rachel Newman. The project was managed by Jamie Quartermaine.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 An archaeological evaluation has been undertaken of the study area at Earcroft Junction of the M65 (centred at NGR SD 6870 2453; Fig 1) by Lancaster University Archaeological Unit (LUAU), on behalf of White Young Green Environmental Ltd. The work is being undertaken in advance of the construction of a motorway service development, which will be accessed by a link road from the existing motorway junction. The programme of work was undertaken during July and August 2000, and comprised a desk-based study, a geophysical survey, a topographical survey and trial trenching. The desk-based study, topographical survey, geophysical survey and trial trenching are presented within this report.
- 1.1.2 The desk-based study was intended to appraise rapidly the likely archaeological value of a given area, and to locate and record potentially interesting or important features in the landscape, whether or not they were visible as surface remains. The intention was that the results would aid site recognition during the programme of trial trenching within the study area. To this end, available documentary and map sources were scanned. All work was carried out in accordance with a project design (*Appendix 3*) prepared by LUAU.
- 1.1.3 The evaluation trenching was informed by the desk-based study, the geophysical survey, and the topographical survey and was intended to establish the below ground potential of the area.
- 1.1.4 This report sets out the results of the work in the form of a short document which outlines the findings, followed by a statement of the archaeological potential of the area, and an evaluation of the impact of the proposed development. This is complemented by a gazetteer of sites (*Appendix 1*), both new to the record and formerly known, and a bibliography.

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 A project design (*Appendix 3*) was submitted in July 2000 by LUAU in response to a request from White Young Green Environmental Ltd, for an archaeological evaluation in accordance with a programme of work designed by Peter Iles of Lancashire County Archaeological Service.
- 2.1.2 The project design provided for a desk-based study, geophysical survey, topographic survey, trial trenching, and written reports, which would interpret the data discovered during the project in advance of the proposed construction of motorway services at the Earcroft junction of the M65. The evaluation has been carried out in accordance with the project design.

2.2 DESK-BASED STUDY

- 2.2.1 A documentary study had already been undertaken as part of the earlier study (GMAU 1994), and it was therefore deemed unnecessary to analyse the documentary sources with regard to the general historical background of the area. Existing archaeological information was obtained from the Sites and Monuments Record (SMR) (Lancashire County Archaeological Service), whilst manuscript maps and selected other documents were studied in the Lancashire County Record office (LRO) (Preston). The quantity of manuscript maps in the LRO was very small, as there were no title or enclosure maps for the area. Available maps and plans were restricted to Yates' map of 1786, Hennem's map of 1829, and the OS 6 inches to one mile, 1st edition maps of 1849 (Sheets 70), 1894 (Sheet 70) , and 1911 (Sheet 70). There were very few relevant documents in the (LRO) although, a list of the documents which were consulted is given in the bibliography.
- 2.2.2 ***Aerial photographic study:*** RAF vertical photographs taken in 1963 and 1988 were located and studied in the Lancashire County Archaeology Service (LCAS) using a stereoscope. Laser prints were not requested, since the coverage already seen indicated the limited potential of the aerial photographic coverage for this particular site.

2.3 GEOPHYSICAL SURVEY

- 2.3.1 The geophysical survey was undertaken in two phases. Firstly, the area was subject to magnetometry scanning over the extent of the study area (13 ha), and then, subject to the results, more intensive geophysical survey was undertaken on 1.5 ha in two fields. In addition, a total of 0.5 ha resistance survey was also undertaken. The work was undertaken by Geophysical Surveys of Bradford.
- 2.3.2 ***Magnetometer Survey:*** the survey area was divided into 20m x 20m grids within which data collection was taken. The individual grids were matched together to produce an overall plan of the surveyed area, the results being analysed using a variety of software. A report, including diagrams, text and interpretation on a CAD system, was then prepared.
- 2.3.3 ***Resistance Survey:*** the resistance survey area was divided into 20m x 20m grids within which data collection was taken. Survey measurements were collected with

a Geoscan research RM15 instrument, normally sampling at one reading per metre with inter-transect distances being 1m. The data were captured in the internal memory of the RM15 and then downloaded to a portable computer. The individual grids were matched together to produce an overall plan of the surveyed area, the results being analysed using a variety of software.

2.4 TOPOGRAPHICAL SURVEY

- 2.4.1 A systematic surface inspection was undertaken of the study area, which was predominantly improved pasture land. The area was walked on 30m transects to identify earthworks and extant surface features. The archaeological detail was mapped to an accuracy of $\pm 0.3\text{m}$, using differential Global Positioning System (GPS) techniques, which use electronic distance measurements along radio frequencies to satellites to enable a fix in Latitude and Longitude, which were subsequently converted mathematically to Ordnance Survey (OS) National Grid. GPS raw data (using a single receiver) were typically accurate to only $\pm 30\text{m}$, but by the use of differential techniques it is possible to achieve much higher accuracies. The Leica system used by LUAU uses a post-processed differential system, which involves the comparison between a roving receiver and a static receiver (at a precisely recorded location) and allows for the elimination of most of the residual errors. This typically results in accuracies of better than $\pm 0.1\text{--}0.2\text{m}$.
- 2.4.2 The survey data from both the GPS and manual surveys were transferred digitally into a CAD system (AutoCAD 14) and were superimposed with 1:10,000 OS raster data.

2.5 EVALUATION TRENCHING

- 2.5.1 **Excavation Methodology:** the excavation trenching was undertaken by a mechanical excavator (a JCB 3C excavator) fitted with a 1.5m toothless ditching bucket, and this was followed by hand cleaning for the purposes of examining archaeological detail. Excavation was undertaken to the depth of the natural subsoil in all trenches. The trenches were then mechanically backfilled. All excavation was carried out stratigraphically, whether by machine or by hand.
- 2.5.2 **Recording:** the recording methods employed by LUAU accord with those recommended by English Heritage's Centre for Archaeology Service (CFA). Recording was in the form of *pro-forma* Trench Sheets for each trench, which recorded the orientation, length, and depth of machining, and described the nature of the topsoil, subsoil (where applicable), and geological deposits. Where possible features were observed and manually sampled, with a full textual, drawn, and photographic record being maintained. Any finds recovered were bagged and recorded by either the trench number or, where appropriate, by the fill of the feature from which they were recovered.
- 2.5.3 The positions of the trenches were recorded using a GPS and the information was superimposed onto the survey CAD drawings.

2.6 GAZETTEER OF SITES

- 2.6.1 All of the information concerning archaeological sites in the affected area has been collated into a gazetteer (*Appendix 1*), which provides details of their location, origin, and character. Locations are given as eight-figure National Grid References where possible. A summary description of each site is provided in conjunction with a reference to the source of the information (SMR, cartographic and documentary), with references as appropriate and an assessment has been given of the interpretation and archaeological potential of the site. The sites have been marked onto a digital map showing their position (Fig 2). Other sites beyond the extent of the study area, which were considered to be of background relevance, are mentioned in the text with appropriate SMR references.

2.7 FINDS

- 2.7.1 All finds were retained for analysis and were recorded and have been processed and temporarily stored according to standard practice (following current Institute of Field Archaeologists guidelines). The ceramics have been analysed by the LUAU in-house finds specialist (*Section 7.2*).

2.8 ARCHIVE

- 2.8.1 A full archive of the desk-based study has been produced to a professional standard in accordance with current English Heritage guidelines (English Heritage 1991). The archive will be deposited in the Lancashire Record Office with a copy to the Lancashire Sites and Monuments Record and a copy will be available for deposition to the National Monuments Record.

3. BACKGROUND

3.1 TOPOGRAPHY AND GEOLOGY

- 3.1.1 **Topography:** the site lies within the Darwen valley, flanked on the western edge by Meadow Head Lane (c183m OD) and to the east by the River Darwen; the motorway is at the northern boundary of the study area. The study area is centred to the south of the site of Oakenhurst Farm which was in the area now occupied by the M65 motorway. The study area lies at the northern end of the historic township of Longworth, but to the south it includes part of the historic township of Lower Darwen. The topography is gently undulating with a cover of short grass.
- 3.1.3 **Geology:** the area lies on the northern flank of the Hercynian Rossendale Anticline, with a solid geology consisting of Upper Carboniferous (Lower Westphalian), mainly Lower Coal Measures (OS 1979). The overlying drift geology is made up of deposits of a mixture of sand and gravel, along with fine clays of the Brickfield 3 Association (71 3g) formed from a parent of drift and Palaeozoic sandstone and shale (SSEW, 1983).

3.2 HISTORICAL BACKGROUND

- 3.2.1 **Prehistoric:** the geological and topographical nature of the area in the form of heavy boulder clays result in poorly draining soils and this has not favoured early settlement. Few prehistoric sites have been identified in the general locale and there was no evidence of prehistoric activity within the site area.
- 3.2.2 **Roman:** the only evidence of activity in the area is in the form of a Roman road which is thought to extend from Manchester to Ribchester, running north-westwards before crossing the Davy Field brook. This alignment is depicted on the OS 1st edition and subsequent maps; however, the historic ford across the Darwen (Davy Brook) is a little to the right of this alignment, which would in any case entail the road traversing a steep bank on the north side of the river itself. The documentary evidence, quoted by the GMAU (1994) report, states that both Watkin (1883, 54) and Abram (1877, 7) thought that the road '*followed the modern road until Lower Darwen is reached*' and it is considered that this alternative alignment is the more probable as it crossed the brook at a more logical point.
- 3.2.3 **Early Medieval:** as usual in the North West there is little evidence for any activity in the early medieval period. What does exist survives as place-name evidence, which has the potential to denote early settlement. Within the confines of the site, this is restricted to Lower Darwen which is derived from the Old English for 'river where the oak trees grow' and Eccleshill (*egles hyll*) meaning 'church hill'. The word *egles*, deriving from a Latin root, implies an early-medieval church and such monuments are particularly rare in the North West. The most popular location for the church is on a spur of higher ground to the south-east of the site, although there is no physical evidence for the church itself. The presence of an early church would have provided a focus for settlement and consequently there is the potential for associated remains in the environs.
- 3.2.4 **Medieval:** evidence for early farming activity is denoted by small hamlets such as Oakenhurst and Lower Eccleshill farmsteads. The common practice of the time was to farm common land or small enclosures, evidence for which is very difficult to

discern. The sites within the bounds of the study area are restricted to the early post-medieval period, although sites like 'cross field', situated along the eastern edge of Lower Eccleshill Road (to the east of the current development), are recorded on the tithe maps of 1843 and may denote earlier activity in the area.

- 3.2.5 **Post-medieval:** the area surrounding the proposed development forms a landscape defined by much post-medieval activity. There is evidence for an agriculture (Oakenhurst and Lower Eccleshill Farms), along with field boundaries that appear on the OS 1st edition maps which are now largely restricted to earthworks or tree/hedge lines. Within the site itself the large regular field patterns are typical of eighteenth/ nineteenth century enclosure systems. Later activity in the vicinity seems to be denoted by an increase in the volume of textile mills (there are nine such mills within 1000m of the site), along with extractive industries such as quarrying.

4. DESK-BASED STUDY

4.1 SITES AND MONUMENTS RECORD

- 4.1.1 There are 26 known archaeological sites recorded on the Lancashire SMR in the vicinity of the assessment area, two of which actually lie within the area itself, although these are defined as footpaths denoted on earlier maps (Sites 21 and 23); these are listed in detail in the gazetteer (*Appendix I*). There were no prehistoric or medieval sites, but there was one listed building, ten industrial/agricultural sites and nine domestic sites identified in the vicinity of the study area.
- 4.1.2 Most of the SMR sites related to features noted on the OS 1st edition maps. These include two wells (Sites 19 and 20), two quarries (Sites 7 and 16), and ten buildings, including schools (Sites 4-12 and 22).
- 4.1.3 Industrial features included the Lower Darwen Moss Bridge cotton mill (Site 18), sewage works (Site 24), reservoir (Site 25), and terraced housing, probably associated with Site 18 (Site 12).

4.2 DOCUMENTARY AND CARTOGRAPHIC SOURCES

- 4.2.1 The assessment area lies in the modern civil parish of Darwen (Farrer and Brownbill 1911), whilst the site of Oakenhurst is first recorded as being in existence from around 1580. By 1786, this was shown as a grouping of 11 structures identified on the Yates map, and by the time of the OS 1st edition map (1849) these had become amalgamated into ten structures. Oakenhurst Farm was documented in 1994/5 by GMAU (1994) and was identified by trial trenching by LUAU in 1997, prior to its demolition for the development of the M65 motorway.
- 4.2.2 The land covered by the study area comprises mainly enclosures predating the enclosure acts of the late eighteenth and early nineteenth centuries. There is also a small area of woodland, directly to the south of Earcroft, which was extant in 1849 when it was depicted on the OS 1st edition map and was possibly the relict survival of more expansive historic woodland that is implied by local placenames (Oakenhurst and Oaksfield). The fields retain name elements such as hey, croft and fold, all of which mean enclosure (Earcroft, Moss Fold), and there is an implication that many of these fields, though not necessarily in their present form, had early origins. The names are also descriptive either of their function, their size, their location (Higher Meadow Head, Lower Eccleshill Farm, Sunny Hillock), or of topographical features such as Oaksfield, Moss Fold and View Cottage. The place names, such as Moss Fold, Moss Bridge, Higher Bog Height and Bog Bank Farm, reflect the generally poorly drained character of the land and would suggest that some areas were reclaimed mire.
- 4.2.3 **Cotton Hall:** Cotton Hall (Site 04) is marked on the map of 1849, situated just north of the assessment area. Although it is not known when the hall was built, it was certainly in existence as a large structure on Yates' map of 1786. The building appears to have comprised two L-shaped and one T-shaped structure to the north-west, as shown on the OS 1st edition map, whilst Yates' map and Hennem's map (1829) identify the building as one square-shaped structure only. By 1895, all visible surface traces of the structure had been lost.

- 4.2.4 **Lower Moss Bridge Mill (Site 18):** the site of Longworth Mill is situated at the west of the study area. The earliest known citation refers to a cotton mill from before 1808 (SMR 10557 description), that is listed in the Mannex directory (1868) as a 'cotton spinning concern'. It appears on all the OS maps from 1849 onwards.
- 4.2.5 **Listed Buildings:** the only listed building within the environs of the study area is that of a barn, c 30m to the west of Earcroft farm house (Site 10). This was known to be in existence by 1688 and has a coursed sandstone rubble and quoins fabric with a slate roof. This is a Grade II listed building.

4.3 CONCLUSIONS

- 4.3.1 Despite the relative paucity of known archaeology within the study area there is documentary evidence for significant archaeological sites immediately outside; there are several industrial sites existing around Oakenhurst Farm, in addition to Lower Darwen Moss Bridge Mill, together with terraced buildings that are associated with the various works in the vicinity, including Moss Bridge Terrace and reservoir (Site 25).
- 4.3.2 Further afield, eight other mill sites are noted with associated buildings such as weaver cottages, a weir (Site 3), Moss Bridge (Site 12), and two wells (Sites 11 and 19). This landscape therefore holds the greatest archaeological potential for early industrial remains, as there may be mill remains within the area which date back to at least the early eighteenth century.
- 4.3.3 Sites such as Oakenhurst Farm and Cotton Hall pertain to an earlier agricultural landscape. Although evidence for Cotton hall is not clearly evident within the pasture land, its location is known from the cartographic depictions of the site. Oakenhurst Farm was potentially an important early settlement, and though it has now been lost to allow for the construction of the motorway its agricultural field system survives in part within the study area. Agricultural activity from both settlements can be identified in the clearly defined footpaths and field boundaries (Sites 21, 23 and 26). A study of the field names reinforces the physical evidence, indicating that the area was predominantly used for agriculture throughout the medieval and post-medieval periods.

5. TOPOGRAPHICAL SURVEY

5.1 RELICT LANDSCAPE

- 5.1.1 ***Agricultural Landscape:*** the topographic survey revealed a collection of features suggestive of a relict agricultural landscape. In particular, land improvement, in the form of drainage, is well represented by Sites 30 - 32 and also by the drains associated with Site 27. It is very probable that these will have been recut and reused since their initial construction and that others will have been incorporated into later field boundaries, leaving those in the assessment area to demonstrate the earliest enclosure pattern.
- 5.1.2 It is likely that the assessment area was originally broken into small plots, shown not only by the drains, which would in themselves have acted as boundaries, especially Sites 30 and 32, but also by Site 29, a lynchet bank. This boundary configuration forms three or four small, irregularly-shaped fields which are suggestive of a pre-enclosure pattern of agriculture.
- 5.1.3 ***Communications:*** access routes across these earlier plots are shown by the large hollow-way (Site 27) and the associated former gateway (Site 28) and possibly also by Site 31, a further hollow-way. If Site 28 was indeed associated with hollow-way Site 27, this indicates some continuation within the field boundaries, which truncated, but respected, the, presumably earlier, hollow-way.
- 5.1.4 Two raised areas (Sites 33 and 34) appear to be of natural origin but may alternatively be the result of dumping, perhaps in association with the improvement of the land. In both cases they respect the drains and other features, and this might suggest that they were contemporary, or at least that they respect each other's function.

5.2 CONCLUSION

- 5.2.1 The relict field boundaries and drains within the assessment area indicate a relatively early phase of land improvement, predating later, more formal enclosures. The boundary small plots for the most part run counter to the extant boundaries although in some cases they have obviously been reused. A generally north / south orientation can be observed, which has been continued in some cases to the present day.

