Archaeology South-East

ASE

Project Design

for

Archaeological Monitoring & Recording

at

Integrated Waste Management Facility

Rivenhall Airfield

Coggeshall Road (A120), Braintree

Essex

NGR: TL 82400 20600

ASE Project no: 8293

Site Code: TBC

November 2014

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1. INTRODUCTION

- 1.1 This Project Design has been prepared by Archaeology South-East (ASE) on behalf of the Guildhouse Consultancy (the Consultant), agent for the commissioning body, Gent Fairhead & Co Limited (the Client), following consultation with Essex County Council Place Service, who provide specialist archaeological advice within the planning system, for a programme of archaeological works in connection with the development of an Integrated Waste Management Facility (IWMF) on land at Rivenhall Airfield, Braintree, Essex.
- 1.2 ECC Place Services have not issued a formal brief for the archaeological work; however, this project design is based on detailed discussions between them and the Consultant over the scope, methods and sampling strategy to be followed. The works, which are described in detail in sections 3 and 4 below, will comprise a programme of archaeological monitoring over the development site, which forms part of Woodhouse Farm and also includes part of Essex Mineral Plan Area "A2", Rivenhall, Essex.

2. BACKGROUND

2.1 Reasons for Project

- 2.1.1 The planning application for the Integrated Waste Management Facility (IWMF) was submitted in August 2008 and was accompanied by an Environmental Statement.
- 2.1.2 As the development as proposed at that time was situated in an area of some archaeological potential, following discussions between the Client and ECC Historic Environment Management (now ECC Place Services) a predetermination archaeological evaluation was undertaken to determine the presence or absence and significance of any archaeological remains within the proposed development area. The results of this work were to be used to inform the planning decision process and ensure appropriate mitigation requirements were in place should archaeological remains be identified and the development granted consent and proceed. The evaluation subsequently

identified archaeological remains in several parts of the site (Ennis 2006 and section 2.3.5 below).

- 2.1.3 The application was "called-in" for determination by the Secretary of State (SoS). The Call-In Public Inquiry was held in Sept/Oct 2009 and the Secretary of State issued the Inspectors report and decision on 2 March 2010, granting planning permission. Following a number of modifications since that date, the extant planning permission is reference number ESS/55/14/BTE).
- 2.1.5 Condition 10 (Archaeology) states:

No development or preliminary groundworks shall take place until a written scheme and programme of archaeological investigation and recording has been submitted to and approved in writing by the Waste Planning Authority. The scheme and programme of archaeological investigation and recording shall be implemented prior to the commencement of the development hereby permitted or any preliminary groundworks.

- 2.1.6 Since the IWMF permission, mineral extraction in the consented A2 area of Bradwell Quarry (ESS/32/11/BTE), which overlaps with much of the approved and consented boundary for the IWMF, has resulted in the excavation and recording of a number of archaeological sites identified by the 2006 evaluation.
- 2.1.7 This Project Design presents the methodology for the excavation and recording of those remaining areas of archaeological interest within the IWMF site that have not already been investigated as part of the "A2" mineral consent, which is required in order to satisfy the requirements of Condition 10 of planning permission ESS/55/14/BTE.

2.2 Site Description and Location

2.2.1 The site is located east of Braintree, approximately 3km south east of Bradwell village, approximately 1km to the north east of Silver End and approximately 3km south west of Coggeshall. The application site totals 25.3 hectares and includes the proposed access road from the A120 Coggeshall Road (Figure 1 – below).



- 2.2.2 The area for development of the IWMF lies on the southern part of the former Rivenhall airfield, now largely removed following mineral extraction as part of Bradwell Quarry. The site is located approximately 1.7km south of Coggeshall Road and includes Woodhouse Farm and its buildings and includes the 6ha area identified as a "preferred location for waste management" (WM1) in the WLP.
- 2.2.3 The site for the IWMF overlaps with Bradwell Quarry where sand and gravel extraction with low level restoration to agriculture/biodiversity/water and woodland is anticipated to be completed by 2018, however further preferred/reserved sites are allocated in the MLP which would extend the life of the quarry if granted.
- 2.2.4 The site for the IWMF site includes areas of former mineral working currently permitted to be restored at low level and the Grade II Listed Woodhouse Farm building complex and areas of TPO woodland at NGR TL 82400 20600. The various elements of the development area are shown on Figure 2.

