

**BUTTERFIELD BUSINESS PARK,
LUTON – PLOT 9,
BEDFORDSHIRE**

**ARCHAEOLOGICAL
EVALUATION**

OCTOBER 2022

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PRE-CONSTRUCT ARCHAEOLOGY

Butterfield Business Park, Luton – Plot 9, Bedfordshire

Site Code: BLB22

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BUTTERFIELD BUSINESS, LUTON – PLOT 9, BEDFORDSHIRE

EVALUATION REPORT

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1. NON-TECHNICAL SUMMARY

- 1.1 Pre-Construct Archaeology were commissioned by BWB Consulting Ltd on behalf of Henry Boot Developments to undertake an archaeological evaluation on land at Butterfield Business Park (Plot 9), Luton, Bedfordshire, centred at National Grid Reference (NGR) TL 11020 25300. This work was undertaken in association with a planning application for the extension to the existing business park and associated services, access and green space (Planning Application Reference: 21/01559/FUL).
- 1.2 The archaeological potential of the wider development area has been established by previous archaeological work including desk-based assessment, fieldwalking, trial trench evaluation and strip, map and sample excavation. This work collectively has identified significant archaeological remains from the prehistoric to medieval periods within the overall proposed development.
- 1.3 This phase of archaeological work involved trial trenching evaluation within the north-eastern part of the overall proposed development in Plot 9, which is supplementary to previous archaeological work undertaken at the site. Recent archaeological work within Plot 9 involved geophysical survey (Phase Site Investigations 2020) and trial trenching evaluation (WYAS 2021). At the time of the geophysical survey and trial trenching evaluation the central part of Plot 9 was occupied by a spoil heap. Therefore, geophysical survey and trial trenching was undertaken only across the northern, western and southern margins of the plot. No anomalies were identified within Plot 9 that suggested buried archaeological remains. The subsequent archaeological evaluation in 2021 involved five trial trenches sited across Plot 9 however this excluded the central area. No archaeological features or deposits of significance were identified during this phase of archaeological work.
- 1.4 This trial trench evaluation was undertaken according to a Specification prepared by BWB Consulting Ltd and approved by Hannah Firth (Archaeological Advisor to Luton Borough Council) prior to the commencement of work. Five trial trenches (Trenches 1-5) were sited across the central part of Plot 9 within the location of the former spoil heap.
- 1.5 Three phases of activity were encountered: Phase 1: Superficial geology; Phase 2: Topsoil & Phase 3: Modern dumping deposits.
- 1.6 Superficial geological deposits (Phase 1) were encountered in all trenches and comprised stiff mid pinkish brown and mid brown clay.
- 1.7 Topsoil (Phase 2) was encountered in all trenches and comprised firm mid grey clayey silt.
- 1.8 Modern dumping deposits (Phase 3) were present in four trenches (Trenches 1-3 & 5) and generally comprised firm mid reddish brown silty clay.
- 1.9 No archaeological deposits or finds were identified during the investigation.

2. INTRODUCTION

2.1 Project Background

- 2.1.1 This report details the results of an archaeological evaluation undertaken by Pre-Construct Archaeology Limited (PCA) in July 2022 on land at Butterfield Business Park (Plot 9), Luton, Bedfordshire (Figure 1) in association with a proposed development involving the extension of the business park within the north-eastern part of the overall development and associated services, access and green space (Planning Application Reference: 20/00926/FUL).
- 2.1.2 The overall proposed development site lies to the northeast of Luton and is situated to the north of the A505 Hitchin Road (central NGR TL 108400 250300) and comprises an irregular shaped parcel of land, covering c. 3.32 hectares. The current phase of archaeological work involved trial trenching evaluation at the north-eastern extent of the Butterfield Business Park within the central part of Plot 9 that until recently was occupied by a modern spoil heap (central NGR TL 11020 25300) (Figure 2). The archaeology work was commissioned by BWB Consulting Ltd, on behalf of Henry Boot Developments.
- 2.1.3 The archaeological potential of the site has been established by a corpus of assessment, evaluation and mitigation undertaken for various phases of the wider development. These previous phases of works identified significant archaeological remains from the prehistoric to medieval periods within the overall development area. Following a review of the results of this work further archaeological work including geophysical survey (Phase Site Investigation 2020) and trial trenching evaluation (WYAS 2021) was undertaken within several development areas including within Plot 9, Unit 18 located immediately to the south of Plot 9 and Unit 10 located at the western extent of the wider development. The archaeological work undertaken during this phase excluded the central area of Plot 9 due to the presence of the modern spoil heap.
- 2.1.4 The geophysical survey identified various anomalies within the three areas that were suggestive of buried archaeological features. The subsequent trial trenching evaluation was undertaken within all three areas (Plot 9, Unit 10 & Unit 18) to determine the site's archaeological potential. Twenty-five trenches were sited to target anomalies identified by geophysical survey and 'blank' areas where no anomalies were identified. To this end no archaeological features were identified in the five trial trenches undertaken in Plot 9. A single ditch of possibly prehistoric date was identified within the south-eastern corner of Unit 18 and several features were identified within Unit 10 from which significant amounts of Roman pottery were recovered.
- 2.1.5 The scope of works for the archaeological evaluation was set out in a Written Scheme of Investigation compiled by BWB Consulting Ltd in June 2022 and approved by Hannah Firth (Archaeological Advisor to Luton Borough Council) prior to the commencement of work. The overarching aim of the evaluation was to determine the presence, nature, date, extent and

significance of any archaeological remains that might be present in the area not available for evaluation in 2021 (central area of Plot 9). The archaeological work comprised five machine excavated trial trenches (Trenches 1-5) each measuring 25m long.