6. GEOPHYSICAL SURVEY

6.1 INTRODUCTION

- 6.1.1 The aim of the survey was to identify any anomalies of archaeological interest within the application area.
- 6.1.2 **Survey Area:** the whole of the evaluation area, totalling 13ha, was subject to gradiometer scanning. Subsequent detailed gradiometer survey totalling 1.25ha was undertaken in two fields; a total of 0.5ha of resistance survey was also undertaken within the two fields. The location of the survey areas is shown in Figure 5 at a scale of 1:2500.
- 6.1.3 The survey grid was set out by GSB and tied in to existing boundaries using an EDM system. Detailed tie-in information has been lodged with the client.
- 6.1.4 **General Considerations:** generally, conditions for survey were good with the site being relatively free from obstructions; the ground cover consisted of short grass.

6.2 RESULTS OF SCANNING

- 6.2.1 With gradiometers in scanning mode, the evaluation area was examined along traverses spaced approximately 10m apart. During this operation, fluctuations in magnetic signal were observed on the instrument's display panel. Any significant variations were investigated more closely to determine their likely origin and those anomalies considered to have archaeological potential were marked with canes for more detailed survey.
- 6.2.2 Scanning revealed a generally low level of background variation ($\pm 0.5\text{nT}$) throughout the majority of the site. The southern end of the area, which lies adjacent to a football ground, was shown to be severely magnetically disturbed, along with the south-eastern corner of the main field.
- 6.2.3 In the remainder of the survey area, several anomalies of potential archaeological interest were noted and these were targeted for detailed gradiometer survey. The areas of magnetic disturbance in the south were also targeted to clarify further the nature of these responses.

6.3 RESULTS OF GRADIOMETER SURVEY

- 6.3.1 **Area A:** several anomalies of potential archaeological interest were noted along the northern edge of the survey block, which could indicate lengths of ditch or pits. The responses were weak and isolated and did not form any clear archaeological pattern, and therefore it is possible that the responses were the result of more recent features or natural variations in the subsoil.
- 6.3.2 Two responses in the north-west corner of the data (A) could indicate the presence of burnt/fired material which may suggest the presence of a hearth, kiln or some other small-scale industrial activity. However, more deeply buried ferrous material could have produced a similar response and, given the

lack of any clear archaeological context for the responses, the latter interpretation should be given equal consideration.

- 6.3.3 Numerous linear trends were visible in the data, the majority of which were on a north-east / south-west alignment. These responses were thought to be associated with more recent agricultural activity, although it is possible that they could relate to former ridge and furrow cultivation.
- 6.3.4 A linear band of ferrous anomalies orientated north-east / south-west in the western half of the survey area was thought to relate to an old field boundary. At the north-eastern end of the response was an area of magnetic disturbance. This may be associated with this possible former boundary, but could also be the result of modern ferrous debris in the topsoil.
- 6.3.5 The strong linear ferrous response aligned north-south through the centre of the survey area was due to the presence of a pipe. Several isolated ferrous responses were noted throughout the survey area and these are considered to reflect modern ferrous debris in the topsoil.
- 6.3.6 **Area B:** the data were dominated by an area of magnetic disturbance, which coincided with a visible earthwork platform. The strength and form of the responses would suggest an area of ferrous debris that would be consistent with modern dumped material or made-up ground. However, the possibility that the noise was associated with building remains could not be wholly discounted and, therefore, resistance survey was also undertaken over this area (*Section 6.4*).
- 6.3.7 Three isolated ferrous-type responses in the western half of the data are thought to be due to modern ferrous debris in the topsoil.
- 6.3.8 **Area C:** strong ferrous responses were apparent throughout the survey block, comprising magnetic disturbance consistent with the presence of ferrous material. Scanning showed the disturbance to extend throughout the southern portion of the evaluation area adjacent to the football ground. It is possible that this area had been subject to modern landscaping and this would be consistent with the results. This disturbance would mask any responses from archaeological features, if present, and it was therefore decided to undertake resistance survey (*Section 6.4*).
- 6.3.9 Several isolated ferrous responses were identified in the data and are considered to reflect modern ferrous debris in the topsoil.

6.4 RESULTS OF RESISTANCE SURVEY

- 6.4.1 **Area B:** several amorphous areas of high resistance were recorded in the data and, given the form of the anomalies, they are considered to be the result of either modern material or to represent natural variations in the soil. There is no evidence in the data to suggest the presence of building remains.
- 6.4.2 A broad oval area of low resistance in the eastern half of the data appeared to coincide with a hollow in the field apparent at the time of survey. It is therefore considered to be a topographic effect.
- 6.4.3 Several trends in the data have been noted and would ordinarily be of interest. However, the responses were weak and indistinct and, given the magnetically

disturbed nature of the area (*Section 6.3.6*), it is more likely that they are the result of recent debris and disturbance.

- 6.4.4 **Area C:** two areas of high resistance were apparent in the north-east and south-west corners of the survey block. These were broad responses that formed no coherent pattern and are likely to represent modern material or to be the result of natural variations in the soil.
- 6.4.5 A rectangular low resistance response in the northern half of the data correlated with an area of magnetic disturbance, and it is possible that this indicates modern landscaping activity. However, a natural origin cannot be wholly dismissed. A few further low resistance anomalies were noted and these are considered to be modern or natural in origin.
- 6.4.6 Two linear trends, orientated north-east / south-west, in the south-eastern corner of the area could be of interest, although, given that the area is severely magnetically disturbed, a more recent origin seems more probable.
- 6.4.7 A rectilinear pattern of trends in the centre of the survey block coincided with some strong ferrous responses. It is possible that they could relate to some form of structural remains, although, given the strength and form of the anomalies, they are more likely to relate to modern debris or landscaping features.

6.5 CONCLUSIONS

- 6.5.1 Gradiometer scanning showed the majority of the site to be magnetically quiet, with areas of magnetic disturbance in the southern fields. Several anomalies of archaeological potential were identified and targeted for detailed survey. The areas of magnetic disturbance were also targeted for survey to clarify further the responses.
- 6.5.2 A few anomalies of potential archaeological interest were identified in Area A that may indicate ditches and pits. Two of the responses could indicate the presence of small-scale industrial activity. However, these could equally be due to more deeply buried ferrous material.
- 6.5.3 A linear response in the western half of Area A is considered to represent an old field boundary. Numerous linear trends in the data are thought to relate to recent agricultural activity, although they may be associated with former ridge and furrow cultivation.
- 6.5.4 Detailed gradiometer survey in Areas B and C confirmed the results of the scanning, detecting extensive areas of magnetic disturbance. Given the strength and form of the responses, it is most likely that they are associated with modern dumped material and/or landscaping.
- 6.5.5 Resistance survey in Areas B and C produced a few anomalies of potential interest, although, given the magnetically disturbed nature of the areas, they are more likely to be modern or natural in origin. There is no clear evidence for any structural remains within Areas B or C.

7. TRENCHING RESULTS

7.1 RESULTS

- 7.1.1 In broad terms, the evaluation produced evidence typical of an agricultural landscape within the region, revealing evidence of ditches, drains and ploughing. The stratigraphy of the whole site was very shallow, with modern disturbance in the south, and along the northern edge. In total, 47 trenches were excavated, which were targeted for the most part on features and anomalies identified by the topographical and geophysical surveys. Only a limited number of control trenches were excavated in areas of disturbance as identified by the geophysical survey, particularly in the southern part of the study area. The detailed results of the trenching is presented in *Appendix 4*, and a summary of the results is presented below.
- 7.1.2 **Site 21:** Two trenches (8 and 11) were targeted on the footpath from Oakenhurst Farm across the site towards Darwen. This feature was identified by the desk-based study as being a potentially significant feature (Site 21). Excavation of Trench 8 revealed an absence of any path or track surface, but did reveal ditches on either side of, and parallel to, the present field boundary, aligned roughly north/south, which were observed to be cut into the natural subsoils; the tops of both ditches were approximately level with the base of the field boundary. Both ditches were of similar profile, stepped, to form a double ditch, with the deeper part on the inner side, nearest the field boundary (Fig 12). It is unlikely that these ditches were dug purely for drainage, given their profile, and it is therefore probable that they lined a path or trackway, although no sub-surface evidence for this was observed. The western ditch was subsequently recut for a ceramic land drain, on a similar alignment. To the east of the eastern ditch the natural subsoil was much more plastic, with a much higher clay content, and this plastic clay natural was also cut by a modern land drain. In Trench 11, two ditches were again identified cut into the natural sandy silt, on either side of the modern field boundary, and in similar positions and alignment to those observed within Trench 8; however, the profiles of the ditches differed. The western ditch, positioned under the present path, was cut 0.2m into the natural silt and was flat bottomed with a U-shaped profile and was cut by a later ceramic pipe along its western edge, whilst the eastern ditch was 0.3m deep with a shallow eastern slope and steep inner (western) face. A row of six angular sandstone kerbing stones was observed immediately to the east of the eastern ditch. These were too shallow to represent the remains of a stone culvert, and were probably the remains of kerbing associated with the ditch. Although no datable finds were recovered from within either ditch, their position and form suggests that they were broadly contemporary with the trackway, and were amongst the earliest surviving features within the site.
- 7.1.3 **Site 27:** evidence of a track surface was revealed in the south-eastern part of the site (Trench 32, Fig 13) within a hollow-way identified by the topographical survey (Site 27). Within the hollow-way was a clay and stone camber, which was 0.18m thick overlying the natural sand, with washed infill of the slope on either side, up to 0.2m deep. To the immediate west of the hollow-way lay a drainage ditch, with a V-shaped profile, that had been recut for the insertion of a ceramic drain. This feature appears to relate to the hollow-way, and was probably designed to prevent it

from becoming waterlogged. To both the east and west of the hollow-way and ditch were shallow depressions up to 0.05m deep and 0.2m wide, which were on a similar same alignment; they were probably the remains of ridge and furrow cultivation.

- 7.1.4 **Boundary Ditches:** the trenches also investigated V-shaped or U-shaped drainage ditches that had been recorded by the topographical survey (Trenches 17, 18, 20, 23-26, 36, 38-9, 41-2 and 45), some of which were still functional. The largest, north / south aligned ditch, in the centre of the study area (Site 30 / 31) corresponds to the line of a field boundary shown on the OS 1st edition map. It was observed in Trenches 17, 18, 20 and 24; it was up to 4.8m wide and had two fills, the primary fill having been recut in places to improve drainage. Although only post-medieval pottery was recovered from these features, all came from the secondary fill, and there is the possibility that this provides a date for their later use and that they had their origins within the medieval agricultural landscape of the area, forming drains along the line of field boundaries.
- 7.1.5 **Ridge and Furrow:** several shallow, truncated features, which were mainly parallel to the drainage ditches, were observed; these probably related to ridge and furrow ploughing. One feature, within Trench 39, appears to represent the L-shaped return of a field boundary ditch. It was 0.1m deep, with a flat-bottomed, U-shaped profile, suggesting a pattern of north-east / south-west aligned fields, an alignment similar to the majority of drains.
- 7.1.6 **Post-hole / Root-bole features:** five isolated sub-rounded features were observed, each in separate trenches (Trenches 3, 4, 20, 40 and 41). Although several of these features had steep-sided U-shaped profiles, it is probable that the majority were root-boles. One feature, within Trench 4, had a steep-sided, flat-based profile and was 0.18m deep, suggesting it was possibly a post-hole. No finds were recovered from the feature.
- 7.1.7 The area at the northern end of the site was heavily disturbed, with large quantities of plastics, and re-deposited natural clay, suggesting that this had been landscaped after the construction of the M65 motorway in the late 1990s. The raised platform (Site 34) identified during the topographical survey in the south-eastern corner of the site was formed of a 0.5m depth of mixed redeposited natural clay and mixed subsoil containing modern brick fragments. This in turn overlay 0.14m of redeposited dark brown, silty clay, which was probably buried topsoil from landscaping (observed in Trenches 44 and 45), and most probably related to the buildings to the east. The playing field to the west, which was not evaluated by trenching, had also been heavily landscaped, being lower than the surrounding field at the western side and was raised to the east, indicating artificial terracing.
- 7.1.8 **Land Drains:** in excess of 100 land drains were observed during the evaluation, representing a continuity from the late eighteenth century / early nineteenth century to the present. The earliest comprised stone culverts, formed of two parallel rows of stones, set on edge and covered with larger capping stones (Plate 4). These varied in depth from c0.4m below present ground level to c1m, and demonstrate the considerable manual labour involved in agricultural drainage. These appear to have been subsequently replaced by a larger number of early type ceramic stone drains, comprising 1ft lengths of c100mm diameter ceramic pipe. The later jointed drains were recut into many of the earlier ditches and many still function. Several extruded drains were observed, and these had a void formed solely within the soil,

without any supportive piping. The majority of these remain intact to the present time.

7.2 FINDS

- 7.2.1 A small amount of artefact evidence was recovered during the course of these excavations, predominantly in the form of fragments of ceramic vessel, although a pair of modern iron/mild steel pliers was recovered from Trench 47, and five fragments of modern bottle and window glass from Trench 46.
- 7.2.2 All fragments were relatively large and unabraded, suggesting that few had moved far from their original place of deposition. The material was of little archaeological interest, with little, if any, of the vessel fragments examined dating prior to the beginning of the nineteenth century. The range of vessels represented included chamber pots, kitchen and storage vessels, and tablewares, all typical household goods, and suggesting a domestic origin for all the material found, and presumably arriving at the site as domestic rubbish.

8. CONCLUSION

8.1 SURVEY CONCLUSIONS

- 8.1.1 The documentary study revealed that the area surrounding Oakenhurst Farm pertains to an early (medieval) agricultural landscape within the area. Although the farm site no longer survives, having been destroyed in the course of the construction of the M65, its associated agricultural landscape in part still exists in the form of some footpaths and field boundaries (Sites 21, 23 and 26). However, comparison between the OS 1st edition map (1849) and that of the present, demonstrates that many of the field boundaries and trackways, shown on the earlier map, have now been removed. A study of the field names reinforces the physical evidence, indicating that the area was predominantly used for agriculture throughout the medieval and post-medieval periods.
- 8.1.2 Although most of the earlier boundaries, as shown on the OS 1st edition map, have fallen out of use, the topographical survey demonstrated that most of these survive as relict features within the modern landscape, albeit in some places very degraded. The geophysical survey reinforced the topographical survey in identifying the major ditches and paths, along with several more ephemeral features associated with agricultural activity across the study area, notably areas of ridge and furrow.

8.2 TRIAL TRENCHING CONCLUSIONS

- 8.2.1 Most of the landscape features were examined by trial trenching, which confirmed that they were components of an agricultural landscape, which was apparently associated with the Oakenhurst settlement. Although the finds assemblage contained exclusively post-medieval artefacts, there is an implication that many of the tracks and boundary ditches may have had earlier origins, and were potentially related to a medieval landscape.
- 8.2.2 **Tracks:** the two trenches excavated across the potential medieval path / track from the Oakenhurst settlement to Darwen (Site 21), on the western side of the study area, revealed an absence of path or track surface, but revealed boundary ditches which were probably broadly contemporary with the trackway. If the trackway was well drained by these ditches, it is possible that it never needed a metalled surface. The footpath marked on the 1849 OS 1st edition map in the centre of the study area was also shown to have had a boundary running along its edge. Evidence of a track surface was, however, revealed in the south-eastern part of the site, within a hollow-way (Site 27); this hollow-way extended south-west from a putative crossing point of the River Darwen to the east of the study areas, as shown on the OS 1st edition map(1849). It comprised a cambered lens of clay overlain by a thin layer of pebbles, forming the surface, within which fragments of modern brick were observed. V-shaped ditches were observed on both sides of the track, the western ditch having been recut for a later ceramic drain. It is probable that the hollow-way was only surfaced after the ditches on either side had ceased to function adequately, a new ceramic pipe only being added in the twentieth century to improve the western drain.
- 8.2.3 **Drainage:** the evaluation revealed that the whole site has been subject to repeated attempts at drainage, especially in the largest, north-eastern, field, where marshy

patches still remain. The linear topographical features appear to relate to the earliest surviving drainage ditches, several of them having been recut for stone and ceramic drains. The stone culverts observed within several of the trenches, at depths of up to 1m below present ground level, appear to represent the next phase of drainage, probably dating to the late eighteenth or early nineteenth century. The majority of drains were nineteenth century segmental ceramic drains, and there were also several later, larger ceramic pipes observed.

8.3 THE LANDSCAPE

- 8.3.1 All of the survey and evaluatory techniques that have been applied to the study area demonstrate the presence of an essentially agricultural landscape which largely corresponds to that recorded on the OS 1st edition map (1849). The character of this field system is broadly radial, with the Oakenhurst settlement at the hub, and clearly pre-dates any eighteenth / nineteenth century parliamentary enclosure. The access road, extending south-west out from Oakenhurst (Site 21), was butted by all the adjacent field boundaries and would appear therefore to be an early component of the landscape. Although the evaluation only identified post-medieval ceramics, the character of the field system would suggest that the alignments of the boundaries were at least contemporary with the Oakenhurst settlement, and likely to be of medieval or earlier origin.
- 8.3.2 Although the nature of the study area itself has been shown to have been agricultural since at least the early post-medieval period, there is documentary evidence for significant archaeological sites outside, which include a number of industrial sites around Oakenhurst Farm, in addition to the Lower Darwen Moss Bridge Mill (Site 18). There are also several terrace buildings that were associated with the various works in the vicinity, including Moss Bridge Terrace (Site 12). Further afield from the site itself are eight other mill sites with associated buildings such as weaver cottages, the later weir (Site 3), Moss Bridge (Site 12), and two wells (Sites 11 and 19). This demonstrates that the broadly agricultural landscape of the eighteenth century was in places subject to considerable industrial development, particularly during the nineteenth century.

