

## **Appendix 18-4 Draft Historic Environment Management Plan**

# Future LuToN: Making best use of our runway

Preliminary Environmental Information Report  
Volume 3: Appendices  
Appendix 18-4 Draft Historic Environment Management  
Plan

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### Appendix A Standards and guidance

# 1 INTRODUCTION

## 1.1 Background

1.1.1 London Luton Airport Limited (LLAL) is proposing to expand London Luton Airport (LTN) by submitting a Development Consent Order (DCO) application for works that will allow LTN to grow to accommodate 32 million passengers per annum (mppa), (the Proposed Development). A current planning permission for works at LTN, called Project Curium (LBC ref: 12/01400/FUL), limits passenger throughput to 18mppa.

1.1.2 This document is the draft Historic Environment Management Plan (HEMP) for the works to construct the Proposed Development, and is provided as part of a suite of documents which make up the Preliminary Environmental Information Report (PEIR) for Statutory Consultation.

1.1.3 The Proposed Development includes all works for which consent is being sought as part of the Development Consent Order (DCO) application. The Proposed Development is described in Chapter 2 of the PEIR, and includes works at the:

- Main Application Site;
- Off-site Car Parks;
- Highway Interventions, and
- Off-site Planting.

1.1.4 The HEMP gives details of the archaeological works required to address the impacts of the Proposed Development within the Main Application Site. This includes extensive earthworks to construct the aviation platform. The Off-site Car Parks and highways interventions occur within areas that have been subject to previous development so there will be no impact on the archaeological resource. The Off-site planting comprises re-establishing hedgerows on areas that have been in long term use as arable land and tree planting and is not considered likely to have any significant effect.

1.1.5 The Proposed Development is characterised by the retention of the existing passenger terminal and the provision of a new passenger terminal on land owned by LLAL to the north east of the runway, to give an overall passenger capacity of 32 million passengers per annum.

1.1.6 The main elements of the Proposed Development are:

- creation of an airfield platform: earthworks from on-site
- excavation;
- new terminal with boarding piers;

- additional taxiways and aprons (aircraft stands);
- vehicle forecourt and multi-storey short stay/ mid-stay car parking adjacent to the terminal, with additional mid- and long stay surface parking, including replacement where the existing facilities are disturbed;
- airfield facilities: relocated engine run-up bay, compass swing bay and de-icing area, and fire training facilities;
- landside facilities: airport associated support buildings such as snow base, energy centre, logistics centre and service yard, and new fuel line connection and storage facilities;
- surface access: road and infrastructure provision and adjustments. Bus station, taxi ranks and extension of Luton DART to the new terminal;
- surface water and foul management, including drainage, interceptors, surface water attenuation and treatment, foul water collection and treatment, effluent storage and discharge to ground; and
- landscaping: improvement or replacement of existing and planned public open space and amenities and restoration landscaping.

## **2 PURPOSE AND DEVELOPMENT OF THE HISTORIC ENVIRONMENT MANAGEMENT PLAN**

### **2.1 Purpose of the HEMP**

2.1.1 The purpose of the HEMP is to deliver effective planning, management and governance throughout the construction period to manage potential impacts upon the historic environment.

2.1.2 LLAL and the lead contractors will comply as a minimum with appropriate environmental legislation at the time of construction. The relevant heritage related legislation and policy is detailed in the Cultural Heritage Chapter of the PEIR (Chapter 18). For this reason, the appropriate statutory requirements are not repeated within this draft HEMP.

### **2.2 Development of the draft HEMP**

2.2.1 The HEMP is one of a suite of documents to be submitted as part of the application to the Planning Inspectorate (PINS) for Development Consent Order (DCO) application for the Proposed Development.

2.2.2 This draft HEMP will be subject to engagement with relevant local authorities and other statutory bodies prior to submission of the DCO application. This will include Historic England, the Central Bedfordshire Archaeologist (CBCA) and the Hertfordshire County Council Archaeologist (HCCA). The draft HEMP may therefore be refined where necessary as the design and construction approaches develop and as the relevant mitigation measures identified in consultation with the local authority archaeologists are finalised and reported in the ES.

2.2.3 The Central Bedfordshire County Council Archaeologist (CBCA) and the Hertfordshire County Council Archaeologist (HCCA) have advised a need to carry out a programme of archaeological mitigation to record and protect the nature and extent of any archaeological remains within the site, in accordance with the National Planning Policy Framework (DCLG 2019).

2.2.4 The final version of the HEMP will describe all the proposed methodology for the programme of archaeological mitigation works as detailed in consultation with the CBCA and HCCA (ongoing). The HEMP has been produced in accordance with the best archaeological practices as defined in the Chartered Institute for Archaeologists' Code of Conduct (CIfA 2014d), Standard and Guidance for Historic Desk Based Assessment (CIfA 2014f), Standard and Guidance for Archaeological Watching Brief (CIfA 2014c), Standard and Guidance for Archaeological Geophysical Survey (CIfA 2014g) and Standard

and Guidance for Archaeological Evaluation (ClfA 2014e). A full list of standards and guidance can be found in Appendix A.

- 2.2.5 A copy of the HEMP will be provided to the Lead Contractor who will be responsible for ensuring that the appointed archaeological contractor will follow the methodologies stipulated. A copy of the HEMP must be kept on site during the entirety of the works.

## 3 BACKGROUND

### 3.1 Site location, topography, and geology

- 3.1.1 The Main Application Site, hereafter referred to as the 'site', is located on a north/south-aligned ridge within the Chilterns. The topography of the study area varies, with Luton Parkway Station being 113m above ordnance datum (AOD) and London Luton Airport being on a plateau at 157m AOD. The A1081, New Airport Way runs along the south eastern edge of Luton towards the airport terminal building. The area is formed from a series of dry valleys which were formed during the last glacial period. The site sits on a series of dry valleys and lies at an elevation ranging from approximately 120 m AOD to 150 m AOD, with the northern and central areas having the highest elevations. There are two valleys which cross through the site from north to east.
- 3.1.2 The underlying geology within the main body of the site is recorded as undifferentiated Lewes Nodular Chalk Formation and Seaford Chalk Formation, with bands of Holywell Nodular Chalk Formation, New Pit Chalk Formation and Chalk Rock Member running along the site's eastern and western edges. These chalk layers formed during the Cretaceous Period (BGS 2017). The chalk is predominantly soft white to off white very fine grained limestone with harder clasts of flint and occasionally softer fragments of low density chalk. The chalk formation is reasonably thick, typically 60 to 70m. The strata in this area dip to the east. Clay with Flints overlies the chalk. It is derived from the solution of many metres of chalk that previously overlay the area. It represents the non-soluble residue from this solution process. This layer can vary greatly locally but is often up to 10m thick.
- 3.1.3 During the last glacial period, the Anglian Ice sheet advanced from the north towards the site. The site lies close to the limit of glaciation; geological mapping shows small areas of glacial deposits south of the Century Park area, indicating that there have been periods of glacial advance in the area. The predominate process which has led to the current geomorphological setting is, however, considered to have been from periglacial processes, resulting in frozen ground that was subject to seasonal melting, and creating ephemeral rivers which cut down the valley sides. This process removed the Clay with Flints from the base of the valley although some deposits are likely to be present down the valley sides.
- 3.1.4 Head deposits are also likely to be present in the valley due to the downslope movement of material mainly under periglacial conditions. Fluvial deposits which are gravelly/chalky in nature are likely to be present in the base of the valley where the ephemeral rivers were present. After the periglacial period these

valleys were left as dry valleys. The former landfill fills the head of one of the valleys.

