



DOVER LODGE FARM GOLF COURSE, CHAIN LANE, STAINING, BLACKPOOL, LANCASHIRE

Archaeological Evaluation and Metal Detector Survey



Oxford Archaeology North

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Mr Wigglesworth

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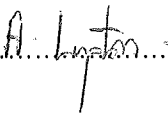
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SUMMARY

Oxford Archaeology North (OA North) was commissioned by Mr Wigglesworth to undertake an archaeological investigation at Dover Lodge Farm, Chain Lane, Staining, Blackpool, Lancashire (NGR: SD 35527 35825; Planning Reference 05/0683). This work was informed by an earlier OA North desk-based assessment and walkover survey and was undertaken in order to fulfil a Lancashire County Archaeology Service (LCAS)-imposed planning condition that a further programme of archaeological investigation should be undertaken within the proposed development area. The programme, undertaken in March 2007, comprised a trial-trench evaluation and a metal detecting survey as set out in an LCAS-approved OA North project design. Three potential sites of archaeological significance were targeted during the investigation targeted.

The projected line of the Kirkham to Fleetwood Roman road (or Dane's Pad, as it is locally known) was examined by Evaluation Trench 1 and, in two locations, the metal detecting survey. Despite previous finds of Roman coins, the latter technique produced no archaeologically significant results. No structural evidence for the Roman Road was identified on the exact course marked on the Ordnance Survey map. However, it is possible that part of an *agger* may be preserved by a pebble and clay field boundary here, or, that the very stony topsoil here represents the ploughed-out remains of an *agger* that had once run across the underlying peat beds supported on a bed of lain timbers.

Pit Carr, recorded on the 1838 tithe award was examined by Evaluation Trench 2, and no remains of archaeological significance were discovered. Positive results were found within Trench 3 in *Kiln Field* (also recorded on the 1838 tithe award). Here was located the heavily truncated remains of a probable kiln, possibly even the post-medieval feature that had lent its name to the field, along with a number of closely juxtaposed small pits, or postholes, of unknown date or function. Environmental sampling of the kiln and two of the pits recovered quantities of charcoal, bone and plant remains. This sampling indicated that oak was probably the major source of fuel used in the kiln, but that the pits had not been used for the disposal of kiln waste. Rather, their contents appeared more akin to domestic refuse. The only finds comprised fragments of possible ochre and chipped volcanic tuff that were recovered from one of the pits, though it is not particularly clear if these represent artefacts or naturally occurring objects.

Although the archaeological findings in Trench 3 were of some significance, they will not be further affected by the development of the golf course, and it is difficult to justify further investigation at this juncture. However, their presence should be considered during the formulation of planning conditions for any further developments on the site.

ACKNOWLEDGEMENTS

OA North would like to thank Mr and Mrs Wigglesworth for commissioning and funding the work, and Doug Moir of Lancashire County Archaeology Service for his advice and liaison during the project.

The archaeological evaluation was undertaken by Kelly Clapperton, Alex Bebben and Pascal Eloy, whilst Sandra Bonsall and Elizabeth Huckerby carried out the environmental assessment. The metal-detecting survey was undertaken by Stratascan. The report was compiled by Kelly Clapperton, Dr Richard Gregory and Stephen Rowland, and illustrated by Marie Rowland. The project was managed by Stephen Rowland, who also edited the report.

1 INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 Mr Wigglesworth submitted proposals for the construction of a nine-hole golf course (Planning Reference 05/0683) at Dover Lodge Farm, Chain Lane, Staining, Blackpool, Lancashire (centred on NGR: SD 35527 35825). In order to understand better the archaeological context of the site and to inform planning decisions, Lancashire County Archaeology Service (LCAS) recommended that a desk-based assessment (DBA) and walkover survey should be undertaken prior to the undertaking of any groundworks on the site. This work was completed by Oxford Archaeology North (OA North) in 2006 and established that, although the majority of the proposed development site consisted of undeveloped agricultural land, prior to the advent of comprehensive post-medieval drainage schemes, it was mostly mossland, and of considerable archaeological potential (OA North 2006). A more detailed account of the archaeological potential and context of the site can be found in *Section 2* of this document, but in outline, the DBA identified within the site the potential for the preservation of organic remains and stratified deposits dating from the prehistoric period onwards, several cropmarks, the putative line of a Roman Road, chance finds of Roman coins, and a number of post-medieval structures and indicative fieldnames.

1.1.2 Once LCAS had assimilated the results of the DBA and walkover survey, they informed the local planning authority that a condition of planning consent should be the undertaking, prior to the construction of the golf course, of the programme of archaeological works recommended in the DBA. Based on the results of this initial work, and in consultation with Mr Wigglesworth, it was possible to devise a programme for further archaeological investigation that would help to mitigate the impact of the final plans for the proposed development. This second phase of archaeological works, including their rationale, was outlined in an OA North project design (*Appendix 1*) and included a programme of targeted evaluation trenching and a metal detector survey. Following LCAS approval of the project design, Mr Wigglesworth commissioned OA North to undertake this further programme of archaeological investigation, which would satisfy the archaeological planning condition requested by LCAS. The following report documents the results of this work, which was undertaken during March and April 2007.

2 BACKGROUND

2.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 2.1.1 The proposed development site is located within the central Fylde region of Lancashire, 4km to the east of Blackpool and 0.5km to the south-east of Staining (Fig 1). The Main Dyke, which drains Marton Mere, forms the main topographic feature in this area and also forms a substantial part of the southern boundary of the proposed development site. The landscape gently descends from north to south, from approximately 15m OD to 5m OD, and several ponds are found scattered across the area. These are probably the sites of former marl pits, which relate to early attempts to improve the fertility of the post-medieval landscape.
- 2.1.2 The underlying geology of the proposed development site comprises Permo-Triassic red mudstones, siltstones and sandstones, which are overlain by thick deposits of glacial and post-glacial clay, and boulder-clay (Countryside Commission 1998). These deposits are superseded by Typical Stagnogley soils (Ordnance Survey 1983). Glacial activity also created many hollows which, due to poor drainage, subsequently filled with peat during the post-glacial period (*ibid*).

2.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 2.2.1 The following section, drawn from the previous desk-based assessment of the proposed development site (OA North 2006), seeks to provide an archaeological context for the present programme of works, rather than present a detailed account of the region, examples of which are readily available elsewhere.
- 2.2.2 ***Prehistoric Period:*** the earliest human activity recorded in the central Fylde area was the discovery of an elk skeleton at Poulton-le-Fylde, 3.5km to the north-west of the development site. The elk was found in post-glacial lake deposits, dating to 10250 BC, and had several barbed points embedded into the skeleton (Middleton *et al* 1995; LUAU 1995). There is very little evidence of Mesolithic activity in the immediate vicinity of the site, although remains have been found in the south/central Pennines and other wetlands in the North West (Howard-Davis *et al* 1988). Neolithic and Bronze Age activity is restricted to stray, or ritual, finds along the edges of mosslands and higher ground. These include concentrations of polished stone axes and rough-outs at Marton Mere, 1km to the west, and Piling Moss, 14km to the north. Stone hammers and metal weapons have also been discovered across the area. Furthermore, during the construction of the Main Dyke, in the nineteenth century, several artefacts dating to the Bronze Age were discovered, including a metal battle axe, a skin cap or bag, and two or three hide-covered coracles, or canoes (LUAU 1995; Thornber 1837, 18).

- 2.2.3 There is a paucity of evidence dating to the Iron Age for the whole of lowland Lancashire. Although this probably relates in part to a low Iron Age population in the North West, when compared to the rest of the country, a lack of archaeological visibility and survival may also be responsible for the apparent absence of Iron Age settlement and other related activities (Hazelgrove 1996). No definite prehistoric sites were identified during the desk-based assessment, and although (undated) cropmarks were observed on an aerial photograph to the south of the development site, these will not be directly affected by the proposed development.
- 2.2.4 **Roman Period:** although little is known about Roman activities in the Fylde area, the Kirkham to Fleetwood Roman road, known as Dane's Pad, possibly traverses the proposed development site. The projected line of this road runs in a north-westerly direction and skirts the eastern edge of the proposed development site. In the nineteenth century, the Rev Thornber (1850-1, 57) describes the road as being substantial and 'in parts on an *agger*'. During the Walkover Survey (OA North 2006) a high density of stones and gravel was observed within fields on the eastern edge of the proposed development site (including that identified as 'Dains's Path Field' on the Weeton-with-Preese township tithe award of 1838). Given the correlation with the location of Dane's Pad on the nineteenth-century OS maps, it was considered that this might represent evidence for the ploughed-out *agger*. Two Roman coins were also recovered, during a metal detector survey, to the western edge of the development site. Recently, a small Romano-British settlement has been excavated at Poulton-le-Fylde (OA North forthcoming)
- 2.2.5 **Medieval Period:** there is very little evidence of activity in the pre-Conquest period, although the village name Staining may come from either Old Norse, meaning 'place of stones' (Wyld 1911), or Anglo-Saxon meaning 'people associated with Stan' (Mills 1976, 135). At the time of the Conquest, Staining was divided into six plough lands and formed part of Earl Tostig's lordship of Preston. By 1086 the *Domesday Book* indicates that *Staininghe* was one large tract of land that later formed part of the 'Honour of Lancashire' and the fiefdom of Count Roger de Poitou. In 1102 the village was in the hands of Henry I who conferred it to the constable of Cheshire, along with eight other manors (Farrer and Brownbill 1912). By the late thirteenth century Staining was one of eight granges owned by Stanlaw Abbey (Platt 1969, 81), and may have been associated with the priory at Runcorn at an earlier date. This grange is likely to be represented by the moated site known as Staining Hall (and now occupied by Staining Hall Farm), identified and partially archaeologically examined at Chain Lane, 500m north-west of the present development site (LUAU 1997). The site remained a grange until the Dissolution in the sixteenth century. No sites dating to the medieval period were identified on the actual development site.
- 2.2.6 **Post-Medieval Period:** very little information can be gleaned about the Staining area after the sixteenth century, though the available evidence suggests that it carried on as an essentially rural area. Agricultural improvements in the eighteenth and nineteenth centuries ushered in changes in farming practice, with extensive moss and mere drainage, and attempts to

increase the fertility of the ground through the excavation and spreading of marl. On Dover Lodge Farm this is exemplified through the construction of the Main Dyke and the various marl pits scattered around, now forming small ponds. Moreover, the field-name *Pit Carr*, denoted on the 1838 tithe award, probably relates to a former marl pit in this area. Indeed, during the OA North walkover survey a pond was observed in this area, which might form the remains of this feature. Another significant field-name, denoted on the 1838 tithe award, is *Kiln Field*, which suggests that a post-medieval kiln once existed within the proposed development area.

