



ST MICHAELS ON WYRE RISING MAIN, LANCASHIRE

Desk-Based Assessment and Walkover Survey



Oxford Archaeology North

January 2006

United Utilities

Issue No: 2005-06/466

OAN Job No: L9600

NGR: SD 47818 42840 – 45260
41328

Document Title: ST MICHAELS ON WYRE RISING MAIN, LANCASHIRE

Document Type: Desk-Based Assessment and Walkover survey

Client Name: United Utilities

Issue Number: 2005-06/466

OA Job Number: L9600

National Grid Reference: SD 47818 42840 – 45260 41328

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SUMMARY

Following a proposal by United Utilities to construct a new rising main between Churchtown (SD 47818 42840) and St Michael's on Wyre (SD 45260 41328) the Specialist Advisor (Archaeology) recommended a programme of archaeological work. This was to comprise a desk-based assessment and rapid identification walkover survey of an area around the proposed development, in order to assess the likely impact on any remains of archaeological significance.

St Michael's on Wyre is a short distance to the south-west of Garstang and the A6, and, as the name suggests, is situated on the north bank of the River Wyre. The two main settlements within the study area, St Michael's and Churchtown are known to be of medieval origin, but there are earlier remains from the general area including prehistoric artefacts, which suggest that it has been settled for some time. There are no known sites of Roman or early medieval date within the study area, but there are forts, roads and the occasional findspot from the general locality, which suggest there was a Roman presence and place-names indicate Norse settlement in the region. During the post-medieval period the area was rapidly improved and large areas of former moss reclaimed for agriculture.

In total, of 16 sites of archaeological interest are recorded in the Lancashire Historic Environment Record (HER), and a further 31 Listed Buildings. The desk-based assessment and walkover survey identified an additional 24 sites. These vary from field systems comprising boundaries and areas of ridge and furrow, to marl pits and individual buildings and find spots. A number of sites were identified through the examination of aerial photographs, which were confirmed during the walkover survey, and several potential sites were recorded as field names on early maps, although the exact nature of these is uncertain. Many sites could not be accurately dated, but are likely to be medieval or post-medieval in origin, and relate to the gradual improvement of the land. A large complex of former watercourses of unknown date is also recorded in aerial photographs, running parallel to the proposed development.

Of the 40 sites identified within the study area, 14 were considered likely to be affected. A variety of types of further work are recommended in order to more fully record and investigate these prior to the development taking place, ranging from topographic survey to evaluation.

ACKNOWLEDGMENTS

Oxford Archaeology North (OA North) would like to thank United Utilities for commissioning and supporting the project. In addition, thanks are also due to Peter Isles and Lesley Mitchell at the Lancashire County Council Environment Directorate and Historic Environment Record (HER) for their help and information, and to the staff of the Lancashire County Record Office in Preston (LRO(P)) for their patient assistance.

Daniel Elsworth undertook the desk-based assessment and Peter Schofield carried out the walk-over survey, and both compiled the report. Mark Tidmarsh produced the drawings. Alison Plummer managed the project and edited the report.

Introduction

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Following a proposal by United Utilities to construct a new rising main between Churchtown (SD 47818 42840) and St Michael's on Wyre (SD 45260 41328), the Specialist Advisor (Archaeology) at Lancashire County Environment Directorate (LCCED) recommended a programme of archaeological assessment be carried out prior to the development. This was to comprise a desk-based assessment and a rapid identification walkover survey of the proposed route.
- 1.1.2 This report sets out the results of the desk-based assessment and walkover survey in the form of a short document, outlining the findings, followed by a statement of the archaeological potential and significance, and an assessment of the impact of the proposed development. The significance criteria detailed in PPG 16 (DoE 1990) were employed during the assessment.

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 OA North submitted a project design (*Appendix 2*) in response to a brief (*Appendix 1*) issued by the Specialist Advisor (Archaeology) at Lancashire County Council Environment Directorate. The project design was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 DESK-BASED ASSESSMENT

- 2.2.1 A study area of 0.5km either side of the proposed pipeline route was examined. The desk-based assessment comprised an examination of published and unpublished sources, original documents and maps and any sites of archaeological interest within the study area were collated into a gazetteer (*Section 4*). The results were analysed using the set of criteria used to assess the national importance of an ancient monument.
- 2.2.2 ***Historic Environment Record (HER)***: this is a list of all of the known sites of archaeological interest within the county, which is maintained by LCC. It is the primary source of information for an assessment of this kind and comprises a description and location of all the sites, together with appropriate references to any primary or secondary sources. Details of Scheduled Monuments and Listed Buildings are also contained within it.
- 2.2.3 In addition, vertical aerial photographs covering the entire area were examined, as were a smaller number of this type of photograph, relating to specific HER sites. Of the verticals only those from 1963 (HSL UK) were clear and detailed enough to identify any additional sites of archaeological interest, although a large number were recorded through their examination.
- 2.2.4 ***Lancashire County Record Office, Preston (LRO(P))***: this was visited in order examine primary documents relating to the area, particularly early maps. These allow the identification of further sites of archaeological interest within the study area. Other primary sources and secondary sources were also consulted to allow additional information to be gathered about individual sites and a general historical background to be compiled.
- 2.2.5 ***Oxford Archaeology North***: OA North has an extensive archive of secondary sources relevant to the study area, as well as numerous unpublished client reports on work carried out both as OA North and in its former guise of Lancaster University Archaeological Unit (LUAU). These were consulted where necessary.

2.3 WALKOVER SURVEY

- 2.3.1 Following the desk-based assessment an enhanced Level I-type survey (*Appendix 1*) was undertaken to relate the existing landscape to research

findings. This encompassed a one hundred metre corridor along either side of the pipeline, walked in a systematic fashion. Archaeological features identified within the landscape were recorded using the relevant OA North *pro forma*, and the features accurately located using differential GPS survey, which can achieve an accuracy of $\pm 0.25\text{m}$ with respect to the OS national grid.

2.4 ARCHIVE

- 2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 2*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the Lancashire County Record Office in Preston on completion of the project. A copy of the report will be deposited with the LCCED.

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 The development area is situated between Churchtown at the north-east (SD 47818 42840) and St Michael's on Wyre at the south-west (SD 45260 41328), and runs approximately parallel to Tarnacre Lane/Garstang Road, which connects the two. It comes to within less than 1km of Churchtown and passes through the west side of St Michael's on Wyre. The north-east end is approximately 3km south-west of Garstang and the south-west end is approximately 3km north-east of Great Ecclestone. The area is situated within the North Lancashire Plain, which extends southwards from Morecambe Bay in the north to the outskirts of Liverpool in the south (Fig 1). The eastern boundary of the plain is contained by the Bowland fringe. Most of the study area is within the parish of St Michael's on Wyre, although a small part of the north-east end is in Garstang. The small area within Garstang is part of the township of Kirkland, while the rest is within Upper Rawcliffe with Tarnacre.
- 3.1.2 Although Permo-Triassic red mudstones, siltstones and sandstones ('New Red Sandstone') constitute much of the floor of the Lancashire lowlands, the solid rock geology rarely emerges from beneath its thick covering of glacial and post-glacial deposits, which is dominated by clay soils (Countryside Commission 1998, 87). Prior to widespread reclamation of land during the last two centuries, the area was predominantly marshland formed by rising sea levels after the last glaciation. Retreating ice-sheets created many badly-drained hollows that soon became filled with peat, giving rise to the mosses and meres, which dominated the area until relatively recently (*op cit*, 88). St Michael's on Wyre lies on the southern edge of one such hollow, the Winnerleigh/Cockerham Moss, which forms part of the Over Wyre mosslands (Middleton *et al* 1995, 8). The Winnerleigh/Cockerham Moss is a one-hectare basin mire, which is likely to date from the immediate post-glacial period, and lies under permanent pasture (*op cit*, 254).

3.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 3.2.1 **Introduction:** this historical and archaeological background is principally compiled from secondary sources and is intended to put the results of the assessment into a wider context. The relatively large size of the study area inevitably means that the background is generalised in places, but specific references are made to the immediate area where relevant.
- 3.2.2 **Prehistoric:** the prehistory of Lancashire is largely non-monumental in character, and is predominantly represented by finds of lithic and metal artefacts, made by chance or during systematic surveys (*op cit*, 17). Scatters of lithic material recovered from ploughsoil constitute the commonest evidence for activity during the period. Palaeolithic finds from Lancashire are limited, but the Mesolithic is better represented, with large numbers of upland sites, and an increasing body of lowland sites, particularly adjacent to wet mire, alluvial, and coastal deposits (Cowell 1996, 30). During the Neolithic, the

distribution of artefacts suggests that settlement was concentrated in the lowlands, mainly around the coasts and in river valleys; in particular the early farming communities seem to have sought out gravel in a landscape predominantly covered with boulder clay (Middleton 1996, 40).

- 3.2.3 The great increase in the variety and geographical spread of finds dating to the Bronze Age probably indicates a more extensive use of the landscape (*op cit*, 54). Finds of metalwork are concentrated in the lowlands, particularly in the wetlands, although this may reflect depositional practices, rather than the location of settlements (*op cit*, 45). Conversely, finds of axe hammers and other perforated stone implements, which are relatively common in north Lancashire, tend to be found in 'dry land' locations, evenly spread across the landscape. In addition, there is a considerable body of evidence for Bronze Age burial monuments, dating to the period 2500-1600BC; many lie in upland areas, although they were formerly much more common in the lowlands, farming activity probably having removed a large number (*op cit*, 49). However, despite the wider distribution of finds, it has been argued that, on clay soils away from the coast, the landscape continued to support thick mixed woodland (*op cit*, 54).
- 3.2.4 Artefactual evidence declines sharply after c 1400BC, and the development of blanket peat in the uplands and raised mires in the lowlands suggests that this may have been indicative of a genuine abandonment of some parts of the landscape (*op cit*, 55). Evidence for the Iron Age in lowland Lancashire is notoriously scarce, indeed very little is known about the nature of material culture and settlement in Northern England in general (Cunliffe 1991, 101). In part, this is regarded as being a product of poor site visibility, with Iron Age pottery being relatively fragile, the boulder clay soils which cover the region not favouring aerial photographic or geophysical prospection, and the predominance of pastoral farming meaning that finds have less chance of being uncovered by ploughing (Middleton *et al* 1995, 19). The contrast of limited artefactual evidence with substantial evidence for prolonged clearance in pollen diagrams suggests the number of known archaeological sites of the period grossly under-represents actual settlement activity, and that many sites remain to be detected (*ibid*).
- 3.2.5 There are two sites within the study area belonging to the prehistoric period, both of probable Neolithic date: a polished stone adze (Site **06**) and a scatter of waste flakes and an arrowhead (Site **37**).
- 3.2.6 **Romano-British:** a Roman presence in the region is clearly attested by the forts of Kirkham and Ribchester, to the south-west and south-east of the study area respectively, by the extensive first to third century site at Walton-le-Dale, some 18km to the south, which appeared to be involved in part with the manufacture and distribution of goods (Gibbons *et al* forthcoming); and by the fort at Lancaster, 17km to the north (Shotter 1997). Sections of a Roman road leading from Walton-le-Dale to Lancaster have been identified on the ground, predominantly through topographic study and the examination of aerial photographs and it is probable that its course passes only c3km to the east of the north-east end of the study area (Margary 1957, 108). A second road, suggested to be of Roman origin, has also been identified near St Michael's on

Wyre by members of the Pilling and District Historical Society (SD 459 441), although the exact details of this are uncertain (OA North 2003, 9).