## **3.2 Historical and archaeological background**

3.2.1 The following background is taken from the Cultural Heritage Chapter (Chapter 18, Volume 1) of the PEIR. The heritage assets within the Site, as well as previous work undertaken within the site boundary, can be found in the PEIR (see PEIR Volume 2, Figure 18-3), listed by their Unique Identification reference number.

### ***The Prehistoric Period***

3.2.2 The Site lies close to the southern limit of the Anglian Ice sheet and the Bedfordshire Archaeological Resource Framework notes that the area around Luton has produced a number of important finds of Palaeolithic material. The available evidence, which often occurs in brick earth deposits or sand or gravel quarries shows that in the Upper Palaeolithic period activity was concentrated within river valleys and uplands areas affording good vantage points, such as the Greensands ridge and the Chilterns.

3.2.3 At Caddington (approximately 6 km to the south west of the airport) evidence was found of short-term, small-scale Palaeolithic activity around ponds and watering holes. These formed in funnel-shaped solution hollows (dolines) which penetrate the superficial deposits into the underlying chalk bedrock. The airport Site has the potential for similar geological conditions and therefore has the potential for the survival of in-situ Palaeolithic deposits.

### ***The Iron Age and Roman Period***

3.2.4 The Catevallauni, who occupied the area during the Iron Age, were one of the most important tribal groups in southern Britain. They were actively engaged in trading and the Icknield Way was a major transport corridor in the Iron Age period (MBD 353). It ran from the Dorset coast to Norfolk; within the local area it skirted Dunstable and ran to the west of Luton. Watling Street (MBD 5508) ran on the line of the modern A5 through Dunstable. It is known to have passed to the west of Luton, and Waulud's Bank (MBD 820), an important prehistoric site was situated at the point where the Icknield Way crossed the River Lea. The Icknield Way was also still in use in the Romano-British period.

3.2.5 At the eastern end of the Site, within the fields south of Wandon End, there is the site of an Iron Age- Romano British double ditched enclosure and occupation site (PHA22) and two further areas where other cropmarks which may represent Iron Age activity have been recorded from aerial photographs.

- 3.2.6 Other sites of a similar period in the immediate area include the Iron Age/Romano-British enclosure south of Chiltern Hall (CM2) and the cropmarks of possible prehistoric enclosures adjacent to Winch Hill to the east (HER13 & HER14). Archaeological excavations at Stopsley (MBD 7243 & MBD 13417) approximately 2km to the north of the Site, in an area of similar topography, revealed a complex, multi-period landscape with evidence of settlement from the later Neolithic/Bronze Age through to the Medieval period (Albion Archaeology 2010 a & b).

### ***The Early Medieval period***

- 3.2.7 By the 10th century Lyg-tun, the Saxon settlement at Luton, was established. Pre-Christian Saxon cemeteries have been identified at Biscot Windmill, on a chalk ridge and at Argyll Avenue and Legrave Marsh. The historic core of the town is not, however, thought to originate from the Anglo-Saxon period (Rushton 2003).

### ***The Medieval period***

- 3.2.8 The Domesday Book of 1086 records Loitone as very large, with 145 households, 80 villagers and 47 smallholders. It had land for 82 ploughs, meadow for 4 ploughs, woodland for 2000 pigs and six mills. To the east of the site, the settlement of Wandon End and Wandon Green is recorded as having only 6 households, land for 2.8 ploughs and woodland for 40 pigs (opendomesday.org<sup>1</sup>). In the Medieval period Luton had six watermills. One mill gave its name to Mill Street. Between 1121 and 1137 Robert, 1st Earl of Gloucester, the Lord of the Manor, built a new church, and in 1139 he built a castle. This castle was demolished in 1154 but it gave its name to Castle Street. In the late 12th century a 'hospital' where poor travellers could stay was built in Farley Hill. There was another hospital in Luton, this one for sick people. It was dedicated to the Virgin Mary and Mary Magdalene.
- 3.2.9 During this period, the area covered by the Main Application Site and surrounding area was in agricultural use while Luton has been a market town since 1338. There are numerous agricultural buildings in the area that illustrate its agricultural history, for example the timber framed Winsley Hill Farm. Someries Castle (SM, PHA35, NHLE 1008452) which lies to the south of the runway at Luton Airport was a residence that was built in the 1430s for Sir John Wenlock. The name Someries Castle is derived from William de Someries, whose residence stood on the site in the 13th century.

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<sup>1</sup> [www.opendomesday.org.uk](http://www.opendomesday.org.uk)

### ***The Post-Medieval Period***

- 3.2.10 During the post-medieval period, Luton was a quiet market town serving the surrounding agricultural land. In the 16th century, a brick making industry was established in Luton. This had an effect on the appearance of the town with many of the timber-framed buildings replaced with the more fashionable brick. In the beginning of the 17th century, with the introduction of the manufacture of straw plait, a successful straw hat making industry was established and the town entered a new era of prosperity. The importance of Luton market was substantially increased and Luton became the main centre for Bedfordshire and Hertfordshire. Outside of the urban area of Luton, Luton Hoo (Grade II\*, NHLE 1000578), a landscape park, was first enclosed in 1623 and enlarged and remodelled by Lancelot Brown in 1764-74.
- 3.2.11 In the 18th century Luton continued to be an agricultural market town serving the local villages with hat making continuing to be prosperous. The development of Luton accelerated during the 19th century.
- 3.2.12 The post-medieval agricultural history of the area is illustrated by a number of agricultural buildings scattered throughout the landscape to the north east, east and south of the Main Application Site. Some of these buildings are included in villages, small hamlets or isolated settlements. The parish of King's Walden, to the east, includes scattered farmhouses and cottages as well as the village of Breachwood Green and the hamlets of Wandon End and Lawrence End to the south.

