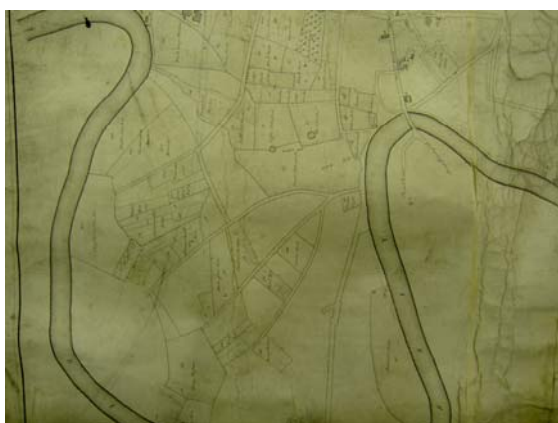


ARPLEY MEADOWS, WARRINGTON, CHESHIRE



Archaeological Desk- Based Assessment



Oxford Archaeology North

May 2005

Sinclair Knight Merz

Issue No: 2005-6/381

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SUMMARY

Following a request by Sinclair Knight Merz, Oxford Archaeology North undertook an archaeological assessment of an area of land on either side of the River Mersey, the eastern half being in Arpley Meadows, to the south-west of Warrington town centre, Cheshire (centred SJ 596 870). The assessment was carried out in advance of the proposed development of the site for retail and residential use, and involved a desk-based assessment and site visit, undertaken in May 2005.

The desk-based assessment involved the examination of a 1km study area centred on the site, including all pertinent documents and cartographic sources held in the Cheshire and Lancashire County Record Offices, and the consultation of the Cheshire Historic Environment Record (HER) in Chester. In addition, several published sources were consulted to provide background information.

The site lies on the River Mersey floodplain and is very flat; it has been recently ploughed and appears to have been freshly sown with grass. The study demonstrated that there was the potential for prehistoric remains surviving on the site within buried floodplain deposits, and there was also the possibility of stray finds having been brought to the surface through ploughing. The focus for Roman activity in the area was at Wilderspool, but it was possible that remains of activity of this date could have been preserved on the site. The discovery of five early medieval logboats within the study area to the south-east and west demonstrates that there was considerable activity in the vicinity during this period. From the late medieval period onwards the western half of the site was water meadows attached to the settlement at Lower Walton, and the eastern half was part of Arpley Meadows, which were the town fields of Warrington. The water meadows became physically detached from the settlement of Lower Walton in the early eighteenth century with the construction of the Mersey and Irwell Canal. In the mid nineteenth century, the western part of Arpley Meadows became physically detached from Warrington with the construction of the London and North-West railway.

The map regression identified several sites of archaeological interest within the proposed development area. In the western half, these comprised a possible ford (Site **15**), a possible boundary stone (Site **19**), two buildings (Sites **20** and **22**), an occupation road (Site **21**), and two possible former settlement sites (Sites **23** and **24**). In the eastern half, two possible dagger and hammerstone findspots, thought to be of prehistoric origin, were identified (Sites **26** and **27**).

Recommendations for further archaeological work were made, comprising archaeological evaluation trenching and fieldwalking, and the examination of any available borehole data to determine the extent and survival of buried floodplain deposits. It was also recommended that English Heritage be consulted regarding the disused transporter bridge (Site **06**) to the north of the proposed development area. This bridge is a Scheduled Monument, and it is believed to be in a fragile condition, and may be adversely affected by noise and vibration from the proposed development.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Mark Brown of Sinclair Knight Merz for commissioning the project. Thanks are also due to Rob Edwards, Liz Snead and Jill Collens at the Cheshire County Historic Environment Record, and all the staff of the Cheshire County Record Office in Chester and the Lancashire County Record Office for their assistance with this project.

The desk-based assessment was undertaken by Jo Dawson, with the drawings produced by Kathryn Blythe. The project was managed by Emily Mercer, who also edited the report, together with Alan Lupton.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 Clients of Sinclair Knight Merz Ltd (SKM) propose to develop an area of land in Arpley Meadows, to the south-west of Warrington town centre, Cheshire (centred SJ 596 870), for retail and residential purposes. One bridge will connect the two halves of the site separated by the River Mersey, and a second bridge will connect the western half of the site with the Warrington/Sankey Bridges area to the north (Fig 2). SKM requested that Oxford Archaeology North (OA North) submit a project design for an archaeological desk-based assessment of the proposed development area, which was prepared in accordance with Cheshire County Council's (CCC) guidance notes (2003). Following the submission of the project design, OA North were commissioned to undertake the work.

1.2 PROJECT STRUCTURE

1.2.1 The desk-based assessment comprised a search of both published and unpublished records held by the Historic Environment Record (HER) in Chester, the Cheshire County Record Office in Chester and the Lancashire County Record Office in Preston, and the archives and library held at OA North. In addition to this, the site was visited, in order to relate the landscape and surroundings to the results of the desk-based assessment.

1.2.2 This report sets out the results of the findings, with a study of the historical and archaeological background for the site followed by the results of a cartographic and aerial photograph analysis and any other archaeological interventions in the vicinity. Consequently, any sites of archaeological importance in the study area will be listed in the gazetteer. Any significant sites as defined by the criteria for Scheduling archaeological monuments detailed in PPG 16 (DoE 1990) will be recommended for further study.

1.3 LOCATION, TOPOGRAPHY AND GEOLOGY

1.3.1 The site comprises green fields on either side of a meander in the River Mersey, to the south-west of Warrington town centre, Cheshire (centred SJ 596 870; Fig 1). The land to the north and east has already been developed, but although the site has been extensively ploughed, it has not been significantly built on in the recent past, and there is no evidence of extensive damage from industrial activity. The area is very flat, with embankments protecting it from flooding by the river. The western half of the area lay in Cheshire and was attached to Lower Walton township, but it has been increasingly cut off, first by the canal, and then by the railway. During the twentieth century the land to the north of the western half of the development area has been used for industrial purposes, and two bridges have been built to connect it to the industrial centre of Warrington to the east. More recently a third bridge was built connecting it to the Gatewarth area to the west. The eastern half of the

area was formerly the western edge of Arpley Meadows, and was attached to Warrington township in Lancashire, but the London and north-western railway and the River Mersey diversion have divided the Meadows land.

- 1.3.2 The area of Warrington, within the Mersey Valley, lies to the south of the Lancashire Coal Measures, and to the north of the Cheshire Plain (Countryside Commission 1998). It is defined by a low-lying topography, with much lying beneath 20m above mean sea level (*ibid*). It is underlain by esturine and river alluvium up to a depth of 3m, with wind-blown sands interlying, and the underlying geology of the area is Triassic sandstone (*ibid*).

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 A project design (*Appendix 1*) was submitted by OA North in response to a request from SKM. 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 The principal sources of information consulted were historical and modern maps of the area to the south of Warrington town centre, although published and unpublished secondary sources were also reviewed. The main study area focused on the proposed development site, and information from up to a 1km radius obtained for the background context. All archaeological sites identified within the main study area have been included in the Site Gazetteer and plotted in the corresponding Figure 2, with sites from the surrounding 1km included as appropriate (*see 2.2.2, below*). The results were analysed using the Secretary of State's criteria for the scheduling of ancient monuments, outlined in Annex 4 of *Planning Policy Guidance 16: Archaeology and Planning* (DoE 1990).
- 2.2.2 ***Cheshire County Historic Environment Record (HER):*** the County Historic Environment Record (HER) held in Chester was consulted to establish the sites of archaeological interest already known within the study area, and the extent and number of these. The HER is a database of archaeological sites in Cheshire, and is maintained by Cheshire County Council. For each entry, a short note was obtained, which was added to the Site Gazetteer (*Section 4*). Many of the medieval and post-medieval sites that will not be affected were grouped into hazard areas for the purpose of the gazetteer. Vertical aerial photographs were also consulted.
- 2.2.3 ***Cheshire County Record Office (CRO):*** the Cheshire County Record Office in Chester was visited to examine nineteenth century and earlier maps relating to the part of the study area that lay within Cheshire at that time; approximately land to the south of the River Mersey. Both published and unpublished manuscript maps were also consulted, as well as secondary sources.
- 2.2.4 ***Lancashire County Record Office (LRO):*** the Lancashire County Record Office in Preston was visited to examine maps relating to the part of the study area within Lancashire during the nineteenth century and earlier. The twentieth century Ordnance Survey (OS) were not county specific and the study area could be seen in its entirety. These maps were also examined in Preston. Both published and unpublished manuscript maps were consulted, as well as secondary sources.

- 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.
- 2.2.6 **Site Visit:** the site was visited on 3rd May 2005, when a series of colour digital photographs were taken (a selection is presented in Plates 1 and 2). A report on the site visit was written based on observations made at the time, and examination of the digital photographs.

2.3 ARCHIVE

- 2.3.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in Cheshire Record Office in Chester on completion of the project.