- 3.2.7 In contrast to the sites referred to above, the rural non-military archaeology of the Roman period remains elusive over much of northern Lancashire (Middleton *et al* 1995, 19), a few farms or rural settlements have been discovered. As per the Iron Age, the small number of such sites that have been identified probably represents only a small fraction of the total. Romano-British activity in the area is demonstrated by the discovery of a Roman coin hoard at Myerscough Park (SD 5008 3997), south-east of the study area; the find was made in the eighteenth century and has since been lost, however. A single coin found to the east of Catterall Hall Farm (HER No. 15384) may indicate that there is the potential for further discoveries to be made.
- 3.2.8 There are no confirmed sites of Romano-British date within the study area.
- 3.2.9 **Early Medieval:** evidence for early medieval activity is limited throughout northern Lancashire; few artefacts of the period have been recovered, and there is almost no archaeological evidence for settlement. However, logic suggests that the rural settlements of the Roman period either continued or declined gradually, and by the end of the period, considerable densities of Scandinavian place names imply that a large number of settlements existed, either newly founded, or renamed (Newman 1996, 103). The study area lies within one such cluster of names, which follows the low land flanking the Wyre, and includes Catterall and Garstang; indeed, it has been suggested that Garstang itself represented the meeting place for the Scandinavian community in the Fylde (Kenyon 1991, 134-5).
- 3.2.10 There are no known sites of Early medieval date within the study area.
- 3.2.11 **Medieval:** The township of Upper Rawcliffe with Tarnacre was held by Earl Tostig at the time of the Norman Conquest and was probably granted with Garstang to the de Lancaster family (Farrer and Brownbill 1912, 267). In time it passed to the de Kirkbys of Kirkby Ireleth (now in Cumbria) and the majority then passed to the Urswicks (*op cit*, 268). Kirkland formed part of the lordship of Nether Wyresdale, first mentioned in 1246, which was granted by William de Lancaster III to Robert the Tailor (*op cit*, 313). It subsequently passed to the Botelers, who became the Butlers and whose heirs retained it until the nineteenth century (*op cit*, 314). Both St Michael's on Wyre and Churchtown are essentially medieval villages and both have the remains of market crosses of medieval date (HER Nos. 1403 (Churchtown) and 1405 (St Michael's on Wyre)). Similarly, both have churches of medieval origin (Farrer and Brownbill 1912, 261 and 293). Churchtown was originally known as 'Garstang Churchtown', presumably to distinguish it from 'Garstang Market-town', although both originally held markets; at Churchtown this is thought to have been held around the cross (Taylor 1902, 203-4).
- 3.2.12 There are three sites of possible medieval date within the study area, including relict field systems (Sites **23** and **31**), and the possible site of a cross (Site **22**).
- 3.2.13 **Post-medieval:** the development of settlements on the Lancashire Plain is, as a whole, a relatively recent occurrence and coincides largely with the drainage of the mosses in the nineteenth century. This is evident in early maps of the area (see *Section 3.3*), which demonstrate the shrinkage of the wetland areas between the sixteenth and late eighteenth centuries. The Lancaster Canal,

lying north-east of the study area, was opened in 1797 and ran between Preston and Tewitfield. The canal was used to transport coal, slate, timber food, and limestone and later offered a passenger service between Preston and Kendal (Wyre Borough Council n.d.).

- 3.2.14 The majority of the area remained very rural in character during the eighteenth, nineteenth and early twentieth centuries, with most of the settlements remaining small. Agriculture dominated the local economy and there were a number of isolated farmsteads in the general area. A plan to construct a railway from Knott End through the Over-Wyre area to Garstang and connect it to the London and North West Railway Company's line at Garstang and Catterall station was mooted in the early 1860s. It was promoted by local landowners, principally Wilson France, the Squire of Rawcliffe, who saw the proposed line as a means of improving access to the area, and was completed in stages from the end of the nineteenth century and beginning of the twentieth (Sobee 1997, 135-138).

3.3 MAP REGRESSION ANALYSIS

- 3.3.1 **Early Maps:** the earliest maps of the county, such as Saxton's of 1577 and Speed's of 1611 show little detail, although they do show the enormous extent of Pilling Moss at this time (OA North 2003).
- 3.3.2 **Yates 1786:** this is the first county map to show any real detail, although it adds little useful information and field boundaries are not depicted. Pilling Moss is still extremely large at this time, and the basic arrangement of the two major settlements in the area, Churchtown and St Michael's on Wyre, is evident. No additional sites of archaeological interest were identified through reference to this map.
- 3.3.3 **Corn Rate map and Tithe Maps:** the Corn Rate map for St Michael's on Wyre (LRO(P) AT/14 1824) and Tithe Maps of Upper Rawcliffe (LRO(P) DRB 1/161 1840; 1841) and Kirkland (LRO(P) DRB 1/120 1847; 1848) reveal the form of the landscape prior to a number of later alterations, in particular the removal and rearrangement of field boundaries. The Tithe Maps essentially show a fossilised landscape, as it was at the height of the Industrial Revolution, but also preserving earlier information in its field names. A number of these within the study area may indicate sites of archaeological interest, including agricultural buildings (Sites **09**, **18**, and **20**), earlier houses (Site **13**), the possible site of a cross (Site **22**), and a possible salt production site (Site **04**). Other sites were also identified, including a track (Site **14**), cottages (Site **24**), ponds (Site **26**), and a house (Site **05**).
- 3.3.4 **Ordnance Survey 1847 (Plates 1 and 2):** the landscape has essentially changed very little in the few years since the production of the Tithe Maps. A number of sites identified by the HER are taken from this map, such as former schools, vicarages and so forth, although these tended to be outside the study area. A single site, the tithe barn (Site **19**) was identified through reference to this map. Some of the former field systems identified in aerial photographs also correspond to boundaries still present at this time.

- 3.3.5 **Ordnance Survey 1893 (Plates 3 and 4):** by this date the landscape has noticeably altered, with a number of field boundaries being removed and reorganised, especially around the north-east and central part of the study area. This is presumably a result of changing agricultural practices and improvements made to mosses. No additional sites of archaeological interest were identified through reference to this map.
- 3.3.6 **Ordnance Survey 1912 and 1932:** although the landscape appears to change very little during the early twentieth century there are a few notable differences, namely the removal of further field boundaries. No additional sites of archaeological interest were identified through reference to these maps.

3.4 ARCHAEOLOGICAL INTERVENTIONS

- 3.4.1 Two previous pieces of archaeological work have been undertaken in the immediate vicinity of the study area. One of these, a building investigation of Catterall Hall Farm, examined remains thought to date from 1704, although re-used timbers within the structure suggest it may have earlier origins (Morgan 1993). This has little relevance to the current project, however. More recently a desk-based assessment and walkover survey was carried out of an area around Sharples Lane, which includes some of the current study area (OA North 2003). This identified 17 sites of archaeological interest, including some within the current study area, all of which were considered likely to be affected by the related development.

4. WALKOVER SURVEY

4.1 INTRODUCTION

- 4.1.1 The walkover survey aimed to determine both the survival of above ground remains of sites recorded during the desk-based assessment and also identify previously unrecorded sites along the proposed pipeline route.
- 4.1.2 All the fields containing, and adjacent to, the pipeline were walked systematically along the pipeline route and the ground conditions were good for identifying sites through walkover. The vast majority of fields explored were under pasture and had a covering of short grass. Several fields were at an early stage of arable cultivation, with freshly ploughed and seeded fields, and thus were also easily explored.

4.2 RESULTS

- 4.2.1 The descriptions of twelve sites identified through the desk-based assessment were enhanced through the walkover survey (Sites **8, 10, 16, 17, 21, 23, 26, 27, 28, 31, 32** and **34**), and the survey also identified five new sites of archaeological significance (Sites **11, 15, 29, 30** and **33**). What was immediately evident was that there was intermittent survival of agrarian features along the pipeline route. The survey area is historically located on the southern edge of Rawcliffe Moss (Middleton *et al*, 1995) and is sandwiched between it and the alluvial plain of the river Wyre. The area skirts the northern side of the medieval village of St Michael's on Wyre and the road leading to Churchtown, and it is to be expected that there would be evidence of numerous field-systems and ridge and furrow cultivation. The earliest evidence of field-systems and cultivation were around the northern edge of St Michael's on Wyre, where one area of field boundaries had survived (Site **32**), whilst two adjacent areas had been removed (Sites **31** and **34**). The pattern of piecemeal nineteenth and twentieth century enlargement and removal of historic boundaries seen through the map regression analysis (see *Section 3.3*) is mirrored across the rest of the pipeline route.
- 4.2.2 For the most part, the rest of the field-systems relate to post-medieval cultivation away from the village. This cultivation is potentially associated with the improvement of the edges of Rawcliffe Moss (where it emerges from under the alluvial soils to the south) and encroachment upon it after the peat had been extracted. Indeed, some of the ridge and furrow cultivation identified may in fact relate to the orientation of peat extraction beds. There was evidence for surviving field-systems containing either one or both elements of relict ditched field boundaries and ridge and furrow cultivation. (Sites **8, 10-Plate 8, 16, 17, 27** and **28**). Some areas of field-system, cultivation and ponds (Sites **21, 23** and **26**) identified through the desk-based assessment had been removed by modern improvement and intensive ploughing.
- 4.2.3 Sites newly identified by the walkover survey were all agrarian in nature and were limited to two areas of old marl pits. These consisted of sub-circular to

oval pits, which had been cut into the ground at the edges of fields and are now often filled with water as ponds. The pits are likely to be associated with post-medieval clay extraction, which would have helped improve the fertility of the fields. They are located to the north of St Michael's on Wyre (Sites **29**, **30** and **33**) and west of Tarnacre Hall Farm (Sites **11** and **15**) respectively.

