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November 2023

London Luton Airport Expansion

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Volume 5 Environmental Statement and Related Documents

5.02 Appendix 10.7 Archaeological Trial Trench Evaluation Report (Cotswold 2023)

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5.02 ENVIRONMENTAL STATEMENT APPENDIX 10.7 ARCHAEOLOGICAL TRIAL TRENCH EVALUATION REPORT (COTSWOLD 2023)

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Cotswold Archaeology

Luton Airport Phase 2
Luton
Bedfordshire & Hertfordshire

Archaeological Evaluation

for:
AECOM

on behalf of:
Luton Rising

CA Project: MK757
CA Site Code: LUT22
CA Report: MK0757_4

Archive Entry No.: LTNMG:1515
Accession Number: LUTNM 2022/10

October 2023

Andover Cirencester Milton Keynes Suffolk

Luton Airport Phase 2
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LIST OF ILLUSTRATIONS

SUMMARY

Project name:	Luton Airport Phase 2
Location:	Luton, Bedfordshire & Hertfordshire
NGR:	13178 21743
Type:	Evaluation
Date:	08 – 26 August 2022
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In August 2022, Cotswold Archaeology (CA) carried out a second phase of evaluation trenching on land immediately to the east of the existing Luton Airport complex, at the request of AECOM acting on behalf of Luton Rising. The works were undertaken in advance of the planned extension of London Luton Airport, and the fieldwork results will form part of the baseline data being gathered as part of the Environmental Impact Assessment which will support the Development Consent Order application.

Part of the current Site area is located within the Luton Council administrative area, while the other part is within Hertfordshire. A total of 51no. trenches were excavated across three targeted areas as part of this phase of fieldwork, including 42no. 50m long by 2m wide trenches and nine 30m long by 2m wide trenches. Trenches were numbered to follow on consecutively from the first phase of evaluation, undertaken in 2019.

Despite the proximity to known archaeological remains, the current phase of trenching in Bedfordshire revealed only three features. A small ditch and pit were observed within Trench 69, and a second small ditch or possible erosion channel was investigated in Trench 89. The lack of features is most likely due to the gradient of the dry valley bisecting the centre of the Site, encompassing much of Area 3, becoming more pronounced and rendering the land unsuitable for anything other than pastoral uses. Similarly, the trenches in Area 2 were situated on the steep slopes and near the base of a second, parallel dry valley along the northern edge of the site.

Trenches within the Hertfordshire portion of the development area were located within a designated Archaeological Alert Area due to the high potential for Roman remains associated with a potential building located to the east. However, no features or deposits of archaeological interest were revealed within the trenches. Extensive modern plough scarring was noted across the area, possibly contributing to the eradication of any features which may once have been present. Alternatively, it is possible that any remains connected to the Roman building recorded to the east do not extend far enough to the west to be included within the current trenching area.

1. INTRODUCTION

1.1. In August 2022, Cotswold Archaeology (CA) carried out a second phase of evaluation trenching on land immediately to the east of the existing Luton Airport complex, at the request of AECOM acting on behalf of Luton Rising. The works were undertaken in advance of the planned extension of London Luton Airport. Part of the development site area is located within the Luton Council administrative area, while the other portion is within Hertfordshire.

1.2. The fieldwork was commissioned in connection with proposals to expand the existing airport to accommodate 32 million passengers per annum, including refurbishment of the existing terminal, creation of a new terminal, replacement and additional car parks, an extension to the Luton Direct Air to Rail Transit (DART), highway network improvements and replacement of existing / planned public open space and amenities. The results of the evaluation will form part of the baseline data being gathered as part of the Environmental Impact Assessment which will support the Development Consent Order application.

1.3. The scope of this phase of archaeological works was agreed in discussions between AECOM, the archaeology team at Central Bedfordshire Council (CBCA) and the Historic Environment Team at Hertfordshire County Council (HCCHET). Two Written Scheme of Investigation (WSI) were subsequently prepared by AECOM (AECOM 2022a and 2022b) on this basis, supplemented by two Supplementary Method Statement produced by CA (2022a and 2022b), to cover the Bedfordshire and Hertfordshire portions of the Site respectively. Trenches were numbered to follow on sequentially from the phase 1 works (CA 2019). The WSIs and Method Statements were reviewed and approved by the CBCA and HCCHET, and the fieldwork was monitored through written updates and photographs provided by CA and a site visit from AECOM and the respective archaeological advisors.

1.4. The evaluation was also undertaken in line with the *Standard and guidance for archaeological field evaluation* (CIfA 2014; updated October 2020), *Management of Research Projects in the Historic Environment (MoRPHE) PPN 3: Archaeological Excavation* (Historic England 2015) and *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (Historic England 2015).

The site

1.5. The development site comprises arable and rough pasture fields located to the east of Luton Airport, directly bounding the eastern edge of Wigmore Valley Park. Following on from the phase 1 evaluation works (CA2019), it was agreed that further evaluation trenches would be excavated in six additional areas of the Site (Areas 1, 4, 5, and 6 in Hertfordshire; and Areas 2 and 3 in Luton Council who receive archaeological advice on planning matters from the CBCA) and access was permitted to carry out trial trenching in advance of planning in three of these areas (Area 2, 3 and 6), which form the subject of this report.

1.6. The underlying bedrock geology of the development area is mapped as chalk of the Lewes Nodular Chalk Formation and Seaford Chalk Formation, a type of sedimentary bedrock formed between 93.9 and 83.6 million years ago during the Cretaceous period. This is overlain by a mixture of clay, silt, sand and gravel of the Clay-with-flints Formation, a sedimentary superficial deposit formed between 23.03 million and 11.8 thousand years ago during the Neogene and Quaternary periods (BGS 2022). The Bedfordshire portion of the site is bisected by a large broadly north-west/south-east aligned dry valley, with Head deposits of clay, silt, sand and gravel overlying the bedrock along its course (BGS 2022). A second roughly parallel dry valley is mapped along the northern edge of the development site, with similar associated Head deposits mapped by the BGS.

1.7. The Bedfordshire portion of the development site is located immediately to the north-east of the existing Luton Airport runway (centred on NGR 13178 21743). Area 2 is located on the slopes of the northernmost dry valley at an elevation of approximately 133m above Ordnance Datum (aOD); Area 3 spans the slopes and lowest contours of the southern dry valley, where the elevation ranges from 131m aOD at the north, dropping to 128m aOD within the valley floor, before rising again to 135m aOD.

1.8. The Hertfordshire portion of the development site comprises a number of arable fields located to the east of the existing Luton Airport and contains four areas targeted for investigation, comprising Areas 1, 4, 5, and 6. However, only Area 6 was investigated as part of the current fieldwork phase, with the works in Areas 1, 4, and 5 to be undertaken at a later date, post-planning consent for the scheme. Area 6 is centred on NGR 513975 221608 and is the eastern-most field within the Site, situated on the edge of the southern dry valley at an elevation of approximately 140m aOD, dropping

to 135m aOD towards the south-east. This area is an Archaeological Alert Area due to the high potential to contain Roman remains associated with potential building HER 7358 (see section 2, below). The trenches are positioned in the area of a proposed fuel connection pipeline and access road, approximately 130m south-west of HER 7358.

2. ARCHAEOLOGICAL BACKGROUND

2.1. The entirety of the proposed development area has previously been the subject of a historic environment desk-based assessment (DBA; AECOM 2021) and two sets of geophysical survey (SUMO 2018; TigerGeo 2019), which identified potential heritage assets of archaeological significance within the site. A first phase of trial trenching within the Bedfordshire portion of the site has also been carried out (CA 2019). The following archaeological background is summarised from these sources, supplemented by an up-to-date search of records contained in the CBC Historic Environment Record (HER; search ref. 202223/049).

Prehistoric

2.2. The only evidence for early prehistoric activity identified within a 1km radius of the development area is a Mesolithic flint scatter (HER 15052) located approximately 500m north of the Main Application Site, just south of Brickkiln Wood, Cockernhoe.

2.3. An archaeological investigation undertaken in 2008 on land to the north-east of Luton Airport, approximately 600m north of the Main Application Site boundary, identified a pit containing Neolithic pottery sherds (HER 16290). The first phase of trial trench evaluation undertaken within the Main Application Site boundary also identified a single pit of Neolithic date (CA 2019; see below).

2.4. A geophysical survey undertaken at Butterfield Green, Luton, approximately 3km north of the development area, produced evidence for a rectilinear and possible sub-circular ditched enclosure. A subsequent excavation identified a boundary ditch and pits dating to the late Bronze Age / early Iron Age, as well as a number of Neolithic and Bronze Age flints.

2.5. Cropmarks located approximately 300m south of the development area were identified during aerial photograph analysis (EBD447) of land south of Luton Airport. A trapezoidal enclosure was identified, with other features nearby, including a circular feature intersected by two parallel features and other linear features (HER 15090).

These are likely to date from the late Bronze Age / Early Iron Age to Romano-British, and a late Iron Age saddle quern was found during fieldwalking of the area.

2.6. An archaeological investigation at Wigmore Valley Park (EBD1242), located within the proposed development boundary, comprised a single trench excavation undertaken in 1997. This investigation exposed a number of features, notably two double ditches, both containing late Iron Age and Romano British pottery sherds.