3. RESULTS

3.1 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 3.1.1 **Prehistoric Period:** the earliest known activity within Cheshire dates to the Mesolithic period, and it is possible that a few of the flints from the Warrington district may belong to the period (Archaeological Surveys Ltd 1976, 14). No evidence has been recovered to suggest the presence of a Neolithic settlement in the Warrington region, but Neolithic flint implements have been found all over the area (*ibid*). The density of tumuli in the area suggests that Warrington was the focus of considerable settlement during the Bronze Age (*ibid*). No portable objects of Iron Age date have been recorded in the Warrington area, but it has been suggested that two pile settlements may date to this period (*op cit*, 16).
- 3.1.2 Two prehistoric flints are known from the study area (Sites **02** and **11**), neither of which have been closely dated, and several human skulls (Sites **03** and **07**) have also been found. Some of the skulls were found by workmen during the nineteenth century, who would have been digging out deposits by hand, and so would probably have noticed if other bones were present (Site **03**). One skull was discovered during the late twentieth century, and the source specifically stated that no other bones were present (Site **07**). This suggests that these skulls may be the remains of head burials such as have been found in other wet places in Lancashire and Greater Manchester, possibly dating to the Bronze Age or Romano-British period (Middleton *et al*, 1995, 66-9). A possible timber-piled settlement (Site **11**) was discovered near one of the flints at Warrington Docks, and has also not been closely dated, although an Iron Age date has been suggested (see above). There have been possible dagger and hammerhead finds, which may have been of prehistoric date, on the edge of the proposed development area (Sites **25** and **26**).
- 3.1.3 Of most relevance to the proposed development were the sediments and animal remains discovered at Gatewarth Farm in 1995 (Site **07**). Deposits of archaeological interest were uncovered at depths of between 3m above and 1.75m below mean sea level (Shimwell 1996). In one borehole these deposits included clay, buried peat with bands of silt, and peat, and in another sand with peat lenses (*ibid*). Deer antlers were recovered from 0.75m below mean sea level, with timber and tree trunks between 0.15m and 1.75m below mean sea level (*ibid*). It was interpreted as a casual assemblage accumulated by natural processes of riverine deposition, rather than the slaughter of animals (*ibid*). Radiocarbon dating produced a sequence from the Mesolithic to the Roman period (*ibid*).
- 3.1.4 **Roman Period:** the road between the forts at Chester and Wilderspool runs to the south of the proposed development area (Site **18**). There have been considerable remains uncovered at Wilderspool, which is a Scheduled site, to the south-east of the Arpley Meadows. This major settlement was dictated by the meeting of roads from Middlewich, Chester, and possibly Manchester. The precise location of the settlement was determined by the presence of a patch of

well-drained sand, in a peat bog area, which provided a dry approach to the river-crossing. The site clearly involved large-scale industrial activity with evidence of kilns and furnaces, hypocausted buildings, ditched complexes and timber-framed structures having been found (Higham 1993). The settlement is not thought to have had any long-term military function, although a short-lived fort on the north bank at Warrington seems likely. Closer to the proposed development area there have been two stray finds of a silver coin and a fragment of pottery, both dated broadly to the Roman period (Sites **16** and **17**).

- 3.1.5 **Medieval Period:** Warrington is recorded in the Domesday Book, which states that the district was comparatively heavily settled prior to the Norman Conquest, but little is known about the period from the sixth to the eleventh centuries (Archeaological Surveys Ltd 1976, 18). The remains of five early medieval logboats have been recorded within the study area (Sites **04**, **05**, **11**, and **12**), most of them close to the current course of the River Mersey. The exception to this is the logboat found at Gatewarth (Site **12**), approximately 0.25km north of the river. The depths at which they were found have all been recorded as below present ground level measurements, and are 3.3m (Site **12**) and 5.4m (Sites **04**, **05**, and **11**).
- 3.1.6 During the later medieval period, the settlements of Warrington, associated with the eastern half of the proposed development area, and Lower Walton, associated with the western half, were both in existence. Although at this time Warrington (Site **13**) stopped well short of the Mersey floodplain, it is likely that the surrounding land, including Arpley Meadows, was cultivated. Indeed, the Legh manuscript of 1465 mentions the 'great meadows of Howley and Arpley' (Crowe 1947, 71), and a survey of Warrington in 1592 names Howley and Arpley as the 'Town Fields' (*op cit*, 91). Walton means '*the Britons' or the serfs' farm*', and is recorded from at least the twelfth century (Dodgson 1970, 157). As with Warrington, the western half of the site is likely to have been cultivated at this time, although there is no evidence for settlement within it. There is a ford located at the north-west end of Lower Walton, thought to date from the medieval period (Site **09**), and to the west of Warrington is Sankey Hall (Site **10**), which may have been more closely tied to the settlement of Sankey Bridges.
- 3.1.7 **Post-Medieval Period:** in the late seventeenth century, the Bank Quay industrial area (Site **14**) developed to the west of Warrington, founded by Thomas Patten, a Warrington landowner and merchant (Anon 2003, 15). At the same time, Patten and others promoted a scheme which resulted in the tidal stretch of the River Mersey from Runcorn to Warrington being improved by dredging (Crosby 1996, 73). In 1720, the Mersey and Irwell Navigation was authorised (*ibid*), and the Mersey and Irwell Canal built as part of this scheme in 1729. This canal resulted in the western half of the proposed development area, covered by water meadows, becoming physically detached from the settlement of Lower Walton. In the east, Arpley Meadows (or Arpley Fields) were open until at least the late 1820s, planted with clumps of elms and intersected by grassy lanes (Crowe 1947, 150); the area was a favourite with the people of Warrington for walking (*op cit*, 152). Later, the construction of the London and north-western railway divided the eastern half of the study

area from the rest of Arpley Meadows (Fig 5). Around the year 1858, the town of Warrington was presented with pieces of Russian artillery that were captured trophies from the Crimean War (*op cit*, 165). They became known as the 'Arpley Cannons' as they were used for celebrations by volley firing in Arpley Fields, before being removed and melted down during the First World War (*ibid*).

3.2 MAP AND AERIAL PHOTOGRAPH REGRESSION ANALYSIS

- 3.2.1 **Introduction:** the town of Warrington is covered by a series of detailed maps surveyed during the eighteenth to mid nineteenth century, but many of these do not include the proposed development area. Several maps were therefore examined, but were found not to contain any useful information (Wallworth and Donbavand 1772; Hall 1826; Ordnance Survey 1850). Until the twentieth century, the halves of the proposed development area within Cheshire and Lancashire were mapped separately, with the boundary along the River Mersey. Separate estate, tithe, and Ordnance Survey maps were therefore consulted for the western and eastern halves for the period until the end of the nineteenth century, as set out below.
- 3.2.2 **Yoxall's map of the Legh estate, 1747:** unfortunately, this map had been misplaced within Cheshire Record Office (CRO(C) DWW 1/186 1747). However, a tracing of an extract of the map was examined (Adams *et al* 1998, fig 7), that covered much of the proposed development area on the east side of the River Mersey, which was then the western part of Arpley Meadows. The northern part of this area contained the south ends of five strip fields, which were adjoined to the south by a large, somewhat irregularly-shaped field. To the south of this was a smaller field, with the end of a long field to the north-east. In the southern part of the proposed development area no detail was given by Yoxall. Lanes were observed running from Warrington into Arpley Meadows, and one of these can be seen between the strip fields, leading into the north of the proposed development area.
- 3.2.3 **Map of Patten estate in Arpley Meadows, pre 1806 (Fig 3):** this is very similar to the previous map, and covers the same area of Arpley Meadows (CRO(C) DWW 1/63 pre 1806). Again, only the eastern side of the site is mapped. There are twice as many strip fields in the north as were mapped in 1747, and several field names are shown. Chesshyres Six Acre is the name of the large irregularly-shaped field shown by Yoxall, and this may indicate a formerly detached part of the county within Lancashire; to the east is part of Broad Arpley.
- 3.2.4 The strip fields in the north are named (from west to east) Higher Six Acre, Cartwrights Two Acre, Meadow, Seamans Field, Dagger Acre, Arpley within Rails, and Hammerhead Acre. In many cases, a single field name applies to several fields, possibly indicating earlier boundaries. The field names Dagger Acre and Hammerhead Acre are interesting as they relate to the possible prehistoric finds of a dagger (Site 25), and a hammerhead (Site 26), respectively. As with the Legh estate map, a lane is shown running from Warrington into the north of the site.

- 3.2.5 **Maps of Patten estate in Arpley Meadows, circa early nineteenth century:** two maps, both covering the Arpley Meadows (eastern) half of the proposed development area, are stored together in Cheshire Record Office, with their date or dates estimated as early nineteenth century (CRO(C) DWW 1/248 c early nineteenth century). The first of these maps is in poor condition, but shows field names and names of owners or occupiers. The layout of the field boundaries is almost identical to the previous Patten estate map. Many of the field names are also repeated: Chesshyres Six Acre, Dagger Acre, Arpley within Rails, Hammerhead Acre, and Broad Arpley. Higher Six Acre, Cartwrights Two Acre, Meadow, and Seamans Field are unnamed because they belong to Thomas Legh's estate. The additional field name of Bents Field is also given in the south-east. The previously unnamed lane extending into the proposed development area from Warrington is marked as Slutchers Lane. The layout of the field boundaries on the second map (not illustrated) is identical to the first, but much less detail is shown.
- 3.2.6 **Lower Walton township tithe map, 1844 (Fig 4):** the tithe map (CRO(C) EDT 249/2 1844) and its corresponding apportionment (CRO(C) EDT 249/1 1844) were examined. These included only the western half of the proposed development area, which lay within Cheshire. All the fields were named in the apportionment, and the use of every field within the site boundary was given as 'water meadow'. A few fields specified their use further: barley (Field 23), wheat (Field 48), potatoes (Field 45), and pasture (Fields 44, 46, 49, 50, 71, and 72). The shape of many of the fields was aratral, or reverse 'S' shaped, indicating a field system of some considerable age, probably dating back to the medieval period. The occupation road (Site 21) ran through the east of the area, and many strip fields lay along its north-west side: various 'Loont's (meaning 'land' (Dodgson 1970, 158), Fields 8-10), Charles Meadow (Field 11), various 'Gutsford's (meaning 'a ford over a channel' (*ibid*), fields 12-4, 16-20, Site 15), and Clares Meadow (Field 21). The 'Gutsford' field names could relate to a ford across the Mersey to the west, or alternatively to a ford across a channel formerly within the water meadows.
- 3.2.7 There are other field names that appear to indicate how wet the land was: Quag Meadow (meaning 'a boggy place, a quagmire' (*ibid*; Dodgson 1981b, 315), Field 7), various 'Island's (fields 3, 5, and 6, Site 01), and Pool Ditch (Field 43, Site 23). Adjacent to Pool Ditch is Stanbridge Hey (Field 45, Site 23), which means either a stone bridge/causeway, or stoney land broken up for cultivation (Dodgson 1970, 158; Dodgson 1981a, 120, 113). However, given the proximity of Pool Ditch, the former meaning seems more likely. House Pasture and Horse Croft (Fields 47 and 72, respectively, Site 23) lie to the south of Stanbridge Hey, and it is possible that this area, which is close to the occupation road to the east, formerly housed a farmhouse. There is a second site within this area that may have had one or more buildings on it, to the north-west of the one just indicated, although it may have been part of the same complex. This may be indicated by a field that is named 'Old Yards' (Field 32); to the east of it is a former orchard named 'Crab Tree Acre', which is divided into eight very small strip fields, running north/south.