- 2.1.6 The Online Access to the Index of Archaeological Investigation (OASIS) reference number of the project is preconst1-508115.

2.2 Site Location and Description

2.2.1 The Business Park is located to the northeast of Luton and is to the north of the A505 Hitchin Road (NGR TL11020, 250300). Located immediately to the east and north of the application site are a number of commercial units which are served by an access road that ties in to the A505 via a roundabout. To the north and west are agricultural fields and to the south is Vale Cemetery and Crematorium.

2.2.2 The site itself is located within the north-eastern extent of the wider Butterfield Business Park and comprises an area of c. 60m x 60m of cultivated rough pasture and until recently was occupied by a spoil heap that had been cleared and levelled prior to the commencement of work.

2.3 Geology and Topography

2.3.1 The solid geology of the site is chalk of the Lewes Nodular Chalk Formation and Seaford Chalk Formation, a sedimentary bedrock formed approximately 84 to 94 million years ago in the Cretaceous period when the local environment was dominated by warm chalk seas (British Geological Survey website). Superficial deposits comprise clay, silt, sand and gravel of the Clay-with-flints formation in an area formerly dominated by weathering processes. These were formed up to 23 million years ago in the Quaternary and Neogene periods (*ibid.*).

2.3.2 Presently the site is relatively level occurring at maximum and minimum heights of 175.03m AOD at the northern part of the site and 173.97m AOD at the southern part of the site, respectively.

2.4 Planning Background

2.4.1 The requirement to undertake the archaeological investigation is in line with planning policy at a national level, as set out in the *National Planning Policy Framework* (NPPF) (Department for Communities and Local Government 2021). Heritage assets - those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest - are a key concept of the NPPF.

2.4.2 Chapter 16 of the NPPF 'Conserving and enhancing the historic environment' describes, in paragraph 205, that '*Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in*

part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible’.

2.4.3 Central Bedfordshire Council has responsibility for archaeological development control in relation to the historic environment. A scheme of archaeological evaluation work was required in association with a planning application for the extension to the existing business park (Planning Application Reference 21/01559/FUL). Condition 20 stated that:

No development shall take place until an archaeological written scheme of investigation (WSI), has been submitted in writing to the Local Planning Authority for approval.

The WSI shall include the following components:

1. Method statements for the investigation of any archaeological remains that will be affected by the development. This will include as necessary, method statements for further trial trench evaluation and full excavation;

2. An outline strategy for post-excavation assessment, analysis, archive preparation and publication, including details of the timetable for each stage of the post-excavation works

The said development shall only be implemented in full accordance with the approved WSI, and this condition shall only be fully discharged when:

1. All elements of the archaeological fieldwork have been undertaken and the date of completion has been confirmed in writing by the Local Planning Authority

2. The post-excavation assessment, analysis and final archaeological report has been submitted in writing to the Local Planning Authority for approval. This shall be done within 18 months of the date of completion of the archaeological fieldwork unless otherwise agreed in advance in writing by the Local Planning Authority

3. The preparation of the site archives (both physical and digital) for deposition at stores approved by the Local Planning Authority has been undertaken and confirmed in writing by the Local Planning Authority. For the digital archive this will include confirmation of the intention to deposit with a CoreTrustSeal certified repository dedicated to storing archaeological archives.

4. The preparation of an archive report and the submission of a publication report (if applicable) have been undertaken and confirmed in writing by the Local Planning Authority. Unless otherwise agreed in advance in writing by the Local Planning Authority, items 3, and 4 of this condition shall be finished within three years of the archaeological fieldwork date of completion.

Reason: To ensure satisfactory regard is given to archaeological heritage.

2.4.4 A Written Scheme of Investigation for the work was prepared by BWB Consulting Ltd and approved by the Hannah Firth (Archaeological Advisor to Luton Borough Council), detailing the methodology of the programme of works.

2.5 Archaeological and Historical Background

2.5.1 Information in this section has been extracted from the Written Scheme of Investigation undertaken by BWB Consulting Ltd (2022). The research and writing of those responsible is acknowledged. It has been prepared with information obtained from the Central Bedfordshire and Luton Historic Environment Record supplemented with additional data provided by the Council's Archaeological Advisor (HER Search No. 201920/75).

Prehistoric to Roman

2.5.2 In 2004 an archaeological evaluation (EBD1000) was undertaken by Pre-Construct Archaeology to the east of the site. The works comprised the excavation of 17 trenches which were excavated prior to the construction of the infrastructure road corridor that leads off the principal access into Butterfield Business park.

