

Project Plan for Trial Trench Evaluation at Windmill Hill, Ladbroke Cutting, Warwickshire (AC320-8)

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1 Executive Summary

1.1.1 This Project Plan details proposed methodologies, techniques and deliverables for trial trench evaluation on the Windmill Hill, Ladbroke Cutting, Warwickshire. The trial trenching addresses an area located east of Ladbroke village (hereafter referred to as 'the Site'; Figure 1).

1.1.2 The Site, centred at NGR SP 42700 59060, comprises a single parcel of land covering 7.01ha. Most of the Site occupies an arable field to the north of Windmill Lane, though a c. 195m x 20m strip of land in the field south of the road is also included.

1.1.3 Geophysical survey has identified the presence of possible archaeological features in the south-eastern part of the Site. A series of linear features in this area appear to mark out a series of enclosures. The features may continue to the south and east of the Site, and they fade out to the north and west.

1.1.4 The trial trenching is required to help clarify the location, extent, date, survival and significance of archaeological features identified during the geophysical survey, and will contribute to the following specific GWSI: Historic Environment Research and Delivery Strategy (HERDS) objectives:

- KC15: Can we identify regional patterns in the form and location of Late Bronze Age and Iron Age settlements across the route, and are there associated differences in landscape organisation and enclosure?
- KC21: Assess the evidence for regional and cultural distinctiveness along the length of the route in the Romano-British period, with particular regard to the different settlement types encountered along the route.
- KC40: Identify patterns of change within medieval rural settlement from the 11th to mid-14th century.

1.1.5 The purpose of this Project Plan is to:

- define the scope of work for trial trench evaluation;
- outline the aims of the investigation and how they will contribute to the specific objectives of the GWSI: HERDS;
- describe the methodology to be employed; and
- set out the proposed deliverables and reporting mechanisms.

2 Scheme Design Elements

- 2.1.1 The land is required for construction work on the HS2 rail alignment and associated engineering earthworks, a new carriageway road, a satellite construction compound, and subsequent landscape mitigation planting. The location for the trial trench evaluation have been selected to address construction programme risk to all the land required.

3 Location and Site Background

3.1 Site Location

- 3.1.1 The Site is centred at NGR SP 42700 59060 and lies within the parish of Ladbroke in the district of Stratford-on-Avon (Figure 1). It occupies a single tract of land, covering 7.01ha (Fusion Site GIS ID no.: C32019), that primarily extends across two arable fields separated by Windmill Lane, though it primarily covers the field to the north of the road. Windmill Hill lies to the north-west of the Site, while Ladbroke Hill Farm is located just over 400m to the north-east. The modern village of Ladbroke is centred c. 1km to the west of the Site.

3.2 Archaeological Baseline

- 3.2.1 The information presented below has been derived from the Environmental Statement (see references section), prepared in 2013, up-to-date Warwickshire Historic Environment Record data (Figure 2) and results of the surveys undertaken within the Site and in its environs (i.e. LiDAR (Figure 3) and geophysical survey (Figure 4)). A geophysical survey of the Site and a land parcel to the north-west was undertaken in 2013 and the results of this will be noted below (Figure 4; CN004, CH-004-016). In addition, another geophysical survey undertaken in 2017 and located 350m north-west of the Site indicated several phases of ridge and furrow (1EW03-FUS-EV-REP-CS07-0001583). Heritage assets discussed below are shown on Figure 2.
- 3.2.2 The Site is located in Archaeological Character Sub-Zone 11 (Ladbroke: Windmill Hill/Lady Hill/Ladbroke Hill) within Community Forum Area 16 (Ladbroke and Southam). The Sub-Zone does not include much evidence for archaeology other than extensive remains of ridge and furrow, which is mainly located to the south of the Site (Figure 2; Appendix CH-001-016).

Prehistoric/Romano-British

- 3.2.3 Geophysical survey within the Site revealed several linear features in the south-east corner of the main field (Figure 4). These were mostly on an east-west alignment, though there are signs that some may have formed small enclosures and two parallel features may represent a trackway. Other small anomalies may represent pits and postholes. The features fade out as they extend west and north; here they may have suffered from later truncation (Appendix CH-004-016: CN004). The features are undated, but on the basis of their morphology it is likely that they are of late prehistoric or Romano-British origin.

Medieval

- 3.2.1 Geophysical survey has revealed an area of ridge and furrow in the northern part of the Site (Appendix CH-004-016: CN004). This appears to be orientated north-west to south-east, which differs from modern ploughing which is orientated north-east to south-west. The ridge and furrow on the Site appears to survive in the north-west corner of the Site and elsewhere it may have been truncated by modern ploughing.
- 3.2.2 An area of extensive ridge-and-furrow and early enclosed fields are located immediately south of Windmill Lane, adjacent and south of the Site, across an area approximately 105ha (LBS046). The remains are visible on recent aerial photographs and LiDAR survey (Figure 3; Appendix CH-004-016: WA16.30, WA16.31, WA16.33, WA16.34, WA16.35 and WA16.36). The small size of the fields and morphology of the boundaries suggest they probably date to the medieval period. The survival of ridge and furrow earthworks within some wooded areas close to the Site suggests that much of the area was cleared for agriculture during the medieval period. LiDAR has indicated the presence of ridge and furrow within woodland at Ladbroke Fox Covert located 560m south-east of the Site (WA16.30) and on Windmill Hill located 270m west of the Site (Figure 3).

Post-medieval

- 3.2.3 The medieval ridge and furrow features on and close to the Site exist as part of a much larger expanse of former medieval open fields (LBS100). These fields were subjected to piecemeal enclosure surrounding the village of Ladbroke and continued to be farmed into the post-medieval period. Ridge and furrow earthworks follow extant field boundaries in some cases, indicating the transition from open field agriculture to enclosed agriculture and then to pasture. Few changes are evident in this landscape between the 1st edition OS maps and current field patterns.
- 3.2.4 Two post-medieval buildings appear on the 1887 first edition OS map, and one on the 1905 second edition OS in this area. These structures still stand in fields to the south of the Site.

Undated

- 3.2.5 LiDAR and hyperspectral survey revealed two linear features extending southwards from the Site (Figure 3). It is uncertain whether these features are related to those identified during the geophysical survey (Appendix CH-004-016, fig. 7).
- 3.2.6 Linear features were identified on the northern side of Windmill Hill from the LiDAR survey, c. 275m west of the Site (Figure 3). These features are fairly irregular, and their origin is uncertain; they may be remains of agricultural features, such as ditches or lynchets, or they may be natural.

3.3 Site Conditions

Topography

- 3.3.1 A ridge of elevated ground at the northern end of the Site overlooks the field to the south from a height of c. 122m aOD. This ridge is formed by the eastern end of Windmill Hill. From here, the field gently slopes southwards and eastwards to about 105m aOD in both directions.

Site stratigraphy

- 3.3.2 The underlying geology across the Site consisting of Charmouth Mudstone Formation, a sedimentary bedrock formed approximately 183–199 million years ago in the Jurassic Period¹. There are no superficial deposits in this area. The overlying soils at the Site are slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils in the north².
- 3.3.3 Three boreholes have been dug along Windmill Road, one of which lies within the Site boundary³. This recorded ploughsoil for 0.4m down to the underlying Lias clay.

Previous disturbance

- 3.3.4 The upper horizons may have been impacted by ploughing over the centuries, particularly during the medieval and post-medieval periods, though this is unlikely to have been extensive (Figure 3 and 4).
- 3.3.5 Windmill Road extends east–west across the southern end of the Site. The construction of this track may have caused some disturbance to the underlying archaeology in this area, though the geophysical survey results suggest that archaeological features have survived well in the southern part of the Site.
- 3.3.6 A water main extends along Windmill Road and northwards along the eastern boundary of the Site (Figure 5). These services are unlikely to have impacted the underlying remains within the field.

4 Aims and Specific Objectives

4.1 Need and Aims

- 4.1.1 The trial trench evaluation is required to determine, as far as reasonably possible, the nature of the archaeological resource within the Site.
- 4.1.2 The trial trenches will target the undated linear features in the south-eastern part of the Site (Figure 7). These are undated, but it is possible that they represent prehistoric and/or

¹ British Geological Survey, 2017 Geology of Britain viewer [online] accessed 21 November 2017 from <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

² Cranfield Soil and Agrifood Institute 2017 *Soilscapes* [online] accessed 21 November 2017 from <http://www.landis.org.uk/soilscapes/>

³ BGS, op. cit. SP45NW28-30

Romano-British remains. Trial trenching provides the most appropriate means of confirming the presence/absence and significance of archaeological remains from this broad range of periods.

4.1.3 The objective of the investigation is to identify the extent and character of any surviving archaeological remains within the Site and to inform an archaeological resource assessment of its knowledge value and ability to contribute to Specific Objectives. The outcomes of the investigation will be used to inform the requirement and strategy of further archaeological investigation. Where present, the investigation will define the character, extent, quality, preservation and significance of the archaeology in order to determine its potential to contribute to Specific Objectives set out in the GWSI: HERDS.

4.1.4 The aims of the trial trenching are to:

- to confirm the presence of the archaeological features identified by the geophysical survey in the south-eastern part of the Site;
- to confirm the presence/absence, extent and depth of any surviving archaeological remains in other areas the Site;
- to determine the nature, date, condition, state of preservation including any preservation bias, complexity and significance of any archaeological remains;
- to determine the likely range, quality and quantity of artefactual and environmental evidence present;
- suggest measures, if appropriate and feasible, for further archaeological investigation to mitigate identified significant impacts; and
- contribute to the delivery of GWSI: HERDS Specific Objectives as specified in Section 3.2.

