# WP 029(C) - Historic Environment Works - South Cubbington Wood - Enabling Works North Contract

## Location Specific Written Scheme of Investigation for Archaeological Mitigation

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# Contents

# 1 Executive Summary

1.1.1 This High Speed 2 (HS2) North Section Phase One Location Specific Written Scheme of Investigation (LS-WSI) details the proposed methodology and approach for a programme of mitigation by archaeological recording at South Cubbington Wood in Warwickshire. The mitigation area is located between HS2 chainage markers 134640 and 134940 and encompasses 2.2 ha (Figures 1-2, Appendix 2). The area is required as part of the construction land requirements for the enabling works and subsequent main works for HS2 Phase One. The mitigation area targets a focus of archaeological remains discovered during EWC North trial trenching at South Cubbington Wood as part of WP29(B) Historic Environment Works.

1.1.2 The works detailed within this LS-WSI are permitted by the High Speed Rail (London-West Midlands) Act (the Act), which provides powers for the construction and operation of HS2 Phase One, and the Heritage Memorandum, which sets out how historic environment (including heritage assets and their setting) will be addressed during the design and construction of HS2 Phase One.

1.1.3 The enabling and main works will entail ground disturbance which may have an impact on the historic environment (i.e. known or possible buried heritage assets/archaeological remains and above ground heritage assets/structures of historic interest).

1.1.4 The mitigation area is located within a single agricultural field situated immediately east of South Cubbington Wood and approximately 550 m east of Cubbington. It is centred on National Grid Reference (NGR) 435371 268408 and encompasses 2.2 ha of land. In terms of the Construction Land Requirements (CLR) the 'site' comprises parcel (CLR) CR02724: Lower Grange Embankment.

1.1.5 The prior trial trenching undertaken as part of WP29(B) identified a focus of settlement on the highest ground in trenches 193-202. Drainage gullies, storage pits and postholes were encountered in trenches 193, 194, 195 and 196. A possible penannular gully was identified at the top of the hill in trench 195, perhaps functioning as the drip-gully of a roundhouse or similar structure with an estimated diameter of 6.2 m. A posthole 2 m away suggests a wooden post may have stood towards the centre of the structure. A possible contemporary pond at trench 194 measured more than 3 m deep; it was not fully excavated during the evaluation trenching, but a monolith sample from it showed episodic deposition of sterile sediments. Several ditches on north-south orientations and perpendicular east-west orientations were also identified. The archaeological evaluation trenching followed on from a geophysical survey, carried out as part of the HS2 Phase One EWC in 2018 (1EW04-LMJ-EV-REP-NS01-NL02-029001), which also identified the Late Iron Age/Early Romano-British settlement activity.

1.1.6 The method of mitigation will be 'Archaeological Recording' to examine an area where Late Iron Age/early Romano-British rural settlement evidence has been discovered. The mitigation is intended to investigate and record the settlement evidence, and any other significant archaeological remains present, in order to clarify their nature, date, significance and contribution to GWSI: HERDS Specific Objectives.

1.1.7 Discovery of unexpected finds of national importance shall be in accordance with HS2 Procedure for the unexpected discovery of archaeological remains of national importance HS2-HS2-EV-PRO-000-000009).

1.1.8 This LS-WSI should be read alongside the Cubbington Wood Interim Report for Trial Trenching (1EW04-LMJ_WEX-EV-REP-NS01_NL03-029001), the Cubbington Wood Evaluation Report for Trial Trenching (1EW04-LMJ-WEX-EV-REP-NS01_NL03-029003) and the Project Plan (1EW04-LMJ-DJV-EV-PLN-NS01_NL03-029004) in order to provide the complete picture of the archaeological investigation of the mitigation area.

1.1.9 Preliminary research carried out as part of the 2013 Phase One Environmental Statement (ES), include hyperspectral and LiDAR survey. A reappraisal of the ES LiDAR data was undertaken in 2018 (1EW04-LMJ-EV-REP-N000-029012) to assess the use of different visualisations to identify additional archaeological features.

1.1.10 This LS-WSI sets out the aims of the mitigation, defines how the mitigation works will be delivered and identifies the timescale and proposed programme for the works. This will include: details of programme management, cost control, resourcing, health and safety and reporting.

1.1.11 The GWSI: HERDS Specific Objectives for Knowledge Creation (KC) guiding the Project Plan focus on the Iron Age and Romano-British periods, but the mitigation could also contribute to Specific Objectives examining aspects of earlier and later periods and appropriate KC's may be added subject to review of results. The Specific Objectives identified for this mitigation are listed below:

- 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.

# 2 Location/ Site Background

## 2.1 Baseline

2.1.1 This LS-WSI has been produced in line with guidance outlined in the Hs2 Technical Standard - Specifications Historic Environment Investigations (HS2-HS2-EV-STD-000-000035) the HS2 Technical Standard Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (HS2-HS2-EV-STD-000-000036) and the South Cubbington Wood - Project Plan for Archaeological Mitigation (1EW04-LMJ-DJV-EV-PLN-NS01_NL03-029004).

2.1.2 This LS-WSI has also been prepared with reference to the HS2 Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS; HS2-HS2-EV-STR-000-000015.

2.1.3 The mitigation area is located within a single agricultural field situated immediately east of South Cubbington Wood and approximately 550 m east of Cubbington. It is centred on National Grid Reference (NGR) 435371 268408 and encompasses 2.2 ha of land. In terms of the Construction Land Requirements (CLR) the 'site' comprises parcel (CLR) CR02724: Lower Grange Embankment.

2.1.4 The mitigation area is situated within the Dunsmore Archaeological Character Area (ACA3) which is centred on an area of former heathland associated with a low plateau of glacial deposits. The ACAs were split further in the ES; the mitigation area is located within the following Archaeological Character Sub-Zone:

- CFA17-09: Dunsmore Plateau. In continuous agricultural use for several centuries with a number of surviving medieval ridge and furrow systems. Utilised for managed woodland since the medieval period.

2.1.5 The method of mitigation will be 'Archaeological Recording', which will examine an area where Late Iron Age/Early Romano-British rural settlement evidence has been discovered.

2.1.6 Table 1 lists the archaeological investigations that have been carried out at the site to date, with key outcomes.

Table 1: Previous HS2 investigations in proximity to the mitigation area

| Description | Summary of results |
|---|---|
| WP29(B) Historic Environment Works – Cubbington Wood – Enabling Works North Contract: Interim and Evaluation Reports for Trial Trenching (1EW04-LMJ_WEX-EV-REP-NS01_NL03-029001 | Late Iron Age/Romano-British settlement activity recorded in trenches 193-202 in the area immediately south-east of South Cubbington Wood. Drainage gullies, storage pits and post holes recorded in trenches 193. 194. 195 and 196. Tops of the features had been truncated by modern ploughing. Possible penannular gully identified at trench 195 which measured 0.5m wide by 0.2m deep and contained |

| | |
|---|---|
| and 1EW04-LMJ_WEX-EV-REP-NS01_NL03-029003 ) | pottery, an iron object and animal bone. The feature may have functioned as the drip gully of a roundhouse with an estimated diameter of 6.2m. A post hole 2m away suggests a wooden post may have stood towards the centre of the structure. Relatively small finds assemblage dominated by abraded pottery and limited animal bone. |
| LiDAR and Hyperspectral Survey carried out as part of the 2013 ES (CH-004-017) | The ES LiDAR survey identified features to the west of the mitigation area within South Cubbington Wood. Ridge and furrow earthworks (WA17.19) on both a N-S and E-W alignment were recorded at the south and the NW of the wood. The survey also recorded a small number of boundary ditches within the woodland (WA17.20). |
| WP29(A) Geophysical Survey Areas 1-3:River Itchen Viaduct to Balsall Common (1EW04-LMJ-EV-REP-NS01-NL02-029001) | Parcel 2AA, in which the mitigation area is located, contained linear, curvilinear, rectilinear and discrete positive magnetic anomalies which were interpreted as identifying prehistoric or Romano-British settlement activity. |
| Historic Settlement Landscape Study carried out as part of the HS2 Phase One Enabling Works based upon the Detailed Desk Based Assessment for Historic Settlement Landscape Study (1EW04-LMJ-EV-REP-N000-029001) | A route-wide historic settlement study was undertaken to examine the later medieval and post-medieval landscapes. No heritage assets were identified at the mitigation area. |
| WP29(A) Detailed Desk Based Assessment for EIA LiDAR Survey Reappraisal (1EW04-LMJ-EV-REP-N000-029012) | The LiDAR re-appraisal identified a group of small sub-circular pits (APS17.067), at the north of the mitigation area, these features show as earthworks on visualised EA LIDAR data. A small number of boundary ditches, dispersed ponds and an area of ridge and furrow are situated to the west of the mitigation area within South Cubbington Wood (APS17.074, 17.075, 17.068). |

## 2.2 Site Conditions

### Topography and geology

2.2.1 The mitigation area is located at a relatively flat plateau at c. 96 m above Ordnance Survey (aOD). Land to the south descends to the River Leam at c.74 m, then rises to around 98m aOD at Hunningham Hill on the southern side of the valley.

2.2.2 The British Geological Survey (BGS) online mapping data shows that the underlying solid geology of the mitigation area consists of Mercia Mudstone Group mudstone. The superficial deposits within the mitigation area are recorded as Bosworth Clay Member and Mid Pleistocene Diamicton Till.

### Summary of archaeological potential and significance

2.2.3 There are no world heritage sites, scheduled monuments, registered battlefields, registered parks and gardens or listed buildings within the mitigation area. The closest designated heritage asset is the Grade II Listed pigeon cote at Weston Hall Farm approximately 500m to the north east of the mitigation area.

2.2.4 The 2013 Environmental Statement (ES) identified four non-designated heritage assets within 500m of the mitigation area (the location of these assets as mapped by the ES is shown on Figure 2 in Appendix A of the Project Plan).

- ES ref. OFC037: Important hedgerow demarking the historic Cubbington/Weston-under-Wetherley parish boundary.
- ES ref. OFC041/STN004: Bytham River, Middle Pleistocene river system later subsumed by Anglian ice sheet and buried by late glacial deposits.
- ES ref. OFC042: Cubbington Primary School ridge and furrow surviving as earthworks.
- ES ref. OFC044: Mill Lane ridge and furrow.

2.2.5 The Warwickshire HER does not list any previous investigations of the mitigation area, but an additional eight non-designated heritage assets are recorded within 500m of the mitigation area (the location of these assets is shown on Figure 2 in Appendix A of the Project Plan).

- HER ref. MWA9508: Weston Hall garden, Weston-under-Wetherley. Small gardens with formal walk and orchard, c.500m north.
- HER ref. MWA10296: Possible site of Weston House demolished c. 1730, c.500m north-north east.
- HER ref. MWA12987: Cubbington Medieval Settlement, c.2000m north-north east. The probable extent of the medieval settlement based on the Ordnance Survey map of 1887.
- HER ref. MWA22502: Medieval to Imperial artefact found during metal detecting, c.300m east.
- HER ref. MWA22503: Romano-British artefact found during metal detecting, c.300m east.
- HER ref. MWA22539: Medieval artefacts found during metal detecting, c.500m northeast.
- HER ref. MWA22720: Post-medieval artefact found during metal detecting, c.150m north.
- HER ref. MWA22728: Medieval artefact found during metal detecting, c.150m north.

2.2.6 EWC North geophysical survey and trial trenching identified a Late Iron Age/Romano-British enclosed settlement, situated at a plateau overlooking the River Leam, which is located c.800m to the south. The main evidence for the settlement comprised ditches, gullies and possible storage pits encountered in trenches 193, 194, 195 and 196, although a contemporary pond was

identified in trench 194. Two features at the southern end of trench 195 were interpreted as a potential penannular gully, perhaps the site of a small roundhouse. The finds assemblage included 106 sherds of principally Late Iron Age/Romano-British pottery reflecting domestic activity. There were also 22 fragments of ceramic building material (CBM) recovered from the fills of Late Iron Age/Romano-British features.

2.2.7 The settlement features surviving at the mitigation area appear to have been truncated by subsequent ploughing; the majority of pits, post holes and gullies were *c.* 0.2 m deep, although a few ditches survived to depths of *c.* 0.5 m and a possible contemporary pond was more than 3 m deep. The finds assemblage recovered during the trial trenching was relatively small, animal bone poorly preserved, and palaeoenvironmental information limited. The mitigation may reveal areas where archaeological features are better preserved and artefacts, ecofacts and palaeoenvironmental evidence more abundant, but current evidence indicates that the focus of mitigation will be to determine the scale, character, longevity and any observable zoning of activity at the settlement.

2.2.8 EWC North trial trenching identified a small number of widely dispersed potential ditches generally on a southeast to northwest alignment, but otherwise exhibiting no obvious pattern, at the sloping valley side situated immediately to the south of the Late Iron Age / Romano-British enclosed settlement. The majority of the potential ditches did not contain dating evidence, and with one exception (*c.* 0.50 m deep), they were shallow (<0.20 m deep), and were often aligned with plough furrows and land drains. One of the isolated potential ditches did contain artefactual evidence (five very small abraded sherds of Late Iron Age / Early Romano-British pottery), it was *c.* 1.00 m wide and *c.* 0.17 m deep and was situated *c.* 200 m south of the Late Iron Age / Romano-British enclosed settlement near the base of the valley at trench 222.

# 3 Aims and Specific Objectives

3.1.1 The aims and objectives of the mitigation are laid out within the South Cubbington Wood Project Plan for Archaeological Mitigation (1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004)

3.1.2 The aims and objectives of the mitigation will be:

- To expose surviving archaeology at the mitigation area, through the application of an archaeologically controlled topsoil strip using plant equipped with a toothless bucket;
- To archaeologically excavate and record all significant archaeological features within the mitigation area, in order to clarify the nature, date, extent and survival of any remains revealed and thus contribute to understanding of their heritage significance. The mitigation will provide a permanent archaeological record for the purposes of contributing to specific GWSI: HERDS Specific Objectives (see below);

- To obtain dating and environmental evidence (where possible) through retrieval of artefactual and ecofactual evidence;
- To carry out post-excavation assessment and analysis of recovered material; and
- To publish the results of the excavation to bring the findings into the public and academic domain.

3.1.3 The mitigation will aim to meet the GWSI: HERDS Specific Objectives, set out below, and is proposed in order to reduce or offset any adverse effects arising from proposed ground disturbance.

## Contribution to GWSI: HERDS Specific Objectives

3.1.4 The GWSI: HERDS provides a comprehensive list of Specific Objectives for the historic environment for the whole HS2 Phase One North Section. The mitigation at South Cubbington Wood will contribute to the following Specific Objectives as laid out in the Project Plan and reproduced below:

Table 2: GWSI: HERDS Specific Objectives and mitigation strategy aims

| GWSI: HERDS Specific Objective | Comment | Mitigation strategy aim |
|---|---|---|
| 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? | Results from geophysical survey and trial trench evaluation have identified the site of a Late Iron Age/Romano-British enclosed rural settlement to the south-east of South Cubbington Wood. | Archaeological recording will investigate the form, scale material culture, economy and date of the potential Ion Age phases of occupation.<br><br>Results will be compared with regional and route wide evidence to examine whether the settlement is regionally and culturally distinctive in terms of form, location, 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 regard to the different settlement types encountered along the route. | Evidence collected during the Archaeological Recording will enable examination of the regional and cultural distinctiveness of the settlement and comparison with other contemporary settlement types located along the route. | Archaeological recording within the mitigation area will investigate the form, scale, material culture, economy and date of the potential Romano-British phases of occupation.<br><br>Results will be compared with regional and route wide evidence to examine whether the settlement is regionally and culturally distinctive and, if possible, to determine the extent of Romanization. |

# 4 Scope and Methodology

## 4.1 Guidance

4.1.1 This LS-WSI has been produced in line with the guidance outlined in the HS2 Technical Standard – Specifications for Historic Environment Investigations (HS2-HS2-EV-STD-000- 000035) the HS2 Technical Standard – Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (HS2-HS2-EV-STD-000-000036) and South Cubbington Wood – Project Plan for Archaeological Mitigation ( 1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004).

4.1.2 DJV shall review the results of the Archaeological Recording during regular assurance visits. DJV will assist the Archaeological Contractor in assessing the ability of the recovered evidence to address GWSI: HERDS Specific Objectives. DJV may identify a need to alter the scope of works, including the scope of archaeological and palaeoenvironmental sampling, to appropriately address Specific Objectives, and would liaise with the Employer in this eventuality. Final agreement of alteration to scope may involve HERDS meetings between the Archaeological Contractor, DJV, the Employer and stakeholders. The Employer will determine whether an agreed alteration to scope necessitates production of an addendum to this LS-WSI.

4.1.3 The LS-WSI has also been prepared with reference to the HS2 Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS; HS2- HS2-EV-STR-000-000015).

4.1.4 Specific guidance for excavation methodology and reporting strategies are also referenced in text where appropriate

4.1.5 This LS-WSI will be submitted to HS2 for approval prior to work commencing.

4.1.6 The mitigation fieldwork outlined in this LS-WSI comprises 'Archaeological Recording' at an area encompassing 2.2 ha (Figures 1-2, Appendix 2), including any contingency, as part of the mitigation works detailed in the Project Plan. The works have been designed to meet HS2 GWSI: HERDS Specific Objectives. The mitigation will establish the presence, nature, date, extent, survival and significance of archaeological remains and their contribution to the HS2 GWSI: HERDS Specific Objectives All works will be undertaken in accordance with detailed methods set out in this LS-WSI.

4.1.7 All works will be carried out in accordance with current industry best practice and guidance (CIfA 2014a-c) and in line with the standards set out by HS2 in the HS2 Technical Standard – Specifications for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035).

## 4.2 Pre-excavation walkover

4.2.1 A pre-excavation walkover has been carried out by appropriately qualified members of the archaeological team to identify preferred access points, the suitability of the proposed welfare location and any potential environmental or health and safety issues.

4.2.2 During further pre-excavation mobilisation, the proposed excavation area will be verified on the ground in consultation with utilities and service plans provided by HS2. The excavation area will be subject to an initial Cable Avoidance Tool (CAT) scan carried out by a suitably qualified individual in order to verify the presence and/or absence of any live underground utilities or services in advance of fieldwork commencement.

4.2.3 Topsoil and subsoil storage areas will be clarified with the LM Project Manager and land access team.

## 4.3 Mitigation

## Archaeological Recording

4.3.1 The area subject to mitigation will be fully stripped by a tracked excavator using a bladed ditching bucket to the first significant archaeological horizon or to the underlying drift geology. Following surface cleaning and identification of features the final excavation process will be agreed with DJV and approved by the Employer. As a minimum it will usually include:

- The excavation of structural elements including foundation cuts, wall lines and post holes will usually comprise the removal of 50% (minimum) of archaeological deposits by hand, with the potential for full excavation of features;
- The excavation of non-structural isolated features, such as pits, will usually comprise the removal of 50% (minimum) of archaeological deposits by hand. Complete excavation of isolated features may be necessary if they contain significant artefactual, industrial, economic or environmental evidence;
- Non-structural ditches and gullies will usually be subject to excavation by hand (minimum 10%) to characterise their significance, form, function, condition and date; at the same time retrieving a fully representative artefact/ecofact assemblage;
- All terminal ends of ditches and gullies will be investigated;
- All feature intersections will be hand investigated to determine stratigraphic relationships;
- Industrial features and deposits will be 100% excavated

- Human burials, cremations and other deposits relating to funerary activity –excavation of 100%, following established guidance;
- The retrieval of standard paleo-environmental bulk samples from securely stratified, significant deposits and fills, from selected features distributed across the mitigation areas paying regard to observed levels of truncation, equitable sampling of different phases and any perceived zoning of activity at the sites. Other types of environmental sampling may be used for suitable fills and deposits, e.g. kubiena tins for sediment characterisation, or other purposive environmental samples (for more information see sections 4.3.30 – 4.3.42);
- Particular attention shall be given to recording potential evidence of structured deposition of artefacts or ecofacts within pits and other features; and
- Excavation, handling, processing, conservation and storage of finds will be completed so that, for example, pot sherds can be subject to residue analysis. The Archaeological Contractor will follow the advice of recognised specialists for field and post excavation procedures for finds which may be subject to scientific analysis, as summarised in available guidance (e.g. HE 2017).

4.3.2 The process of excavation, recording and sampling will continue until a sufficient sample of the archaeological remains has been investigated to meet the aims and objectives of the work.

4.3.3 The spoil heap will be scanned using metal detectors during the course of excavations if deemed feasible and safe to do so. Metal detectors will also be used by experienced staff to scan for metallic finds during the excavation of key archaeological features or deposits.

4.3.4 In order to protect any waterlogged remains during the works, the Archaeological Contractor may identify a requirement for 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.

4.3.5 A 2% contingency of the mitigation area will enable further investigation of significant archaeology, should this be necessary. The 2% contingency would be used, with the agreement of the Employer, where additional investigation of significant features extending outside the mitigation area would provide information contributing to HERDS Specific Objectives.

4.3.6 In accordance with Schedule 20, appropriate measures will be taken to ensure respect for human remains is observed. If appropriate this will include screening the excavation in accordance with the Code of Construction Practice (CoCP) such as to be effective to shield the remains from public view; and permitting access to that part of the site only to persons whose presence is necessary for carrying out of the archaeological works.

4.3.7 No photographs taken on site will be shared without permission granted by the Employer. Any public open days should be undertaken in consultation with the Employer.

4.3.8 Discovery of unexpected finds of national importance shall be in accordance with procedure (HS2-HS2-EV-PRO-000-000009).

4.3.9 Consideration will be taken at all times during excavation as to how the results can contribute to the GWSI: HERDS Specific Objectives set out in Table 2.

## Setting Out

4.3.10 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.

4.3.11 The area of mitigation shall be located to a horizontal accuracy of +/– 0.05m. The corner points shall be set out with Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS) equipment or other suitable automated equipment referenced from the PGMs.

4.3.12 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 0.1m Ök: where 'k' is the total distance levelled in kilometres.

4.3.13 The Archaeological Contractor shall ensure that all excavation limits, and significant archaeological detail are surveyed 'as dug' in relation to the project grid before leaving the site. Ground level height data to Ordnance Datum (OD) shall be recorded, along with the levels of the top of the superficial or solid geological deposits (where present). Levels of key archaeological horizons and features will be recorded

## Fieldwork Recording

4.3.14 Recording shall be undertaken by the Archaeological Contractor to the general requirements as described in the GWSI: HERDS and the *Technical Standard – Specification for Historic Environment Investigations* (HS2-HS2-EV-STD-000-000035). During the Archaeological Recording 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.

4.3.15 Archaeological recording is to include, as a minimum:

- The written record of individual context descriptions on appropriate pro-forma;
- Sections (1:10 or 1:20 scale) of cut features and significant deposits;

- Plans at appropriate scales (1:10, 1:20 or 1:50);
- Other drawn and written records on appropriate pro-forma;
- Single context planning should be used only if appropriate (i.e. where there is a complex sequence); and
- Digital photographs.

4.3.16 A 'site location plan', indicating site north shall be prepared at 1:1250. A plan at 1:200 (or 1:100) shall be prepared showing the location of archaeology investigated in relation to the mitigation area. The location of site plans will be identified using OSGB co-ordinates.

4.3.17 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 Temporary Bench Mark (TBM) used for shall also be indicated.

4.3.18 A record of the full extent in plan of all archaeological features and 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 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 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 Cultural Heritage GIS Standard (HS2-HS2-GI-SPE-000-000004). Single context planning shall be used where complex stratigraphy is encountered.

4.3.19 A 'Harris matrix' stratification diagram shall be employed to record stratigraphic relationships (Harris et al. 1993) where appropriate. This record shall be compiled and fully checked by the Contractor during the course of the excavations. Spot dating shall be incorporated onto this diagram during the course of excavations.

4.3.20 Recording of post medieval and modern 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 structural features revealed in investigations may be required in accordance with the aims and objectives of the investigation as defined in the Project Plan.

4.3.21 The photographic record will be in digital format, captured by cameras with a minimum sensor size of 10 megapixel, resulting in high resolution TIFF (uncompressed) images. Photographs will illustrate both the detail and context of the principal archaeological features discovered. In addition, the Contractor shall take appropriate record photographs to illustrate work in progress. All photographic records will include information detailing: site name and number/code, date, context, scale and orientation.