- 2.2.5 The site is set within a predominantly rural character area, consisting of arable crops in large fields, often without boundaries resulting in an open landscape.
- 2.2.6 Located on the old airfield to the west of the site is a 48m (above natural ground level) radar mast positioned next to Hangar No. 1, which is approximately 370m west of the site.
- 2.2.7 The development area lies on the boulder clay plateau on the interfluve between the southeast flowing Rivers Brain, to the southwest, and the Blackwater, to the north-northeast. It has a gentle west to east slope from c.52m AOD in the central west sector to below 47m AOD on the eastern boundary. Although much altered, in part by the creation of the airfield, the original aspect of the area, that of a broad northeast to southwest orientated spur of land, is still apparent. The Braintree District Historic Environment Characterisation Project (ECC HEM 2010) notes that the area "comprises a rolling landscape of rich agricultural land, predominantly under arable cultivation, but with some important areas of ancient woodland".
- 2.2.8 An indication of the regional geology has been obtained from the British Geological Survey (BGS) Map Sheet 223 (scale 1:50,000) covering the Braintree area. The map shows that the site is underlain by Boulder Clay (now defined as the Lowestoft Formation); these superficial drift deposits overlie the London Clay Formation.
- 2.2.9 The Lowestoft Formation is characterised by chalky till, together with outwash sands and gravels, silts and clays. The basal beds have shown banding and crude laminations. Below the Lowestoft Formation a continuous, or almost continuous, sheet of sand and gravel is present. This is believed to be the Kesgrave Sands and Gravels, which are a sequence of fluvial glacial gravels laid down in a braided river system containing flint, vein quartz, quartzite, sandstone and occasional igneous and metamorphic rock gravel clasts. The deposit is worked extensively for aggregate and building sand and is identified in the Minerals Assessment Reports for the areas of Coggeshall and Witham.

2.2.10 The London Clay Formation underlies these superficial deposits. This is a stiff, blue grey, silty clay, in which the upper surface is often weathered, exhibiting a colour change to brown grey. The geological map indicates that up to 69m of London Clay is present in the area and it is exposed in the river valleys to the north and the south where the drift deposits have been eroded. Below the London Clay, the anticipated geology is the Thanet Sand, Lambeth Group and the Upper Chalk. The surface of the Upper Chalk lies at approximately 90m beneath the Site (40m AOD) and dips to the south.

2.3 Historical and Archaeological Background

- 2.3.1 A Cultural Heritage (Archaeology) Statement (OAA 1997) has already been prepared for Rivenhall Airfield and is held in the Essex Historic Environment Record (EHER), together with records of all fieldwork to date within the airfield. In addition, much archaeological work has been undertaken in recent years within the IWMF site boundary and to the north, west and east in connection with extraction at Bradwell Quarry Site R and the current A2, A3 and A4 quarry extensions (Germany 2014, ASE 2014). Only a brief summary of the most pertinent information is presented here.
- 2.3.2 A range of archaeological fieldwork has been carried out in advance of gravel extraction at Bradwell and Rivenhall Airfield. With particular regard to the IWMF site, these comprise fieldwalking and selective geophysical surveying of much of the airfield during 1991 and 1992 (Medlycott 1991; Johnson 1992), continuous monitoring and piecemeal excavation of the mineral extraction area known as Site R between 1991 and 2010 (Peachey 2003; Allen and Roy 2006; Germany 2006; Ennis 2008), trial-trenching of the IWMF site in 2006 (Ennis 2006), trial-trenching of mineral extraction areas A2 and A5 (proposed) in 2010 (Germany 2010), and archaeological excavation and monitoring of mineral extraction of parts of A2, including areas that also fall within the boundary of the IWMF consent, during 2011 to 2014 (Germany in prep.).
- 2.3.3 The 1991 92 fieldwalking exercise discovered fifteen concentrations of artefacts within the A2, A3, A4 and A5 mineral extraction areas. One of these, concentration 1, straddled the boundary between the A2 and A5 areas, five (concentrations 2, 3, 7, 9 and 10) were located wholly with A2, and two were situated within the A3/ A4 area (concentrations 14 and 15 respectively). The

geophysical survey targeted the fieldwalking concentrations but found no significant anomalies.

- 2.3.4 The continuous observation of topsoil stripping and piecemeal excavation of Site R between 1991 and 2010 recorded a small number of archaeological sites and intermittent features and finds. The sites included a Middle Iron Age round-house in the western part and medieval enclosures to its east and north-east. The western enclosure contained a well, pits and post-holes and was possibly part of small farmstead, while the northern one may have been used for crop processing. The western enclosure continued in a modified form into the late medieval period and was eventually incorporated into a network of post-medieval field boundaries. Evidence for the activities of other periods was minimal. Small amounts of Neolithic and later worked flint were present, although there were no concentrations, while Middle Bronze Age pits and finds were present on the northern and southern limits of the area and were possibly related to habitation and domestic activity. Other features comprised several Late Iron Age / Roman ditches and an Early Saxon cremation burial.
- 2.3.5 In 2006 a pre-determination archaeological evaluation by trial-trenching was undertaken of the proposed IWMF site. The archaeological work identified a low density of prehistoric, medieval and post-medieval remains (Ennis 2006). The most significant of these was a medieval enclosure dated to the late 12th/early 13th century. Other features in the east of the IWMF site included a single Middle Iron Age pit and a scatter of medieval and post-medieval quarry pits and ditches of low significance. In addition, three WWII structures, all lying in the eastern part of the IWMF site, close to Woodhouse Farm, comprising a Type T2 hanger, a Night Flying Equipment Store and a Floodlight Trailer/ Tractor shed, were the subject of an Historic Building Record as required under Condition (11) of the IWMF Consent.
- 2.3.6 The A2 and A5 trial-trenching, undertaken in 2010, discovered three archaeological sites (Germany 2010). One of them lay north of Sheepcotes Farm and contained a small number of Middle Iron Age pits which may have been related to the Middle Iron Age roundhouse found previously. Pits and enclosure ditches dating to the 11th to 13th / 14th-century were also present at the same location and are likely to have been associated with Sheepcotes