3 METHODOLOGY

3.1 PROJECT DESIGN

3.1.1 The LCAS-approved OA North project design (*Appendix I*) was adhered to as fully as possible, and all works were consistent with the standards and guidance of the Institute for Archaeologists and accepted best practice. Several variations from the projected programme were agreed with LCAS. The first comprised the abandonment of the trench placed to investigate the putative line of the Dane's Pad in the central eastern part of the development site (Designated as Site **19/32** in the OA North DBA (2006), on the basis that groundwork for this area were no longer planned. The second involved the locations of Trenches 1 and 3; construction of the targeted golf course features was completed in these areas prior to the commencement of the evaluation, and, as a comprise, each trench was moved on the same alignment to the closest available point: Trench 1 slightly to the north, and Trench 3 just to the north-east.

3.2 EVALUATION TRENCHING

3.2.1 The aim of the evaluation trenching was to establish the presence or absence of archaeological remains, and to assess the date, nature, depth and significance of any remains identified. All three trenches were targeted at known sites where groundworks were to take place and their locations and orientations are shown on figure 2. These comprised:

- Trench 1 (2m by 40m): excavated across the axis of the projected line of Dane's Pad Roman road (designated as Site **19** in the OA North 2006 DBA). Within the south-eastern corner of the site, a concentration of stones and cobbles was tentatively identified as the ploughed-out remains of the Roman road surface, although it is possible that this material could relate to more recent agricultural activity in the area. The development within this area was to comprise a pair of rectangular tees up to 15m across. These tees were to be stripped of topsoil before being built-up with clay. A green to the north-west of the potential archaeological sites was to be mounded-up onto the existing ground surface, whilst the associated sand bunkers will be sculpted into this mounded material rather than dug into the present ground surface.
- Trench 2 (2m by 50m): excavated in the area named as *Pit Carr* on the 1838 tithe survey, which probably indicates the presence of a former post-medieval marl pit (designated as Site **22** in the OA North DBA). This trench was positioned adjacent to a pond, which might form the remains of the marl pit and which was to be preserved as a grass hollow as part of the proposed development.
- Trench 3 (50m by 2m): excavated at a site named *Kiln Field* on the 1838 tithe survey, which may have once contained a post-medieval kiln (designated as Site **25** in the OA North 2006 DBA).

3.2.2 All of the evaluation trenches were initially excavated by a 13-ton tracked 360° mechanical excavator, fitted with a 2m toothless ditching bucket, and operating under the constant supervision of an archaeologist. All trenches were subsequently manually cleaned using hoes, trowels and shovels. Each trench was assessed for archaeological remains, and all deposits identified were hand cleaned and excavated. All trenches and contexts were recorded on OA North *pro-forma* sheets utilising a system derived from that of the English Heritage Centre for Field Archaeology. All plans and sections were drawn to an appropriate scale. An indexed photographic record was produced using 35mm cameras on colour slide, monochrome print and high-resolution digital photography. Environmental samples were removed from targeted contexts, to recover dating evidence. All trenches were located using GPS equipment and tied into the Ordnance Survey Datum (OD), and then backfilled.

3.3 METAL DETECTOR SURVEY

3.3.1 A non-ferrous metal detecting survey was undertaken by Stratascan in two separate areas within the proposed development, both of which were situated along the course of the projected line of the Dane's Pad Roman road (*Appendix 3*). This survey covered a total area of 0.8ha and was carried out along transects, at 3m intervals, using Garrett GTAX750 detectors. Finds were recovered from the topsoil to a maximum depth of 0.3m, and all were located using Leica SR350 GPS equipment.

3.4 ENVIRONMENTAL ASSESSMENT

3.4.1 During the evaluation three environmental bulk samples were taken from secure contexts for the assessment of charred and waterlogged plant remains. Ten litres of each sample was hand-floated. The flots were collected on 250 micron mesh and air dried, and then scanned with a Leica MZ6 stereo microscope. The plant material was recorded and provisionally identified, with the data is shown in Table 1 (*Section 4.4*); botanical nomenclature follows Stace (1997). Plant remains were scored on a scale of abundance of 1-4, where 1 is rare (less than 5 items) and 4 is abundant (more than 100 items). The components of the matrix were also noted.

3.5 FINDS

3.5.1 All finds were exposed, lifted, cleaned and bagged in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition). All identified finds and artefacts were retained from all material classes; these were hand collected from stratified deposits for processing and assessment.

3.6 ARCHIVE

3.6.1 A full archive has been compiled in accordance with the project design (*Appendix 1*), and with current IfA and English Heritage guidelines (EH

1991). The archive and a copy of this report will be deposited respectively with the Lancashire County Record Office and the Lancashire Historic Environment Record, and the finds with the Lancashire Museum; all three repositories are in Preston.

4 RESULTS

4.1 EVALUATION TRENCHING

- 4.1.1 **Introduction:** this section provides a brief description of each of the trenches excavated and the main deposits and features identified within these trenches. Full context descriptions can be found in *Appendix 2*.
- 4.1.2 **Trench 1:** this east/west-aligned trench measured 40m long by 2m wide and was excavated across the projected line of the Roman road (Fig 2). It was excavated through a 0.2m thickness of grey/brown sandy loam topsoil (**101**), which sealed a 0.6m-thick ridge of yellow/brown sandy gravel (**102**), which formed part of a bank for the hedge skirting the present field. Below this, a deposit of blackish-brown peat (**100**) was encountered, which was 1.35m thick and which sealed a silver-grey fine clay deposit (**107**) (Plate 1). No features of archaeological significance were observed in this trench.
- 4.1.3 **Trench 2:** this north/south-aligned trench measured 50m by 2m (Fig 2). The trench was excavated through a 0.4m-thick dark brown clay silt topsoil (**103**). Beneath the topsoil, a 0.13m-thick layer of orange/brown clay silt (**104**) was discovered, which sealed a 0.16m thick layer of grey/brown clay silt subsoil (**105**). Below this, the natural geology (**106**) was encountered, which was composed of pinkish-orange sandy clay. Two modern ceramic field drains were observed running north-east/south-west across the trench at distances of 7m and 45m from its southern end. No features of archaeological significance were observed in this trench.
- 4.1.4 **Trench 3:** this north-west/south-east-aligned trench measured 50m by 2m (Figs 2 and 3). The 0.33m-thick dark brown sandy loam topsoil (**122**) sealed the natural boulder clay (**106**). Cut into the natural boulder clay were a number of archaeological features. At the north-western end of the trench these included the remains of a probable kiln (**116/120**). Although the remains of this feature were ephemeral and truncated towards its south-eastern end, in plan the kiln was defined by an approximate figure-of-eight-shaped cut (Plates 2-4). This cut measured *c* 2.5m in length, had a maximum width of 2m, and a maximum depth of 0.1m. It was filled with ashy greyish-black silt (**117/121**) and, although this fill did not contain any artefacts, there were substantial quantities of charcoal; and the whole feature was surrounded by an aureole of heat-affected natural boulder clay. In view of this, environmental samples were subsequently removed from this deposit.
- 4.1.5 Approximately 2.75m south-east of the kiln a small pit (**108**) was also identified (Fig 3). This pit measured 0.4m by 0.34m, was 0.09m deep, and contained an ashy fill (**109**). No finds were recovered from his fill, though samples were taken for dating and environmental purposes. Approximately 2m to the south-east of pit **108**, a small group of shallow intercutting pits (**110**, **112** and **114**) were located (Fig 3; Plate 5). Pit **110** was the earliest and measured 0.84m by 0.59m by 0.1m deep, and contained silver-grey sandy clay (**111**). This pit had been truncated on its northern side by pit **114**, which had a *c* 0.45m diameter, a depth of *c* 0.09m, and was filled with blackish-grey clay silt **115**, whilst its centre and western edge were truncated by pit **112**. This

latter pit had a maximum width of 0.47m, a depth of 0.13m and contained grey-brown clay silt **113**, from which an environmental sample was extracted. A small fragment of ochre and a piece of volcanic tuff were also recovered from this pit (see *Section 4.3*).

- 4.1.6 At the eastern end of the trench another small isolated pit or posthole (**118**) was observed. This pit measured 0.6m by 0.36m, was 0.13m deep, and contained grey silty sand **119**.

4.2 METAL DETECTOR SURVEY

- 4.2.1 The report by Stratascan detailing the methodology and results of the metal detecting survey undertaken in the two separate areas, which would be affected by the development, can be found in *Appendix 4*.

- 4.2.2 In summary, during the course of this metal detector survey no non-ferrous finds of archaeological significance were made and only three modern metallic objects were discovered.

4.3 FINDS ASSESSMENT

- 4.3.1 The finds comprised two small, abraded, fragments of a soft red material that may be ochre and a piece of volcanic tuff, both recovered from pit **112** in Trench 3. The tuff exhibited two parallel concave scars that ran lengthways along the stone fragment. This gave the initial appearance of a pair of blade scars on a small core (*c* 35 x 20mm). However, the abraded nature of the material made a confident analysis difficult. Furthermore, the delicate workmanship required to produce two such fine blades (*c* 30 x 6mm and 32 x 4mm in size) would suggest the need for a well-prepared core with a definite striking platform. Such a platform was not, however, evident. No bulbar scars, or waves of percussion, were visible, though the coarse-grained and abraded nature of the stone may have precluded these indicators of anthropogenic modification. The tuff may have been brought into the area by glacial moraine deposition.

4.4 ENVIRONMENTAL ASSESSMENT

- 4.4.1 Deposit **117**, contained in kiln **116/120**, contained abundant oak (*Quercus*) charcoal, occasional charred bedstraw (*Galium* sp) seeds and fungal sclerotia (Table 1). Fill **113** of pit **112** contained a little charcoal, fungal and sclerotia. A little charcoal and occasional small fragments of mammal bone was recorded in fill **109** of pit **108**. The fills of pits **108** and **112** also contained some modern plant and insect remains.

Sample number	Context number	Feature	Flot volume (ml)	Flot description	Plant Remains	Potential
1	117	Kiln 116/120	125	Charcoal >4mm (4), fungal sclerotia (4),	CPR (1) weed seeds	None
2	109	Pit 108	60	Charcoal >4mm (2), mammal bone (1), modern roots, seeds and insects		None
3	113	Pit 112	40	Charcoal >4mm (2), fungal sclerotia (4), modern roots, seeds and insects		None

Table 1: Assessment of charred and waterlogged plant remains from Dover Lodge Farm. Plants recorded on a scale of 1-4, where 1 is rare (up to 5 items) and 4 is abundant (>100 items). CPR = charred plant remains

5 DISCUSSION

5.1 ARCHAEOLOGICAL REMAINS

5.1.1 **Introduction:** the archaeological investigation at Dover Lodge Farm targeted three development-threatened potential sites of archaeological significance, as identified during the 2006 OA North DBA and walkover survey. In the event, it was necessary to adjust the location of Trenches 1 and 3, which may have affected the nature, or even presence, of archaeological remains (negatively in the case of Trench 1, positively in the instance of Trench 3). The salient results of the investigation are discussed below.