9. IMPACT AND RECOMMENDATIONS

9.1 IMPACT

- 9.1.1 All the exploratory techniques, desk-top study, topographical survey, geophysical survey and evaluatory trenching have provided confirmatory evidence that the study area has been farming land from the early post-medieval period onwards and possibly even from the medieval period. The features identified comprised land drains, field boundaries, access tracks, lynchet banks and also localised ridge and furrow; as such these features are the primary and by-products of predominantly arable farming activity. For the most part the features themselves were datable to the post-medieval period, and the analysis of the finds recovered from the trenching has demonstrated only post-medieval or modern artefacts. However, there is a distinct possibility that the ridge and furrow identified was of medieval date. The proposed development will result in the loss of a medieval / post-medieval agricultural landscape, but this is not of any particular rarity and is therefore of only local importance.

9.2 RECOMMENDATIONS

- 9.2.1 The study area has been subject to mitigative recording by topographical survey, and the archaeological resource has been extensively investigated and recorded by means of evaluatory trenching and geophysical survey. The identified archaeological resource is of only local importance and it is considered that the present archaeological programmes have provided an adequate record. However, the trenching could not be undertaken within the area of the football field on the eastern side of the study area and, as it has not been adequately investigated, it is recommended that a watching brief be undertaken in the course of the initial ground works in this area.

10. BIBLIOGRAPHY

10.1 PUBLISHED CARTOGRAPHIC SOURCES

10.1.1 Lancashire Record Office, Preston (LRO)

William Yates's Map of Lancashire 1786

G Hennem's Map of Lancashire 1829

Ordnance Survey, 1844 6": *1 mile map, Sheet 63*, 1st edn

Ordnance Survey, 1849 6": *1 mile map, Sheet 70*, 1st edn

Ordnance Survey, 1849 6": *1 mile map, Sheet 71*, 1st edn

Ordnance Survey, 1894 6": *1 mile map, Sheet 70*, 2nd edn

Ordnance Survey, 1911 25": *1 mile map, Sheet 70, 6, 7, and 8*

SSEW 1983, *Soils of England and Wales, Sheet 1, Northern England*, Soil Survey of England and Wales.

10.2 AERIAL PHOTOGRAPHS (HELD BY LANCASHIRE SMR)

1963 1:10000 black and white verticals 5 0057 and 6 9983

1988/9 1:10000 colour verticals 61 88 170, 61 88 172 and 29 89 041

10.3 SECONDARY SOURCES

Abram, WA, 1877 *A history of Blackburn, Town and parish*, Blackburn

Mannex, P and Co, 1868 *Directory of Blackburn and East Lancashire*, Preston

Farrer, W, and Brownbill, J, 1911 *The Victoria History of the County of Lancaster*, **6**, London

Greater Manchester Archaeological Unit (GMAU), 1994 *Stage 2 Assessment of the M65 Blackburn Southern Bypass*, unpubl rep

LUAU, 1997 *Eccleshill Link Road Phase II, Blackburn: Archaeological Evaluation*, unpubl rep

Watkin, WT, 1883 *Roman Lancashire*, Liverpool

APPENDIX 1
PROJECT BRIEF

APPENDIX 2
PROJECT DESIGN

**Lancaster
University
Archaeological
Unit**

July 2000

**OAKENHURST FARM
EARCROFT JUNCTION M65, DARWEN**

LANCASHIRE

ARCHAEOLOGICAL EVALUATION

Proposals

The following project design is offered in response to a request from White Young Green, Environmental for an archaeological evaluation of the Oakenhurst Farm, near Darwen in advance of the proposed construction of motorway services, at the Earcroft junction of the M65.

1. INTRODUCTION

1.1 CONTRACT BACKGROUND

1.1.1 Lancaster University Archaeological Unit (LUAU) has been invited by White Young Green Environmental to submit a project design and costs for an archaeological evaluation of land at Oakenhurst Farm, near Darwen, in advance of the proposed construction of motorway services, at the Earcroft junction of the M65. This follows on from and is informed by an archaeological assessment of the line of the M65 by GMAU (1994) and by an evaluation undertaken on land immediately north of the site by LUAU (1997). The project design is in accordance with a brief by Peter Iles of the Lancashire County Archaeological Service.

1.2 ARCHAEOLOGICAL BACKGROUND:

1.2.1 The proposed development occupies the site of a substantial hamlet which was first recorded in 1580, and potentially had medieval origins. It was shown on the Yates map (1786) and comprised eleven structures. The OS 1st edition map (1849) showed the settlement as Oakenhurst, and the settlement has steadily declined until it comprised only the Oakenhurst Farm as shown on the 3rd edition OS map (1965). The farm buildings were destroyed without recording prior to the construction of the M65. An evaluation investigation by LUAU (1997) centred on the former farm complex revealed the survival of earlier buildings underlying the Oakenhurst farm complex, notably on its eastern side. Thirteenth / fourteenth to sixteenth century pottery was identified reinforcing the supposition that the Oakenhurst hamlet dated back to the medieval period. The proposed development is within the extent of the field system of the Oakenhurst hamlet.

1.3 LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

1.3.1 LUAU has considerable experience of the evaluation and excavation of sites of all periods, having undertaken a great number of small and large scale projects during the past 18 years. Evaluations and assessments have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. LUAU undertook the evaluation of the Oakenhurst Farm (1997) and has also undertaken numerous assessments and evaluations on similar sites both in this locality and also in the wider region. LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct and is a registered organisation with the IFA (No 27).

2. OBJECTIVES

2.1 The following programme has been designed in accordance with a brief by Peter Iles of Lancashire County Archaeological Service to provide an accurate archaeological evaluation of the study area. The required stages to achieve these ends are as follows:

2.2 DOCUMENTARY ASSESSMENT

2.2.1 A rapid assessment will examine the documented resource for the site, which will follow on from that undertaken as part of the assessment by GMAC in 1994.

2.3 GEOPHYSICAL SURVEY

2.3.1 A programme of geophysical survey will be undertaken over the extent of the study area. The purpose of the survey is to examine the extent of the site, to identify the sub-surface character of the site and in order to inform subsequent trial trenching.

2.4 TOPOGRAPHICAL SURVEY

2.4.1 A topographic survey will be undertaken of the site examining any archaeological surface features across the extent of the study area which may inform the trenching programme.

2.5 TRIAL TRENCHING

- 2.5.1 A programme of trial trenching will be undertaken in order to investigate features identified by the documentary, geophysical and topographic surveys. It will examine 2.5% of the overall study area. The configuration of trenching will be established in conjunction with LCAS in advance of the implementation of the programme.

2.6 EVALUATION REPORT

- 2.6.1 A written evaluation report will assess the significance of the data generated by this programme within a local and regional context. It will advise on the requirements for further evaluation or recording measures as necessary.

3. METHODS STATEMENT

- 3.1 The following work programme is submitted in line with the stages and objectives of the archaeological work summarised above.

3.2 DESK TOP STUDY

- 3.2.1 A rapid desk-top survey will be undertaken so as to maximise on the work already undertaken as part of the earlier documentary study. It will not therefore re-examine sources that were pertinent to the general historical background of Oakenhurst hamlet and the environs, but will examine sources that are relevant specifically to this study area. In particular this will mean a reliance on cartographic, aerial photographic sources and the SMR which will have been previously examined but not specifically in relation to this area. The report, however, will incorporate the results of the earlier study in the assessment.

- 3.2.2 **Documentary and cartographic material:** this work will include an appraisal of the Lancashire Sites and Monuments Record, as well as early maps, and such cartographic documentation (tithe and estate plans etc.) as may be reasonably available. Any photographic material lodged in either the County Sites and Monuments Record or the County Record Offices will also be studied. This work will involve a visit to the County Record Office in Preston.

- 3.2.3 **Aerial photography:** a survey of the extant air photographic cover will be undertaken. This may indicate the range and survival of archaeological and structural features in the designated area, and if appropriate coverage is available, allow an assessment of the rate and progress of erosion of archaeological features. It will also facilitate the rapid recognition and plotting of archaeological features including those no longer visible at ground level. Sources held at the Lancashire SMR and the National Monuments Record (Swindon), although, within the timescale available, it is unlikely that prints will be forthcoming from this body for inclusion in this report.

3.3 GEOPHYSICAL SURVEY

- 3.3.1 The geophysical survey will be undertaken in two phases. First the area will be subject to magnetometry scanning over the extent of the study area (13 ha), and then, subject to the results, more intensive geophysical survey will be undertaken on a quarter of the total area (3.0ha). The method to be employed for the detail survey will depend on tests of both resistance and magnetometry techniques within the development area, to assess which will be the most productive technique. Resistivity survey is more expensive and is less effective at identifying negative features, such as ditches or post holes, but is effective at identifying positive features such as walls and stone features. The successful technique will then be implemented across the whole of the detail area (3.0ha). The work will be undertaken by Geophysical Surveys of Bradford.

- 3.3.2 **Magnetometer Survey:** subject to the results of the tests the survey area will be divided into 20m x 20m grids within which data collection is taken. The individual grids are matched together to produce an overall plan of the surveyed area, the results being analysed using a variety of software. A report, including diagrams, text and interpretation on a CAD system, will then be prepared.

3.3.3 **Resistance Survey:** subject to the results of the tests resistance detail survey will be implemented. The survey area will be divided into 20m x 20m grids within which data collection is taken. Survey measurements are collected with a Geoscan research RM15 instrument, normally sampling at one reading per metre with inter-transect distances being 1m. The data are captured in the internal memory of the RM15 and then downloaded to a portable computer. The individual grids are matched together to produce an overall plan of the surveyed area, the results being analysed using a variety of software. A report, including diagrams, text and interpretation on a CAD system, will then be prepared.

3.4 TOPOGRAPHIC SURVEY

3.4.1 **Reconnaissance:** a reconnaissance will be undertaken of the entire study area, as defined on the mapping provided by the client. The reconnaissance will consist of systematic field walking of the study area to identify sites for accurate survey. The survey will aim to identify, locate and record archaeological sites and features on the ground and thus all sites noted will be recorded.

3.4.3 **Detail Topographic Survey:** it is proposed to undertake a level 2b survey (see LUAU survey levels, *Appendix 1*) of the sites identified by the walkover, which is equivalent to RCHM(E) level 2. All appropriate topographic detail will be recorded to provide an appropriate context for the archaeological detail.

3.4.4 It is proposed to use Global Positioning System (GPS) techniques to locate and record the features. GPS instrumentation uses electronic distance measurement along radio frequencies to satellites to enable a positional fix in latitude and longitude which can be converted mathematically to Ordnance Survey National Grid. The use of GPS techniques has proved to be an essential and extremely cost-effective means of locating monuments, which can achieve accuracy of better than $\pm 0.2\text{m}$. The digital data will be transferred onto a portable computer for manipulation and later transfer to other digital or hard mediums. Film plots will be output via a plotter. The archaeological detail will be drawn up in the field as a dimensioned drawing on the plots with respect to survey markers. Most topographic detail will also be surveyed, particularly if it is archaeologically significant or is in the vicinity of archaeological features. The survey drawings will be generated within a CAD system and will be merged with raster 1:10,000 data. The results can be output at any scale. All archaeological information collected in the course of field inspection will be recorded in standardised form, and will include accurate national grid references. This will form the basis of a gazetteer, to be submitted as part of the report.

3.4.5 **Photographic Record:** a photographic record will be undertaken simultaneously, which will be undertaken in colour transparency and black and white 35mm formats.

3.5 TRIAL TRENCHING

3.5.1 This programme of trenching will establish the presence or absence of any archaeological deposits and, if established, will then briefly test their date, nature, and quality of preservation. This element of the work is invaluable in order to assess those parts within the proposed study area where there is a potential for archaeological deposits to survive which are not visible on the surface.

3.5.2 The trenches will target features of suspected archaeological significance in the light of the documentary, geophysical and topographic surveys, be they documented structures or physical features. The study area totals 13ha and the evaluation of a 2.5% sample of this is required. This would involve the excavation of 3250 sqm of trench, which is equivalent to fifty five 30m x 2m trenches. The precise positions and sizes of the trenches would be determined in discussions with the client and LCAS.

3.5.3 **Methodology:** to maximise the speed and efficiency of the operation the removal of topsoil will be undertaken by machine, where accessible, under careful archaeological supervision (with a standard five foot toothless ditching bucket). This will be followed by the manual cleaning of the trenches and the manual excavation of any identified features. If significant or complex archaeological deposits are identified then there will need to be recourse to a variation, which will be subject to agreement with the client and LCAS.

- 3.5.4 The excavation will enable an assessment of the nature, date and survival of deposits. The deposits will be investigated sufficiently to establish their character but the full depth of the deposits to natural will not necessarily be established across the whole trench. In accordance with current health and safety regulations, excavation will not be continued below 1.25m without shoring. Given the lack of current information for the potential of deep stratigraphy, the costs do not include provision for shoring at this stage. If it is required to excavate below this depth, then there will be additional costs to enable shoring of the requisite elements. All trenches will be excavated in a stratigraphical manner, whether by machine or by hand.
- 3.5.5 All features exposed will be sample excavated, which typically would involve the excavation of 50% of discrete features and 25% of linear features. No feature or structure will be wholly excavated as the intention is simply to evaluate only the archaeological resource at this stage. Trenches will be accurately located with respect to the original LUAU survey control, by use of a total station survey instrument.
- 3.5.6 Samples will be taken for environmental analysis, although any analysis would be subject to the results of the evaluation and discussions with LCAS and the client, and is not costed in the present programme.
- 3.5.7 **Evaluation Recording:** all elements of the work will, as a matter of course, be recorded in accordance with current English Heritage guidelines (*Management of Archaeological Projects, 2nd edition 1991*) and the best practices formulated by English Heritage's Centre for Archaeology. All excavation, by whatever method, will be recorded by the compilation of context records, and of object records for any finds, and the production of manually drawn accurately scaled plans and section drawings (probably at scales of 1:20 and/or 1:10), as well as a photographic record. Finds recovery and sampling programmes will be in accordance with best practice (current IFA guidelines). All typologically significant and closely datable finds will be contextually recorded. All artefacts and ecofacts will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration. Finds storage during fieldwork and any post-excavation assessment and analysis (if appropriate) will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by LUAU. Any discard policy for finds should be formulated with care, and with advice from the LCAS. Archaeological features within the trenches will be planned by instrument survey techniques.

3.6 EVALUATION REPORT

- 3.6.1 **Archive:** the results of Stages 3.2-3.5 will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects, 2nd edition, 1991*). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include summary processing and analysis of any features and finds recovered during fieldwork. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct.
- 3.6.2 This archive can be provided in the English Heritage Centre for Archaeology format, both as a printed document and on computer disks as ASCII files (as appropriate), and a synthesis (in the form of the index to the archive and the report) will be deposited with the Lancashire Sites and Monuments Record. A copy of the archive will also be available for deposition in the National Archaeological Record in London. LUAU practice is to deposit the original record archive of projects (paper, magnetic, and plastic media) with the appropriate County Record Office, and a full copy of the record archive, should any material be recovered, with the material archive (artefacts, ecofacts, and samples, at this stage from surface collections) with an appropriate museum.
- 3.6.3 **Collation of data:** the data generated by 3.2 to 3.5 (above) will be collated and analysed in order to provide an assessment of the nature and significance of the known surface and subsurface remains within the designated area. It will also serve as a guide to the archaeological potential of the area to be investigated, and the basis for the formulation of any detailed field programme and associated sampling strategy, should these be required in the future.

- 3.6.4 **Evaluation Report:** one bound and one unbound copy of a written synthetic report will be submitted to the client, and a further copy submitted to LCAS. The report will include a copy of the project brief, this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, together with appropriate illustrations, including a map and gazetteer of known or suspected sites identified within or immediately adjacent to the study area. It will include the results of the geophysical survey and detailed topographic survey mapping as well as trench location mapping. It will also include a complete bibliography of sources from which the data has been derived, and a list of further sources identified during the programme of work, but not examined in detail. The report will examine the results from the trial trenching, and present them in conjunction with analysis of the artefactual assemblage.
- 3.6.5 This report will identify areas of defined archaeology, an assessment and statement of the actual and potential archaeological significance of any features within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, which can be tailored to the specific requests of the client (eg particular scales etc), subject to discussion. The report will be in the same basic format as this project design; a copy of the report can be provided on 3.5" disk (IBM compatible format).
- 3.6.6 **Proposals:** the report will make a clear statement of the likely archaeological implications of the intended development. It will also make recommendations for any further evaluation of the identified archaeological potential deemed necessary or desirable for individual sites. It will seek to achieve, as a first option, the preservation *in situ* of all significant archaeological features, and possible strategies for the mitigation of the development, including design modifications, will be considered. Where conservation is neither possible, nor practical, it may be appropriate to recommend a further stage of more intensive archaeological work in order to mitigate the effects of development.