## Human Remains

4.3.22 EWC North trial trenching did not identify any human remains at the mitigation areas. In the event that human remains are identified during mitigation, all work must be undertaken in accordance with the *Human remains and monuments procedure* (HS2-HS2-EV-PRO-0000-000008).

4.3.23 The Archaeological Contractor shall notify DJV and the Contractor immediately upon discovery of unexpected human remains. DJV shall notify the Employer, so that the Employer's human remains procedures can be implemented. DJVs notification to the Employer may initially be made personally or by telephone but shall be confirmed in writing (email will suffice) within 24 hours of discovery.

4.3.24 After notification to DJV the Archaeological Contractor will cease all works on unexpected human remains until further instruction is provided by the Employer.

4.3.25 In accordance with Sections 8.2.23 – 8.2.27 of HS2 *Burial Grounds, Human Remains and Monuments Procedure* (HS2-HS2-EV-PRO-000-000008) the Archaeological Contractor will inform the Coroner or Police, and the local authority Environmental Health Officer of the discovery of unexpected human remains and provide brief background information which will enable a decision to visit the site, or confirm that the human remains are of no interest. The decision regarding a site visit, or notification of no interest must be provided by the Coroner, and or Police and the EHO within two working days of notification.

4.3.26 All articulated and disarticulated human remains encountered during the course of the excavation will be recorded in accordance with current best practice (McKinley and Roberts 1993; Brickley and Roberts 2004; Historic England 2018). Human remains will be collected and retained by appropriately skilled team members to allow for future assessment in line with HERDS research objectives. Articulated remains will be excavated and recorded in situ, whilst disarticulated remains will be recorded by stratigraphic context unless demonstrably forming part of a coherent deposit of disarticulated bone. Where possible neonatal remains will be block lifted for excavation off site.

4.3.27 Human remains, once recognised, will be metal detected immediately to determine whether any metallic grave goods are present. If possible, following the Employer's Burial Grounds, Human remains and monuments procedure (HS2-HS2-EV-PRO-0000-000008) and best practice for exhumation of human remains (CIfA 2017, Historic England 2018, IfA 2004), burials with metallic grave goods shall be excavated, recorded and lifted on the day of discovery to avoid the risk of vandalism and theft. Where this is not feasible or appropriate, the Archaeological Contractor shall ensure, on liaison with the Contractor, that adequate site security is provided. As a minimum, this will require a 24-hour comprehensive security regime until sensitive remains have been recorded and lifted. This is a particular issue for rural sites and 'isolated burials'.

4.3.28 Human remains will be accorded due dignity, care and respect at all times. The Archaeological Contractor may need to screen the remains, dependent on their location.

4.3.29 Excavation and post-excavation processing of human remains will be in accordance with Wessex Archaeology protocols and current guidance documents (e.g. McKinley 2013) and the standards set out in CIfA Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains*. Appropriate specialist guidance/site visits will be undertaken if required.

## Environmental Sampling

4.3.30 In line with the HS2 Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035) an initial sampling strategy is set out below (Section 4.3.35 of the Project Plan). This strategy is based on the existing information about the site, gathered from nearby archaeological investigations and the HERDS Objectives listed in Table 2.

4.3.31 The sampling strategy, along with the HERDS Objectives outlined in Table 2, identifies the key elements that should, where present, be sampled during the Archaeological Recording. However, the strategy will need to be reviewed and justified throughout the on-site work; DJV shall review the palaeoenvironmental sampling during regular assurance visits and will assist the Archaeological Contractor in assessing the ability of the recovered evidence to address GWSI: HERDS Specific Objectives. DJV may identify a need to alter the scope of palaeoenvironmental sampling, *e.g.* where quality of recovered information is poor or unexpected features and deposits are identified, in order to appropriately address Specific Objectives, and would liase with the Employer in this eventuality. Final agreement of alteration to scope may involve HERDS meetings between the Archaeological Contractor, DJV, the Employer and stakeholders. The Employer will determine whether an agreed alteration to scope necessitates production of an addendum to this LS-WSI.

4.3.32 Significant, securely stratified deposits and fills shall be sampled to retrieve palaeoenvironmental and economic indicators. The Archaeological Contractor shall make provision for the sampling of a wide range of contexts for potential assessment and analysis for plant and animal micro/macro fossils and soils/sediments in order to fulfil the aims set out in the Project Plan. Wherever appropriate, artefacts, biological samples and soils shall be assessed for evidence of site and deposit formation processes and taphonomy and especially for evidence of recent changes that may have been caused by alterations in the site environment.

4.3.33 Sampling will follow Historic England guidance (HE 2011). The Archaeological Contractor's sampling strategy shall be developed by the Archaeological Contractor's environmental archaeologist or recognised osteoarchaeologist in liaison with DJV and the Employer. Sample record sheets shall include a reasoned justification for selection of deposits for sampling. Flotation samples and samples taken for coarse-mesh sieving from dry deposits shall be processed at the time of the fieldwork, to permit variation of sampling strategies if necessary.

4.3.34 The sampling strategy for Late Iron Age/Romano-British features and deposits will remain flexible and be subject to review throughout the fieldwork. It will be guided by the Archaeological Contractors recognised specialists in liaison with DJV, Historic England Senior Science Advisor and will follow recognised guidance (HE 2011, 2015).

4.3.35 The Archaeological Contractors recognised specialists shall review information available from the trial trenching, and examine the condition of previously investigated features once mitigation soil stripping is complete, to determine whether further sampling of previously sectioned features would be of value, and the contribution that further work at these features could make to GWSI:HERDS Specific Objectives.

4.3.36 As a minimum the sampling strategy will include consideration of:

- Bulk sampling of securely stratified deposits and feature fills spread across concentrated areas of activity for retrieval of macro environmental remains and to examine whether there are changes in rates of deposition, material survival and zoning of activity during different phases of activity;
- Floor surfaces where they survive and have not been truncated;
- Screening of collected samples for indicators of industrial processes, particularly in areas of possible burning. Where significant concentrations are identified, this information should be fed-back to the site, so that where necessary, further samples can be taken to help to define any areas of metalworking, or other industrial processes;
- Monolith sampling of securely stratified feature fills or deposits for pollen, thin section and other methods of scientific analysis;
- Retrieval of securely stratified material for scientific dating;
- Geoarchaeological input, as necessary, in order to aid understanding of site formation processes and to determine whether scientific assessment and analysis could enhance understanding of feature fills, including whether the features were in-filled deliberately, or naturally in-filled over time;

4.3.37 Scientific methods used to examine feature fills may include chemical and physical analyses, soil micromorphology, mineralogy and particle size analysis (HE 2011, 2015). Field based recording and sampling will be carried out by, or under the supervision of, recognised palaeoenvironmental and geoarchaeological specialists.

4.3.38 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 Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035).

4.3.39 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.

4.3.40 Processing and assessment of all bulk soil samples collected, or sub-samples of them, will 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 Wessex Archaeology'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.

4.3.41 Samples collected for geo-archaeological assessment should be processed promptly by the Contractor's specialist, particularly where storage of unprocessed samples is thought likely to result in deterioration. Appropriate assessment shall be undertaken in liaison with DJV and the Employer.

4.3.42 Wessex Archaeology shall be responsible for the protection of all samples and finds and for their transport (including loading and unloading) to the processing facilities or other location as agreed with the Employer.

## Finds

4.3.43 All archaeological finds pre-dating the 19th century will be retained. Late post-medieval and modern finds (19th century or later) may be recorded on site and not retained, depending on the site-specific objectives.

4.3.44 The Archaeological Contractor may propose a retention policy if large assemblages of certain categories of find are expected or are unexpectedly recovered. Proposals for a retention policy will be agreed with DJV and must be approved by the Employer before the Archaeological Contractor enacts them. The retention policy will follow the Technical Standard - Historic environment physical archiving procedure (HS2-HS2-EV-STD-000-000039) and the usual categories of material considered by the policy will comprise:

- Ceramic building material;
- Kiln and furnace structure;
- Ceramic wasters;

- Industrial waste samples such as slag;
- Non-descript wall plaster;
- Plaster and mortar samples;
- Building stone samples;
- Animal bone, especially from contexts with large residual pottery assemblages that nullify study of the animal bone due to the potential for large residuality of animal bone; and
- Post-medieval bottle glass.

4.3.45 Where appropriate, soil samples may be taken and sieved to aid in finds recovery.

4.3.46 Any finds requiring active conservation or specific storage conditions will be dealt with immediately in line with First Aid for Finds (Watkinson and Neal 1998).

4.3.47 The Archaeological Contractor shall be responsible for the protection of all finds and for their transport (including loading and unloading) to the processing facilities or other location as agreed with the Employer.

## Metallic Objects and Residue

4.3.48 Assessment of finds assemblages shall, where appropriate to the Specific Objectives being addressed, include x-radiography of iron objects (after initial screening to exclude obviously recent debris) and, where appropriate, nonferrous artefacts. 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.

## Treasure

4.3.49 In the event of the discovery of 'treasure' as defined below, the Treasure Act 1996 will apply to works for Phase One of HS2 and the Archaeological Contractor shall comply with it. The Treasure Act defines 'Treasure' as:

- Any metallic object, other than a coin, provided that at least 10 per cent by weight of metal is precious metal (that is, gold or silver) and that it is at least 300 years old when found. If the object is of prehistoric date it will be Treasure provided any part of it is precious metal;
- Any group of two or more metallic objects of any composition of prehistoric date that come from the same find (see below;

- Two or more coins from the same find provided they are at least 300 years old when found and contain 10 per cent gold or silver (if the coins contain less than 10 per cent of gold or silver there must be at least ten of them). Only the following groups of coins will normally be regarded as coming from the same find: Hoards that have been deliberately hidden; Smaller groups of coins, such as the contents of purses, that may have been dropped or lost; Votive or ritual deposits;
- Any object, whatever it is made of, that is found in the same place as, or had previously been together with, another object that is Treasure; and
- Any object that would previously have been **treasure trove**, but does not fall within the specific categories given above. Only objects that are less than 300 years old, that are made substantially of gold or silver, that have been deliberately hidden with the intention of recovery and whose owners or heirs are unknown will come into this category.

4.3.50 **Note:** An object or coin is part of the *'same find'* as another object or coin if it is found in the same place as, or had previously been together with, the other object. Finds may have become scattered since they were originally deposited in the ground.

4.3.51 All finds falling within the definitions of treasure shall be reported immediately to DJV who will inform the Contractor and Employer.

4.3.52 The Archaeological Contractor will ensure that all finds of Treasure are reported to the Coroner within 14 days of discovery, or within 14 days of recognition that the find/s constitute Treasure.

4.3.53 The Archaeological Contractor will initially report the find/s to the Portable Antiquities Scheme Finds Liaison Officer (FLO). The FLO will often provide assistance in determining whether find/s constitute Treasure and may report the discovery to the Coroner on the finder's behalf. The FLO will also contact the British Museum to obtain a unique Treasure reference number for the find and this will act as a constant identifier throughout the process.

4.3.54 To protect the finds from theft, the Archaeological Contractor shall record the finds and remove them to a safe place on the day of discovery. Where recording and removal is not feasible or appropriate on the day of discovery, the Archaeological Contractor shall ensure, on liaison with the Contractor that adequate site security is provided by the Contractor.

4.3.55 Subject to the Provisions of the Treasure Act 1996, all material that is defined as Treasure is vested in the franchisee or, if none, the Crown.

### Backfilling

4.3.56 The area of Archaeological Recording shall be pumped dry (by Wessex Archaeology) and any necessary protection measures 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.

4.3.57 Any specific archaeological requirements relating to backfilling including use of materials to mark excavated depth, such as geotextiles (if necessary), shall be specified by Wessex Archaeology.

# 5 Post-Investigation Reporting and Archiving

5.1.1 All reporting will be carried out in accordance with the GWSI: HERDS requirements (HS2-HS2-EV-STR-000-000015).

5.1.2 If appropriate, Schedule 20 reporting requirements – within 12 months for remains and monuments – will also be adhered to in the reporting process.

5.1.3 Wessex Archaeology will produce an interim report for the Archaeological Recording within ten days of completion of fieldwork, unless otherwise agreed with the Employer. The interim report will:

- Be brief, with information contained commensurate with the timescale for production;
- Provide information gathered during the initial assessment of fieldwork results, including brief summaries and interpretations of identifies archaeology, recovered finds and results of environmental sampling;
- Indicate whether the fieldwork findings require the resource assessment and specific objectives to be updated;
- Provide brief information necessary to inform design decisions relating to the next stage of historic environment works (if required by the Employer); and
- Include a site plan indicating the extent of fieldwork investigations.

5.1.4 Wessex Archaeology will produce a fully illustrated post-excavation assessment for the Archaeological Recording within six weeks of completion of the fieldwork, unless otherwise agreed with the Employer. The report will be structured as follows:

- Executive Summary;
- Introduction, including site location and project background, aims, and GWSI: HERDS Specific Objectives (as identified in the Project Plan);
- Baseline summary, including topography and geology, designated assets; archaeological potential and previous work(s) relevant to the archaeology of the site (e.g. DDBA, previous surveys);
- Detailed Scope and Methodology, to include dates of fieldwork, the areas investigated at each stage and the rationale in relation to the Specific Objectives;
- Results and observations, along with the following supporting sections:
    - Site walkover inspection
    - Archaeological Recording
    - Stratigraphic report
    - Finds report
    - Environmental evidence report
    - Interpretation of results against original expectations and Specific Objectives
    - Review of the evaluation and mitigation strategy (i.e success and confidence rating
- Conclusions
    - Statement of findings, and summary of significance
    - Assessment of achievement (or not) of the Specific Objectives
- Recommendations and research aims for further investigation, publication and dissemination proposals (in consultation with DJV and if required by the Employer), including archive deposition;
- References to all primary and secondary sources consulted; and
- Appendices will comprise (where appropriate) illustrations, contextual summary by trench, finds reports, environmental reports, site matrices and full definitions of the interpretation terms used in the report and a copy of the OASIS record.

5.1.5 The following figures will be included in the mitigation report and the report figures may be combined with the Trial Trenching report figures in order to provide a clear overview of the site:

- General plan (mandatory);
- Engineering design (mandatory);
- Site location;
- Survey extents;
- Location of area of Archaeological Recording;
- Survey results to include plans and section of archaeological features, deposits and sequences; and
- Selected photographs or representative and/or significant features and finds.

5.1.6 If Wessex Archaeology foresees a requirement for extension to completion of either stage of reporting they will immediately notify DJV so that extension can be discussed with the Employer.

5.1.7 The creation and curation of the archaeological physical archive compiled as a result of the archaeological works conducted by the HS2 scheme shall comply with the Historic Environment Physical Archiving Strategy (HS2-HS2-EV-STR-000-000018) and Technical Standard - Historic environment physical archiving procedure (HS2-HS2-EV-STD-000-000039).

5.1.8 The guidance for the creation, curation and dissemination of digital data created as a result of the archaeological works conducted by the HS2 scheme shall be in accordance with Technical Standard - Historic environment digital data management and archiving procedure (HS2-HS2-EV-STD-000-000040) and Historic environment digital data management and archiving strategy (HS2-HS2-EV-STR-000-000019).

5.1.9 The Heritage Memorandum for Phase One of HS2 recognises the need to deposit the HS2 archaeological and built heritage archive appropriately and the Employer is committed to working with Historic England and local authorities to identify suitable repository/ies to enable the deposition of the artefacts and records generated by the HS2 heritage works.

# 6 Dissemination

## 6.1 General

6.1.1 In accordance with professional standard practice, Wessex Archaeology will complete an 'Online Access to the Index of Archaeological Investigations' (OASIS) record. To achieve completion of OASIS records in compliance with Employer requirements a small number of steps are necessary:

- Wessex Archaeology will register for an OASIS login using HS2 prefix, i.e *'HS2-Archaeological Contractor Name'*;

- The OASIS record 'project name' field will be completed using HS2 as a prefix to the project name. The project name will exactly replicate the Final Report title;
- HS2 site codes will be added as identifiers to the OASIS record 'associates project reference codes' field;
- HS2 will be specified as the archive depository in the OASIS record;
- The OASIS record will be presented in the Final Report as an appendix; and
- Archaeological Contractor report/s will only be uploaded to the relevant OASIS record after 'Code 1' approval of the report has been received from HS2.

6.1.2 Digital and hard copies of reports will be submitted to the relevant Historic Environment Record (HER) and the National Record for the Historic Environment (NRHE) in Swindon in accordance with their requirements.

6.1.3 Significant discoveries will be reported in summary in the local archaeological society journal and/or other relevant journal as appropriate.

## 6.2 Transfer of Tile

6.2.1 On completion of the evaluation (or extended fieldwork programme), every effort will be made to persuade the legal owner of any finds recovered (i.e., the landowner), with the exception of human remains and any objects covered by the Treasure Act 1996 (as amended by the Coroners and Justice Act 2009), to transfer their ownership to the museum in a written agreement.

## 6.3 Preparation of Archive

6.3.1 The complete project archive, which may include paper records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by HS2, and in general following nationally recommended guidelines (SMA 1995; CIfA 2014c; Brown 2011; ADS 2013) and HS2 standards. The archive will usually be deposited within one year of the completion of the project, with the agreement of the client.

## 6.4 Selection Policy

6.4.1 The retention policy will follow the Technical Standard - Historic environment physical archiving procedure (HS2-HS2-EV-STD-000-000039) In accordance with these, and any specific guidance prepared by HS2, a process of selection and retention will be followed so that only those artefacts or ecofacts that are considered to have potential for future study will be retained. The selection policy will be agreed with HS2, and fully documented in the project archive. Material not selected for retention may be used for teaching or reference collections by HS2 or by Wessex Archaeology.

## 6.5 Security Copy

6.5.1 In line with current best practice (eg, Brown 2011), on completion of the project a security copy of the written records will be prepared in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

# 7 Information Management

7.1.1 GIS deliverables will be provided in accordance with the 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 standard template for reports (HS2-HS2-PM-TEM-000-000004) will be used.

# 8 Quality Assurance Process

8.1.1 Wessex Archaeology will liaise with DJV regarding the works programme and quality assurance of the archaeological works. In the event of potential delays to programme, Wessex Archaeology will issue an Early Warning Notice (EWN) via CEMAR following internal approval by the Archaeological Contractor's Project Director.

8.1.2 Wessex Archaeology will have direct communication with LM on contractual matters and non-archaeological quality assurance; DJV will be informed of any EWNs raised in the course of the works.

8.1.3 The works will be overseen and internally quality-assessed by Wessex Archaeology's senior management and will be directed by Wessex Archaeology's Project Director.

8.1.4 All parties will follow HS2 protocols for Intra- and Inter-project communication, which will consist of the following format:

- Weekly progress meetings will be held to discuss the progress of on-site works, forecasting of the works programme and to highlight any potential EWNs; and
- Matters arising from progress meetings will be discussed and meeting minutes will be forwarded to all parties (Archaeological Contractor, DJV, and Contractor).

8.1.5 The following interfaces are anticipated on the basis of current information:

- The Employer (HS2 Ltd) via DJV;
- The Contractor (LM-JV);
- The Archaeological Consultant (DJV);
- Third party stakeholders via DJV;
- Other contractors working on separate parts of the evaluation area.

8.1.6 Following completion of work, parts of the mitigation area will be formally signed off by DJV and HS2. Formal sign off will be through a written process utilising a fieldwork sign-off sheet submitted by the Archaeological Contractor to DJV. DJV will review and, subsequent to any required revision, will submit the sign off sheet to HS2 for final approval.

8.1.7 Wessex Archaeology will submit a draft of all reports to Asite for review. DJV will provide internal feedback and may require that the Archaeological Contractor amends documentation before acceptance. The Archaeological Contractor will upload PDF's of accepted documents to Asite for issue to HS2. HS2 may provide feedback and require amendment to submitted documents before they are approved.

# 9 Community Engagement

9.1.1 Community Engagement lies at the heart of historic environment works for HS2 Phase One. GWSI: HERDS (HS2-HS2-EV-STR-000-000015) is clear in setting out three tenets as key to delivery of an innovative new approach to archaeological research and investigation: creating knowledge, involving people, and legacy. The GWSI: HERDS sets out specific objectives for Community Engagement (CE):

- CE1: Marking and communicating the changes to landscapes and environments;
- CE2: Identifying and sharing our stories;
- CE3: Meeting the challenge of inspiring the next generation;
- CE4: Accessible information and knowledge sharing; and
- CE5: Contribute to the process and facilitation of audience project creation.

## 9.2 Community Engagement Scope

9.2.1 The Contractor will offer activities and events that involve and keep the community and stakeholders informed, and develop an understanding of local history and archaeology. Community engagement will strive to include harder-to-reach audiences (e.g. BAME, youth and low-income groups).

9.2.2 Archaeological mitigation provides an opportunity to exploit the benefits of personal and social satisfaction and access to professional and specialist knowledge, forge closer relationship between communities and environment, provide 'good news' stories for local and national press, and fulfil social and community obligations (GWSI: HERDS 9.1.2).

9.2.3 Event and activity type will depend on Health and Safety, interest from local groups, Wessex Archaeology capability, resource, works programme and site conditions. Wessex Archaeology will organise events and activities in liaison with the Employer, the Contractor and DJV.

9.2.4 Wessex Archaeology will deliver at least two types of engagement selected from the list below, with the flexibility for further engagement depending on outcomes and uptake.

- Notifications ad illustrated fact sheets – for distribution to agreed groups and across agreed networks
- Community and local interest group site visits – subject to Health and Safety, ground conditions, weather and accessibility, programme;
- Community open days - including artefact handling, information boards;
- Drop-in events - including artefact handling, information boards;
- Lectures and talks – to local interest groups, societies, parish and community groups;
- Blogs and online materials – in conjunction with HS2 Commonplace;
- Site photography and drone footage;
- School visits – in conjunction with LM Skills Education and Employment (SEE); and
- Participation in archaeological fieldwork stages and post-excavation work (where possible and appropriate), e.g. community excavation and recording, research.

## 9.3 Community Engagement Set Up, Approval and Publicity

9.3.1 Events and activities will be set up in line with the Contractor's objectives on engagement, using and building on site and/or area specific engagement plans or stakeholder matrices. Activities and events will support the pillars of the Employer's community engagement strategy: creating knowledge, involving people, and legacy.

9.3.2 Activities and events will be promoted and advertised through channels and networks appropriate to the scale and audience at least one week in advance.

9.3.3 Wessex Archaeology will supply all text and images for use in Community Engagement to DJV for review and for approval by the Contractor and the Employer (at least one week prior to promotion)

9.3.4 In addition to the HS2 corporate channels listed below, other opportunities for publicity should be sought and communicated to the Employer, Contractor and DJV in a mini communication plan. Local press (radio, newspaper and TV) and relevant local digital platforms should be considered, as should historical and archaeological societies, Council for British Archaeology West Midlands and local museums platforms.

- HS2 corporate website – options include a press release, revamped page content – to be determined by HS2;
- Commonplace websites for Birmingham, Solihull, Warwickshire and Staffordshire – each website to be updated with consistent key messages, fact sheet(s), responses to FAQs together with some bespoke messages tailoring the page to the local context;
- E-news alerts from Commonplace – distributing HS2 fact sheet(s), notifications, blogs, webpage updates, etc; and
- HS2 social media – Facebook, Twitter and LinkedIn – LM to provide the content; HS2 to post

## 9.4 Community Engagement Delivery

9.4.1 Delivery of activities and events will usually be attended by representatives of the Employer, the Contractor and/or DJV.

9.4.2 The Archaeological Contractor will provide engagement / feedback forms to participants in Community Engagement activities and events and may create an engagement form specific to the subject matter to aid reporting.

9.4.3 Activities and events should:

- Be locally-based if possible;
- Focus on the archaeology of the site and immediate area; and
- Be tailored to the audience

## 9.5 Community Engagement Reporting

9.5.1 Following activities and events, Wessex Archaeology will communicate information on factors such as numbers, achievements, interest and appetite for further engagement to the Employer, the Contractor and DJV.