5.1.2 **Kirkham to Fleetwood Roman road:** although the results of both the trenching and the metal-detecting survey in the vicinity of this feature were negative, the results of the intrusive investigation bear some consideration. Certainly, no conventional ditch-flanked mounded clay and stone *agger* was identified. However, the thick peat deposits here might have dictated the form of the Roman road across such a point: a dense *agger* built directly onto the moss surface would be liable to rapid subsidence, whilst road-side ditches would have little value in an already waterlogged setting. As such, it might be expected that the road would be carried across the mire on a bed of horizontal (corduroy) timbers, the survival of which would have depended upon their continued waterlogging. It is likely that the road surface would have been built up of clay and stone on top of the timbers, but, following post-medieval drainage, the resultant decomposition of the now desiccated underlying timbers, and subsequent plough damage, this horizon is likely to have been dispersed quite rapidly. Certainly, as observed by the walkover survey (OA North 2006), the topsoil in Trench 1 was observed to be much stonier than within Trenches 2 or 3, and it is difficult to imagine all these pebbles deriving from the peat. Within this context, field boundary **102** is of interest, particularly as over 60% of its make-up was of sub-rounded pebbles, whilst its alignment at the point of investigation matches that of Dane's Pad. One is thus left with three hypotheses regarding the Roman Road:

1. It follows a route parallel to that shown by the Ordnance Survey, but outside that investigated by Trench 1;
2. It fell within the investigated area, but has since been dispersed through agricultural agencies;
3. It lies within the investigated area, partly dispersed, but partly preserved as a field boundary.

5.1.3 **Kiln Field:** Trench 3 was the only one to contact stratified archaeological remains, which included the poorly preserved remains of a probable post-medieval kiln, perhaps even that from which *Kiln Field*, recorded on the 1838 tithe award, took its name. It is difficult to ascertain the original size of the feature, since it continued beyond the northern limits of excavation, but it would seem that cut **116** was likely to represent a flue; any evidence for a superstructure had been removed by truncation. It seems unlikely that the feature had been associated with metal working or crop processing, as such

activities would be expected to leave at least some trace within the palaeoenvironmental samples. Moreover, there were no finds from the vicinity (such as brick or pottery wasters) that might indicate the kiln's function, and the absence of such artefacts also makes the feature rather difficult to date. Any understanding of the date of the kiln would thus be dependent on absolute dating of the recovered oak charcoal.

5.1.4 The proximity of the kiln and a number of small pits or postholes (**108**, **110**, **112**, **114** and **118**) of unknown date and function might imply they were in some way associated. However, the limited amount of charcoal in pits **108** and **112** would suggest that they had not been dug to receive burnt waste when the kiln was periodically cleaned out. Rather, the inclusion of fragmented mammal bone suggests a domestic waste component. Indeed, the fact that pits **110**, **112** and **114** represent the instatement of the same feature on the same spot on separate occasions might indicate that such activity was long-standing, or, at the very least, involved the periodic utilisation of the exact location. Two small fragments of possible ochre and a piece of volcanic tuff were also recovered from one of the pits (**112**), though it is not particularly clear if these represent artefacts indicative of prehistoric activity, or naturally occurring objects, which have been serendipitously incorporated into the fill of this feature.

5.1.5 Although this group of features remains somewhat enigmatic, their location is of interest; they occupy the slope of a boulder clay rise that ascended from a peat-filled low-lying area to the east. As such, it seems likely that this area had been relatively dry, even prior to the post-medieval drainage schemes within the area, and, as such, would have allowed the exploitation of a range of local ecosystems.

5.2 POTENTIAL FOR FURTHER ARCHAEOLOGICAL WORKS

5.2.1 Although the archaeological remains identified within Trench 3 are clearly of interest, and merit further investigation, this cannot be justified at the present time, as this area will not be impacted upon further by groundworks for the golf course. However, their presence needs to be taken into consideration in the context of future planning conditions and developments in the area. Given that Trenches 2 and 3 were found to occupy boulder clay, rather than peat, future planning conditions should give due consideration to geophysical techniques in these areas, as much better results could be expected on boulder clay than peat (especially where burnt features are expected). The fieldwork programme has not revealed sufficient evidence to confirm or deny the position of Dane's Pad as marked on the OS map, and the route of this feature deserves further attention should any future development be planned within its path.

5.2.2 The assessment of the plant remains from the site provides no information concerning the economy or environment of the site. Therefore, there is no potential for any further analysis of these samples. There is potential for the radiocarbon dating of the oak charcoal from the kiln, although the desirability of this is perhaps limited by the lack of functional evidence, and the strong

possibility that dating will provide little more information than can be surmised from the 1838 tithe award (much of the radiocarbon calibration curve for the post-medieval period is irregular and thus difficult to interpret with accuracy). Similarly, organic matter from the Trench 3 pit group was also identified, but its uncertain taphonomic history (especially given the degree of re-cutting and re-working of sediment), the small quantities present and its contamination with modern plant and insect remains, means that radiocarbon dating in this instance may not be a successful or applicable technique.

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7 ILLUSTRATIONS

7.1 FIGURES

Figure 1: Site Location

Figure 2: Trench Location Plan

Figure 3: Plan of Trench 3 with insets

7.2 PLATES

Plate 1: Trench 1, south-facing section through peat deposit **100**

Plate 2: Trench 3, south-west-facing shot with kiln **116=120** in the foreground

Plate 3: Trench 3, south-west-facing shot of kiln **116=120**, showing north-facing section

Plate 4: Trench 3, south-west-facing shot of kiln **116=120**, showing sections through **116** and **120**

Plate 5: Trench 3, south-west-facing section through complex of small pits **110**, **112** and **114**