2.7. In 2019, a first phase of trial trench evaluation was undertaken on land to the east of Luton Airport (CA 2019; see below), which identified a number of ditches which seemingly formed an enclosure encompassing the remains of a small building and a series of rubbish pits, which contained Late Iron Age – Early Roman transitional period pottery.

2.8. A survey of earthworks (EHT6748) within Brickkiln Wood, approximately 900m north of the development area, identified a possible late Iron Age – late Roman enclosure (HER 16645). An archaeological investigation during the construction of a pipeline, approximately 900m north of the development area, identified a number of features related to late Iron Age occupation and which produced late Iron Age pottery and a single urned cremation (HER 7359). Further Iron Age activity is identified by spot finds of Iron Age pottery sherds (HER 10810).

Roman

2.9. In 1997 a trench was excavated by Luton Borough Council in Wigmore Valley Park (EBD1242), located within the proposed development boundary. This cut through an extensive range of Roman occupation features including flint surfaces, pits and double ditches and produced finds of Roman tile and late Iron Age – Romano-British pottery sherds. A subsequent geophysical survey (EBD1243) was undertaken in 2004 which identified evidence for a substantial structure. A possible Roman occupation site (HER 10808) was known to exist in this area since an analysis of aerial photographs undertaken in 1976 identified two ring-ditches and a linear feature. Further fieldwalking (EBD692) of the area revealed pottery and tile, including tegulae, imbrex, flue and hypocaust tiles, indicating the possible location of a Roman building.

2.10. A series of archaeological investigations (EHT4336; EHT4337) were undertaken at Winch Hill Farm, located to the east of Luton Airport and within the proposed development boundary, which identified a number of Romano-British features

probably representing a farmstead (HER 7358). Later fieldwalking of the site revealed a large amount of Roman and medieval pottery (EHT4338). The Hertfordshire trenches of the current phase of evaluation are located within the designated Archaeological Alert Area associated with potential farmstead HER 7358. The area 6 trenches in the current phase of work were located to the west of the suspected building location, separated by a buffer zone from the recorded location of the building due to the presence of an aviation fuel pipeline.

2.11. In 2000, a few Iron Age/ Roman pottery sherds were identified in the backfill of a cable trench on Pasture Lane, and subsequent fieldwalking in 2008 in the field to the east identified a small scatter of Romano-British pottery sherds (HER 10810). Roman pottery sherds were also identified within a ditch (HER 1466) during construction works at the Luton Airport site in 1960. Further Roman activity has been identified in the form of findspots of Roman pottery sherds and building material (HER 11461; HER 11584; HER 12600), Roman coin (HER 1949), a copper alloy pin (HER 18285), and Roman extraction pits (HER16293).

Early medieval

2.12. A Saxon settlement was established at Luton by at least 475AD, the exact location of this settlement is unknown but it is assumed to be in the vicinity of Argyll Avenue, approximately 1.5km north of the modern centre of Luton, due to the discovery in 1925 of an extensive Saxon cemetery in this area.

2.13. By the time of the 6th century, an Anglo-Saxon settlement is known to have existed in the area of Limbury, approximately 4km north of the modern centre of Luton. Saxon cemeteries containing 5th century burials have also been identified at Kempton and Sandy, all in the vicinity of known small Roman towns.

2.14. A probable female inhumation (HER 1248), dated to c. 670, was found in 1913 by workmen on land between Breachwood Green and Darley Hall, King's Walden, approximately 100m east of the development area. Multiple Anglo-Saxon finds were identified including four brooches however no human remains were located. In addition, an isolated inhumation cemetery dated to the mid-late 7th.

2.15. Under the terms of the Danelaw treaty of 878 AD, Luton found itself on the Saxon – Danelaw boundary and was probably taken over by the Danes, as the Anglo-Saxon Chronicles states that Luton was reclaimed from the Danes in 917 AD. A Saxon

settlement was established at Luton (Lyg-tun) by the late 10th century when the Danelaw collapsed and when the original church at the site of the present St. Marys Parish Church was built.

Medieval

2.16. The Domesday Survey of 1086 reflects the changes in land ownership following the Norman Conquest of 1066. The survey lists 180 settlements in Hertfordshire and 163 settlements in Bedfordshire with the most populated areas being Hitchin, Luton and Ware. Bedfordshire is largely described as mainly nucleated with some dispersed settlement with agriculture dominating the local economy. Hertfordshire was among England's most densely wooded counties in the medieval period which is thought to be a marked change from an earlier landscape characterised by open farmland. The economy of Hertfordshire developed through trade rather than agriculture.

2.17. The parish of King's Walden is located approximately 1.5km to the east of the Main Application Site and has Saxon origins. The settlement comprised the church of St. Mary which adjoined the manor house of King's Waldenbury with the village being near and off the road. At a later date, the inhabitants migrated towards the road and the village became established where it is today.

2.18. Wandon End (HER 1837) is an area located on the northern extent of the Main Application Site boundary within the parish of King's Walden and is purported to be a deserted medieval village, being recorded in the Domesday Book as having six households. The place-name however implies not a village but a scatter of buildings around the many ends and greens characteristic of the areas dispersed settlement pattern such as that at Crawley Green (HER 12403) and (HER 17102). Cockernhoe is a parish located approximately 1.2km north of the Main Application Site and from the 14th century, the manor of Cockernhoe was held along with the manor of Offley by the St. Ledger family.

2.19. The probable site of St. Anne's Tower and Chapel (HER 361) was thought to have been built in the early 12th century and is located approximately 800m west of the Main Application Site boundary. The land was owned by the Abbots of St. Albans with the chapel being demolished in the 17th century and the tower being demolished in the early 18th century.

2.20. The site of the Hospital of St. Mary Magdalene (HER 362) is located within the Main Application Site boundary. It is thought to have been a leper hospital founded by Thomas Becket before 1170 and dissolved in c.1540. It was located to the east of Spittlesey / Spittlesea Wood, an area now occupied by Luton Airport. Spittlesea Wood is visible on historic OS mapping dated from 1885 through to 1955 with remnants of the wood still remaining as part of the current Luton Airport site.

2.21. Someries Castle (NHLE 1008452) is a late-medieval 15th century fortified manor house located approximately 250m south of the Main Application Site boundary. The remains of the original medieval manor house and gardens are now only visible as earthworks, although remains of the gatehouse, incorporating the chapel and lodge, are still partially standing (HER 360). The name Someries Castle is derived from William de Someries whose residence stood on the site in the 13th century. Sir John Wenlock built Someries Castle in the 15th century and the garden earthworks are in the style of formal gardens of the 16th and 17th centuries. The estate passed to Thomas Rotheram after Sir Wenlock's death and later passed to the Archbishop of York. The house was never completed with much of the building demolished in 1742. This is reinforced by 18th century prints which show the ruins largely as they stand today.

2.22. During the medieval period, the main economic activity in the area was agriculture. This is evidenced in extant medieval buildings, such as those at Breachwood Green which include Manor Farm (Grade II, NHLE 1102444) that dates to the 16th century or possibly earlier and Heath Farmhouse (Grade II, NHLE 1366120), a late 15th century farmhouse.

2.23. There are a number of ancient woodlands with medieval origins within the wider area including George Wood (HER 13172) and Kidney/Bulls Wood (HER 13242), both located approximately 600m to the southwest of the development area. There are also a number of sites of possible medieval rabbit warrens located within the wider area. One at Coney Ground (HER 12372) near Someries Farm and one at Kimpton Lane (HER 12371) which is within the eastern extent of the Main Application Site boundary.

2.24. Further evidence for medieval activity within the wider area consists of cropmarks representing former field boundaries of medieval origin (HER 12441) and (HER

12442). There are also finds spots including a silver-gilt purse hanger (HER 19324) and pottery sherds (HER 13792; HER 9679).

Post-medieval

2.25. The agricultural base of Luton changed in the 16th century with leather-working and early brickmaking developing in the rural/agricultural regions with most parishes having at least one brickyard and kiln; and some larger estates even having their own pits and kilns. By the 17th century, Luton was a centre for the developing straw-plaiting and hat-making industries. Lacemaking was supposedly introduced by Flemish refugees in the late 16th century. It was carried out mainly by women and children of farming families up to the end of the 19th century when the introduction of lace-making machines in and around Nottingham brought about the decline of lace-making in Bedfordshire. In the 17th century, hat-making became synonymous with the town and by the 18th century it dominated the town as its only significant industry.

2.26. Bedfordshire played a key role in the Agricultural Revolution of the 18th and 19th centuries with the countryside being far more industrialised than the towns and innovations such as the steam plough being developed here. Farms were built like factories and hedgerows and fields were re-fashioned to fit the new machines. The River Lea Navigation Act of 1739 led to the river being improved and becoming navigable, which increased the amount of trade between Hertfordshire and London. Advanced farming techniques and soil improvement programmes had enabled farmers to work Hertfordshire's land to better effect since the early medieval period.