- 3.2.8 Three fields along the west side of the site are named ‘Wharf’ (Fields 2, 33, and 34), meaning ‘a shore, a beach; a flat piece of land or meadow along a stream or the shore; marshy ground near a stream; a coastal, offshore (sometimes tidewashed) sandbank’ (Dodgson 1981b, 380), or ‘an embankment, a shore, a wharf’ (*op cit*, 242). The occupation road (Site 21) and the island (Site 01) being on the east side, and the ‘Wharf’ and ‘Gutsford’ (Site 15) fields on the west, would seem to indicate that the west was flat, low-lying, and marshy, whilst the east was more elevated and drier, possibly with deliberate drainage, such as the ‘Pool Ditch’ (Site 23) crossed by a possible stone bridge. In the south, some of the land may have been very boggy, as indicated by the shape of the boundaries of Field 51, which has the appearance of following a water course. It is named ‘Snig Hole’ (meaning ‘eel’ hole (Dodgson 1970, 158).
- 3.2.9 There is possible evidence of a shift in the course of the River Mersey along the east side with two ‘Pingot’ field names (meaning ‘a small croft or enclosure’ (Dodgson 1970, 158; Dodgson 1981b, 306), Fields 44 and 74). The appearance of these fields, their location, and the distribution of the ‘pingot’ names, all seem to indicate the possibility that they had been enclosed from former sand banks when the course of the River Mersey shifted east.
- 3.2.10 **Ordnance Survey, 1849 and 1882 (Fig 5):** the first edition 1:10,560 for the Lancashire (eastern) half of the site was surveyed by the Ordnance Survey (OS) as early as 1849. However, although Warrington was surveyed in great detail a year later (Ordnance Survey 1850), that part of the proposed development area within Cheshire (the western half) was not surveyed until the 1870s. Figure 5 combines the first edition 1:10,560 maps for Lancashire and Cheshire for the eastern and western halves of the site.
- 3.2.11 Figure 5 provides the opportunity to view the site in its entirety for the first time; the field patterns for the west and east sides are quite different with larger fields on the east side. Nevertheless, the layout of the field boundaries on the east side is very similar to Patten’s early nineteenth century estate map, although many of the narrow strip fields, their divisions formerly indicated by dotted lines, are shown as larger fields. For the west side little has altered since the tithe map (Fig 4). For the first time the land in the south-west of Arpley Meadows is mapped, with the caption ‘Subject to Floods’ providing a reasonable explanation for why it was not detailed on previous maps. The London and North Western Railway, which was shown in the west of the site on the Lower Walton tithe map (Fig 4), can now be observed within Arpley Meadows, close to the site’s eastern boundary. Slatchers Lane (*sic*) now runs underneath the railway line towards the field formerly named Chesshyre’s Six Acre, and the reason for the irregular shape of this field is now clear, as a stream runs along its north side into the River Mersey. To the north of the proposed development area, Sankey Hall (Site 10) is named.
- 3.2.12 **Warrington township tithe map, c1878:** the Warrington township tithe map and apportionment were created in 1837 (LRO(P) DRL 1/82 1837), but these documents were damaged and were not available for consultation at Lancashire Record Office. The altered apportionment of 1878 and the corresponding map (LRO(P) DRL 1/82/A 1878) were consulted instead. Land

to the north of, and not including, Chesshyre's Six Acre was shown, with a few field names present. Land formerly called Cartwrights Two Acre and Meadow was named Arpley Close or Tolletts Meadow, and the Broad Arpley field name was used as previously.

- 3.2.13 **Ordnance Survey, 1894-9 (Fig 6):** the Lancashire and Cheshire second edition 1:10,560 maps differ little in date, with Lancashire having been revised in 1888-92, and Cheshire in 1897. Little Sankey and Bank Quay have developed since the first edition 1:10,560 map, and this area has almost become an urban conglomeration with Warrington in a relatively short space of time. The iron works opposite and new railway line sweeping in shows the changing landscape of the site, yet it still remains agricultural. The River Mersey is acting as a physical barrier between the fast growing industrial development and the essentially rural economy on the marshy land.
- 3.2.14 Within Arpley Meadows, the London and North West Railway's Grand Junction Line has been built to the west of the previous London and North Western Railway, and it is the former railway which now bounds the site on the east. Within the eastern half of the site, some of the field boundaries have been removed and larger fields created, and a footbridge (Site 25) is shown where the footpath crosses the stream at the north-west corner of Chesshyre's Six Acre.
- 3.2.15 In the western half of the site there have been significant changes in the field boundaries. The strip fields have been combined into more formal larger fields, and almost all the aratral boundaries have been straightened. The road/trackway formerly known as the 'Occupation Road' (Site 21) running east/west has been extended. Two buildings of unknown function are shown (Sites 20 and 22), and a stone is marked near one of them (Site 19).
- 3.2.16 **Ordnance Survey, 1908 (Fig 7):** this is the first map to be seen as a whole, with no omissions according to county, i.e. Lancashire and Cheshire. In Arpley Meadows, the industry which was formerly some distance to the north has moved south, so that Bank Quay Cable and Rubber Works now lie much closer to the north of the proposed development area (Site 14). The rest of the Arpley Meadows half of the site is essentially unchanged. In the western half of the proposed development area the field boundaries remain unchanged, but the two buildings (Sites 19 and 20) and the stone (Site 22) are no longer shown. To the north and west, there is infilling between the iron works and Bank Quay with Little Sankey Green developing southwards.
- 3.2.17 **Ordnance Survey, 1928:** this map shows the most drastic change since the start of the detailed mapping nearly two hundred years earlier. In both halves of the site all the field boundaries have been removed, and the land is shown as rough pasture with areas of mud on the east and south, suggesting it is no longer farmland. Bank Quay Soap Works is the first development to cross the river and has been built to the north of the site (Site 14); a transporter bridge (Site 06) connected it to the railway lines on the opposite bank of the River Mersey. The former Bank Quay Cable and Rubber Works are now Bank Quay Aluminium Rolling Mills, with Crosfield's High Level Sidings adjoining to the south close to the site's north-eastern boundary (Site 14). Five landing

stages are shown along the River Mersey to the west of Arpley Meadows, three on the west bank and two on the east. The reason for their appearance since 1908 (Fig 7) is not known. There is a Sand Pumping Station shown in the south. Along the west side of the site, a strip of land can be seen as distinct from the marshy ground to the south and rough grassland to the east. This may indicate that it is still worked. Around all parts of the site and the area immediately surrounding there has been extensive embankment construction, presumably to limit widespread flooding.

- 3.2.18 **Ordnance Survey, 1947 (Fig 8):** there have been no significant changes since the previous map within the site.
- 3.2.19 **Ordnance Survey, 1954:** little has changed since the previous map, except for a reduction in the mud on the site, which has now been taken over by rough marshy ground.
- 3.2.20 **HSL UK, 1961:** this aerial photograph somewhat contradicts the information from the previous two maps. Both halves of the site appear to be made up of fields. Although the divisions may not be formerly marked out, they are certainly not rough grassland, although this activity may be recent. There are five principal fields shown in the west (some split into smaller fields), and one large field in the east, with several smaller fields at its edges. The north-eastern boundary of this field follows a similar line to the stream that formerly bounded Chesshyre's Six Acre. An industrial area is shown around the Sand Pumping Station and what appear to be palaeochannels show up as parch marks in the north-west of the site.
- 3.2.21 **HSL UK, 1973:** the layout of the fields in the west of the site is very similar to that shown in the previous photograph. A line of electricity pylons has been erected, two of which lie within the south-west of the site. The palaeochannels in the west and the industrial area in the location of the Sand Pumping Station are still shown, and to the south are two circular tanks. In the eastern half of the site the field boundaries have changed, with a single boundary dividing the site from north to south down the middle. At the south-east end of this is a small building.
- 3.2.22 **Ordnance Survey, 1975:** there have been several significant changes since the previous map. Three of the landing stages have been disused, one has moved south, and several drains and a pipe line are shown in the western part of the site. Numbers of small buildings and enclosures are shown to the south of the pipe line, and Arpley Dredging Deposit Ground has been constructed, and forms the south-west boundary of the site. The strip of ground along the west of the site is no longer shown.
- 3.2.23 **Airviews (M/cr) Ltd, 1983 (Fig 9):** a new bridge has been constructed to the south of the now disused transporter bridge, and Crosfield's High Level Sidings have been removed, and some of the resulting land built on. The industry to the north has encroached onto the north-west of the site, and a new road runs from the works to the roundabout at the new bridge, through an area of spoil heaps and apparently exposed sand. There are now three circular tanks in the south of the site, rather than the two seen previously, and many of the

field boundaries have changed. Most of the site is still used for agricultural purposes.