4.2 Contribution to Specific Objectives

4.2.1 Through delivery of the works set out in Section 4 and through addressing the aims set out in 4.1.4, the trial trench evaluation will create knowledge and outputs that would contribute to the following specific objectives in the following ways:

Table 1 – Summary of HERDS Objectives

Specific Objective	Contribution
KC15: Can we identify regional patterns in the form and location of Late Bronze Age and Iron Age settlements across the route, and are there associated differences in landscape organisation and enclosure?	Geophysical survey has identified several linear features in the south-east part of the Site. These have yet to be dated, but based on their form they may be prehistoric in origin. The trial trench evaluation will seek to determine the presence of these features, and will aim to establish their depth below ground, character, date, depth and complexity.
KC21: Assess the evidence for regional	Geophysical survey has identified several linear features in

Specific Objective	Contribution
and cultural distinctiveness along the length of the route in the Romano-British period, with particular regard to the different settlement types encountered along the route.	the south-east part of the Site. These have yet to be dated, but based on their form may be of Romano-British origin. The trial trench evaluation will seek to determine the presence of these features, and will aim to establish their depth below ground, character, date, depth and complexity.
KC4o: Identify patterns of change within medieval rural settlement from the 11th to mid-14th century.	The Site lies within an area of extensive ridge and furrow. These define the medieval farming landscape east of the village of Ladbroke and over Windmill Hill, on which there is possible evidence of lynchets. It has been suggested that the open fields in this area are comparatively small perhaps reflecting a relatively intensive pattern of land-use in the area, and this can be characterised by the trial trench evaluation.

5 Scope and Methodology

5.1 Trial Trench Evaluation Scope

- 5.1.1 The trial trench evaluation will be undertaken in accordance with specific guidance produced by HS2, namely the Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035) and the GWSI: HERDS (HS2-HS2-EV-STR-000-000015).
- 5.1.2 Apart from the small strip of land in the southern field, the entirety of the Site was previously subject to geophysical survey and the results have been used to inform the trial trench evaluation scheme design (Figure 7). Geophysical anomalies indicate the presence of several linear features in the south-eastern part of the Site, plus an area of medieval ridge and furrow in the north (Figure 4).
- 5.1.3 The undated linear features occupy an area measuring approximately 130m x 90m. A total of eight 30m x c. 2m trenches will be excavated in this part of the Site, representing a 4% sample of the area (these include Trenches 14-21).
- 5.1.4 A 2% sample of the remaining area of the Site will be examined. This will require 19 30m x c. 2m trenches and one 15m x c. 2m trench. The majority of these will be randomly positioned around the Site to investigate 'blank' areas, including the patch of ridge and furrow in the north. At least one trench will be positioned in the small strip of field to the south of Windmill Road to investigate the linear features observed on the LiDAR and hyperspectral survey.
- 5.1.5 All trial trenches are listed in Table 2 and each has been assigned a unique ID in accordance with the Employer's Asset Information Management System (AIMS). A contingency for an extra 1% sample of the Site will be excavated if unexpected archaeological remains are encountered. In the event of the contingency being invoked, a further 10 30m x c. 2m trenches will be excavated, following approval of Fusion, to characterise the remains.

Table 2 – Schedule of Trial Trenches

AIM ID.	Tr. No.	Length	Width	Max. Trench Depth	Objectives/Comments
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	001	30.00	2.00	To natural geology	Random trench location
	002	30.00	2.00	To natural geology	Random trench location, in area of recorded ridge and furrow
	003	30.00	2.00	To natural geology	Random trench location, in area of recorded ridge and furrow
	004	30.00	2.00	To natural geology	Random trench location, in area of recorded ridge and furrow
	005	30.00	2.00	To natural geology	Random trench location
	006	30.00	2.00	To natural geology	Random trench location
	007	30.00	2.00	To natural geology	Random trench location, in area of recorded ridge and furrow
	008	30.00	2.00	To natural geology	Random trench location, in area of recorded ridge and furrow
	009	30.00	2.00	To natural geology	Random trench location
	010	30.00	2.00	To natural geology	Random trench location, in area of recorded ridge and furrow
	011	30.00	2.00	To natural geology	Random trench location
	012	30.00	2.00	To natural geology	Random trench location
	013	30.00	2.00	To natural geology	Random trench location
	014	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	015	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	016	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	017	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	018	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	019	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	020	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	021	30.00	2.00	To natural geology	Targeted on geophysical anomaly
	022	30.00	2.00	To natural geology	Random trench location
	023	30.00	2.00	To natural geology	Random trench location
	024	30.00	2.00	To natural geology	Random trench location
	025	30.00	2.00	To natural geology	Random trench location
	026	30.00	2.00	To natural geology	Random trench location
	027	30.00	2.00	To natural geology	Random trench location
	028	15.00	2.00	To natural geology	Random trench location

5.2 Methodology

5.2.1 Tasks and activities that will be undertaken include:

Setting out

5.2.2 All spatial setting out and recording shall be in accordance with The Ordnance Survey National Grid and Ordnance Survey Newlyn Datum (ODN) as defined by the OS Active GNSS network and use of a Virtual reference system. A minimum of three Permanent Ground Markers (PGM) shall be created using this system for each trench or group of geographically related trenches.

5.2.3 Trial trenches shall be located to a horizontal accuracy of +/-500mm. The corner points of each trench location shall be set out with Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS) equipment or other suitable automated equipment referenced from the PGMs.

- 5.2.4 Surface heights shall be recorded using RTK GNSS and related to PGMs. Ordnance Survey Bench Marks (OSBM) are not to be used. Levelling accuracy shall be within 10 mm/k: where 'k' is the total distance levelled in kilometres.
- 5.2.5 The Archaeological Contractor shall ensure that all trial trench limits, and significant archaeology detail are surveyed 'as dug' in relation to the project grid before leaving the site. Ground level height data shall be recorded for each trench. Survey methodology and a detailed survey record shall be provided to HS2 Ltd within the survey report.

Mechanical excavation

- 5.2.6 Trial trenches shall be excavated to the first archaeological horizon or the uppermost natural deposit, whichever is encountered first. Excavation will be undertaken using a mechanical excavator with toothless ditching bucket.
- 5.2.7 Where modern foundations are likely to be present, the LSWSI shall identify whether they should be left in-situ for the purposes of the investigation or removed. Where it is clear that modern foundations have truncated certain archaeological levels, they should be removed to assess lower archaeological levels. The Archaeological Contractor shall take all reasonable care to ensure that any damage to archaeological deposits is limited as far as is practicable. If significant damage is likely to occur the work shall be suspended and the Employer informed so that a technical solution can be agreed.
- 5.2.8 Machining shall be carried out under the constant supervision of the Archaeological Contractor to excavate the ground in spits. The Archaeological Contractor shall use their professional judgement to determine the appropriate depth of each spit. Any variations to the excavation methodology shall be at the discretion of the Archaeological Contractor and recorded in writing for inclusion in the final report. Each spit shall be examined carefully to assist the recovery of any archaeologically significant artefacts and thus to determine when to cease machining. It is the responsibility of the Archaeological Contractor to ensure that the finished surface is machined to a suitably 'clean' state in order to identify, define and investigate any exposed archaeological deposits. If the surface is not sufficiently clean, hand cleaning of the surface will be required. Machine excavation will comply with the Employer's Technical Standard—Route wide soil resources plan (HS2-HS2-EV-STD-000-000008).
- 5.2.9 Metal detectors will be used by experienced staff to scan for metallic finds during the excavation of key archaeological features or deposits.
- 5.2.10 The Archaeological Contractor shall ensure that water is discharged and excavated material from archaeological excavations are stored in accordance with the Contractor's environmental protection requirements (as set out in the package Works Information and their Environmental Management Plan) and any relevant consents for the worksite. The Contractor shall monitor discharge rates and, if necessary, conductivity of discharge waters to ensure compliance.

- 5.2.11 In areas of deep stratigraphy, such as alluvial sequences, each intervention shall be excavated to the base of the stratigraphic sequence and shall be appropriately shored and kept free of water to allow 'person entry' to the excavations, i.e. to allow the Archaeological Contractor to undertake investigation and recording to fulfil the aims of the work. The Archaeological Contractor will ensure that all works undertaken in deep stratigraphy will comply with the Employer's Technical Standard–Temporary Works (HS2-HS2-CV-STD-000-000005).
- 5.2.12 Within alluvial sequences, the Archaeological Contractor shall pay particular attention to establishing the vertical extent of layers of archaeological potential and shall be aware that horizons of cultural activity may be interdigitated with horizons of sterile alluvium.
- 5.2.13 Should any material be excavated that is deemed to be contaminated or potentially contaminated it shall be investigated, controlled (e.g. placed separately from clean material) and removed from the site in accordance with the Contractor's environmental protection requirements (as set out in their Environmental Management Plan).

Fieldwork recording

- 5.2.14 Archaeological recording shall be undertaken by the Archaeological Contractor to the general requirements as described in the GWSI: HERDS. A sufficient sample of the archaeological features and deposits revealed must be sampled/or fully excavated to allow the resolution of the aims and objectives of the work. Structures, features, or finds which might reasonably be considered to merit preservation in situ shall not be unduly damaged.
- 5.2.15 Where areas of extensive archaeological stratification are encountered, the horizontal and vertical extent of archaeological stratification shall be assessed by the Archaeological Contractor through implementation of an appropriate strategy including, either the excavation of features cut into horizontal stratification, limited test pitting or auguring. The aim shall be to recover suitable stratigraphic, finds and environmental samples from the full, intended depth of the trench, as far as is practicable. The exact methodology may need to be determined by the Contractor during the excavation of individual trenches and agreed with the Employer.
- 5.2.16 Where deposits are investigated, and found to be undated, and where these have the potential to be of archaeological significance (e.g. of earlier prehistoric or early medieval date, or any other deposit types notable for artefactual scarcity) appropriate samples should be taken for artefact recovery. The soil should hand excavated and then sieved or screened through ¼" or 6mm wire mesh to recover artefacts. Samples can be sieved on site or retained for immediate sieving off-site.
- 5.2.17 In order to protect any waterlogged remains during the works, the Archaeological Contractor may identify a requirement for trial excavations to be allowed to refill with water overnight. In such cases, the Archaeological Contractor shall ensure that any hazards to staff or 3rd parties are minimised.