2.27. About half of Bedfordshire was still farmed under the open field system until the introduction of enclosures in the 18th and 19th centuries. The area has a mixture of dispersed and nucleated rural settlement and in the Chilterns, there are numerous single farmsteads and 'end' place names which are usually seen to be of medieval origin, but some almost certainly originated in the post-medieval period. Deserted and shrunken villages are well known from the medieval period however many settlements were partially deserted in the post-medieval period mainly due to agricultural workers being drawn to larger towns for work.

2.28. The site of a model farm (HER 15586) is located west of the development area. Model farms were designed to research and demonstrate improvements in agricultural techniques, efficiency and building layout. The site was demolished in the 20th century to make way for the expansion of Vauxhall Motors. Medlow House (HER

15134) is a 19th century farmstead located approximately 250m east of the Main Application Site. The layout and materials used for the construction of the buildings suggest a planned layout although not using one of the contemporary model farm plans.

2.29. There are also a number of post-medieval farmsteads east of the development area which highlight the continued agricultural activity in this area as opposed to the industrialisation of Luton to the west. Wandon End Farm (HER 15464) is a post-medieval farmstead with a 16th century farmhouse (Grade II, NHLE 1102448), and range of barns, located on the northern extent of the Main Application Site boundary. Wandon End House (Grade II, NHLE 1307874) dates to the early 18th century and is constructed of brick, is located approximately 200m to the east of Wandon End Farm. Other post-medieval farmsteads include Heath Farm (HER 15138), Bailey's Farm (HER 15136) and Crouchmoor Farm (HER 11026), all of which have earlier medieval farmhouses. Located towards the north of Someries Castle is Someries Farm (HER 2027) which is an 18th century farmhouse with 19th century renovations.

2.30. To the north-east, east and south, the development area is surrounded mainly by countryside with hamlets and small villages. 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 Enclosure Act took effect in King's Walden in 1797 with the land being surveyed and reallotted while the common land was enclosed by an award in 1802. As a result, the farms in Breachwood Green and King's Walden had taken shape which has remained relatively unaltered until today.

2.31. Wigmore Hall Farmhouse, an early 19th century grade II listed building (Grade II, NHLE 1321368) is situated just outside of the northern boundary of the development area (on the south side of Eaton Green Road). It was originally part of a larger farm complex which included Wigmore Hall and a series of farm buildings and a yard which lay on the north side of Eaton Green Road. This was demolished during the late 20th century when the area was redeveloped for housing. Wigmore Hall Farmhouse is now used as Wigmore Hall Conference Centre. It is of stucco with a hipped Welsh slate roof and arranged around a square double pile plan. The main elevation faces onto Eaton Green Road to the north.

2.32. The introduction of the railways in Bedfordshire and Hertfordshire marks the beginning of the industrial period with large towns like Bedford and Luton expanding and thriving. Historic OS mapping between 1885 and 1955 shows the area within Hertfordshire largely unchanged. The residential areas of Wandon End and Breachwood Green do not appear to have grown in size and the farmsteads noted on the 1885 OS map are still noted on the 1955 OS map with no additions. In contrast to this, the town of Luton has expanded extensively in all directions from its historic core, predominantly towards the northwest. The Hatfield, Luton and Dunstable Branch of the Great Northern Railway (HER 14086) runs north to south to the east of the Main Application Site and is visible on historic OS mapping dating from 1885. Foundries and engineering works started to appear in the early 19th century including a brick and tile works (HER 6732) at Eaton Green, on the north-western extent of the Main Application Site boundary and the site of Cockernhoe brickworks (HER 13723) which is located approximately 1km to the north-east of the development area. The area has also undergone extensive quarrying due to its good source of basic raw materials, with clay being the most intensively extracted to provide raw material for the brickworks. A number of quarry pits are located in the wider area (HER 6733; HER 12420; HER 12421; HER 12429; HER 18063).

Modern

2.33. The hat making industry in Luton fell into decline later in the 20th century. However, new industries had already been established in the town including Vauxhall, a car manufacturer which came to the town in 1905. Vauxhall Iron Works, later Vauxhall Motors, moved their production line to Luton, making it the largest car manufacturing site in the country. A number of buildings are still extant which formed part of the Vauxhall Motors Complex including the office block (Grade II, NHLE 1249000), one of the main production buildings Block AA (HER 15580) and other associated buildings (HER 15390; HER 15391; HER 15392). A war memorial (HER 16976) was unveiled in 1992 on Kimpton Street to commemorate the men and women who worked at Vauxhall Motors and who died during the First and Second World Wars. Defensive installations in the 20th century, particularly airfields, had a considerable impact on the landscape.

2.34. Luton was a vital town during World War Two (WWII) as Vauxhall Motors produced military equipment including vehicles such as tanks. As such, Luton was heavily

bombed and the town suffered extensive damage, with over 1,500 homes damaged or destroyed.

2.35. In 1938, Luton Airport (HER 9271) was opened and owned by the Borough of Luton. The Airport was also utilised during the war, being used by the Royal Air Force as a military training airfield. A fighter squadron were based there as well as a manufacturing site where military aircraft was designed and built. Further assets related to the defensive installations at Luton Airport include an airfield battle headquarters (HER 17921) which is located largely underground, towards the northern extent of the Main Application Site boundary, in Wigmore Park, a pillbox (HER 17922) which is now demolished, earthworks including gun emplacements (HER 12423) and the site of a prisoner of war camp (HER 17937), now demolished.

2.36. In 1952, civil use of the airport resumed and a new control tower was opened. During the next ten years, the 'package' holiday was developed and Luton Airport played an important role in the development of the package holiday business in the UK. By 1969, a fifth of all flights from the UK departed from Luton Airport and by 1972, it was Britain's most profitable airport. In the 1990's, the airport infrastructure and facilities were upgraded and expanded with passenger levels increasing rapidly, making the airport the UK's fastest-growing major airport.

2.37. Further assets related to the modern period in the surrounding area include 20th century churches (HER 13547; HER 13550), earthworks (HER 20507) and Luton Airport Fire Station (HER 19823) which is part of the Luton Airport complex.

Unknown

2.38. A number of cropmarks and soilmarks are visible to the south of Winch Hill Farm, within the proposed development boundary. The cropmarks and soilmarks consist of faint traces of possible enclosures and an extraction pit (HER 17218), possible enclosures, pits and ditched features (HER 17219) and evidence of settlement and boundaries (HER 17234). These are all currently undated but may be associated with known Iron Age and Roman activity in this area. Further undated cropmarks of linear features (HER 18458) are located to the south-east of Luton Airport.

2.39. Additional assets of unknown date have been identified through analysis of historic maps, LiDAR data and aerial photography. These comprise pit-type features (AEC001; AEC002) which are located towards the eastern extent of the Main

Application Site and areas of former woodland (AEC025; AEC005) which were located within the development area but removed during the construction of the existing airport. A number of areas of woodland (AEC006; AEC008; AEC010; AEC016) and chalk / clay pits (AEC009; AEC018; AEC021) have also been identified within the wider area.

Geophysical survey (SUMO 2018; TigerGeo 2019)

2.40. In 2018 and 2019, two phases of geophysical survey were undertaken within the proposed development area. The 2018 survey was undertaken by SUMO on land within Bedfordshire which identified a small complex of ditches and pit-like anomalies that were interpreted as probably a component of a small Romano-British site and correlates with an enclosure recorded in the HER record (HER 10808). A possible pit alignment was also identified. Features that correlated with asset (HER 12422) were confirmed to be of geological origin.

2.41. The 2019 geophysical survey was undertaken by TigerGeo on land within Hertfordshire which identified a small number of possible ditches across the surveyed area, but none forming groups or having diagnostic character.

Phase 1 trial trench evaluation (CA 2019)

2.42. An initial phase of trial trench evaluation in 2019 targeted a potential Romano-British site and possible pit alignment identified by the 2018 geophysical survey. The evaluation identified a single pit of Neolithic date and confirmed the presence of Late Iron Age/ Early Roman and Romano-British activity in the form of an enclosure encompassing the remains of a small building or structure (correlating with HER10808) and a series of rubbish pits. The Area 2 and 3 trenches in the current phase of works were located to the northeast and east of these features respectively.

3. AIMS AND OBJECTIVES

3.1. The general objectives of the evaluation, in line with the *National Planning Policy Framework* (MHCLG 2021), were to:

- confirm the presence or absence of surviving archaeological remains;
- determine the location, nature, extent, date, condition, state of preservation, significance and complexity of any archaeological remains;

- determine the likely range, quality and quantity of artefactual and environmental evidence present;
- inform a strategy for the recording, preservation and/or management of the identified assets;
- interpret the archaeology of the Site within its local, regional and national archaeological context; and
- aid the determination of a suitable mitigation response.

3.2. Site-specific aims for the Bedfordshire portion of the site (Areas 2 and 3) were set out in consultation with the CBCA and included:

- to complement and complete the archive collected during the Stage 1 trial trenching works;
- to record the presence / absence, location, date, preservation and extent of archaeological evidence associated with Roman activity in the area;
- to aid understanding of the level of association between known Roman settlements HER 10808 and HER 7358 (located in Hertfordshire) by improving understanding of the use of the space between the settlements; and
- to further characterise the type of activity within the area in order to identify as far as practical the full range of features and structures associated with the Roman activity identified in the area, including evidence for trackways and field systems between settlements HER 10808 and HER 7358.