Farm, an adjacent long-lived settlement that is documented as being founded during or before the 12th century. The second site was situated at the southern end of Area A5 and consisted of a thin scatter of prehistoric pits, one of which produced pieces of Neolithic worked flint. The third site sat northeast of that and probably indicated the location of a Late Iron Age to Roman farmstead. A dense concentration of 13th-century pits was found on the southern edge of the Roman site and is conjectured to have been part of another small farmstead and / or an area of medieval quarrying.

- 2.3.7 The subsequent archaeological monitoring and excavation of part of Area A2 between 2011 and 2014 revealed a Roman waterhole or well, which was probably part of the previously identified Roman farmstead, and four medieval sites comprising the remains of enclosures, ponds and medieval buildings. The southern-most of these dated to the 12th to mid-13th century and was probably an agricultural working area, complete with large barn or byre, while its counterpart to the north was probably a messuage, dating to the early 13th to 15th century. A series of late 12th / early 13th-century enclosure ditches lay to the west of these sites, while immediately to the east of Sheepcotes Lane an enclosed settlement, including the remains of at least three earth-fast timber buildings of 12th to 14th century date was investigated (Germany forthcoming).
- 2.3.8 In addition to the above, an assessment of the natural sediments exposed in the existing quarry was undertaken by Dr Peter Allen (independent consultant), in order to determine the potential for Pleistocene faunal remains and Palaeolithic archaeology (Allen 2011a). This concluded that the Kesgrave Gravels in this area have little potential to contain Pleistocene faunal remains/ Palaeolithic material but that a palaeosol (ancient soil) was present sealing the sands and gravels and these in turn were overlain by glacial till. The palaeosol was seen as representing a "B" horizon (subsoil) with the "A" horizon (topsoil) having been removed by subsequent glacial erosion. Although the "B" horizon had little potential, depressions containing areas of dark, brecciated organic material were seen as being of potential importance since a relative date of Marine Isotope Stage (MIS) 18 could tentatively be attributed to them, placing them in the time zone when early man is known to have been present in the East Anglian region (e.g. Pakefield, Suffolk MIS

17, c. 700,000 BP and Happisburgh, Norfolk – MIS 22, c. 900,000 BP). Subsequent laboratory examination of samples indicates minimal organic presence and that the climatic conditions at the time of formation were likely to be hostile to human habitation (Allen 2011b & 2011c). Consequently it is considered highly unlikely that any archaeological remains of this date will be present within the Proposed Development Area (PDA).

- 2.3.9 The airfield was constructed by the USAAF in 1943 and was used by the RAF from the summer of 1944 until 1946 (OAA 1997). The construction of the airfield runways, taxiways and aircraft parking bays involved ground levelling and topsoil removal by box-scrapers pulled by tractors and bulldozers and is known to have damaged or destroyed any archaeological remains that were present in the immediate area of the runways. Rubble from London bomb sites was used as hardcore for the levelling of the runways and the infilling of field ditches. Numerous new drainage runs, services and temporary buildings were also constructed. After the war the airfield was used by Marconi Radar as a test site. The majority of the airfield buildings no longer survive and some elements of the airfield, including parts of the runway/ perimeter taxiways and aircraft dispersal bays, were reinstated to farmland after the Second World War.
- 2.3.10 Collectively, the archaeological works which have taken place within the Bradwell / Rivenhall Airfield area to date strongly suggests that the modern landscape of Bradwell is largely a 12th-century construct and is derived from a dispersed settlement pattern based upon Bradwell church and hall, isolated tenant farms and cottages, with utility and working areas, such as barns and quarries, connected by narrow roads and farm tracks, all within a network of small fields.

3. FIELDWORK AIMS

3.1 General Objectives

3.1.1 The principal objective of the archaeological investigation is to achieve the preservation by record of the archaeological evidence contained within the site to satisfy the requirements of Condition 10. This will necessarily require a suitable level of post-ex and publication and archive deposition.

