WP 029(B) Historic Environment Works – Land Adjacent to Stoney Thorpe Deserted Medieval Village – Enabling Works North Contract

Location Specific Written Scheme of Investigation for Trial Trenching

Document Number: 1EW04-LMJ-EV-REP-NS01_NL03-029021

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1 Executive Summary

1.1.1 This Location Specific Written Scheme of Investigation (LS-WSI) sets out the methodology, deliverables, programme, health, safety and environmental requirements, resources and interfaces necessary to deliver an archaeological evaluation as defined in the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001). The project plan established the scope, aims, contribution to the Generic Written Scheme of Investigation Historic Environment Research and Delivery strategy (GWSI HERDS) objectives, techniques, deliverable and reporting mechanism for trial trenching investigation.

1.1.2 Production of this LS-WSI follows the Guidance as outlined in Technical Standard – Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (Doc No: HS2-HS2-EV-STD-000-000036) and Technical Standard – Specification for Historic Environment Investigations (Doc No: HS2-HS2-EV-STD-000-000035). Reference is also made to other guidance as specified in the GWSI HERDS (Doc No: HS2-HS2-EV-STR-000-000015). The structure of this LS-WSI follows the Technical Standard – Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (Doc No: HS2-HS2-EV-STD-000-000036, Section 3). Other relevant guidance is noted throughout the remainder of this document.

1.1.3 The trenched area ('evaluation area') is approximately 1km long and covers approximately 22.8 ha at part of the HS2 route located north-west of Southam, Stratford-on-Avon District, Warwickshire (Figure 1). It is located between the River Itchen (HS2 Chainage 126400) in the east and the Dallas Burston Polo Grounds (Hs2 Chainage 127230) in the west. The evaluation area is required as part of the construction land requirements for the enabling works and subsequent main works for HS2 Phase One.

1.1.4 The trial trenching is required to help identify the presence, nature, date, extent, survival and significance of known and potential sub-surface heritage assets which may be affected by the enabling works and subsequent main works. The objective of the investigation is to gain information about the archaeological potential of the evaluation area to contribute to Specific Objectives set out in the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (Doc No: HS2-HS2-EV-STR-000-000015) (see below). The outcome of the investigation will be used to inform future decision-making on the requirement for further archaeological investigation at the evaluation area, or where appropriate, inform the development of mitigation by design.

1.1.5 Specifically, and as outlined in the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL029001), the trial trenching programme aims to identify the presence, location, extent, character, survival and significance of known and potential heritage assets within the evaluation area. It will focus on examining the known heritage assets of the medieval to post-medieval landscape at Stoney Thorpe and associated features south of the deserted medieval village (DMV) at Stoney Thorpe, as identified through previous investigations outlined in the Project Plan.

1.1.6 The trial trenching programme aims to contribute to the following specific HERDS Knowledge Creation objectives, as outlined in Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (Doc No: HS2-HS2-EV-STR-000-000015), section 6.7:

- KC5: Identifying settlement location and developing models for settlement patterns for the Mesolithic, Neolithic and Early Bronze Age
- KC9: Does a lack of visibility of Neolithic and Bronze Age monuments reflect genuine area distinctiveness, or is this due to variation in geology or investigative techniques?
- 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?
- KC30: Identify the location and form of Early and Middle Saxon settlement and investigate evidence for land use in the period
- KC31: Identify the location of Middle to Late Saxon settlement, explore processes of settlement nucleation and understand the development of associated field types and agricultural regimes
- KC33: Investigate the development of water mills from the Anglo-Saxon period through to the modern period. How did the technology of milling change, and what are the implications for farming practice?
- KC34: Undertake research and investigation into medieval manorial complexes. What was their origin, development and impact on the landscape?
- KC35: Investigate the impacts on rural communities of social and economic shocks in the mid-14th century and thereafter and their contribution to settlement desertion

- KC36: How were medieval and later woodlands managed and exploited and what evidence do they preserve for earlier land use?
- KC40: Identify patterns of change within medieval rural settlement from the 11th to mid-14th century

1.1.7 The way the trial trenching aims to contribute to the aforementioned KC's is outlined in the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001, Section 3.1.6, Table 2).

2 Site Location, Extent and Condition

2.1.1 The evaluation area is located to the south-west of Southam in the Stratford-on-Avon District of Warwickshire. It runs for *c.* 1km between the River Itchen in the east (HS2 Chainage 126400) and the Dallas Burston Polo Grounds in the west (HS2 Chainage 127230). It is centred on National Grid Reference (NGR) 439866, 261782 and covers an area of approximately 22.8 ha, mostly comprising rural pasture fields, a polo ground and several small wooded and developed areas. The A425 runs through the centre of the evaluation area and forms part of the southern site boundary in the west and northern site boundary in the east.

2.1.2 The evaluation area includes Construction Land Requirement (CLR) parcel CR01866 in the south.

2.1.3 The evaluation area lies within the Warwickshire Feldon Archaeological Character Area (ACA2). The ACAs were split further within the ES for a more in-depth understanding of the archaeological potential, and the evaluation area crosses the following Archaeological Character Sub-Zones:

- ASZ16-18 Southam/Long Itchington: River Itchen – Sinuous, narrow floodplain running north-south with potential for stream side activities of all periods from early prehistoric onwards. Additional potential exists for remains buried under the alluvium and good environmental preservation;
- ASZ16-19 Ufton/Long Itchington: South facing slopes down to the River Itchen – Ground rises gently to west at the River Itchen towards Ufton Woods with potential for unknown buried late prehistoric/ Roman/ early Medieval archaeology. Significant concentrations of finds and sites have been recorded to the north in the lower Itchen valley;
- ASZ16-22 Long Itchington: Polo Grounds – Natural slope up to the west away from

the River Itchen but the area has been levelled and landscaped associated with its use for polo; and

- ASZ16-23 Bascote Heath, Long Itchington – south facing slopes down to the River Itchen (only a very small part lies within this zone).

2.1.4 The evaluation area has a gentle rise and lies at c.90.0 m above Ordnance Datum (OD) in the south and gently ascends to 95.0 m OD in the east, although the landscape within the polo grounds has been levelled.

2.1.5 The British Geological Survey (BGS) online mapping data shows the underlying bedrock geology as Langport Member limestone across the northern part of the evaluation area and Cotham Member mudstone in the south and north-west portions. Superficial geological deposits comprise a c. 70m strip of Alluvium along the line of the River Itchen; no information on other superficial deposits within the evaluation area available.

2.1.6 The current conditions of the evaluation area were confirmed during a walkover survey undertaken in October 2019. The walkover confirmed the evaluation to be relatively flat rural pasture fields with some wooded and developed areas. A polo ground and associated horse paddocks occupies land in the north-west of the evaluation area. The area to the south consists of two fields separated by a small, narrow watercourse.

3 Overview of Project Plan

3.1.1 This LS-WSI has been prepared to provide the necessary specification and site-specific information to enable the delivery of the trial trenching investigation defined in the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001). As outlined in Section 4, the Project Plan defines the scope of the trial trenching, outlines the aims of the survey and how they will contribute to the specific objectives laid out in the GWSI: HERDS, sets out in detail the methodology for the trial trenching, and describes the proposed deliverables and reporting mechanisms. It should be referred to for detailed information on these matters (see Appendix 15.1).

3.1.2 The GWSI: HERDS Specific Objectives guiding the trial trenching have been refined following the work undertaken to date and are paraphrased below:

- KC5: Identifying settlement location and developing models for settlement patterns for the Mesolithic, Neolithic and Early Bronze Age

- KC9: Does a lack of visibility of Neolithic and Bronze Age monuments reflect genuine area distinctiveness, or is this due to variation in geology or investigative techniques?
- 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?
- KC30: Identify the location and form of Early and Middle Saxon settlement and investigate evidence for land use in the period
- KC31: Identify the location of Middle to Late Saxon settlement, explore processes of settlement nucleation and understand the development of associated field types and agricultural regimes
- KC33: Investigate the development of water mills from the Anglo-Saxon period through to the modern period. How did the technology of milling change, and what are the implications for farming practice?
- KC34: Undertake research and investigation into medieval manorial complexes. What was their origin, development and impact on the landscape?
- KC35: Investigate the impacts on rural communities of social and economic shocks in the mid-14th century and thereafter and their contribution to settlement desertion
- KC36: How were medieval and later woodlands managed and exploited and what evidence do they preserve for earlier land use?
- KC40: Identify patterns of change within medieval rural settlement from the 11th to mid-14th century

4 Scheme Design Elements

4.1.1 The trial trenching will be undertaken in accordance with specific guidance produced by HS2, namely the Technical Standard Specification for Historic Environment Investigations (HS2- HS2-EV-STD-000-000035) and the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS; HS2-HS2-EV-STR-000-000015).

4.1.2 The trench plan layout; and numbering of the trenches was specified by the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001). This has, however, been updated in light of constraints posed by

utilities and ecology and the revised trench plan is illustrated on Figure 2 and within the RAMS (Appendix 15.2).

4.1.3 There will be 46 trenches opened during the evaluation, with their locations indicated on Figure 2. A 4% contingency by area is also allowed for and will enable, if necessary, further investigation of targeted archaeology, characterisation of discoveries of previously unknown archaeology and, with the agreement of HS2, mitigation of archaeology which contributes to HERDS Specific Objectives where initial investigation has shown that it is of limited complexity and extent. All trenching will be assigned a unique ID in accordance with the Employer's Asset Information Management Systems (AIMS).

4.1.4 Trenches are positioned to provide coverage across the entirety of the evaluation area, with any areas left blank being due to logistical issues of access, space, presence of utilities and appropriate ground conditions for excavation (see Figure 2 and RAMS; Appendix 15.2). The locations of all trenches are provisional and subject to confirmation of the locations of any utilities and services present on the evaluation area as well as buffers established around ecological constraints.

4.1.5 The following table outlines the general locations of the trenches to be excavated within the evaluation area:

Table 1 Trench Locations

Trenches	Location
1 -10	Land within Dallas Burston Polo Ground and to east of access road, CV47 2DL
11-46	Multiple fields south of Leamington Road (A425) and west of the River Itchen

4.1.6 The trial trenching programme will contribute to the Specific HERDS 'Knowledge Creation' aims KC5, KC9, KC15, KC30, KC31, LC33, KC34, KC35, KC36 and KC40 which largely relate to the development of the wider historic landscape and settlement patterns of the medieval period. The trial trenching programme has been designed to provide coverage across the evaluation area, where constraints are not posed by utilities and ecological factors, with some trenches targeting specific areas of archaeological potential.

4.1.7 The trenching programme aims to identify the extent of the Stoney Thorpe designed landscape as well as activity associated with the Stoney Thorpe DMV (ES ref. LBS69); Trench 10 is within an area of the early park (HER ref. MWA1647). Any early medieval remains in relation to settlement and land use associated with a precursor to the DMV have the potential to contribute to HERDS Objectives KC30 and KC31. Any evidence dating to the medieval period or post-medieval period would inform HERDS Objectives KC35, KC36 and KC40.

4.1.8 In addition, Trenches 13-46 will examine an area close to two potential Iron Age enclosed settlements identified c. 30m to the south and c. 150m to the east of the evaluation area (HER ref. MWA20532 and HER ref. MWA20538); associated remains could contribute to HERDS Objective KC15. Trenches adjacent to south-east boundary may encounter alluvial deposits that may contain or mask prehistoric archaeological and palaeoenvironmental evidence, contributing to HERDS Objective KC5. Trenches 11-46 will target ridge and furrow at Lower Farm (ES ref. LBS072/HER Ref. MWA19489) in an attempt to understand the use, date and form of open field system earthworks and investigate whether other features are present beneath the ridges. Trench 19 examines a hollow identified in an examination of LiDAR data (EWR10816).

4.1.9 The on-site works associated with the trial trenching evaluation will be as follows:

- Walkover survey (completed October 2019);
- Setting Out (including welfare, compound and required fencing);
- Mechanical excavation to remove topsoil, in order to expose potential archaeological horizons;
- Hand Excavation and Fieldwork Recording; and
- Environmental Sampling (as relevant).

4.1.10 The off-site works associated with the trial trenching will be as follows:

- Environmental Sample Processing and Assessment;
- Artefact Processing and Assessment; and
- Reporting and Archiving.

4.1.11 The applicable methodologies and standards for these activities will be as follows:

- Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001, Section 4 – see Appendix 15.1);

- Technical Standard: Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035, Section 3); and
- All other Technical Standards as outlined in Technical Standard: Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035, Section 1.2).

4.1.12 Where relevant, the trial trenching will also reflect other best practice guidance e.g.:

- Archaeology Data Service/Digital Antiquity guides to good practice;
- Chartered Institute for Archaeologists (2014) Code of Conduct;
- Chartered Institute for Archaeologists (2014) Standard and guidance: archaeological field evaluation;
- Chartered Institute for Archaeologists (2014) Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives; and
- Historic England (2015) Management of research projects in the historic environment.

5 Programme

5.1.1 The proposed programme of works is given in the table below:

Table 2 Programme

Activity	Start date
Site Walkover Survey	October 2019
Submission of LS-WSI	October 2019
Approval / Finalisation of LS-WSI	October 2019
Commencement of Evaluation	28th October 2019
Completion of Evaluation	November 2019
Reporting	January 2019
Archiving	March 2020

6 Methodology

6.1.1 The trial trenching will be conducted according to the detailed methodology laid out in the Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001; Appendix 15.1). This covers the methodology for all parts of the investigation, including setting out (Section 4.3.13-4.3.16), mechanical excavation (Section 4.3.17-4.3.22), fieldwork recording (Section 4.3.23-4.3.33), human remains (4.3.34-4.3.40), environmental sampling (Section 4.3.41-4.3.52), preservation in situ (Section 4.3.53), backfilling (Section 4.3.54-4.3.55), and post-investigation reporting and archiving (Section 5.1.1-5.1.4). The work will also adhere to Technical Standard: Archaeology and Built Heritage Approach to Ground Investigation (Doc No: HS2-HS2-EV-STD-000-000038).

6.1.2 The following sections address wider issues of methodology and project delivery.

6.2 Site set-up process

6.2.1 A walkover survey and access assessment have been undertaken to highlight any site-specific logistical issues prior to the commencement of the trial trenching. The results of the survey are incorporated in the following sections.

6.2.2 The Employer has full consent to undertake the trial trenching within the evaluation area (as defined by the red line boundary), although ownership of the land remains with the landowners. The Employer will manage landowner liaison and will notify the landowners in advance that the archaeological works are taking place. The Employer will also fully compensate the landowners for any damage caused to crops and fences during the trial trenching. It is therefore assumed that interaction between the landowners and the Archaeological Contractor will not take place or be minimal, although should negotiation and interaction with landowners be required it will be undertaken by senior and experienced members of the Archaeological Contractor's field team, supported by senior management. Communication and engagement with third parties will use the Employer's communication protocols set out in the Community Relations Strategy.

6.2.3 It is proposed to set up a two small-scale, temporary site compounds on the periphery of fields within the evaluation area. The locations of the site compounds are illustrated within the RAMS (Appendix 15.2) on Figure 2.

6.3 Details of site access

6.3.1 Staff and plant will access areas of the evaluation area via the closest compound access as illustrated within the RAMS (Appendix 15.2) on Figure 2 depending on the area of trenching taking place. Traffic management will be required to safely access Compound 2 (Appendix 15.2, Figure 2).

6.3.2 Welfare facilities will be delivered and collected from a suitable location and placed within one of the small-scale site compounds.

6.3.3 Plant Access will be as follows:

Table 3 Compound Locations

Compound	Location
Compound 1	Dallas Burston Polo Club, Stoneythorpe Estate, Southam CV47 2DL
Compound 2	Field off A425, Stoneythorpe Estate, Southam CV47 2DL

6.3.4 The trenching will therefore require a minimum of six plant movements; some fields will be accessed by JCB with direct access available from the nearest road, while others will be accessed by crossing tracks, where possible. Additional plant movements may be required if access between fields is unavailable or to accommodate backfilling.

6.4 Details of plant and methodology for its use

6.4.1 It is proposed to use a minimum of one 360 tracked excavator of between 8 and 22 tonnes. It will be fitted with a broad toothless ditching bucket and delivered to site on a ridged loader. A three-inch diaphragm water pump may also be required. A JCB will be used to excavate trenches in areas where access is restricted.

6.4.2 All machine excavation will be carried out under the constant supervision of a suitably qualified and experienced archaeologist. Deposits will be removed in spits, the depths of which will be determined by the supervising archaeologist. Each spit will be examined carefully in order to assist in the retrieval of archaeologically significant artefacts. Machine excavation will cease at the top of the first significant archaeological horizon, and the Archaeological Contractor will ensure that a 'clean' machined surface is exposed. Spoil will be stored along the edges of

excavated trenches, topsoil being kept separate from subsoil. The storage of excavated material will be in accordance with the Contractor's environmental protection requirements, as set out in their Environmental Management Plan.

6.4.3 Prior to backfilling the trenches will be pumped dry and any necessary protection measures for archaeological remains, below ground infrastructure, services and/or utilities will be implemented. Generally, all backfill material will consist of non-toxic, uncontaminated, non-putrescible, natural and inert material which will be compacted and (if necessary) tested (dynamic compaction test or other). Original surface conditions will be reinstated to the required standard. The excavations and backfilling will comply with Technical Standard – Agriculture, Forestry and Soils Route-wide Soil Resource Plan (HS2-HS2-EV-STD-000-000008). A photographic condition survey will be carried out at each trench location prior to excavation and after backfilling of the trench.

6.4.4 All plant movements across the evaluation area (see above) will be supervised by an archaeologist acting as banksman, who will be present at all times during the movements. If it is necessary for plant to cross a road, two archaeologists acting as banksmen will supervise the crossing (as outlined in the project Risk Assessment and Method Statement (RAMS); Appendix 15.2).

6.5 Main Work Packages

6.5.1 The work will be carried out between October and November 2019.

6.6 Provision for unexpected remains

6.6.1 As outlined in Project Plan for Trial Trenching at Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001) a number of earlier investigations indicate the character of the archaeological remains that many be expected to be found on site. The summary of archaeological potential and significance within the Project Plan (Section 2.2.3 to Section 2.2.23) suggests that features contained within alluvial deposits, possibly dating from the Palaeolithic to the Bronze Age, may be encountered during the evaluation in the area to the west of the River Itchen. The evaluation also has the potential to uncover remains such as field boundaries and enclosures, and these may be associated with settlement and land management in places, perhaps in the form of pits, posthole structures, ditches or stone foundations; these could date to any period, but specifically the potential for Saxon and medieval activity is high.

6.6.2 There is minimal known evidence for Palaeolithic, Mesolithic and Neolithic activity in the vicinity of the evaluation area; however, there is high potential for the preservation of archaeological and palaeoenvironmental deposits within the alluvial deposits within the evaluation area. Evidence for Bronze Age, Iron Age and Roman activity is scarce in the vicinity of the evaluation area.

6.6.3 Evidence for Saxon and medieval settlement and land management activity is known within the evaluation area and surrounding area. The Stoney Thorpe estate may have been occupied in the Saxon period based on place name evidence suggesting an Old Norse settlement was located there. Evidence of this may be encountered within the evaluation area. The estate is thought to have been occupied throughout medieval period before the area was heavily depopulated at the end of the medieval period and many villages abandoned and the land was enclosed and turned over to extensive pasture for grazing. The evaluation area appears to have been part of the agricultural landscape during the early medieval/Saxon and medieval periods with evidence for c. 10th croft sites, ridge and furrow, enclosure and assarting identified. The remains of a possible medieval chapel, first mentioned in the 16th century, may be located within the evaluation area.

6.6.4 In the 17th century, Stone Thorpe Hall (LBS067) was constructed to the north of the evaluation area and landscaping took plane associated with its park. The hall was built on the site of the earlier manor and DMV and the park was gradually developed throughout the 17th and 19th centuries. The evaluation area was likely in the surrounding agricultural lands during this period. Remains of field boundaries and enclosures may thus be encountered. There may also be post-medieval evidence for the modern Thorpe Bridge.

6.6.5 However, the following classes of remains may be considered 'unexpected' for this location:

- Extensive human burials;
- Significant and extensive structural remains;
- Significant and extensive waterlogged remains (leather, timber etc.).

6.6.6 In all three instances, disturbance of these remains, if encountered, will be kept to a minimum during the evaluation.

6.6.7 For human remains, the provisions outlined in the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001 (Section 4.3.34-4.3.40; Appendix 15.1) and in Burial Grounds, Human Remains and Monuments Procedures (HS2-HS2-EV-PRO-0000-000008) will be followed. Should human remains be encountered the Archaeological Contractor will inform DJV immediately. DJV

will inform the Employer so that these procedures can be implemented. Visible grave goods would be recorded and lifted before the end of the working day. Where this is not achievable, the Archaeological Contractor should liaise with the Contractor to ensure that adequate security is provided at the evaluation area.

6.6.8 Other best practice guidance would also be utilised, such as Guidance for the Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England (Church of England/Historic England, 2017), and The Role of the Human Osteologist in an Archaeological Fieldwork Project (Historic England, 2018).

6.6.9 Any in situ structural remains would be fully recorded for the extent that they are exposed; brick and stone samples may be taken if potentially diagnostic of date or function. The presence of extensive structural remains and their significance will be discussed and agreed with DJV and HS2.

6.6.10 Waterlogged organic materials would be dealt with in line with Historic England's guidance documents, Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation (2018), Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood (2010), and Environmental Archaeology: A guide to the theory and practice of methods from sampling and recovery to post-excavation (2011).

6.6.11 Should geoarchaeological investigations be required, any supplementary works will be discussed and agreed by DJV, the Employer and with Historic England's Senior Science Advisor. These works will be supplemented by additional guidance contained in Historic England's guidance note Geoarchaeology: using earth sciences to understand the archaeological record (2015).

6.7 Treasure

6.7.1 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 object at least 300 years old when found which is not a coin but has metallic content of which at least 10 per cent by weight is precious metal;
- When found, is one of at least two coins in the same find which are at least 300 years old at that time and have that percentage of precious metal; or
- When found, is one of at least ten coins in the same find which are at least 300 years old at that time.

- Any object at least 200 years old designated as treasure by the Secretary of State under section 2(1) of the Treasure Act 1996.
- Any object that would have been 'Treasure Trove'.
- Any object found with any of the above.

6.7.2 The Treasure (Designation) Order 2002 extends the definition of treasure to include:

- Finds of least two base metal objects (other than coins) of prehistoric date; and
- Any object (other than a coin) of prehistoric date with any precious metal content.

6.7.3 All finds falling within the definitions of treasure shall be reported immediately to DJV who will inform the Employer. All subsequent works must be undertaken in accordance with the relevant legislative requirements of the Treasure Act and all necessary measures taken to comply with those requirements and any project specific requirements will be implemented.

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

6.7.5 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.

6.8 Provision of sampling facilities to support requirements established by Project Plans

6.8.1 The on-site sampling methodologies will follow the recommendations as set out in the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001) sections 4.3.41to 4.3.52.

6.8.2 The off-site sampling will be conducted at Connect Archaeology's in-house sampling facilities.

7 Delivery Interfaces

7.1.1 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 Project Director.

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

7.1.3 All communications regarding archaeological results, and any proposed alteration to scope and method will be communicated to DJV who will review this information and will liaise with the Employer on behalf of the Contractor.

7.1.4 The trial trenching will be supervised by a suitably qualified and experienced Project Officer appointed by the Archaeological Contractor. All parties will follow the Employer's protocols for Intra- and Inter-project communication.

7.1.5 Details of the Contractor's design, programme and Health and Safety policy are awaited.

7.1.6 Connect Archaeology have ISO 9001:2015 accreditation and the interface, consultation and communication will be undertaken in accordance with these protocols.

8 Health, Safety and Environment

8.1.1 The Archaeological Contractor will undertake the works in accordance with the Employer's route wide health and safety requirements (Safe at Heart) and, if applicable, the Contractor's health and safety requirements for specific locations.

8.1.2 The Archaeological Contractor, overseen by the Contractor, will be responsible for Health and Safety during the trial trenching, and a Risk Assessment and Method Statement (RAMS; Appendix 15.2) for the evaluation has been produced. All work will also be undertaken in accordance with the Archaeological Contractor's Health and Safety Policy (Connect Archaeology 2017).

8.1.3 All site staff will be fully inducted and will read and sign the RAMS (Appendix 15.2) before commencing work on site.

8.2 Site access and construction traffic

8.2.1 Prior to any works commencing on site, a Health and Safety check will be carried out which will assess the following:

- Risk of fire and appropriate mitigation;
- Appropriate location of site parking; and
- Location of site compound and appropriate security.

8.2.2 The above will be incorporated into a site layout plan made available to all site staff and visitors.

8.2.3 There will be a one-week allowance prior to works commencing on site to allow for the following:

- Health and Safety check
- Set up of site compound and security
- Set up of site parking
- Set up of traffic management plan including plant routes and pedestrian walkways
- Installation of appropriate signage for all aspects of Health and Safety.

8.2.4 Specific risks have been identified regarding delivery of plant and plant movements between different parts of the evaluation area (see the RAMS, Appendix 15.2). All loading / unloading of plant and all plant movements will be supervised by a minimum of one archaeologist acting as banksman.

8.2.5 Although multiple plant movements are envisaged, these should only involve a single low loader and the impact of construction traffic on the local infrastructure will be minimal.

8.3 Agriculture and ecology

8.3.1 Current crop land use has been assessed during a walkover survey (October 2019). No crops were present at the time of the walkover survey. However, should crops be present at the time of trenching, all attempts will be made to limit damage. Plant will be tracked around the edges of fields and along existing trackways and 'tramlines' within crops, where this is practicable. However, it is acknowledged that the trenching will inevitably cause damage to any crops present within the red line boundary of the evaluation area. The Employer will fully compensate the landowners for any such loss.