3.7 OTHER MATTERS

- 3.7.1 **Access:** it is understood that access to the site will be arranged by the client.
- 3.7.2 **Health and Safety:** LUAU conforms to all health and safety guidelines as contained in the Lancaster University Manual of Health and Safety and the safety manual compiled by the Standing Conference of Archaeological Unit Managers. The work will be in accordance with Health and Safety at Work Act (1974), the Council for British Archaeology Handbook No. 6, *Safety in Archaeological Fieldwork* (1989). All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1991) and risk assessments are implemented for all projects.
- 3.7.3 Full regard will, of course, be given to all constraints (services etc) during the excavation of the trenches, as well as to all Health and Safety considerations. LUAU provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. As a matter of course the Unit uses a U-Scan device prior to any excavation to test for services. It is assumed that the client will provide any available information regarding services within the study area, if available. excavation will not be undertaken to a greater depth than 1.25m from surface without shoring. If there is a need to excavate to a greater depth then there will be a recourse to variation funding.
- 3.7.4 **Reinstatement and Security:** land disturbed as a result of this work will be reinstated to the client's satisfaction, and in this instance the topsoil will be stored separately from sub-surface material and the materials be backfilled in the reverse order from that removed, following which the surface will be relaid. It is presumed that the client will have responsibility for site security. LUAU would take responsibility for temporary fencing arrangements to exclude livestock. In addition, any deep sections of open trench would be fenced off to prevent any accidents occurring to LUAU/client staff.
- 3.7.5 **Confidentiality:** the report is designed as a document for the specific use of the client, for the particular purpose as defined in the project design, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third

parties beyond the project brief and project design, or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.

3.8 PROJECT MONITORING

- 3.8.1 **White Young and Green Environmental:** LUAU will consult with the Client regarding access to land within the study area. This consultation will include, if required, the attendance of the Development Control Officer of LCAS.
- 3.8.2 **Lancashire County Council:** any proposed changes to the project brief or the project design will be agreed with the Development Control Officer of LCAS in conjunction with the client.

4. WORK TIMETABLE

- 4.1 The following programme is proposed:
- 4.2 **Rapid Documentary Study**
A three day period is required to undertake the study.
- 4.3 **Geophysical Survey**
A three day period is required to undertake the survey.
- 4.3 **Topographic Survey**
A two day period is required to undertake the topographic survey.
- 4.4 **Evaluation Trenching**
A seven day period is required to undertake the trenching.
- 4.5 **Evaluation Report**
An twelve day period will be required to complete this element.
- 4.6 LUAU can execute projects at short notice once an agreement has been signed with the client.
- 4.7 The project will be under the management of **Jamie Quartermaine, BA, Surv Dip, MIFA** (Unit Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise.

APPENDIX 3 GAZETTEER OF SITES

Site number 01
Site name Oakenhurst
NGR SD 6870 2453
SMR No 11724
Site type Domestic/Agricultural Buildings
Period Medieval onwards
Source SMR records, Yates' map of 1786, Hennet's map 1829, OS 1849 onwards
 The site is thought to have been in existence from 1580, and appears as a hamlet of eleven buildings on Yates' 1786 map of the area. The site is referred to in 1829 as 'Oakenshaw'. By 1895, these appear to only survive as a series of farm buildings. There is now no visible trace of these structures as they lay in the path of the original M65 roadwork scheme and were demolished.
Assessment
 The site lies to the north of the assessment area.

Site number 02
Site name Oakenhurst Farm
NGR SD 6870 2453
SMR No 4147
Site type Farm Building
Period Post-medieval
Source SMR records
 the site known to have been in existence from around 1580. By 1786 this was shown by a grouping of eleven structures identified on the 1786 map. The same number of sites are shown on the subsequent maps (1849, 1895 and 1911). This site was documented in 1994/5 by GMAU and by trial trenching by LUAU in 1997, prior to its demolition for the development of the M65 motorway.
Assessment
 The site lies to the north of the assessment area.

Site number 03
Site name Weir
NGR SD 6896 2467
Site type Weir
Period Post-medieval
Source OS 1st edition map 25" to 1 mile (1895)
 Site of a weir shown on the OS 1st edition map.
Assessment
 The site lies to the immediate west of the assessment area.

Site number 04
Site name Cotton Hall
NGR SD 6850 2455
SMR No 11723
Site type Domestic Building
Period Post-medieval
Source SMR records, Yates' 1786 map, OS 1849 and GMAU (1994)
 A large structure is first identified on Yates' map. The building appears to have comprised two L-shaped and one T-shaped structure to the north-west on the OS 1st edition. The earlier Yates' map and Hennet's map (1824) identify the building as one square-shaped structure only. By 1895, all visible surface traces of the structure had been lost.
Assessment
 The site lies to the west of the assessment area.

Site number 05
Site name Earcroft
NGR SD 6824 2450
SMR No 11720
Site type Domestic Buildings
Period Post-medieval
Source SMR records, OS 1895

A row of terrace housing first appears on the 1895 map as an elongated structure. By 1911, most of the row has disappeared, with the exception of the easternmost part. It is possible that this site was connected to the mill to the south and separated from it by a reservoir. The mill itself was demolished by 1911 to be replaced by terraced housing. None of the structures survive.

Assessment

The site lies to the north-west of the assessment area.

Site number 06
Site name Blackburn Road
NGR SD 6818 2455
SMR No 11719
Site type Domestic Buildings
Period Post-medieval
Source SMR records, OS 1895, 1911 and GMAU (1994)

Two rows of terraced housing first appear on the OS 1895 map. The site is depicted as an elongated rectangular structure with a smaller building, on the south side of Sandy Lane. The detached public house, the 'Rising Sun', is the only standing structure remaining.

Assessment

The site lies to the north-west of the assessment area.

Site number 07
Site name Earcroft School
NGR SD 6815 2455
SMR No 11718
Site type School
Period Post-medieval
Source SMR records, OS 1849, 1911 and GMAU (1994)

The site of an L-shaped school building identified during the GMAU survey. The site also appears on the OS maps of 1849 and 1911. The structure is now deserted.

Assessment

The site lies to the north-west of the assessment area.

Site number 08
Site name Earcroft
NGR SD 6814 2456
SMR No 11717
Site type Domestic Building
Period Post-medieval
Source SMR records, OS 1911 map and GMAU (1994)

An L-shaped building first appears on the 1895 map. This has evolved into three attached properties on the 1911 map and was identified by the GMAU survey in 1994/5 as being overlain by a modern brick-built building.

Assessment

The site lies to the north-west of the assessment area.

Site number 09
Site name Earcroft

NGR SD 6823 2457
SMR No 11721
Site type Earthworks
Period Post-medieval
Source SMR records, OS 1849 and GMAU (1994)

Several grassed over amorphous banks were identified by the GMAU survey lying to the north of the Scotshaw Brook. These are visible on the aerial photographs of 1963 and 1988 and appear to correspond to field boundaries that appear on the OS 1st edition map and a footpath that appears on the 1895 OS map.

Assessment

The site lies to the north-west of the assessment area.

Site number 10
Site name Barn
NGR SD 6825 2464
SMR No 10248
Site type Farm Building
Period Post-medieval
Source SMR records

The site of a barn is located c30m to the west of Earcroft farm house. It was known to be in existence by 1688 and was constructed of a coursed sandstone rubble with quoins and a slate roof. This is a Grade II listed building.

Assessment

The site lies to the north-west of the assessment area.

Site number 11
Site name Earcroft House
NGR SD 6824 2467
SMR No 998
Site type Domestic Building
Period Post-medieval
Source SMR records, OS 1st edition map (1849)

A ruined building is known to have been in existence around 1694, but was recently undergoing demolition for the construction of a new building. The structure was constructed of stone with a central two-storey porch.

Assessment

The site lies to the north-west of the assessment area.

Site number 12
Site name Moss Bridge
NGR SD 6825 2432
SMR No 11722
Site type Domestic Structures
Period Post-medieval
Source SMR records, OS 1849, 1895, 1911 and GMAU survey

A row of terraced housing is situated on the eastern side of Blackburn Road. These appear as a small structure on the OS 1st edition. By 1895, there is an additional rectangular building added to the northern end, reaching almost to the small T-shaped structure that also appeared on the 1st edition. On the 1911 map, the site is easily identifiable as two distinct rows of terraced housing, the most northerly of which is still standing as a two-storey brick and stone structure. To the north is the 'Horseshoe Inn', a detached two-storey brick-built public house, dating to around the late nineteenth / early twentieth centuries.

Assessment

The site lies to the immediate north-west of the assessment area.

Site number 13
Site name Anchor
NGR SD 6829 2414

SMR No 7252
Site type Milestone
Period Post-medieval
Source SMR records, OS 1849

A milestone is shown on the OS 1st edition map in conjunction with the Anchor Turnpike road. It does not appear on the current OS map.

Assessment

The site lies to the west of the assessment area.

Site number 14
Site name Anchor Inn
NGR SD 6934 2445
Site type Public House
Period Post-medieval
Source OS 1st edition (1849)

The site of the old Anchor Inn, a tavern named on the 1st edition but it only appears as an 'Inn' by 1894. It does not appear on any later maps.

Assessment

The site lies to the immediate west of the assessment area.

Site number 15
Site name Anchor
NGR SD 6835 2397
SMR No 7251
Site type Turnpike
Period Post-medieval
Source SMR records, OS 1st edition map (1849)

A turnpike road is shown on the 1st edition OS map. It does not appear on the current OS map.

Assessment

The site lies to the west of the assessment area.

Site number 16
Site name Quarry
NGR SD 6872 2398
Site type Sandstone Quarry
Period Post-medieval
Source OS 1st edition map (1849)

A sandstone quarry is shown on the OS 1st edition map.

Assessment

The site lies to the immediate south-east of the assessment area.

Site number 17
Site name Quarry
NGR SD 6890 2390
Site type Sandstone Quarry
Period Post-medieval
Source OS 1st edition map (1849)

A sandstone quarry is shown on the OS 1st edition map.

Assessment

The site lies to the immediate south-east of the assessment area.

Site number 18
Site name Lower Darwen Moss Bridge Mill
NGR SD 6810 2430
SMR No 10557

Site type Mill
Period Post-medieval
Source SMR records, OS 1st edition (1849 and 1894)
 A pre-1808 cotton mill is listed in Mannex (1868) as a 'cotton spinning concern'. It appears on all the OS maps from 1849 onwards.
Assessment
 The site lies to the north-west of the assessment area.

Site number 19
Site name Oakenhurst
NGR SD 6870 2453
Site type Well
Period Post-medieval
Source OS 1st edition (1849)
 A well is shown on 1st edition map but only appears as a spring on the current edition.
Assessment
 The site lies to the north of the assessment area.

Site number 20
Site name Unknown
NGR SD 6830 2470
Site type Well
Period Post-medieval
Source OS 1st edition (1849)
 A well is shown on 1st edition map but only appears as a spring on the current edition.
Assessment
 The site lies to the north of the assessment area.

Site number 21
Site name Oakenhurst
NGR SD 6850 2453
Site type Footpath
Period Post-medieval
Source OS 1st edition (1849), Aerial Photographs
 A footpath shown on the 1st edition map and still appears on the current edition.
Assessment
 The site lies within the assessment area.

Site number 22
Site name View Cottage
NGR SD 6830 2420
Site type Domestic Building
Period Post-medieval
Source OS 1st edition (1849)
 A domestic structure is shown on the 1st edition map but appears as 'View Farm' on 1894 edition. On the current edition only the name 'View Road' remains.
Assessment
 The site lies to the south-west of the assessment area.

Site number 23
Site name Oakenhurst
NGR SD 6870 2430
Site type Footpath
Period Post-medieval
Source OS 1st edition (1849), Aerial Photographs

A footpath is shown on the 1st edition map and still appears on the current edition.

Assessment

The site lies within the assessment area.

Site number 24
Site name Oakenhurst
NGR SD 6890 2430
Site type Sewage Works
Period Post-medieval
Source OS 1911, Aerial Photographs

Sewage works is shown on the 1911 map and still appears on the current edition.

Assessment

The site lies to the immediate east of the assessment area.

Site number 25
Site name Unknown
NGR SD 6835 2450
Site type Reservoir
Period Post-medieval
Source OS 1894 and 1911

A reservoir is shown on the 1894 edition map and on the 1911 edition, but has disappeared from the current edition and does not appear on the aerial photographs.

Assessment

The site lies to the north-west of the assessment area.

Site number 26
Site name Oakenhurst
NGR SD 6870 2453
Site type Field Boundary
Period Post-medieval
Source OS 1st edition, 1894, 1911, Aerial Photographs

A field boundary is shown on the 1st edition map and still appears as a single tree, between fields 167 and 166 on the current edition and on aerial photographs.

Assessment

The site lies within the assessment area.

Site number 27
Site name Earcroft
NGR SD 368771,424268 - 368844,424364
Site type Hollow-way
Period Post-medieval
Source Field survey

A shallow and broad hollow-way runs north-east/south-west from gate 28. It has fairly steep sides (30-40°) which are only 0.7m high at best (at the north-east end of the east side). It is quite broad (2-3m width) and some marks in the grass are still visible suggesting wheel/cart rutts. A drain runs along the north-west side of the track and possibly continues west to join with site 31, a hollow-way/drain. A drain also hits the south end of the hollow-way, connecting with the playing field and was probably a land drain. The hollow-way probably runs to Greenhurst/Oakenhurst Farm.

Assessment

The site lies within the assessment area.

Site number 28
Site name Earcroft
NGR SD 368846,424385

Site type Blocked gate
Period Post-medieval
Source Field survey

A possible blocked gateway relates to hollow-way 27. It consists of new walling of a similar style to earlier sections in the west-facing side of the east field wall. The stonework is regularly coursed but consists of rough walling topped with mock crenellation-style decoration. It was possibly just a rebuild of a collapsed section. There are no obvious quoins along the edges, although the south end is stepped in slightly. It is approximately 1.8m high.

Assessment

The site lies within the assessment area.

Site number 29
Site name Earcroft
NGR SD 368749,424449 - 368824,424360
Site type Lynchet
Period Post-medieval
Source Field survey

A south-west facing lynchet runs north-west / south-east. It is approximately 0.5m high, with a drain running along the lower side. It probably marks the line of a former field boundary.

Assessment

The site lies within the assessment area.

Site number 30
Site name Earcroft
NGR SD 368725,424439 - 368695,424370
Site type Drain
Period Post-medieval
Source Field survey

An inverted 'T'-shaped drain, the north branch of which is visible as a slight depression running downslope and feeding a large drain hole/quarry. The east/west branch is still visible as a partially uncovered drain; a slight lynchet on the north side is suggestive of upcast. The drain may be associated with the relict field boundary, though only tenuously.

Assessment

The site lies within the assessment area.

Site number 31
Site name Earcroft
NGR SD 368706,424369 - 368585,424160
Site type Hollow-way/Drain
Period Post-medieval
Source Field survey

A very long and meandering linear depression was probably originally a hollow-way but now serves as a drain. It is approximately 150m long and 2-3m wide. There is a slight depression towards the south end, approximately 3m across. To the north the ditch deepens to 0.5-0.7m. The steepest side, at the north-east end, is west-facing and 1.1m high. The ditch is currently very wet and has lots of bog grasses at its centre; it was either a hollow-way, field boundary or even both.

Assessment

The site lies within the assessment area.

Site number 32
Site name Earcroft
NGR SD 368557,424312 - 368627,424272
Site type Drain?
Period Post-medieval
Source Field survey

A series of very slight depressions in the ground surface, running east/west and parallel, marks the line of what may have been a former hedge. These butt the fencing to the west and the hollow-way (site 31) to the east. They are only approximately 0.2m in depth and were mainly visible as a vegetation mark.

Assessment

The site lies within the assessment area.

Site number 33
Site name Earcroft
NGR SD 368609,424341
Site type High ground
Period Unknown
Source Field survey

A slight area of raised ground is visible mainly as a steep, 1.2m high, west-facing lynchet on the west side, while sloping off to the north and south sides and it became very shallow to the east. It was probably natural.

Assessment

The site lies within the assessment area.

Site number 34
Site name Earcroft
NGR SD 368708,424148
Site type High ground
Period Unknown
Source Field survey

An area of high ground at the south-west corner of the field, was not noticeably man-made but was picked up by geophysics as an area of high disturbance. It has a possible rise in gradient around its edges, and its proximity to a depot may suggest it results from the dumping of material.

Assessment

The site lies within the assessment area.

APPENDIX 4

TRENCH DESCRIPTIONS

Trench No: 1
Alignment: East-south-east/ west-north-west
Length: 30m
Depth: 0.45m

Dark brown topsoil, 0.2m in depth, overlay 0.2-0.25m depth of a mid-brown silty clay subsoil with some mineralisation. This overlay a natural orangey brown plastic silty clay with occasional pebbles up to 0.1m in diameter, and fewer sub-rounded stones up to 0.15m diameter. A north-east / south-west aligned ridge in the natural plastic clay, 0.3m wide at the west end of the trench, appears to represent the base of truncated ridge and furrow.

Trench No: 2
Alignment: East/west
Length: 30m
Depth: 0.5m

Dark brown topsoil (0.2m in depth) overlay 0.2-0.25m of a mid-brown silty clay subsoil, similar to that observed within Trench 1. This overlay natural orangey brown plastic silty clay, similar to that in Trench 1, but with more sub-rounded stones. Patches of grey mottling were observed within the natural clay at the eastern end of the trench.

Trench No: 3
Alignment: South-west / north-east
Length: 29m
Depth: 0.5m

Dark brown topsoil (0.2m in depth) overlay 0.15-0.22m of a mid-brown silty clay subsoil, similar to that observed within Trenches 1 and 2. This overlay natural orangey brown silty clay subsoil, as in Trenches 1 and 2. Several flecks of charcoal were observed at the interface between the subsoil and the natural clay, including a sub-rounded patch 18.5m from the western end of the trench, measuring 0.3m in diameter. A linear lens of mid-brown plastic clay, 0.3m wide was observed c4m to the east, and contained 0.05m depth of charcoal at its southern terminus. Both features appear to relate to root boles and had irregular profiles.