2.5.3 Found within the plough soil of each trench were a number of worked flints of assumed Mesolithic or Neolithic date. These may be associated with those finds that was recovered during fieldwalking (EBD 921) to the north which comprised a Neolithic to Bronze Age flint scatter. Also recorded within the trenches were a number of ditches, pits and a gully which were dispersed across the site. These features were interpreted as being associated with a field system away from settlement activity.

2.5.4 Further Neolithic and later Bronze Age material was found during the excavation within the eastern part of the wider development site between 2005 and 2006 (EBD 991; Luke, M., and Preece, T., 2017 69-71). These works were undertaken by Albion Archaeology.

2.5.5 A corpus of archaeological works (HER 13417) was undertaken within the proposed extension to the Vale Cemetery which lies to the southwest of the site. In 2005 a geophysical survey (EBD 196) was undertaken to the south west of the site by West Yorkshire Archaeology Service (WYAS). This was undertaken within the footprint of the Vale Cemetery Extension. Following this an evaluation was carried out by Albion Archaeology in 2005 (EBD 195) which revealed evidence for Iron Age, Roman and Medieval remains. The evaluation demonstrated that the western part of the site had the highest potential. In 2006 Albion Archaeology undertook further archaeological investigations within the eastern part of the proposed extension (EBD 216). No Iron Age or Roman activity was revealed, however, features of medieval and post-medieval date were encountered.

2.5.6 Excavation of the western part of the cemetery was undertaken by Oxford Archaeology East between October and November 2013. The investigations revealed that a number of the ditches contained pottery dating between the early-middle Iron Age. To the south of this is evidence for a possible settlement which was dated to the Late Iron Age. Activity continued into the Roman period evidenced by two phases of field system. This was not deemed to be associated with settlement activity based on the limited finds.

- 2.5.7 The investigations undertaken by Oxford Archaeology also found a late pre-Roman Iron Age cemetery that continued to be used and expanded into the Roman period. There were four late Iron Age features tentatively described as "graves" possibly in a burial mound, then seven cremations in two different groups, the first group of four was c. 1st century AD date and more characteristically Iron Age and the other three were thought to be later c. mid-2nd century AD. It has been suggested that all the burials were associated with the barrow.
- 2.5.8 In advance of the construction of the Luton Aquatic Centre c. 500m to the southwest of the Business Park, late Iron Age and early Roman features were recorded during the trial trench evaluation undertaken by Albion Archaeology (EBD 563; HER No. 7423) and the subsequent excavation also carried out by Albion Archaeology (EBD 1080). Evident was a large enclosure associated with which are a number of smaller enclosures and a trackway. There was limited material evidence found which suggest that the features formed part of a field system.
- 2.5.9 A series of enclosures were also found to the east of site prior to commercial development along Great Marlings. The excavation of these was undertaken by Albion Archaeology between 2005 and 2006 (EBD991; Luke, M., and Preece, T., 2017) following a geophysical survey (EBD 999) and archaeological evaluation (EBD 1001). The excavations revealed the presence of an early-middle Iron Age farmstead. Late Iron Age to early Romano-British activity was represented by the presence of field boundaries and a water pit which may form part of the fringes of a settlement on adjacent land. In addition to this late Neolithic/ early Bronze Age and late Bronze Age artefacts were found.
- 2.5.10 A series of enclosures were also found to the east of site prior to commercial development along Great Marlings. The excavation of these was undertaken by Albion Archaeology between 2005 and 2006 (EBD991; Luke, M., and Preece, T., 2017) following a geophysical survey (EBD 999) and archaeological evaluation (EBD 1001). The excavations revealed the presence of an early-middle Iron Age farmstead. Late Iron Age to early Romano-British activity was represented by the presence of field boundaries and a water pit which may form part of the fringes of a settlement on adjacent land. In addition to this late Neolithic/ early Bronze Age and late Bronze Age artefacts were found.
- 2.5.11 An archaeological evaluation was undertaken by Foundation Archaeology in 2006 in a roughly south-western to north-eastern belt across wider development area. This included the excavation of trenches within the Kitwave development parcel including trenches 10 – 15. A number of possible Iron Age/ Romano-British features were identified within the southwestern part of the wider development area. It possible that these are associated with the features found during the excavation of the extension to the Luton Vale Cemetery during October and November 2013 by Oxford Archaeology East.

