

MID CHESHIRE PHASE 2 PIPELINE, EATON BOREHOLE TO NANNEY'S BRIDGE, Cheshire

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SUMMARY

Following proposals by United Utilities for the construction of a pipeline from Eaton Borehole to Nanny's Bridge, Cheshire (NGR SJ 568634–660564), the Cheshire County Council Historic Environment Officer recommended the completion of an archaeological desk-based assessment relating to the application area. Oxford Archaeology North (OA North) was subsequently commissioned by United Utilities to undertake this work.

In total, 39 sites of archaeological interest were identified within the study area during the desk-based assessment, of which 29 had been previously recorded in the Cheshire HER. The remaining 10 sites were identified by inspection of aerial photographs (Sites 29 to 36) and field names from tithe maps and apportionments (Sites 37 and 38). Sixteen listed buildings were identified within the study area and one Scheduled Ancient Monument. The scheduled monument comprised the moated site and fishponds at Rushton Hall (Site 12).

The 39 identified sites comprised two prehistoric sites, two Romano-British sites, five medieval sites, eighteen post-medieval sites, and twelve sites that were not closely dated. Out of these sites, 14 were deemed likely to be affected by works associated with the proposed pipeline. Recommendations were made for a walkover survey, in order to establish the existence of any currently unknown sites and visible features relating to sites that have been identified solely by the analysis of aerial photography. These specifically included features associated with a possible D-shaped enclosure (Site 17), a penannular enclosure (Site 32), a rectangular enclosure (Site 34), three groups of ridge and furrow (Sites 33, 35, and 36), and a curvilinear feature (Site 31). The identification of any features during the walkover survey might then necessitate a programme of topographic survey.

Evaluation trenching was recommended in the environs of the proposed pipeline route that extends from Eaton Borehole towards Eaton Village in order to identify any potential features of archaeological interest associated with Eaton Villa (Site 22). Evaluation trenching was also recommended in the environs of the possible D-shaped (Site 17) and penannular (Site 32) enclosures, in order to attempt to ascertain the nature and date of these features. Watching briefs were recommended in the locale of the remaining sites of archaeological interest, although due to the high number of archaeological remains identified along the route, a permanent presence watching brief throughout all topsoil stripping activities would also be appropriate. The mitigation strategies should be revised following the results of the walkover survey and subsequent evaluation trenching.

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Oxford Archaeology North (OA North) would like to thank United Utilities for commissioning the project. Thanks are also due to Robert Edwards at Cheshire Historic Environment Record (CHER) and the staff at Cheshire County Record Office in Chester.

Alastair Vannan undertook the desk-based assessment and Mark Tidmarsh produced the drawings. Alison Plummer managed the project and also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 United Utilities propose the construction of a pipeline in the Eaton and Cholmondeston area of Cheshire. The proposed pipeline (Fig 1) is aligned in a north-west to south-east direction, from Eaton Borehole to Nanny's Bridge (NGR SJ 568634–660564), with an additional short stretch of pipeline from Vyrnwy LDTM to Eaton Borehole. The total length of the proposed pipeline is 10.1km. Following recommendations made by the Cheshire County Council Historic Environment Officer, United Utilities commissioned Oxford Archaeology North (OA North) to undertake an archaeological desk-based assessment of the proposed development area.
- 1.1.2 This report sets out the results of the desk-based assessment, outlining the findings, followed by a statement of the archaeological potential and an assessment of the impact of the proposed development.

1.2 SITE LOCATION AND TOPOGRAPHY

- 1.2.1 The proposed pipeline is situated between Eaton and Crewe in mid Cheshire (Fig 1). The site is located on gently sloping land lying between 90m and 40m AOD, which generally slopes from north-west to south-east. Most of the study area occupies the Shropshire, Cheshire, and Staffordshire Plain, with the western end of the proposed pipeline occupying the sloping land that signals the transition from the plain into the Cheshire Sandstone Ridge (Countryside Commission 1998, 145–7). The areas of sandstone ridge rise sharply from the flat plain and the relative height and steep slopes of these areas of raised land create extremely prominent features in the landscape. This largely pastoral landscape is dominated by dairying within a productive and managed agricultural area.
- 1.2.2 The underlying geological deposits consist of Triassic sandstones and marls that are overlain by Diamicton glacial till (British Geological Survey 2007).

2. METHODOLOGY

2.1 DESK-BASED ASSESSMENT

- 2.1.1 A study area that extended 0.25km to each side of the proposed pipeline, to form a corridor 0.5km wide, was examined in order to gain an understanding of the historical and archaeological background of the area, and to assess the potential impact of the development on sites of archaeological significance. The sites identified within this study area are presented in the site gazetteer (*Appendix 1*; Fig 2). A general historical and archaeological background of the area was compiled and map regression analysis was undertaken.
- 2.1.2 Several sources of information were consulted as part of the assessment, which have provided a good understanding of the developmental history of the study area. Archive sources that were consulted include:
 - Cheshire Historic Environment Record (HER), Backford: the HER is a list of all known sites of archaeological interest within Cheshire, and also holds copies of aerial photographs dating from the 1940s through to the present day. The HER is the primary source of information for a study of this kind.
 - Cheshire County Record Office, Chester: the record office holds cartographic and documentary sources relating to the study area.
 - *OA North Library*: OA North has undertaken numerous projects throughout the North West. As a result, it has a large library of secondary sources, as well as unpublished client reports in its offices in Lancaster.
- 2.1.3 Several historic cartographic sources were consulted in order to trace the physical development of the study area:
 - Map of Cheshire by Swire and Hutchings of 1830
 - Tithe map of township of Eaton of 1838
 - Tithe map of township of Rushton of 1837
 - Tithe map of township of Alpraham of 1839
 - Tithe map of township of Calveley of 1839
 - Tithe map of township of Wettenhall of 1839
 - Tithe map of township of Cholmondeston of 1843
 - Tithe map of township of Church Minshull of 1838
 - Tithe map of township of Aston of 1839
 - Ordnance Survey first edition map of 1875 (25": 1 mile)
 - Ordnance Survey first edition map of 1881 (6": 1 mile
 - Ordnance Survey second edition map of 1899 (6": 1 mile)
 - Ordnance Survey third edition map of 1910 (25": 1 mile)
 - Ordnance Survey map of 2006 (1: 25000)

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Introduction

3.1.1 In addition to a detailed investigation of the closely defined study area, it is also necessary to present a general archaeological and historical background of the wider locality. This will allow the site to be considered within the context of the differing systems of land use and resource exploitation over time that helped to define the human landscapes in this area.

3.2 THE PREHISTORIC PERIOD

- 3.2.1 The Upper Palaeolithic and Mesolithic periods (c 12,800–4000 cal BC): although the natural history of the local area has been informed by the discovery of fossilised footprints of Chirotherium Herculis, an animal present in the area around 230 million years ago, in Eaton, evidence of human activity in the wider locale begins at around 12800–12000 cal BC (Matthews 2007a). This evidence consists of a Cresswell point found at Carden Park, around 15km to the south-west of the study area, and represents activity during the final stages of the Devensian glaciation (Hodgson and Brennand 2006, 23), at a time when the glacial climate of the region was becoming gradually more hospitable. There is little further evidence for the late Upper Palaeolithic period or for the earliest Mesolithic period (c 8000–6500 cal BC) in the region, with Mesolithic material from Carden Park dating to around 6800–4300 cal BC (Matthews 2007b). The later Mesolithic period is not generally evident elsewhere in the mid Cheshire area.
- 3.2.2 The Neolithic and Bronze Age periods (c 4000–700 cal BC): the Mesolithic was the latest cultural epoch in Britain during which people employed a subsistence strategy based wholly upon hunting, gathering, and fishing. Following the introduction of farming to the British Isles, from around 4000 BC, the Neolithic period saw a gradual increase in permanent settlement and the beginning of the widespread construction of monumental architecture, although few such structures are known from Cheshire (Hodgson and Brennand 2006, 39).
- 3.2.3 The exploitation of the mid Cheshire region for agricultural purposes during the early Neolithic is attested by pollen evidence demonstrating the growth of cereals at Hatchmere and Delamere (Crosby 1996, 17), within 6km to the north of the study area. Worked flint dating to the Neolithic and Bronze Age were also found associated with an enclosure at Peckforton Mere (Leah *et al* 1997, 109; 112), within 5km to the south-west of the study area. These areas have been the subject of intensive archaeological investigation as part of the North West Wetlands Survey (*see* Leah *et al* 1997). Activity within the study area during the Neolithic period is suggested by the discovery of a stone axe (Site 14), said to have been found at Eaton Cottage (Site 8) (Tredwell 1982, 9), and an axe and perforated stone instrument that were found nearby at Tarporley (Latham 1969, 2).

- The beginning of the Bronze Age in Britain, defined mainly by the 3.2.4 introduction of the use of copper alloy metals, developed gradually out of the preceding Neolithic during the mid third millennium BC (Parker Pearson 2000, 13). There is little evidence for settlement at this period within the locale of the study area, however, several sites suggest that funerary practices were taking place in the area at this time. Several tumuli, probably representing Bronze Age barrows, are located around 3km to the north of the study area, near to Oak Mere and Hatchmere (Leah et al 1997, 107-8). Finds of Bronze Age pottery at Beeston Castle, to the south-west of the study area, were interpretated as being representative of disturbed burials that may have been covered by mounds (Ellis 1993, 20). A tumulus in Alpraham, a township partially included in the study area, known as 'Robin Hood's Tump' was excavated, revealing pits beneath the mound but no associated finds (Latham 1969, 2). Another probable barrow known as Round Mound (Site 21) is located at the western end of the study area.
- 3.2.5 Settlements associated with Bronze Age and Neolithic groups have proved elusive, however, enclosures have been found at Peckforton Mere and Oak Mere (Leah *et al* 1997, 107–8) that may suggest structural evidence relating to domestic or subsistence activities during these periods. It is also possible that, as demonstrated at Beeston, some of the other hillforts of the Cheshire Sandstone Ridge, such as Eddisbury, traditionally interpreted as Iron Age in origin, may have originated in earlier prehistoric periods (Ellis 1993, 87). A D-shaped enclosure (Site 17; Plate 1) and a pennannular enlosure (Site 32; Plate 2) within the study area, identified as a crop marks from aerial photographs, may relate to early farming practices, however, no evidence is available with which to date the features.
- 3.2.6 *The Iron Age* (c 700 cal BC AD 43): the most obvious traces of Iron Age activity in the locale relate to the series of hillforts situated along the Cheshire Sandstone Ridge. Kelsborrow and Eddisbury hillforts lie around 6km to the north-west and north of the study area, respectively, while Beeston lies around 3km to the south-west (*op cit*, 90–1). Some of these hillforts, such as Beeston and Eddisbury, may have represented social and political centres from which the trade of salt was controlled (*ibid*).
- 3.2.7 Pollen evidence from Peckforton, around 5km to the south-west of the study area, demonstrated the use of arable agriculture during the Iron Age, however, no such evidence has been produced for the study area. A general lack of pottery and other surviving elements of material culture from both the Iron Age and Romano-British periods in the region has led to great difficulty in identifying settlement sites from these periods (Hodgson and Brennand 2006, 51–2; Philpott 2006, 59). Aerial photography has, however, revealed numerous cropmark enclosures in Cheshire (Hodgson and Brennand 2006, 52) and when similar examples have been excavated, Iron Age and Romano-British occupation has been demonstrated (Hodgson and Brennand 2006, 53; Philpott 2006, 61). A great deal of continuity in rural settlement has been observed between the Iron Age and Romano-British periods in the region (Leah *et al* 1997, 153; Philpott 2006, 73). Therefore, Romano-British rural sites, such as the villa at Eaton (Site 22) and the site at Birch Heath, Tarporley

(Philpott 2006, 61), might be seen as indicators of late pre-Roman Iron Age populations in the area. Although no sites associated with the Iron Age have been identified within the study area, the D-shaped enclosure (Site 17; Plate 1) and penannular enclosure (Site 32, Plate 2) identified from aerial photography have not been dated and could date to the late prehistoric period.

