

**Mannings Heath WTW to Chesworth Lane,
West Sussex**

**Historic Environment Desk-Based Assessment
(Heritage Statement)**

Prepared for Southern Water

NGR: 520154 129136 (east) to 517263 130035 (west)

**ASE Project No. 220267
ASE Report No. 2022208
WSHER Ref. No. 202223-040**

August 2022

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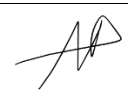
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Date of Issue:	August 2022		
Version:	1		

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Summary

Archaeology South-East (a division of the Centre for Applied Archaeology UCL) was commissioned by Southern Water to carry out an archaeological appraisal in relation to a proposed cross-country pipeline route, approximately 3.5km in length, in West Sussex. The proposed scheme runs between Mannings Heath Water Treatment Works (WTW) in the east and Chesworth Lane, Horsham in the west. The pipeline route (also referred to in this report as the Site) extends from National Grid Reference (NGR) 520154 129136 (east) to 517263 130035 (west). A wider Study Area of 500m has been considered along the full length of the proposed pipeline scheme to place the area within its wider context. The majority of the pipe is to be installed using an open-cut trench method with only small sections (e.g. stream, woodland and main road crossings) of pipe to be installed using trenchless horizontal directional drilling (HDD) or pipe bridge methods.

The majority of the Study Area lies on natural bedrock geology of Weald Clay formation (mudstone) and Upper Tunbridge Wells Sand (interbedded sandstone, siltstone and mudstone). Most of the area has no recorded superficial deposits, except along the route of the River Arun and its tributary, Horn Brook where there is alluvium, as well as Arun Terrace Deposits, 4 Member (sand and gravel). The route extends across a mix of fields and existing north-south aligned roads, as well as the watercourses mentioned above.

The assessment has concluded that:

- The Scheme does not pass through any Conservation Areas, although Horsham Conservation Area lies to the north-west of the scheme;
- No listed buildings are present in any of the proposed parts of the scheme, with the majority located in the historic core of Horsham and the nearest, being the Grade II* listed Chesworth House (1027063) located approximately 265m to the south-west;
- There is one scheduled monument within the Study Area, a well-established, medieval MOATED SITE AND FISHPONDS 15M SOUTH OF CHESWORTH HOUSE (10214460), located approximately 165m south-west of the proposed pipeline in the Chesworth Farm area;
- A section of the proposed pipeline (approximately 1km) passes through the Chesworth House Medieval Moated Site Archaeological Notification Area (DWS8533). Excavation in this area should be treated with caution;
- The majority of the Site is considered to lie within an area of generally unknown potential for most periods with moderate potential for the medieval and post-medieval/modern periods;
- This assessment has identified some moderate localised Palaeolithic and palaeoenvironmental potential in deeper deposits in the vicinity of the lower-lying wetlands where the watercourses (River Arun and Hornbrook tributary) converge around Kerves Lane;
- It is possible that the best archaeological potential for the vicinity of the appraisal Site lies in the lower-lying part of the Site close to the watercourse, where the superficial gravels are located, but it is not clear how accurately the deposits are recorded here, so excavations in this area should be undertaken with caution;
- The cartographic evidence has revealed a relatively static landscape in which agriculture has been the predominant factor;
- Where present, preservation of archaeological remains across the scheme is likely to be good owing to a broad absence of previous impacts;
- Archaeological deposits within previously undeveloped fields across the appraisal area are likely to survive below the depth of modern ploughing;

- *A number of non-designated heritage assets are recorded along or close to the scheme (e.g. the 19th century farmstead and a former outfarm at Buckleigh and anti-tank blocks at the entrance to Chesworth Farm) and there is potential for activity relating to these sites to extend beyond the limits of previous investigations or the identified location of the asset. Where thus far unknown heritage assets are present along the route of the proposed pipeline, there is a possibility that they will be directly impacted by the groundworks for the scheme, which is likely to result in damage and disturbance, and/or potentially the complete destruction, of these assets;*
- *Minor impact on some surviving historic boundary hedgerows in areas where open trenches are proposed may be unavoidable, but the temporary nature of the scheme means they are likely to be restored fairly quickly following groundwork. Where possible, the scheme may mitigate any impact on extant hedge-lines by using either directional drilling / auger-boring methods or crossing where there are natural gaps; and*
- *This assessment has found that the scheme will have no significant impact on the setting of designated heritage assets, because of its largely temporary and reversible nature.*

The assessment recommends the following archaeological mitigation:

- *Given that the proposed route runs through an Archaeological Notification Area (Red – very sensitive) and the remainder runs through an area with either unknown or moderate archaeological potential, archaeological mitigation works are advised;*
- *It is recommended that any excavations proposed in fields (e.g. compound strips and working corridor strips) are subject to a programme of pre-construction archaeological investigation (non-intrusive geophysical survey and evaluation trenching). This will allow for any surviving archaeological remains to be assessed and recorded prior to the pipe being installed;*
- *No archaeological mitigation is recommended for significant crossing areas (e.g. wood, roads and watercourse) where the pipe is proposed to be installed using a pipe bridge or directional drilling, nor during the excavations of the drill pits;*
- *Archaeological watching brief monitoring may be required in any areas where geophysical survey and/or archaeological trenching is not considered to be practical; and*
- *These are preliminary recommendations based on the methods proposed at the time of writing. Should these methods change prior to construction, they would need to be reviewed.*

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1.0 INTRODUCTION

- 1.1 Archaeology South-East (a division of the UCL Centre for Applied Archaeology) has been commissioned by Southern Water to carry out an archaeological appraisal in relation to a proposed cross-country pipeline route in West Sussex. The proposed scheme runs between Mannings Heath Water Treatment Works (WTW) in the east and Chesworth Lane, Horsham in the west (Fig. 1). The appraisal comprises a desk-based assessment (DBA) and preliminary walkover survey.
- 1.2 This report follows the recommendations set out by the Chartered Institute for Archaeologists in their *Standards and Guidance for historic environment desk-based assessment* (CIfA 2017¹). The aim of this assessment is to present a synthesis of readily available archaeological and historical data relating to the Site and its environs, in order to identify any known or potential heritage assets within the Site. This information has been used, where possible, to ascertain the location, extent, date, character, condition and significance of any identified heritage assets and to consider the likely impact of the proposed development upon them.
- 1.3 The pipeline route (also referred to in this report as the Site) extends from National Grid Reference (NGR) 520154 129136 (east) to 517263 130035 (west) (Figs. 1 - 5). The route covers a length of approximately 3.5km. Within this report the full extent of the proposed works is referred to as either 'the Site' or 'the scheme'.
- 1.4 A wider Study Area of 500m has been considered along the full length of the proposed pipeline scheme to place the area within its wider context (Figs. 1 - 5). Information beyond this limit has been included where considered relevant.
- 1.5 In drawing up this desk-based assessment, cartographic and documentary sources and archaeological data relating to the Study Area were obtained from the Historic Environment Record (HER) held by West Sussex County Council and from the West Sussex Record Office (WSRO) in Chichester. Listed Building and Conservation Area data was acquired from Historic England and Horsham District Council (HDC). Relevant sources held within the Archaeology South-East library were utilised, and appropriate on-line databases interrogated. These included: Heritage Gateway, National Heritage List for England, and the Magic website, which holds government digital data on designated sites (Scheduled Monuments, Registered Historic Parks and Gardens and Registered Historic Battlefields) in GIS map form. It should be noted that other material may be held in other collections.
- 1.6 It should be noted that this form of non-intrusive appraisal cannot be seen to be a definitive statement on the presence or absence of archaeological remains within any area but rather as an indicator of the area's potential based on existing information. Further non-intrusive and intrusive investigations such as machine-excavated trial trenching may be needed to conclusively define the presence/absence, character and quality of any archaeological remains.

1.7 The Proposed Scheme and Route

- 1.7.1 This scheme proposes a cross country pipeline, approximately 3.5km in length which extends from Chesworth Lane in the west to Mannings Heath WTW in the east. Whilst some sections of the pipeline are trenchless, the majority of the pipeline is open cut with a nominal depth of 2m and a 1m wide trench.

¹ <https://www.archaeologists.net/codes/cifa>, accessed July 2022

- 1.7.2 A number of construction compounds and access tracks are proposed along the route of the pipeline (Fig. 5) although these locations have not yet been 100% confirmed. The compounds are likely to be soil stripped with 'type 1' laid. Access tracks to these areas will likely be made using track matting although this will need to be confirmed and will be determined by ground suitability and weather.
- 1.7.3 The proposed pipeline installation methodology comprises a mix of open-cut trenching and trenchless horizontal directional drilling (HDD) trenchless techniques, the locations of which are shown on Figure 5. The design drawings for the scheme are yet to be finalised and as such have not been included within this report. The majority of the pipe is to be installed using an open-cut trench method with only small sections (e.g. crossings) of pipe to be installed using HDD methods. Trenchless methods may well be used to cross significant features be it a road, wooded area or watercourse, though again these locations will need to be confirmed following a constructability review. A pipe bridge is proposed at the eastern end of the scheme at Gaggle Wood where the Water Treatment Works (WTW) is located.
- 1.7.4 The only above ground features will be washouts and air valves (see typical design details from Southern Water presented in Appendix 2), the potential locations of which are shown in Figure 5, although these locations are not yet confirmed. They will consist of a below ground chamber topped with cover. In some locations the chamber may extend up to 600mm above the ground level and could be fenced off if required by the landowner.

2.0 SITE TOPOGRAPHY AND GEOLOGY

2.1 Location and Topography

- 2.1.1 The proposed pipe route extends between the Mannings Heath WTW in the east across fields to Chesworth Lane in the west.
- 2.1.2 The River Arun meanders across the Study Area to the south of the proposed scheme. The Horn Brook tributary also crosses the area. There is a wetland area located around the river where the moated site at Chesworth Farm is located to the south-west.
- 2.1.3 The route extends across a mix of fields and existing roads, as well as the watercourses mentioned above. Horsham is situated on the western edge of the High Weald, on a slope falling from c.90m to c.40m aOD (above Ordnance Survey) (Harris 2004, 11). The topography varies across the scheme, but broadly the area lies between 42m aOD in the west at Chesworth Lane and 68m aOD in the east at Gaggle Wood. A localised mound can be seen (green) immediately east of the pipeline in the lower river valley (blue) in the Chesworth Farm area.



Plate 2.1: Image showing the topography across the Site²

2.2 Geology

- 2.2.1 According to the British Geological Survey 1:50,000 scale geological mapping available online³, the natural bedrock geology of the Site consists of Weald Clay formation (mudstone) and Upper Tunbridge Wells Sand (interbedded sandstone, siltstone and mudstone). Areas where sandstone overlies clay are prone to landslipping and cambering.
- 2.2.2 The drift geology of the Horsham area is limited in extent, reflecting the inland location of the town. Alluvium (flanked by small areas of river terrace deposits) marks the location of the former narrow flood plain of the River Arun, and its tributaries, Boldings Brook and Chennells Brook (Harris 2004, 12). On the Arun next to the historic town (at Denne Farm) the alluvium extends to 100m wide, but downstream nearby at Tan Bridge is little over 25m wide (*ibid*). Most of the Study Area has no recorded superficial

² [Horsham topographic map, elevation, relief \(topographic-map.com\)](https://topographic-map.com/), accessed July 2022

³ <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>, accessed July 2022

deposits, except along the route of the River Arun and its tributary Horn Brook where there is alluvium, as well as Arun Terrace Deposits, 4 Member (sand and gravel) in the area of the pipeline where these watercourses meet at Kerves Lane (Plates 2.2-2.3 below).

2.2.3 No geotechnical data was available for the Site at the time of writing.



Plate 2.2: View of the bedrock and superficial geology across the wider Study Area and clearly showing the route of the watercourse (pink area indicates Arun Terrace Deposits, 4 Member sand and gravel)

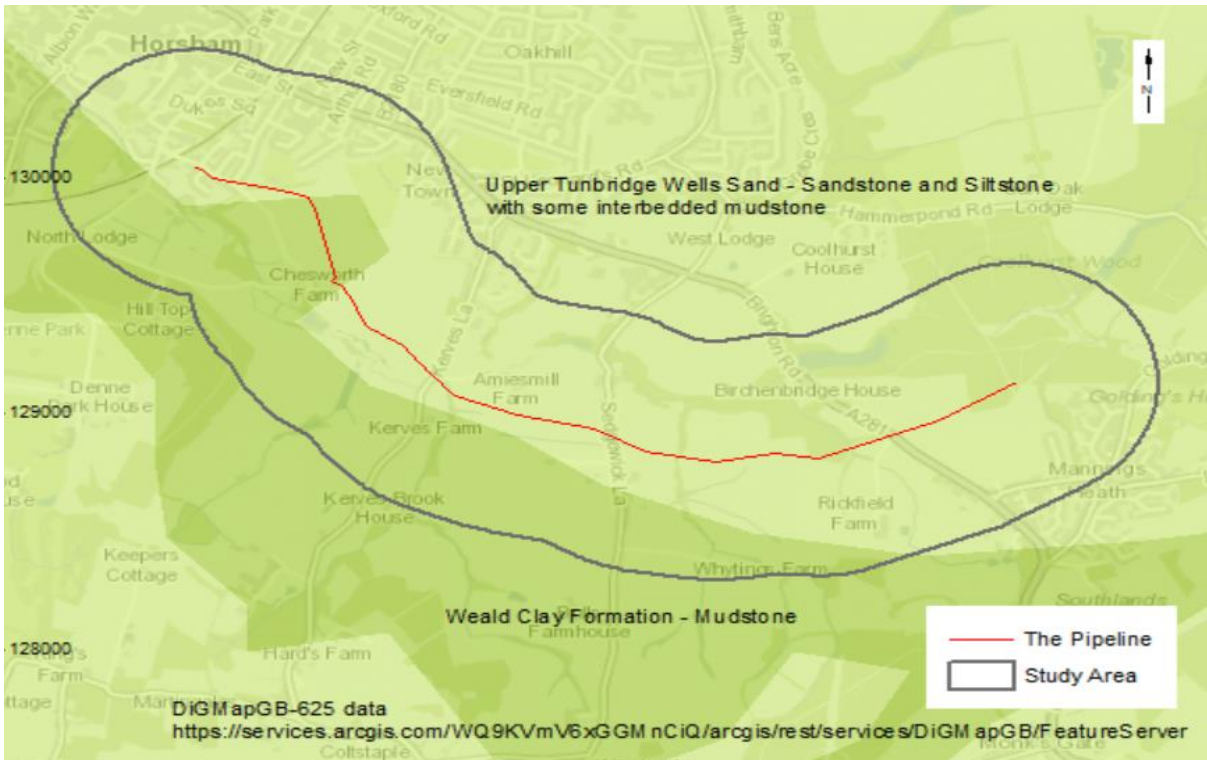


Plate 2.3: Image showing the varied geology across the Site

3.0 PLANNING BACKGROUND

Legislative Background

3.1 Ancient Monuments and Archaeological Areas Act 1979

3.1.1 The Ancient Monuments and Archaeological Areas Act 1979 is the main piece of legislation concerned with the protection of ancient monuments in England, including a schedule of ancient monuments (Scheduled Monuments) protected by law.

3.2 Planning (Listed Buildings and Conservation Areas) Act 1990

3.2.1 The Planning (Listed Buildings and Conservation Areas) Act 1990 is concerned with the designation and protection of buildings and areas of special architectural or historic interest.

National Planning Policy

3.3 National Planning Policy Framework (NPPF)

3.3.1 Government policies relating to planning are given in the National Planning Policy Framework. Section 16 (paragraphs 189 – 208) of the Framework (*Conserving and enhancing the historic environment*) outlines policies relating to the historic environment and the key role it plays in the Government's definition of sustainable development, the principle which underpins the document.

3.3.2 The Framework requires that local planning authorities *should set out in their Local Plan 'a positive strategy for the conservation and enjoyment of the historic environment'*, recognising that *'heritage assets are an irreplaceable resource'* and should be conserved *'in a manner appropriate to their significance'* (Section 16, paragraphs 190-191)⁴.

3.3.3 The Framework requires that planning applicants should *'describe the significance of any heritage assets affected'* by their application, *'including any contribution made by their setting'* (Section 16, paragraph 194)².

3.3.4 The NPPF is supported by Planning Practice Guidance⁵. In specific relation to historic environment issues, further guidance is provided by Historic Environment Good Practice Advice in Planning Notes 1 to 3, issued by Historic England and the Historic Environment Forum⁶.

Local Planning Policy

3.4 Horsham District Planning Framework (adopted November 2015)

⁴ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>, accessed July 2022

⁵ <https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment>, accessed July 2022

⁶ <http://historicengland.org.uk/advice/planning/planning-system/>, accessed July 2022

3.4.1 On 27th November 2015 Horsham District Council adopted the Horsham District Planning Framework (HDPF)⁷. With the exception of land within the South Downs National Park, the HDPF replaces the policies contained in the Horsham District Core Strategy and General Development Control Policies which were both adopted in 2007. The HDPF sets out the planning strategy for the years up to 2031 to deliver the social, economic and environmental needs for the district (outside the South Downs National Park). The information and policies considered relevant to this assessment have been summarised below:

3.4.2 **Policy 34: Cultural and Heritage Assets**

The Council recognises that heritage assets are an irreplaceable resource, and as such the Council will sustain and enhance its historic environment through positive management of development affecting heritage assets. Applications for such development will be required to:

- 1. Make reference to the significance of the asset, including drawing from research and documentation such as the West Sussex Historic Environment Record;*
- 2. Reflect the current best practice guidance produced by English Heritage and Conservation Area Character Statements;*
- 3. Reinforce the special character of the district's historic environment through appropriate siting, scale, form and design; including the use of traditional materials and techniques;*
- 4. Make a positive contribution to the character and distinctiveness of the area, and ensuring that development in conservation areas is consistent with the special character of those areas;*
- 5. Preserve, and ensure clear legibility of, locally distinctive vernacular building forms and their settings, features, fabric and materials;*
- 6. Secure the viable and sustainable future of heritage assets through continued preservation by uses that are consistent with the significance of the heritage asset;*
- 7. Retain and improves the setting of heritage assets, including views, public rights of way, trees and landscape features, including historic public realm features; and*
- 8. Ensure appropriate archaeological research, investigation, recording and reporting of both above and below-ground archaeology, and retention where required, with any assessment provided as appropriate.*

⁷ <https://www.horsham.gov.uk/planningpolicy/planning-policy/horsham-district-planning-framework>, accessed July 2022

4.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 Introduction and Archaeological Periods

4.1.1 The following section summarises the known information relating to designated and non-designated heritage assets in the Study Area derived from the sources set out in 1.5 and including additional heritage assets, where appropriate, identified from field survey. The identified heritage assets have been assigned an identifying number shown in **bold** in the text, and are tabulated in Appendix 1 with their locations shown plotted on Figures 2 – 4.

4.1.2 The timescale of the archaeological periods referred to in this report is shown below. The periods are given their usual titles. It should be noted that for most cultural heritage assessment purposes the boundaries between them are not sharply distinguished, even where definite dates based on historical events are used.

Prehistoric: Palaeolithic (c. 750,000 BC - c. 10,000 BC)

Prehistoric: Mesolithic (c. 10,000 BC - c.4,000 BC)

Prehistoric: Neolithic (c. 4,000 BC - c.2,500 BC)

Prehistoric: Bronze Age (c. 2,500 BC - c. 600 BC)

Prehistoric: Iron Age (c. 600 BC - AD 43)

Romano-British (AD 43 - c. AD 410)

Early Medieval (c. AD 410 - AD 1066)

Medieval (AD 1066 - AD 1540)

Post-medieval (AD 1540 to date)

4.2 Heritage Assets

4.2.1 Heritage assets comprise a site, building, place, area or landscape of heritage interest and thus include buildings, archaeological sites and landscape features such as ancient woodland and hedgerows. Designated heritage assets are designated by statute, while non-designated heritage assets can be locally listed by the local planning authority and/or listed on county historic environment record databases, although this is not a definitive record of potential heritage assets – further examples may exist in an unrecognised or unrecorded form and absence from the HER database does not reduce or negate the significance of any potential heritage asset.

Designated Heritage Assets (Figs. 2-3)

Scheduled Monuments

4.2.2 There is one scheduled monument within the Study Area, a MOATED SITE AND FISHPONDS 15M SOUTH OF CHESWORTH HOUSE (1, HE listing ref. 1021446), located approximately 165m south-west of the proposed pipeline in the Chesworth Farm area (Fig. 2). The listing text describes the monument as follows⁸:

The monument includes a moated site and three associated fishponds lying on the north bank of the River Arun south of Horsham. The moated site and fishponds comprise a rectangular group of features aligned north west - south east, with the fishponds lying on the south east side of the complex. The River Arun forms the south arm of the moat, and the moat island is artificially moated on the other three sides. Both the west and north arms of the moat have been landscaped and canalised, but

⁸ <https://historicengland.org.uk/listing/the-list/list-entry/1021446?section=official-list-entry>, accessed July 2022

both the scarp and counterscarp banks of the west arm of the moat and the south scarp of the north arm can be seen standing to about 1.5m high. The east end of the north arm is largely intact. The distance between the outer edges of the banks on the west arm is 19m, and the moat itself is 10m wide. The east arm of the moat is now part of one of the ponds, and there is a shallow depression 0.5m deep where the east end of the central island platform terminates 5m before the most westerly pond. The island platform in the centre of the moat measures about 85m north-west – south-east by 60m north-east – south-west, the ground surface is uneven, but there are no obvious archaeological features visible. The Inspector of Ancient Monuments in 1966 noted that foundations lie 0.25m below the surface. Landscaping at the east end of the site has created five ponds which are now merged into each other. Four of these lie parallel to each other aligned approximately north - south longitudinally and the fifth runs horizontally lengthways across the north side of the two most westerly ponds. The horizontally aligned pond is the remnant of the north arm of the moat at this east end, and one of the longitudinal ponds is the vestigial remains of the east arm of the moat. The fish ponds lie on either side of this east arm of the moat; two to the east and one to the west. The northern pond is about 47m long by 14m wide; the pond which formed the east arm of the moat is amalgamated into the westernmost pond and this expanse of water now measures approximately 37m north-south by 40m east-west. The two remaining ponds to the east measure about 8m east-west by 34m north-south and 11m by 16m. The moated site is that of a C13 moated house. The manor of Chesworth was held in 1281 by William, Lord Braose. Edward I is thought to have stayed at Chesworth in 1299 and Edward II in 1324. It was also held by the Mowbray and the Howard (later Fitzalan-Howard) families, including the Dukes of Norfolk and Earls of Arundel. The manor house which lay on the moated island was in existence by 1324, and possibly by 1299; a drawbridge was mentioned in 1427. It was abandoned in favour of the adjacent Chesworth House in the late C15. The three artificial arms of the moat, the fishponds and a small part of the north-west corner of the island have been modified in the C20 during the construction of ornamental gardens. All above ground structures and hard landscaping such as ornamental steps, bridges, pergolas and sheds are excluded from the scheduling, although the ground beneath is included.

Listed Buildings

4.2.3 There are a total of fifty-one listed buildings (2 - 52) situated within the Study Area (Figs. 2-3). The majority of these buildings are located around the historic core of Horsham to the north-west (Fig. 2) and others represent isolated farm buildings scattered around the Study Area. Their locations are plotted on Figure 2 and in more detail on Figure 3. They are summarised below in Table 4.1. The nearest listed building, the Grade II* listed Chesworth House (3) is at least 265m away from the proposed scheme. All others are either close to the edge of the Study Area boundary (5, 9, 17-20, 33, 50-52; Fig. 2) or around the conservation area to the north-west (Fig. 3).

Site	Ref	Eastings	Northings	Description	Period
2	DWS6294	517065	130257	PARISH CHURCH OF ST MARY - Grade I listed building	Medieval
3	DWS5145	517611	129477	CHESWORTH HOUSE - Grade II* listed building	Medieval
4	DWS5626	517202	130451	HORSHAM MUSEUM - Grade II* listed building	Medieval
5	DWS5620	518184	129867	116 & 118, BRIGHTON ROAD, HORSHAM - Grade II listed building	Medieval

Site	Ref	Eastings	Northings	Description	Period
6	DWS5682	517254	130475	BUILDING TO REAR OF NO 6 AND BUILDINGS TO REAR OF NO 10 - Grade II listed building	Medieval
7	DWS6066	517372	130476	19-25 EAST STREET - Grade II listed building	Medieval
8	DWS6276	517142	130359	19 & 20, THE CAUSEWAY, HORSHAM - Grade II listed building	Medieval
9	DWS6340	517691	130421	31 NEW STREET - Grade II listed building	Medieval
10	DWS6271	517144	130460	THE MANOR HOUSE - Grade II* listed building	Post-medieval
11	DWS5571	517205	130534	1, SOUTH STREET - Grade II listed building	Post-medieval
12	DWS5572	517195	130517	4, SOUTH STREET - Grade II listed building	Post-medieval
13	DWS5591	517116	130149	ARUNDALE - Grade II listed building	Post-medieval
14	DWS5602	517232	130473	MARKET SQUARE 1 - Grade II listed building	Post-medieval
15	DWS5603	517229	130494	TOWN HALL, MARKET SQUARE - Grade II listed building	Post-medieval
16	DWS5605	517253	130381	6, MORTH GARDENS - Grade II listed building	Post-medieval
17	DWS5612	517699	130333	1-5, BRIGHTON ROAD - Grade II listed building	Post-medieval
18	DWS5613	517737	130317	11, BRIGHTON ROAD - Grade II listed building	Post-medieval
19	DWS5614	517746	130313	13, BRIGHTON ROAD, HORSHAM - Grade II listed building	Post-medieval
20	DWS5618	517903	130139	SOUTHGROVE - Grade II listed building	Post-medieval
21	DWS5627	517185	130414	13, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
22	DWS5628	517159	130379	17, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
23	DWS5629	517145	130367	18, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
24	DWS5630	517053	130301	24 & 26, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
25	DWS5631	517148	130387	THE MINSTREL - Grade II listed building	Post-medieval
26	DWS5632	517135	130415	FORMER STABLES TO SOUTH OF MANOR HOUSE - Grade II listed building	Post-medieval
27	DWS5662	517195	130435	NUMBER 10, CAUSEWAY LODGE - Grade II listed building	Post-medieval
28	DWS5663	517173	130404	14, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval

Site	Ref	Eastings	Northings	Description	Period
29	DWS5666	517101	130312	CHURCHYARD AND VICARAGE WALL AND GATE PIERS - Grade II listed building	Post-medieval
30	DWS5676	517235	130307	12 & 18, DENNE ROAD - Grade II listed building	Post-medieval
31	DWS5710	517172	130528	34 SOUTH STREET - Grade II listed building	Post-medieval
32	DWS5793	516863	129746	NORTH LODGE - Grade II listed building	Post-medieval
33	DWS5857	520142	128694	RED COTTAGE AND THE OLD SMITHY - Grade II listed building	Post-medieval
34	DWS6255	517196	130525	2 & 3 SOUTH STREET - Grade II listed building	Post-medieval
35	DWS6264	517229	130470	12 & 13, MARKET SQUARE - Grade II listed building	Post-medieval
36	DWS6265	516864	130280	TOWN MILL - Grade II listed building	Post-medieval
37	DWS6275	517162	130390	16, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
38	DWS6277	517116	130362	28, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
39	DWS6290	517303	130520	35, CARFAX - Grade II listed building	Post-medieval
40	DWS6291	517219	130461	7 & 8, THE CAUSEWAY - Grade II listed building	Post-medieval
41	DWS6292	517188	130425	NUMBERS 11 AND 12 INCLUDING ATTACHED WALL TO NUMBER 11 AND SUMMERHOUSES IN GARDEN OF NUMBER 11 - Grade II listed building	Post-medieval
42	DWS6293	517168	130397	16, THE CAUSEWAY - Grade II listed building	Post-medieval
43	DWS6295	517076	130314	CHANTRY HOUSE - Grade II listed building	Post-medieval
44	DWS6296	517135	130396	16, THE CAUSEWAY - Grade II listed building	Post-medieval
45	DWS6297	517397	130450	3, DENNE ROAD - Grade II listed building	Post-medieval
46	DWS6308	517128	130145	ARUN HOUSE - Grade II listed building	Post-medieval
47	DWS6311	517241	130483	6 & 10, MARKET SQUARE - Grade II listed building	Post-medieval
48	DWS6312	517211	130535	Nos 5 & 5A, MIDDLE STREET - Grade II listed building	Post-medieval
49	DWS6313	517244	130388	5 MORTH GARDENS - Grade II listed building	Post-medieval
50	DWS6319	517730	130320	9 BRIGHTON ROAD - Grade II listed building	Post-medieval
51	DWS6544	520065	128612	CHULMLEIGH - Grade II listed building	Post-medieval
52	DWS6549	520277	128737	MASONS - Grade II listed building	Post-medieval

Table 4.1: Summary table of Listed Buildings within the Study Area

Conservation Areas

- 4.2.4 Within the Study Area there is one Conservation Area: Horsham Conservation Area, located approximately 265m north-west of the proposed pipeline at the western end (Fig. 2).
- 4.2.5 There are no examples of the following designated heritage assets within the Study Area:
- Historic Battlefields; and
 - Registered Historic Parks and Gardens.