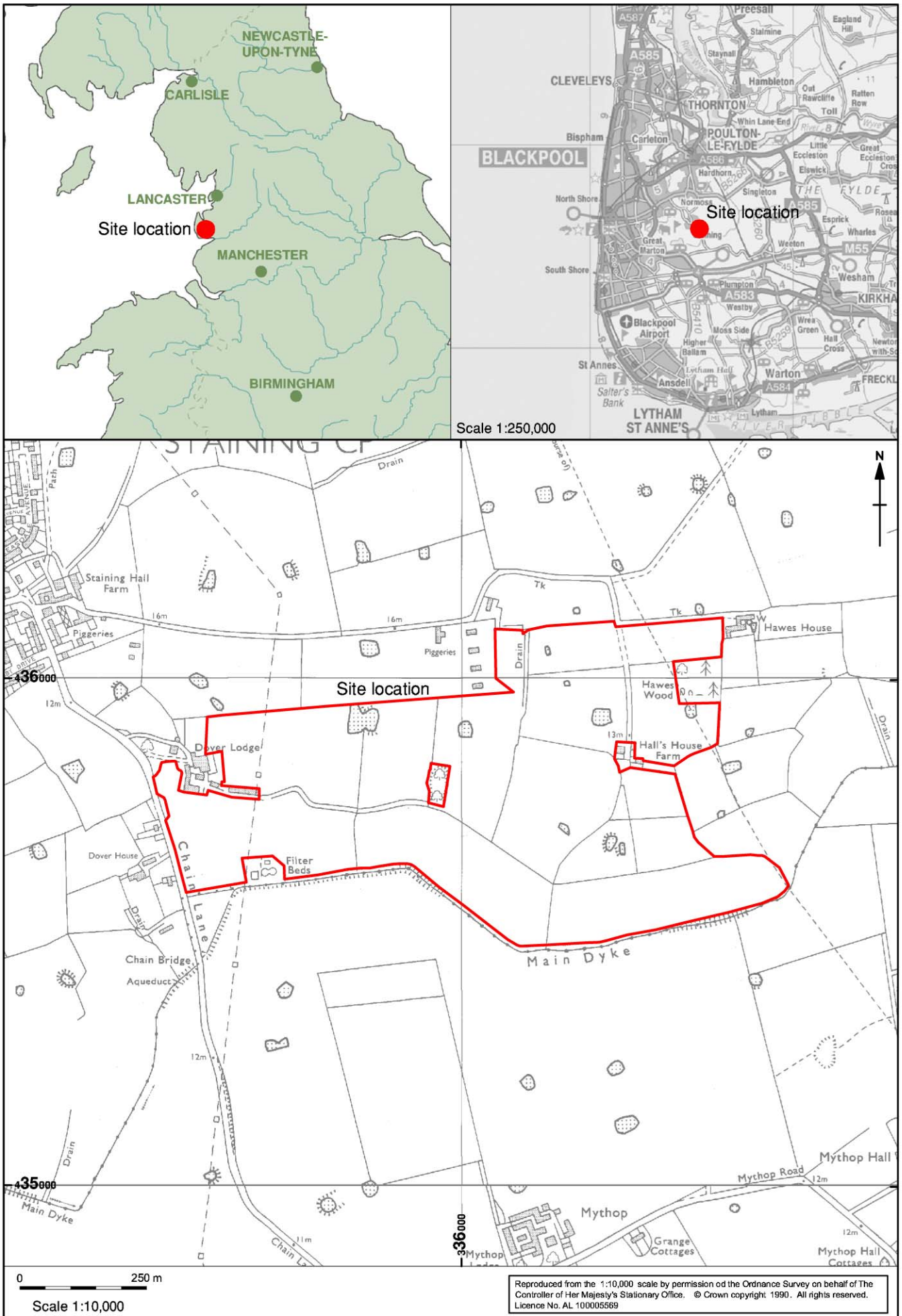


Figure 1: Site Location

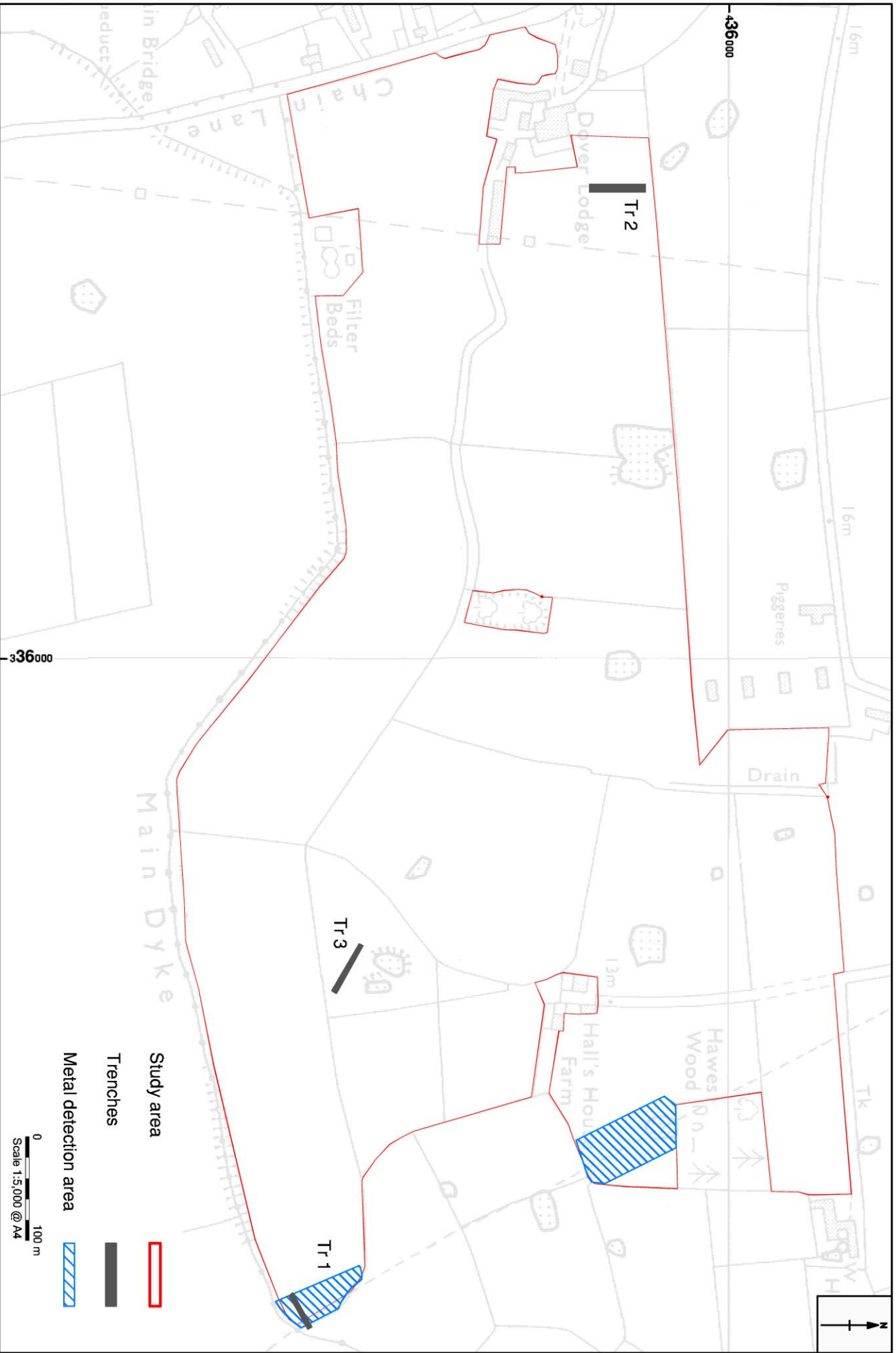


Figure 2: Trench Location Plan

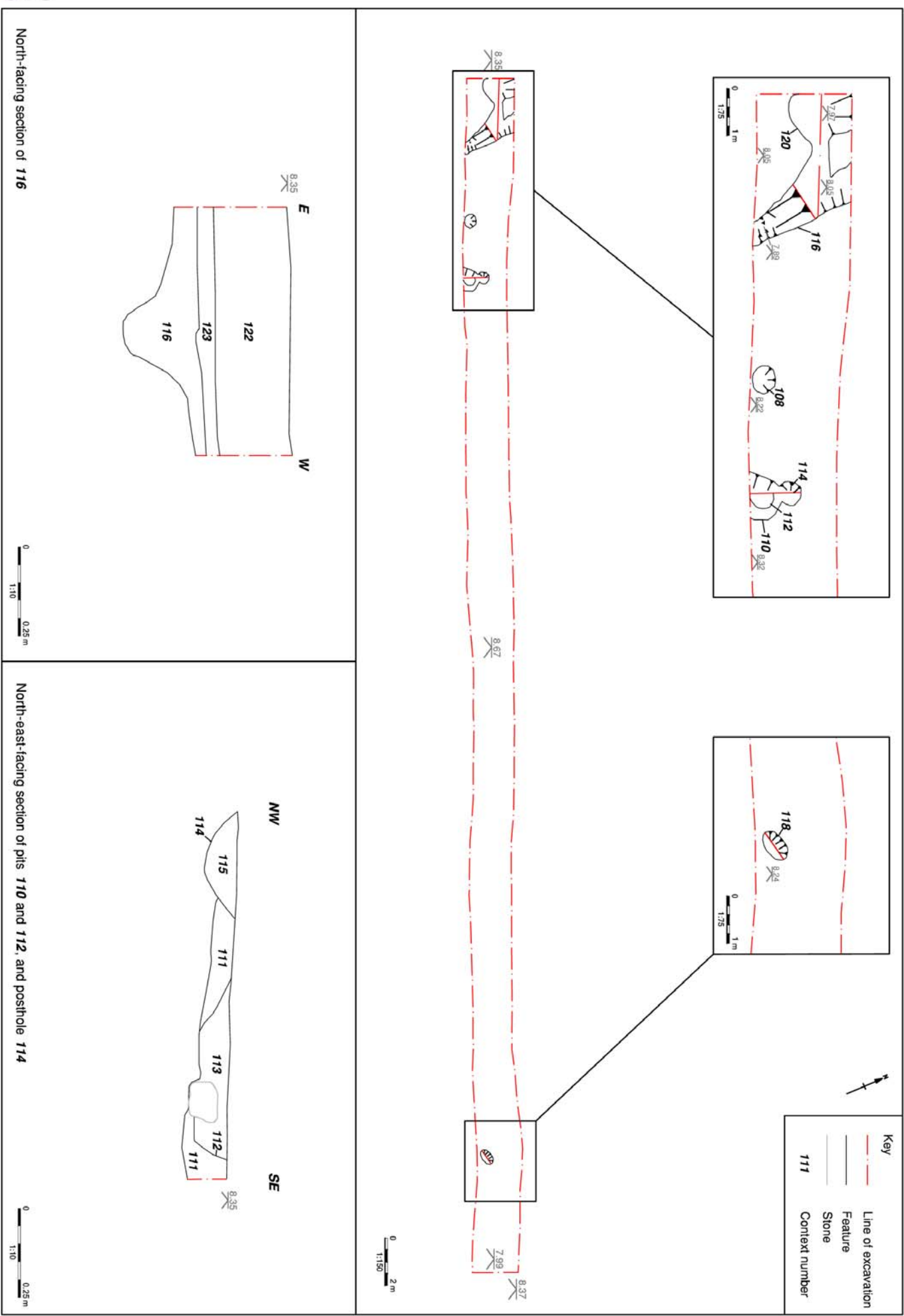


Figure 3: Plan of Trench 3 and sections



Plate 1: Trench 1, south-facing section through peat *100*



Plate 2: Trench 3, south-west facing shot of trench with kiln *116=120* in the foreground



Plate 3: Trench 3, south-west facing shot of kiln *116=120*



Plate 4: Trench 3: south-west-facing shot of kiln *116=120*



Plate 5: South-west-facing section through complex of small pits *110*, *112* and *114*

APPENDIX 1: PROJECT DESIGN

1.1 PROJECT BACKGROUND

1.1.1 Mr Wigglesworth (hereafter the 'client') has submitted proposals for the construction of a nine-hole golf course (Planning Reference 05/0683) at Dover Lodge Farm, Chain Lane, Staining, Blackpool, Lancashire (NGR SD 35527 35825). Should this application be successful, the client proposes to expand the nine-hole course to a full 18-hole course. Because the site lies within an area of archaeological potential, Lancashire County Archaeology Service (LCAS) recommended that a programme of archaeological investigation, comprising a desk-based assessment and walkover survey, be undertaken prior to any development taking place on the site. Oxford Archaeology North were commissioned to undertake this work and, following the results of the investigation (OA North 2006), Mr Wigglesworth requested that OA North produced a programme of investigation to meet to the LCAS requirement that the recommendations for further archaeological work outlined in the desk-based assessment should be undertaken prior to the development of the site. The following document had been prepared in consultation with Mr Wigglesworth, and aims to represent an appropriate scheme of investigation within the context and scale of the proposed development. The proposed programme of work has yet to be agreed by LCAS.

1.2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

1.2.1 The development sites covers a c 70ha area within the Central Fylde region of Lancashire, just to the east of Blackpool. Current land use within the area would appear to be a mixture of pasture and arable. Geologically, the area is characterised by deep deposits of poorly-drained boulder clay glacial moraine (Middleton *et al* 1995). The previous desk-based assessment (OA North 2006) identified fifteen sites that were threatened by the proposed development, including ten sites within the presently proposed nine-hole golf course and a further five sites within the extended area that would form the 18-hole golf course.

1.3 REVISED PROGRAMME

1.3.1 Based on the information available at the time of writing, recommendations were made as to the nature of any required further investigation for each site, including evaluation, metal detector survey, environmental sampling and geophysical survey. In retrospect, the latter investigative technique is unlikely to prove fruitful; the fact that the site is likely to lie upon an area of thick peat, as was found in the case of recent fieldwork at Mythop, just to the south (OA North 2005), means that geophysical survey may not be an appropriate means of investigating the site: the high water content of this material can lead to anomalous results during resistivity, whilst the high organic content is likely to similarly skew the results of any magnetometry. Furthermore, although in normal circumstances, detailed magnetometry might be expected to identify any agger or road-side ditches associated with a Roman road, the stone elements of the road itself would not be susceptible to such prospection techniques.

1.3.2 The sites, and the nature of the development in their respective areas, are as follows:

1.3.3 Site **04**, area of peat; this part of the site will become part of a conservation area in the forthcoming development, and would only be unduly affected if any drainage works were undertaken. Since this is not thought to be the case, no further action is recommended.

1.3.4 Site **19/32** (possible Roman Road) and **21** (Dain's Path Carr fieldname). The projected line of the Roman Road runs north-westwards along the eastern edge of the site, entering the proposed development area at three locations. Within the south-eastern corner of the site, a concentration of stones and cobbles was tentatively identified as the ploughed-out remains of the Roman road surface, although it is possible that this material could relate to more recent agricultural activity in the area. The development within this area comprises a pair of

rectangular tees 10m by up to 15m. These tees will be stripped of topsoil before being built-up with clay. A green to the north-west of the potential archaeological sites will be mounded-up onto the existing ground surface, whilst the associated sand bunkers will be sculpted into this mounded material rather than dug into the present ground surface. It is suggested that archaeological action in this area should comprise the excavation of a single trial trench 2m wide by 40m long, placed across the main axis of the interpolated route of the Road.