3.3 THE HISTORIC PERIOD

- 3.3.1 *The Romano-British Period* (c *AD 43 AD 409*): the general character of the this region during the Romano-British period, as suggested by the nature of most of the known sites in the area, is one of military and industrial centres being interlinked by roads (Philpott 2006, 59–60; 69). The Romano-British salt trade was focused on the industrial centres at Nantwich, Northwich, and Middlewich, with smaller production areas scattered across rural areas, in locations where brine springs occured (*op cit*, 83). These industrial areas and forts were then linked by road systems with the legionary fortress at Chester (*Deva*) and the wider fort network (*op cit* 60). One of these roads runs from Middlewich to Nantwich, and is situated around 1km to the east of the study area (Margary 1957, road no. 700, 304–5). A second road has been suggested to have run between Nantwich and Tiverton (Thompson Watkin 1886), passing through Tilstone Fearnall and Calveley Halls (Latham 1969, 3) around 2km to the south of the study area.
- 3.3.2 There is only one demonstrable Roman villa known from Cheshire (Site 23), representing domestic Romano-British occupation, and this is within the study area at Eaton (Leah et al, 153). The presence of Romano-British activity in this area was initially suggested due to the discovery of tiles, mortar, and a coin of Marcus Aurelius (Site 13) found during the construction of the Severn Vyrnwy Aqueduct (Site 17) in 1886 (Tredwell 1982, 10). Although there are few excavated Romano-British rural, and non-military, settlements known from the region (Philpott 2006, 59), this does not preclude their existence. Aerial photography has identified numerous cropmarks, particularly in the Weaver and Dee valleys, that have been interpreted as Romano-British enclosed settlements (op cit, 61) and archaeological monitoring of construction schemes, such as pipelines, has revealed previously unknown Romano-British rural sites (ibid). The latter group includes a site from Birch Heath in Tarporley (ibid), within 2km to the south-west of the study area. A lack of pottery and general material culture has made the identification of rural Romano-British sites in the region difficult and this has been compounded by the meagre traces often left by timber-built settlements (op cit 59). However, a growing awareness of the potential insubstantiality of such sites will aid in the recognition of further sites.
- 3.3.3 The early medieval period (c AD 409 AD 1066): in similarity to the sites associated with rural activity in the preceding Romano-British and Iron Age periods, the investigation of early medieval sites in the region has been hampered by a lack of material remains (Newman 2006, 91–3). Although documentary sources attest to considerable activity throughout the region during this period, artefactual and general archaeological evidence relating to the period have proved difficult to identify (*ibid*). In the absence of abundant

material traces, the use of place-name and documentary evidence can be cautiously used as a guide in order to attempt to identify areas of population density and activity, which can then be more closely observed in an attempt to recognise any contemporary sites. Some Romano-British farmsteads may have continued in use into this period (*op cit*, 97) and some Romano-British towns, such as Nantwich, may also have continued in use, or been reocccupied, during this period (Crosby 1996, 26). The subsequent continued use of such towns through to the present day may, therefore, have concealed or destroyed traces of early medieval activity.

- 3.3.4 Place-name evidence from the study area suggests that some of the current townships in the area may have been founded, or at least have been present and subsequently fallen under the administrative control of successive kingdoms, during the periods of Anglo-Saxon influence in the region. This period of influence is likely to have begun in the early seventh century, when the Northumbrian Anglo-Saxon kingdom gained control over Cheshire, which was then subsumed into the Anglo-Saxon kingdom of Mercia around AD 633. Mercian control of Cheshire was then succeeded by the kingdom of Wessex (Crosby 1996, 27–31). Against a backdrop of Danish raids, and a brief period of Danish control, in the ninth century, Cheshire was part of one of the Anglo-Saxon kingdoms from the seventh century until the Norman Conquest (*ibid*).
- 3.3.5 The place-names of Alpraham (*Alburgham*), Rushton (*Ruistone*), Wettenhall (*Watenhale*), Cholmondston (*Chelmundston*), Aston (*Estone*), Leighton (*Lekton*), and Church Minshull (*Maneshale*) were all mentioned in the Domesday Book of 1086 and all derive from Old English elements (Dodgson 1971, 29; 128; 136–7; 154–5; 166–7, 289–300; 307–8). The cluster of *tun* place-names demonstrates clearly that settlements or farmsteads were present in the local area during the early medieval period.
- 3.3.6 It is often repeated that Eaton does not appear in Domesday Book (eg Tredwell 1982, 7), however, there is mention of a place called *Opetone* (Chesire Archives and Local Studies Service nd) which may refer to this township. Eaton was mentioned in 1240, as *Parva Eyton*, and Calveley in 1180 as *Kaluileia* (Dodgson 1971, 289; 307–8).
- 3.3.7 Further evidence of the importance of the general area during the Anglo-Saxon period is provided by the place-name element *wich* associated with Nantwich, Middlewich and Northwich, and responsible for the designation of the salt-rich areas of Chesire as 'the three wiches'. This stems from the Anglo-Saxon *wic*, meaning trading settlement (Crosby 1996, 26), suggesting the continuation of these towns from the Romano-British period as important industrial centres. Whether the early medieval settlements in the immediate locale of the study area provided agricultural support for these industrial centres, as a productive hinterland forming one part of a mutually dependant exchange network, remains to be seen.
- 3.3.8 *The medieval period* (c *AD 1066 AD 1540*): as discused above, all of the current townships that fall within the study area, except Calveley and Eaton, were in existence as administrative units at the time of the Norman Conquest. Calveley and Eaton were subsequently mentioned in the twelfth and thirteenth

- centuries, respectively. Rushton was also mentioned as the site of a moot (Site 23), or meeting place, of one of the Domesday Hundreds. The township areas, depicted on the various nineteenth century tithe maps, show that the boundaries of these townships were nearly all delimited by water courses (Fig 3), rather than apparently arbitrarily negotiated man-made extents. This suggests that the convenient, and difficult to contest or encroach upon, extents of these administrative units could have remained relatively unchanged from the medieval period onwards and perhaps from even deeper antiquity, although slight changes in the routes of the water courses are likely.
- 3.3.9 During the medieval period, and extending into the post-medieval period, this area of Cheshire was dominated by the forests of Mara and Mondrum, which extended from the Mersey in the north to beyond the southern limits of the study area (Tredwell 1982, 14–15). The township of Rushton extended far enough north to fall under the administrative control of Mara (*ibid*), whereas the rest of the study area would have been part of Mondrum, as demonstrated by the township name of 'Aston juxta Mondrum'. The forests would not, however, have been completely dominated by boundless woodlands, with open areas, settlements, and routeways forming part of the forest landscape (Tredwell 1982, 14–15). Some areas, such as Wettenhall (Harris and Thacker 1987, 360), and Alpraham would, however, have been quite densely wooded, with wolves and boar being present in the fourteenth century (Latham 1969, 5).
- 3.3.10 A mansion house called Rushton Hall (Site 14) was built to the south-east of Eaton during the medieval period, and lies within the study area. This hall was built upon a rectangular platform surrounded by a moat, which in turn was augmented by a second, outer, ditch on the north-western and north-eastern sides that may have been a fishpond (Site 13). Although the probable medieval house was rebuilt in the seventeenth century, no trace of a building remains on the platform.
- 3.3.11 Evidence exists of industry in the study area during the thirteenth and fourteenth centuries. At Eaton, a Red- and Grey-ware kiln site (Site 15) stood, representing only one of four such sites known in Cheshire (Leah et al 1997, 217). This partially overlay the Roman Villa (Site 22) and associated debris also extended to the east of the villa. In 1312 a water mill was recorded within Alpraham, and it has been suggested that this may have been situated in the Pages Wood area of the township (Latham 1969, 8). Part of this wood lies within the study area and it is bounded to the north by the potential power source of Wettenhall Brook. Pages Wood appears to have been named after a family present in the area in the fifteenth and sixteenth centuries and may, therefore, date to at least as early as this period (ibid). A house named 'Flaxyordes' in 1461 (Cheshire Archives and Local Studies Service nd) suggests the growth of flax in the area and it is possible that the flax was also processed locally. This house was depicted on the Ordnance Survey first edition map of 1875 as featuring a moat and may represent a medieval moated hall. As well as being a time of local industry, the fourteenth century was also a time of stress with the arrival of the Black Death in around 1368 impacting upon the local area (op cit, 5). In Rushton and Cholmondston at this time

fields were recorded as lying fresh and uncultivated and rents in the locality were reduced, perhaps reflecting a diminishing population (*ibid*). The possibility also exists that this outbreak may have had a negative effect on the industries based at the kiln and water mill sites.