- 3.2.24 **Ordnance Survey, 1989:** little has changed since the aerial photograph of 1983, although mapping conventions make it appear as if the field boundaries have been removed again. Three pumps are shown to the south of the roundabout.
- 3.2.25 **Geonex, 1993:** the major change since 1989, although it does not affect the site directly, is the construction of a bridge from Gatewarth Industrial Estate, in the west, to the land immediately west of the site. The two fields to the east of the roundabout at the east end of the new bridge are still agricultural and neat in appearance. The rest of the site has deteriorated drastically since the previous aerial photograph ten years ago, and is now rough ground or wasteland. The field boundaries have changed again, and there is a car and lorry park around the road to the bridge south of the disused transporter bridge.
- 3.2.26 **Ordnance Survey, 2005:** a bank is also shown running east/west through the western half of the site. Otherwise, nothing has changed.

3.3 ARCHAEOLOGICAL INTERVENTIONS

- 3.3.1 There have been many excavations in the Warrington area, and the two most relevant sites are Gatewarth Farm (Site 07), which is discussed above (*see* 3.1.3), and at Greenall Whitley Brewery, close to the site of the Roman fort at Wilderspool on the River Mersey (Gifford Consulting Engineers 1991; Gifford and Partners 1995). Evaluation trenches and a watching brief at the Brewery site established that extensive nineteenth and twentieth century foundations had removed earlier deposits (Gifford and Partners 1995, 1).
- 3.3.2 A desk-based assessment was carried out for an area whose boundary was almost identical to that for which development is currently proposed (Adams *et al* 1998). This report noted the limitations of what could be learned from the desk-based assessment, due to all the fieldwork having been carried out on the fringes and none within the development area (*op cit*, 21). However, despite the lack of any major archaeological interventions close to the site, there are many findspots as a result of works on the river, or other ground disturbances. The 1998 report's recommendations were for a survey of the river frontage, comprising a viewing of exposed banks and a metal detector survey (*ibid*). It also recommended a programme of fieldwalking, and a borehole survey to assess the survival of *in situ* deposits (*ibid*). No further archaeological investigations were, however, carried out.

3.4 SITE VISIT

- 3.4.1 Much of the site appeared to have been recently ploughed and seeded, within brown patches of bare soil within the crop. It was very flat, and the transporter bridge and the bridge to the south could be clearly seen. The embankments

next to the River Mersey were also visible. The site, including the transporter bridge, was photographed from the south-east (Plates 1 and 2).

4. GAZETTEER OF SITES

Site number 01
Site name Island west of Arpley Meadows, Warrington
NGR SJ 5950 8751
Site type Island field name
Period Post-medieval
HER No -
Statutory Designation -
Sources CRO(C) EDT 249/1 and 2 1844

Description

The title map and corresponding apportionment show fields with island names (Fields 3, 5, and 6; CRO(C) EDT 249/1 and 2 1844), likely to relate to islands within the surrounding marshy water meadows, and there is therefore the possibility of the remains of human activity being present. These areas of higher ground tend to be due to underlying geology, and therefore to be fairly constant within the floodplain, meaning there could be the potential for prehistoric remains there.

Assessment

The site lies immediately to the north of the proposed development area, and should not be affected.

Site number 02
Site name Prehistoric flint find in Arpley area
NGR SJ 6000 8700
Site type Flint findspot
Period Prehistoric
HER No 478
Statutory Designation -
Sources Grealey 1976

Description

A flint flake of unknown date, possibly a scraper, was found in the Arpley area (Grealey 1976, 78, no 2).

Assessment

The findspot is poorly located, and may be affected by the proposed development. It is also indicative of the potential for prehistoric activity in the Arpley area.

Site number 03
Site name Human skulls found at Arpley Meadows
NGR SJ 6021 8653
Site type Human skulls
Period Unknown
HER No 450
Statutory Designation -
Sources Madeley 1894

Description

Several human skulls were found during construction work on the New River Diversion across Arpley Meadows in 1893 (Madeley 1894, 105).

Assessment

The site lies to the south-east of the proposed development area, and will not be affected.

Site number 04
Site name Warrington Logboat 7
NGR SJ 5985 8657
Site type Logboat
Period Early Medieval
HER No 504
Statutory Designation -

Sources Dunlop 1930; McGrail 1978

Description

A logboat was dredged from the River Mersey, west of the central pier of Walton Arches in 1931. It was discovered whilst removing a bank of sand in the bed of the river, embedded 0.6m deep in sand, at approximately 15m above mean sea level (Dunlop 1930, 16). The logboat was made of oak, and was interpreted as a provisional canoe (McGrail 1978, 295). It has been radiocarbon-dated to around the eleventh century.

Assessment

The site lies to the south of the proposed development area, and will not be affected.

Site number 05

Site name Warrington Logboat 1

NGR SJ 6014 8650

Site type Logboat

Period Early Medieval

HER No 500

Statutory Designation -

Sources McGrail 1978

Description

A logboat was dredged up in 1893 during work on the new course of the River Mersey across Arpley Meadows. It lay approximately 18-23m north of the former bank of the river, at a depth of c5.4m below ground level. It has been radiocarbon-dated to approximately the twelfth century (McGrail 1978, 288).

Assessment

The site lies to the south-east of the proposed development area, and will not be affected.

Site number 06

Site name Bank Quay Transporter Bridge

NGR SJ 5968 8761

Site type Transporter bridge

Period Post-medieval

HER No 626/1/1

Statutory Designation Scheduled Monument 108; Grade II* Listed Building

Sources DoE 1978 (Map 5, item 160)

Description

The bridge was built in 1913-15 for Joseph Crosfield and Sons Ltd, a chemical firm whose works occupy both sides of the River Mersey at Bank Quay.

Assessment

The site (DoE 1978) is outside the proposed development area, and will not be directly affected.

Site number 07

Site name Gatewarth Farm

NGR SJ 5860 8690

Site type Deer antlers and animal bones; human skull

Period Prehistoric and unknown, respectively

HER No 2590 and 2762, respectively

Statutory Designation -

Sources Hampshire 1996; Shimwell 1996

Description

During the course of excavations by North West Water for a new sewerage plant at Gatewarth Farm, Sankey Bridges in 1995, two sequences of floodplain sediments were exposed to reveal deposits of peats, timbers, scour pool detritus, animal bones and deer antlers. A sequence of radiocarbon dates from the Mesolithic to Roman period was derived (Shimwell 1996).

A human skull was found during the same excavations in 1996 at a depth of c6-6.5m, and remains undated (Hampshire 1996, 1).

Assessment

The site lies to the west of the proposed development area, and will not be affected.

Site number 08
Site name Bronze Age Palstave from Latchford
NGR SJ 6100 8700
Site type Palstave findspot
Period Prehistoric
HER No 480
Statutory Designation -
Sources Shone 1911
Description
 A loopless palstave, dated to the Bronze Age, was found at Ackers Common, Latchford (Shone 1911, 67).
Assessment
 The site lies to the east of the proposed development area, and will not be affected.

Site number 09
Site name Medieval Ford in Warrington
NGR SJ 6020 8630
Site type Site of ford
Period Medieval
HER No 476
Statutory Designation -
Sources Ordnance Survey 1899b
Description
 The predecessor to the HER, the County Treasures Record, records a medieval ford in the Walton area south of the disused Runcorn and Latchford Canal, possibly with the evidence of the name Ford House Farm (Ordnance Survey 1899b).
Assessment
 The site lies to the south-east of the proposed development area, and will not be affected.

Site number 10
Site name Sankey Hall, Warrington
NGR SJ 5938 8814
Site type Manor house
Period Medieval - Post-medieval
HER No 566/1
Statutory Designation -
Sources Anon 1927
Description
 Sankey Hall is said to be a manor house, and members of the Sankey family lived at Little Sankey Hall during the same centuries that the Boteler family lived at Bewsey. The Hall dates from c1500, and was demolished in 1937.
Assessment
 The site lies to the north of the proposed development area, and will not be affected.

Site number 11
Site name Warrington Docks
NGR SJ 6070 8640
Site type Flint findspot, timber pile settlement, logboats
Period Prehistoric (flint and settlement), Early Medieval (logboats)
HER Nos 477/0/1, 477/1, 501/0/1, 501/0/2 (respectively)
Statutory Designation -
Sources Grealey 1976; McGrail 1978
Description
 A prehistoric triangular flint scraper was found near the entrance to Warrington Docks (Grealey 1976, 78, no 1). Prehistoric timber piling was also found, with many piles set in two irregular lines 1m apart and interspersed with rows of stakes crossed in herringbone fashion (*op cit*, 79, no 18). The piles were discovered during the construction of the Manchester Ship Canal and Walton Lock in 1894, and a

logboat, later dated to the early medieval period, was also found (McGrail 1978, 288-91). Several years later, in 1929, a second logboat was dredged from the old river channel near its junction with the diversion at Arpley, and it was also dated to the early medieval period (*op cit*, 293-5).

Assessment

The site lies to the south-east of the proposed development area, and will not be affected.

Site number 12
Site name Warrington Logboat 11
NGR SJ 5830 8710
Site type Logboat
Period Early Medieval
HER No 506
Statutory Designation -
Sources McGrail 1978

Description

A logboat was found at Gatewarth sewerage works in 1971, and was later dated to the early medieval period (McGrail 1978, 297-8).

Assessment

The site lies to the west of the proposed development area, and will not be affected.

Site number 13
Site name Hazard area for Medieval Warrington and its Post-medieval expansion
NGR centred SJ 608 881
Site type Town
Period Medieval - Post-medieval
HER No includes numerous sites
Statutory Designation -
Sources Anon 2003

Description

The area of archaeological potential for later medieval Warrington and its post-medieval expansion (Anon 2003, fig 2).

Assessment

The hazard area lies to the north-east of the proposed development area, and will not be affected.