### ***The Modern Period***

- 3.2.13 The decline of the hat industry in Luton and the arrival of heavy industry in the form of motor car manufacture led to major changes in the nature of the settlement and to rapid population growth and associated housing throughout the 20th century. The Vauxhall Motors plant opened on the site to the north west of the airport in 1905 and expanded during the 20th century.
- 3.2.14 Aviation came to Luton in 1914, immediately before World War I when Gustav Blondeau and Hilda Hewlett relocated the Omnia Works from Clapham to Leagrave, the site of the Electrolux factory.
- 3.2.15 During World War II the Percival Aircraft factory and the Flight Testing Department of the Napier & Sons engine manufacturer, which were both sited at Luton Airport, became important military assets during WWII. An RAF Elementary and Reserve Flying Training School was established at Luton Aerodrome in 1938.

- 3.2.16 A variety of military defensive features were constructed during the war to protect the airport and the Vauxhall Motor Works, which was a major production centre for tanks. Gun emplacements and pillboxes were established on a promontory overlooking the factory site.
- 3.2.17 At the end of the war, the land was returned to local authority control and the airport continued in use as a commercial operation. A new control tower became operational in 1952. Percival Aircraft Ltd became Hunting Percival Aircraft in 1954 and then Hunting Aircraft in 1957 which had an operational factory at the airport until the early 1960s.
- 3.2.18 The airport grew in importance and expansion of its facilities began in 1958 with a concrete runway being installed in 1960. This was then extended to a total length of 2,160 metres in 1964. Luton further increased its capacity as the foreign holiday travel market expanded and over a 15 year period underwent a process of upgrading its facilities.

### **3.3 Previous archaeological investigations**

- 3.3.1 There are nine archaeological events recorded in the CBC & HCC HER's that have taken place within the boundary of the Proposed Development. These are summarised below.
- 3.3.2 A fieldwalking survey of land at Winchill Farm by the Manshead Archaeological Society in 1996 [EV7] found evidence of a Romano British building. In 1997 an anti-traveller trench at the eastern edge of Wigmore Park [EV8] was excavated and the spoil heaps subsequently assessed archaeologically. This recorded prehistoric flints and Iron Age, Romano British and Medieval pottery.
- 3.3.3 In 2004 a geophysical (resistivity) survey [EV1] of targeted areas within Wigmore Valley Park, within 20m of the anti-traveller trench found evidence of a possible building.
- 3.3.4 In 1989 and 1990 the route of the Humberside to Buncefield oil pipeline was assessed. Geophysical survey, fieldwalking and evaluation (EV 10, 11 & 12) near Winch Hill Farm identified pits containing Romano British material. Subsequent investigations at Winch Hill Common found evidence for a substantial late 1st century BC to 2nd century AD settlement.

#### ***Archaeological investigations associated with the Proposed Development***

- 3.3.5 A phased programme of investigation to inform the baseline understanding of the archaeological resource has been carried out in support of the PEIR and the ES. To date this consists of

desk based research, geophysical survey and archaeological trial trench evaluation.

3.3.6 In 2018 a geophysical survey (Sumo 2018) confirmed that an enclosure occupied the high ground in the field immediately south of Wandon End. An archaeological evaluation of this area was carried out by Cotswold Archaeology in February 2019 (Appendix 18-3, Volume 3 of the PEIR). This showed that the ditches were well preserved and that they enclosed an area that had the remains of a late Iron Age/Romano British building which shows evidence of an under floor heating system and some evidence of plastered walls which had been painted.

3.3.7 In January 2019 further archaeological fieldwork was carried out on the LLAL holdings in Hertfordshire. A geophysical survey (Appendix 18-2, Volume 3 of the PEIR) identified a series of anomalies which may be archaeological in nature.

### ***PEIR 2019***

3.3.8 The PEIR concluded that there are no designated heritage assets within the Proposed Development boundary, but identified a Romano British settlement (PHA22) which will be impacted by the earthworks. It concludes the following archaeological potential for the site:

- Neolithic – low potential;
- Bronze Age – low potential;
- Iron Age – medium potential;
- Roman – high potential;
- Saxon – low potential;
- Medieval – low potential;
- Post-medieval – low potential.

### ***Trial trench evaluation 2019***

3.3.9 The Iron Age/Romano British settlement (PHA22), was evaluated by archaeological trenching carried out by Cotswold Archaeology in February 2019. This was carried out to enhance the baseline understanding of the Site. The report is included in Volume 3 of the PEIR as Appendix 18-3.

3.3.10 The entire area of the two fields is 50ha, which was all included in the geophysical survey carried out by Sumo. This informed the design of the trial trench evaluation. Fifty-seven trenches were excavated across the evaluation site. The area comprises two arable fields, north and south respectively, situated on a series of dry valleys. The trial trench evaluation only covered the main focus of the settlement as the area is being prepared for public

use as replacement amenity land. It was agreed with the Central Bedfordshire archaeology team that the remainder of the area would be subject to archaeological trial trenching at a later date prior to construction.

- 3.3.11** The evaluation confirmed that the preservation of archaeology within cut features, such as the boundary ditches was good, with largely undisturbed deposits containing good dating evidence from pottery. Within the boundary ditches a series of features relating to the domestic and agricultural use of the enclosure in the late Iron Age to the fourth century AD were found. The earliest feature on the site was in the north field which comprised a single pit which contained Neolithic pottery within its fill.
- 3.3.12** A Late Iron Age/Early Roman and Romano-British enclosure, small building and series of rubbish pits were recorded during the trial trench evaluation. These were all situated on a largely flat area adjacent to a dry valley bisecting the field. The building had well-preserved rubble-built walls with an internal plaster coating which has evidence of pigments that had been used to decorate the top surface. There was also evidence of an underfloor heating system. This building is comparable in design to the Romano British villa site excavated at Totternhoe. The degree of preservation of structures and artefacts and the high archaeological potential of this site, together with the parallels with other local sites, means it is of regional importance and therefore of medium value (heritage significance).
- 3.3.13** No archaeology or features of geoarchaeological interest was found in any of the trenches in the southern field.

## 4 AIMS AND OBJECTIVES

### *Introduction*

- 4.1.2 The following outlines the aims and objectives and agreed methodologies that will be used during the archaeological mitigation works associated with this project. The archaeology works will be carried out in accordance with the published Standards and guidance for Archaeological Field Evaluation (ClfA 2014a), Standards and guidance for Archaeological Excavation (ClfA 2014b), Standards and guidance for Archaeological Watching Brief (ClfA 2014c) and the ClfA Code of Conduct (2014d) and all other relevant standards and guidance (see Appendix A).