- 3.3.12 The primacy of Nantwich, Northwich, and Middlewich as centres of salt production continued into the medieval period (Rochester nd, 27). Nantwich appears to have been the dominant town, in terms of salt production, in Cheshire between the eleventh and seventeenth centuries (*ibid*) and, once again, this is likely to have had an impact on the local economy beyond the industrial centre.
- 3.3.13 *The post-medieval period*: the gradual deforestation of Mara and Mondrum meant that by the time that the office of Chief Forester was held by Sir John Done (1577–1629) the forest of Mara had been reduced to 8346 acres and was surrounded by common grazing land exempt from the restrictions of the forest laws (Tredwell 1982, 15). The forest of Mara was finally enclosed, and the office of Chief Forester was dissolved, during the lifetime of Sir John (*op cit*, 16). The part of the forest of Mondrom within the locale of the study area was also lacking the large expanses of woodland that had been described in Domesday Book (Harris and Thacker 1987, 356; 360) by the time of the production of the tithe maps of the nineteenth century. These maps post-date the enclosure of the Eaton and Rushton commons by the enclosure act of 1808 (Tredwell 1982, 34), and this enclosure suggests that the Forest of Mondrom had ceased to be a viable wooded entity in the local area by this time.
- 3.3.14 The Eaton tithe map of 1838 shows most of the property units to consist of crofts, meadows, arable land and pasture. The agricultural aspect of the area during this period is reinforced by the numerous marl pits that were in use as sources of fertiliser (Tredwell 1982, 44). Dairying was an important local industry in the post-medieval period (*op cit*, 47) and allowed Cheshire to become a centre of cheese production, with the making of cheese surviving as a farmhouse-based industry until 1968, when the last of the cottage industries yielded to factory production (*op cit*, 46). One significant threat to the dairying industry was that of foot and mouth disease with recurrent outbreaks of *rinderspest* in 1749, 1865, 1923, and 1967 (*op cit*, 48–9). Arable agriculture also played a key role in the post-medieval economy, with such abundant potato crops being produced that Irish workers migrated seasonally for work during the harvest period and were housed in 'shants' consisting of farm buildings (*ibid*).
- 3.3.15 As well as agriculture, the local area hosted various other industries. Mill Lane, in Eaton, was mentioned in the eighteenth century, with a mill having been situated on this thoroughfare between Winterford Farm and Boothouse (op cit, 24), at the western end of the study area. Mill Croft (Site 38; Fig 4) was shown on the Eaton tithe map of 1838 in this area and is likely to reference this structure. A windmill (property unit 280), to the north-east of the study area, is also named on the Eaton tithe map. A house in Eaton called Flaxyards features a lintel with the inscription '1668' (op cit, 22), suggesting that flax may have been produced or processed locally during the post-medieval period. This house was prominent enough to have been recorded on

John Speed's map of 1610 and appears to have had a predecessor, known as 'Flaxyordes' as early as 1461 (Section 3.3.11). Numerous trades were undertaken in the area during the eighteenth century, including, in Eaton, wheelwright, stone-cutter, mason, shoe-maker, carpenter, tailor and weaver (op cit, 55). By 1850 this list had expanded to include blacksmith, clogger, shopkeeper, sawyer, engine smith, bricklayer and joiner (ibid). The addition of engine smith to this list poses the question of whether this was related to steam-ploughing engines or steam-powered mills in the area. The Eaton tithe map of 1838 mentions two fields called Brick Kiln Field and Brick Kiln Meadow, suggesting that bricks were being made in the area, prior to the tithe survey.

- 3.3.16 The locale of the study area was situated in the midst of hostlities during the English Civil War, lying between Royalist Chester and Parliamentarian Nantwich. West Alpraham was utilised as a camp by each of the armies at different times, and a battle was fought to the west of the study area at Tarporley (Latham 1969, 12).
- 3.3.17 The eighteenth and early nineteenth centuries were a time of consolidation and creation of communication routes and, being situated between large towns and cities, such as Nantwich and Chester, the study area lay close to several of these improved transport arteries. In 1772 the Chester to Nantwich section of the Shropshire Union Canal, to the south of the study area, was constructed and by 1805 the Middlewich branch, which runs through the eastern end of the study area had been completed (Shropshire Union Canal Society 2007). Jackson's Bridge (Site 26) and Nanney's Bridge (Site 27) were also constructed over the Middlewich branch of the canal, allowing private field access and road access repectively, and Minshull Lock (Site 28) was installed as part of the canal system. In 1782 comments were recorded relating to the proposals for a turnpike road to be instituted between Tarporley and Eaton, utilising Sapling Lane (Tredwell 1982, 36); the road from which access to Eaton Borehole is enabled.
- 3.3.18 In stark contrast to, and yet presumably enabled by, the affluence and economic stability suggested by these communications enterprises, a poorhouse, or workhouse was built in Eaton in 1773 (*op cit*, 93). This was located at Portal Green and is now called Portal Lodge (*ibid*).
- 3.3.19 Several buildings, currently listed, were erected during the post-medieval period, within the study area. These consist mainly of timber-framed cottages and farmhouses that cluster around the village of Eaton, at the western end of the study area, as well as a lock-keepers cottage (Site 4) at the eastern end of the study area. A smithy (Site 20) and red brick schoolhouse in Flemish bond (Site 3) were also built in Eaton at this time and a village cross (Site 19) was erected in the seventeenth or eighteenth century. Rushton Hall (Site 14) was rebuilt in the seventeenth century, although no trace now remains, and Ardene Hall, to the south of the western end of the study area, was built in 1867. This house replaced Eaton Banks House and incorporated grand landscaping schemes, including a replica of a ruined cathedral, an artificial river with a waterfall, and a pool called the 'Old Roman Bathing Place' (Tredwell 1982, 95–6). In around 1886 the Severn Vyrnwy Aqueduct (Site 21) was constructed

(op cit, 10), which runs from north to south across the western end of the study area.

3.4 MAP REGRESSION ANALYSIS

- 3.4.1 *Swire and Hutchings map of 1830:* this was one of the first maps to depict the study area with any great detail (Fig 6). The map showed the area to have been sparsely populated with buildings, with the only cluster occurring in the environs of Eaton, at the western end of the study area. Pages Wood was the only substantial wooded area depicted and this appeared to extend further to the south-east and north-west than the present wood.
- 3.4.2 *Township tithe maps 1837–43:* these maps and their corresponding apportionments showed the study area to have consisted largely of crofts, meadows, arable land and pasture. One obvious exception to this was the inclusion of Pages Wood on the Alpraham tithe map, which was described as 43 acres, and currently occupies a similar area. A plantation woodland was shown on the Cholmondeston tithe map, to the north-west of Cholmonston Hall, consisting of just over two acres, which is also shown on current mapping. Field 370 on the Church Minshull tithe map was named Priest Field and utilised for arable agriculture. This area is now wooded and is named Paradise Covert, however, both names suggest ecclesiastic connotations and might recall a former land use associated with a religious function. A second field called 'Priest Field' (plot 443) was situated to the north-east of Nanny's Bridge (Site 27) and shown on the Church Minshull tithe map.
- 3.4.3 Plot 41 on the Rushton tithe map, to the south of Philo Gorse, was described as a water meadow and was divided from the field to the east by a field boundary. Aerial photographs from the 1940s, however, showed ridge and furrow (Site 35) that appeared to underlie this boundary. On the Rushton tithe map, four fields were illustrated that lay adjacent to each other, and were shown by aerial photography to contain ridge and furrow (Site 36) that underlay the subdividing north to south field boundary. The map depicted these areas as two plots without the dividing boundary. The plots were described as garden areas, however, suggesting that the ploughing may have pre-dated this map. They had been sub-divided by the time of the third edition Ordnance Survey map of 1910.
- 3.4.4 An enigmatic curvilinear feature (Site 29) that was visible on aerial photographs from the 1940s, in a field to the south of Rushton Hall (Site 15), was shown on the Eaton tithe map to form the irregular southern edge of a field boundary. Whether this feature may have originally been associated with the moated site (Site 14) at Rushton Hall is not clear. No sign of the moated site was depicted on the tithe map.
- 3.4.5 Indicators of prior industrial land usages were suggested by field names, such as 'Mill Croft' (Site **38**; plot 99, Fig 4), 'Smithy Field' (Site **25**; plot 97, Fig 4), 'Brick Kiln Field', and Brick Kiln Meadow', on the Eaton tithe map. 'Near Flax Field' (plot 442) and 'Far Flax Croft' (Plot 419) also appeared on the Church Minshull tithe map, although these were both in use as pasture by

- 1838. Plot 373 on the Eaton tithe map was named as 'Cross Field' (Site **37**; Fig 5), which could indicate the former presence of a monument in this area.
- 3.4.6 *Ordnance Survey first edition map of 1875:* this map was drawn at a scale of 25" to 1 mile and showed the study area in considerable detail. The general impression given by the map is of a dispersed agricultural landscape consisting of fairly consistently sized, and generally sub-rectangular, fields. These fields were interrupted only by meandering, rather than channelled, waterways and occasional roads and tracks. Numerous ponds were depicted, as were similarly sized pits and both features may have resulted from former marl extraction. Occasional small areas of marshy ground were shown. Small stands of trees were depicted within well-defined polygonal plots, some of these, such as Pages Wood, having been shown as woodland on the tithe maps, whilst others, such as Philo Gorse and Aston Gorse, had clearly developed into wooded areas on land that had been shown as rough pasture or 'cover' but not heavily wooded on the earlier maps. The grounds surrounding Ardene Hall were depicted as open and lightly wooded parklands containing landscaped elements, such as 'Adam's Well' and fishponds.
- 3.4.7 Although many buildings were depicted within the village of Eaton, only two were annotated, both of these being smithys. Only one of these survives as a standing building (Site 20). The moated site (Site 13) associated with Rushton Hall (Site 14) was sparsely depicted as a right-angle shaped group of hachures suggesting two sides of the moat ditch. No sign of the house structure was shown. There was no indication of the possible Bronze Age barrow (Site 21) to the north-east of Ardene Hall. The field boundary (Site 29) shown on the Eaton tithe map that was visible on aerial photography was not depicted on this map and the field boundaries in this area appeared similar to those shown on current mapping. Very few features suggestive of industrial activity were depicted in the vicinity of the proposed pipeline, with one example being 'Brick field', which was to the west of Boothouse. Several field boundaries that had been shown on the earlier tithe maps were no longer extant, but were preserved by lines of trees. One line of trees extending southwards from Ox Heys suggests a former boundary pre-dating the Rushton tithe map of 1837.
- 3.4.8 A smithy was shown to the north of the crossroads at Cholmondeston. In the vicinity of the Shropshire Union Canal, at the western end of the study area, Minshull Lock (Site 28) and Minshull Lock Cottage (Site 4) were depicted but named only as 'Aston Lock'. Nanney's Bridge (Site 27) and Jackson's Bridge (Site 26) were both shown but were not named. A group of buildings named as 'Out Lanes' was shown to the south-east of Nanney's Bridge.
- 3.4.9 *Ordnance Survey first edition map of 1881:* this map was produced at a scale of 6" to 1 mile and, was, therefore, less detailed than the 25" to 1 mile map. The limited detail was, however, generally reflected in the simplified execution of the illustrated features, rather than by a reduction in the number of depicted features (Fig 7). Fewer ponds were shown on this map but little else appeared to differ from the depictions of the larger scale map.
- 3.4.10 *Ordnance Survey second edition map of 1899:* following the publication of the first edition Ordnance Survey maps, the later editions became more

schematic with details, such as trees on field boundaries being omitted. As a result of this simplification, subtle features, such as former field boundaries represented by lines of trees were not depicted. The general representation of the area demonstrated few deviations from the first edition maps.