Non-Designated Heritage Assets

Archaeological Notification Areas

- 4.2.6 There are three Archaeological Notification Areas within the Study Area (Fig. 4):
- **(53)** Horsham Town Medieval Core, Horsham (DWS8532);
 - **(54)** Chesworth House Medieval Moated Site and surrounding area, Horsham (DWS8533); and
 - **(55)** Denne Park - Historic park at Denne (DWS8543). House built 1870 in early 17th century style. Stables and coachman's cottage. Fine double avenue of lime trees planted in 17th century. Good 19th century cast iron screen railing. Extents of parkscape shown by the OS in 1813 and 1872-4. Within the grounds is the location of the ice house, as well as the location of a Canadian camp and firing range.
- 4.2.7 A section of the proposed pipeline comprising approximately 1km runs through the Chesworth House Medieval Moated Site and surrounding area ANA **(54)** (Fig. 4). This ANA is summarised as follows:

The area includes a medieval moated site (Scheduled Monument 1021446) and three associated fishponds lying on the north bank of the River Arun south of Horsham. The moated site and fishponds comprise a rectangular group of features aligned north west - south east, with the fishponds lying on the south east side of the complex. Archaeological investigation has recovered garden features to the north of the moated site. Chesworth Historic Farmstead dating to the medieval period is also within the area as are World War II and Cold War military features.

Ancient Woodland (Fig. 6)

- 4.2.8 Several areas of ancient semi-natural woodland are present within the Study Area. These areas are designated by Natural England and refer to woodland known to have been in existence since 1600, often containing archaeological features relating to historic woodland management and pre-woodland activity. The nearest areas are shown on Fig. 6. The pipe route is proposed to cross one small section of ancient and semi-natural woodland, Gaggie Wood, at the eastern end. The construction method in this area is proposed as trenchless (pipe bridge) to enable the pipe to be installed across the stream valley and without impacting tree roots.
- 4.2.9 There are no examples of the following locally designated heritage assets within the Study Area:
- Locally Listed Buildings.

4.3 Historic Landscape Character (HLC) (Fig. 7)

4.3.1 Due to the size of the proposed pipeline route, a variety of historic landscape character types are defined within the Study Area. The core historic landscape character areas are shown on Fig. 7. According to the West Sussex Historic Landscape Characterisation database, the Site falls over the following characterisations:

- HWS5386 planned estate (Post-medieval to Modern);
- HWS5268 Modern field amalgamation (Post-medieval to Modern);
- HWS5269 Planned private enclosure (Post-medieval);
- HWS5306 Irregular piecemeal enclosure (Medieval);
- HWS4953 Cohesive assart (Medieval);
- HWS4957 Modern field amalgamation (Post-medieval to Modern);
- HWS4950 Irregular piecemeal enclosure (unknown);
- HWS3603 Cohesive assart (Medieval);
- HWS3631 Cohesive assart (Medieval); and
- HWS3629 Water treatment.

4.4 Previous Archaeological Investigations

4.4.1 The Study Area has not been the subject of much archaeological investigation in the past and this is probably because of its rural character and a general absence of development requiring archaeological intervention. Within the Study Area, the WSHER records nineteen archaeological events (**A – S**; Table 4.2 and Plate 4.1) all of which are at the western end of the scheme, mostly around Horsham town centre. Despite Horsham’s status as one of the largest towns in late medieval western Sussex, the survival of many medieval plots and buildings, and the large scale of redevelopment of the town centre at the end of the 20th century, the town has seen only limited archaeological study (Harris 2004, 9). The nearest archaeological investigations were at Chesworth Farm at least 250m from the proposed pipeline. All events are summarised as follows:

Site	Ref	Eastings	Northings	Description
A	EWS1175	517613	129513	Chesworth House, Horsham - Archaeological Investigations
B	EWS1615	517608	129475	Chesworth House, Horsham - Historic Building Survey and Heritage Statement
C	EWS1176	517277	130531	Kings Head, Horsham - Archaeological Investigations
D	EWS1240	517351	130492	11/15 East Street, Horsham - Evaluation
E	EWS1426	517168	130397	No 15 The Causeway, Horsham
F	EWS1607	517076	130314	The Chantry House, Causeway, Horsham - Historic Building Recording
G	EWS1608	517195	130435	Causeway Lodge, 10 The Causeway, Horsham - Historic Building Survey
H	EWS1055	517241	130473	10/10A Market Square, Horsham
I	EWS394	517200	130500	Part excav, Kirby J, 1975-6
J	EWS472	517280	130470	Part Excav, SEAS, Apr 95
K	EWS707	517065	130257	St. Mary’s Church, Horsham - Survey and Recording
L	EWS907	517110	130292	Vicarage Garden, The Causeway, Horsham- An Archaeological Evaluation (Stage 1)
M	EWS979	517110	130292	Archaeological Investigations at The Vicarage Garden, Causeway, Horsham, West Sussex Post-

Site	Ref	Eastings	Northings	Description
				Excavations Assessment and Project Design for Publication
N	EWS1915	517229	130493	The Old Town Hall, Horsham - Waching Brief and Targeted Historic Building Recording
O	EWS877	517418	130292	Summary Report on An Archaeological Evaluation at the Former TA Centre, Denne Road, Horsham, West Sussex
P	EWS1926	517596	130330	36-48 Queen Street, Horsham - Evaluation
Q	EWS1164	517481	130379	Land to the South of East Street, Horsham
R	EWS1391	517965	130260	Land at the Mid Sussex Professional Centre, Horsham - Desk Based Assessment
S	EWS1018	517458	130418	52-56 East Street, Horsham

Table 4.2: Summary of previous archaeological events carries out within the Study Area

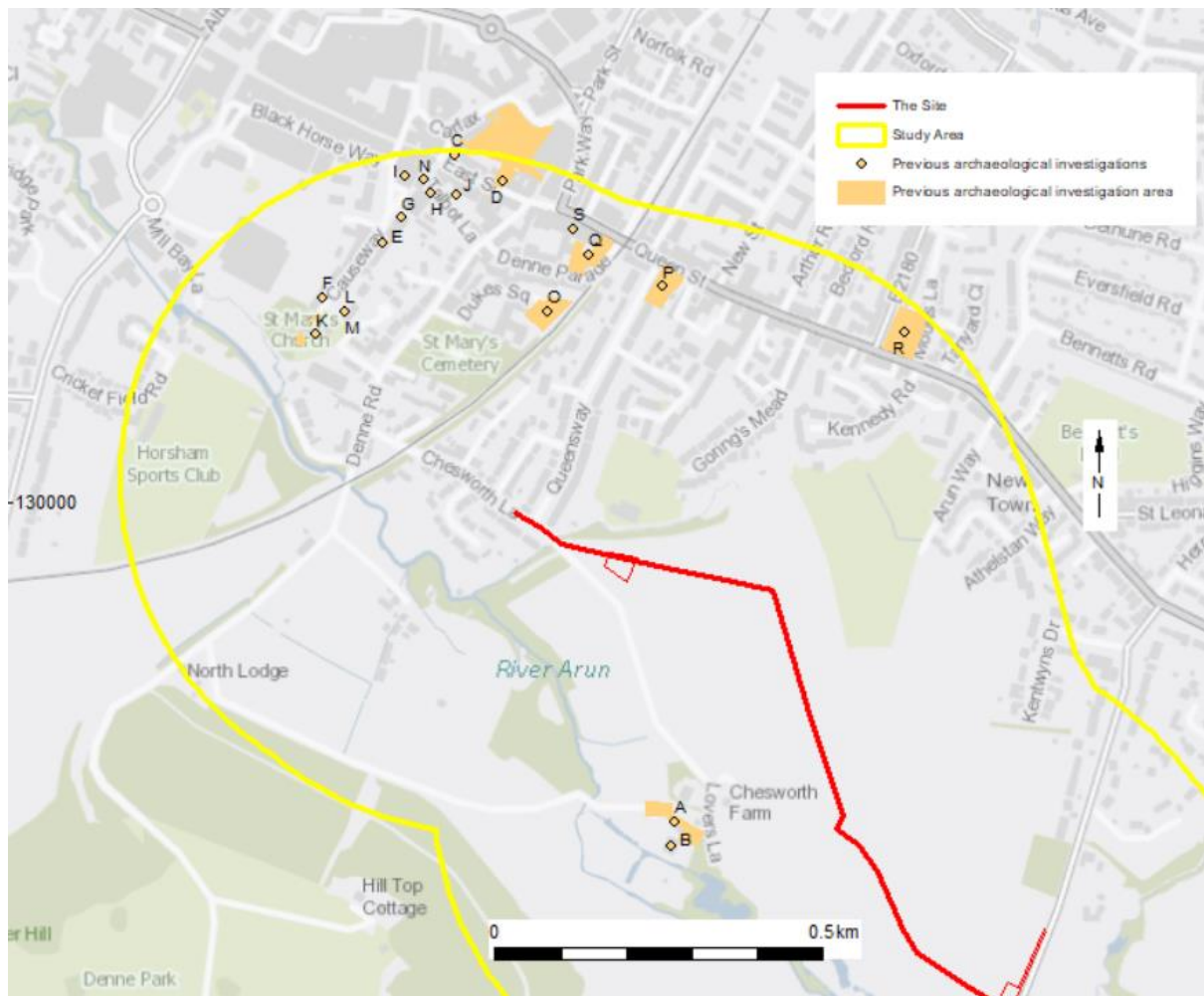


Plate 4.1: Location of previous archaeological investigations in the Study Area

4.5 Prehistoric

Palaeolithic to Neolithic

4.5.1 Prehistoric activity in the High Weald does not, on the basis of available evidence, appear to have been extensive, although the exploitation of the Wealden resources by prehistoric communities has been an accepted fact for many years (Tebbutt 1974). The region was covered in dense forest throughout the prehistoric period, and much

of the known settlement pattern concentrates around the rim of the Weald, exploiting the better soils of the Chalk and Greensand. A number of isolated find spots are known to date from the Palaeolithic period within Sussex, but most of the relatively small number of artefacts found have been recovered from geologically disturbed contexts. The majority of the finds in the region have been associated with the lines of raised beaches in the Upper Coastal Plain – as at Boxgrove and Slindon (Woodcock 1978). Other finds have been retrieved from the chalk downland and the river gravel terraces, although these deposits are 'fragmentary and thin' (Woodcock 1999). Palaeolithic evidence mostly derives from deep deposits, where they have been either redeposited or buried in the course of subsequent geological and climatic events. These deposits include river gravels and alluvium along ancient river terraces; colluvial and solifluction deposits in valleys, valley slopes and hollows; aeolian and loessic deposits, such as brickearth; and residual finds spots, mostly on higher ground and associated with clay-with-flint drift, which were either re-exposed through erosion or never covered by Pleistocene deposits. There are no Palaeolithic heritage assets recorded on the HER within the Study Area.

- 4.5.2 Many Mesolithic sites in Sussex are represented by concentrations of flintwork rather than by settlement sites. These flint scatters are found in all parts of the county, forming clusters which may represent activity zones. The clusters predominate in the river valleys, with other sizeable concentrations on the High Weald and along the Coastal Plain. Sandstone outcrops further to the east in the Eridge and High Rocks areas (and possibly at Nymans) were used as transient summer shelters by Mesolithic groups operating from home camps based on the Lower Greensand. Such evidence is likely to be restricted to flint scatters, evidence of tool manufacture and maintenance, and hearths – any structures are likely to have been animal hide tents or of similarly insubstantial organic construction. One Mesolithic findspot comprising maceheads (56) are recorded on the HER within the Study Area.
- 4.5.3 The Neolithic was a period of increasing temperatures and more settled human occupation, allowing the development of more permanent farming systems alongside the traditional exploitation of natural resources. Although residual finds and isolated concentrations of worked flint are common in Sussex, evidence for settlement sites of this period is limited, particularly in coastal and floodplain areas where sites are likely to have been truncated by fluctuating sea-levels or become deeply buried beneath later deposits. Flintwork concentrations, causewayed enclosures and barrows indicate that during the Neolithic period settlement and farming was concentrated along the raised beaches and on Chalk Downland. The areas north of the Downs are represented by isolated finds of stone axes and some flint tools. The current evidence would tend to suggest that only limited attempts were made to exploit this area for agricultural purposes during the Neolithic, as the poor drainage and extensive woodland cover would have proved a great obstacle. One Neolithic findspot, tools found at Needles playing field (57), is recorded on the HER within the Study Area.

Bronze Age to Iron Age

- 4.5.4 An increase in funerary monuments is seen in the Bronze Age period. In Sussex, the vast majority of these are located on the South Downs, overlooking the Weald, river valleys and coastal environments. Early Bronze Age settlement sites are still thought to be poorly represented in Sussex as a whole. By the Middle Bronze Age, however, increased population and perhaps drier soils had encouraged settlement to spread from the Downs onto the Coastal Plain and it continued to increase in the Late Bronze Age. The area north of the Downs is very much a blank area throughout the Bronze Age based on current evidence, with a few isolated find spots of bronze axes perhaps indicating some utilisation of woodland resources, probably associated with woodland

camp. The presence of several barrows and barrow cemeteries in the Weald, including Ashdown Forest, plus environmental evidence for agricultural activity, indicates that some level of exploitation of the region was taking place during the Bronze Age (Gardiner 1990). The discovery of a Late Bronze Age burial at Wakehurst Place (Stevens 1998) and a Late Bronze Age enclosed settlement with at least one roundhouse at Gatwick (Yates 2007, 46) reinforce this. It has been suggested that the Weald may have been more extensively settled than generally thought at this period, with short-lived farmsteads established in clearings and moving on once the soil fertility was quickly exhausted (Gardiner 1990, 43). No Bronze Age activity is recorded on the HER within the Study Area.

- 4.5.5 Rapid socio-economic growth occurred during the Iron Age, alongside a rise in population and the increasing exploitation of what had previously been more marginal environments. Consequently, this period is characterised by marked changes throughout the archaeological record of Sussex, from ceramic styles to settlement and funerary practices. A greater emphasis on trade and exchange can also be seen during the Late Iron Age, demonstrated by the appearance of local coin production and the growing presence of imported Roman goods, culminating in the rapid Romanisation of southern England at this time (Hamilton and Manley 1999). Few sites of this period are recorded from north of the Downs, apart from a scatter of hillforts in the High Weald, perhaps associated with increased exploitation of the Wealden iron ores in the Later Iron Age. There are 25 known prehistoric hillfort enclosures in Sussex (e.g Highdown Hill, Chanctonbury Ring, Mount Caburn, Ditchling Beacon and Cissbury Ring), many of which have been used for their intended purpose as Sussex is the gateway into Britain from the continent⁹. In many cases such as at Highdown Hill and Mount Caburn there was previous Bronze Age settlement without any form of defence.
- 4.5.6 No evidence of Iron Age iron working activity has yet been found within the Study Area. Most of the settlement evidence from this period has come from the Downs and, increasingly, the Coastal Plain. No Iron Age activity is recorded on the HER within the Study Area, although the first hard evidence of farming in Horsham District was found at Chesworth: an Iron Age loom weight was found, along with other similar material, suggesting a farmstead in this location, which benefitted from being next to the river and may have been chosen to exploit a woodland pasture amongst the surrounding trees¹⁰.

4.6 Romano-British

- 4.6.1 As one of the nearest parts of Britain to the Continent, Sussex experienced contact with Rome from an early date, forming part of the client kingdom of the Regni. Following the Roman invasion of AD43, the region became heavily settled, particularly along the Downs and the fertile Coastal Plain, where settlements were mostly associated with farming and are characterised by evidence of continuity with the previous Iron Age (Rudling 1999, 24). Settlements also occur along principal routes such as Stane Street, which linked the major urban centre of Chichester with London. However, evidence for Roman activity in the Weald is generally sparse and is confined mainly to roads and ironworking sites. Few settlement sites have been found in the High Weald (Rudling 1999) although some sites such as villas at Chiddingfold in Surrey and Wiggonholt in West Sussex are known from the less bleak periphery (Gardiner 1990).

⁹ <http://www.sussexarch.org.uk/saaf/hillfort.html>, accessed July 2022

¹⁰ <https://horshammuseum.org/collections/blog/posts/farming-and-agriculture-in-horsham-part-1-iron-age-to-middle-ages>, accessed July 2022

- 4.6.2 The Weald remained heavily wooded throughout the Romano-British period. The iron industry took advantage of the favourable Wealden landscape, although the evidence is sparse and often destroyed or obscured by later working. Ironworking sites were usually located close to roads or tracks to allow the movement of heavy raw materials and products.
- 4.6.3 Romano-British activity in the Study Area is confined to the western end in the Horsham area and comprises a burial to the west of the pipeline (58) and an isolated coin (59) findspot.

4.7 Early Medieval

- 4.7.1 The demise of Roman authority in Britain saw a return to older ways of life, with a gradual decline in both the economy and administration of the colony, and an influx of settlers from Germanic lands across the North Sea. This migration of Germanic peoples introduced a new language and material culture into southern and eastern Britain. However, knowledge of the period following the departure of the Romans is fragmentary, in part due to issues with dating evidence, as a result of the lack of official coinage and the decline of the big pottery industries. The early medieval period is poorly represented in the archaeological record, with few identified settlement sites and much of the archaeological evidence for this period is therefore derived from cemeteries, and the grave goods they contain (White 1999). Even in the 7th century, there were still no recognisable towns, and it was not until the mid-11th century that a hierarchy of settlements had emerged, reflecting the economic and administrative complexity of the ascendant English society (Gardiner 1990).
- 4.7.2 During the early medieval period, the Weald was largely covered by the great forest of *Andredeswald*, which was known to the Romans as *Sylva Anderida*. The heavily forested nature of the region limited settlement at this period, and the iron-working industry seems to have shrunk in scale in comparison with the Roman period. The Weald was an important area for seasonal, swine pastures established as extra-territorial parcels of land associated with parent manors situated on better soils elsewhere in the region. This initial settlement was probably fairly nomadic in nature but incorporating some small-scale clearance. The clearances gradually coalesced into a series of enclosed estates from which the later parochial and manorial systems evolved. The predominant agricultural regimes at this time comprised pastoralism, supplemented by extensive woodland management. The predominantly north - south alignment of many of the roads within the Weald fossilise the line of many of the early droveways (Brandon 2003, 47), which in turn have acted as templates for distinctive linear co-axial field systems, forming ladder-like patterns in several areas of the Weald.
- 4.7.3 The name Horsham is first recorded in 947 and 963, long before any known settlement, in a description of 11 detached Wealden pastures in the area belonging to the downland estate of Washington (Gardiner 1995, 40). In the 8th century, the Saxon settlement of Steyning, with its port and important Saxon church, was probably the dominant economic centre¹¹. Nearby there was a large Saxon estate based around Washington. Today, there are place names that have Saxon origins all around Horsham, such as Roughey (later spelt Roffey), where “rough” means deer and “hey” means fence. Chesworth was “Ceoldred’s farm”, and this clearly shows that Saxons were working the land there by the 9th century if not long before. This practice was confirmed in land charters, including the first one that mentioned a place where horses

¹¹ <https://horshammuseum.org/collections/blog/posts/farming-and-agriculture-in-horsham-part-1-iron-age-to-middle-ages>, accessed July 2022

breed, Horsham. The settlement arose in 947 when the people of Washington, 15 miles to the south, were given additional land for pasture.

4.7.4 The West Sussex HER records no early medieval activity within the Study Area.

4.8 Medieval

4.8.1 The Study Area lies over the historic parishes of Horsham and Nuthurst. Settlements named in Domesday are more numerous in the south and west of Sussex, lying in the area of fertile land between the coastline and the ridge of the downs, than in the Wealden area to the north (King 1962, 419). Mannings Heath is not named in Domesday because it has later origins dating to the early post-medieval period. During the medieval period much of the Nuthurst parish lay within St. Leonard's Forest, which at that time extended much further to the south-west. In the 15th century, Sedgewick Park formed one bailiwick of the forest. The park had existed by 1248, and in 1326 comprised 400 acres, of which 300 acres was held of Fécamp abbey (Seine Maritime, France)¹².

4.8.2 The agricultural regime initiated in the early medieval period in the Weald, mainly scattered pastoral activity, continued on into the medieval period. The typical heavy clayey soils of the area rendered much of the land unsuitable for arable farming at this time, as the primitive ploughing technology was unable to cope with these heavier soils. Consequently, an open field agricultural system never developed to any great extent, and those few examples that did exist were enclosed at an early date and have left few traces in the documentary record (Chapman & Seeliger 2001). Many of the scattered landholdings in the region had developed into small settlement foci, many of which still survive as farms in the modern landscape. The rural landscape comprised a mainly pastoral landscape of irregular assarts with small patches of common demesne (land held in hand by the manorial lord) arable around scattered settlement foci with extensive common grazing (Horsham Common). Horsham Common was still surviving in 1800 but none of the enclosure maps extend as far south as the Site, suggesting that the area of the Site was not part of this 'common' during this period. The 14th century saw a rising population so farmers were moving into the marginal lands, probably including the poorer soils of the Weald. Following the devastation impact of the Black Death on the population, Horsham eventually recovered and the Archbishop of Canterbury gave permission for a new Monday market in the Bishopric, as well as two 3-day fairs¹³.

4.8.3 The Site is located in a geological area that would have been favourable for iron production, which was a prolific industry within the Weald during the Roman occupation and the Tudor and early Stuart periods. Hodgkinson (2008) notes two factors which make the Weald an appealing location for iron-working processes; its geology of clay and sandstone, which provide many of the structural needs for the industry (e.g. iron stone/ore), and its woodland, which was necessary for the production of charcoal, the fuel that kept the furnaces and forges alight. The great forests of Worth, St Leonard's and Ashdown were important smelting districts, systematically managed by multi-stemmed coppicing to conserve timber for charcoal production¹⁴. The noise of the ironworks in this otherwise remote region gave rise to the local legend of the St Leonard's Forest Dragon. The Weald's iron deposits lie relatively close to the ground surface, which meant that they were easily extracted by open cast mining. Clay

¹² <http://www.british-history.ac.uk/vch/sussex/vol6/pt3/pp96-101>, accessed July 2022

¹³ <https://horshammuseum.org/collections/blog/posts/farming-and-agriculture-in-horsham-part-1-iron-age-to-middle-ages>, accessed July 2022

¹⁴ <http://www.hammerpond.org.uk/History/history.htm>, accessed July 2022

ironstone, or siderite mudstone, provided ore for the Wealden iron industry, and there is a significant concentration of minepits in the Horsham area (Harris 2004, 11). Most extraction and smelting took place in the High Weald. 'Hammer' ponds are not natural lakes but dammed streams and rivers, crucial to the Tudor and Stuart iron industry that was established within the High Weald of Kent and Sussex, and adjacent parts of Surrey and Hampshire¹⁵.