### *Archaeological Process*

- 4.1.3 As the detailed design for construction works becomes available the information will be provided to the Archaeological Consultant who will arrange a liaison meeting with the CBCA or HCCA as appropriate to confirm mitigation requirements. The outcome of these consultations and the mitigation proposals will be reported in the ES and captured in the final HEMP. The implementation of the HEMP will be a requirement of the DCO.
- 4.1.4 Following CBCA and HCCA agreement of the mitigation strategy as set out in this document, the works will be tendered out by the Archaeological Consultant and an Archaeological Contractor will be appointed in consultation with the LLAL.
- 4.1.5 The Archaeological Contractor will be required to produce specific Method Statements for each stage of archaeological mitigation as set out in the final HEMP, including all relevant Health and Safety documentation. These will be submitted for approval to the CBCA and HCCA as appropriate. The contractor's specific Method Statement will confirm the works methodology for that particular stage of mitigation in accordance with the HEMP.
- 4.1.6 The fieldwork will be subjected to regular monitoring meetings attended by the Archaeological Consultant and the CBCA and/or HCCA. The Archaeological Officer will provide confirmation that no further work is required, and that construction may proceed. The archaeological consultant will then issue a completion statement. The DCO requirements will be formally discharged in agreement by CBCA and HCCA and by receipt of their written approval of the final fieldwork reports and the receipt of confirmation from the relevant museum that the primary archive has been deposited. Fieldwork reports will be produced by the Archaeological Contractor for each stage of works following completion of fieldwork. The reports will include a quantification

of the archive for the current and preceding phases of archaeological mitigation. The fieldwork reports will be reviewed by the Archaeological Consultant before being submitted to the CBCA and HCCA for agreement.

### ***Aims and objectives of archaeological works***

4.1.7 The general objectives of the mitigation works are:

- To preserve by record the archaeological remains that will be impacted by the Proposed Development;
- To confirm and enhance the results of the evaluation to understand the extent, date, and nature of archaeological deposits and features; and
- To provide a clearer understanding of the level of activity within the Proposed Development area and surrounding landscape.

4.1.8 The general aims of the mitigation works are:

- To obtain further information on the nature and function of the known archaeological remains; and
- To determine the nature and extent of archaeological features and/or deposits in areas not covered by evaluation trenching.

## 5 CONSULTATION RESPONSES

5.1.1 A Heritage working group which includes the CBCA and HCCA and the Historic England Inspector and the Conservation Officers for Luton Borough Council and Central Bedfordshire Council has been set up. The outcomes of consultations held to date is summarised in table 18.2 in the PEIR. This section of the final HEMP will be updated with the details of further consultation prior to the completion of the ES.

5.1.2 In addition, both the CBCA and HCCA have provided responses to the design of geophysical surveys and archaeological evaluations that have been commissioned by LLAL to provide further information about the baseline archaeological conditions within areas of the Proposed Development that will be subject to direct impact.

### ***Central Bedfordshire Council Archaeologist (2019)***

5.1.3 The CBCA attended weekly on site monitoring meetings during the course of the archaeological trial trench evaluation of land south of Wigmore Valley Park (see PEIR Appendix 18-3) and has reviewed the draft archaeological evaluation report. The requirement for an open area archaeological excavation as mitigation of the impact of the proposed earthworks in this area is currently the subject of further discussion.

### ***Hertfordshire Council Archaeologist (2019)***

5.1.4 The HCCA has provided advice about the appropriate geophysical survey techniques that were employed in carrying out the geophysical survey of the LLAL holdings in Hertfordshire (see PEIR Appendix 18-2) and attended site during the course of the survey. The HCCA has been consulted about the design of the archaeological trial trench evaluation and has provided input into the scope of the evaluation and layout of the trenches (See PEIR Volume 2, Figure 18-9).

## 6 ARCHAEOLOGICAL MITIGATION METHODOLOGY

### ***Research Frameworks***

- 6.1.2 Prior to the commencement of the work and during the mitigation fieldwork, the Archaeological Contractor will refer to the Resource Assessment, Research Agenda and Strategy (Oake et al 2007 for works within Bedfordshire) and Research and Archaeology: a Framework for the Eastern Counties 2. for works within Hertfordshire (Brown and Glazebrook 2000). The aims of the Research Agenda and Framework are to provide a viable, realistic and effective academic basis for undertaking archaeological intervention, either as a result of developer-funded operations or to underpin future research designs.
- 6.1.3 The outcome will enable curators to integrate appropriate research strategies within their specifications and ensure that contractors tender and operate in full awareness of local designs.

### ***Fieldwork methodologies***

- 6.1.4 The Archaeological Consultant will give a minimum of two weeks' notice for the start of any fieldwork. Any areas to be subject to archaeological excavation will be agreed with the CBCA and HCCA in advance of fieldwork. LLAL will provide sufficient time to undertake the mitigation works in advance of construction groundworks commencing.
- 6.1.5 The excavation area will be set out using electronic survey equipment by the Archaeological Contractor. The extent of the excavations will be clearly demarcated to ensure that persons or vehicles cannot inadvertently traverse the areas of investigation while archaeological works are in progress. The fencing (to be provided by the Lead Contractor) will be regularly inspected and maintained until investigations in the area have been completed, inspected, approved and signed off by the statutory authorities and the Archaeological Consultant.

### ***Machine Excavation***

- 6.1.6 The initial topsoil strip stage of excavation will be undertaken using an appropriate 360° mechanical excavator fitted with a toothless ditching bucket within the mitigation areas agreed by the CBCA and HCCA. This will be undertaken under archaeological supervision, to the top of the first archaeological horizon. Topsoil overburden and subsoil will be stockpiled separately. The mechanical plant will not traverse any stripped areas.
- 6.1.7 The resulting surface will, if necessary, be hand cleaned and inspected for archaeological remains. Following cleaning, all

archaeological deposits and remains will be planned, to enable the selection of areas for excavation.

- 6.1.8 Archaeological deposits will be excavated and recorded as per the Chartered Institute for Archaeologists' Standard and Guidance for an Archaeological Excavation (CIfA 2014). Site specific WSI's (SSWSI's) will be issued by the Archaeological Contractor for the approval of the Archaeological Consultant and the CBCA and HCCA prior to work commencing on site. All relationships between features or deposits will be investigated and recorded. All features shall be recorded in plan and section at scales of 1:10, 1:20 or 1:50. All scale drawings shall be undertaken at a scale appropriate to the complexity of the deposit/feature and to allow accurate depiction and interpretation.
- 6.1.9 Should archaeological features revealed within the mitigation areas continue outside the areas of known archaeological significance and are likely to be subject to construction impact in the current or later phases, the excavation area may need to be extended sufficiently to characterise the material. This will only be undertaken with the agreement of the CBCA and HCCA.