Medieval

- 2.5.12 The excavations undertaken by Oxford Archaeology East in advance of the extension to Vale Cemetery revealed the presence of a number of medieval field boundaries. These were aligned parallel and perpendicular to Butterfield Lane and the medieval field systems excavated at Vale Cemetery (EBD216) by Albion Archaeology.
- 2.5.13 Other evidence for medieval activity includes two medieval body sherds found during field waking in 1990 to the north of the site (EBD 921) and those recovered in a feature within the northern part of the Innovation Centre excavations (EBD 993) although these could not be used to date the feature.
- 2.5.14 Archaeological mitigation (EBD1080) was undertaken in advance of the development of the Luton Aquatic Centre to the southwest of Vale Cemetery. This revealed evidence for a medieval to post-medieval Manor House and Farm.
- 2.5.15 Recorded in the wider area is evidence for Medieval settlement activity within the area including the Medieval settlements of Stopsley (HER 17100), Butterfield Green (HER12399) and Swifts Green (HER 17099) which lies to the southwest.
- 2.5.16 Investigation undertaken within the wider site to the east found two medieval ditches which were suggested to be linked to Hayes Manor (HER 3341) which dates to the medieval period. Accounts suggest that the manor was in the ownership of the Hayes Family from the 12th century. Found to the south were rectilinear earthworks which have been suggested to be associated with the manor.
- 2.5.17 Post-medieval**
- 2.5.18 From the analysis of historic Ordnance Survey maps it is evident that the development area was in agricultural use, demonstrated by the number of agricultural fields that fall within the wider Butterfield Scheme. It has been suggested that these were formed during the enclosure of the parish.
- 2.5.19 During the excavation in advance of the Aquatic Centre (EBD1080) evidence for post-medieval field systems and enclosure were encountered. These were associated with the settlements of Swift Green and Hayes Manor.

Previous Archaeological Work

Geophysical Survey

- 2.5.20 In 2004 West Yorkshire Archaeological Service (WYAS) undertook a geophysical survey (EBD 999) to the south of the application site on the western edge of the spine road. The survey recorded large areas of enhanced magnetic response. It was suggested that these were caused by geological/ pedological variations. No archaeological features were found although it was suggested that the magnetic responses recorded could be masking potential archaeological anomalies.

- 2.5.21 WYAS undertook a geophysical survey (EBD 196) to the southwest of the application site in 2005 in advance of proposals to extend Vale Cemetery. The survey also recorded magnetic responses which were interpreted as relating to the underlying geology. No archaeological features and / or deposits were evident. WYAS also undertook a geophysical survey (EBD 1004) to the southwest of the application site in 2005, however, no archaeological features of probable archaeological origin were encountered.
- 2.5.22 Magnitude Surveys carried out a geophysical survey on land immediately to the southwest of the site in 2017. No archaeological anomalies were evident during the survey. All that was found was evidence for modern landscaping. The results of the subsequent strip, map and sample excavation of this area are discussed below.
- 2.5.23 In 2020 Phase Site Investigations undertook a geophysical survey within three areas of the wider site including parts of the southwestern, western and northeastern part of the application site. Archaeological features were identified in the western and southern survey areas but none were apparent in the application site. Areas of disturbance were apparent which is consistent with the results of the trial trenching undertaken in 2021 by WYAS (see paragraphs 4.11 and 4.12). This disturbance is also evident from various aerial photographs taken since 2018.

Trial Trenching

- 2.5.24 In 2004 an archaeological evaluation (EBD1000) was undertaken by Pre-Construct Archaeology to the south of the application site. The works comprised the excavation of 17 trenches which were excavated prior to the construction of the infrastructure road corridor that leads off the principal access into the site.
- 2.5.25 Found within the plough soil of each trench were a number of worked flints of assumed Mesolithic or Neolithic date. These may be associated with those finds that was recovered during fieldwalking (EBD 921) to the north which comprised a Neolithic to Bronze Age flint scatter.
- 2.5.26 Recorded within the trenches were a number of ditches, pits and a gully which were dispersed across the site. These features were interpreted as being associated with a field system away from settlement activity.
- 2.5.27 In response to the geophysical survey undertaken within the proposed area for the extension to the Vale Cemetery, a trial trench evaluation was carried out by Albion Archaeology in 2005. This revealed a number of Iron Age, Roman and medieval features.
- 2.5.28 An archaeological evaluation was undertaken by Foundations Archaeology in 2006 across a rough southwestern to northeastern belt across the wider Butterfield Business Park. This included the excavation of Trench 31 within the proposed application site. A single archaeological feature was found which comprised a very shallow northeast-southwest aligned gully. No finds were encountered during its excavation. To the south on the western

edge of the application site Trench 32 was excavated. This was a shallow northwest-southeast gully. No artefactual evidence was found.

- 2.5.29 To the northwest of this Trench 29 was excavated. This contained a single feature [2903] which was an east-west aligned ditch associated with a 20th century track way. Within its fills were 20th century shards of glass and fragments of CBM. Trench 28 and 30 to the south of this contained no archaeological features.
- 2.5.30 Between February and March 2021 WYAS excavated five trenches (15-19) on the western and northern side of the application site (Figure 2; Appendix 2). No trenches were excavated elsewhere due the presence of a large spoil heap. This report presents the results of targeting the area underneath this spoil.
- 2.5.31 No archaeological features were identified in the trenches. It was noted that in each trench the area had been disturbed through wheel rutting and the truncation of topsoil and subsoil. These results are consistent with the negative results of the geophysical survey undertaken by Phase Site Investigations in 2021.
- 2.5.32 The trenches excavated by WYAS to the south of the site in 2021 were largely absent of archaeology other than a mid-to late Iron Age ditch found within the southeastern extent of the evaluation area. This ran in an east west direction. Features were also found in the trenches excavated to the southwest, some of which contained significant quantities of Roman pottery.