3.3. Site-specific aims for the Hertfordshire portion of the site (Area 6) were set out in consultation with the HCCHET and included:

- to confirm the results of previous geophysical survey within the site and confirm the presence or absence of archaeological remains;
- to confirm the presence/ absence of significant archaeological remains associated with potential Roman building HER 7358 in the area of the proposed fuel pipeline (Area 6); and
- to further characterise the type of activity within the area in order to identify, as far as is practical, the full range of features and structures associated with prehistoric and Romano-British activity identified in the area. This includes evaluating the space between known settlements (HER 10808 and HER

7358) in order to understand land-uses, land management, communication routes and levels of association.

3.4. The results of the fieldwork were also considered in relation to relevant research themes identified in *Bedfordshire Archaeology: Research and Archaeology: Resource Assessment, Research Agenda and Strategy* (Oake et al 2007) and the *East of England Regional Research Framework* (ALGAO 2021), as well as previous iterations of the research framework.

4. METHODOLOGY

4.1. The evaluation fieldwork was planned to comprise a total of 54no. trenches across three areas. However, based on preliminary results in the field and with the agreement of the CBCA and AECOM, three trenches were subsequently dropped from the scope of works (see below). Consequently, a total of 51no. trenches were excavated as part of the current evaluation phase, including 42no. 50m long by 2m wide trenches and nine 30m long by 2m wide trenches, in the locations shown in Figure 2:

- **Area 2** (Luton Council) contained a total of seven trenches, comprising five trenches measuring 50m long by 2m wide and two trenches measuring 30m long by 2m wide.
- **Area 3** (Luton Council) contained a planned total of 39no. trenches, comprising 31no. trenches measuring 50m long by 2m wide, and eight trenches measuring 30m long by 2m wide. However, with the agreement of the CBCA and AECOM, Trenches 78, 80, and 83 were dropped from the scope of works and remained unexcavated. In addition, Trench 79 was extended from 25m to 50m long in order to cover the planned location of Trench 78.
- **Area 6** (Hertfordshire) contained a total of eight trenches, each measuring 50m long by 2m wide.

4.2. The trenches were located to test geophysical anomalies and to provide a representative sample of the remainder of the site, in order to further clarify the archaeological potential of the proposed development area. The evaluation results also contribute to providing more complete baseline data for the Environmental Impact Assessment. This in turn will inform the requirement for and design of any future archaeological mitigation and/or in situ preservation strategy.

4.3. Trenches were set out on OS National Grid co-ordinates using Leica GPS and scanned for live services by trained staff using CAT and genny equipment. Overburden was stripped from the trenches by a mechanical excavator fitted with a toothless grading bucket. All machining was conducted under archaeological supervision to the top of the natural substrate, which was the level at which archaeological features were first encountered.

4.4. Archaeological features/deposits were investigated, planned and recorded in accordance with *CA Technical Manual 1: Fieldwork Recording Manual* and the methodologies set out in the approved WSI (AECOM 2022a) and Supplementary Method Statement (CA 2022a).

4.5. Deposits were assessed for their palaeoenvironmental potential and samples were taken in accordance with *CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites* and the methodologies set out in the approved WSI (AECOM 2022a) and Supplementary Method Statement (CA 2022a).

4.6. No artefacts were recovered during the fieldwork.

4.7. CA will make arrangements with The Culture Trust, Luton for the deposition of the documentary project archive under accession number LUTNM 2022/10. An agreement was reached following discussions with The Culture Trust, Luton and North Hertfordshire Museums Service that a single archive would be deposited with The Culture Trust, Luton in order to preserve the integrity of the site archive.

4.8. A digital archive will also be prepared and deposited with the Archaeology Data Service (ADS). The archives (museum and digital) will be prepared and deposited in accordance with the *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (CIfA 2014; updated October 2020) and relevant museum guidance. When the archive has been accepted by the ADS, the unique DOI will be forwarded to the HER.

4.9. A summary of information from this project, as set out in Appendix C, will be entered onto the OASIS online database of archaeological projects in Britain.

5. RESULTS

5.1. This section provides an overview of the evaluation results. Detailed summaries of the recorded contexts are given in Appendix A. Details of the environmental samples (palaeoenvironmental evidence) are given in Section 7 and Appendix B.

Area 2 (Luton Council); Trenches 58 – 64 (Fig. 2, 3, 6, 7)

5.2. The stratigraphic sequence across the area was relatively shallow, with the natural substrate, comprising mid orange brown silt clay with frequent natural flint nodules, encountered at depths between of c. 0.3m and c.0.4m. This was overlain directly by topsoil deposits of mid grey brown silt clay.

5.3. No archaeological features or deposits were encountered in any of the trenches.

Area 3 (Luton Council); Trenches 65 – 102 (Fig. 2, 4, 8, 9, 12, 13)

5.4. The trenches in Area 3 revealed a broadly consistent geological sequence, with the natural substrate comprising mid orange brown silt clay with frequent natural flint nodules, with bands of chalk running along the slopes of the dry valley. The natural substrate across all trenches was encountered at depths between of c. 0.3m and c.0.4m. This was overlain directly by topsoil deposits of mid grey brown silt clay. No distinct colluvial sequences matching those encountered during the Phase 1 evaluation were encountered; this may be due to the presence of more cohesive soils in the current trenching area or a different land use (e.g. rough pasture) over a longer period of time resulting in less soil movement when compared to other parts of the field.

5.5. With the exception of Trenches 69 and 89 (see below), all other trenches in Area 3 were devoid of archaeological remains. With the agreement of the CBCA and AECOM, Trenches 78, 80, and 83 were dropped from the scope of works and remained unexcavated, although trench 79 was extended from 25m to 50m long in order to extend across the planned location of Trench 78.

5.6. Archaeological features were revealed in two trenches in Area 3; Trenches 69 and 89. In Trench 69, a small pit 6902 (see Fig. 12) was investigated, measuring 0.71m wide and 0.24m deep, with moderately sloping sides and a slightly irregular base. The feature contained two fills, with the lower fill, 6903, comprising mid grey brown silty clay mixed with chalk. A small proportion of charcoal was recovered via a bulk soil sample taken from the lower fill. However, it was thought that this may be intrusive

material originating within upper fill 6904, as this deposit, comprising dark brown silty clay with frequent charcoal inclusions, produced a larger proportion of charcoal indicative of a dump of hearth waste material. No finds were recovered from the fills. At the request of the CBCA and AECOM, the pit was 100% excavated but remains undated.

5.7. The pit was located immediately to the south of broadly east/west aligned small ditch 6905 (see Fig. 12), measuring 0.88m wide and 0.18m deep with concave sides and a flat base. The single undated sterile fill, 6906, comprised mid grey brown silty clay with some chalk inclusions. At the request of AECOM, and after taking advice from the CA environmental team, two small samples of the ditch fill were recovered, to be held in reserve for potential pollen analysis at a later date.

5.8. In Trench 89 a north/south aligned possible small ditch or natural water-formed erosion channel (8902; see Fig. 13) was investigated, measuring 0.6m wide and 0.11m deep, with gently sloped sides and a concave base. The single fill, 8903, comprised a mid grey brown silty clay with frequent natural flint inclusions that contained no artefacts.

Area 6 (Hertfordshire); Trenches 103 – 110 (Fig. 10, 11)

5.9. The stratigraphic sequence across the area was relatively shallow, with the natural substrate, comprising mid orange brown silt clay with frequent natural flint nodules, encountered at a depth of c. 0.3m. This was overlain directly by topsoil deposits of mid grey brown silt clay.

5.10. No archaeological features or deposits were encountered in any of the trenches.

6. THE BIOLOGICAL EVIDENCE

Plant macrofossils by Emma Aitken

6.1. Two environmental samples (24 litres of soil) were processed from undated pit 6902 in Trench 69. These samples were taken to evaluate the preservation of palaeoenvironmental remains within this part of the site and with the intention of recovering environmental evidence of industrial or domestic activity in the area. It was also hoped that the environmental remains may aid in the dating of undated pit 6902. The samples were processed by standard flotation procedures (CA Technical Manual No. 2).

6.2. The results of the assessment have been recorded in Table 1 (Appendix B), with the preliminary identifications of mollusc shells following nomenclature according to Anderson (2005) and habitat preferences according to Kerney (1999) and Davies (2008).

Trench 69

6.3. Two samples were taken from undated pit 6902 from upper fill 6904 (sample 1) and lower fill 6903 (sample 2). The flots were relatively large, with 50-90% rooty material and moderate to high numbers of the intrusive burrowing snail, *Cecilioides acicula*.

6.4. Both assemblages contained no charred plant remains. Sample 1 contained a large quantity of charcoal fragments, many of which were comminuted, and sample 2 contained a small amount of charcoal. Terrestrial snail shells were observed in both assemblages in moderate numbers and include the open country species *Vallonia sp., Vertigo sp., Pupilla muscorum*, and *Helicella itala*, and the shade-loving species *Discus rotundatus* and *Aegopinella pura*.