- 3.4.11 One addition to this 6" to 1 mile map was the depiction of a hydrualic ram, to the south-east of Eaton village. The Severn Vyrnwy Aqueduct (Site 21) was shown for the first time on this map, running roughly from north to south, to the west of Eaton village and annotated 'Liverpool Corporation Waterworks'. Old sandpits and quarries were shown to the south and east of Eaton that had not been depicted on the earlier maps. An additional brickfield was shown on this map, lying in a stream bend to the west of the crossroads at Cholmondeston.
- 3.4.12 *Ordnance Survey third edition map of 1910:* this map was produced at a scale of 25" to 1 mile (Fig 8). Once again, the largely agricultural nature of the study area meant that little change was evident on this map from the preceding second edition map. Even the relatively urbanised area of Eaton village appeared to have been little modified, except for the addition of Thomas's Church at the western side of the village. The parkland surrounding Ardene Hall appeared unchanged to the extent that the omission or addition of individual trees to the mapping was conspicuous.
- 3.4.13 The area annotated as 'Brick Field' to the west of Cholmondeston, on the second edition map, was shown with slightly better definition and the platfrom or structural element at the western side was shown to be slightly larger than the previous depiction. Minshull Lock (Site 28) was no longer called Aston Lock, and Nanney's (Site 27) and Jackson's bridges (Site 26) were named. The buildings annotated 'Out Lanes' to the south-east of Nanney's Bridge (Site 27) appeared in a similar form to the first edition depiction.
- 3.4.14 *Ordnance Survey map of 2006:* the current mapping of the study area generally shows little dramatic modification to the landscape. The area is still dominated by agricultural field systems, although the consolidation of plots, or attempts to slightly increase the usable area of holdings, has led to the removal of numerous field boundaries. Even the degree of additional building that has occurred around the Cholmondston crossroads has been minimal. The village of Eaton has seen some development over the twentieth century. This has, however, been limited to the central, sub-rectangular, 'enclosed' part of the village, from which the various access roads radiate. The peripheries of the village, including the western side, which lies closest to the proposed works, have even seen a reduction in the number of standing buildings. The waterworks at Eaton Borehole were added to the north side of Sapling Lane, at the western end of the proposed pipeline, occupying a small enclosed area.

3.5 Previous Archaeological Work

A site visit was conducted at Eaton Moat (Site **13**) on the 13th of January 2004 (ECH 4037) by a representative of Cheshire County Council. The purpose of this visit was in order to observe the installation of a waterworks compound

and to ensure that the scheduled monument was not at risk. No additional information relating to the site was produced as a result of the visit. In 1999 Network Archaeology undertook a desk-based assessment in advance of works relating to a proposed pipeline between Bridge Farm and Birch Heath. Although part of the study area utilised for this assessment coincided with part of the current study area, there was no subsequent report detailing the findings of any further archaeological works in the area. A desk-based assessment of the Cheshire Sandstone Ridge (National Museums and Galleries on Merseyside 2005) was carried out in 2005. Although part of the current study area falls within the broad area outlined for investigation by this study, none of the targeted zones of archaeological interest generated by the report coincided with the current study area.

4. SIGNIFICANCE OF THE REMAINS

4.1 Introduction

- 4.1.1 In total, 39 sites were identified within the study area during the desk-based assessment. 29 of these sites had been recorded in the Cheshire HER. The remaining 10 sites were identified by inspection of aerial photographs (Sites 29, 30, 31, 32, 33, 34, 35, and 36) and field names from tithe maps and apportionments (Sites 37, 38). There are two sites of prehistoric origin in the study area, including a Neolithic polished stone axe findspot (Site 11) and a probable Bronze Age barrow (Site 21). Two cropmarks suggestive of enclosures, one D-shaped (Site 17; Plate 1) and the other penannular (Site 32; Plate 2), can not be closely dated from aerial photography inspection, but could be prehistoric in origin. The only sites with known origins in the Romano-British period are Eaton Villa (Site 22) and a findspot of Roman-British artefacts (Site 12). There are five sites of known medieval origin. These are the earlier village of Eaton (Site 24), a medieval kiln (Site 15), a moot site (Site 23), and the moated site (Site 13) and associated house (Site 14) at Rushton Hall.
- 4.1.2 A rectangular feature (Site **34**; Pl 3) identified from an aerial photograph from the 1940s is of uncertain date and function. Although Roman camps are typically playing card-shaped, this feature is only about one acre in area, which is quite small for such a site. It is possible that differential ploughing might be responsible for the anomalous feature. Sites **29**, **32**, and **31** (Pl 2) represent curvilinear features identified from analysis of aerial photography. At least one of these was in use as a field boundary in 1838, as depicted on the Eaton tithe map, but this could also have been associated with the Rushton moated site (Site **13**). Three sites consist of areas of ridge and furrow of uncertain date that underlie field boundaries shown on 1940s aerial photographs (Sites **33**; Pl 3, **35**, and **36**).
- 4.1.3 The rest of the sites consist mainly of buildings and structures that are probably attributable to the post-medieval period, although some of these have not been closely dated due to their identification from field names on tithe maps. As the proposed works consist of a pipeline construction, consideration of the long-term visual impact upon the setting of sites of archaeological interest are not as pertinent as with other types of development. The works associated with the proposed pipeline may affect 14 out of the 39 identified sites within the study area. These are a Romano-British findspot (Site 12) and villa (Site 22), a medieval kiln (Site 15), the Severn Vyrnwy Aqueduct (Site 16), a D-shaped enclosure (Site 17), a penannular enclosure (Site 32), a rectangular enclosure (Site 34), three groups of ridge and furrow (Sites 33, 35, and 36), a curvilinear feature (Site 31), Cross Field (Site 37), Mill Croft (Site 38), and Smithy Field (Site 25). All of the sites are summarised in *Table 1* below:

Period	No of Sites	Sites	
Prehistoric	2	Neolithic polished stone axe findspot (Site 11), Bronze	
		Age barrow (Site 21).	
Romano-British	2	Eaton Villa (Site 22), Roman-British findspot (Site 12).	
Medieval	5	Eaton Village (Site 24), kiln (Site 15), moot site (Site	
		23), moated site (Site 13), Rushton Hall (Site 14).	
Post-medieval	18		
		Silver Birches (Site 1), Eaton House (Site 2), Old	
		School House (Site 3), Minshull Lock Cottage (Site 4),	
		Baytree Cottage (Site 5), Church Cottage (Site 6), The	
		Green (Site 7), Eaton Cottage (Site 8), Oak Tree	
		Farmhouse (Site 9), Well House Farmhouse (Site 10),	
		Severn Vyrnwy Aqueduct (Site 16), Village well (Site	
		18), Village cross (Site 19), Eaton Smithy (Site 20),	
		Jackson's Bridge (Site 26), Nanney's Bridge (Site 27),	
		Minshull Lock (Site 28)	
Not closely dated	12	C-shaped enclosure (Site 17), Smithy Field (Site 25),	
		?Property boundary (Site 29), Curvilinear feature (Site	
		30), Curvilinear feature (Site 31), Penannular enclosure	
		(Site 32), Ridge and furrow (Sites 33, 35, 36),	
		Rectangular enclosure (Site 36), Cross Field (Site 37),	
		Mill Croft (Site 38),	

Table 1: Number of Sites within the study area

4.1.2 There are 16 listed buildings within the study area: Silver Birches (Site 1), Eaton House (Site 2), Old School House (Site 3), Minshull Lock Cottage (Site 4), Baytree Cottage (Site 5), Church Cottage (Site 6), The Green (Site 7), Eaton Cottage (Site 8), Oak Tree Farmhouse (Site 9), Well House Farmhouse (Site 11), Village well (Site 19), Village cross (Site 19), Eaton Smithy (Site 21), Jackson's Bridge (Site 27), Nanney's Bridge (Site 27), and Minshull Lock (Site 28). There is one scheduled ancient monument within the study area, this being the moated site (Site 13) associated with Rushton Hall (Site 14).

4.2 CRITERIA

- 4.2.1 The methodology that will be used to assess the archaeological significance of sites is 'Secretary of State's criteria for scheduling ancient monuments', which is included as Annex 4 of Planning Policy Guidance 16 (Department of the Environment 1990). The sites listed in the gazetteer (*Appendix 1*) that were considered likely to be affected by the proposed development were each considered using these criteria and the results are detailed below.
- 4.2.2 *Period*: the D-shaped (Site 17) and penannular enclosures (Site 32) may represent rural sites of prehistoric or Romano-British origin. Although isolated findspots of prehistoric material have been discovered on the Cheshire Plain, most of the known sites of this period featuring structural elements that have received archaeological investigation are located in the raised lands of the Sandstone Ridge to the west of the study area. Eaton Villa (Site 22) and the findspot of Romano-British artefacts (Site 12) represent the only two confirmed sites of this period within the study area. Although the villa has been excavated, the full extent of any associated buildings or features has not necessarily been established. The site occupied by the villa appears to have been in use from the second century until the fourth century. A findspot of

Romano-British artefacts to the south of the villa included a coin of Marcus Aurelius, Emperor from AD 161-180. This may be contemporary with the earlier phases of the villa, as the findspot is likely to have been within the immediate environs of the villa. The rectangular enclosure (Site 34) bears a superficial similarity to a Roman marching camp, however it is quite small in area (c one acre) and has quite sharp corners, rather than the gently rounded corners typical of such camps. The site may be the result of differential modern ploughing in the area.

- 4.2.3 The medieval kiln at Eaton (Site 15) represents the only site of this period in the immediate vicinity of the proposed works, however four other sites from this broad period are known within the study area, including the village of Eaton (Site 24). The extent of the kiln site, which includes dumps of waste material, has not been established and was observed, by fieldwalking, to potentially extend to the east of the kiln site.
- 4.2.4 Although difficult to date from appearance alone, the three sites of ridge and furrow cultivation marks (Sites 33, 35, and 36) are likely to be post-medieval in date. The precisely straight nature of these cultivation marks, exhibiting a much greater width than modern ploughing ridges, may suggest the use of eighteenth or nineteenth century steam ploughing, rather than the deliberate creation of ridges in the medieval period that generally resulted in gentle Sshaped earthworks (Muir 2004, 219–21). The field-name Cross field (Site 37) provides a conjectural indication that a cross may have stood in this area. Lying close to the current road, it is possible that this may refer to a wayside cross. Such monuments could date from the medieval or later periods. Mill Croft (Site 38) and Smithy Field (Site 25) are field-names suggestive of industrial sites, probably dating to the post-medieval period, but no longer being in use by the time of the mid-nineteenth century production of tithe maps. The Vyrnwy Aqueduct dates to around 1886. The curvilinear feature (Site 31) is of uncertain date, but may have formed part of a boundary line that originally extended from an extant boundary to the north of this feature.
- Rarity: although numerous suspected prehistoric and Romano-British 4.2.5 enclosures, such as Sites 17 and 32, have been identified in the low-lying areas of Cheshire by aerial photographic analyses, few have been subject to archaeological investigation beyond fieldwalking (Hodgson and Brennand 2006, 52; Phillpot 2006, 61) and are, therefore, poorly understood site-types with little amassed data. One Romano-British rural site was discovered nearby at Birch Heath in Tarporley (Philpott 2006, 61) confirming the potential for such sites in the locale. Eaton Villa (Site 22) is the only Romano-British villa known in Cheshire and any associated or contemporary structures, perhaps represented by the nearby findspot (Site 12), would be of significant archaeological interest. The potential Roman marching camp (Site 34) would be the only such site in the locale and could relate to military activity at Middlewich, Northwich, and Chester during this period. The medieval kiln (Site 15) is one of only four Red- and Grey-ware kiln sites known in Cheshire (Leah et al, 1997, 217). Although much documentary evidence exists to demonstrate activity in the area at this time, with the exception of the kiln few