- 1.3.5 Where the Roman Road enters the central eastern edge of the site, it cuts across the area of a mounded tee, c 10m square and also a grass hollow, which makes use of an existing marl pit in this area. Topsoil will be removed from the area of the tee in this area, so it is suggested that a trial trench, measuring 2m by 30m, should be placed across the axis of the interpolated route of the Roman Road.
- 1.3.6 The final area in which the Roman Road route passes into the development area, at the north-western corner, will be used as a conservation area, and thus will not be affected.
- 1.3.7 Site **22**, 'Pitt Carr' field name, which may relate to the existing marl pit in this field. The marl pit will become a grass hollow, whilst several mounded tees will be built to the south-west. It is suggested that a 50m trial trench should be excavated on a north-west/south-east alignment across the axis of the tees which will be stripped of topsoil before being mounded and capped with clay. Since the marl pit will be preserved within the grass hollow, no further action is recommended for this particular feature.
- 1.3.8 Site **23**, the site of a post-medieval wind pump, lies close to the position of a proposed grass hollow. However, this grass hollow would be within an existing marl pit, and does not therefore impact upon any potential archaeological features in this area.
- 1.3.9 Site **24**, 'Stable Field' field name, which may relate to a stable or similar structure that may originally have stood in this field. As part of the development, this area will be planted with oak, ash, elm and holly trees. These trees are not especially deep-rooted, so it would appear that the threat to Site **24** is fairly limited.
- 1.3.10 Site **25**, 'Kiln Field' field name, which may relate to a kiln or similar feature within this field. The development in this area will comprise an area of green. If there is to be any drainage associated with this feature, or any topsoil stripping (although the latter certainly seems unlikely), it is suggested that the site should be the subject of a single north-east/south-west evaluation trench 50m long by 2m wide.
- 1.3.11 Site **28**, site of a former building shown on the 1911 OS map. Although the development in this area is to comprise a series of tees and a mounded green, further consultation with Mr Wigglesworth would suggest that this building was an early nineteenth century chicken coop and therefore to be of little archaeological interest. The post-pad construction of the building is also likely to mean that no trace of the structure could be expected to survive.

1.4 OXFORD ARCHAEOLOGY NORTH

- 1.4.1 Oxford Archaeology North has considerable experience of sites of all periods, having undertaken a great number of small and large scale projects throughout Northern England during the past 24 years. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.
- 1.4.2 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute of Field Archaeologists (**IFA**) **registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

2. OBJECTIVES

- 2.1 The following programme has been designed as an appropriate response to the development in order to record the extent of known archaeological features. It will also allow the assessment of the subsoil deposits within the development area to determine and, where necessary, record the presence, extent, nature, quality and significance of any archaeological deposits that may be threatened by the proposed development. To this end, the following programme of archaeological work has been designed. The results will provide information as to whether further mitigation works are required prior to, or during, ground works associated with the development. The required stages to achieve these ends are as follows:
- 2.2 **Metal detector Survey:** to undertake a metal detector survey of 40% of the a 50m wide corridor along the route of the Roman Road, looking for non-ferrous metal objects only.
- 2.3 **Archaeological Evaluation:** to implement a programme of trial trenching across four locations of proposed ground disturbance.
- 2.4 **Report and Archive:** a written report will assess the significance of the data generated by this programme within a local and regional context. It will present the results of the evaluation and would make an assessment of the archaeological potential of the area, and any recommendations for further work.
- 2.5 **Summary:** (NFA = No Further Action)

Site	Investigation	Proposed Location
04	NFA unless the site is to be associated with any drainage	
19/32 and 21	Evaluation trench 2m x 40m, aligned E/W	SD 36638 35586
	Evaluation trench 2m x 30m, aligned NE/SW	SD 36474 25902
	Metal detector survey along a 50m wide corridor either side of the projected Roman Road route within those parts of the development area outside of conservation areas	
22	Evaluation trench 2m x 50m, aligned NW/SE	SD 36300 35647
23	NFA	
24	NFA	
25	Possible evaluation trench, 2m x 50m, aligned NE/SW	SD 35503 35870
28	NFA	

3. METHOD STATEMENT

3.1 METAL DETECTOR SURVEY

- 3.1.1 The nominal 50m wide Roman Road corridor within the affected part of the development area covers an area of c 0.8ha which will be subjected to a 40% metal detector survey for non-ferrous atefacts. Using Garrett GTAX750 detectors, the survey should be carried out along transects of 3m intervals, which may be along sight lines marked at appropriate distances by ranging poles, depending on the topography. The area for the metal detector survey should ideally be newly-ploughed or be recently-mown to allow the metal detecting equipment to scan close to the ground surface and maximise recovery. The current quotation does not include costs caused by the requirement for OA North staff to either prepare the site for the metal detector survey or to work within thick vegetation, which would otherwise cause unnecessary delays.
- 3.1.2 The current costed scheme is based upon the recording and recovery of a maximum of 100 non-ferrous finds per hectare. Should the number of finds exceed this amount, it will be necessary either for more resources to be allocated to the survey, costed as a variation in

agreement with the client and LCAS, or, to adopt a suitable sampling strategy in order to maintain the present development schedule.

- 3.1.3 Finds will only be retrieved from within the topsoil, to a maximum depth of 300mm, and would, therefore, be classed as unstratified. All finds of archaeological significance will be numbered, bagged and located by use of Leica SR530 GPS equipment which is accurate to $\pm 0.4\text{m}$, altitude information will be established with respect to Ordnance Survey Datum. All finds will be mapped digitally by group (ferrous, copper etc) and type (domestic, agricultural etc). In order that the distribution of dated artefacts can be plotted graphically, finds will be subject to rapid assessment by period, function and material-type, in line with OA North's finds policy (see *Section 3.2.15*, below).

3.2 EVALUATION

- 3.2.1 The programme of trial trenching will establish the presence or absence of any previously unsuspected archaeological deposits and, if established, will then test their date, nature, depth and quality of preservation. In this way, it will adequately sample the threatened known archaeological features.

- 3.2.2 **Trench configuration:** the evaluation will comprise the excavation of four trial trenches, as detailed in *Section 1.3* and summarised in *Section 2.5*. It is possible that LCAS will request further evaluation trenching beyond those posited here; any such trenching would be costed as a variation and initiated under the direct instruction of LCAS in agreement with the client. The trenches will initially be dug to a maximum depth of 1.2m and any requirement for deeper excavation may require recosting. It is understood that the general impact of the development would, however, be shallow, it is likely that LCAS would require only that the trenches should be dug to the depth of impact with a suitable buffer zone, rather than to the upper surface of natural deposits, should these lie below this depth.

- 3.2.3 **Methodology:** the topsoil and any modern overburden will be removed in 0.2m thick spits by machine (fitted with a toothless ditching bucket) under archaeological supervision to the surface of the first significant archaeological deposit or to the level of the natural subsoil. This deposit will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. All features of archaeological interest must be investigated and recorded unless otherwise agreed by LCAS. The trenches will not initially be excavated deeper than 1.20m to accommodate health and safety constraints; any requirements to excavate below this depth will involve stepping-in of the sides.

- 3.2.4 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be located by use of GPS equipment, which is accurate to $\pm 0.25\text{m}$, or Total Station. Altitude information will be established with respect to Ordnance Survey Datum.

- 3.2.5 Any investigation of intact archaeological deposits will be exclusively manual. Selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.

- 3.2.6 All information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections, colour slides and monochrome contacts) to identify and illustrate individual features. Primary records will be available for inspection at all times.

- 3.2.7 Results of all field investigations will be recorded on *pro-forma* context sheets. The site archive will include both a photographic record and accurate large scale plans and sections at

an appropriate scale (1:50, 1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.

- 3.2.8 **Reinstatement:** it is understood that there will be a basic requirement for reinstatement of the ground. The trenches will be backfilled so that the topsoil is laid on the top, and the ground will be roughly graded with the machine. Should there be a requirement by the client other than that stated, for example for the cutting and re-laying of turf, this will involve recosting for an agreed variation.
- 3.2.9 **Fencing/hoarding requirements:** it is assumed that the client will advise on the arrangements/requirements for the site to be protected from public access. Unless the site is completely secure from public access, whether legal or otherwise, health and safety dictates that any excavations must be fenced-off. If not provided by the client, Heras fencing or similar may be required, and would be costed as a contingency.
- 3.2.10 **Environmental Sampling:** environmental samples (bulk samples of 30 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). Any assessment of the environmental potential of the site would be undertaken through the examination of suitable deposits by the in-house palaeoecological specialist, who will examine the potential for further analysis.
- 3.2.11 The assessment would include soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features. In addition, the samples would be assessed for plant macrofossils, insect, molluscs and pollen from waterlogged deposits.
- 3.2.12 The costs for the palaeoecological assessment are defined as a contingency and will only be called into effect if good deposits are identified and will be subject to the agreement of LCAS and the client.
- 3.2.13 **Faunal remains:** if there is found to be the potential for discovery of bones of fish and small mammals, a sieving programme will be carried out. These will be assessed as appropriate by OA North's specialist in faunal remains, and subject to the results, there may be a requirement for more detailed analysis. A contingency has been included for the assessment of such faunal remains for analysis.
- 3.2.14 **Human Remains:** any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. LCAS and the local Coroner will be informed immediately. If removal is essential the exhumation of any funerary remains will require the provision of a burial license from the Department of Constitutional Affairs, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations. The cost of removal or treatment will be agreed with the client and costed as a variation.
- 3.2.15 **Treatment of finds:** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines. Metal finds from stratified deposits will be x-rayed. The cost of conservation has been included as a contingency, which will be agreed with the client.
- 3.2.16 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator. A metal detector will be used to scan spoil heaps for non-ferrous metal artefacts.

- 3.2.17 **Treasure:** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.
- 3.2.18 **Contingency plan:** a contingency costing may also be employed for unseen delays caused by prolonged periods of bad weather, vandalism, discovery of unforeseen complex deposits and/or artefacts which require specialist removal, use of shoring to excavate important features close to the excavation sections etc. This has been included in the Costings document (*Section 10*) and would be charged in agreement with the client.
- 3.2.19 The evaluation will provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. In this way, an impact assessment will also be provided. In the unlikely event of this project design being an insufficient basis for the treatment of the archaeological remains on site, a more specific strategy will be designed in consultation with LCAS and the client.

3.3 REPORT AND ARCHIVE

- 3.3.1 **Report:** one bound and one unbound copy of the final report will be submitted to the client within two months of completion of fieldwork. Should the client require a draft report, an interim statement can be provided on request, within three weeks of the completion of each stage of the programme of work. Digital copies of the report will be submitted to the Lancashire SMR. The report will include:
- a site location plan related to the national grid
 - a front cover to include the planning application number and the NGR
 - the dates on which each phase of the programme of work was undertaken
 - a concise, non-technical summary of the results
 - an explanation to any agreed variations to the brief, including any justification for any analyses not undertaken
 - a description of the methodology employed, work undertaken and results obtained
 - an interpretation of the desk-based assessment results and their significance, using the 'Secretary of State's criteria for scheduling ancient monuments' included as Annex 4 of PPG 16 (DoE 1990)
 - plans and sections at an appropriate scale showing the location and position of deposits and finds located during the watching brief and excavation, as well as sites identified during the desk-based assessment
 - monochrome and colour photographs as appropriate
 - a list, and dates, for any finds recovered along with a description and interpretation of the deposits identified
 - a description of any environmental or other specialist work undertaken and the results obtained
 - a summary of the impact of the development on any archaeological remains and, where possible, a model of potential archaeological deposits within as-yet unexplored areas of the development site
 - a copy of the LCAS specification and of this project design, and indications of any agreed departure from that design
 - the report will also include a complete bibliography of sources from which data has been derived.