6.5. The charcoal recovered from fill 6904 is likely to be indicative of a dump of hearth waste material. The high level of rooting and number of *Cecilioides acicula* would suggest that the charcoal recorded from fill 6903 was intrusive material from the overlying fill. Due to the lack of charred plant remains, it is not possible to determine a potential date for the feature on taphonomic grounds

6.6. The molluscan remains are indicative of a well-established open landscape with areas of longer grass in the vicinity of this pit.

7. DISCUSSION

7.1. Despite the archaeological potential within both the wider area and the targeted trenching areas themselves, the second phase of trenching yielded very limited results, with the majority of the trenches revealing no archaeological features of any type or period.

7.2. Although the pit and ditch encountered in Trench 69 remain undated it is possible that these features relate to peripheral activity linked to the Late Iron Age/ Romano-British enclosure and building remains recorded *c.*250m to the west, during the first phase of evaluation. Suggested hearth waste material recovered from the upper fill of pit 6902 is indicative of human activity in the wider vicinity but provides no evidence

as to the nature of that activity and may represent a single, isolated disposal episode. Notably, both Trench 69 and Trench 89 are located on the edges of the high ground on either side of the dry valley, before the ground starts to slope steeply down towards the valley bottom.

7.3. The absence of features across the majority of the phase 2 Bedfordshire trenching areas may be explained by the presence of the two dry valleys and the location of the majority of the trenches on the steep valley slopes or within the valley bases. With the gradient of the slopes growing much more pronounced within the current trenching areas compared to the phase 1 trenches, located on the flatter high ground to the west, it is unlikely that the land within Areas 2 and 3 would have been suitable for anything other than pastoral uses.

7.4. Although the Hertfordshire trenches were located at the top of the ridge, alongside the dry valley bisecting the development area, and within the Archaeological Alert Area relating to the location of a Romano-British building (HER 7358), no archaeological features or artefacts were encountered during the fieldwork. It is possible that the relatively thin topsoil and visible plough truncation within the area may have contributed to the loss of any features which may have been present. It should also be noted that due to the 50m safety buffer required due to the presence of the fuel pipeline along the eastern edge of Area 6, it is possible that the trenches were located too far to the south-west to reveal any remains associated with the building.

7.5. Within the Bedfordshire portion of the site (Areas 2 and 3), no further evidence for Roman activity was identified, suggesting that the area between settlements HER 10808 and HER 7358 (located in Hertfordshire) may have been a predominantly open agricultural landscape. No evidence was observed for the existence of established trackways or field systems in Areas 2 and 3. Within the Hertfordshire portion of the site (Area 6), no archaeological remains of any type or period were recovered. It is likely that any remains relating to Roman building HER 7358 either do not extend far enough south-west to reach the current trenching area, or that any more ephemeral features in this area have been lost due to extensive ploughing. The site archives for both phases of fieldwork will be deposited at the same time, under the relevant accession numbers.

7.6. Given the limited results of the current phase of evaluation trenching, very limited potential for meaningful contributions to relevant regional research aims can be identified on the basis of the phase 2 trenching alone. However, the results of all fieldwork phases across the development area do have the potential to make some contribution to research themes centred around Late Iron Age and Romano-British activity within the area, including the dating and chronology of Roman pottery; the characterisation of rural settlement in the Roman period including patterns of settlement nucleation or dispersal; and determining the relationship between settlement and enclosure in the Roman period.

8. CA PROJECT TEAM

8.1. Fieldwork was undertaken by Anna Wolf, assisted by Rachel Alexander, Georgina Matthews, Sam Cross, and Joan Roig. This report was written by Anna Wolf. The biological evidence report was written by Emma Aitken. The report illustrations were prepared by Ken Lymer. The project archive has been compiled and prepared for deposition by Molly Agnew-Henshaw. The project was managed for CA by Adrian Scruby. The assistance of Annie Calder and Jennifer Wilson (AECOM); Hannah Firth (Central Bedfordshire Council); and Daniel Phillips (Hertfordshire County Council) is gratefully acknowledged.

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APPENDIX A: CONTEXT DESCRIPTIONS

Trench	Context	Fill of	Type	Interpretation	Description	Length (m)	Width (m)	Depth (m)
58	5800		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.24
58	5801		layer	Natural	Mid orange brown, silty clay, compact, frequent sub angular flints and stones	50	2	
59	5900		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.29
59	5901		layer	Natural	Mid orange brown, silty clay, compact, frequent sub angular flints and stones	50	2	
60	6000		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.34
60	6001				void			
60	6002		layer	Natural	Mid orange brown, silty clay, compact, frequent sub angular flints and stones	50	2	
61	6100		layer	Topsoil	Mid grey brown, silty clay, compact	25	2	0.28
61	6101		layer	Natural	Mid orange brown, silty clay, compact, frequent sub-angular flints and stones	25	2	
62	6200		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.32
62	6201				void			
62	6202		layer	Natural	Mid orange brown, silty clay, compact, frequent sub angular stones and flint	50	2	
63	6300		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.24
63	6301		layer	Natural	Mid orange brown, silty clay, compact, frequent sub angular flints	50	2	
64	6400		layer	Topsoil	Mid grey brown, sandy clay, compact	25	2	0.25
64	6401		layer	Natural	Mid orange brown, silty clay, compact, frequent sub angular flints	25	2	
65	6500		layer	Topsoil	Mid grey brown silty clay, firm, frequent flints	25	2	0.27
65	6501		layer	Natural	Mid orange brown silty clay, firm, frequent flints and some chalk	25	2	
66	6600		layer	Topsoil	Mid grey brown silty clay, firm, frequent flints	50	2	0.32
66	6601		layer	Natural	Mid orange brown silty clay, compact, frequent flints	50	2	
67	6700		layer	Topsoil	Mid grey brown silty clay, firm, some flints	25	2	0.31
67	6701		layer	Natural	Mid orange brown silty clay, compact, frequent flints	25	2	
68	6800		layer	Topsoil	Mid grey brown silty clay, firm, some flints	25	2	0.3
68	6801		layer	Natural	Mid orange brown silty clay, compact, frequent flints	25	2	
69	6900		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.32
69	6901		layer	Natural	Light brown white, silty chalk, friable with red clay patches, frequent stones and flints	50	2	
69	6902		cut	Pit	Circular in plan, moderately steep sides and irregular base	0.71	0.71	0.24
69	6903	6902	fill	Secondary Fill	Mid grey brown mottled with mid orange brown compact silty clay with frequent chalk and flint	0.71	0.71	0.18

69	6904	6902	fill	Deliberate Backfill	Dark brown grey compact silty clay with frequent charcoal and flint	0.71	0.71	0.08
69	6905		cut	Ditch	Linear running E to W	15	0.88	0.18
69	6906	6905	fill	Secondary Fill	Mid brown gravelly silt.	15	0.88	0.18
70	7000		layer	Topsoil	Dark grey brown, silty clay, friable	50	2	0.25
70	7001		layer	Natural	Mid red brown, silty clay, compact with frequent chalk patches and gravels.	50	2	
71	7100		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.25
71	7101		layer	Natural	Light brown white, silty chalk, friable with orange clay patches, frequent flint inclusions	50	2	
72	7200		layer	Topsoil	Mid grey brown loose Sandy clay with frequent flint	50	2	0.37
72	7201		layer	Natural	Mid orange brown, silty clay, compact, frequent sub angular flints and patches of chalk	50	2	
73	7300		layer	Topsoil	Mid grey brown silty clay, firm, frequent flints	50	2	0.3
73	7301		layer	Natural	Mid orange brown silty clay, compact, frequent flints and some chalk	50	2	
73	7302				void			
74	7400		layer	Topsoil	Mid grey brown silty clay, firm, frequent flints	50	2	0.29
74	7401		layer	Natural	Mid orange brown silty clay, compact, frequent flints and some chalk	50	2	
75	7500		layer	Topsoil	Dark grey brown, sandy clay, compact	50	2	0.28
75	7501				void			
75	7502		layer	Natural	Mid brown white with orange clay patches, silty chalk, friable, frequent sub angular stones and flint	50	2	
76	7600		layer	Topsoil	Mid grey brown silty clay, firm, frequent flints	50	2	0.33
76	7601				void			
76	7602		layer	Natural	White chalk, firm, some lenses of mid orange brown silty clay with flints	50	2	
77	7700		layer	Topsoil	Mid grey brown silty clay, firm, frequent flints	50	2	0.34
77	7701		layer	Natural	White chalk, firm, some lenses of mid orange brown silty clay with flints	50	2	
78					trench unexcavated			
79	7900		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.27
79	7901		layer	Natural	Light brown white, silty chalk, friable, frequent stones and flint	50	2	
80					trench unexcavated			
81	8100		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.36
81	8101				void			
81	8102		layer	Natural	Light brown white, silty chalk, friable, frequent stones	50	2	
82	8200		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.29
82	8201		layer	Natural	Mid orange brown, silty clay, compact, frequent chalk and flints	50	2	
83					trench unexcavated			