#### ***Hand excavation***

- 6.1.10 Archaeological deposits/features identified for excavation will be hand excavated in an archaeologically controlled and stratigraphic manner in order to meet the aims and objectives of the excavation. Machine-assisted excavation may be permissible by the Archaeological Contractor if large deposits are encountered but only after consultation and agreement with the Archaeological Consultant and the CBCA and HCCA.
- 6.1.11 A sufficient sample of deposits/features will be investigated through sample excavation in each area to record the horizontal and vertical extent of the stratigraphic sequence to the level of undisturbed natural deposits. The following sampling strategies will be used as a minimum:
- Small, discrete features will be fully excavated;
  - Larger discrete features will be half-sectioned (at least 50% excavated) and
  - Long linear features will be sample excavated along their length - with investigative excavations distributed along the exposed length of any such feature and to investigate terminals, junctions and relationships with other features.
- 6.1.12 Should the above percentage excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined, additional excavation of such features/deposits may be required. Additional excavation may

also be required for the taking of paleo-environmental samples and recovery of artefacts. Any variation of the above will be undertaken in agreement with the CBCA and HCCA.

- 6.1.13 There may be cases when individual features do not merit these sampling levels. Any sampling variation would need to be approved by the Archaeological Consultant/Contractor and CBCA and HCCA following on-site discussion.
- 6.1.14 Should deep features, such as wells, be uncovered that will require excavation below a safe working depth, machine excavation may be permissible in agreement with the Archaeological Consultant/Contractor and the CBCA and HCCA. Provision should be made for the taking of intact geo-archaeological borehole samples to the base of the feature by an appropriate specialist contractor.

### ***Recording***

- 6.1.15 A unique site code should be assigned for the project. Prior to the commencement of all site investigations the sub-contractor will liaise with the CBCA and HCCA to ensure that the Site Code and Context Numbering system is compatible with their adopted system. An accession code should also be obtained from the recipient museum.
- 6.1.16 Following machine excavation, the extent of the excavation area will be accurately recorded using electronic survey equipment. The data will be overlaid at a scale of 1:500 onto the Ordnance Survey National Grid (using digital map data).
- 6.1.17 A full written, drawn and photographic record will be made of each area even where no archaeological features are identified. Hand drawn plans and sections of features will be produced at an appropriate scale (normally 1:20 for plans and 1:10 for sections). All plans and sections will include spot heights relative to Ordnance Datum in metres, correct to two decimal places.
- 6.1.18 Photographs will be taken to record archaeological features and excavated areas. General site photographs will also be taken in order to provide a visual overview of the site. Attention should be paid to obtaining shots suitable for displays, exhibitions and other publicity.

### ***Monitoring of site works***

- 6.1.19 A watching brief is suggested by the CBCA and HCCA during groundworks in previously undisturbed areas with potential to preserve archaeology.
- 6.1.20 Initial topsoil stripping subject to a watching brief will be undertaken by a machine fitted with a toothless grading bucket under the supervision and control of the site archaeologist to the

depth of formation, the surface of in situ subsoil/weathered natural or archaeological deposits whichever is highest in the stratigraphic sequence. Should archaeological deposits be exposed, machining will cease in that area to allow the site archaeologist to investigate the exposed deposits.

- 6.1.21 Archaeological features and deposits will be cleaned and excavated by hand and will be fully recorded by context as per the ClfA guidance for an Archaeological Watching Brief (2014). All features shall be recorded in a plan and section at scales of 1:10, 1:20, or 1:50. All scale drawings shall be undertaken at a scale appropriate to the complexity of the deposit/feature and to allow accurate depiction and interpretation.
- 6.1.22 As a minimum (to be confirmed in phase specific Written Schemes of Investigation (WSIs) prepared by the Archaeological Contractor and agreed with the CBCA and HCCA):
- Small, discrete features will be fully excavated;
  - Larger discrete features will be half-sectioned (50% excavated); and
  - Long, linear features will be sampled along their length with investigative excavations distributed along the exposed length of any such feature and to investigate terminals, junctions and relationships with other features.
- 6.1.23 Should the above percentage excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined full excavation of such features/deposits will be required. Spoil will be examined for the recovery of artefacts.
- 6.1.24 Should deposits be exposed that contain paleo-environmental or datable elements appropriate sampling and post-excavation analysis strategies will be initiated (see Environmental Sampling section below). On-site sampling and post-excavation assessment and analysis will be undertaken in accordance with English Heritage's guidance in *Environmental Archaeology: a guide to theory and practice of methods*, from sampling and recovery to post-excavation.
- 6.1.25 In the event of particularly significant discoveries, the CBCA and HCCA will be informed and a site meeting between the Archaeological Consultant/Contractor, the CBCA and HCCA, and LLAL will take place to determine an appropriate mitigation strategy.
- 6.1.26 An adequate photographic record of the watching brief will be prepared by the Archaeological Contractor. This will include photographs illustrating the principal features and finds discovered, in detail and in context. The photographic record will

also include working shots to illustrate more generally the nature of the archaeological operation mounted. All photographs of archaeological detail will feature an appropriately-sized scale. Laser or inkjet prints of digital images, while acceptable for inclusion within this management plan, are not an acceptable medium for archives. Digital images taken during the course of the fieldwork will form part of the digital archive to be submitted and curated by the ADS – see archive section below (7.3). The drawn and written record must be on an appropriately archival medium.

- 6.1.27 Should human remains be discovered during the course of the excavations, the remains will be covered and protected and left in situ in the first instance. The removal of human remains will only take place with the acquisition of a coroner's license from the Ministry of justice, in accordance with the appropriate Department for Constitutional Affairs and Environmental Health regulations, the ClfA Updated Guidelines to the Standards for Recording Human Remains 2018, and the Burial Act 1857, if required. In the event of the discovery of human remains the Archaeological Contractor will notify the Archaeological Consultant and LLAL immediately.
- 6.1.28 Any artefacts that fall within the scope of the Treasure Act (1996) will be reported to the Archaeological Consultant and LLAL. The Archaeological Consultant/Contractor or LLAL will contact H.M. Coroner for the area to ensure that Treasure Act procedures are followed; and ensure that all relevant parties are kept informed.
- 6.1.29 Finds that are classified as 'treasure' shall be removed to a safe place. Where removal cannot be affected on the same working day as the discovery, suitable security measures must be taken to protect the finds from damage or unauthorised removal.

### ***Environmental sample processing and assessment***

- 6.1.30 If significant environmental deposits are found, provision for scientific dating of samples should be made where appropriate in line with the aims of the excavation. The requirement for this will be agreed with the CBCA or HCCA as appropriate. The environmental sampling strategy shall be carried out by the Archaeological Contractor's environmental specialist in accordance with the environmental guidelines produced by English Heritage. The Historic England Environmental Specialist (Cambridge Office, Tel.01223 582707) should be contacted to advise if necessary.
- 6.1.31 Any samples taken must come from appropriately cleaned surfaces, be collected with clean tools and be placed in clean containers. They will be adequately recorded and labelled, and a register of all samples will be kept. Once the samples have been

obtained, they should be stored appropriately in a secure location prior to being sent to the appropriate specialist.

- 6.1.32 The assessment of the results will give consideration to the potential contribution that the material could make to knowledge of and archaeological deposits within the area. It will also make recommendations for the type and scope of further analysis if necessary.