- 3.3.2 This report will be in the same basic format as this project design; a copy of the report can be provided in .pdf format on CD, if required. Recommendations concerning any subsequent mitigation strategies and/or further archaeological work following the results of the field evaluation will be provided in a separate communication.
- 3.3.3 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.
- 3.3.4 **Archive:** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork, which will be catalogued by context.
- 3.3.5 The deposition of a properly ordered and indexed project archive in an appropriate repository is essential and archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Lancashire SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects with the appropriate Record Office.
- 3.3.6 All artefacts will be processed to MAP2 standards and will be assessed by our in-house finds specialists. The deposition and disposal of any artefacts recovered in the evaluation will be agreed with the legal owner and an appropriate recipient museum. Discussion regarding the museum's requirement for the transfer and storage of finds will be conducted prior to the commencement of the project, and LCAS will be notified of the arrangements made.
- 3.3.7 **Publication:** A brief summary report of fieldwork, to appear in the Council for British Archaeology North West *Archaeology North West* will be produced, even when the fieldwork encountered no archaeological deposits. This will be sent to the editor of Archaeology North West in accordance with the standard format for summary reporting, and in time for it to appear within a calendar year of the completion of fieldwork.
4. HEALTH AND SAFETY
- 4.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. 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 (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 4.2 Full regard will, of course, be given to all constraints (services etc) during the fieldwork as well as to all Health and Safety considerations. **Information regarding services within the study area have been received and will be used during the course of the evaluation.**
5. PROJECT MONITORING
- 5.1 Whilst the work is undertaken for the client, LCAS will be kept fully informed of the work and its results, and will be notified a week in advance of the commencement of the fieldwork. After its submission to LCAS any proposed changes to the project design will be agreed with LCAS in consultation with the client. Fieldwork will be monitored by LCAS on behalf of the developer.

6. WORK TIMETABLE

6.1 METAL DETECTOR SURVEY

6.1.1 It is estimated that one to two days will be required for the completion of this element.

6.2 EVALUATION TRENCHING

6.2.1 Approximately three days will be required to complete the excavation of the four trial trenches.

6.2.2 OA North can execute projects at very short notice once an official order/confirmation has been received from the client. A team could mobilise with one to two weeks notice (to allow the necessary arrangements to be made to commence the task).

6.3 REPORT

6.3.1 Copies of the report, as outlined in *Section 3.3.1*, will be issued to the client and other relevant parties within two months of the completion of fieldwork, unless otherwise agreed prior to the commencement of fieldwork.

6.4 ARCHIVE

6.4.1 The archive will be deposited within six months following submission of the report, unless otherwise instructed.

7. STAFFING

7.1 The project will be under the direct management of **Stephen Rowland** (OA North Project Manager) to whom all correspondence should be addressed. The finds will be processed, studied and reported upon, either by, or under the guidance, of **Chris Howard-Davies** (OA North Finds Manager) who has extensive experience of finds from all periods, but particularly prehistoric and Roman material. All environmental sampling and assessment will be undertaken under the auspices of **Elizabeth Huckerby** (OA North Environmental Manager) who has unparalleled experience of palaeoenvironmental work in the North West and who heads an excellent team of environmental archaeologists. Any faunal remains will be studied by **Andrew Bates** (OA North Project Officer), who has a large amount of experience in undertaking the assessment and analysis of faunal assemblages of all sizes from a wide range of periods and locations. Any human remains are likely to be examined under the auspices of **Louise Loe** (OA South Project Manager). Current time-tabling precludes the allocation of specific members of staff at this juncture, but OA North can guarantee that the desk-based assessment and walkover survey will be undertaken by an OA North supervisor experienced in such work and capable of carrying out projects of all sizes. Similarly, the evaluation will comprise a suitably-sized team of experienced archaeologists led by an OA North Project Officer or Supervisor. All OA North Project Officers and Supervisors are experienced archaeologists capable of undertaking small-, medium- and large-scale projects in a range of urban and rural situations.

8. INSURANCE

8.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

9. REFERENCES

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APPENDIX 2: CONTEXT REGISTER

Context	Trench	Description
100	1	Natural peat deposit Dark brown/black firm peat, with >1% small rounded pebble inclusions, fragments of preserved timbers were also visible. An auger of the peat indicated that it reached a depth of 1.9m from the current ground surface.
101	1	Topsoil Grey/brown compact sandy loam with up to 30% sub-rounded pebble inclusions. Measured 0.2m in depth.
102	1	Hedge bank Yellowish-brown friable gravel-loam with >60% /pebble inclusions. It reached approximately 0.6m in height.
103	2	Topsoil Mid- to dark brown friable clay silt 30/70, with >5% small sub-rounded pebbles. It measured 0.3m in depth.
104	2	Subsoil Mid-orange/brown firm clay silt 40/60, with >1% small sub-rounded pebbles, 0.13m thick. Comprises the upper subsoil.
105	2	Subsoil Mid-grey/brown firm and slightly tacky clay silt with 1% small sub-rounded stones, 0.16m thick. Formed the lower subsoil.
106	2	Natural geology Pinkish-orange friable sandy clay, with 5% medium sub-rounded sandstone pebbles.
107	1	Natural deposit Light silver-grey compact and sticky clay. Contains >1% charcoal flecks and smears. This deposit was identified using an auger, and sits 1.9m below peat deposit 100 .
108	3	Cut of small pit Small sub-circular, bowl-shaped pit measuring 0.4m x 0.34m x 0.09m, contained fill 109 . Possibly relates to kiln 116=120 and small pit complex 110, 112 and 114 .
109	3	Fill of pit 108 Grey-brown friable clay-silt with up to 25% charcoal inclusions, 0.09m thick.
110	3	Cut of pit Sub-oval in plan, with gradually sloping sides and flat base, it measured 0.84m x 0.59m x 0.1m. It has been cut to the south-west by smaller pit 112 , and is clipped to the north by pit 114 . It may have been truncated by later agriculture.
111	3	Fill of pit 110 Silver-grey compact, fine sandy clay with >1% sub-rounded pebbles, 0.1m thick. Pit 112 has been cut into the deposit.
112	3	Cut for small pit Sub-oval with sharp sides and a flat base, measured 0.47m in width and 0.13m in depth, the length is unknown as it runs under the trench section. It cuts through pit 110 .
113	3	Fill of pit 112 Grey/brown friable clay silt with >2% small sub-rounded stones and 2% charcoal flecks. A small possible lithic core was removed. The stone was not of good quality and it has been heavily abraded.
114	3	Cut for possible pit/posthole Circular in plan, bowl-shaped, with sharply sloping sides to the north, and measured 0.45m x 0.43m x 0.09m. Clips the very northern edge of 110 .
115	3	Fill of pit 114 Mottled black/grey firm clay silt with 1% small sub-rounded pebbles and 10% charcoal flecks; 0.09m thick.
116	3	Cut southern half of kiln Figure of 8-shape in plan, although it has been truncated, probably by later

Context	Trench	Description
		agricultural activity. It was aligned roughly north/south. U-shaped in section to the south before flattening out towards the centre. The feature extended beyond the limit of excavation, and measured 2.9m x 1.04m. The depth at the southern end is 0.22m, with an average depth of 0.07m throughout.
117	3	Fill of 116 Grey/black compact silty clay with charcoal, ash and sand, 5% small to medium pebble inclusions. Only single fill, but the surrounding natural clay shows evidence of heat subjection.
118	3	Cut of small pit/posthole Oval in plan and rounded v-shape in plan, measured 0.6m x 0.36m x 0.13m. Solitary feature, with no obvious relationship to the other features observed in Trench 3.
119	3	Fill of 118 Grey firm silty sand with 20% charcoal flecks, 0.13m thick.
120	3	Cut of northern half of kiln Figure of 8 as 116 , but more u-shaped. Has been truncated to the west and north, probably by modern agriculture, meaning that the sides were very ephemeral.
121	3	Fill of 120 Grey/brown firm silty clay with quantities of ash. 5% small sub-rounded pebbles. Considerable amounts of charcoal and heat-affected surrounding clay suggest that the feature was a kiln.
122	3	Topsoil Dark brown friable silty loam, 5% small to medium sub-rounded pebbles; 0.33m thick.

APPENDIX 3: METAL DETECTING SURVEY

STRATASCAN

Geophysical Survey Report

Dover Lodge Farm, Staining Blackpool

For

Oxford Archaeology North

April 2007

J2318

Hannah Heard BSc (Hons) AIFA



Document Title: **Geophysical Survey Report
Dover Lodge Farm, Staining, Blackpool**