3.2 Specific objectives – mitigation strategy

- 3.2.1 Following discussions between the Consultant and ECC Place Services, the following Mitigation Strategy has been proposed:
 - A. Preservation in-situ of Woodhouse Farm and its environs;
 - B. Preservation by Record of –
 - (1) identified sites of greater significance by "set piece" excavation at the outset of development.
 - (2) sites of lesser significance by "monitoring and recording" i.e. Continuous Observation/ High-level Watching Brief on topsoil and, if necessary, areas of redeposited material/ upper subsoil strip, with excavation and recording requirement.
 - (3). Remainder of PDA "monitoring and recording" i.e. Intermittent Observation/Low-level Watching Brief on topsoil and, if necessary, areas of redeposited material/ upper subsoil strip, with excavation and recording requirement.
 - (4) Mineral and Palaeosol monitoring by Intermittent Low-level Watching Brief to check for Palaeolithic material with excavation and recording requirement.
 - C. Archive Consolidation, finds and sample processing, interim assessment and reporting (dependent upon results and development timescales).
 - D. Overall assessment of results and Updated Project Design.

- E. Analysis and publication of results (commensurate to level of significance).
- F. Archive Deposition (finds subject to landowner approval).

3.3 Research Aims

- 3.3.1 The archaeological work will complement the results of other recent work in the Rivenhall/ Bradwell area which suggest that that the modern landscape of Bradwell parish is largely a 12th-century construct derived from a dispersed settlement pattern based upon Bradwell church and hall, isolated tenant farms and cottages, with utility and working areas, such as barns and quarries, connected by narrow roads and farm tracks, all within a network of small fields. With regard to Medlycott 2011, the origins, development and dynamics of different Medieval rural settlement types is highlighted as needing further research. Evidence from the IWMF site coupled with the evidence provided by other recent archaeological work in the Rivenhall/ Bradwell area has the potential to add to our understanding of the way places appear, grow, shift, disappear, and in some instances are resettled after a break in occupation during the medieval and post-medieval periods (Medlycott 2011 p.70).
- 3.3.2 Following completion of the fieldwork the objectives for the project identified above will be reviewed/ refined as necessary as part of the post-excavation assessment and publication process against those set out in Research and Archaeology: a Framework for the Eastern Counties, 2. research agenda and strategy (Brown and Glazebrook 2000) and Research and Archaeology Revisited: a revised framework for the East of England. (Medlycott 2011).

4. METHODOLOGY

4.1 Specified works

- 4.1.1 The works required are outlined below (see also Figure 2).
- 4.1.2 Monitoring (Continuous Observation) of topsoil strip (and upper subsoil if necessary) will be carried out in the areas shown on Figure 2. This includes any previously unevaluated areas that will be affected by the development. In

the event that only isolated or scattered archaeological remains are revealed then Intermittent/ Low-level monitoring may be possible following agreement with ECC Place Services.

- 4.1.3 Monitoring (Intermittent Observation) of topsoil (and upper subsoil if necessary) strip will be carried out in all remaining areas shown on Figure 2. In the event that significant remains are being exposed monitoring will be raised to High Level Observation.
- 4.1.4 Monitoring (Intermittent Observation) of the mineral will also be carried out across the site. The same methodology will apply to the palaeosol and any associated depressions should any of these latter features be present. In the unlikely event that such material is encountered advice will be sought, from a suitably qualified specialist, in conjunction with ECC Place Services and the Consultant on a suitable strategy for the investigation of any archaeological or potentially associated palaeoenvironmental remains.

4.2 Machining – area excavation

- 4.2.1 Machining will be carried out under the supervision of an experienced archaeologist. The removal of modern overburden and topsoil will be performed by a machine fitted with a toothless bucket. Machine-excavation will stop at the uppermost archaeological surface and will create a clean and level surface for hand excavation and recording.
- 4.2.2 In areas where subsoil exists between topsoil/overburden and clean natural, subsoil stripping will take place under archaeological supervision.
- 4.2.3 Any spoil heaps generated will be visually scanned and checked with a metal detector.

4.3 Machining – detailed monitoring & recording

4.3.1 Topsoil stripping will be undertaken using a toothless bucket, under the supervision of a professional archaeologist. The exposed subsoil or archaeological horizon will be cleaned by hand immediately after machine stripping if/ as required and any archaeological deposits or negative features planned and excavated. Plant will not be allowed to cross stripped areas until

these have been signed-off by ECC HEM, on behalf of the Mineral Planning Authority, via the Consultant.

- 4.3.2 Where particularly significant or complex remains are uncovered during monitoring works they may be subject to a separate Project Design for area excavation.
- 4.3.3 Any changes to the approved methodologies or working areas due to on-site constraints will be notified to the Consultant for agreement with ECC Place Services monitoring officer as soon as possible.