# 10 Health, Safety and Environment

10.1.1 Health and safety consideration will be of paramount importance in conducting all fieldwork. Safe working practices will override archaeological considerations at all times. Wessex Archaeology will supply trained, competent and suitably qualified staff to perform the tasks and operate the equipment used on site.

10.1.2 Wessex Archaeology will undertake the work in accordance with the health and Safety at Work Act 1974 and the Management of Health and Safety at Work Regulations 1999 as well as in accordance with the Employer's health and safety requirements and with any site-specific health and safety requirements.

10.1.3 Wessex Archaeology will be responsible for the implementation of, adherence to and reporting of health and safety during the mitigation.

10.1.4 A draft site-specific Risk Assessment and Method Statement (RAMS) for the mitigation has been produced and is included as Appendix 3.

10.1.5 All work on site is to be carried out in accordance with the procedures set out in the RAMS.

10.1.6 All staff deployed onto site are to be fully inducted by the Employer and will have read and signed the RAMS before commencing work.

10.1.7 Wessex Archaeology have still to be made aware by the Contractor of any ecological constraints on the site.

10.1.8 The current land use of the site was assessed during the site walkover survey.

10.1.9 There will be no working under extant tree canopies or in the proximity of tree canopies to avoid potentially cutting through roots as this may have safety implications. There will be no tracking over areas of potential tree roots.

10.1.10 The red line site boundary will be clearly marked so that staff and subcontractors can work within it. No area outside the red line boundary will be surveyed unless specifically authorised by the Employer.

# 11 Site specific details

## 11.1 Access and Welfare

11.1.1 Access will be provided by HS2 and Landowner liaison by Wessex Archaeology is likely to be minimal. Should negotiation and interaction with the owners of adjacent land parcels be required this will be undertaken by the LM land access team.

11.1.2 Communication and engagement with third parties will use the Employer's communication protocols set out in the Employer's and/or Contractor's Community Relations Strategy.

11.1.3 Wessex Archaeology will supply plant, welfare and site security for the duration of the mitigations works.

## 11.2 Safety and Security

11.2.1 Vehicles will be parked in the compound's designated locations only (Figure 3, Appendix 2).

11.2.2 No tools or equipment will be left on site overnight.

11.2.3 Procedures to be followed if members of the public are outlined within the RAMS (Appendix 3).

11.2.4 No lone working is permitted.

11.2.5 Wessex Archaeology is providing security including remote alarm systems and mobile response.

## 11.3 Accommodation

11.3.1 Where required, accommodation will be provided as close to the site as possible to reduce environmental impact and driver fatigue.

## 11.4 Insurance

11.4.1 Both public liability (£10,000,000) and professional indemnity insurance (£5,000,000) are held by Wessex Archaeology.

# 12 Programme and Staff

12.1.1 The proposed programme of works is set out below:

| Activity | Start Date | End Date |
|---|---|---|
| Site walkover inspection | 08/08/2019 | 08/08/2019 |
| Archaeological Mitigation | 19/09/2019 | 20/12/2019 |
| Post-ex analysis and Reporting | 06/01/2020 | TBC |
| Archiving | TBC | TBC |

# 13 Resourcing requirements and budget

13.1.1 The following resourcing requirements and costs are required to undertake the work: More detailed information has been provided in a pricing schedule.

| Activity | Cost |
|---|---|
| LS-WSI (WSI), Site Specific RAMS | £2,286.68 |
| Site Walkovers | £3,251.94 |
| Prelims – compound hire (14 weeks) including all welfare, fencing, installation and demobilisation, traffic management and grass cutting | £43,904.60 |
| Prelims – trackway hire (14 weeks), installation and demobilisation | £9,408.80 |
| Prelims - Site security | £11,800.00 |
| Fieldwork – Mitigation 2.2 ha excavation - staffing, management, transport, equipment, UAV flights over 14 weeks | £271,119.40 |
| Fieldwork - Plant – 2.2 ha stripping and reinstatement (machine excavator x 2, dumpers x 4, bulldozer and dust suppression) | £143,635.50 |
| Reporting | £59,406.72 |
| Contingency fieldwork (additional excavation or prelims at framework rates) | At framework rates |
| Contingency reporting (additional analysis and reporting at framework rates) | TBC on fieldwork completion at framework rates |

# 14 References and Glossary

## 14.1 References

ADS 2013 Caring for Digital Data in Archaeology: a guide to good practice. Archaeology Data Service & Digital Antiquity Guides to Good Practice

Brown, D H 2011 Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation (revised edition). Archaeological Archives Forum

Chartered Institute for Archaeologists (CIfA) 2014a Standard and Guidance for Archaeological Field Evaluation. Reading, CIfA

CIfA 2014b Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials. Reading, CIfA

CIfA 2014c Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives. Reading, CIfA

English Heritage 2011 Environmental Archaeology: A Guide to the Theory, Practice of Methods, from Sampling and Recovery to Post-excavation (second edition). Portsmouth, English Heritage

Historic England 2015 Management of Research Projects in the Historic Environment: the MoRPHE project managers' guide. Swindon, Historic England

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| Reference | HS2 document reference no. |
|---|---|
| HS2 Technical Standard Specification for historic environment investigations | HS2-HS2-EV-STD-000-000035 |
| HS2 Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) | HS2-HS2-EV-STR-000-000015 |
| HS2 Cultural Heritage (HERDS) GIS Specification | HS2-HS2-GI-SPE-000-000004 |
| HS2 Geographic Information System Standards | HS2-HS2-GI-STD-000-000002 |
| HS2 Environmental Impact Assessment (EIA) Phase One Environmental Statement (ES): CFA18 Stoneleigh, Keniliworth and Burton Green | Volume 5 Technical Appendices: CH-001-018; CH-002-018; CH-003-018; CH-004-018 |
| WP 29(B) Historic Environment Works – River Leam to Stoneleigh Park – Enabling Works North Contract: Project Plan for Trial Trenching | 1EW04-LMJ-EV-PLN-NS01-NL03-029003 |
| WP 29(B) Historic Environment Works – Cubbington Wood (River Leam to Stoneleigh Park) – Enabling Works North Contract: Interim Report for Trial Trenching (Trenches 193-238) | 1EW04-LMJ_WEX-EV-REP-NS01_NL03-029001 |
| WP 29(B) Historic Environment Works – Cubbington Wood (River Leam to Stoneleigh Park) – Enabling Works North Contract: Evaluation Report for Trial Trenching (Trenches 193-238) | 1EW04-LMJ_WEX-EV-REP NS01_NL03-029003 |

## 14.2 Acronyms

| Acronym | Title |
|---|---|
| **ADS** | Archaeology Data Service |
| **CIfA** | Chartered Institute for Archaeologists |
| **CLR** | Construction Land Requirement |
| **DDBA** | Detailed DeskoBased Assessment |
| **EH** | English Heritage (now Historic England) |
| **ES** | Environmental Statement |
| **ESA** | Enhanced Study Area (as part of GDBA) |

| | |
|---|---|
| **GIS** | Geographic Information System |
| **GPS** | Global Positioning System |
| **GWSI: HERDS** | Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy |
| **HE** | Historic England (formerly English Heritage) |
| **HER** | Historic Environment Record |
| **HS2** | High Speed 2 |
| **LPA** | Local Planning Authority |
| **LS-WSI** | Location Specific Written Scheme of Investigation |
| **NRHE** | National Record for the Historic Environment |
| **OASIS** | Online Access to the Index of Archaeological Investigations |
| **RTK** | Real Time Kinematic |
| **WSI** | Written Scheme of Investigation |

# 15 Appendices

# Appendix 1: Project Plan

# WP 029 C Historic Environment Works – South Cubbington Wood – Enabling Works North Contract

## Project Plan for Archaeological Mitigation

Document Number: 1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004

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# 1 Executive Summary

1.1.1 This High Speed 2 (HS2) North Section Phase One 'Project Plan' details the proposed methodology and approach for a programme of mitigation by archaeological recording at South Cubbington Wood in Warwickshire. The mitigation area is located between HS2 chainage markers 134640 and 134940 and encompasses 2.2ha. The area is required as part of the construction land requirements for the enabling works and subsequent main works for HS2 Phase One. The mitigation area targets a focus of archaeological remains recorded during EWC North trial trenching as part of WP29B Historic Environment Works.

1.1.2 Works detailed within this Project Plan are permitted by the High Speed Rail (London-West Midlands) Act (the Act), which provides powers for the construction and operation of HS2 Phase One, and the Heritage Memorandum, which sets out how historic environment (including heritage assets and their setting) will be addressed during the design and construction of HS2 Phase One.

1.1.3 The enabling and main works will entail ground disturbance which may have an impact on the historic environment (i.e. known or possible buried heritage assets/archaeological remains and above ground heritage assets/structures of historic interest).

1.1.4 The method of archaeological mitigation will be 'Archaeological Recording'. Geophysical survey carried out as part of the HS2 Phase One EWC in 2018 (1EW04-LMJ-EV-REP-NS01-NL02-029001) revealed possible Late Iron Age/Romano-British enclosed rural settlement activity located immediately south-east of South Cubbington Wood. EWC North evaluation trenches 193-202 (Appendix A, Figure 4) have confirmed the presence of a focus of Late Iron Age/Romano-British rural settlement activity. Drainage gullies, storage pits and post holes were identified, as well as a possible penannular gully, perhaps defining the position of a roundhouse. A possible contemporary pond at Trench 194 measured more than 3m deep; it was not fully excavated during the evaluation trenching, but a monolith sample from it showed episodic deposition of sterile sediments.

1.1.5 The 'Archaeological Recording' will investigate the area containing settlement activity, as identified in Trenches 193-202, and clarify the nature, extent, date, survival, significance and contribution to Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) Specific Objectives.

1.1.6 DJV shall review the results of the Archaeological Recording during regular assurance visits. DJV will assist the Archaeological Contractor in assessing the ability of the recovered evidence to address GWSI: HERDS Specific Objectives. DJV may identify a need to alter the scope of works, including the scope of archaeological and palaeoenvironmental sampling, to appropriately address Specific Objectives, and would liaise with the Employer in this eventuality. Final agreement of alteration to scope may involve HERDS meetings between the

Archaeological Contractor, DJV, the Employer and stakeholders. The Employer will determine whether an agreed alteration to scope necessitates production of an addendum to the LS-WSI.

1.1.7 Discovery of unexpected finds of national importance shall be in accordance with HS2 Procedure for the unexpected discovery of archaeological remains of national importance (HS2-HS2-EV-PRO-000-000009).

1.1.8 The Project Plan for Mitigation should be read alongside the River Leam to Stoneleigh Park Project Plan for Trial Trenching (1EW04-LMJ-EV-PLN-NS01_NL03-029003) and Evaluation Report for Trial Trenching (1EW04-LMJ_WEX-EV-REP-NS01_NL03-029003) in order to provide the complete picture of the archaeological investigation of the mitigation area.

1.1.9 Preliminary research carried out as part of the 2013 Phase One Environmental Statement (ES), included hyperspectral and LiDAR survey. A reappraisal of the ES LiDAR data was undertaken in 2018 (1EW04-LMJ-EV-REP-N000-029012) to assess the use of different visualisations to identify additional archaeological features.

1.1.10 The purpose of this Project Plan is to:

- Outline the scope and aims of the Archaeological Recording and how it will contribute to specific research objectives, in accordance with the GWSI: HERDS;
- Outline the approach and methodology to be employed. The details will be covered in the Local Specific Written Scheme of Investigation (LS-WSI); and
- Set out the proposed deliverables and reporting mechanisms.

1.1.11 The GWSI: HERDS Specific Objectives for Knowledge Creation (KC) that the Project Plan focuses on are listed below:

- 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 regard to the different settlement types encountered along the route.

# 2 Location / Site Background

## 2.1 Baseline

2.1.1 This Project Plan has been prepared in accordance with guidelines set out in *HS2 Technical Standard - Specification for historic environment project plans and location specific written schemes of investigation* (HS2-HS2-EV-STD-000-000036).

2.1.2 The mitigation area is located within a single agricultural field situated immediately east of South Cubbington Wood and approximately 550m east of Cubbington. It is centred on National Grid Reference (NGR) 435371 268408 and encompasses 2.2ha of land.

2.1.3 The mitigation area will be subject to enabling works as part of Phase One of HS2, and includes the Construction Land Requirement (CLR) CR02724: Lower Grange Embankment. The work will entail ground disturbance which will have an impact on archaeological remains.

2.1.4 The mitigation area is situated within the Dunsmore Archaeological Character Area (ACA3) which is centred on an area of former heathland associated with a low plateau of glacial deposits. The ACAs were split further in the ES; the mitigation area is located within the following Archaeological Character Sub-Zone:

- CFA17-09: Dunsmore Plateau. In continuous agricultural use for several centuries with a number of surviving medieval ridge and furrow systems. Utilised for managed woodland since the medieval period.

2.1.5 The method of mitigation will be 'Archaeological Recording' to examine an area where Late Iron Age/early Romano-British rural settlement evidence has been discovered. The mitigation is intended to investigate and record the settlement evidence, and any other significant archaeological remains present, in order to clarify their nature, date, significance and contribution to GWSI: HERDS Specific Objectives.

2.1.6 Table 1 lists the archaeological investigations carried out at the site to date, with the key outcomes.

Table 1: Previous HS2 investigations in proximity to the mitigation area

| Description | Summary of results |
|---|---|
| WP29(B) Historic Environment Works – River Leam to Stoneleigh Park – Enabling Works North Contract: Interim Report for Trial Trenching (1EW04-LMJ_WEX-EV-REP-NS01_NL03-029001) | Late Iron Age/Romano-British settlement activity recorded in trenches 193-202 in the area immediately south-east of South Cubbington Wood. Drainage gullies, storage pits and post holes recorded in trenches 193. 194. 195 and 196. Tops of the features had been truncated by modern ploughing. Possible penannular gully identified at trench 195 which measured 0.5m wide by 0.2m deep and contained pottery, an iron object and animal bone. The feature may have functioned as the drip gully of a roundhouse with an estimated diameter of 6.2m. A post hole 2m away suggests a wooden post may have stood towards the centre of the |

| | |
|---|---|
| | structure. Relatively small finds assemblage dominated by abraded pottery and limited animal bone. |
| LiDAR and Hyperspectral Survey carried out as part of the 2013 ES (CH-004-017) | The ES LiDAR survey identified features to the west of the mitigation area within South Cubbington Wood. Ridge and furrow earthworks (WA17.19) on both a N-S and E-W alignment were recorded at the south and the NW of the wood. The survey also recorded a small number of boundary ditches within the woodland (WA17.20). |
| WP29(A) Geophysical Survey Areas 1-3: River Itchen Viaduct to Balsall Common (1EW04-LMJ-EV-REP-NS01-NL02-029001) | Parcel 2AA, in which the mitigation area is located, contained linear, curvilinear, rectilinear and discrete positive magnetic anomalies which were interpreted as identifying prehistoric or Romano-British settlement activity. |
| Historic Settlement Landscape Study carried out as part of the HS2 Phase One Enabling Works based upon the Detailed Desk Based Assessment for Historic Settlement Landscape Study (1EW04-LMJ-EV-REP-N000-029001) | A route-wide historic settlement study was undertaken to examine the later medieval and post-medieval landscapes. No heritage assets were identified at the mitigation area. |
| WP29(A) Detailed Desk Based Assessment for EIA LiDAR Survey Re-appraisal (1EW04-LMJ-EV-REP-N000-029012) | The LiDAR re-appraisal identified a group of small sub-circular pits (APS17.067), at the north of the mitigation area, these features show as earthworks on visualised EA LIDAR data. A small number boundary ditches, dispersed ponds and an area of ridge and furrow are situated to the west of the mitigation area within South Cubbington Wood (APS17.074, 17.075, 17.068). |

## 2.2 Site Conditions

### Topography and Geology

2.2.1 The mitigation area is located at a relatively flat plateau at c. 96m above Ordnance Survey (aOD). Land to the south descends to the River Leam at c.74m, then rises to around 98m aOD at Hunningham Hill on the southern side of the river valley.

2.2.2 The British Geological Survey (BGS) online mapping data shows that the underlying solid geology of the mitigation area consists of Mercia Mudstone Group mudstone. The superficial deposits within the mitigation area are recorded as Bosworth Clay Member and Mid-Pleistocene Diamicton Till.

### Summary of Archaeological Potential and Significance

2.2.3 There are no world heritage sites, scheduled monuments, registered battlefields or listed buildings within the mitigation area. The closest designated heritage asset is the Grade II Listed pigeon cote at Weston Hall Farm approximately 500m to the north east of the mitigation area.

2.2.4 The 2013 Environmental Statement (ES) identified four non-designated heritage assets within 500m of the mitigation area (the location of these assets as mapped by the ES is shown on Figure 2 in Appendix A).

- ES ref. OFC037: Important hedgerow demarking the historic Cubbington/Weston-under-Wetherley parish boundary.
- ES ref. OFC041/STN004: Bytham River, Middle Pleistocene river system later subsumed by Anglian ice sheet and buried by late glacial deposits.
- ES ref. OFC042: Cubbington Primary School ridge and furrow surviving as earthworks.
- ES ref. OFC044: Mill Lane ridge and furrow.

2.2.5 The Warwickshire HER does not list any previous investigations of the mitigation area, but an additional eight non-designated heritage assets are recorded within 500m of the mitigation area (Figure 2 in Appendix A).

- HER ref. MWA9508: Weston Hall garden, Weston-under-Wetherley. Small gardens with formal walk and orchard, c.500m north.
- HER ref. MWA10296: Possible site of Weston House demolished c. 1730, c.500m north-north east.
- HER ref. MWA12987: Cubbington Medieval Settlement, c.200m north-north east. The probable extent of the medieval settlement based on the Ordnance Survey map of 1887.
- HER ref. MWA22502: Medieval to Imperial artefact found during metal detecting, c.300m east.
- HER ref. MWA22503: Romano-British artefact found during metal detecting, c.300m east.
- HER ref. MWA22539: Medieval artefacts found during metal detecting, c.500m north-east.
- HER ref. MWA22720: Post-medieval artefact found during metal detecting, c.150m north.
- HER ref. MWA22728: Medieval artefact found during metal detecting, c.150m north.

2.2.6 EWC North geophysical survey and trial trenching identified a Late Iron Age/Romano-British enclosed settlement situated at a plateau overlooking the River Leam, which is located c.800m to the south. The main evidence for the settlement comprised ditches, gullies and possible storage pits encountered in trenches 193, 194, 195 and 196, although a possible

contemporary pond was identified in Trench 194. Two features at the southern end of Trench 195 were interpreted as a potential penannular gully, perhaps the site of a small roundhouse. The finds assemblage included 106 sherds of principally Late Iron Age/Romano-British pottery reflecting domestic activity. There were also 22 fragments of ceramic building material (CBM) recovered from the fills of Late Iron Age/Romano-British features.

2.2.7 The settlement features surviving at the mitigation area appear to have been truncated by subsequent ploughing; the majority of pits, post holes and gullies were c.0.2m deep, although a few ditches survived to depths of c.0.5m and a possible contemporary pond was more than 3m deep. The finds assemblage recovered during the trial trenching was relatively small, animal bone poorly preserved, and palaeoenvironmental information limited. The mitigation may reveal areas where archaeological features are better preserved and artefacts, ecofacts and palaeoenvironmental evidence more abundant, but current evidence indicates that the focus of mitigation will be to determine the scale, character, longevity and any observable zoning of activity at the settlement.

2.2.8 EWC North trial trenching identified a small number of widely dispersed potential ditches generally on a southeast to northwest alignment, but otherwise exhibiting no obvious pattern, at the sloping valley side situated immediately to the south of the Late Iron Age / Romano-British enclosed settlement. The majority of the potential ditches did not contain dating evidence, and with one exception (c.0.50m deep), they were shallow (< 0.20m deep), and were often aligned with plough furrows and land drains. One of the isolated potential ditches did contain artefactual evidence (five very small abraded sherds of Late Iron Age / Early Romano-British pottery), it was c.1.00m wide and c.0.17m deep, and was situated c.200m south of the Late Iron Age / Romano-British enclosed settlement near the base of the valley at trench 222.

## Proposals

2.2.9 The proposed works across the route of HS2 Phase One are outlined in the HS2 Design Element Statement (DES). The DES specifies the following works in proximity to the mitigation area:

- (133-L2) – Lower Grange Embankment
- (134-L1) – Lower Grange Cutting
- (134-L2) – Cubbington Retaining Wall
- (134-S1) – Mill Lane (Footpath W129d) Accommodation Green Overbridge
- (135-S1) – Footpath W130 Overbridge
- (135-S2) – B4453 Rugby Road Overbridge

- (136-L1) – Cubbington Cutting

### Archaeological Implications

2.2.10 The works listed above will entail ground disturbance which will damage or remove below ground archaeology. The types of potential impact from construction are summarised below.

#### *Soil Removal*

2.2.11 It is assumed for the purposes of this report that soil will be removed across the route of HS2, but that soil removal will be less comprehensive at areas subject to impact such as ecological mitigation or diversion of utilities. Soil removal will occur prior to landscaping and construction, including areas designated for temporary works to establish access routes, compounds and topsoil storage. It would potentially truncate or destroy any archaeological remains present through machine excavation, rutting and compaction resulting from movement of plant.

#### *Earthworks*

2.2.12 The section of HS2 at and in proximity to the mitigation areas will be built on embankments, and in deep cuttings. Soil stripping for embankments may remove or truncate archaeological remains and any surviving remains could further damaged by plant operation and compaction. Excavation of cuttings and the tunnel portal will entirely remove any shallow archaeological remains. Movement of plant or other construction activity may destroy shallow archaeological remains at adjacent areas.

#### *Planting*

2.2.13 The works may include Landscape Mitigation Planting, which could comprise introduction of hedgerows, stands of woodland and areas of woodland edge. Ground intrusion from the proposed tree planting and subsequent root action is assumed to reach a depth of 1.0–1.5mbgl, removing or disturbing significantly any archaeological remains at the location of the planting.

#### *Site Fencing*

2.2.14 There may be localised impacts resulting from the construction of the foundation posts for the hanging posts of fence gates and end struts. The level of impact is assumed to be around 1.0–1.5m deep, potentially disturbing archaeological assets within their footprint.

# 3 Aims and Specific Objectives

3.1.1 All historic environment work on HS2 is guided by the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) (HS2-HS2-EV-STR-000-000015). Its purpose is to establish the objectives and mechanisms for

designing and carrying out all historic environment related investigations, so that the work has specific aims, rather than an approach of simply mitigating impacts in order to collect information.

3.1.2 The aim of this Project Plan is to:

- Define the scope aims and scope of the programme of mitigation and how the work will contribute to specific objectives, in accordance with the GWSI: HERDS;
- Outline the overall approach and methodology to be employed; and
- Set out the proposed deliverables and reporting mechanisms.

3.1.3 The Project Plan will support the overarching LS-WSI for the mitigation area, which will set out the detailed method for the work.

3.1.4 The aims and objectives of the mitigation will be:

- To expose surviving archaeology at the mitigation area (see Figure 4), through the application of an archaeologically controlled topsoil strip using plant equipped with a toothless bucket;
- To archaeologically excavate and record all significant archaeological features within the mitigation area, in order to clarify the nature, date, extent and survival of any remains revealed and thus contribute to understanding of their heritage significance. The mitigation will provide a permanent archaeological record for the purposes of contributing to specific GWSI: HERDS Specific Objectives (see below);
- To obtain dating and environmental evidence (where possible) through retrieval of artefactual and ecofactual evidence;
- To carry out post-excavation assessment and analysis of recovered material; and
- To publish the results of the excavation to bring the findings into the public and academic domain.

3.1.5 The mitigation will aim to meet the GWSI: HERDS Specific Objectives, set out below, and is proposed in order to reduce or offset any adverse effects arising from proposed ground disturbance.

## Contribution to GWSI: HERDS Objectives

3.1.6 The GWSI: HERDS provides a comprehensive list of Specific Objectives for the historic environment for the whole HS2 Phase One North Section. This Project Plan has identified those objectives which are relevant for the mitigation works.