## 7 REPORTING

7.1.1 This section covers the reporting method for all aspects of fieldwork, including monitoring and excavation.

### *Interim report*

7.1.2 Verbal progress reports will be provided to the Archaeological Consultant and LLAL on request and upon completion of the archaeological works an interim statement will be prepared and submitted to the Archaeological Consultant and LLAL. It will include:

- a brief summary of the results;
- a draft or sketch plan of each trench; and
- a quantification of the primary archive including finds and samples.

### *Fieldwork report*

7.1.3 Immediately after completion of each phase of fieldwork the finds and samples will be processed (cleaned and marked) as appropriate. Each category of find or environmental/industrial material will be examined by a suitably qualified archaeologist or specialist and their results incorporated into the report.

7.1.4 On completion of each stage of fieldwork, the Archaeological Contractor shall prepare a full illustrated report. The report will set out the results of the archaeological work undertaken within that stage, including the results of any specialist assessment or analysis undertaken. The report must be produced within three months of completion of each stage of fieldwork. If a substantial delay is anticipated (for example, by the provision of specialist reports, radiocarbon dating results etc.) then the CBCA and HCCA must be informed of this and an interim report must be produced within three months of the completion of the fieldwork. A revised date for the production of the full report will be agreed between the CBCA and HCCA and the Archaeological Contractor. The report will include the following:

- site location;
- a non-technical summary;
- archaeological and historical background;
- methodology;
- archaeological background;
- aims and objectives;
- results (to include full description, assessment of condition, quality and significance of the remains);

- interpretation of results in wider context;
- statement of potential with recommendations;
- publication proposals if warranted;
- summary of archive, storage and curation;
- general and detailed plans showing the location of the investigations accurately positioned on an OS base map (to an appropriate and clearly stated scale);
- detailed plans and sections as appropriate (to a known scale) with OD heights;
- a complete matrix for each area of investigation;
- summary table;
- a cross-referenced index of the project archive; and
- specialist assessment or analysis reports.

7.1.5 The report will be submitted to the Archaeological Consultant and LLAL as a draft. In finalising the report, the comments of the Archaeological Consultant and LLAL will be taken into account.

7.1.6 One bound and one digital version of the report and illustrations will be produced within one week of the receipt of the Archaeological Consultant's or LLAL's comments on the draft report. (Digital text to be in Microsoft Word format and illustrations in AutoCAD and/or PDF format).

7.1.7 On completion of the final report, in addition to copies required by LLAL, hard copies of the reports shall be supplied to the CBCA and HCCA on the understanding that one of these copies will be deposited for public reference in the HER. In addition to the hard copies of the reports, one copy shall be provided to the CBCA and HCCA in digital format - in a format to be agreed in advance with the CBCA and HCCA - on the understanding that it may in future be made available to researchers via a web-based version of the Historic Environment Record.

7.1.8 The Archaeological Contractor shall complete an Online Access to the Index of Archaeological Investigations (OASIS) form in respect of the archaeological work. This will include a digital version of the report. The report will also include the OASIS ID number.

### ***Post-Excavation Assessment, Analysis and Project Designs for Further Work***

7.1.9 Where excavations reveal archaeological, artefactual or paleo-environmental deposits that have potential for yielding important information about the site or its environs, through specialist assessment and analysis, this assessment work will be

undertaken and reported on in a separate formal Post-Excavation Assessment and Project Design. This document may also fulfil the role of an interim report if a substantial publication delay is expected.

**7.1.10** This document will be produced by the archaeological contractor within three months of completion of the fieldwork - specialist input allowing - and agreed with the CBCA and HCCA. It will include:

- A summary of the project and its background;
- A plan showing the location of the site and plans of the site showing the location of archaeological features, artefactual or paleo-environmental deposits exposed;
- Research aims and objectives (referencing the relevant Research Frameworks);
- Method statements setting out how these aims and objectives are to be achieved;
- Details of the tasks to be undertaken;
- The results of any specialist assessment work undertaken as part of the production of the formal Assessment and Project Design;
- Proposed project team;
- Overall timetable for undertaking the tasks as well as setting out monitoring points with the CBCA and HCCA. This report will be published within one year of completion of fieldwork; and
- Details of the journal in which the material is to be published, including consideration of non-journal publication options.

**7.1.11** The report shall be accompanied by an Updated Project Design in accordance with MoRPHE and other relevant national guidelines. The Updated Project Design shall summarise and consider all preceding phases of work and set out the further analytical and reporting works, if any, that are required to achieve the research objectives identified in the post-excavation assessment report. If the assessment process identifies that no further work is required for the phase area then the Updated Project Design should clearly state that this is the case.

**7.1.12** Following completion of the post-excavation assessment report and Updated Project Design a covering letter will be provided setting out the itemised costing for the recommended further works. The assessment will be completed within 12 weeks after the completion of the fieldwork. In finalising the post-excavation assessment report the comments of the Archaeological Consultant and LLAL will be taken into account.

- 7.1.13 Six bound copies, one unbound master-copy and a digital version of the post-excavation assessment and Updated Project Design and illustrations will be produced and sent to the Archaeological Consultant and LLAL for distribution within one week of the receipt of comments on the draft report (digital text to be in Microsoft Word format and illustrations in AutoCAD and PDF format).
- 7.1.14 The final publication report will include full stratigraphic and phased accounts of the excavation results, and the results of analysis by specialists outlined in each post-excavation assessment report.
- 7.1.15 The cost will be reviewed when the Updated Project Design has been agreed. Appropriate resources will be made available to enable the agreed programme of post-excavation analysis as defined in the Updated Project Design to be undertaken.
- 7.1.16 The post-excavation analysis and preparation of final reports will be undertaken in accordance with MAP2, MoRPHE, the Post-excavation Assessment Report and Updated Archaeological Design and the relevant archaeological standards and national guidelines.

### ***Publication***

- 7.1.17 Should significant archaeological or paleo-environmental remains, finds and/or deposits be encountered, wider publication in line with government planning guidance is likely to be required.
- 7.1.18 The requirement to publish the full results of any evaluation works will be agreed with the approval by the CBCA and HCCA of a method statement for post excavation assessment and analysis if required. Where agreed, the archaeological report will be published within one year of completion of the fieldwork. The requirement for non-journal publication of the results will also be agreed with the CBCA and HCCA.

## **7.2 Copyright**

- 7.2.1 The Archaeological Contractor shall assign copyright in all reports, documentation and images produced as part of this project to LLAL. The Archaeological Contractor shall retain the right to be identified as the author or originator of the material.
- 7.2.2 This applies to all aspects of the project. It is the responsibility of the Archaeological Contractor to obtain such rights from subcontracted specialists.
- 7.2.3 The Archaeological Contractor may apply in writing to use or disseminate any of the project archive or documentation (including images). Such permission will not be unreasonably withheld. The results of the archaeological works shall be

submitted to the CBCA and HCCA by LLAL, and will ultimately be made available for public access.