Site number 14
Site name Hazard area for Bank Quay industrial centre, up to the twentieth century
NGR centred SJ 595 877
Site type Industrial area
Period Post-medieval
HER No includes numerous sites
Statutory Designation -
Sources Anon 2003, HER

Description

Bank Quay developed as an industrial area to the west of Warrington, and was founded by Thomas Patten in the late seventeenth century (*op cit*, 15). This area has been defined (Anon 2003, fig 2), and has been expanded here to include industry in the surrounding area up to and including the twentieth century.

Assessment

The hazard area lies to the north of the proposed development area, and will not be directly affected.

Site number 15
Site name Possible ford at Gutsford, west of Arpley Meadows, Warrington
NGR SJ 5926 8725
Site type Possible ford
Period Post-medieval
HER No -

Statutory Designation -**Sources** CRO(C) EDT 249/1 and 2 1844**Description**

Several fields have Gutsford field names on the west bank of the River Mersey (CRO(C) EDT 249/1 and 2 1844), indicating a possible ford, either across the river, or across some smaller channel within the water meadows.

Assessment

The site lies within the proposed development area, and may be affected.

Site number 16**Site name** Roman pottery findspot in Warrington Parish**NGR** SJ 6050 8800**Site type** Pottery findspot**Period** Roman**HER No** 628**Statutory Designation -****Sources** Grealey 1976**Description**

Roman pottery was found in an unknown location within Warrington Parish (Grealey 1976, 79, no 21).

Assessment

The site is poorly located, and may be affected by the proposed development.

Site number 17**Site name** Roman coin from Warrington**NGR** SJ 6060 8780**Site type** Coin findspot**Period** Roman**HER No** 631**Statutory Designation -****Sources** Grealey 1976**Description**

A Roman silver coin was found in Warrington in 1885 (Grealey 1976, 80, no 28).

Assessment

Although the site appears to be poorly located within Warrington, it lies to the north-east of the proposed development area, and will not be affected.

Site number 18**Site name** Roman Road from Chester to Wilderspool**NGR** SJ 5093 7657**Site type** Road**Period** Roman**HER No** 2417/1/0**Statutory Designation -****Sources** Margary 1957, 304-5**Description**

The Roman road between Chester and Wilderspool has been traced north-east from Chester to connect with the northern road through Warrington at the Roman settlement of Wilderspool (Margary 1957, 304-5).

Assessment

The road runs to the south-east of the proposed development area, and will not be affected.

Site number 19**Site name** Stone west of Arpley Meadows, Warrington**NGR** SJ 5953 8730**Site type** Stone**Period** Post-medieval

HER No -
Statutory Designation -
Sources Ordnance Survey 1899b

Description

A stone is marked in this location in the late nineteenth century, probably representing a boundary marker.

Assessment

The stone is not marked on any twentieth century maps. However, its survival cannot be confirmed without further evaluation and it may therefore be affected.

Site number 20
Site name Building west of Arpley Meadows, Warrington
NGR SJ 5954 8726
Site type Building
Period Post-medieval

HER No -
Statutory Designation -
Sources Ordnance Survey 1899b

Description

A building is marked in this location in the late nineteenth century, but it does not appear on any later mapping.

Assessment

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

Site number 21
Site name Occupation road west of Arpley Meadows, Warrington
NGR SJ 5951 8706
Site type Road
Period Post-medieval

HER No -
Statutory Designation -
Sources CRO(C) EDT 249/1 and 2 1844; Ordnance Survey 1899b

Description

An occupation road is shown on the tithe map (CRO(C) EDT 249/1 and 2 1844), and it later branches off to the west (Ordnance Survey 1899b).

Assessment

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

Site number 22
Site name Building near occupation road, west of Arpley Meadows, Warrington
NGR SJ 5952 8698
Site type Building
Period Post-medieval

HER No -
Statutory Designation -
Sources Ordnance Survey 1899b

Description

A building is marked in this location in the late nineteenth century, but it does not appear on any later mapping.

Assessment

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

Site number 23
Site name Possible settlement around House Pasture, west of Arpley Meadows, Warrington
NGR SJ 5955 8667
Site type Settlement, ditch, stone bridge

Period Post-medieval
HER No -
Statutory Designation -
Sources CRO(C) EDT 249/1 and 2 1844
Description
Field names (House Pasture, near Pool Ditch and Stanbridge Hey) indicate possible settlement in this area.
Assessment
The site lies within the proposed development area, and will be affected.

Site number 24
Site name Footbridge near Cheshire's Six Acre, Arpley Meadows, Warrington
NGR SJ 5967 8739
Site type Footbridge
Period Post-medieval
HER No -
Statutory Designation -
Sources Ordnance Survey 1899b
Description
A footbridge is shown going over the stream that formerly marked the northern boundary of the field named Cheshshyre's Six Acre.
Assessment
The site lies immediately north of the proposed development area, and will not be affected.

Site number 25
Site name Possible dagger find in Dagger Acre, Arpley Meadows, Warrington
NGR SJ 5986 8730
Site type Dagger
Period Prehistoric
HER No -
Statutory Designation -
Sources CRO(C) EDT 249/1 and 2 1844
Description
The field name 'Dagger Acre' indicates a possible dagger find of unknown date in this area.
Assessment
The site lies within the proposed development area, and will be affected.

Site number 26
Site name Possible hammerhead find in Hammerhead Acre, Arpley Meadows, Warrington
NGR SJ 5995 8723
Site type Hammerhead
Period Prehistoric
HER No -
Statutory Designation -
Sources CRO(C) EDT 249/1 and 2 1844
Description
The field name 'Hammerhead Acre' indicates a possible hammerhead find of unknown date in this area.
Assessment
The south-west end of the site lies within the proposed development area, and will be affected.

5. SIGNIFICANCE OF THE REMAINS

5.1 INTRODUCTION

5.1.1 In total, 26 sites of archaeological potential were identified within the study area. Of these, 14 sites were previously recorded by the HER (Sites **02-12**, **16-18**), two sites were hazard areas based on information held at the HER, and included numerous HER sites within them (Sites **13** and **14**), and the remaining 10 sites were identified from cartographic sources from within the proposed development area (Sites **01**, **15**, **19-26**). The hazard areas contain Listed Buildings, and there is also one Scheduled Monument (Site **06**, which is also a Listed Building). None of the sites with statutory designations lie within the proposed development area. The detailed results of the assessment have been provided in the Site Gazetteer (*Section 4, above*), and an outline is presented in Table 1, below.

Period	No of sites	Sites
Prehistoric	6	Flint findspots (Sites 02 and 11), antlers and animal bones (Site 07), timber pile settlement (Site 11), palstave findspot (Site 08), dagger (?) (Site 25), hammerhead (?) (Site 26)
Roman	3	Pottery findspot (Site 16), Coin findspot (Site 17), Road (Site 18)
Early Medieval	4	Logboats (Sites 04 , 05 , 11 , and 12)
Medieval	3	Ford (Site 09), Hall (Site 10), Hazard area for town (Site 13)
Post-medieval	12	Island (Site 01), Transporter bridge (Site 06), Hall (Site 10), Hazard area for town (Site 13), Hazard area for industrial centre (Site 14), Ford (?) (Site 15), Stone (Site 19), Buildings (Sites 20 and 22), Road (Site 21), Occupation (Site 23), and Foot bridge (Site 24)
Unknown	2	Human skulls (Sites 03 and 07)

Table 1: Number of sites by period

5.2 CRITERIA

5.2.1 There are a number of different methodologies used to assess the archaeological significance of sites; that to be used here is the ‘Secretary of State’s criteria for scheduling ancient monuments’ which is included as Annex 4 of PPG 16 (DoE 1990). The sites previously listed (*Section 4, above*) were considered using the criteria, with the results below, from which the potential for the unknown archaeological resource may be gauged.

- 5.2.2 **Period:** within the proposed development area, there are no known archaeological sites that are significant for their period. However, outside the area there are early medieval logboats, and also human skulls, which although undated could be Bronze Age/Iron Age head burials and could, therefore, be significant for their period.
- 5.2.3 **Rarity:** it is possible that the stone identified within the proposed development area (Site **19**) is a boundary stone associated with divisions within the water meadows. Surviving examples are often Listed (OA North 2005, 25), but the significance of Site **19** is greatly decreased if it has been removed.
- 5.2.4 The waterlogged logboat remains (Sites **04**, **05**, **11**, and **12**), although relatively numerous in the study area, are not common, and provide a rare insight into early medieval organic remains which have left no trace in drier areas. Similarly, the timber piles (Site **11**) are a rare survival, preserved due to the waterlogged conditions. The island within the water meadows (Site **01**) can be reasonably compared to those found in the North Lancashire wetlands, where the remains of prehistoric activity was often concentrated (Middleton *et al* 1995). This island may be relatively rare within the water meadows in the surrounding area, and it is unfortunate that this area has been largely developed.
- 5.2.5 If the field names identified do indeed indicate an abandoned occupation site of post-medieval or earlier date (Site **23**) this would be at least of local rarity. The proposed development area is one of the few remaining greenfield sites close to Warrington and within the River Mersey floodplain, and many of the areas nearby have been developed with no archaeological intervention. Therefore, any previously existing similar sites are not known and may have been destroyed. For the same reason, the proposed development represents a rare opportunity to examine any surviving floodplain deposits. The closest site where these have been discovered lies to the west at Gatewath Farm (Site **07**).
- 5.2.6 **Documentation:** the value of the possible occupation site (Site **23**), the possible ford (Site **15**), and the island (Site **01**) would be enhanced by the information on the surrounding landscape given in the field names on the tithe map. There is otherwise little documentation for prehistoric and medieval archaeological potential.
- 5.2.7 **Group Value:** any settlement sites discovered within the west of the proposed development area (such as possible Site **23**) would have group value with the rest of the elements of the surrounding landscape - the 'Occupation Road' (Site **21**), the possible ford (Site **15**), the possible boundary stone (Site **19**), and the complex of water meadows in this meander in the River Mersey west of Arpley Meadows. Any logboats found would have group value with the numerous other logboats that have already been found in the area (Sites **04**, **05**, **11**, and **12**).
- 5.2.8 **Survival/Condition:** although the proposed development area appeared from the site visit to be extremely flat and to have been extensively ploughed, the depth of buried deposits in the surrounding area means that this is unlikely to have affected any prehistoric sediments and remains. Because the site is on the River Mersey floodplain, the drift geology is alluvial deposits, which are deep and, therefore, likely to preserve earlier deposits. Post-medieval sites are likely

to have suffered more due to plough damage, and may be in a poor condition (Sites **15**, **19-23**). It should be noted that an inspection of the Scheduled transporter bridge (Site **06**) in 1999 concluded that parts of it were very corroded and it was in poor condition (Vertical Access Limited 1999).