84	8400		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.31
84	8401		layer	Natural	Mid brown orange, silty clay, compact, frequent sub angular stones and flints	50	2	
85	8500		layer	Topsoil	Mid grey brown, friable Sandy clay with frequent flint	50	2	0.3
85	8501		layer	Natural	Mid brown orange, silty clay, compact, frequent sub angular flints and stones	50	2	
86	8600		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.29
86	8601		layer	Natural	Light brown white, silty chalk, friable, frequent stones and flints	50	2	
87	8700		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.27
87	8701		layer	Natural	Light white chalk mixed with brown silty patches, friable, frequent stones and flints	50	2	
88	8800		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.29
88	8801		layer	Natural	Light white chalk with brown silty patches, friable, frequent stones and flints	50	2	
89	8900		layer	Topsoil	Mid grey brown, silty clay, compact	50	2	0.28
89	8901		layer	Natural	Light brown white, silty chalk, friable, frequent sub angular flints and stones	50	2	
89	8902		cut	Ditch	Linear NE-SW. Fairly gentle edges with concave base	20	0.6	0.11
89	8903	8902	fill	Secondary Fill	Mid grey brown, silty clay, compact, frequent sub-angular stones and flints	20	0.6	0.11
90	9000		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.26
90	9001		layer	Natural	Light brown white, silty chalk, friable, frequent stones and flint	50	2	
91	9100		layer	Topsoil	Mid grey brown friable sandy clay with frequent flint	50	2	0.28
91	9101		layer	Natural	Mid brown orange with white chalk patches, silty clay, compact, frequent sub angular flints and stones	50	2	
92	9200		layer	Topsoil	Mid grey brown, sandy clay, friable	50	2	0.36
92	9201		layer	Natural	Mid brown orange silty clay, compact, frequent sub angular flints and stones	50	2	
93	9300		layer	Topsoil	Mid grey brown, sandy clay, compact	50	2	0.32
93	9301		layer	Natural	Mid brown white, silty chalk with orange clay, friable, frequent sub-angular stones and flint	50	2	
94	9400		layer	Topsoil	Mid grey brown, friable sandy clay	50	2	0.29
94	9401		layer	Natural	Mid brown orange with white chalk patches, silty clay, compact, frequent sub angular flints and stones	50	2	
95	9500		layer	Topsoil	Mid grey brown, sandy clay, friable	50	2	0.32
95	9501		layer	Natural	Mid brown orange with white chalk patches, silty clay, compact, frequent sub angular flints and stones	50	2	
96	9600		layer	Topsoil	Mid grey brown, sandy clay, compact	25	2	0.29

96	9601		layer	Natural	Mid brown white with dark brown patches, silty chalk, friable, frequent flints and stones	25	2	
97	9700		layer	Topsoil	Mid grey brown friable Sandy clay with frequent flint	25	2	0.26
97	9701		layer	Natural	Mid brown orange with white chalk patches, silty clay, compact, frequent sub angular flints and stones	25	2	
98	9800		layer	Topsoil	Mid grey brown, sandy clay, friable	25	2	0.26
98	9801		layer	Natural	Mixed brown orange chalk, friable, frequent sub-angular stones and flint	25	2	
99	9900		layer	Topsoil	Dark grey brown, sandy clay, compact	50	2	0.27
99	9901		layer	Natural	Mid white brown with orange clay patches, silty chalk, friable, frequent sub-angular flint and stones	50	2	
100	10000		layer	Topsoil	Dark grey brown, sandy clay, compact	50	2	0.25
100	10001		layer	Natural	Mid brown orange with white chalk patches, silty clay, compact, frequent sub angular flints and stones	50	2	
101	10100		layer	Topsoil	Dark grey brown, sandy clay, compact	50	2	0.3
101	10101		layer	Natural	Mixed brown orange clay with chalk patches, friable, frequent sub-angular stones and flint	50	2	
102	10200		layer	Topsoil	Dark grey brown, sandy clay, compact	25	2	0.29
102	10201		layer	Natural	Light white chalk with brown silty patches, friable, occasional flint and stones	25	2	
103	10300		layer	Topsoil	Mid grey brown silty clay, firm, frequent flints	50	2	0.32
103	10301		layer	Natural	Mid red brown silty clay, firm, frequent flints	50	2	
104	10400		layer	Topsoil	Mid grey brown, sandy clay, friable	50	2	0.3
104	10401		layer	Natural	Mid red brown, silty clay, compact, frequent angular stones and flint	50	2	
105	10500		layer	Topsoil	Mid grey brown friable Sandy clay	50	2	0.42
105	10501		layer	Natural	Mixed: mid reddy brown compact silty clay with frequent flint; light grey brown chalky clay with occasional flint	50	2	
106	10600		layer	Topsoil	Mid grey brown, sandy clay, friable	50	2	0.29
106	10601		layer	Natural	Mid brown red, silty clay, compact with chalk patches, frequent sub angular flint inclusions	50	2	
107	10700		layer	Topsoil	Mid grey brown, sandy clay, friable	50	2	0.32
107	10701		layer	Natural	Mid red brown, silty clay, compact with chalk patches, frequent sub angular flint inclusions	50	2	
108	10800		layer	Topsoil	Mid grey brown, sandy clay, friable	50	2	0.31
108	10801		layer	Natural	Mid red brown, silty clay, compact, frequent angular stones and flint with patches of chalk	50	2	
109	10900		layer	Topsoil	Mid grey brown, sandy clay, friable	50	2	0.32
109	10901		layer	Natural	Mid red brown, silty clay, compact, frequent angular stones and flint with patches of chalk	50	2	
110	11000		layer	Topsoil	Mid grey brown, sandy clay, friable	25	2	0.35

110	11001		layer	Natural	Mid red brown, silty clay, compact, frequent angular stones and flint with patches of chalk	25	2	

APPENDIX B: THE PALAEOENVIRONMENTAL EVIDENCE

Table 1: Assessment of the palaeoenvironmental remains.

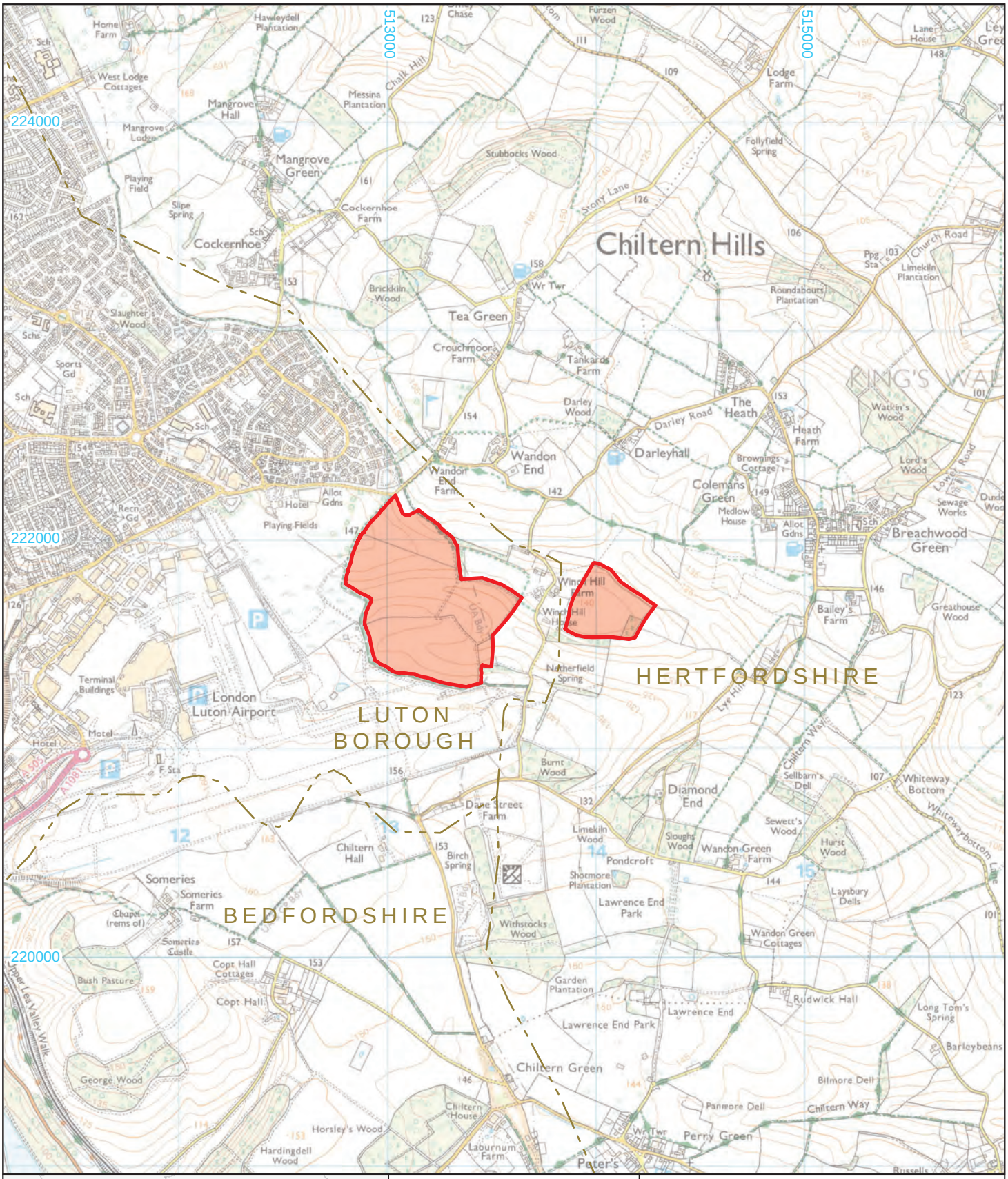
Feature	Context	Sample	Vol (L)	Flot size (ml)	Roots %	Grain	Chaff	Charred Other	Charred Remains Notes	Charcoal > 4/2mm	Other
Trench 69											
Pit 6902	6904	1	9	135	50	-	-	-	-	****/*****	moll-t (***)
	6903	2	15	125	90	-	-	-	-	**/**	moll-t (***)