Client: **Oxford Archaeology North**

Stratascan Job No: **J2318**

Techniques: **Non-ferrous metal detecting survey**

National Grid Ref: **SD 364 359 and SD 366 356**



Field Team: **Mark Styles and Alec Philips BSc (Hons)**

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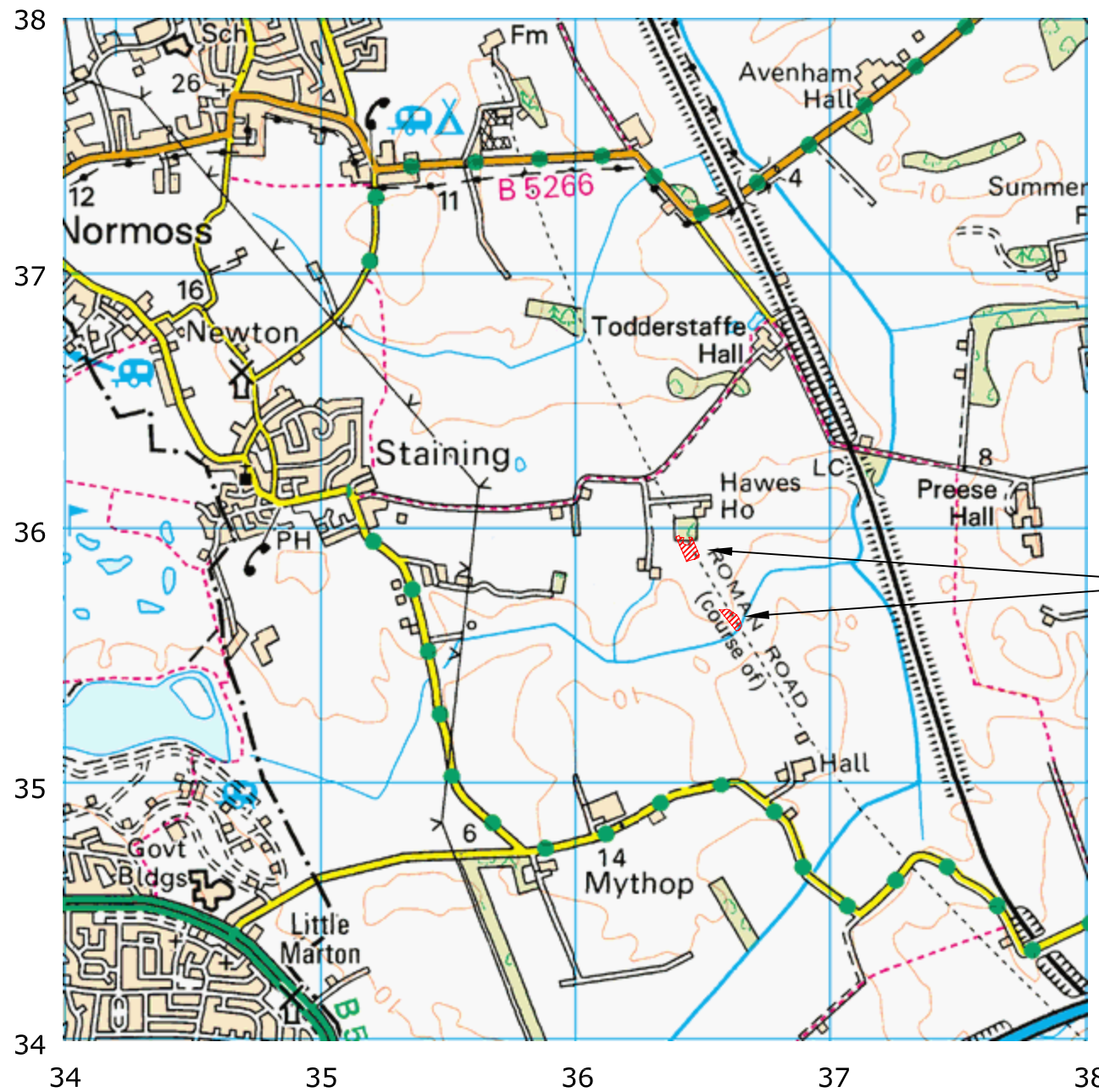
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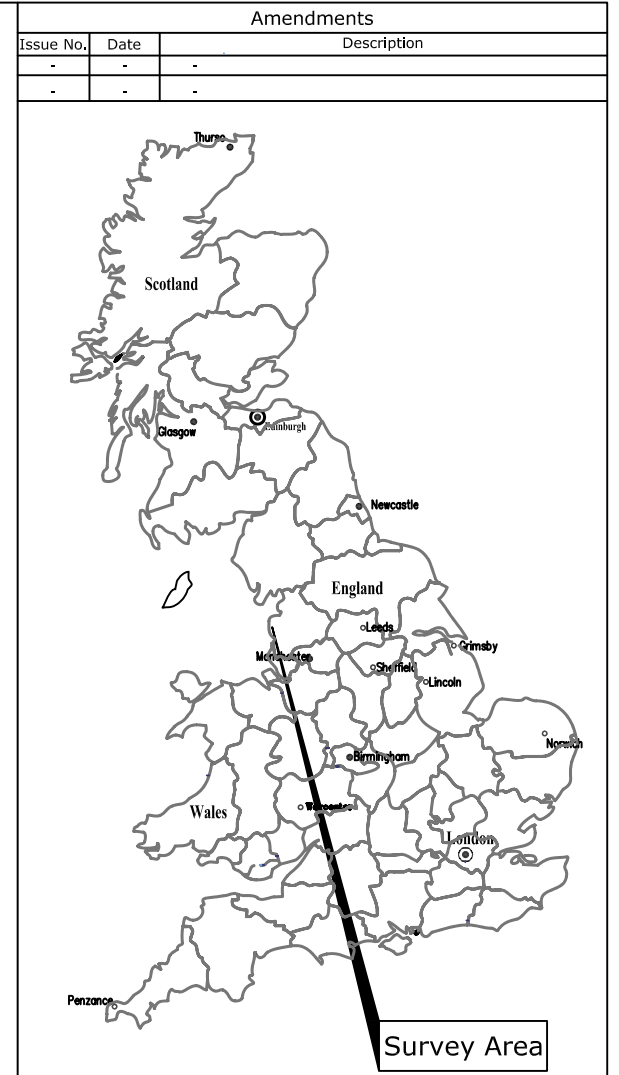
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Survey Area



Site centred on NGR SD 364 359 & 366 356

Client
OXFORD ARCHAEOLOGY NORTH

Project Title **GEOPHYSICAL SURVEY - DOVER LODGE FARM, STAINING, BLACKPOOL** Job No. 2318