- 5.2.9 **Fragility/Vulnerability:** any floodplain deposits within the proposed development area will be vulnerable to deep excavations carried out as part of the proposed development.
- 5.2.10 **Diversity:** all the sites mentioned above under Group Value in the area west of Arpley Meadows relate to a diverse landscape of water meadows divided by field boundaries, associated with a road and a possible occupation site.
- 5.2.11 **Potential:** within the whole of the proposed development area there is the potential for the discovery of remains from the prehistoric period onwards. The deep deposits and lack of extensive development are contributing factors, and, in addition, there are likely to be waterlogged deposits so there is the potential for the recovery of environmental information. Other than where field names have indicated the potential for relatively recent abandoned occupation (eighteenth century or earlier, Site **23**) or associated sites (Site **15**), the potential should perhaps be considered to be equal across the whole area. The possible prehistoric findspots at Dagger Acre and Hammerhead Acre (Sites **25** and **26**) are indicators of potential prehistoric activity in the area.

5.3 SIGNIFICANCE

- 5.3.1 As discussed above, within the proposed development area as whole there is a rare opportunity to study sites of all ages in the water meadows near Warrington. The nature of the floodplain environment means that deposits may have been preserved from the prehistoric period onwards in any or all areas, and both the known (or suspected) sites of archaeological potential (Sites **15**, **19-24**, **25-26**) and the unknown archaeological resource are considered to be of local to regional significance. The transporter bridge (Site **06**), as a Scheduled Monument, is of national significance.

6. IMPACT AND RECOMMENDATIONS

6.1 IMPACT

6.1.1 As the results have shown, it is considered that there is a high potential for archaeological remains from the prehistoric period onwards across the whole of the proposed development area. These remains may be buried at depth, with Early Bronze Age deposits having been discovered to the west at a depth of between 0.6m and 0.82m below mean sea level (Site **07**; Shimwell 1996). No details are available regarding the location of any proposed buildings, the types of foundations, or access arrangements with Warrington to the north, and so an exact assessment of the impact of the proposed development upon the known and unknown archaeological resource cannot be accurately made.

6.2 RECOMMENDATIONS

6.2.1 Recommendations are provided for the known sites of archaeological potential in the table below, with the assumption that the proposed development will impact upon them. Recommendations for the unknown archaeological resource are also provided, which may need to be modified when more details of the proposed development become available.

Site No	Type	Period	Impact	Recommendations
02	Flint findspot	Prehistoric	Poorly located, and may be affected	Fieldwalking may locate further artefacts
15	Ford?	Post-medieval	May be affected	Evaluation
16	Pottery findspot	Roman	Poorly located, and may be affected	Fieldwalking may locate further artefacts
19	Boundary (?) stone	Post-medieval	Survival unknown	Survey to investigate presence of stone, and record if present
20 and 22	Sites of buildings	Post-medieval	May be affected	Walkover survey and assessment for evaluation
21	Road	Post-medieval	May be affected	Walkover survey and assessment for evaluation
23	Possible occupation site	Post-medieval	May be affected	Walkover survey and assessment for evaluation

Site No	Type	Period	Impact	Recommendations
26 and 27	Possible dagger and hammerhead findspots	Unknown	May be affected	Fieldwalking may locate further artefacts

Table 2: Recommendations for gazetteer sites within proposed development area

- 6.2.2 In addition to, and including, those site specific recommendations in Table 2 a general evaluation will be required across the site in order to assess the presence, extent and nature of the unknown archaeological resource. This should include fieldwalking to assess whether any further material may be present, particularly in the areas of the findspots mentioned in Table 2 above. This can provide indicators of archaeological activity. Evaluation trenching will also be required, the exact amount of which must be agreed with the Historic Environment Planning Officer (Archaeology) at Cheshire County Council. It should be noted that specific recommendations for intrusive archaeological assessment of the proposed bridge locations can only be made when more information regarding associated excavation works becomes available.
- 6.2.3 Any available borehole information would be useful prior to evaluation, and once the details of construction are known, to assess the depths of deposits. Consequently, any deposits that can remain *in situ* beneath the development without impact can be excluded from evaluation. Further recommendations could then be made based on the results of the recommended programme of evaluation.

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8. ILLUSTRATIONS

8.1 FIGURES

Figure 1: Location Map

Figure 2: Gazetteer Sites

Figure 3: Extract from Patten Estate Map, pre 1806 (CRO(C) DWW 1/63), showing eastern half of development site

Figure 4: Extract from the Lower Walton Tithe Map, 1844 (CRO(C) EDT 249/2), showing western half of development site

Figure 5: Extract from Ordnance Survey first edition 1:10,560 maps, 1849 (Lancashire) and 1882 (Cheshire)

Figure 6: Extract from Ordnance Survey second edition 1:10,560 maps, 1894-9

Figure 7: Extract from Ordnance Survey third edition 1:10,560 maps, 1908

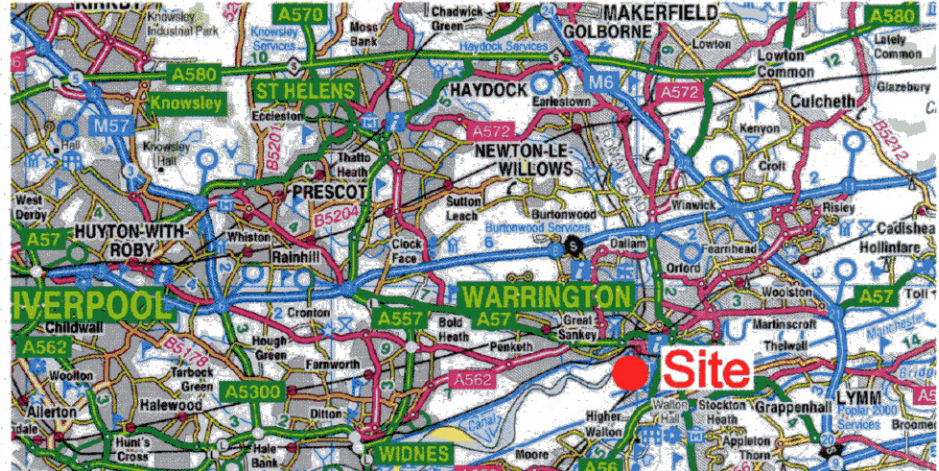
Figure 8: Extract from Ordnance Survey fifth edition 1:10,560 maps, 1947

Figure 9: Extract from aerial photograph of proposed development area (Airviews (M/cr) Ltd 1983, run 5/13 32232)

8.2 PLATES

Plate 1: Part of the east (Arpley Meadows) half of the proposed development area, with the transporter bridge (Site **06**) in the background, facing north-west

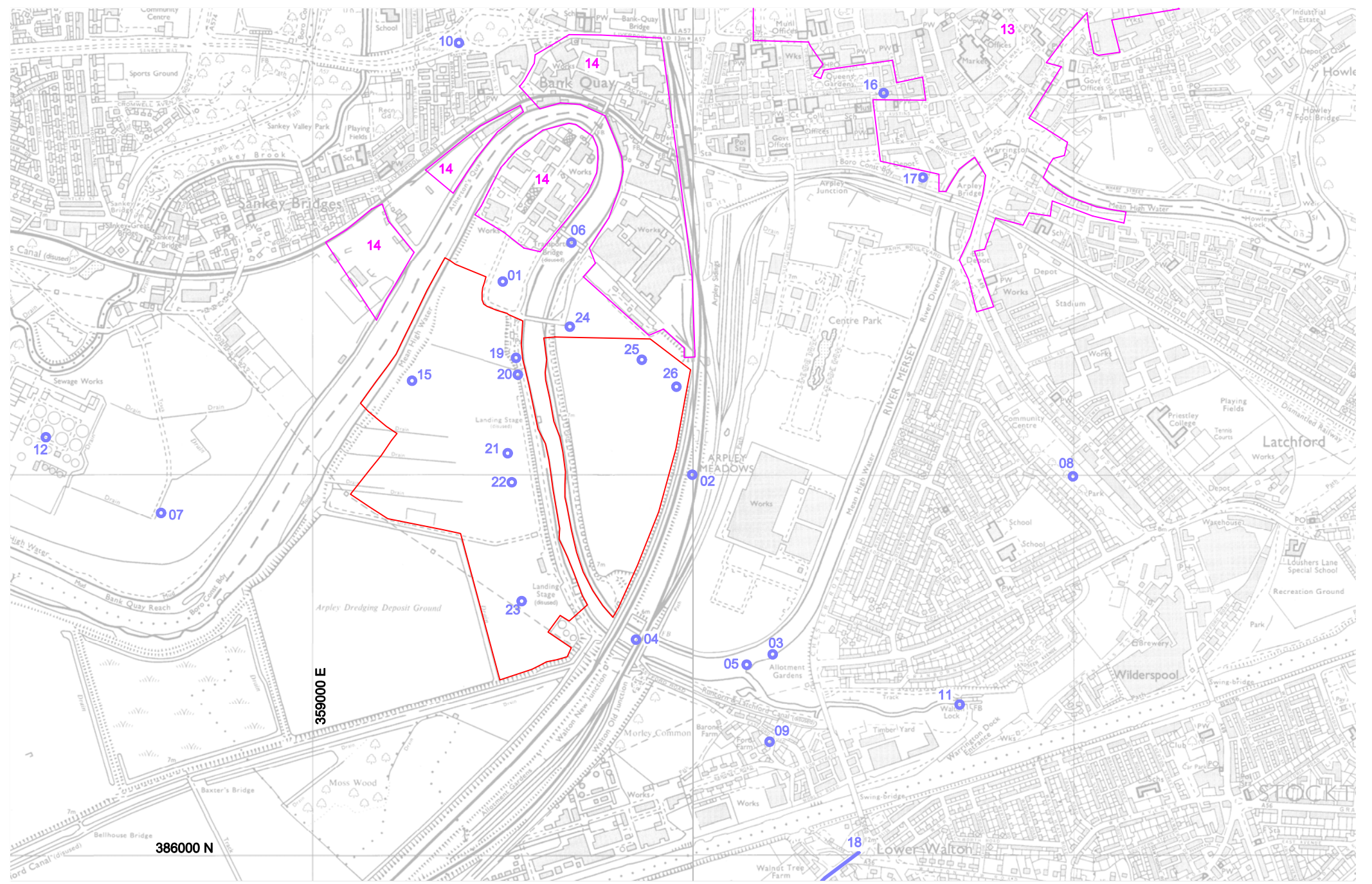
Plate 2: A more general view of the eastern half of the proposed development area, facing north-west