8.3.2 No areas outside the red line boundary of the evaluation area will be tracked over by plant unless this has been specifically authorised by the Employer.

8.3.3 No boundaries or entrances, including hedgerows, fences or gates, will be damaged to facilitate site access unless this has been specifically authorised by the Employer.

8.3.4 An ecological assessment has been undertaken by DJV (Doc No. 1EW04-LMJ-EV-PKG-NS01_NL03-029004). The assessment identified that the intrusive archaeological works may have an adverse impact on Great Crested Newts (GCN), other amphibians, otters and hedgerows.

8.3.5 As such, ecological constraints and the appropriate buffers have been taken into consideration within the revised trench plan (Figure 2). Toolbox talks on otters, GCNS and other amphibians will be given by the ECoW prior to the commencement of works. All ecological mitigation in place for these constraints will be adhered to throughout the duration of the fieldwork.

8.4 Plant noise

8.4.1 It is anticipated that plant noise will be minimal, and the main part of site lies some distance from residential areas. It is not anticipated that a mechanical breaker will be used on any part of the site.

8.4.2 The Archaeological Contractor will ensure that all staff working in the vicinity of plant are provided with ear defenders.

8.5 Utilities

8.5.1 The utility drawings have been taken into account when designing the trench plan; however, all trenches will be scanned with a Cable Avoidance Tool prior to excavation.

8.5.2 Overhead medium and low-voltage electrical lines are located to the north of the A425. A buffer of 10m either side of the overhead lines has been established and has been taken into consideration for the trench plan to minimise plant movements in the vicinity of the overhead lines. Crossing beneath the overhead lines will be necessary for access to Trenches 9 and 10; hence, instruction from the owner of the electrical utilities in the area is awaited.

8.5.3 The number of passageways beneath any overhead cables will be kept to a minimum. All plant movements will be planned in advance and supervised on site and will follow best practice as outlined in the Health and Safety Executive's publication Avoidance of danger from overhead electricity lines (GS6, 4th edition). If there is a risk of accidental contact with overhead cables, or if the safe clearance distance will be breached by the plant used for the trial trenching, the route of the passageway beneath the overhead cables will be defined with goalposts which include a

cross-bar. The Archaeological Contractor will establish exclusion zones around any further cable lines where appropriate (Illustrated within Appendix 15.2 Figure 2).

8.5.4 Buried electrical cables, telecommunications, sewer pipes and water mains run through the evaluation area in various areas of trenching (illustrated in the RAMS; Appendix 15.2 Figure 2). Appropriate buffers on either side of the buried services is in place which the trench plan has taken into consideration. This will inform the Archaeological Contractor as to how crossing of services will be undertaken.

8.5.5 The RAMS outlines the emergency procedures that will be followed by the Archaeological Contractor (Appendix 15.2).

8.6 Unexploded ordnance

8.6.1 To the north of the A425, the evaluation area is recorded as a moderate unexploded ordnance (UXO) hazard with some potential for UXOs as a result of World War II bombing. A high explosive (HE) bomb has been recorded to the south of Trench 9. The area containing Trenches 1-10 will be subject to an UXO watching brief during the trench excavations managed by a UXO specialist. All staff will be given a briefing by the UXO specialist prior to the excavation of these trenches.

8.6.2 The area to the south of the A425 is recorded as a low UXO hazard.

8.7 Contaminated Land

8.7.1 The only area of potentially contaminated ground within the evaluation area is a small area at the junction of the A425 and an access track to the Codemaster Campus. No trenches are located in the vicinity of this area. However, should any material be excavated that is deemed to be contaminated or potentially contaminated, excavation shall cease, and the Contractor will be immediately informed, and the Contractor will seek advice on how to proceed. Contaminated or potentially contaminated material will be kept separate to all other excavated material until testing has taken place and a strategy has been confirmed.

8.8 Site safety and security

8.8.1 The evaluation area to the north of the A425 is largely located within a polo ground which may be in use by the public at the times during the trial trenching. The area to the south of the A425 is largely agricultural land beyond the limits of residential areas. The RAMS (Appendix 15.2) outlines machine movement and fencing requirements to protect the public and procedures to

be followed if members of the public enter the site, which include standing down plant until any unauthorised people have left the site.

8.7.2 Security will be present outside of working hours.

8.9 Local community, general public, neighbouring properties and businesses

8.9.1 It is not anticipated that the trial trenching will cause significant disruption to the local community or neighbouring properties and business, as most of the works will be on agricultural land that lies some distance from residential areas and public footpaths.

8.9.2 Given the distances between most of the trenches and residential areas, it is not anticipated that plant noise will be problematic for the local community.

8.9.3 All plant movements will be undertaken with a mind to minimising disruption to local traffic and infrastructure.

8.9.4 Health and Safety procedures will be in place to minimise the risk to any member of the public who enters the site during the trial trenching (see the RAMS, Appendix 15.2)

9 Information Management

9.1.1 GIS deliverables will be provided in accordance with the Employer's Cultural Heritage GIS Specification (Doc No: 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 will be supplied in GIS format.

9.1.2 Mapping and spatial data deliverables will conform to the Employer's Cultural Heritage GIS Standard (Doc No: HS2-HS2-GI-STD-000-000010) and other associated referenced documents.

9.1.3 The Employer's standard template for reporting as set out in Technical Standard: Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035, Section 4.4) will be followed.

10 Site Monitoring and Engagement

10.1.1 DJV will arrange, convene and attend monitoring site visits. HS2 Historic Environment Team may convene monitoring visits with limited notice.

10.1.2 The Archaeological Contractor will provide weekly written progress reports to DJV for dissemination to the Contractor and the Employer.

10.1.3 DJV will inform the Warwickshire County Council that the trial trenching will take place at least one week in advance of the commencement of fieldwork.

10.1.4 DJV will arrange and convene monitoring site visits by external consultees, as appropriate. These may include:

- Historic England;
- Warwickshire County Archaeologist;
- Relevant local interest groups; and
- Relevant and acknowledged specialists in such fields as geophysical survey and archaeological science.

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

11 Quality Assurance Processes

11.1.1 Connect Archaeology are ISO 9001:2015 Quality Assured and all of their work practices will adhere to these independently qualified standards.

11.1.2 All project staff employed by the Archaeological Contractor will be suitably qualified, experienced and trained to undertake the work in hand.

11.1.3 Fieldwork will be monitored by the Archaeological Contractor's Project Manager responsible for the project, under the general supervision of the Archaeological Contractor's senior management.

11.1.4 The trial trenching assessment report will be checked and reviewed by a suitably qualified and experienced Project Manager or a member of the Senior Management Team before it is issued to DJV. On receipt of comments, the final report will be checked and reviewed again prior to its reissue.

11.1.5 All of the Archaeological Contractor's work will be assured by DJV on behalf of the Contractor.

12 Fieldwork Sign-off Sheet

Historic Environment Fieldwork Sign-off Sheet			
Work Package Reference	WP 029(B)		
Historic Environment Investigation Type	Trial Trenching		
Contractor			
Fieldwork conducted by (site director)		Dates	
Summary of results			
Document References Project Plan: 1EW04-LMJ-EV-PLN-NS01_NL03-029001 LS-WSI (this document): 1EW04-LMJ-EV-MST-NS02_NL04-029000			

Compiled by	Name	Date	Signature
Checked by	Name	Date	Signature
Approved by	Name	Date	Signature

13 References and Glossary of Terms

13.1.1 The following terms have been used in this report:

- **Archaeological Contractor** – Connect Archaeology who will be undertaking the archaeological trial trenching on behalf of the Employer.
- **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 combined historic environment investigation programme of assessment, evaluation and investigation.
- **Project Manager** – acts as administrator of the contract, handling certification, compensation events etc., with an obligation to act fairly and impartially as an agent of the Employer. An office-based manager who is the client's principal point of contact and who has overall responsibility for the project budget and delivery
- **Project Plans** – specification document for each specific package of activity (e.g. a survey, desk based assessment, excavation, recording project). The plans would respond to the Specific Objectives set out in the GWSI: HERDS and be delivered within an agreed budget and timeframe.
- **Senior Archaeologist** - a site-based manager provided by the Archaeological Contractor who is responsible for the direction of the works and the field team.
- **Works** – the specific historic environment assessment, evaluation or further investigation works at each location.

13.1.2 The following documents are referred to:

Title	Reference
HS2 CFA16 ES Reports: Ladbroke to Southam	Volume 5 appendix: CH-001-016, ES 3.5.2.16.4 CH-002-016, ES 3.5.2.16.5 CH-003-016, ES 3.5.2.16.6 CH-004-016, ES 3.5.2.16.7
HS2 W029(B) Historic Environment Works – Land Adjacent to Stoney Thorpe Deserted Medieval Village – Enabling Works North Contract – Project Plan for Trial Trenching	1EW04-LMJ-EV-PLN-NS01_NL03-029001
Report: Detailed Desk-Based Assessment of Long Itchington Assarts	1D037-ESP-EV-REP-030-000034
Project Plan for Detailed Desk-Based Assessment: Historic Settlement Landscape	Project Plan for Detailed Desk-Based Assessment: Historic Settlement Landscape
Report: Geophysical Survey of Thorpe Rough	1EW04-LMJ-EV-REP-NS01_NL01-022012

Detailed Desk Based Assessment – EIA LiDAR Survey Re-appraisal	1EW04-LMJ-EV-REP-N000-029011
Project Plan for Detailed Desk-Based Assessment: Historic Settlement Landscape	1EW04-LMJ-EV-PLN-N000-029008
Geoarchaeological Desk-Based Assessment (GDBA)	1D037-EDP-EV-REP-000-000031
Cultural Heritage GIS Specification	HS2-HS2-GI-SPE-000-000004
Cultural Heritage GIS Standard	HS2-HS2-GI-STD-000-000010
Technical Standard – Temporary Works	HS2-HS2-CV-STD-000-000005
Burial Grounds, Human Remains and Monuments Procedures	HS2-HS2-EV-PRO-000-000008
Technical Standard – Agriculture, Forestry and Soils Route-wide Soil Resource Plan	HS2-HS2-EV-STD-000-000008
Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy	HS2-HS2-EV-STR-000-000015
Technical Standard - Specification for historic environment investigations	HS2-HS2-EV-STD-000-000035
HS2 Unexploded Ordnance Desk Study	0615-ET-GT-REP-000-000001
HS2 Technical Standard: Specification for Project Plans and Location Specific Written Scheme of Investigations	HS2-HS2-EV-STD-000-000036
Technical Standard: Historic Environment Physical Archive Procedure	HS2-HS2-EV-STD-000-000039
Technical Standard: Archaeology and Built Heritage Approach to Ground Investigation	HS2-HS2-EV-STD-000-000038
Technical Standard: Historic Environment Digital Data Management and Archiving Procedure	HS2-HS2-EV-STD-000-000040
Contractors' Environmental Management Plan	1EW04-LMJ-EV-PLN-N000-000022
Employers Community Relations Strategy	IMS 11.1.1
Employer's protocols for Intra- and Inter-project Communication	IMS 12.1.1

Safe at heart: Supply chain health and safety standard	
Connect Archaeology 2017 – Health and Safety Policy	
British Geological Survey, Geology of Britain viewer, http://mapapps.bgs.ac.uk/geologyofbritain/home.html	
Church of England/ Historic England 2017 – Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England	
Health and Safety Executive 2013 – Avoidance of Danger from Overhead Electricity Lines (GS6, 4th edition)	
Historic England 2018 - The role of the Human Osteologist in an Archaeological Fieldwork Project	
Historic England 2015 – Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record	
Historic England 2010 – Waterlogged Wood: Guidelines on the Recording, Sampling, Conservation and Curation of Waterlogged Wood	
Historic England 2011 – Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation	
Historic England 2018 – Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation	

14 Figures

Table 4 Figures

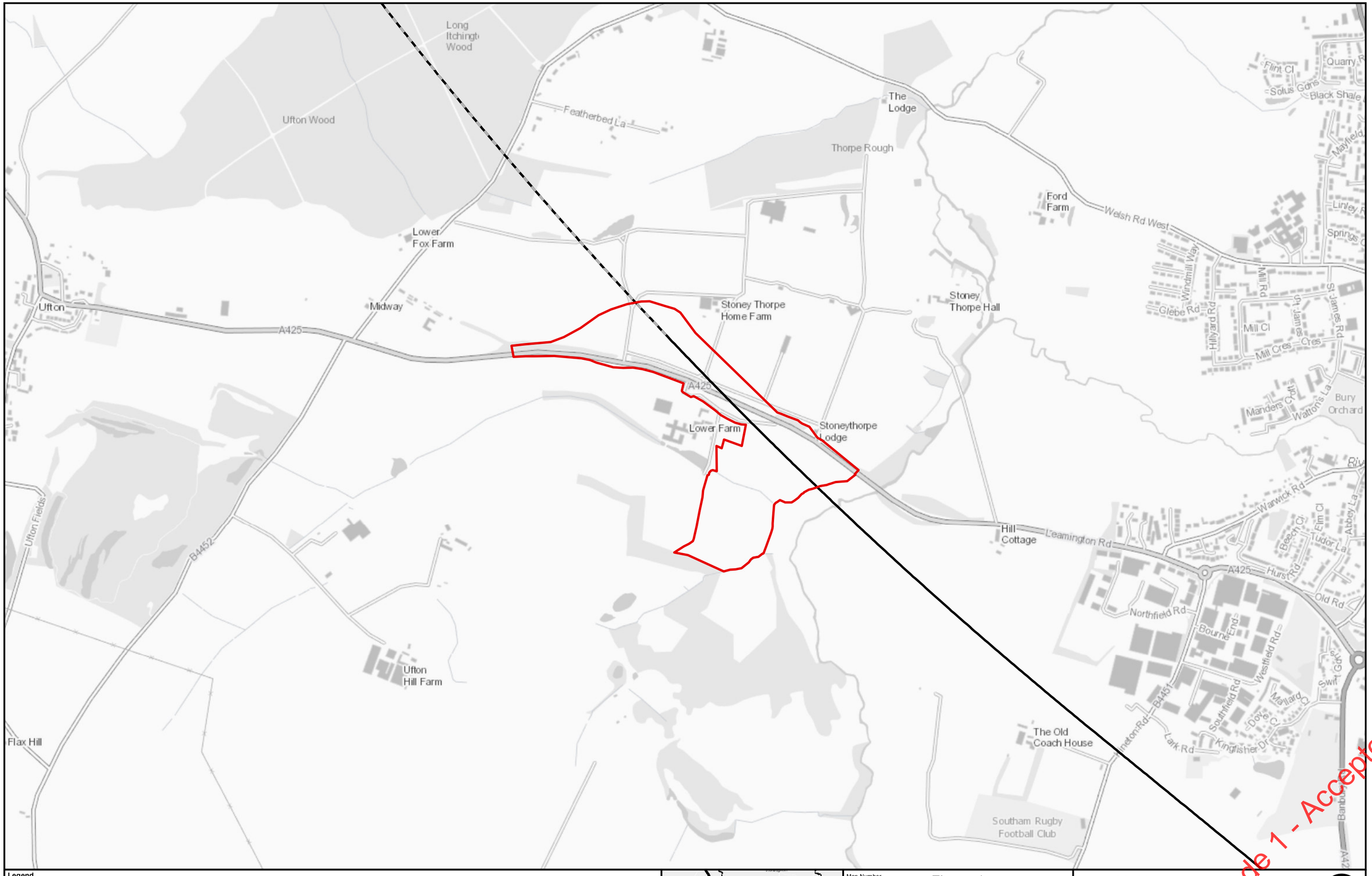
Figure title	Map Title
Figure 1 Location Plan	Land adjacent to Stoney Thorpe DMV Location Plan
Figure 2 Trench Plan	Land adjacent to Stoney Thorpe DMV Trench Plan

Table 5 Figures within Project Plan

Figure title	Drawing No.
Figure 1 Location Plan	See Appendix 15.1 (p.33 of Project Plan (1EW04-LMJ-EV-PLN-NS01_NL03-029001))
Figure 2 Heritage assets	See Appendix 15.1 (p.33 of Project Plan (1EW04-LMJ-EV-PLN-NS01_NL03-029001))
Figure 3 Previous Investigations	See Appendix 15.1 (p.33 of Project Plan (1EW04-LMJ-EV-PLN-NS01_NL03-029001))
Figure 5 Trench Plan	See Appendix 15.1 (p.33 of Project Plan (1EW04-LMJ-EV-PLN-NS01_NL03-029001))

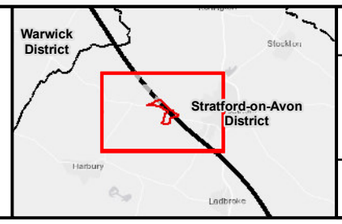
Table 6 Figures within RAMS

Figure title	Drawing No.
Figure 1 Location Plan	See Appendix 15.2 (RAMS Appendix B)
Figure 2 Trench Plan	See Appendix 15.2 (RAMS Appendix B)



Legend

- Site Boundary - 080319
- Route in tunnel
- Route on surface



Map Number: Figure 1

Map Name: Land Adjacent to Stoney Thorpe DMV Location Plan

Community Forum Area CFA16
Ladbroke and Southam

HS2

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Scale at A3: 1:10,000

0 100 200 300 400 Metres

Doc Number: -

Date: 21/10/19

Compound 1

Compound 2

Legend

- Compound Locations
- Site Boundary - 080319
- Great Crested Newt
- Bats Building Roosts
- Bats Tree Roosts
- White Clawed Crayfish Location
- Badger Sett
- Important Hedgerow
- Otter Terrestrial Habitat
- Otter Terrestrial Habitat buffer (30m)
- Watercourse
- Watercourse buffer (10m)
- Electrical - UG LV Existing
- Electricity - UG MV and LV Cables - New Diverted/Modified
- Electricity - LV Connections - New
- Electricity - UG MV and LV Cables - Removed/Abandoned
- Electricity - OH MV and LV Cables - New Diverted/Modified
- Electricity - OH MV and LV Assets - Removed/Abandoned
- Electricity - EHV - Temp
- Sewer
- Sewer - Small Existing
- Telecom and Mobile - Temporary Diversion Works
- Water Mains - New
- Utility Construction Zone

Stratford-on-Avon District

Map Number: Figure 2

Map Name: Land Adjacent to Stoney Thorpe DMV Trench location plan

Community Forum Area CFA16
Ladbroke and Southam

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0 30 60 90 120 Metres

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Date: 21/10/19

15 Appendix

15.1 Project Plan

WP 029(B) Historic Environment Works – Land Adjacent to Stoney Thorpe Deserted Medieval Village – Enabling Works North Contract

Project Plan for Trial Trenching

Document Number: 1EW04-EV-PLN-NS01_NL03-029001

Revision	Author	Checked by	Approved by	Date	Reason for revision
C01	Molly Clyne DJV	Klara Spandl and Harry Clarke DJV	Alastair Hancock DJV	19/12/18	Issued for acceptance
C02	John Appleby DJV	Debbie Taylor DJV	Alastair Hancock DJV	13/06/19	Issued for acceptance
C03	Molly Clyne DJV	Debbie Taylor DJV	Alastair Hancock DJV Hancock, Alastair Digitally signed by Hancock, Alastair DN: cn=Hancock, Alastair, ou=Birmingham (Mailbox), email=Alastair.Hancock@wsp.com Date: 2019.06.13 13:52:56 +01'00'	13/06/2019	Issued for acceptance

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Contents

List of figures

List of tables

1 Executive Summary

1.1.1 This High Speed 2 (HS2) North Section Phase One 'Project Plan' details the methodology and approach for a programme of trial trenching, on a part of the HS2 route located south west of Southam, in Stratford-on-Avon District, Warwickshire. The trenched area, or "evaluation area", is c.1km long and situated between the River Itchen (HS2 Chainage 1264000) in the east and the Dallas Burston Polo Grounds (HS2 Chainage 127230) in the west.

1.1.2 Works 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 evaluation area covers approximately 24ha and is required as part of the construction land requirements for the HS2 enabling works and subsequent main works. The enabling work 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).Trial trenching is required to examine the presence, nature, date, extent, survival, significance and contribution to Generic Written Scheme of Investigation Historic Environment Research and Delivery Strategy (GWSI: HERDS) Specific Objectives of known or potential sub-surface heritage assets which may be affected by the enabling works and subsequent main works. The trial trenching is also designed to inform further contingency trial trenching, and the basis for defining subsequent mitigation strategies where known or unexpected archaeology has potential to contribute to HERDS Objectives.

1.1.4 This Project Plan uses results of previous investigations to define the trial trenching strategy and, where appropriate, the targeting of trial trenches. The previous investigations include:

- Research carried out as part of the 2013 Phase One Environmental Statement (ES), including hyperspectral and LiDAR survey;
- A Detailed Desk Based Assessment (DDBA) (1D037-ESP-EV-REP-030-000034) which included the northern half of the evaluation area;
- A non-HS2 Desk-Based Assessment incorporating the results of geophysical survey and LiDAR appraisal (EWA10816) including that part of the evaluation area south of the Leamington Road. Also results of subsequent targeted trial trenching (EWA10808) located c. 30m south and c. 150m east of the evaluation area.

- Other studies completed by DJV during EWC North, such as Historic Settlement Landscape Study (1EW04-LMJ-EV-REP-N000-029001), Railway & Industry Landscape Study (1EW04-LMJ-EV-REP-N000-029002), Geoarchaeological Desk Based Assessment (GDBA) and LiDAR Re-appraisal Study (1EW04-LMJ-EV-PLN-N000-029011).

1.1.5 The ES and the DDBA concluded that there was low potential for remains relating to the prehistoric to Romano-British periods within the evaluation area, although a band of alluvium to the east of the evaluation area, flanking the River Itchen, may contain or mask archaeological remains and palaeoenvironmental evidence. However, the recent identification of probable later Iron Age enclosed settlements (HER refs. MWA20532 and MWA20538), located c. 30m south and c. 150m east of the evaluation area, raises the potential for later prehistoric activity to extend into the evaluation area.

1.1.6 The name Stoney Thorpe may have originated in the early Saxon period and there is the potential for the deserted medieval village (DMV) to the north of the evaluation area to have had later Saxon origins. It is possible that activities associated with the DMV, in addition to the known ridge and furrow, may be extend into the evaluation area.

1.1.7 The evaluation area remained primarily agricultural throughout the post-medieval period and the manor at Stoney Thorpe was rebuilt as Stoney Thorpe Hall in the 17th century. Transport infrastructure also developed during this period, with the turnpiking of the road through the evaluation area in 1765. The Grand Union Canal lies *c.* 2.1km north of the evaluation area. Both these developments are likely to have encouraged trade and potentially influenced population increases.

1.1.8 The trial trenching will focus on examination of potential late prehistoric heritage assets extending into the evaluation area from the south and heritage assets associated with medieval to post-medieval settlement and agricultural landscape at Stoney Thorpe.

1.1.9 The purpose of this Project Plan is to:

- outline the scope and aims of archaeological field evaluation and how this will contribute to specific research objectives, in accordance with the Generic Written Scheme of Investigation Historic Environment Research and Delivery Strategy (GWSI: HERDS);
- outline the approach and methodology to be employed. These details will be covered comprehensively in the Local Specific Written Scheme of Investigation (LS-WSI); and
- set out the proposed deliverables and reporting mechanisms.

1.1.10 The baseline information demonstrates that a programme of trial trenching will contribute to GWSI: HERDS Specific Objectives, mainly addressing medieval settlement, landscape and

infrastructure. The trenching also has the potential to reveal unknown archaeological features of other periods and may therefore contribute to other GWSI: HERDS Specific Objectives, in particular those examining the prehistoric and early medieval periods. The GWSI: HERDS Specific Objectives guiding the Project Plan are listed below:

- KC5: Identifying settlement location and developing models for settlement patterns for the Mesolithic, Neolithic and Early Bronze Age;
- KC9: Does a lack of visibility of Neolithic and Bronze Age monuments reflect genuine area distinctiveness, or is this due to variation in geology or investigative techniques?
- 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?
- KC30: Identify the location and form of Early and Middle Saxon settlement and investigate evidence for land use in the period;
- KC31: Identify the location of Middle to late Saxon settlement, explore processes of settlement nucleation and understand the development of associated field types and agricultural regimes
- KC33: Investigate the development of watermills from the Anglo-Saxon through to the modern period. How did the technology of milling change, and what implications has this for farming practice?
- KC34: Undertake research and investigation into medieval manorial complexes. What was their origin, development and impact on the landscape?
- KC35: Investigate the impacts on rural communities of social and economic shocks in the mid-14th century and thereafter and their contribution to settlement desertion
- KC36: How were medieval and later woodlands managed and exploited and what evidence do they preserve for earlier land use?
- KC40: Identify patterns of change within medieval rural settlement from the 11th to mid-14th century

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 Recording* and location specific written schemes of investigation (HS2-HS2-EV-STD-000-000036).

2.1.2 The evaluation area is located in the Stratford-on-Avon District of Warwickshire. It runs for approximately 1km between the River Itchen (HS2 Chainage 126400) in the east and the Dallas Burston Polo Grounds (HS2 Chainage 127230) in the west. The historic core of the town of Southam is situated *c* 2km to the east.

2.1.3 The evaluation area is centred on National Grid Reference (NGR) 439866, 261782, and includes approximately 22.8ha of land mostly comprising rural pasture fields, a polo ground and several small wooded and developed areas. The A425 runs through the centre of the evaluation area and forms part site boundary.