5. GAZETTEER OF SITES

Site number	01
Site name	Kirkland
NGR	347600, 443000
Site type	Earthworks
Period	Unknown
HER No	LA434
Statutory Designation	-
Sources	HER; Middleton <i>et al</i> 1995, 251
Description	Field boundaries, watercourses and marl pits showing as crop marks.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	02
Site name	Upper Rawcliffe
NGR	347200, 443200
Site type	Watercourses
Period	Unknown
HER No	3853
Statutory Designation	-
Sources	HER
Description	Air photograph showing an area of former watercourses. Part of a system including Sites 03 and 12 that extends over 2km to the south-west.
Assessment	The majority of the site lies outside of the proposed development area and is unlikely to be affected.

Site number	03
Site name	Upper Rawcliffe with Tarnacre
NGR	346800, 442800
Site type	Earthworks
Period	Unknown
HER No	LA424
Statutory Designation	-
Sources	HER; Middleton <i>et al</i> 1995, 250
Description	Watercourses, field boundaries and ridge and furrow seen in an aerial photograph.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	04
Site name	Brookside Farm
NGR	347152 442632
Site type	Field name
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	Corn Rate map (AT/14 1824; Tithe Map (LRO(P) DRB 1/1621 1840)
Description	A field named 'Salhouse Meadow' is listed on both the Corn Rate map of 1824 and the Tithe Map of 1840. It may suggest that a salt-production site was present nearby.
Assessment	The site lies within the proposed development area and may be affected, although the uncertain nature of its location makes this difficult to assess.

Site number	05
Site name	Brookside Farm
NGR	347252 442600
Site type	House
Period	Post-medieval
HER No	-
Statutory Designation	-
Sources	Corn Rate map (LRO(P) AT/14 1824; Tithe Map (LRO(P) DRB 1/161 1840; Ordnance Survey 1847; 1893
Description	A building is shown on the Corn Rate map of 1824 and Tithe Map of 1840 in this location. It is also shown on the Ordnance Survey map of 1847 and named 'Raby House'. It has been replaced by different buildings, slightly to the east, by the Ordnance Survey map of 1893.
Assessment	The site lies close to the proposed development area and may be affected.

Site number	06
Site name	South bank of River Wyre
NGR	347400 442200
Site type	Stone adze
Period	Prehistoric: Neolithic
HER No	19141
Statutory Designation	-
Sources	HER
Description	Polished shafthole adze, almost rectangular in plan, measuring 175mm by 84mm by 30mm. Partially damaged, especially at butt end. The shafthole is centrally placed and of typical hourglass profile. Petrologically the implement belongs, on visual inspection, to Group XV.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected .

Site number	07
Site name	Buttsfield Wood
NGR	346650 442520
Site type	Pond
Period	Unknown
HER No	25111
Statutory Designation	-
Sources	HER
Description	Extension of a pond situated in Buttsfield Wood. The site measures 20m by 10m and is visible as a subrectangular cropmark.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	08
Site name	Tarnacre Hall Farm
NGR	346818 442384
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9139; Ordnance Survey 1847; Walkover survey
Description	A field system comprising an area of ridge and furrow orientated north-east/south-west and field boundaries is visible in an aerial photograph from 1963. The field boundaries were extant on the Ordnance Survey map of 1847 but a rationalisation

of boundaries in the nineteenth/twentieth century has left part of the relict boundaries and cultivation evident during the walkover survey. It revealed an area of wide ridge and furrow cultivation, measuring up to 7m wide, with linear field boundaries surviving as a shallow ditches. The ditches measured approximately 2m wide by 0.5m deep. The field system had been truncated a factory yard extension to the south.

Assessment The site lies within the proposed development area will be affected.

Site number 09
Site name Tarnacre Hall Farm
NGR 347041 442229
Site type Field name
Period Post-medieval
HER No -
Statutory Designation -
Sources Corn Rate map (LRO(P) AT/14 1824); Tithe Map (LRO(P) DRB 1/161 1840)
Description A field named 'Barn field' is marked on the Corn Rate map of 1824 and the Tithe Map of 1840, which suggests that there was a barn nearby.
Assessment The site lies close to the proposed development area but is unlikely to be affected.

Site number 10
Site name Upper Rawcliffe with Tarnacre
NGR 346700 442298
Site type Field system
Period Medieval – Post-medieval
HER No LA423
Statutory Designation -
Sources HER; Middleton *et al* 1995, 250; HSL UK 1963, Run 15, Frame 9139; Ordnance Survey 1847; Walkover survey.
Description An area of ridge and furrow orientated north-west/south-east with associated boundaries and marl pits is visible in aerial photographs from 1963 and identified as part of the North West Wetlands Survey. The field boundaries and marl pits were extant on the Ordnance Survey map of 1847 but a rationalisation of boundaries in the nineteenth/twentieth century has left relict boundaries and cultivation evident during the walkover survey. It revealed an area of wide ridge and furrow cultivation, measuring up to 7m wide, with both sinuous and linear field boundaries surviving as shallow ditches. The ditches measured approximately 2m wide by 0.5m deep.
Assessment The site lies outside of the proposed development area and is unlikely to be affected.

Site number 11
Site name Tarnacre Hall Farm
NGR 346737 442291
Site type Marl pit
Period Post-medieval
HER No -
Statutory Designation -
Sources Walkover survey
Description A small oval-shaped marl pit located at the corner of a relict field system (Site 10). It measures approximately 35m long by 15m wide by up to 0.6m deep. It is partially filled with water.
Assessment The site lies outside of the proposed development area and is unlikely to be affected.

Site number	12
Site name	Buttfield Pool
NGR	346500, 442500 (centre)
Site type	Watercourses
Period	Unknown
HER No	3814
Statutory Designation	-
Sources	HER
Description	A curving band of watercourses, aligned approximately north-east/south-west with lengths of watercourse, once probably continuous, running down the centre. The band is about 3km long and 500m wide in total.
Assessment	The main part site lies outside of the proposed development area and is unlikely to be affected although the south-west end may be.

Site number	13
Site name	Tarnacre Hall Farm
NGR	346799 442295
Site type	Field name
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	Corn Rent map (LRO(P) AT/14 1824; Tithe Map (LRO(P) DRB 1/161 1840)
Description	A field named 'Old House Meadow' is marked on the Corn rent map of 1824 and Tithe map of 1840, which perhaps suggest that a house, considered old at the beginning of the nineteenth century was present nearby.
Assessment	The site lies within the proposed development area and may be affected, although the inaccurate location makes this difficult to assess.

Site number	14
Site name	St Michael's on Wyre
NGR	345963 442466 – 346672 441953
Site type	Track
Period	Post-medieval
HER No	-
Statutory Designation	-
Sources	Tithe Map (LRO(P) DRB 1/161 1840)
Description	A track is shown on the Tithe Map of 1840.
Assessment	Part of the site is crossed by the proposed development area and will be affected.

Site number	15
Site name	Tarnacre Hall Farm
NGR	346714 442234
Site type	Marl pit
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	Walkover survey
Description	A small circular marl pit located at the corner of a field. It measures approximately 18m in diameter and is filled with water as a pond.
Assessment	The site lies close to the proposed development area but is unlikely to be affected.

Site number	16
Site name	Tarnacre Hall Farm

NGR	346718 442133
Site type	Ridge and furrow
Period	Medieval – post-medieval
HER No	
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frane 9139; Corn Rate map (LRO(P) AT/14 1824; Tithe Map (LRO(P) DRB 1/161 1840); Walkover survey
Description	An area of ridge and furrow is visible in an aerial photograph from 1963 orientated north-west/south-east. The field is named 'Barn Field' on the Tithe Map of 1840 but is called 'Unsworth Field' on the Corn Rate map of 1824. The majority of the ridge and furrow was also visible as slight, shallow earthwork features during the walkover survey.
Assessment	The site lies within of the proposed development area and will be affected.

Site number	17
Site name	Near Tarnacre Hall Farm
NGR	346559 442168
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9140; Ordnance Survey 1847; Walkover survey
Description	An area of ridge and furrow orientated north-west/south-east with associated field boundaries is visible in an aerial photograph from 1963. This was found to be part of a much larger area extending to the south-west during the walk-over survey. The field boundaries were extant in the Ordnance survey 1847 map but most had been removed by the Ordnance Survey 1893 map. At the south end of the site the ridge and furrow cultivation survives as straight, 7m wide ridges with boundary ditches measuring 2m wide by up to 0.4m deep.
Assessment	The site lies close to the proposed development area but is unlikely to be affected.

Site number	18
Site name	Near Tarnacre Hall Farm
NGR	346599 442042
Site type	Field name
Period	Post-medieval
HER No	-
Statutory Designation	-
Sources	Corn Rate map (LRO(P) AT/14 1824); Tithe Map (LRO(P) DRB 1/161 1840)
Description	A field named 'Barn Meadow' is marked on the Tithe Map of 1840, which might suggest that there was a barn nearby. It is called 'Unsworth Meadow' on the Corn Rate map of 1824, however, perhaps suggesting that it was not built until after this date.
Assessment	The site lies within of the proposed development area and may be affected although the inaccuracy of its location makes an assessment difficult.

Site number	19
Site name	St Michael's on Wyre
NGR	346703 441969
Site type	Tithe barn
Period	Post-medieval
HER No	-
Statutory Designation	-
Sources	Ordnance Survey 1847

Description	The Tithe Barn is marked in this position on the Ordnance Survey map of 1847.
Assessment	The site lies close to the proposed development area but is unlikely to be affected.
Site number	20
Site name	St Michael's on Wyre
NGR	346629 441914
Site type	Field name
Period	Post-medieval
HER No	-
Statutory Designation	-
Sources	Corn Rate map (LRO(P) AT/14 1824); Tithe Map (LRO(P) DRB 1/161 1840
Description	The field is named 'Barn Field' on the Corn Rate map of 1824 and the Tithe Map of 1840, suggesting that there was a field nearby .
Assessment	The site lies within the proposed development area and may be affected although the its inaccurate location makes this difficult to assess.
Site number	21
Site name	St Michael's on Wyre
NGR	346443 441973
Site type	Ridge and furrow
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9140
Description	An area of ridge and furrow orientated north-east/south-west is visible in an aerial photograph from 1963. Currently the field has been ploughed flat and there is no evidence of ridge and furrow cultivation surviving.
Assessment	The site lies close to the proposed development area and may be affected.
Site number	22
Site name	St Michael's on Wyre
NGR	346520 441858
Site type	Field name
Period	Medieval?
HER No	-
Statutory Designation	-
Sources	Corn Rate map (LRO(P) AT/14 1824); Tithe Map (LRO(P) DRB 1/161)
Description	A field named 'Cross Field' is marked on the Corn Rate map of 1824 and the Tithe Map of 1840, which perhaps denotes the position of a cross of some description.
Assessment	The site lies within the proposed development area and may be affected, although the inaccuracy of its position makes a detailed assessment difficult.
Site number	23
Site name	St Michael's on Wyre
NGR	346513 441837
Site type	Field system
Period	Medieval?
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9140; Tithe Map (LRO(P) DRB 1/161 1840)
Description	A group of field boundaries forming a row of strip fields is visible in aerial photographs from 1963. These partially correspond to boundaries shown as

	present on the Tithe Map of 1840. Currently the field has been ploughed flat and there is no evidence of either relict field boundaries or ridge and furrow cultivation surviving.
Assessment	The site lies within the proposed development area and will be affected.