## **7.3 Archive deposition**

### ***Archive preparation***

- 7.3.2** Archaeological material recovered from fieldwork is irreplaceable and data recorded in the course of fieldwork should be copied and held securely in a separate location in line with current good practice, until it can be deposited in a recipient repository. The finds and records generated by the fieldwork will be removed from site at the end of each working day and will be kept secure at all stages of the project. The Archaeological Contractor will be responsible for the care of the site archive (records and finds) in their possession and should ensure that adequate resources are in place prior to the start of the fieldwork, including the materials necessary for appropriate storage and access to an archaeological conservator.
- 7.3.3** The site records and assemblages (list of fieldwork interventions, notebooks /diaries, context records, feature records, structure records, site geometry (drawings), photographs and films, finds records and associated data files) will constitute the primary Site Archive. This is the key archive of the fieldwork project and the raw data upon which all subsequent assessment and analysis and future interpretation will be based. The archive will therefore not be altered or compromised.
- 7.3.4** The site archive shall be quantified, ordered, indexed and made internally consistent, and in line with current good practice. All finds and coarse-sieved and flotation samples will have been processed and stored under appropriate conditions. The archive will also contain a site matrix, a summary of key findings and descriptions of artefactual and environmental assemblages. Arrangements will be made for the proper cataloguing and storage of the archive during the life-cycle of the archaeological project (it may be appropriate to liaise with an archive specialist). The content of an outline structure for a fieldwork archive is presented in Management of Research Projects in the Historic Environment (MoRPHE) Project Planning Note 3: Archaeological Excavation.
- 7.3.5** The archive will be produced to current national standards (see Appendix A Standards and guidance). All records and materials produced will be marked with the site/accession code and will be quantified, ordered, indexed and internally consistent. The archive will be produced to national standards.

### ***Discard policy***

- 7.3.6 The Archaeological Contractor shall follow the guidelines set out in Selection, Retention and Dispersal of Archaeological Collections, which allows for the discard of selected artefact and ecofact categories which are not considered to warrant any future analysis. Any discard of artefacts will be fully documented in the project archive and set out in the Archaeological Contractor's RAMS which will be agreed with LLAL and the CBCA and HCCA.

### ***Security copy***

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

### ***Archive storage and deposition***

- 7.3.8 The Archaeological Contractor will, prior to the start of fieldwork, liaise with an appropriate storage facility to obtain agreement-in-principle to accept the material, documentary, digital and photographic archive for long-term storage. The Archaeological Contractor will identify at the initial project set-up stage any specific requirements or policies of the recipient repository in respect of the archive (for example, the discard policy for retained finds), and for adhering to those requirements. The Archaeological Contractor shall immediately inform LLAL of the requirements or policies of the recipient repository, for approval by the CBCA and HCCA.
- 7.3.9 Any charges levied by the repository for the long-term storage of the archive will be met by the Archaeological Contractor.
- 7.3.10 As part of the production of the method statement for each stage of archaeological work the Archaeological Consultant or Contractor shall contact the relevant collecting museum to obtain a reference number with regard to potential future deposition of any material archive generated by the archaeological works. The museum's reference number will be quoted in the method statement and within the fieldwork report and overarching report or the short entry to the Historic Environment Record.
- 7.3.11 The collecting museum requires that the digital archive (consisting of born-digital and digital copies of relevant written and drawn data produced during fieldwork) must be transferred into the care of a Trusted Digital Repository instead of with the museum (see 'Deposition of the digital archive' – below) and generally not with the museum. The archaeological contractor

will therefore need to make appropriate digital copies of all hardcopy elements of the site record.

7.3.12 It is possible that the archive will be combined with the records from later phases of investigation. At the end of the investigation(s), the deposition of the archive will form the final stage of the project.

7.3.13 The Archaeological Contractor shall provide LLAL with copies of communications with the recipient museum and written confirmation of the deposition of the archive. LLAL will deal with the transfer of ownership and copyright issues and will inform the CBCA and HCCA once the archive has been transferred to the recipient repository.

#### ***The material (finds) archive***

7.3.14 Items in the material archive must be cleaned (or otherwise treated) ordered, recorded, packed and boxed in accordance with the deposition standards of the relevant museum. It is advised that early consultation with the museum will facilitate transfer of the material archive.

7.3.15 Archaeological finds resulting from the investigation (which are the property of LLAL), should be deposited with the appropriate museum - in a manner to be agreed with the museum - and within a timetable to be agreed with the CBCA and HCCA. The composition of the archive shall conform to the collecting museum's accession guidelines for depositing archaeological material. The acceptance of an archive by the museum will be in accordance with the museum's accession/collection policies and early consultation with the relevant collecting museum is advised.

7.3.16 The Archaeological Consultant or Contractor must, on behalf of the museum, obtain a written agreement from LLAL to transfer title to all items in the material archive to the receiving museum. It is preferable for this agreement to be made at the earliest possible stage following assessment after data-collection. It is not advisable to wait until the archive has been compiled before obtaining transfer of title.

7.3.17 If ownership of all or any of the finds is to remain with LLAL, provision and agreement must be made for the time-limited retention of the material and its full analysis and recording, by appropriate specialists.

#### ***Deposition of the digital archive***

7.3.18 The digital archive will consist of:

- all born-digital data (images, survey data, digital correspondence, site data collected digitally etc.) and

- digital copies made of all other relevant written and drawn data produced and/or collected during fieldwork - i.e. the primary record comprising context records and indices, sample sheets and indices, finds records and indices, site drawings - earthwork surveys, sections and plans, as well as relevant sketches or notes that aid the interpretation and understanding of the site and its recording, any relevant information undertaken as part of the post-excavation assessment or analysis, etc.

7.3.19 Digital archive must be deposited with a Trusted Digital Repository and thus made publicly accessible, in accordance with paragraph 188 of the NPPF. It is understood that the only suitable repository for digital archaeological archive is the Archaeology Data Service (ADS) – contact details are given at the end of this brief. Digital archive must be compiled in accordance with the standards and requirements of the ADS, which may be accessed through the ADS website: <http://archaeologydataservice.ac.uk/advice/guidelinesForDepositors>

7.3.20 Guidance on selection for the archive is also provided at: <http://archaeologydataservice.ac.uk/advice/selectionGuidance>

7.3.21 It is expected that a licence to copyright for documentary material, in both physical and digital forms, will be given to the receiving repository. This must be stated within the Written Scheme of Investigation, which should also identify the recipients of each element of the documentary archive.