- 5.2.18 Archaeological recording is to include, as a minimum:
- At least one representative section at (1:10 or 1:20 scale) of each evaluation trench, from ground level to the base of the excavation;
 - the written record of individual context descriptions on appropriate pro-forma;
 - plans at appropriate scales (1:10, 1:20 or 1:50);
 - single context planning should be used only if appropriate;
 - photographs and other appropriate drawn and written records; and
 - other sections, including the half-sections of individual layers or features shall be drawn as appropriate to 1:10 or 1:20.
- 5.2.19 A 'site location plan', indicating site north shall be prepared at 1:1250. Individual 'trench plans' at 1:200 (or 1:100) shall be prepared which show the location of archaeology investigated in relation to the investigation area. The location of site plans will be identified using OSGB co-ordinates.
- 5.2.20 Section drawings shall be located on the relevant plan and OSGB co-ordinates recorded. The locations of the PGM bench markers used and any site TBM shall also be indicated.
- 5.2.21 A record of the full extent in plan of all archaeological deposits as revealed in the investigation shall be made. These plans will normally be based on digital survey data (digital planning methods shall be agreed in advance with the Employer) supplemented where appropriate by hand drawn records on polyester based drawing film (at a scale of 1:10 or 1:20 unless otherwise agreed with the Employer). All hand drawn information shall be digitised (or preferably generated digitally in the first instance), and final deliverables will be supplied in an Esri format and adhere to standards set out in the Employer's Cultural Heritage GIS Standard (HS2-HS2-GI-SPE-000-000004). Single context planning shall be used where complex stratigraphy is encountered.
- 5.2.22 A 'Harris matrix' stratification diagram shall be employed to record stratigraphic relationships (Harris 1989) where appropriate. This record shall be compiled and fully checked by the *Archaeological Contractor* during the course of the excavations. Spot dating shall be incorporated onto this diagram.
- 5.2.23 Recording of structural evidence revealed below ground level will vary according to the level of special interest of the structure and its relationship to archaeological remains. Structures of little or no significance shall be noted on a site plan. Detailed drawings of important features revealed in investigations may be required in accordance with the aims and objectives of the investigation as defined in the Project Plan.
- 5.2.24 The photographic record will be in digital format, resulting in high resolution TIFF (uncompressed) images. Photographs will illustrate both the detail and context of the
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principal archaeological features discovered. In addition, the Archaeological Contractor shall take appropriate record photographs to illustrate work in progress. All photographic records will include information detailing: sitename and number/code, date, context, scale and orientation. A selection of progress photos of publication quality must be submitted with the weekly progress report.

Human remains

- 5.2.25 Where human remains are identified, all subsequent work must be undertaken in accordance with the Employer's Human remains and monuments procedure (HS2-HS2-EV-PRO-0000-000008) and Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035 section 4.18 Methodology for archaeological excavation of human burials).
- 5.2.26 It is not expected, on the basis of previous research and investigations that human remains will be encountered at this site. Should human remains be discovered, the Archaeological Contractor shall notify the Contractor's Historic Environment Manager immediately, who will notify the Employer, so that the procedures set out in the Employer's Human remains and monuments procedure (HS2-HS2-EV-PRO-0000-000008) can be implemented. This notification may be initially made personally or by telephone but shall be confirmed in writing (including email) within 24 hours of discovery.
- 5.2.27 In the event that human remains are identified, the Archaeological Contractor will cease all works at that location until further instruction is provided by the Employer and communicated by the Contractor's Historic Environment Manager. The Archaeological Contractor shall undertake an initial in situ observation and assessment of the remains and shall advise the Contractor's Historic Environment Manager of the course of action required. The Contractor's Historic Environment Manager will then notify the Employer.

Environmental sampling

- 5.2.28 In line with The Employer's Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035) an initial sampling strategy is set out below for this site. This strategy is based on the existing information about the site, gathered from non-intrusive surveys and the HERDS objectives outlined in Table 1.
- 5.2.29 This sample strategy, along with the HERDS objectives outlined in Table 1 identify the key elements that should, where present, be sampled during this evaluation. However, the strategy will need to be reviewed throughout the on-site work, and where unexpected features or deposits are identified, revised accordingly to take these into account.
- 5.2.30 The purpose of sampling at the evaluation stage is to identify the range of environmental materials present on site, their preservation, significance and distribution.

- 5.2.31 The Windmill Hill site has potential for the presence of remains of prehistoric and/or Roman date, as indicated by a number of possible enclosures identified by geophysical survey, in addition to features relating to medieval agricultural activity, as identified in section 3.2.
- 5.2.32 Sampling will therefore target the following, where present, as a minimum:
- Archaeological features (including possible enclosure ditches identified by geophysical survey, as well as any other features such as gullies, pits and postholes); and
 - Deposits representing the main phases of activity on site (to assess whether there are changes in rates of deposition, or material survival over time).
- 5.2.33 Sampling will not only just target charcoal rich or wet deposits, but be undertaken on those features outlined above, taking into account advice from The Contractor's environmental archaeologist. This will ensure that samples are recovered from a representative range of contexts, which adequately characterise past activities on site, and allow an assessment to be made of the extent to which they help address palaeoenvironmental and palaeoeconomic questions.
- 5.2.34 Where unexpected deposits or features are identified during the evaluation which are not covered in the initial sampling strategy above, the need for sampling will be assessed in terms of the specific objectives (both those in Table 1 as well as the remaining HERDS objectives), the sampling strategy updated and the features sampled accordingly.
- 5.2.35 All samples will be taken to address a specific question. The purpose of the sample, and the question it has been taken to address will be recorded on The Archaeological Contractor's sample record sheet.
- 5.2.36 Samples will be taken using ten litre plastic buckets (with lids and handles), or strong polythene bags (double bagged) secured at the neck, for the recovery of bulk 'disturbed' environmental samples. Labelling will follow guidance set out in the and Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035).
- 5.2.37 For non-waterlogged deposits bulk samples will normally be taken in the range of 40-60 litres. Where contexts have a volume of less than that stated above then 100% of the context will be sampled. Each bulk sample will only contain sediment derived from a single context. Where waterlogged deposits are encountered, samples sizes will usually be in the range of 10-20 litres, which is suitable for the recovery of macrofossils from these contexts. Samples shall be protected at all times from temperatures below 5°C and above 25°C and from wetting and drying out due to weather exposure.
- 5.2.38 Where house floors or other buried land-surfaces are encountered and these are sampled, appropriately sized monolith or kubiena boxes will be used for the recovery of 'undisturbed' monolith samples for soil micromorphology and to sub-sample for microfossils (e.g. pollen

and spores, diatoms, ostracods). Where longer sequences are sampled, contiguous column samples will be collected for the retrieval of macrofossils (e.g. molluscs, plant remains and insects). Further guidance on specialist samples is provided in the Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035 - sections 4.21.22-26)

- 5.2.39 Processing of all bulk soil samples collected for biological assessment should be completed within two weeks of collection. Processing samples at the time of fieldwork will allow this sampling strategy to be updated and refined where necessary. The preservation state, density and significance of material retrieved shall be assessed by the Archaeological Contractor's recognised specialist. Special consideration shall be given to any evidence for recent changes in preservation conditions that may have been caused by alterations in the site environment.

Metallic objects and residues

- 5.2.40 Where works are intended to address Specific Objectives relating to industrial activity and there is evidence for industrial activity, macroscopic technological residues (or a sample of them) shall be collected by hand. Separate samples (c. 10ml) shall be collected for micro-slugs (hammer-scale and spherical droplets). Reference should be made to forthcoming guidance on Archaeometallurgy (Dungworth, in prep.). Assessment of any technological residues shall be undertaken. Assessment of finds assemblages shall, where appropriate to the Specific Objectives being addressed, include x-radiography of all iron objects (after initial screening to exclude obviously recent debris) and, where appropriate, nonferrous artefacts (including all coins). Where necessary, active stabilisation / consolidation shall be carried out to ensure long-term survival of the material, but with due consideration to possible future investigations.

Geoarchaeology

Samples collected for geoarchaeological assessment as part of the alluvium sondages will be processed promptly by the Archaeological Contractor's specialist, and appropriate assessment undertaken as agreed with Fusion.

Preservation in situ

- 5.2.41 Where preservation in situ has been identified as an option for areas of the site, or it becomes clear during the evaluation that certain parts of the site might be retained in situ within the scheme design, The Archaeological Contractor will ensure that suitable samples are taken to assess the state of preservation (as set out in Historic England guidance on Preserving archaeological remains). Where it is proposed that waterlogged deposits are preserved in situ, discussions should be held with Fusion about initiating a water environment study. If preservation in situ is considered to be a viable and desirable option, the areas proposed should be excluded from further plant / vehicle movement, to minimise the possible effects of compression and loading on the physical integrity of the site. Thought should also be given to

whether the proposed construction works will have any short or long term hydrogeological or chemical impacts on the archaeological remains.

Backfilling

- 5.2.42 The trenches shall be pumped dry (by the Archaeological Contractor) and any necessary protection measures for archaeological remains (in addition to those for below ground infrastructure, services or utilities) shall be completed prior to backfilling. Generally, all backfill material shall consist of non-toxic, uncontaminated, non-putrescible, natural and inert material which shall be compacted and (if necessary) tested (dynamic compaction test or other) in accordance with a specification provided by the Contractor. Surface conditions shall be reinstated to the required standard.
- 5.2.43 The Contractor shall ensure, in liaison with the Employer that adequate protection is provided for any archaeological remains. Any specific archaeological requirements relating to backfilling including use of materials to mark excavated depth, such as geotextiles, shall be specified by the Contractor in the LSWSI.

