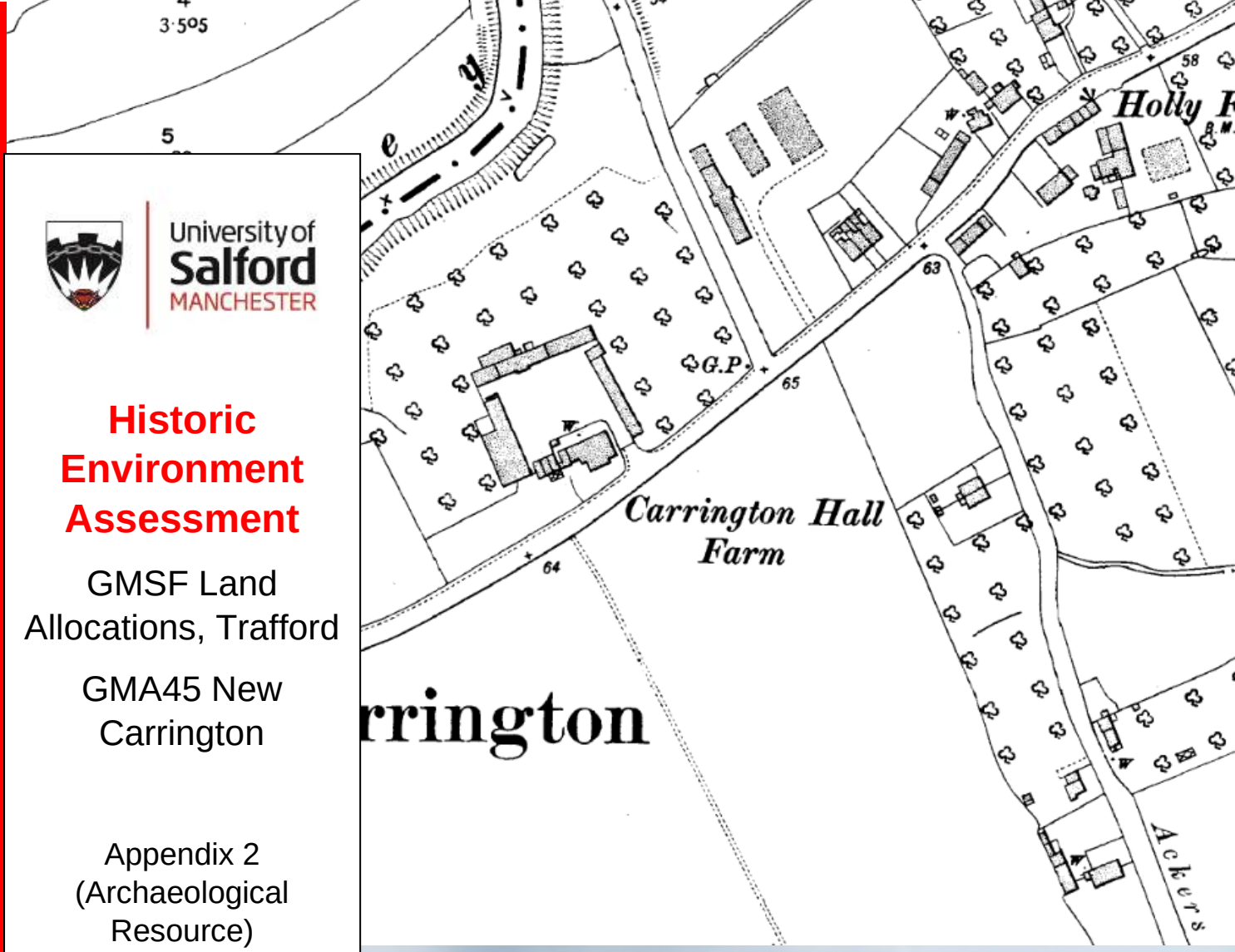

University of Salford MANCHESTER

Historic Environment Assessment

GMSF Land Allocations, Trafford

GMA45 New Carrington

Appendix 2 (Archaeological Resource)

Client:
Trafford Council

Technical Report:
Anthony Lee & Rachael Reader

Report No:
2020/4

The Centre for Applied Archaeology

REGISTERED CIfA ORGANISATION

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1. Introduction

1.1 Introduction

This report contains the detailed evidence base for the known, and potential, archaeological resource within the Carrington land allocation (herein 'the Site'); it should be read in conjunction with the other Appendices, as well as the Headline Report. The assessment has been split into five parts:

- Headline Report
- Appendix 1: Historic Environment Background and Characterisation
- Appendix 2: Archaeological Resource
- Appendix 3: Built Heritage
- Appendix 4: Historic Landscape

The evidence provided in this report is intended to inform masterplanning work for the GMSF to guide decisions on allocating locations and approximate densities for the development over the next 15 years and to inform planning policy to ensure they can be delivered in a way that minimises the risk of harm to heritage assets and proposes the appropriate level of mitigation. This report should not be used as a Heritage or Archaeology Impact Assessment to be relied upon for a current or future planning application relating to any part of the Site.

As discussed in Appendix 1, the known archaeological resource consists of Prehistoric/Romano-British field systems, skirting the former Carrington Moss which itself has the potential to hold a wealth of information relating to past environmental conditions as well as human activity. There is also potential for medieval archaeological remains within the settlement at Carrington as well as the medieval deer park at Warburton. There are also remnants of the industrial past, particularly linked to the extensive transport network across the mossland when it was reclaimed during the late 19th century.

However, overall our knowledge is limited; there has been very little archaeological investigation within the area and most of it derives from work carried out in advance of development. We have a fragmented and piecemeal knowledge base, and large areas of the Site are potentially archaeologically highly sensitive. This Appendix draws the known evidence together, highlights the unknowns, and suggests a strategy for dealing with the buried archaeological resource across the Site.

1.2 Approach to Analysis

The methodology for the archaeological analysis is set out in Appendix 1 but because so much remains unknown, this report characterises our current understanding, knowledge and potential of the resource. This information has then been combined with the historic landscape and the built heritage resource to help define the HECAs (Appendix 1).

This analysis does not seek to present a comprehensive and/or new understanding of the archaeological resource, nor does it predict the location of individual sites. Rather, it combines what is currently a disjointed and fragmented knowledge base and provides an understanding of how to approach the resource in the future.

The evidence base consists of a combination of site-based specific projects, such as individual building surveys, excavations etc and overarching pieces of work across larger areas, such as the Wetlands Survey. As the archaeological resource is generally limited, the resource

was analysed within the framework of the current HECAs rather than attempting to create new boundaries.

Recent archaeological investigations both within and in the vicinity of the Site have provided important glimpses into the nature and extent of the archaeology that may be expected to exist across large parts of the Site. The following analysis sets out the current understanding and potential of the buried archaeological resource within the defined Historic Environment Character Areas.

HECA No.	HECA Name	Sensitivity of Archaeology
01	Petrochemical Works	Low-Medium
02	Carrington Power Station	Low-Medium
03	Former Partington Gas Works	Medium
04	Carrington Village	Medium
05	Altrincham Sewage Works	Low
06	Carrington Training Ground	Medium
07	Warburton Park	Very High
08	Birchmoss Covert	Medium
09	Carrington Moss	High
10	Coroner's Wood	Very High
11	Enclosed Land, east of the Moss	Medium
12	Enclosed Land, west of Carrington	Medium
13	Enclosed Land, south of the Moss	High
14	Scrubland, west of the Gasworks	Medium
15	The Church of St George	High
16	Land west and south of the Chapel of St George	Medium
17	Scrubland Area, west of the Moss	Medium
18	Enclosed Area, south of the Moss	High
19	Rugby/Football Training Ground	Low-Medium
20	Ackers Farm	Medium
21	Woodland and Dainewell Park	Medium
22	Scrub Woodland, south-east of the Moss	Medium

Table 1 Archaeological sensitivity of the 22 HECAs within the Site

2. Geology

2.1 Introduction

Geology can influence the evolution of an area's historic environment and it is important to understand the geological character of the area. The geological data for the area was analysed on British Geological Survey's Geology of Britain viewer at 1:50,000 scale and was used to help define the HECAs. The bedrock and superficial geology overlying it is outlined below; the superficial geology is shown on Figure 1 and Chapter 3 combines this information with the known, and potential, archaeological resource.

2.2 Bedrock

Most of the Site to the north of the Cheshire Lines Railway is underlain by the Wilmslow Sandstone Formation, sedimentary bedrock. Running in a broadly north-west to south-east band south of the CLR is the Helsby Sandstone Formation, a pebbly, gravelly deposit also formed during the Triassic period. The Tarporley Siltstone Formation is located around the Red Brook in a small area just east of Warburton Lane, as well as in a thin band running along Red Brook westwards, and consists of layers of siltstone, mudstone and sandstone. A very small part of the Site, west of Warburton Lane, consists of Bollin Mudstone. This bedrock formed between 242 and 252 million years ago during the Triassic period.

2.3 Superficial Geology

This has shown that there are four broad types of superficial geology overlying the sandstone bedrock. Figure 1 shows the extent of these deposits across the Site:

- Peat
- Shirdley Hill Sand Formation
- Glaciofluvial sheet deposits of Sands and Gravels
- Alluvium

2.3.1 Peat

Around 300ha of the Site represents what remains of Carrington Moss. This area comprises peat, partially decayed vegetation or organic matter which has formed over thousands of years. The Moss is thought to have originated as a lake filled hollow after the retreat of the last ice age *c* 10,000BCE, and peat began to form subsequently, as the lake evolved into bog and mossland. Peat has the potential to hold a wealth of palaeoenvironmental data as well as preserved organic material, including wood, leather, textiles and even human bodies. The most famous find within a peat bog in the UK is Lindow Man, from Lindow Moss near Wilmslow in 1984. Analysis showed that the body had been deposited within the bog sometime between 2 BC and 119 AD. Closer to the Site, the remains of Worsley Man were recovered from Chat Moss in 1958, (c.6km NE of the Site) and this body appears to have been deposited in the Moss at a similar time to Lindow Man.