Trench No: 4
Alignment: South-west / north-east
Length: 26m
Depth: 1.1m

A 0.25m layer of boggy topsoil overlay 0.2m of a mid-brown silty clay subsoil. At the western end of the trench this overlay >0.7m redeposited mixed subsoils comprising silty sands, pale grey plastic clay, dark grey clay and yellowish brown clay. The deposit was very mixed and contained plastic and polythene piping, degraded sandstone and charcoal. The deposit was bounded at its eastern end by two large irregular blocks of concrete, which were presumably dumped. To the east, the mid-brown silty subsoil overlay pale grey natural silty sand containing large quantities of fine organic roots. A sub-rounded feature, possibly a post-hole (0.35m diameter), with steep sides and a rounded base was cut into this deposit 5m from the eastern end of the trench. It was filled with a dark brown uniform slightly plastic silty clay with occasional charcoal flecks from which no finds were recovered.

Trench No: 5
Alignment: East/west
Length: 30m
Depth: 0.5m

A 0.2m deep topsoil overlay a 0.1m depth of humic brown peaty subsoil containing large quantities of partly decayed small fragments of wood. This overlay a 0.12m depth of mixed greyish silty sand which blended to uniform pale grey natural silty sand. This was cut by two roughly south-west / north-east

aligned stone culverts which were in turn cut by five later, approximately north / south aligned, ceramic drains.

Trench No: 6
Alignment: East/west
Length: 30m
Depth: 0.6m

A dark brown topsoil, 0.2m in depth, overlay 0.2m of mixed brown / yellowish brown silty sand subsoil containing some small pebbles. This overlay natural mottled yellowish brown / grey silty sand with some patches of mineralisation. This was cut by three roughly south-west / north-east aligned, though not parallel, stone culverts of similar style to those in Trench 5. A north/south aligned ceramic land drain, constructed of 1' lengths of ceramic pipe, was also observed. Two parallel north-north-west / south-south-east aligned narrow linear features (0.15 – 0.18m wide) possibly represent the base of deep ploughing.

Trench No: 7
Alignment: North / south
Length: 31m
Depth: 0.52m

A dark brown topsoil (0.12m in depth) overlay 0.2m of a mid-brown silty clay subsoil. At the northern end of the trench this overlay sub-rounded and sub-angular pebbles in a silty clay matrix. The trench was positioned across a possible terrace, and this deposit, located at the base of the bank, appears to represent the washing of material down the slope and was most probably related to a natural topographic feature. The bank and terrace were formed of natural yellowish brown silty sand, observed in the remainder of the trench.

Trench No: 8
Alignment: East/west
Length: 30m
Depth: 0.75m

This trench was located across the trackway between Oakenhurst and Darwen. A 0.16m deep dark topsoil overlay 0.1-0.25m mixed brown / grey mottled silty sand subsoil, into which, 12m from the western end of the trench, was cut a modern ditch for the present field boundary, 0.25m in depth. The subsoil overlay mottled orangey brown / pale grey silty sand, into which were cut two ditches on either side of, and parallel to, the present field boundary, aligned roughly north / south. Both ditches were of similar profile, stepped, to form a double ditch, with the deeper part on the inner side, nearest the field boundary. It is unlikely that these ditches were dug purely for drainage, given their profile, suggesting that they lined a path or trackway, no formal evidence of which was observed. The western ditch was recut by a later ceramic land drain, on a similar alignment. To the east of the eastern ditch the natural subsoil was much more plastic, with a much higher clay content, and this change in the natural subsoil may explain the positioning of the field boundary. This natural plastic clay was also cut by a modern land drain.

Trench No: 9
Alignment: East/west
Length: 30m
Depth: 0.5m

A dark brown topsoil, 0.2m in depth, overlay 0.15 – 0.3m of a mid-brown silty clay subsoil. This overlay mottled yellowish brown / pale grey natural silty sand. This was cut by a single north-north-west / south-south-east aligned well-preserved stone culvert.

Trench No: 10
Alignment: East/west
Length: 30m
Depth: 0.55m

A dark brown topsoil, 0.2m in depth, overlay 0.2m of mid-brown silty sand subsoil. This overlay mottled grey / orangey brown silty sand natural subsoil, into which was cut a south-west / north-east aligned stone culvert and a parallel, unexcavated, land drain.

Trench No: 11
Alignment: East/west
Length: 29m
Depth: 0.65m

This trench was located across the possible medieval trackway. A dark brown topsoil, 0.2m in depth, overlay 0.2m of mixed brown silty subsoil. This overlay mid-brown / orange sandy silt with pale grey plastic clay patches. The eastern end of the trench was heavily disturbed by two large modern ceramic drains and there was some associated waterlogging. Ditches were cut into the natural sandy silt, on either side of the modern field boundary, in a similar position and alignment to those observed within Trench 8. However, the profiles of the ditches differed. The western ditch, positioned under the present path, was cut 0.2m into the natural silt and was flat bottomed with a U-shaped profile and was cut by a later ceramic pipe along its western edge, whilst the eastern ditch was 0.3m deep with a shallow eastern slope and steep inner (western) face. A row of six angular sandstone kerbing stones was observed immediately to the east of the eastern ditch, too shallow to have formed part of a culvert, and these probably related to the ditch.

Trench No: 12
Alignment: East/west
Length: 30m
Depth: 0.45m

A dark brown topsoil, 0.2m in depth, overlay 0.2m of a mid-brown silty subsoil. This overlay a natural mottled yellowish brown silty sand with mid-brown and pale grey banding. No features were observed within this trench.

Trench No: 13
Alignment: East/west
Length: 30m
Depth: 0.45m

A dark brown topsoil, 0.18m in depth, overlay 0.2 – 0.35m of a mid-brown silty subsoil. In the western 6m of the trench this overlay mottled mid-brown / yellowish brown silty sand. To the east, up to 11m from the western end, the subsoil overlay mottled yellowish brown / pale grey plastic silty clay with sub-angular stones up to 0.15m x 0.1m. To the east the natural subsoil comprised mottled pale grey / yellowish brown / mid-brown silty clay. No features were observed within this trench.

Trench No: 14
Alignment: East/west
Length: 31m
Depth: 0.49m

A dark brown topsoil, 0.18m in depth, overlay 0.2 – 0.25m of a mid-brown silty subsoil. This overlay mottled yellowish brown / pale grey silty clay with some more plastic patches. One area of burning, 0.3m wide and extending 0.6m from the southern section at the western end of the trench, was only 0.05m deep and appears to have been a natural phenomenon.

Trench No: 15
Alignment: East/west
Length: 30m
Depth: 0.43m

A dark brown topsoil, 0.18m in depth, overlay 0.2m of a mid-brown silty subsoil. This overlay mottled yellowish brown natural silty clay, cut by a single north / south aligned stone culvert.

Trench No: 16
Alignment: East/west
Length: 30m
Depth: 0.55m

A dark brown topsoil, 0.2m in depth, overlay 0.1 - 0.25m of a mid-brown silty clay subsoil. At the west end this overlay pale greyish brown natural silty clay, which became more yellowish to the east. The natural subsoil in the eastern part of the trench had a higher clay content, and was much more plastic. An approximately north-west / south-east aligned deep land drain had been cut in the western end of the trench.

Trench No: 17
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.15m in depth, overlay 0.15m of a mid-brown silty subsoil. This overlay natural orangey yellow silty clay, cut by a south-east / north-west aligned ditch, 3.3m wide and filled with dark brown silty clay. The feature appeared to have a V-shaped profile, but was waterlogged below a depth of 0.5m, where it had been recut for a ceramic pipe.

Trench No: 18
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.2m in depth, overlay 0.1 - 0.2m of a mid-brown silty clay subsoil. This overlay natural mottled yellowish mid-brown / pale grey silty clay, slightly plastic in the west of the trench. This was cut by a south-west / north-east aligned ditch, 2.9m wide, containing three fills. The feature is the same as that observed in Trenches 17 and 20, and appears to have been recut to prevent it silting up.

Trench No: 19
Alignment: East/west
Length: 30m
Depth: 0.43m

A dark brown topsoil, 0.17m in depth, overlay 0.2m of mixed topsoil and plastic silty clay. This merged into mottled orangey brown / pale grey natural silty clay, which became more plastic and grey towards the west. It was cut by three south-west / north-east aligned ceramic drains.

Trench No: 20
Alignment: East/west
Length: 29m
Depth: 0.4m

A dark brown topsoil, 0.15m in depth, overlay 0.2m of mid-brown silty clay subsoil. This overlay slightly plastic natural orangey brown mottled silty clay at the western end of the trench, becoming more plastic and paler grey to the east. A narrow band of topsoil, 0.06m wide and 0.1m deep, dropping to the west at an angle of $c10^\circ$, was observed between the two layers of clay, and appears to be a natural topographic feature. The large ditch, observed in Trenches 17 and 18, was located in the centre of the trench (4.8m wide); it had two fills, with the upper containing modern brick in the section. The ditch appears to have been recut to improve drainage. A ceramic land drain on a similar alignment was observed at the western end of the trench. A sub-rounded feature, 0.3m in diameter with gently sloping sides located at the eastern end of the trench, was filled with an organic peaty silt and appears to represent a root bole.

Trench No: 21
Alignment: East/west
Length: 30m
Depth: 0.5m

A dark brown topsoil, 0.2m in depth, overlay 0.15m of a mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty clay, becoming reddish brown at the eastern end of the trench. A peat-filled sub-rounded feature similar to that in Trench 20 was observed towards the western end of the trench, and the linear band of buried topsoil observed in Trench 20 was also recorded in this trench. The natural subsoil was also cut by two deep ceramic land drains.

Trench No: 22
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark-brown topsoil, 0.15m in depth, overlay 0.1m of mid-brown silty subsoil. This overlay natural mottled pale grey / mid-brown silty clay, becoming more yellowish brown to the east. This was cut by one south-west / north-east aligned ceramic drain.

Trench No: 23
Alignment: East/west
Length: 30m
Depth: 0.52m

A dark brown topsoil, 0.18m in depth, overlay 0.16m of mid-brown silty subsoil. This overlay natural pale grey sandy silt, which became more mid-brown clay towards the east. It was cut by three parallel roughly north / south aligned ditches, the largest of which was 2.2m wide with a recut eastern side. All three had similar U-shaped profiles and were filled with dark silty clay. The natural silts were also cut by two ceramic drains on a similar alignment.

Trench No: 24
Alignment: East/west
Length: 30m
Depth: 0.7m

A dark brown topsoil, 0.2m in depth, overlay 0.15m of mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown sandy silt, which became more sandy to the east. The continuation of the ditch observed in Trenches 17, 18 and 20 cut this natural subsoil and was waterlogged. Two other V-shaped ditches on a similar alignment were also observed, both with modern recuts. Three ceramic land drains were also observed on the same alignment.

Trench No: 25
Alignment: East/west
Length: 30m
Depth: 0.45m

A dark brown topsoil, 0.2m in depth, overlay 0.15m of a mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sands. This was cut by a north-west / south-east aligned shallow (0.12m deep) V-shaped ditch at the western end of the trench. A large field boundary ditch, similar to that in Trenches 17, 18, 20 and 24, was also observed. To the east a large area of dumped material was observed, comprising black mineralised silty clay, redeposited plastic clay with a stoney clay upper lens, probably representing dumped demolition material. A land drain was cut through the natural subsoil at the eastern end of the trench.

Trench No: 26
Alignment: East/west
Length: 30m
Depth: 0.45m

A dark brown topsoil, 0.18m in depth, overlay 0.15m of a mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sands. This was cut by a V-shaped waterlogged ditch at the eastern end of the trench, similar to other boundary ditches observed. The natural subsoil was also cut by two ceramic land drains and a curving drain, 0.35m deep with vertical sides.

Trench No: 27
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.1m in depth, overlay 0.2m of mid-brown silty subsoil. This overlay natural mottled pale yellowish silty sand, becoming more a plastic clay towards the eastern end of the trench. A north/south aligned narrow ditch, 0.7m wide, was observed in the centre of the trench, and this was cut at its southern edge by a shallow (0.02m) north-west / south-east aligned linear feature, which was most probably a plough mark.

Trench No: 28
Alignment: East/west
Length: 30m
Depth: 0.45m

A dark brown topsoil, 0.25m in depth, overlay 0.15m of mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sands, with occasional patches of plastic clay. It contained two intercutting drainage channels, each 0.25m wide with a V-shaped profile.

Trench No: 29
Alignment: East/west
Length: 30m
Depth: 0.5m

A dark brown topsoil, 0.12m in depth, overlay 0.2m of mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sands. It contained two intercutting drainage channels, each 0.2m wide with a V-shaped profile.

Trench No: 30
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.12m in depth, overlay 0.18m of a mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish green silty sands, cut by four ceramic land drains on differing alignments from north-west / south-east to north-east / south-west. It also contained the southern terminus of a drain comprising a plastic flexible tube, enclosed in brick at the southern end, within a vertical sided, flat-bottomed cut, 0.15m deep.

Trench No: 31
Alignment: North / south
Length: 30m
Depth: 0.52m

A dark brown topsoil, 0.12m in depth, overlay 0.2m of mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sand, which became more clayey to the south.

Trench No: 32
Alignment: East/west
Length: 30m
Depth: 1m

A dark brown topsoil, 0.12m in depth, overlay 0.2m of a mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sands, except in the central 8m of the trench, where it overlay the fill of the hollow-way, across which the trench was located. The hollow-way had a surface forming a clay and stone camber 0.18m thick overlying the natural sand, with washed infill of the slope on either side, up to 0.2m deep. To the immediate west of the hollow-way lay a drainage ditch, V-shaped in profile, recut for the insertion of a ceramic drain. This feature appears to relate to the hollow-way, probably designed to prevent it becoming waterlogged. To both east and west of the hollow-way and

ditch, shallow depressions up to 0.05m deep and 0.2m wide were observed on the same alignment. These probably relate to the remains of ridge and furrow, or more modern ploughing.

Trench No: 33
Alignment: East/west
Length: 30m
Depth: 0.45m

A dark brown topsoil, 0.15m in depth, overlay 0.2m of mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sand, with patches of pale grey plastic clay. This was cut by a single south-east /north-west aligned ceramic land drain.

Trench No: 34
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.12m in depth, overlay 0.2m of a mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown silty sand, which was cut by two stone culverts, one aligned south-east /north-west and the other, unusually, aligned east / west. It was also cut by a deep narrow land drain.

Trench No: 35
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.13m in depth, overlay 0.2m of a mid-brown silty subsoil. This overlay natural mottled pale grey / yellowish brown soft silty clay, with several slightly plastic patches. It was cut by two stone culverts, the eastern one aligned north-east /south-west and the western one aligned south-west /north-east. There was slight evidence of north-east / south-west aligned ridge and furrow or shallow ploughing at the interface between the subsoil and natural silty clay.

Trench No: 36
Alignment: East/west
Length: 30m
Depth: 0.47m

A dark brown topsoil, 0.14m in depth, overlay 0.2m of a mid-brown silty subsoil mixed with the natural silts below. This merged to become a natural yellowish brown silty clay. This was cut by a shallow (0.27m deep) south-west / north-east aligned ditch with a steep western side and a shallower, recut eastern side. To the east, and on a similar alignment, was the terminus of a ditch, possibly related to a headland, 0.3m wide, 0.12m deep, with a U-shaped profile and a flat base.

Trench No: 37
Alignment: East/west
Length: 30m
Depth: 0.42m

A dark brown topsoil, 0.16m in depth, overlay 0.2m of a mid-brown silty clay subsoil. At the western end this overlay natural pale grey / mid-brown silty clay, which became less plastic and more yellowish brown to the east. This was cut by five roughly north / south aligned land drains.

Trench No: 38
Alignment: East/west
Length: 30m
Depth: 0.6m

A dark brown topsoil, 0.16m in depth, overlay 0.2m of a mid-brown silty clay subsoil. In the western 4.8m of the trench, the subsoil comprised 0.1m of dumped gravel and pebbles mixed with modern

abraded brick. The natural subsoil comprised yellowish / mid-brown silty sand, becoming paler and a more plastic clay towards the eastern end of the trench. This was cut by a south-west / north-east aligned culvert, and two later land drains on differing orientations. A north-east /south-west aligned linear feature, 0.06m deep, appears to be similar to that observed within Trench 36.

Trench No: 39
Alignment: East/west
Length: 30m
Depth: 0.45m

A dark brown topsoil, 0.15m in depth, overlay 0.18m of a mid-brown silty clay subsoil. This overlay natural mottled pale grey / yellowish brown silty clay, with occasional patches of silty sand. It was cut by what appeared to be an L-shaped return of a field boundary ditch, similar to those observed in Trenches 36 and 38; it was 0.1m deep with flat-bottomed U-shaped profile, possibly forming the western corner of a roughly south-west / north-east aligned field. It was also cut by two north-west /south-east aligned stone culverts and five land drains on slightly differing alignments.

Trench No: 40
Alignment: East/west
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.15m in depth, overlay 0.18m of a mid-brown silty clay subsoil. This overlay natural mottled pale grey / yellowish brown silty clay. It was cut by a steep-sided flat-bottomed sub-rounded feature, 0.2m in diameter and 0.08m deep. The feature is of unclear function, but was possibly a post hole, or root bole. The natural subsoil was also cut by four south-east /north-west aligned land drains and one south-west /north-east aligned drain at the western end of the trench.