6 Post-Investigation Reporting and Archiving

- 6.1.1 The Archaeological Contractor shall submit an interim statement to HS2Ltd. Within seven days of completion of the evaluation. The interim statement will be consistent with the requirements detailed in the Specification for historic environment investigations (Document no. HS2-HS2-EV-STD-000-000035) and will provide HS2 with the information necessary to inform design decisions relating to:
- a. the next stage of archaeological works (if required) and
 - b. engineering design
- 6.1.2 A fieldwork report will be produced with the following structure:
- Executive Summary
 - Introduction
 - Summary of project's background (including the Specific Objectives addressed)
 - Assumptions and limitations
 - Description and illustration of the site location
 - Previous work(s) relevant to the archaeology of the site (e.g. DDBA, previous surveys)
 - Geology and topography of the site

- Specific Objectives and Aims
- Scope and Methodology, to include:
 - Date(s) of fieldwork;
 - Number and dimensions of trial trenches;
- Results and observations
 - Stratigraphic report
 - Finds report
 - Environmental evidence report
 - Interpretation of results against original expectations and Specific Objectives
 - Review of evaluation strategy [where appropriate].
- Recommendations and research aims for further investigation
- Conclusions
 - Statement of potential of archaeology
 - Assessment of achievement (or not) of survey objectives.
- Evaluation of methodology employed and results obtained (i.e. a confidence rating)
- Publication and dissemination proposals, including archive deposition
- References to all primary and secondary sources consulted.
- Appendices to include illustrations, contextual summary by trench, finds reports, environmental reports, site matrices [where appropriate] and full definitions of the interpretation terms used in the report.

6.1.3 The trial trenching report will contain figures accompanied by supporting text. All figures within the report shall be on the same paper size, where appropriate. All categories of anomaly identified will be labelled with the appropriate assigned number code on the figures, which will be referred to in the text document.

6.1.4 The following figures will be included in the fieldwork report:

- General plan (mandatory)
- Engineering design (mandatory)
- Site location

- Survey extent and trial trench locations
- Survey results to include plans and sections of archaeological features, deposits and sequences
- Selected photographs of representative and/or significant features and finds

7 Information Management

7.1.1 GIS deliverables will be provided in accordance with the *Employer's* Cultural Heritage GIS Specification (HS2-HS2-GI-SPE-000-000004). CAD files will be GIS compatible and follow standards set out in the same Specification. Figures may be produced using CAD but final deliverables must be supplied in GIS format.

7.1.2 Mapping and spatial data deliverables will conform to the *Employer's* GIS Standards as set out in HS2-HS2-GI-STD-000-000002 and other associated referenced documents.

7.1.3 The Employer's standard template for reports (HS2-HS2-PM-TEM-000-000004) will be used.

8 Quality Assurance Processes

8.1.1 The trial trenching report will be prepared and conducted by suitably qualified, experienced and competent professionals.

8.1.2 The trial trenching report will be checked and then reviewed by senior qualified, experienced and competent professionals prior to issue to the Employer for acceptance. Final reports, following comments, will be checked and reviewed again prior to issue.

9 Change Control

9.1.1 During the course of the archaeological investigation, unexpected, complex or undated archaeological remains may be encountered. In order to inform the decision-making process and to minimise delays to the enabling works construction programme, it may be necessary to implement a contingency or vary the methodology or extent of the archaeological investigation.

9.1.2 The GWSI: HERDS document establishes the need to manage unexpected discoveries and regularly review ongoing fieldwork events (Sections 7.6.5 and 7.6.17) (Document no.: HS2-HS2-EV-STR-000-000015). In order to promote rapid decision making and to minimise delays a clearly defined change control process will be followed. This change control process will enable:

- rapid decision making during historic environment investigations;
- the implementation of contingencies;

- the variation of methodologies being used on site;
- the localised extension of investigation areas: and
- the rapid implementation of mitigation measures.

9.1.3 The change control process will also enable effective cost control while minimising the risk to the enabling works programme.

9.1.4 The change control process will be recorded using the pro forma Historic Environment Fieldwork Change Control Acceptance Sheet at Appendix B of this project plan and will comprise the following steps:

- 1) The Archaeological Contractor will:
 - prepare an interim summary of the investigation results noting key features or elements of the archaeological remains or structure;
 - provide a proposal for the variation to the works or methodologies; and
 - suggest any new or existing HERDS objectives to which the variation may provide opportunities for knowledge gain;
- 2) The interim summary will be submitted to the Contractor's Historic Environment Manager who will disseminate the results and arrange a meeting on site with the Employer's Historic Environment Manager and local authority (stakeholder) archaeologist;
- 3) At the site meeting all parties will:
 - review the nature, extent and significance of the archaeological remains;
 - review and agree the proposed variation to the works; and
 - signify their endorsement or approval of the variation by signing the Historic Environment Fieldwork Change Control Acceptance Form.
 - at the end of the site meeting the Contractor's Historic Environment Manager will instruct the Archaeological Contractor to implement the variation to the works.
- 4) Following the site meeting the Contractor will submit a copy of the completed the Historic Environment Fieldwork Change Control Acceptance Form to the Employer via eB.
- 5) Where the rapid implementation of mitigation measures is required the Contractor will, prior to completion of the ongoing archaeological investigation:
 - prepare a new Project Plan detailing the aims, HERDS objectives and specification of the archaeological mitigation and submit it to the Employer for acceptance;
 - Request a new site code from the Employer; and
 - Update and resubmit the existing LSWSI to include the archaeological mitigation works.

10 Evidence of Engagement

- 10.1.1 The Northamptonshire County Council archaeological advisor to the local planning authority (Lesley-Ann Mather) was contacted via email on 17 November 2017, but no response was received before the finalisation of the report.

11 Community Engagement Proposals

- 11.1.1 Due to the small scale of the works and limited timescales to complete, it is considered that community engagement is not applicable for this small-scale trial trench evaluation. The results of the investigations will be disseminated to the wider public in due course, as appropriate (details to be provided by the Archaeological Contractor).

12 Figures

- 12.1.1 The following figures are included at Appendix A.
- Figure 1: Site location
 - Figure 2: Heritage assets
 - Figure 3: LiDAR Survey and Remote Survey Interpretation
 - Figure 4: Geophysical Survey
 - Figure 5: Utilities locations
 - Figure 6: Ecological constraints
 - Figure 7: Scheme Design

13 Site Information

13.1 Site Access

- 13.1.1 The Site occupies most of an arable field north of Windmill Hill, plus a strip of a second field on the southern side of the road. A site visit from public rights of way was undertaken on 21 November 2017 and the access arrangements as listed below have been noted. The main field can be accessed off Windmill Road at the south-west corner of the Site, NGR SP 42527 58959, while the southern field can be accessed via track a few meters to the east, NGR SP 42590 58941 (Figure 1). Both access points are available from within the Consolidated Construction Boundary (CCB). These access arrangements will be confirmed by Fusion.
- 13.1.2 The Archaeological Contractor will satisfy themselves that the access point is suitable and safe prior to the start of the evaluation and will undertake all due care when accessing the Site

from either the public highways or private tracks. The method for and controls placed on Site access/egress will be set out in the Archaeological Contractor's Method Statement and will comply with the Contractor's Construction Phase Health and Safety Plan.

13.1.3 Prior to the start of the trial trench evaluation, the Archaeological Contractor will attend a pre-works site meeting with the Contractor. The purpose of this meeting will be to allow the Archaeological Contractor to confirm the access points, ground conditions, site-specific hazards and to agree the location for the welfare facilities and the safe storage of plant and materials.

13.1.4 Information regarding site-specific undertaking and assurances, land-access arrangements, site-specific arrangements and site logistics and traffic management will be provided by the Contractor.

13.2 Constraints

13.2.1 The Archaeological Contractor will ensure the fields are in a suitable condition for the trial trench evaluation (i.e. no livestock or mature crops) prior to commencements.

13.2.2 Site specific constraints/hazards are illustrated on Figures 5 and 6 and include:

- Overhead services: There are no known overhead services that cross the Site.
- Buried services: Water mains extend through the southern part of the Site, alongside Windmill Road, and northwards along the eastern boundary of the Site. Some of these will be removed prior to construction. A 5m buffer may be required around these services.
- Great-crested newts: A medium-sized population of newts has been recorded just outside the south-eastern boundary of the Site. No trenches are proposed in this area and these populations should not be affected, but it is recommended that an ecologist is consulted, and a licence may be required.
- Badger activity: Two badger latrines are located to the north of the Site, though there are no known badger setts in the vicinity.
- Trackways and field boundaries: The Site consists parts of two fields divided by Windmill Road. No trenches will be positioned on the road surface. The fields are also bounded by hedgerows and although these are not of historical significance, they will need to be avoided.
- Watercourses: There are no known watercourses within the vicinity of the Site.
- Unexploded ordnance (UXO): UXO risk has been checked on the gViewer by the designer and checked by the Contractor. The Site has been designated as low risk in terms of unexploded ordnance.

13.3 Other Considerations

Site security requirements

- 13.3.1 Following site set-up, the archaeological evaluation will be conducted in accordance with the information provided in the Project Plan and LSWSI and the safe methods of work described in the Archaeological Contractor's Risk assessment and Method Statement.
- 13.3.2 All staff involved in the fieldwork should be CSCS qualified to a minimum standard as an 'Operative'. Staff CVs will include CSCS qualifications.
- 13.3.3 All site personnel will be provided with the Archaeological Contractor's Risk Assessment and will familiarise themselves with the following:
- Site emergency and evacuation procedures;
 - The Site's health and safety coordinator;
 - The first aiders; and
 - The location of the nearest hospital and doctor's surgery.
- 13.3.4 The Archaeological Contractor shall take precautions to ensure that all plant and materials are securely stored within the limits of the Site. Particular care should be taken to lock welfare and site accommodation when not occupied and for the plant to be fitted with lockable screens and fuel caps.
- 13.3.5 Plant will be stored overnight adjacent to the welfare units and within a locked Heras fenced compound. The Contractor will provide manned 24-hour security and will install CCTV cameras within the site compound.