2.3.2 Sand Formations, including Sands and Gravels

Around 730ha across the Site comprises of sand and/or sands and gravels; these tend to support freely draining soils although the agricultural land on the north-east side of the Site (around Dainewell and Ackers Farm), does not drain well. This area has several drainage ditches and the land has tended to be used for pastoral purposes. This type of superficial geology has revealed evidence for Prehistoric/Romano-British activity and the location near a watercourse would also have been favourable. One such example has been recorded within the Site, just south of the Chapel of St George (WYAS 2019), however other locations nearby

on this type of geology, such as at Port Salford near the AJ Bell stadium, has also revealed evidence for longevity of occupation (Redhead pers. comm.).

2.3.3 Alluvium

Around 108ha of the Site consists of alluvium and is concentrated along the banks of the Mersey to the north and the Red Brook to the south. There are also smaller areas which could indicate the presence of former tributaries, between Dainewell and Ackers Farms. Areas of alluvium have potential to preserve palaeoenvironmental data, including faunal and ecological material and there are also remnants of the former course of the river, which silted when the Manchester Ship Canal was excavated in the late 19th century.

3. Archaeological Resource Analysis

3.1 Introduction

The aim of this analysis was to broadly identify areas where archaeological deposits have been subject to disturbance or where they survive relatively undisturbed. The information on the geology was used to initially help identify the HECAs alongside the data on later development of the landscape within the Site. Several sources were analysed, including historic and modern maps, the HLC data (see Chapter 6) and the results of the built heritage analysis (Chapter 8). Secondary sources were also consulted, particularly the Wetland Survey which carried out work on the Carrington Moss. Further geological data was analysed, including from historical boreholes as well as more recent work undertaken in advance of development within the Site. Other sources were consulted, such as data on historical landfills. This analysis identified areas where archaeological deposits have been subject to disturbance or destruction and/or where they survive relatively undisturbed. The results can be seen on Figure 3, which highlights the sensitivity of the potential archaeology within the individual HECAs, outlined within Appendix 1.

Where the sensitivity was defined as medium-high, this is discussed below in relation to four main areas, based on the analysis carried out; Carrington Moss, the sands and gravel fringes around the Moss and along Red Brook, areas of alluvium as well as the former course of the Mersey and the deer park at Warburton. The detailed evidence for the resource within these areas is outlined below, as well as the potential survival of any remains. Chapter 4 then outlines the further work required to understand the archaeological resource better.

3.2 Carrington Moss: The Wetland

3.2.1 Introduction

The mossland at Carrington is well documented; from casual observations of a relatively desolate landscape, through its transformation to productive agricultural land in the late 19th century (see Appendix 1 and Appendix 4). However, the archaeological potential of this landscape was not recognised until the North West Wetlands Survey, carried out during the late 1980s and early 1990s. This demonstrated that despite the reclamation, there were still substantial peat deposits surviving. However, the peat was, and continues to be under threat; the resource is diminishing and as much as 2m of peat may have been lost since the Moss was reclaimed.

More recent work still shows that there are substantial peat deposits present, extending over a wide area (ARUP 2016b). However, these studies were carried out for geotechnical purposes and there has been no definitive archaeological work on Carrington Moss to characterise the extent, depth and condition of the peat, in order to more clearly understand its archaeological potential. It is clear that the Moss formerly extended across a much wider area in all directions that the area currently identified as Carrington Moss and one of the current unknowns is how far the peat deposits extend out in all directions across the Site, beyond the area currently understood and mapped as 'Carrington Moss'.

3.2.2 Data Analysis

It is thought that the peats at Carrington Moss began to form from the Neolithic period onwards (between 4000 and 3000 BC), as has been postulated for other similar mires across the North-West (Shimwell 1985). This research has found that there is data on peat thickness in the area, dating back to the 1940s and derives from the following sources:

- Wetland Survey (Hall *et al* 1995): this was a series of transects and auger samples across the agricultural land.
- Historical borehole data held by the British Geological Survey. There are records of borehole sampling across Carrington which are publicly accessible online. Some of these are confidential, however there are still a number available which are open access. Most of these date to the mid-1940s and were undertaken in advance of the Gas Works extension and the Petrochemical Works.
- Other geotechnical information. More recent planning applications have geotechnical information attached, including work by ARUP (2016b) which has inferred the thickness of the peat. There is also data from intrusive investigations at the former Partington Gas Works (Sirius Geotechnical 2018)

This data was mapped and analysed to gauge the estimated extent of the Moss, peat thickness and condition. Due to the different types of investigation that have taken place over the course of around 70 years, only the peat thickness is recorded for this analysis as it is the only consistently recorded type of data. Figure 2 shows where previous data has been collected and the thickness of the peat recorded across this landscape.

3.2.3 Results and Discussion

The data shows that the peat resource is diminishing rapidly in some areas and the extent has shrunk in some areas. Defining the extent of the peat has proven difficult; it is shown as diminishing in size and some of the shallower peat deposits have been lost, as evidenced through the historic mapping, the Wetlands Survey and ARUP's work. The latter is the most accurate and up-to-date and the current, known extent is shown on Figure 1, however there may not be a distinction between what was identified as organic, shallow soils around the periphery. The shape and profile of the former lake has also been difficult to determine, though it was probably broad and shallow basin within the fluvioglacial terrace. ARUP's projected thickness map shows an undulating profile to the peat, with concentrations of thicker peat.

The peat surface has been subject to extensive disturbance, however and it has been postulated that the Moss only had a relatively shallow cover of <4m (compared to Chat Moss which may have been up to 7m) (Hall *et al* 1995). Historically, the maximum thickness recorded was at around 3.00m during the 1940s and during the 1990s survey, the maximum thickness was recorded at 2.70m. There is evidence for significant peat degradation in certain places. Some areas may have lost around 0.6-0.7m of peat but in other areas, there appears to have been little degradation.

More detailed analysis of the peat has only been carried out as part of the Wetlands Survey but gives an indication of the archaeological potential of the resource. Fieldwalking and examination of the surface as part of the Wetlands Survey found no evidence for prehistoric activity on the peat, although this can be attributed to the extensive dumping of nightsoil and other waste materials during the later 19th and early 20th century. Field visits as well confirmed the presence of a 19th century pottery across the ploughed surfaces (see Appendix 1 and 4). Although the peats were badly humified, the degree of preservation was adequate for palynological analysis, however this was not carried out for Carrington Moss. Burnt plant fragments were noted within the peat samples but again, these were not subject to more detailed analysis (Hall *et al* 1995).

There are still gaps to be addressed within the knowledge base for Carrington Moss; there are areas where the full extent of peat survival is still unknown as there is no recent peat thickness data. This includes the area south and south-east of the former Gas Works, along the north-eastern extent of the Moss and within the southern part of the former Shell Petrochemical Works. ARUP's survey infers that within the latter two areas, only shallow peats are to be

expected, however near the Gas Works there appears to be thicker peat deposits still present. We have no firm dating for the formation of the peat and what the surrounding environment was like. However, work at the former Partington Gas Works noted the survival of wood fragments, including a tree trunk measuring 1.2 x 0.3m (Sirius Geotechnical 2018). This is the type of material which could be used to date the formation of the peat strata.

3.3 Carrington Moss: The Reclamation

3.3.1 Introduction

The archaeological resource relating to moss reclamation is dealt with as part of the historic landscape discussion in Appendix 4, which deals with the infrastructure related to the late 19th century use of the Moss for waste dumping. It was felt that the historic landscape, built heritage and archaeology associated with this could not be separated from each other. However recommended work for this infrastructure is discussed within Chapter 4 of this report. The key archaeological potential for this period of the development of Carrington Moss relates to the infrastructure system put in place in the late 19th century for receiving large quantities of nightsoil from Manchester. Although some structures survive as upstanding archaeology, such as a water tower (see Appendix 4), there is likely to be a great deal of the infrastructure which only survives as below ground archaeological remains, such as evidence for the former tramway system and the numerous buildings that were used in relation to the reclamation.

3.4 Land around the Moss

3.4.1 Introduction

This refers to the area surrounding the Moss and broadly consists of the superficial geological formations of blown sand and sands and gravels. A growing body of archaeological data from across Greater Manchester has shown that prehistoric and Romano-British settlement favours locations on this type of geology which contains better draining soils. Locations near to watercourses were also favoured. Several sites have been identified on this geology (see Appendix 1) and more recently, Prehistoric/Romano-British activity has been identified within the Site. There is good potential for the survival of archaeological remains, of prehistoric and/or Romano-British date within the area fringing the Moss, which is likely to have been heavily exploited when it was a lake.

3.4.2 Data Analysis

There is a range of geological data, as well as evidence for disturbance which has implications for the survival of archaeological remains within the Site. These sources include:

- Historical borehole data held by the British Geological Survey. There are records of borehole sampling across Carrington which are publicly accessible online. Some of these are confidential, however there are still a number available which are open access. Most of these date to the mid-1940s and were undertaken in advance of the Gas Works extension and the Petrochemical Works.
- Other geotechnical information. More recent planning applications have geotechnical information attached and the work by ARUP has also identified localised organic deposits outside the Moss area.
- Historic Landfills. The Environment Agency holds data on areas which have been subject to extensive tipping, which may have masked or removed archaeological deposits.
- Archaeological data. Although there has been limited intrusive excavation within the Site, the potential for archaeological remains to survive is indicated by the results of an archaeological investigation to the south of the Chapel of St George (known as E1 and E2 plots) (WYAS 2019)

- Historic mapping. This shows that there is potential for now-demolished buildings to survive within this area, ranging from the medieval period onwards. Fieldnames from Tithe mapping may also indicate potential occupation and/or industrial uses within the wider area as well.

The geological and geotechnical data was analysed to identify any areas within the Site with unusual deposits above the natural strata of sands and bedrock.

3.4.3 Results and Discussion

According to ARUP's inferred peat thickness data (2016), there are several localised organic deposits located outside the Moss. There is a small area of up to 1.0m deep within HECA16, south-west of the Chapel of St. George. The proximity to the River Mersey suggests that these may be organic layers related to a former meander of the river. There are also smaller pockets of thin organic peat deposits across the former Petrochemical Works as well as HECA11 and partially HECA19. However, these have been estimated at around 0.10m in depth; the ones within HECA11 may be related to what has been tentatively identified as a former tributary of the Mersey. It survives as a hollow running along the eastern side of Dainewell Farm. However, there is documentary evidence to suggest that John Daine constructed the "most substantial reservoir for the reception of dung" and it is possible that the organic deposits noted to the south of the farm may derive from that.