3.1.7 The identified Specific Objectives have been selected based on information collated to date (see Section 2). The Specific Objectives may be revised relative to the results of the Archaeological Recording. For example, unexpected archaeological remains may be encountered which could contribute to other Specific Objectives. If other Specific Objectives are identified, the scope of works shall be updated to address those Objectives

3.1.8 Table 2 sets out the Specific Objectives of the historic environment works. Through delivery of these works, and the addressed aims set out in the table, the archaeological recording will create knowledge and outputs that may contribute to these Specific Objectives.

Table 2 GWSI: HERDS Specific Objectives and mitigation strategy aims

| **GWSI: HERDS Specific Objective** | **Comment** | **Mitigation strategy aim** |
|---|---|---|
| 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? | Results from geophysical survey and trial trench evaluation have identified the site of a Late Iron Age/Romano-British enclosed rural settlement to the south-east of South Cubbington Wood. | Archaeological recording within the mitigation area will investigate the form, scale, material culture, economy and date of the potential Iron Age phases of occupation.<br><br>Results will be compared with regional and route wide evidence to examine whether the settlement is regionally and culturally distinctive in terms of form, location, 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 regard to the different settlement types encountered along the route. | Evidence collected during the Archaeological Recording will enable examination of the regional and cultural distinctiveness of the settlement and comparison with other contemporary settlement types located along the route. | Archaeological recording within the mitigation area will investigate the form, scale, material culture, economy and date of the potential Romano-British phases of occupation.<br><br>Results will be compared with regional and route wide evidence to examine whether the settlement is regionally and culturally distinctive and, if possible, to determine the extent of Romanization. |

# 4 Scope and Methodology

## 4.1 Introduction

4.1.1 The mitigation fieldwork set out in this Project Plan comprises 'Archaeological Recording' at an area encompassing 2.2ha (Figures 1 to 4). The mitigation is designed to meet HS2 GWSI: HERDS Specific Objectives in order to establish the presence, nature, date, extent, survival and significance of archaeological remains and their contribution to the HS2 GWSI: HERDS Specific Objectives.

## 4.2 Location Specific Written Scheme of Investigation

4.2.1 The Archaeological Contractor will produce a Location Specific Written Scheme of Investigation (LS-WSI) for Archaeological Recording in accordance with HS2 Technical Standard – Specification for historic environment project plans and location specific written schemes of investigation (HS2-HS2-EV-STD-000-000036). The LS-WSI will provide the detailed method of investigation, including excavation, sampling and recording method, area of mitigation, dimensions, access arrangements, welfare, accommodation, site safety, RAMS, etc. The LS-WSI will be approved by the Employer prior to starting work.

4.2.2 DJV shall review the results of the Archaeological Recording during regular assurance visits. DJV will assist the Archaeological Contractor in assessing the ability of the recovered evidence to address GWSI: HERDS Specific Objectives. DJV may identify a need to alter the scope of works, including the scope of archaeological and palaeoenvironmental sampling, to appropriately address Specific Objectives, and would liaise with the Employer in this eventuality. Final agreement of alteration to scope may involve HERDS meetings between the Archaeological Contractor, DJV, the Employer and stakeholders. The Employer will determine whether an agreed alteration to scope necessitates production of an addendum to the LS-WSI.

## 4.3 Mitigation

### Scope

4.3.1 The mitigation area will be fully stripped by a tracked excavator using a bladed ditching bucket to the first significant archaeological horizon or to the underlying drift geology. Following surface cleaning and identification of features the final excavation process will be agreed with DJV and approved by the Employer. The agreed process will be reviewed by DJV in consultation with the Employer throughout the programme of field work. As a minimum it will usually include:

- The excavation of structural elements including foundation cuts, wall lines and post holes will usually comprise the removal of 50% (minimum) of archaeological deposits by hand, with the potential for full excavation of features;
- The excavation of non-structural isolated features, such as pits, will usually comprise the removal of 50% (minimum) of archaeological deposits by hand. Complete excavation of isolated features may be necessary if they contain significant artefactual, industrial, economic or environmental evidence;
- Non-structural ditches and gullies will usually be subject to excavation by hand (minimum 10%) to characterise their significance, form, function, condition and date; at the same time retrieving a fully representative artefact/ecofact assemblage;
- All terminal ends of ditches and gullies will be investigated;
- All feature intersections will be investigated to determine stratigraphic relationships;
- Industrial features and deposits –excavation of 100%
- Human burials, cremations and other deposits relating to funerary activity – excavation of 100%, following established guidance;
- The retrieval of standard palaeoenvironmental bulk samples from securely stratified, significant deposits and fills, from selected features distributed across the mitigation areas paying regard to observed levels of truncation, equitable sampling of different phases and any perceived zoning of activity at the sites. Other types of environmental sampling may be used for suitable fills and deposits, e.g. kubiena tins for sediment characterisation, or other purposive environmental samples (for more information see sections 4.3.29 – 4.3.41);
- Particular attention shall be given to recording potential evidence of structured deposition of artefacts or ecofacts within pits and other features;
- Excavation, handling, processing, conservation and storage of Iron Age and Romano-British finds (and finds of prehistoric or early medieval periods, if present) will be completed so that, for example, finds of particular interest can be subject to scientific analysis, e.g. residue analysis. The Archaeological Contractor will follow the advice of recognised specialists for field and post excavation procedures for finds which may be subject to scientific analysis, as summarised in available guidance (e.g. HE 2017)..

4.3.2 The process of excavation, recording and sampling will continue until a sufficient sample of the archaeological remains has been investigated to meet the aims and objectives of the work.

4.3.3 The spoil heap will be scanned using metal detectors during the course of excavations if deemed feasible and safe to do so. Metal detectors will also be used by experienced staff to scan for metallic finds during the excavation of key archaeological features or deposits.

4.3.4 In order to protect any waterlogged remains during the works, the Archaeological Contractor may identify a requirement for 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.

4.3.5 A 2% contingency of the mitigation area will enable further investigation of significant archaeology, should this be necessary. The 2% contingency would be used, with the approval of the Employer, where additional investigation of significant features extending outside the mitigation area would provide information contributing to GWSI: HERDS Specific Objectives.

4.3.6 In accordance with Schedule 20, appropriate measures will be taken if any unexpected human remains are discovered. If appropriate this will include screening the excavation in accordance with the Code of Construction Practice (CoCP) in order to shield the remains from public view; and permitting access to that part of the site only to persons whose presence is necessary for carrying out of the archaeological works.

4.3.7 No photographs taken on site will be shared without permission granted by the Employer. Any public open days will be undertaken in consultation with the Employer.

4.3.8 Discovery of unexpected finds of national importance shall be in accordance with procedure (HS2-HS2-EV-PRO-000-000009).

4.3.9 Consideration will be taken at all times during excavation as to how the results can contribute to the GWSI: HERDS Specific Objectives set out in Table 2.

## Setting Out

4.3.10 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.

4.3.11 The area of mitigation shall be located to a horizontal accuracy of +/– 0.05m. The corner points shall be set out with Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS) equipment or other suitable automated equipment referenced from the PGMs.

4.3.12 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 0.1m Ök where 'k' is the total distance levelled in kilometres.

4.3.13 The Archaeological Contractor shall ensure that all excavation limits, and significant archaeological detail are surveyed 'as dug' in relation to the project grid before leaving the site. Ground level height data to Ordnance Datum (OD) shall be recorded, along with the levels of the top of the superficial or solid geological deposits (where present). Levels of key archaeological horizons and features will be recorded.

## Fieldwork Recording

4.3.14 Recording shall be undertaken by the Archaeological Contractor to the general requirements as described in the GWSI: HERDS and the *Technical Standard – Specification for Historic Environment Investigations* (HS2-HS2-EV-STD-000-000035). During the Archaeological Recording 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.

4.3.15 Recording is to include, as a minimum:

- The written record of individual context descriptions on appropriate pro-forma;
- Sections (1:10 or 1:20 scale) of cut features and significant deposits;
- Plans at appropriate scales (1:10, 1:20 or 1:50);
- Other drawn and written records on appropriate pro-forma;
- Single context planning should be used only if appropriate (i.e. where there is a complex sequence); and
- Digital photographs.

4.3.16 A 'site location plan', indicating site north shall be prepared at 1:1250. A plan at 1:200 (or 1:100) shall be prepared showing the location of archaeology investigated in relation to the mitigation area. The location of site plans will be identified using OSGB co-ordinates.

4.3.17 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 Temporary Bench Mark (TBM) used for shall also be indicated.

4.3.18 A record of the full extent in plan of all archaeological features and 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 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 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 Cultural Heritage GIS Standard (HS2-HS2-GI-SPE-000-000004). Single context planning shall be used where complex stratigraphy is encountered.

4.3.19 A 'Harris matrix' stratification diagram shall be employed to record stratigraphic relationships (Harris et al. 1993) 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 during the course of excavations.

4.3.20 Recording of post medieval and modern 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 structural features revealed in investigations may be required in accordance with the aims and objectives of the investigation as defined in the Project Plan.

4.3.21 The photographic record will be in digital format, captured by cameras with a minimum sensor size of 10 megapixel, resulting in high resolution TIFF (uncompressed) images. Photographs will illustrate both the detail and context of the principal archaeological features discovered. In addition, the Contractor shall take appropriate record photographs to illustrate work in progress. All photographic records will include information detailing: site name and number/code, date, context, scale and orientation.

## Human Remains

4.3.22 EWC North trial trenching did not identify any human remains at the mitigation area. In the event that human remains are identified during Archaeological Recording, all work must be undertaken in accordance with the *Burial Grounds, Human remains and monuments procedure* (HS2-HS2-EV-PRO-0000-000008).

4.3.23 The Archaeological Contractor shall notify DJV and the Contractor immediately upon discovery of unexpected human remains. DJV shall notify the Employer, so that the Employer's human remains procedures can be implemented. DJVs notification to the Employer may initially be made personally or by telephone but shall be confirmed in writing (email will suffice) within 24 hours of discovery.

4.3.24 After notification to DJV the Archaeological Contractor will cease all works on unexpected human remains until further instruction is provided by the Employer.

4.3.25 In accordance with Sections 8.2.23 – 8.2.27 of HS2 *Burial Grounds, Human Remains and Monuments Procedure* (HS2-HS2-EV-PRO-000-000008) the Archaeological Contractor will inform the Coroner or Police, and the local authority Environmental Health Officer of the discovery of unexpected human remains and provide brief background information which will enable a decision to visit the site, or confirm that the human remains are of no interest. The

decision regarding a site visit, or notification of no interest must be provided by the Coroner, and or Police and the EHO within two working days of notification.

4.3.26 The Archaeological Contractor will complete any exhumation of human remains in accordance with the requirements of their recognised osteoarchaeologist. In some circumstances DJV may consult Historic England and other stakeholders for input to exhumation and sampling strategy.

4.3.27 Human remains, once recognised, will be metal detected immediately to determine whether any metallic grave goods are present. If possible, following the Employer's *Burial Grounds, Human remains and monuments procedure* (HS2-HS2-EV-PRO-0000-000008) and best practice for exhumation of human remains (CIfA 2017, Historic England 2018, IfA 2004), burials with metallic grave goods shall be excavated, recorded and lifted on the day of discovery to avoid the risk of vandalism and theft. Where this is not feasible or appropriate, the Archaeological Contractor shall ensure, on liaison with the Contractor, that adequate site security is provided. As a minimum, this will require a 24-hour comprehensive security regime until sensitive remains have been recorded and lifted. This is a particular issue for rural sites and 'isolated burials'.

4.3.28 Human remains will be accorded due dignity, care and respect at all times. The Archaeological Contractor may need to screen the remains, dependent on their location.

## Environmental Sampling

4.3.29 In line with the HS2 Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035) an initial sampling strategy is set out below (Section 4.3.35). This strategy is based on the existing information about the mitigation area and the GWSI: HERDS Specific Objectives listed in Table 2.

4.3.30 The sampling strategy, along with the HERDS Objectives outlined in Table 2, identifies the key elements that should, where present, be sampled during the Archaeological Recording. However, the strategy will need to be reviewed and justified throughout the on-site work; DJV shall review the palaeoenvironmental sampling during regular assurance visits and will assist the Archaeological Contractor in assessing the ability of the recovered evidence to address GWSI: HERDS Specific Objectives. DJV may identify a need to alter the scope of palaeoenvironmental sampling, *e.g.* where quality of recovered information is poor or unexpected features and deposits are identified, in order to appropriately address Specific Objectives, and would liaise with the Employer in this eventuality. Final agreement of alteration to scope may involve HERDS meetings between the Archaeological Contractor, DJV, the Employer and stakeholders. The Employer will determine whether an agreed alteration to scope necessitates production of an addendum to the LS-WSI.

4.3.31 Significant, securely stratified deposits and feature fills shall be sampled to retrieve palaeoenvironmental and economic indicators. The Archaeological Contractor shall make provision for the sampling of a wide range of contexts for potential assessment and analysis for plant and animal micro/macro remains and soils/sediments in order to fulfil the aims set out in the Project Plan. Wherever appropriate, artefacts, biological samples and soils shall be assessed for evidence of site and deposit formation processes and taphonomy and especially for evidence of recent changes that may have been caused by alterations in the site environment.

4.3.32 Sampling will follow Historic England guidance (HE 2011). The Archaeological Contractor's sampling strategy shall be developed by the Archaeological Contractor's environmental archaeologist in liaison with DJV and the Employer. Sample record sheets shall include a reasoned justification for selection of deposits for sampling. Flotation samples and samples taken for coarse-mesh sieving from dry deposits shall be processed at the time of the fieldwork, to permit variation of sampling strategies as necessary.

4.3.33 The sampling strategy for Late Iron Age/ early Romano-British features and deposits will remain flexible and be subject to review throughout the fieldwork. It will be guided by the Archaeological Contractor's recognised specialists in liaison with DJV, the Employer, and Historic England Senior Science Advisor and will follow recognised guidance (HE 2011, 2015).

4.3.34 The Archaeological Contractor's recognised specialists shall review information available from the trial trenching, and examine the condition of previously investigated features once mitigation soil stripping is complete, to determine whether further sampling of previously sectioned features will be of value, and the contribution that further sampling of these features could make to GWSI: HERDS Specific Objectives.

4.3.35 As a minimum the sampling strategy will include consideration of:

- Bulk sampling of securely stratified deposits and feature fills spread across concentrated areas of activity for retrieval of macro environmental remains and to examine whether there are changes in rates of deposition, material survival and zoning of activity during different phases of activity;
- Floor surfaces where they survive and have not been truncated;
- All samples shall be screened for indicators of industrial processes, particularly in areas of possible burning. Where significant concentrations are identified, this information should be fed-back to the site, so that where necessary, further samples can be taken to help to define any areas of metalworking, or other industrial processes
- Monolith sampling of securely stratified feature fills or deposits for pollen, thin section

and other methods of scientific analysis.

- Retrieval of securely stratified material for scientific dating.
- Geoarchaeological input, as necessary, in order to aid understanding of site formation processes and to determine whether scientific assessment and analysis could enhance understanding of feature fills, including whether the features were in-filled deliberately, or naturally in-filled over time.

4.3.36 Scientific methods used to examine feature fills may include chemical and physical analyses, soil micromorphology, mineralogy and particle size analysis (HE 2011, 2015). Field based recording and sampling will be carried out by, or under the supervision of, recognised palaeoenvironmental and geoarchaeological specialists.

4.3.37 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 Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035).

4.3.38 For non-waterlogged deposits bulk samples will normally be taken in the range of 40-60 litres though a greater volume may be collected from significant features. 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 macroremains 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.

4.3.39 Processing and assessment of all bulk soil samples will 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.

4.3.40 Samples collected for geo-archaeological assessment should be processed promptly by the Archaeological Contractor's recognised specialist, particularly where storage of unprocessed samples is likely to result in deterioration. Appropriate assessment shall be undertaken in liaison with DJV and the Employer.

4.3.41 The Archaeological Contractor shall be responsible for the protection of all samples and finds and for their transport (including loading and unloading) to the processing facilities or other location as agreed with the Employer.

## Finds

4.3.42 All archaeological finds pre-dating the 19th century will be retained. Late post-medieval and modern finds (19th century or later) may be recorded on site and not retained, depending on their contribution to Specific Objectives.

4.3.43 The Archaeological Contractor may propose a retention policy if large assemblages of certain categories of find are expected or are unexpectedly recovered. Proposals for a retention policy will be agreed with DJV and must be approved by the Employer before the Archaeological Contractor enacts them. The retention policy will follow the Technical Standard - Historic environment physical archiving procedure (HS2-HS2-EV-STD-000-000039) and the usual categories of material considered by the policy will comprise:

- Ceramic building material;
- Kiln and furnace structure;
- Ceramic wasters;
- Industrial waste samples such as slag;
- Non-descript wall plaster;
- Plaster and mortar samples;
- Building stone samples;
- Animal bone, especially from contexts with large residual pottery assemblages that nullify study of the animal bone due to the potential for large residuality of animal bone; and
- Post-medieval bottle glass.

4.3.44 Where appropriate, soil samples may be taken and sieved to aid in finds recovery.

4.3.45 Any finds requiring active conservation or specific storage conditions will be dealt with immediately in line with First Aid for Finds (Watkinson and Neal 1998).

4.3.46 The Archaeological Contractor shall be responsible for the protection of all finds and for their transport (including loading and unloading) to the processing facilities or other location as agreed with the Employer.

## Metallic Objects and Residue

4.3.47 Assessment of finds assemblages shall include x-radiography of metallic objects (after initial screening to exclude obviously modern objects). 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.

## Treasure

4.3.48 In the event of the discovery of 'treasure' as defined below, the Treasure Act 1996 will apply to works for Phase One of HS2 and the Archaeological Contractor shall comply with it. The Treasure Act defines 'Treasure' as:

- Any metallic object, other than a coin, provided that at least 10 per cent by weight of metal is precious metal (that is, gold or silver) and that it is at least 300 years old when found. If the object is of prehistoric date it will be Treasure provided any part of it is precious metal.
- Any group of two or more metallic objects of any composition of prehistoric date that come from the same find (see below)
- Two or more coins from the same find provided they are at least 300 years old when found and contain 10 per cent gold or silver (if the coins contain less than 10 per cent of gold or silver there must be at least ten of them). Only the following groups of coins will normally be regarded as coming from the same find: Hoards that have been deliberately hidden; smaller groups of coins, such as the contents of purses that may have been dropped or lost; Votive or ritual deposits.
- Any object, whatever it is made of, that is found in the same place as, or had previously been together with, another object that is Treasure.
- Any object that would previously have been treasure trove, but does not fall within the specific categories given above. Only objects that are less than 300 years old, that are made substantially of gold or silver, that have been deliberately hidden with the intention of recovery and whose owners or heirs are unknown will come into this category.

4.3.49 **Note:** An object or coin is part of the *'same find'* as another object or coin if it is found in the same place as, or had previously been together with, the other object. Finds may have become scattered since they were originally deposited in the ground.

4.3.50 All finds falling within the definitions of treasure shall be reported immediately to DJV who will inform the Contractor and Employer.

4.3.51 The Archaeological Contractor will ensure that all finds of Treasure are reported to the Coroner within 14 days of discovery, or within 14 days of recognition that the find/s constitute Treasure.

4.3.52 The Archaeological Contractor will initially report the find/s to the Portable Antiquities Scheme Finds Liaison Officer (FLO). The FLO will often provide assistance in determining whether find/s constitute Treasure and may report the discovery to the Coroner on the finders behalf. The FLO will also contact the British Museum to obtain a unique Treasure reference number for the find and this will act as a constant identifier throughout the process.

4.3.53 To protect the finds from theft, the Archaeological Contractor shall record the finds and remove them to a safe place on the day of discovery. Where recording and removal is not feasible or appropriate on the day of discovery, the Archaeological Contractor shall ensure, on liaison with the Contractor that adequate site security is provided by the Contractor.

4.3.54 Subject to the Provisions of the Treasure Act 1996, all material that is defined as Treasure is vested in the franchisee or, if none, the Crown.

### Backfilling

4.3.55 The mitigation area shall be pumped dry (by the Archaeological Contractor) and any necessary protection measures 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 Archaeological Contractor. Surface conditions shall be reinstated to the required standard.

4.3.56 Any specific archaeological requirements relating to backfilling including use of materials to mark excavated depth, such as geotextiles, shall be specified by the Archaeological Contractor in the LS-WSI.

# 5 Post-Investigation Reporting and Archiving

5.1.1 All reporting will be carried out in accordance with the GWSI: HERDS requirements (HS2-HS2-EV-STR-000-000015).

5.1.2 If appropriate, Schedule 20 reporting requirements – within 12 months for remains and monuments – will also be adhered to in the reporting process.

5.1.3 An interim report will be produced for the Archaeological Recording within ten working days of completion of fieldwork, unless otherwise agreed with the Employer. The interim report will:

- Be brief, with information contained commensurate with the timescale for production;

- Provide information gathered during the initial assessment of fieldwork results, including brief summaries and interpretations of identified archaeology, recovered finds and results of environmental sampling;
- Indicate whether the fieldwork findings require the resource assessment and specific objectives to be updated;
- Provide brief information necessary to inform design decisions relating to the next stage of historic environment works (if required by the Employer); and
- A site plan indicating the extent of fieldwork investigations.

5.1.4 A fully illustrated report will be produced for the Archaeological Recording within six weeks of completion of the fieldwork, unless otherwise agreed with the Employer. The report will be structured as follows:

- Executive Summary;
- Introduction, including site location and project background, aims, and GWSI: HERDS Specific Objectives (as identified in this Project Plan);
- Baseline summary, including topography and geology, designated assets; archaeological potential and previous work(s) relevant to the archaeology of the site (e.g. DDBA, previous surveys);
- Detailed Scope and Methodology, to include dates of fieldwork, the areas investigated at each stage and the rationale in relation to the Specific Objectives.
- Results and observations, along with the following supporting sections:
  - Site walkover inspection
  - Archaeological Recording.
  - Stratigraphic report
  - Finds report
  - Environmental evidence report
  - Interpretation of results against original expectations and Specific Objectives
  - Review of the evaluation and mitigation strategy (i.e. success and confidence rating)
- Conclusions:
  - Statement of findings, and summary of significance

- Assessment of achievement (or not) of the Specific Objectives

- Recommendations and research aims for further investigation (if required), publication and dissemination proposals, including archive deposition
- References to all primary and secondary sources consulted.
- Appendices will comprise (where appropriate) illustrations, contextual summary, finds reports, environmental reports, site matrices, full definitions of the interpretation terms used in the report and a copy of the OASIS record.

5.1.5 The following figures will be included in the mitigation report, the report figures may be combined with the Trial Trenching report figures in order to provide a clear overview of the site:

- General plan (mandatory)
- Engineering design (mandatory)
- Site location
- Survey extents
- Location of area of Archaeological Recording
- Survey results to include plans and section of archaeological features, deposits and sequences
- Selected photographs of representative and/or significant features and finds

5.1.6 If the Archaeological Contractor foresees a requirement for extension to completion of either stage of reporting they will immediately notify DJV so that extension can be discussed with the Employer.

5.1.7 The creation and curation of the archaeological physical archive compiled as a result of the archaeological works conducted by the HS2 scheme shall comply with the Historic Environment Physical Archiving Strategy (HS2-HS2-EV-STR-000-000018) and Technical Standard - Historic environment physical archiving procedure (HS2-HS2-EV-STD-000-000039).

5.1.8 The guidance for the creation, curation and dissemination of digital data created as a result of the archaeological works conducted by the HS2 scheme shall be in accordance with the Historic environment digital data management and archiving procedure (HS2-HS2-EV-STD-000-000040) and Historic environment digital data management and archiving strategy (HS2-HS2-EV-STR-000-000019).

5.1.9 The Heritage Memorandum for Phase One of HS2 recognises the need to deposit the HS2 archaeological and built heritage archive appropriately and the Employer is committed to working with Historic England and local authorities to identify suitable repository/ies to enable the deposition of the artefacts and records generated by the HS2 heritage works.

# 6 Dissemination

6.1.1 In accordance with professional standard practice the Archaeological Contractor will complete an 'Online Access to the Index of Archaeological Investigations' ('OASIS') record. To achieve completion of OASIS records in compliance with Employer requirements a small number of specific steps are necessary:

- The Archaeological Contractor will register for an OASIS login using an HS2 prefix, i.e. '*HS2-Archaeological Contractor Name'*.
- The OASIS record 'project name' field will be completed using HS2 as a prefix to the project name. The project name will exactly replicate the Final Report title.
- HS2 site codes will be added as identifiers to the OASIS record 'associated project reference codes' field.
- HS2 will be specified as the archive depository in the OASIS record.
- The OASIS record will be presented in the Final Report as an appendix.
- Archaeological Contractor report/s will only be uploaded to the relevant OASIS record only after 'Code 1' approval of the report has been received from the Employer.