- 4.8.4 The name 'Hammerpond Farm' at the eastern end of the Study Area (Fig. 8) hints at the prominence of the area to the Wealden Iron Industry, and also relates to the nearby ponds, such as Roosthole Pond, Hawkins Pond and perhaps most significantly, Hammer Pond. One ironworking site is recorded on the HER within the Study Area at Birchen Bridge (67, Fig. 4). In the east of the Study Area, Hammerpond Road links the two major 16th century iron workings in the forest, Upper Forge at Hammerpond and Lower Forge and furnace at Hawkins Pond. These ponds provided the power needed for the bellows and the hammers of the iron industry and were formed by damming Newstead and Frenchbridge gills which ran south out of the forest.
- 4.8.5 The 'worth' in Chesworth Farm derives from an Old English term for an enclosed settlement; a settler called Ceor probably owned it as a farm. The manor of Chesworth belonged by 1281 to the Braose family and later was held by the Mowbray and the Howard (later Fitzalan-Howard) families, including the Dukes of Norfolk and Earls of Arundel. The early medieval manor house which existed by 1324 occupied the moated site south of the present Chesworth House and probably had a courtyard plan¹⁶. The HER text for Chesworth House, describes the medieval history associated with the manor, which is relevant to this assessment due to its close proximity to the scheme, therefore a summary is included here:

The late C15 north-east timber-framed range was built north of the moat possibly by the second Duke of Norfolk. The adjoining south-east brick range with a principal room on the first floor may be the range called "The Earl of Surrey's tower". As this title was used by the heir to the Duke of Norfolk it is likely to have been built by the third Duke when heir to the title after 1514. It has similarities with Kenninghall in Norfolk (Grade II) which he built after 1524. After the death of Thomas Howard, the second Duke, in 1524, the manor of Chesworth was held in dower by his widow Agnes. His son, Thomas the third Duke, had his niece, Catherine Howard, moved to Chesworth under the care of the Dowager Duchess. Chesworth was the scene of her relationship with a kinsman, Francis Dereham and events with her music teacher, Henry Manox, before she was sent to Henry VIII's court. Events at Chesworth later formed a substantial part of the charges against her at her trial which led to her execution on 13th February 1541. In 1549 the house included a hall, great chamber, dining chamber, a chapel and at least 20 other rooms and service buildings.*

- 4.8.6 In addition to the eight medieval listed buildings (2 – 9 Fig. 4), twelve medieval, non-designated heritage assets (60 – 71) are recorded on the West Sussex HER within the Study Area (Appendix 1 and Fig. 4). These sites are summarised as follows:
- (60) Chesworth House Moated Site (also scheduled (1) - The monument includes a moated site and three associated fishponds lying on the north bank of the River Arun south of Horsham. The moated site and fishponds comprise a rectangular group of features aligned north-west – south-east, with the fishponds lying on the south-east side of the complex;
 - (61) Horsham medieval town;
 - (62) Site of medieval glassworks – Horsham;

¹⁵ <http://www.hammerpond.org.uk/>, accessed July 2022

¹⁶ <https://historicengland.org.uk/listing/the-list/list-entry/1027063?section=official-list-entry>, accessed July 2022

- (63) Chesworth Farm historic medieval farmstead, Horsham;
- (64) 10 and 10A Market Square, Horsham - Historic Building Recording - No. 10 and 10A Market Square, Horsham, is one of ten medieval houses with one or two cross-wings that have been identified in the town, surviving in whole or in part;
- (65) 13-15 East Street - interpretative survey - the earliest surviving part of the building was formerly the three-bay crosswing of a medieval house;
- (66) 19, 21, 23 East Street - interpretative survey - a 15th century building which has undergone alterations through to the 20th century;
- (67) Ironworking site - At Birchen Bridge is a possible ironworking site. A bay, with modern weir at its SE end, has been heightened and widened with chalk and flint rubble to carry the main A281 road. At several places at the base of the bay on the south-west side are quantities of forge cinder, and downstream the old watercourse has been dammed up with dumped soil and building rubbish, containing large amounts of forge cinder, possibly from the construction or reconstruction of the weir on the bay. A waterfilled pond is retained and there are two supply dumps on separate streams above, one waterfilled at TQ20452956;
- (68) Amies Mill - a watermill which dates back to at least 1410 when listed as 'Assheles Mille'. A survey of 1650 refers to it as Amies Mill;
- (69) The Former Territorial Army Centre, Denne Road- Archaeological Field Evaluation - consisting of observations and the excavation of four trial trenches revealed a gully of late medieval / post-medieval date and other modern features;
- (70) The Vicarage Garden, Causeway, Horsham - Evaluation - an open area of the Vicarage Garden was excavated and recorded where features including medieval and early post-medieval ditches, pits and possible quarry pits were encountered; and
- (71) Horsham Museum, 9 The Causeway - interpretative survey - an historical interpretive survey was carried out at Number 9 The Causeway, which now houses Horsham Museum.

4.9 Post-medieval and Modern

4.9.1 The agricultural landscape around Horsham is in part a fossilised late medieval landscape, comprising small irregular fields carved from the surrounding woodland, much of which has been left as shaws, often managed for woodland products through coppicing – woodland remained an important resource until modern times (Hudson 1986, 130). Areas of open waste such as Horsham Common were used as common pasture for manorial tenants and for other uses such as military musters, fairs and executions, until enclosed in 1812-13. Some modification of the field pattern, including the grubbing-out of shaws and hedgerows, took place during the 19th century when advances in technology allowed arable farming to be carried out on a much greater scale than before, but particularly in the post-war period with the advent of large agricultural plant. This resulted in the building of isolated barns in fields away from the farm, reflecting the difficulty of carting loads any great distance on clay – although technology could increase crop yields on the clay soils, it could not transport the produce any easier (Dales 1982). Further landscape developments in the wider area included the expansion of Horsham in the 19th and 20th centuries and the construction of the two railway lines in 1848 and 1867.

4.9.2 The post-medieval period saw Horsham retaining its function as a market town. The layout remained fundamentally medieval in nature, with piecemeal suburban development on all sides. By 1524, the town had the highest average wealth in Sussex,

and was referred to in 1730 as the 'Metropolis of the Weald' (Hudson 1986, 132). In 1648 the town played a small part in national events when it was the scene of a Royalist uprising, swiftly crushed by the New Model Army. The later post-medieval period saw a continuing rise in prosperity, partly due to the presence of a large barracks and the holding of assizes in the town, culminating in its status as joint county town of West Sussex (with Chichester) in 1889. By 1939, Horsham had acquired its present function, a dormitory settlement serving London.

4.9.3 The 'Mannings' placename is thought to have derived from lands called Mannings in 1650 (Daniel-Tyssen 1871, 290) and the latter part 'heath' relates to the lowland heath habitat on the periphery of St. Leonards Forest in which the Site was located at that time. The north-eastern corner of Nuthurst parish remained unenclosed heathland in 1724 but had been largely reclaimed before 1795¹⁷. Mannings Heath, however, continued unenclosed until the later 19th century, although it diminished in size by encroachments in the 18th century and later. By 1841 the heath had shrunk to 26 acres of waste land along the two roads which form the central crossroads of the modern settlement of Mannings Heath.

4.9.4 The HER text for Chesworth House, describes the post-medieval history associated with the manor, which is relevant to this assessment due to its close proximity to the scheme, therefore a summary is included here:

In 1572, the fourth Duke of Norfolk was executed for plotting with Mary Queen of Scots, the manor reverted to the Crown and was occupied by various tenants including the Bishop of Chichester (1577-82) and the Caryll family (c.1586-1660). In 1660-61 the manor was settled on Queen Henrietta Maria and by 1674 on Queen Catherine of Braganza, who still held it in 1699. From that date until the early C20 Chesworth House was a farmhouse. The present west range built of stone were added in the C17 and early C18. According to an inventory of 1780 there were two principal rooms and a kitchen on the ground floor and six first floor rooms, with a passage. There were two hearths on the ground floor in the two parlours, with a large cooking hearth in the kitchen, and two on the first floor. The early C16 brick range was used as a house in 1836 and as a washhouse, storehouse and dairy in 1868. The C17 west range was extended to the north and south during the C19. The 1876 and 1911 Ordnance Survey maps show Chesworth House at almost its current extent.

In 1928 the house was bought by a Captain Cook who enlarged it on the north side, restored it to his own designs and inserted old fittings from other houses. He also laid out extensive gardens and built a new entrance drive from the west, away from farm buildings on the north side (some of which burnt down in 1989). The 1932 Ordnance Survey map shows the addition of an extension at the north-east end and a porch to the north west which complete the present footprint of the building. Some repairs were carried out to the building in the later C20.

4.9.5 Several records on the HER demonstrate how Horsham prepared itself for a German invasion during the Second World War, with some defence structures still surviving across the landscape today (e.g. barracks, pill boxes, anti-tank blocks and trenches).

4.9.6 In addition to the forty-three post-medieval listed buildings (**10 – 52**) (see section 4.2.3 and Figs. 2-3), forty (**72 – 111**) further non-designated heritage assets of post-medieval and modern date are also recorded within the Study Area (Appendix 1 and Fig. 1). A summary of the post-medieval/modern records is as follows:

- (**72**) Site of Foxhole Barn historic 19th century outfarm, Nuthurst;
- (**73**) Kerves Barn (Kerveslane Farm) historic 19th century outfarm, Nuthurst;
- (**74**) Northland Farm historic 19th century farmstead, Nuthurst;

¹⁷ <http://www.british-history.ac.uk/vch/sussex/vol6/pt3/pp96-101>, accessed July 2022

- (75) 19th century historic outfarm, Southwater;
- (76) Horsham Parish Workhouse, Horsham - Horsham's parish workhouse was established in 1727 near the parish church, on the south side of Normandy. In 1842, the site was taken over to become St. Mary's almshouses;
- (77) Historic 19th century outfarm south-west of Chesworth Farm, Southwater;
- (78) Rickfield Farm historic 19th century farmstead, Nuthurst;
- (79) Site of Sheep Hovel historic 19th century outfarm, Nuthurst;
- (80) No. 72 Brighton Road, Horsham - a suburban villa dating from c1840 and altered in the late-20th century (delisted);
- (81) Site of Whitesbridge Farm historic 19th century farmstead, Nuthurst;
- (82) Whytings Farm (Whitings Farm) historic 19th century farmstead, Nuthurst;
- (83) Normandy Well - supposed to have been used by the Norman Brotherhood, who lived in the first house next to the churchyard;
- (84) Post box - the 'window' letter box dating from 1830 consists of a wooden hinged panel in the entrance to Pump Alley. It is labelled 'Ye Old Horsham Post Box';
- (85) Watermill - Birchen Bridge - Birchenbridge Mill is shown by the OS in 1874;
- (86) Brickworks – Horsham;
- (87) Manor House, Causeway - Excavation produced five sherds of pottery: one late 13th - early 14th century sherd; one late 17th - early 18th century sherd; three rim sherds of c. 1900 dinner plate. Description of the house, built on the site of earlier tenements, which dates from 1704;
- (88) Post-medieval and modern features, 52-56 East Street, Horsham – evaluation;
- (89) 1-4 Peel House and Bailey House, Bartelot Road - Former police station buildings. Peel House is two-storey with four gables fronting the road, and Bailey House built to similar designs, however of a smaller street front with two gables;
- (90) Christian Life Church, East Street - previously the Pentecostal church and originally the Primitive Methodist Church;
- (91) 51 and 53 East Street - 51 East Street is a 2 and a half storey Victorian brick building and forms a group with 53 East Street;
- (92) 58, 60 and 62 East Street - Double fronted two storey buildings providing a group value and form an attractive frontage to the junction with Park Way;
- (93) 71 East Street and 1 Park Terrace West and Arches below - an unusual building with coarse rough stone façade, topped with heavy cement rendered cornice;
- (94) 35 Queen Street - Two storey detached shop building;
- (95) Queens Head Public House, 37 Queen Street;
- (96) Amiesmill Farm historic 19th century farmstead, Nuthurst;
- (97) World War II Pillbox, Horsham;
- (98) Memorial Garden, The Causeway - A Garden of Remembrance dedicated to the First World War, in particular Charles S Laughton;
- (99) Highridge, Kerves Lane - Designed by local architect Claude Kay as his own home;
- (100) Royal Observer Corps Monitoring Post (Cold War) – Horsham;
- (101) Cold War Royal Observer Corps 2 Group Headquarters, Horsham;
- (102) Horsham barracks;
- (103) Guard house;
- (104) Horsham anti-tank blocks;
- (105) Horsham - pill box;
- (106) Anti-tank blocks – Horsham;
- (107) Horsham - pill box;

- **(108)** Horsham pill box;
- **(109)** Trenches;
- **(110)** Horsham anti-tank blocks; and
- **(111)** Archaeological Intervention - Talbot Lane - Two trenches were excavated around NGR TQ 1728 3047, the only features found were modern (e.g. a manhole cover and electricity cable).

4.9.7 An historic outfarm (not recorded on the HER), Buckleigh Farm/barn, was observed on the tithing survey in 1841/44 with a lane (Buckleigh Lane) leading to it (Fig. 4). The barn building is recorded on the Horsham (Part 4) tithing survey as a House Homestead occupied by Moses Mason (Fig. 10). The buildings are shown on the 1875-6 OS map (Plate 5.4, Section 5), but have been removed by 1897 (Plate 5.5, Section 5). The lane, now a public footpath (only partially accessible during the walkover survey due to overgrown vegetation and fallen trees), appears to have been a fairly significant historic routeway, with a very wide hollow-way still visible (Plate 7.20 in Section 7 below).

4.10 Undated

4.10.1 In addition, a negative (no archaeology identified) archaeological evaluation at 11/15 East Street (**112**) (Fig. 1) is also recorded within the Study Area.

4.10.2 A large sub-rectangular anomaly was seen on LiDAR imagery as part of this assessment in the Great Horsham Hill area to the north-east of Chesworth Farm (within the grounds) (see 6.6 below). It is likely that this has a geological origin, caused by the movement of sandstone and clay (cambering). However, some archaeological origin cannot be ruled out given the regularity of the feature and its prominent position within the river valley, and it has been identified on Figs 4, 15 and 16 as a possible earthwork.

5.0 CARTOGRAPHIC EVIDENCE

- 5.1 A full list of the cartographic sources used during this assessment can be seen at the end of this report. The figures referred to within the text (Figs. 8 - 14) can also be seen at the back of this report. It should be noted that the Site is approximately located over the earlier maps, due to slight scaling differences and where there is an absence of established roads, buildings and field boundaries with which to accurately locate the Site. Due to the size of the Study Area, a broad discussion of the area is provided here, with only significant changes to the landscape mentioned in more detail. Only maps showing significant areas of change are reproduced within this report.
- 5.2 John Speed's 1610 Map of Sussex (Plate 5.1 below) shows that St. Leonard's Forest was a key place in the early 17th century, but there is no record of Mannings Heath at this time. The nearest towns of Horsham and Nuthurst are recorded. By the end of the 17th century, Robert Morden's view of Sussex in 1695 is largely unchanged (Plate 5.2 below).



Plate 5.1: Extract from John Speed's 1610 Map of Sussex showing the broader area around the Site



Plate 5.2: Extract from Robert Morden's 1695 Map of Sussex showing the broader area around the Site

- 5.3 The earliest county map of sufficient detail is the county map drawn by Richard Budgen in 1724 (Plate 5.3 below), which shows the broader context of the Study Area within the wider county. It depicts the area in a stylised fashion with very little detail, although it does label key place-names within the area at the time, including 'Mannings heath', 'St. Leonard's Forest', 'St. Leonard's Fair' and nearby 'Sedgewick Park' and 'Den Park'. The majority of the wider area was part of the heathland/forest at this time.



Plate 5.3: Extract from Richard Budgen's 1724 Map of Sussex showing the broader area around the Site

- 5.4 The 1795 Gardner and Gream Map of Sussex (Fig. 8) shows the area in a little more detail illustrating key routes, tracks and ponds at this time. Key farms, such as Chesworths, Amies, Rickfold (Rickfield), Whitesbridge, Goldings and Hammerpond are labelled at this time.
- 5.5 The First Series OS map which dates to 1813 (Fig. 9) continues to label key farms and also shows Amy's (Amies) Mill and Birchen Bridge Mill.
- 5.6 The 1841-1844 tithing survey shows the area of the Site in greater detail (Figs. 10-12) and provides accompanying information for each land parcel. The western end of the pipeline from Dukes Square to just beyond Kerves Lane is shown on Horsham part 3 (WSRO ref. TD/W68, Fig. 10). The area from Amiesmill Farm to just before the A281 between Birchenridge and Rickfield Farm is shown on part 4 of Horsham tithe map (WSRO ref. TD/W68, Fig. 11) and the eastern end of your line from just before it crosses the A281 to its end is on the 1841 Nuthurst tithe map (WSRO ref. TD/W92, Fig. 12). The Tithe awards identify who owned each land parcel, by whom it was tenanted/occupied, its name/description and its cultivation and size. The relevant apportionment information for this assessment has been tabulated below (Tables 5.1-3). In summary, the Tithe awards show that the majority of the route of the pipeline was owned and tenanted by many different individuals, under a mixed cultivation, but mostly arable. Overall, the Tithe shows that the Study Area was largely rural at this time with a few buildings (mostly related to farming activity and small cottages) dotted around the landscape. The majority of the land parcels along which the scheme is proposed were under a mix of arable and pastoral cultivation with some historic hedgerows present as boundaries between fields. The data is summarised as follows:

Plot	Owner's Surname	Owner's Forename	Occupier's Surname	Occupier's Forename	Description of land	Cultivation
626	Eversfield	James	Redford	Richard	Taylor's Mead	Mead
627	Eversfield	James	Redford	Richard	Bare Lags	Mead
665	Eversfield	James	Redford	Richard	Three cornered field	Arable
664	Eversfield	James	Redford	Richard	Great Horsham Hill	Arable
666	Eversfield	James	Redford	Richard	Little Horsham Hill	Arable
656	Eversfield	James	Redford	Richard	White Gate Lag	Pasture
652	Eversfield	James	Redford	Richard	Gravel pit	Arable
649	Nelthorpe	James Tudor	Foreman	William	Lower Mead	Mead
650	Nelthorpe	James Tudor	Foreman	William	The Lower Lag	Pasture
1642	Nelthorpe	James Tudor	Foreman	William	Bridge field	Arable
1646	Nelthorpe	James Tudor	Foreman	William	Pasture	Mead

Table 5.1: Summary of Horsham (Part 3) tithe apportionment, 1844 (TD/W68)

Plot	Owner's Surname	Owner's Forename	Occupier's Surname	Occupier's Forename	Description of land	Cultivation
1648	Nelthorpe	James Tudor	Foreman	William	The Legs	Mead
1668	Nelthorpe	James Tudor	Foreman	William	Old Mead	Arable
1667	Nelthorpe	James Tudor	Foreman	William	Whites Bridge field	Mead
1745	Tredcroft	Henry	Howes	Richard	3½ acres	Arable
1742	Tredcroft	Henry	Howes	Richard	Furze field	Arable
1743	Tredcroft	Henry	Howes	Richard	Black hole field	Arable
1741	Tredcroft	Henry	Howes	Richard	Rainbow field	Arable
1750	Nelthorpe	James Tudor	Mason	Moses	The Coppice field	Arable
1758	Nelthorpe	James Tudor	Mason	Moses	Rough field	Arable
1759	Nelthorpe	James Tudor	Mason	Moses	House Homestead	
1760	Nelthorpe	James Tudor	Nelthorpe	James Tudor	Coppice	Wood
1765	Dickens	Charles Scrase	Dickens	Charles Scrase	The Legs	Pasture

Table 5.2: Summary of Horsham (Part 4) tithe apportionment, 1844 (TD/W68)

Plot	Owner's Surname	Owner's Forename	Occupier's Surname	Occupier's Forename	Description of land	Cultivation
176	Bridger	Elizabeth	Allen	Alfred	Horsham Field	Arable
174	Bridger	Elizabeth	Allen	Alfred	House Plat	Meadow
171	Bridger	Elizabeth	Allen	Alfred	House Field	Arable
171a	Bridger	Elizabeth	Allen	Alfred	Rough in House Field	Hedgerow
172a	Bridger	Elizabeth	Allen	Alfred	Rough in Toffin Field	Hedgerow
172	Bridger	Elizabeth	Allen	Alfred	Toffin Plat	Arable
170	Bridger	Elizabeth	Allen	Alfred	Common Plat	Arable
173	Bridger	Elizabeth	Allen	Alfred	Homestead	

Plot	Owner's Surname	Owner's Forename	Occupier's Surname	Occupier's Forename	Description of land	Cultivation
169a	Dickens	Charles Scrase	Dickens	Charles Scrase	Buckleigh Lane and Ground adjoining	Buckleigh Lane and Ground adjoining
817	Dickens	Charles Scrase	Dickens	Charles Scrase		
40	Dickens	Charles Scrase	Dickens	Charles Scrase	Five acres	Arable
39	Dickens	Charles Scrase	Dickens	Charles Scrase	Eight acres	Arable
41	Dickens	Charles Scrase	Dickens	Charles Scrase	Seven acres	Arable
41a	Dickens	Charles Scrase	Dickens	Charles Scrase	Rough in seven acres	Hedgerow
31a	Aldridge	Robert	Mason	Moses	Rough in Little Coppice Field	Hedgerow
31	Aldridge	Robert	Mason	Moses	Little Coppice Field	Pasture
29	Aldridge	Robert	Pronger	James	Gaggle Wood	Wood

Table 5.3: Summary of Nuthurst tithe apportionment, 1844 (TD/W92)

5.7 The historic Ordnance Survey (OS) mapping shows the Study Area from 1879 through to 1982. Historic Ordnance Survey mapping spanning the length of the proposed route from the following years was consulted: 1875-6, 1897-8, 1912, 1938, 1958, 1961 and 1982. Where relevant, OS mapping of particular interest has been reproduced (Fig. 13). In addition, the Land Utilisation Survey of Britain mapping from 1938¹⁸ (Sheet 124 – Guildford and Horsham, 1:63360) (Fig. 14) has been reproduced to show the overall land-use covering the area in 1938. Any significant observations or changes occurring within the Study Area across the period covered by these maps are discussed below by date and Section (where necessary):

1875-6 OS

The 1875-6 OS map continues to illustrate the rural landscape across the Study Area, which is largely made up of undeveloped field parcels and a few scattered farms, previously recorded on the 1841 -1844 Tithe maps (Figs. 10-12). The most significant change illustrated in the 1875-6 OS map (Fig. 13) is the presence of the 'London Brighton and South Coast Railway' (LBSCR) line in the north-west of the Study Area, which is believed to have been constructed around 1848. The proposed scheme does not pass close to the railway line. The eastern part of the pipeline passes approximately 400m south of the mill pond. Some 'old gravel and sand pits' are recorded in the area east of Chesworth Farm and north-west of Amiesmill Farm showing evidence of quarrying and extraction activities in the proximity of the pipeline route. An historic outfarm (not recorded on the HER), Buckleigh Farm/barn, first observed on the tithing survey in 1841/44 with a lane (Buckleigh Lane) leading to it (Fig. 4). The barn building is recorded on the Horsham (Part 4) tithing survey as a House Homestead occupied by Moses Mason. The buildings are shown on the 1875-6 OS map (Plate 5.4) but have been removed by 1897 (Plate 5.5).

¹⁸ <http://www.visionofbritain.org.uk/>, accessed July 2022

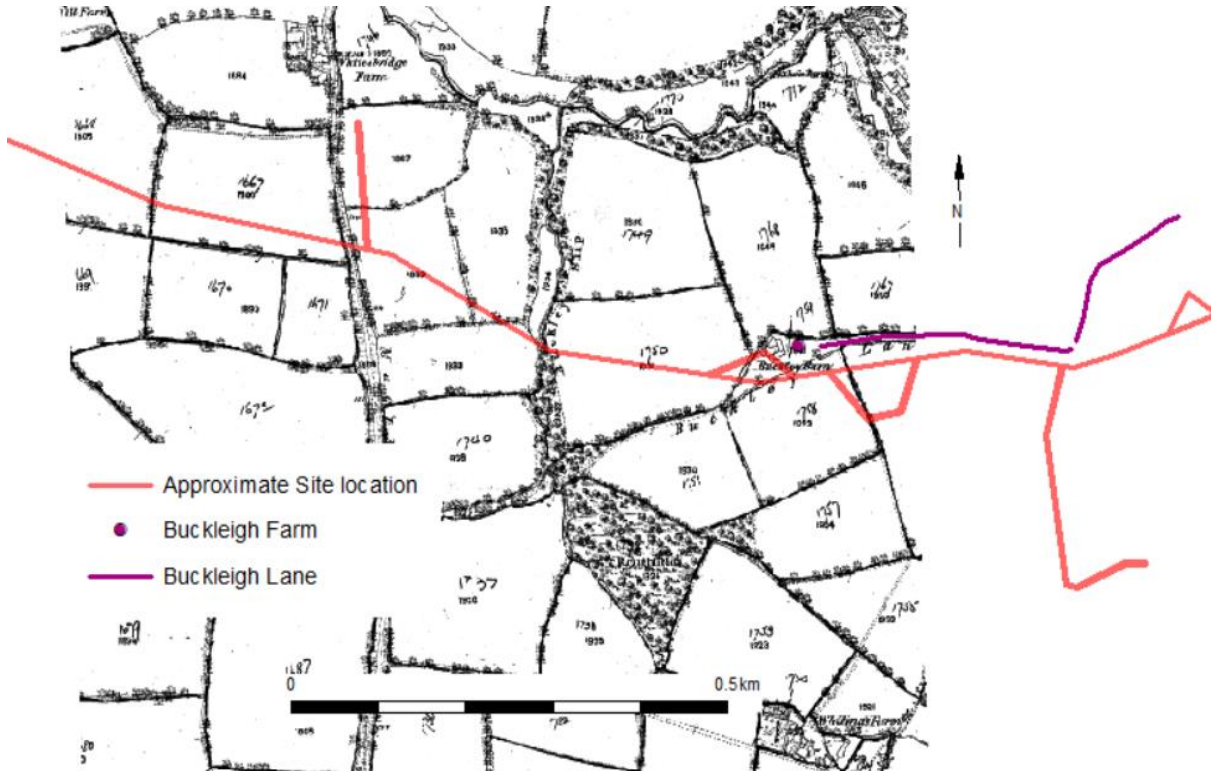


Plate 5.4: 1875-6 OS map showing building at Buckleigh Farm/barn

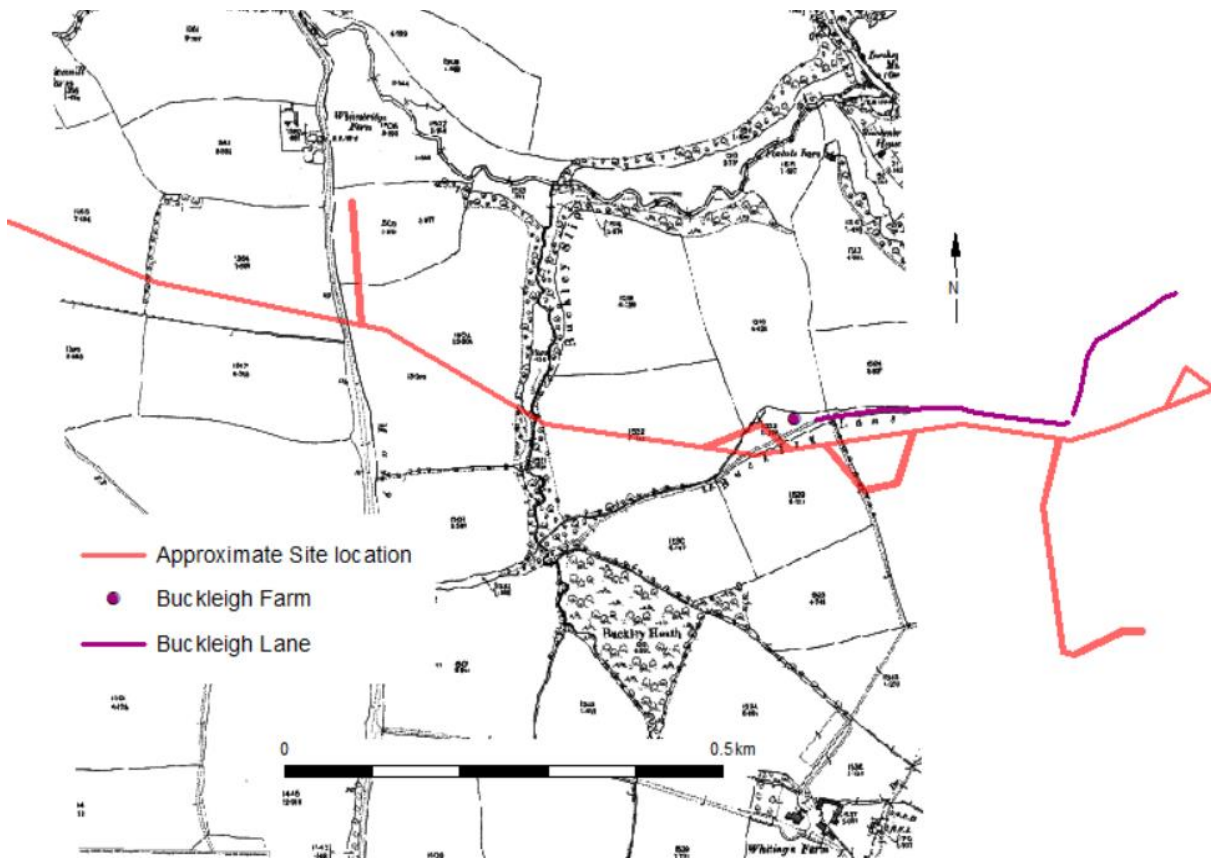


Plate 5.5: 1897 OS map showing that the building at Buckleigh Farm/barn has now gone

1898 and 1912 OS maps

The Study Area remains fairly static on the 1898 and 1912 OS maps.