## 7.4 Fieldwork schedule and liaison

7.4.1 A full fieldwork schedule will be produced upon appointment of the Archaeological Contractor.

## 7.5 Monitoring of archaeological work

7.5.1 The fieldwork will be subjected to regular monitoring meetings attended by the Archaeological Consultant and the CBCA and HCCA. The Archaeological Officer will provide confirmation that no further work is required and that construction may proceed. The DCO requirements will be officially discharged with agreement by CBCA and HCCA and approval of the final publication report.

7.5.2 The archaeological works will be monitored by the CBCA and HCCA and the Archaeological Consultant. A programme for monitoring the fieldwork will be agreed in advance of the work where possible. The Archaeological Contractor will prepare written progress reports on a weekly basis. These will be provided to the Archaeological Consultant.

7.5.3 The Archaeological Consultant or LLAL will notify the CBCA and HCCA upon completion of each fieldwork stage of work. Monitoring of the Archaeological Contractor will continue until the deposition of the site archive and finds and the satisfactory completion of an OASIS report – see <https://oasis.ac.uk>.

## 7.6 Health and Safety

7.6.1 The Archaeological Contractor will provide LLAL with details of their public liability and professional indemnity insurance cover.

7.6.2 The Archaeological contractor will refer to the Code of Construction Practice (CoCP) which stipulates the Health and Safety regime that is to be adhered to.

7.6.3 The Archaeological Contractor will prepare the necessary Health and Safety Plan, Risk Assessment and Method Statements, provide suitable welfare facilities and undertake H&S Site inductions for all staff that work on the project in accordance with the Construction Design and Management (CDM) Regulations 2015.

7.6.4 The Archaeological Contractor will have their own Health and Safety policy as required under the Health and Safety at Work etc. Act 1974. A copy of the Archaeological Contractor's latest Health and Safety policy will be submitted to LLAL.

7.6.5 The Archaeological Contractor shall prepare Risk Assessment(s), Method Statement(s) (RAMS), and a project specific Health and Safety Plan and submit these to LLAL for approval prior to starting on site. The Archaeological Contractor will not be permitted to start on site until LLAL has received confirmation that the Plan is acceptable for the proposed works. If amendments are required to these reports during the works LLAL must be provided with the revised document at the earliest opportunity.

7.6.6 The site supervisor will be qualified to a minimum Site Supervisor Safety Training Scheme (SSSTS) level. All other staff involved in the fieldwork will be Construction Skills Certification Scheme (CSCS) qualified. For the majority, this will comprise holding an “Academically Qualified Person” (AQP) card, though CSCS-qualified “Professionally Qualified Person” (PQP) card holders, “Labourer” green card holders, and those holding currently valid CRO “Archaeological Operative” cards may be deployed to the scheme. CVs will include details of SSSTS, CSCS and all other relevant qualifications and accreditations, with expiry dates.

7.6.7 LLAL will provide the Archaeological Contractor with the results of recently conducted service and utility searches; however, the Archaeological Contractor shall be responsible for identifying any buried or overhead services and taking the necessary

precautions to avoid damage to such services, prior to and during the fieldwork. The Archaeological Contractor will ensure that any individual scanning for buried services is both competent and appropriately trained. The Archaeological Contractor shall at all times maintain a safe working distance from the overhead and buried services / utilities. In addition, the Archaeological Contractor shall be responsible for any requirements with regard to work in the vicinity of watercourses and live carriageways. The Archaeological Contractor's Risk Assessment(s) and project Health and Safety Plan shall make reference to relevant guidance and good practice (for example: Health and Safety Executive SEGS6 - Avoidance of Danger from Overhead Lines; HS(G)47 - Avoiding Danger from Underground Services; Energy Networks Association: The Safe Use of Mechanical Plant in the Vicinity of Electricity Overhead Lines; PAS 128 – Specification for underground utility detection, verification and location).

- 7.6.8 The Archaeological Contractor's supervisor will maintain a record of site attendance and complete a daily briefing, including a review of health & safety requirements, at the start of work for each day that there is a team in the field.
- 7.6.9 All site personnel will wear personal protective equipment (PPE) as defined by the Archaeological Contractor's risk assessment undertaken in accordance with mandatory requirements. Any visitors to the investigations will require a site induction in accordance with the Archaeological Contractor's Health and Safety requirements and will have read the appropriate Archaeological Contractor's Risk Assessment and Method Statement (RAMS). The Archaeological Contractor will ensure that any visitors to the investigations are equipped with suitable PPE prior to entry to the site. All equipment that is used in the course of the fieldwork must be 'fit for purpose' and be maintained in a sound working condition that complies with all relevant Health and Safety regulations and recommendations.
- 7.6.10 The Archaeological Contractor will assure the provision and maintenance of adequate, suitable and sufficient welfare and sanitary facilities at appropriate locations for the duration of the works. The locations for the temporary site welfare facilities will be agreed with LLAL prior to the start of the works, and arrangements for temporary parking shall also be agreed should they be required. Health and Safety considerations will be of paramount importance and will override archaeological considerations at all times. This includes all stages of the archaeological works, including site-based and office-based activities. All anticipated activities should be included in the Archaeological Contractor's RAMS and suitable mitigation measures to reduce the risk of injury be put in place. The

Archaeological Contractor's RAMS will be kept under continuous review throughout the works and updated as necessary.

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## Appendix A Standards and guidance

AAF 2007 Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum

AAI&S 1988 The Illustration of Lithic Artefacts: a guide to drawing stone tools for specialist reports. Association of Archaeological Illustrators and Surveyors Technical Paper 9

AAI&S 1994 The Illustration of Wooden Artefacts: an introduction to the depiction of wooden objects from archaeological excavations. Association of Archaeological Illustrators and Surveyors Technical Paper 11

AAI&S 1995 The Survey and Recording of Historic Buildings. Association of Archaeological Illustrators and Surveyors Technical Paper 12

AAI&S 1997 Aspects of Illustration: prehistoric pottery. Association of Archaeological Illustrators and Surveyors Technical Paper 13

AAI&S n.d. Introduction to Drawing Archaeological Pottery. Association of Archaeological Illustrators and Surveyors, Graphic Archaeology Occasional Papers 1

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APABE 2015 Large Burial Grounds. Guidance on sampling in archaeological fieldwork projects. Advisory Panel on the Archaeology of Burials in England, July 2015  
[http://www.archaeologyuk.org/apabe/Large\\_Burial\\_Grounds.pdf?bcsi\\_scan\\_e956bcbe8a dbc89f=0&bcsi\\_scan\\_filename=Large\\_Burial\\_Grounds.pdf](http://www.archaeologyuk.org/apabe/Large_Burial_Grounds.pdf?bcsi_scan_e956bcbe8a dbc89f=0&bcsi_scan_filename=Large_Burial_Grounds.pdf)

APABE 2017 Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England. Second Edition. Advisory Panel for the Archaeology of Burials in England <http://www.babao.org.uk/assets/Uploads-to-Web/APABE-ToHREfCBG-FINAL-WEB.pdf>

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