Strip, Map and Sample Excavation

- 2.5.33 Albion Archaeology undertook an excavation immediately to the southwest of the site between 2005 and 2006 (EBD 991; Luke, M., and Preece, T., 2017 69-71). During the course of the works a number of finds ranging from the late Neolithic and late Bronze Age were found. Settlement activity dating between the early to middle Iron Age was also recovered. In addition to this evidence for the fringes of a later settlement dating to the late Iron Age/ early Romano-British period was found.
- 2.5.34 Investigations were also undertaken to the south of the application site prior to the development of the Butterfield Innovation Centre (EBD 993). This was undertaken by Albion Archaeology in 2005. Neolithic and early Bronze Age activity was evident demonstrated by the presence of two residual flint flakes which were found in a later water pit. Activity continued into the Late Bronze Age/ early Iron Age as determined by the presence of a group of features within the northern part of the excavation area. Included with these were a boundary ditch, two adjacent water pits and small number of pits. It was concluded that the features are representative of peripheral settlement activity.
- 2.5.35 Between October and November 2018 Pre-Construct Archaeology undertook a programme of strip, map and record (Pre-Construct Archaeology, 2019) to the west of the excavation undertaken by Albion Archaeology between 2005-2006. Revealed were a series of

boundary ditches, a possible trackway, some postholes and a small pit in the southwestern corner of the investigation area. In addition to this an isolated un-urned cremation was found on the eastern edge of the area investigated. The artefacts found ranged in date from the Prehistoric to Romano-British period.

- 2.5.36 In 2013 Oxford Archaeology undertook an excavation within the western part of the Vale Cemetery extension. The investigations revealed that a number of the ditches contained pottery dating between the early - middle Iron Age. To the south of this is evidence for a possible settlement which was dated to the Late Iron Age. Activity continued into the Roman period evidenced by two phases of field system. This was not deemed to be associated with settlement activity based on the limited finds. Also revealed were a number of medieval filled boundaries which were aligned parallel and perpendicular to Butterfield Lane and the medieval field systems excavated in the eastern part of the Vale Cemetery Extension (EBD 216) which was carried out by Albion Archaeology.
- 2.5.37 In 2019 West Yorkshire Archaeology Service (WYAS) undertook a programme of Strip Map and Record within the Kitwave development parcel. The strategy for this was informed by previous evaluation which found evidence for a number of linear features.
- 2.5.38 The Strip Map and Record identified a series of field systems and a boundary ditch which dates to the Romano-British period as attested to by the finds recovered. This fits into the pattern of Romano-British field systems identified within the wider Butterfield Business Park.

3. PROJECT AIMS AND RESEARCH OBJECTIVES

3.1 Project Aims

3.1.1 The primary aim of the programme of works was to determine the absence/presence of archaeological remains. The archaeological work was designed to identify, investigate, and record any archaeological remains observed during the evaluation. The results will be used to inform decisions regarding further archaeological mitigation measures that may be required at the site prior to commencement of the proposed development.

3.1.2 The objective of trial trench evaluation as defined by the Chartered Institute for Archaeologists (CIfA) is to ‘determine, as far as is reasonably possible, the nature of the archaeological resource within a specified area using appropriate methods and practices’ (CIfA 2020a).

3.1.3 Specific objectives of the investigation were:

- to determine if the paucity of archaeological remains in Plot 9 recovered in previous archaeological evaluation continues across the remainder of the Site;
- to characterise and date archaeological deposits and/or features encountered;
- to assess the potential for other archaeological deposits and/or features to occur;
- to determine the likely range, quality and quantity of artefactual and environmental evidence present;
- to recover environmental evidence;
- to gain further information about contemporary features to the known archaeological landscape;
- to assess apparent blank areas not subject to geophysical survey;
- to inform the scope of archaeological mitigation works, where necessary;
- to record all remains to an appropriate level.

3.2 Research Objectives

3.2.1 The project was undertaken with reference to the following East Anglian Regional Research Agendas:

- Research and Archaeology: A Framework for the Eastern Counties: 1. Resource Assessment (Glazebrook 1997);
- Research and Archaeology: A Framework for the Eastern Counties: 2. Research Agenda and Strategy (Brown and Glazebrook 2000);
- Regional Research Framework for the Eastern Region (Medlycott and Brown 2008);
- Research and Archaeology Revisited: A Revised Framework for the East of England (Medlycott 2011).

- 3.2.2 The research frameworks highlight the importance of research as a vital element of development-led archaeological work. By setting out key research priorities for all periods of the past these documents allow archaeological projects to be related to wider regional and national priorities for the study of archaeology and the historic environment.
- 3.2.3 An appropriate level of reporting on the work was required, including, if necessary, full analysis and publication of any notable archaeological findings upon completion of the evaluation. Thus, the results of the work constitute the preservation by record of any archaeological remains encountered and subsequently removed during the course of works.