1938 (Land Utilisation Survey)

By 1938 the Land Utilisation Survey map of Britain (Fig. 14) shows how different parts of the Study Area were used at this time. The map shows that the majority of land within the Study Area is utilised primarily by meadowland/permanent grass. There is an area of arable farming shown at Chesworth Farm and another area in the south through which the pipeline is proposed to pass. There is a scattering of woodland across the Study Area at this time with the pipeline proposed to pass two areas, one in the south and one at the eastern end (Gaggle Wood). Overall, this map illustrates the rural character of the Study Area well into the 20th century.

1958 OS

The 1958 OS map is the first map recording the boundary of the water treatment works at Mannings Heath at the eastern end of the pipeline scheme. 'Tanks' are recorded within the boundary which has been created within Gaggle Wood.

1962 -1982 OS maps

By 1962, the most significant change shown in this area is the increase in urban development around the town of Horsham and around Mannings Heath. The majority of the area across which the proposed pipeline passes remains fairly static across the latter part of the 20th century.

Summary

- 5.8 The majority of the Site has been undeveloped fieldscape, which appears to have been part of a series of farmsteads, throughout the period assessed cartographically. The majority of roads (either near to or along which the pipe route extends) appear to have been established before 1795. Historic boundaries shown on the 1841-1844 tithing surveys (Figs. 10-12) are considered to have some heritage significance due to their age and their fossilisation of the field pattern.

6.0 AERIAL PHOTOGRAPHS AND LIDAR ASSESSMENT

- 6.1 A search was made of the vertical and oblique collections of West Sussex Record Office (WSRO), as well as on Google Earth and on Britain from Above¹⁹.
- 6.2 The scale of most large scale early aerial images was found to be of only limited use for the purposes of archaeological interpretation. No clear features of archaeological significance were observed on the 1947 Ordnance Survey Aerial Photographs, which show the broad area around Horsham (WSRO ref: APH82). However, this image does show the largely rural character of the Study Area in the mid-20th century (not reproduced here).
- 6.3 The only aerial photographs showing the Site and its surrounding area at a suitable scale for identifying any significant details were historical satellite images from Google Earth, but these are only available from December 2001 onwards. In terms of land-use, these images served to support the generally unchanging nature of the Study Area and the Site in more recent times and have not been reproduced here. Figure 5 shows the Study Area and pipeline route over the most recent Google Earth satellite image (captured March 2022).
- 6.4 A search of the Britain From Above (BFA) website returned no suitable images covering the Study Area.

LiDAR imagery

- 6.5 Only the western end of the pipeline scheme is covered by available open-source Light Detection and Ranging (LiDAR) airborne mapping, which was assessed online²⁰. As with the satellite imagery, the LiDAR digital terrain model (1m DTM) (processed using analytical hill-shading from multiple (16) directions and with sun angle 35°) (Fig. 15) provides an alternative view across the Study Area.
- 6.6 During the walkover survey, sloping topography was noted in an aptly named field, Great Horsham Hill, to the north-east of Chesworth Farm, but within its grounds. This corresponds with a large oval/sub circular anomaly observed on the LiDAR data in this area and resembling a central mound with an external concentric ditch. The anomaly corresponds to a prominent natural knoll extending from the main valley side towards the river and is located on sandstone overlying clay. It is likely, therefore, that the anomaly represents cambering, a common feature within the Weald where sandstone overlying clay is lubricated by percolating water causing it to slide and break, forming features that look superficially archaeological. However, given the advantageous topographical location and the proximity to known settlement sites (notably the medieval manorial centre at Chesworth), it is possible that the knoll was occupied by earlier human communities exploiting the valley and an archaeological origin for the anomalies cannot be ruled out.
- 6.7 Figure 16 presents the feature shown over LiDAR data (processed using sky-view factor (SVF), which highlights depressions (e.g. moats) in a darker shade, because they receive less illumination (Zakšek et al. 2011).

¹⁹ <http://www.britainfromabove.org.uk/>, accessed July 2022

²⁰ <https://data.gov.uk/publisher/environment-agency>, accessed July 2022

7.0 WALKOVER SURVEY

- 7.1 An initial walkover survey by the author was undertaken across the Site on 27th July 2022. The conditions were dry and slightly overcast. Basic observations and notes were maintained on a base-map of the area.
- 7.2 The objective of the walkover survey was to identify historic landscape features not plotted on existing maps, together with other archaeological surface anomalies or artefact scatters, and also to assess the existence of constraints or areas of disturbance that may have impacted upon the predicted archaeological resource. The walkover survey was rapid and was not intended as a detailed survey.
- 7.3 Parts of the route of the proposed pipeline were walked where public footpaths were available, but where access was limited/restricted, the route was viewed from strategic points, such as nearby roads and footpaths. Photographs were taken at various intervals in order to illustrate the proposed route. The photographs used to illustrate the text have been included as plates (Plates 7.1 – 7.23) in this section of the report. Where there was no access to areas, Google Earth satellite images have been used to help with the discussion below. The following text provides a summary of the route from west to east. The walkover survey began at Chesworth Lane where the parking sign is shown in the map of Chesworth Farm below (Plate 7.1). The field names that fall within the Chesworth Farm grounds are also indicated in the map below, which has been included to aid discussion in the text.



Plate 7.1: Map of Chesworth Farm showing field names for ease of reference within the text

- 7.4 The pipeline scheme starts at Chesworth Lane (Plate 7.2), a residential street to the south of Horsham town centre. The lane running roughly east-west, leads to Chesworth

Farm, where the listed house and scheduled medieval moated site are located. WWII anti-tank blocks (106) can be seen at the entrance of Chesworth Farm (Plate 7.3). A washout is proposed here as part of the scheme (Fig.5). The pipeline heads into the first field, Jenny Bare Legs, which was entered by a small pedestrian gate from Chesworth Lane in the south-west corner (Plate 7.4). This field gradually slopes upwards to the east where there is a tall mature tree line boundary. A temporary compound/laydown area is proposed here (Fig. 5). Jenny Bare Legs (as with the others in Chesworth Farm) is covered with long grass and is used as pasture for grazing animals (none at the time of the site visit). The pipeline approximately follows the route of the footpath (Plate 7.5) which leads to a small wooden pedestrian gate leading into the next field, Great Horsham Hill (Plate 7.6).



Plate 7.2: View westwards along Chesworth Lane at the western end of the pipeline scheme



Plate 7.3: Anti-tank blocks (106) located by the stream at the entrance to Chesworth Farm along Chesworth Lane (looking east)



Plate 7.4: Entrance to field in grounds of Chesworth Farm, known as Jenny Bare Legs, from Chesworth Lane (looking west)



Plate 7.5: View from field within the grounds of Chesworth Farm, known as Jenny Bare Legs (looking east) - pipeline approximately aligned with the footpath



Plate 7.6: View from field within the grounds of Chesworth Farm, known as Great Horsham Hill (looking south-south-east)

- 7.5 As the name suggests, the topography of Great Horsham Hill is like a mound (Plate 7.6), with a noticeable rise from the north-west corner where it is accessed to the middle and east, and then a decline to the south/south-east. From here, there are distant views to Horsham town centre and the Conservation Area (Plate 7.7), which lies approximately 665m to the north-west, but only the tops of buildings and the church spire (2) were visible from the approximate route of the pipeline. Given the distance and in-between development, it is unlikely that there would be a clear view from the conservation area back to the Site. Looking towards the scheduled site and the listed house at Chesworth Farm to the south-west, only a glimpse of the rooftops can be seen amid the dense tree lines and vegetation in between (Plate 7.8). From the scheduled site and listed building no view back to the Site was possible through the dense trees. The peak of Denne Park, beyond the farm and river, sits up high, overlooking the Site with a prominent line of tall trees (Plate 7.8). There is a wide metal field gate in the south-east corner of this field (Plate 7.9) which leads out onto a wide footpath/cycle lane (Arun Way). There is an air valve proposed here (Fig. 5).



Plate 7.7: View from field within the grounds of Chesworth Farm, known as Great Horsham Hill - looking north-north-west towards Horsham town centre and historic core/conservation area (note that this view is not from the peak of Great Horsham Hill, but from the approximate route of the pipeline)



Plate 7.8: View across field within the grounds of Chesworth Farm, known as Great Horsham Hill - looking south-west towards the scheduled moated site and listed house with Denne Park (treeline) in background



Plate 7.9: Metal field gate in south-east corner of Great Horsham Hill providing access to Arun Way and Spring Barn Field (looking east)

7.6 Across the footpath lies Spring Barn Field (Plate 7.10). The pipeline approximately follows the route of the footpath gradually sloping downwards to Gravel Pit Field in the south-east (7.11) where it runs parallel with the tall hedgerow to the south. A temporary compound/laydown area is proposed during the construction works near to the eastern mature treeline boundary (Kerves Lane beyond), where there is also an access track proposed.



Plate 7.10: View across field within the grounds of Chesworth Farm, known as Spring Barn Field (looking south-east) – pipeline approximately aligned with the footpath



Plate 7.11: View across field within the grounds of Chesworth Farm, known as Gravel Pit Field (looking east-south-east) – laydown/compound area proposed adjacent to mature boundary in distance

- 7.7 Where the proposed pipeline meets Kerves Lane, it crosses the edge of two fields (Plate 7.12), an access lane to Amiesmill Farm and the watercourse (Plate 7.13). There may be some localised Palaeolithic and palaeoenvironmental potential in deeper deposits in this vicinity where the watercourses (River Arun and Hornbrook tributary) converge and gravels are recorded. However, there is a proposed crossing here by directional drilling (Fig. 5) which will reduce the potential for encountering such deposits. A washout is also proposed here (Fig. 5). From here, the pipeline crosses diagonally across a rectangular field to the east of Kerves Lane (Plate 7.14), which is enclosed by tall mature tree boundaries on all edges. The pipeline then heads eastwards in the middle, running south of Amiesmill Farm across horse paddocks across to Sedgewick Lane (Plates 7.15-16). The landscape topography across this middle section of the scheme is fairly flat.



Plate 7.12: View across fields within the grounds of Amiesmill Farm looking north-westwards towards Kerves Lane – directional drilling proposed across the road crossing



Plate 7.13: View across small footbridge crossing within the grounds of Amiesmill Farm looking north - directional drilling proposed across the stream



Plate 7.14: View south-eastwards across field to the east of Kerves Lanes



Plate 7.15: View south-eastwards across horse paddock to the south of Amiesmill Farm buildings



Plate 7.16: View westwards across field to the west of Sedgewick Lane (source: Google Earth Street View as no access or view due to height of hedgerow at time of Site visit)

7.8 At Sedgwick Lane there is a proposed road crossing into another field to the east, where an access track is also proposed (Plate 7.17). The pipeline extends across fields, which were largely inaccessible during the walkover, passing the former Buckleigh Farm/barn to the south and running approximately parallel to the old lane to the north (Buckleigh Lane) to Brighton Road. It was not possible to get direct access to the former Buckleigh farm site at the time of the survey, but a scan of available modern satellite imagery suggests that there are no clear remnants of buildings in this area, although there is an electricity pylon in this area (Plate 7.18). An air valve is proposed in this area (Fig. 5) with directional drilling to the east. Rickfield Farm lies to the south of the pipeline. The pipeline crosses the field which lies immediately west of Brighton Road and just to the south of the access road to Rickfield Farm (Plate 7.19). A washout is proposed here, as it a temporary compound/laydown area (Fig. 5). Directional drilling is proposed for the road crossing to the east of this field across Brighton Road (Fig. 5).



Plate 7.17: View south-eastwards across field to the east of Sedgwick Lane – access route located adjacent to roadside hedge



Plate 7.18: Satellite view across fields between Sedgwick Lane and Brighton Road passing the former Buckleigh farm/barn (located with purple arrow) (no access to this area at time of Site visit)



Plate 7.19: View across field to west of Brighton Road and within the grounds of Rickfield Farm – proposed directional drill to cross hedgerow in east (looking south-west)

7.9 During the walkover survey, the old Buckleigh Lane was partly accessed (Plate 7.20). Although this lane, now a footpath, lies to the north of the proposed scheme and will not be impacted, it helps to portray the historic landscape around the pipeline. The lane is densely wooded with a wide hollow-way and boundary banks delineating its route. It seems to have once been a fairly significant historic routeway.



Plate 7.20: View along historic routeway/hollow-way, Buckleigh Lane (looking west)

7.10 Access was limited in the last section of pipeline to the east of Brighton Road and up to the Water Treatments Works in Gaggle Wood (Plate 7.21-23). An access track is proposed from Brighton Road into the first field on the eastern side of Brighton Road (Plates 7.21-22). The pipeline then extends across the fields (Plate 7.22) and a pipe bridge is proposed to cross the stream valley within Gaggle Wood into the WTW, in order to avoid impact on underlying tree roots (Fig. 5).



Plate 7.21: View across field to east of Brighton Road (looking south-east) – access route proposed here from Brighton Road – tall, mature roadside treeline boundary located between this field and Brighton Road – directional drilling proposed here to cross road and boundary hedgerows



Plate 7.22: Satellite view across fields and woodland to the Mannings Heath Water Treatment Works in the east (blue arrow) – approximate pipeline route shown with red line and access road shown with green line (no access to this area at time of Site visit)



Plate 7.23: Mannings Heath Water Treatment Works at the eastern end of the pipeline scheme (looking north-west)

- 7.11 The walkover identified some extant hedgerows that may be considered to be 'important' historic hedgerows as defined by The Hedgerows Regulations 1997²¹, given their longevity and existence since the mid-19th century tithing surveys (Figs. 10-12) and which may be impacted by the scheme. The impact on potential historic boundaries is limited to the period of construction only as they are likely to be restored following the works (see recommendations below in Section 13).
- 7.12 Overhead power cables and electricity pylons can be seen at sporadic intervals across the route. Some below grounds services may also be present in some areas (e.g. for water or drainage). The modern disturbance within the road areas means that any historic landscape features are likely to have been destroyed, although deeper features may still survive.
- 7.13 The Lidar anomaly in the Great Horsham Hill Field was observed only as mound-like topography during the walkover survey, although it is unclear to what extent this may be geological rather than archaeological, or a mixture of both. On the ground this feature was not particularly visible, with its full extent and shape, being masked by extant field boundaries and the roughly north-south aligned Arun Way. No other significant historic landscape features were observed in the accessed areas on the walkover survey.
- 7.14 A few of the nearest listed buildings can be seen from some parts of the proposed pipeline route, particularly because of the generally open rural landscape. A rapid assessment of the potential impact on the setting of these designated heritage assets in the vicinity of the Site, was carried out during the walkover survey. The results of this assessment are outlined in section 8 of this report (see below).

²¹ <http://www.legislation.gov.uk/ukxi/1997/1160/contents/made>, accessed July 2022

8.0 SETTINGS ASSESSMENT OF NEARBY DESIGNATED HERITAGE ASSETS

- 8.1 A rapid assessment of the potential impact of the setting of any nearby designated heritage assets in the vicinity of the proposed route of the pipeline was undertaken, taking-into-account the various elements of the proposed development described in the Introduction. The following chapter describes the various impacts resulting from the construction activities.

Designated Heritage Assets

- 8.2 No designated heritage assets are recorded along the proposed areas of the Site, therefore no direct, physical impact is anticipated.
- 8.3 There is one scheduled monument within the Study Area, a MOATED SITE AND FISHPONDS 15M SOUTH OF CHESWORTH HOUSE (1) (10214460), located approximately 165m south-west of the proposed pipeline in the Chesworth Farm area.
- 8.4 There are a total of fifty-one listed buildings (2 - 52) situated within the Study Area (Figs. 2-3). The majority of these buildings are located around the historic core of Horsham to the north-west (Fig. 2) and others represent isolated farm buildings scattered around the Study Area. Their locations are plotted on Figure 2 and in more detail on Figure 3. They are summarised in Table 4.1 (Section 4). The nearest listed building, Chesworth House (1027063) (3), is at least 265m away from the proposed scheme to the south-west. All others are either close to the edge of the Study Area boundary (5, 9, 17-20, 33, 50-52; Fig. 2) or around the conservation area to the north-west (Fig. 3).
- 8.5 Within the Study Area there is one Conservation Area: Horsham Conservation Area, located approximately 265m north-west of the proposed pipeline at the western end (Fig. 2).

Proposed Works

Pipe Installation (Fig. 5)

- 8.6 The majority of the scheme will not cause any permanent changes to the landscape as the development primarily requires the sub-surface installation of a pipe. However, the majority of the scheme is currently under pasture and may leave a more visible backfilled trench that may be temporarily directly visible from the Chesworth House (3) and the scheduled monument (1) at certain times of the year (e.g. when the intermediary trees are less in leaf cover). It is thought that this will result in a negligible or, at most, temporary minor adverse impact until grass regrows, visually similar to agricultural drainage works, these works are therefore deemed to cause a temporary and reversible effect on the setting of designated heritage assets during construction works only.

Compound areas and access tracks (Fig. 5)

- 8.7 The compound/laydown areas and access tracks will result in a temporary change to the landscape during construction works only, therefore no permanent impact on the setting of the designations is anticipated as a result of the scheme.

Washouts and Air Valves (Fig. 5)

- 8.8 The only above ground features will be washouts and air valves, although these locations are not yet confirmed. Appendix 2 presents typical design details from Southern Water for these elements. They will consist of a below ground chamber

topped with cover. In some locations the chamber may extend up to 600mm above the ground level and could be fenced off if required by the landowner. Although there will be some permanent change to the above ground landscape arising from the installation of the washouts and air valves, these elements of the scheme are considered to be very low impact (no more than 600mm above the ground) with no significant impact on archaeological setting identified.

Impact Assessment

- 8.9 The open, rural landscape means that distant views are possible in some areas of the Site, therefore, in some cases, the rooftops of some listed buildings located some distance from the Site (e.g. (3) to the south-west and in the conservation area to the north-west, can still be seen and possibly vice-versa. However, the majority of the scheme will not cause any permanent changes to the landscape as the scheme requires the sub-surface installation of a pipe. These works are therefore deemed to cause a *temporary* and *reversible* effect during construction works only. Following construction, the pipeline will be backfilled and will in time be invisible. Consequently, there will be no significant impact on the setting of any designated heritage assets. The only elements of this scheme that are anticipated to have any permanent impacts on designated heritage assets are the air valves and washouts, but the impact is considered to be so minimal that it will be negligible.

9.0 ASSESSMENT OF HERITAGE POTENTIAL AND SIGNIFICANCE

9.1 Introduction

- 9.1.1 A review of the cultural heritage evidence detailed earlier indicates that the scheme is located in close proximity to many known heritage assets along the entire route. As such, it is considered that there is also the potential for as yet unknown heritage assets of archaeological interest (i.e. below-ground archaeological remains) to be encountered during works. These are summarised below by period.
- 9.1.2 This section assesses the potential for archaeological remains to exist across the Study Area based on the known archaeological resource, but it does not address the impact which previous development has had. Section 10 of this report assesses the impact of past development on the survival of below-ground archaeological remains.

9.2 Prehistoric

- 9.2.1 Little is known about the majority of the area covered by the Site during the prehistoric period, but this is largely because of an absence of past development and archaeological excavation. An Iron Age loom weight findspot (not recorded on the HER) in the Chesworth Farm area, may suggest some activity in this area dating from this time. The newly identified, but undated earthwork observed in the field, Great Horsham Hill, has the potential to date to this period. The potential for Palaeolithic and palaeoenvironmental evidence from deep deposits, where they have been either redeposited or buried in the course of subsequent geological and climatic events, including river gravels and alluvium along ancient river terraces is well known. Consequently, there may be some localised Palaeolithic and palaeoenvironmental potential along the pipeline in the vicinity of the River Arun and its tributary, Horn Brook where there is alluvium, as well as Arun Terrace Deposits, 4 Member (sand and gravel) recorded and where these watercourses meet at Kerves Lane.
- 9.2.2 Given the limited information available and the absence of any previous archaeological investigation across the Site area, the possibility that as yet unknown remains of this date may be present cannot be discounted.
- 9.2.3 The potential for the overall Site to contain as yet unknown heritage assets of prehistoric date is generally considered to be **unknown**. There may also be some **moderate** localised Palaeolithic and palaeoenvironmental potential in deeper deposits in the vicinity of the lower-lying wetlands where the watercourses converge near Chesworth Farm and Kerves Lane.

9.3 Romano-British

- 9.3.1 As with the prehistoric period, little is known about the majority of the area covered by the Site during the Romano-British period, but this is largely because of an absence of past development and archaeological excavation.
- 9.3.2 Given the limited information available and the absence of any previous archaeological investigation across the Site area, the possibility that as yet unknown remains of this date may be present cannot be discounted.
- 9.3.3 The potential for the overall Site to contain as yet unknown heritage assets of this date is generally considered to be **unknown**.

9.4 Early Medieval

- 9.4.1 Little is known about the Site during the early-medieval period. The West Sussex HER records no early medieval entries from the Site or the Study Area. However, it is thought possible that Chesworth Farm had Saxon origins, which slightly raises the archaeological potential in this localised part of the scheme.
- 9.4.2 Given the limited information available and the absence of any previous archaeological investigation across the Site area, the possibility that as yet unknown remains of this date may be present cannot be discounted.
- 9.4.3 The potential for the overall Site to contain as yet unknown heritage assets of this date is generally considered to be **unknown**.

9.5 Medieval

- 9.5.1 The HER demonstrates increased activity during the medieval period, primarily represented by local industries (e.g. iron working, glassworks, mills) and agriculture. Land-use was predominantly agricultural, with a mix of arable and pastoral cultivation across the fields within the Study Area, as well as a few small areas of woodland. In addition to the eight medieval listed buildings (**2 – 9** Fig. 4), twelve medieval, non-designated heritage assets (**60 – 71**) are recorded on the West Sussex HER within the Study Area (Appendix 1 and Fig. 4). A section of the proposed pipeline comprising approximately 1km runs through the Chesworth House Medieval Moated Site and surrounding area ANA (**54**). There is one scheduled monument within the Study Area, a MOATED SITE AND FISHPONDS 15M SOUTH OF CHESWORTH HOUSE (**1**), located approximately 165m south-west of the proposed pipeline in the Chesworth Farm area.
- 9.5.2 Given the limited information available and the absence of any previous archaeological investigation across most of the Site area, the possibility that as yet unknown remains of this date may be present cannot be discounted. Should such remains be present they are perhaps most likely to comprise either artefacts of local significance or evidence of altered field boundaries (e.g. ditches/ grubbed-out hedgerows) and agricultural activity (e.g. ridge and furrow ploughing).
- 9.5.3 The potential of the Site to contain as yet unknown heritage assets of this date is considered to be **moderate**.

9.6 Post-Medieval and Modern

- 9.6.1 This assessment has shown that the Study Area experienced gradual development following the opening of the London, Brighton & South Coast Railway in 1846 with cartographic sources showing increased ribbon development along the primary road network. The 19th century expansion of Horsham also played a part in increasing development in the Study Area. In addition to the forty-three post-medieval listed buildings (**10 – 52**) (see section 4.2.3 and Figs. 2-3), forty (**72 – 111**) further non-designated heritage assets of post-medieval and modern date are also recorded within the Study Area. The former historic outfarm of Buckleigh lies close to the pipeline scheme to the north of Rickfield Farm, and although no remains appear to survive there today, there is some potential for contemporary agricultural activity to be found across this area. The majority of records for the post-medieval period indicate a continuation of predominant farming activity expanding from the medieval period with wartime defence features also representing modern-era activity. Areas near to the

pipeline scheme are labelled on historic maps as 'gravel pit', old gravel pit', and 'sand pit', providing strong evidence for such extraction activities along the scheme.

- 9.6.2 The potential of the Site to contain as yet unknown heritage assets of this date is considered to be **moderate** in light of increased activity across the Study Area, but the significance of such remains, is likely to be of lower significance than earlier periods.