2.1.4 The evaluation area will be subject to enabling works and subsequent main works as part of Phase One of HS2, and includes Construction Land Requirement (CLR) parcel CR01866 in the south. The work will entail ground disturbance which would potentially have an impact on any archaeological remains that may be present.

2.1.5 The evaluation area is situated within the Warwickshire Feldon Archaeological Character Area (ACA2) and shown in Appendix 5 of the ES (CH-01-112; CH-01-113). The ACAs were split further within the ES; therefore, the evaluation area is located within the following Archaeological Character Sub-Zones:

- ASZ16-18 Southam/Long Itchington: River Itchen – Sinuous, narrow floodplain running north-south with potential for stream side activities of all periods from early prehistoric onwards. Additional potential exists for remains buried under the alluvium and good environmental preservation;
- ASZ16-19 Ufton/Long Itchington: South facing slopes down to the River Itchen – Ground rises gently to west at the River Itchen towards Ufton Woods with potential for unknown buried late prehistoric/ Roman/ early Medieval archaeology. Significant concentrations of finds and sites have been recorded to the north in the lower Itchen valley;
- ASZ16-22 Long Itchington: Polo Grounds – Natural slope up to the west away from the River Itchen but the area has been levelled and landscaped associated with its use for polo; and

- ASZ16-23 Bascote Heath, Long Itchington – south facing slopes down to the River Itchen (only a very small part lies within this zone).

2.1.6 The archaeological works detailed in this Project Plan comprise 'Trial Trenching', which is intended to identify, investigate and record known archaeological remains, and where present, unknown archaeological remains in order to clarify their nature, date and significance and the contribution they can make to HERDS Specific Objectives.

2.1.7 Table 1 lists the archaeological investigations that have been carried out at the evaluation area to date, with the key outcomes.

Table 1: Previous investigations in the evaluation area

Description	Summary of results
LiDAR and Hyperspectral data carried out as part of the ES (CH-004-016).	The LiDAR survey which took place over the evaluation area identified extensive areas of former ridge and furrow which is particularly well-preserved towards Thorpe Bridge (ES ref. LBS078; WA16.56). Also identified were substantial boundaries which comprised banks with ditches on either side (ES ref. LBS082; WA16.57). These features were identified in the survey over the evaluation area.
LiDAR Re-appraisal carried out as part of the HS2 Phase One Enabling Works based upon the Detailed Desk Based Assessment – EIA LiDAR Survey Re-appraisal (1EW04-LMJ-EV-REP-N000-029011)	The re-appraisal of LiDAR data took place at the evaluation area; Area 1 in the south of the evaluation area identified extant medieval and post-medieval ridge and furrow as an earthwork.
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. Just one asset was identified as partially extending into the evaluation area; Thorpe Bridge (ES ref. LBS073) a modern bridge structure with earlier origins. Stoney Thorpe Lodge (id 65) and listed gate and piers (ES ref. LBS096) lie very close to the northern boundary.

2.2 Site Conditions

Topography and Geology

2.2.1 The evaluation area lies at an (approximate) elevation of between 90.0m above Ordnance Datum (OD) in the south and rises gently to 95.0m OD in the east.

2.2.2 The British Geological Survey (BGS) records the underlying bedrock geology across the evaluation area comprising Langport Member limestone across the north of the evaluation area and Cotham Member mudstone in the south and north-west of the evaluation area. Superficial deposits recorded in proximity to the evaluation area comprise a narrow band of

Alluvium flanking the River Itchen, which may extend into the south east of the evaluation area.

Summary of Archaeological Potential and Significance

2.2.3 The evaluation area does not contain any nationally designated (protected) heritage assets, such as world heritage sites, scheduled monuments, listed buildings or registered parks and gardens. The closest nationally designated (protected) heritage assets lie just to the north-east of the evaluation area (on the northern side of the A425); these are the Grade II Listed Stoney Thorpe Hall Lodge Gates and Gatepiers (National Heritage List / NHL Ref: 1185656). The closest Conservation Area is at Southam, 1.1km east of the evaluation area.

2.2.4 The ES identified seven non-designated heritage assets within the evaluation area (Figure 2). The assets are listed in Appendix B. Those of particular significance comprise:

- ES ref. LBS072 / HER ref. MWA19489: Surviving ridge and furrow to south and west of Lower Farm. Visible on recent aerial photographs and LiDAR survey;
- ES ref. LBS077: A425 road turnpiked in 1765; and
- HER ref. MWA5424: Site of Possible Medieval Chapel at Stoney Thorpe.
- HER ref. MWA1647: The site of a park created in the post-medieval period and marked on the Ordnance Survey maps of 1886 and 1906.

2.2.5 There are five previous archaeological investigations recorded in the Warwickshire HER within or immediately adjacent to the evaluation area, and three within the wider landscape, shown on Figure 3 and in Appendix C; those within the evaluation area comprise:

- EWA6672: a site visit to Stoney Thorpe Park in east of the evaluation area;
- EWA1041: a gradiometery survey at Stoney Thorpe Village in the south of the evaluation area;
- EWA10816: air photo and LiDAR mapping interpretation at Stoney Thorpe Village, in the southern extent of the evaluation area.

2.2.6 The following sections summarise the archaeological and heritage potential of the evaluation area by period.

Palaeolithic, Mesolithic and Neolithic (500,000 – 2,400BC)

2.2.7 There is currently no known evidence of activity associated with the Palaeolithic and Mesolithic periods in the vicinity of the site. The GDBA assessed the superficial alluvial deposits within Geoarchaeological Character Zone (GCZ) 25: Lower Radbourne to Southam

'River Itchen' as having high potential for the preservation of archaeological and palaeoenvironmental deposits.

2.2.8 The HER lists only a small number of Neolithic finds within the vicinity of the evaluation area. These include two instances of possible Neolithic flint tools recovered near Southam, 2km east of the evaluation area (HER ref. MWA3879), and 3.5km north-east of the evaluation area (HER ref. MWA10295).

Bronze Age and Iron Age (2,400BC – 43AD)

2.2.9 No evidence of later prehistoric activity has been located within the evaluation area, although six Bronze Age barrows are identified 1.5km north-west of the evaluation area at Long Itchington. The ES suggests that while the River Avon continues to provide a focus for activity during the periods, and it is likely that similar evidence may also extend to its tributaries, including the River Itchen which is located c.50m east of the evaluation area's south-east boundary.

2.2.10 Non HS2 archaeological evaluation (EWA10808) has identified two areas of probable later Iron Age enclosed settlement, c. 30m south (HER ref. MWA20532) and c. 150m east (HER ref. MWA20538) of the project plan area. The geophysical survey completed for the non-HS2 evaluation included the southern part of the project plan area examined by trenches 13-46. The geophysics results clearly define the two areas of settlement activity situated to the south and east of the project plan area, but similar activity does not appear to extend into it.

2.2.11 Cropmark enclosures have been identified 1.5km north-east at Wood Farm (LBS084), with a single Iron Age coin revealed 1km to the south-east, as identified by the DDBA (1D037-EDP-EV-REP-030-000034).

Romano-British (AD43 – 410)

2.2.12 There is no evidence of Romano-British activity within the evaluation area, and evidence of this period is scarce within the surrounding vicinity. The closest evidence lies at Wood Farm *c* 1.5km to the north-east of the evaluation site, where a settlement has been identified through cropmarks (LBS084), although the ES notes that it may be Iron Age in date.

2.2.13 Further evidence dating to this period lies 2km north-east of the evaluation area where a small number of Roman coins were discovered (HER ref. MWA765). Significant sites relating to this period comprise a possible settlement and Romano-British villa at Snowford, approximately 4km north of the evaluation area and the Roman road of Fosse Way (OFC012) *c* 3.7km to the north west.

Early Medieval / Anglo-Saxon (AD410 – 1066)

2.2.14 A middle Saxon cemetery, comprising 13 burials is located c. 1.1km to the south east of the evaluation area on the Banbury Road south of Southam (MWA30407). There is currently no definitive evidence for associated settlement. The ES notes that at this period settlement in this landscape was likely to be dispersed and possibly short-lived and mobile leaving few traces of its presence.

2.2.15 The ES records a concentration of Anglo-Saxon barrows in the lower Itchen valley. One of which, excavated at Long Itchington in 1876, was reported as containing two burials accompanied by a 'shield-boss, knife, spearheads and brooches'. Another burial site in Long Itchington was excavated in the late 19th century and contained an urn and fragments of human bone. North of Southam, in Stockton, a third barrow contained spearheads, a javelin and knife. Cropmarks at Snowford within the Itchen Valley in Long Itchington clearly show the location of a number of large rectangular timber halls suggestive of a high-status site of this period.

2.2.16 Within the wider area, the HER references Saxon boundary charters for Wormleighton, Southam and Long Itchington (HER ref. MWA8889). The boundary referred to is the parish boundary between Ufton and Long Itchington which runs between Ufton Wood and Long Itchington Wood. In this charter, Long Itchington is described as a royal manor and some of the surrounding woodland from this period is still present. The most notable of these ancient woodlands are Ufton and Long Itchington Woods, which may have covered the evaluation area between the early-medieval and medieval periods.

2.2.17 Settlement of the later Saxon period often formed the origin of medieval villages and the DMV at Stoney Thorpe could have originated in this period. The Stoney Thorpe estate was part of the parish of Long Itchington in the early medieval period and was referred to as Torp or Thorpe, a placename of Old Norse origin indicating secondary settlement on the edge of the parish (1D037-EDP-EV-REP-030-000034).

Medieval (AD1066 – 1540)

2.2.18 The area was heavily depopulated at the end of the medieval period with many villages abandoned or in decline, the open fields becoming enclosed and estates gradually being turned over to extensive pasture for grazing. This process preserved the former villages, and their open fields of ridge and furrow, as earthworks within the new grasslands.

2.2.19 Ridge and furrow has been shown to survive within the evaluation area (LBS072) as part of the open fields of the Stoney Thorpe DMV which lies *c* 170m north east of the evaluation area (LBS069). The preservation of the ridge and furrow earthworks in the evaluation area south of the Leamington Road is variable (EWA10816) with the best preserved features located in the south western field.

2.2.20 The DMV earthworks comprise *c.* 10 croft sites. Stoney Thorpe is first mentioned (as Thorp) in 1199 and from the 14th century by its current name. Originally part of the manor of Long Itchington, by 1308 it was a separate manor but remained within the parish. A medieval deer park (MWA1646) was first mentioned in conjunction with the manor in the 14th century but its extent is unknown. The presence of a possible medieval chapel (HER ref. MWA5424) in the south of the evaluation area has been identified in the HER from 'circumstantial evidence'. The site of a chapel was first mentioned in the 16th century, but it is unclear if the location as identified in the HER or NMR data is correct.

2.2.21 Further ridge and furrow is recorded south of the evaluation area east of the River Itchen (LBS071), at Bascote Heath 600m north-west of the evaluation area (LBS078) and through LiDAR to the north, south and south-east of the Stoney Thorpe Hall (LBS067). Stoney Thorpe Hall a 17th century structure with 16th century origins likely to be on the site of the old manor house or built incorporating its remains. The grounds of the hall contain a disused medieval watermill along its northern boundary (HER ref. MWA1644).

2.2.22 Throughout the medieval period, the evaluation area underwent significant assarting due to its proximity to Ufton and Long Itchington Woods (LBS082). LiDAR data shows field boundaries and ridge and furrow beneath the woodland suggesting that these woods have expanded over former medieval open fields which probably occurred from the end of this period and into the post medieval period associated with the wider changes in the local agricultural economy (1D037-EDP-EV-REP-030-000034).

2.2.23 Welsh Road runs north-west to south-east, 900m north of the evaluation area. It was used as a medieval drove road for transporting cattle from North Wales to the markets of South East England. It may have earlier origins given that significant lengths of the road form parish or manorial boundaries and may have influenced the settlement pattern in the area from an early date.

Post-Medieval (AD1540 – 1901)

2.2.24 The most significant change in the immediate area during this period was the construction of Stoney Thorpe Hall north of the evaluation area (on the site of the earlier manor and DMV) and landscaping associated with its park (LBS068). The park was developed piecemeal between the 17th and 19th centuries.

2.2.25 The Warwick to Northampton road was turnpiked in 1765 (LBS077) and it is possible that the original Thorpe Bridge (id 64) was built as part of this upgrade. The Grand Union Canal (LBS092) opened in 1800, 2km north of the evaluation area. The network of canals and roads improved connections to the south and north. Both the canals and the roads came with a suite of physical infrastructure such as distance markers, bridges, wharves and locks and they often attracted new settlement and industry. Research completed as part of the EW North Historic

Settlement Landscape DDBA (1EW04-LMJ-EV-REP-N000-029001) identified a 19th century listed gate (id 65) on the northern boundary of the evaluation area and indicated the landscape was enclosed and in agricultural use during the post-medieval period.

2.2.26 Within the evaluation area, in the fields to the south of Leamington Road, features visible on LiDAR include water channels to the west of the River Itchen and a hollow of unknown function. Geophysical survey in these fields also identified former post medieval field boundaries (EWA10808).

Modern (1901 – present)

2.2.27 Beyond the development of housing estates surrounding Southam, modern impacts in the vicinity of the evaluation area are minimal, apart from the landscaping associated with the Polo Club. The only noteworthy modern feature is the Bascote Heath and Stoney Thorpe Grade II Listed war memorial that lies 500m north-west of the evaluation area.

Proposals

2.2.28 The proposed works across the route are outlined in the HS2 Design Element Statement (DES). The DES specifies the following works within the evaluation area:

- (126-L5) Long Itchington Wood Green Tunnel;
- (126-S2) A425 Leamington Road Reinstatement;
- (126-L4) Leamington Road Cutting;
- (126-S4) Stoney Thorpe Auto-Transformer Station;
- (126-L2) River Lichen Viaduct; and
- (126-L3) Leamington Road Embankment

2.2.29 The construction elements of the above works will comprise the following:

- Earthworks across the route;
- One attenuation pond with ditch connected to the River Itchen;
- Ditches;
- Landscape Mitigation Planting (and planting of grasslands);
- Two Satellite construction compounds; and
- One large Temporary Earthwork Stockpile.

Archaeological Implications

2.2.30 Since the majority of the evaluation area has not been developed, any archaeological finds or features are likely to lie immediately below the ploughsoil as negative features cut into the underlying superficial geology. Due to the longstanding agricultural use of the evaluation area, it is probable that any shallow archaeological remains will have been affected by modern ploughing. This generally reworks the upper 0.3m (0.4m for crops such as potatoes). The bases of cut features such as pits and ditches, and structural footings potentially survive intact.

2.2.31 It is unlikely that the presence or absence of Palaeolithic remains will be determined by the shallow trial trenching set out in this document and HERDS Objectives relevant to possible Palaeolithic remains will be addressed through alternative methodologies. Initial work will comprise preparation of a geoarchaeological deposit model as set out in a separate project plan (1EW04-LMJ-EV-PLN-N000-029009).

2.2.32 The works listed in sections 2.2.23 and 2.2.24 will damage or remove any potential below ground archaeology. The types of potential impact from construction are summarised below.

Soil Removal

2.2.33 It is assumed for the purposes of this report that the soil would be removed across the evaluation area as part of enabling and construction works. This work will occur prior to activities such as ecological mitigation, landscaping and construction, including areas designated for temporary works to establish access routes, compounds and topsoil storage areas. This would potentially truncate or destroy any archaeological remains present through machine excavation and movement of plant.

Earthworks

2.2.34 Areas of embankment and areas of cut will be constructed. Embankment may lead to damage or destruction of heritage assets through movement of plant, localised excavation and compaction, whilst areas of cut will remove any heritage assets present.

Pond Excavation

2.2.35 The assumed excavation depths for any attenuation ponds and associated drainage ditches is between 1.5–2.0m below ground level (mbgl). These depths would partially or completely remove any archaeological assets from within their footprint.

Planting

2.2.36 The works include Landscape Mitigation Planting, which may include introduction of hedgerows, stands of woodland and woodland edge. Ground intrusion from the proposed

planting and subsequent root action is assumed to reach a depth of 1.0–1.5mbgl, removing or disturbing archaeological remains at the location of the planting.

Site Fencing

2.2.37 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 Aims

3.1.1 The aim of this Project Plan is to:

- Define the aims and scope of the programme of field evaluation (trial trenches) 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.

3.1.2 All historic environment work on HS2 is guided by the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) (Ref 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.

3.1.3 The aim of the field evaluation is to determine, as far as reasonably possible, the presence, nature, date, extent, survival and significance of the archaeological resource within the evaluation area, primarily in relation to previously identified GWSI: HERDS research objectives, so that, if necessary, a suitable archaeological mitigation strategy can be put in place to reduce or offset any adverse effects arising from proposed ground disturbance.

3.2 Contribution to GWSI: HERDS Objectives

3.2.1 The GWSI: HERDS document 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 Specific Objectives which are relevant for the field evaluation.

3.2.2 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

evaluation. For example, unexpected archaeological remains may be encountered which could contribute to other Specific Objectives. If other Specific Objectives are identified during the evaluation, the scope of works shall be updated to address those Objectives

3.2.3 Table 2 sets out the Specific Objectives of the works. Through delivery of these works, and the addressed aims set out in the table, the trial trenching will create knowledge and outputs that will contribute to these Specific Objectives.

Table 2 GWSI: HERDS Specific Objectives and evaluation strategy aims

GWSI: HERDS Specific Objective (knowledge Creation)	Comment	Evaluation strategy aim
KC5: Identifying settlement location and developing models for settlement patterns for the Mesolithic, Neolithic and Early Bronze Age	Several potential late Mesolithic to Neolithic findspots have been located north of Southam. If further finds or sites from these periods can be located within the evaluation area it would be of high significance.	Trial trenching will examine evidence for early prehistoric activity and perhaps settlement dating to these periods which would inform this KC.
KC9: Does a lack of visibility of Neolithic and Bronze Age monuments reflect genuine area distinctiveness, or is this due to variation in geology or investigative techniques?	There is little known evidence for these periods within the immediate vicinity of the evaluation area, however the surrounding area contains evidence of a Bronze Age cemetery (i.e. the barrow site north of Long Itchington) and sporadic Neolithic findspots north of Southam.	Trial trenching has the potential to reveal both archaeology of these periods, but also negative 'evidence' which will allow further discussion on the question of geology versus investigative techniques.
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?	Probable later Iron Age enclosed settlements (HER refs. MWA20532. MWA20538) have been recorded c.30m to the south and c.150m east of the evaluation area.	Trial trenching at the evaluation area will examine the potential for later prehistoric activity to extend into the evaluation area. Results may contribute to this KC.

GWSI: HERDS Specific Objective (knowledge Creation)	Comment	Evaluation strategy aim
KC30: Identify the location and form of Early and Middle Saxon settlement and investigate evidence for land use in the period KC31: identify the location of Middle to late Saxon settlement, explore processes of settlement nucleation and understand the development of associated field types and agricultural regimes.	There is the potential for the medieval deserted settlement to have originated in the 10th to early 11th centuries supported by the Old Norse place name. Given the evidence for a Middle Saxon cemetery c. 1.1km to the south east, in addition to a probable dispersed and possibly transitory settlement pattern during this period, there is the potential for the presence of earlier settlement and associated agricultural activity within the wider vicinity of Stoney Thorpe.	Trenching in the vicinity of Stoney Thorpe deserted medieval settlement will investigate the potential for early medieval rural activity to have existed in the vicinity of the later known settlement. Any evidence of settlement and associated land use during this period would be significant and would inform these KCs. The potential for the ridge and furrow earthworks to have originated in the early medieval period will also be examined by the trial trenching which could contribute to understanding the nature of agricultural regimes during this period.
KC33: Investigate the development of water mills from the Anglo-Saxon through to the modern period. How did the technology of milling change, and what implications has this for farming practice?	A disused medieval watermill has been identified 700m north-east of the evaluation area. Whilst there is no evidence to suggest that mills may be present within the evaluation area, the presence of the River Itchen and the proximity to the DMV may suggest some potential. The evaluation area itself has been used for mostly agricultural purposes throughout history. Water channels of unknown date and function were identified in the LiDAR analysis (EWA10816).	Trial trenching has been targeted along the River Itchen to determine the potential for a watermill to have existed which could have been associated with settlement at Stoney Thorpe. Identification of a new mill site along the River Itchen would be significant and investigation of which would inform all aspects of this KC.
KC34: Undertake research and investigation into Medieval manorial complexes. What was their origin, development and impact on the landscape? KC35: Investigate the impacts on rural communities of social and economic shocks in the mid-14th century and thereafter and their contribution to settlement desertion.	The DMV lies to the north east of the evaluation site and it is likely that the evaluation area fell within one of the open fields of the settlement. Ridge and furrow exists in the area. Stoney Thorpe manor lay just to the north east of the evaluation area and it is likely that the evaluation area fell within its control. A medieval chapel is thought to lie within the evaluation area.	Trial trenching is being targeted across known examples of ridge and furrow agriculture in order to recover dating evidence and archaeological remains which would contribute to an in-depth analysis of the hinterland of a DMV and its management. Any evidence of changes in agriculture across the site may have been caused by settlement change, such as the subsequent use of the arable fields as pasture. If a date for this were found

GWSI: HERDS Specific Objective (knowledge Creation)	Comment	Evaluation strategy aim
KC40: Identify patterns of change within medieval rural settlement from the 11th to mid-14th century.		this could inform the date when the settlement starts to decline. Any evidence which could be attributed to manorial control would inform KC34. Confirmation that there was a Medieval chapel on the site would be significant. Its date of origin and desertion would further inform ideas on settlement change in the area.

4 Scope and Methodology

4.1 Introduction

4.1.1 The investigative fieldwork outlined in this Project Plan comprises a programme of Trial Trenching. The work has been designed to meet HS2 GWSI: HERDS Specific Objectives. The trenches are targeted to features identified by previous surveys, including Geophysical and LiDAR Survey and will also investigate 'blank' areas, where features have not previously been identified. It would determine, as far as reasonably possible, the presence, nature, date, extent, survival and significance and contribution to GWSI: HERDS Specific Objectives of archaeological remains discovered within the evaluation area.

4.2 Location Specific Written Scheme of Investigation

4.2.1 A Location Specific Written Scheme of Investigation (LS-WSI) will be produced by the Archaeological Contractor. This will provide the detailed method of investigation of each stage outlined in this Project Plan, including details of method, survey area, access arrangements, welfare, accommodation, evaluation area safety, RAMS, etc. The LS-WSI will be approved by HS2 prior to starting work.

4.3 Trial Trench Evaluation

4.3.1 The aim of the evaluation will be to examine the known archaeological potential and investigate the presence or absence of unknown archaeological features, structures, deposits, artefacts and/or ecofacts. Where present the investigation will define the character, extent, quality and preservation of archaeological remains in order to determine their contribution to Specific Objectives identified in this Project Plan, and to examine whether other Specific

Objectives should be added. The results of the evaluation will inform any subsequent archaeological mitigation strategy, including design adjustment, where possible, to avoid significant remains.

4.3.2 There will be 46 trenches opened during the evaluation, with their locations shown on Figure 4. A 4% contingency by area will be used, with agreement of HS2 and as appropriate, for further investigation of areas of high potential where results of initial trenching have been negative, to further define and characterise targeted archaeology or discoveries of previously unknown archaeology. It will also be used for mitigation of archaeology which contributes to HERDS Specific Objectives where initial investigation has shown that it is of limited complexity and extent. All trenching will be assigned a unique ID in accordance with the Employer's Asset Information Management Systems (AIMS).

4.3.3 The evaluation will be carried out by a suitably qualified Archaeological Contractor. The trial trenches will generally be 50.0m long and 2.0m wide, and no more than 1.2m deep. Where deeper excavation is considered necessary, for example at areas of colluvium or alluvium, trench sides will be shored or stepped.

4.3.4 The trial trenches are positioned to provide coverage across the entirety of the site within the evaluation area whilst avoiding known utilities. The area that is accessible for trial trenching (the "evaluation area") is shown on Figure 1; and is dictated by the construction land requirements and current land use.

4.3.5 The programme of trial trenching across the evaluation area will contribute to the Specific HERDS 'Knowledge Creation' aims (KC5, KC9, KC15, KC30, KC31, KC33, KC34, KC35 and KC40), these objectives relate primarily to the development of the wider historic landscape and settlement patterns of the medieval period. In conjunction with HERDS Objectives, the trial trenching will further determine the nature of non-designated heritage assets identified in the ES and HER data (outlined in Section 2.2.4).

4.3.6 Trenches 13-46 examine an area close to two potential Iron Age enclosed settlements identified c.30m to the south and c.150m to the east of the evaluation area; the trenching may reveal associated evidence, thus contributing to HERDS Objective KC15.

4.3.7 Trenches adjacent to the south-east boundary of the evaluation area may encounter alluvial deposits containing, or masking prehistoric archaeological and palaeoenvironmental evidence which could contribute to HERDS Objective KC5.

4.3.8 Any early medieval assets discovered in relation to settlement and land use associated with an earlier precursor to the DMV to the north-east would contribute to KC30 and KC31.

4.3.9 Trenches 11-46 examine the ridge and furrow at Lower Farm (ES ref. LBS072 / HER ref. MWA19489) to attempt to understand the use, date and form of these open field system

earthworks. This will inform HERDS Objectives KC34, KC35 and KC40. The ridge and furrow may mask and protect earlier medieval archaeology beneath the ridges. Trench 19 examines a hollow identified in an examination of LiDAR data (EWA10816).