6.1.2 Digital and hard copies of reports will be submitted to the relevant Historic Environment Record (HER) and the National Record for the Historic Environment (NRHE) in accordance with their requirements.

6.1.3 Significant discoveries will be reported in summary in the local archaeological society journal and/or other relevant journal as appropriate.

# 7 Information Management

7.1.1 GIS deliverables will be provided in accordance with the 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 standard template for reports (HS2-HS2-PM-TEM-000-000004) will be used.

# 8 Quality Assurance Processes

8.1.1 The Archaeological Contractor will liaise with DJV regarding the works programme and quality assurance of the archaeological works. In the event of potential delays to programme, the Archaeological Contractor will issue an Early Warning Notice (EWN) via CEMAR following internal approval by the Archaeological Contractor's Project Director.

8.1.2 The Archaeological Contractor will have direct communication with the Contractor on contractual matters and non-archaeological logistics and quality assurance; DJV will be informed of any EWNs raised in the course of the works.

8.1.3 The works will be overseen and internally quality-assessed by the Archaeological Contractor's senior management and will be directed by the Archaeological Contractor's Project Director.

8.1.4 All parties will follow the Employer's protocols for Intra- and Inter-project communication, which will consist of the following format:

- Weekly progress meetings will be held to discuss the progress of on-site works, forecasting of the works programme and to highlight any potential EWNs;
- Matters arising from progress meetings will be discussed and meeting minutes will be forwarded to all parties (Archaeological Contractor, DJV, and Contractor).

8.1.5 The following interfaces are anticipated on the basis of current information:

- The Contractor (LM-JV);
- The Contractor's Archaeological Consultant (DJV);
- Third party stakeholders via DJV;
- The Employer (HS2 Ltd) via DJV;
- Other contractors working on separate parts of the evaluation area.

8.1.6 Following completion, the Archaeological Contractors work will be formally signed off by the Employer. Formal sign off will be through a written process utilising a fieldwork sign-off sheet submitted by the Archaeological Contractor to DJV. DJV will review and, subsequent to any required revision, will submit the sign off sheet to the Employer for final approval.

8.1.7 The Archaeological Contractor will submit a draft of all reports to Asite for review. DJV and the Contractor will provide internal feedback and may require that the Archaeological Contractor amends documentation before acceptance. The Archaeological Contractor will subsequently upload accepted documents to Asite so that the Contractor can issue them to

the Employer. The Employer may provide feedback and require amendment to submitted documents before final approval.

# 9 Community Engagement

9.1.1 Community Engagement lies at the heart of historic environment works for HS2 Phase One. GWSI: HERDS (HS2-HS2-EV-STR-000-000015) is clear in setting out three tenets as key to delivery of an innovative new approach to archaeological research and investigation: creating knowledge, involving people, and legacy. The GWSI: HERDS sets out specific objectives for Community Engagement (CE):

- CE1: Marking and communicating the changes to landscapes and environments;
- CE2: Identifying and sharing our stories;
- CE3: Meeting the challenge of inspiring the next generation;
- CE4: Accessible information and knowledge sharing; and
- CE5: Contribute to the process and facilitation of audience project creation.

## Community Engagement Scope

9.1.2 The Archaeological Contractor will offer activities and events that involve and keep the community and stakeholders informed, and develop an understanding of local history and archaeology. Community engagement will strive to include harder-to-reach audiences (e.g. BAME, youth and low-income groups).

9.1.3 Archaeological mitigation provides an opportunity to exploit the benefits of personal and social satisfaction and access to professional and specialist knowledge, forge closer relationship between communities and environment, provide 'good news' stories for local and national press, and fulfil social and community obligations (GWSI: HERDS 9.1.2).

9.1.4 Event and activity type will depend on Health and Safety, interest from local groups, Archaeological Contractor capability, resource, works programme and site conditions. The Archaeological Contractor will organise events and activities in liaison with the Employer, the Contractor and DJV.

9.1.5 The Archaeological Contractor will deliver at least two types of engagement selected from the list below, with the flexibility for further engagement depending on outcomes and uptake.

- Notifications and illustrated fact sheets – for distribution to agreed groups and across agreed networks
- Community and local interest groups site visits - subject to Health and Safety, ground

conditions, weather and accessibility, programme;

- Community open days - including artefact handling, information boards;
- Drop-in events - including artefact handling, information boards;
- Lectures and talks – to local interest groups, societies, parish and community groups;
- Blogs and online materials – in conjunction with HS2 Commonplace;
- Site photography and drone footage;
- School visits – in conjunction with LM Skills Education and Employment (SEE); and
- Participation in archaeological fieldwork stages and post-excavation work (where possible and appropriate), e.g. community excavation and recording, research.

## Community Engagement Set Up, Approval and Publicity

9.1.6 Events and activities will be set up in line with the Contractor's objectives on engagement, using and building on site and/or area specific engagement plans or stakeholder matrices. Activities and events will support the pillars of the Employer's community engagement strategy: creating knowledge, involving people, and legacy.

9.1.7 Activities and will be promoted and advertised through channels and networks appropriate to the scale and audience events at least 1 week in advance.

9.1.8 The Archaeological Contractor will supply all text and images for use in Community Engagement to DJV for review and for approval by the Contractor and the Employer (at least 1 week prior to promotion).

9.1.9 In addition to the HS2 corporate channels listed below, other opportunities for publicity should be sought and communicated to the Employer, Contractor and DJV in a mini communication plan. Local press (radio, newspaper and TV) and relevant local digital platforms should be considered, as should historical and archaeological societies, Council for British Archaeology West Midlands and local museums platforms.

- HS2 corporate website – options include a press release, revamped page content – to be determined by HS2;
- Commonplace websites for Birmingham, Solihull, Warwickshire and Staffordshire – each website to be updated with consistent key messages, fact sheet(s), responses to FAQs together with some bespoke messages tailoring the page to the local context;
- E-news alerts from Commonplace – distributing HS2 fact sheet(s), notifications, blogs, webpage updates, etc; and

- HS2 social media – Facebook, Twitter and LinkedIn – LM to provide the content; HS2 to post.

### Community Engagement Delivery

9.1.10 Delivery of activities and events will usually be attended by representatives of the Employer, the Contractor and/or DJV.

9.1.11 The Archaeological Contractor will provide engagement / feedback forms to participants in Community Engagement activities and events and may create an engagement form specific to the subject matter to aid reporting.

9.1.12 Activities and events should:

- Be locally-based if possible;
- Focus on the archaeology of the site and immediate area; and
- Be tailored to the audience.

### Community Engagement Reporting

9.1.13 Following activities and events, the Archaeological Contractor will communicate information on factors such as numbers, achievements, interest and appetite for further engagement to the Employer, the Contractor and DJV.

# 10 Evidence of Stakeholder Engagement

10.1.1 Evidence of stakeholder engagement in preparing this Project Plan, as well as DJV responses to stakeholder comments, is set out in Appendix A.

Table 3 Record of stakeholder engagement

| Consultee and date | Comment | How this has been addressed in the Project Plan |
|---|---|---|
| Project Plan C01 sent to Jim Williams and Chris Welch (Historic England) on 30/08/2019 | Comments received at a meeting held on 20/09/2019 and are summarised in Appendix A | DJV response in Appendix A |
| Project Plan C01 sent to Anna Stocks (Warwickshire County Council) on 30/08/2019 | Comments received at a meeting held on 20/09/2019 and are summarised in Appendix A | DJV responses in Appendix A |

# 11 References

| Reference | HS2 document reference no. |
|---|---|
| IfA (Institute for Archaeologists) 2004 Guidelines to the Standards for Recording Human Remains | n/a |
| CIfA (Chartered Institute for Archaeologists) 2017 Updated Guidelines to the Standards for Recording Human Remains | n/a |
| HE (Historic England) 2011 Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post Excavation | n/a |
| HE (Historic England) 2015 Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record | n/a |
| HE (Historic England) 2017: Organic Residue Analysis and Archaeology: Guidance for Good Practice and Supporting Information | n/a |
| HE (Historic England) 2018 The Role of the Human Osteologist in an Archaeological fieldwork project. | n/a |
| HS2 Technical Standard Specification for historic environment investigations | HS2-HS2-EV-STD-000-000035 |
| HS2 Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) | HS2-HS2-EV-STR-000-000015 |
| HS2 Cultural Heritage (HERDS) GIS Specification | HS2-HS2-GI-SPE-000-000004 |
| HS2 Geographic Information System Standards | HS2-HS2-GI-STD-000-000002 |
| HS2 Environmental Impact Assessment (EIA) Phase One Environmental Statement (ES): CFA22 Whittington to Handsacre | Volume 5 Technical Appendices:<br>CH-001-022<br>CH-002-022<br>CH-003-022<br>CH-004-022 |
| WP29(B) Historic Environment Works – River Leam to Stoneleigh Park – Enabling Words North Contract – Project Plan for Trial Trenching | 1EW04-LMJ-EV-PLN-NS01_NL03-029003 |

| | |
|---|---|
| HS2 Phase 1 Enabling Works North - River Leam to Stoneleigh Park - Trenches 193-238 Interim Report – Key Findings | 1EW04-LMJ_WEX-EV-REP-NS01_NL03-029001 |
| HS2 Phase 1 – WP 029(B) – Cubbington Wood (River Leam to Stoneleigh Park) – Enabling Works North Contract: Evaluation Report for Trial Trenching (Trenches 193 – 238) | 1EW04-LMJ_WEX-EV-REP-NS01_NL03-029003 |

# 12 Glossary

12.1.1 The following terms have been used in this report:

- **Archaeological Contractor** – the organisation undertaking the archaeological work on behalf of the Contractor.
- **Contractor** – LM JV: the body responsible for the terms and conditions, policies, procedures and payments.
- **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.
- **DJV** – the body responsible to the Contractor for assurance of historic environment work and all communication with the Employer and other stakeholders regarding the archaeological strategy, scope and method of work.
- **Employer** – Hs2 Ltd.
- **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.
- **Project Plans** – specification document for each specific package of activity (e.g. a survey, desk based assessment, excavation, recoding project). The plans respond to the Specific Objectives set out in the GWSI: HERDS and are delivered within an agreed budget.
- **Works** – the specific historic environment assessment, evaluation or investigation

works at each location

## Acronyms

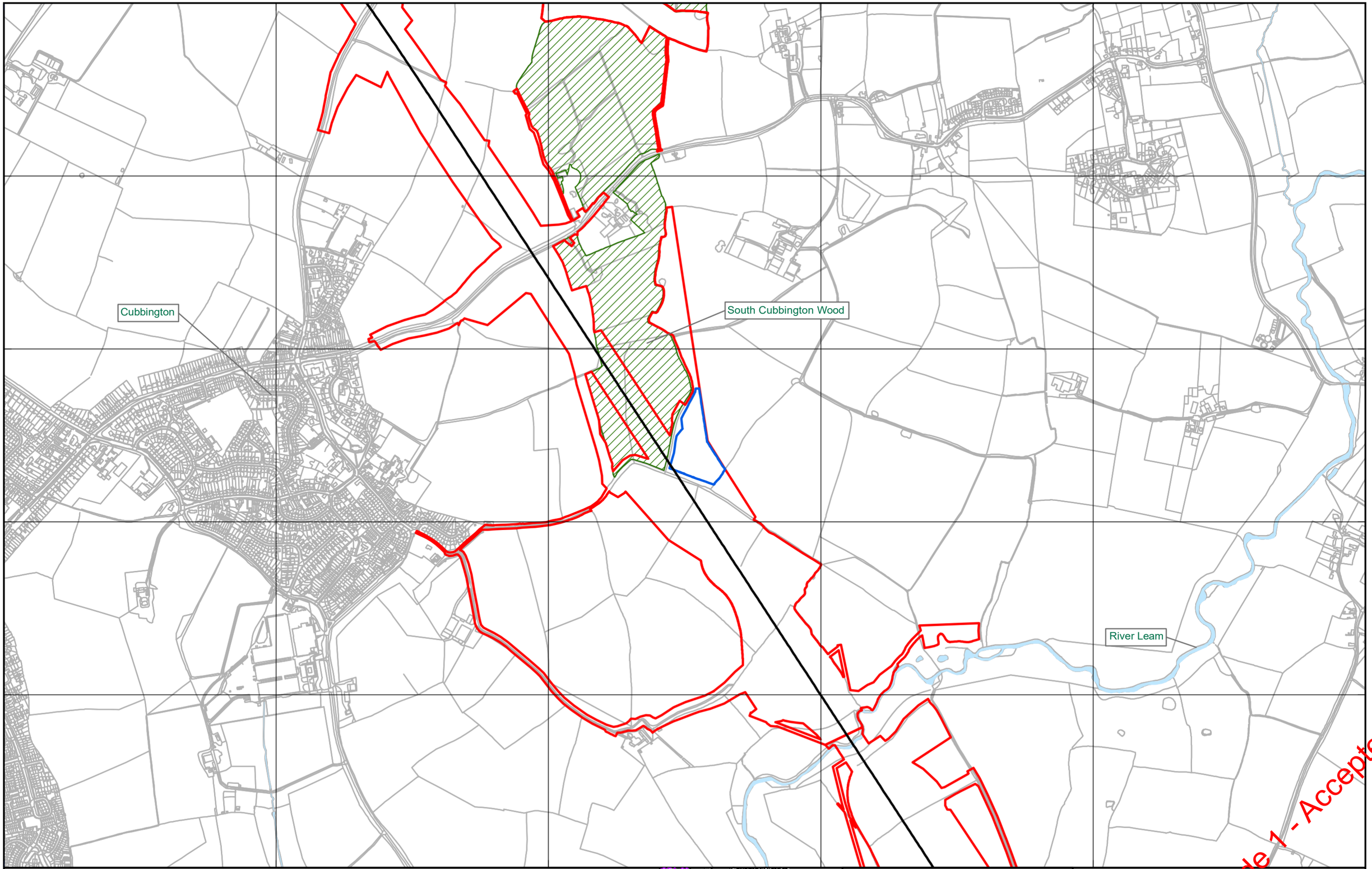
| | |
|---|---|
| ADS | Archaeology Data Service |
| CLR | Construction Land Requirement |
| DDBA | Detailed Desk-Based Assessment |
| ES | Environmental Statement |
| ESA | Enhanced Study Area (as part of GDBA) |
| GCZ | Geoarchaeological Character Zone (as part of GDBA) |
| GDBA | Geoarchaeological Desk-Based Assessment |
| GIS | Geographical Information System |
| GWSI: HERDS | Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy |
| HE | Historic England (Formerly English Heritage) |
| HER | Historic Environment Record |
| LLAU | Limits of Land to be Acquired or Used |
| LS-WSI | Location Specific Written Scheme of Investigation |
| NRHE | National Record for the Historic Environment |
| OASIS | Online AccesS to the Index of archaeological investigationS |
| PDF | Portable Document Format |

# Appendix A – Stakeholder Engagement

| Consultee and date | Comment No. | Reviewer | Comment | How this has been addressed in the Project Plan |
|---|---|---|---|---|
| Project Plan C01 sent to Jim Williams and Chris Welch (Historic England) and HS2 Historic Environment Team on 30/08/2019.<br><br>Comments made at Meeting 3 on 20/09/2019 | 1 | Jim Williams, Historic England | Evaluation results suggest that the archaeological features are truncated, finds density may be low and palaeoenvironmental information limited. The mitigation can contribute to HERDS Specific Objectives, but how do we ensure that the sampling strategy is proportionate and targeted to meet HERDS Specific Objectives. | A part of DJV's role is to assure that Archaeological Contractors work is proportionate and ensure that it addresses HERDS Specific Objectives.<br><br>Archaeological potential / assurance / control text is modified, and added to the project plan (Sections 1.1.6, 2.2.7, 4.2.2 and 4.3.30) including reference to consultation with stakeholders during periodic review of results. |
| | 2 | Jim Williams, Historic England | How is HS2's commitment to Community Engagement addressed in this Project Plan? | Community Engagement text (Section 9) added to the Project Plan. The Archaeological Contractor will provide at least two methods of Community Engagement. |
| | 3 | Jim Williams, Historic England | Revise section 4.3.2 to reflect best practice for exhumation of human remains. | Text of Section 4.3.2 has been revised. |
| | 4 | Jim Williams, Historic England | Revise section 4.3.47 text as x-ray should be carried out regardless unless material is obviously modern | Text of Section 4.3.47 has been revised. |
| Project Plan C01 sent to Anna Stocks (Warwickshire County Council) on 30/08/2019. | 5 | Anna Stocks, Warwickshire County Council | Supplemental HERDS Specific Objectives, in addition to those already identified in the Project Plan, should be added where mitigation results warrant this. | Text is added at Section 3.1.7 to specify the addition of HERDS Specific Objectives if warranted by results of mitigation. |
| Comments made at | 6 | Anna Stocks, Warwickshire | The HERDS Specific Objectives are mainly very high level and the existing regional research framework and other applicable studies, such as | The LPA will contribute to review of fieldwork results during site works and any |

| | | | | |
|---|---|---|---|---|
| Meeting 3 on 20/09/2019 | | County Council | the aggregate levy publication, should be used to further inform research priorities during mitigation. | proposed amendment to sampling strategies. Research priorities will be assessed against the HERDS objectives. Any changes to the scope of fieldwork and any new specific research objectives would be made in agreement with the employer. |

# Appendix B – Figures




**Legend**

- Route in tunnel
- Route on surface
- Evaluation Area
- Community forum boundary
- District/Borough boundary
- Water Body
- Watercourse
- Ancient Woodland
- Mitigation Area 2.2ha

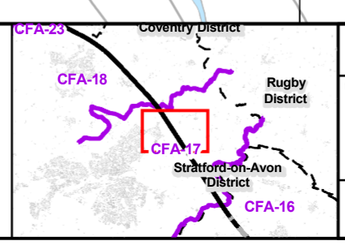



Figure 1

Map Name

South Cubbington Wood
Location Plan

Community Forum Area CFA17
Offchurch and Cubbington

HS2



Registered in England. Registration number 06791686.
Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA



Scale at A3: 1:10,000

0 100 200 300 400
Metres

Doc Number: 1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004

**Date:** 02/10/19

A B C D E

1 2 3 4 5

MWA10296
415
MWA12987
MWA22539
MWA22720
MWA22728
OFC041/
STN004
OFC042
MWA22502
MWA22503
MWA9508
938
OFC044
OFC037
99
105

**Legend**

- Route in tunnel
- Route on surface
- Mitigation Area 2.2ha
- 500m Boundary
- Community forum boundary
- Water Body
- Ancient Woodland
- Non-designated heritage site (point)
- Non-designated heritage site (line)
- Non-designated heritage site (polygon)
- Place names
- Listed Building
- Grade I
- Grade II*
- Grade II
- Building
- Farmstead
- Mill
- Moat
- Nursery

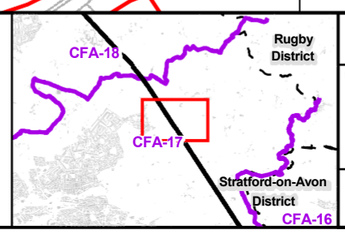



Figure 2

Map Name

South Cubbington Wood Heritage Assets

Community Forum Area CFA17
Offchurch and Cubbington

HS2



Registered in England. Registration number 06791686.
Registered office: 2 Snow Hill, Queensway,
Birmingham, B4 6GA

Scale at A3: 1:6,000



0 60 120 180 240
Metres

Doc Number: 1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004

Date: 02/10/19

Code 1 - Accepted

A B C D E

1 2 3 4 5

**Legend**

- Route in tunnel
- Route on surface
- 500m Boundary
- Community forum boundary
- District/Borough boundary
- Water Body
- Watercourse
- Mitigation Area 2.2ha
- WP29B Trenches
- HER Events (polygon)

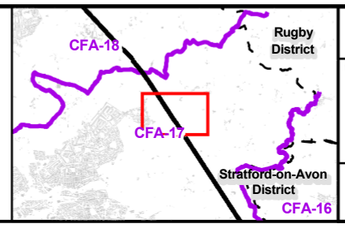



Figure 3

Map Name

South Cubbington Wood Previous Investigations

Community Forum Area CFA17
Offchurch and Cubbington



Scale at A3: 1:6,000

0 60 120 180 240 Metres

**Date:** 02/10/19

**Doc Number:** 1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004

A B C D E

1 2 3 4 5

5m trackway

Mitigation Area 2.2ha

Fenceline

Public right of way

193 194 195 196 197 198 199 200 201 202 203 207

**Legend**

- Route in tunnel
- Route on surface
- Mitigation Area 2.2ha
- Community forum boundary
- District/Borough boundary
- Water Body
- Watercourse
- Ancient Woodland
- Trenches
- Fenceline
- 5m fenceline buffer for trackway

CFA17

Figure 4

Map Name

South Cubbington Wood Mitigation Plan

Community Forum Area CFA17
Offchurch and Cubbington

HS2

HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

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Scale at A3: 1:1,250

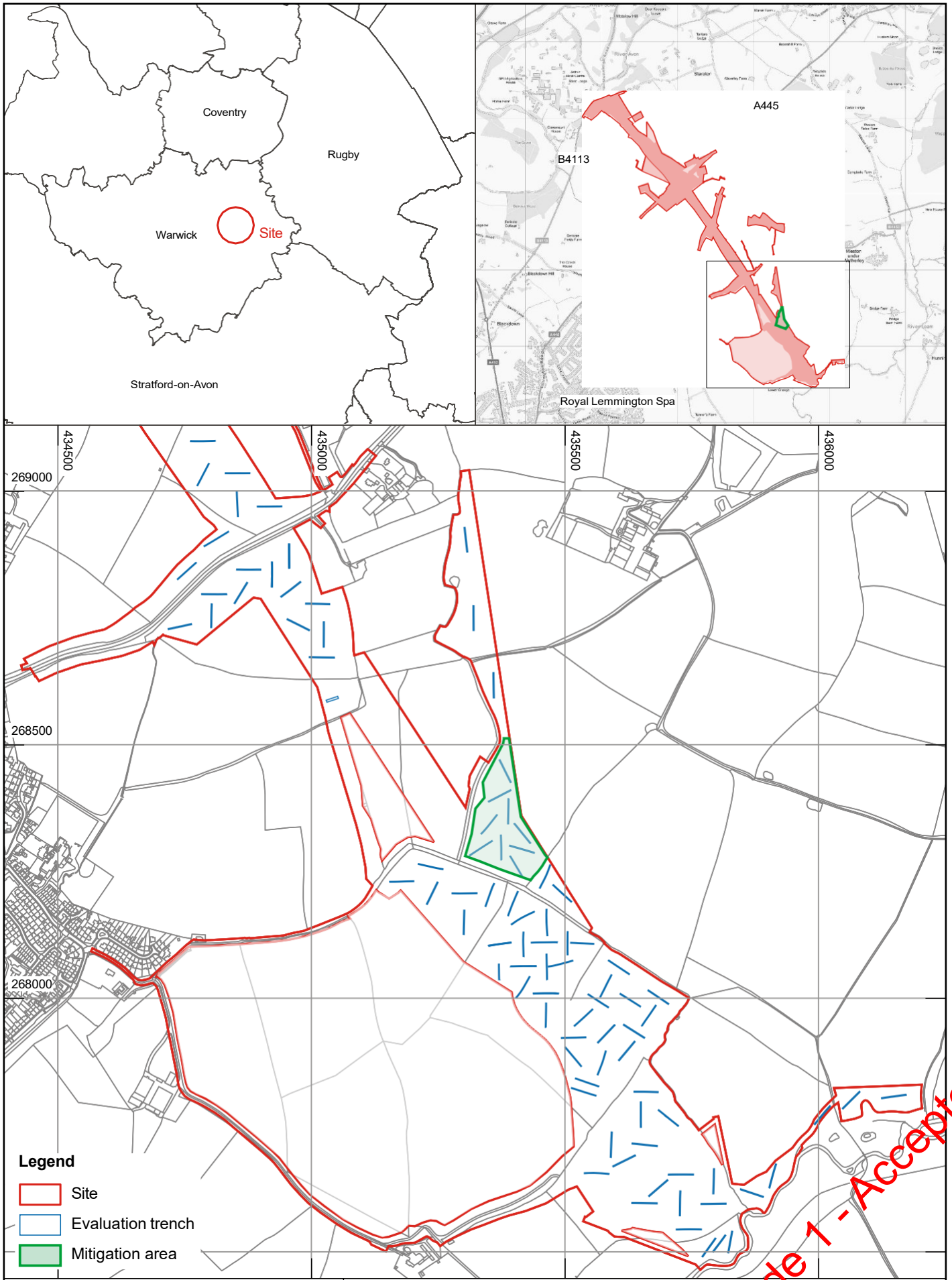


0 10 20 30 40
Metres

Doc Number: 1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004

Date: 02/10/19

# Appendix 2: Figures




Code 1 - Accepted

Map Number

Figure 1

Map Name

Cubbington Woods
Location Plan

Community Forum Area CFA17
Offchurch and Cubbington

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.