9.7 Undated

- 9.7.1 A considerable sub-circular anomaly (approximately 300m x 350m across) was observed on LiDAR data (Figs. 15-16) and as a topographical feature during the walkover survey in the aptly named 'Great Horsham Hill' field to the north-east of Chesworth Farm. It is likely that this is predominantly a geological feature, caused by cambering characteristic of the Weald, but an archaeological component cannot be ruled out, either as an earthwork element contributing to the Lidar anomaly or as buried archaeological deposits exploiting a topographically advantageous location.

- 9.7.2 The potential of the Site to contain as yet unknown heritage assets of unknown date is considered to be **unknown** in the field named 'Great Horsham Hill'.

9.8 Summary of Potential

- 9.8.1 A desk-based assessment can generally only consider the potential of a site in principle. Its conclusions usually require testing by fieldwork in order to confirm whether remains are actually present and, if this is the case, to establish their character, condition and extent and thus indicate the weight that ought to be attached to their preservation. It must always be acknowledged that remains of a type for which there is no prior evidence may be found on a site by fieldwork.

- 9.8.2 The potential for the discovery of new heritage assets has been revealed by a review of the known cultural heritage baseline in the immediate vicinity. The estimated potential for heritage assets being located within the Site can be summarised thus:

Palaeolithic/Palaeoenvironmental – **Moderate** (localised on superficial alluvium and Arun Terrace Deposits)
Prehistoric – **Unknown**
Romano-British – **Unknown**
Early Medieval – **Unknown**
Medieval – **Moderate**
Post-Medieval and Modern – **Moderate**
Undated - **Unknown**

- 9.8.3 To conclude, the majority of the Site is considered to lie within an area of generally unknown potential for most periods with moderate potential for the medieval and post-medieval/modern periods. There may also be some moderate localised Palaeolithic and palaeoenvironmental potential in deeper deposits in the vicinity of the lower-lying wetlands where the watercourses (River Arun and Hornbrook tributary) converge.

9.9 Preliminary Assessment of Significance

- 9.9.1 The significance of a heritage asset is 'the value of a heritage asset to this and future generations because of its heritage interest.'²². Given that this desk-based assessment

²² <http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/annex-2-glossary/>, accessed July 2022

has only been able to establish the potential for heritage assets to be present within the Site in principle, the significance of such assets cannot be conclusively determined at the present time.

- 9.9.2 The available evidence from the wider Study Area would suggest that any assets present are most likely to be of local to perhaps regional significance.

10.0 PREVIOUS IMPACTS ON HERITAGE POTENTIAL

- 10.1 This section assesses the impact of past development and other previous impacts on the survival of below-ground archaeological remains.
- 10.2 The majority of the Site lies over a fieldscape which has never been developed and so the past risk of destruction to any potential archaeological deposits in these areas can be considered to be low. The exception to this is the occasional electricity pylon and some possible below ground services, which may have caused some impact on buried remains during construction.
- 10.3 The area is likely to have been under a mixed arable/pastoral regime since assarting (tree-clearing) activities were undertaken to provide new farmland in the medieval period. Any sub-surface deposits are likely to have been truncated to some degree by ploughing at the Site as well as the initial assarting. Intensive cultivation by modern farm machinery may have been extensive over the Site. This activity will have impacted upon the archaeological resource to some degree, with the possible truncation of some pre-modern sub-surface deposits and/or features. The degree to which any truncation may have occurred is impossible to determine without establishing the depth of the topsoil, which is likely to differ between and within fields depending on the gradient of the land, for example.
- 10.4 The Wealden geology and topography of the Site would have made it a favourable location for past iron-working, which may have included the excavation of large extraction pits for iron-ore. Areas near to the pipeline scheme are labelled on historic maps as 'gravel pit', 'old gravel pit', and 'sand pit', providing strong evidence for such activities along the scheme. Any such activities may have removed or truncated earlier archaeological remains, whilst themselves having some intrinsic archaeological significance.
- 10.5 The cartographic assessment has shown that the majority of key roads have been in existence since at least the end of the 18th century (Fig. 8) and possibly earlier. However, the walkover survey demonstrated that modernisation has played its part in obscuring the historic routes of the Site, by introducing service installations (e.g. drains, manhole covers, extant service pipes/cables and pylons) in some parts of the proposed route, particularly in more developed residential areas. The areas of the pipeline that run across known roads are thought to have suffered the most impact on any buried heritage assets.

11.0 IMPACT OF PROPOSED DEVELOPMENT

- 11.1 This section of the report considers the potential impacts of the proposed scheme (excluding those on setting which have been discussed above in Section 8). In considering the significance of the impact of the pipeline scheme on any heritage assets that are present it is necessary to understand both the significance of the heritage asset and the likely degree of impact (e.g. how much of the heritage asset will be destroyed). Although presence/absence and significance of any heritage assets on the Site is undetermined there is potential for such heritage assets to be present. As heritage assets are a fragile and non-renewable resource such impacts on them are considered to be adverse.
- 11.2 This scheme proposes a cross country pipeline, approximately 3.5km in length which extends from Chesworth Lane in the west to Mannings Heath WTW in the east. Whilst some sections of the pipeline are trenchless, the majority of the pipeline is open cut with a nominal depth of 2m and a 1m wide trench. The proposed pipeline installation methodology comprises a mix of open-cut trenching and trenchless horizontal directional drilling (HDD) trenchless techniques, the locations of which are shown on Figure 5. The design drawings for the scheme are yet to be finalised and as such have not been included within this report. The majority of the pipe is to be installed using an open-cut trench method with only small sections (e.g. crossings) of pipe to be installed using HDD methods. Trenchless method may well be used to cross significant features be it a road, wooded area or watercourse, though again these locations will need to be confirmed following a constructability review. A pipe bridge is proposed as the eastern end of the scheme at Gaggle Wood where the Water Treatment Works (WTW) is located. The only above ground features will be washouts and air valve, the potential locations of which are shown in Figure 5, although these locations are not yet confirmed. They will consist of a below ground chamber topped with cover. In some locations the chamber may extend up to 600mm above the ground level and could be fenced off if required by the landowner (Appendix 2).

Direct Impacts

Designated heritage assets

- 11.3 This report concludes that there will be no direct impact upon any known designated heritage assets identified in this report.

Non-designated heritage assets

Known Resource

- 11.4 A number of non-designated heritage assets are recorded along or close to the scheme (Fig. 4). It is theoretically possible for archaeological deposits beyond the recorded extent of these assets to survive, together with further deposits relating to currently unknown assets. There is potential for activity relating to these sites to extend beyond the limits of previous investigations or the identified location of the asset. Direct impact is likely to result in damage and disturbance, and/or potentially the complete destruction, of these assets.
- 11.5 A section of the proposed pipeline comprising approximately 1km runs through the Chesworth House Medieval Moated Site and surrounding area ANA (54; Fig. 4). Excavation in this area should be treated with caution, particularly in light of the Lidar anomaly which may have some unconfirmed archaeological potential.

- 11.6 There may be some localised Palaeolithic and palaeoenvironmental potential in deeper deposits in this vicinity where the watercourses (River Arun and Horn Brook tributary) converge and gravels are recorded. However, there is a proposed crossing here by directional drilling (Fig. 5) which will reduce the potential for encountering such deposits.
- 11.7 The cartographic assessment indicates the probability that ‘important’ historic hedgerows as defined by The Hedgerows Regulations 1997²³ are likely to be present along parts of the route of the scheme. Minor impact on surviving historic boundaries in areas where open trenches are proposed is unavoidable, but the temporary nature of the scheme means they are likely to be restored fairly quickly following groundwork. However, existing breaches should be used where feasible.
- 11.8 The route of the pipeline passes through an area of Ancient and Semi-Natural Woodland (Gaggles Wood) in the east (Fig. 6). Areas of Ancient and Semi-Natural Woodland are present on maps dating back to the early 1800’s and, unless there is evidence that indicates otherwise, the presumption is that they are likely to have existed since 1600 in England and Wales (and 1750 in Scotland). Each ancient wood is unique with its own local soil, environment, wildlife and cultural history. For this reason ancient woodland is irreplaceable. Archaeological and cultural features may be present within ancient woodland that can provide insight into past land use²⁴. The majority of the proposed route appears to avoid the areas of ancient woodland, therefore there is no impact by the scheme on these areas. Where the scheme cannot avoid passing through ancient woodland (e.g. in the east at Gaggles Wood), the scheme has mitigated the impact by using trenchless pipe bridge methods to avoid disturbance to tree roots and the associated environment and for ease of constructing the pipe across the valley.

Unknown Resource

- 11.9 In the less disturbed areas of the Site (e.g. undeveloped fields), as yet unknown heritage assets (e.g. archaeological remains) are likely to be relatively shallowly buried, typically immediately below the topsoil / subsoil. Such assets would be impacted by the excavation of the open-cut trenches, creation of the easement corridor and plant movement along it, particularly in areas which have not been subject to previous development (e.g. fields). These impacts may result in damage, disturbance and/or the complete destruction of those assets.

Pipeline (open-cut trenching)

- 11.10 Where the pipeline crosses previously undeveloped areas (e.g. fields), the potential for archaeological preservation, where deposits exist, is generally considered to be good. As the degree of disturbance in this area cannot be accounted for in a desk-based assessment, it would be best to take a cautious approach and assume that the proposed groundworks may impact on archaeological remains during these works, particularly where the scheme crosses through the known ANA at Chesworth Farm or close to known field systems.

Pipeline (horizontal directional drilling and associated launch and reception drill pits for crossings)

- 11.11 This construction method is not considered to have a significant impact on buried archaeology as the disturbance is very localised. The impact on archaeological remains is generally considered to be less with this method than with open-cut

²³ <http://www.legislation.gov.uk/uksi/1997/1160/contents/made>, accessed July 2022

²⁴ <http://www.woodlandtrust.org.uk/about-us/ancient-woodland-restoration/ancient-woodland/what-is-ancient-woodland/?gclid=CNfX0oei6MwCFZcy0wodH74M7Q&gclid=aw.ds>, accessed July 2022

trenching, although limited impacts may occur in the excavations for the launch and reception pits.

Compound areas and access routes

- 11.12 A number of construction compounds and access tracks are proposed along the route of the pipeline (Fig. 15) although these locations have not yet been confirmed. The compounds are likely to be soil stripped with 'type 1' laid. It is possible that the soil strips for the compounds will result in some impact on shallow archaeological remains. Access tracks to these areas will likely be made using track matting although this will need to be confirmed and will be determined by ground suitability and weather. If the track matting method is confirmed, then no impact is thought to arise as this will avoid excavations into the ground, thus avoiding potential below ground impact on archaeology.
- 11.13 This assessment has not identified any potential for geoarchaeological deposits along the pipeline route, but if present, they are likely to be at more significant depth, which lessens any impact from the scheme.
- 11.14 Should as yet unknown, below ground heritage assets be present along the route of the scheme they are likely to be relatively shallowly buried, typically immediately below the topsoil/ subsoil. Such assets would be impacted by excavation (e.g. temporary compound areas, temporary construction track strip, drill pits and open-cut trenching) and plant movement along the route, particularly in areas which have not been subject to previous development (e.g. fields). These impacts may result in damage, disturbance and/or the complete destruction of those assets. This assessment has not identified any potential for geoarchaeological deposits along the pipeline route, but if present, they are likely to be at more significant depth, which lessens any impact from the scheme.

Indirect Impacts

Designated heritage assets

- 11.15 A preliminary settings assessment of the designated heritage (listed buildings, scheduled monument and conservation area) assets was undertaken in section 8.0 of this report. To summarise, due to the **temporary** and **reversible** nature of the change of the setting of the designated heritage assets, it is considered that no permanent effects to the setting of any designated heritage assets will occur as a result of these elements of the scheme.
- 11.16 Although there will be some permanent change to the above ground landscape arising from the installation of the washouts and air valves, these elements of the scheme are considered to be very low impact (no more than 600mm above the ground) with no significant impact on archaeological/heritage setting identified.

12.0 CONCLUSIONS

- 12.1 This assessment is based on a desk-based survey of existing information and cannot therefore be considered to be a definitive statement on the presence or absence of archaeological deposits in any given area. A site assessed as having low potential may still contain unsuspected archaeological deposits.
- 12.2 The assessment has outlined the archaeological potential of the Site and examined the effects of existing impacts, and as far as possible, the effects of the proposed impacts upon that potential. The assessment identified no heritage assets of national significance within the Site that may require preservation *in situ*, to the extent that this can be predicted from available information, although the presence of unsuspected deposits of this importance cannot be ruled out.
- 12.3 The assessment has concluded that:
- The Scheme does not pass through any Conservation Areas, although Horsham Conservation Area lies to the north-west of the scheme;
 - No listed buildings are present in any of the proposed parts of the scheme, with the majority located in the historic core of Horsham and the nearest, being the Grade II* listed Chesworth House (1027063) located approximately 265m to the south-west;
 - There is one scheduled monument within the Study Area, a well-established, medieval MOATED SITE AND FISHPONDS 15M SOUTH OF CHESWORTH HOUSE (10214460), located approximately 165m south-west of the proposed pipeline in the Chesworth Farm area;
 - A section of the proposed pipeline (approximately 1km) passes through the Chesworth House Medieval Moated Site Archaeological Notification Area (DWS8533). Excavation in this area should be treated with caution;
 - The majority of the Site is considered to lie within an area of generally unknown potential for most periods with moderate potential for the medieval and post-medieval/modern periods;
 - This assessment has identified some moderate localised Palaeolithic and palaeoenvironmental potential in deeper deposits in the vicinity of the lower-lying wetlands where the watercourses (River Arun and Hornbrook tributary) converge around Kerves Lane;
 - It is possible that the best archaeological potential for the vicinity of the appraisal Site lies in the lower-lying part of the Site close to the watercourse, where the superficial gravels are located, but it is not clear how accurately the deposits are recorded here, so excavations in this area should be undertaken with caution;
 - The cartographic evidence has revealed a relatively static landscape in which agriculture has been the predominant factor;
 - Where present, preservation of archaeological remains across the scheme is likely to be good owing to a broad absence of previous impacts;
 - Archaeological deposits within previously undeveloped fields across the appraisal area are likely to survive below the depth of modern ploughing;
 - A number of non-designated heritage assets are recorded along or close to the scheme (e.g. the 19th century farmstead and a former outfarm at Buckleigh and anti-tank blocks at the entrance to Chesworth Farm) and there is potential for activity relating to these sites to extend beyond the limits of previous investigations or the identified location of the asset. Where thus far unknown heritage assets are present along the route of the proposed pipeline, there is a possibility that they will be directly impacted by the groundworks for the scheme, which is likely to result

in damage and disturbance, and/or potentially the complete destruction, of these assets;

- Minor impact on some surviving historic boundary hedgerows in areas where open trenches are proposed may be unavoidable, but the temporary nature of the scheme means they are likely to be restored fairly quickly following groundwork. Where possible, the scheme may mitigate any impact on extant hedge-lines by using either directional drilling / auger-boring methods or crossing where there are natural gaps; and
- This assessment has found that the scheme will have no significant impact on the setting of designated heritage assets, because of its largely temporary and reversible nature.

13.0 PRELIMINARY RECOMMENDATIONS FOR FURTHER WORK

- 13.1 This section offers a suggested programme of further fieldwork which will confirm the presence or absence of archaeological deposits. It should be stressed that these recommendations are for information only and represent the professional opinion of Archaeology South-East.
- 13.2 Recommendations for further archaeological work are based on the combination of factors, such as the potential for archaeology, impact from past disturbances and proposed methodology for the scheme. They are made in relation to best archaeological practice.
- 13.3 The recommendations for further archaeological mitigation are summarised as follows:

Pipeline/s – easement corridor, laydown areas and open-cut trenching

As this is a desk-based assessment, whilst it is assumed that there will be some localised impacts on heritage potential, the majority of this route is likely to have been undisturbed, which suggests greater survival for buried heritage assets across the Site. Most of the pipeline is proposed to be installed using open-cut trenching usually following the strip of a c.15m wide temporary construction corridor. A non-intrusive programme of geophysical survey is recommended across the undeveloped areas of the scheme (e.g. fields) followed by a targeted programme of archaeological evaluation trenching prior to any groundwork. An archaeological evaluation, which could be targeted on anomalies identified during the geophysical survey, is the most economical approach for determining the presence or absence of archaeological deposits in this area, as well as establishing the character, dating and degree of preservation of any such deposits/ features and the results would then be invaluable in formulating an appropriate further mitigation strategy for the Site should significant archaeological deposits be present. No archaeological mitigation is recommended in areas of the pipe route which extend along existing road carriageways. This is because the potential for remains to have survived in these areas is generally considered to be lower. Archaeological watching brief monitoring may be required in any areas where and geophysical survey and/or archaeological trenching is not considered to be practical.

Pipeline – Pipe bridge and horizontal directional drilling plus associated launch and reception drill pits for crossings

A small section of the pipeline is proposed to be installed using trenchless, horizontal directional drilled and pipe bridge methods (Fig. 5). The areas selected for this method of pipe installation are limited to where there are physical obstacles which are difficult to cross (e.g. roads, rivers, mature treelines). As a result of this proposed method, any pre-construction archaeological investigation in these areas would have a greater impact on the archaeological resource than that caused by the scheme, and recent archaeological monitoring of launch and reception pits has proved to be fruitless due to the limited size of these excavations, therefore no pre-construction archaeological mitigation is recommended during the actual directional drilling and the excavation of drill pits. It is, however, recommended that any nearby compound / laydown areas are carried out with the usual pre-construction archaeological mitigation (evaluation trenching).

Compound/laydown areas and access tracks

Where compound areas are proposed to be stripped, they should be treated the same as the pipeline in terms of recommendations. Should track-matting be used for the access tracks, no impact is thought to arise, therefore there are no recommendations for further work.

- 13.4 These are preliminary recommendations based on the methods proposed at the time of writing. Should these methods change prior to construction, they would need to be reviewed.

ACKNOWLEDGMENTS

Archaeology South-East would like to thank the following for their help and advice in the preparation of this report:

John Nicklin, Neil Schofield and Nathan Camilleri, Southern Water
Melanie Dickenson, West Sussex HER
Searchroom staff, West Sussex Record Office

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Ordnance Survey extract, 1912

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APPENDIX 1: Summary table of heritage assets (use with Section 4 and Figures 2 - 4)

No	HER No	Eastings	Northings	Description	Period
Scheduled Monuments					
1	DWS299	517617	129385	MOATED SITE AND FISHPONDS 15M SOUTH OF CHESWORTH HOUSE	Medieval
Listed Buildings					
2	DWS6294	517065	130257	PARISH CHURCH OF ST MARY - Grade I listed building	Medieval
3	DWS5145	517611	129477	CHESWORTH HOUSE - Grade II* listed building	Medieval
4	DWS5626	517202	130451	HORSHAM MUSEUM - Grade II* listed building	Medieval
5	DWS5620	518184	129867	116 & 118, BRIGHTON ROAD, HORSHAM - Grade II listed building	Medieval
6	DWS5682	517254	130475	BUILDING TO REAR OF NO 6 AND BUILDINGS TO REAR OF NO 10 - Grade II listed building	Medieval
7	DWS6066	517372	130476	19-25 EAST STREET - Grade II listed building	Medieval
8	DWS6276	517142	130359	19 & 20, THE CAUSEWAY, HORSHAM - Grade II listed building	Medieval
9	DWS6340	517691	130421	31 NEW STREET - Grade II listed building	Medieval
10	DWS6271	517144	130460	THE MANOR HOUSE - Grade II* listed building	Post-medieval
11	DWS5571	517205	130534	1, SOUTH STREET - Grade II listed building	Post-medieval
12	DWS5572	517195	130517	4, SOUTH STREET - Grade II listed building	Post-medieval
13	DWS5591	517116	130149	ARUNDALE - Grade II listed building	Post-medieval
14	DWS5602	517232	130473	MARKET SQUARE 1 - Grade II listed building	Post-medieval
15	DWS5603	517229	130494	TOWN HALL, MARKET SQUARE - Grade II listed building	Post-medieval
16	DWS5605	517253	130381	6, MORTH GARDEN - Grade II listed building	Post-medieval
17	DWS5612	517699	130333	1-5, BRIGHTON ROAD - Grade II listed building	Post-medieval
18	DWS5613	517737	130317	11, BRIGHTON ROAD - Grade II listed building	Post-medieval
19	DWS5614	517746	130313	13, BRIGHTON ROAD, HORSHAM - Grade II listed building	Post-medieval
20	DWS5618	517903	130139	SOUTHGROVE - Grade II listed building	Post-medieval
21	DWS5627	517185	130414	13, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
22	DWS5628	517159	130379	17, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval

No	HER No	Eastings	Northings	Description	Period
23	DWS5629	517145	130367	18, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
24	DWS5630	517053	130301	24 & 26, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
25	DWS5631	517148	130387	THE MINSTREL - Grade II listed building	Post-medieval
26	DWS5632	517135	130415	FORMER STABLES TO SOUTH OF MANOR HOUSE - Grade II listed building	Post-medieval
27	DWS5662	517195	130435	NUMBER 10, CAUSEWAY LODGE - Grade II listed building	Post-medieval
28	DWS5663	517173	130404	14, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
29	DWS5666	517101	130312	CHURCHYARD AND VICARAGE WALL AND GATE PIERS - Grade II listed building	Post-medieval
30	DWS5676	517235	130307	12 & 18, DENNE ROAD - Grade II listed building	Post-medieval
31	DWS5710	517172	130528	34 SOUTH STREET - Grade II listed building	Post-medieval
32	DWS5793	516863	129746	NORTH LODGE - Grade II listed building	Post-medieval
33	DWS5857	520142	128694	RED COTTAGE AND THE OLD SMITHY - Grade II listed building	Post-medieval
34	DWS6255	517196	130525	2 & 3 SOUTH STREET - Grade II listed building	Post-medieval
35	DWS6264	517229	130470	12 & 13, MARKET SQUARE - Grade II listed building	Post-medieval
36	DWS6265	516864	130280	TOWN MILL - Grade II listed building	Post-medieval
37	DWS6275	517162	130390	16, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
38	DWS6277	517116	130362	28, THE CAUSEWAY, HORSHAM - Grade II listed building	Post-medieval
39	DWS6290	517303	130520	35, CARFAX - Grade II listed building	Post-medieval
40	DWS6291	517219	130461	7 & 8, THE CAUSEWAY - Grade II listed building	Post-medieval
41	DWS6292	517188	130425	NUMBERS 11 AND 12 INCLUDING ATTACHED WALL TO NUMBER 11 AND SUMMERHOUSES IN GARDEN OF NUMBER 11 - Grade II listed building	Post-medieval
42	DWS6293	517168	130397	16, THE CAUSEWAY - Grade II listed building	Post-medieval
43	DWS6295	517076	130314	CHANTRY HOUSE - Grade II listed building	Post-medieval
44	DWS6296	517135	130396	16, THE CAUSEWAY - Grade II listed building	Post-medieval
45	DWS6297	517397	130450	3, DENNE ROAD - Grade II listed building	Post-medieval
46	DWS6308	517128	130145	ARUN HOUSE - Grade II listed building	Post-medieval
47	DWS6311	517241	130483	6 & 10, MARKET SQUARE - Grade II listed building	Post-medieval

No	HER No	Eastings	Northings	Description	Period
48	DWS6312	517211	130535	Nos 5 & 5A, MIDDLE STREET - Grade II listed building	Post-medieval
49	DWS6313	517244	130388	5 MORTH GARDENS - Grade II listed building	Post-medieval
50	DWS6319	517730	130320	9 BRIGHTON ROAD- Grade II listed building	Post-medieval
51	DWS6544	520065	128612	CHULMLEIGH - Grade II listed building	Post-medieval
52	DWS6549	520277	128737	MASONS - Grade II listed building	Post-medieval
Archaeological Notification Areas					
53	DWS8532	517163	130310	Horsham Town Medieval Core, Horsham	Medieval
54	DWS8533	518034	129519	Chesworth House Medieval Moated Site and surrounding area, Horsham	Medieval
55	DWS8543	517424	129268	Denne Park - Historic park at Denne. House built 1870 in early C17 style. Stables and coachman's cottage. Fine double avenue of lime trees planted in C17. Good C19 cast iron screen railing. Extents of parkscape shown by the OS in 1813 and 1872-4. Within the grounds is the location of the ice house, as well as the location of a Canadian camp and firing range	Post-medieval
Finds and Monuments (archaeology)					
56	MWS1243	517000	130000	Mesolithic maceheads - Horsham	Mesolithic
57	MWS4598	516850	130050	Neolithic tools found at Needles playing field, Horsham	Neolithic
58	MWS494	517000	130000	Roman burial - Horsham	Romano-British
59	MWS502	517100	130400	Roman coin - Horsham	Romano-British
60	MWS3359	517608	129475	Chesworth House Moated Site - The monument includes a moated site and three associated fishponds lying on the north bank of the River Arun south of Horsham. The moated site and fishponds comprise a rectangular group of features aligned north west - south east, with the fishponds lying on the south east side of the complex	Medieval