4.3.10 Untargeted trenches have the potential to identify the extent of the Stoney Thorpe designed landscape as well as further activities associated with Stoney Thorpe DMV (ES ref. LBS69). Trench 10 is within the area of the early park (HER ref. MWA1647) shown on Figure 2. Any evidence dating to the medieval period or post-medieval period would inform HERDS Objectives KC35, KC36 KC40 and KC52.

4.3.11 The locations of all trenches will be subject to confirmation of any utilities and services present in the evaluation area. Trenches may be relocated to avoid existing services and for other reasons, e.g. to avoid ecological or physical constraints. Trenching may be modified or discontinued at areas where initial investigation reveals extensive modern disturbance.

4.3.12 Tasks that will be undertaken comprise:

- Set up;
- Mechanical excavation to remove soils, in order to expose potential archaeological horizons;
- Archaeological hand-excavation and the identification and recording of any archaeological features exposed;
- Selective environmental sampling, processing and assessment; and
- Post-investigation reporting and archiving.

Setting Out

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

4.3.14 Trenches shall be set out and recorded to a minimum horizontal accuracy of +/– 0.05m. The corner points of each trench location shall be set out with Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS) equipment or other suitable automated equipment referenced from the PGMs.

4.3.15 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√k; where 'k' is the total distance levelled in kilometres.

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

Mechanical excavation

4.3.17 Trial trenches shall be excavated to the first archaeological horizon, the top of the natural geology or usually a maximum depth of 1.2m, if no remains of archaeological interest have been identified. Areas of deeper stratigraphy, which may include or cover archaeological remains, such as colluvial or alluvial sequences, may need to be excavated to the base of the stratigraphic sequence and in this instance trenches shall be shored, or stepped and kept free of water, in order to allow appropriate investigation (see 4.3.13 - 4.3.15).

4.3.18 Excavation will be undertaken using a mechanical excavator with toothless ditching bucket. Machining shall be carried out under the constant supervision of the Archaeological Contractor to excavate the ground in spits. The Archaeological Contractor shall use their professional judgement to determine the appropriate depth of each spit. Where trial trenching cuts through well-preserved ridge and furrow earthworks the machining of spits should aim to maximise the potential for characterising these features and for the recovery of potential dating evidence. The Archaeological Contractor will agree any variations to the excavation methodology with DJV and shall record this in writing for inclusion in the final report. Each spit shall be examined carefully to assist the recovery of any archaeologically significant artefacts and thus to determine when to cease machining. It is the responsibility of the Archaeological Contractor to ensure that the finished surface is machined to a suitably 'clean' state in order to identify, define and investigate any exposed archaeological deposits. If the surface is not sufficiently clean, hand cleaning of the surface will be required. Machine excavation will comply with the Employer's Technical Standard - Route wide soil resources plan (HS2-HS2-EV-STD-000-000008).

4.3.19 The Archaeological Contractor shall ensure that water is discharged and excavated materials from archaeological excavations are stored in accordance with the Contractor's environmental protection requirements (as set out in the package Works Information and their Environmental Management Plan) and any relevant consents for the worksite. The Archaeological Contractor shall monitor discharge rates and, if necessary, conductivity of discharge waters to ensure compliance.

4.3.20 Deep stratigraphy, such as colluvial or alluvial sequences, may be encountered during the fieldwork. Where these deposits are revealed, and where feasible trenches, or sondages, shall be excavated to the base of the stratigraphic sequence, and shall be appropriately shored and

kept free of water to allow 'person entry' to the excavations i.e. to allow the Archaeological Contractor to undertake investigation and recording to fulfil the aims of the work. The Archaeological Contractor will ensure that all works undertaken in deep stratigraphy will comply with the Employer's Technical Standard – Temporary Works (HS2-HS2-CV-STD-000-000005).

4.3.21 Within alluvial sequences the Archaeological Contractor shall pay particular attention to establishing the vertical extent of layers of archaeological potential and shall be aware that horizons of cultural activity may be present within horizons of sterile alluvium. The Archaeological Contractor shall supervise the excavation of each trench in such a manner to allow recording of a cumulative or continuous trench section.

4.3.22 Should any material be excavated that is deemed to be contaminated or potentially contaminated it shall be investigated, controlled (e.g. placed separately from clean material) and removed in accordance with the Contractor's environmental protection requirements (as set out in their Environmental Management Plan).

Fieldwork Recording

4.3.23 Archaeological recording shall be undertaken by the Archaeological Contractor to the general requirements as described in the GWSI: HERDS (section 7.6). 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.

4.3.24 Where areas of extensive archaeological stratification are encountered, the horizontal and vertical extent of archaeological stratification shall be assessed by the Archaeological Contractor through implementation of an appropriate strategy including either the excavation of features cut into horizontal stratification, limited test pitting or auguring. The aim shall be to recover suitable stratigraphic, finds and environmental samples from the full, intended depth of the trench, as far as is practicable. The exact methodology may need to be designed by the Archaeological Contractor during the excavation of individual trenches and agreed with DJV and the Contractor.

4.3.25 Metal detectors will be used by experienced staff to scan for metallic finds during the excavation of spoil from trenches as well as key archaeological features or deposits.

4.3.26 In order to protect any waterlogged remains during the works, the Archaeological Contractor may identify a requirement for trial excavations to be allowed to refill with water overnight. In such cases, the Archaeological Contractor shall ensure that any hazards to staff or ard parties are minimised.

4.3.27 Archaeological recording is to include, as a minimum:

- At least one representative section at (1:10 or 1:20 scale) of each evaluation trench, from ground level to the base of the excavation;
- the written record of individual context descriptions on appropriate pro-forma;
- plans at appropriate scales (1:10, 1:20 or 1:50);
- single context planning should be used only if appropriate (i.e. where there is a complex sequence);
- photographs and other appropriate drawn and written records; and
- other sections, including the half-sections of individual layers of features shall be drawn as appropriate to 1:10 or 1:20 scale.

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

4.3.29 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 the evaluation shall also be indicated.

4.3.30 A record of the full extent in plan of all archaeological deposits as revealed in the investigation shall be made. These plans will normally be based on digital survey data (digital planning methods shall be agreed in advance with HS2), supplemented where appropriate by hand drawn records on polyester based drawing film (at a scale of 1:10 or 1:20 unless otherwise agreed with the HS2). 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.

4.3.31 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.

4.3.32 Recording of structural evidence revealed below ground level will vary according to the level of special interest of the structure and its relationship to archaeological remains. Structures of little or no significance shall be noted on a site plan. Detailed drawings of important features revealed in investigations may be required in accordance with the aims and objectives of the investigation as defined in the Project Plan.

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

Human Remains

4.3.34 If unexpected human remains are identified, all work must be undertaken in accordance with the *Human remains and monuments procedure* (HS2-HS2-EV-PRO-0000-000008) and the Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035).

4.3.35 The Archaeological Contractor shall notify DJV and LM-JV immediately upon discovery of unexpected human remains. DJV shall notify HS2, so that the HS2 human remains procedures can be implemented. DJVs notification to HS2 may initially be made personally or by telephone but shall be confirmed in writing (email will suffice) within 24 hours of discovery.

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

4.3.37 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 Force, 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, Police and the EHO within two working days of notification.

4.3.38 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.

4.3.39 Human remains, once recognised, will be metal-detected immediately to determine whether any metallic grave goods are present. If possible grave goods and other obvious artefacts shall be 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'.

4.3.40 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

4.3.41 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 4.3.45). This strategy is based on the existing information about the evaluation area, gathered from non-intrusive surveys and the HERDS Objectives listed in Table 2.

4.3.42 The sampling strategy, along with the HERDS Objectives outlined in Table 2 identify the key elements that should, where present, be sampled during this evaluation. However, the strategy will need to be reviewed throughout the on-site work, and where unexpected features or deposits are identified, revised accordingly to take these into account.

4.3.43 The purpose of sampling at the evaluation stage is to identify the range of environmental materials present, their preservation, significance and distribution.

4.3.44 Sampling will target the following, where present, as a minimum:

- Archaeological features (buildings, ditches, pits, gullies, postholes) associated with pre-medieval settlement and agriculture, and any remains associated with the DMV extending into the evaluation area, from different features spread across concentrated areas of settlement activity (to assess the concentration, distribution and survival of medieval palaeoenvironmental material);
- Floor surfaces where they survive and have not been truncated;
- Deposits representing main phases of activity (to assess whether there are changes in rates of deposition, or material survival over time);
- Alluvial sequences from deposits adjacent to the River Itchen (to assess the survival of palaeoenvironmental material).

4.3.45 Sampling will not only just target charcoal-rich or wet deposits, but be undertaken on those features outlined above, taking into account advice from the Archaeological Contractor's environmental archaeologist. This will ensure that samples are recovered from a representative range of contexts, which adequately characterise past activities, and allows an assessment to be made of the extent to which they help address palaeoenvironmental and palaeoeconomic questions.

4.3.46 It is possible that unexpected deposits or features will be identified during the evaluation within the areas where non-intrusive survey has not revealed any evidence. As these are not covered in the initial sampling strategy above, the need for sampling will be assessed in terms

of the Specific Objectives (both those in Table 2 as well as the remaining HERDS Objectives), the sampling strategy updated and the features sampled accordingly.

4.3.47 All samples will be taken to address a specific question. The purpose of the sample, and the question it has been taken to address will be recorded on The Archaeological Contractor's sample record sheet.

4.3.48 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).

4.3.49 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.

4.3.50 Where house floors or other buried land-surfaces are encountered and these are sampled, appropriately sized monolith or kubiena boxes will be used for the recovery of 'undisturbed' monolith samples for soil micromorphology and to sub-sample for microfossils (e.g. pollen and spores, diatoms, ostracods). Where longer sequences are sampled, contiguous column samples will be collected for the retrieval of macrofossils (e.g. molluscs, plant remains and insects). Further guidance on specialist samples is provided in the Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035 - sections 4.21.22-26)

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

4.3.52 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.

Preservation in situ

4.3.53 Part of the purpose of evaluation is to identify areas where preservation in situ might be achieved through detailed design. Where preservation in situ has been identified as an option for areas, or it becomes clear during the evaluation that certain parts of the evaluation area might be retained in situ within the scheme design, The Archaeological Contractor will ensure that suitable samples are taken to assess the state of preservation (as set out in Historic England guidance on Preserving Archaeological Remains).

Backfilling

4.3.54 The trenches shall be pumped dry (by the Archaeological Contractor) and any necessary protection measures for archaeological remains (in addition to those for below ground infrastructure, services or utilities) shall be completed prior to backfilling. Generally, all backfill material shall consist of non-toxic, uncontaminated, non-putrescible, natural and inert material which shall be compacted and (if necessary) tested (dynamic compaction test or other) in accordance with a specification provided by the Contractor. Surface conditions shall be reinstated to the required standard.

4.3.55 The Archaeological Contractor shall ensure that adequate protection is provided for any archaeological remains. Any specific archaeological requirements relating to backfilling including use of materials to mark excavated depth, such as geotextiles, shall be specified by the Archaeological Contractor in the LS-WSI.

5 Post-investigation Reporting and Archiving

5.1.1 The Archaeological Contractor will produce an interim report, very briefly summarising findings of the evaluation, within five working days of the completion of fieldwork.

5.1.2 The Archaeological Contractor will produce a fully illustrated final report for the field evaluation, within 25 working days of the completion of fieldwork, with the following structure:

- Executive Summary;
- Introduction, including evaluation area 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 evaluation area (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:
  - Trial trench evaluation
  - Stratigraphic report
  - Finds report
  - Environmental evidence report
  - Interpretation of results against original expectations and Specific Objectives
  - Review of evaluation 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 should include illustrations, contextual summary by trench, finds reports, environmental reports, site matrices (where appropriate) and full definitions of the interpretation terms used in the report.

5.1.3 The following figures will be included in the final report:

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

5.1.4 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 HS2.

6 Dissemination

6.1.1 The project archive and finds will be deposited with the appropriate museums archive, as identified in the LS-WSI.

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

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

6.1.4 In accordance with professional standard practice the Archaeological Contractor will complete an 'Online AccesS to the Index of archaeological investigationS' ('OASIS') record.

6.1.5 A digital copy of the final report will be submitted to the Archaeological Data Service (ADS).

7 Information Management

7.1.1 GIS deliverables will be provided by the Archaeological Contractor 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 HS2 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 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 the Archaeological Contractor's senior management and will be directed by the Archaeological Contractor'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;
- Matters arising from progress meetings will be discussed and meeting minutes will be forwarded to all parties (Archaeological Contractor, DJV, LM).

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

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

8.1.6 Following completion of work, parts of the evaluation 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 The Archaeological Contractor 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 Evidence of Engagement

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

10 References

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 GIS Specification	HS2-HS2-GI-SPE-000-000004
HS2 Geographic Information System Standards	HS2-HS2-GI-STD-000-000002
HS2 CFA16 ES Reports: Ladbroke and Southam	Volume 5 appendix: CH-001-016, ES 3.5.2.16.4 CH-002-016, ES 3.5.2.16.5 CH-003-016, ES 3.5.2.16.6 CH-004-016, ES 3.5.2.16.7
Geoarchaeological Desk Based Assessment (GDBA)	1D037-EDP-EV-REP-000-000031
Report: Detailed Desk Based Assessment of Long Itchington Assarts	1D037-ESP-EV-REP-030-000034
Project Plan for Detailed Desk-Based Assessment: Historic Settlement Landscape	1EW04-LMJ-EV-PLN-N000-029008
Report: Geophysical Survey of Thorpe Rough	1EW04-LMJ-EV-REP-NS01_NL01-022012
Detailed Desk Based Assessment for Historic Settlement Landscape Study	1EW04-LMJ-EV-REP-N000-029001
Detailed Desk Based Assessment – EIA LiDAR Survey Re-appraisal	1EW04-LMJ-EV-REP-N000-029011
Unexploded Ordnance Desk Study	0615-ZET-GT-REP-000-000001
A.J. Archaeology (2015). Stoneythorpe Village, Warwickshire Archaeological Desk-Based Assessment	EWA10808
A.J. Archaeology (2016). Stoneythorpe Village, Warwickshire Archaeological Trenching	EWA10816

11 Figures

11.1.1 The following figures are attached as **Appendix A:**

- Figure 1: Location Plan
- Figure 2: Heritage Assets
- Figure 3: Previous Investigations
- Figure 4: Trench Plan

11.1.2 The detailed proposals drawings have not been included in this Project Plan but where appropriate to informing the evaluation strategy they have been referred to in the text. Trench layout may be subject to change once the final geophysics report has been received and, for example, due to environmental and utility constraints at the evaluation area.

12 Glossary of Terms

12.1.1 The following terms have been used in this report:

- **Archaeological Contractor** - the organisation undertaking the evaluation 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.
- **Exhumation** – removal of human burials from an archaeological site.
- **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.

- **Health and Safety Compliance Manager** – The manager with responsibility for site inspections, reporting and issuing of recommendations for the Site Supervisor and Project Manager to implement.
- **Location** – a specific HS2 worksite or group of worksites that are being addressed as a combined historic environment investigation programme of assessment, evaluation and further investigation.
- **Project Manager** - acts as administrator of the contract, handling certification, compensation events etc., with an obligation to act fairly and impartially as an agent of the Employer. An office-based manager who is the client's principal point of contact and who has overall responsibility for the project budget and delivery
- **Project Plans** – specification document for each specific package of activity (e.g. a survey, desk-based assessment, excavation, recording project). The plans would respond to the Specific Objectives set out in the GWSI: HERDS and be delivered within an agreed budget and timeframe.
- **Senior Archaeologist** - a site-based manager provided by the Archaeological Contractor who is responsible for the direction of the works and the field team.
- **Works** – the specific historic environment assessment, evaluation or further investigation works at each location.

Acronyms

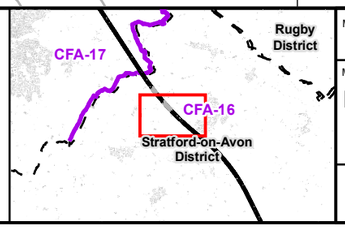
ADS	Archaeology Data Service
CLR	Construction Land Requirement
DDBA	Detailed Desk-Based Assessment
ES	Environmental Statement
ESA	Enchanced Study Area (as part of GDBA)
GCZ	Geoarchaeological Character Zone (as part of GDBA)
GDBA	Geoarchaeological Desk-Based Assessment
GIS	Geographical Information System
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 – Figures

Legend

- Route in tunnel
- Route on surface
- Evaluation Area
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water Body



Map Number: Figure 1

Map Name: Land adjacent to Stoney Thorpe DMV Location Plan

Community Forum Area CFA16 Ladbroke and Southam

HS2

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

Scale at A3: 1:8,350

0 80 160 240 320 Metres

Document Number: 1EW04-EV-PLN-NS01_NL03-029001 - **Date:** 03/06/19

LBS080
69
67
68
471
LBS078
MWA29627
LBS111
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MWA8889
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LBS086
MWA19488
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882
MWA8767
LBS101
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MWA1710
65
MWA769
MWA7096
MWA7095
LBS069
LBS064
LBS072
LBS068
MWA762
LBS071
64
LBS073
MWA5424
51
52
48
LBS065
MWA7094
MWA19489
MWA19491
MWA20538
MWA9602
MWA20532
LBS059
Legend
Route in tunnel
Route on surface
500m Boundary
Community forum boundary
District/Borough boundary
Watercourse
Water Body
LBSXX
Heritage Asset Reference ID (2013 EIA)
Non Designated Heritage Site (point)
Non Designated Heritage Site (Line)
Non Designated Heritage Site
Listed Building
Grade I
Grade II*
Grade II
Place names
Bridge
Building
CFA-17
Rugby District
CFA-16
Stratford-on-Avon District
Map Number
Figure 2
Map Name
Land adjacent to Stoney Thorpe DMV Heritage Assets
Community Forum Area CFA16
Ladbroke and Southam
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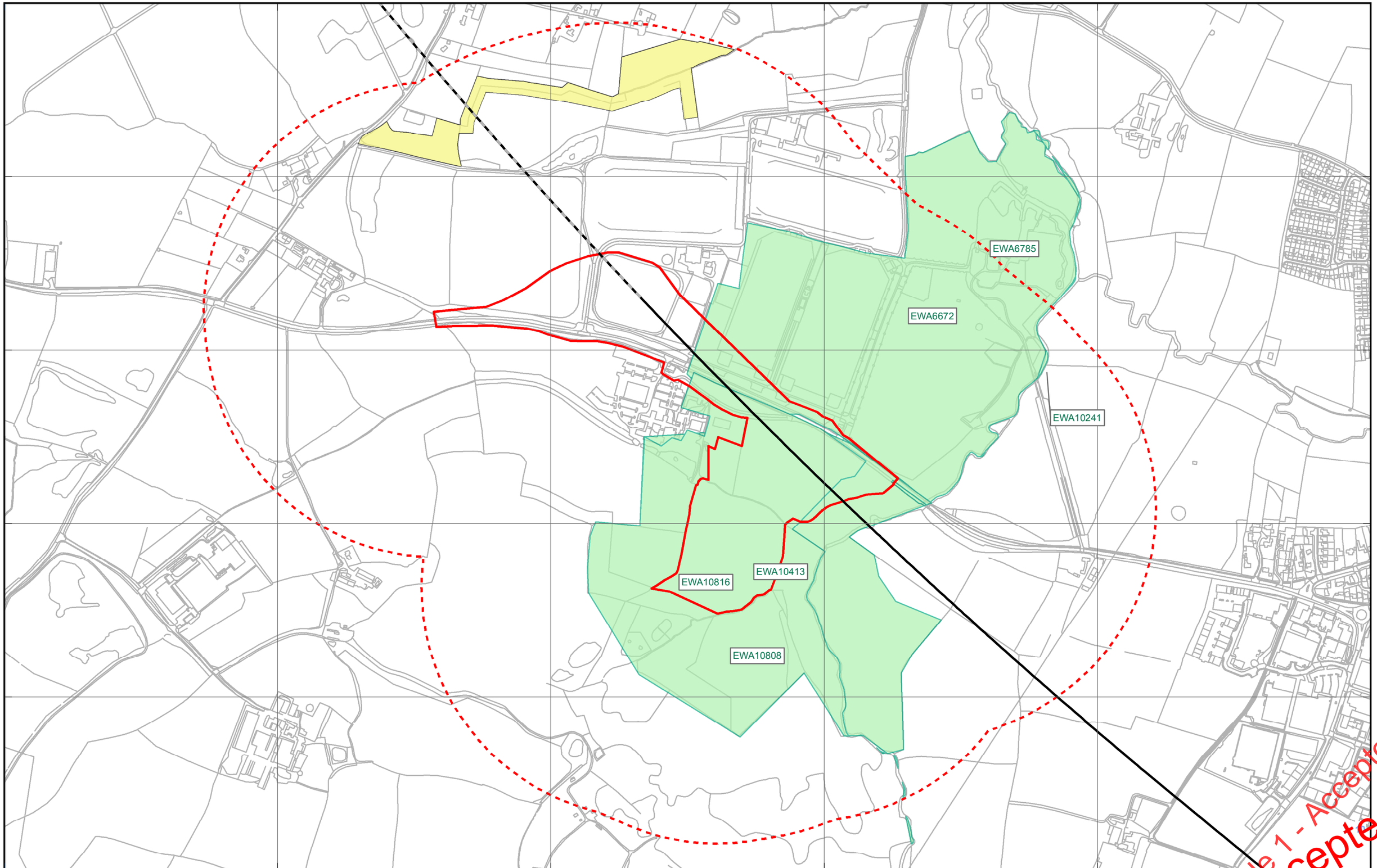
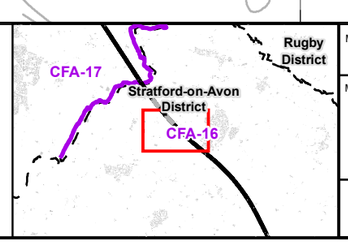
Doc Number:1EW04-EV-PLN-NS01_NL03-029001 -
Date: 04/06/19
Code 1 - Accepted
Code 1 - Accepted



Legend

- Route in tunnel
- Route on surface
- Evaluation Area
- 500m Boundary
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water Body
- Historic environment record point
- Historic environment record linear
- Historic environment record area
- WP22 Sites
- EWAXX Warwickshire HER Unique Reference ID (2016)



Map Number

Figure 3

Map Name

Land adjacent to Stoney Thorpe DMV
Previous Investigations

Community Forum Area CFA16
Ladbroke and Southam

HS2

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Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA

Scale at A3: 1:7,500

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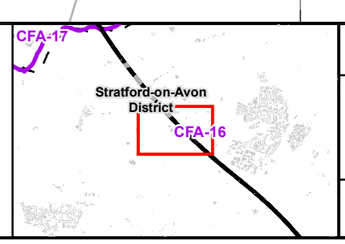
Metres

Doc Number:1EW04-EV-PLN-NS01_NL03-029001 -

Date: 13/06/19

Legend

- Route in tunnel
- Route on surface
- Evaluation Area
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water Body
- Trenches
- Place names
- Bridge
- Building



Map Number

Figure 4

Map Name

Land adjacent to Stoney Thorpe DMV
Trench Plan

Community Forum Area CFA16
Ladbroke and Southam

HS2

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

Scale at A3: 1:4,000

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Metres

Doc Number:1EW04-EV-PLN-NS01_NL03-029001 -

Date: 13/06/19

Appendix B – Heritage Assets

Asset ID	Asset Name	Asset Description
ES ref. LBS068	Stoney Thorpe designed landscape	The parkland landscape around Stoney Thorpe Hall is extensive to the north of the Leamington Road on both sides of the River Itchen. It features open grassed parkland planted with specimen trees, with woodland along the Itchen valley which bisects the park, and along the Leamington road, and a kitchen garden closer to the Hall. The park is accessed from the south at two points along the Leamington Road. The first to the south-west at a mid-19th century Jacobean style gatehouse/lodge with Grade II Listed lodge gates and piers (1185656 – 17th century coursed lias restored in 19th century when present gates were installed). The second access to the south-east is through simple metal gates and along a tree-lined avenue to a bridge over the river. There is no evidence that the park originated from a medieval deer park (although it was enclosed over the deserted medieval village and parts of the former open fields) or that it was ever designed as a single entity. It appears to have developed piecemeal between the 17th and 19th centuries. Although there is little information on the design of the park it follows the naturalistic form of many English garden designs from the mid-18th century and may still have incorporated elements of the wider landscape to create views to and from the park. At Stoney Thorpe these views would have included the River Itchen to the south and the landscape of fields and woodland beyond. The gates and gate piers sit back from the A424 road which is treed and hedged screening the gate and piers from long views from the south. North of the gate and gate piers views open up along the avenue and across the park land (to east) and polo grounds (to the west). Remains of possible quarries identified within the landscape by LiDAR (site WA16.53, see Appendix CH-004-016).
ES ref. LBS071	Thorpe Bridge ridge-and-furrow	Surviving ridge and furrow to south of Thorpe Bridge. Visible on recent aerial photographs and LiDAR survey (site WA16.52, see Appendix CH-004-016).
ES ref. LBS072	Lower Farm ridge-and-furrow	Surviving ridge-and-furrow to south and west of Lower Farm. Visible on recent aerial photographs and LiDAR survey (see Appendix CH-004-016).