4. ARCHAEOLOGICAL METHODOLOGY

4.1 Fieldwork

- 4.1.1 The fieldwork was undertaken in compliance with the codes and practice of the Chartered Institute for Archaeologists and the relevant ClfA standard and guidance document (ClfA 2020a & 2021). PCA is a CIFA 'Registered Organisation'.
- 4.1.2 The project was managed in line with principles set out in Historic England's *'Management of Research Projects in the Historic Environment'* (MoRPHE) published in 2015.
- 4.1.3 All archaeological staff involved in the project were suitably qualified and experienced for their project roles. The project was overseen for PCA by Aaron Goode, Project Manager at PCA's Durham Office. All relevant Health and Safety legislation, regulations and codes of practice were respected. PCA's Health and Safety (H&S) Policy is the starting point for managing H&S at all locations where PCA carries out its operations.
- 4.1.4 The scope of the work for the archaeological evaluation was set out in a Written Scheme of Investigation (BWB Consulting Ltd 2022) and approved by Hannah Firth (Archaeological Advisor to Luton Borough Council) prior to the commencement of work. The trial trenches were positioned to avoid any obvious obstructions and to provide good coverage of the area under investigation.
- 4.1.5 The work comprised the excavation of five trial trenches with dimensions at base of 25m x 2m (Figure 2).
- 4.1.6 The trial trenching evaluation was carried out between the 6th - 8th July 2022.
- 4.1.7 Ground level in the trenches was reduced using a 180° backhoe mechanical excavator utilising a toothless ditching bucket. Successive spits of no more than 100mm depth were removed until either the top of the first archaeological horizon or the top of superficial geological deposits was reached. All ground reduction was carried out under archaeological supervision.
- 4.1.8 Deposits were individually recorded on the *pro-forma* 'Trench Recording Sheet' and 'Context Recording Sheet'. All site records were marked with the unique-number BLB22 (site code).
- 4.1.9 The height of all principal strata was calculated in metres above Ordnance Datum (m AOD). A detailed photographic record of the evaluation was prepared using SLR digital photography. All detailed photographs included a legible graduated metric scale. The photographic record illustrated all five trenches which were devoid of archaeological remains.

4.2 Post-excavation

- 4.2.1 The stratigraphic data for the project comprises written and photographic records. A total of 14 archaeological contexts were defined within the five trenches (Appendix 2). Post-

excavation work involved checking and collating site records, grouping contexts and phasing the stratigraphic data. A written summary of the archaeological sequence was then compiled, as described in Section 5.

- 4.2.2 During the evaluation no features or deposits of archaeological significance were identified, therefore no artefactual material or bulk environmental samples were recovered.
- 4.2.3 In preparing the Site Archive for deposition, all relevant standards and guidelines documents referenced in the Archaeological Archives Forum guidelines document (Brown 2007) will be adhered to, in particular a well-established United Kingdom Institute for Conservation (UKIC) document (Walker, UKIC 1990) and the most recent ClfA publication relating to archiving (ClfA 2020b).
- 4.2.4 At the time of writing the Site Archive was housed at the Durham Office of PCA, The Rope Works, Broadwood View, Chester-le-Street, County Durham, DH3 3AF. When complete, the Site Archive comprising the final report and site photographs will be digitally archived with the Archaeology Data Service (no physical archive was generated as the site was devoid of archaeology). The Online Access to the Index of Archaeological Investigation (OASIS) reference number of the project is preconst1-508115.

5. RESULTS: THE ARCHAEOLOGICAL SEQUENCE

During the archaeological investigation, separate stratigraphic entities were assigned unique and individual context numbers, which are indicated in the following text as, for example [123]. The context numbers have been assigned per trench therefore contexts from Trench 1 are in the 100s and contexts from Trench 2 in the 200s etc. The sequence is described by placing stratigraphic units (contexts) within broad phases, assigned on a site-wide basis in this case. An attempt has been made to add interpretation to the data and correlate these phases with recognised historical and geological periods. The figures can be found in Appendix 1 with the context index and stratigraphic matrix located in Appendix 2 and 3 respectively. A selection of plates can be found within Appendix 4.

5.1 Phase 1: Superficial Geology

5.1.1 Phase 1 represents superficial geological deposits that were observed within all trenches (Trenches 1-5) and comprised stiff mid pinkish brown and brown clay that contained small nodules and shards of flint (Plates 1-5). This material represents the Clay-with-flints Formation that is noted throughout the area (British Geological Survey website).

5.1.2 The table below summarises the depth below ground level and metres above Ordnance Datum (AOD) height of geological deposits within the trenches. The highest level at which natural substratum was encountered was 174.70m AOD in Trench 1 and the lowest level was 173.26m AOD in Trench 5.