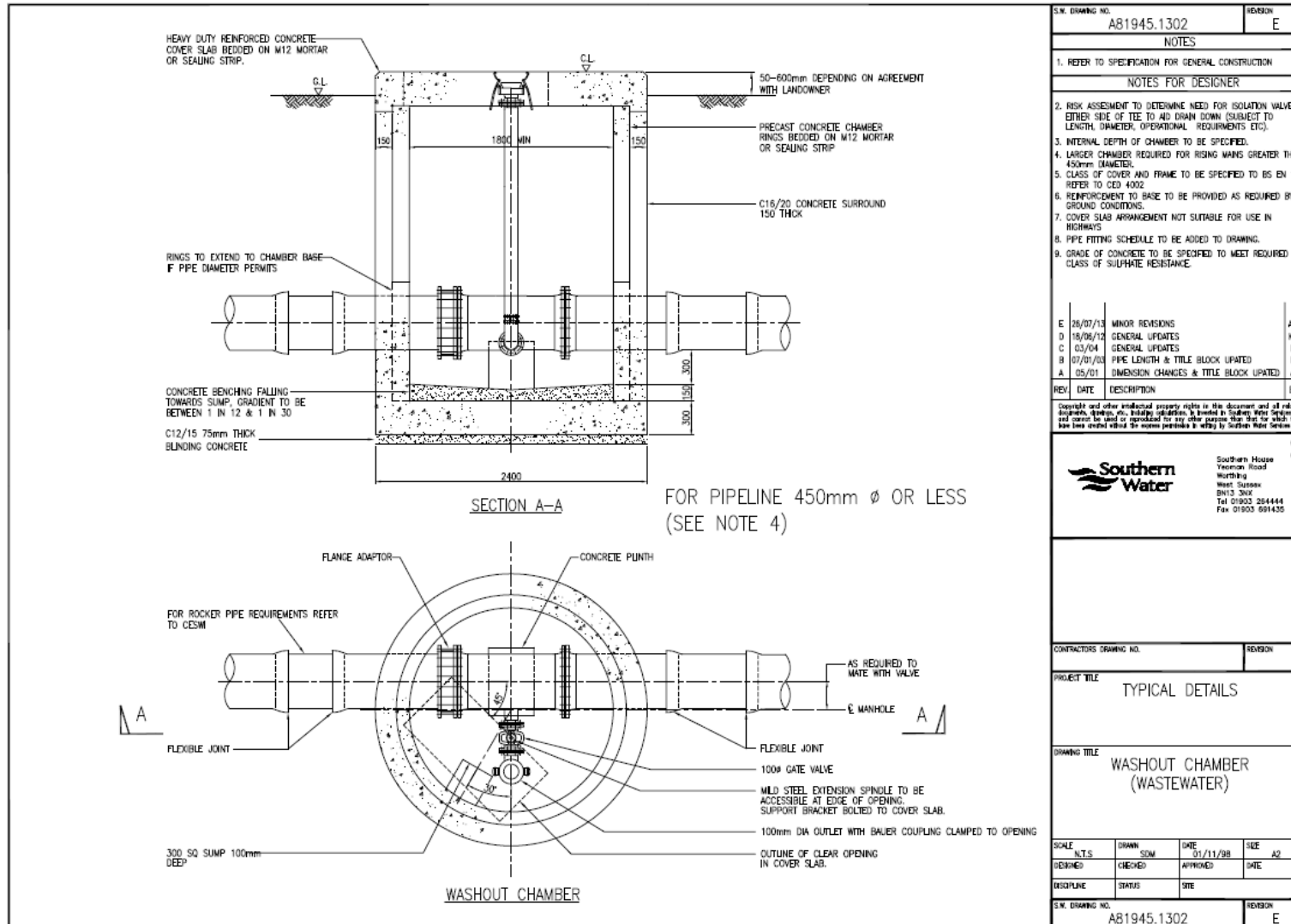
No	HER No	Eastings	Northings	Description	Period
61	MWS4203	517200	130500	Horsham Medieval town	Medieval
62	MWS495	517160	130340	Site of medieval glassworks - Horsham	Medieval
63	MWS9730	517643	129503	Chesworth Farm Historic medieval Farmstead, Horsham	Medieval
64	MWS9015	517241	130473	10 and 10A Market Square, Horsham - Historic Building Recording - No. 10 and 10A Market Square, Horsham, is one of ten medieval houses with one or two cross-wings that have been identified in the town, surviving in whole or in part	Medieval
65	MWS6724	517340	130490	13-15 East Street - interpretative survey - the earliest surviving part of the building was formerly the three-bay crosswing of a medieval house	Medieval
66	MWS6730	517300	130500	19, 21, 23 East Street - interpretative survey - a 15th century building which has undergone alterations through to the 20th century	Medieval
67	MWS3213	519350	129170	Ironworking site - At Birchen Bridge is a possible ironworking site. A bay, with modern weir at its SE end, has been heightened and widened with chalk and flint rubble to carry the main A281 road. At several places at the base of the bay on the SW side are quantities of forge cinder, and downstream the old watercourse has been dammed up with dumped soil and building rubbish, containing large amounts of forge cinder, possibly from the construction or reconstruction of the weir on the bay. A waterfilled pond is retained and there are two supply dumps on seperate streams above, one waterfilled at TQ20452956.	Medieval to Post-medieval
68	MWS6841	518300	129100	Amies Mill - a watermill which dates back to at least 1410 when listed as 'Assheles Mille'. A survey of 1650 refers to it as Amies Mill.	Medieval to Post-medieval
69	MWS7931	517416	130278	The Former Territorial Army Centre, Denne Road- Archaeological Field Evaluation - consisting of observations and the excavation of four trials trenches revealed a gully of Late Medieval / Post- Medieval date and other modern features	Medieval to Post-medieval
70	MWS8090	517110	130292	The Vicarage Garden, Causeway, Horsham - Evaluation - an open area of the Vicarage Garden was excavated and recorded where features including medieval and early postmedieval ditches, pits and possible quarry pits were encountered	Medieval to Post-medieval
71	MWS6721	517213	130444	Horsham Museum, 9 The Causeway - interpretative survey - an historical interpretive survey was carried out at Number 9 The Causeway, which now houses Horsham Museum	Medieval to Modern
72	MWS10618	519317	129094	Site of Foxhole Barn Historic 19th century Outfarm, Nuthurst	Post-medieval
73	MWS11873	518056	128953	Kerves Barn (Kerveslane Farm) Historic 19th century Outfarm, Nuthurst	Post-medieval
74	MWS12631	520066	128739	Northland Farm Historic 19th century Farmstead, Nuthurst	Post-medieval

No	HER No	Eastings	Northings	Description	Period
75	MWS12826	517208	129796	19th century Historic Outfarm, Southwater	Post-medieval
76	MWS13166	517144	130192	Horsham Parish Workhouse, Horsham - Horsham's parish workhouse was established in 1727 near the parish church, on the south side of Normandy. In 1842, the site was taken over to become St. Mary's almshouses	Post-medieval
77	MWS13186	517525	129331	Historic 19th century Outfarm South West of Chesworth Farm, Southwater	Post-medieval
78	MWS13421	519647	128586	Rickfield Farm Historic 19th century Farmstead, Nuthurst	Post-medieval
79	MWS13534	519761	129155	Site of Sheep Hovel Historic 19th century Outfarm, Nuthurst	Post-medieval
80	MWS13743	518071	130146	No. 72 Brighton Road, Horsham - a suburban villa dating from c1840 and altered in the late-C20 (delisted)	Post-medieval
81	MWS13989	518682	129108	Site of Whitesbridge Farm Historic 19th century Farmstead, Nuthurst	Post-medieval
82	MWS13993	519273	128343	Whytings Farm (Whitings Farm) Historic 19th century Farmstead, Nuthurst	Post-medieval
83	MWS497	517110	130220	Normandy Well - supposed to have been used by the Norman Brotherhood, who lived in the first house next to the churchyard	Post-medieval
84	MWS500	517200	130400	Post box - the 'window' letter box dating from 1830 consists of a wooden hinged panel in the entrance to Pump Alley. It is labelled 'Ye Old Horsham Post Box'	Post-medieval
85	MWS472	519380	129150	Watermill - Birchen Bridge - Birchenbridge Mill is shown by the OS in 1874	Post-medieval
86	MWS5143	517520	130260	Brickworks - Horsham	Post-medieval
87	MWS6723	517250	130450	Manor House, Causeway - Excavation produced five sherds of pottery: one late 13th - early 14th century sherd; one late 17th - early 18th century sherd; three rim sherds of c. 1900 dinner plate. Description of the house, built on the site of earlier tenements, which dates from 1704.	Post-medieval
88	MWS8571	517458	130418	Post-medieval and Modern Features, 52-56 East Street, Horsham - Evaluation	Post-medieval
89	MWS8777	517480	130459	1-4 Peel House and Bailey House, Bartellot Road - Former police station buildings. Peel House is two-storey with four gables fronting the road, and Bailey House built to similar designs, however of a smaller street front with two gables.	Post-medieval

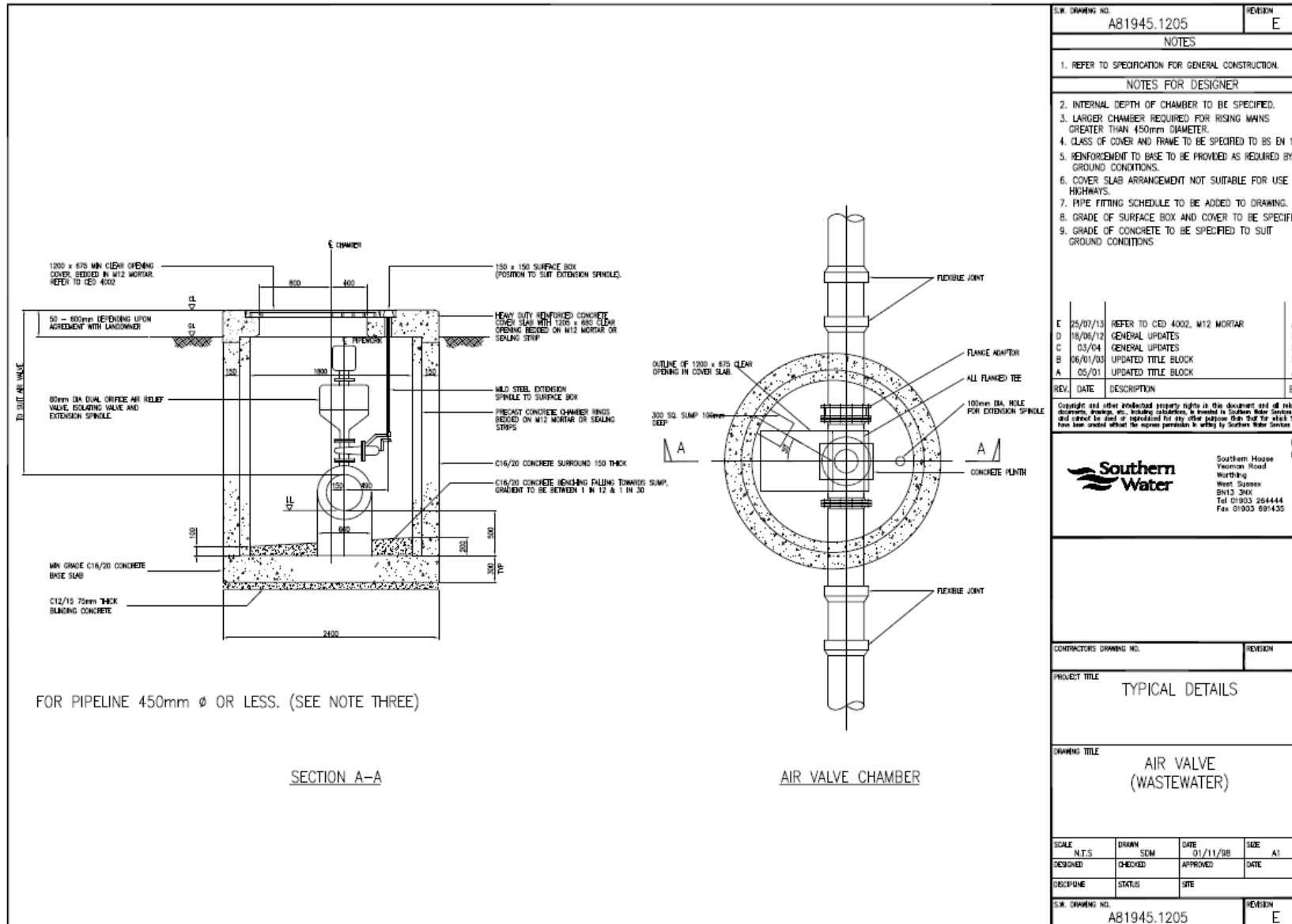
No	HER No	Eastings	Northings	Description	Period
90	MWS8782	517464	130461	Christian Life Church, East Street - previously the Pentecostal church and originally the Primitive Methodist Church.	Post-medieval
91	MWS8783	517472	130450	51 and 53 East Street - 51 East Street is a 2 and a half storey Victorian brick building and forms a group with 53 East Street	Post-medieval
92	MWS8784	517482	130415	58, 60 and 62 East Street - Double fronted two storey buildings providing a group value and form an attractive frontage to the junction with Park Way	Post-medieval
93	MWS8785	517531	130419	71 East Street and 1 Park Terrace West and Arches below - an unusual building with coarse rough stone façade, topped with heavy cement rendered cornice	Post-medieval
94	MWS8796	517644	130362	35 Queen Street - Two storey detached shop building	Post-medieval
95	MWS8797	517658	130358	Queens Head Public House, 37 Queen Street	Post-medieval
96	MWS9280	518367	129159	Amiesmill Farm Historic 19th century Farmstead, Nuthurst	Post-medieval
97	MWS15120	519360	129280	World War II Pillbox, Horsham	Modern
98	MWS9380	517000	130200	Memorial Garden, The Causeway - A Garden of Remembrance dedicated to the First World war, in particular Charles S Laughton	Modern
99	MWS8791	518312	129651	Highridge, Kerves Lane - Designed by local architect Claude Kay as his own home	Modern
100	MWS7517	517880	129790	Royal Observer Corps Monitoring Post (Cold War) - Horsham	Modern
101	MWS7692	517413	130283	Cold War Royal Observer Corps 2 Group Headquarters, Horsham	Modern
102	MWS6731	516800	130000	Horsham Barracks	Modern
103	MWS5313	517060	129930	Guard House	Modern
104	MWS5318	517086	129969	Horsham Anti-tank Blocks	Modern
105	MWS5319	517285	129860	Horsham - Pill Box	Modern
106	MWS5320	517356	129914	Anti tank blocks - Horsham	Modern

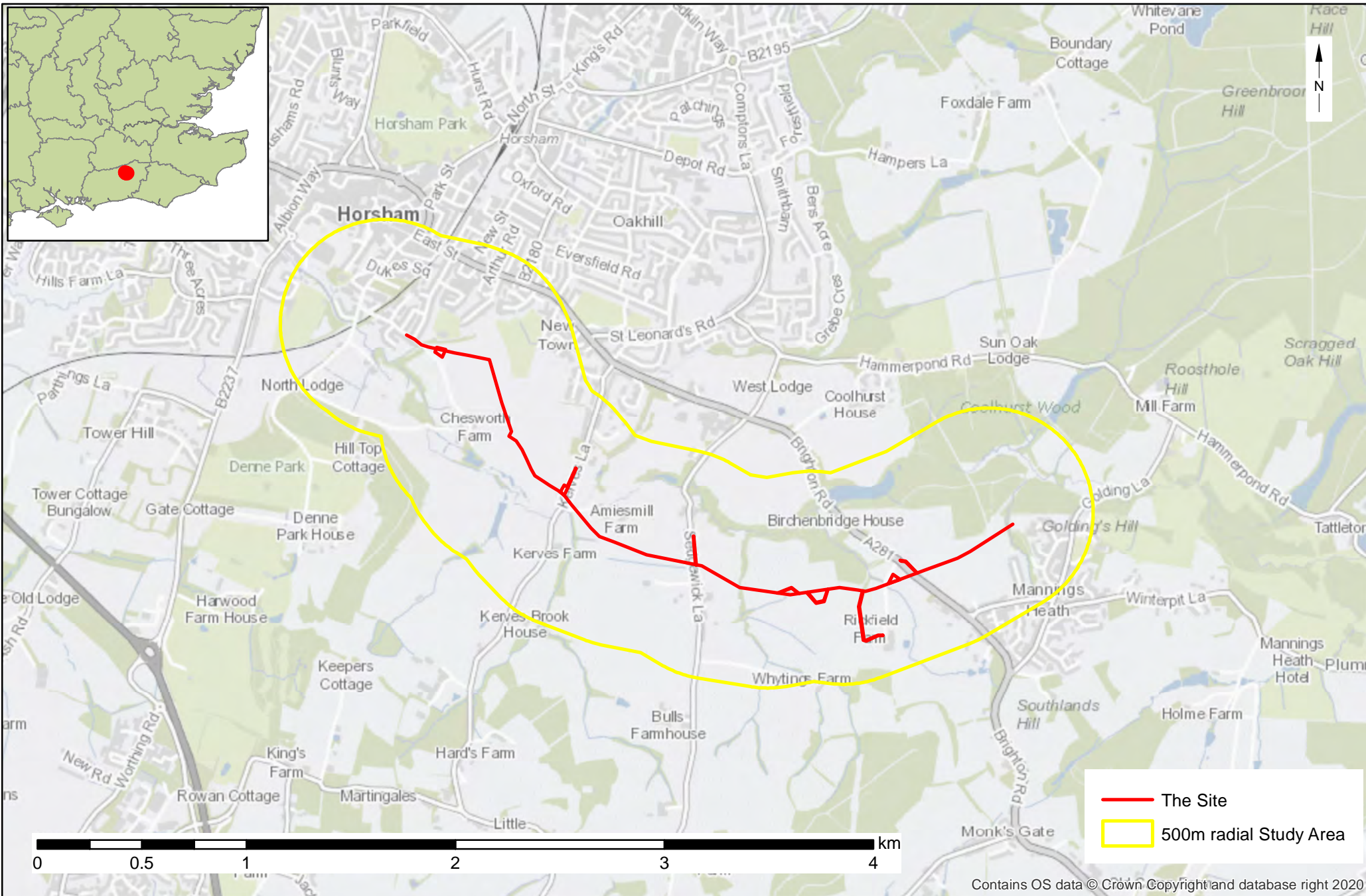
No	HER No	Eastings	Northings	Description	Period
107	MWS5321	518804	129261	Horsham - Pill Box	Modern
108	MWS5333	516999	130186	Horsham Pill Box	Modern
109	MWS5334	517300	130050	Trenches	Modern
110	MWS5540	517181	130447	Horsham anti-tank blocks	Modern
111	MWS4249	517280	130470	Archaeological Intervention - Talbot Lane - Two trenches were excavated around NGR TQ 1728 3047, the only features found were modern (e.g. a C20 manhole cover and electricity cable).	Modern
112	MWS6718	517351	130492	Archaeological evaluation (Stage 2) at 11/15 East Street - no archaeological feature were encountered during the evaluation	Negative

APPENDIX 2: Typical design details of washouts and air valves (provided by Southern Water)



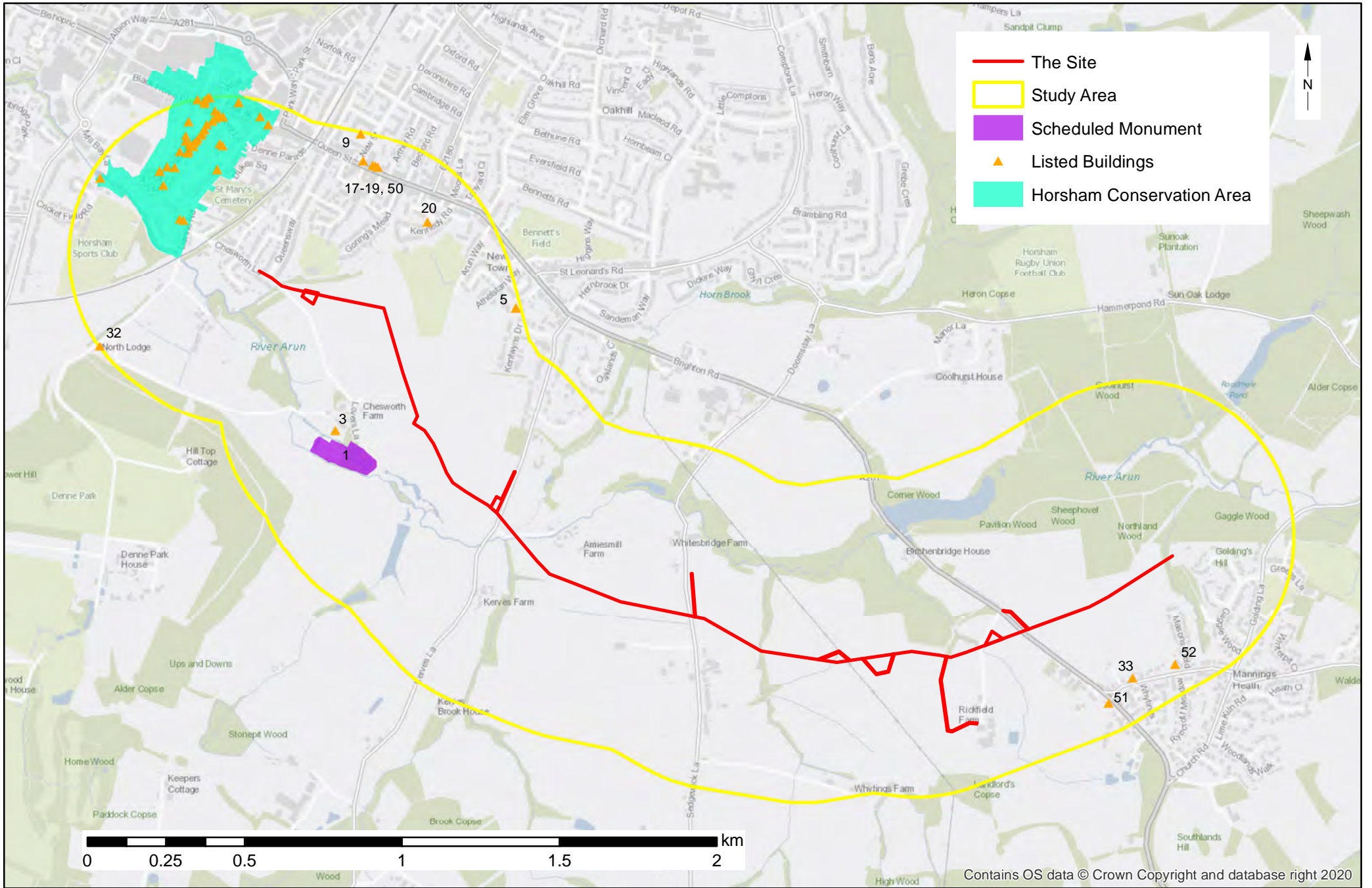
S.W. DRAWING NO. A81945.1302		REVISION E
NOTES		
1. REFER TO SPECIFICATION FOR GENERAL CONSTRUCTION		
NOTES FOR DESIGNER		
2. RISK ASSESSMENT TO DETERMINE NEED FOR ISOLATION VALVES EITHER SIDE OF TEE TO AID DRAIN DOWN (SUBJECT TO LENGTH, DIAMETER, OPERATIONAL REQUIREMENTS ETC).		
3. INTERNAL DEPTH OF CHAMBER TO BE SPECIFIED.		
4. LARGER CHAMBER REQUIRED FOR RISING MAINS GREATER THAN 450mm (DIAMETER).		
5. CLASS OF COVER AND FRAME TO BE SPECIFIED TO BS EN 124. REFER TO CED 4002.		
6. REINFORCEMENT TO BASE TO BE PROVIDED AS REQUIRED BY GROUND CONDITIONS.		
7. COVER SLAB ARRANGEMENT NOT SUITABLE FOR USE IN HIGHWAYS		
8. PIPE FITTING SCHEDULE TO BE ADDED TO DRAWING.		
9. GRADE OF CONCRETE TO BE SPECIFIED TO MEET REQUIRED CLASS OF SULPHATE RESISTANCE.		
REV	DATE	DESCRIPTION
E	26/07/13	MINOR REVISIONS
D	18/06/12	GENERAL UPDATES
C	03/04	GENERAL UPDATES
B	07/01/03	PIPE LENGTH & TITLE BLOCK UPDATED
A	05/01	DIMENSION CHANGES & TITLE BLOCK UPDATED
BY		
		AM
		KM
		DJ
		DM
		AM
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CONTRACTORS DRAWING NO.		REVISION
PROJECT TITLE TYPICAL DETAILS		
DRAWING TITLE WASHOUT CHAMBER (WASTEWATER)		
SCALE N.T.S.	DRAWN SDM	DATE 01/11/98
DESIGNED	CHECKED	APPROVED
DISCIPLINE	STATUS	DATE
S.W. DRAWING NO. A81945.1302	REVISION E	





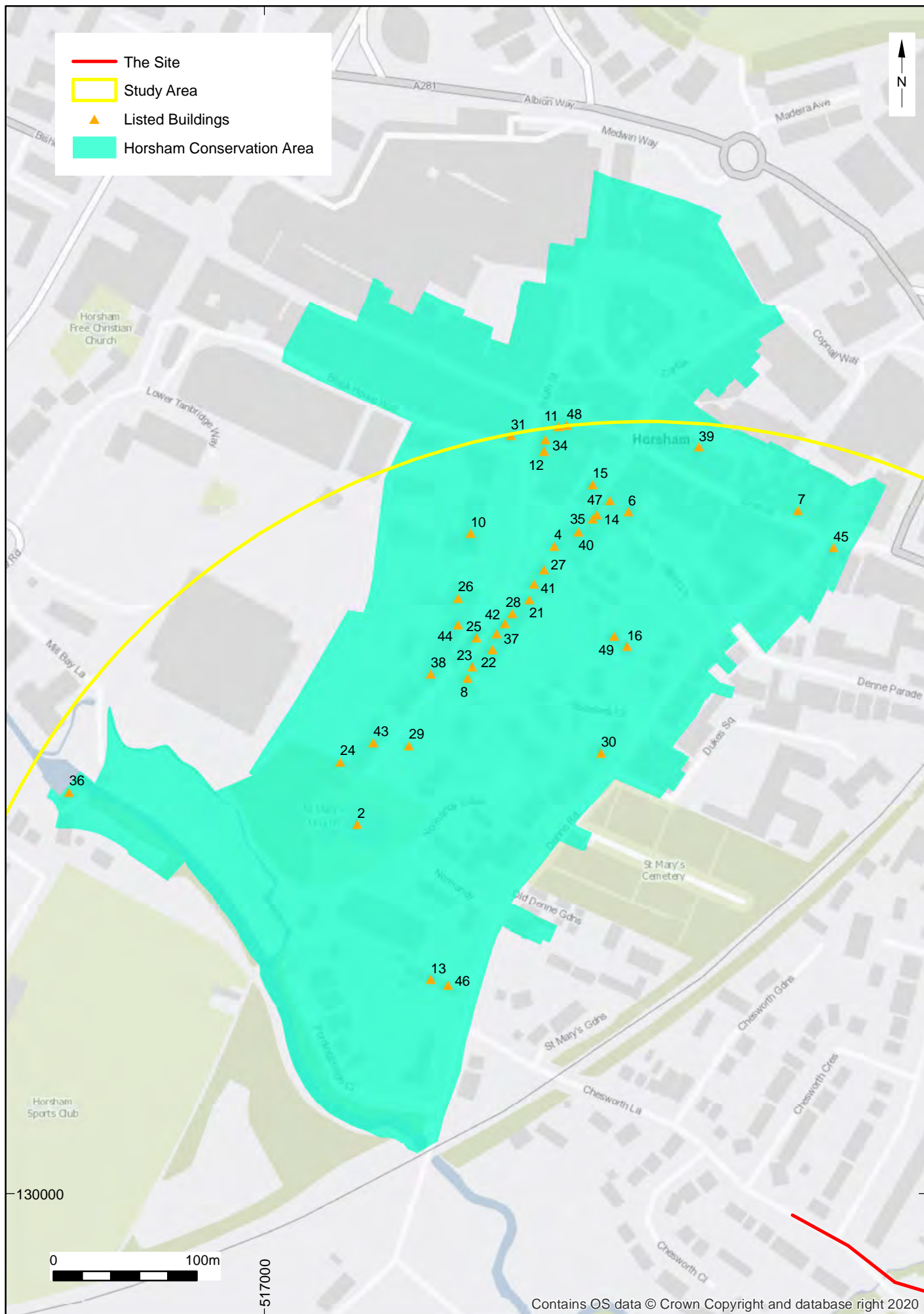
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© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 1
Project Ref: 220267	July 2022	Location of Site and Study Area	
Report Ref: 202208	Drawn by: KLRG		