Asset ID	Asset Name	Asset Description
ES ref. LBS073	Thorpe Bridge	Modern bridge over A425. The HER notes that this was the probable site of the historic Thorpe Bridge. However no remains of that bridge are evident and the modern bridge has no heritage value. It is not significant. Its setting comprises agricultural fields to the south west, Stoney Thorpe Park to the north-east, and the River Itchen in both directions.
ES ref. LBS077	A425	Turnpike Road, A425 Warwick to Northampton, established in 1765 which ran between Warwick and Northampton via Southam. It is unlikely that very much of the original fabric of the road survives other than its line.
HER ref. MWA1647	Stoneythorpe Deserted Medieval Settlement	The site of deserted settlement dating to the medieval period. The settlement remains are visible as earthworks, which suggest it contained at least ten crofts. It is located 1km west of Southam.
HER ref. MWA5424	Site of Possible Medieval Chapel at Stoney Thorpe	Circumstantial evidence suggests that this is the possible site of a Medieval Chapel at Stoneythorpe, 300m west of Thorpe Bridge.

Appendix C – Archaeological Events

Event ID	Event Description
EWA10241	Watching Brief, Severn Trent Southam Area Rationalisation Scheme 1996
EWA10413	Detailed gradiometery survey at Stoneythorpe Village, Warwickshire 2015
EWA6672	Site visit to Stoneythorpe Park by J Lovie 1996
EWA10816	Air Photo and LiDAR Mapping Interpretation at Stoneythorpe Village, Southam 2016
EWA10808	Evaluation at Stoney Thorpe Village 2016

Appendix D – Evidence of Engagement

Consultee and date	Comment	How this has been addressed in the Project Plan
Anna Stocks (Warwickshire County Archaeologist) on 14/01/2019	Previous geophysical survey and trial trenching has identified evidence for probably Iron Age settlement immediately adjacent to the site. The Executive Summary fails to reference that previous work and only highlights that the ES and DDBA, which pre-date the trial trenching concluded that there is a low potential for remains dating to the prehistoric to Romano British period. I would expect the presence of the known sites in the immediate vicinity of the site to be referenced, and present an updated analysis of the potential for further pre-medieval remains across this area.	The recently completed evaluation reports have been sourced, reviewed and the evidence for probable Iron Age enclosed settlements located c.30m to the south and c.150m east of the evaluation area has now been referenced in the Executive Summary and project plan text.
	The table of previous investigations fails to mention the geophysical survey which was previously undertaken across this area.	Table 1 (previous investigations) is only for investigations carried out on behalf of HS2. The geophysical survey in this area is referenced in Appendix C.
	Whilst the geophysical survey has been referred to elsewhere in the document, there is no mention of it having identified significant archaeological features immediately adjacent to the area subject to this PP. This is a significant failing - was the evaluation report looked at in detail when developing this project?	Results of the recent evaluations were not present in baseline heritage information held by HS2 which is available for review by DJV during preparation of the C01 project plan. Subsequent to stakeholder review and comment the evaluation reports have now been sourced, reviewed and the potential Iron Age sites located slightly to the south and east of the evaluation area are now included in the project plan baseline text.
	The trial trenching previously undertaken immediately adjacent to this site, which established the presence of a probably Iron Age settlement, has not been identified during the background research for this project. Information on those works should be obtained, and the project plan, and assessment of potential etc. updated accordingly at the earliest opportunity. This is an instance where initial consultation with this office prior to the project plan being produced would have been of use.	DJV produce project plans in accordance with HS2 Consents Strategy. Project plans are supplied to stakeholders for comment, and comments are addressed in a subsequent iteration of the project plan. The recent evaluation reports and the preceding desk-based assessment, have been sourced, reviewed and the project plan updated.

	A number of Roman, Iron Age and Saxon features have been identified in the wider vicinity of the site which have not been considered as part of the assessment for this Project Plan.	Period sections have been updated to include Iron Age, Romano-British and Saxon features within the wider landscape.
	There are no specific objectives relating to the Iron Age despite known Iron Age features being identified immediately adjacent to this site.	KC15 added to the list of GWSI: HERDS Specific Objectives due to the possibility of revealing further later prehistoric activity particularly south of the Leamington Road in the area adjacent to the Iron Age settlements.
	I consider that the PP underplays the potential for as yet unidentified archaeological features to survive across this area. In our experience the absence of known sites in an area of certain periods often reflects an absence of previous archaeological investigations rather than an absence of such features (absence of evidence is not evidence of absence) - this has been demonstrated across this area by the recent discovery of an Iron Age settlement adjacent to this site, in an area where few previous Iron sites have been identified, and the discovery of a Saxon cemetery (which was not identified by geophysical survey) to the east of this site at Southam.	Comment is addressed in the Executive Summary text.
	Para. 4.2.5 states that the site has not been previously subject to archaeological survey. It has been - as has been stated elsewhere in this document. If it hasn't been, the results of that survey should be checked and the trial trench locations adjusted if appropriate.	The results of the LiDAR and geophysical survey has been reviewed and three trenches adjusted to target possible archaeological features (see paragraphs 4.3.6 and 4.3.7).
	Para. 4.2.24 states that metal detectors will be used to scan for metallic finds 'during excavation of key archaeological features or deposits'. The scanning with a metal detector should not just be limited to the excavation of features and deposits - the spoil heap etc should also be scanned.	Amended to state that the spoil heap will also be scanned.
	As we have previously discussed, we would normally recommend that a minimum of a 4% sample of a site be examined across areas where there are no specific potential archaeological features to target (e.g. geophysical anomalies), as, in our experience across this county, this is the minimum quantity of trenching necessary to provide sufficient information to enable adequately informed assessments of the archaeological potential of a site to be made. Of particular concern is that, in our experience, a lower percentage sample may not be sufficient to establish the presence of significant archaeology, let alone characterise it.	Greater density of trenching is employed where the ES risk model and previous HS2 studies suggest high potential for archaeological remains and lower trenching density may be used where the risk model and other HS2 studies show lower potential, or where utilities and other constraints are present, or where current development design shows limited impact.

	This is particularly important in areas where there is a potential for Saxon features, which can be difficult to identify at lower percentages (and where we would normally expect a greater than 4% sample to be examined). Whilst the geophysical survey previously undertaken across this area was effective at identifying the Iron Age settlement in the vicinity of this site, there is the potential for other features are not easily discoverable by geophysical survey to still survive across this area. This has been demonstrated to the east of this site, in south Southam, where a Saxon cemetery was recently discovered which was not identified by geophysical survey. The trenching presently proposed only examines a 3% sample of the site. I would recommend that the archaeological potential of this area be updated to take into account the comments above. I would be happy to reassess our recommendation for the quantity of trenching to be updated once that assessment has been completed and a copy provided to this office.	The aggregates study and Hey and Lacey's study show that 2% trenching identifies archaeology, but is usually insufficient to adequately determine its extent and character. As the aggregates document and Hey and Lacey's study suggest, a subsequent phase of contingency trenching to determine extent and character will be reviewed and agreed with HS2 where archaeology is identified, and may be used to further examine high potential areas where initial results have been negative. However, as Hey and Lacey acknowledge (p55), even at very high trenching percentages, chance plays a significant part in discovery of Neolithic, Bronze Age and early Anglo Saxon archaeology.

15.2 Risk Assessment Method Statement (RAMS)

Refer to *Archaeological Contractor's* documentation.

Method Statement/ Risk Assessment

CONNECT ARCHAEOLOGY

All sections of this method statement/risk assessment are to be completed. If a section is not applicable, this is to be stated. If needed, additional documents or extra information is to be attached to the back of the method statement and state the reference in the appropriate section of the method statement.

Method Statement Title	HS2 WP029(B) – Stoney Thorpe Deserted Medieval Village: Trial Trench Evaluation
Method Statement Ref Number/Status/Revision	33909/RAMS/01
Contract Number	33909
Contract Title	HS2 WP029(B) – Stoney Thorpe Deserted Medieval Village: Trial Trench Evaluation
Client/Principal Contractor Details	**LM Joint Venture** LMJV Head Office, Cornerblock, 2 Cornwall Street, Birmingham B3 2DL Paul Hunt, Project Manager 07775 551776 **Connect Archaeology** Melissa Melikian, Operations Director 0208 8437380 or 07500 104671 Ross Murray, Project Manager 0131 440 3593 or 07855 086 322 Alan Duffy, Site Manager 07764 154 379 Martin Cook, H&S Director 0131 440 3593 or 07801 562493
Date of Issue	**21/10/2019**
Contract Start Date	**23/09/2019**
Contract End Date	**TBC**

Appendices	A. Inspection and Test Plan
	B. Site Layout Plans **(To be completed once site compound locations and layouts confirmed)**
	C. COSHH Assessments & Data Sheets
	D. Calibration Certificates **(To be added to site file at time of works)**
	E. Plans and directions to A&E **(To be completed once site compounds confirmed)**

General Health, Safety, Quality & Environmental Requirements
All work will be carried out in compliance with Connect Archaeology & Clients Management Systems in-line with BS EN ISO 9001: 2015, BS EN ISO 14001: 2004 & OHSAS 18001: 2007 Requirements and all Operational Procedures.

CONTENTS LIST

1.0 Scope & Objectives of Works

Full description of the scope of works to be outlined, including a basic programme of works

Scope

A programme of archaeological trial trenching is to be undertaken to assess the potential for the survival of sub-surface archaeological remains within the Site that may be affected by the proposed scheme. It is proposed to excavate up to 48 evaluation trenches across the site. The trenches will generally be 50m long and 2m wide, and no more than 1.2m deep, but generally 0.50m. Deeper excavation, requiring shoring or stepped sides, is not anticipated. The locations of all trenches are provisional and subject to confirmation of the locations of any utilities and constraints either previously recorded or found to be present on site once the on-site works have commenced.

The works will be in accordance with *WP 029(B) Historic Environment Works – Land Adjacent to Stoney Thorpe Deserted Medieval Village – Location Specific Written Scheme of Investigation for Trial Trenching – Enabling Works North* (Doc No: 1EW04-LMJ-EV-MST-NS02_NL04-029000). The objective of the investigation, as stated in *WP 029(B) Historic Environment Works – Land Adjacent to Stoney Thorpe Deserted Medieval Village – Location Specific Written Scheme of Investigation for Trial Trenching – Enabling Works North* (Doc No: 1EW04-LMJ-EV-MST-NS02_NL04-029000), is to gain information about the archaeological potential of the site to contribute to Specific Objectives set out in the *Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (HERDS)* (Doc No: HS2-HS2-EV-STR-000-000015).

The project will adhere to an Inspection and Test Plan (ITP), which will review/inspect, record and verify key stages in the set-up and execution of the project through to handover (see Appendix A). Monitoring of the project will be undertaken by DJV to ensure compliance with the Project Plan for Trial Trenching at Land Adjacent to Stoney Thorpe Deserted Medieval Village (Doc No: 1EW04-LMJ-EV-PLN-NS01_NL03-029001) and Location Specific Written Scheme of Investigation (Doc No: 1EW04-LMJ-EV-MST-NS02_NL04-029000). All works will be carried out in accordance with this Risk Assessment/Method Statement. The Site Emergency Plan, detailing muster point(s), procedures, emergency contact details and directions to the nearest A&E, will be displayed in the Site Offices.

2.0 Location of Works

Full location description including not only the working area but also the positioning of compounds/welfare facilities.

The Site (Appendix B) is located to the north-west of Southam in the Stratford-on-Avon Districtt of Warwickshire. It runs for c. 7.6 km between the River Itchen in the east (HS2 Chainage 126400) and the Dallas Burston Polo Grounds in the west (HS2 Chainage 127230). It is centred on National Grid Reference (NGR) 439866, 261782 and covers an area of approximately 22.8 ha, mostly comprising rural pasture fields, a polo ground and several small wooded and developed areas. The A425 runs through the centre of the Site and forms part of the southern site boundary in the west and northern site boundary in the east.

Site compound and welfare facilities will be set up at approximately two different locations within the area of the proposed works, the layouts of which are shown on the Site Layout Plans (Appendix B).

3.0 Task Methodology

Pre-Commencement

All Connect Archaeology and plant operator staff will attend a Site-Specific Induction, including Site Rules, Emergency Arrangements and in addition will be briefed on Site Specific Risk Assessments, Method Statements and Procedures.

The site compounds will consist of a mobile welfare cabin or cabins suitable for between eight and fourteen people (depending on compound), surrounded by a secure storage area demarcated with HERAS fencing. Access into the working areas will be secured by existing gates, or where these don't exist, HERAS fencing. The designated parking areas will be adjacent to the welfare cabins; all vehicles will reverse park. Appropriate signage will be displayed within each site compound. Where adjacent to a road appropriate signage will be displayed at the entrance to each working area when in operation.

The need for track matting at each compound will be reviewed during the duration of the project.

No tools or equipment will be left on site overnight.

A general photographic record will be made before, during and after the trial trenching including a number of general views of the Site from all sides, showing it in its setting.

Connect Archaeology staff will be on site between 08:00 and 16:00 Monday to Thursday, and between 08:00 and 15.30 on Fridays. Work outside of these hours will be agreed with LM in advance. Security will be present on site at all times, including weekends, outside of site hours.

Setting Out

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

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

Surface heights shall be recorded using RTK GNSS and related to PGMs. Ordnance Survey Bench Marks (OSBM) are not to be used. Levelling accuracy shall be within 10 mmÖk: where 'k' is the total distance levelled in kilometres.

The Contractor shall ensure that all trench or excavation limits and significant archaeology detail are surveyed 'as dug' in relation to the project grid before leaving the site. Ground level height data shall be recorded for each trench. Survey methodology and a detailed survey record shall be provided to the Employer within the survey report.

Mechanical Excavation

Trial trenches shall be excavated to the first archaeological level, or natural, whichever is reached first. Excavation will be undertaken using a mechanical excavator with toothless ditching bucket.

Machining shall be carried out under the constant supervision of the Contractor to excavate the ground in spits. The Contractor shall use their professional judgement to determine the appropriate depth of each spit. Any variations to the excavation methodology shall be at the discretion of the Contractor and recorded in writing for inclusion in the final report. Each spit shall be examined carefully to assist in the recovery of any archaeologically significant artefacts and thus to determine when to cease machining. It is the responsibility of the Contractor to ensure that the finished surface is machined to a suitably 'clean' state in order to identify, define and investigate any exposed archaeological deposits. If the surface is not sufficiently clean, hand cleaning of the surface will be required. Machine excavation will comply with the Technical Standard - Route wide soil resources plan (HS2-HS2-EV-STD-000-000008). Spoil will be stored along the edges of excavated trenches, topsoil being kept separate from subsoil.

The Contractor shall ensure that water is discharged and excavated material from archaeological excavations are stored in accordance with the Contractor's environmental protection requirements (as set out in the package Works Information and their Environmental Management Plan) and any relevant consents for the worksite. The Contractor shall monitor discharge rates and, if necessary, conductivity of discharge waters to ensure compliance.

In areas of deep stratigraphy, such as alluvial sequences, each intervention shall be excavated to the base of the stratigraphic sequence and shall be appropriately shored and kept free of water to allow 'person entry' to the excavations i.e. to allow the Contractor to undertake investigation and recording to fulfil the aims of the work. The Contractor will ensure that all works undertaken in deep stratigraphy will comply with the Employer's Technical Standard – Temporary Works (HS2-HS2-CV-STD-000-000005).

Within alluvial sequences the Contractor shall pay particular attention to establishing the vertical extent of layers of archaeological potential and shall be aware that horizons of cultural activity may be interdigitated with horizons of sterile alluvium. The Contractor shall supervise the excavation of each test pit in such a manner so as to allow a cumulative or continuous section to be recorded.

To the north of the A425, the evaluation area is recorded as a moderate unexploded ordnance (UXO) hazard with some potential for UXOs as a result of World War II bombing. A high explosive (HE) bomb has been recorded to the south of trench 9. The area to the south of the A425 is recorded as a low UXO hazard.

Should any material be excavated that is deemed to be contaminated or potentially contaminated, excavation shall cease and LM will be immediately informed. LM will liaise with contaminated ground investigation teams on how to proceed. Any contaminated material which was removed when trenching will be placed separately from clean material. Under instruction from LM with advice from contaminated ground investigation teams, the material shall either be suitability backfilled or removed by specialists in accordance with the Environmental Management Plan

Constraints

Services

Known services across the proposed area of the works include, low and medium voltage overhead and buried electric cables, pressurised water mains, telecommunications cables and sewers all which have been confirmed from service plans. There are also a number of temporary overhead electric cables. The client will provide details of consultation with the relevant service providers, along with mitigation strategies to be adopted where necessary.

Prior to commencement of site operations, on-site meetings will be held if required with the owners of the electrical services and water pipelines with the aim of finalising mitigation for the crossing of these services, marking them out and any required buffer zones.

All trenches have been positioned to avoid excavations both below and above known services.

Prior to excavation the margins of each field will be walked to check for the potential of unrecorded buried services. Each trench will be scanned by use of a Cable Avoidance Tool (CAT) by a suitably qualified person. A log of these scans will be kept in the site file.

UXO Contamination

The area containing trenches 1-10 is a moderate UXO hazard and will be subject to an UXO watching brief during the trench excavations managed by a UXO specialist.
Prior to excavation of the above-mentioned trenches, all staff will be given a dedicated UXO briefing by a UXO specialist. The UXO watching brief will be managed by a specialist UXO contractor. A separate RAMS for the watching brief and UXO engineer will be provided prior to the UXO watching brief.

Environmental Issues

An ecological assessment has been undertaken by DJV (Doc No. 1EW04-LMJ-EV-PKG-NS01_NL03-029004). The assessment identified that the intrusive archaeological works may have an adverse impact on Great Crested Newts (GCN), other amphibians and otters. While most trenches pose only a low risk, Trenches 1 and 4 are located within 250m of a GCN pond and considered as a moderate risk so will be conducted under supervision of the Ecological Clerk of Works (ECoW).

The following trenches have been moved due to ecological restraints:

- Trench 45 was to be moved beyond 10m from a watercourse as it poses a high ecological risk.
- Trenches 45 and 46 were considered high risk and a buffer of 30m from the potential otter couch was required.
- Trenches 12, 26 and 35 were also considered high risk and a necessary buffer of 10m from hedgerows was required.

As such, ecological constraints and the appropriate buffers have been taken into consideration within the trench plan. Toolbox talks on otters, GCNS and other amphibians will be given by the ECoW prior to the commencement of works. All ecological mitigation in place for these constraints will be adhered to throughout the duration of the fieldwork.

Fieldwork Recording

Archaeological recording shall be undertaken by the Contractor to the general requirements as described in the GWSI: HERDS (Section 7.3). 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.

Where areas of extensive archaeological stratification are encountered, the horizontal and vertical extent of archaeological stratification shall be assessed by the Contractor through implementation of an appropriate strategy including, either the excavation of features cut into horizontal stratification, limited test pitting or auguring. The aim shall be to recover suitable stratigraphic, finds and environmental samples from the full, intended depth of the trench, as far as is practicable. The exact methodology may need to be determined by the Contractor during the excavation of individual trenches and agreed with DJV and the Contractor.

Metal detectors will be used by experienced staff to scan for metallic finds during the excavation of key archaeological features or deposits. The spoil from each trench shall be subject to a metal detector survey; any finds shall be recorded on the relevant trench sheet.

In order to protect any waterlogged remains during the works, the Contractor may identify a requirement for trial excavations to be allowed to refill with water overnight. In such cases, the Contractor shall ensure that any hazards to staff or 3rd parties are minimised.

Archaeological recording is to include, as a minimum:

- At least one representative section at (1:10 or 1:20 scale) of each evaluation trench, from ground level to the base of the excavation;
- the written record of individual context descriptions on appropriate pro-forma;
- plans at appropriate scales (1:10, 1:20 or 1:50);
- single context planning should be used only if appropriate (i.e. where there is a complex sequence);
- photographs and other appropriate drawn and written records; and ·
- other sections, including the half-sections of individual layers or features shall be drawn as appropriate to 1:10 or 1:20.

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

Section drawings shall be located on the relevant plan and OSGB co-ordinates recorded. The locations of the PGM bench markers used and any site TBM shall also be indicated.

A record of the full extent in plan of all archaeological deposits as revealed in the investigation shall be made. These plans will normally be based on digital survey data (digital planning methods shall be agreed in advance with the Employer) supplemented where appropriate by hand drawn records on polyester based drawing film (at a scale of 1:10 or 1:20 unless otherwise agreed with the Employer.). All hand drawn information shall be digitised (or preferably generated digitally in the first instance), and final deliverables will be supplied in an Esri format and adhere to standards set out in the Cultural Heritage GIS Standard (HS2-HS2- GI-SPE-000-000004). Single context planning shall be used where complex stratigraphy is encountered.

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.

Recording of structural evidence revealed below ground level will vary according to the level of special interest of the structure and its relationship to archaeological remains. Structures of little or no significance shall be noted on a site plan. Detailed drawings of important features revealed in investigations may be required in accordance with the aims and objectives of the investigation as defined in the Project Plan.

The photographic record will be in digital format, resulting in high resolution TIFF (uncompressed) images. Photographs will illustrate both the detail and context of the 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

If unexpected human remains are identified, all work must be undertaken in accordance with the Human remains and monuments procedure (HS2-HS2-EV-PRO-0000-000008) and the Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035).

The Archaeological Contractor shall notify DJV and LM-JV immediately upon discovery of unexpected human remains. DJV shall notify HS2, so that the human remains procedures can be implemented. DJVs notification to HS2 may initially be made personally or by telephone but shall be confirmed in writing (email will suffice) within 24 hours of discovery.

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

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 Force, and the local authority Environmental Health Officer of the discovery of unexpected human remains to enable them to visit the site, or confirm that the human remains are of no interest. The visit, or notification of no interest must be provided by the Coroner, Police and the EHO within two working days.

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.

Human remains, once recognised, will be metal-detected immediately to determine whether any metallic grave goods are present. If possible grave goods and other obvious artefacts shall be 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'.

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

This sample strategy, along with the HERDS objectives outlined in Table 2 identify the key elements that should, where present, be sampled during this evaluation. However, the strategy will need to be reviewed throughout the on-site work, and where unexpected features or deposits are identified, revised accordingly to take these into account.

The purpose of sampling at the evaluation stage is to identify the range of environmental materials present on site, their preservation, significance and distribution.

The evidence from non-intrusive surveys for the evaluation area indicate a number of potential features which should be targeted through sampling. These include potential prehistoric features, early medieval and medieval features associated with Stoney Thorpe deserted medieval village and Thorpe Bridge, and features Stoney Thorpe designed landscape and post-medieval land use. It also includes alluvial deposits associated with the River Itchen which may contain evidence of past environments.

Sampling will therefore target the following, where present, as a minimum:

- Archaeological features (structures, monuments, ditches, pits, gullies) associated with later prehistoric (Late Neolithic to Iron Age) presence, from different features spread across

concentrated areas of potential activity (to assess the concentration, distribution and survival of later prehistoric palaeoenvironmental material);

- Archaeological features (buildings, ditches, pits, gullies, postholes) associated with Romano-British settlement, from different features spread across concentrated areas of settlement activity (to assess the concentration, distribution and survival of Romano-British palaeoenvironmental material);

- Archaeological features (buildings, ditches, pits, gullies, postholes) associated with the occupation and desertion of early medieval and medieval settlement, from different features spread across concentrated areas of settlement activity (to assess the concentration, distribution and survival of medieval palaeoenvironmental material);

- Archaeological features (buildings, ditches, pits, gullies, postholes) associated with the post-medieval designed landscape and land use, from different features spread across concentrated areas of activity (to assess the concentration, distribution and survival of post-medieval palaeoenvironmental material);

- All samples will be screened for the presence of hammer-scale and other indicators of industrial processes, particularly in the area 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;

- Floor surfaces where they survive and have not been truncated;

- Deposits representing the main phases of activity on site (to assess whether there are changes in rates of deposition, or material survival over time);

- Alluvial sequences from deposits adjacent to the River Itchen (to assess the survival of palaeoenvironmental material).

Sampling will not only just target charcoal-rich or wet deposits, but also be undertaken on those features outlined above, taking into account advice from the Archaeological Contractor's environmental archaeologist. This will ensure that samples are recovered from a representative range of contexts, which adequately characterise past activities on site, and allows an assessment to be made of the extent to which they help address palaeoenvironmental and palaeoeconomic questions.

It is possible that unexpected deposits or features will be identified during the evaluation within the areas where non-intrusive survey has not revealed any evidence. As these are not covered in the initial sampling strategy above, the need for sampling will be assessed in terms of the specific objectives (both those in Table 2 as well as the remaining HERDS objectives), the sampling strategy updated and the features sampled accordingly.

All samples will be taken to address a specific question. The purpose of the sample, and the question it has been taken to address will be recorded on the Archaeological Contractor's sample record sheet.

Samples will be taken using 10-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).

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.

Where house floors or other buried land-surfaces are encountered and these are sampled, appropriately sized monolith or kubiena boxes will be used for the recovery of 'undisturbed' monolith samples for soil micromorphology and to sub-sample for microfossils (e.g. pollen and spores, diatoms, ostracods). Where longer sequences are sampled, contiguous column samples will be collected for the retrieval of macrofossils (e.g. molluscs, plant remains and insects). Further guidance on specialist samples is provided in the Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035 - sections 4.21.22-26)

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

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.

Geoarchaeology

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.

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 as agreed with the Employer. Where preservation in situ is a viable and desirable option, consideration shall be given to minimising the possible effects of compression and loading on the physical integrity of the site and any hydrological or chemical impacts of the proposed construction works (Campbell et al. 2011).

Preservation in situ

Where preservation in situ has been identified as an option for areas of the site, or it becomes clear during the evaluation that certain parts of the site might be retained in situ within the scheme design, the Archaeological Contractor will ensure that suitable samples are taken to assess the state of preservation (as set out in Historic England guidance Preserving Archaeological Remains).