Historical borehole data for the area also details a series of thick deposits of what was described as 'black canal silt' recorded in 1945. These were recorded across the western side of HECA01, below the Saica Paper Mill and landfill deposits to the north along the ship canal. These deposits range in thickness from 2.40m in the south-east of the Paper Mill, through to 12.80m along the banks of the ship canal beneath the historical landfill. It is not clear where these deposits are derived from, whether deliberately deposited or organic fills related to former river activity in the area (see Figure 4).

Historical landfill data shows that two substantial areas; to the north-west around the Power Station and south-east, where the Sewage Farm is, have been extensively tipped on. There are also more localised areas of landfill and are shown on Figure 4; it is not clear whether they represent material deposited which could mask archaeological deposits, or whether earth moving was involved which may have destroyed any archaeological remains.

A series of possible field systems and a trackway have been identified on an area of sands and gravels, to the west of the Moss (within HECA16). The features were encountered at a depth of around 0.80m below the current ground level and consisted of a Romano-British trackway which ran west-east and curved northwards. To the north and west of the trackway there were a series of enclosure ditches and smaller discrete features, such as pits, were also identified. Only one sherd of Roman pottery was recovered from the features; a small amount of post-medieval pottery was also recovered (WYAS 2019).

The results of this excavation add to a small body of evidence for Iron Age/Romano-British occupation, but they are difficult to date and generally rely on limited artefacts. Port Salford was similar with its enclosure ditches and paucity of artefacts. At this site however there was little evidence for permanent settlement, such as roundhouses. Great Woolden Farm had roundhouses surviving (Nevell 1988); the evidence at Port Salford was not as concrete but a series of small curvilinear features were tentatively identified as roundhouses, or stock enclosures.

The similar geological profile these sites tend to be located on extends across a large part of the Site, surrounding the Moss. As was noted in the recent excavations, geophysical survey undertaken prior to excavation only identified the more substantial features such as the

trackway and one enclosure ditch. The shallower, more ephemeral features were masked by later ploughing and modern anomalies. The shallow nature of the features and the lack of organic fills are also factors contributing to weakened responses on the geophysical data (WYAS 2019, 21). Recent geophysical survey carried out along Warburton Lane, within the south-western part of the Site, have also identified strong anomalies potentially of a similar nature to those outlined above (Magnitude Surveys 2019). This also raises the possibility of further prehistoric or later activity which has yet to be tested with excavation.

There are several farms, cottages and a medieval manor identified within the Site and a full gazetteer can be found in Appendix 1. Those heritage assets identified within medium to high archaeologically sensitive areas are outlined below, along with their HECA.

HA Number	HECA Location	Name	Period
11	4	Carrington Hall	medieval
12	4	Carrington Water Mill	medieval
35	4	Smithy, House and Garden	post-medieval
33	7	Brook Cottage	?post-medieval
14	11	Dainewell Farm	?medieval
18	11	Earthwork	?post-medieval
32	11	Martha Baxter's House	?post-medieval
70	12	Yewtree Farm	?post-medieval
25	13	Birch Cottage	?19th century
28	13	Heath Farm	?post-medieval
29	13	George Royle's Cottage	?post-medieval
34	13	John Dennis's Cottage	?post-medieval
37	13	Briery Field	19th century
38	13	Saw Pit Field	19th century
41	13	Kiln Field	19th century
99	13	Strawberry Cottage	?post-medieval

3.4.4 Conclusion

The significance of the any archaeological remains depends on the extent, condition, survival and date. Some of these have the potential to be of regional significance, particularly any prehistoric/Romano British and medieval remains; however as so much remains unknown it is difficult to ascribe significance at this stage. However, those heritage assets that are earlier in date and more well-preserved will be ascribed higher significance.

3.5 Warburton deer park

The north-eastern portion of the former medieval Warburton deer park falls within the Site. The following analysis has, however, considered the park as a whole, as the significance of the park cannot be understood without considering it in its entirety.

This current assessment has determined that there are a number of features surviving within the landscape that are likely to be associated with the medieval former deer park. There are also likely to be hitherto unknown buried archaeological remains surviving that are associated with the park.

Within the Site boundary, the only above-ground remains of the deer park observed during this assessment was a substantial bank, which is likely to represent the northern boundary of the deer park, also known as the 'park pale'. No detailed inspection of this feature, or indeed any other areas of the park, were carried out as part of this assessment, so there is currently a degree of uncertainty regarding the extent of the survival of the park pale within the Site, as well as its survival along the whole of its length. There is also a degree of uncertainty regarding the veracity of the other above ground features of the park that have been identified by this assessment, most of which lie outside the Site boundary, and which have been identified from historic maps but which have not been subject to detailed visual inspection.

3.5.1 Historic Background

Appendix 1 has a brief history on Warburton deer park and this section reinforces the fact that there is limited historical information on this deer park. There is a suggestion that Sir Geoffrey de Dutton II was responsible for creating the deer park sometime between his succession of the estate in 1248 and his death in 1278. The park is shown on several late 16th/early 17th century maps and it is presumed to have been disimparked around the 17th century. The surrounding landscape was presumably deforested and enclosed for agricultural purposes; the manor appears to have been converted into a farm around this time though it is not clear if it was tenanted or if members of the Warburton family continued to occupy it. An 18th century Estate Plan shows that the land that formed the deer park was retained as one tenancy. It is estimated that the size of the park would have been originally around 112ha.

Deer parks were a major feature of the medieval landscape and became popular after the Norman conquest. Most parks were created between 1200 and 1350 and it is estimated that there were around 3000 once in existence across England, Scotland and Wales. Deer parks survive in greatest numbers in the West Midlands and the South East of England. The creation of a deer park was an elite privilege and took time and money to create; they could be located at some distance from their creator's home, whereas others encompassed it. Deer parks also varied greatly in size, with the smallest known at 3ha, to the largest at 1600ha.

Although deer parks were primarily used for hunting, they also provided food, resources for building and fuel and contained a mix of woodland and pasture. Parks could contain several features, including hunting lodges (often moated), park keeper's accommodation, rabbit warrens, fishponds, pitfall traps, deer courses and game enclosures. They were usually surrounded by the park pale (park boundary) which was typically a fenced or hedged bank, often with an internal ditch.

3.5.2 Warburton deer park features

Several features and buildings across the former park landscape have been potentially identified which relate to the use of the park and its subsequent enclosure for agricultural purposes. Some of the features are visible in the landscape, whilst some are likelty to survive as buried remains, and are outlined below, including:

- Warburton Park Farm, thought to have originated as the medieval moated manor of the Dutton family;
- Evidence for the park pale (park boundary);
- Evidence for a water mill and associated water management such as mill race (leat) and dams;
- Evidence for fishponds;
- Evidence for a possible pillow mound (artificial rabbit warren)
- Evidence for other features, such as possible salters, an eastern entrance to the deer park, and other unidentified features.

Evidence for the park was collated through a combination of satellite mapping, historical map regression, documentary research, and a rapid site visit. LiDAR could not be consulted as there is currently no coverage for the area.

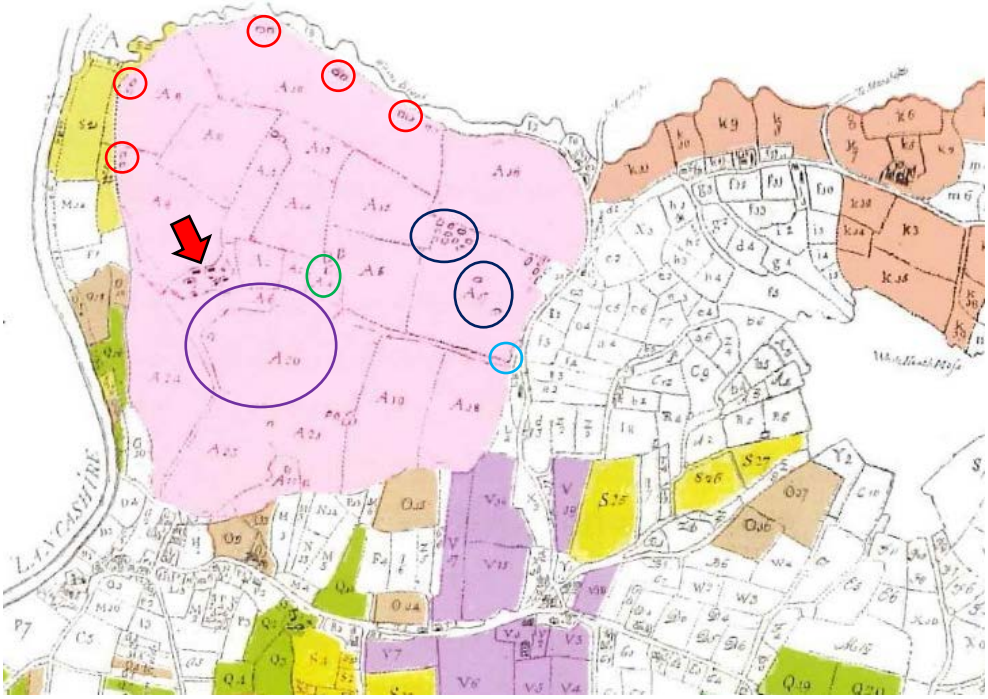

Plate 1 Warburton Estate Plan of 1757. The possible salters are circled in red, with the surviving ponds (probable fishponds) in blue, and the potential rabbit warren feature circled in green. The purple circle is the general area where a former mill may have been located. The light blue circle indicates the location of a probable entrance to the deer park. Warburton Park Farm is arrowed (taken from Nevell et al 2015; reproduced from the Warburton Archives at Arley Hall)

3.5.2.1 Warburton Park Farm – Moated Manor

Around 6000 moated sites are known across England and consist of wide ditches which enclose a platform on which stood domestic or religious buildings. Most were prestigious aristocratic and seigneurial residences and the moats were more likely to have been status symbols. The peak of their construction was around 1250-1350, with the greatest concentration in central and eastern parts of England.