Scale At A4: 1:5000 (main graphic)

0 200 m



Doc Number: 1EW04-LMJ_WEX-EV-MST-NS01_NL03-029002

Date: 17/09/19

435300

435400

268500

268400

268300

Tr193

19407

Tr194

Tr195

19506

19505

Possible
continuation
of ring gully

19504

Tr196

Tr197

19805

Tr198

Tr199

Tr200

Tr202

Tr207

**Legend**

- Site
- Mitigation area
- Evaluation trench
- Archaeology
- Disturbance/Land drain
- Ridge and furrow
- Geology
- Pond

Map Number: Figure 2

Map Name: Cubbington Woods Mitigation area

Community Forum Area CFA17
Offchurch and Cubbington

HS2



Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.

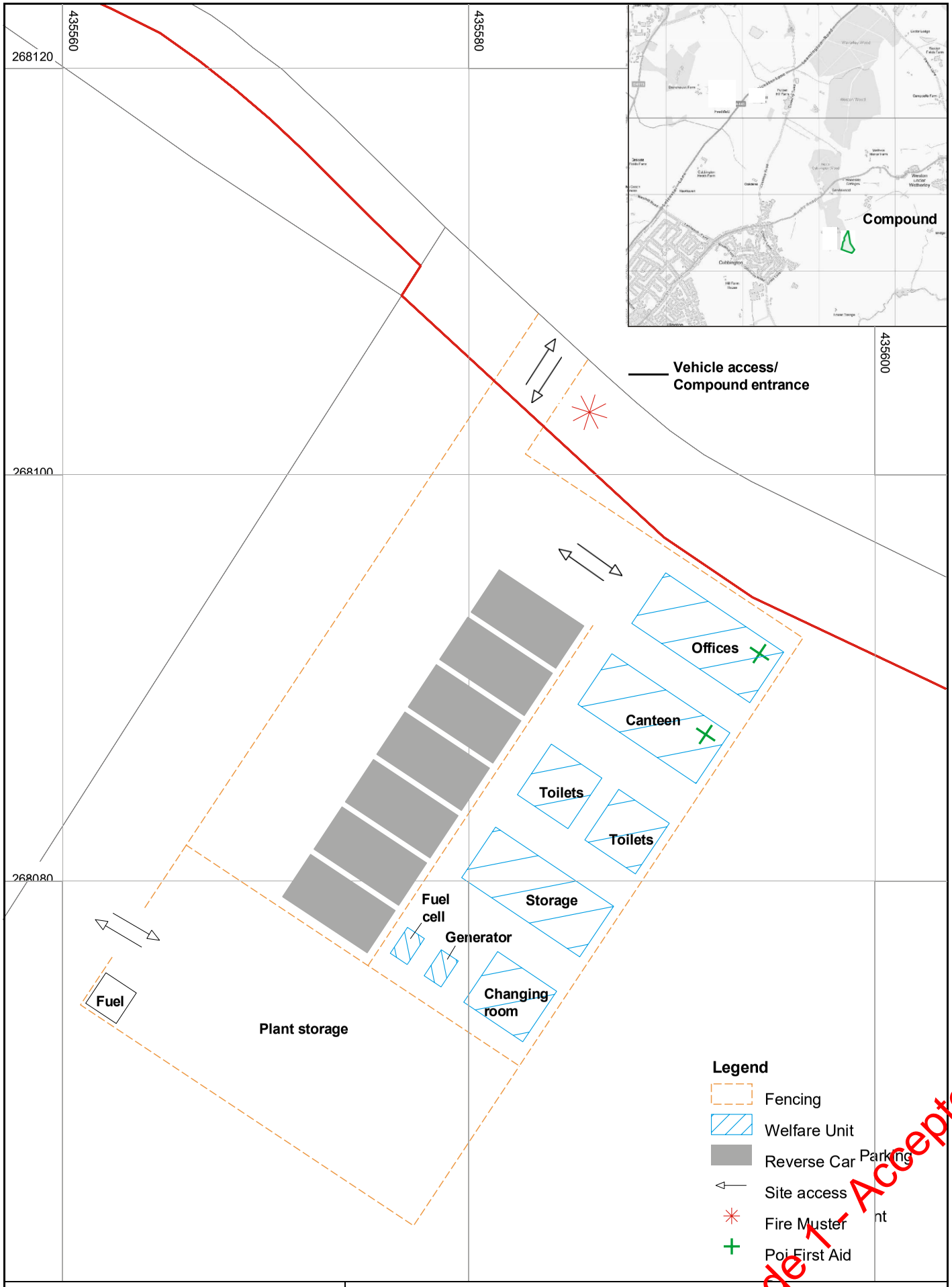


Scale At A3: 1:750

0 25 m

Doc Number: 1EW04-LMJ_WEX-EV-MST-NS01_NL03-029002

Date: 28/08/19




Code 1 - Accepted

| | |
|---|---|
| Map Number | Figure 3 |
| Map Name | Cubbington Woods Compound Plan |
| | Community Forum Area CFA17 Offchurch and Cubbington |



Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

Scale At A4: 1:250 (main graphic)

0 10 m



Doc Number: 1EW04-LMJ_WEX-EV-MST-NS01_NL03-029002

Date: 17/09/19

# Appendix 3: Risk Assessment and Method Statement – South Cubbington Wood

# Project Risk Assessment

| | | | | | | |
|---|---|---|---|---|---|---|
| **Site address** | **South Cubbington Wood<br>Off Rugby Road<br>Cubbington<br>Warwickshire<br>CV32 7UH** | | **Start Date:** | **18/09/2019** | **Doc. Ref. 01** | **215958.01** |
| | | | **Completion Date:** | **20/12/2019 (estimated 14 weeks)** | | |
| **Scope of Works** | **Archaeological Mitigation Excavation of 2.2 ha** | | **Client /Principal Contractor** | | **LM-JV/ HS2** | |
| **Significant Hazard / Risk associated with the work** | **Working with Plant<br>Plant movement<br>Slips Trips and Falls<br>Deep Excavation<br>Buried and overhead utilities<br>Contamination<br>Driving** | | **Responsible Persons** | **Senior Project Manager: Richard O'Neill<br>Project Supervisor: Hannah Dabill<br>First Aid: Hannah Dabill** | | |
| | | | **Emergency Procedures** | **Nearest A&E Hospital:<br>Warwick Hospital<br>Lakin Road<br>Warwick<br>Warwickshire, CV34 5BW<br>Tel: 01926 495321** | | |
| **Additional Information / Documentation** | **In the event of work ceasing due to health and safety reasons, the client is to be informed within 24hours (client detail provided in contacts in red). This notification should be undertaken by the Project Manager in the first instance. In the absence of the Project Manager the Emergency Response Team (ERT) as detailed on the Emergency Response Procedure (attached) should be informed** | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Risk Assessment Completed by:** | **Print** | **Hannah E R Dabill** | **Signed** | | **Position** | **Supervisor** | **Date** | **09/09/19** |
| **Risk Assessment Approved by:** | **Print** | **Richard O'Neill** | **Signed** | | **Position** | **Senior Project Manager** | **Date** | **12/09/19** |

Code 1 - Accepted

# Site Specific Risk Assessment

Completed before starting on site

| Hazard | Consequence | Affected S/C/P | Initial Risk Rating | | | Control Measures | Residual Risk Rating | | | Monitor |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | S | RR | | L | S | RR | |
| Site Setup | Injury to WA staff, visitors, other contractors or other plant during mobilisation and operation of site | S/C/P | 2 | 3 | 6 | • Wessex Archaeology will operate under their own H&S arrangements except in shared areas where Wessex will comply with Five Rivers CDM arrangements.<br>• All staff will receive an induction from Wessex Archaeology prior to accessing the site.<br>• A daily briefing will be held with Five Rivers in which Wessex Archaeology will confirm daily excavation workings. It is not anticipated that Five Rivers will access the mitigation area, should access be required Five Rivers must request permission from Wessex Archaeology.<br>• Wessex Archaeology will erect and maintain a fully fenced perimeter for their works.<br>• All vehicular and plant access routes and spoil locations will be agreed with LM prior to commencement.<br>• Welfare units will be placed into an approved location by a qualified installation operative provided by Wessex Archaeology's supplier.<br>• Heras type fencing for the Wessex Archaeology compound area will be erected by hand by qualified site staff wearing suitable PPE. The panels will be secured by rubber footings and connecting clips | 1 | 2 | 2 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

| | |
|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |

1= Low
2 = Med
3 = High

Code 1 - Accepted

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | • Excavators will arrive by low loaders driven by a competent and trained person into the designated safe zones.<br>• All securing chains will be removed by a qualified person prior to moving plant off the low loader.<br>• All site set up will be monitored and supervised by a qualified and trained site Supervisor. | | | | |
| **General plant operations** | Injury to WA staff, visitors, other contractors or other plant during machine excavation, including crushing and entrapment | S/C/P | 2 | 3 | 6 | • A permit to dig will be produced and issued by Wessex Archaeology prior to excavation.<br>• Hi-vis vests, safety boots and safety helmet will be worn by all persons on site at all times.<br>• All plant operators will be CITB certificated. All plant operators must have CPCS and valid driving license.<br>• All plant operators will be made aware of WA working practices.<br>• Wessex Archaeology will erect and maintain a fencing perimeter for the archaeological mitigation area.<br>• All plant movement will be monitored.<br>• All staff will be made aware of plant movement in their area.<br>• Exclusion zone will be maintained and managed by the banksman during all plant movements and mechanical excavation.<br>• No staff, vehicles or unused plant will be within the working radius of plant.<br>• Plant movements across active public footpaths will be monitored and managed by a banksman at all times. | 1 | 2 | 2 | WA/ Contractor/ Client |
| | Noise, Vibration and Air Pollution | S/C/P | 2 | 2 | 4 | • WA standard working hours are 0800 – 1600 hrs, weekdays only. Weekend working or extended hours to be avoided.<br>• All plant to be maintained in good working order at all times, and switched off whenever not required. | 1 | 2 | 2 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

| | |
|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |
| 1= Low | |
| 2 = Med | |
| 3 = High | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Fire | S/C/P | 2 | 2 | 4 | • All plant to be equipped with on-board fire extinguishers. Site accommodation to be equipped with fire extinguishers.<br>• Staff/ subcontractors to vigorously tackle fire only if considered safe to do so – if in doubt call the emergency services immediately and ensure all personnel, visitors, members of the public etc. are kept well back. | 1 | 2 | 2 | WA/ Contractor/ Client |
| | Theft and/or damage (potentially impacting on local environment) | S/C/P | 2 | 2 | 4 | • Care will be taken to store plant away from the main road and site entrance, in a place not clearly visible from public rights of way. Plant will be fenced off with Heras type fencing. Plant will also be secured by the plant operator.<br>• Plant will be covered by remote security devices and a response will be provided by Wessex Archaeology's supplier. | 1 | 2 | 2 | WA/Contractor/Client |
| **Fuel oil management** | Injury to WA staff, visitors and other contractors, and damage to the local environment through contamination | S/C/P | 2 | 2 | 4 | • All plant will be fuelled off-site or in areas designated by the Contractor. Spill kits to be retained for plant and vehicles. | 1 | 2 | 2 | WA/ Contractor/ Client |
| **Slips trips and falls** | Injury to WA staff, visitors and other contractors on site | S/C/P | 2 | 2 | 4 | • Good housekeeping will be maintained in facilities and on site e.g. Work areas will be kept tidy, tools stowed away when not in use and clutter minimised.<br>• Staff and visitors must wear safety footwear with tread in good condition.<br>• Access and egress points of excavations will be stepped or sloped as appropriate.<br>• Designated walkways will be created if site conditions warrant this.<br>• If site conditions become extremely slippery due to weather conditions the project manager will be | 1 | 2 | 2 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

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|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |

1= Low
2 = Med
3 = High

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | informed and work on site will cease until conditions improve or suitable walkways are implemented. | | | | |
| **Hand-excavation** | Injury to WA staff, visitors and other contractors whilst using hand tools | S/C/P | 2 | 2 | 4 | • All tools will be inspected prior to removal from Sheffield. All damaged, broken or otherwise unusable hand tools to be marked as such and put to one side, either at Sheffield or on site.<br>• Sustained (i.e. in excess of one working day) repetitive manual activity will be avoided where possible.<br>• All on-site grid pegs will be fitted with safety caps<br>• Heavy lifting to be avoided where possible. If unavoidable then all staff to receive appropriate training.<br>• All tools will be used for the purpose for which they were intended.<br>• At all times WA staff shall be made aware of other persons working in the vicinity. | 1 | 2 | 2 | WA/ Contractor/ Client |
| **Deep excavation** | Injury to WA staff, visitors or other contractors due to edge collapse | S/C/P | 2 | 3 | 6 | • **Excavation area sides will be stepped or battered as ground conditions demand, regardless of depth.**<br>• Access to areas on site will be agreed prior to starting works. Access points to excavation areas and slots through deep features will be identified and battered in order to facilitate safe access into the excavation area.<br>• No persons other than WA, Client, Contractor or curatorial staff will enter deep excavations at any time.<br>• If required, groundwater will be pumped out following the LM 'permit to pump' procedure and WA Environmental policy | 1 | 3 | 3 | WA/ Contractor/ Client |
| | Injury to WA staff, visitors or other contractors due to fall into excavations | S/C/P | 2 | 3 | 6 | • Excavation areas and deep excavated features will be demarcated by netlon fencing.<br>• Appropriate hazard signs (i.e. "Danger Deep Excavation") to be erected at all reasonable access points to the site if necessary. | 1 | 3 | 3 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

| | |
|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |
| 1= Low | |
| 2 = Med | |
| 3 = High | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | • Excavated spoil will be neatly piled in sealed bunds at least 1m away from the edge of the mitigation area.<br>• All visitors to the site will be made aware of the location of any deep excavations. | | | | |
| **Farm environment** | Physical injury from livestock | S/C/P | 2 | 2 | 4 | • Do not enter areas where you will potentially be in direct contact with livestock, unless approval is given by the farmer.<br>• No excavation to take place within areas of livestock.<br>• WA will liaise with the Contractor regarding land owner requirements prior to works commencing to ensure access and appropriate places to track plant are agreed. | 1 | 2 | 2 | WA/ Contractor/ Client |
| | Transfer of animal to animal infections (FMD, SVD, anthrax, fowl pest, etc) or zoonoses (transfer of animal diseases to humans). | S/C/P | 2 | 2 | 4 | • Do not attempt to touch animals.<br>• Wash off all animal faeces or other forms of contamination before leaving site and/or moving between different areas of landholding.<br>• Do not work in the vicinity of animals if suspected or known to be pregnant, recovering from respiratory illness, undergoing chemo-therapy or similar forms or medication, or have other health concerns that may be exacerbated by exposure to farm animals.<br>• Appropriate PPE (overalls, gloves, respirators etc.) to be worn at all times where direct contact with or working in very close proximity to livestock, or where they have been housed in the recent past, is unavoidable.<br>• Washing facilities to be provided in accordance with H&S requirements. All staff to use such prior to eating. | 1 | 2 | 2 | WA/ Contractor/ Client |
| | Injury to agricultural equipment, livestock etc. | P | 2 | 2 | 4 | • Ensure all equipment, and particularly grid pegs and nails, are collected on completion of fieldwork. | 1 | 2 | 2 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

| | |
|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |

1= Low
2 = Med
3 = High

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Utilities buried hazards** | Injury to WA staff, other contractors and plant (including utilities) due to rupturing of or contact with utilities (buried or overhead). | S/C | 2 | 3 | 6 | • The Contractor will provide Wessex Archaeology with the full results of utility searches. These will be provided prior to the commencement of fieldwork. Wessex Archaeology will consult its own search via DURS and Linesearch, geophysical survey results and online aerial imagery via Google Earth.<br>• Wessex Archaeology will mark out the position of the mitigation area and test pits with a GPS.<br>• There will be no excavation over gas or fuel services at any time, therefore the services will never be exposed.<br>• Site and surrounding area will be visually inspected in detail for any clues to indicate buried services in the area.<br>• The excavation area will be scanned with a proprietary cable detector (i.e. a CAT & Genny).<br>• Machine stripping to be carried out in discrete 0.1 m spits under constant supervision, and periodically re-checked using the CAT.<br>• If buried services are suspected or anticipated then hand-excavation may be required to initially establish the location and alignment of such services. Work will be carried out in line with HSG47.<br>• Any cable or pipe encountered will be considered live at all times, and will be protected from any subsequent damage.<br>• Plant will not operate beneath overhead utilities. Goalposts will be erected in accordance with GS6 for plant travelling beneath overhead power lines lower than 10m. Power lines higher than 10m and away from main access routes will be demarked by orange netlon fencing and appropriate signage. | 1 | 3 | 3 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

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|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |
| 1= Low | |
| 2 = Med | |
| 3 = High | |

Code 1 - Accepted

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Animal Habitat destruction | S/C/P | 2 | 2 | 4 | • The Contractor and DJV Ecological Clerk of Works (ECoW) will advise Wessex Archaeology of any ecological assets that could be potentially impacted upon by the archaeological work.<br>• Advice will be taken from the ECoW regarding the location and of any areas identified as exclusion zones for ecological reasons. There will be no work or access to areas identified as exclusion zones for ecological reasons, and such constraints will be recorded in the day book records in the H&S file.<br>• Staff will be vigilant to the possibility of new habitats being created during the works. | 1 | 2 | 2 | WA/ Contractor/ ECoW |
| **Contamination** | Injury to WA staff, visitors and other contractors, and damage to the local environment through contamination | S/C/P | 2 | 3 | 6 | • The Client / Contractor will advise of any known contaminants.<br>• Wessex Archaeology archaeologists have UKATA approved asbestos awareness training. If any asbestos is observed, work will immediately stop and the Contractor and/or Client will be informed. Work will only commence after the safe removal of any asbestos and the Contractor and/or Client has deemed the area to be safe.<br>• Health & Safety procedures outlined by the Contractor at induction will be followed and appropriate levels of PPE utilised where necessary.<br>• SHOULD CONTAMINATION BE ENCOUNTERED THIS RAMS WILL NEED TO BE FULLY REVIEWED AND REVISED.<br>• Smoking will not be allowed on site or in site welfare facilities | 1 | 3 | 3 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

| | |
|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |

1= Low
2 = Med
3 = High

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|---|---|---|---|---|---|---|---|---|---|---|
| **Unexploded Ordnance (UXO)** | | S/C/P | 2 | 3 | 6 | • There is no anticipated UXO risk.<br>• Staff will retain a copy of WA UXO guidelines on site at all times and will familiarise themselves with the guidelines prior to fieldwork commencement.<br>• On finding UXO the procedure to be followed is:<br>- ***Do not touch or move the UXO;***<br>- ***Remove all personnel to a safe distance – minimum 100 metres;***<br>- ***Mark the site so it is easily identifiable (Picket and tape is recommended);***<br>- ***Telephone 999 and inform the police of the emergency. Inform the Contractor and/or Client of the emergency so that emergency plans can be implemented*** | 1 | 3 | 3 | WA/ Contractor/ Client |
| **Extreme weather conditions** | Hot weather working (i.e. dehydration, sun burn, sun stroke etc.) | S/C/P | 2 | 2 | 4 | • Sun cream, min. SPF15 (though SPF30+ recommended) with good UVA and UVB protection to be applied regularly to exposed skin.<br>• Regular breaks to be taken in shade to limit exposure to sun.<br>• Appropriate clothing to be worn - Full PPE including Hi Vis tops, steel toe-capped boots and hard hats to be worn at all times.<br>• Drinking water to be available on site, and consumed at regular intervals – **do not wait until thirsty, thirst is a symptom of dehydration**.<br>• If necessary, wear sunglasses that offer good UV protection, particularly where glare may be a factor (e.g. investigations on chalk, sites on or near large bodies of water etc.). | 1 | 2 | 2 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

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| | Good |
| | Acceptable |
| | Needs further controls |
| 1= Low | |
| 2 = Med | |
| 3 = High | |

Code 1 - Accepted

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| | Exposure to wet, cold and/ or storm conditions, risk of lighting strike, hypothermia | S/C/P | 2 | 3 | 6 | • Appropriate waterproof clothing to be carried, and worn when necessary.<br>• Toolbox talk to given on hypothermia and frostbite<br>• No fieldwork to be undertaken during electric storms.<br>• Dry clothing to be available, as necessary.<br>• Mobile phone to be carried at all time. If employees possess a second mobile phone (i.e. a personal phone), then this must be carried too, and all numbers made available to Head Office, colleagues, line manager etc. | 1 | 2 | 2 | WA/ Contractor/ Client |
| **Driving** | Injury to WA staff, WA equipment, plant and members of the public resulting from road traffic accidents. | S/C/P | 2 | 3 | 6 | • Nominated drivers must familiarise themselves in advance with routes for all journeys, as well as routes to local A&E services and any other destinations considered likely/ necessary as part of project work. If roadmaps are unavailable, or the nominated driver does not have access to internet-based route-planners (e.g. http://maps.google.co.uk/) then the project manager must obtain route details and attach below.<br>• All equipment will be securely stowed during transit, with a fixed bulkhead separating equipment and passengers.<br>• All vehicle manoeuvring will only occur with the assistance of appropriately located 'banksmen'.<br>• Tyres, water, oil and petrol will be checked daily.<br>• Extreme caution will be exercised when entering or leaving public highways.<br>• Mobile phones will be turned off before commencing any journey, and will not be used at all whilst driving.<br>• Access to site will via local roads and designated routes only. Access to areas on site needs to be agreed prior to starting works.<br>• Gas bottles will not be carried, hot drinks will either be bought locally, or provided in vacuum flasks. | 1 | 3 | 3 | WA/ Contractor/ Client |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

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| | Needs further controls |
| 1= Low | |
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| | | | | | | • All drivers are to be fully aware of the Gross Vehicle Weight (GVW) of all vehicles driven. If in any doubt a public weighbridge is to be used to confirm weight of the vehicle. | | | | |
| **General Measures** | General measures for implementation to maximise any reduction in risk rating. | | | | | • A mobile phone contact will be available at all times for use in emergencies.<br>• Where feasible, all WA personnel will be CSCS card-holders, or in the case of visitors, be accompanied by CSCS card-holders at all times.<br>• Anything that is or seems to be unsafe will be reported to the WA project officer/supervisor immediately<br>• A first aid kit will be available to WA staff and others at all times (i.e. in the messing area and vehicles).<br>• Directions to the first aid kit, a copy of WA Health & Safety policy, a HSE guidance poster, a valid insurance certificate and a copy of this Risk Assessment will be on display within the messing area.<br>• A fire extinguisher will be located in each welfare unit deployed on site.<br>• The WA Site Supervisors will provide a site induction to all members of staff prior to the commencement of work and ensure that they have read and signed this risk assessment. Any visitors to site must be made aware of and sign the risk assessment prior to entering site, and any potential health and safety issues highlighted e.g. deep excavation areas | | | | |

| | | Likelihood | | |
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| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

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| | Good |
| | Acceptable |
| | Needs further controls |