Temporary works

- 13.3.6 It is anticipated that all trial trenches excavated will be shallow and that they will not require temporary works. If during the excavation of the trial trenches a need for temporary works is identified, works will cease at that location, the trench temporarily back-filled and the Contractor's Historic Environment Manager informed. The Contractor will assess the requirement for temporary works and will be responsible for their design, installation and maintenance.
- 13.3.7 Temporary works will be co-ordinated by the Contractor's Temporary Works Co-ordinator (TWC) who will be responsible for ensuring that the planning, erection, use, maintenance and dismantling of temporary works is undertaken in line with the Contractor's temporary works process and as agreed with the relevant Temporary Works Manager (TWM). A temporary works schedule produced at tender stage will be reviewed and updated at regular intervals.

- 13.3.8 All temporary works will be designed and installed in accordance with the Employer's Technical Standard for temporary Works (Document No. HS2-HS2-CV-STD-000-000005), the Contractor's IMS and Construction Phase Health and Safety Plan.

Site monitoring and engagement

- 13.3.9 Requirements for site monitoring and engagement with HS2, Historic England and LPA advisors will be discussed in detail by the Archaeological Contractor in the LSWSI.

Facilities and attendances

- 13.3.10 Prior to the start of the archaeological evaluation the Archaeological Contractor shall prepare and submit a draft Health and Safety Plan and Risk Assessment and Method Statement (RAMS) for the works to the Contractor for review and approval. The Archaeological Contractor's Method Statement will clearly identify the methods and processes that will be implemented to fulfil the aims, objectives and requirements of the Project Plan and LSWSI. The Method Statement will be prepared in liaison with the Contractor, taking account of the Contractor's AWHERDS Environmental Management Plan and other relevant site information provided by them and requirements for the works set out in the Works Information (e.g. relating to health and safety, security, engineering design requirements and attendances). This will include the Archaeological Contractor's requirements and specification for services and facilities and attendances required to be supplied by the Contractor or the Employer.

13.4 Archaeological Contractor's Input into the LSWSI

- 13.4.1 A Location Specific Written Scheme of Investigation has been set out by the designer, accompanying a group of project plans. The LSWSI shall be completed by the Archaeological Contractor for approval, along with the Risk Assessment Method Statement (RAMS), prior to commencing the works.
- 13.4.2 The sections of the LSWSI that will require completion by the Archaeological Contractor include:
- Programme: detailed programme (including schedule of dates and a detailed Gantt chart baseline programme);
 - Archaeological Contractor's Topic Specific Method Statement: this section has been laid out by the Designer, but the Archaeological Contractor is required to complete this to provide methods and approach for the undertaking of the site based works and off-site processes to completion;
 - Archaeological Contractor's Interface and Communication Plan: The Archaeological Contractor will describe and outline the interface and consultation to be undertaken and the results of the constraint review and design exercise;
 - Health, Safety and Environment Management and RAMS (provided as a separate document);
-

- Site Monitoring and Engagement: details of Archaeological Contractors arrangements for enabling the monitoring and engagement requirements by HS2, Fusion and other stakeholders and community engagement plan;
- Quality Assurance;
- Resourcing requirements and budget;
- Archaeological Contractor's Site Management Plan;
- Archaeological Contractor's safe Method of Working;
- Figures (as relevant).

14 References

14.1 Glossary of Terms

14.1.1 The following terms have been used in this report:

- **Archaeological Contractor** - the organisation undertaking the specific historic environment works for the Contractor.
- **Contractor** – Fusion; the organisation undertaking the Enabling Works for Area Central on behalf of the Employer.
- **Detailed Desk Based Assessment (DDBA)** – analytical document that builds on the information gathered previously in the Environmental Statement to address particular issues, questions or uncertainties within a given area. It may be developed to provide a more detailed understanding of the resource in an area to inform design development or construction programming.
- **Employer** – HS2 Ltd, the organisation responsible for delivery of HS2 Phase One Scheme and all terms and conditions, policies, procedures, and payments
- **Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS)** – the framework for delivering all historic environment investigations undertaken as part of the HS2 Phase 1 programme.
- **Location** – a specific HS2 worksite or group of worksites that are being addressed as a combine historic environment investigation programme of assessment, evaluation and investigation.
- **Location Specific Written Scheme of Investigation (LSWSI)** - specification document assembling one or more Project Plans within an area of land defined primarily for construction programme purposes. The LS-WSIs will be agreed with the Project Manager and would provide a costed and programmed approach to delivering

outcomes.

- **Project Plans** – specification document for each specific package of activity (e.g. a survey, desk based assessment, excavation, recoding project). The plans would respond to the Specific Objectives set out in the GWSI: HERDS and be delivered within an agreed budget.
- **Works** – the specific historic environment assessment, evaluation or investigation works at each location.

14.2 References

Title	Reference
Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record. Historic England	HE Guidance
Animal Bones and Archaeology: Guidelines for Best Practice. Historic England	HE Guidance
Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood. Historic England	HE Guidance
Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and recovery to Post-excavation (2nd ed.). Historic England	HE Guidance
ClfA 2014 Standard and guidance for archaeological field evaluation. Chartered Institute for Archaeologists	ClfA 2014
Harris, E C 1989 Principles of Archaeological Stratigraphy (2nd ed.) Academic Press	Harris 1989
Hey, G and Lacey, M 2001 Evaluation of archaeological decision-making processes and sampling strategies. Kent County Council	Hey and Lacey 2001
Historic England 2015a Management of research projects in the historic environment (and associated guides and planning notes)	HE 2015a
Historic England 2015b Geoarchaeology: Using earth sciences to understand the archaeological record	HE2015b
Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation. Historic England	HE Guidance
High Speed Rail (London-West Midlands) Environmental Minimum Requirements Annex 3: Heritage Memorandum	CS755 02/17
High Speed Rail (London-West Midlands) Environmental Minimum Requirements Annex 1: Code of Construction Practice	CS755 02/17
HS2 Phase One Environmental Statement, Supplementary Environmental Statements and Geophysical Survey Reports. CFA 16: Ladbroke and Southam	ES 3.5.2.16.4 ES 3.5.2.16.5

	ES 3.5.2.16.6
	ES 3.5.2.16.7
HS2 Ltd, 2015. Heritage Risk Model Phase 1 Review 2014 - Volume I	C253-ATK-EV-REP-000-000002
HS2 Technical Standard: Cultural Heritage GIS Specification	HS2-HS2-GI-SPE-000-000004
HS2 Technical Standard: – Temporary Works	HS2-HS2-CV-STD-000-000005
HS2 Technical Standard: - Route wide soil resources plan	HS2-HS2-EV-STD-000-000008
HS2 Technical Standard: Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy	HS2-HS2-EV-STR-000-000015
HS2 Technical Standard: Specification for historic environment investigations	HS2-HS2-EV-STD-000-000035
HS2 Technical Standard: Specification for Project Plans and Location Specific Written Scheme of Investigations	HS2-HS2-EV-STD-000-000036
HS2 Technical Standard: Historic Environment Physical Archive Procedure	HS2-HS2-EV-STD-000-000039
HS2 Technical Standard: Historic Environment Digital Data Management and Archiving Procedure	HS2-HS2-EV-STD-000-000040
HS2 Enabling Works Information W10200 General Constraints	1E001-HS2-PR-ITT-000-000098
HS2 Phase 1 EWC Central Geophysical Survey Report for Windmill Hill Spinney, Warwickshire (CRO1080) Site Code 1C17WMHMG	1EW03-FUS-EV-REP-CS07-0001583
Fusion Standard for Accident and Incident Investigation and Reporting	SH2 STD1
Fusion Construction Phase Health and Safety Plan	
Fusion Incident & Emergency Preparedness Plan	1EW03-FUS-HS-PLN-C000-000001
Fusion Urgent Works Package 1 Quality Plan	1EW03-FUS-QY-PLN-C000-000022

14.3 List of Acronyms

ACA	Archaeological Character Area
AIMS	Asset Information Management System
ANA	Archaeological Notification Area
AOD	Above Ordnance Datum
ASZ	Archaeological Character Sub-Zone
BHER	Buckinghamshire Historic Environment Record
CAD	Computer Aided Design
CBM	Ceramic Building Material
CCB	Consolidated Construction Boundary
CCTV	Closed Circuit Television
CFA	Community Forum Area
CIfA	Chartered Institute for Archaeologists

CoCP	Code of Construction Practice
CSCS	Construction Skills Certification Scheme
DDBA	Detailed Desk Based Assessment
EIA	Environmental Impact Assessment
ES	Environmental Statement
GCN	Great Crested Newt
GIS	Geographical Information Systems
GNSS	Global Navigation Satellite System
GWSI: HERDS	Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy
HER	Historic Environment Record
KC	Knowledge Creation
LiDAR	Light Detection and Ranging
LLAU	Limits of Land to be Acquired or Used
LOD	Limit of Deviation
LSWSI	Location Specific Written Scheme of Investigation
MYA	Million Years Ago
OASIS	Online Access to the Index of archaeological investigations
ODN	Ordnance Survey Newlyn Datum
OS	Ordnance Survey
OSGB	Ordnance Survey Great Britain
PDF	Portable Document Format
PGM	Permanent Ground Markers
PROW	Public Right of Way
QA	Quality Assurance
RAMS	Risk Assessment Method Statement
RTK	Real Time Kinematic
SMS	Strip, Map and Sample
TBM	Temporary Bench Mark
TIFF	Tag Image File Format
TST	Total Station Theodolite
TWC	Temporary Works Co-ordinator
TWM	Temporary Works Manager
UXO	Unexploded Ordnance