Key: * = 1–4 items; ** = 4–20 items; *** = 21–49 items; **** = 50–99 items; ***** = >100 items
moll-t = terrestrial mollusc,

APPENDIX C: OASIS REPORT FORM

PROJECT DETAILS		
Project name	Luton Airport Phase 2, Luton, Bedfordshire & Hertfordshire	
Short description	In August 2022, Cotswold Archaeology (CA) carried out a second phase of evaluation trenching on land immediately to the east of the existing Luton Airport complex, at the request of AECOM acting on behalf of Luton Rising. The works were undertaken in advance of the planned extension of London Luton Airport. Part of the current Site area is located within the Luton Borough Council/ Bedfordshire administrative area, while the other part is within Hertfordshire. A total of 51no. trenches were excavated across three targeted areas as part of this phase of fieldwork, including 42no. 50m long by 2m wide trenches and nine 30m long by 2m wide trenches. Trenches were numbered to follow on consecutively from the first phase of evaluation, undertaken in 2019. Despite the proximity to known archaeological remains, the current phase of trenching in Bedfordshire revealed only three features. A small ditch and pit were observed within Trench 69, and a second small ditch or possible erosion channel was investigated in Trench 89. The lack of features is most likely due to the gradient of the dry valley bisecting the centre of the Site, encompassing much of Area 3, becoming more pronounced and rendering the land unsuitable for anything other than pastoral uses. Similarly, the trenches in Area 2 were situated on the steep slopes and near the base of a second, parallel dry valley along the northern edge of the site. Trenches within the Hertfordshire portion of the development area were located within a designated Archaeological Alert Area due to the high potential for Roman remains associated with a potential building located to the east. However, no features or deposits of archaeological interest were revealed within the trenches. Extensive modern plough scarring was noted across the area, possibly contributing to the eradication of any features which may once have been present. Alternatively, it is possible that any remains connected to the Roman building recorded to the east do not extend far enough to the west to be included within the current trenching area.	
Project dates	08 – 26 August 2022	
Project type	Field evaluation	
Previous work	Geophysical survey (SUMO 2018; TigerGeo 2019) Field evaluation (CA 2019)	
Future work	Unknown	
PROJECT LOCATION		
Site location	Land east of Luton Airport, Luton, Bedfordshire & Hertfordshire	
Study area (m^2/ha)		
Site co-ordinates	NGR 13178 21743	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project brief originator	Central Bedfordshire Council; Hertfordshire County Council	
Project design (WSI) originator	AECOM; Cotswold Archaeology	
Project Manager	Adrian Scruby	
Project Supervisor	Anna Wolf	
MONUMENT TYPE	Pit; ditches [undated]	
SIGNIFICANT FINDS	none	
PROJECT ARCHIVES	**Intended final location of archive (museum/Accession no.)**	**Content (e.g. pottery, animal bone etc)**
Physical	The Culture Trust, Luton	Charcoal (enviro remains)

Paper	The Culture Trust, Luton	Context sheets, section drawings, photo registers
Digital	ADS	Digital trench records, digital photographs
BIBLIOGRAPHY		
Cotswold Archaeology 2022 *Luton Airport Phase 2, Luton, Bedfordshire & Hertfordshire: Archaeological Evaluation* CA typescript report **MK0757_4**		



Site boundary

County/borough boundary

N

0 1km

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PROJECT TITLE

Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire

FIGURE TITLE

Site location plan

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**13/09/2022**	**1**
APPROVED BY	**AS**	*SCALE@A4*	**1:25,000**	

222500
513000
513500
514000
222000
221500
EATON GREEN ROAD
DARLEY ROAD
WINCH HILL ROAD
HERTFORDSHIRE
LUTON BOROUGH (BEDFORDSHIRE)
See Fig. 3
See Fig. 4
See Fig. 5
Area 2
Area 3
Area 6
T58 T59 T60 T61 T62 T63 T64
T65 T66 T67 T68 T69 T70 T71 T72 T73 T74 T75 T76 T77 T78 T79 T80 T81 T82 T83 T84 T85 T86 T87 T88 T89 T90 T91 T92 T93 T94 T95 T96 T97 T98 T99 T100 T101 T102
T103 T104 T105 T106 T107 T108 T109 T110
N
Site boundary
Phase 1 evaluation trench (CA 2019)
Phase 2 evaluation trench
Unexcavated trench
Archaeological feature
Constraint
Archaeological alert area
County/borough boundary
0 1:5000 250m

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PROJECT TITLE
Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire
FIGURE TITLE
Trench location plan, showing modern constraints, Phase 1 trenches and archaeological alert area

DRAWN BY	KL	PROJECT NO.	MK0757	FIGURE NO.
CHECKED BY	DB	DATE	13/09/2022	2
APPROVED BY	AS	SCALE@A3	1:5000	

513000
513200
513400
222200
222000
EATON GREEN ROAD
HERTFORDSHIRE
LUTON BOROUGH
(BEDFORDSHIRE)
T58
T59
T60
T61
T62
T63
T64
T65
T66
T67
T68
T69
T70
T71
T72
Area 2
Area 3
N
Site boundary
Phase 1 evaluation trench (CA 2019)
Phase 2 evaluation trench
Archaeological feature
County/borough boundary
0 1:1500 50m

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PROJECT TITLE
Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire
FIGURE TITLE
Bedfordshire trenches: Area 2
DRAWN BY	KL	PROJECT NO.	MK0757	FIGURE NO.
CHECKED BY	DB	DATE	14/09/2022	3
APPROVED BY	AS	SCALE@A3	1:1500	

513000

513200

513400

221800

221600

Area 3

T65

T66

T67

T68

T69

ditch 6905

pit 6902

T70

T71

T72

T73

T74

T75

T76

T77

T78

T79

T80

T81

T82

T83

T84

T85

T86

T87

T88

T89

ditch 8902

T90

T91

T92

T93

T94

T95

T96

T97

T98

T99

T100

T101

T102

N

Site boundary

Phase 1 evaluation trench (CA 2019)

Phase 2 evaluation trench

Unexcavated trench

Archaeological feature

0 1:1500 50m

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PROJECT TITLE

Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire

FIGURE TITLE

Bedfordshire trenches: Area 3

DRAWN BY	KL	PROJECT NO.	MK0757	FIGURE NO.
CHECKED BY	DB	DATE	14/09/2022	4
APPROVED BY	AS	SCALE@A3	1:1500	

N

Site boundary

Phase 2 evaluation trench

County/borough boundary

0 1:1500 50m

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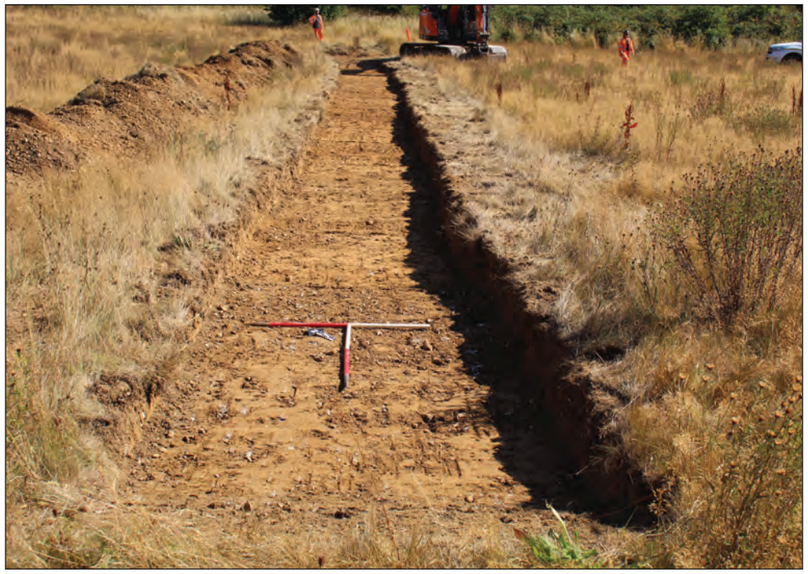
PROJECT TITLE

Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire

FIGURE TITLE

Hertfordshire trenches: Area 6

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**5**
APPROVED BY	**AS**	*SCALE@A3*	**1:1500**	



Trench 58, looking north-east (1m scales)

Trench 59, looking north-west (1m scales)

Trench 60, looking north-east (1m scales)

Trench 63, looking north-west (1m scales)

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PROJECT TITLE

Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire

FIGURE TITLE

Area 2: photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**6**
APPROVED BY	**AS**	*SCALE@A3*	**na**	

Trench 67, looking south-west (1m scales)

Trench 70, looking north (1m scales)

Trench 72, looking north (1m scales)

Trench 77, looking south (1m scales)