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Figure 1: Location Map

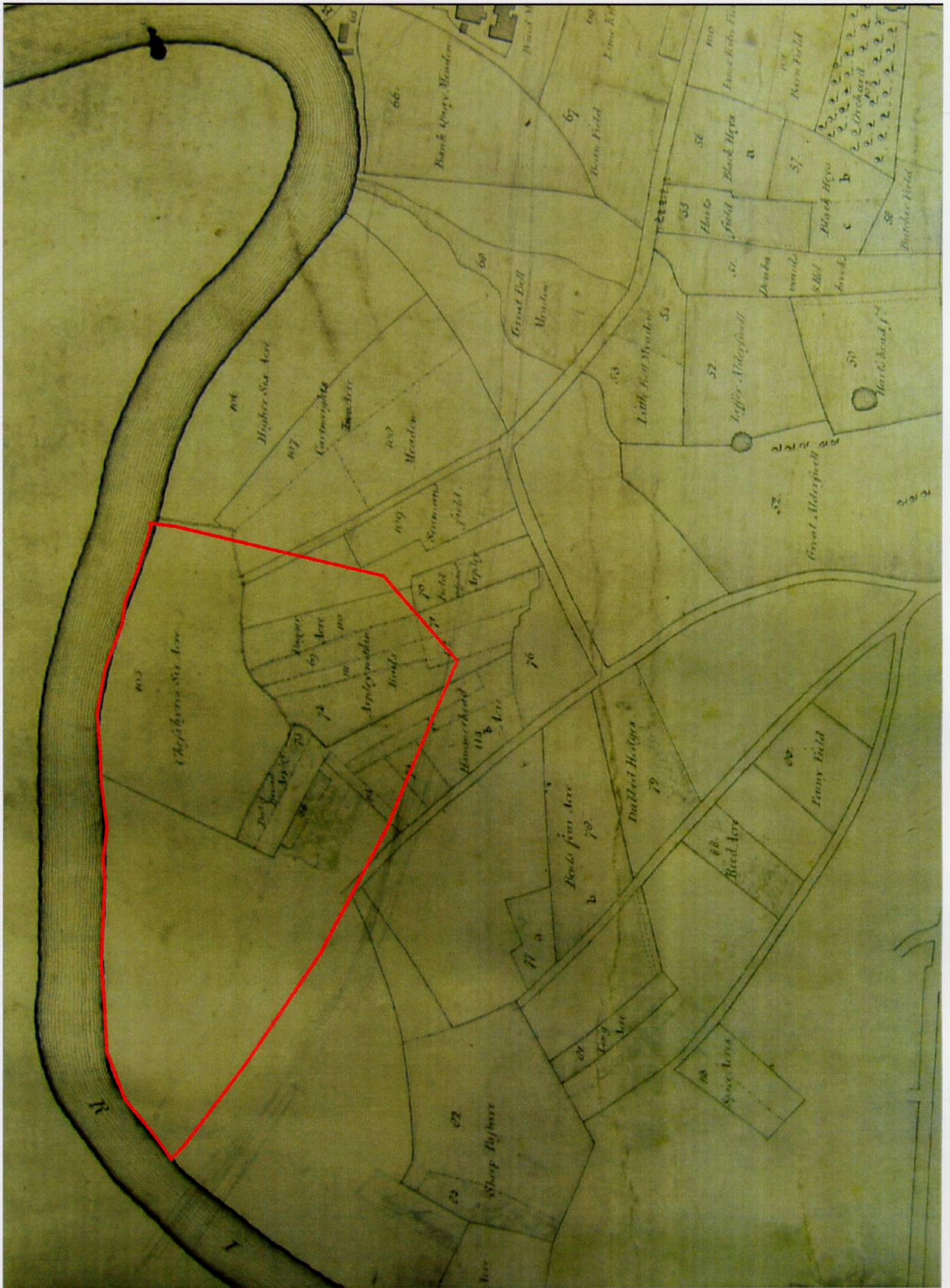


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- Proposed development boundary
- Hazard areas (Sites 13 and 14)
- 01 Gazetteer site



Figure 2: Gazetteer sites

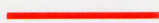
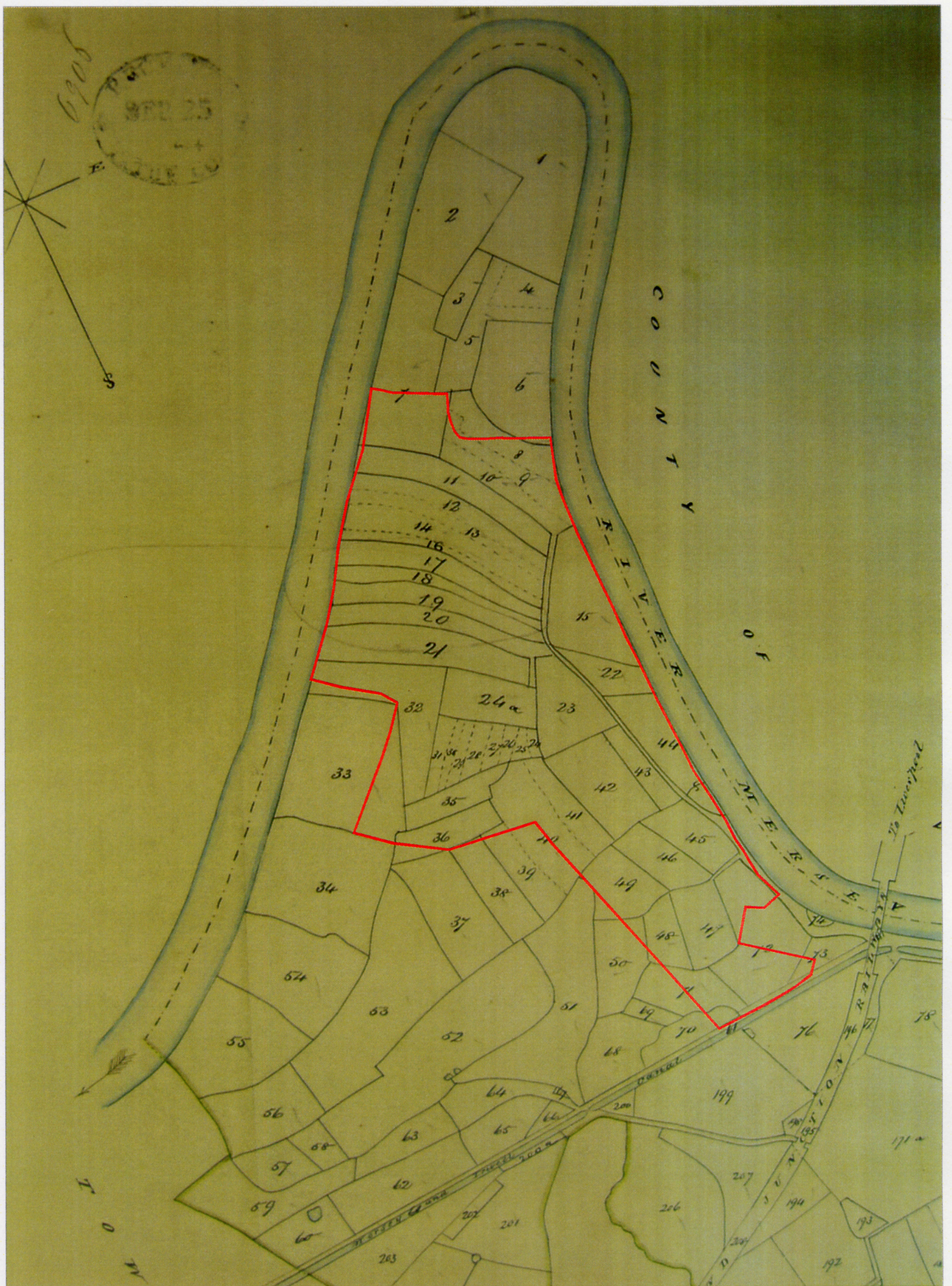


— Proposed development boundary

Not to Scale



Figure 3: Extract from Patten Estate map, pre 1806 (CRO(C)DWW 1/63), showing eastern half of development site



Proposed development boundary

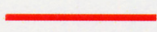
Not to scale



Figure 4: Extract from the Lower Walton Tithe Map, 1844 (CRO(C) EDT 249/2), showing western half of development site