The evidence suggests that until around 1469, this was the manorial seat of the Dutton family (who took the Warburton name sometime around 1311). The main branch of the family moved to Arley Hall, around five miles west of Warburton in 1469, however a branch of the family continued to reside here until the late 17th century (Newton 1939, 9; Ormerod 1882; Nevell 2015). This may coincide with when the farm complex was first built as the Grade II listed outbuilding (possibly labourers' accommodation) dates to the 17th century. There is little other

evidence for it being a moated manor site except for the survival of what has been interpreted as part of the moat to the south of the farm (centred at 370215, 390158). The area has been heavily landscaped, and the agricultural buildings have expanded in all directions so there is little evidence to suggest where the rest of the moat may have been located.

There is also what appears to be a series of feeder channels running from the east towards the farm with one running into the moat. The ones north of the moat appear to be created in the late 19th century however the southernmost one is earlier in date and can be traced running eastwards, then turning south to follow Warburton Lane and then eastwards again across what was once part of Warburton Moss.

It could however be an earlier feature; moated sites frequently had inlet and outlet leats or channels to keep them supplied with water (Taylor 1978, 10) and there is evidence at Warburton for sluice gates existing at one stage as well. The one at Warburton has been heavily modified, with additional channels added during the later 19th century and a large part of the garden to the north of the possible moat has been extensively landscaped.

3.5.2.1 Warburton Park – Evidence for an associated water-powered corn mill

Tithe map evidence suggests the high likelihood of the existence of a water-powered corn mill within Warburton Park, of possible medieval origin. The evidence comes from the name of two fields given on the tithe map and the presence of ponds in those fields, as well as visible, surviving remains of the mill (and wider park) water management, in the form of a mill leat and associated water channels (Plates 2 and 3, below). Plate 2 shows the location of the two fields. The field numbered '6' had the plot name '*Mill Field & part of Dam & Spring'*, and the field numbered '11' had the plot name 'Dam and Spring and part of Mill Field'. Assuming that the field names do indicate the presence of a mill in this location, there is a high likelihood of buried archaeological remains of this mill to survive. A comparative example of the buried remains of a mill and dam being located with a deer park comes from Ravensdale deer park in Derbyshire (Scheduled Monument number 1021232).

Plate 2: Field name evidence provided by the c1839 tithe map suggests that a water-powered mill was formerly located to the south of Warburton Farm. The two fields lie outside the Site boundary.

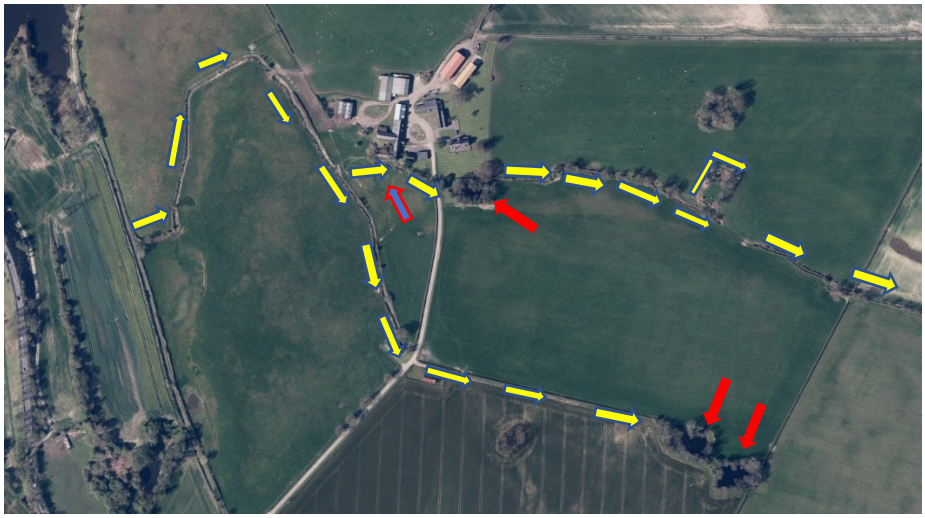

Plate 3: A modern aerial showing the surviving evidence for a former mill and associated water management. Red arrows indicate surviving probable mill ponds/dams (the blue arrow shows the location of a former pond). The yellow arrows indicate a probable mill race/leat, which would have channelled water from and to the Mersey to feed the mill ponds/dam. Map evidence also suggests that the water channel also provided water for the boundary ditch around the rabbit warren. The fact that the water channel appears to extend further east, beyond the rabbit warren, to the edge of the park, suggests that an elaborate system may have existed where the park pale's internal ditch could also have been supplied with water, which could be regulated to provide inflow or outflow for the mill. Further survey is required to better understand water management within the deer park. This area is outside the Site boundary.

3.5.2.2 Evidence for the park pale (deer park boundary)

The boundary of the park can be identified with some confidence, partly based on evidence for its original extent shown on an 18th century estate map as well as upstanding features. Part of the boundary has been identified surviving as an earthwork along its south side, running over a distance of around 350m (centred at 370211, 390159).

Elsewhere the boundary is identified with less confidence, however the northern boundary is known to broadly follow the Red Brook and evidence suggests that the a substantial bank, with southern slope leading down towards Red Brook possibly represents above ground remains of the park pale.

Plate 3: Photograph taken from the edge of Coroner's Wood, looking south-westwards across Red Brook. The possible park boundary can be seen beyond the Brook, represented by a substantial bank, the top of which is indicated by the red arrows. This area is within the Site.

No further above-ground remains of the park pale where identified, however the route of the park appears to have been fossilised in the landscape: the eastern park boundary broadly corresponds with modern day Warburton Lane and its western course is fossilised in a field boundary which runs broadly parallel with the Mersey. It is thought to follow part of the Bollin Way and there is a slight change in topography with a slight hollow running parallel with this path which could represent the remains of a boundary ditch (centred at 369933, 389817). On some satellite imagery, this also corresponds with a darker cropmark which follows the projected course of the boundary although this area has historically been used for tipping which may have affected the survival of any remains. The buried remains of an eastern entrance to the deer park may also exist within, or just outside the Site, opposite Jack Hey Gate farm, as this is shown on the 1757 Estate map and the name of the farm suggests the possibility of the former existence of a park gate in this location.

3.5.2.3 Evidence for fishponds

A fishpond would have been artificially created, to cultivate, breed and store fish and could be dug into the ground, embanked or formed by placing a dam across a narrow valley. They tend to be in groups of up to 12, arranged either in a single line of in a cluster and interconnected with leats. They could be of the same size, or differently sized depending on whether they were used for storage, in the case of larger ones, or used for cultivating fish and breeding, as with the smaller ones. Fish ponds were maintained by a water management system, which included inlet and outlet channels carrying water from a river or stream as well as an overflow leat. They were sometimes associated with buildings which were used by fishermen or to store equipment. They were recorded from the 12th century onwards and were located close to villages, manors or monasteries, or were located within parks and around 2000 are known nationally. Despite being a relatively common features, fishponds are important for their association with other classes of medieval monument (Historic England 2018, 1-2)

Tithe mapping shows the presence of a large number of ponds across the former Park area, in comparison to elsewhere where they are much more isolated and scattered around. It is thought that some of these are remnant of Park features and there are three distinct clusters identified which have been interpreted as remains of fish ponds. These are all first depicted on the 1757 Estate map. One was located just south-west of Heathlands Farm and have since been infilled, although there is potential for them to survive as archaeological remains (centred around 371077, 390153). Tithe mapping depicts five separate ponds but they were infilled by the late 19th century as they are not shown on subsequent maps.

A second cluster has been identified towards the south side of the former park (centred around 370489, 389851). Tithe mapping shows six separate ponds however on later mapping they are no longer distinct entities and now survive as two separate ponds. Historic mapping tentatively hints at possible channels between some of them which appear to have gradually eroded and became indistinguishable. Some of these ponds have also since been infilled. A third cluster has been identified, north west of the first cluster and appears to be the most intact and well-preserved grouping (centred at 370851, 390264). Historic mapping shows up to ten ponds, as well as a series of interconnecting channels. Today, they lie in a densely wooded area which is currently inaccessible, however most of the ponds still survive along with their interconnecting channels.

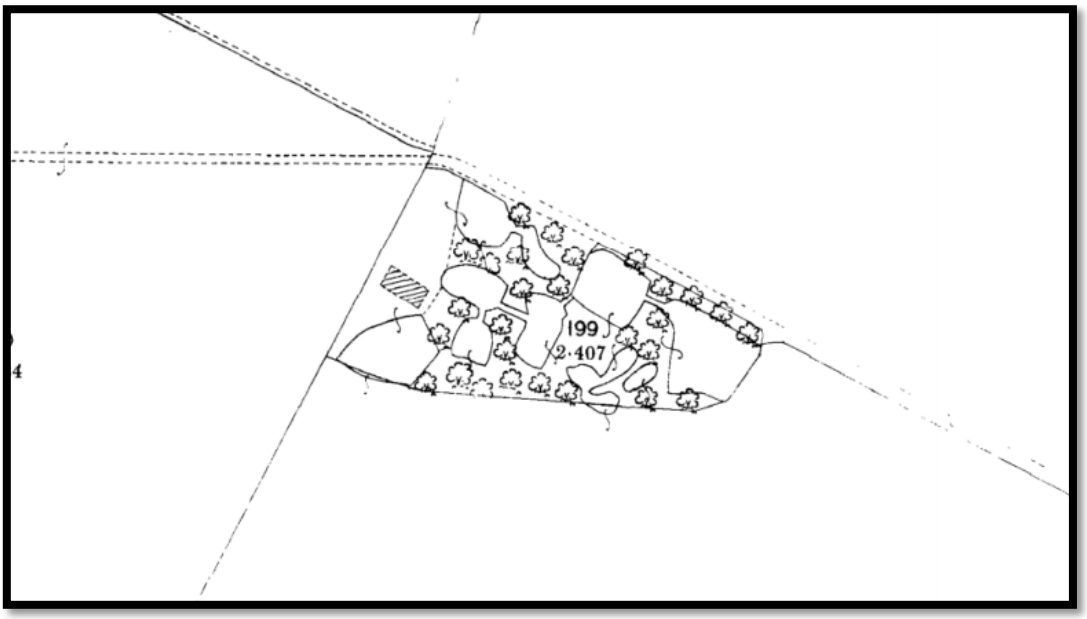

Plate 4: The fishponds, as depicted on the 1898 1:2500 Map, clearly showing the interconnecting leats

There is a further cluster of ponds shown on Tithe Mapping however it is not clear if these were fishponds (centred at 370503, 390242). Only three are shown however they appear to have functioned as a feeder for channels leading towards Warburton Park Farm. There are several isolated ponds across the landscape which could be akin to marl pits, though these tended to be dug into clay, rather than the sands and gravels that lie within this area. Some of these could be remnants of pitfall traps. A number can also clearly be seen along the northern park pale and these are discussed below.