4.4 Standards

4.4.1 ASE will adhere to the CIfA Code of Conduct (CIfA 2014a), the Standard and Guidance for archaeological excavation (CIfA 2014b), the Standard and Guidance for an archaeological watching brief (CIfA 2014c) and the ALGAO Standards for Field Archaeology in the East of England (Gurney 2003) throughout the project. ASE is a Registered Organisation with the CIfA.

4.5 Excavation and Recording

- 4.5.1 All exposed archaeological features and deposits will be recorded and excavated, except obviously modern features and disturbances (e.g. concrete, modern drains and 20th-century structures).
- 4.5.2 Standard ASE methodologies will be employed. All stratigraphy will be recorded using the ASE context recording system.
- 4.5.3 An overall plan related to the site grid and tied in to the Ordnance Survey National Grid will be drawn in addition to individual plans showing areas of archaeological interest. All features revealed will be planned.
- 4.5.4 Site plans will be at 1:20 unless circumstances dictate otherwise. Plans at other scales will be drawn if appropriate (e.g. cremation burials at 1:10). Sections will be drawn at 1:10.

- 4.5.5 Datum levels will be taken where appropriate. Sufficient levels will be taken to ensure that the relative height of the archaeological/subsoil horizon can be extrapolated across the whole of the development area.
- 4.5.6 Archaeological features and deposits will be excavated using hand tools, unless they cannot be accessed safety or unless a machine-excavated trench is the only practical method of excavation. Any machine-excavation of archaeologically significant features will be agreed with the Consultant and ECC Place Services monitoring officer in advance.
- 4.5.7 With the exception of modern disturbances, normally a minimum 50% of all contained features will be excavated. Modern disturbances will only be excavated as necessary in order to properly define and evaluate any features that they may cut. Normally 10% (or at least a 1m-long segment) of non-structural linear features will be excavated. At least 50% of linear features with a possible structural function (e.g. beam slots) will normally be excavated. Details of the precise excavation strategy and any alterations to it will be discussed with the Consultant and monitoring officer if particularly significant archaeology is revealed as a result of topsoil stripping. Further discussion and agreement on the approach to the excavation of complex areas may be requested during the project.
- 4.5.8 Any articulated human remains, graves and cremation vessels/deposits encountered will be fully excavated. The coroner will be informed and an exhumation licence from the Ministry of Justice will be sought immediately The Client and the ECC Place Services monitoring officer will also be informed. In the event of any unexpected or unusual discoveries of cremation or inhumation burials specialist advice will be sought from an appropriate specialist (Dr Lucy Sibun ASE Senior Forensic Archaeologist). Any human bone that is recovered will be assessed and recorded in accordance with the Guidelines to the Standards for Recording Human Remains (BABAO/IFA 2004), Human Bones from Archaeological Sites (English Heritage 2004) and Science and the Dead (English Heritage 2013).
- 4.5.9 A full photographic record comprising colour digital images will be made with monochrome prints of significant features/feature groups or in situ artefacts

only. The photographic record will aim to provide an overview of the excavation and the surrounding area. A representative sample of individual feature shots and sections will be taken, in addition to working shots and elements of interest (individual features and group shots). The photographic register will include: film number, shot number, location of shot, direction of shot and a brief description of the subject photographed.

4.6 Finds/Environmental Remains

- 4.6.1 In general, all finds from all features will be collected. Where large quantities of post-medieval and later finds are present and the feature is not of intrinsic or group interest, a sample of the finds assemblage will normally be collected sufficient to date and characterise the feature.
- 4.6.2 Finds will be identified, by context number, to a specific deposit or, in the case of topsoil finds, to a specific area of the site.
- 4.6.3 All finds will be properly processed according to ASE guidelines and IfA *Guidelines for Finds Work*. All pottery and other finds, where appropriate, will be marked with the site code and context number.
- 4.6.4 Any finds believed to fall potentially within the statutory definition of Treasure, as defined by the Treasure Act 1996, amended 2003, shall be reported to the Essex County Council Finds Liaison Officer, the Consultant and the ECC Place Services monitoring officer. Should the find's status as potential treasure be confirmed the Coroner will also be informed. A record shall be provided to all parties of the date and circumstances of discovery, the identity of the finder, and the exact location of the find(s) (OS map reference to within 1 metre, and find spot(s) marked onto the site plan).
- 4.6.5 Environmental samples will be collected from suitable excavated contexts i.e. well-stratified, datable deposits that are deemed to have potential for the preservation/survival of ecofactual material, including dated/datable buried soils, well-sealed slowly silted features, sealed hearths, sealed features containing evident carbonised remains, peats, water-logged or cess deposits. In all instances deposits with clear residual or intrusive material will be avoided.

4.6.6 Bulk soil samples (minimum 40 litres or 50% of context) will be taken for wet sieving and flotation, and for finds recovery. ASE's environmental consultant is Karine Le Hegarat (ASE) and, if necessary, the English Heritage regional science advisor will be consulted.