Appendices

Appendix A: Figures

Appendix B: Fieldwork Change Control Acceptance Sheet

Historic Environment Fieldwork Change Control Acceptance Sheet	
Site Code:	
Site Name:	Fleet Marston Spinney
Historic Environment Investigation Type:	Trial Trench Evaluation
Contractor:	
Project Plan Doc. No.:	066-M3W
LSWSI Doc. No.:	UW1 WSI
Summary of Results	
Fieldwork Director:	Date:
Description of Proposed Change:	

Drawing / Sketch:

Change type: (Delete as applicable)	Implementation of Contingency	Variation of Methodology	Rapid Investigation	Extension of Investigation Area
--	----------------------------------	-----------------------------	------------------------	------------------------------------

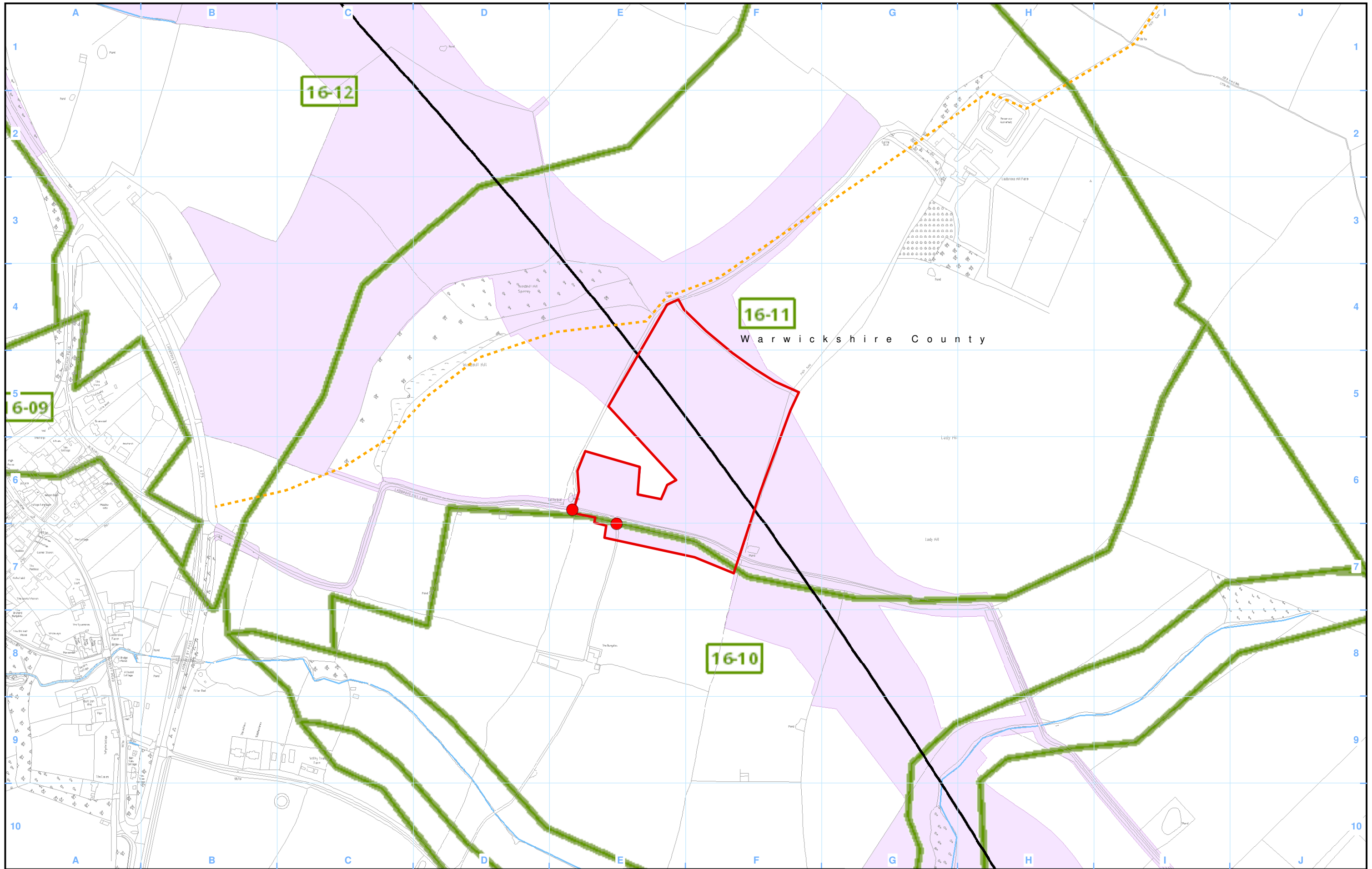
Proposed HERDS Objectives:

Compiled by: (Archaeological Contractor)	Name	Date	Signature
Checked by: (Contractor)	Name	Date	Signature
Consultation with: (Stakeholder Archaeologist)	Name	Date	Signature
Approved by: (HS2 Historic Environment)	Name	Date	Signature

Appendix C: Fieldwork sign off sheet

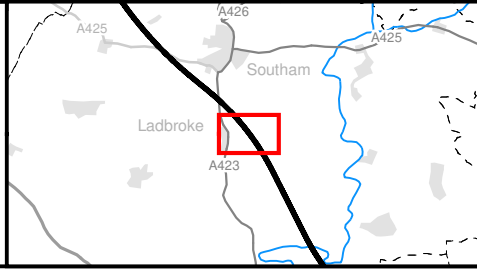
Historic Environment Fieldwork Sign-off Sheet			
Work Package Reference			
Historic Environment Investigation Type			
Contractor			
Fieldwork Conducted by (Site Director)		Dates	
Summary of Results			
Document References			
1.			
2.			
3.			
4.			
Compiled by	Name	Date	Signature
Checked by	Name	Date	Signature
Approved by	Name	Date	Signature

Appendix D: Decision record form



Legend

- Route
- Site Extent
- Consolidated Construction Boundary
- Archaeological Character Sub-Zone
- Water Body
- Watercourse
- County Boundary
- Point of Access
- Public Right Of Way (PROW)



Map Number
AC320/8_1

Map Name
SITE LOCATION

Community Forum Area (CFA16):
Ladbroke & Southam

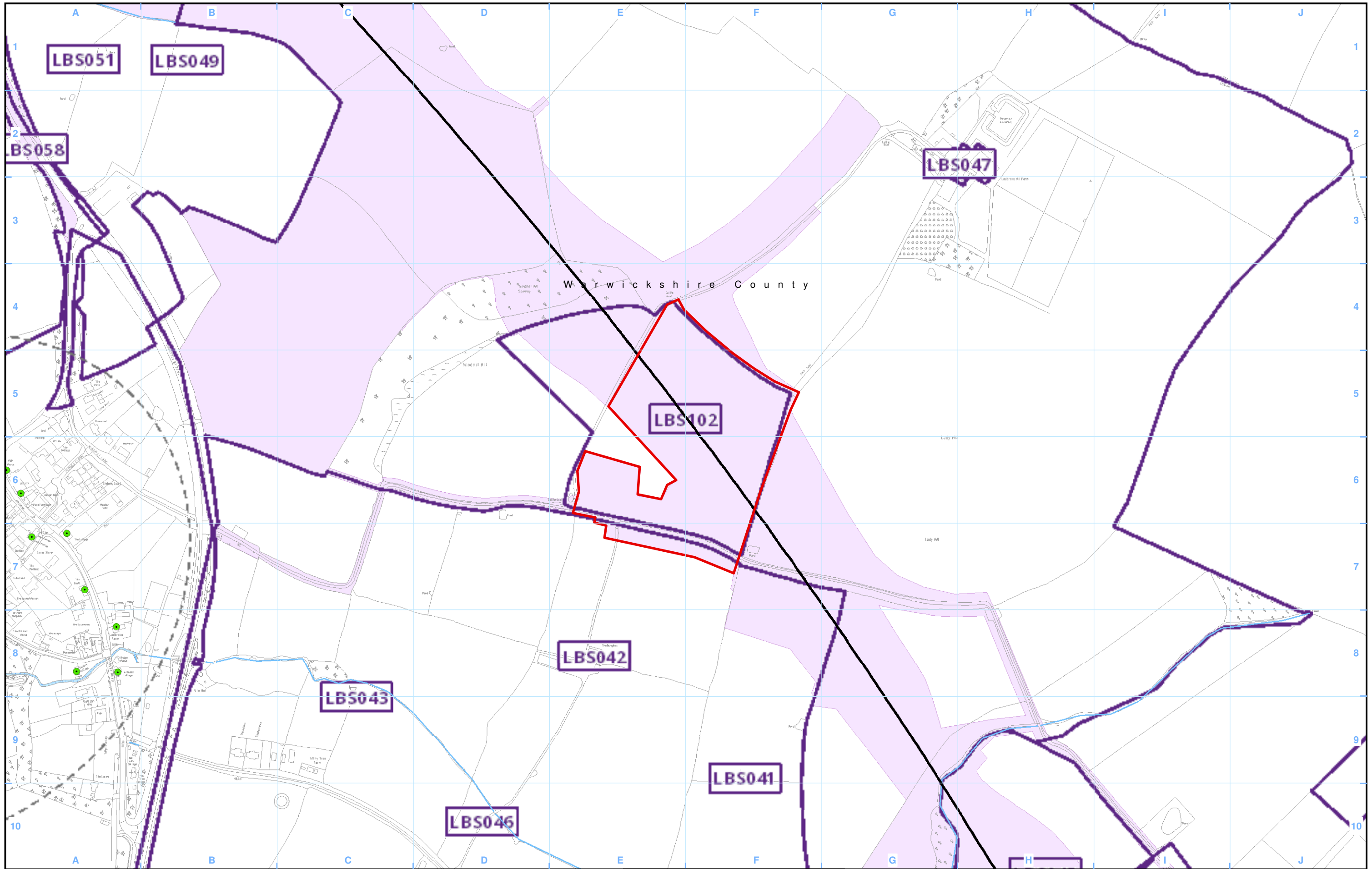
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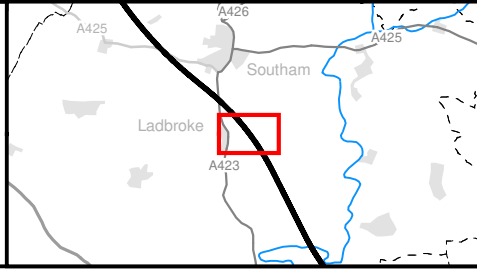
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Doc Number: 1EW03-FUS-EV-REP-CS07_CL24-002574 Date: 30/01/18