Trench No: 41
Alignment: East/west
Length: 30m
Depth: 0.68m

A dark brown topsoil, 0.18m in depth, overlay 0.2m of a mid-brown silty clay subsoil. This overlay natural mottled pale grey / yellowish brown silty clay. This was cut by a north-north-east/ south-south-west aligned ditch, 1.5m wide, and 0.15m deep, with U-shaped profile, similar to other probable field boundary ditches observed. In the eastern end of the trench was a sub-rounded feature, 0.2m diameter and 0.06m deep, which was probably a root bole. The subsoil was also cut by five land drains on differing north-west / south-east – north-east / south-west alignments.

Trench No: 42
Alignment: East/west
Length: 30m
Depth: 0.38m

A dark brown topsoil, 0.15m in depth, overlay 0.05 – 0.15m of a mid-brown silty clay subsoil. This overlay natural mottled pale grey / yellowish brown silty sand, which in turn was cut at the western end of the trench by a U-shaped, north-west / south-east aligned ditch, 0.28m deep and 0.56m wide. A second similar ditch lay 5m to the east, and was 0.4m wide and 0.2m deep. These features appear similar to other probable field boundary ditches observed. Further to the east, 17.5m from the western end of the trench, was a similarly aligned but much larger, waterlogged ditch, 1.8m wide, recut on the western side for a later ceramic drain. Two land drains were also cut into the natural subsoils.

Trench No: 43
Alignment: East/west
Length: 30m
Depth: 0.41m

A dark brown topsoil, 0.15m in depth, overlay 0.05 – 0.2m of a mid-brown silty clay subsoil. This overlay natural mottled pale grey / yellowish brown slightly plastic silty clay, merging to yellowish

brown silty sand 7.5m from the western end of the trench. This was cut by seven parallel south-west / north-east aligned land drains of varying type, but all of nineteenth or twentieth century date.

Trench No: 44
Alignment: East/west
Length: 30m
Depth: 0.87m

A dark brown topsoil, 0.15m in depth, overlay 0.05–0.15m of a mid-brown silty clay subsoil. This overlay natural yellowish brown silty clay. At the eastern 8m of the trench the topsoil directly overlay 0.5m depth of mixed redeposited natural clay and mixed subsoil containing modern brick fragments. This in turn overlay 0.14m of redeposited dark brown silty clay, which was probably topsoil buried as a result of landscaping. This overlay the natural yellowish brown silty clay observed at this level in the western part of the trench. In the west this was cut by four land drains on differing alignments.

Trench No: 45
Alignment: North / south
Length: 30m
Depth: 0.95m

A dark brown topsoil, 0.16m in depth, overlay mixed redeposited natural clay and mixed dark brown subsoil to a maximum depth of 0.65m at the southern end of the trench. This overlay 0.2m of dark brown, gritty, oily silty clay, which directly underlay the topsoil at the northern, shallower end of the trench. This overlay natural mottled pale grey / yellowish brown silty sand, which was cut by a north-west / south-east aligned drainage U-shaped, steep-sided, ditch (0.8m deep), that partly underlay the northern section of the trench, and was subsequently recut for a modern ceramic land drain. The natural subsoil was also cut by five roughly north-west / south-east or north-east / south-west aligned narrow land drains.

Trench No: 46
Alignment: East/west
Length: 30m
Depth: 0.42m

A dark brown topsoil, 0.15m in depth, overlay 0.1 – 0.2m of a mid-brown silty clay subsoil. This overlay a mid-brown / pale greyish silty clay at the west end of the trench, and a yellowish brown silty sand at the eastern end. This was cut by a north / south aligned V-shaped ditch 0.5m deep and 1m wide, with a recut ceramic drain in its eastern edge. The natural subsoil was also cut by a south-west / north-east aligned land drain.

Trench No: 47
Alignment: North / south
Length: 30m
Depth: 0.4m

A dark brown topsoil, 0.15m in depth, overlay 0.15 – 0.25m mixed dark brown / black subsoil, containing much glass, tile and brick. A double row of unbonded bricks, one course thick, was observed within the subsoil and appears to have formed a soakaway. This subsoil overlay natural pale greyish brown silty clay. One east/west aligned land drain cut this natural clay, and the northern terminus of a plough mark 0.05m deep was observed, extending 0.7m from the eastern section of the trench.

ILLUSTRATIONS

- Fig 1 Site Location Plan
- Fig 2 Desk-Based Study Site Map
- Fig 3 OS 1st edition map 6" to 1 mile (1849)
- Fig 4 Topographical Survey Site Map
- Fig 5 Geophysical Survey Location Diagram
- Fig 6 Summary Interpretation of the Geophysical Survey Data
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- Fig 13 Trench 32: Plan and Section

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PROJECT:

Oakenhurst Farm
 Earcroft Junction M65
 Darwen, Lancashire

DRAWING No:

1

DRAWN BY: A. Scott

DATE: 26/07/2000

LOCATION:

SD 62 SE

Scale 1:20000

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Site Location

TITLE:

Site Location Plan

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White Young Green
 Environmental

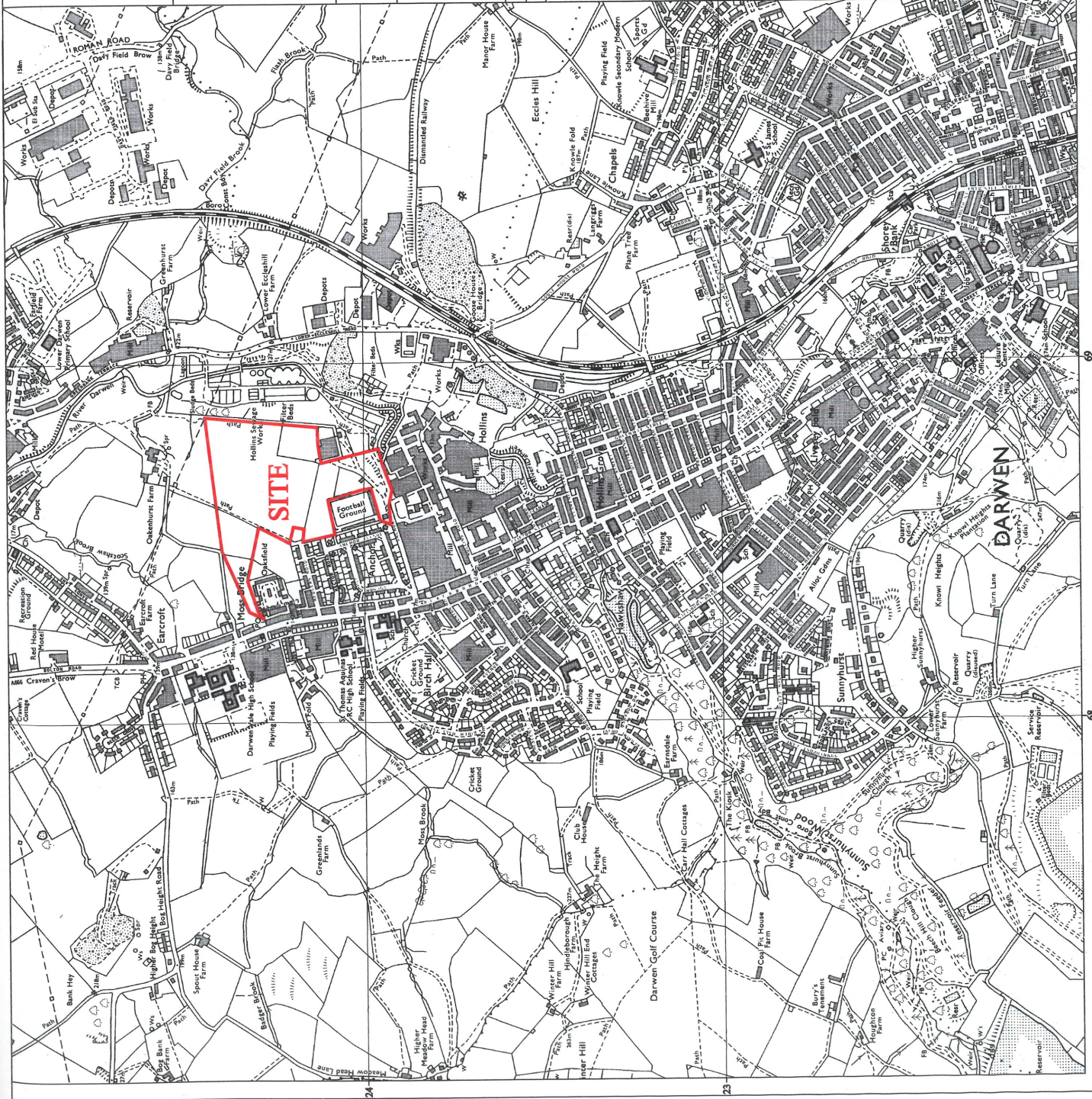


Fig 1 : Site Location Plan

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LA1 1TY

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PROJECT:

**Oakenhurst Farm
Earcroft Junction M65
Darwen, Lancashire**

DRAWING No:

2

0 100 200 300 m



DRAWN BY: A. Scott

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Oakenhurst Farm

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Site Location



Site Gazetteer
Numbers

TITLE:

Site Gazetteer

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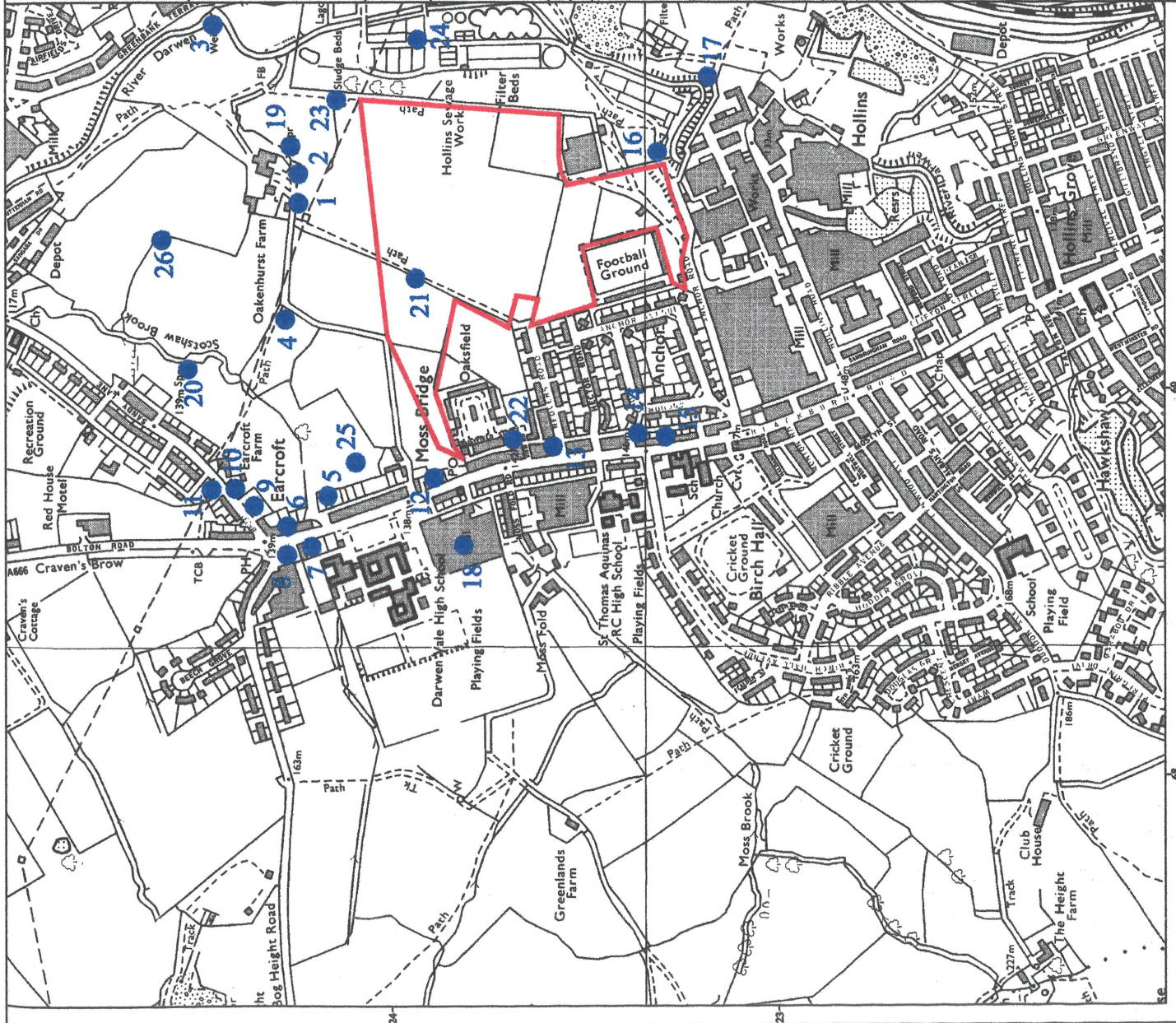


Fig 2 : Desk-Based Study Site Gazetteer

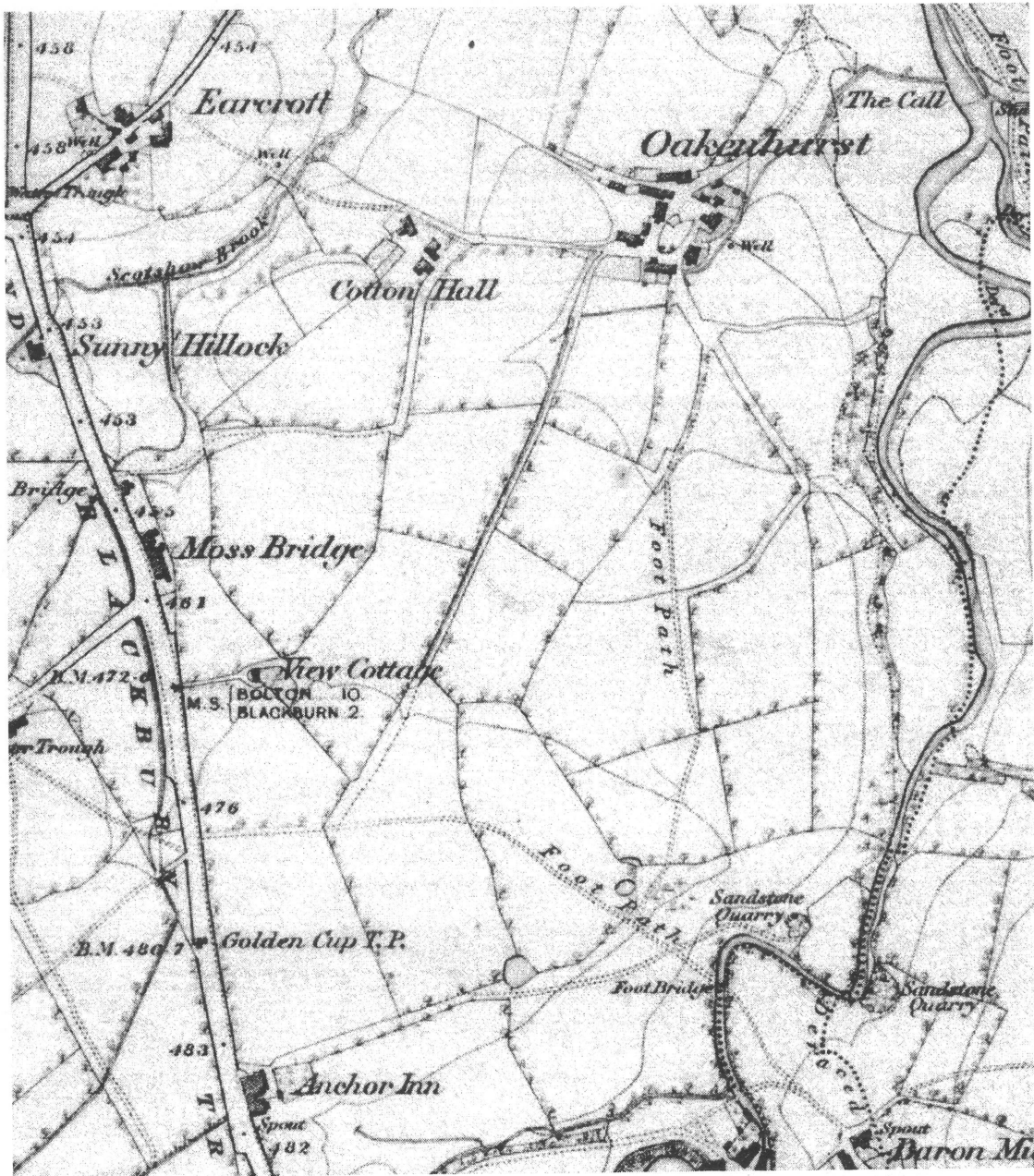


Fig 3 OS 1st edition map 6" to 1 mile (1849)



PROJECT:

Oakenhurst Farm
Earcroft Junction M65
Darwen, Lancashire

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DRAWN BY: MT and DWE

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Site Location

TITLE:

Topographic Survey
Results

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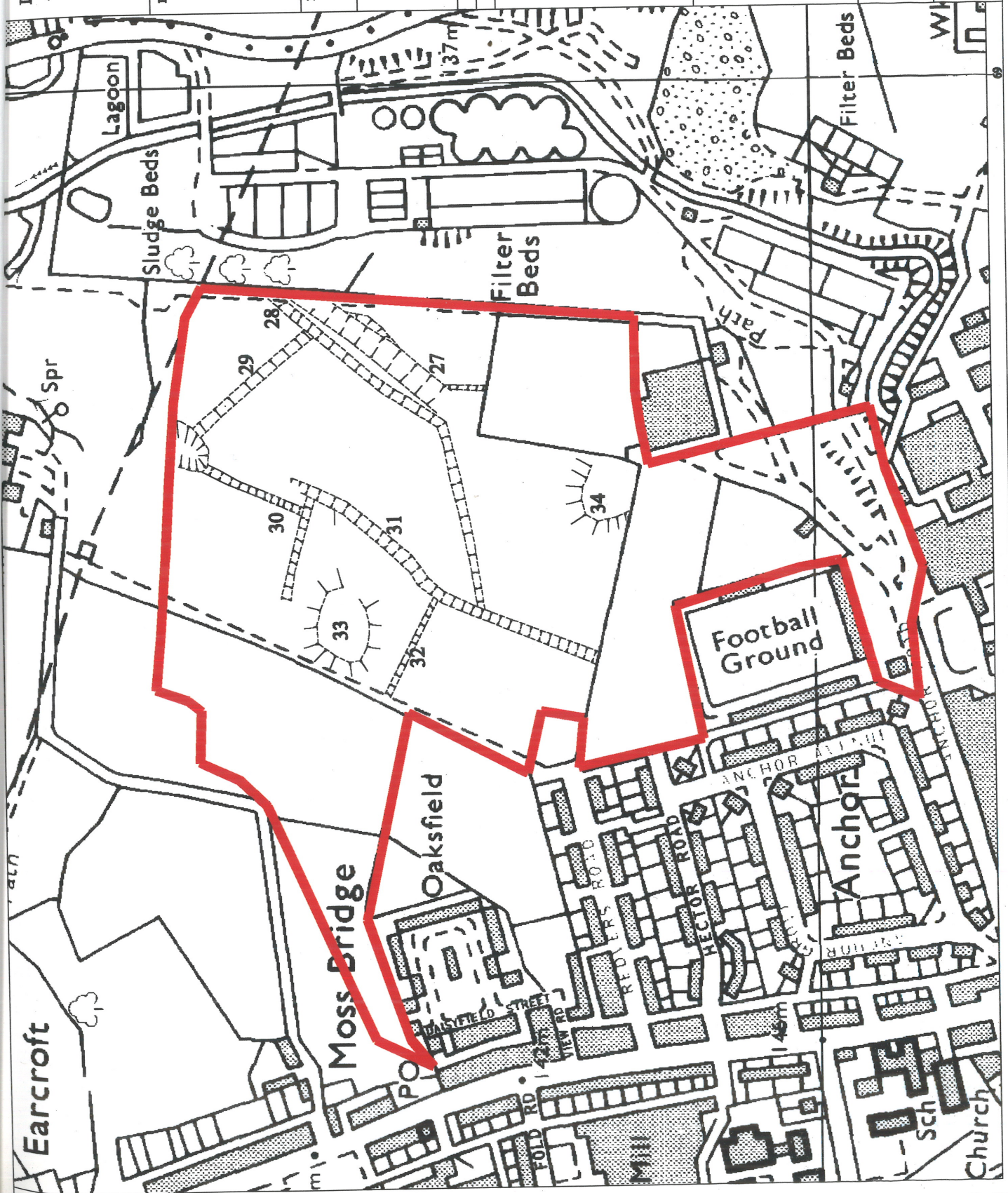


Fig 4: Topographic Survey Results

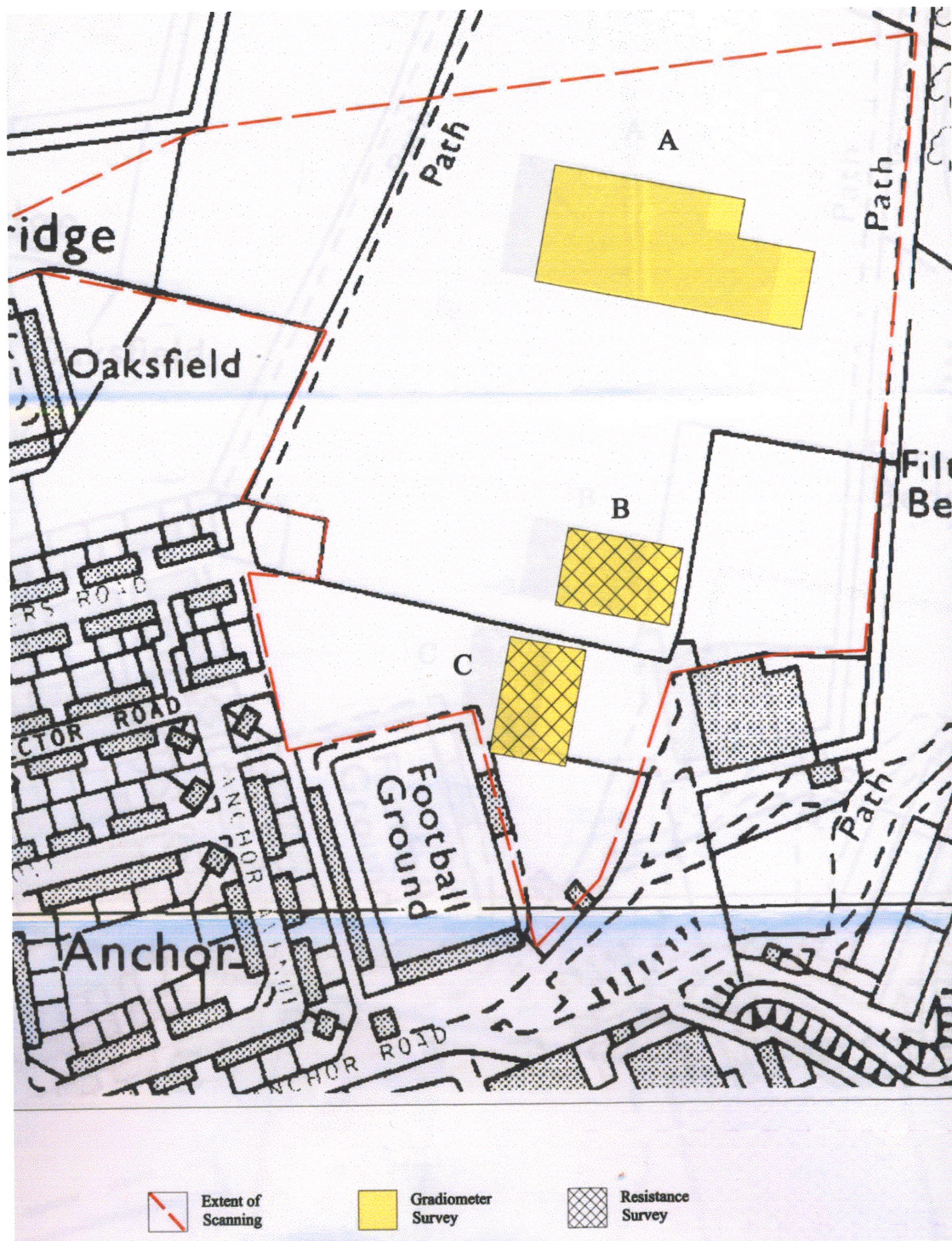


Fig 5 Geophysical Survey Areas Location Diagram

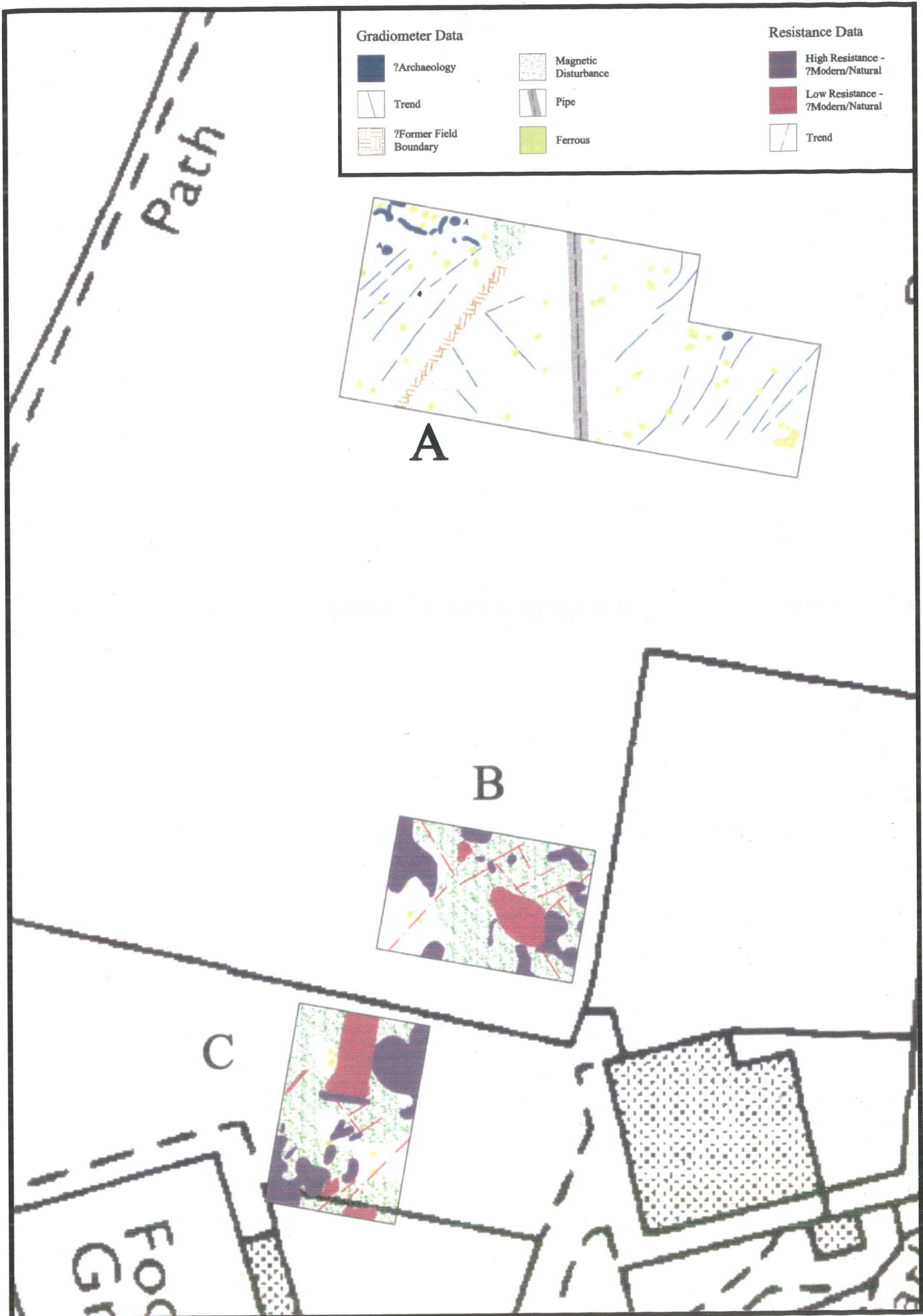


Fig 6 Summary Interpretation of the geophysical survey data

OAKENHURST FARM

Area A

Gradiometer Data

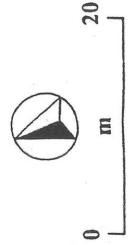
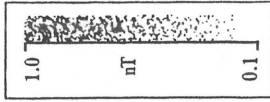


Figure 7 Gradiometer dot density plot for Area A

OAKENHURST FARM

Area A

Gradiometer Data

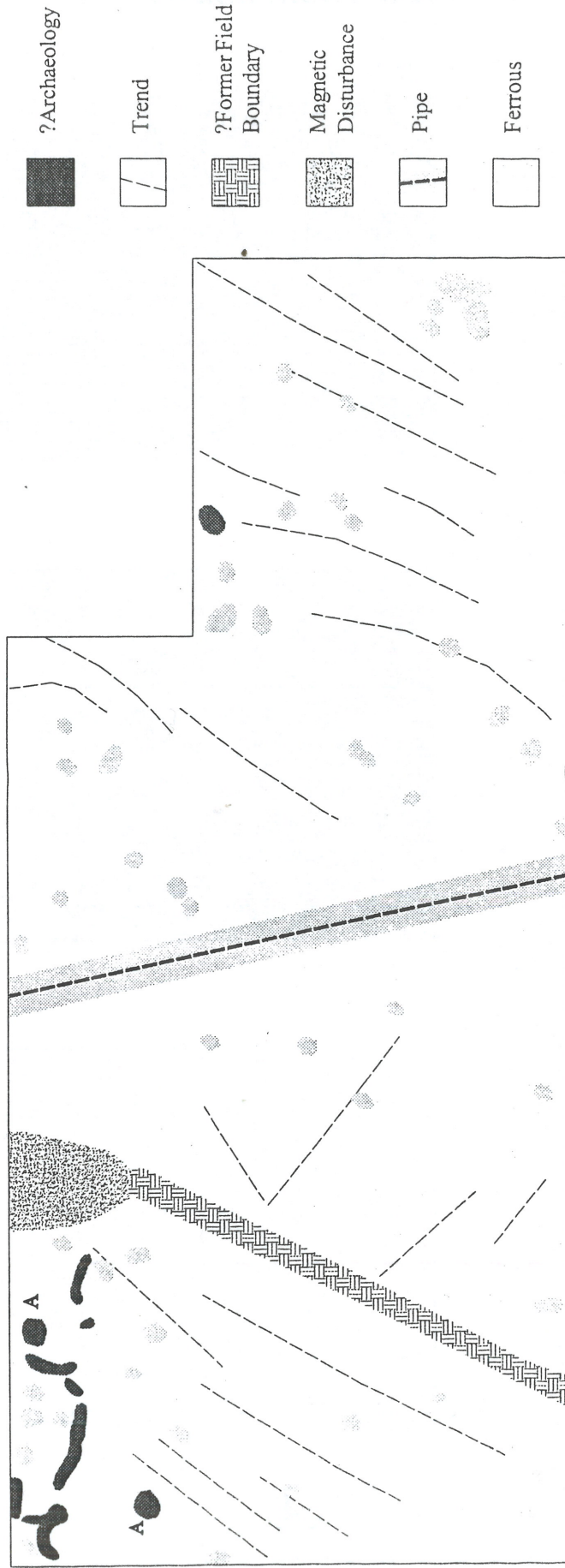
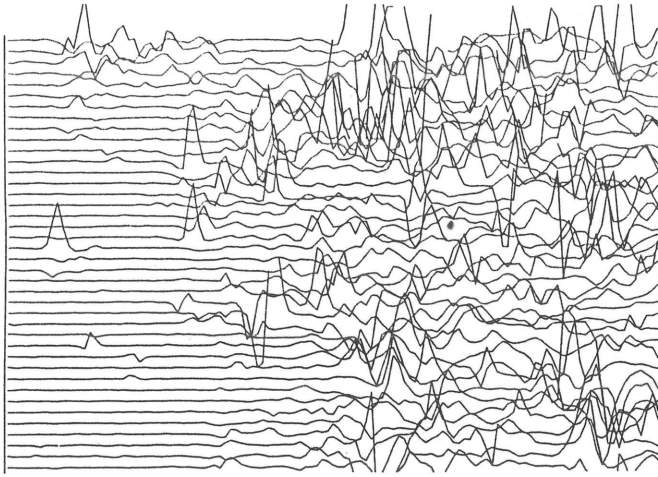
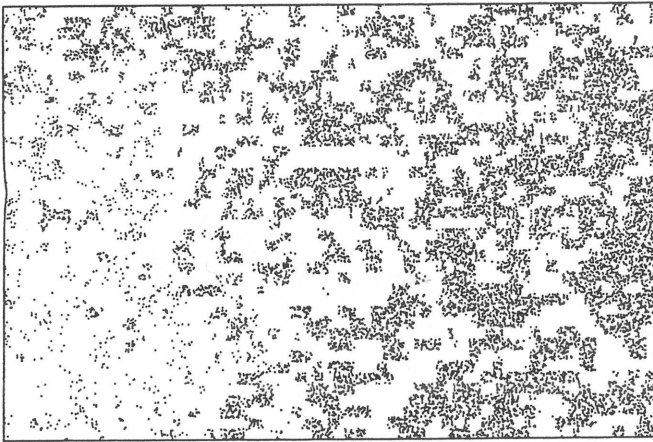