3.5.2.4 Other Features

Several other features have been identified which could relate to the deer park, including possible salters (or deer leaps) and a pillow mound (artificial rabbit warren).

Several possible salters have been identified from the 1757 Estate Plan surviving along the former park pale. This involved modifying the park boundary (known as a pale) to encourage and enable deer to enter a park but unable to leave. Two types of salters are known, and these could be the product of a Type 1 salter, where the pale fence would be reduced in height and a ditch or hollow constructed internally. A map of Leagram deer park made in 1608 is a rare depiction showing the location of sixteen salters, evenly spaced around the park. There are also drawings from the 19th century showing what one of these deer leaps may have looked like.

The possible salters are shown as a series of pairs, evenly spaced along the park boundary. A number of these can be seen on Tithe Mapping but then disappear by the late 19th century and therefore could survive archaeologically. Two sets of these appear to survive as seasonally filled ponds (centred at 370036, 390703 and 369983, 390497).

A large upstanding mound (370489, 390143) also still survives within the park and has been variously interpreted as a possible Bronze Age barrow and a grave for the monks at Warburton Priory. However, it is considered more likely that the feature represents the remains of a pillow mound, which were artificial rabbit warrens. Rabbits would be bred and managed to supply fresh meat and skins and had purpose-built breeding places. These pillow mounds would vary in shape and size, though tend to be of an elongated 'cigar' shape and less than 1m in height. They would be surrounded by ditches (see Plate 6) and contain underlying channels or be sited on sloping ground to facilitate drainage. The interior would contain nesting places, sometimes constructed of stone slabs. Warrens could range in size between 1 and 40 mounds, occupying an area of up to around 600ha. They were often enclosed by banks, hedges or walls to contain and protect the rabbits and, depending on the size, may have had living quarters for the warrener. There are between 1000 and 2000 examples known in England with concentrations in the uplands, heathland and coastal zones (Historic England 2018).

Plate 5: Possible pillow mound (artificial rabbit warren) identified at Warburton Park. This lies outside the Site boundary.

Plate 6: Pond and water channels surrounding the possible pillow mound at Warburton Park, identified on the Ordnance Survey 1st Edition, published 1881. A fence, with gate for access, would have been located along the eastern side, with a water channel barrier on the other three sides, to prevent the rabbits from leaving the area. The water management associated with this feature was connected with a larger water management system that fed the water mill ponds, as well as possibly the park boundary ditch, and possibly the moat. Detailed survey will be required to better understand water management at Warburton Park.

3.5.4 Assessment of Significance

The most commonly accepted methodology for assessing the archaeological significance is the Secretary of State's criteria for the scheduling of ancient monuments, outlined in Annex 1 of *Scheduled Monuments: Identifying, Protecting, Conserving and Investigation Nationally Important Archaeological Sites Under the Ancient Monuments and Archaeological Areas Act 1979* (DCMS March 2010). These criteria have been utilised in attempting to assess the significance of the deer park as far as our current knowledge allows.

The criteria are:

- Period
- Rarity
- Documentation
- Group Value
- Survival/Condition
- Fragility/Vulnerability
- Diversity
- Potential

Baseline Significance Conditions

Period

The features described are associated with the medieval deer park at Warburton, thought to have been created by Geoffrey de Dutton II sometime between 1248 and 1278. The exact chronology is unclear, however it is thought to have been disemparked sometime during the 17th century. The extant buildings at Warburton Park Farm appear to be mostly of 18th century date or later, however there is a small outbuilding which is thought to be 17th century in date (Grade II listed).

Rarity

The original number of deer parks is unknown but probably exceeded 3000. Many of these survive today, although often altered to a greater or lesser degree. Where a deer park survives well, and is well documented or associated with other significant remains, its principle features are normally deemed rare enough to be identified as nationally important. If confirmed, the diverse elements of Warburton deer park are likely to be deemed rare enough to be worthy of Scheduling.

Documentation

The historical development of the area can be traced reasonably well from cartographic and other primary sources. Further documentary research would undoubtedly furnish additional evidence, including the Warburton Family archives held at Arley Hall.

Group Value

The heritage assets identified that are associated with the deer park represent a broadly contemporary group of features and their importance is increased by this association. Therefore, they have high group value.

Survival/Condition

Part of the park boundary appears to survive in certain places as an earthwork, as well as traces of a ditch in some areas. The feature appears to be well-preserved along a section to the south-east (outside the Site), and probably along the northern edge along Red Brook (within the Site) where a substantial bank is visible. One cluster of fishponds also appears to be well-preserved (outside the Site). The probable rabbit warren (outside the Site) with its associated boundary channels also appears to be well-preserved. Further surviving water channels with the park (outside the Site) appear to have been artificially constructed and may be related to water management associated with the deer park, particularly the putative water mill, that is suggested by a former leat, ponds, and tithe map field names.

It should be noted that no close inspection of any physical elements of the deer park were undertaken as part of this assessment, and so there is a high degree of uncertainty relating to the identification and full extent of the surviving above ground park features.

The survival, extent and condition of any below-ground archaeological remains relating to the deer park is presently unknown. However due to the agricultural use since disemparkment and lack of development, there is good potential for survival of archaeological remains. Within the Site, the greatest potential for surviving remains is likely to relate to the park pale, including the bank and ditch. The later farm complex buildings at Warburton Park farm (outside the Site) may have affected the survival of remains relating to the moated manor.

Fragility/Vulnerability

Any of the features both above and below ground should they be present and survive *in situ* are vulnerable to damage and destruction during any earth moving works.

Diversity
Parts of the deer park pale, fishponds, a moated site, mill site, possible salters and a pillow mound survive both as upstanding features and with probable associated buried archaeological remains. Therefore, the features are highly significant due to diversity within a deer park context.

Potential
There is also good potential for buried archaeological remains of the medieval deer park to survive, particularly of the internal park pale ditch (evidence for which is likely to be present with the Site), as well as significant buried remains associated with the probable medieval watermill which is thought to have existed within the park (outside the Site), the fishponds (outside the Site), rabbit warren (outside the Site).

Significance
Using the above criteria, particularly survival/condition, rarity and period, it is concluded that, based on our current understanding, those features that have been tentatively associated with Warburton deer park have the potential to be of high or national significance. If confirmed through further, more detailed assessment and survey, the best preserved elements of the deer park are likely to be worthy of Scheduled Monument status, in line with the Scheduled status of surviving elements of deer parks across England.

Historic England's guides to Scheduling features associated with deer parks mentions specific features and the approach to scheduling:

- Fishponds: 'where fishponds survive in good condition, without later scouring which will have removed bottom deposits, and especially where they are parts of wider medieval complexes, [they] will typically be recommended for scheduling' (2018b, 14)
- Park Pale: 'Examples…have been scheduled, especially where other components of the park survive' (2018b, 16).
- Pillow mounds: 'medieval or early modern examples [of pillow mounds] will be favoured over [later ones]' (2018b, 16).
- Watermills sites: 'Confirmed examples of medieval mill sites which survive in good condition will always be a strong candidate for scheduling, especially when in association with settlement remains, fishponds and so on.' (2018b, 15).
- Moated sites: 'factors which favour designation include good quality earthworks; the demonstrable or likely survival of medieval archaeological deposits; the presence of listed medieval buildings within the moat; diversity of features, such as the presence of fishponds; contemporary documentation…; and where a site stands within a wider, contemporary (medieval) landscape' (2018c, 26-27).

3.6 Carrington

3.6.1 Introduction

The historical background on Carrington is covered within Appendix 1 and due to the built up nature of the village, there are few areas that have potential for archaeological remains to survive. However one particular area has high potential and covers the site of Carrington Hall, which is outlined below.

3.6.2 Carrington Hall

The history of the Carrington family is outlined within Appendix 1 however references to the Hall are not well documented. Ormerod, writing in 1819, described it as "an ancient building of brick, considerably dilapidated and used as a farmhouse". It was described as Elizabethan in date however it incorporated elements of an older building. It demolished in 1858 to make way for new farm buildings and a long piece of dark oak carved with the armorial bearings of the Carrington family was inserted into the eaves of a nearby barn.