- medieval material remains have been investigated archaeologically in this area.
- Post-medieval ridge and furrow, such as that probably represented by Sites 33, 4.2.6 35, and 36, is not particularly rare but may be informative if it confirms the use of local steam ploughing agricultural strategies, such as cable-drawn balance ploughs. The curvilinear feature (Site 31) may represent little more than a watercourse formerly utilised as a property boundary, which would be common in this area, however, the period during which it was established could alter the significance of the feature. The Severn Vyrnwy Aqueduct (Site 16) is an extremely large monument that is not unique as an example of a postmedieval long-distance aqueduct and which is unlikely to display enough variation in construction styles throughout the overall length to render individual sections, within the larger monument, as being rare. Any postmedieval structures associated with the field-names 'Smithy Field' (Site 25) and 'Mill Croft' (Site 38) would not be rare at a national level, but are not abundant locally. If, however, any medieval sites were associated with these field-names then the sites would be of greater rarity.
- 4.2.7 **Documentation**: although the medieval kiln (Site **15**) does not appear to have been mentioned specifically in historical documentation, there are primary sources from the Domesday Book of 1086 onwards that refer to the locale of the study area, and it is possible that references to this specific site or other associated sites might exist within these archives. There are documentary sources suggesting the presence of a mill (Tredwell 1982, 24) in the environs of Mill Croft (Site **38**), in addition to the field name recorded on the Eaton tithe map of 1838.
- 4.2.8 *Group Value*: the potentially prehistoric or Romano-British enclosures (Sites 17 and 32) are two sites that have been identified by aerial photography and many more such sites have been initially categorised by this means (Hodgson and Brennand 2006, 52; Phillpot 2006, 61). As few of these sites have received further archaeological treatment, beyond fieldwalking, any information might lead to a better understanding of the group as a whole.
- 4.2.9 *Survival/Condition*: Eaton Villa (Site **22**) survived as a series of sub-surface structural remains, although the full extent of any associated structures has not been be confirmed. The Romano-British findspot (Site **12**) is likely to have been within the near environs of the villa (Site **22**) and, therefore, have been archaeologically excavated. The medieval kiln (Site **15**) was excavated in the 1980s, however, dumps of waste material marking the full extent of the site were not fully investigated and the condition and extent of sub-surface remains is not known. The Severn Vyrnwy Aqueduct (Site **16**) is still a functioning utility and will be utilised by the proposed pipeline development.
- 4.2.10 The D-shaped enclosure (Site 18) and penannular enclosure (Site 32) survive as cropmarks, which indicate subsurface remains, such as ditches or structural elements. These areas are likely to have been subjected to ploughing and parts of any associated features may have been truncated or damaged by such practices. A rectangular enclosure (Site 34) has also been extensively ploughed and survives as a cropmark and possibly as earthworks, as suggested

by the respecting of the outline of the feature by ploughing patterns. The three groups of ridge and furrow (Sites 33, 35, and 36) survive as clearly defined forms in the landscape, however, their superior clarity on the aerial photographs from the 1940s, in comparison to the present day photographs, might suggest damage by later twentieth century farming practices. The curvilinear feature (Site 31) survives only as a faintly visible sub-surface feature recognisable by the inspection of aerial photography. The depth of any sub-surface features is not known. Cross Field (Site 37), Mill Croft (Site 38), and Smithy Field (Site 25) exist as fields, displaying no obvious traces, visible on aerial photographs, of any remains that might relate to the former land-uses suggested by the field-names.

- 4.2.11 Fragility/Vulnerability: any remains associated with Cross Field (Site 37), Mill Croft (Site 39), Smithy Field (Site 25), the D-shaped enclosure (Site 17), the penannual ar enclosure (Site 32), the rectangular enclosure (Site 35), and the linear feature (Site 31) are likely to survive only as sub-surface remains. Their location, within agricultural fields, means that they may be at risk from damage by ploughing. Any such remains would also be likely to be vulnerable from intrusive ground works associated with the proposed pipeline. The three areas of ridge and furrow (Sites 33, 35, and 36) survive as visible features in the landscape and would also be vulnerable to plough damage and groundworks. Any associated artefacts or features associated with the Roman findspot (Site 12) may have been damaged by activity within the village of Eaton, although the exact location of the findspot is not known. This is, however, likely to have been close to Eaton Villa (Site 22), as the course of the Severn Vyrnwy Aqueduct runs near to this spot and it was during these works that the artefacts were found. The villa (Site 22) was subject to excavation and the known extent of this site is, therefore, well defined, although it is not protected by a statutory designation. Any currently unknown artefacts or features that might be associated with the findspot or the villa can only survive in a sub-surface, or ploughsoil, context and would be, therefore, vulnerable to groundworks associated with the proposed pipeline, as well as any ploughing.
- 4.2.12 The Severn Vyrnwy Aqueduct (Site **16**) is still being utilised, however, the degree of repairs, modifications, or replacements that may have been undertaken relating to this utility is not known. The ongoing use of the aqueduct suggests the integrity of the structure and works associated with the pipeline are likely, by necessity, to conserve this structural integrity, however this may involve deviations from the original fabric and form of parts of the monument.
- 4.2.13 *Potential*: the potential remains for unknown sites in association with Eaton Villa (Site 22), the Romano-British findspot (Site 12) and the medieval kiln (Site 17) to exist in the environs of these sites, at the western end of the study area. The enclosures (Sites 18, and 34) possess the potential to provide information about previously unknown activity and sites in the area during the prehistoric and Romano-British periods. The D-shaped (Site 17) and penannular (Site 32) enclosures may provide information relating to the nature of rural settlement in the area during these periods and their relationship with

- the highly visible political, military, and industrial centres that have often dominated archaeological understanding of this locale.
- 4.2.14 Mill Croft (Site **38**) and Smithy Field (Site **25**) both possess the potential to provide physical evidence for sites of industry currently known solely from documentary evidence. The route of the Severn Vyrnwy Aqueduct (Site **16**) is well established, however, the exact nature of the form and fabric of the monument in this area is concealed due to it lying below ground level. Any exposure of the aqueduct might reveal such information.
- 4.2.15 Although beyond the impact of the proposed pipeline works, the probable Bronze Age barrow (Site 21) is an indicator of activity in this area during the Bronze Age. There could, therefore, have been other such monuments in the vicinity that are no longer visible as prominent remains due to the long-term effects of ploughing. The general area possesses the potential to reveal subsurface remains relating to such monuments, such as features associated with funerary practices.

4.3 SIGNIFICANCE

4.3.1 Table 2 summarises the levels of significance attributed to generic site-types, together with guideline recommendations for appropriate mitigation strategies in each case.

Significance	Examples of Site-type	Mitigation
National	Scheduled Monuments (SMs), Grade I and II* Listed Buildings	To be avoided
Regional/County	Conservation Areas, Registered Parks and Gardens (Statutory Designated Sites), Grade II Listed Buildings	Avoidance recommended
	Historic Environment Record	
Local/Borough	Sites with a local or borough value or interest for cultural appreciation	Avoidance not envisaged
	Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	
Low Local	Sites with a low local value or interest for cultural appreciation	Avoidance not envisaged
	Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	
Negligible	Sites or features with no significant value or interest	Avoidance unnecessary

Table 2: Summary of significance according to site-type and appropriate mitigation

4.3.2 Five of the sites in the study area that are likely to be affected by the proposed pipeline works have been included in the Historic Environment Record of Cheshire (Sites 12, 15, 16, 17, and 22), which suggests a regional or county-level significance. Two sites have been assessed as of local/borough significance (Sites 32 and 34) and the remaining seven (Sites 25, 31, 33, 35, 36, 37 and 38) as of low local significance. This is based on the current state of knowledge and the subsequent discovery of additional features or evidence relating to these sites could alter their assessed levels of significance.

5. IMPACT ASSESSMENT

5.1 IMPACT

- 5.1.1 In its Planning Policy Guidance *Note 16*, the Department of the Environment (DoE 1990) advises that archaeological remains are a continually diminishing resource and 'should be seen as finite, and non-renewable resource, in many cases, highly fragile and vulnerable to destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed'. It has been the intention of this study to identify the archaeological potential of the study area, and assess the impact of redevelopment, thus allowing the advice of the DoE to be enacted upon. Assessment of impact has been achieved by the following method:
 - assessing any potential impact and the significance of the effects arising from redevelopment;
 - reviewing the evidence for past impacts that may have affected sites of archaeological interest;
 - outlining suitable mitigation measures, where possible at this stage, to avoid, reduce or remedy adverse impacts on sites of archaeological significance.

Scale of Impact	Description		
Substantial	Significant change in environmental factors;		
	Complete destruction of the site or feature;		
	Change to the site or feature resulting in a fundamental change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.		
Moderate	Significant change in environmental factors;		
	Change to the site or feature resulting in a significant change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.		
Slight	Change to the site or feature resulting in a small change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.		
Negligible	Negligible change or no material changes to the site or feature. No real change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.		

Table 3: Criteria used to determine scale of impact

5.1.2 The impact is assessed in terms of the sensitivity or importance of the site to the magnitude of change or potential scale of impact during future redevelopment scheme. The magnitude, or scale of an impact is often difficult to define, but will be termed as substantial, moderate slight, or negligible, as shown in Table 3.