Trench No.	Context	Depth (below ground level)	m AOD	
			Highest	Lowest
Trench 1	[102]	0.49m	174.70	174.41
Trench 2	[202]	0.55m	174.67	174.19
Trench 3	[302]	0.35m	173.96	173.83
Trench 4	[401]	0.47m	174.04	173.66
Trench 5	[502]	0.54m	173.73	173.26

Summary of superficial geology depths and levels

5.2 Phase 2: Topsoil

5.2.1 Phase 2 represents buried topsoil that was encountered in within all trenches (Trenches 1-5) and comprised firm mid grey clayey silt ([101] Trench 1; [201] Trench 2; [301] Trench 3; [401] Trench 4 & [501] Trench 5) that ranged in thickness from 0.47m in Trench 5 and 0.25m in Trench 3. The topsoil in all five trenches was directly overlain by Phase 3 modern levelling deposits that were derived from either the establishment or removal of the spoil heap that recently occupied the site.

5.2.2 Although the topsoil presumably extends across the area under investigation, there is evidence of substantial truncation and disturbance with wheel rutting noted in each trench.

5.3 Phase 3: Modern

5.3.1 Phase 3 represents modern levelling activity associated with the removal of the spoil heap that recently occupied the site. Deposits derived from the establishment and subsequent removal of the soil heap extended across the entirety of the area under investigation and comprised firm mid reddish brown silty clay that varied in thickness from up to 0.24m in Trench 5 and 50mm in Trench 4. The table below summarises the thickness of the levelling deposits encountered during the evaluation:

Trench No.	Context Number	Maximum Thickness
Trench 1	[100]	0.10m
Trench 2	[200]	0.10m
Trench 3	[300]	0.10m
Trench 4	[400]	50mm
Trench 5	[500]	0.24m

Summary of the maximum thickness of levelling deposits.

5.3.2 The current ground level across the site occurs at maximum and minimum heights of 175.14m AOD at Trench 1 and 173.68m AOD at Trench 5, respectively.

6. CONCLUSIONS

- 6.1 The archaeological investigations undertaken on the proposed site comprised the excavation of five trenches. Geological deposits, buried topsoil and modern levelling deposits were encountered. This activity was assigned to three phases of activity:
- Phase 1: Superficial geological deposits were encountered within all five trenches (Trenches 1-5);
 - Phase 2: Buried topsoil was encountered in all five trenches (Trenches 1-5);
 - Phase 3: Modern levelling deposits were encountered in all five trenches (Trenches 1-5).
- 6.2 Topsoil (Phase 2) was encountered in all five trenches and was directly overlain by Phase 3 levelling deposits. Substantial truncation and disturbance was identified in the form of wheel rutting within all trenches investigated that was probably the result of both the establishment and removal of the spoil heap that occupied the site until recently.
- 6.3 The modern levelling deposit (Phase 3) forming the current ground surface at the site comprised redeposited geological material that formed the spoil heap.
- 6.4 No archaeological features or finds were identified within any of the evaluation trenches. No further work is required on the information recovered during the evaluation, with the Site Archive (including this report), forming the permanent record of the strata encountered.

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7.2 Online Sources

The **British Geological Survey** website: www.bgs.ac.uk. This was consulted for information regarding the geology of the study area.