Site number	24
Site name	St Michael's on Wyre
NGR	346597 441798
Site type	Cottages
Period	Post-medieval
HER No	-
Statutory Designation	-
Sources	Corn Rate map (LRO(P) AT/14 1824); Tithe Map (LRO(P) DRB 1/161 1840)
Description	A building is shown on the Tithe Map of 1840 and described as two cottages and a barn. It is also present on the Corn Rate map of 1824, where it is similarly described as two cottages.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	25
Site name	St Michael's on Wyre
NGR	346400 441400
Site type	Field systems
Period	medieval – post-medieval
HER No	3868
Statutory Designation	-
Sources	HER
Description	A few small areas of ridge and furrow and field boundaries are visible within the village of St Michael's on Wyre near Jenkinson's Farm.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	26
Site name	Sharrocks Farm
NGR	346410 441762
Site type	Ponds
Period	Unknown
HER No	-
Statutory Designation	-
Sources	Tithe Map (LRO(P) DRB 1/161 1840)
Description	A large group of ponds is shown on the Tithe Map of 1840. Currently the field has been ploughed flat and there is no evidence of ponds at this location.
Assessment	Part of the site lies within the proposed development area and is likely to be affected.

Site number	27
Site name	St Michael's on Wyre
NGR	346369 441839
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9140; walkover survey

Description An area of ridge and furrow, orientated north-west/south-east with associated field boundaries is visible in an aerial photograph from 1963. It was still present during the walkover survey. The field had wide ridge and furrow cultivation with a ditched boundary running through the middle. The ditch was 2.5m-3m wide by up to 0.5m deep. The boundary continued into the field to the west (Site 28). In addition there was a raised earthen farm track running south-east/north-west through the field which overlays the boundary ditch.

Assessment The site lies close to the proposed development area and may be affected.

Site number 28
Site name St Michael's on Wyre
NGR 346240 441821
Site type Field system
Period Medieval – post-medieval
HER No -
Statutory Designation -
Sources HSL UK 1963, Run 15, Frame 9140; walkover survey
Description An area of ridge and furrow, orientated north-west/south-east with associated field boundaries is visible in an aerial photograph from 1963. The walkover survey revealed no surviving ridge and furrow cultivation, but had a continuation of the boundary ditch running through from the field to the east (Site 27). The ditch curved to the south on the western end.
Assessment The site lies close to the proposed development area but is unlikely to be affected.

Site number 29
Site name St Michael's on Wyre
NGR 346238 441573
Site type Marl pit
Period Unknown
HER No -
Statutory Designation -
Sources Walkover survey
Description A potential marl pit located at the current corner of a field. It is obscured by fencing and undergrowth but the visible elements measure 17m long by 8m wide and up to 0.4m deep.
Assessment The site lies close to the proposed development area and may be affected.

Site number 30
Site name St Michael's on Wyre
NGR 346166 441590
Site type Marl pit
Period Unknown
HER No -
Statutory Designation -
Sources Walkover survey
Description A marl pit located at the centre of a current field. It is sub-circular and measures 30m in diameter by 0.4m deep. The pit is empty and is edged by trees on the south side.
Assessment The site lies outside of to proposed development area and is unlikely to be affected.

Site number 31
Site name St Michael's on Wyre
NGR 346348 441660

Site type	Field system
Period	Medieval?
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9140; Corn Rate map (LRO(P) AT/14 1824); Tithe Map (LRO(P) DRB 1/161 1840)
Description	A group of field boundaries forming strip fields is visible in an aerial photograph from 1963. These partially correspond with boundaries shown on the Corn Rate map of 1824, Tithe Map of 1840 and Ordnance Survey map of 1847 (Plate 2), and associated fields are frequently named 'croft' suggesting that they are medieval in origin. Currently the field has been ploughed flat and there is no evidence of either relict field boundaries or ridge and furrow cultivation surviving.
Assessment	The site lies within the proposed development area and will be affected.

Site number	32
Site name	St Michael's on Wyre
NGR	346087 441415
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9140; walkover survey
Description	A field boundary is visible in an aerial photograph from 1963. The walkover survey revealed other field boundaries forming strip fields and paddocks. The boundaries survive for the most part as shallow ditches measuring up to 2m wide by 0.5m deep. The westernmost boundary also consists of the corner of a slightly raised earthen bank.
Assessment	Part of the site lies within the proposed development area and will be affected.

Site number	33
Site name	St Michael's on Wyre
NGR	346070 441599
Site type	Marl pit
Period	Unknown
HER No	-
Statutory Designation	-
Sources	Walkover survey
Description	A marl was identified during the walkover survey and is located in a small tree filled rectangular enclosure. The pit survives as a sub-oval pond measuring up to 45m long by 30m wide.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	34
Site name	Catterall's Farm
NGR	345896 441446
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9140
Description	A group of field boundaries and ridge and furrow orientated approximately north/south is visible in an aerial photograph from 1963. Currently the field has

Assessment	been ploughed flat and there is no evidence of either relict field boundaries or ridge and furrow cultivation surviving. The site lies close to the proposed development area but is unlikely to be affected.
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Site number	35
Site name	Westby House Farm
NGR	345406 441477
Site type	Ridge and furrow
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9141
Description	An area of ridge and furrow orientated approximately north/south is visible in an aerial photograph from 1963.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	36
Site name	Glebe Farm, St Michael's on Wyre
NGR	345800 441000
Site type	Farmhouse (site of)
Period	Post-medieval
HER No	4847
Statutory Designation	-
Sources	Watson and McClintock 1979, 50-51
Description	A brick, two-storey building, built in 1713, with a thatched roof. It had three hearths on the ground floor and one on the first had a good deal of elaborate detail.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	37
Site name	St Michael's on Wyre
NGR	345540 441270
Site type	Find spot
Period	Prehistoric: Neolithic
HER No	LA33
Statutory Designation	-
Sources	HER; Middleton <i>et al</i> 1995, 230
Description	Three flints including some waste and a leaf arrowhead, piece of pottery and burnt stones discovered beneath peat and alluvium. The lowest level of peat was dated to <i>c</i> 4000 cal BC.
Assessment	The site lies close to the proposed development area and may be affected.

Site number	38
Site name	Westby House Farm
NGR	345456 441306
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9141

Description	A group of field boundaries and a small area of ridge and furrow is visible in an aerial photograph from 1963. The field was not subject to the walkover survey, the current survival of the field system remains unknown.
Assessment	The site lies close to the proposed development area and may be affected.

Site number	39
Site name	Turnover Hall Farm
NGR	345109 441383
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9141
Description	A group of field boundaries is visible in an aerial photograph from 1963.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

Site number	40
Site name	Stocken Bridge Farm
NGR	345155 441120
Site type	Field system
Period	Medieval – post-medieval
HER No	-
Statutory Designation	-
Sources	HSL UK 1963, Run 15, Frame 9141
Description	Two areas of ridge and furrow and associated field boundaries is visible in an aerial photograph from 1963.
Assessment	The site lies outside of the proposed development area and is unlikely to be affected.

6. SIGNIFICANCE OF THE REMAINS

6.1 INTRODUCTION

6.1.1 In total, 40 sites were identified during the desk-based assessment and walkover survey. Of these, 16 were previously recorded in the Lancashire HER. The majority of the additional sites were identified through the examination of aerial photographs and during the walkover survey. These are summarised by period in Table 1 below:

Period	No of sites	Sites
Neolithic	2	Stone adze (Site 06), lithic artefacts (Site 37)
Bronze Age	0	-
Iron Age	0	-
Romano-British	0	-
Medieval	3	Cross? (Site 22) field systems? (Sites 23 , 31)
Medieval – post-medieval	19	Field name (Site 04 , 09 , 13 , 18 , 20), field system (Site 08 , 10 , 17 , 25 , 27-28 , 32 , 34 , 38-40), ridge and furrow (Sites 16 , 21 , 35)
Post-medieval	10	Houses (Sites 05 , 36), marl pits (Sites 11 , 15 , 29-30 , and 33), track (Site 14), Tithe Barn (Site 19), cottages (Site 24)
Unknown	6	Earthworks (Sites 01 , 03), watercourses (Sites 02 , 12), ponds (Sites 07 and 26)

Table 1: Number of sites by period

6.1.2 There are no Scheduled Monuments within the study area. The village of Churchtown is a Conservation Area, but it is not within the study area. There are 31 Listed Buildings within the study area, and while it is considered unlikely that any of these will be affected by the proposed development, and they are therefore not listed in the gazetteer, they are summarised in Table 2 below:

<i>HER No.</i>	<i>Name</i>	<i>Description</i>	<i>Location</i>	<i>Listing</i>
1402	St Michael's Church	Church	SD 46203 41043	I
1403	The village cross, Churchtown	Cross	SD 48134 42960	II
1404	St Helen's Church	Church	SD 48160 42800	I
1405	Cross, St Helen's church	Cross	SD 48194 42835	II
4841	Churchgate House,	House	SD 48155 42869	II

	Churchtown			
5743	Garstang Road, St Michael's on Wyre	Bridge	SD 46152 41096	II
16591	Ainspool Lane, Kirkland	Milestone	SD 47765 43026	II
16592	Ainspool Lane, Churchtown	Telephone box	SD 48129 42977	II
16593	Manor House and Manor Cottage, Church Street, Churchtown	Houses	SD 48120 42960	II
16594	Church Street, Churchtown	Houses	SD 48120 42923	II
16595	Churchgate Cottage, Church Street, Churchtown	House	SD 48154 42860	II
16596	Church Street, Churchtown	Coach house	SD 48154 42860	II
16597	Sunday School, Churchtown	Sunday school	SD 48162 42749	II
16598	Church of St Helen, Churchtown	Sundial	SD 48161 42777	II
16599	Church of St Helen, Churchtown	Headstones	SD 48183 42808	II
16600	Church of St Helen, Churchtown	Headstones	SD 48166 42784	II
16601	Church of St Helen, Churchtown	Headstone	SD 48169 42786	II
16602	Church of St Helen, Churchtown	Headstone	SD 48196 42811	II
16603	Church of St Helen, Churchtown	Headstone	SD 48195 42820	II
16604	Church of St Helen, Churchtown	Headstone	SD 48184 42817	II
16605	Church of St Helen, Churchtown	Gravestone	SD 48177 42836	II
16606	Church of St Helen, Churchtown	Gravestone	SD 48169 42814	II
16607	Church of St Helen, Churchtown	Gravestone	SD 48169 42820	II
16608	Old Vicarage, Churchtown	Vicarage	SD 48253 42832	II