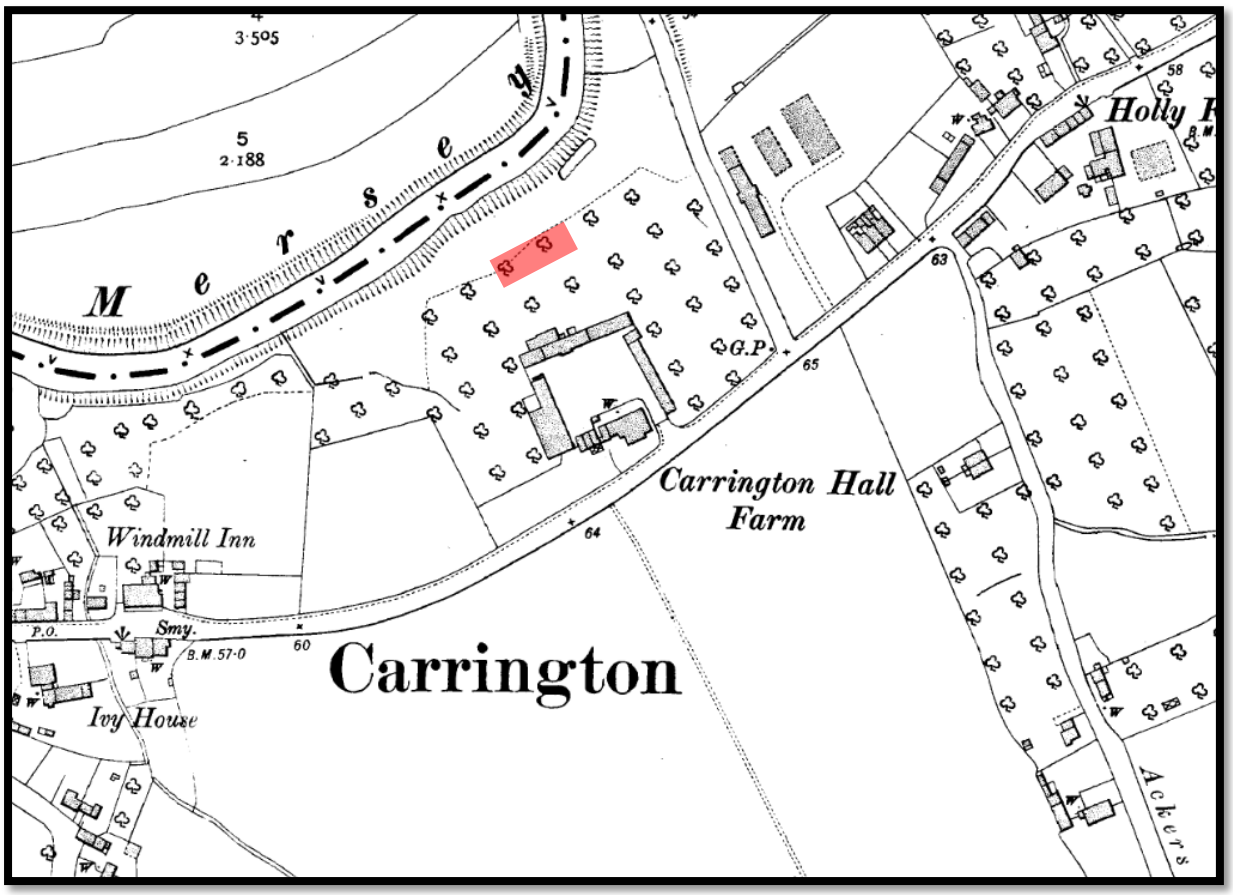

Plate 7: Carrington Hall, as depicted on the Ordnance Survey 1:2500 mapping, published in 1908. Also shown highlighted in red is the approximate location of the original hall.

The tithe map shows that the hall originally stood to the north of the farm buildings. It is presumed that when the last Carrington family member died in the 16th century, it was tenanted for farming and the buildings seen on 19th century mapping were added, possibly during the late 18th century. The northern range of the courtyard was added after the hall was demolished and the whole farm was demolished during the mid-20th century. No photographs could be found of the hall or farm, nor any depictions of it. The Site has remained undeveloped and is now a recreation ground.

4. Recommendations

4.1 The different categories for recommendations

Recommendations have been provided below, which provide a guide for the next stages of archaeological investigations in relation to taking the development forward.

This assessment has considered all the land within the New Carrington red line boundary. However, not all of the land within the red line will be proposed for development and the masterplanning will identify the most appropriate development parcels.

The recommendations are only relevant to those areas which are proposed for development.

The basis for defining the strategy for dealing with the archaeology for the Site is the archaeological sensitivity of different areas of the Site, which have been identified through this assessment (see Figure 3, below).

The recommendations have been split into the following categories

- Areas where the requirement for further work should be set out in the development brief and the work completed pre-application
- Areas where a programme of archaeological works can be secured by planning condition and referenced in the development brief
- Areas where no further archaeological work is anticipated to be required

For large parts of the Site, especially those with identified 'very high sensitivity', 'high sensitivity', and in some cases 'medium sensitivity' it is recommended that a requirement for a programme of archaeological works be set out in the development brief, and that the work be carried out pre-application. This will allow for any especially significant archaeological remains to be preserved *in situ* through sympathetic planning.

For a number of HECAs, a programme of work is recommended at an early stage to clarify the full extent, depth and survival of the peat. This work, which is referenced in the relevant HECAs, below, would initially involve a programme of transect augering, which will inform further work to include micro and macro analysis of peat cores, with dating, and help in the creation of an archaeological strategy to deal with the land within this area, the putative extent of which is shown on Figure 1.

<u>HECA01</u>

An archaeological investigation to establish the depth and condition of the peat across this area should be undertaken pre-application and set out in the development brief. Any further required archaeological works can be secured by planning conditions and referenced in the development brief.

<u>HECA02</u>

This an area where a programme of archaeological works can be secured by planning conditions and referenced in the development brief.

HECA03

An archaeological investigation to establish the depth and condition of the peat across this area should be undertaken pre-application and set out in the development brief. Any further required archaeological works can be secured by planning conditions and referenced in the development brief.

HECA 04

This is an area where the requirement for further work should be set out in the development brief and the initial work completed pre-application.

Given the historic settlement of Carrington Village and Carrington medieval hall site and associated features an archaeological evaluation should be carried out before development design proposals are drawn up for this area so that opportunities to preserve sensitive remains *in situ* and for community engagement are taken fully into account. This evaluation work will comprise geophysics and evaluation trenching.

Any further archaeological works arising from the initial evaluation can be secured by planning conditions and referenced in the development brief.

HECA05

Due to the sewage works within this HECA, further archaeological work is unlikely to be required.

HECA06

An archaeological investigation to establish the depth and condition of the peat across this area should be undertaken pre-application and set out in the development brief. Any further required archaeological works can be secured by planning conditions and referenced in the development brief.

HECA07 and HECA10

This are two adjacent areas where the requirement for other further work should be set out in the development brief and the initial work completed pre-application. This is a relatively large area of archaeological sensitivity where the prehistoric archaeological potential has not been defined and the extent and significance of the medieval deer park remains has not been definitively established, both within and outside the Site. Within the Site, our current understanding suggests that the most significant element of the deer park is likely to be the park pale, a visible trace of which survives as a substantial earthen bank, whilst its associated internal ditch is likely to survive as buried archaeological remains. Detailed inspection of this part of the Site, like the rest of Warburton Park, was not possible during this assessment.

Further historical research relating to the medieval deer park, combined with earthwork survey, geophysics and evaluation trenching, as well as a setting assessment, is required pre-application to better define significance and inform the scheduling/listing process. This will allow for any especially significant archaeological remains identified to be preserved *in situ*

through sympathetic planning. Any further, more detailed, archaeological investigations required can be secured by planning conditions.

It should be noted that HECA07 is also considered to form part of the setting of the listed farm complexes at Heathlands and Park Farm and makes a positive contribution to the significance of these buildings. This also needs to be considered for any future design proposals.

HECA08

An archaeological investigation to establish the depth and condition of the peat across this area should be undertaken pre-application and set out in the development brief. Any further required archaeological works can be secured by planning conditions and referenced in the development brief.

HECA 09

An archaeological investigation to establish the depth and condition of the peat across this area should be undertaken pre-application and set out in the development brief.

A separate programme of evaluation of the 19th and 20th century tramway, former buildings, and associated infrastructure (see Appendix 4 for further details) should be undertaken pre-application and set out in the development brief. This will allow the option for any especially well-preserved and/or significant elements of the infrastructure to be preserved and incorporated into the development, if desired. Any further, more detailed archaeological investigations required, can be secured through planning conditions.

HECA 11

An archaeological investigation to establish the depth and condition of the peat across the eastern portion of this area should be undertaken pre-application and set out in the development brief.

This is also an area where the requirement for other further work should be set out in the development brief and the initial work completed pre-application. This work should include programme of evaluation geophysics and trial trenching. This will allow for any especially significant archaeological remains to be preserved *in situ* through sympathetic planning. Any further, more detailed, archaeological investigations required can be secured by planning conditions.

HECA 12

This is an area where a programme of archaeological works can be secured by planning condition and referenced in the development brief.

HECA 13

An archaeological investigation to establish the depth and condition of the peat across the northern portion of this area should be undertaken pre-application and set out in the development brief.

Furthermore, this is also an area where the requirement for other further work should be set out in the development brief and the initial work completed pre-application. This is a large area of archaeological sensitivity where the potential has not been defined. The masterplan should identify broad areas of where development might take place and then archaeological evaluation should be undertaken in the form of through geophysics, field walking and trenching to establish where especially significant archaeology should be preserved *in situ* through sympathetic planning within those developable areas, and those areas where the archaeology can be removed but first of all recorded through a planning condition.

HECA 14

This is an area where a programme of archaeological works can be secured by planning conditions and referenced in the development brief.

HECA15

This is also an area where the requirement for other further work should be set out in the development brief and the initial work completed pre-application.

Further archaeological investigations should be undertaken including historical research, survey and evaluation. This work should be undertaken early to inform the development brief, which should set out the methodologies and requirement for enhancing the heritage features, including the Chapel of St. George, engaging with the community, and delivering this as a legacy heritage project.

HECA 16

An archaeological investigation to establish the depth and condition of the peat across the eastern portion of this area should be undertaken pre-application and set out in the development brief.

This is also an area where the requirement for other further work should be set out in the development brief and the initial work completed pre-application. This work should include programme of evaluation geophysics and trial trenching. This will allow for any especially significant archaeological remains to be preserved *in situ* through sympathetic planning. Any further, more detailed, archaeological investigations required can be secured by planning conditions.

HECA17

This is area where the requirement for further work should be set out in the development brief and the initial work completed pre-application. An archaeological investigation to establish the depth and condition of the peat across the eastern portion of this area should be undertaken first. This should be followed by a programme of evaluation geophysics and trial trenching. This will allow for any especially significant archaeological remains to be preserved *in situ* through sympathetic planning. Any further, more detailed, archaeological investigations required can be secured by planning conditions.

HECA 18

An archaeological investigation to establish the depth and condition of the peat across this area should be undertaken pre-application and set out in the development brief.

Furthermore, a programme of evaluation geophysics and trial trenching should be undertaken pre-application and set out in the development brief. This will allow for any especially significant archaeological remains to be preserved *in situ* through sympathetic planning. Any further, more detailed, archaeological investigations required can be secured by planning conditions.

HECA 19

This is an area where the requirement for further work should be set out in the development brief and the initial work completed pre-application. This work should include further research and a survey of the WW2 gun battery in order to assess its significance and determine if it is worthy of a preservation, enhancement and presentation project, possibly involving the community.

For the rest of HECA 19, a programme of archaeological works can be secured by planning condition and referenced in the development brief.

HECA 20

This is an area where a programme of archaeological works can be secured by planning condition and referenced in the development brief.