Backfilling

The trenches shall be pumped dry (by the Contractor) and any necessary protection measures for archaeological remains (in addition to those for below ground infrastructure, services or utilities) shall be completed prior to backfilling. Generally, all backfill material shall consist of non-toxic, uncontaminated, non-putrescible, natural and inert material which shall be compacted and (if

necessary) tested (dynamic compaction test or other) in accordance with a specification provided by the Contractor. Surface conditions shall be reinstated to the required standard.

The Archaeological Contractor shall ensure, in liaison with DJV, that adequate protection is provided for any archaeological remains. Any specific archaeological requirements relating to backfilling including use of materials to mark excavated depth, such as geotextiles, shall be specified by the Archaeological Contractor in the LS-WSI.

Post Task Methodology

The Site will be left clean, tidy and secure.

4.0 Parties Affected by Works

Clients Employees	**Yes**	√	**No**		**Employees**	**Yes**	√	**No**	
Visitors	**Yes**	√	**No**		**Contractors**	**Yes**	√	**No**	
Members of the Public	**Yes**	√	**No**						

5.0 Specific Hazards

Principle hazards are:

- Manual Handling
- Infections and diseases
- Livestock and dogs
- Movement around site
- Isolated working areas
- Severe weather
- Excavations and Utilities
- Use of mechanical plant / delivery of mechanical plant
- Confrontation with members of the public
- Fire in compound
- Contamination
- UXO
- Utilities
- Public using public footpaths
- Driving to and from site

6.0 Foreseeable Hazards & Risks Associated with Works

Risk Assessment

Risk Rating Matrix

Risk = Likelihood x Severity

RISK RATING (R) Likelihood (L) x Severity (s)		HAZARD SEVERITY (S)				
		Negligible (N) Negligible injury, no absence from work	**Slight (S)** Minor Injury requiring first aid treatment	**Moderate (M)** Injury leading to a lost time accident	**High (H)** Involving a single death or serious injury	**Very High (VH)** Multiple Deaths
LIKELIHOOD OF RECURRENCE (L)	**Very Unlikely (VU)** A freak combination of factors would be required for an incident/accident to result	LOW	LOW	LOW	LOW	MEDIUM
	Unlikely (U) A rare combination of factors would be required for an accident/incident to result	LOW	LOW	LOW	MEDIUM	MEDIUM
	Possible (P) Could happen when additional factors are present but otherwise unlikely to occur	LOW	LOW	MEDIUM	MEDIUM	HIGH
	Likely (L) Not certain to happen but an additional factor may result in an accident/incident	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	Very Likely (VL) Almost inevitable that an accident/incident would result	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

LOW RISK — May be acceptable; however, review task to see if risk can be reduced further.

MEDIUM RISK — Task should only proceed with appropriate consultation with specialist personnel and safety team. Where possible the task should be refined to take account of the hazards involved or the risks should be reduced further prior to task commencement.

HIGH RISK — Task must not proceed. It should be redefined or further control measures put in place to reduce risk. The controls should be re-assessed for adequacy prior to task commencement.

Item	Hazards Identified	Who Is At Risk	Risk Rating at Initial Assessment	Residual Risk After Control Measures Applied
1.	Manual Handling: Over exertion, dropping, failure to assess the lift, incorrect lifting cuts, strains, back injuries etc	Employees	LxM=Med	UxM=Low

2.	Infections and Diseases • Weils Disease • Ticks and Lyme's Disease • Tetanus	Employees	UxH= Med	UxM= Low
3.	Livestock and Dogs	Employees	UxH= Med	UxM= Low
4.	Movement around site. • Slipping and tripping / uneven ground • Presence of unauthorised personnel / public footpaths • Movement around site	Employees Visitors	PxM=Med	UxM= Low
5.	Isolated working areas • Injury or ill health when working alone or at a distance from others	Employees Visitors	PxM=Med	UxM= Low
6.	Severe weather • Exposure to the elements and extreme temperatures	Employees Visitors	UxM=Low	UxM= Low
7.	Excavations and Utilities	Employees Visitors	LxH=High	UxM= Med
8.	Use of Mechanical Plant / Delivery of Mechanical Plant	Employees Visitors	LxH=High	UxM= Med
9.	Confrontation with members of the public	Employees Visitors	PxH=Med	UxM= Low
10.	Fire in Compound	Employees Visitors	PxH=Med	UxM= Low
11.	Contamination	Employees	PxH=Med	UxM= Low
12.	UXOs	Employees	PxH=Med	UxM= Low
13.	Injury to pedestrians on Public Footpaths	Public	PxH=High	UxM= Low
14.	Driving to and from site	Employees	PxH=Med	UxM=Low

Item	Control Measures
1.	**Manual Handling** • No weights requiring mechanical methods will be lifted. • Seek help from others when lifting heavy equipment. • Wear PPE including supportive/protective boots that complies with BS EN ISO 20345 that has a covered steel toe cap, mid-sole protection and provides support to the ankle. Rigger boots are not acceptable and will not be worn. Wear gloves conforming to EN388 intermediate design • Assess weight to be lifted. No lifting issue is anticipated with the equipment used.
2.	**Infectious Diseases (e.g. Lyme Disease and Leptospirosis** • Contact with standing water to be avoided at all times. • Wear gloves. • Always wash hands before eating/drinking/smoking. • Canteen/Welfare areas will be kept clean to deter vermin. • Avoid unnecessary contact with eyes, mouth and nose using dirty hands. • All cuts and skin abrasions to be immediately washed and dressed. • Close fitting clothes (no shorts of short-sleeved shirts) to be worn in areas which are known to be inhabited by deer. • Insect repellent to be used in areas which are known to be inhabited by deer. • Medical attention to be sought if flu-like symptoms appear between one to four weeks after a possible insect or tick bite following working in such areas. • It is the responsibility of each staff member to ensure compliance with the control measures. • If sewage enters the working area work will cease.
3.	**Livestock and Dogs** • No work will be undertaken in fields containing livestock. • Follow instructions agreed with LM in consultation with the tenant or landowner. • Livestock and dogs will not be approached. • Consider removal of high-vis PPE near cattle/rams, as per landowner instruction.
4.	**Movement Around Site:** **Slipping and tripping / uneven ground** • Track mats to be provided in access and compound areas if required. • The site will be inspected for slip and trip hazards prior to work commencing. • Suitable safety footwear will be worn by all staff. • Tools will be stored neatly in designated areas. • If appropriate access and egress to trenches will be by designated safe routes • The Site Manager will assess the site for hazards and update the risk assessment as necessary. • The project supervisor will regulate deployment into trenches. • All staff are to ensure that footwear is maintained, and replacement sought if necessary.

	Presence of unauthorised personnel / public footpaths • In the event that unauthorised personnel gain access all survey works will cease until the person(s) have been escorted from the site. • Public footpaths crossing fields within the Site boundary are to be fenced off before works commence within each field. **Movement around site** • Staff to be aware of the potential dangers involved in moving around the site, e.g. uneven ground, presence of moving plant, presence of unauthorized personnel etc.
5.	**Isolated Working Areas:** **Injury or ill health when working alone or at a distance from others** • Staff to work in small groups in relatively close proximity where practicable. • When staff are required to work alone at a distance from others regular mobile phone contact must be maintained with the Site Manager. • Site Manager to be aware of all staff working locations and to maintain personal or mobile phone contact. • All staff to maintain vigilance and communicate with Site Manager when working at a distance
6.	**Severe Weather:** **Exposure to the elements and extreme temperatures** • Individuals to wear appropriate protective clothing (rain proof and/or windproof and/or warm garments in adverse wet, windy or cold weather conditions. Foul weather equipment (where needed) that complies with BS EN 343: 2003 Class3. • Individuals to wear appropriate clothing (loose and light) and sun protection (sun screen, appropriate hat) in warm, bright weather conditions. Shorts should not be worn, short-sleeved shirts should not be worn in areas where deer are known to be present, or when weather conditions, extreme heat/cold, determine. • Work should cease in thunderstorms and appropriate shelter sought. • All staff to adhere to the control measures.
7.	**Excavation and Utilities** • Permit to dig to be completed prior to any excavation. • Client to provide service plans which will be checked prior to excavation and trenches positioned to avoid known services. • The Site Manager will walk over the site prior to the commencement of works to inspect the site for obvious service trenches and service markers. • Known services across the proposed area of the works include, overhead and underground electric cables, buried water pipelines, sewers and telecommunication. • The need to cross either below or above any service will be avoided where possible. Where this is not possible then guidance will be sought from the relevant utility provider regarding best practice. Permission will be sought from the archaeological curator to move any trench that is found to lie under, above or within the immediate vicinity of any service. National Grid will be informed where overhead services are

	carried on National Grid pylons, and in the vicinity of buried gas mains. BPA will be informed of any work within close proximity of the fuel pipeline. The locations of all trenches will be scanned with a Cable Avoidance Tool (CAT) prior to excavation by a suitably trained person. • The required buffers zones (given in HSE Guidance Note GS6) will be created around overhead utilities that lie within the site, with goalposts erected at a single crossing point where required. The height of goalpost will be determined by the asset owner. The required buffers zones will be erected around any known buried services, these will be agreed in advance with the asset owner. Crossing points will be constructed above any buried service where required. Method of crossing the buried service will be sought from the asset owner • If unmapped services are located their presence will be confirmed by hand digging before proceeding and/or the trench moved to a new location or split either side of the unmapped service. Further machine excavation will be restricted to a minimum distance of 1m from location of identified services, to create a 2m wide berm over the position of services. • Broken drainage and sewage pipes to be treated with particular care, especially during periods of rainfall. Staff will avoid contact with any discharge.
8.	**Use of Mechanical Plant / Delivery of Mechanical Plant** • The necessary level of traffic management will be employed at each access location during the delivery of heavy plant or other materials. Where access is off a road, a minimum of two members of staff acting as banksmen will be in attendance. • All plant drivers to be trained to CITB (or equivalent) standard and in possession of necessary certification • All staff and visitors to wear the following PPE: High-visibility upper-body clothing (orange) with reflective tape that complies with BS EN 471 – in addition, long-sleeved clothing must be worn; High-visibility trousers (orange) with reflective tape that complies with BS EN 47; Safety helmets that comply with BS EN 397 (Colour coding of safety helmets will be in accordance with the relevant contract requirements) Visitors will wear blue safety helmets; Safety footwear that complies with BS EN ISO 20345 that has a covered steel toe cap, mid-sole protection and provides support to the ankle. Rigger boots are not acceptable and will not be worn; Hand protection, (gloves) that conform to EN388 intermediate design; Eye protection (safety) glasses that conform to EN166, 1F; protective boots (boots preferably conforming to BS1870 Pt.1). In addition, and when required; foul weather equipment that complies with BS EN 343: 2003 Class3, 3; For employees working in close proximity to buried services, flame-retardant PPE that complies with BS EN 533. • Staff to remain in driver's view at all times and alert the driver to their presence. • A minimum of one staff member to guide machine operators • Staff not to stand or work within the swing area of the machine arm • Machines travelling from one part of the site to another to be escorted by a banksman. • If crossing a public road, two banksmen will escort the machine. • Any areas of plant movement during delivery / collection outside the working area will be checked for public presence before and during unloading / loading. • Connect Archaeology's project supervisor will be responsible for checking certification, coordinating staff and supervising all plant movements. • All staff will maintain awareness of plant location/movement at all times. • When not in use the mechanical excavator will be stored in a dedicated compound. When in the dedicated compound a drip tray/plant nappy will be placed underneath the excavator. • All mechanical excavators will carry a Spill kit.

	• A fuel bowser will be located within the compound containing the welfare unit and tool store. A drip tray/plant nappy will be placed underneath the fuel bowser.
9.	**Confrontation with Members of the Public** • Do not engage in confrontation with the public • Always be polite • Do not discuss the works, refer the person/s to the HS2 Contact Number • Leave the work area as soon as possible if arguments or aggressive behaviour becomes intimidating or threatening. • Report any issues to your Manager.
10.	**Fire in Compound** Display site emergency procedure and appoint fire-fighting equipment in areas of risk e.g. Canteen/Storage areas. Smoking prohibited in storage areas. Smoking only allowed in Designated area. Ensure cookers and heaters are powered by electricity. Ensure ALL WASTE is collected on a daily basis and deposited in skips for regular removal by waste carrier. Lock ALL FLAMABLE materials in steel units with good ventilation when not in use. The fuel bowser located in the main compound is bunded (double skinned) and is lockable. **Most fires can be prevented with simple precautions**. If a fire does occur: • Raise the alarm. • Locate an escape route. • It is vital these routes are kept clear at all times • Make your way calmly to the designated meeting point and stay there. This is very important as a full register will be taken to ensure everybody is present. • If the fire is small –and suitable fire-fighting equipment is immediately to hand –and you decide to tackle the small fire ensure that you always position yourself between the fire and your escape route
11.	**Contamination** • Prior to the start of excavation works all staff will be made aware of any areas (and nature of) the contamination identified in the Environmental Appraisal and Ground Investigation Logs. • Prior to the start of excavation works, areas of contamination will be marked on the ground and appropriate buffers put in place. • If areas of previously unknown contamination are identified during the trial trenching works trenching will cease in the vicinity. All staff will avoid the potentially contaminated area. Connect Archaeology will immediately inform LM and seek advice on how to proceed. • Measures to deal with contaminated material may include:

	impermeable sheeting (DPM matting) on which to store excavated material; facilities to segregate hazardous and non-hazardous material; appropriate PPE; facilities to deal with any potentially contaminated wash water; and arrangements with appropriately licenced waste management contractors to dispose of any hazardous waste as quickly as possible. • All works will be undertaken in line with LM's Contaminated Land Action Plan and Waste Management Plan.
12.	**UXOs** • There is moderate potential for unexploded ordnance (UXO) to the north of the A425, around trenches 1-10. A UXO specialist will issue a briefing to all staff prior to the excavation of these trenches. The UXO specialist will also undertake a watching brief during their excavation.
13.	**Public Rights of way** • Public footpaths crossing main trenching areas will be fenced off using a physical barrier prior to trenching.
14.	**Driving to and from site** • Drivers to check and familiarise themselves with the vehicle. Daily checks of tyre pressure/tread, fluids, and lights will be undertaken. • Drivers will hold a valid licence for the type of vehicle they are driving. • The use of mobile phones or electronic devices whilst driving is illegal and will not occur. If mobile phones are used for navigation they must be secured in a cradle. • Driving to be shared by project staff wherever possible to avoid fatigue. • Staff will familiarise themselves with safe vehicle loads and ensure they are adhered to. • Vehicles will be loaded safely. Equipment will be secured to negate unexpected weight transfer; bulkhead will segregate staff from load.

7.0 Specific Health & Safety Compliance Arrangements

Detail all health & safety restrictions or arrangements required for the contract
All works carried out by Connect site staff will adhere to the Client's Health and Safety procedures as outlined in this document and given during the site induction.

8.0 Protection of Third Parties from Works

Detail specific control measures for the prevention of exposing third parties to risks from works
Site Specific Rules in place. If applicable, access gates to the site will be kept locked at all times and only opened to allow authorised access/egress. Security will be employed 24hs to maintain the security of the compounds, plant and general site area.

9.0 COSHH

Detail all substances, materials and biological organisms applicable to the works	
Material/Substance/Biological	***Control Measure***
Petrol	COSHH Assessment
Diesel	COSHH Assessment
Hydraulic Oil	COSHH Assessment
Line Marker Paint Aerosol	COSHH Assessment
Skin Sanitiser	COSHH Assessment

10.0 Personal Protective Equipment & Other Essentials

High Visibility Clothing Upper body- orange long sleeved with reflective tape complying with BS EN 471 Lower Body- Orange high-visibility trousers with reflective tape complying with BS EN 471	√	**Safety Glasses that conform to EN166:1F**	√	**First Aid Kit**	√
Sunscreen and after sun protection	√	**Waterproof Trousers that comply with BS EN 343: 2003 Class3:3**	√	**Safety Gloves that conform to EN388 intermediate design**	√
Wet Weather Clothing complying with BS EN 343: 2003 Class3:3	√	**Hard Hat that complies with BS EN 397**	√	**Latex Gloves**	√
Ear Protection	√	**Respiratory Protective Equipment (RPE)**		**Antiseptic Wipes/Hand Cleaner**	√
Safety Boots complying with BS EN ISO 20345 (covered steel toe cap, mid-sole protection and provides support to the ankle)	√	**Sat Nav**	√	**Maps of Site**	√
Food Provision	√	**Fully Charged Mobile and Charger for Each Member of Staff**	√	**Other (Specify): Flame-retardant PPE complying with BS EN 533;**	√

11.0 Emergency Response Equipment/Arrangements

Detail all emergency response equipment and arrangements
Emergency Procedures A qualified first aider will be present on site at all times (British Red Cross), as required by the Health and Safety (First Aid) Regulations (1981).

A complete first aid kit will be maintained on site at all times. At a minimum first aid kits and eyewash stations will be located within the welfare facilities at each compound. A first aid kit will be located in each excavator.

Any injury, no matter how minor, will be reported and included in the site accident book and reported to LM within 24 hours.

In the case of health and safety concerns or injury, Connect Archaeology staff are to inform the Site Manager in the first instance who will liaise with Ross Murray (Project Manager) and Melissa Melikian (Connect Archaeology Operations Director). Any immediate health and safety and security issues should also be reported to the client.

Emergency Procedures if Contact is Made with Overhead Power Cables

If someone or something comes into contact with an overhead line, it is important that everyone involved knows what action to take to reduce the risk of anyone sustaining an electric shock or burn injuries. Key points are:

- never touch the overhead line's wires;
- assume that the wires are live, even if they are not arcing or sparking, or if they otherwise appear to be dead;
- remember that, even if lines are dead, they may be switched back on either automatically after a few seconds or remotely after a few minutes or even hours if the line's owner is not aware that their line has been damaged;
- if you can, call the emergency services. Give them your location, tell them what has happened and that electricity wires are involved, and ask them to contact the line's owner;
- if you are in contact with, or close to, a damaged wire, move away as quickly as possible and stay away until the line's owner advises that the situation has been made safe;

All site staff carry valid CSCS cards which will be made available for inspection. All site supervisors are SSSTS certified.

In the event that a member of staff is seriously injured on site the emergency services will be contacted immediately. The site address will be given as:

For Compound 1: Dallas Burston Polo Club, Stoneythorpe Estate, Southam CV47 2DL

For Compound 2: Field off A425, Stoneythorpe Estate, Southam CV47 2DL

In case of accident or emergency Connect Archaeology Project Management will be informed. Connect will be responsible for reporting the incident to the Health and Safety Executive (HSE), should this be required, within the time periods stipulated by the HSE.

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

12.0 Permit to Work Requirements

Permit to Dig	**Yes**	✓	**No**	
Permit to Work At Height	**Yes**		**No**	✓
Hot Work Permit	**Yes**		**No**	✓
Confined Space Permit	**Yes**		**No**	✓
General Permit to Work	**Yes**		**No**	✓
Other Permit				

13.0 Personnel Involved in Task & Contact Details

Detail personnel involved in the task either in persons conducting job or overall numbers. Also include levels of supervision.

Designated staff

LM	Paul Hunt	07775 551776
WSP (DJV)	Glenn Rose	07583 018586
Connect Archaeology Operations Director:	Melissa Melikian	07824 438954
Connect Archaeology Project Manager:	Ross Murray	07855 086 322
Connect Archaeology Site Manager:	Alan Duffy	07764 154 169
Connect Archaeology Health & Safety Consultant:	Stuart Draper	07595 450 671

14.0 Specific Training Requirements for Task

Detail all training requirements/restrictions, including any licences required for persons conducting task

All staff are CSCS card holders.
Site Supervisor SSSTS.
Staff trained in GPS survey using Trimble GPS.
Staff trained in using a Cable Avoidance Tool

15.0 Plant & Equipment to be used During Works

Detail all plant

Machines:

- 8-22 tonne tracked 360 machines with rubber tracks
- JCBs (e.g. 3CX)

Equipment

- Trimble GPS (GeoXR/7X, R6 or R8s)
- CAT (calibration certificates will be kept in the site file)

16.0 Traffic Management

Detail requirements for traffic management restrictions and controls
The necessary level of traffic management will be employed at each access location during the delivery of heavy plant or other materials. Where access is off a road, a minimum of two members of staff acting as banksmen will be in attendance. Site vehicles will be parked in the Site Compound areas. Reverse parking only.

17.0 Waste Disposal & Environmental Considerations

Detail all Waste Disposal Considerations
Connect staff will work in accordance with the Site Environmental Procedures and Site Rules as stated by LM below. A copy of the Environmental Site Rules should be displayed in the Site Office **LM ENVIRONMENTAL SITE RULES** • Core working hours from 08:00 to 17:00 on weekdays (excluding bank holidays) and from 08:00 to 13:00 on Saturdays. • Any work out of these hours will need to be agreed with LM and the Local Authority. • One hour before and up to one hour after normal working hours is allowed for start-up and close down of activities. ***No plant and/or machinery shall be turned on during this period.*** • Repairs or maintenance of construction equipment that is required to be carried out outside of core working hours will normally be carried out on Saturday afternoons or Sundays between 09:00 and 17:00. • No open fires allowed. • LM subcontractors shall use biodegradable (vegetable-based) hydraulic oil for all site plant. • No discharge of site runoff to ditches, watercourses, drains, sewers or soakaways is permitted without agreement from LM and the regulatory authority. • Plant and machinery to be stored in designated areas only, outside of any flood plain. • White noise alarms only are to be used on LM sites. • Vehicles and plant will be switched off and secured when not in use. • Movement of construction traffic around the site will be kept to the minimum. • The site layout will be planned to locate machinery and dust-causing activities away from residences. • If you are approached by members of the public advise them to contact the HS2 helpdesk and provide contact cards. **ALL ENVIRONMENTAL INCIDENTS INCLUDING SPILLS, LEAKS, ECOLOGICAL OR DAMAGE TO BUILDINGS ARE TO BE REPORTED TO YOUR SITE SUPERVISOR WHO WILL NOTIFY LM.** A Permit to Pump must be used and accepted before and pumping out of water.

Waste will be disposed of in accordance with Site Rules and Procedures.

Environmental Risk Assessments provided for site file.

18.0 Specific Emergency Contact Numbers/Procedures

Detail all Specific Emergency Contact Numbers or Procedure references
Refer to Site Emergency Plan, Connect Archaeology Site Specific Procedures and Emergency Contact details displayed in the Site Office.

19.0 Specific Co-operation with Third Party Activities

Detail specific requirements
Occasionally other sub-contractors may be present on site during the archaeological works. Working practices to avoid conflict during these periods can be discussed and agreed at a Site Meeting.

Method Statement/Risk Assessment Prepared by	**Name**	Melissa Melikian	**Sign**	
	Position	Operations Director	**Date**	18th October 2019
Reviewed by		Ross Murray	**Date**	21st October 2019

20. Acknowledgement:

I confirm that I have understood the Method Statement/ Risk Assessment and undertake to execute the works in the appropriate manner.

