

P20-188



HILFIELD SOLAR FARM

Archaeological Desk-based Assessment

for Elstree Green Limited

16th December 2020

HILFIELD SOLAR FARM AND BATTERY ENERGY STORAGE

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HA Job no.: P20-188
HAS no.: 1396
Centre of western PDA 515119
196501
NGR: Centre of eastern PDA 516626
197532
Parish: Aldenham / Elstree
Council: Hertsmere District Council

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HILFIELD SOLAR FARM

ARCHAEOLOGICAL DESK-BASED ASSESSMENT

In June 2020 Headland Archaeology (UK) Ltd was commissioned to produce a heritage impact assessment to assess the potential impact that a proposed solar park development site on land to the north east and west of Elstree aerodrome, Elstree in Hertfordshire would have on the historic environment resource.

The proposed development is to build a new 49.9 MW solar park with battery storage capacity and underground grid connection to Elstree National Grid substation on Hilfield Lane. The solar panels are mounted on a Fixed Tilt System mounted on a structure made of galvanized steel or aluminium. The metal framework that supports the solar panels would be fixed into the ground by posts centred c. 6m apart. The posts would be pile-driven (like a fence post) into the turf to a depth of around 2-2.5m. The cables linking all the PV arrays to the inverter/transformer stations will be via underground or cable trays above ground and underground from the inverter/transformer stations to the on-site substation. An area of topsoil stripping will be required for the battery storage. It is estimated that these limited impacts will amount to less than 4% of the total site.

This assessment has identified that any currently unrecorded archaeological remains that may be present within the site are unlikely to be of more than low importance. No harm is predicted to the setting or significance of any Listed Building.

A geophysical survey was initiated as part of this assessment process but this proved ineffective and with the agreement of the archaeological advisor to Hertsmere DC the survey was not completed. Targeted archaeological trial trenching was carried out in accordance with a Written Scheme of Investigation (WSI) approved by the archaeological advisor. Of twenty trenches across three areas only one feature of archaeological origin (an undated ditch) was identified. The archaeological potential of the PDA is therefore assessed as being low.

1 INTRODUCTION

1.1 Planning Background

Elstree Green Limited is proposing a solar farm and battery storage on land to the north east and west of Elstree aerodrome Elstree, Hertfordshire. Headland Archaeology was commissioned to produce a desk-based assessment to support the application following completion of an initial appraisal of heritage assets which informed the request for an EIA screening opinion which was submitted to Hertsmere Borough Council.

The proposed development has been screened as requiring an EIA but the scope of this does not include archaeology.

1.2 Site Description

The Proposed Development Area (PDA) covers a total of 20 fields. The location of the PDA is shown on Figure 1 and the field numbers are shown in Appendix 1. Five are located in the west of the PDA, Field 1 is bounded by the M1 motorway and A41 to the west and by Hilfield Lane to the east, east of Hilfield Lane are Fields 2—5, with the buildings of Hilfield farm between Hilfield Lane and Field 3, the Elstree Aerodrome (not marked on Figure 1) to the south east of Field 5 and fields to the north-east and north of these fields (with an electricity substation to the north-west beyond a further field and small area of woodland). The eastern parcel is bounded by Aldenham Road to the west, Butterfly Lane with Aldenham Park beyond to the south, by the A5183 Watling Street to the east and by hedgerows to the north with further fields beyond. In total the PDA covers c.123hectares.

The PDA is mainly in arable use, but Fields 18 and 19 are laid to pasture and 20, the former inert landfill site is used in part as pasture and part as rough grazing. The site varies in elevation at around 90mOD in the eastern parcels and between 75 and 90m in the western parcels (rising to towards the south). A grid connection route is proposed between these two main areas, this runs through the northern edge of the Elstree Aerodrome.

1.3 Consultation

Simon Wood of Herefordshire County Council (as the archaeological advisor to Hertsmere Borough Council) was consulted via email in August 2020 regarding the scope of the assessment. A 1km study area was agreed and geophysical survey was recommended. An EIA Screening request was submitted to Hertsmere Borough Council, the archaeological advisor commented that if an EIA was not required then any archaeological impacts could be managed through the usual planning process with a desk-based assessment and geophysical survey submitted in support of the application.