4.7 **Processing of finds and environmental samples**

- 4.7.1 All hand-collected, bulk finds (pottery, bone, stone, worked flint, building material) will be washed, dried and bagged by material and context. The pottery will be marked with sitecode and context number. All bulk finds will be counted and weighed and quantification presented on a context by context basis for each material group. Ceramic building material and burnt flint may be discarded after recording and quantification in line with the Guidelines of the Society of Museum Archaeologists (1993). Samples will be retained as appropriate.
- 4.7.2 All registered finds (coins, individual objects etc) will be washed, dried and packaged as appropriate. Requirements for remedial conservation will be ascertained and carried out in order to stabilise objects. Site specific numbers will be assigned to each registered find for identification purposes.
- 4.7.3 All retained environmental samples will be processed by experienced and qualified staff and recorded using pro-forma recording sheets. Bulk samples from dry (non-waterlogged) deposits will be processed using flotation. The flots and residues from these samples will be retained, dried and sorted for environmental and archaeological remains. Samples from waterlogged deposits will be wet sieved through nested sieves and stored in anaerobic, wet, cool conditions or dried if considered an appropriate form of conservation. Column samples and samples extracted for analysis of insects or parasites for example will be sent to an appropriate specialist for assessment. Waterlogged wood specimens will be recorded, sampled for identification and stored in wet, cool conditions. All will be assessed and retained as appropriate.
- 4.7.4 See Appendix 1 for information regarding specialist consultants.

5. PRESENTATION OF RESULTS

5.1 Post-Excavation Assessment and Updated Project Design

- 5.1.1 A brief summary report with a plan showing all features will be provided to the Consultant and ECC Place Services within four weeks of the complete cessation of on-site investigation if required.
- 5.1.2 A Post-Excavation Assessment report and updated project design will be prepared within six months of completion of the site work. The assessment report will be in line with guidelines set out in Management of Research Projects in the Historic Environment (MoRPHE; English Heritage 2006) and MoRPHE Project Planning Note 3: Archaeological Excavation (English Heritage 2008). It will include:
 - SUMMARY: A concise non-technical summary
 - INTRODUCTION: General introduction to project including reasons for work and funding, planning background.
 - BACKGROUND: to include geology, topography, current site usage/description, and what is known of the history and archaeology of the surrounding area.
 - AIMS AND OBJECTIVES: Summary of aims and objectives of the project
 - METHOD: Methodology used to carry out the work.
 - FIELDWORK RESULTS: Detailed description of results. In addition to archaeological results, the depth of the archaeological horizon and/or subsoil across the site will be described. The nature, location, extent, date, significance and quality of any archaeological remains will be described.
 - SPECIALIST REPORTS: Summary descriptions of artefactual and ecofactual remains recovered. Brief discussion of intrinsic value of assemblages and their more specific value to the understanding of the site.
 - ASSESSMENT OF SIGNIFICANCE & POTENTIAL: Overview to include assessment of value and significance of the archaeological deposits and artefacts, and consideration of the site in its wider context.
 - PUBLICATION PROPOSAL: to include recommendations for further analysis and publication, publication outline, task list.

- APPENDICES: Context descriptions, finds catalogues, contents of archive and deposition details, HER summary sheet.
- FIGURES: to include a location plan of the archaeological works in relation to the proposed development (at an Ordnance Survey scale), specific plans of areas of archaeological interest (at 1:50), a section drawing to show present ground level and depth of deposits, section drawings of relevant features (at 1:20).
- PLATES: Colour photographs of the more significant archaeological features and general views of the site will be included where appropriate.
- 5.1.3 Following completion of the Post-Excavation Assessment a review of the post-excavation programme will be held in consultation with the Consultant and ECC Place Services. At this review stage a timetable and the aims of any further specialist input required will be presented in an Updated Project Design for agreement.
- 5.1.4 A copy of the Post-excavation Assessment and Updated Project Design will be supplied to the Essex Historic Environment Record on the understanding that it will become a public document after an appropriate period of time not exceeding six months, subject to any confidentiality restrictions.
- 5.1.5 An Online Access to the Index of Archaeological Investigations (OASIS) form will be completed at <u>http://ads.ahds.ac.uk/project/oasis/</u> following the completion of the assessment report and included as an appendix.
- 5.1.6 In addition to copies of the report supplied to the Client, a digital copy of the report will be supplied to the ECC Place Service monitoring officer for planning purposes and inclusion in the Essex Historic Environment Record.
- 5.1.7 Copies of the report will also be submitted to Braintree Museum as part of the project archive.