HECA 21

This is an area where the requirement for further work should be set out in the development brief and the initial work completed pre-application. This work should include a programme of archaeological evaluation through geophysics, fieldwalking of ploughed fields, and trial trenching. This work should also seek to date the origin of the Township boundary (if any part of it is likely to be affected by the development). This work will allow for any especially significant archaeological remains to be preserved *in situ* through sympathetic planning. Any further, more detailed, archaeological investigations required can be secured by planning conditions.

HECA22

An archaeological investigation to establish the depth and condition of the peat across this area should be undertaken pre-application and set out in the development brief.

Furthermore, a programme of evaluation geophysics and trial trenching within accessible areas not covered by trees/scrub should be undertaken pre-application and set out in the development brief. This work should also seek to date the origin of the Township boundary (if any part of it is likely to be affected by the development). This will allow for any especially significant archaeological remains to be preserved *in situ* through sympathetic planning. Any further, more detailed, archaeological investigations required can be secured by planning conditions.

5. Figures

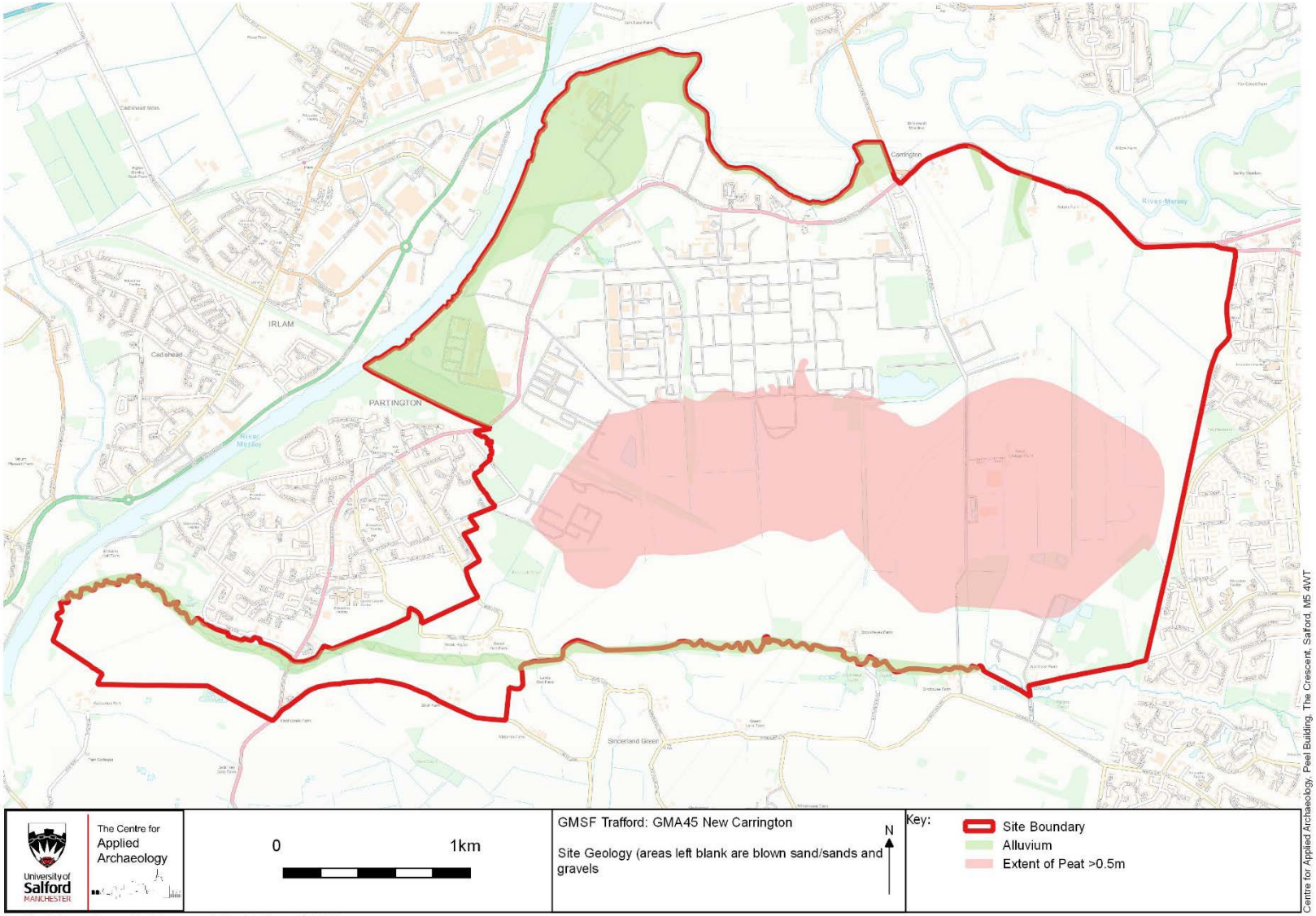

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Figure 1 Estimated general extent of peat and alluvium within the Site (based on ARUP 2016; Sirius Geotechnical 2018; Hall et al 1995; British Geological Survey data)

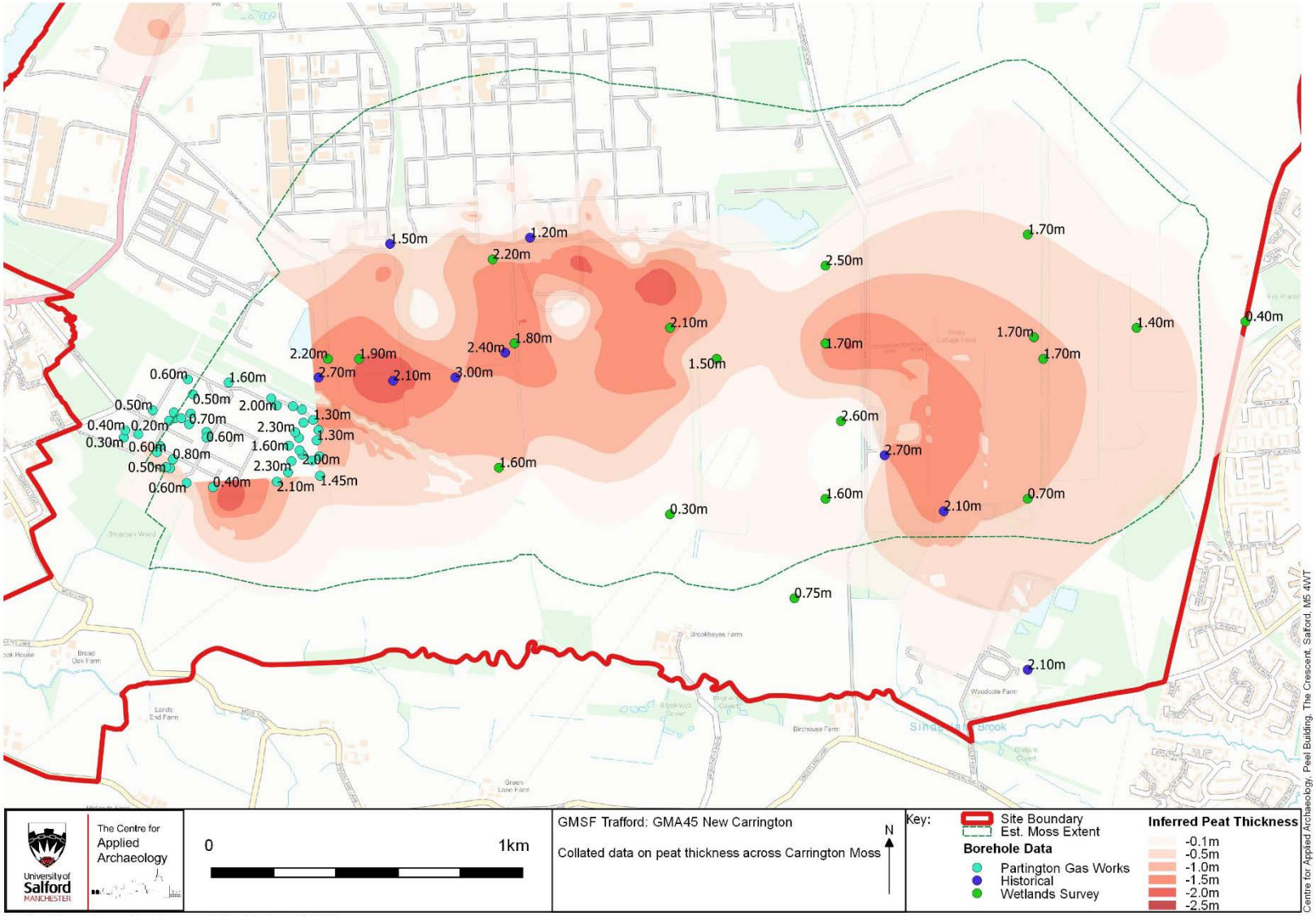

Figure 2 Collated data on peat thickness, taken from British Geological Survey data, Hall et al 1995, ARUP 2016 and Sirius Geotechnical 2018