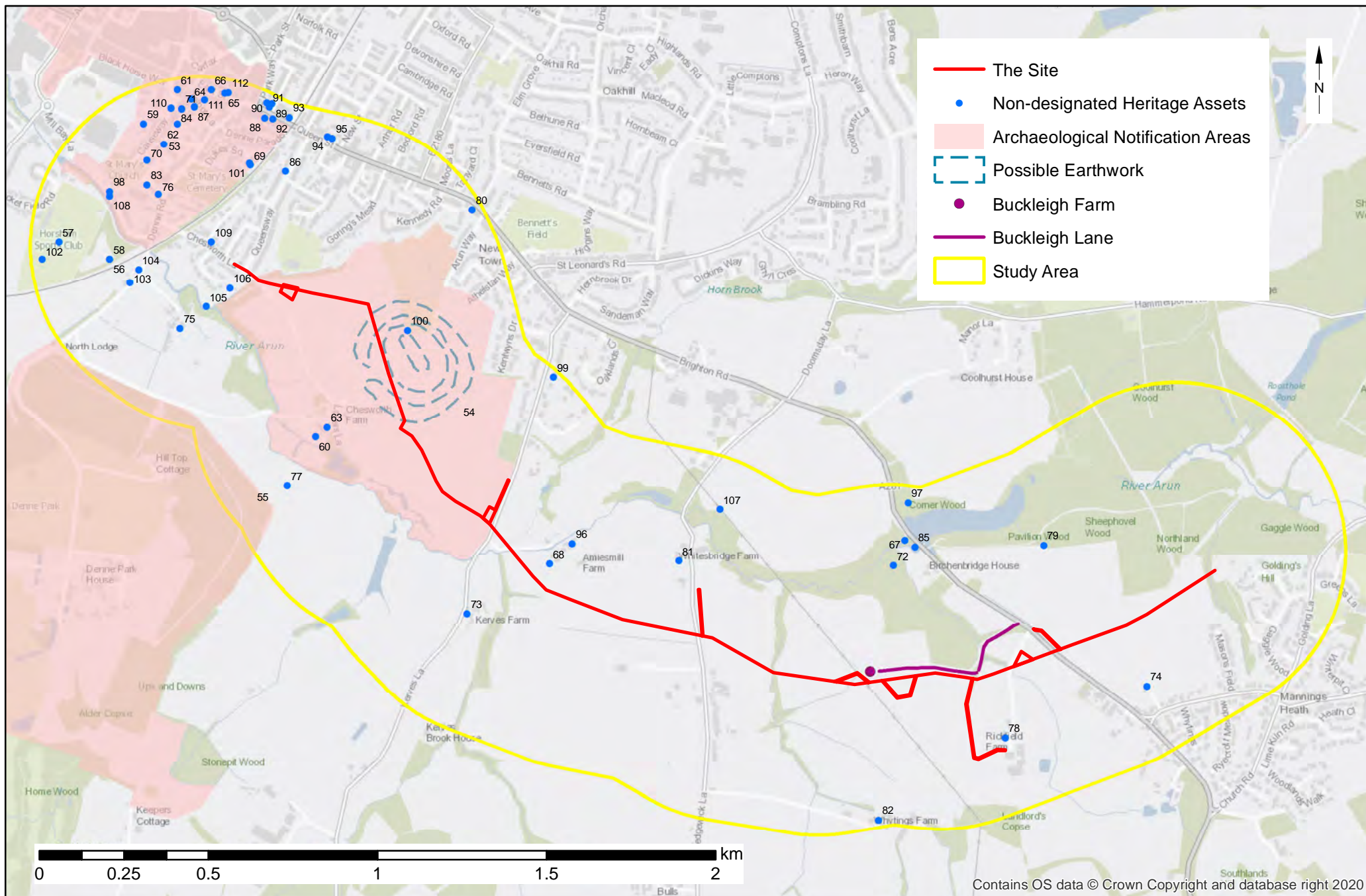


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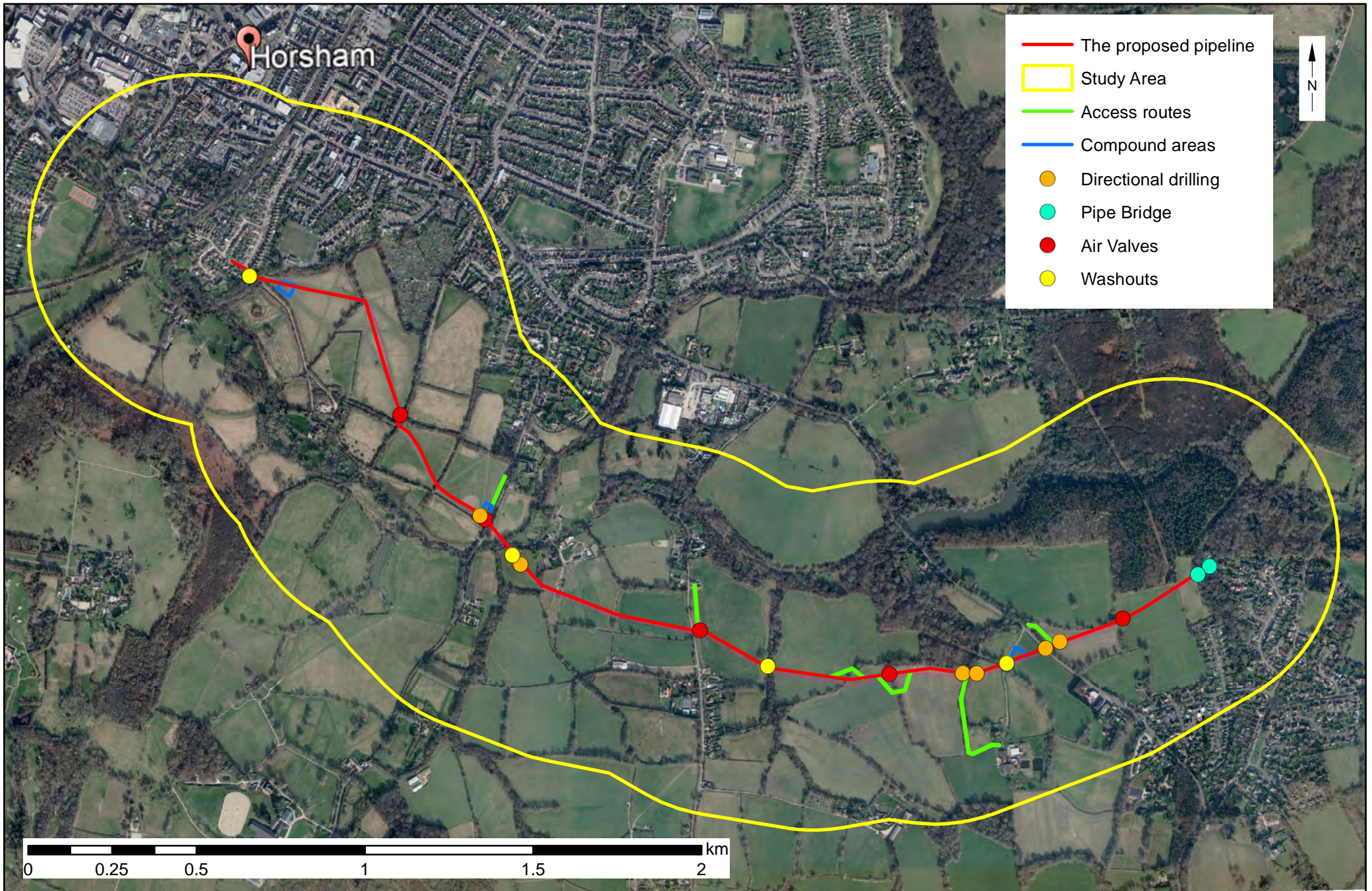
© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 2
Project Ref: 220267	July 2022	Plotted designated heritage assets	
Report Ref: 2022208	Drawn by: KLGR		



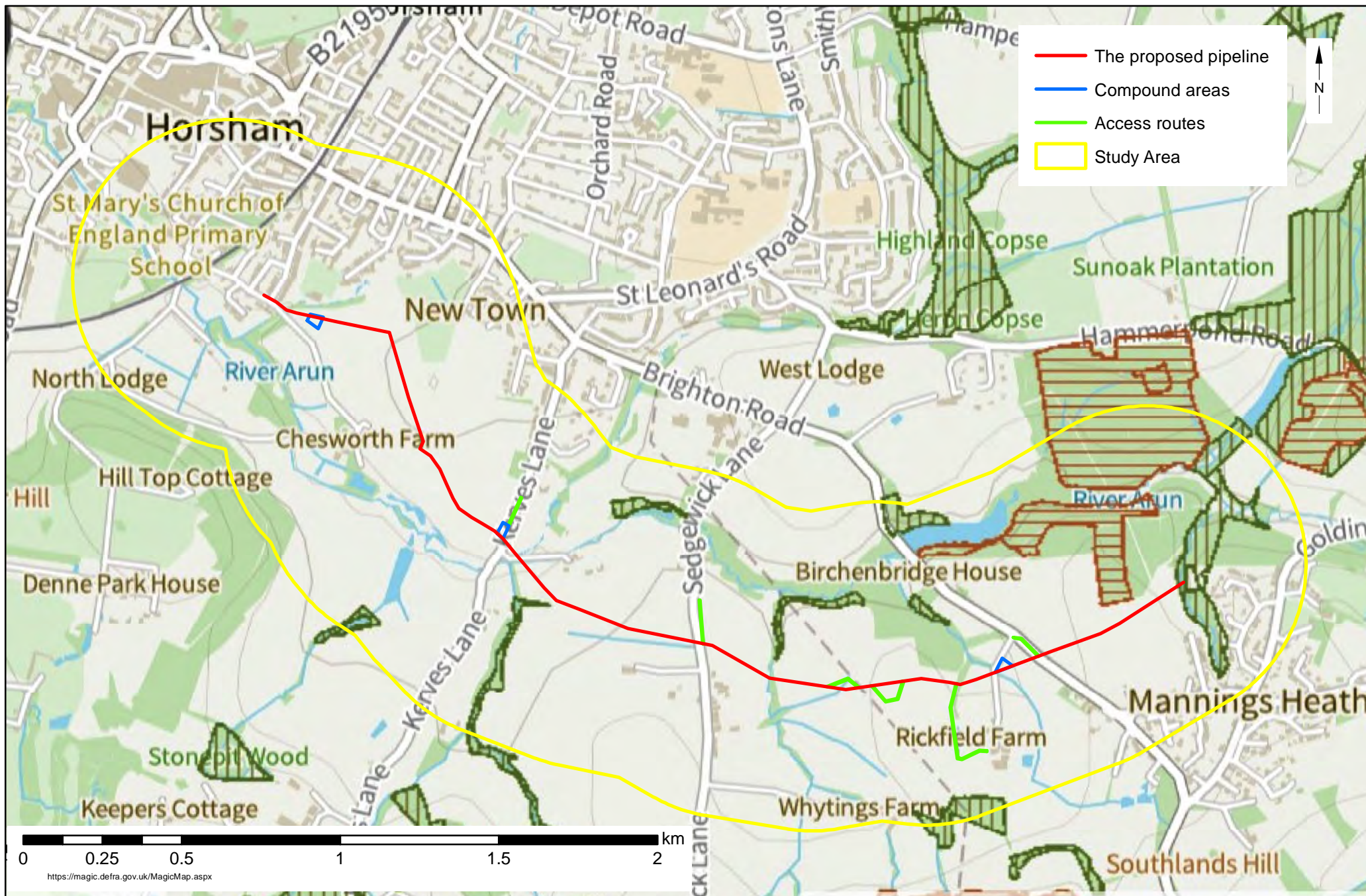
© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 3
Project Ref: 220267	July 2022	Detailed view of Conservation Area in north-west of Study Area	
Report Ref: 2022208	Drawn by: KLGR		



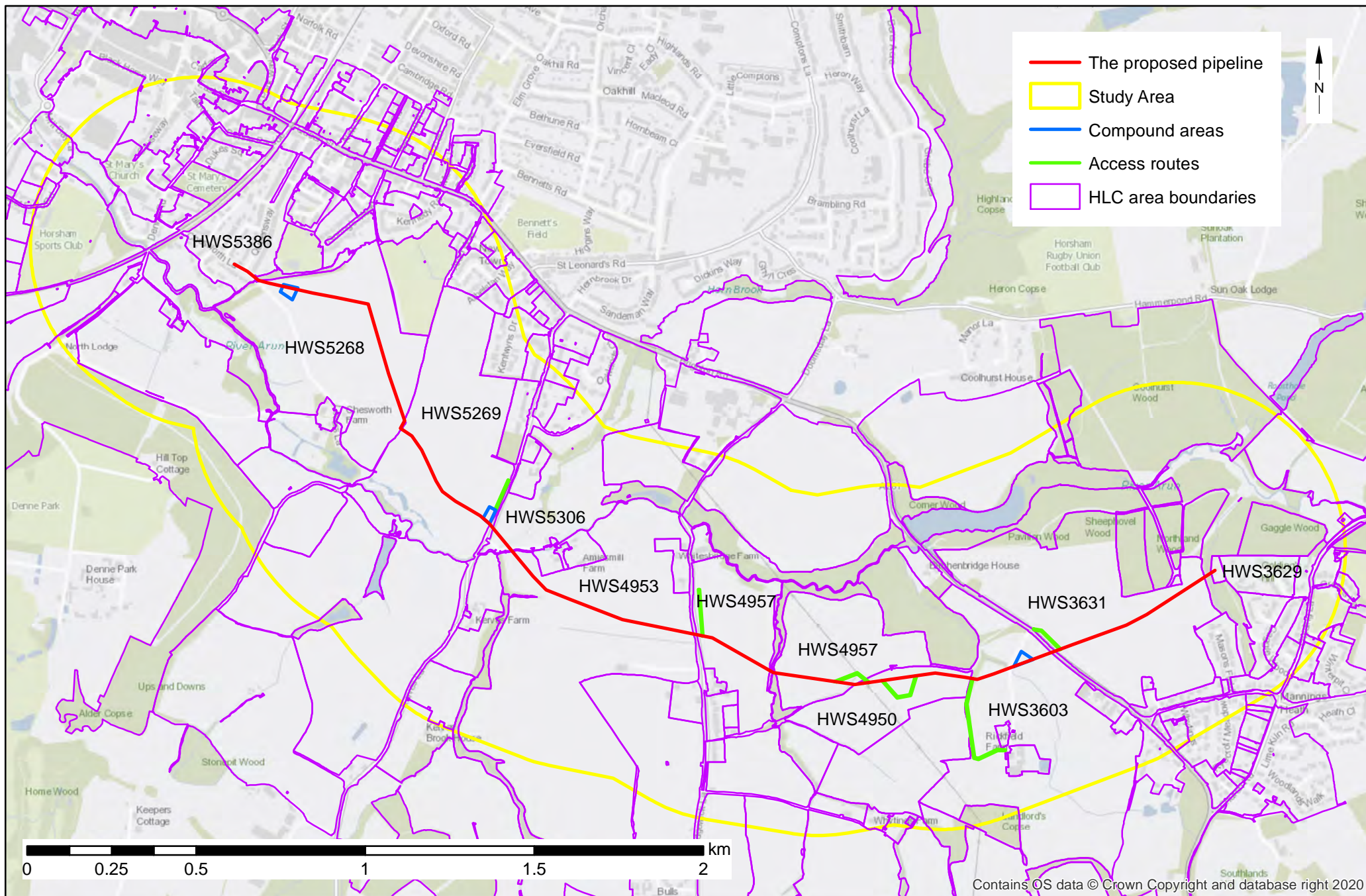
© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 4
Project Ref: 220267	July 2022	Plotted archaeological data: monuments and findspots	
Report Ref: 2022208	Drawn by: KLGR		



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Project Ref: 220267	July 2022	Google Earth satellite view showing the proposed pipeline scheme and methods (captured March 2022)	
Report Ref: 2022208	Drawn by: KLG		

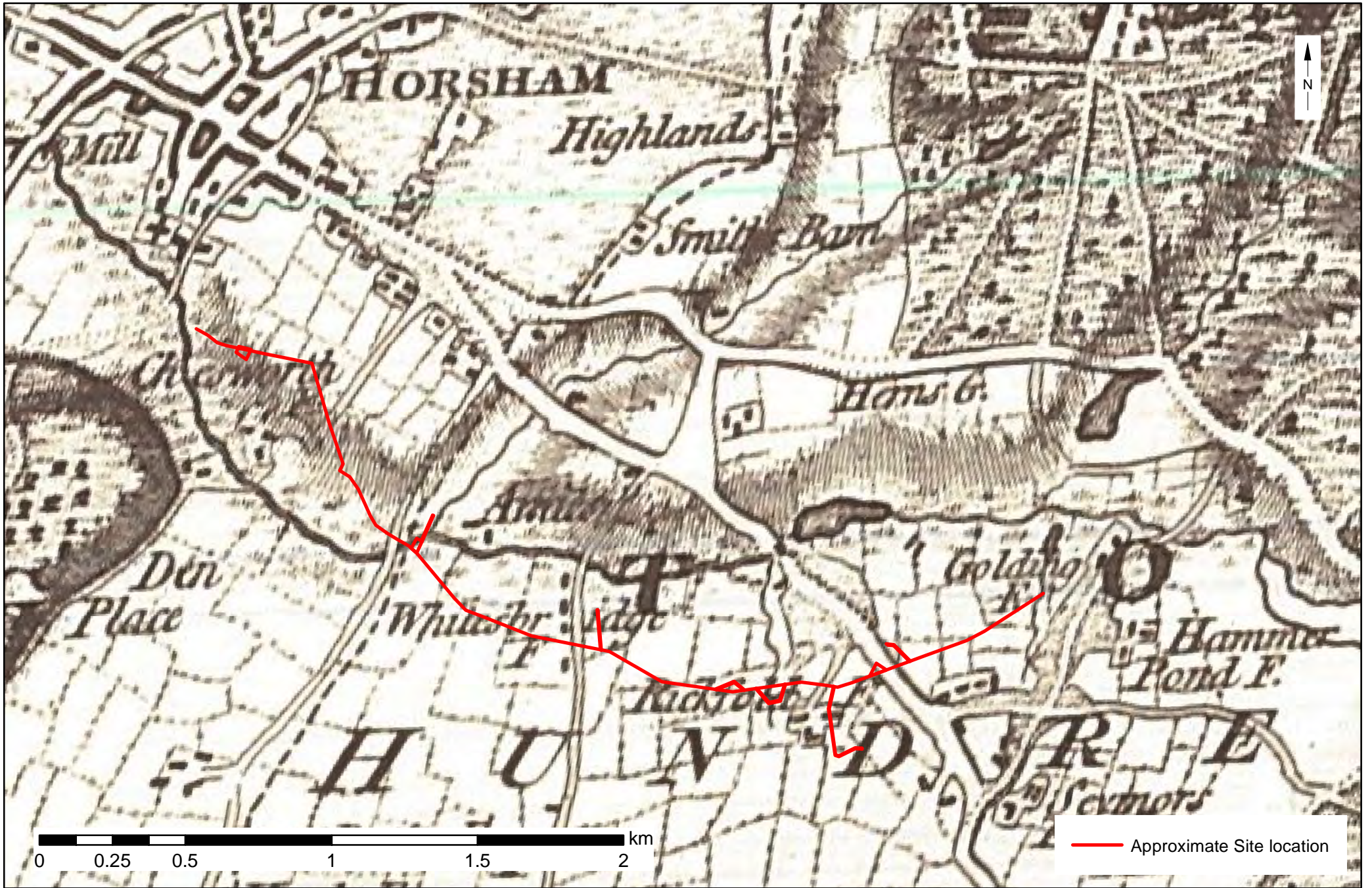


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Project Ref: 220267	July 2022	Areas of Ancient Woodland within the Study Area	
Report Ref: 2022208	Drawn by: KLGR		

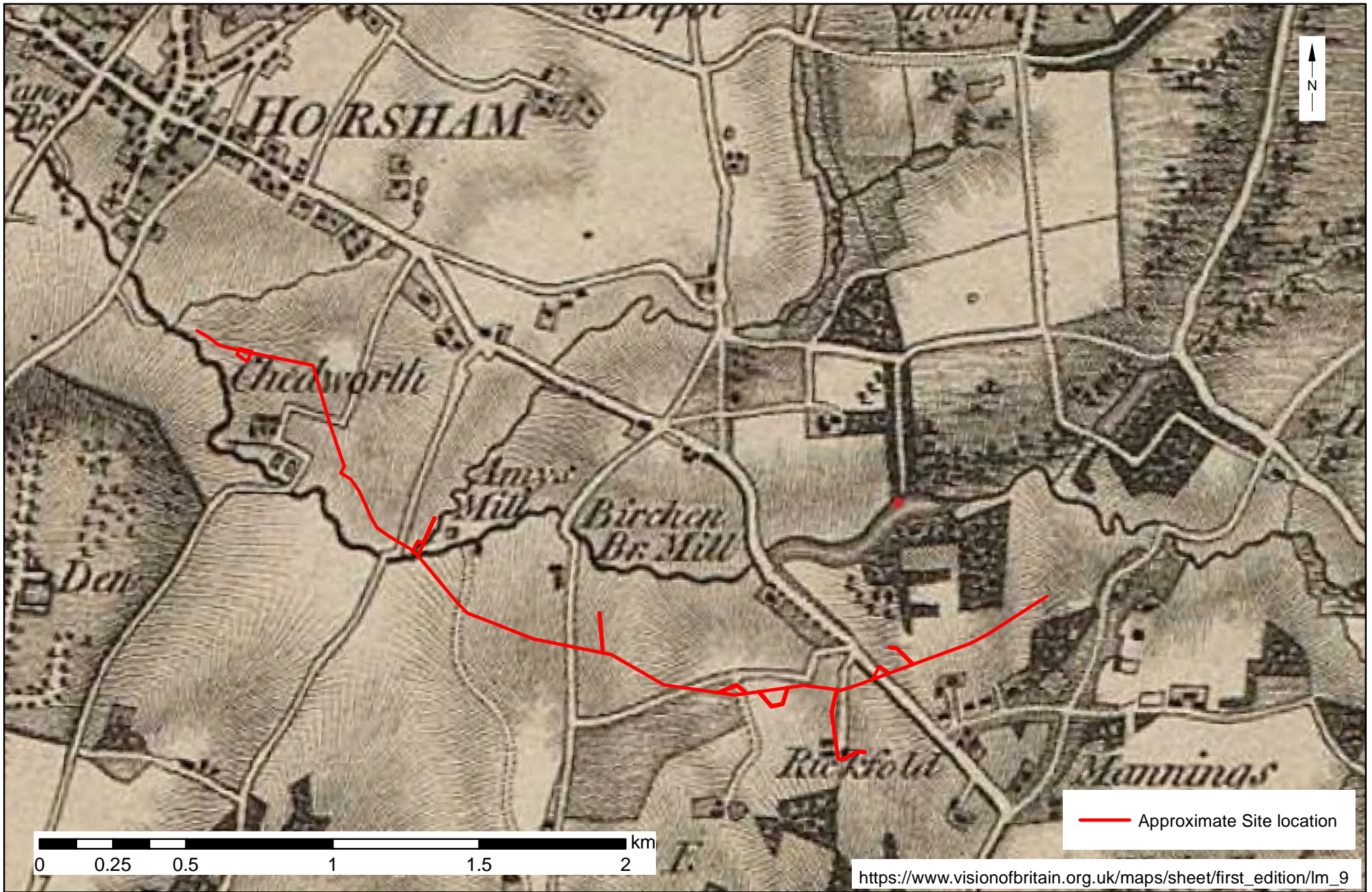


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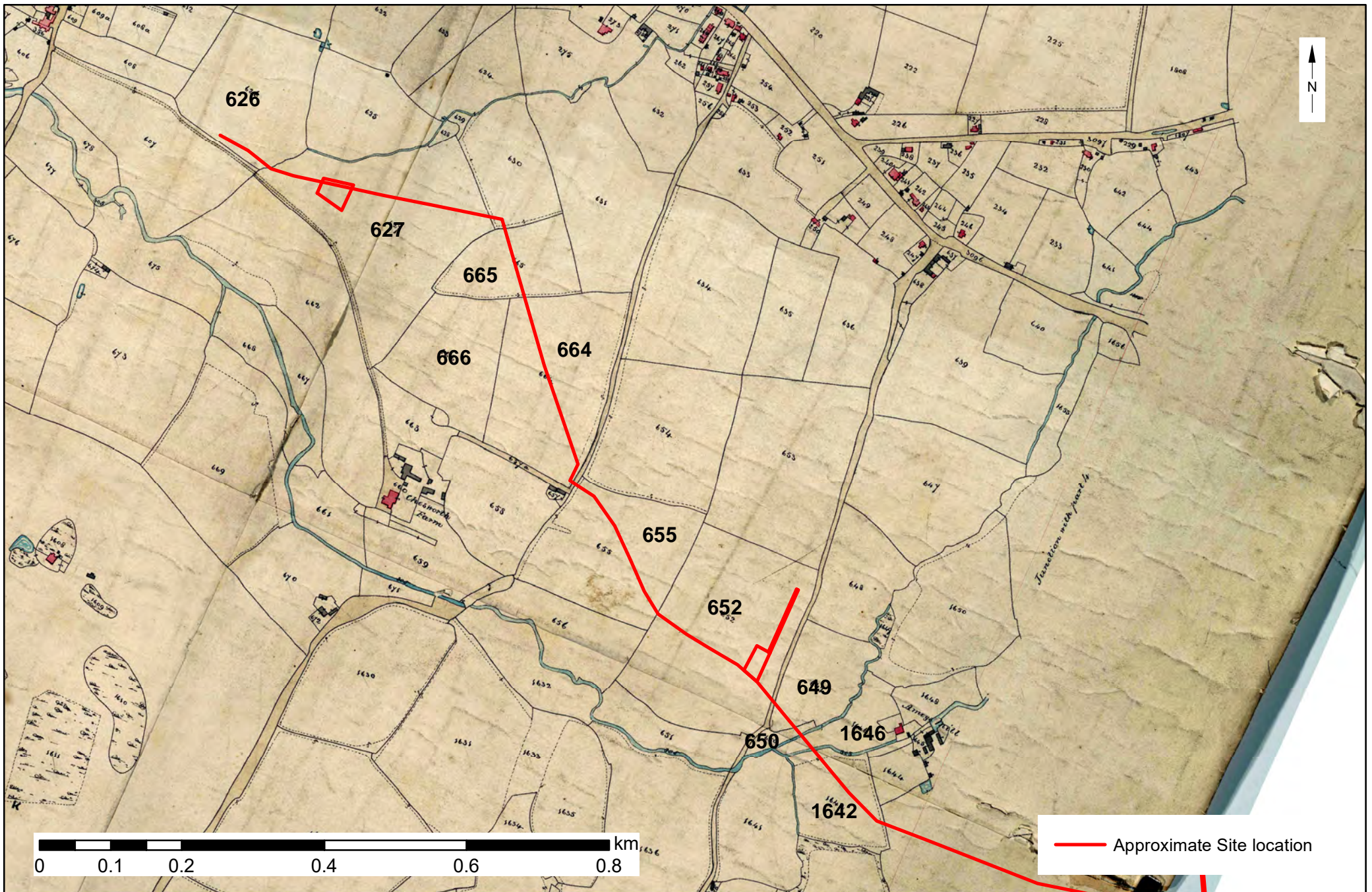
© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 7
Project Ref: 220267	July 2022	Location of Historic Landscape Character areas within the Study Area	
Report Ref: 2022208	Drawn by: KLGR		