5.2 **Publication and Archive**

- 5.2.1 In line with the recommendations of the Post-excavation Assessment and Updated Project Design report, agreement shall be reached with the Consultant and ECC Place Services regarding the format and destination of any subsequent publication. Any further specialist reports will be commissioned and a publication report will be submitted to a relevant journal or monograph series within 12 months of completion of the fieldwork.
- 5.2.2 Upon completion of the final report for publication a full archive will be prepared for all work undertaken in accordance with the principles of Management of Research Projects in the Historic Environment (MoRPHE) (English Heritage 2006), guidelines contained in UKIC Guidelines for the Presentation of Excavation Archives for Long Term Storage and the requirements of Braintree Museum.
- 5.2.3 Permission will be sought for the deposition of the site archive and finds in Braintree Museum. An accession number will be obtained as necessary. Any items requiring treatment will be conserved. The landowner will be asked to donate the finds to the local museum.

6. HEALTH AND SAFETY

6.1 Code of Practice, Risk Assessment and Method Statement

6.1.1 A Risk Assessment and Method Statement (RAMS) for the project will be prepared prior to the commencement of fieldwork and all current health and safety regulations will be adhered to. A copy of the RAMS will be kept on site.

6.2 Site Risk Assessment and Safety Measures

6.2.1 An initial appraisal of risk suggests that adherence to standard ASE codes of practice should adequately control identified risk. Assessment of risk is an ongoing process and so this document is not necessarily intended as a final version of the RAMS. Should circumstances demand additional risk assessments will be carried out both prior to and during archaeological works.

- 6.2.2 ASE staff will liaise with the commissioning body and/ or their agent and will adhere to any additional Health and Safety instructions that are given/ agreed.
- 6.2.3 Archaeology South-East is insured against claims for: public liability to the value of £50,000,000 any one occurrence and in the aggregate for products liability; professional indemnity to the value of £10,000,000 any one occurrence; employer's liability to the value of £50,000,000 each and every loss.

7. RESOURCES AND PROGRAMMING

7.1 Staffing and Equipment

- 7.1.1 The archaeological works will be undertaken by a professional team of archaeologists, comprising a Senior Archaeologist and up to four Assistant Archaeologists with support from a surveyor as required.
- 7.1.2 The Senior Archaeologist for the project will be responsible for fieldwork, post-excavation reporting and archiving in liaison with the relevant specialists and under the overall direction of the fieldwork project manager and the post-excavation project manager.
- 7.1.3 The ECC Place Service monitoring officer will be notified by the Consultant of the proposed start date and the senior archaeologist assigned to the project at least one week in advance of commencement. Any subsequent changes to senior personnel will also be advised and CVs of all key staff will be available on request.
- 7.1.4 Specialists who may be consulted are listed in Appendix 1.
- 7.1.5 Other specialists may be consulted if necessary. These will be made known to the monitoring officer for approval prior to consultation. Similarly, any changes in the specialist list will be made known to the monitoring office for approval prior to consultation.

7.2 Timetable and Programme

- 7.2.1 The works are provisionally programmed to commence in 2015, subject to Client confirmation.
- 7.2.2 The timetable for the excavation of any archaeological remains that are exposed will be determined by their extent and complexity; however, the attending archaeologist should be able to deal with any isolated features, infilled field boundary ditches etc. as stripping progresses. The production of the Post-Excavation Assessment and Updated Project Design will take up to 6 months from the end of the fieldwork.
- 7.2.3 The Consultant and their Client are aware of working methods and provision has been made to allow access to undertake the archaeological works.

8. MONITORING

- 8.1 The archaeological works will be monitored on behalf of the Client by the Consultant. The ECC Place Services monitoring officer will be responsible for monitoring progress and standards throughout the project on behalf of the Local Planning Authority and will be kept informed of progress by the Consultant.
- 8.2 The ECC Place Services monitoring officer will be contacted by the Consultant in the event that significant archaeological features are discovered. Arrangements will be made for the monitoring officer to inspect the archaeological works. Stripped/ excavated areas will not be backfilled or disturbed without the prior agreement of the ECC Place Services monitoring officer.
- 8.2 Any variations to the specification will be agreed with the Consultant and ECCPlace Services prior to being carried out.