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PCA Credits

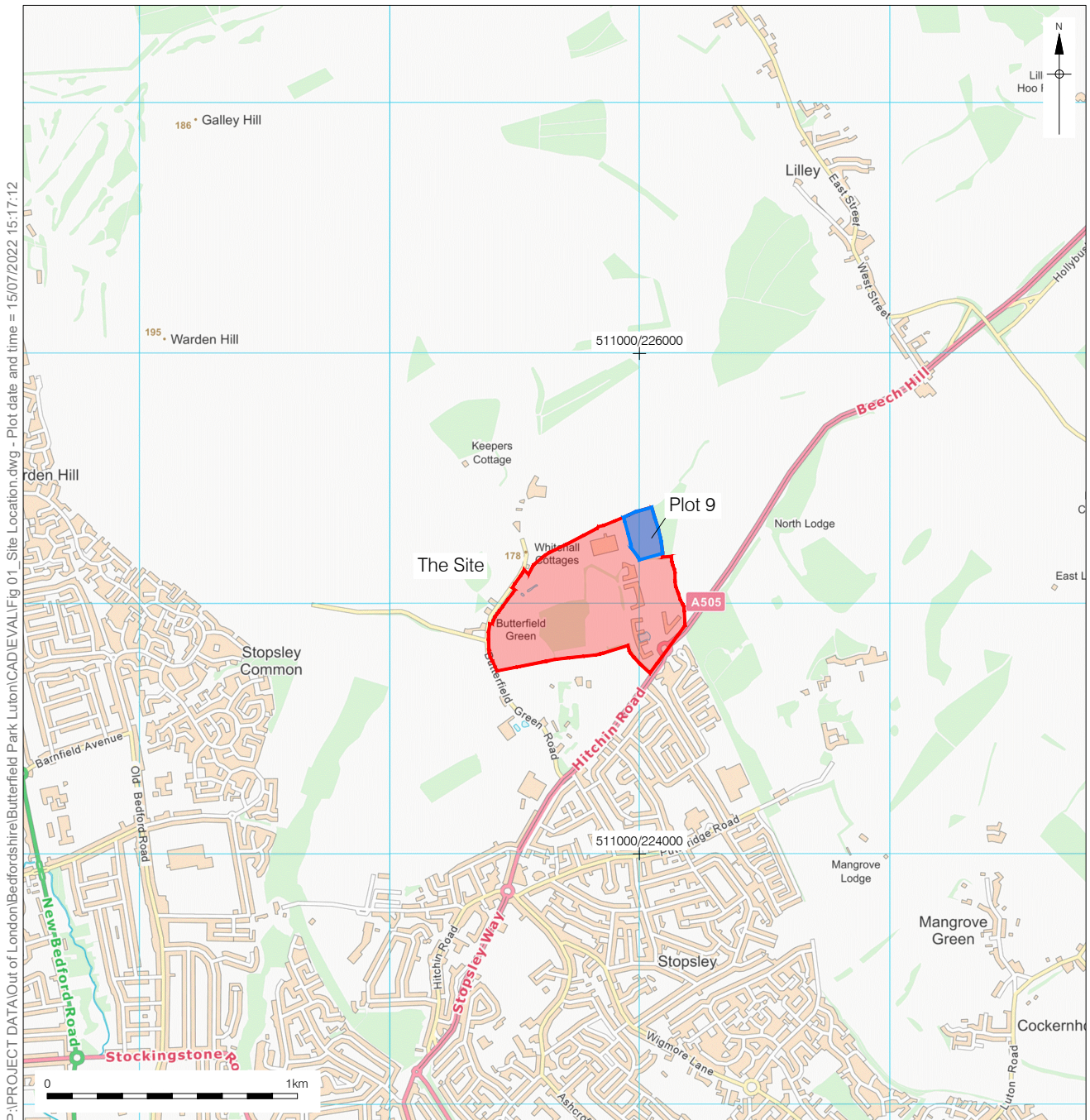
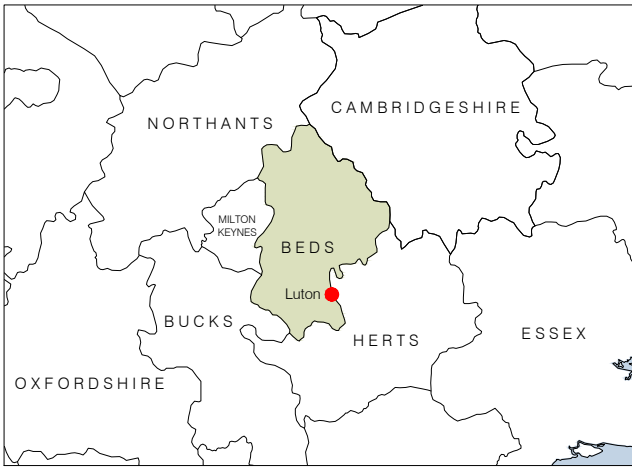
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APPENDIX 1: FIGURES



P:\PROJECT DATA\Out of London\Bedfordshire\Butterfield Park Luton\CAD\IE\VAL\Fig 01_Site Location.dwg - Plot date and time = 15/07/2022 15:17:12



APPENDIX 2: CONTEXT INDEX

Context	Phase	Type 1	Type 2	Fill of	Interpretation
Trench 1					
[100]	3	Deposit	Layer	-	Levelling deposit
[101]	2	Deposit	Layer	-	Topsoil
[102]	1	Deposit	Layer	-	Superficial geology
Trench 2					
[200]	3	Deposit	Layer	-	Levelling deposit
[201]	2	Deposit	Layer	-	Topsoil
[202]	1	Deposit	Layer	-	Superficial geology
Trench 3					
[300]	3	Deposit	Layer	-	Levelling deposit
[301]	2	Deposit	Layer	-	Topsoil
[302]	1	Deposit	Layer	-	Superficial geology
Trench 4					
[400]	3	Deposit	Layer	-	Levelling deposit
[401]	2	Deposit	Layer	-	Topsoil
[402]	1	Deposit	Layer	-	Superficial geology
Trench 5					
[500]	3	Deposit	Layer	-	Levelling deposit
[501]	2	Deposit	Layer	-	Topsoil
[502]	1	Deposit	Layer	-	Superficial geology

APPENDIX 3: STRATIGRAPHIC MATRIX

	Trench 1	Trench 2	Trench 3	Trench 4	Trench 5
Phase 3: Modern	[100]	[200]	[300]	[400]	[500]
<hr/>					
Phase 2: Topsoil	[101]	[201]	[301]	[401]	[501]
<hr/>					
Phase 1: Superficial geology	[102]	[202]	[302]	[402]	[502]

APPENDIX 4: PHOTOGRAPHIC PLATES

Plate 1: Trench 1, view SE, 2m scale



Plate 2: Trench 2, view ESE, 2m scale



Plate 3: Trench 3, view NE, 2m scale



Plate 4: Trench 4, view North, 2m scale



Plate 5: Trench 5, WNW view, 2m scale



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