Legend

- Route
- Site Extent
- Consolidated Construction Boundary
- Water Body
- Watercourse
- County Boundary
- Non-Designated Heritage Asset
- Gazetteer ID Boundary
- Grade II Listed Building



Map Number: AC320/8_2

Map Name: HERITAGE ASSETS

Community Forum Area (CFA16):
Ladbroke & Southam

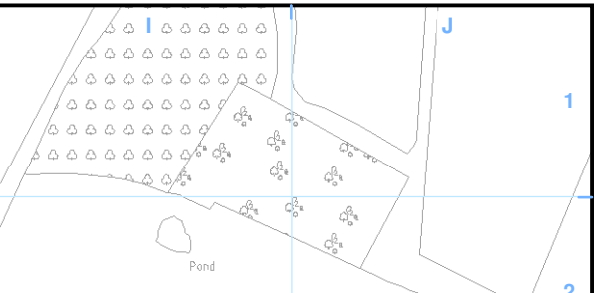
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Legend

- Route
- Site Extent
- County Boundary
- Consolidated Construction Boundary
- Water Body
- Watercourse
- Possible archaeology



Map Number
AC320/8_3

Map Name
**LIDAR SURVEY AND
REMOTE SURVEY INTERPRETATION**

Community Forum Area (CFA16):
Ladbroke & Southam

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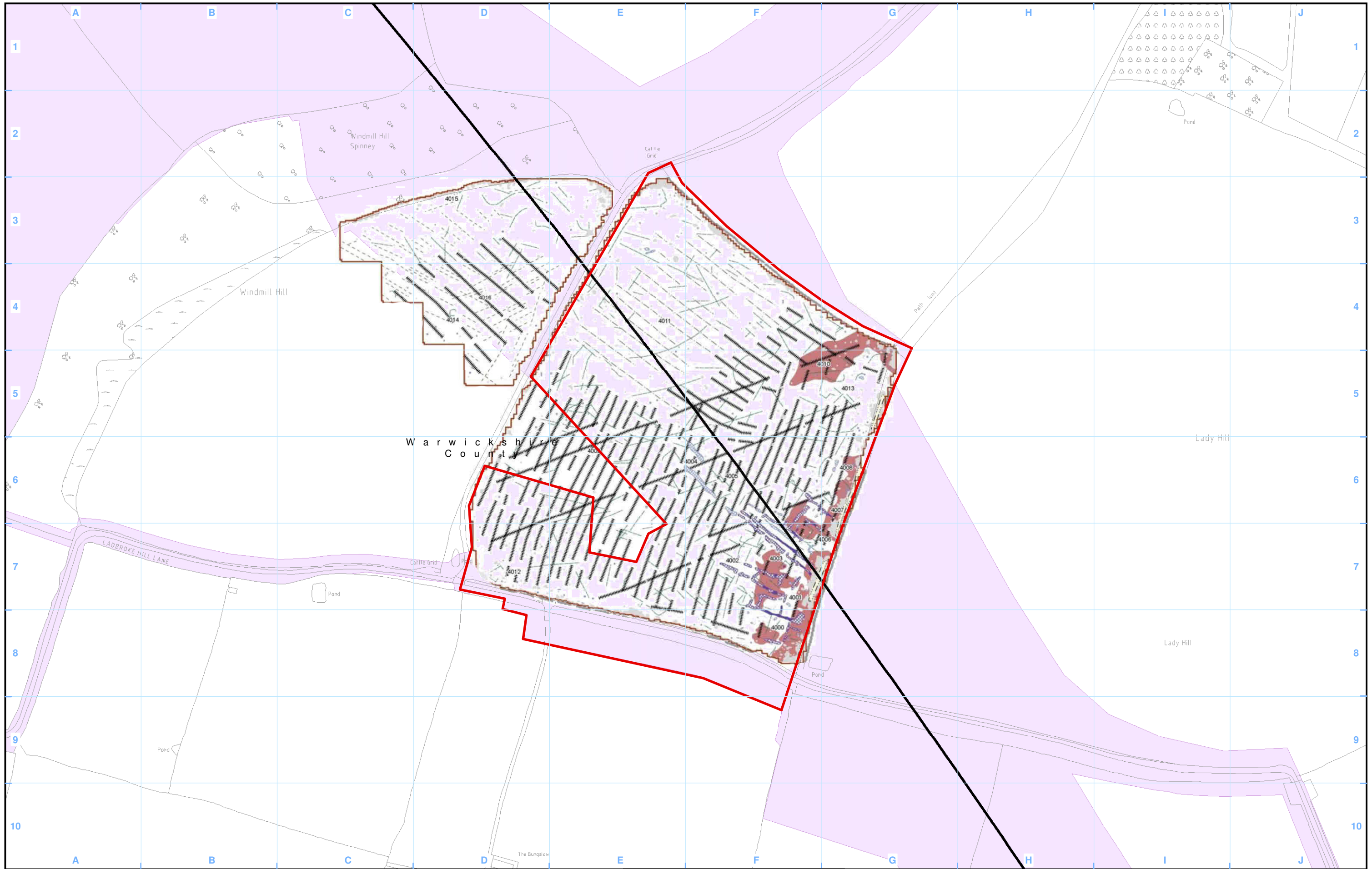
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Scale at A3: 1:2,500

0 25 50 75 100 Metres

Doc Number: 1EW03-FUS-EV-REP-CS07_CL24-002574 Date: 30/01/18



Legend

Route	County Boundary	Drain
Site Extent	Geophysics Results	Ploughing
Consolidated Construction Boundary	Archaeology	Ridge & Furrow
Water Body	Increased Magnetic Response	
Watercourse	Ferrous	



Map Number	AC320/8_4
Map Name	GEOPHYSICAL SURVEY
Community Forum Area (CFA16): Ladbroke & Southam	

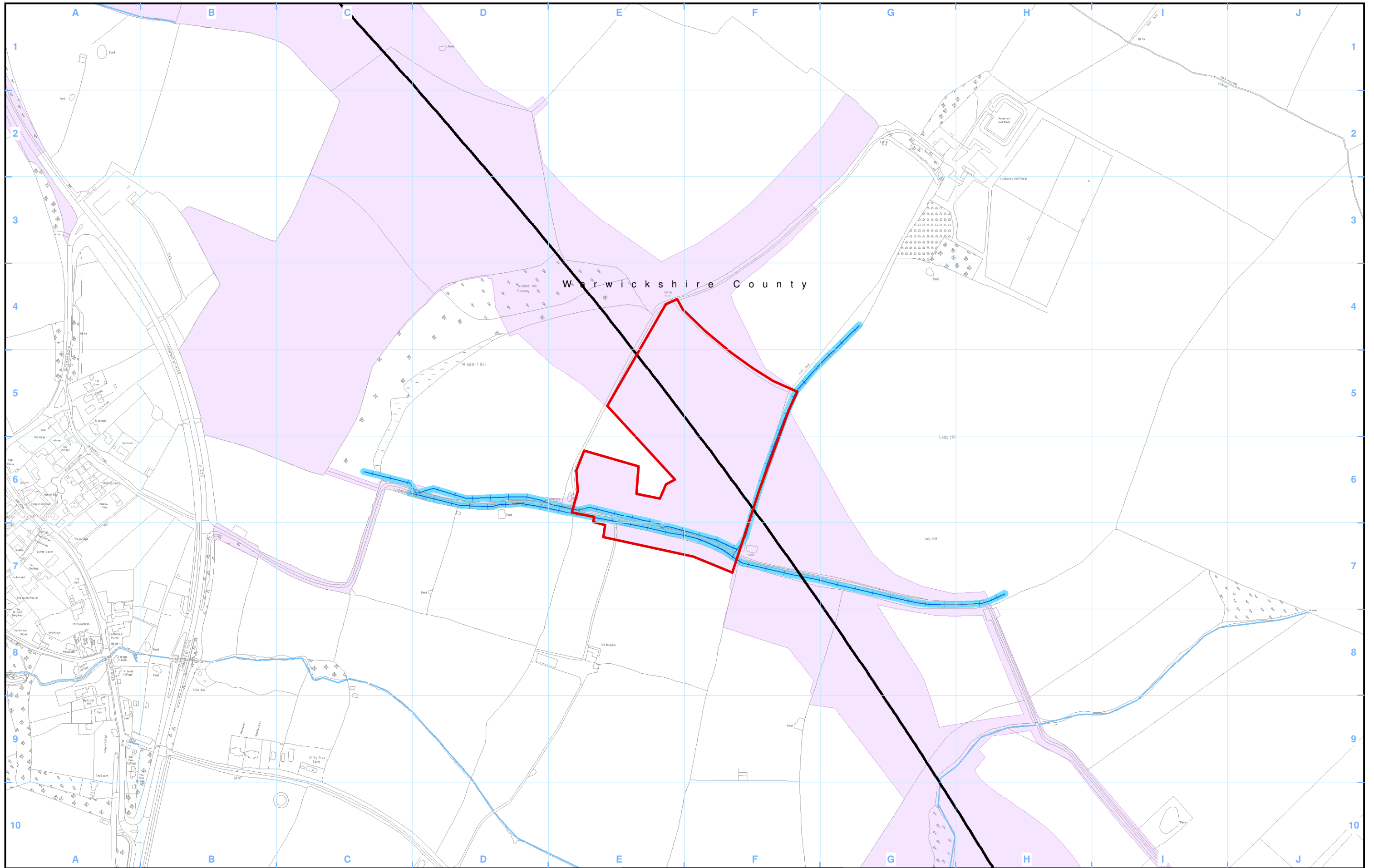
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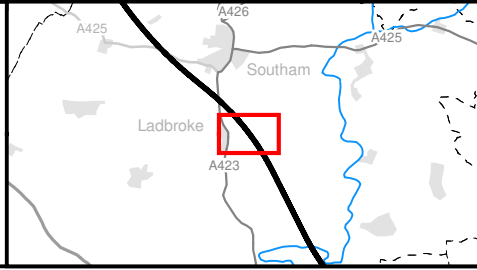
Scale at A3: 1:2,500