Print Name	Sign	Date

Appendix A: Inspection and Test Plan

CONNECT ARCHAEOLOGY INSPECTION AND TEST PLAN							
PROJECT:	HS2/EWC	**PROJECT No:**	H7468	**ITP No:**		**REV:**	02
WORK ITEM:	**Historic Environment Survey Works**						
PRINCIPAL CONTRACTOR/CLIENT:	**LM-JV**						
SUBCONTRACTOR:	**AOC Archaeology**						

AMENDMENT RECORD

REV	AMENDMENT	WRITTEN BY	DATE	APPROVED BY	DATE
01	First Issue				
02	Second Issue	MM	4/6/18	Darren Connelly (LM-JV)	5/6/18

LEGEND

Inspection Authorities

DJV: Design Joint Venture/WSP
CA: Connect Archaeology
LMJV: LM Joint Venture/Client Representative

Inspection Codes

A: Approval
H: Hold
I/T: Inspection/Test
N: Notification
NA: Not Applicable
R: Review
S: Surveillance
W: Witness

CONNECT ARCHAEOLOGY INSPECTION AND TEST PLAN								
PROJECT:		**PROJECT No:**		**ITP No:**			**REV:**	02

Item No	Activity	Control Document/ Acceptance Criteria	Review/Inspection/ Test method and by whom	Verification Document	Inspection Authority and Code			Remarks
					LM JV	DJ V	CA	
1	Receive Project Plan from the Employer	Project Plan Doc No: XXX	Project Manager			N		Code 1 received from PC (LM) includes Environmental, Utility & U&A's criteria
2	Receive Site Conditions from Employer: • Utilities • Site Access • Agriculture • Unexploded Ordnance (UXO) • Ecological Constraints (where relevant) • Walkover survey results	HS2-HS2-EV-STD-000-000036 Section 3.2.11 Linesearch results (Utilities)	Project Manager/Site Director		N			
3	Prepare and submit LS-WSI for approval	HS2-HS2-EV-STD-000-000036 HS2-HS2-EV-STR-000-000015 HS2-HS2-EV-STD-000-000036_P01-P01-1	DJV		A	A/H		
4	Prepare and submit all necessary method statements/risk assessments for approval	HS2-HS2-EV-STD-000-000035_P01-P01-1 Section 1.7	Project Manager/Site Director LM		A/H			

CONNECT ARCHAEOLOGY INSPECTION AND TEST PLAN								
PROJECT:		**PROJECT No:**		**ITP No:**			**REV:**	02

Item No	Activity	Control Document/ Acceptance Criteria	Review/Inspection/ Test method and by whom	Verification Document	Inspection Authority and Code			Remarks
					LM JV	DJ V	CA	
		LM RAMS sign-off form						
5	Receive all approved versions of documentation from the Employer	Approved Documents	Project Manager		N	N		
6	Receive/Produce Setting out information	Contract Drawings	Project Manager/Site Director		N	N		
7	Project Briefing prior to fieldwork commencement	CA HS2 site pack and set-up checklist	Project Manager/Site Director				N	
8	Site Induction	LSWSI, RAMS, Induction	Site Director	Induction and RAMS sign-off			S	
9	Preliminary Site Inspection/Access Survey/Pre-Condition Surveys	Contract Drawings	Site Director	Survey Record/Photographs/Site Inspection Form/Condition Survey Form			S	
10	Compound/Welfare Set up	RAMS and site layout plan	Site Director	Survey Record/Photographs			S	
11	Plant Delivery and Access	RAMS and vehicle checklist	Site Director	Photographs and vehicle checklist			S	
12	Setting out Survey-Trenches/Excavation Area/Constraints	Contract Drawings	Site Director	Survey Record/Photographs			S	
13	Demarcate Spoil Storage Area(s)	RAMS	Site Director	Survey Record/Photographs			S	
14	Establish Plant Operation/Pedestrian Routes	RAMS and site layout plan	Site Director	Survey Record/Photographs			S	

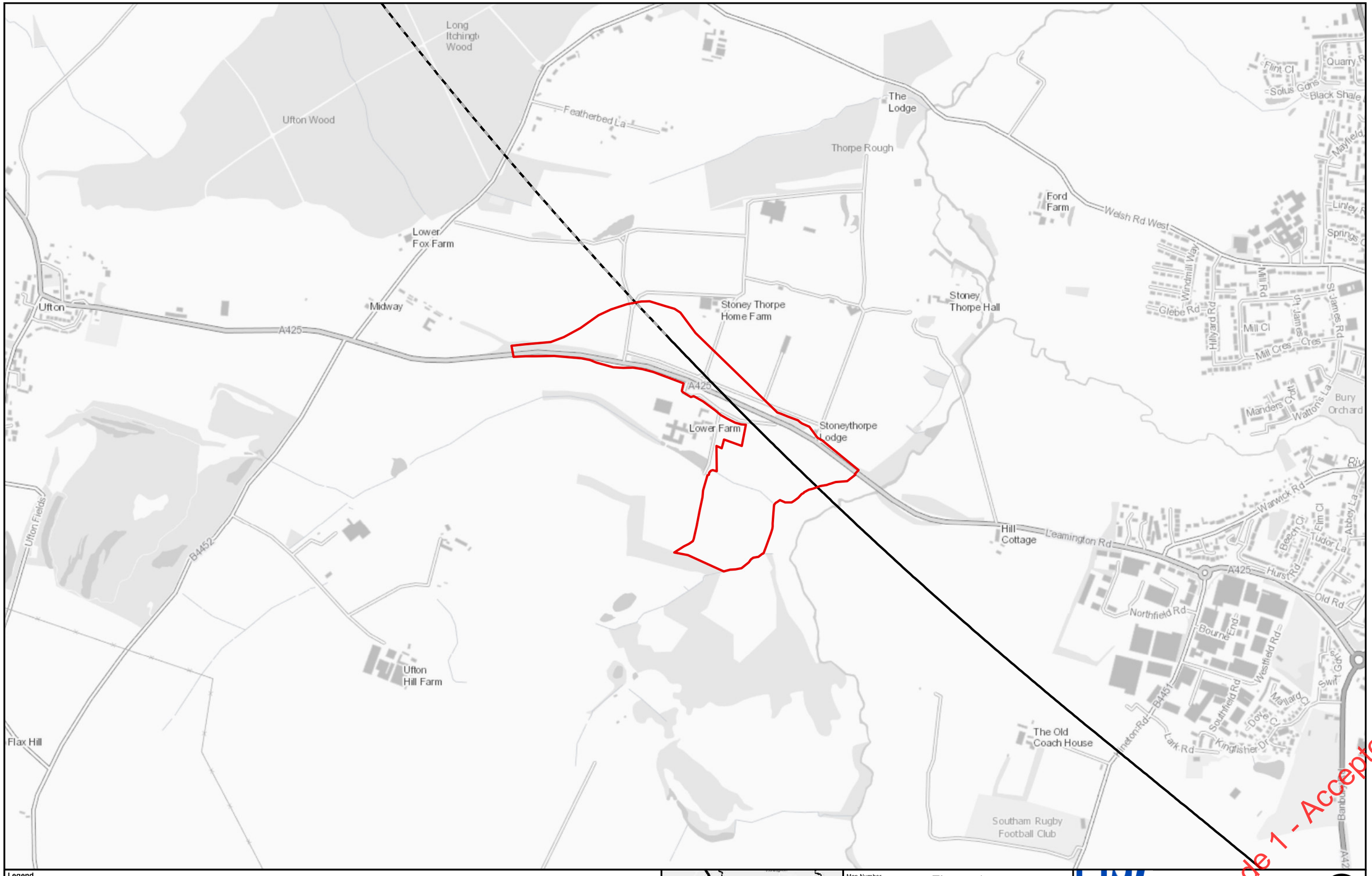
CONNECT ARCHAEOLOGY INSPECTION AND TEST PLAN								
PROJECT:		**PROJECT No:**		**ITP No:**			**REV:**	02

Item No	Activity	Control Document/ Acceptance Criteria	Review/Inspection/ Test method and by whom	Verification Document	Inspection Authority and Code			Remarks
					LM JV	DJ V	CA	
15	Locate and demarcate utilities and required buffer zones/mitigation	Contract Drawings RAMS PAS 128 Avoidance of Underground Cables GS6 -Avoiding danger from overhead power lines	Site Director	Survey Record/Photographs	S		H	
16	Internal Pre-Start Inspection	Pre-Start Inspection Checklist	Project Manger		T		H	
17	Employer Pre-Start Inspection		LM	LM Site Diary Notification	H			
18	Complete and Issue Permit to Dig	Permit to Dig	Site Director LM	Permit to Dig	W			
19	Ground-breaking i) Spoil Segregation/Storage ii) Excavation level	LSWSI BS 3882- Specification for topsoil	Site Director LM	Survey Record/Photographs	S			
20	Hand excavation- Archaeological features	HERDS PP LSWSI	Site Director	Survey Record/Site Records/Photographs		S		
21	Approval of Excavated Archaeological Features	HERDS PP WSI	WSP HS2	HS2 Sign Off Sheet		H		
22	Backfill/Reinstatement i) Correct material order ii) Adequate Compaction	PP LSWSI	Site Director LM	Survey Record/Photographs	S			Note: HS2 authorisation required for backfill works to commence at any stage.

CONNECT ARCHAEOLOGY INSPECTION AND TEST PLAN								
PROJECT:		**PROJECT No:**		**ITP No:**		**REV:**	02	

Item No	Activity	Control Document/ Acceptance Criteria	Review/Inspection/ Test method and by whom	Verification Document	Inspection Authority and Code			Remarks
					LM JV	DJ V	CA	
	iii) Pre-Excavation Levels	BS 3882- Specification for topsoil						
23	Plant Egress	TMP, RAMS	Site Director	Photographs	S			
24	Compound/Welfare removal	RAMS	Site Director	Survey Record/Photographs	S			
25	Post Condition Survey (Site Handover) i) Trenches/Excavation Area ii) Compound Area iii) Site Access	LSWSI	Site Director	Photographs Condition Survey Form	S			
26	Reporting Documents	PP/LSWSI/HERDS	Site Director	Interim Report – 1 week post completion and Final Report 6 weeks post completion.	R	R		Clarity required as to what information is collated, who forwards the information to whom & if the report on the work activity gets uploaded separately onto A Site or forwarded to a 3rd Party.

Appendix B: Site Layout Plans



Legend

- Site Boundary - 080319
- Route in tunnel
- Route on surface

Map Number: Figure 1

Map Name: Land Adjacent to Stoney Thorpe DMV Location Plan

Community Forum Area CFA16
Ladbroke and Southam

Registered in England. Registration number 06791686.
Registered office: Eland House, Bressenden Place, London SW1E 5DU.

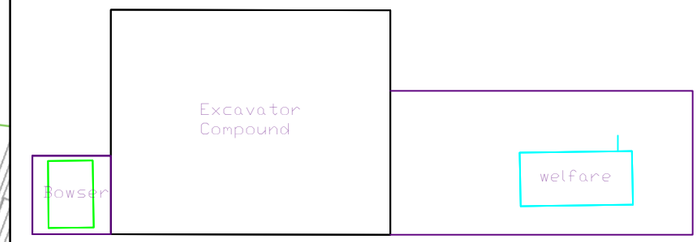
Scale at A3: 1:10,000

0 100 200 300 400 Metres

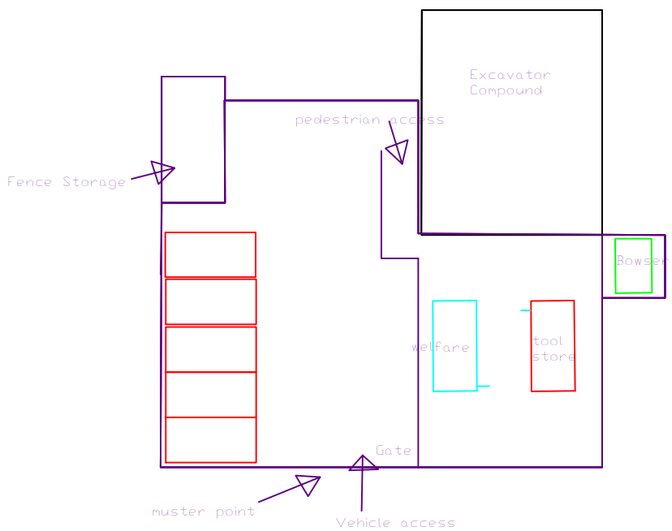
Doc Number: -

Date: 21/10/19

Compound 1



Compound 2

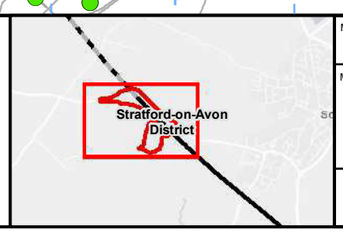


Compound 1

Compound 2

Legend

- Compound Locations
- Site Boundary - 080319
- Great Crested Newt
- Bats Building Roosts
- Bats Tree Roosts
- White Clawed Crayfish Location
- Badger Sett
- Important Hedgerow
- Otter Terrestrial Habitat
- Otter Terrestrial Habitat buffer (30m)
- Watercourse
- Watercourse buffer (10m)
- Electrical - UG LV Existing
- Electricity - UG MV and LV Cables - New Diverted/Modified
- Electricity - LV Connections - New
- Electricity - UG MV and LV Cables - Removed/Abandoned
- Electricity - OH MV and LV Cables - New Diverted/Modified
- Electricity - OH MV and LV Assets - Removed/Abandoned
- Electricity - EHV - Temp
- Sewer
- Sewer - Small Existing
- Telecom and Mobile - Temporary Diversion Works
- Water Mains - New
- Utility Construction Zone



Map Number: Figure 2

Map Name: Land Adjacent to Stoney Thorpe DMV Trench location plan with compounds

Community Forum Area CFA16
Ladbroke and Southam

Scale at A3: 1:3,500

0 30 60 90 120 Metres

Doc Number: -

Date: 21/10/19

Code 1 - Accepted

Appendix C: COSHH Assessments & Data Sheets

COSHH Assessment No: 01	AOC Archaeology Group

This assessment must take into account the Manufacturer's Safety Data Sheet, Product Label and the activity to be undertaken. A copy of the Safety Data Sheet is to be attached to this Assessment upon completion.

Substance Name: Petrol	**Supplier:** Various

Chemical Composition:

Complex mixture of hydrocarbons in the C_4-C_{11} range. CAS No 86290-81-5. EINECS No 289-220-8. The main components are paraffinic, naphthenic and aromatic hydrocarbons but catalytically and thermal cracked constituents from refinery processes may be present. May also contain up to 5% bio-ethanol.

Hazard Classification

 Caution		 Flammable	X	 Dangerous for the Environment	X
 Corrosive		 Gas under pressure			
 Toxic		 Oxidising		Other (Please Specifiy):	
 Long Term Health Hazards	X	 Explosive	X		

Risk Categories:	**Safety Phrases:**
R45,R11,R48,R23,R24,R25 Xi, Xn R12,R38,R45,R65,R67,R51,R53	

Form of Substance

DUST		**FUMES**	X	**MIST**		**GASES**	
VAPOURS	x	**SOLID**		**LIQUID**	X	**OTHER (Please Specify):**	

Persons at Risk

Employees	**Sub-Contractors**	**Visitors**	**Members of the public**	**Other (Please Specify):**
X	X	X		

Routes of Exposure

Skin	**Cuts/ Abrasions**	**Eyes**	**Inhalation**	**Ingestion**	**Other (Please Specify):**
X	X	X	X	X	

Work Process (How is the Substance used?)

Method Statement/ Risk Assessment

Petrol to Fuel Generator

Occupational Exposure Limits (From EH40):

Effects of Exposure On Health & Environment

Extremely flammable. Explosive mixtures may form at ambient temperatures. May cause irritation in contact with eyes and skin. Harmful if swallowed. Aspiration into the lungs caused by vomiting is harmful and can be fatal. Contains benzene: prolonged or repeated exposure to benzene may cause anaemia and other blood diseases including leukaemia. Classified as a category 2 carcinogen. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Is Biological Monitoring/ Health Surveillance Required? (If yes what is in place?)

No

Is Environmental Monitoring Required? (If yes what is in place?)

No

Control Measures (Remember; Eliminate, Isolate, Engineer, PPE & Training)

All Operatives must receive a Site Induction and comply with Site Rules and Emergency Procedures.

Site Specific Method Statement must be read and understood before work commences.

Petrol will be delivered to site and stored on site in a metal 10ltr Jerrycan designed to carry petrol and its contents must be clearly identified, including the Flammable Liquid Dimond displayed.

The above container should be stored in a flammable storage unit or box on site.

When handling petrol ensure you have the corrective PPE as identified: Gloves, Coveralls, Respirator, Googles, Safety Footwear. You must also wear the Specific PPE Requirements of the site:

Smoking Strictly Forbidden.

A suitable funnel

A suitable Drip tray.

A suitable Fire Extinguisher (Use carbon dioxide, dry powder or foam)

A first Aid Kit which must include Eyewash.

Extra care must be taken when opening containers after movement to prevent splashes.

Personal Protective Equipment Required

Gloves	X	**Coveralls**	X	**Respirator/ Face Mask**	X
Glasses/ Goggles	X	**Safety Footwear**	X	**Other (Please Specify):**	

Testing and Maintenance of Control Measures

Monitor, audit and review

First Aid Measures

Skin	Remove contaminated clothing as soon as possible. Wash exposed skin thoroughly with soap and water. If irritation persists, seek medical attention.

Eyes	Immediately wash with fresh water for at least 15 minutes. Obtain medical advice if pain or redness develops.
Inhalation	**If over exposure occurs, remove to fresh air. Administer artificial respiration if breathing stops. Seek immediate medical attention.**
Ingestion	If this material is swallowed, DO NOT INDUCE VOMITING. If unconscious, place in recovery position and protect airway. Seek immediate medical attention.

Emergency Action

FIRE FIGHTING MEASURES EXTINGUISHING MEDIA Use carbon dioxide, dry powder or foam. DO NOT USE WATER JETS. For small fires sand or earth may also be used.
FIRE AND EXPLOSION HAZARDS Forms extremely flammable vapour – air mixture.
PROTECTIVE MEASURES Do not enter confined spaces without proper protective equipment including respirator. Use water fog or spray to cool containers exposed to fire.

ACCIDENTAL RELEASE MEASURES (SPILLAGE)
PERSONAL PRECAUTIONS In the event of a major spillage only trained personnel wearing self-contained breathing apparatus. Any spillage or leak should be treated as a major fire/explosion hazard.
ENVIRONMENTAL PRECAUTIONS Alert fire brigade. Eliminate all sources of ignition. If vehicles present, switch off engines. Contain spillage.
RECOVERY: Recovery of large spillages should be affected by specialist personnel. Soak up residual fluids using sand, sawdust, earth.

Storage, Transport & Disposal

STORAGE AND HANDLING (IN NORMAL USE)
STORAGE Gasoline storage is subject to legislative controls. Storage tanks must be suitably designed and installed, in accordance with legislation. Storage must be remote from all sources of heat, ignition and open flame. The vapours in tank head spaces should be considered highly flammable at all times. Use spark proof tools.
VENTILATION Ensure adequate ventilation.
HANDLING DO NOT SMOKE, EAT OR DRINK WHILST HANDLING. Avoid breathing vapours and/or mist. Launder contaminated clothing before re-use. Do not siphon product by mouth.
DISPOSAL Dispose of in accordance with local authority/national regulations relating to hazardous waste. Materials contaminated with product should be treated as highly flammable.

Risk Rating Following Assessment & Implementation of Control Measures

LOW

Information Sources Used

COSHH DATA Sheet

Assessed by: S Draper	**Date:** 1st January 2019	**Date for Review:** 1st January 2020

I confirm that I have read and understood this COSHH Assessment titled Petrol and that I shall Carry out works in the manner stated above.

Print Name	Sign	Date

Risk Rating Matrix

Risk = Likelihood x Severity

RISK RATING (R) Likelihood (L) x Severity (s)		HAZARD SEVERITY (S)				
		Negligible (N) Negligible injury, no absence from work	**Slight (S)** Minor Injury requiring first aid treatment	**Moderate (M)** Injury leading to a lost time accident	**High (H)** Involving a single death or serious injury	**Very High (VH)** Multiple Deaths
LIKELIHOOD OF RECURRENCE (L)	**Very Unlikely (VU)** A freak combination of factors would be required for an incident/accident to result	LOW	*LOW*	LOW	LOW	MEDIUM
	Unlikely (U) A rare combination of factors would be required for an accident/incident to result	LOW	LOW	LOW	MEDIUM	MEDIUM
	Possible (P) Could happen when additional factors are present but otherwise unlikely to occur	LOW	LOW	MEDIUM	MEDIUM	HIGH
	Likely (L) Not certain to happen but an additional factor may result in an accident/incident	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	Very Likely (VL) Almost inevitable that an accident/incident would result	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

COSHH Assessment No: 02	AOC Archaeology Group

This assessment must take into account the Manufacturer's Safety Data Sheet, Product Label and the activity to be undertaken. A copy of the Safety Data Sheet is to be attached to this Assessment upon completion.

Substance Name: Diesel	**Supplier:** Various

Chemical Composition:
Hydrocarbons and Additives

Hazard Classification

 Caution	X	 Flammable	X	 Dangerous for the Environment	X
 Corrosive		 Gas under pressure			
 Toxic	X	 Oxidising		Other (Please Specifiy):	
 Long Term Health Hazards		 Explosive			

Risk Categories:	**Safety Phrases:**
Xn; Carc. Cat. 3;R40, Xn;R65, R66, N;R51/53 **Nature of Special Risk:** R40; Limited evidence of a carcinogenic effect. R65; Harmful: may cause lung damage if swallowed. R66; Repeated exposure may cause skin dryness or cracking. R51/53; Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	**Safety Advice:** S2; Keep out of the reach of children. S36/37; Wear suitable protective clothing and gloves. S61; Avoid release to the environment. Refer to special instructions/safety data sheets. S62; If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Form of Substance

DUST		**FUMES**		**MIST**		**GASES**	
VAPOURS	X	**SOLID**		**LIQUID**	X	**OTHER (Please Specify):**	

Persons at Risk

Employees	**Sub-Contractors**	**Visitors**	**Members of the public**	**Other (Please Specify):**
X	X	X		

Routes of Exposure

Skin	**Cuts/ Abrasions**	**Eyes**	**Inhalation**	**Ingestion**	**Other (Please Specify):**
X	X	X	X	X	

Work Process (How is the Substance used?)

Diesel for Excavators or Generators

Occupational Exposure Limits (From EH40):

Fuels, diesel, no. 2 Vapour TWA: 200 mg/m3	Fuels, diesel, no. 2 Stable Aerosol TWA: 5 mg/m3

Effects of Exposure On Health & Environment

PHYSICAL / CHEMICAL HAZARDS

Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an incendiary electrical discharge.

HEALTH HAZARDS

Limited evidence of a carcinogenic effect. Harmful: may cause lung damage if swallowed. Repeated exposure
may cause skin dryness or cracking. Under conditions of poor personal hygiene and prolonged repeated contact, some polycyclic aromatic compounds (PACs) have been suspected as a cause of skin cancer in humans. May be irritating to the eyes, nose, throat, and lungs. May cause central nervous system depression. High-pressure injection under skin may cause serious damage.

ENVIRONMENTAL HAZARDS

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Is Biological Monitoring/ Health Surveillance Required? (If yes what is in place?)

No

Is Environmental Monitoring Required? (If yes what is in place?)

No

Control Measures (Remember; Eliminate, Isolate, Engineer, PPE & Training)

All Operatives must receive a Site Induction and comply with Site Rules and Emergency Procedures.

Site Specific Method Statements must be read and understood before work commences.

Diesel will be delivered to site and stored on site in a metal 10ltr Jerrycan designed to carry diesel and its contents must be clearly identified, including the Flammable Liquid Dimond displayed.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider:

Use explosion-proof ventilation equipment to stay below exposure limits.

PERSONAL PROTECTION:

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection:

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:
No special requirements under ordinary conditions of use and with adequate ventilation.
For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection:

Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly affect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:
Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. CEN standards EN 420 and EN 374 provide general requirements and lists of glove types.

Eye Protection:

If contact with material is likely, chemical goggles are recommended.

Skin and Body Protection:

Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:
Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Personal Protective Equipment Required					
 **Gloves**	X	 **Coveralls**	X	 **Respirator/ Face Mask**	X
 **Glasses/ Goggles**	X	 **Safety Footwear**	X	**Other (Please Specify):**	

Testing and Maintenance of Control Measures

Monitor, audit and review

First Aid Measures

Skin	Remove contaminated clothing. Dry wipe exposed skin and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water. For those providing assistance, avoid further skin contact to yourself or others. Wear impervious gloves. Launder contaminated clothing separately before reuse. Discard contaminated articles that cannot be laundered. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.
Eyes	Flush thoroughly with water. If irritation occurs, get medical assistance.
Inhalation	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
Ingestion	Seek immediate medical attention. Do not induce vomiting.

Emergency Action

FIRE FIGHTING MEASURES
Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames. Inappropriate Extinguishing Media: Straight streams of water.

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Aldehydes, Sulphur Oxides, Smoke, Fume, Incomplete combustion products, Oxides of carbon
FLAMMABILITY PROPERTIES
Flash Point [Method]: >56C (133F) [ASTM D-93]
Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 7.0
Autoignition Temperature: >250°C (482°F)

NOTIFICATION PROCEDURES:
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES:

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for firefighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT:

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Large Spills:
Water spray may reduce vapour but may not prevent ignition in enclosed spaces.
Water Spill: Stop leak if you can do so without risk. Eliminate sources of ignition. If the Flash Point exceeds the Ambient Temperature by 10 deg C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS
Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

Storage, Transport & Disposal

HANDLING
Avoid all personal contact. Use proper bonding and/or earthing procedures. Do not use as a cleaning solvent or other non-motor fuel uses. For use as a motor fuel only. Do not use electronic devices (including but not limited to cellular phones, computers, calculators, pagers or other electronic devices etc) in or around any fuelling operation or storage area unless the devices are certified intrinsically safe by an approved national testing agency and to the safety standards required by national and/or local laws and regulations. Prevent small spills and leakage to avoid slip hazard. Do not siphon by mouth. Material can accumulate static charges which may cause an electrical spark (ignition source).
Static Accumulator: This material is a static accumulator.

STORAGE
Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release.
Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Drums must be earthed and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters.

Risk Rating Following Assessment & Implementation of Control Measures

LOW

Information Sources Used

COSHH DATA Sheet

Assessed by: S Draper	**Date:** 1st January 2019	**Date for Review:** 1st January 2020

I confirm that I have read and understood this COSHH Assessment titled Diesel and that I shall carry out works in the manner stated above.

Print Name	Sign	Date

Risk Rating Matrix

Risk = Likelihood x Severity

RISK RATING (R) Likelihood (L) x Severity (s)		HAZARD SEVERITY (S)				
		Negligible (N) Negligible injury, no absence from work	**Slight (S)** Minor Injury requiring first aid treatment	**Moderate (M)** Injury leading to a lost time accident	**High (H)** Involving a single death or serious injury	**Very High (VH)** Multiple Deaths
LIKELIHOOD OF RECURRENCE (L)	**Very Unlikely (VU)** A freak combination of factors would be required for an incident/accident to result	LOW	*LOW*	LOW	LOW	MEDIUM
	Unlikely (U) A rare combination of factors would be required for an accident/incident to result	LOW	LOW	LOW	MEDIUM	MEDIUM
	Possible (P) Could happen when additional factors are present but otherwise unlikely to occur	LOW	LOW	MEDIUM	MEDIUM	HIGH
	Likely (L) Not certain to happen but an additional factor may result in an accident/incident	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	Very Likely (VL) Almost inevitable that an accident/incident would result	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

COSHH Assessment No. CA 03

Site Address:

AOC Archaeology Group

This assessment must take into account the Manufacturer's Safety Data Sheet, Product Label and the activity to be undertaken. A copy of the Safety Data Sheet is to be attached to this Assessment upon completion.