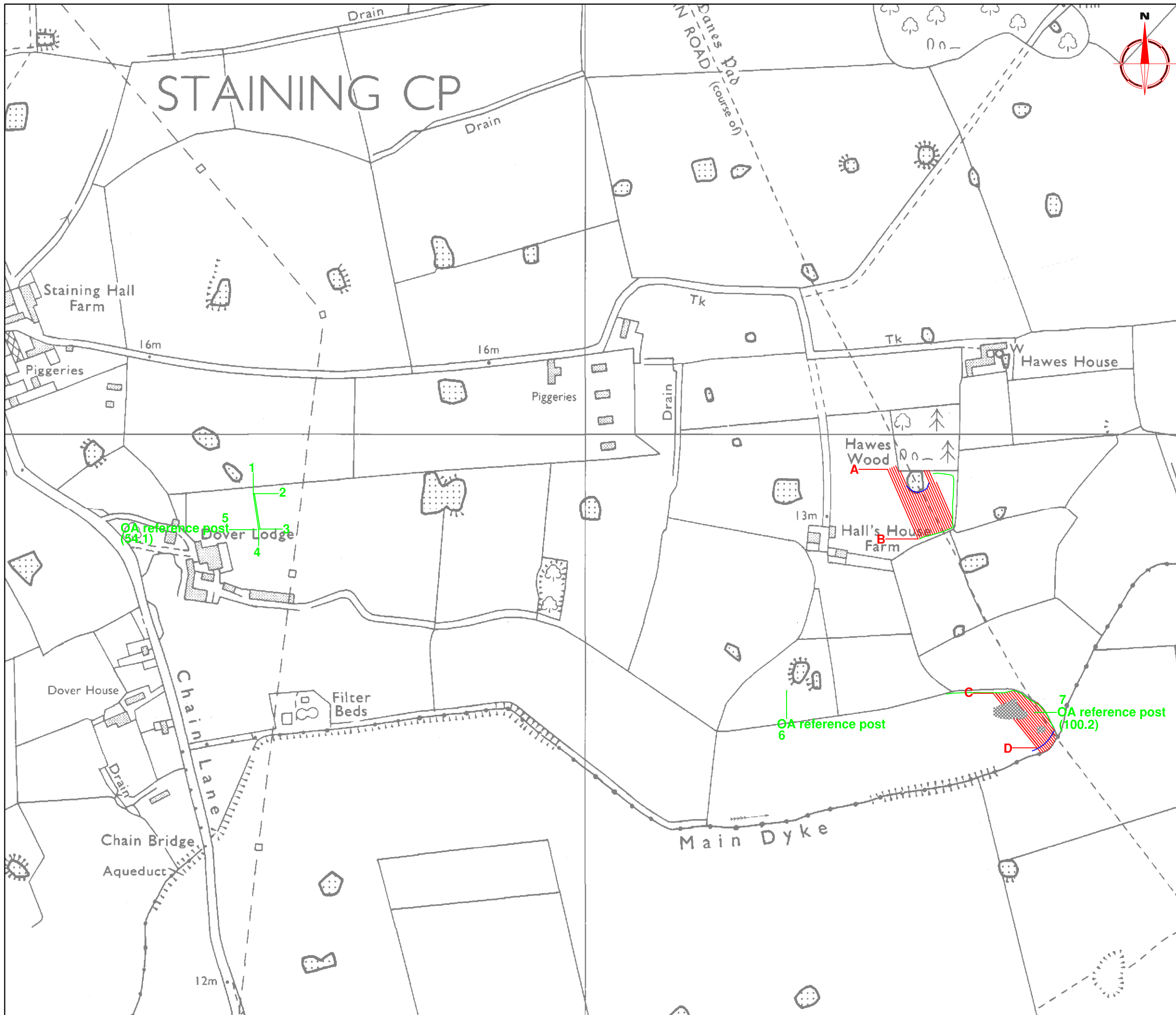
Subject
LOCATION PLAN OF SURVEY AREA






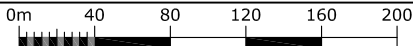
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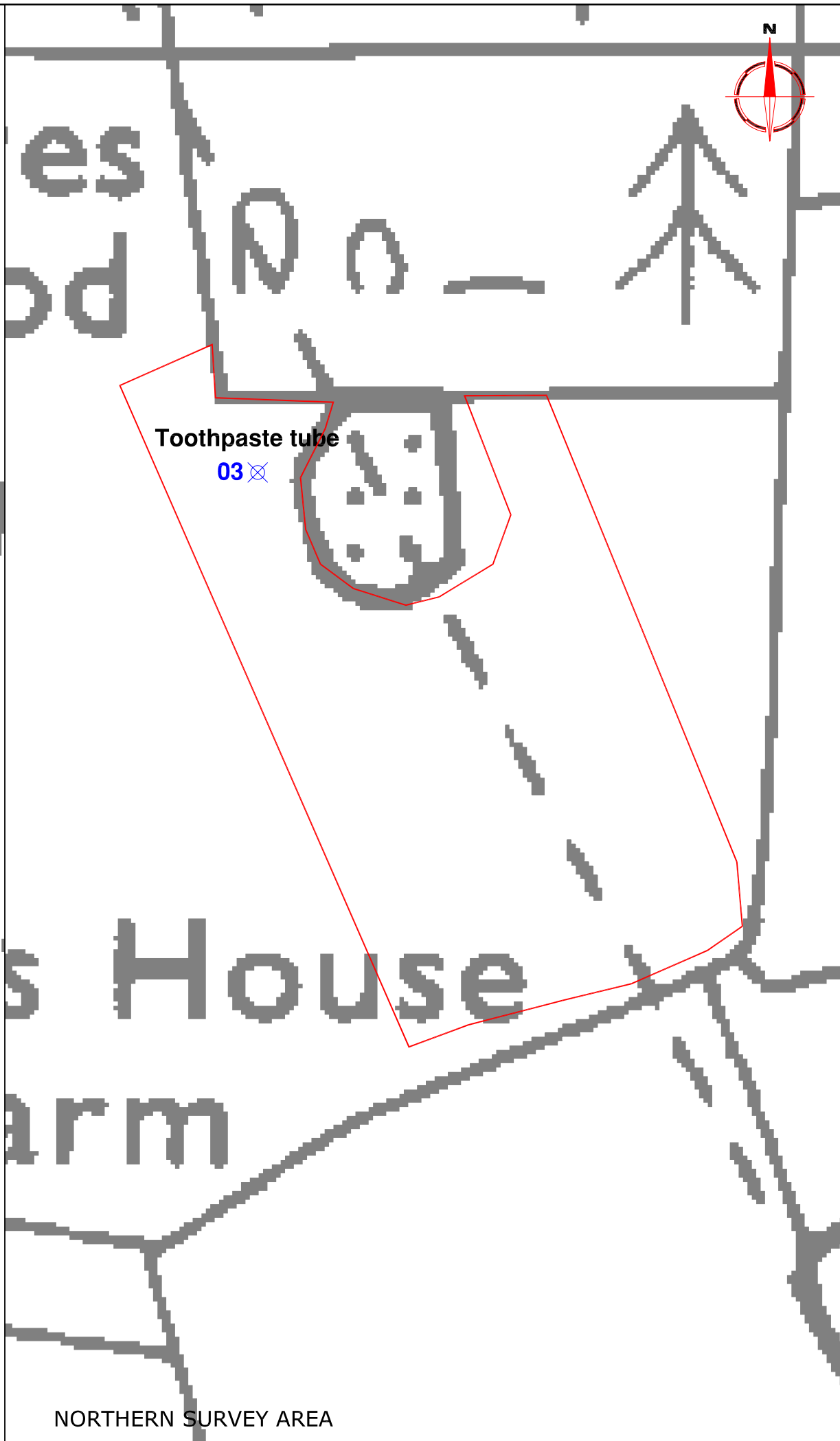
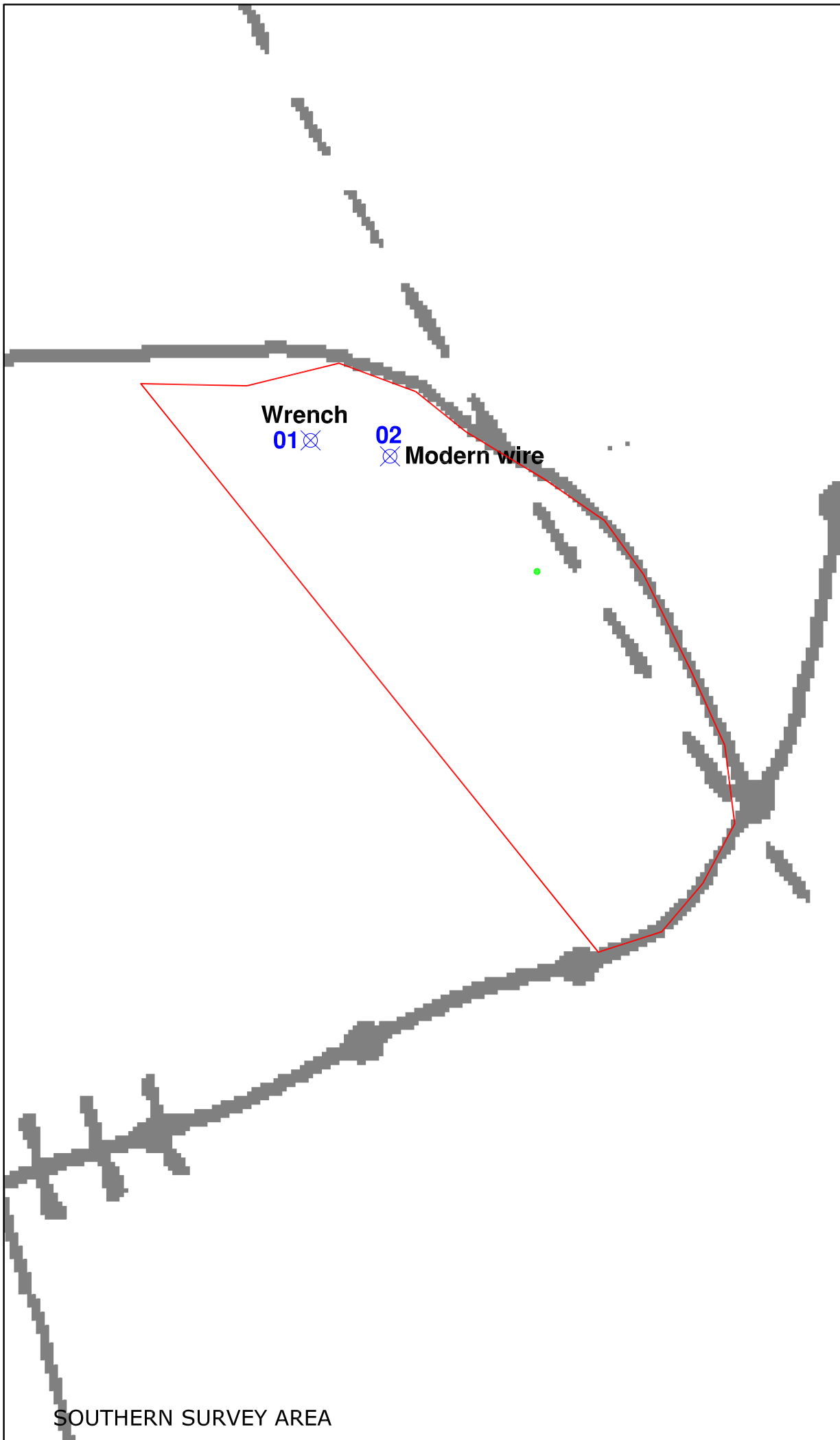


Scale 1:25 000
 0m 500m 1000m

Plot A3	Checked by SAS	Issue No. 01
Survey date APRIL 07	Drawn by HH	Figure No. 01



Amendments		
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-	-	-
OS GRID REFERENCES		
A	336413.807, 435951.950	
B	336455.560, 435856.692	
C	336558.507, 435645.457	
D	336618.384, 435570.891	
1	335545.418, 435918.670	
2	335547.040, 4359118.711	
3	335554.646, 435870.210	
4	335532.782, 435869.961	
5	335549.606, 435869.355	
6	336275.497, 435648.897	
7	336614.563, 435619.331	
	3m metal detection traverses	
	Topographic survey of field boundary	
	Topographic survey of pond edge and dyke	
	Area of landscaping activity	
Client		
OXFORD ARCHAEOLOGY NORTH		
Project Title		Job No. 2318
GEOPHYSICAL SURVEY - DOVER LODGE FARM, STAINING, BLACKPOOL		
Subject		
LOCATION AND REFERENCING OF SURVEY LINES		
STRATASCAN™		
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Scale		
1:4000 		
Plot	Checked by	Issue No.
A3	SAS	01
Survey date	Drawn by	Figure No.
APRIL 07	HH	02



Amendments		
Issue No.	Date	Description
-	-	-
-	-	-

KEY	
⊗	Find location
03	Find number
coin	Brief description

Finds positions recorded using a Leica system 500 DGPS

Client
OXFORD ARCHAEOLOGY NORTH

Project Title
GEOPHYSICAL SURVEY -
DOVER LODGE FARM, STAINING,
BLACKPOOL

Job No. 2318

Subject
PLOT OF THE NON-FERROUS METAL
DETECTING SURVEY

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Scale 1:750
0m 5 15 30m

Plot A3	Checked by SAS	Issue No. 01
Survey date APRIL 07	Drawn by HH	Figure No. 03

1 SUMMARY OF RESULTS

A non-ferrous metal detecting survey was carried out at the proposed development site of Dover Lodge Farm, Stainings, Blackpool. The survey area consists of two separate fields situated along the course of a Roman road. Three modern metallic objects were identified within the survey area. No non-ferrous finds of archaeological significance were identified within the survey area.

2 INTRODUCTION

2.1 Background synopsis

Stratascan were commissioned by Oxford Archaeology North to undertake a metal detecting survey of an area outlined for development. This survey forms part of an archaeological investigation by Oxford Archaeology North.

2.2 Site location

The two sites are located east of Staining, on the outskirts of Blackpool at OS ref. SD 364 359 and SD 366 356.

2.3 Description of site

The survey area is approximately 0.8ha of agricultural land currently under pasture. The survey area consists of two separate fields, both of which are situated along the course of a Roman Road. Situated in the northern field is a large pond. In the southern field two areas of landscaping are present which are associated with the proposed development. Newt fences are present around the perimeter of the survey area.

2.4 Geology and soils

The underlying geology is Triassic Mudstone with overlying Boulder Clay and Morainic Drift. (British Geological Survey South Sheet, Fourth Edition Solid, 2001; First Edition Quaternary, 1977). The overlying soils in the northern field are known as Stanway soils which are typical stagnogley soils. These consist of slowly permeable seasonally waterlogged, often stoneless, fine silty or fine silty or clayey soils on rock (Soil Survey of England and Wales, Sheet 3 Midland and Western England). The overlying soils in the southern field are known as Altcar 1 soils which are earthy eufebrous peat soils. These consist of deep peat soils with earthy topsoil (Soil Survey of England and Wales, Sheet 3 Midland and Western England).

2.5 Site history and archaeological potential

No details were available to Stratascan. However, the survey areas are situated along the course of the Roman Road, Danes Pad, therefore suggesting the potential for Roman activity within the area.

2.6 Survey objectives

The objective of the survey was to locate non-ferrous metal objects of possible archaeological significance in order that they may be assessed prior to development.

2.7 Survey method

A metal detecting survey can identify key areas of interest by defining the spatial extents of objects unearthed. The recovered finds can provide an indication of earlier land uses. This survey technique allows a rapid assessment of large areas and can lead to targeted areas for detailed geophysical survey, such as gradiometry or resistivity.

3 **METHODOLOGY**

3.1 Date of fieldwork

The fieldwork was carried out over 2 days from 4th-5th April 2007. Weather conditions during the survey were fine and sunny.

3.2 Grid locations

The survey baselines were set out using a Leica total station and referenced to OS coordinates with a Leica system 500 DGPS.

3.3 Survey equipment

A Garrett GTAx 750 was used to carry out the metal detecting survey.

3.4 Sampling interval, depth of scan, resolution and data capture

3.4.1 Sampling interval

Scanning was carried out along 3m spaced traverses across the survey area. A 0.6m 'sweep' was carried out either side of each traverse, covering a 1.2m wide corridor along every 3m traverse. The coil level is kept at a constant height approximately 3-5cm above the ground.

3.4.2 Depth of scan and resolution

The GTAx 750 has a typical depth of penetration of up to 30cm (depending on size and material). This would be increased if strongly magnetic objects have been buried in the site.

3.4.3 Data capture

No automatic find settings were applied to the GTAx 750. The detection of any metal targets is indicated by an increase in sound. The target ID display is used to omit any ferrous objects from the survey, although it is known that a small percentage of responses may still be picked up and subsequently identified as ferrous. Finds are then pinpointed and excavated using the smallest hole possible. The hole is then filled. The find is given an individual ID number, bagged, and its position recorded to OS coordinates using a Leica system 500 DGPS.

3.5 Presentation of results and interpretation

The presentation of the data for each site involves a print-out of the finds location (Figure 2) and a spreadsheet containing the object ID, easting, northing and preliminary description (Table 1).

4 RESULTS

No finds of archaeological significance were detected in both survey areas. Two strong metallic responses were identified in the north of the southern survey area. When excavated, these were revealed to be a wrench and some modern wire. One metallic response was also identified in the northern survey area; this was revealed to be a toothpaste tube.

Find Number	OS Eastings	OS Northings	Brief Description
01	336582.07	435638.27	Wrench
02	336593.55	435635.97	Modern wire
03	336433.71	435939.39	Toothpaste tube

Table 1: Metal detecting survey results

5 CONCLUSION

No finds of archaeological significance were identified from the non-ferrous metal detecting survey. However, the lack of near surface metallic finds may not represent the absence of archaeological activity within the area. Further investigation may be needed to assess the archaeological potential of the area.

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