Doc Number: 1EW03-FUS-EV-REP-CS07_CL24-002574 Date: 30/01/18



Legend

- Route
- Site Extent
- Consolidated Construction Boundary
- Water Body
- Watercourse
- County Boundary
- Water Main
- Utilities Buffer (5m)



Map Number
AC320/8_5

Map Name
UTILITIES LOCATIONS

Community Forum Area (CFA16):
Ladbrooke & Southam

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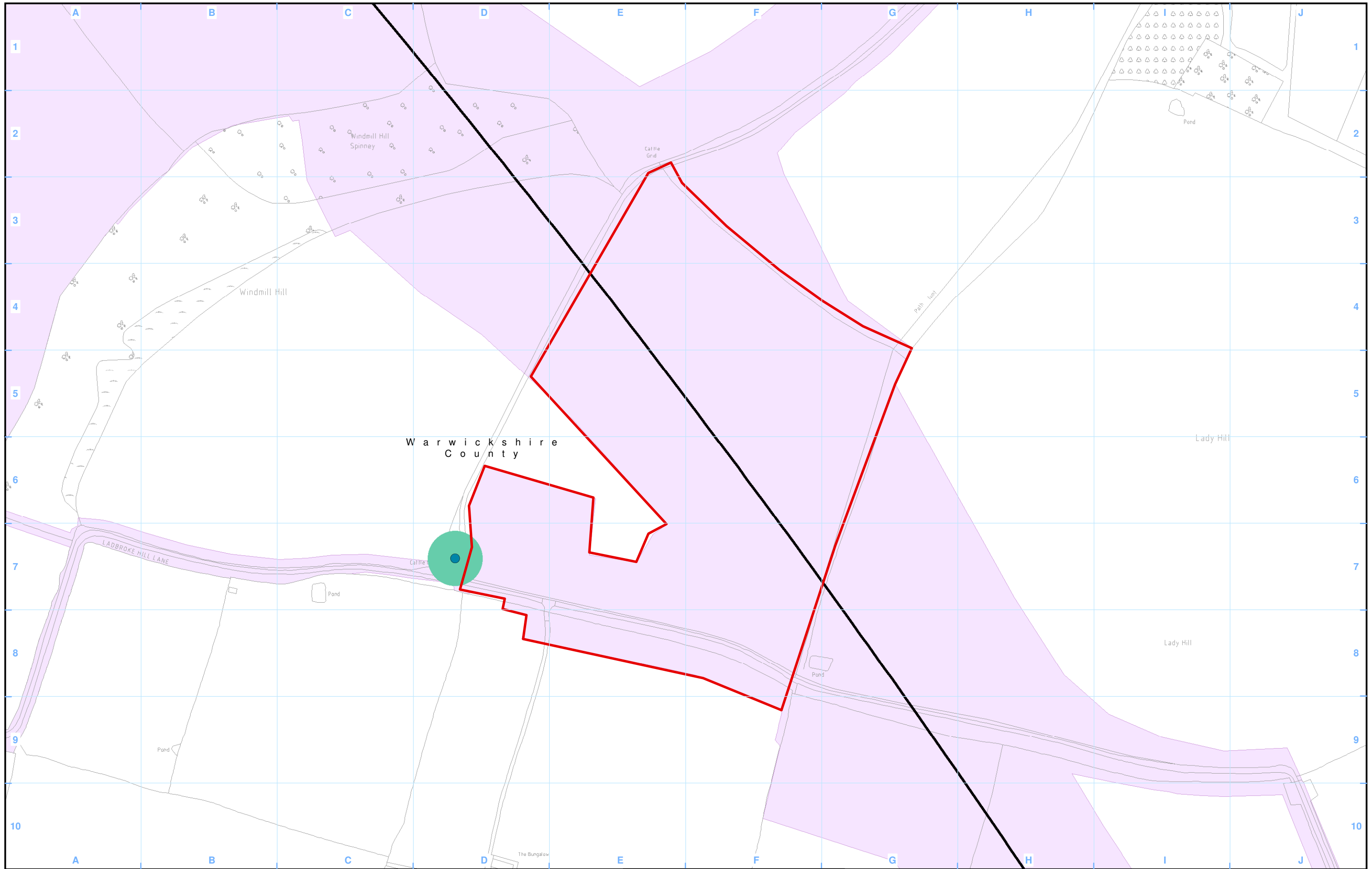
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0 50 100 150 200 Metres

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Legend

- Route
- Site Extent
- Consolidated Construction Boundary
- Water Body
- Watercourse
- County Boundary
- Great Crested Newt presence
- GCN Buffer (20m)



Map Number
AC320/8_6

Map Name
ECOLOGICAL CONSTRAINTS

Community Forum Area (CFA16):
Ladbroke & Southam

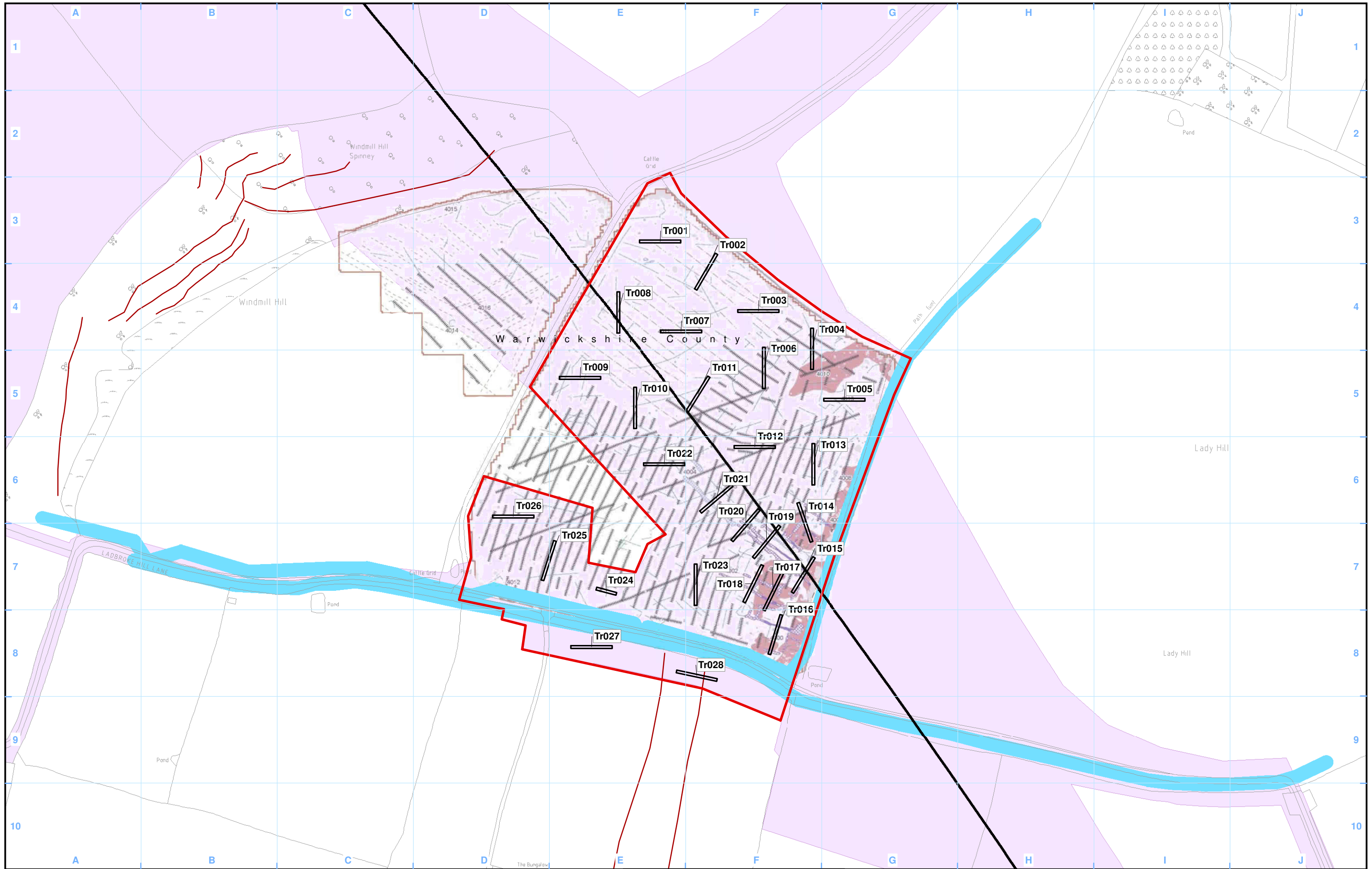
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Legend

— Route	--- County Boundary	▨ Archaeology
▭ Site Extent	▭ Utilities Buffer (5m)	■ Increased Magnetic Response
▭ Consolidated Construction Boundary	— Possible archaeology	■ Ferrous
▭ Water Body	Geophysics Results	+++ Drain
— Watercourse		--- Ploughing
		--- Ridge & Furrow



Map Number	AC320/8_7
Map Name	SCHEME DESIGN
Community Forum Area (CFA16): Ladbroke & Southam	

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Scale at A3: 1:2,500

0 25 50 75 100
Metres

Doc Number: 1EW03-FUS-EV-REP-CS07_CL24-002574 Date: 30/01/18