5.1.3 The interaction of the scale of impact (Table 3) and the importance of the archaeological site (Table 2) produce the impact significance. This may be calculated by using the matrix shown in Table 4:

Resource Value	Scale of Impact Upon Archaeological Site			
(Importance)	Substantial	Moderate	Slight	Negligible
National	Major	Major	Intermediate/ Minor	Neutral
Regional/County	Major	Major/ Intermediate	Minor	Neutral
Local/Borough	Intermediate	Intermediate	Minor	Neutral
Low local	Intermediate Minor Minor/ / Minor Neutral			Neutral
Negligible	Neutral	Neutral	Neutral	Neutral

Table 4: Impact significance matrix

- 5.1.4 The extent of previous disturbance to buried archaeological levels is an important factor within the assessment of archaeological significance, and the most likely cause of long-term damage or degradation is agricultural activity. The effects of modern deep-ploughing on sub-surface remains can be severe, and it is possible that currently unidentified sites within the study area may have been adversely affected by such activity. In addition to such unknown sites, the Romano-British findspot (Site 12), D-shaped enclosure (Site 17), penannular enclosure (Site 32), rectangular enclosure (Site 34), three groups of ridge and furrow (Sites 33, 35, and 36), curvilinear feature (Site 32), Cross Field (Site 37), Mill Croft (Site 38), Smithy Field (Site 26) and any associated sites and artefactual evidence may have been subject to damage by ploughing.
- 5.1.5 The impact of such plough damage will depend upon the nature of the site and the scale and duration of ploughing in the particular area. Sites comprising deeply cut ditches or pits, for example, will be more likely to survive as residual features than shallow negative features.
- 5.1.6 Following on from the above considerations, the scale of impact on the present condition of sites of archaeological interest has been determined, based on the present understanding of the nature of the proposed development. The results are summarised in Table 5, although these would require review should there be any changes to the route of the pipeline.

Site	Name/Type	Nature of Impact	Significance	Scale of Impact	Impact Significance
12	Roman findspot	Disturbance of related artefacts or features by groundworks	Regional/ County	Moderate	Major/ Intermediate
15	Medieval kiln	Disturbance of related artefacts or features by groundworks	Regional/ County	Moderate	Major/ Intermediate
16	Severn Vyrnwy Aqueduct	Disturbance to monument by modification of existing utility	Regional/ County	Moderate	Major/ Intermediate
17	D-shaped enclosure	Disturbance of related artefacts or features by groundworks	Regional/ County	Moderate	Major/ Intermediate
22	Eaton Villa	Disturbance of related artefacts or features by groundworks	National	Moderate	Major
25	Smithy Field	Disturbance of related artefacts or features by groundworks	Low local	Negligible	Neutral
31	Curvilinear feature	Disturbance by groundworks			Neutral
32	Pennannular enclosure	Disturbance of related artefacts or features by groundworks	Regional/ County	Moderate	Major/ Intermediate
33	Ridge and furrow	Disturbance by groundworks	Low local	Slight	Minor/ neutral
34	Rectangular enclosure	Disturbance of related artefacts or features by groundworks	Local/borough	Moderate	Intermediate
35	Ridge and furrow	Disturbance by groundworks	Low local	Slight	Minor/ neutral
36	Ridge and furrow	Disturbance by groundworks	Low local	Slight	Minor/ neutral
37	Cross Field	Disturbance of related artefacts or features by groundworks	Low local	Negligible	Neutral
38	Mill Croft	Disturbance of related artefacts or features by groundworks	Low local	Negligible	Neutral

Table 5: Assessment of the impact significance on each site within the study area during development

6. RECOMMENDATIONS FOR FURTHER ARCHAEOLOGICAL INVESTIGATION AND MITIGATION

6.1 Introduction

- 6.1.1 In terms of further archaeological investigation and mitigation, it is necessary to consider only those sites that will be affected by the proposed development. Current legislation draws a distinction between archaeological remains of national importance and other remains considered to be of lesser significance. Those perceived to be of national importance may require preservation *in situ*, whilst those of lesser significance may undergo preservation by record, where regional or high local significance can be demonstrated.
- 6.1.2 A walkover survey along the entire route of the proposed easement would establish whether any visible traces of the D-shaped enclosure (Site 17), penannular enclosure (Site 32), rectangular enclosure (Site 34), three groups of ridge and furrow (Sites 33, 35, and 36), and curvilinear feature (Site 31), are present at ground level. If such remains were identified in association with any known or previously unknown sites then these could warrant a programme of topographic survey.
- 6.1.3 Following any such recording by topographic survey evaluation trenching is also recommended in the environs of the D-shaped (Site 17), penannular enclosure (Site 32) and the rectangular enclosure (Site 34), in order to attempt to ascertain the nature and date of these features.
- 6.1.4 Depending upon the results of the initial programmes of walkover survey and evaluation trenching, further recommendations for mitigation may be forthcoming. Where phases of detailed archaeological investigation, such as walkover survey, topographic survey, evaluation trenching, and watching briefs, identify the presence of significant remains of archaeological interest that cannot be preserved *in situ*, archaeological excavation would be necessary, in order to preserve the sites by record.
- 6.1.5 Finally, due to the significant number of archaeological sites along the proposed route of the pipeline it is recommended that a permanent presence watching brief should be maintained during all ground disturbing activities. During the watching brief a section should be put through any township or parish boundaries that are disturbed by the easement. Site-specific recommendations for further investigation are summarised in Table 6.

Site	Name/Type	Significance	Impact Significance	Recommendations
12	Roman findspot	Regional/ County	Major/ Intermediate	Intensive watching brief
17	D-shaped enclosure	Regional/ County	Major/ Intermediate	Walkover survey, if positively identified at ground level then topographic survey. Evaluation trenching
22	Eaton Villa	National	Major	Intensive watching brief, metal detector survey
32	Pennannular enclosure	Regional/ County	Major/ Intermediate	Walkover survey, if positively identified at ground level then topographic survey. Evaluation trenching
34	Rectangular enclosure	Local/borough	Intermediate	Walkover survey, if positively identified at ground level then topographic survey. Evaluation trenching.

Table 6: Summary of site-specific recommendations for further archaeological investigation and provisional mitigation

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8. ILLUSTRATIONS

8.1 LIST OF FIGURES

Figure 1: Site Location

Figure 2a: Plan of gazetteer sites (west)

Figure 2b: Plan of gazetteer sites (east)

Figure 3: Plan of township boundaries

Figure 4: Extract of Eaton tithe map of 1838 and Rushton tithe map of 1837 showing Smithy Field (Site **25**) and Mill Croft (Site **38**)

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Figure 6: Proposed route superimposed upon the Swire and Hutchings map of 1830

Figure 7a: Proposed route (west) superimposed upon the Ordnance Survey 6" to 1 mile, 1881

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Figure 8a: Proposed route (west) superimposed upon the Ordnance Survey 25" to 1 mile, 1910

Figure 8b: Proposed route (west) superimposed upon the Ordnance Survey 25" to 1 mile, 1910

8.2 LIST OF PLATES

Plate 1: Aerial photograph showing D-shaped enclosure (Site 17)

Plate 2: Aerial photograph showing penannular enclosure (Site **32**) and linear feature (Site **31**)

Plate 3: Aerial photograph showing rectangular enclosure (Site **34**) and ridge and furrow (Site **33**)

APPENDIX 1: GAZETTEER OF SITES

Site Name Number 2 Silver Birches

Site number 01

NGR SJ 5734 6338 HER no 4191 Site Type Building Period Post-Medieval

Statutory

Designation Grade II Listed Building – ref 57222 **Source** (1) LUAU 2001 (2) DOE 1990

Description A Grade II listed two-storey building dating from the eighteenth century. Early C18

with early and mid C19 additions. Whitewashed random bond brick with thatched roof. Two storeys. Entrance front: door to left of centre with moulded surround and C19 gabled porch. To left of this is an early C19 2-light horizontally sliding sash window with 3 x 4 panes to each light and to the right is a 3-light early C19 casement above which is a 2-light gabled dormer. To the right of this is the early C19 extension with a tripartite ground floor window having a central light of 4 x 4 panes with lateral lights of 1 x 4 panes. The rear has a mid C19 wing at the right and a C19 outshut to the left of rear. Right hand gable end has a cross-window to the gable and the left

hand gable has a horizontally sliding sash with cambered head to the gable.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Eaton House

Site number 02

NGR SJ 5745 6338 HER no 4192 Site Type Building Period Post-medieval

Statutory

Designation Grade II Listed Building – ref 57223 **Sources** (1) LUAU 2001 (2) DOE 1991

Description Farmhouse, now house. c.1840. Red Flemish bond brickwork with ashlar dressings

and plain tile roof. Two storeys with attic. Entrance front: three bays symmetrically disposed. Rendered plinth. Central gabled two-storey porch with four-centered arch. Three-light casement window above at first floor level with a chamfered stone sill and lintel and diamond-patterned lattice common to all the windows. Stone kneelers and coping to the gable which has a central window-slit. Similar 3-light windows to the ground and first floors at either side. The left hand side of the building has 3 bays symmetrically disposed with slightly projecting gabled wings to either side of the recessed centre which has 4-light latticed casement windows to the ground and first floors with 3-light windows to both floors in the wings and 2-light attic windows to the gables. There is a central gabled attic dormer with plain bargeboards and a

decorated bargepost. The lateral gables have ashlar kneelers and coping.

The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Old School House, Eaton.

Site number 03

NGR SJ 5730 6341 HER no 4193 Site Type Building Period Post-medieval

Statutory

Assessment

Designation Grade II Listed Building – ref 57230 **Source** (1) LUAU 2001 (2) DOE 1991

Description School houses, now house. Mid/Late C18. Red Flemish bond brick with stone

dressings and a slate roof. Two storeys. Entrance front: stone plinth. Yellow headers. Two bays having door at far right with wooden doorcase of fluted pilasters to either side and open pediment above. Within this open pediment is an open book painted with the words: GOD IS TRUTH THE WORD IS TRUTH THE SPIRIT IS TRUTH LOVE IN TRUTH Beneath is a 6-panelled door. To left of this are two windows with stone sills and wedge lintels of 3 x 4 sash panes. There are two similar windows to

the first floor.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Minshull Lock Cottage

Site number 04

NGR SJ 6541 5849

HER no 4636 Site Type Building

Period Post-medieval/19th Century

Statutory

Designation Listed Building – ref 351229 **Sources** (1) English Heritage 2005

Description A lock keepers cottage constructed c. 1827 – 33. The house has an L-plan and has

two storeys. It is built of brick with plain tile roof with large gable stack (1).