1= Low
2 = Med
3 = High

Code 1 - Accepted

# Dynamic Risk Assessment

Completed after work has started

| Hazard | Consequence | Affected S/C/P | Risk Rating L | Risk Rating S | Risk Rating RR | Control Measures | Residual Risk Rating L | Residual Risk Rating S | Residual Risk Rating RR | Monitor | Staff informed |
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| | | Likelihood | | |
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| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

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| | Good |
| | Acceptable |
| | Needs further controls |

1= Low
2 = Med
3 = High

**RISK ASSESSMENT BRIEFING LOG**

| Name | Signature | Date | Company |
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## CONTACTS

| Name | Role | Telephone | Address |
|---|---|---|---|
| Richard O'Neill | Senior Project Manager | | C/o Wessex Archaeology |
| Ian Phillips | SH&E Manager | | C/o Wessex Archaeology |
| Hannah Dabill | Supervisor | | C/o Wessex Archaeology |
| Paul Hunt | Project Manager | | Laing O'Rourke Murphy Joint Venture LMJV |
| Nick McCreadie | Project Manager | | Laing O'Rourke Murphy Joint Venture |
| Tom Jackson | Construction Manager | | Laing O'Rourke Murphy Joint Venture |
| Rob Arnold | WP29 Construction Manager | | Laing O'Rourke Murphy Joint Venture |
| Thomas Janse Van Vuuren | Contracts Manager | | Five Rivers |
| Jasmine Newton | Project Assistant | | Five Rivers |
| Alastair Hancock | Technical Lead – Archaeology and Heritage. | | DJV |
| Glenn Rose | Senior Consultant | | DJV |
| Hollie Ridley | H & S Manager | | Laing O'Rourke Murphy Joint Venture |
| Mark Hipwell | Land Liaison | | Laing O'Rourke Murphy Joint Venture |
| **Warwick Hospital** | **Accident and Emergency** | **01926 495321** | **Lakin Road Warwick Warwickshire, CV34 5BW** |

| | | Likelihood | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Severity | 3 | 3 | 6 | 9 |
| | 2 | 2 | 4 | 6 |
| | 1 | 1 | 2 | 3 |

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|---|---|
| | Good |
| | Acceptable |
| | Needs further controls |
| 1= Low | |
| 2 = Med | |
| 3 = High | |

**Hospital Route**

13 min (6.3 miles)

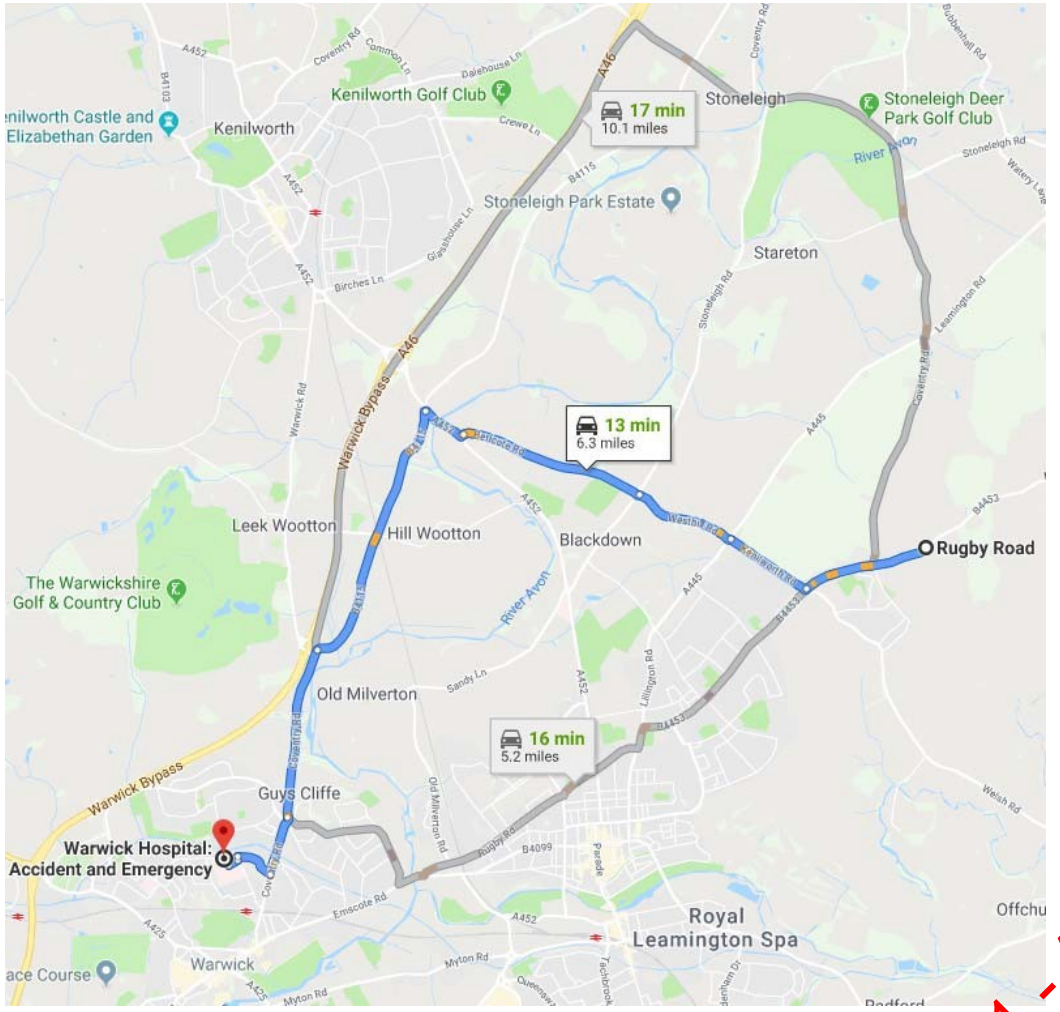
via B4115

Fastest route, the usual traffic

**Rugby Rd**
Leamington Spa

- Take Bericote Rd, B4115 and Coventry Rd/A429 to Guys Cross Park Rd in Warwick
  11 min (6.0 mi)
- Continue on Guys Cross Park Rd to your destination
  2 min (0.4 mi)

**Warwick Hospital: Accident and Emergency**
Warwick Hospital, Lakin Rd, Warwick CV34 5BW




Code 1 - Accepted

# Project Risk Assessment

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Site address** | **South Cubbington Wood<br>Off Rugby Road (B4453)<br>Cubbington<br>Warwickshire<br>CV32 7UH** | | | **Start Date:** | **18th August 2019** | **Doc. Ref. 01** | 215958.01 | |
| | | | | **Completion Date:** | **14 weeks** | | | |
| **Scope of Works** | **Archaeological Mitigation. There may be a requirement to use suitable plant to lift big mats, fuel bowsers and fencing into position.** | | | **Client/ Principal Contractor** | | **LM-JV/ HS2** | | |
| **Significant Hazard / Risk associated with the work** | **Working with plant<br>Lifting operations<br>Overhead services<br>Dropped/slipped loads** | | **Responsible Persons** | **Senior Project Manager: Richard O'Neill<br>Site Supervisor: Hannah Dabill<br>First Aid: Hannah Dabill, Amy Derrick<br>Slinger Signaller: Stuart Pierson, Luke Roberts, Rob Jones, Max Higgins, Emma Carter** | | | | |
| | | | **Emergency Procedures** | **Nearest A&E Hospital:<br>Warwick Hospital<br>Lakin Road<br>Warwick<br>Warwickshire, CV34 5BW** | | | | |
| **Additional Information / Documentation** | **In the event of work ceasing due to health and safety reasons, the contractor and/or client is to be informed within 24 hours (contractor detail provided in contacts in red). This notification should be undertaken by the Project Manager in the first instance. In the absence of the Project Manager the Emergency Response Team (ERT) as detailed on the Emergency Response Procedure (attached) should be informed.** | | | | | | | |
| **Risk Assessment Completed by:** | **Print** | **Max Higgins** | **Signed** | | **Position** | **Assistant Supervisor** | **Date** | **13/09/2019** |
| **Risk Assessment Approved by:** | **Print** | **Richard O'Neill** | **Signed** | | **Position** | **Senior Project Manager** | **Date** | **16/09/2019** |

# Site Specific Risk Assessment

Completed before starting on site

| Hazard | Consequence | Affected S/C/P | Initial Risk Rating | | | Control Measures | Residual Risk Rating | | | Monitor |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | S | RR | | L | S | RR | |
| **Overloading of lifting equipment** | Injury to WA staff, visitors, other contractors during lifting, including crushing and entrapment | S/C/P | 2 | 3 | 6 | • Lifting capacity to be identified on the equipment<br>• Weights of loads to be established<br>• Ground conditions to be confirmed<br>• Radius of lift to be ascertained for load<br>• Operator and slinger signaller competency checks<br>• Equipment must be fitted with an in-cab audible over load indicator, or an acoustic/visual safe load indicator<br>• Current certificate of thorough examination as required by the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) | 1 | 2 | 2 | WA/ Contractor/ Client |
| **Overloading of lifting accessories** | Injury to WA staff, visitors, other contractors during lifting, including crushing and entrapment | S/C/P | 2 | 3 | 6 | • Lifting accessories Safe Working Limits (SWL) requirements to be confirmed.<br>• Lifting accessories to be attached and used as intended<br>• Pre use inspections to be undertaken to check for damage<br>• Non-standard or modified lifting accessories shall not be used<br>• Operator/User instructions shall be briefed to those involved in the lifting operation.<br>• Operators shall be competent in the use of the lifting accessories provided | 1 | 2 | 2 | WA/ Contractor/ Client |

Code 1 - Accepted

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|---|---|---|---|---|---|---|---|---|---|---|
| **Slipped/Dropped Load** | Injury to WA staff, visitors, other contractors during lifting, including crushing and entrapment | S/C/P | 2 | 3 | 6 | • Only competent and qualified staff should carry out lifting operations<br>• Manufacturer or supplier recommended lifting points to be used at all times<br>• A competent person shall ensure that all personnel are clear of loads prior to lifting<br>• Only those essential to the lifting operation shall be present and at no time shall the load be above personnel | 1 | 2 | 2 | WA/ Contractor/ Client |
| **Collision with obstructions on site** | Injury to WA staff, visitors, other contractors during lifting, including crushing and entrapment | S/C/P | 2 | 3 | 6 | • Allow adequate clearances to avoid conflict with other plant or adjacent structures and to prevent over sail<br>• Slung load movements to be supervised by a qualified slinger signaller at all times | 1 | 2 | 2 | WA/ Contractor/ Client |
| **Weather conditions** | Injury to WA staff, visitors, other contractors during lifting, including crushing and entrapment | S/C/P | 2 | 3 | 6 | • Lifting operations will cease when ground conditions deteriorate following heavy rain, snow, ice etc<br>• Lifting operations will cease when wind speeds exceed the manufacturers stated limit for the lifting equipment<br>• Lifting operations to cease during thunder storms. | 1 | 2 | 2 | WA/ Contractor/ Client |
| **Overhead services** | Injury to WA staff, visitors, other contractors during lifting, including crushing and entrapment | S/C/P | 2 | 3 | 6 | • Any movement of slung loads under overhead cables must be carried out in between goalposts and under the control of a banksman/slinger signaller<br>• A constant check should be made to ensure that loads or lifting equipment do not exceed the safe working heights indicated by goalposts | 1 | 2 | 2 | WA/ Contractor/ Client |

# Dynamic Risk Assessment

Completed after work has started

| Hazard | Consequence | Affected S/C/P | Risk Rating | | | Control Measures | Residual Risk Rating | | | Monitor | Staff informed |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | S | RR | | L | S | RR | | |
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**RISK ASSESSMENT BRIEFING LOG**

| Name | Signature | Date | Company |
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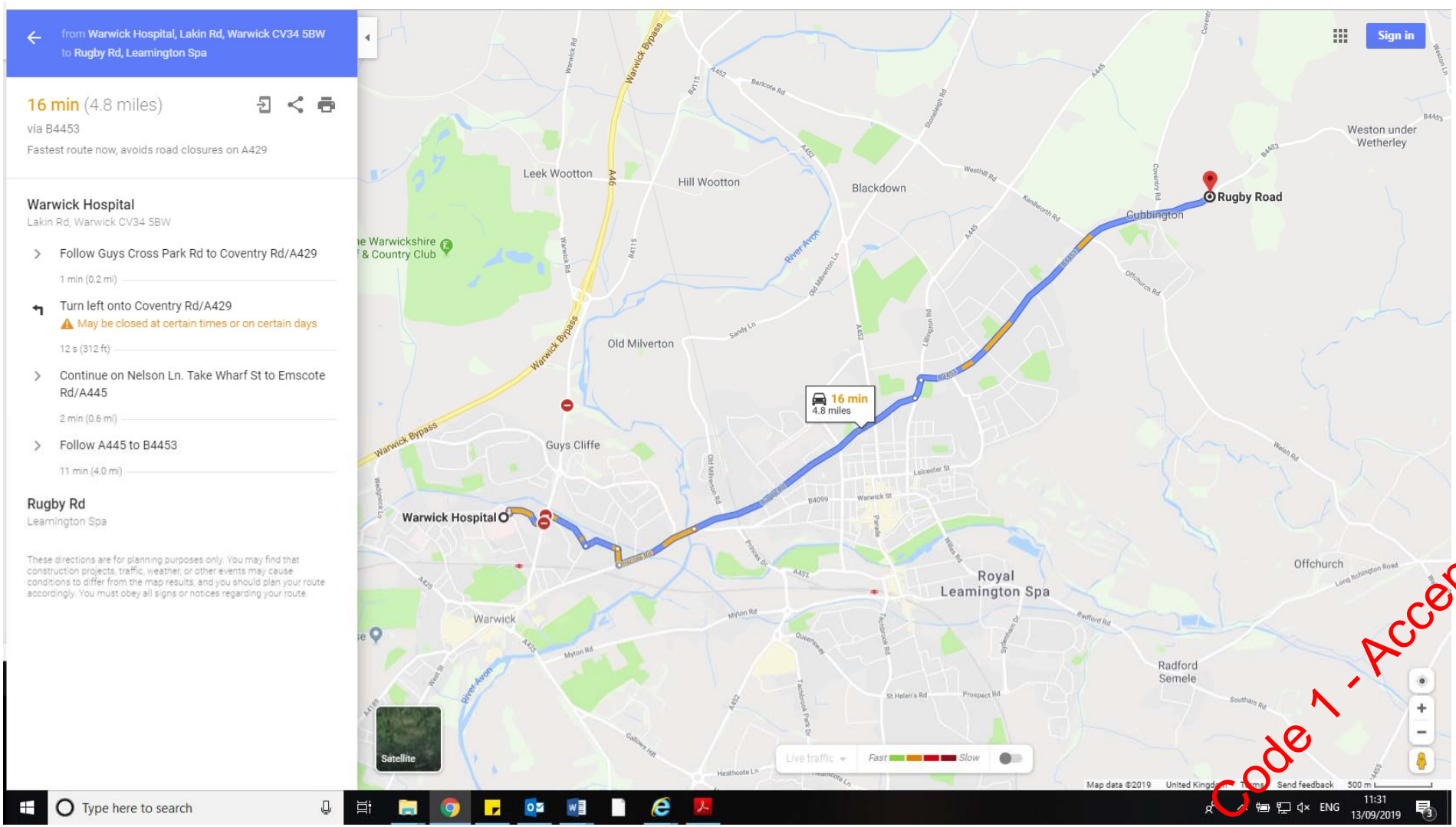
**CONTACTS**

| Name | Role | Telephone | Address |
|---|---|---|---|
| Richard O'Neill | Senior Project Manager | | C/o Wessex Archaeology |
| Ian Phillips | SH&E Manager | | C/o Wessex Archaeology |
| Hannah Dabill | Site Supervisor | | C/o Wessex Archaeology |
| Paul Hunt | Project Manager | | Laing O'Rourke Murphy Joint Venture LMJV |
| Nick McCreadie | Project Manager | | Laing O'Rourke Murphy Joint Venture |
| Tom Jackson | Construction Manager | | Laing O'Rourke Murphy Joint Venture |
| Rob Arnold | WP29 Construction Manager | | Laing O'Rourke Murphy Joint Venture |
| Thomas Janse Van Vuuren | Contracts Manager | | Five Rivers |
| Jasmine Newton | Project Assistant | | Five Rivers |
| Alastair Hancock | Technical Lead – Archaeology and Heritage. | | DJV |
| Glenn Rose | Senior Consultant | | DJV |
| Hollie Ridley | H & S Manager | | Laing O'Rourke Murphy Joint Venture |
| Mark Hipwell | Land liaison | | Laing O'Rourke Murphy Joint Venture |
| **Warwick Hospital** | **Accident and Emergency** | **01926 495321** | **Lakin Road Warwick Warwickshire, CV34 5BW** |

# Hospital Route




Code 1 - Accepted

# WP 029(C) Historic Environment Works – South Cubbington Wood Mitigation - Enabling Works North Contract

## Method Statement

**Prepared for:**
LM on behalf of HS2

**Prepared by:**
Wessex Archaeology
Unit R6 Riverside Block,
Sheaf Bank Business Park,
Prospect Road,
Sheffield,
S2 3EN

www.wessexarch.co.uk

**September 2019**

**215958.01**

## Quality Assurance

| | | | | | |
|---|---|---|---|---|---|
| **Project Code** | 215958 | **Accession Code** | | **Client Ref.** | |
| **Planning Application Ref.** | | **Ordnance Survey (OS) national grid reference (NGR)** | 435371 268408 | | |

| Version | Status* | Prepared by | Checked and Approved By | Approver's Signature | Date |
|---|---|---|---|---|---|
| File: | S:\PROJECTS\215956_Health_and_Safety\Crewe_Farm | | | | |
| v01 | F | IMachin | RJO | | 13/09/19 |
| File: | | | | | |
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* I = Internal Draft; E = External Draft; F = Final

Code 1 - Accepted

# WP 029(C) Historic Environment Works – South Cubbington Wood Mitigation - Enabling Works North Contract

## Method Statement

**Contents**

# WP 029(C) Historic Environment Works - South Cubbington Wood Mitigation - Enabling Works North Contract

## Method Statement

## 1 INTRODUCTION

### 1.1 General

1.1.1 This method statement has been prepared by Wessex Archaeology (WA) to provide a safe framework for a programme of archaeological investigations during Work Package 029(C) of the HS2 Enabling Works North Contract at South Cubbington Wood (hereafter 'the Scheme').

1.1.2 The Principal Contractor, LM, has provided a Construction Phase Plan (CPP). WA will comply with the CPP and ensure all of its activities follow the guidance and rules relating to that plan.

1.1.3 The current archaeological programme comprises of a 2.2 ha mitigation site (**Appendix 1**). All works are being carried out in accordance with approved Location Specific Written Scheme of Investigation (1EW04-LMJ_WEX-EV-MST-NS01_NL03-029002).

1.1.4 Conditions may vary on site, and this document may require amendment during the course of the work to reflect those variations. Following consultation with the Client and any other relevant parties, the WA Senior Project Manager (R. O'Neill) will amend the document as necessary to reflect any change in methodology. Any changes will need to be approved, and the method statement re-signed prior to works proceeding.

1.1.5 All employees will be briefed on the content of this method statement, WA's health and safety policy, and a Site specific risk assessment before commencing work. All employees and sub-contractors will sign-off the project Risk Assessment to confirm such briefing has occurred, and WA will also maintain a record of all safety inductions and tool box talks. Employees will be instructed to co-operate on all matters of health and safety.

1.1.6 Inductions will be carried out by LM for all personnel prior to being allowed to work on site.

1.1.7 A mandatory site induction will be given by the WA site supervisor for all staff and visitors prior to them being allowed on site. A start of shift briefing will be completed daily by WA. This will detail any changes to the working environment and / or specific considerations for the planned daily activities. There will also be an opportunity to review the previous day's activities and obtain feedback.

1.1.8 LM will arrange all access and advise on spoil storage arrangements. WA will only gain access to the Site by means of agreed routes in line with the CPP Traffic Management Plan (TMP).

1.1.9 This site specific Method Statement is designed to be read in conjunction with a site specific Risk Assessment (Wessex Archaeology 2019) and will be submitted for approval prior to work commencing.

## 2 SITE DESCRIPTION

2.1.1 The mitigation area is located between HS2 chainage markers 134640 and 134940 and encompasses 2.7ha, including contingency, as part of the mitigation works detailed in the Project Plan (1EW04-LMJ_DJV-EV-PLN-NS01_NL03-029004).

2.1.2 The mitigation area is located within a single agricultural field situated immediately east of South Cubbington Wood and approximately 550 m east of Cubbington. It is centred on National Grid Reference (NGR) 435371 268408 and encompasses 2.2 ha of land. In terms of the Construction Land Requirements (CLR) the 'site' comprises parcel (CLR) CR02724: Lower Grange Embankment.

## 3 METHODOLOGY

### 3.1 General

3.1.1 WA proposes to adopt the following outline methodology which conforms to CIfA guidelines for archaeological excavation and the agreed LSWSI.

3.1.2 Service plans provided by LM via the DURS system will be consulted before work commences (see Risk Assessment – Utilities buried hazards) and areas will be scanned with a Cable Avoidance Tool and Signal Generator (CAT and Genny) to check for any uncharted services. All Wessex plant supervisors deployed on this project will have had banksman training.

### 3.2 Mitigation Area

3.2.1 The mitigation area will be subject to initial metal detecting carried out by Wessex Archaeology staff.

3.2.2 Topsoil or overburden will be removed using mechanical excavators (360˚ tracked excavator) fitted with toothless buckets, working under the continuous direct supervision of suitably experienced archaeologists who will act as banksmen. Overburden will be removed in a series of level spits down to the first significant archaeological horizon or to the underlying drift geology or the level of the natural geology, whichever is reached first. Particular attention will be paid to achieving a clean and well-defined horizon (surface) with the machines.

3.2.3 Spoil will be stored in areas agreed with LM. Topsoil and subsoil excavated from the strip, map and record areas will be separated, placed and stored separately beyond the limits of the excavation area but within the site boundary allocated to WA.

3.2.4 Whilst mechanical excavation is being undertaken no operatives shall be present within the accessible radius of the excavator. Should access be required the machine must be stopped by the banksman, who will then confirm safe access is available. Mechanical excavation must not then re-commence until the banksman confirms to the machine driver the exclusion zone has been re-established.

3.2.5 Following the machining of excavation areas any exposed archaeological features will be cleaned, planned and hand excavated. Hand excavation will not exceed a safe working

depth (provisionally a maximum of 1.2 m, though shallower if ground conditions demand (see Risk Assessment – Deep Excavation).

3.2.6 Following the completion of all hand excavation and in agreement with LM and DJV, the area will be signed off.

3.2.7 Reinstatement groundworks (backfilling of subsoil and then topsoil) will proceed once approval has been given by LM

3.2.8 Following the completion of the archaeological works, WA will remove all WA equipment from the Site.

## 4 PLANT/EQUIPMENT

### 4.1 General

4.1.1 Plant, operators and banksman will be provided by, and be the responsibility of WA (See Risk Assessment - General plant operations). Mechanical excavation will be carried out by 360˚ tracked excavators with toothless ditching buckets and wheeled dumpers provided by AE Faulks Ltd. Daily plant and plant operator checks and records will be the responsibility of AE Faulks but WA will keep a record of assurance checks on plant operators qualifications daily checks.

4.1.2 Topsoil and subsoil will be stored separately. Stockpiles will be maintained in a tidy workmanlike manner, and capped of using mechanical plant to facilitate run-off and prevent waterlogging and/ or saturation.

4.1.3 All WA vehicles and tools (mattocks, shovels etc) must be in good repair and any defects will be reported to the WA Supervisor.

## 5 SEQUENCE OF WORKS

### 5.1 General

5.1.1 This Method Statement and associated Risk Assessment will be sent all relevant parties for approval prior to commencement of archaeological fieldwork commencing.

5.1.2 Welfare facilities, security and site fencing will be put in place prior to work commencing. Once established, an assurance visit will be carried out by LM to ensure that the necessary facilities, resources and H&S procedures are in place.

5.1.3 The areas to be excavated will be photographed and CAT scanned prior to the commencement of any excavation work. All WA supervisors have CAT and Genny training.