Substance Name: Hydraulic Oil	**Supplier:** Various

Chemical Composition: Refined mineral base oil

Hazard Classification

Caution	x	Flammable			x
Corrosive		Gas under pressure		Dangerous for the Environment	
Toxic		Oxidising		Other (Please Specifiy):	
Long Term Health Hazards	x	Explosive			

Risk Categories:

- R51/53 Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
- R52 Harmful to aquatic organisms
- R65 Harmful: may cause lung damage if swallowed.
- R65 Harmful may cause lung damage if swallowed.

Safety Phrases:

Form of Substance

DUST	**FUMES**	**MIST**	**GASES**
VAPOURS	**SOLID**	**LIQUID**	**OTHER (Please Specify):**
		x	

Persons at Risk

Employees	Sub-Contractors	Visitors	Members of the public	Other (Please Specify):
x	x	x		

Routes of Exposure

Skin	Cuts/ Abrasions	Eyes	Inhalation	Ingestion	Other (Please Specify):
x	x	x	x	x	

Work Process (How is the Substance used?)

The substance is used for Machines on site.

Exposure Details (How much for how long?)

Code 1 - Accepted

Method Statement/ Risk Assessment

Occupational Exposure Limits (From EH40):		Quantity (Kg/ L): 5 Ltrs
15 Min TWA: Mineral Oil 10 mg/m3	**8 Hr TWA:** 5mgm3 Mineral Oil 5mg/m3	**Duration (mins/ Hrs):** 10 mins

Effects of Exposure On Health & Environment

Short Term Effects:

Eye Contact: May cause irritation to eyes.

Skin: Prolonged skin contact may cause redness and irritation.

Ingestion: May cause irritation of mouth, throat and digestive tract.

Inhalation: Low volatility makes inhalation unlikely at ambient temperature.

Environment
If spillage occurs, do not allow material to enter drains, sewers or water courses.

Is Biological Monitoring/ Health Surveillance Required? (If yes what is in place?)

NO

Is Environmental Monitoring Required? (If yes what is in place?)

NO

Control Measures (Remember; Eliminate, Isolate, Engineer, PPE & Training)

Operative must receive a site induction.

Operatives must have signed to say they have understood the Method Statement.

Provide adequate ventilation.

Local Exhaust Ventilation is recommended when excessive product misting occurs.

Wear correct PPE.

Ensure your read all instructions on the tin.

Follow site Emergency Response Procedures.

Personal Protective Equipment Required

Gloves [x]	**Coveralls** [x]	**Respirator/ Face Mask** [ ]
Glasses/ Goggles [x]	**Safety Footwear** [x]	**Other (Please Specify):**

Testing and Maintenance of Control Measures

Monitor, audit and review

First Aid Measures

Skin	Remove contaminated clothing. Wash skin with soap and water.

Eyes	Immediately rinse with water. Continue to rinse for at least 15 minutes. Make sure to remove any contact lenses from eyes before rinsing. Get medical attention immediately. Continue to rinse.
Inhalation	Remove victim immediately from source of exposure. Get medical attention
Ingestion	Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.
Environmental	Do not allow to enter drains, sewers or watercourses. Contain spillages with suitable absorbent material.

Emergency Action

Extinguish with carbon dioxide or dry powder.

Contact AOC Management in an emergency

Follow site Emergency Response Procedures

Storage, Transport & Disposal

Storage: Store in closed original container in a dry place.

Transport- Supplied in purpose made vehicle,

Disposal- Dispose of waste and residues in accordance with local authority requirements.

Risk Rating Following Assessment & Implementation of Control Measures (Use 5X5 Matrix)

VUxH=L

Information Sources Used

Supplier's Safety Data Sheet

Assessed by: S Draper	**Date:** 16th October 2019	**Date for Review:** 16th October 2020

I confirm that I have read and understood this COSHH Assessment titled Hydraulic Oil and that I shall carry out works in the manner stated above.

Print Name	Sign	Date

Risk Rating Matrix

Risk = Likelihood x Severity

RISK RATING (R) Likelihood (L) x Severity (s)		HAZARD SEVERITY (S)				
		Negligible (N) Negligible injury, no absence from work	**Slight (S)** Minor Injury requiring first aid treatment	**Moderate (M)** Injury leading to a lost time accident	**High (H)** Involving a single death or serious injury	**Very High (VH)** Multiple Deaths
LIKELIHOOD OF RECURRENCE (L)	**Very Unlikely (VU)** A freak combination of factors would be required for an incident/accident to result	LOW	*LOW*	LOW	LOW	MEDIUM
	Unlikely (U) A rare combination of factors would be required for an accident/incident to result	LOW	LOW	LOW	MEDIUM	MEDIUM
	Possible (P) Could happen when additional factors are present but otherwise unlikely to occur	LOW	LOW	MEDIUM	MEDIUM	HIGH
	Likely (L) Not certain to happen but an additional factor may result in an accident/incident	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	Very Likely (VL) Almost inevitable that an accident/incident would result	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

Method Statement/ Risk Assessment

COSHH Assessment No. CA 04

Site Address:

AOC Archaeology Group

This assessment must take into account the Manufacturer's Safety Data Sheet, Product Label and the activity to be undertaken. A copy of the Safety Data Sheet is to be attached to this Assessment upon completion.

Substance Name: Line Marker Paint Aerosol	**Supplier:** Various

Chemical Composition: Gas/vapour

Hazard Classification

 Caution	x	 Flammable	x	 Dangerous for the Environment	x
 Corrosive		 Gas under pressure			
 Toxic		 Oxidising		Other (Please Specifiy):	
 Long Term Health Hazards		 Explosive			

Risk Categories:

- R12 Extremely Flammable
- R36 Irritating to eyes
- R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R66 Repeated exposure may cause skin dryness or cracking.
  R67 Vapours may cause drowsiness and dizziness

Safety Phrases:

- S2 Keep out of reach of children
- S9 Keep container in well-ventilated place.
- S16 Keep away from sources of ignition-No smoking.
- S25 Avoid contact with eyes.
- S26 In case of contact with eyes, rinse immediately With plenty of water and seek medical advice.
- S37 Wear suitable gloves.
- S46 If swallowed, seek medical advice immediately and show this container or label.
- S51 Use only in well-ventilated areas.
- S56 Dispose of this material and its container to hazardous or special waste collection point.
- S64 If swallowed, rinse mouth with water (only if person is conscious).

Form of Substance

DUST		**FUMES**		**MIST**	x	**GASES**	x
VAPOURS	x	**SOLID**		**LIQUID**		**OTHER (Please Specify):**	

Persons at Risk

Code 1 - Accepted

Method Statement/ Risk Assessment

Employees	Sub-Contractors	Visitors	Members of the public	Other (Please Specify):
x	x	x		

Routes of Exposure

Skin	Cuts/ Abrasions	Eyes	Inhalation	Ingestion	Other (Please Specify):
x	x	x	x	x	

Work Process (How is the Substance used?)

Substance used for marking out on site

Exposure Details (How much for how long?)

Occupational Exposure Limits (From EH40):

15 Min STEL:	8 Hr TWA:
Acetone, 1500 ppm/3620 mg/m3 Butane, 750 ppm/1810 mg/m3 Butyl Acetate-norm 200 ppm/966 mg/m3 Cumene, 50 ppm (Sk)/250mg/m3 (Sk) Propane, Asphyxiating	1,2,4-Trimethylbenzene, 25 ppm/125 mg/m3 Acetone, 500 ppm/1210 mg/m3 Butane, 600 ppm/1450 mg/m3 Butyl Acetate-norm 200 ppm/966 mg/m3 Cumene, 25 ppm (Sk)/125 mg/m3 (Sk) Propane, Asphyxiating

Quantity (Kg/ L): 250 ml

Duration (mins/ Hrs):
5 mins

Effects of Exposure On Health & Environment

Short Term Effects:

Eye Contact: May cause severe irritation to eyes.

Skin: Prolonged skin contact may cause redness and irritation.

Ingestion: Drowsiness, dizziness, disorientation, vertigo.

Inhalation: Vapours may cause drowsiness and dizziness

Chronic Effects:

Environment
When used as intended, no environmental impact is anticipated. If spillage occurs, do not allow material to enter drains, sewers or water courses.

Is Biological Monitoring/ Health Surveillance Required? (If yes what is in place?)

NO

Is Environmental Monitoring Required? (If yes what is in place?)

NO

Control Measures (Remember; Eliminate, Isolate, Engineer, PPE & Training)

Operative must receive a site induction.

Operatives must have signed to say they have understood the Method Statement.

Provide adequate ventilation.

Observe occupational exposure limits and minimise the risk of inhalation of spray.

Wear correct PPE.

Ensure your read all instructions on the container.

Follow site Emergency Response Procedures.

Personal Protective Equipment Required		
 **Gloves** x	 **Coveralls** x	 **Respirator/ Face Mask** ☐
 **Glasses/ Goggles** x	 **Safety Footwear** x	**Other (Please Specify):**

Testing and Maintenance of Control Measures

Monitor, audit and review

First Aid Measures

Skin	Remove contaminated clothing. Wash skin with soap and water.
Eyes	Immediately rinse with water. Continue to rinse for at least 15 minutes. Make sure to remove any contact lenses from eyes before rinsing. Get medical attention immediately. Continue to rinse.
Inhalation	Remove victim immediately from source of exposure. Get medical attention
Ingestion	Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.
Environmental	Do not allow to enter drains, sewers or watercourses. Contain spillages with suitable absorbent material.

Emergency Action

Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
Extremely flammable. Forms explosive mixtures with air. Aerosol cans may explode in a fire. Vapours are heavier than air and may spread near ground to sources of ignition.
Pressurised container must not be exposed to temperatures above 50c.

Contact AOC Management in an emergency

Follow site Emergency Response Procedures

Storage, Transport & Disposal

Storage: Extremely flammable. Store at moderate temperatures in dry, well-ventilated area, keep away from heat, sparks and open flame. Pressurised container; must not be exposed to temperatures above 50c. Do not pierce or burn even after use.

Transport- Supplied in purpose made vehicle,

Disposal- Dispose of waste and residues in accordance with local authority requirements. Make sure containers are empty before discarding. Do not burn or incinerate containers even when empty-containers may burst or explode violently if exposed to extreme heat.

Risk Rating Following Assessment & Implementation of Control Measures (Use 5X5 Matrix)

VUxH=L

Information Sources Used

Method Statement/ Risk Assessment

CONNECT ARCHAEOLOGY

Supplier's Safety Data Sheet		
Assessed by: S Draper	**Date:** 16th October 2019	**Date for Review:** 16th October 2020

I confirm that I have read and understood this COSHH Assessment titled Line Marker Paint Aerosol and that I shall carry out works in the manner stated above.

Print Name	Sign	Date

Risk Rating Matrix

Risk = Likelihood x Severity

RISK RATING (R) Likelihood (L) x Severity (s)		HAZARD SEVERITY (S)				
		Negligible (N) Negligible injury, no absence from work	**Slight (S)** Minor Injury requiring first aid treatment	**Moderate (M)** Injury leading to a lost time accident	**High (H)** Involving a single death or serious injury	**Very High (VH)** Multiple Deaths
LIKELIHOOD OF RECURRENCE (L)	**Very Unlikely (VU)** A freak combination of factors would be required for an incident/accident to result	LOW	*LOW*	LOW	LOW	MEDIUM
	Unlikely (U) A rare combination of factors would be required for an accident/incident to result	LOW	LOW	LOW	MEDIUM	MEDIUM
	Possible (P) Could happen when additional factors are present but otherwise unlikely to occur	LOW	LOW	MEDIUM	MEDIUM	HIGH
	Likely (L) Not certain to happen but an additional factor may result in an accident/incident	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	Very Likely (VL) Almost inevitable that an accident/incident would result	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

COSHH Assessment No. CA 05

Site Address:

AOC Archaeology Group

This assessment must take into account the Manufacturer's Safety Data Sheet, Product Label and the activity to be undertaken. A copy of the Safety Data Sheet is to be attached to this Assessment upon completion.

Substance Name: AdBlue	**Supplier:** Various
Chemical Composition: Water solution of aqueous urea (32.5%) solution	

Hazard Classification

 Caution	X	 Flammable	x	 Dangerous for the Environment	
 Corrosive		 Gas under pressure			
 Toxic		 Oxidising		Other (Please Specifiy):	
 Long Term Health Hazards		 Explosive			

Risk Categories: R10 Flammable.	**Safety Phrases:**

Form of Substance

DUST	**FUMES**	**MIST**	**GASES**
VAPOURS	**SOLID**	**LIQUID** X	**OTHER (Please Specify):**

Persons at Risk

Employees	Sub-Contractors	Visitors	Members of the public	Other (Please Specify):
X	x	X		

Routes of Exposure

Skin	Cuts/ Abrasions	Eyes	Inhalation	Ingestion	Other (Please Specify):
X	X	X	X	X	

Work Process (How is the Substance used?)

The product is used in motor vehicles with a diesel engine for reduction of NOx emissions

Exposure Details (How much for how long?)

Occupational Exposure Limits (From EH40):

Effects of Exposure On Health & Environment

Substance is not classified as dangerous according to regulation (EC) 1272/2008 of the European parliament and of the council, on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006

Is Biological Monitoring/ Health Surveillance Required? (If yes what is in place?)

NO

Is Environmental Monitoring Required? (If yes what is in place?)

NO

Control Measures (Remember; Eliminate, Isolate, Engineer, PPE & Training)

Operative must receive a site induction.

Process conditions provide eyewash station.
Hand Protection: Hand protection not required.
Eye Protection: Wear eye protection if there is a risk of this product coming into contact with eyes.
Wear appropriate clothing to prevent any possibility of skin contact.

Personal Protective Equipment Required

 **Gloves**	x	 **Coveralls**	x	 **Respirator/ Face Mask**	
 **Glasses/ Goggles**	x	 **Safety Footwear**	x	**Other (Please Specify):**	

Testing and Maintenance of Control Measures

Monitor, audit and review

First Aid Measures

Skin	Wash contaminated skin with soap and warm water. Remove contaminated clothing and shoes. If irritation persists seek medical attention.
Eyes	Irrigate thoroughly with water for at least 10 minutes. Obtain medical attention.
Inhalation	Remove from exposure. In severe cases, or if recovery is not rapid or complete seek medical attention.
Ingestion	Wash out mouth with water. Do not induce vomiting. If patient is conscious give water to drink. If patient feels unwell seek medical attention.
Environmental	Do not allow to enter drains, sewers or watercourses. Contain spillages with suitable absorbent material.

Emergency Action

Move victim to a safe area. If unconscious, place in recovery position and seek medical advice. No action shall be taken involving any personal risk without suitable training. Actions shall be taken by certified and trained personnel.

Do not discharge into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.

Storage, Transport & Disposal

Method Statement/ Risk Assessment

When AdBlue is stored in a GreenChem tank system and a fire or extreme heats threatens the system, a pressure increase will occur, and the container may burst. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk without suitable training. Always follow directions in applicable emergency plans.
Risk Rating Following Assessment & Implementation of Control Measures (Use 5X5 Matrix)
Low
Information Sources Used
Supplier's Safety Data Sheet

Assessed by: S Draper	**Date:** 16th October 2019	**Date for Review:** 16th October 2020

I confirm that I have read and understood this COSHH Assessment titled AdBlue and that I shall carry out works in the manner stated above.

Print Name	Sign	Date

Risk Rating Matrix

Risk = Likelihood x Severity

RISK RATING (R) Likelihood (L) x Severity (s)		HAZARD SEVERITY (S)				
		Negligible (N) Negligible injury, no absence from work	**Slight (S)** Minor Injury requiring first aid treatment	**Moderate (M)** Injury leading to a lost time accident	**High (H)** Involving a single death or serious injury	**Very High (VH)** Multiple Deaths
LIKELIHOOD OF RECURRENCE (L)	**Very Unlikely (VU)** A freak combination of factors would be required for an incident/accident to result	LOW	*LOW*	LOW	LOW	MEDIUM
	Unlikely (U) A rare combination of factors would be required for an accident/incident to result	LOW	LOW	LOW	MEDIUM	MEDIUM
	Possible (P) Could happen when additional factors are present but otherwise unlikely to occur	LOW	LOW	MEDIUM	MEDIUM	HIGH
	Likely (L) Not certain to happen but an additional factor may result in an accident/incident	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	Very Likely (VL) Almost inevitable that an accident/incident would result	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

Method Statement/ Risk Assessment

COSHH Assessment No. CA 06

Site Address:

AOC Archaeology Group

This assessment must take into account the Manufacturer's Safety Data Sheet, Product Label and the activity to be undertaken. A copy of the Safety Data Sheet is to be attached to this Assessment upon completion.

Substance Name: Skin Sanitiser	**Supplier:** Various

Chemical Composition: Alcohol Denat. Aqua Propyl Alcohol Glycerin Panthenol Acrylates/C10-30 Alkyl Acrylate Crosspolymer Triisopropanolamine

Hazard Classification

Caution		Flammable	x	Dangerous for the Environment	
Corrosive		Gas under pressure			
Toxic		Oxidising		Other (Please Specifiy):	
Long Term Health Hazards		Explosive			

Risk Categories:	**Safety Phrases:**
R10 Flammable.	

Form of Substance

DUST	**FUMES**	**MIST**	**GASES**
VAPOURS	**SOLID**	**LIQUID** x	**OTHER (Please Specify):**

Persons at Risk

Employees	Sub-Contractors	Visitors	Members of the public	Other (Please Specify):
x	x	x		

Routes of Exposure

Skin	Cuts/ Abrasions	Eyes	Inhalation	Ingestion	Other (Please Specify):
x	x	x	x	x	

Work Process (How is the Substance used?)

Used as skin sanitiser

Exposure Details (How much for how long?)

Code 1 - Accepted

Occupational Exposure Limits (From EH40):		
SODIUM HYDROXIDE WEL STEL - 15 min. 2 mg/m		

Effects of Exposure On Health & Environment

Inhalation. No specific symptoms noted.
Ingestion May cause nausea, headache, dizziness and intoxication.
Skin contact None known.
Eye contact May cause severe irritation to eyes.

Is Biological Monitoring/ Health Surveillance Required? (If yes what is in place?)

NO

Is Environmental Monitoring Required? (If yes what is in place?)

NO

Control Measures (Remember; Eliminate, Isolate, Engineer, PPE & Training)

Operative must receive a site induction.

Process conditions Provide eyewash station.
Engineering measures
Not relevant Respiratory equipment
Not relevant Hand protection Hand protection not required.
Eye protection Wear eye protection if there is a risk of this product getting in the eyes.
Other Protection Wear appropriate clothing to prevent any possibility of skin contact. Hygiene measures DO NOT SMOKE IN WORK AREA! Promptly remove any clothing that becomes contaminated

Personal Protective Equipment Required

 **Gloves**	x	 **Coveralls**	x	 **Respirator/ Face Mask**	
 **Glasses/ Goggles**	x	 **Safety Footwear**	x	**Other (Please Specify):**	

Testing and Maintenance of Control Measures

Monitor, audit and review

First Aid Measures

Skin	Remove contaminated clothing.
Eyes	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention promptly if symptoms occur after washing.
Inhalation	General first aid, rest, warmth and fresh air.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.
Environmental	Do not allow to enter drains, sewers or watercourses. Contain spillages with suitable absorbent material.

Emergency Action

Extinguishing media Fire can be extinguished using: Water spray, fog or mist. Foam, carbon dioxide or dry powder. Dry chemicals, sand, dolomite etc.

Hazardous combustion products During fire, toxic gases (CO, CO2) are formed. Unusual Fire & Explosion Hazards FLAMMABLE. Forms explosive mixtures with air. Special Fire Fighting Procedures If possible, fight fire from protected position. Protective equipment for fire-fighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire Do not discharge into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.
Storage, Transport & Disposal
Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Storage Class Flammable liquid storage.
Risk Rating Following Assessment & Implementation of Control Measures (Use 5X5 Matrix)
Low
Information Sources Used
Supplier's Safety Data Sheet

Assessed by: S Draper	**Date:** 16th October 2019	**Date for Review:** 16th October 2020

I confirm that I have read and understood this COSHH Assessment titled Skin Sanitiser and that I shall carry out works in the manner stated above.

Print Name	Sign	Date

Risk Rating Matrix

Risk = Likelihood x Severity

RISK RATING (R) Likelihood (L) x Severity (s)		HAZARD SEVERITY (S)				
		Negligible (N) Negligible injury, no absence from work	**Slight (S)** Minor Injury requiring first aid treatment	**Moderate (M)** Injury leading to a lost time accident	**High (H)** Involving a single death or serious injury	**Very High (VH)** Multiple Deaths
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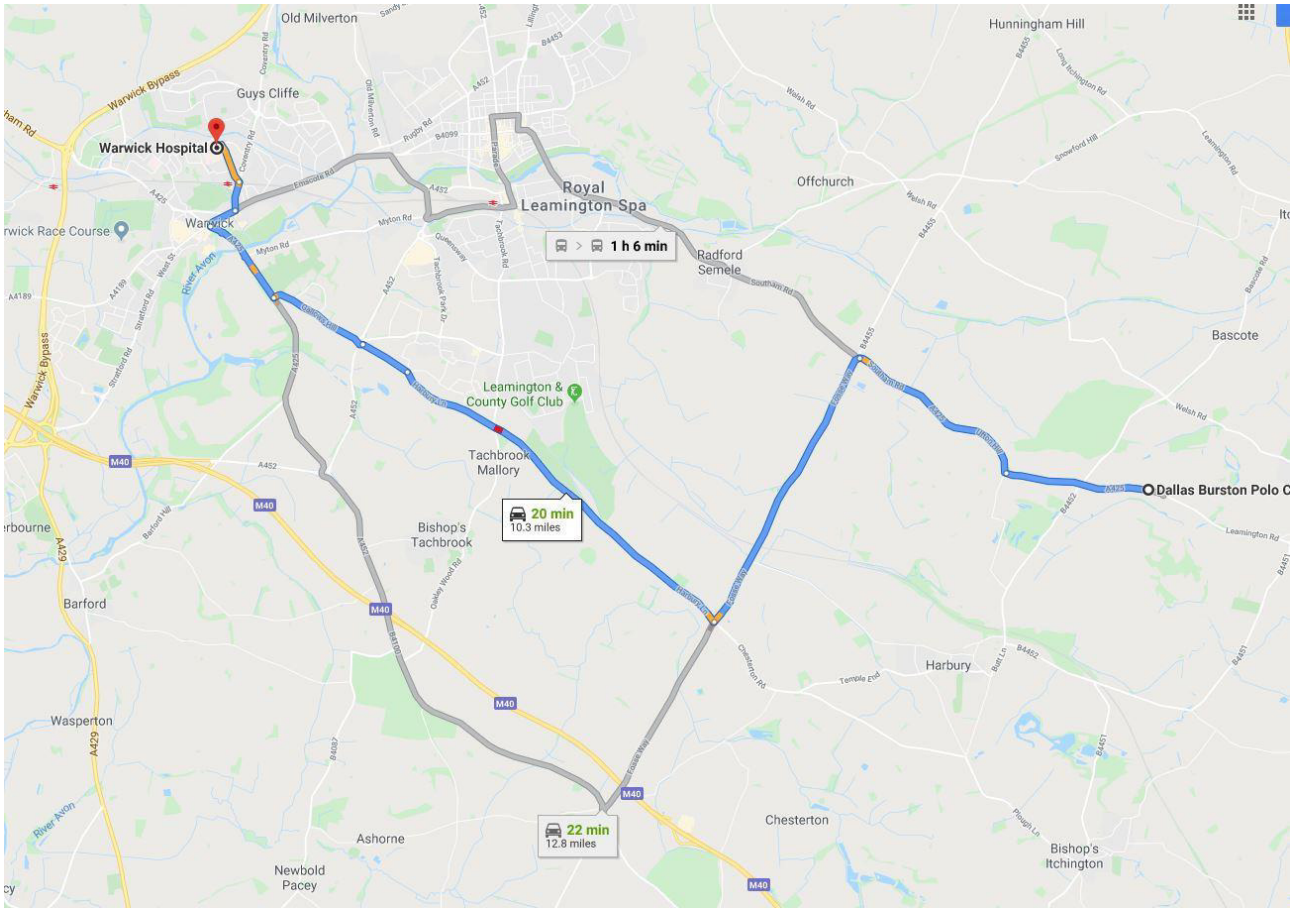
	Possible (P) Could happen when additional factors are present but otherwise unlikely to occur	LOW	LOW	MEDIUM	MEDIUM	HIGH
	Likely (L) Not certain to happen but an additional factor may result in an accident/incident	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	Very Likely (VL) Almost inevitable that an accident/incident would result	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

Appendix D: Calibration Certificates

To be held on file on site.

Appendix E: Plan and Directions to A&E



Dallas Burston Polo Club
Stoneythorpe Estate, Southam CV47 2DL

Head south towards A425
2 s (43 ft)
Continue on A425. Take B4455 and Harbury Ln to Lakin Rd in Warwick
19 min (10.0 mi)

Turn right onto A425
1.1 mi

At the roundabout, take the 2nd exit onto Southam Rd/A425

Continue to follow A425
1.5 mi

At the roundabout, take the 1st exit onto B4455
2.2 mi

Turn right onto Harbury Ln
2.9 mi

At the roundabout, take the 1st exit and stay on Harbury Ln
0.4 mi

At the roundabout, take the 2nd exit onto Gallows Hill
0.8 mi

Turn right onto Banbury Rd/A425

Go through 2 roundabouts
0.7 mi

Turn right onto Smith St/A429

Continue to follow A429
0.2 mi

Turn left onto Coventry Rd/A429
0.2 mi
Follow Lakin Rd to your destination
1 min (0.3 mi)

Turn left onto Lakin Rd
0.3 mi

Turn left
13 ft

Warwick Hospital
Lakin Rd, Warwick CV34 5BW