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Baytree Cottage, Eaton

Site number 05

NGR SJ 5733 6332 HER no 886/0/1 Site Type Building Period Post-Medieval

Statutory

Designation Grade II Listed Building – ref 57227

Source (1) DOE 1991

Description Baytree Cottage. 17th Century. Timber-framed with rendered infill and brick walling

and thatched corrugated asbestos roof. Interior: Inglenook fireplace (1). House. Cl7. Timber framed with rendered infill and brick walling and thatch and corrugated asbestos roof. Two storeys. Baffle entry plan. Entrance front: of 3 builds. To the right is a small area of timber framing set with two 2 light C20 casement windows. To the left of this is a C20 gabled porch with a stable door. The first floor has two 3-light casement windows to the right with a single-light dormer over the porch. To the left is a replaced C20 portion with two 2-light and a single light window and to the left again is a portion of small framing of 4 x 2 cells with angle braces. The left hand gable end has a deep stone plinth and angle braces and queen posts and angle struts to the gable. Rear: the left hand portion has 5 bays of uneven framing at the left with an angle brace at right and a lean-to C19 or C20 porch at right. There are two cells of small framing to the far right with an angle brace. Interior: Ingle nook fireplace with

staircase to the inner instead of the more usual outer side.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Church Cottage

Site number 06

 NGR
 SJ 5730 6337

 HER no
 886/0/3

 Site Type
 Building

 Period
 Post-medieval

Statutory

Designation Grade II Listed Building – ref 57228

Sources (1) DOE 1991 (2) DOE 1965

Description House. Early Cl7. Timber framed with rendered infill and a thatched roof. Two

storeys. Road front: seven bays of uneven timber framing with angle braces at left and to either side of the fourth upright from the left. Three 2-light ground floor casements and two 2-light gabled casements to the first floor. Chimney stack to right

hand gable end. C19 wing to right at rear.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name The Green, Eaton

Site number 07

NGR SJ 5728 6337 HER no 886/0/4 Site Type Building Period Post-Medieval

Statutory

Designation Grade II Listed Building – ref 57232

Source (1) DOE 1991

Description House. Late Cl7 with Cl8 additions and alterations. Rendered brick and timber

framing with brick infill and a slate roof. Two storeys. Road front: two bays. C19 door to centre with 4 panels and a gabled hood. To the left of this is a C18 leaded 3-light casement window and to right is a similar C19 or C20 window. Leaded 2-light casement to first floor right and C19 2-light casement to left. To the right is a lean-to porch entry and to the left a C19 extension with a C20 window to the ground floor and a square pitch-hole to the first floor with ashlar hinge dressings and now with

C20 glazing.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Eaton Cottage, Eaton

Site number 08

NGR SJ 5714 6338 HER no 886/0/4 Site Type Building Period Post-Medieval

Statutory

Designation Grade II Listed Building – ref 57233

Source (1) DOE 1991 (2) DOE 1965

Description Cottage. C17 with C18, C19 and C20 additions and alterations. Timber framed with

rendered infill and English garden wall bond brick and thatched roof. Entrance front: three bays. Cambered-headed window openings to ground floor with C20 3-light windows inserted and an early C19 door to the left of centre with panelled surround and a door of 6 raised and fielded panels and segmental porch supported on moulded brackets. Three 3-light gabled first floor dormers. C20 addition at left. The bay to left of the front door has a band of two bricks depth between the floors. To the right the Flemish bond has yellow headers. The rear has 5 x 2 cells of small framing at left with angle braces to the left and the fourth upright from the left. There is a projecting

C20 gabled wing at right of centre.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Oak Tree Farmhouse

Site number 9

NGR SJ 5737 6329

HER no 886/3/0

Site Type Building Period Post Medieval

Statutory

Designation Grade II Listed Building **Sources** (1) DOE 1991 (2) DOE 1965

Description Built in the late 16th century/early 17th century with later additions. It is timber-

framed with rendered infill and a thatched and slate roof. Baffle-entry plan. Front -earliest portion at right with later 17th century portion to left. 12 x 3 cells of small framing to the earliest portion. Later portion consists of 9 x 3 cells of small framing. Righthand gable end has 5 x 3 cells of small framing with angle braces. Queen posts Wood was in plentiful supply as a building material in Britain until the 17th century. It was therefore the most practical material for house building. Timber framed buildings consist of a wooden framework (usually oak) that was infilled to create solid walls. Infill material used included wattle and daub, lath and plaster, brick and weather board. Brick nogging, (brick infill) was often used in the 17th and 18th centuries to replace earlier wattle and daub or lath and plaster infill as it was longer

lasting

Assessment The site lies outside the development area and is unlikely to be affected by the works.

Site Name Well House Farmhouse

Site number 10

NGR SJ 5738 6325 HER no 886/4/0 Site Type Building Period Post Medieval

Statutory

Designation Grade II Listed Building – ref 57218 **Source** (1) DOE 1991 (2) DOE 1965

Description Farmhouse. Late C17. Timber framed with rendered infill. Baffle-entry plan, two

storeys. Entrance front: 14 x 3 cells of small framing on a rendered stone plinth with angle braces to sides. Central doorway with gabled C19 porch. To either side are C19 2-light casement windows and there are swept 2-light dormers to the first floor with a central ridge chimney stack. Brick addition at left painted in simulation of timber-framing. Rear: 9 x 3 cells of small framing with angle braces at centre, a C19 and C20 block at the right and a projecting wing to the left with C19 and C20 windows. Interior: Ingle nook fireplace to parlour and chamfered ceiling beams to the parlour. The dining room has a 12-panel cut-down door and there is a bread-oven, approached

from under the staircase built into the side of the hearth.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Prehistoric stone axe from Rushton

Site number 11

NGR SJ 5715 6345

HER no 878
Site Type Findspot
Period Neolithic

Statutory Designation

Sources (1) Historic Environment Record.

Description A polished stone axe was found in small fields between Eaton Cottage

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Unnamed findspot in Rushton Parish

Site number 12

NGR SJ 5700 6300

HER no 882/0/1 Site Type **Findspot** Period Romano-British

Statutory **Designation**

Source (1) Historic Environment Record.

About 1886 during pipe laying for the new Vyrnwy water supply to Eaton, near **Description**

Tarporley, fragments of Roman tiles, mortar and a first brass of Marcus Aurelius were found. The coin is inscribed Obv:-M.AVR.ANTONINVS. TR.P. COS with head of emperor to right and Rev:-VOTA.SOL.DECENN II with a figure sacrificing at an altar between the letters SC. Coin is in possession of Mr Fotherby in the

neighbourhood. Excavation in the 1980's uncovered a villa.

Assessment The full extent of the site is not known and associated features might be affected by

the works

Site Name Moated site and fishponds 500m southeast of Eaton

Site number 13

NGR SJ 5790 6311 HER no 1035/1/1

Site Type Mansion house and moat

Period Medieval

Statutory

Designation Scheduled Ancient Monument - ref 13460

Sources (1) Historic Environment Record.

Description Moated site at Rushton, probably the site of Rushton Hall. Sited in a field along the

Hall Lane. Rushton Hall was probably medieval, but was rebuilt in the 17th century. It was held by the Hinton family. In 1864, it was sold to P. de M.Grey-Egerton, who is now proprietor of the Rushton Hall Estate (1882). Rectangular moated site in pasture field. Lowlying platform, orientated north-west / south-east. Moat 1.50m deep and marshy, though not water-filled. 9-10m wide on north-west and south-west sides. No trace of buildings on level platform, some 55m x 36m in extent. A second moat, parallel to 2 sides of platform, surrounds north-west and north-east sides of site. This was probably a fishpond. To south-east some 34m from the edge of the moat there are traces of an outer field bank parallel with the south-east side of the moat. Also dry fishpond on south-west and outer bank 10m x 0.5m flanking north-west and southwest arms. Moated site at Rushton which is a Scheduled Monument. Moated Sites are characterised by a waterlogged ditch that encloses a platform of land where buildings were built though they were also used for horticulture e.g. orchards. They were most popular in medieval times though not necessarily for the defensive advantages of being on an island as they were also seen as a sign of prestige. There are approximately 6000 across England with over 200 moated sites in Cheshire alone. It was probably the site of Rushton Hall, a medieval building rebuilt in the 17th century. There is no trace of any building on the moated platform today. The site consists of a rectangular moated platform and a second moat on two sides which was probably a fishpond. Fishponds were often part of large estates or monasteries in medieval times. Fish was an important part of the diet for the rich, particularly for those in religious houses where abstinence from meat was frequently required.

Assessment The full extent of the site is not known and associated features might be affected by

the works

Site Name Rushton Hall

Site number 14

NGR SJ 5791 6311 HER no 1035/1/2 Site Type Mansion House Medieval Period

Statutory Designation Source Description (1) Historic Environment Record.

Probable remains of a fishpond, indicated by traces of an outer ditch on the northwest and north-east sides of the moat (RN:1035/1). Monument comprises a moated site, considered to be the site of Rushton Hall medieval mansion house, and associated fishponds. The site includes a grassy island measuring c.55m x 36m surrounded on three sides by a dry moat 9-10m max. Width x 1.5m deep. An outer bank 10m x 0.5m max. Flanks the north-west and north-east sides of the site, this pond is flanked by an outer bank along the west part of its north side. The medieval house of Rushton Hall was rebuilt in the 17th century and held by the Hinton family. It was sold in 1864 and today there is no trace of any building on the level island.

Assessment

The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Medieval Kiln

Site number 15

NGR SJ 5717 6341

HER no 2143

Site Type Medieval pottery kiln

Period Medieval

Statutory Designation

Designation

Sources (1) Historic Environment Record

Description During the course of the excavation of the Roman Villa, a medieval pottery kiln and

waste dumps were located. Not only was this material above the villa, but field walking and chance finds have shown that the material extends across the rest of the field east of the exposed villa remains. Thin section pottery analysis of selected sherds has been undertaken by A Vince, Museum of London, for the Grosvenor

Museum.

Assessment The full extent of the site is not known and associated features might be affected by

the works

Site Name Severn Vyrnwy Aqueduct

Site number 16

 NGR
 SJ 5072 6620

 HER no
 2655/0/0

 Site Type
 Aqueduct

Period Post-medieval/19th century

Statutory Designation -

Source (1) Crosby A 1996

(2) Ordnance Survey 1896-98.(3) Ordnance Survey 1870-75.

Description Aqueduct that was built in between the surveying for the Ordnance Survey First and

Second Editions 6 inch to 1 mile maps. It carried water from Llyn Vyrnwy to

Liverpool which was much needed for the growing industry.

Assessment The site lies within the proposed pipeline route and will be affected by the works

Site Name Crop mark north of Cholmondeston Hall

Site number 17

NGR SJ 6439 5923

HER no 4537

Site Type D-shaped enclosure

Period Unknown

Statutory Designation

Source (1) Aerial photographs. CCC 1940s (25cm) RAF digital aerial photographs

Description D-shaped enclosure 460m to the north of Cholmondeston Hall. The enclosure has a

possible associated field boundary running to the north for a distance of 165m to the

corner of the modern field surrounding the cropmark.

Assessment The site lies within the proposed pipeline route and will be affected by the works

Site Name The Village Well

Site number 18

NGR SJ 5735 6341 HER no 4565 Site Type Well

Period Post-Medieval

Statutory

Designation Grade II Listed Building – ref 57277

Sources (1) English Heritage, 2005

Description The Village Well, circa 1800 with earlier origins and later alterations. A red

sandstone cave-like chamber set into a wall at Lower Lane Carriageway level. The well has a flat stone threshold slab and the chamber is now fronted by a door for protection, for it was last used in 1940. Due to the slope of Lower Lane the well chamber is below the level of the village green and Eaton Road. It is east of the

village stocks and smithy in a central village position.

Assessment The site lies outside the development area and is unlikely to be affected by the works.