Figure 8 Interpretation diagram of Area A

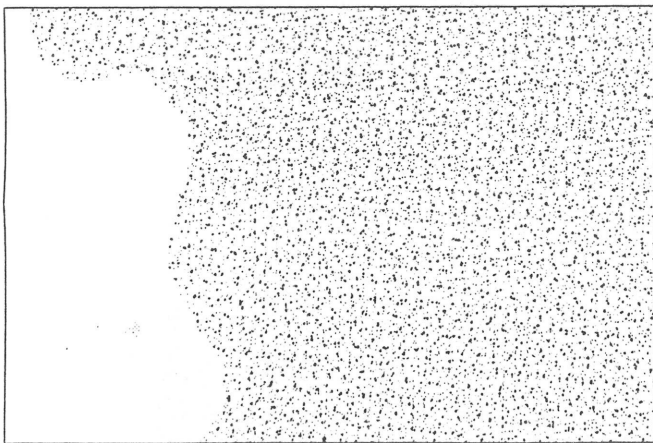
OAKENHURST FARM
Area B
Gradiometer Data



100 nT



2.0
nT
0.1



Magnetic Disturbance
Ferrous



Figure 9 Gradiometer dot density plot for Area B

OAKENHURST FARM

Area C

Gradiometer Data

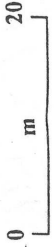
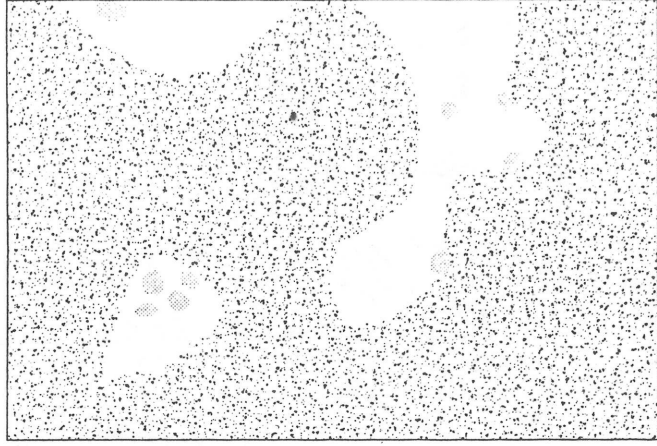
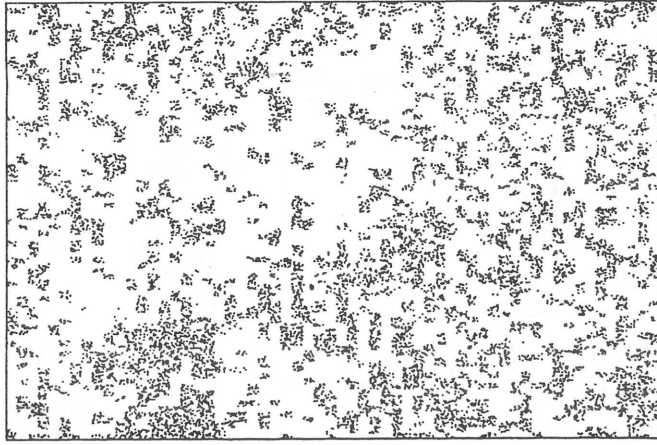
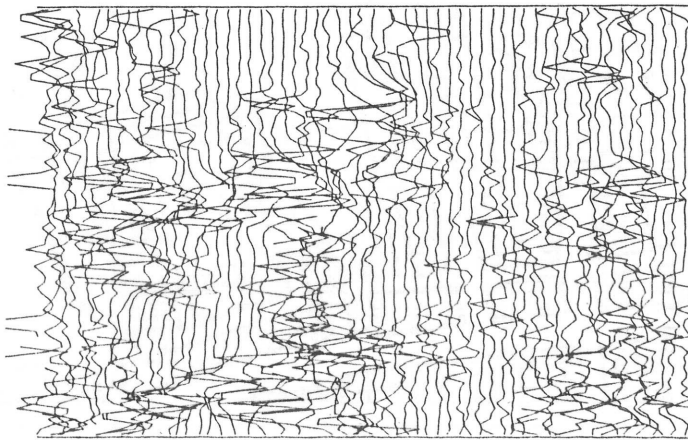


Figure 10 Gradiometer dot density plot for Area C



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KEY
 site boundary
 44 evaluation trench

TITLE:
Trench location plan

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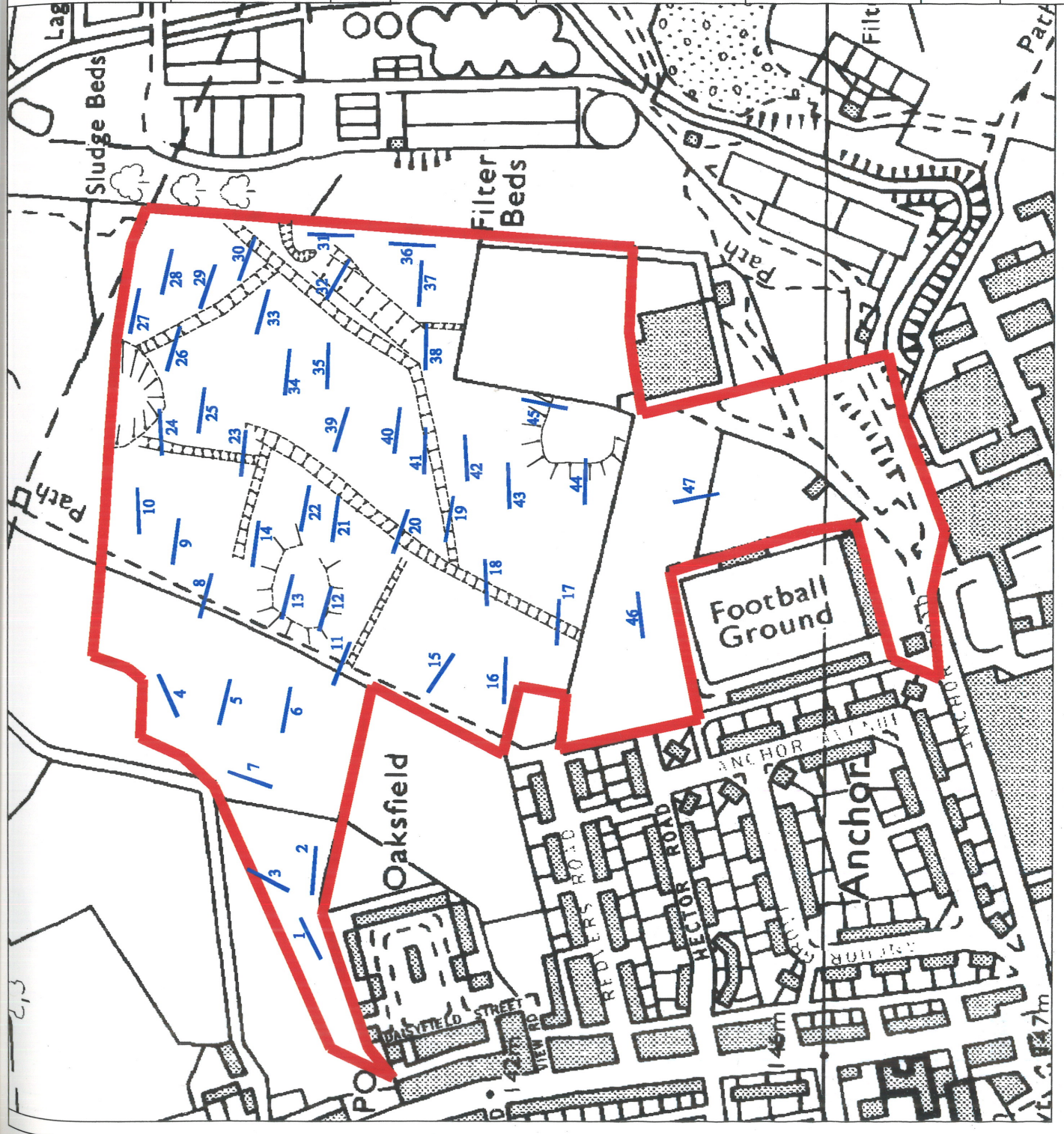


Fig 11 : Trench location plan



PROJECT:

Oakenhurst Farm
Earcroft Junction M65
Darwen, Lancashire

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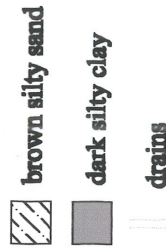
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DATE: October 2000

LOCATION:



KEY

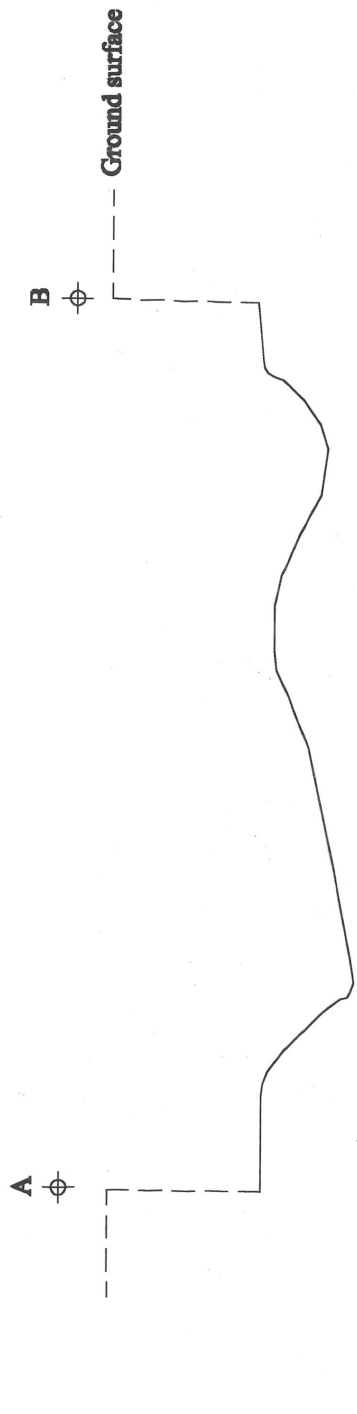
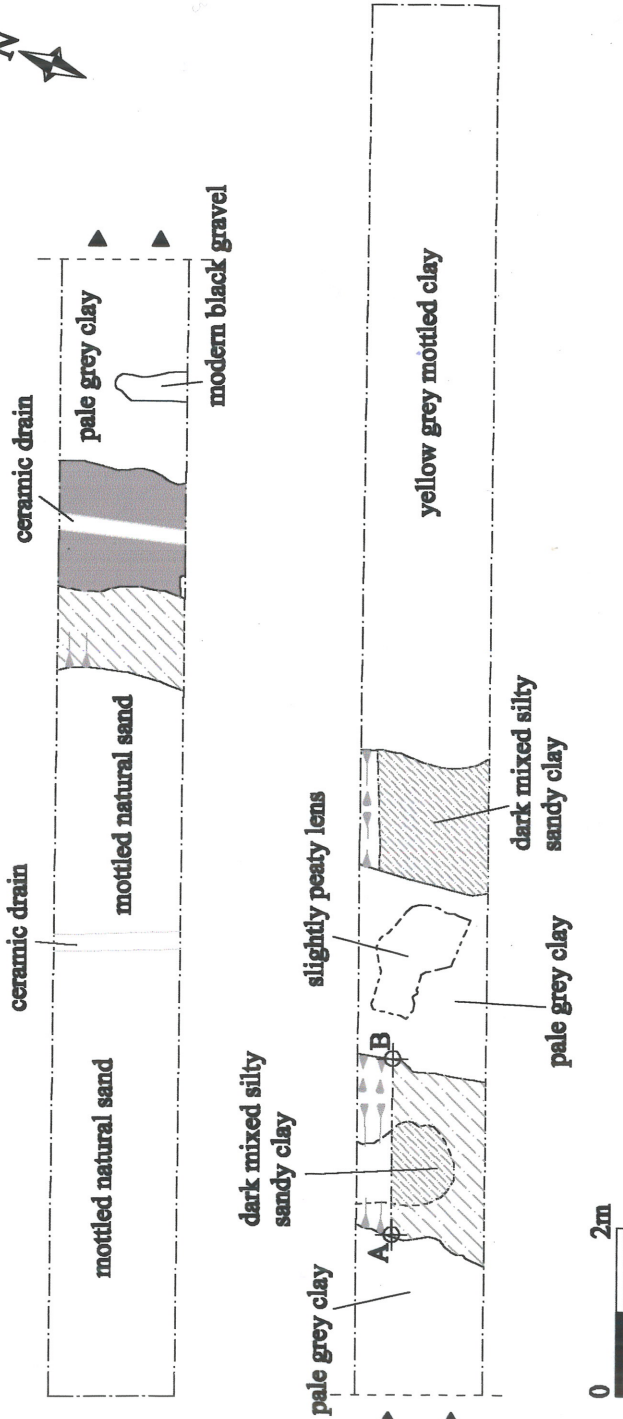


TITLE:

Trench 8 plan and
section

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Profile through double bottomed ditch

Figure 12 Trench 8 Plan and Ditch Profile



PROJECT:

Oakenhurst Farm
Barcroft Junction
M65 Darwen,
Lancashire

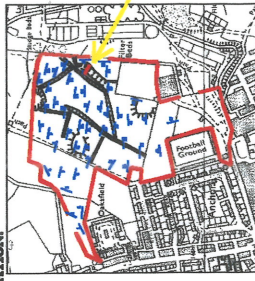
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13




DRAWN BY: CW

DATE: October 2000

LOCATION:



KEY

-  Clay / Pebble Surface
-  Silty Clay Fill
-  Ridge and furrow

TITLE:

Trench 32 plan and
section

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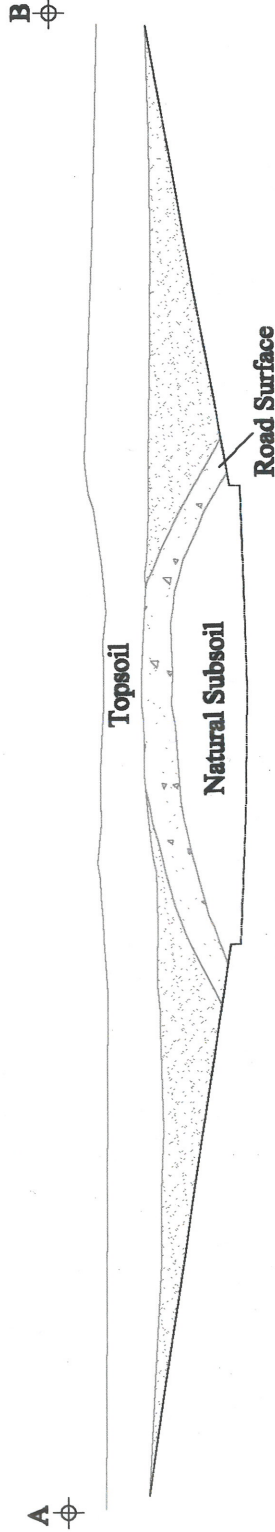
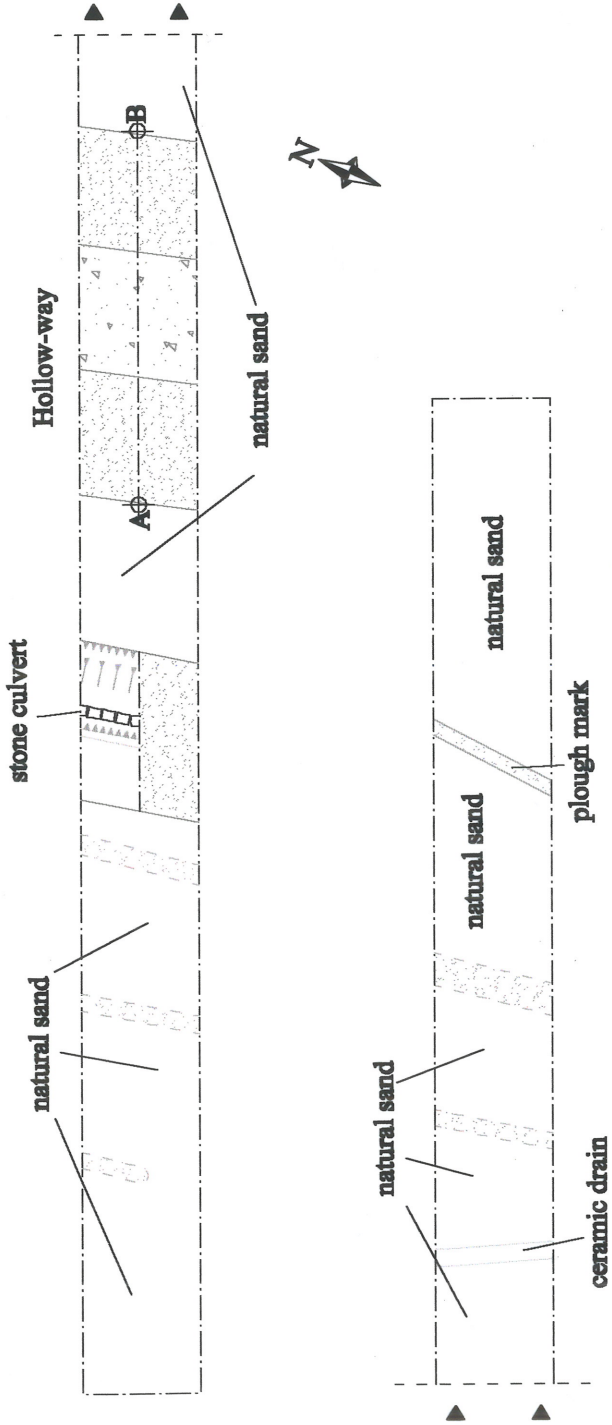


Figure 13 Trench 32 Plan and Section

PLATES

- Plate 1 Hollow-way Site 27 looking north-east
- Plate 2 Ditch boundary Site 29 looking south-east
- Plate 3 Trench 5: Drains and plough marks looking east
- Plate 4 Trench 9: Culverted land drain looking south-west
- Plate 5 Trench 11 kerb and ditch looking east
- Plate 6 Trench 32: road surface looking north



Plate 1 Hollow-way Site 27 looking north-east



Plate 2 Ditch boundary Site 29 looking south-east



Plate 3 Trench 5: Drains and plough marks looking east



Plate 4 Trench 9: Culverted land drain looking south-west



Plate 5 Trench 11 kerb and ditch looking east



Plate 6 Trench 32: road surface looking north