16609	Old Vicarage, Churchtown	Barn	SD 48233 42863	II
16624	Garstang Road, St Michael's on Wyre	Milestone	SD 45780 40980	II
16625	Church of St Michael, St Michael's on Wyre	Mounting block	SD 46186 41041	II
16626	Garstang Road, St Michael's on Wyre	Milestone and boundary stone	SD 46700 4198	II
16628	The Old House, Hall Lane, St Michael's on Wyre	House	SD 46520 41090	II
16636	Catterall Hall Farmhouse, Churchtown	Farmhouse	SD 47970 42580	II
16637	Catterall Hall Farm, Churchtown	Barn	SD 47967 42548	II

Table 2: Listed Buildings within the study area

6.2 CRITERIA

- 6.2.1 There are a number of different methodologies used to assess the archaeological significance of sites; that to be used here is 'Secretary of State's criteria for scheduling ancient monuments', which is included as Annex 4 of PPG 16 (DoE 1991). The sites previously listed in the gazetteer (*Section 5*, above) and that are considered likely to be affected were each considered using the criteria, with the results below.
- 6.2.2 **Period:** none of the sites are particularly significant for their period, although it could be argued that any finds of Neolithic date, such as Site **37**, are important because of their relative rarity. The former watercourses (Sites **12**) are of unknown date, but could prove very significant should they be of particularly early origin. The possible cross (Site **22**) and salhouse (Site **04**) if they are medieval and can be demonstrated to exist, would also be of some importance for their period. Similarly, the possible medieval field systems (Sites **23** and **31**) would also be of local significance if they were positively identified as such.
- 6.2.3 **Rarity:** perhaps the most rare site is the scatter of Neolithic artefacts (Site **37**), which are of local importance. Similarly, the possible cross (Site **22**) and salhouse (Site **04**) are relatively rare sites, especially if they prove to be medieval in origin.
- 6.2.4 **Documentation:** few of the sites have any significant amount of documentation. The decline of the former field systems (Sites **08**, **23**, **27**, **31**, **32** and **38**) are quite well documented in the various maps of the area, and there may be other sources that can elucidate this further. Similarly, the buildings recorded within the study area (Sites **05** and possibly **13**, **18** and **20**) may have more documentation that has not yet been identified, but the uncertainty of this does not add to their significance.

- 6.2.5 **Group value:** the numerous field systems (Sites **08, 16, 23, 27, 31-32**, and **38**) areas of ridge and furrow (Sites **16** and **21**), as well as various other features such as tracks (Site **14**) and marl pits (Sites **11, 15, 29-30**, and **33**), form part of a large interconnected landscape that undoubtedly has its origins in at least the medieval period. As a group, therefore, these sites have some local significance.
- 6.2.6 **Survival/Condition:** when examined by the walkover survey a number of the sites identified from aerial photographs, showed no apparent signs of features on the ground (Sites **21, 23, 31** and **34**). The areas of extant ridge and furrow and field systems of potential medieval date (Site **32**) and the cluster of relict cultivation around Tarnacre Hall Farm (Sites **8, 10, 16** and **17**) are perhaps the best-preserved examples in the entire study area and, therefore, have some additional significance.
- 6.2.7 **Fragility/Vulnerability:** the surviving field systems (Sites **08, 10, 16, 17, 27, 28** and **32**) are likely to be vulnerable to a number of pressures brought about by land-use such as ploughing or even other developments. The sites that are less certainly located are impossible to assess under this criteria, as are the sites known only through documentary sources.
- 6.2.8 **Diversity:** although none of the sites might be considered to be particularly diverse, the field systems (Sites **08, 10, 16, 17, 27, 28** and **32**) do cover large areas and so have some significance on this count. Some of the sites identified through place-names (Sites **13** and **22**) may also prove to be diverse on further investigation but this cannot be certain. Similarly, the findspot of prehistoric lithic artefacts (Site **37**) may represent a much larger and more complex site than is evident in this small number of finds exposed within the drainage ditch.
- 6.2.9 **Potential:** the possibly medieval field systems (Sites **23** and **31**) have the potential to provide information about the early development of St Michael's on Wyre and so are of local significance. Similarly, the scatter of prehistoric artefacts (Site **37**) has the potential to reveal further information about this period in the area, although the extent of the site is not certain. The considerable depth of the peat within which it is contained beneath the alluvial soils precludes further investigation during work on the present pipeline. Some of the sites identified as field names (Sites **13** and **22**) may also have some potential, although this is difficult to assess.

6.3 SIGNIFICANCE

- 6.3.1 The relatively large number of sites of archaeological interest in such a small study area suggests that the area is significant, at least locally, with remains dating back to the Neolithic. A large part of the study area is covered by field systems and related features, which have the potential to reveal a great deal about the growth and development of medieval and post-medieval settlement in the area.
- 6.3.2 There are no Scheduled Monuments or other sites considered to be of national importance that are likely to be affected within the study area. Nevertheless, some of the sites that have been identified both individually and collectively

have the potential to provide important information about the archaeology and history of the general area.

7. IMPACT AND RECOMMENDATIONS

7.1 IMPACT

- 7.1.1 Of the 40 sites of archaeological interest identified within the study area 14 are considered likely to be affected by the proposed development. These vary in scale from field systems to individual sites such as sites of buildings and marl pits. In some cases, the extent of the possible impact is unknown as they are only recorded as a place-name, and this is reflected in the recommended further work below.

7.2 RECOMMENDATIONS

- 7.2.1 Recommendations for further work, based on the assessment of significance in *Section 5* and the extent to which the site is considered likely to be affected, are presented in Table 3 below:

Site No	Type	Period	Impact	Recommendations
04	Field name: salthouse	Medieval - post-medieval	Unknown	Watching brief
05	House	Post-medieval	Minimal	Watching brief
08	Field system	Medieval – post-medieval	Severe on part	Topographic survey and watching brief
12	Watercourses	Unknown	Minimal	Watching brief
13	Field name: house	Medieval – post-medieval	Unknown	Watching brief
14	Track	Post-medieval	Severe on part	Watching brief
16	Ridge and furrow and field name: barn	Medieval – post-medieval	Severe to part and unknown	Topographic survey and watching brief
18	Field name: barn	Post-medieval	Unknown	Watching brief
20	Field name: barn	Post-medieval	Unknown	Watching brief
22	Field name: cross	Medieval?	Unknown	Watching brief
27	Field system	Medieval – post-medieval	Minimal	Topographic survey
29	Marl pit	Unknown	Some	Topographic survey
32	Field system	Medieval – post-medieval	Severe on part	Topographic survey and evaluation

37	Find spot: lithics	Prehistoric: Neolithic	Minimal	Watching brief in field
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Table 3: Sites likely to be affected and recommended further work

- 7.2.2 In addition to the above, a field-walking exercise is recommended for Sites **31** and **34** (ploughed-out field systems). These are the only two sites of field system which are not under an arable crop. Finally, due to the potential for prehistoric remains in the immediate area a permanent presence archaeological watching brief is recommended for the entire length of the pipeline route.

8. BIBLIOGRAPHY

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Ordnance Survey, 1847 *Lancashire Sheet 44, 6"*: 1 Mile, surveyed 1844-5

Ordnance Survey, 1893a *Lancashire Sheet 44.11, 25"*: 1 Mile, resurveyed 1890

Ordnance Survey, 1893b *Lancashire Sheet 44.14, 25"*: 1 Mile, resurveyed 1891

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8.3 AERIAL PHOTOGRAPHS

HSL UK, 1963 Run 15, Frames 9139-9141

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9.1 FIGURES

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Figure 2: Gazetteer sites plan

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Plate 1: Part of the Ordnance Survey map of 1847 showing the arrangement of field boundaries near Tarnicar House (now Tarnacre Hall Farm) after Lancashire County Council 2005)

Plate 2: Part of the Ordnance Survey map of 1847 showing the arrangement of field boundaries making up Site **31** (after Lancashire County Council 2005)

Plate 3: Part of the Ordnance Survey map of 1893 showing the changes to the field boundaries at the north-east end of the study area since 1847

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Plate 6: An aerial photograph of the former watercourses making up Site **02** (from the Lancashire HER)

Plate 7: Sketch plan of the former watercourses making up Sites **02** and **12** (from the Lancashire HER)

Plate 8: The surviving remains of ditched field boundaries within the Site **10** field-system.