Site Name Village Cross

Site number 19

NGR SJ 5730 6339

HER no 4567 Site Type Cross

Period Post-medieval – AD 1540 to AD 1900

Statutory

Designation Grade II Listed Building – ref 57229

Source (1) English Heritage 2005

Description Village Cross. C17 or C18. Red sandstone. Square stepped base supporting cross with

square shaft and rectangular base dated 1977. Square base of c.2' depth with 6 steps above rising to square platform on which stands the cross and its base. Cross and base

restored 1977.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Eaton Smithy

Site number 20

NGR SJ 5734 6342 HER no 4595 Site Type Building

Period Post-medieval – AD 1540 to AD 1900

Statutory

Designation Listed Building – ref 57276 **Sources** (1) English Heritage 2005

Description Smithy, circa 1850, red tooled sandstone with hipped slate roof. A single roomed

almost square building. Central half heck door on strap-hinges flanked by window frames containing single sheets of glass. At the rear there is a large sliding door and a 2-light casement. There is a half-heck door on the north side of the smithy. Internally: The normal open hearth, anvil, bench and smithy fittings. The building occupies a key site at the end of the village green near the village well and the remains of the

village stocks.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Round Mound

Site number

NGR SJ 5702 6291

HER no 876

Site Type Round Barrow Period Bronze Age

Statutory Designation

Assessment

Source (1) Historic Environment Record

Description Site of a possible bronze age round barrow. Round barrows are a type of burial

> mound, particularly used in the Bronze Age. Mounds of earth and stone were placed over a burial or cremation. A single barrow could be re-used for several later burials. The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Eaton Villa

Site number 22

SJ 5717 6341 NGR HER no 882/1 Site Type Roman villa Period Romano-British

Statutory Designation

Sources (1) County Historic Environment Record

Description Excavations in 1980-82 uncovered a Roman winged corridor villa, comprising a main range (8.2m x wide 19.3m long), fronted on the north eastern side by a 2.5m wide portico, with wings (4m wide) at either end projecting out for at least 6m beyond the front wall of the main range. The walls were constructed of sandstone & limestone

blocks & roofing materials included clay tiles, sandstone shingles & slates.

Phase 1 comprises 2 postholes belonging to a structure laid out on a different alignment from later building. This structure may have been of a temporary nature only.

Phase 2 comprises a large timber building, possibly of aisled plan, c.9m x 22m, with a stone hearth. This structure was probably destroyed by fire. Drainage ditches to the north and west were associated with large pits, which were possibly the emplacements for wooden tanks. This system was designed to convey water from the spring on the hillside to the north-west. It is suggested that this structure had a life of c. 30 years.

Phase 3 comprises a single storied stone winged, corridor building 26m x 14m. The southern wing formed a bath suite. The main range contained 5 rooms, decorated with wall plaster and opus signinum or mortared pebble floors. One room had a hypocaust and another a hearth. The northern wing contained 3 rooms, 2 being heated. A colonnade ran along the eastern frontage, between the 2 projecting wings. This building was probably built c. AD 170-200

Phase 4 comprises reconstruction of the villa, some hypocausts were removed but the southern wing still remained a bath suite. The colonnade was converted into rooms, with opus signinum floors and painted wall plaster. A second storey was probably added to the main range and possible corn-drying kilns were located in two rooms. Possibly late C3rd, early C4th.

The site is now conserved and displayed. Some stone column bases and drainage troughs have been imported from the Hunter Street excavations in Chester.

Assessment

The full extent of the site is not known and associated features might be affected by

the works

Site Name Moot Site number 23

NGR SJ 5800 6300 HER no 884/1

Site Type Site of a moot

Period Medieval – AD 1066 to AD 1539

Statutory

Designation

Source (1) Dodgson 1970

Description Rushton was the meeting place (moot) of one of the Domesday hundreds

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Eaton by Tarporley

Site number 24

NGR SJ 5740 6340 HER no 886/0/0

Medieval settlement Site Type

Period Medieval

Statutory

Designation

Source (1) Historic Environmental Record

Description Eaton by Tarporley. Does not appear in Domesday, probably because it was a

dependency of nearby Rushton (RN:884/1). Earliest recorded reference to the settlement appears in the Pipe Rolls of 1240. John the Scot, last of the local earls of Chester (1232-7) granted the manor of Rushton & the villages of Great & Little Eaton to one Hugh Fitton, ancestor of the Fittons of Gawsworth & subsequently they descended to the ownership of the Grey Egerton & Arderne families. The present village seems to have grown up around the crossing point of a number of secondary

roads. No other focal point (no Medieval church or manor house).

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Smithy Field

Site number

NGR SJ 579 625

HER no

Site Type Industrial site

Period not closely dated, pre 1838

Statutory

Designation

Sources (1) Eaton tithe map of 1838

Field named 'Smithy Field' on Eaton tithe apportionment. May represent former **Description**

land-use.

Assessment The site lies within the proposed pipeline route and is likely to be affected by the

works.

Site Name Jackson's Bridge (no. 7)

Site number 26

NGR SJ 652 585

HER no

Site Type Bridge Period Post Medieval

Statutory

Grade II Listed Building - ref 351230 **Designation**

Source Historic Environment Record

Description Accommodation bridge. 1827-33. Telford design. Brick, with stone band and

copings. Single basket arch, solid parapet and piers. Bricked ribbed towpath surface,

with stone coping, beneath arch.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Nanney's Bridge

Site number 27

NGR SJ 657 585

HER no

Site Type Bridge
Period Post Medieval

Statutory

Designation Grade II Listed Building – ref 351234

Sources Historic Environment Record

Description Road bridge over canal. 1827-33. Telford design. Brick, with stone band and copings.

Single basket arch, solid parapet and piers. Parapets partly rebuilt. Brick ribbed

towpath surface with stone coping.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Minshull Lock

Site number 28

NGR SJ 654 585

HER no -

Site Type Canal Lock Period Post Medieval

Statutory

Designation Grade II Listed Building – ref 56731 **Sources** Historic Environment Record

Description Lock on the Middlewich Branch of the Shropshire Union Canal, circa 1830 by

Thomas Telford. Slightly east of Nanney's Bridge on the B5074 Church Minshull to Worleston road and on the Middlewich spur of the canal which links the Trent and Mersey Canal at Middlewich with the Shropshire Union Canal at Barbridge. Mainly blue brick walls with sandstone quoins, steps and copings, timber and metal gates. The upper single (west) gate still has an oak beam but those of the lower (east) gates are now of metal. Little sign of alteration in opening gear and materials generally.

Assessment are now of metal. Little sign of alteration in opening gear and materials generally.

The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Field boundary

Site number 29

NGR SJ 578 629

HER no -

Site Type Field Boundary

Period not closely dated, pre1838

Statutory Designation

Designation -

Sources (1) Aerial photograph, CHER 1940s RAF/3175

(2) Eaton tithe map of 1838

Description An irregular, probably ditched, linear feature was identified from aerial photographs.

This was seen to correspond to an early field boundary on the Eaton tithe map of 1838. The incongruity of the irregularity of the field boundary may suggest a boundary predating some of the nearby field enclosures and it is possible that an

association with the estate of Rushton moated manor (Site 14) may exist.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Curvilinear feature

Site number 30

NGR SJ 628 593

HER no -

Site Type ?trackway
Period not closely dated

Statutory Designation

Source (1) Aerial photograph, CHER 1940s RAF/1164

Description Curvilinear feature which is no longer extant, possibly a trackway, visible on an

aerial photograph.

Assessment The site lies outside of the proposed pipeline route and is unlikely to be affected by

the works

Site Name Curvilinear feature

Site number 31

NGR SJ 587 620

HER no -

Site Type ?boundary Period not closely dated

Statutory Designation

Designation -

Source (1) Aerial photograph, CHER 1970s: run 24/1720

Description Curvilinear feature which is no longer extant, possibly a field boundary, apparent on

an aerial photograph. It could be a palaeochannel, however, water courses in the local area were, and continue to be, used as boundaries and divisions and this may have

been utilised in such a way.

Assessment The site lies within the proposed pipeline route and is likely to be affected by the

works

Site Name Penannular Enclosures

Site number 32

NGR SJ 585 621

HER no

Site Type Enclosures
Period Not closely dated

Statutory Designation

Source (1) Aerial photograph, CHER 1970s: run 24/1720

Description A group of cropmarks visible on aerial photographs that may represent several

penannular enclosures and smaller circular structures.

Assessment The site lies within the proposed pipeline route and will be affected by the works

Site Name Ridge and Furrow

Site number 33

NGR SJ 583 622

HER no -

Site Type Cultivation ridges Period Post medieval

Statutory

Designation -

Source (1) Aerial photographs. CHER 1940s RAF/3174

Description Ridge and furrow predating the overlying filed boundaries. May represent steam

ploughing with cable-drawn balance ploughs

Assessment The site lies within the proposed pipeline route and will be affected by the works

Site Name Rectangular feature

Site number 34

NGR SJ 584 261

HER no -

Site Type Rectangular cropmark
Period Not closely dated

Statutory Designation

Source (1) Aerial photographs. CHER 1940s RAF/3174

Description Rectangular feature enclosing around one acre that was visible on an aerial

photograph. This could represent an enclosure, such as a small Romano-British marching camp, but could also be a result of differential ploughing techniques.

Assessment The site lies within the proposed pipeline route and will be affected by the works

Site Name Ridge and Furrow

Site number 35

NGR SJ 596 618

HER no -

Site Type Cultivation ridges
Period Post-medieval

Statutory Designation

Designation

Source (1) Aerial photographs. CHER 1940s RAF/3171

Description Ridge and furrow predating the overlying filed boundaries. May represent steam

ploughing with cable-drawn balance ploughs

Assessment The site lies within the proposed pipeline route and will be affected by the works

Site Name Ridge and Furrow

Site number 36

NGR SJ 602 614

HER no -

Site Type Cultivation ridges
Period Post-medieval

Statutory Designation

Source (1) Aerial photographs. CHER 1940's RAF/3169

Description Ridge and furrow predating the overlying filed boundaries. May represent steam

ploughing with cable-drawn balance ploughs

Assessment The site lies within the proposed pipeline route and will be affected by the works

Site Name Cross Field

Site number 37

NGR SJ 567 633

HER no - Cross

Period not closely dated, pre-1838

Statutory Designation

Sources (1) Eaton tithe map of 1838

Description Field named 'Cross Field' on Eaton tithe apportionment. May represent former land-

use.

Assessment The site lies within the proposed pipeline route and is likely to be affected by the

works.

Site Name Mill Croft Site number 38

NGR SJ 579 626

HER no -

Site Type Industrial site

Period not closely dated, pre-1838

Statutory

Designation

Sources (1) Eaton tithe map of 1838

(2) Tredwell 1982

Description Field named 'Mill Croft' on Eaton tithe apportionment. May represent former land-

use. The field lies to the south of Mill Lane, which was mentioned in the eighteenth century, and a mill is said to have been situated on this lane, between Winterford

Farm and Boothouse (2)

The site lies within the proposed pipeline route and is likely to be affected by the Assessment

works.