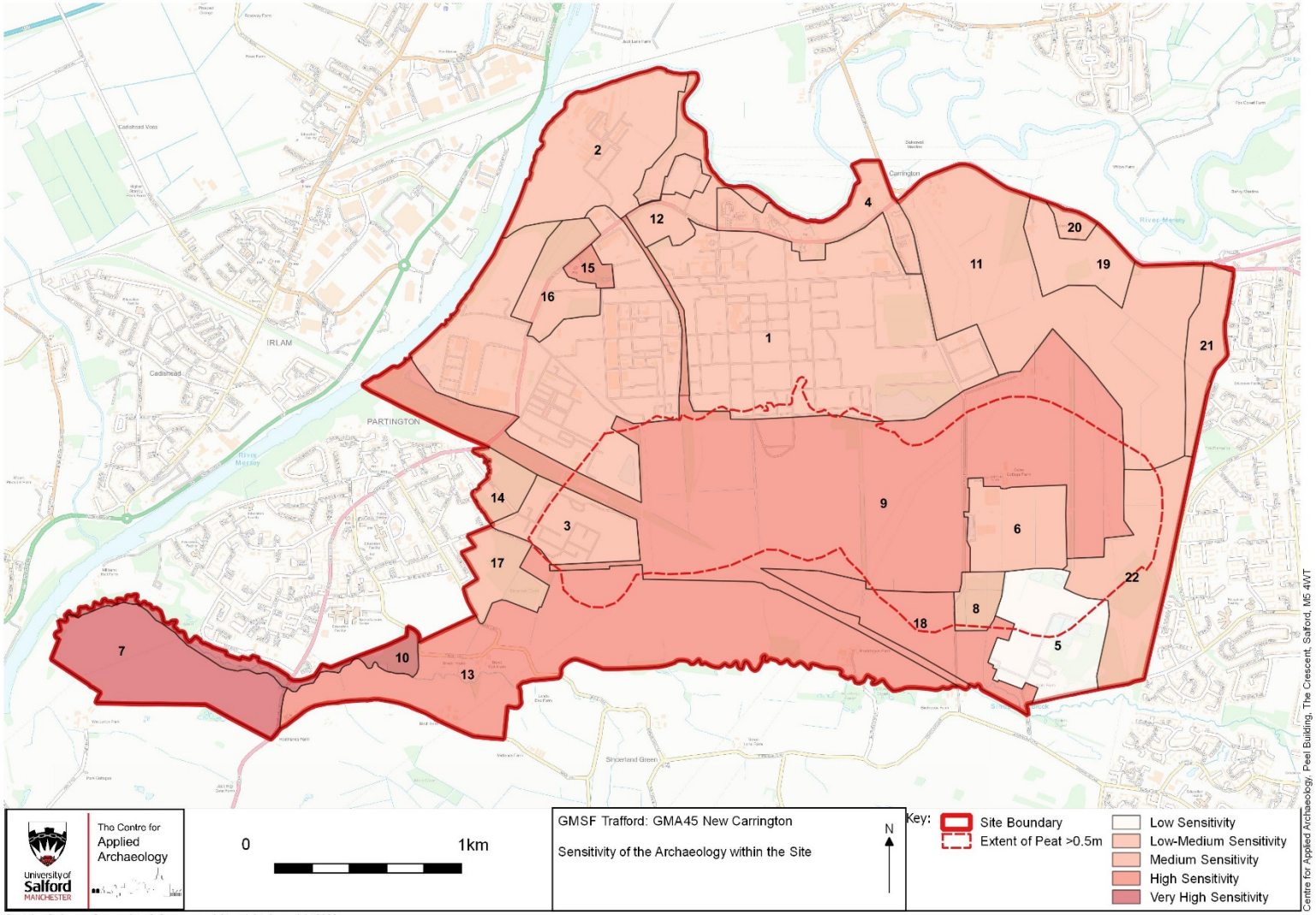

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Figure 3 Map showing the archaeological sensitivity of the HECAs identified within the Site

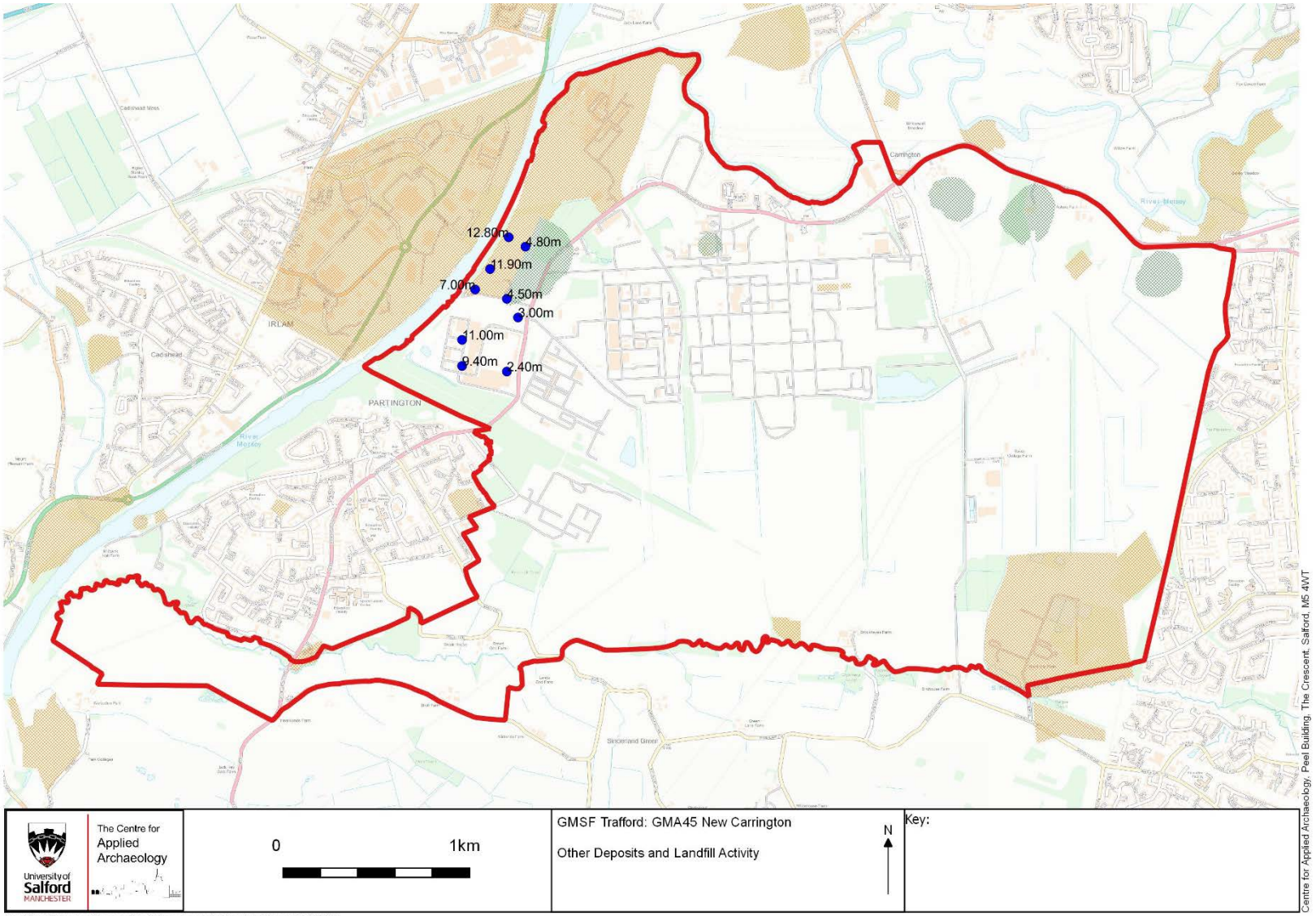

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Figure 4 Known historical landfills, localised organic deposits as well as the 'black silt' recorded in the 1940s

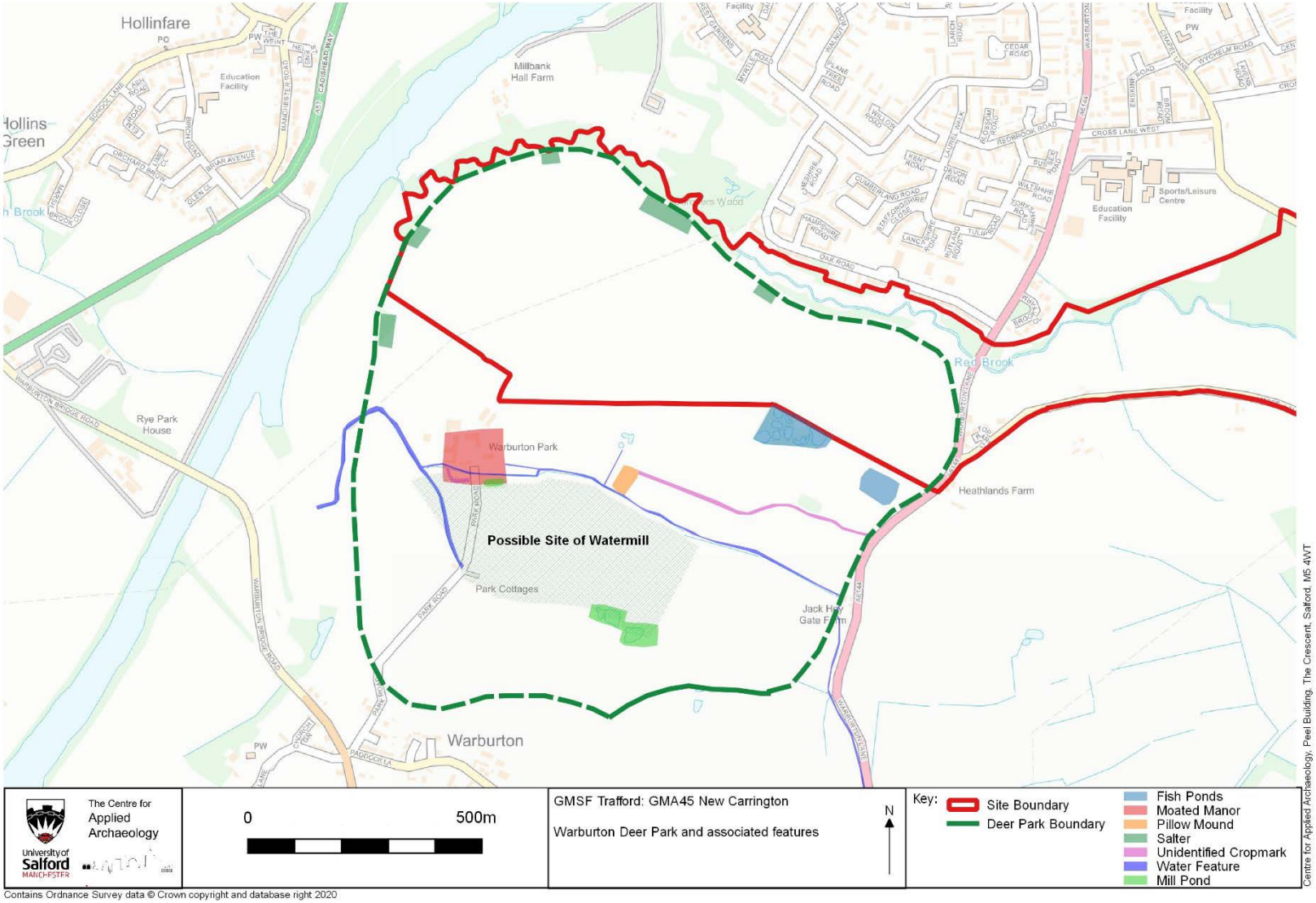

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Figure 5 Map showing possible features related to the deer park (projected boundary is shown as a dashed line)