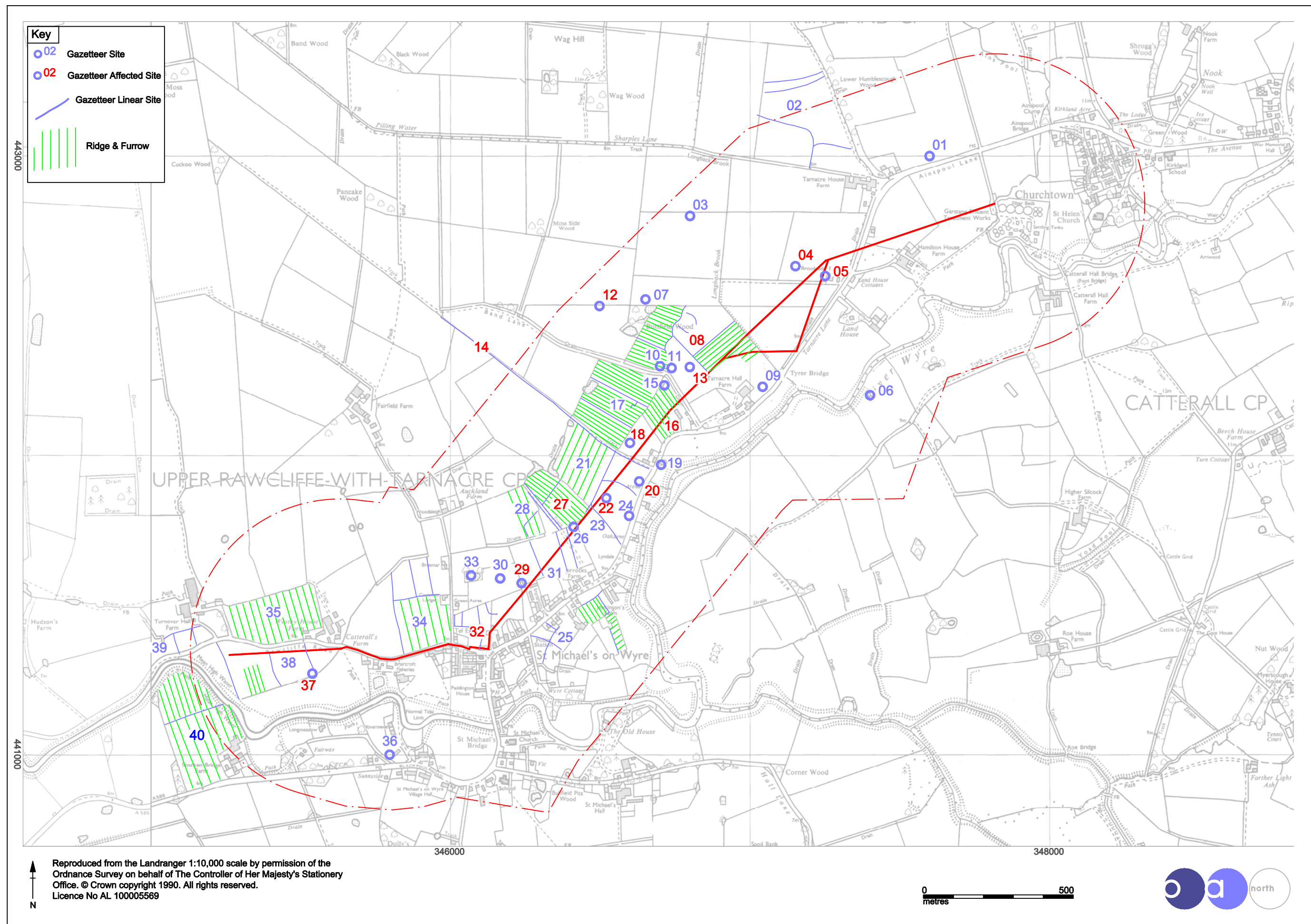


Figure 2: Gazetteer sites plan

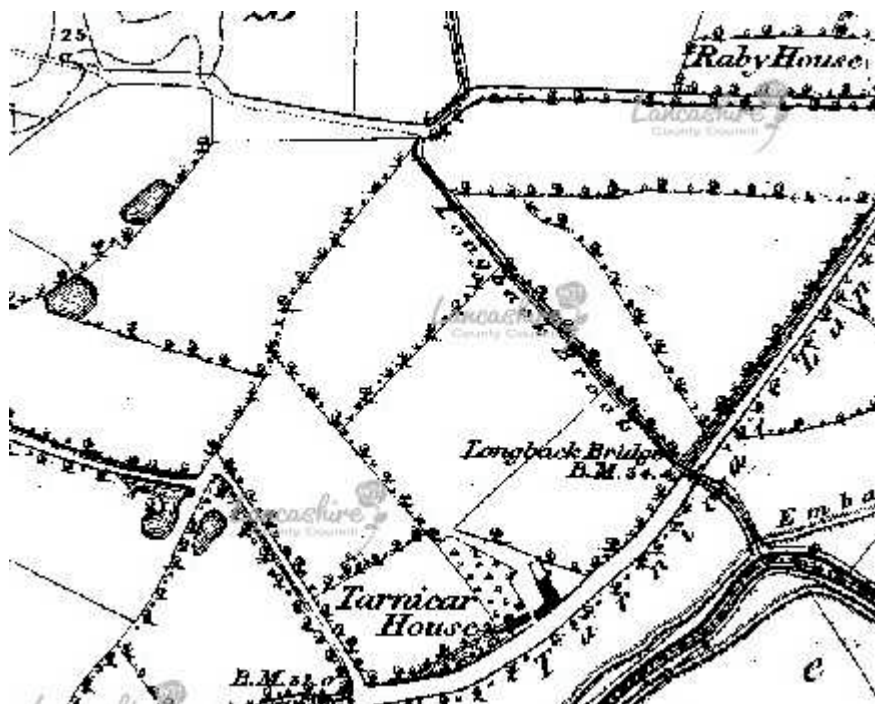


Plate 1: Part of the Ordnance Survey map of 1847 showing the arrangement of field boundaries near Tarnicar House (now Tarnacre Hall Farm) (after Lancashire County Council 2005)

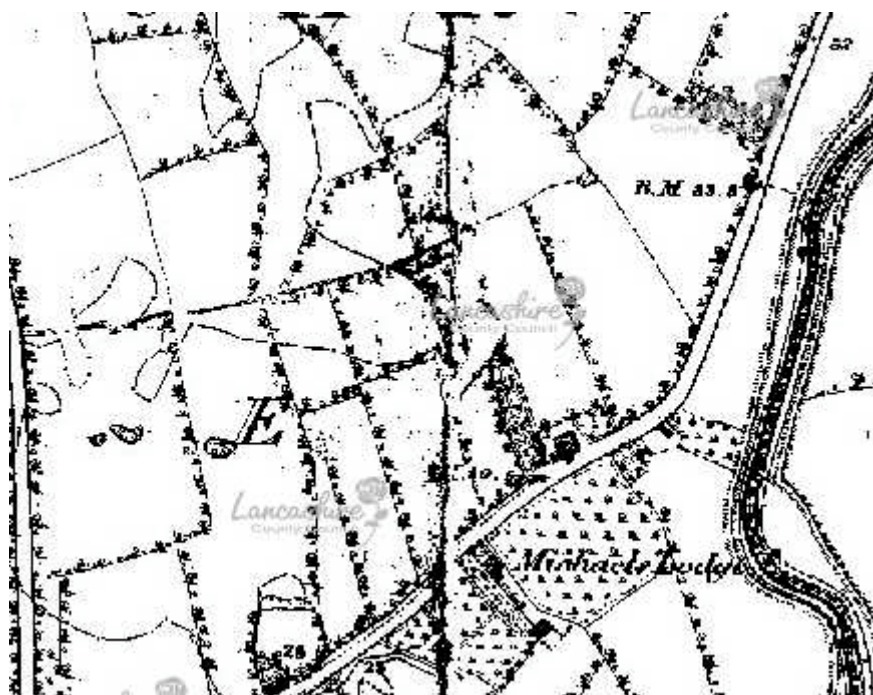


Plate 2: Part of the Ordnance Survey map of 1847 showing the arrangement of field boundaries making up Site 31 (after Lancashire County Council 2005)

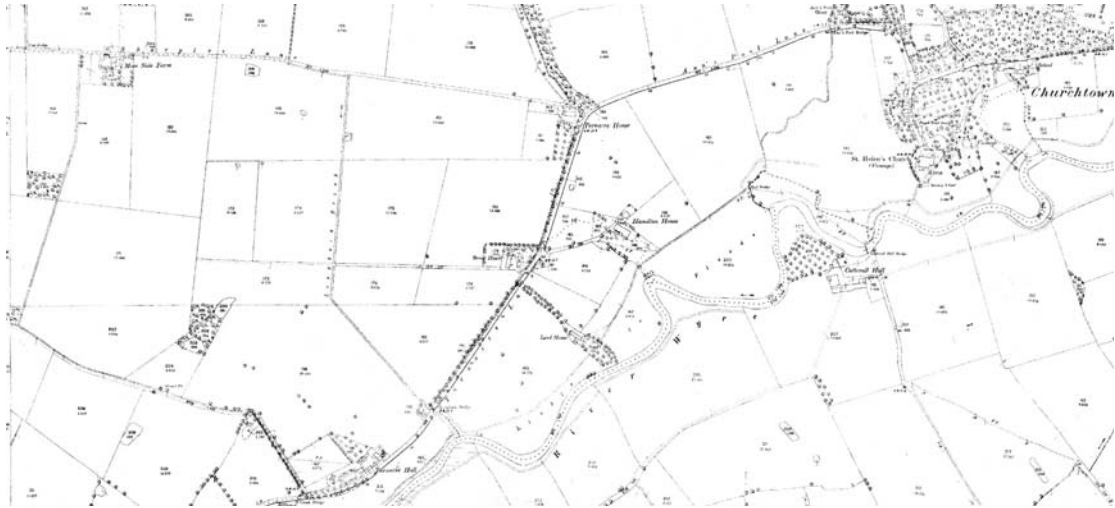


Plate 3: Part of the Ordnance Survey map of 1893 showing the changes to the field boundaries at the north-east end of the study area since 1847

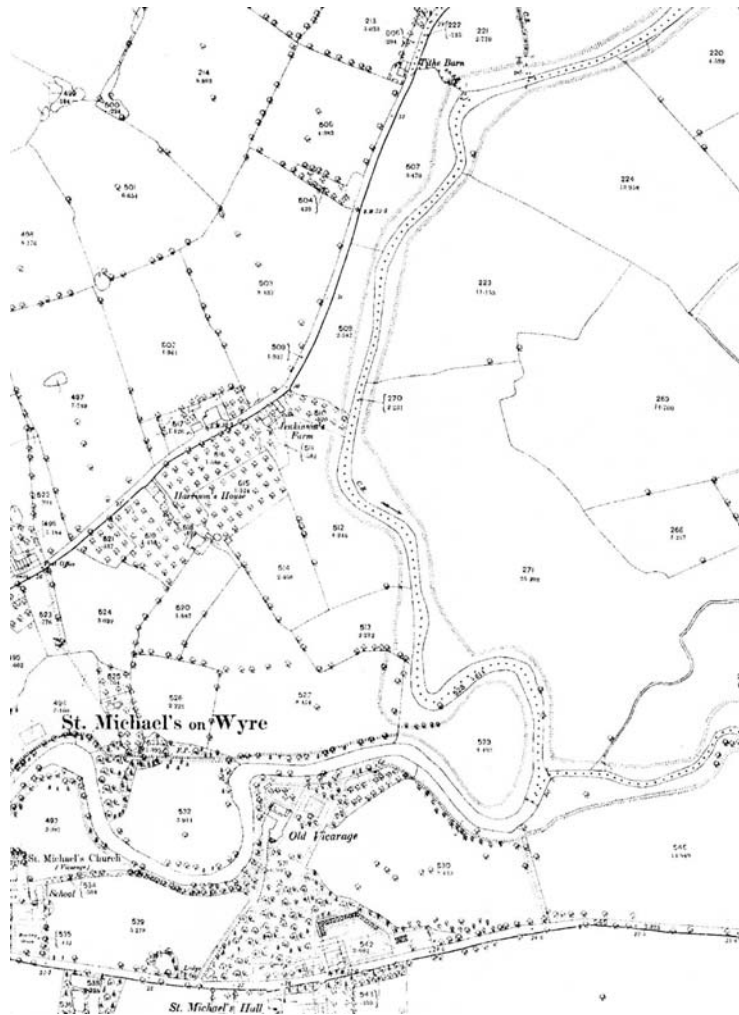


Plate 4: Part of the Ordnance Survey map of 1893 showing the changes to the field boundaries at the south-west end of the study area since 1847