The built heritage advisor to Hertsmere Borough Council identified in their response to the EIA Screening Request a number of listed buildings, the registered park at Aldenham House and the scheduled moated site of Penne's Place as potentially experiencing harmful change in their setting as a result of the proposed scheme and recommended consultation with Historic England regarding the scope of the assessment. These assets have all been included within this assessment and Historic England were consulted regarding the assessment, and appropriate viewpoints, which were also agreed with the Hertsmere built heritage advisor. Following design changes Maria Kitts (built heritage advisor to Hertsmere Borough Council) was consulted via a video call on 11th November during which it was confirmed that the effects on Hillfield Castle, Aldenham House (Listed Building and Registered Park and Garden) and Penne's Place (Scheduled Monument) were reduced. A photograph from Hillfield Lodge was requested to illustrate the current setting.

2 AIMS AND OBJECTIVES

The assessment has been carried out according to the *Standard and guidance for historic environment desk-based assessment* published by the Chartered Institute for Archaeologists (CIfA 2020), and aims to:

- Collate all available written, graphic, photographic and electronic information relevant to the development site;
- Describe the nature, extent and significance of the historic environment within the area potentially affected by the development, identifying any uncertainties in existing knowledge;
- Determine the potential impact of the proposed development (including any impacts resulting from changes in the setting of heritage assets); and
- Identify any requirements for further investigation that may be necessary to understand the effects of the proposed development on the historic environment.

3 METHODOLOGY

3.1 Study area

The study area extends to 1km from the boundaries of the two land parcels that form the proposed development area. This has been used to gather baseline information on the archaeological and built heritage resource in order to inform the assessment of archaeological potential within the site. This area has also been used to identify designated heritage assets that may experience change within their setting that could harm their significance.

3.2 Data sources

The assessment has been based on a study of all readily available documentary sources, following the CIfA Standards and Guidance (CIfA 2014). The following sources of information were referred to:

- Designation data from the National Heritage List for England, downloaded from the Historic England website on 22nd July 2020 and updated on 9th November 2020;
- Descriptions of designated heritage assets in the National Heritage List for England, viewed on the Historic England website;
- Archaeological and architectural records from the National Record of the Historic Environment, viewed through the Heritage Gateway website (www.heritagegateway.org.uk);
- Archaeological records held by Hertfordshire HER obtained as a digital data extract on 22nd July 2020
- Historic Landscape Characterisation provided by Hertfordshire HER;
- Historic maps and plans held in the Hertfordshire Archives and Local Studies Library;

- Environment Agency Lidar data;
- Geological data available online from the British Geological Survey;
- Readily available published sources and unpublished archaeological reports.

Aerial photographs in the Historic England archives have not been consulted as the archives closed in late March 2020 due to the Covid-19 pandemic and at the time of producing this report had not yet reopened.

This information was supplemented by a site visit in July 2020 which confirmed the current ground conditions and land use within the site and the locations of previously recorded heritage assets, and also considered the baseline setting of designated heritage assets in the study area.

3.3 Identification of heritage assets

The assessment aims to identify all known heritage assets potentially affected by the proposed development, and to estimate the potential for currently unknown heritage assets. A heritage asset is defined in the National Planning Policy Framework (NPPF) (Annex 2) as ‘a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest’. Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as heritage assets; and assets may overlap or be nested within one another. Some heritage assets are designated as Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Registered Parks and Gardens, Registered Battlefields, or locally designated through policies in the Local Plan. Undesignated assets may be recorded in Historic Environment Records, while many other assets are currently unrecorded.

Heritage assets within the Study Area are shown in Figures 2 and 3, with detailed descriptions compiled in a gazetteer (Appendix 2). Designated heritage assets are labelled with the list entry number which refers to them in the National Heritage List for England; non-designated assets with the reference number in the Hertfordshire Historic Environment Record (HER). Assets newly identified through this assessment have been assigned a unique Asset number prefixed HA for Heritage Asset. A single asset number can refer to a group of related features, which may be recorded separately in the HER and other data sources.