BIBLIOGRAPHY

Allen, Peter.	2011a	Bradwell Quarry, Essex: Geoarchaeological Assessment (Area A2/ A5). Unpublished report.
Allen, P.	2011b	Bradwell Quarry, Essex: Geoarchaeological Assessment (Area A2/A5. Supplementary field and laboratory information based on site visit and sampling in Area R – 14th March 2011. Macrofossil Investigation). Unpublished report.
Allen, P.	2011c	Bradwell Quarry, Essex: Geoarchaeological Assessment (Area A2/A5. Further supplementary field and laboratory information based on site visit and sampling in Area $R - 14$ th March 2011. Macrofossil Investigation). Unpublished report.
Allen, P. and Roy, M.	2006	Former Rivenhall Airfield, Rivenhall, Essex. Continuous archaeological observation and excavation, phase 1.4. Interim report – revised. ECC FAU report 1368
ASE	2014	Allshots Farm (Areas A3 and A4), Rivenhall Airfield, Essex: Archaeological Desk-based Assessment. ASE report No. 2013274
BABAO/ IFA	2004	Guidelines to the Standards for Recording Human Remains. IFA Paper No.7
Brown N. and Glazebrook, J.	2000	Research and archaeology: a framework for the eastern counties. 2. research agenda and strategy. East Anglian Archaeology Occasional Papers 8
ECC HEM	2010	Braintree District Historic Environment Characterisation Project. Unpublished report
English Heritage	2004	Human Bones from Archaeological Sites: Guidelines for producing assessment reports and analytical documents. HMSO
English Heritage	2006	Management of Research Projects in the Historic Environment HMSO
English Heritage	2008	MoRPHE Project Planning Note 3: Archaeological Excavation. HMSO
English Heritage	2013	Science and the Dead: a guideline for the destructive sampling of archaeological human remains for scientific analysis. HMSO
Ennis, T.	2006	Recycling and composting facility, Rivenhall Airfield, Woodhouse Lane, Rivenhall, Essex. Archaeological evaluation by trial trenching. ECC FAU report 1559
Ennis, T.	2008	Bradwell Quarry, former Rivenhall Airfield, Rivenhall, Essex: Archaeological interim report. Phase 3.1 (East), 3.2, 3.3 and 4.1. January 2008. ECC FAU report 1773
Germany, M.	2006	Former Rivenhall Airfield, Rivenhall, Essex. Continuous archaeological observation and excavation, phases 2.1, 2.2 and 2.3, Interim report. ECC FAU report 1422
Germany, M.	2010	Bradwell Quarry, Bradwell, Essex. Archaeological evaluation by trial trenching. Sites A2 and A5. Issue 1. ECC FAU report 2293
Germany, M.	2014	Allshot's Farm, Rivenhall Airfield, Essex: Archaeological Evaluation (Areas A3 & A4) ECC FAU report no. 2604
Germany, M.	In prep.	Excavations at the former Rivenhall Airfield, Rivenhall, Essex: IWMF

		and A2 extension
Gurney, D.	2003	Standards for Field Archaeology in the East of England. East Anglian Archaeology Occasional Paper 14
CIfA	2014a	Code of conduct (revised). Chartered Institute for Archaeologists
ClfA	2014b	Standard and guidance for archaeological excavation (revised). Chartered Institute for Archaeologists
ClfA	2014c	Standard and guidance for an archaeological watching brief (revised). Chartered Institute for Archaeologists
Johnson, A.E.	1992	Woodhouse Farm, Rivenhall Airfield, Essex. Magnetic Susceptibility, Magnetometer and Auger Survey. Oxford Archaeotechnics
Medlycott, M.	1991	An archaeological fieldwalking evaluation at Rivenhall Airfield, Rivenhall, Essex. ECC Field Projects Service report RA91
Medlycott, M.	2011	Research and Archaeology Revisited: a revised framework for the East of England, E. Anglian Archaeol. Occ. Paper 24
ΟΑΑ	1997	Rivenhall Airfield, Essex-Cultural Heritage (Archaeology) Statement. Report in Essex Historic Environment Record
Peachey, M.	2003	Former Rivenhall Airfield, Rivenhall, Essex. Continuous archaeological observation and excavation. Access road, phases 1.1-1.3 and 3.1 (west). Interim report. ECC FAU report 807

APPENDIX 1

Specialists to be used as necessary:

Prehistoric and Roman pottery Prehistoric Post-Roman pottery

Post-Roman pottery (Essex) CBM Fired Clay Clay Tobacco Pipe Glass Slag

Metalwork Worked Flint

Geological material and worked stone Human bone incl cremated bone Animal bone incl fish Marine shell

Registered Finds Coins Treasure administration Conservation and x-ray Louise Rayner & Anna Doherty (ASE) Nick Lavender (external: Essex region) Luke Barber (external: Sussex, Kent and London) Helen Walker (external: Essex) Sue Pringle & Luke Barber (external) Elke Raemen & Trista Clifford (ASE) Elke Raemen (ASE) Elke Raemen (ASE) Luke Barber, Lynne Keyes (external); Trista Clifford (ASE) Trista Clifford (ASE) Karine Le Hégarat (ASE); Hugo Anderson-Whymark (external) Luke Barber (external) Lucy Sibun (ASE) Gemma Ayton (ASE) Elke Raemen (ASE); David Dunkin (external) Elke Raemen & Trista Clifford (ASE) Trista Clifford (ASE) Trista Clifford (ASE) Fishbourne Roman Villa or UCL Institute of Archaeology

Geoarchaeology Dr Matt Pope & Liz Chambers (ASE) Geoarchaeology (incl wetland environments) Kristina Krawiec (ASE)

Macro-plant remains Charcoal & Waterlogged wood Dr Lucy Allott & Karine Le Hégarat (ASE) Dr Lucy Allott (ASE)