Plate 5: Part of an aerial photograph from 1963 showing the relict field boundaries making up Site **31** (after HSL UK 1963, Run 15, Frame 9140)

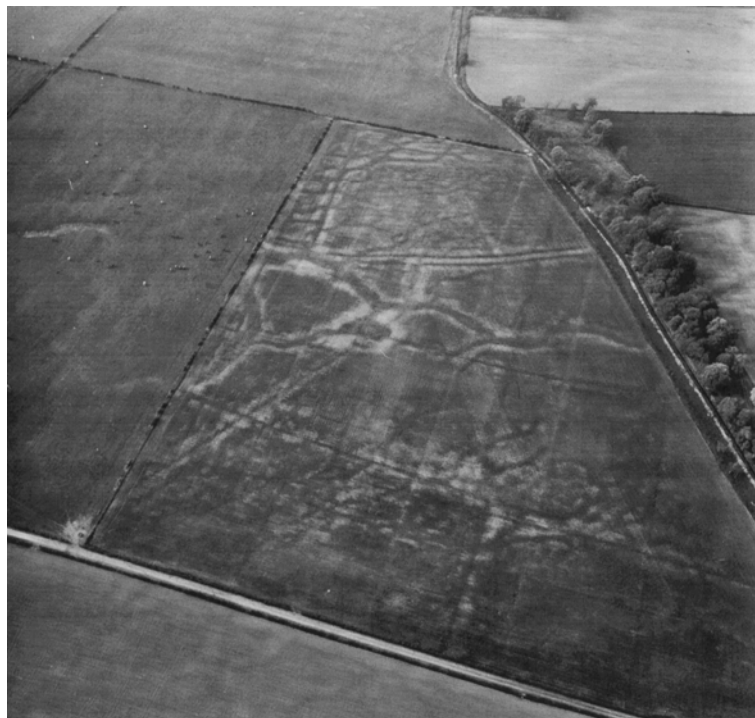


Plate 6: An aerial photograph of the former watercourses making up Site **02** (from the Lancashire HER)

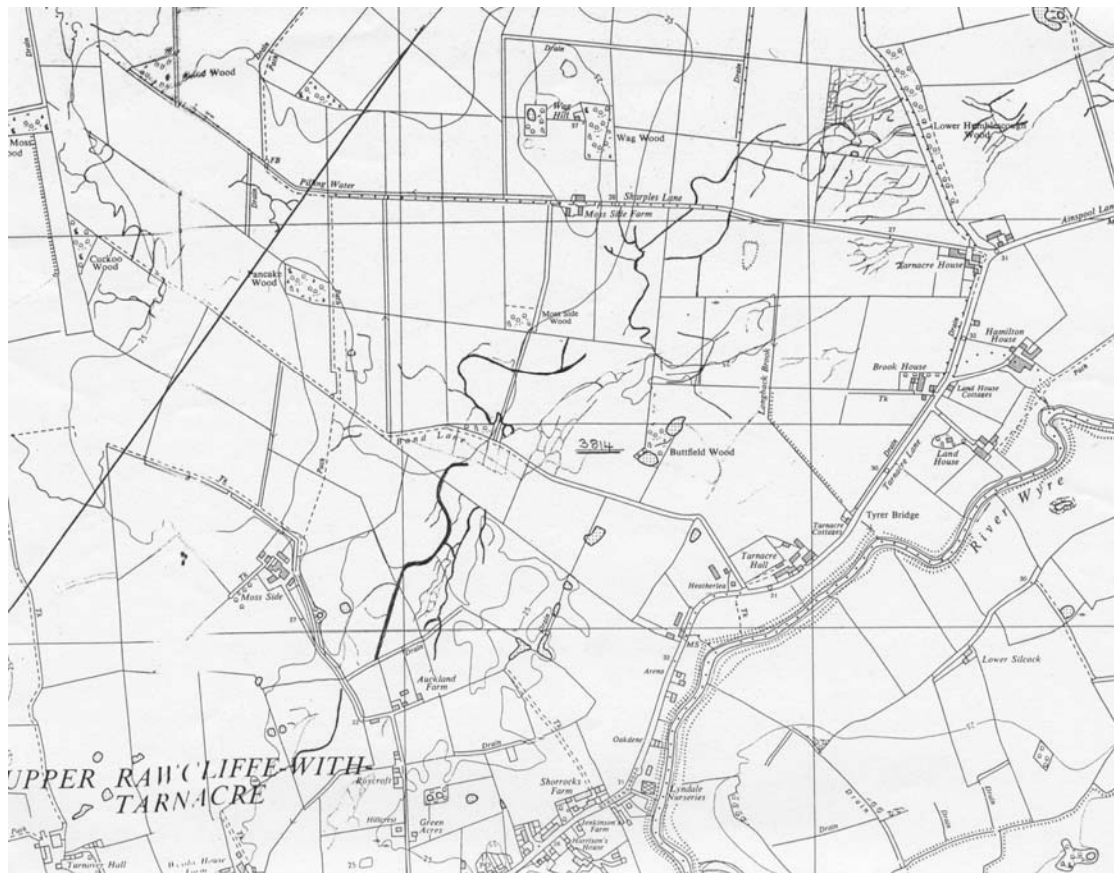


Plate 7: Sketch plan of the former watercourses making up Sites **02** and **12** (from the Lancashire HER)



Plate 8: The surviving remains of ditched field boundaries within the Site **10** field-system.

APPENDIX 1: PROJECT BRIEF

BRIEF FOR AN ARCHAEOLOGICAL ASSESSMENT

Project: St Michaels on Wyre Rising main

Proposal: New Rising Main

1. Summary

- 1.1 In order to improve the quality of drinking water supply United Utilities is proposing to lay a new rising main in the vicinity of St Michaels on Wyre. Although this is a replacement for an existing main, a new route is proposed over a significant portion of its course. It is intended to use an open cut method of construction, probably 1m - 2m deep. An appraisal of the route on using the Lancashire Sites and Monuments Record showed that there are a significant number of sites in the vicinity of the works and a potential for disturbance of prehistoric and later remains.
- 1.2 Beyond some limited work by the North West Wetlands Survey (NWWWS) little fieldwork has been carried out in this area and as a consequence little is known of the location and extent of archaeological sites. It has, therefore, been recommended that an archaeological desktop assessment and a rapid identification survey should be carried out so that the archaeology along the pipe corridor can be better considered.
- 1.3 This recommendation follows the advice given by central government as set out in *Planning Policy Guidance on Archaeology and Planning* (PPG16) issued by the DoE.

2. Site Location and Description

- 2.1 The line(s) of the pipe are shown on the attached plans (REF). They are located to the north of the River Wyre from Rawcliffe Moss to the Treatment Works at Churchtown, on the edge of the Lancashire Plain. They pass through land that is generally in agricultural use (both pastoral and arable) although there are areas of woodland. The landscape here is generally gently rolling, but with some locally steep slopes. Geology is generally carboniferous sandstones overlain with glacial outwash and river deposits of boulder clay, gravels and sands.

3. Archaeological Background

- 3.1 Brief details of known SMR sites in the area are attached as Appendix 2. It is probable that other, as yet unidentified sites of all dates may exist within the pipe corridor.
- 3.2 Further details of these sites can be obtained from the Lancashire Sites and Monuments Record, quoting the PRNs.

4. Requirement for a Desktop Archaeological Assessment

- 4.1 Construction of the pipelines, when undertaken by the traditional open trench method is known to damage or destroy archaeological remains that are present along their routes. It has therefore been recommended that a desktop archaeological assessment, followed by a rapid identification walkover survey should take place to record the presence, attempt to interpret the function and assess the state of preservation of any archaeological features and deposits. The walkover survey should be limited to a 250m corridor, centred on the proposed line(s) of the new pipe, but should also include areas of contractors camps, depots, access points, etc, where topsoil stripping or other ground disturbance is to be expected.

Brief for an Archaeological Assessment – St Michaels on Wyre Pipeline

- 4.2 Existing written and other sources will be consulted, including, as appropriate: published material, finds, archive/unpublished reports, early maps and documents, historic photographs, topographical views and engravings. Sources for these may include, as appropriate:
- Lancashire Sites and Monuments Record,
 - Local Studies Libraries,
 - Lancaster City Library, local studies and reference section,
 - Lancashire County Record Office. In particular the Tithe map and other early maps will be examined both for depicted evidence and significant field and place-name evidence,
 - The National Monuments Record,
- 4.3 Existing museum archives will be consulted. These may include, as appropriate:
- The Museum of Lancashire,
 - Lancaster City Museum
- and any other appropriate museum.
- 4.4 Aerial photographs will be examined for indications of archaeological remains. These may include those held by Lancashire County Council, accessible through the Sites and Monuments Record; The Lancashire Record Office; and the National Monuments Record.
- 4.5 A detailed search for material relating to the history of the site is not required except where such information may indicate the potential for archaeological remains.
- 5. Visual Inspection (Rapid Identification Survey)**
- 5.1 Suitably qualified and experienced persons will carry out the visual inspection.
- 5.2 All areas of the site will be examined as far as is practicable and safe. The immediate surroundings of the site will be assessed for features that may continue into the site.
- 5.3 Features that will be noted shall include:
- Earthworks.
 - Ruined buildings and other structures.
 - Patterns in vegetation that may indicate the presence of archaeological remains.
 - Scatters of material that may indicate the presence of archaeological remains.
 - Artefacts lying on the surface of the ground, or elsewhere. These should not be collected (but see below).
 - Exposures of deposits in riverbanks, field ditches, quarries, peat-cuttings, geotechnical test-pits etc.
- 5.4 A written record of any features noted will be made together with sketch plans and, if appropriate, photographs.
- 5.5 If finds are noticed they should be recorded and left in position, unless this would endanger their survival or later retrieval, or unless a more detailed examination is required of individual pieces. If finds are recovered they will be treated in an appropriate manner.

6 Reporting and Archive

BRIEF FOR AN ARCHAEOLOGICAL ASSESSMENT

Project: St Michaels on Wyre Rising main

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Appendix 1
Lancashire County Council
General Conditions for Archaeological Contractors

Organisations and individuals wishing to be included on the County Council's list of Archaeological Contractors are requested to fulfil the general conditions below that provide a model for best practice and professional conduct in archaeological work. The County Council will require the fulfilment of these conditions in its own contracts. Other clients are advised that it is their responsibility to satisfy themselves that their contractors meet all relevant standards.