Figure 5: Extract from Ordnance Survey first edition 1:10,560 maps, 1849 (Lancashire) and 1882 (Cheshire)



Proposed development boundary

0 250m



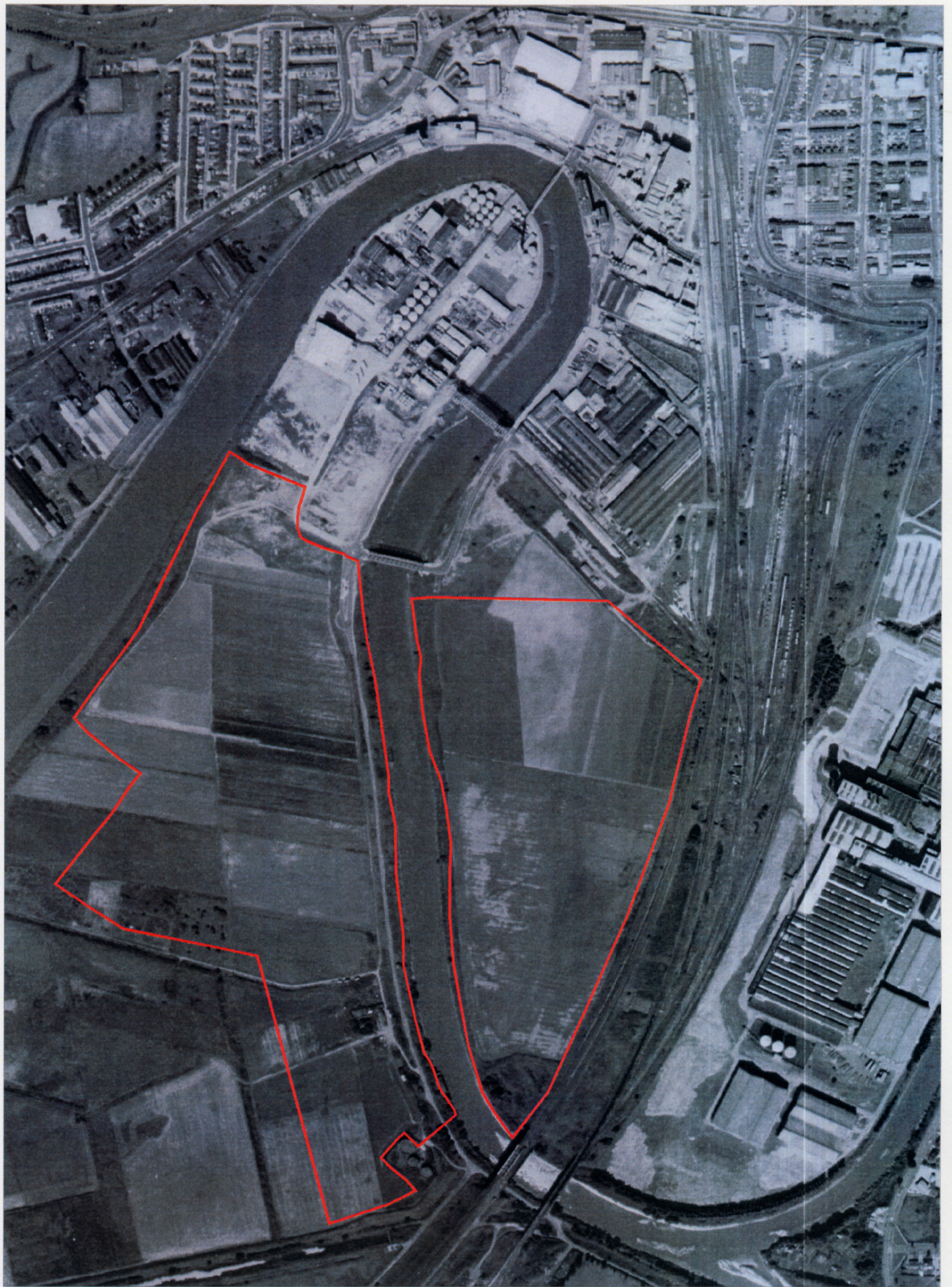
Figure 6: Extract from Ordnance Survey second edition 1:10,560 maps, 1894-9



Figure 7: Extract from Ordnance Survey third edition 1:10,560 maps, 1908



Figure 8: Extract from Ordnance Survey fifth edition, 1:10,560 map, 1947



— Proposed development boundary

Not to scale



Figure 9: Extract from aerial photograph of proposed development area (Airviews (M/cr) Ltd 1983, run 5/13 32232)



Plate 1: Part of the east (Arpley Meadows) half of the proposed development area, with the transporter bridge (Site 06) in the background, facing north-west



Plate 2: A more general view of the easter half of the proposed development area, facing north-west

APPENDIX 1: PROJECT DESIGN

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Sinclair Knight Merz Ltd (SKM) (hereafter the 'client') has requested that Oxford Archaeology North (OA North) submit proposals for an archaeological desk-based assessment of an area of land in Arpley Meadows to the south-west of Warrington town centre, Cheshire (centred SJ 596 870), prior to development of the site for retail and residential purposes. These proposals have been prepared in accordance with Cheshire County Council's (CCC) guidance notes (2003). However, due to the confidential nature of the assessment at this stage no consultation has been undertaken with CCC.

1.2 OXFORD ARCHAEOLOGY NORTH

1.2.1 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.

1.2.2 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 to identify any surviving archaeological deposits that may be disturbed by groundworks for the proposed development.

2.2 **Desk-based assessment:** to provide a desk-based assessment of the site to identify the archaeological potential prior to any development (in accordance with the IFA standards (1999)).

2.3 **Report and Archive:** a report will be produced for the client by 25th May 2005. A site archive will be produced to English Heritage guidelines (MAP 2 (1991)).

3 METHOD STATEMENT

3.1 DESK-BASED ASSESSMENT

3.1.2 **Introduction:** a desk-based assessment is usually undertaken as the first stage of a programme of archaeological recording. Prior to development of the site, further intrusive investigation may be required. It is not intended to reduce the requirement for evaluation, excavation or preservation of known or presumed archaeological deposits, but it will provide an appraisal of archaeological constraints and a guide to any requirement for further archaeological work.

3.1.3 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.

3.1.4 **Documentary and Cartographic Material:** this work will include consultation of the Cheshire Historic Environment Record (CHER), as well as the County Records Office. A review of all known and available resources of information relating to the site of the proposed development, and the study area consisting of 1km radius centred on the site. The

aim of this is to give consideration not only to the application site, but also its setting in terms of historical and archaeological contexts. These include;

- published and unpublished documentary sources
- data held in local and national archaeological databases
- printed and manuscript maps
- place and field-name evidence
- evidence for township, ecclesiastical and other ancient boundaries
- aerial photographs in both national and local collections
- other photographic/illustrative evidence
- local museum catalogues and artefactual evidence
- engineering/borehole data where applicable
- geological/soil surveys

3.1.5 **Cheshire HER:** the CHER holds a large number of aerial photographs and has access to Cheshire County Council's collection. The CHER also has an extensive library of published materials for consultation.

3.1.6 **Cheshire County Record Office:** this holds the main source of primary documentation; both maps and documents. It may also be necessary to include consultation with the Lancashire County Record Office in Preston; prior to 1974 those parts of Warrington Borough to the north of the Mersey lay in Lancashire.

3.1.7 **Other Sources:** Warrington Local Studies Library and Warrington Museum may also contain data relevant to the study area.

3.1.8 **Map regression analysis:** a cartographic analysis has the potential to inform the post-medieval occupation and land-use of the area and its development through to its modern-day or most recent use, and thereby, highlighting areas of potential archaeological interest. Particular emphasis will be on the early cartographic evidence and will include estate maps, tithe maps, and Ordnance Survey maps through to present mapping where possible.

3.1.9 **Geological/Soil Surveys:** 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.

3.2 SITE VISIT

3.2.1 Following the desk-based assessment the site will be visited in order to relate the existing topography and land use to research findings, and assess evidence not available through documentary sources. It will also provide an understanding for areas of impact by the proposed redevelopment.

3.2.2 The survey will note present land use, the condition and visibility of features identified in the documentary research and any features of potential archaeological interest, any areas of potentially significant disturbance, and hazards and constraints to undertaking further archaeological work on site.

3.3 REPORT

3.3.1 One bound and one unbound copy of a written synthetic report will be submitted to the client, and a further three copies submitted to the Cheshire HER within eight weeks of completion. A further copy will also be offered to the National Monuments Record. 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
- a concise, non-technical summary of the results
- the circumstances of the project and the dates on which the fieldwork was undertaken
- description of the methodology, including the sources consulted
- a summary of the historical background of the study area
- an interpretation of the results and their significance, using the ‘Secretary of State’s criteria for scheduling ancient monuments’ included as Annex 4 of PPG 16 (DoE 1990)
- appropriate plans showing the location and position of features or sites located
- a statement, where appropriate, of the archaeological implications of the proposed development
- monochrome and colour photographs as appropriate
- a copy 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, and a list of any further sources identified but not consulted
- an index to the project archive

3.3.2 **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.

3.4 ARCHIVE

3.4.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with appendix 3 of the current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the HER (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the County Record Office.

4 WORK TIMETABLE

4.1 **Assessment:** approximately 6 days will be required for this element.

4.2 **Report:** the client report will be completed and submitted by 25th May 2005, as requested.

5 STAFFING

- 5.1 The project will be under the direct management of **Emily Mercer BA (Hons) MSc AIFA** (OA North Senior Project Manager) to whom all correspondence should be addressed.
- 5.2 The desk-based assessment will be undertaken by **Jo Dawson** (OA North supervisor) who is very experienced in such work and capable of carrying out projects of all sizes.

7 INSURANCE

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

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