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PROJECT TITLE

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FIGURE TITLE

Area 2: photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**7**
APPROVED BY	**AS**	*SCALE@A3*	**na**	

Trench 79, looking south (1m scales)

Trench 81, looking north (1m scales)

Trench 84, looking west (1m scales)

Trench 87, looking north (1m scales)

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PROJECT TITLE

Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire

FIGURE TITLE

Area 3: photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**8**
APPROVED BY	**AS**	*SCALE@A3*	**na**	

Trench 92, looking west (1m scales)

Trench 95, looking north (1m scales)

Trench 101, looking west (1m scales)

Trench 102, looking north (1m scales)

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PROJECT TITLE

Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire

FIGURE TITLE

Area 3: photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**9**
APPROVED BY	**AS**	*SCALE@A3*	**na**	

Trench 103, looking south-east (1m scales)

Trench 104, looking south-west (1m scales)

Trench 105, looking north-west (1m scales)

Trench 106, looking north-west (1m scales)

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FIGURE TITLE

Area 6: photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**10**
APPROVED BY	**AS**	*SCALE@A3*	**na**	

Trench 107, looking north-west (1m scales)

Trench 108, looking south-west (1m scales)

Trench 109, looking north-west (1m scales)

Trench 110, looking south-east (1m scales)

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PROJECT TITLE

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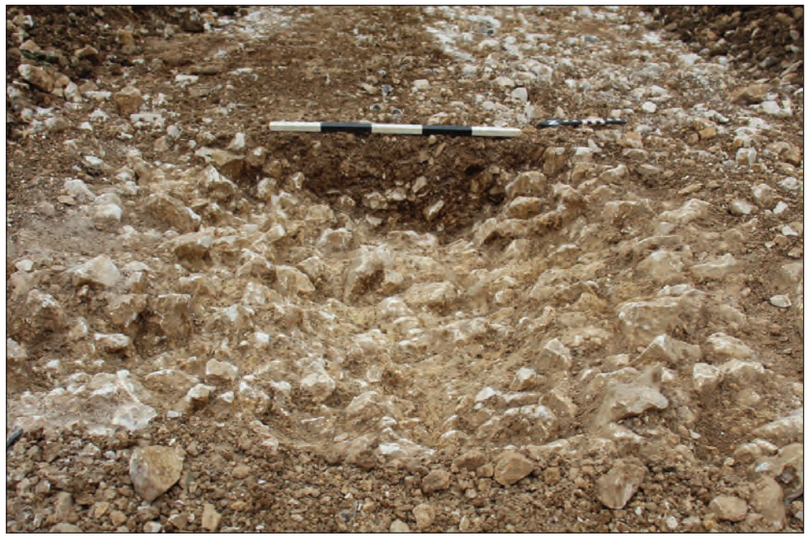
FIGURE TITLE

Area 6: photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**11**
APPROVED BY	**AS**	*SCALE@A3*	**na**	

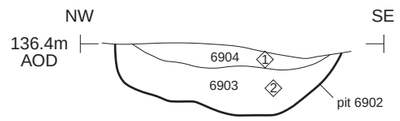
Trench 69, looking west (1m scales)



Ditch 6905, looking east (0.5m scale)

Pit 6902, looking north-east (0.5m scale)

Section AA



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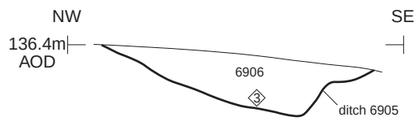

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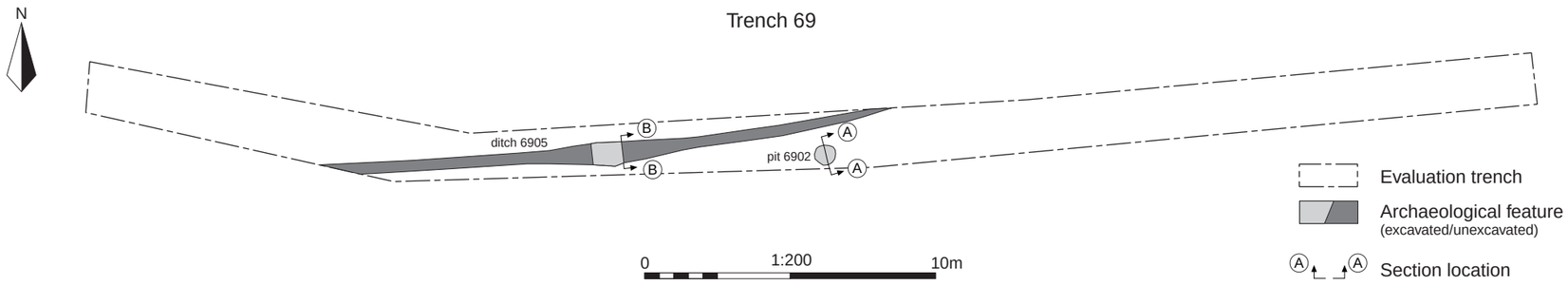

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PROJECT TITLE

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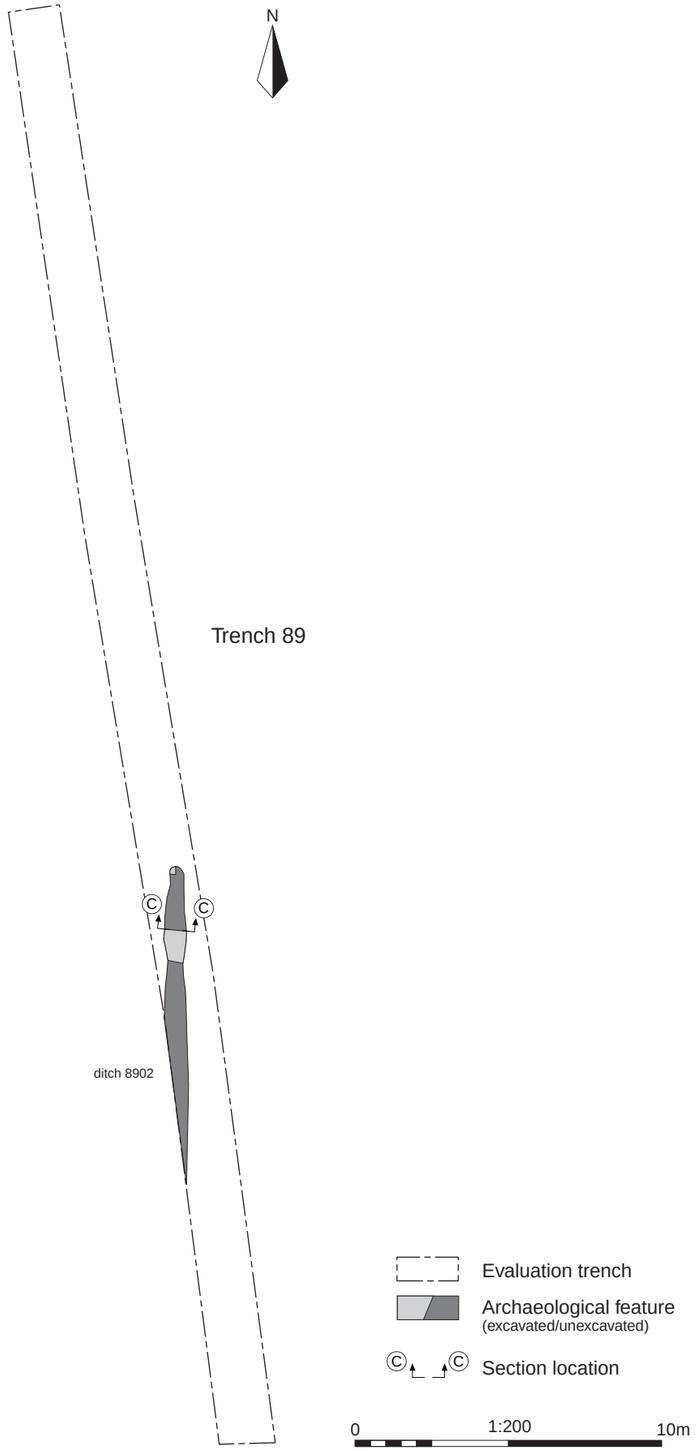
FIGURE TITLE

Trench 69: plan, sections and photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**12**
APPROVED BY	**MF**	*SCALE@A3*	**1:200 & 1:20**	



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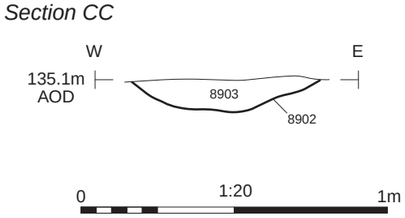

Trench 89, looking north (1m scales)

Ditch 8902, looking north (0.5m scale)

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PROJECT TITLE

Luton Airport Phase 2, Luton, Hertfordshire and Bedfordshire

FIGURE TITLE

Trench 89: plan, section and photographs

DRAWN BY	**KL**	*PROJECT NO.*	**MK0757**	*FIGURE NO.*
CHECKED BY	**DB**	*DATE*	**14/09/2022**	**13**
APPROVED BY	**MF**	*SCALE@A3*	**1:200 & 1:20**	

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