5.1.4 Any revealed archaeological features will be planned, hand cleaned and excavated (mattock and shovel).

5.1.5 Following the completion of hand excavation the area will be signed off by DJV for backfilling to proceed. Excavated areas will be photographed on the completion of all site works. WA will demobilise and remove all welfare facilities, site fencing and other equipment.

5.1.6 Reporting will follow the completion of Site works.

# 6 ACCESS

## 6.1 General

6.1.1 Access to the site will be by agreed routes and in accordance with the TMP.

6.1.2 Although the work site will be under the control of WA, access to the site will be through another sub-contractor's site (Five Rivers) who are carrying out ecological management works in the area. Five Rivers will be the lead sub-contractor and will be responsible for all issues relating to access to the site.

6.1.3 WA will book deliveries through Five Rivers and will communicate any site access issues with Five Rivers by means of regular site meetings. Any difficulties relating to site access will be referred to LM for clarification.

6.1.4 Site vehicles will be reversed parked in a safe way in the car park of the WA compound. All reversing manoeuvres will be carried out under the supervision of a banksman.

# 7 SAFETY

## 7.1 Key Work Elements

- *Mandatory site inductions.*
- *All staff, before they enter the work site, will have completed the mandatory LM Induction. These are held every Monday and Friday mornings at 1000 at the LM offices.*
- *Excavation with a 360˚ tracked excavator and wheeled dumper.*
- *Spoil management with a tracked bulldozer.*
- *Vehicular access.*
- *Working in deep excavations.*
- *Working in proximity to excavation.*

## 7.2 Risks

- *Injury/death from working in close proximity to plant and equipment.*
- *Buried and overhead services*
- *Contamination*
- *Traffic accidents.*
- *Slips, trips and falls*
- *Excavation collapse, falling objects and personal injury.*
- *Unexploded ordnance*

## 7.3 Safety Control Measures

***General***

7.3.1 All staff will have completed the mandatory LM site induction.

7.3.2 All staff will be made aware of emergency contact numbers in the event of any emergency. These will be located in the site H&S file and on display in welfare facilities.

7.3.3 See Risk Assessment (Wessex Archaeology 2019) for more details.

7.3.4 The WA site supervisor (see contact details below) has the primary responsibility for ensuring that the safety measures outlined in the Method Statement and Risk Assessment are carried out. The LM Project Manager, as the Main Contractor, will have overall responsibility for ensuring safety control measures are being complied with. Therefore, WA will comply with instructions provided by the LM Project Manager. In addition, the WA Senior Project Manager (Richard O'Neill) and the Senior Logistics Officer (Ivan Machin) will make site inspections throughout the excavation to ensure safety measures are adhered to.

***Plant***

7.3.5 Only authorised and competent banksman will be allowed to control plant movements/operations.

7.3.6 Mandatory minimum PPE for WA staff will include:

- *Appropriate coloured Safety helmet with, where applicable through risk assessment, suitable chin strap;*
- *Orange high visibility jacket or long-sleeved vest and high visibility trousers;*
- *Safety footwear (incorporating toe and mid-sole protection and provides support to the ankle);*
- *Gloves (specific to the work activities); and*
- *Light eye protection, incorporating prescription lenses where necessary.*

7.3.7 All plant operators will be made aware of WA working practices. All plant movement to be monitored and all staff to be made aware of plant movement in their area.

7.3.8 Exclusion zones will be maintained and managed by the banksman during all plant movements and mechanical excavation. No staff, vehicles or unused plant will be within the working radius of plant.

***Buried services and overhead utilities***

7.3.9 In line with HSG47 (HSE 2014) LM will inform WA of the location of known services.

7.3.10 With regard to services and utilities, WA will comply with the LM Construction Phase Plan and the HS2 Achieving Best Practice in Service Avoidance Guidance notes.

7.3.11 In addition, the site and surrounding area will be swept by trained staff with a cable detector (i.e. CAT and Genny) prior to and during mechanical excavation.

7.3.12 Machine stripping will be carried out in discrete 0.1 m spits under constant supervision and periodically re-checked using CAT and Genny

7.3.13 Any cable or pipe encountered will be considered live at all times, and will be protected from any subsequent damage.

***Unexploded Ordnance***

7.3.14 • The site is considered to be in a 'Low' risk UXO area. However, should any UXO be discovered, the procedure to be followed is:

- *Do not touch or move the UXO;*
- *Remove all personnel to a safe distance – minimum 100 metres;*
- *Mark the site so it is easily identifiable (Picket and tape is recommended);*
- *Telephone 999 and inform the police of the emergency. Inform the PC of the emergency so that emergency plans can be implemented.*

***Contamination***

7.3.15 There is currently no asbestos and/or ground contamination threat within the areas to investigated; however, should asbestos or other contaminants be identified on site, work will halt, LM will be informed and reported in accordance with the CPP.

7.3.16 Handwashing facilities will be available on-site at all time whilst WA staff are present.

7.3.17 Groundwater removal will be the responsibility of WA but will be in accordance with directions from LM. Groundwater from deep excavations (if necessary) will be discharged downslope from the area directly onto the adjacent area/surface to facilitate the removal of all material carried in solution, suspension or traction.

***Excavation collapse and personal injury***

7.3.18 Excavation works will be carried out in conjunction with WA procedures and with the CPP.

7.3.19 Overall site fencing will be the responsibility of WA and in accordance with specifications provided by LM. Individual archaeological interventions will be secured by WA staff with Netlon type plastic fencing and pins.

7.3.20 There will be no unsupported sections greater than 1.2m depth. Excavation area sides will be stepped or battered as ground conditions demand, regardless of depth.

7.3.21 Spoil will be stored in agreed areas. Spoil from excavated features will be cast a safe distance from the features.

7.3.22 All excavations should be checked prior to the start of each shift and recorded on a weekly basis in line with WA procedures. More frequent checks will be carried out as required (i.e. after heavy rain).

7.3.23 Inspections must be completed by a competent person i.e. WA Site Supervisor. A competent person in respect of excavation inspections is someone with the experience, knowledge and appropriate qualifications necessary to enable them to identify any risks that are present and decide upon the measures required to control those risks.

7.3.24 If the competent person is not satisfied that the work can be carried out safely, he/she will inform the WA Project Manager as soon as is practicable. The WA Project Manager will in turn inform the LM Project Manager. No work will take place in the excavation until the defects have been rectified and agreed as such by the competent person. All such excavations should be clearly identifiable through the use of signage.

7.3.25 Excavated spoil, tools, equipment etc. will be stockpiled/ stored at least 1m beyond the edge of the excavations to minimise trip hazards.

***Traffic***

7.3.26 WA will comply with the LM TMP. Only agreed access routes will be utilised.

7.3.27 Only authorised and competent drivers will be used.

7.3.28 All Site staff will remain within designated working areas.

***Walking over uneven ground***

7.3.29 Ground inspections will be completed by a competent person. A competent person in respect of ground inspections is someone with the experience, knowledge and appropriate qualifications necessary to enable them to identify any risks that are present and decide upon the measures required to control those risks.

7.3.30 If the competent person is not satisfied that the work can be carried out safely, he/she will inform the site manager as soon as is practicable. No work may take place until the defects have been rectified and agreed as such by the competent person.

## 8 PERSONAL PROTECTIVE EQUIPMENT

### 8.1 General

8.1.1 PPE will be worn at all times. PPE will follow LM requirements. Mandatory minimum PPE for WA staff will include:

- *Appropriate coloured Safety helmet with, where applicable through risk assessment, suitable chin strap;*
- *High visibility jacket or long-sleeved vest and high visibility trousers;*
- *Safety footwear (incorporating toe and mid-sole protection and provides support to the ankle);*
- *Gloves (specific to the work activities); and*
- *Light eye protection, incorporating prescription lenses where necessary.*

8.1.2 Other PPE will be available and issued where necessary dependant on changes to the risk assessment.

## 9 SUPERVISION AND PERSONNEL

### 9.1 General

- Senior Project Manager: Richard O'Neill -
- Senior Logistics Officer: Ivan Machin -
- Archaeological Supervisors:
  Hannah Dabill
  Amy Derrick

### 9.2 Key Wessex Personnel

- Chris Brayne: Chief Executive
- Andrew Norton: Regional Manager, North
- Ian Philips: Compliance Director

## 10 TRAINING

### 10.1 General

10.1.1 Archaeology as a trade is recognised by the CITB Construction Skills Certification Scheme. All WA field staff have passed the CSCS Health & Safety test at a level of Managers and Professional's level and hold valid CSCS cards.

10.1.2 The Supervisors hold First Aid, Asbestos Awareness, Cable Detection and Banksman certification. Additionally, all WA field staff hold Asbestos Awareness certificates and additionally field staff hold Cable Detection and Banksman certification.

10.1.3 All AE Faulks plant operators have CPCS cards appropriate to the type of equipment they are operating.

## 11 SITE OPERATIONAL PROCEDURES

### 11.1 General

11.1.1 Standard Wessex working hours will be between the hours of 0800 and 1600 Monday to Friday.

11.1.2 Working will be during daylight hours only.

11.1.3 WA will provide mobile phones as a means of communication at all times between personnel involved in the Site works. However, these will only be used in accordance with WA procedures for use of mobile phones.

11.1.4 A first aid kit will be kept within the crew transport and welfare facilities at all times.

11.1.5 Archaeological data will be recorded on pro forma log sheets and electronic tablets, which will include a checklist of safe working practices, safety equipment, emergency procedures and specific information relating to environmental conditions likely during fieldwork.

11.1.6 Members of the team will remain in visual contact at all times.

11.1.7 Welfare facilities will be provided by WA..

## 12 ENVIRONMENTAL PROCEDURES

### 12.1 General

12.1.1 WA will comply with the LM environmental requirements.

### 12.2 Ecology

12.2.1 WA will be made aware of any areas of ecological sensitivity in relation to their works. Advice will be taken from the DJV Ecological Clerk of Works regarding the location and of any areas identified as exclusion zones for ecological reasons. These locations will be available to the site field teams.

### 12.3 Asbestos

12.3.1 Although the presence of ACMs is not known, such material can commonly be found. All Wessex Archaeology staff have passed the UKATA *Asbestos Awareness E-Learning* training module.

### 12.4 Zoonoses

12.4.1 There are no indications that zoonoses are present.

## 13 EMERGENCY PROCEDURES

### 13.1 General

13.1.1 All WA staff will comply with the emergency procedures contained in the CPP.

13.1.2 Any incident or near miss must be reported in line with LM procedures and to the WA Project Manager as soon as possible.

13.1.3 The nearest Accident and Emergency hospital is: Warwick Hospital Lakin Road Warwick Warwickshire, CV34 5BW Tel: 01926 495321

- *All employees must read the Risk Assessment and Method Statement. If an emergency situation occurs the following will apply:*
- *Always remember to stay calm and inform other people.*
- *Raise the alarm / inform a supervisor or member of staff.*
- *Remove any immediate danger if safe to do so.*
- *Protect the injured person(s).*
- *Summon help 999 if necessary or Site Contact mobile phone.*
- *Remain on the phone until the operator asks you to hang up.*
- *State the nature of the emergency and give all details, including the contact number of the phone you used and the site address.*
- *Delegate someone to meet the emergency services at a designated area to escort them to the scene. The supervisor will coordinate the response.*

## 14 STANDARDS

### 14.1 Health and safety policy and practice

14.1.1 Health and safety considerations will be of paramount importance in conducting all fieldwork. Safe working practises will override archaeological considerations at all times.

14.1.2 All work will be carried out in accordance with the Health and Safety at Work Act 1974 and the Management of Health and Safety Regulations 1992, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time in particular the CPP.

### 14.2 Extent and location of existing records and plans relevant to on site H&S

14.2.1 The following list UK legislation applies to the activities undertaken by WA:

- *Health and Safety at Work Act 1974*
- *Management of Health and Safety at Work Regs 1999*
- *Provision and Use of Work Equipment Regs 1998*
- *Lifting Operations and Lifting Equipment Regs 1996*
- *Control of Substances Hazardous to Health Regulations 2002*
- *Manual Handling Operations Regs 1992*
- *Reporting of injuries disease and dangerous occurrences regulations 2013*
- *Control of Asbestos Regulations 2012*
- *Electricity at Work Regulations 1989*
- *Noise at Work Regulations 2005*
- *Work at Height Regulations 2005*
- *Regulatory Reform (Fire Safety) Order 2005*
- *Personal Protective Equipment Regulations 1992*
- *Workplace (Health Safety and Welfare) Regs 1992*
- *First Aid at Work Regulations 1981*
- *Health and Safety (Safety Signs and Signals) Regs 1996*
- *Construction Design and Management Regulations 2015*

14.2.2 In relation to these works, the following documentation will be contained in the WA health and safety folder:

- *Health and Safety policy*
- *Risk Assessments*
- *Method Statements*
- *Local Specific Written Scheme of Investigation*
- *LM Construction Phase Plan*
- *RIDDOR reporting arrangements*
- *COSHH safety data information sheets*
- *Utility plans*
- *Plant maintenance and inspection records*
- *Site induction pack*
- *Tool box talk records*
- *Training records*
- *Daily sign in sheets*
- *Health & Safety comment section*
- *WA Health & Safety Inspection checklist*
- *Form F 91 B equivalent – inspection log for excavations*
- *Form BI 510 equivalent – Accident Record Book, including RIDDOR forms*

- *Safety Observation Report*
- *Site Audit/Start Up Form*

14.2.3 WA will supply a copy of their Health and Safety Policy and site specific Risk Assessment to the client before the commencement of any fieldwork. The Risk Assessment will have been read and understood by all staff attending the Site before any groundwork commences.

## 15 BIBLIOGRAPHY

Achieving Best Practice in Service Avoidance-HS2- Expectations and Guidance- PH1-HS2-HS-GDE-000-000003 2019

Avoiding danger from underground services - HSG47 HSE 2014

Chartered Institute for Archaeologists (CIfA), 2014a. Code of Conduct

Chartered Institute for Archaeologists (CIfA), 2014b. Standard and Guidance for Archaeological Excavation

Construction Phase Plan (CPP) – Enabling Works North Contract 1EW04-LMJ-HS-PLN-N000-000003

HS2 Requirements for working around major utility assets HS2-HS2-UT-STD-000-000007 2019

WA Excavation Procedure 2018

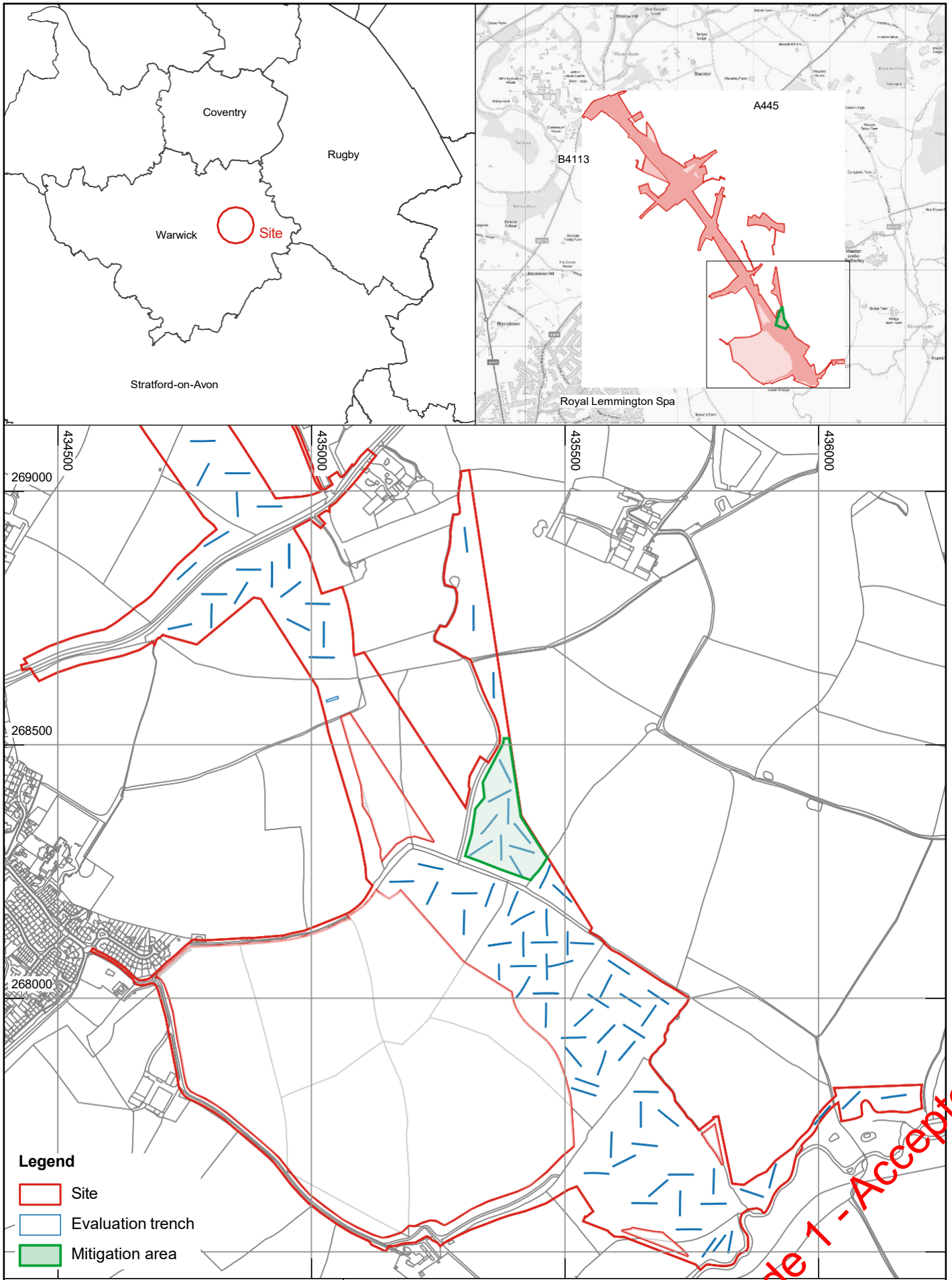
Health and Safety Policy 2019

WP 029b Historic Environment Intrusive Surveys – Enabling Works North Contract Principal Contractor Arrangements Plan 1EW04-LMJ-HS-PLN-N000-029001

WP 29 (C) Historic Environment Works – South Cubbington Wood - Location Specific Written Scheme of Investigation for Archaeological Mitigation Enabling Works North. 1EW04-LMJ_WEX-EV-MST-NS01_NL03-029002

WP29 - Historic Environmental Works – Enabling Works North Construction Logistics Plan 1EW04-LMJ-CL-PLN-N000-029000

## 16 Appendix 1: LSWSI Figures




Code 1 - Accepted

Map Number

Figure 1

Map Name

Cubbington Woods
Location Plan

Community Forum Area CFA17
Offchurch and Cubbington

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.



Scale At A4: 1:5000 (main graphic)

0 200 m



Doc Number: 1EW04-LMJ_WEX-EV-MST-NS01_NL03-029002

Date: 17/09/19

435300

435400

268500

268400

268300

Tr193

19407

Tr194

Tr195

19506

19505

Possible
continuation
of ring gully

19504

Tr196

Tr197

19805

Tr198

Tr199

Tr200

Tr202

Tr207

**Legend**

- Site
- Mitigation area
- Evaluation trench
- Archaeology
- Disturbance/Land drain
- Ridge and furrow
- Geology
- Pond

Map Number

Figure 2

Map Name

Cubbington Woods
Mitigation area

Community Forum Area CFA17
Offchurch and Cubbington

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.





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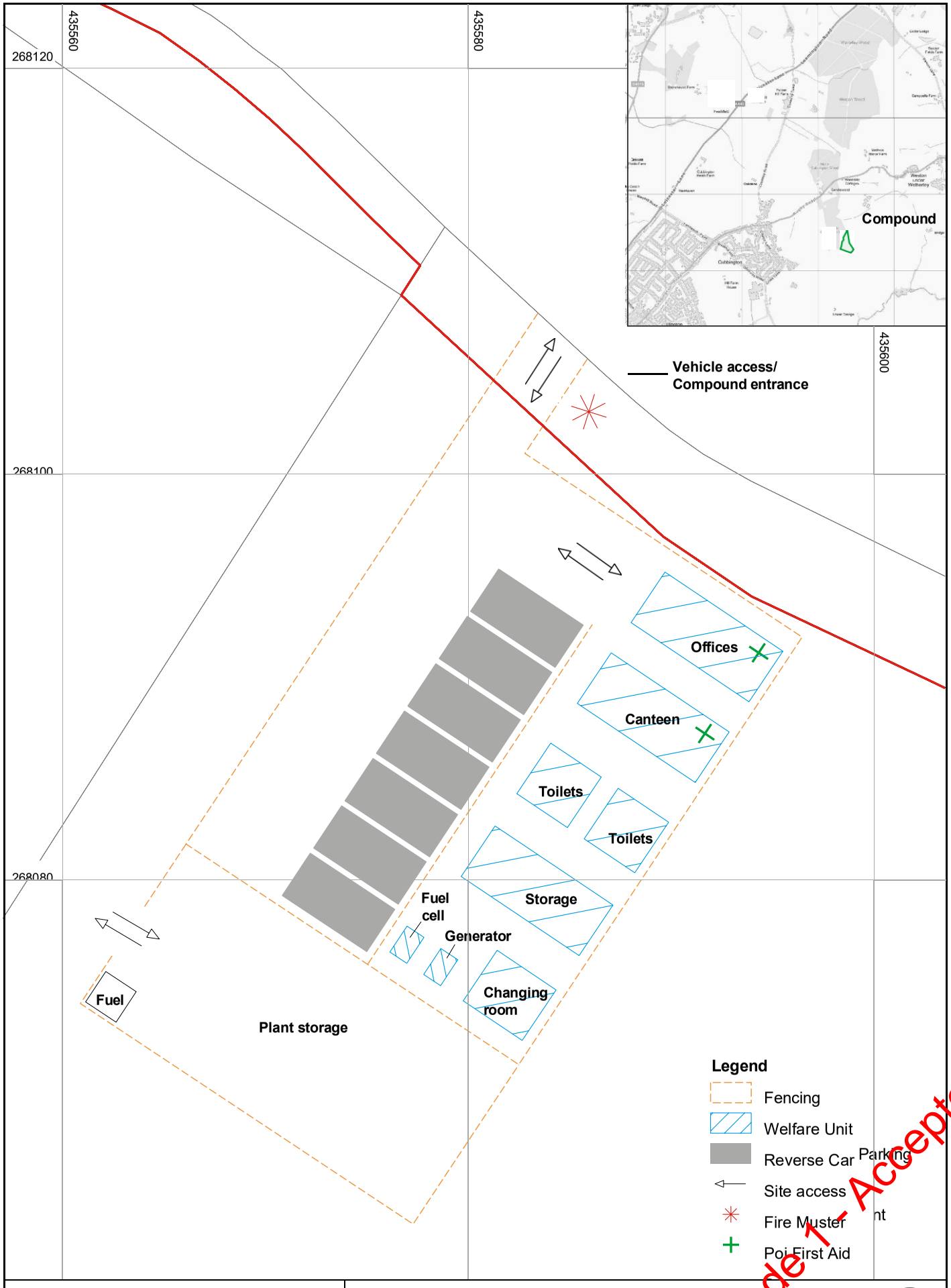
Date: 28/08/19




Map Number

Figure 3

Map Name

Cubbington Woods
Compound Plan

Community Forum Area CFA17
Offchurch and Cubbington



Code 1 - Accepted

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.

Scale At A4: 1:250 (main graphic)

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**Doc Number:** 1EW04-LMJ_WEX-EV-MST-NS01_NL03-029002

**Date:** 17/09/19

## 17 Appendix 2: Suggested Tool Box Talks

*Driving and Access*

- *Public highways (particularly narrow lanes and single tracks)*
- *Footpaths and bridleways*
- *Protecting the public*

*Excavations*

- *Existing services;*
- *Methods of trench support;*
- *Working with plant;*
- *Protecting the public.*
- *Site tidiness (i.e. avoidance of trip hazards);*
- *Storage of materials;*

*Health*

- *Asbestos;*
- *Dermatitis;*
- *Noise;*
- *Weil's disease;*
- *Manual handling;*
- *Hazardous substances*