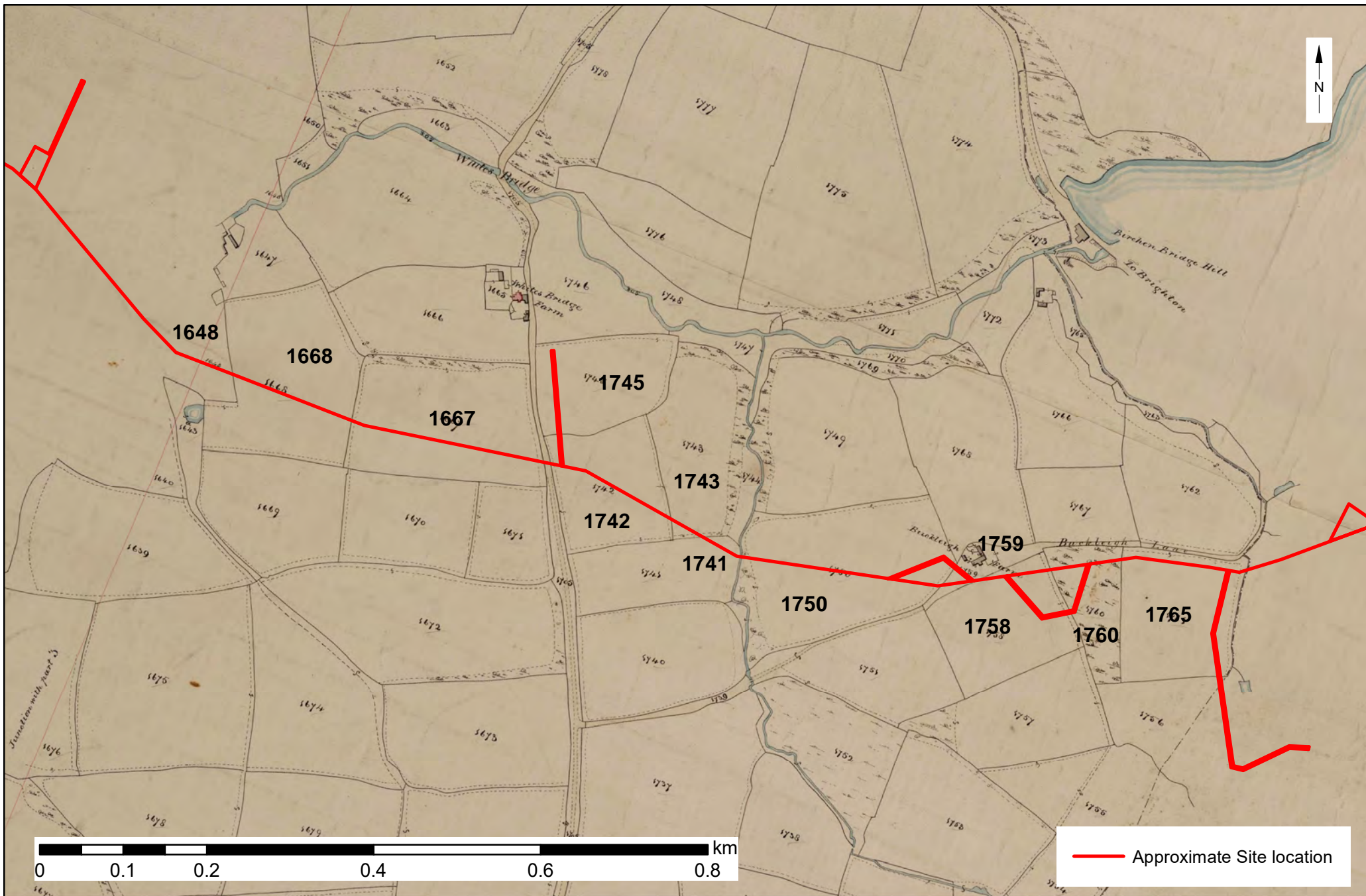
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Project Ref: 220267	July 2022	1795 Gardner and Gream Map of Sussex	
Report Ref: 2022208	Drawn by: KLGR		



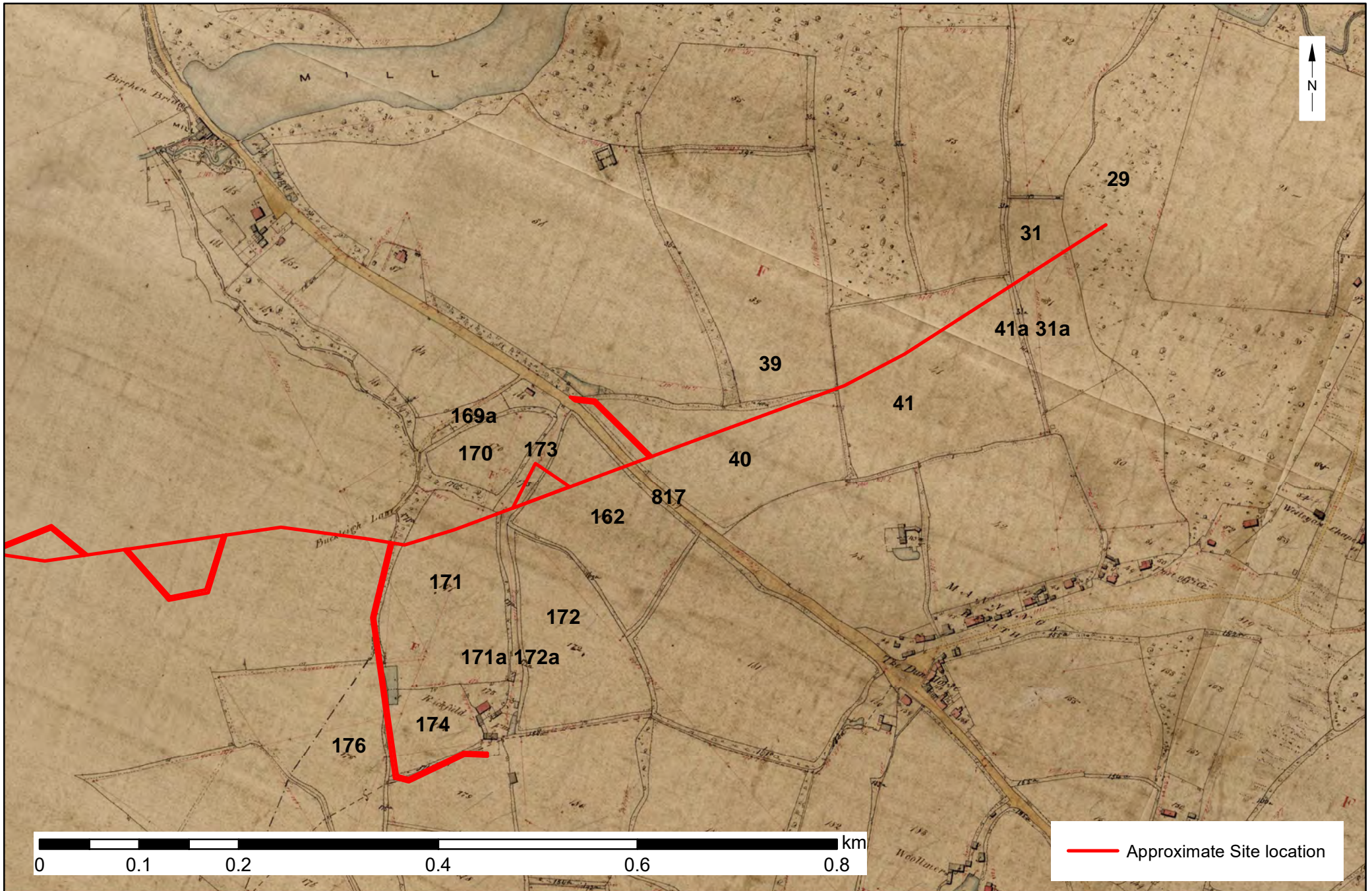
© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 9
Project Ref: 220267	July 2022	1813 Ordnance Survey First Series Map of Sussex	
Report Ref: 2022208	Drawn by: KLGR		



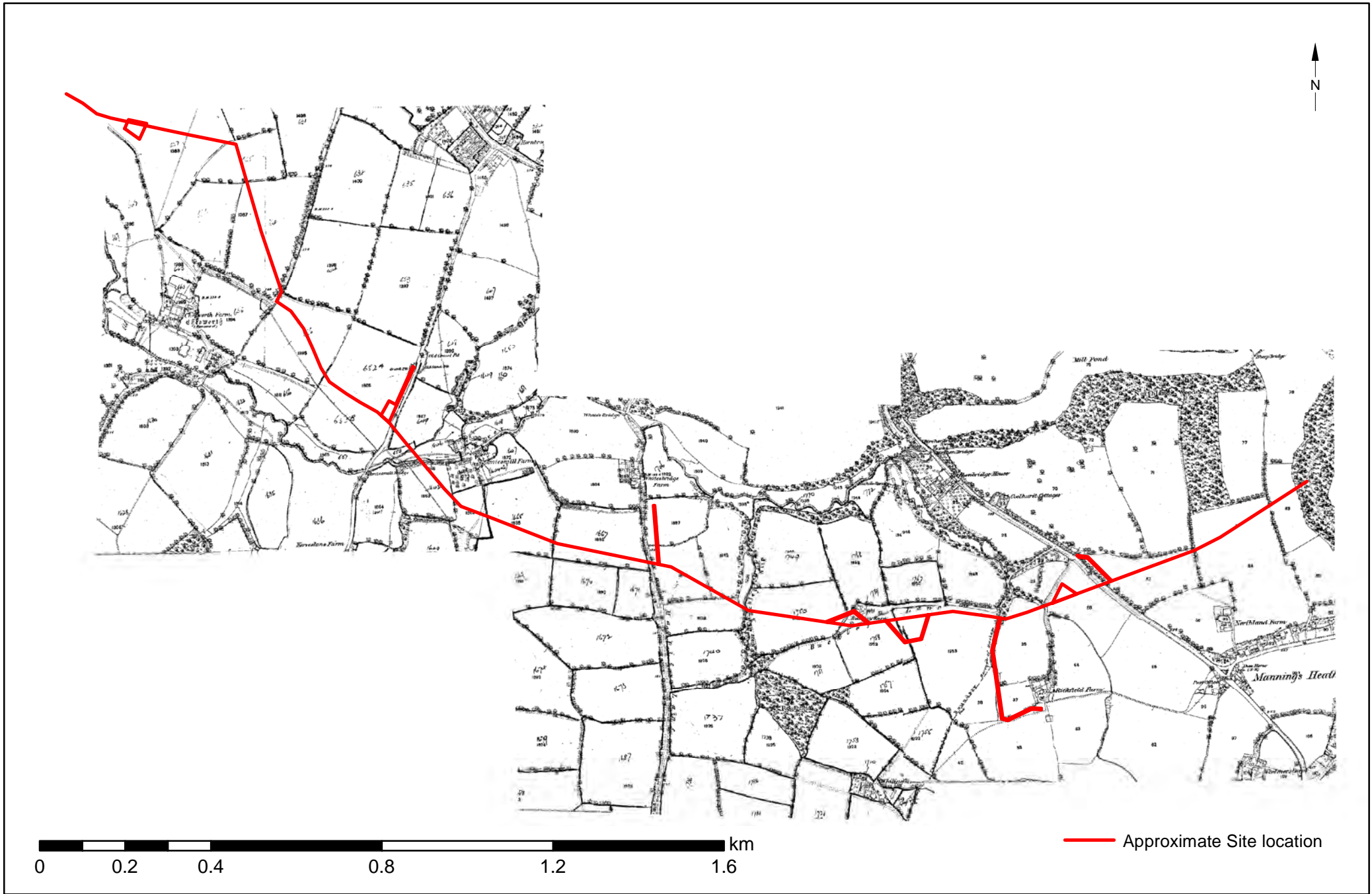
© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 10
Project Ref: 220267	July 2022	Horsham (Part 3) tithe map, 1844 (WSRO ref. TD/W68) – western end of scheme	
Report Ref: 2022208	Drawn by: KLGR		



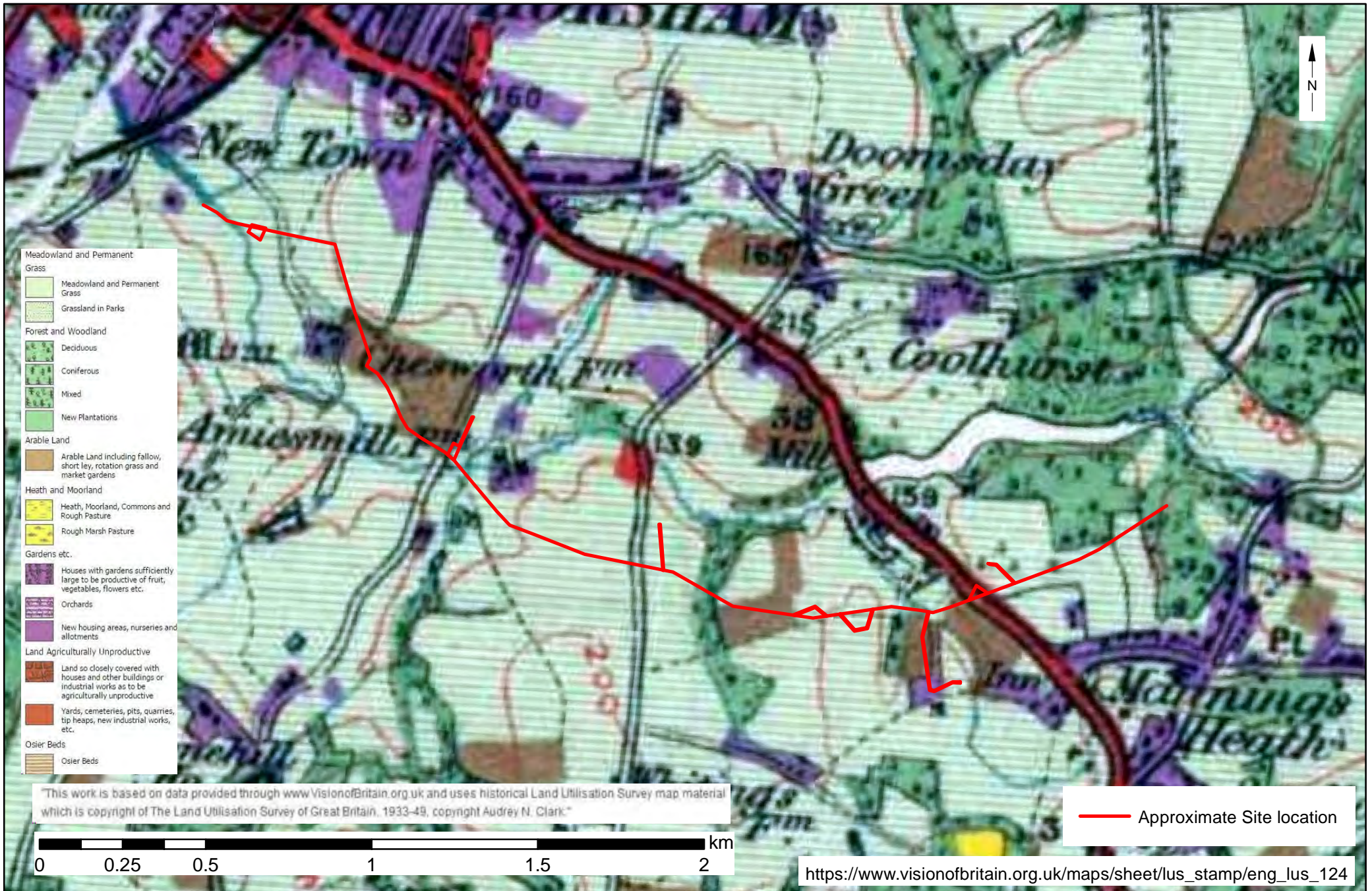
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Project Ref: 220267	July 2022	Horsham (Part 3) tithe map, 1844 (WSRO ref. TD/W68) – middle of scheme	
Report Ref: 2022208	Drawn by: KLGR		



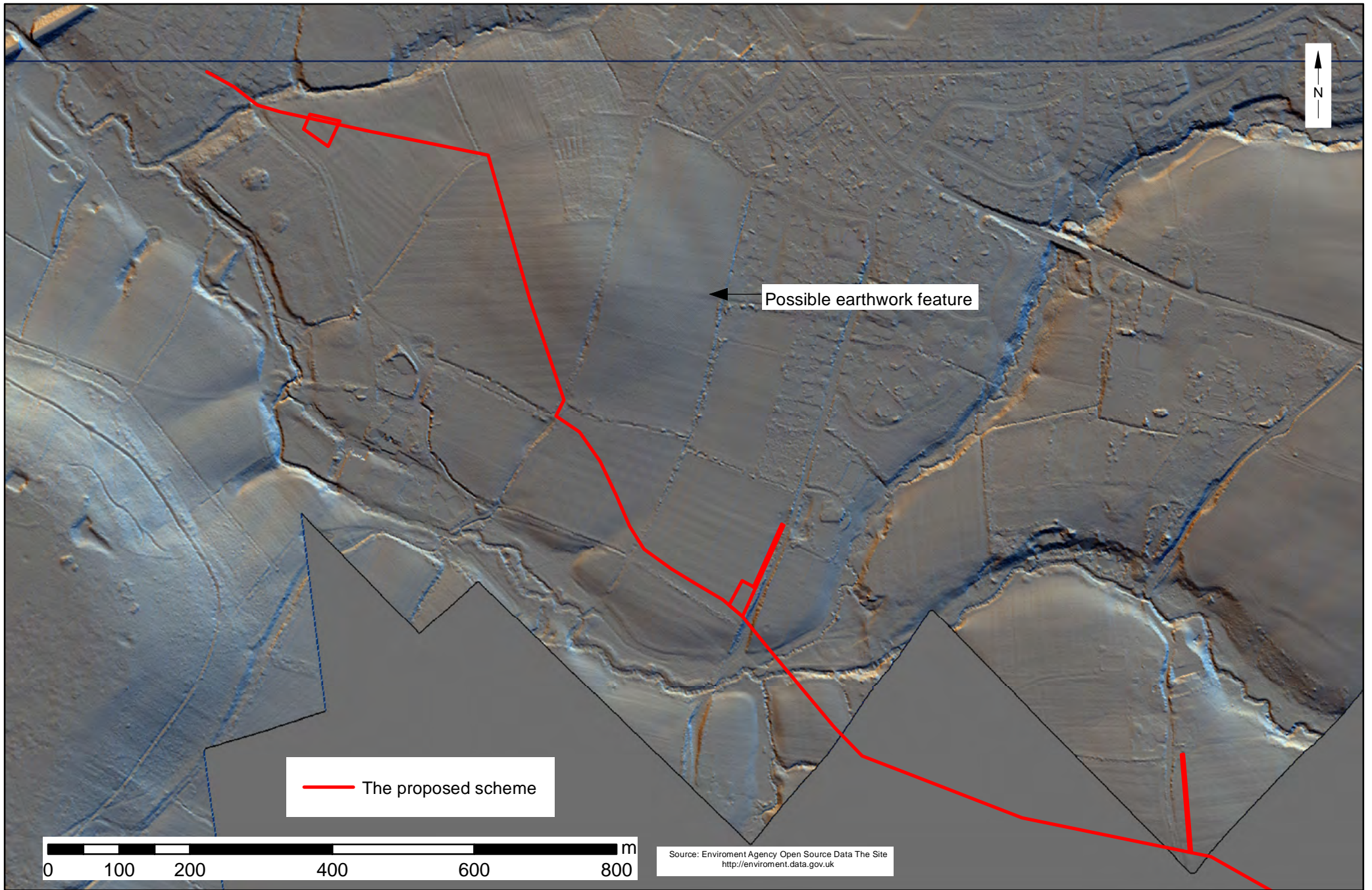
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Project Ref: 220267	July 2022	Nuthurst tithe map, 1841 (WSRO ref. TD/W92) – eastern end of scheme	
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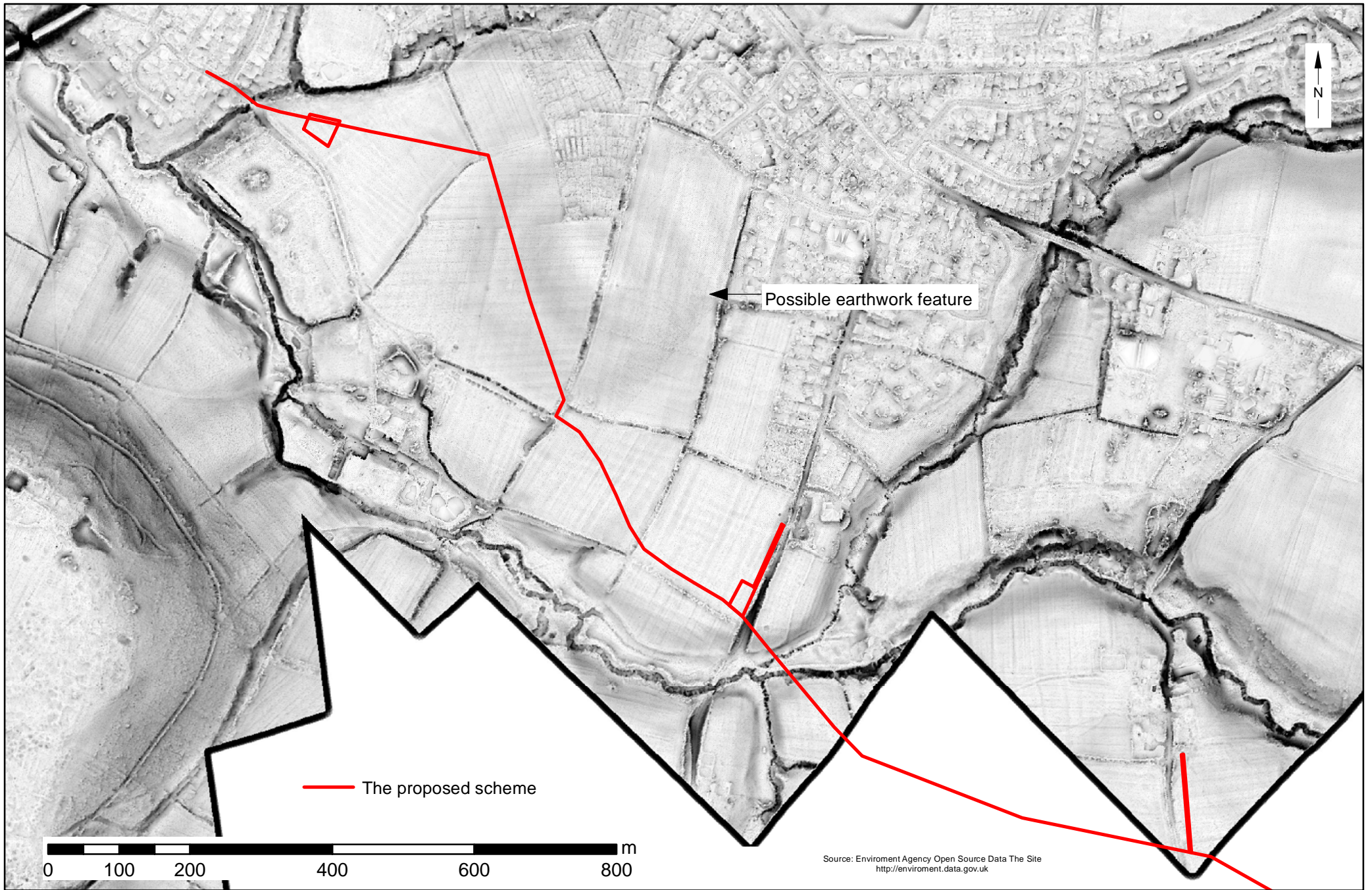
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Project Ref: 220267	July 2022	1875-6 Ordnance Survey map showing the Site	
Report Ref: 2022208	Drawn by: KLGR		



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Project Ref: 220267	July 2022	Land Utilisation Survey of Britain, 1938 (Source: Vision of Britain)	
Report Ref: 2022208	Drawn by: KLGR		



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Project Ref: 220267	July 2022	Lidar imagery (1m DTM Multi D16 H35) showing the	
Report Ref: 2022208	Drawn by: KLGR	area covering the western part of the pipeline	



© Archaeology South-East		Mannings Heath WTW to Chesworth Lane, West Sussex	Fig. 16
Project Ref: 220267	July 2022	Lidar imagery (1m DTM SVF R10 D16) showing the area covering the western part of the pipeline	
Report Ref: 2022208	Drawn by: KLGR		

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