1. Professional Standards

- 1.1 Contractors shall work to the standards of professional conduct outlined in the Institute of Field Archaeologists Code of Conduct, the IFA Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology, and the British Archaeologists and Developers Liaison Group Code of Practice.
- 1.2 Contractors should be either IFA Registered Organisations or individual corporate members of the IFA. In addition Project Directors should be recognised in an appropriate Area of Competence by the IFA.
- 1.3 Contractors with a significant backlog of unpublished projects will not usually be included on the list.
- 1.4 Where students or trainees are employed on a project, their ratio to professional staff shall not normally exceed 1:2.
- 1.5 In the case of dispute over matters of professional conduct or practice, arbitration will normally be sought through the IFA or the British Archaeologists and Clients Liaison Group.

2. Finance

- 2.1 Contractors shall make available at the request of the County Council a recent set of audited accounts.

3. Insurance

- 3.1 Contractors shall hold a current certificate of Public Liability and (where relevant) Employers Liability insurance, and shall produce it at the request of the County Council.

4. Health and Safety

- 4.1 Contractors shall comply with the requirements of all relevant Health and Safety legislation.
- 4.2 Site procedures shall be in accordance with the guidance set out in the Health and Safety Manual of the Standing Conference of Archaeological Unit Managers.

5. Project Design

- 5.1 Individual projects shall be designed in accordance with a brief provided by the County Archaeology Service. Before commencement of a project, Contractors shall submit a written project design for agreement with the County Council

6. Sub-Contracting

- 6.1 The names of proposed Sub-Contractors shall be included in the Project Design. All such Sub-Contractors shall be required to fulfil the General Conditions for Contractors.

7. Form of Contract

- 7.1 Before commencement of a project, the Contractor shall enter into a written agreement with the Client. It is recommended that such agreements should be in conformity with the IFA Model Contract for Archaeological Services or such other form as approved by the County Council.

8. Project Monitoring

- 8.1 The County Council may make arrangements for the monitoring of archaeological progress throughout the project.
- 8.2 Contractors shall provide the County Council with an outline programme of work. Any modification to this programme, due to unforeseen or other circumstances, shall be agreed with the Council. It is recommended that Project Designs include a contingency factor to allow for such circumstances.

9. Publication

- 9.1 Publication shall be in a form and to a timetable to be agreed on completion of the site archive and narrative. A copy of the site narrative and publication synopsis shall be lodged with the County Sites and Monuments Record.
- 9.2 Whilst acknowledging the need for confidentiality in some instances, a summary of the archaeological information resulting from a project should normally enter the public domain within six months of the completion of fieldwork.

10. Archive

- 10.1 Archive deposition shall take place according to a timetable to be agreed on completion of the site archive and narrative.
- 10.2 The site archive, including finds and environmental material, shall be conserved and stored according to the UKIC *Guidelines for the preparation of excavation archives for long-term storage* (1990) and the Museums and Galleries Commission *Standards in the Museum Care of Archaeological Collections* (1992), "Standards for the preparation and transfer of archaeological archives".

Brief for an Archaeological Assessment – St Michaels on Wyre Pipeline

- 10.3 The archive shall be deposited as soon as is practicable in a Registered Museum fulfilling the HBMC/MGC Eligibility Criteria for the Grant Aided Storage of Excavation Archives. This will normally be the Lancashire County Museums Service (artefact and environmental collections and their documentation), or the County Record Office (site documentation).
- 10.4 Any material not to be archived, such as unstable material or items to be retained by the landowner, shall be fully analysed and reported upon.
- 10.5 A copy of the reproducible elements of the site archive should be deposited in the National Archaeological Record.
- 11. Acknowledgement**
- 11.1 Lancashire County Council shall be acknowledged in all publicity - including media releases, site displays, exhibitions and publications - arising from the project, and any such publicity should be agreed in advance with the County Council.

All enquiries regarding these conditions should be addressed to:

The Specialist Advisor (Archaeology)
Lancashire County Council Environment Directorate
PO Box 9
Guild House
Cross Street
PRESTON
Lancashire
PR1 8RD

Tel. 01772 531550
Fax 01772 533423

APPENDIX 2: PROJECT DESIGN

1 INTRODUCTION

- 1.1 This project design has been compiled for United Utilities (hereafter the client). It presents proposals for the assessment of a proposed new rising main in the vicinity of St Michaels on Wyre, Lancashire. Section 2 of this document states the objectives of the project, Section 3 deals with OA North's methodology. Section 4 addresses other pertinent issues including details of staff to be involved, and project costs are presented in Section 5.
- 1.2 The Specialist Advisor (Archaeology) at Lancashire County Council (LCC) has recommended that a desk-based assessment and walkover survey are undertaken of the proposed pipeline route as little is known of the location and extent of archaeological sites in this area. This document deals with the desk-based assessment and walkover survey element of the archaeological programme of work. This programme of work should not be seen as final and further investigation or mitigation work along the route may prove to be necessary. The client should also consider the potential for re-routing the rising main should the nature of archaeological remains encountered warrant it.
- 1.3 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 to provide for accurate recording of any archaeological deposits that are disturbed by topsoil stripping activities and trench cutting associated with the pipeline. A rapid desk-based assessment will precede a walkover survey to place any findings that are made in to the context of known archaeological sites and/or artefact discovery sites in the immediate
- 2.2 A written report will assess the significance of the data generated by the desk-based assessment and subsequent fieldwork, within a local and regional context.

3 METHOD STATEMENT

3.1 DESK-BASED ASSESSMENT

- 3.1.1 The following will be undertaken as appropriate, depending on the availability of source material. The level of such work will be dictated by the time scale of the project.
- 3.1.2 **Documentary and Cartographic Material:** this work will comprise an assessment and investigation of the existing resource. It will include an appraisal of appropriate sections of County histories, early maps, and such primary documentation (tithe and estate plans etc.) as may be reasonably available. Particular emphasis will be upon the early cartographic evidence, which has the potential to inform the post-medieval occupation and land-use of the area. Any photographic material lodged in the County Sites and Monuments Record (SMR) will also be studied. Published documentary sources will also be examined and assessed. The study will examine place and field name evidence for the site and its

environs. This work will involve visits and or correspondence searches of the following repositories: Lancashire Sites and Monuments Record and the County Record office.

- 3.1.3 **Map Regression Analysis:** available cartographic sources will be consulted in an attempt to trace the development of the landscape back to the earliest available cartographic source. This will provide information on additional sites not included in the SMR, as well as ascertaining potentially any areas of more recent development.
- 3.1.4 **Aerial Photography:** a brief survey of the extant air photographic cover will be undertaken. The SMR will be consulted for aerial photography.
- 3.1.5 **Physical Environment:** a rapid desk-based compilation of geological (both solid and drift), pedological, topographical and palaeoenvironmental information will be undertaken. It will be based on published geological mapping and any local geological surveys in the possession of the County Council or the Client. This will not only set the archaeological features in context but also serves to provide predictive data, that will increase the efficiency of the field inspection.

3.2 WALKOVER SURVEY

- 3.2.1 **Visual Inspection:** following the desk-based assessment a level I walkover survey (Appendix 1) will be undertaken to relate the existing landscape to research findings. This will encompass one-hundred and twenty-five-metre corridor along either side of the pipeline, walked in a systematic fashion. Archaeological features identified within the landscape will be recorded using the relevant OA North pro forma, and the features accurately positioned with the use of either a GPS, which can achieve accuracies of $\pm 0.1\text{m}$ with respect to the OS national grid, or by manual survey techniques which will tie in new features to features already shown on the relevant OS map.
- 3.2.2 **Contingency plan:** in the event of significant archaeological features being identified during the desk-based assessment and walkover survey discussions will take place with the Archaeological Officer, as to the extent of further works to be carried out, and in agreement with the Client. All further works would be subject to a variation to this project design. Further stages of work are likely to include a watching brief during topsoil stripping and trench opening activities.

3.3 REPORT/ ARCHIVE

- 3.3.1 **Interim Statement:** in the event that further work is recommended an interim statement will be issued. In this instance or in the event that the client specifically requests an interim statement it should be noted that all illustrations will be copies of field drawings and not completed CAD drawings.
- 3.3.2 **Final Report:** two copies of the final report will be submitted to the client and a further two to LCC Both paper and digital copies will be provided on CD-ROM in pdf format. The report will present the following information:
 - (i) **Summary:** a summary statement of the findings;

- (ii) **Introduction:** the background to the project including location details;
 - (iii) **Methodology:** an outline of the methodology of all elements of the programme of work;
 - (iv) **Historical Background:** a brief historical background to the site;
 - (v) **Results:** an account of the past and present land use of the study area;
An account of known sites identified through the study of documentary sources;
Any evidence for the remains of archaeological sites identified by the walkover;
An account of archaeological features identified during the course of the watching brief;
 - (vi) **Discussion:** a discussion of the relative significance of sites within the study area;
A description of the significance of the study area in its local and regional context;
 - (vii) **Impact/Recommendations:** the identification of areas where further development will impact upon the archaeological resource in addition to the impacts of the current development;
 - (viii) **Illustrations:** maps, plans, sections and copies of the site photographic archive;
 - (ix) **Appendices:** a copy of the brief and this project design;
- 3.3.3 Provision will be made for a summary report to be submitted to a suitable regional or national archaeological journal within one year of completion of fieldwork, if relevant results are obtained.
- 3.3.4 **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.
- 3.3.5 **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 represents the collation and indexing of all the data and material gathered during the course of the project. This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the SMR (the index to the archive and a copy of the report). Arrangements for deposition of the full site archive will be made the Lancashire County Record Office.

4 OTHER MATTERS

- 4.1 **Project Monitoring:** whilst the work is undertaken for the Client, the Lancashire Archaeological Officer will be kept fully informed of the work. Any proposed changes to the project design will be agreed with the Archaeological Officer and the Client.
- 4.1.1 **Access:** OA North will consult with the Client regarding access to the site.
- 4.1.2 **Health and Safety:** 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.
- 4.1.3 **Work Timetable:** the desk-based element is expected to take approximately six days to complete and the walkover in the region of two days. The report will be completed within approximately eight weeks following completion of the fieldwork.
- 4.1.4 **Staffing:** the project will be under the direct management of **Alison Plummer BSc (Hons)** (OA North Senior Project Manager) to whom all correspondence should be addressed.
- 4.1.5 **Daniel Elsworth MA, PIFA** (OA North Project Supervisor) will undertake the desk-based assessment. Daniel has a great deal of experience in documentary research and in particular for the North West. Present timetabling constraints preclude who will be undertaking the walkover survey, although it is likely that this will be undertaken by an OA North supervisor suitably experienced in this field.
- 4.1.6 **Insurance:** OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.