3.4 Assessment of heritage significance and importance

Heritage assets are assessed in terms of their significance and importance, following the requirement in NPPF paragraph 189, and taking account of Historic England’s guidance in *Managing Significance in Decision-Taking in the Historic Environment* (GPA2). Significance, in relation to heritage policy, is defined by the NPPF (Glossary, Annex 2) as

“the value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.”

Setting is defined in Annex 2 of the NPPF as:

“the surroundings in which an asset is experienced. All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance, or may be neutral.”

Where potential impacts on the settings of a heritage assets are identified, the assessment of significance includes ‘assessing whether, how and to what degree these settings make a contribution to the significance of the heritage asset(s)’, following Step 2 of the staged approach to setting recommended in Historic England’s guidance in *The Setting of Heritage Assets* (GPA3). Attributes of an asset’s setting which can contribute to its significance are listed on page 9 of GPA3.

The *importance* of a heritage asset is the overall value assigned to it based on its heritage significance, reflecting its statutory designation or, in the case of undesignated assets, the professional judgement of the assessor (Table 1). Historic England guidance also refers to an asset’s ‘level of significance’ (GPA2, paragraph 10), which in this usage has the same meaning as importance. Nationally and internationally designated assets are assigned to the highest two levels of importance. Grade II Listed Buildings and Grade II Registered Parks & Gardens are considered of medium importance, reflecting the lower level of policy protection provided by the NPPF (paragraph 194). Conservation Areas are not assigned to either level of importance by the NPPF but their status as local designations and their omission from the National Heritage List justifies their classification here as assets of medium importance, except where their particular characteristics merit a higher level – this is a matter of professional judgement. Other non-designated assets which are considered of local importance only

are assigned to a low level of importance; however, it is recognised that some non-designated assets will be of more than local importance and professional judgement will be used to identify them and assign an appropriate level of importance.

Table 1: Criteria for Assessing the Importance of Heritage Assets

Importance of the asset	Criteria
Very high	World Heritage Sites and other assets of equal international importance
High	Grade I and II* Registered Parks and Gardens, Scheduled Monuments, Protected Wreck Sites, Registered Battlefields, Grade I and II* Listed Buildings, and undesignated heritage assets of equal importance
Medium	Conservation Areas, Grade II Registered Parks and Gardens, Grade II Listed Buildings, heritage assets on local lists and undesignated assets of equal importance
Low	Undesignated heritage assets of lesser importance

3.5 Potential for unknown heritage assets

Archaeological features are often impossible to identify through desk-based assessment. The likelihood that significant undiscovered heritage assets may be present within the Inner Study Area is referred to as *archaeological potential*. Overall levels of potential can be assigned to different landscape zones, following the criteria in Table 2, while recognising that the archaeological potential of any zone will relate to particular historical periods and types of evidence. The following factors are considered in assessing archaeological potential:

- The distribution and character of known archaeological remains in the vicinity, based principally on an appraisal of data in the Hertfordshire HER;
- The history of archaeological fieldwork and research in the surrounding area, which may give an indication of the reliability and completeness of existing records;
- Environmental factors such as geology, topography and soil quality, which would have influenced land-use in the past and can therefore be used to predict the distribution of archaeological remains;
- Land-use factors affecting the survival of archaeological remains, such as ploughing or commercial forestry planting; and
- Factors affecting the visibility of archaeological remains, which may relate to both environment and land-use, such as soils and geology (which may be more or less conducive to formation of cropmarks), arable cultivation (which has potential to show cropmarks and create surface artefact scatters), vegetation, which can conceal upstanding features, and superficial deposits such as peat and alluvium which can mask archaeological features.

Table 2: Archaeological potential

Potential	Definition
High	Undiscovered heritage assets of high or medium importance are likely to be present within the PDA.
Medium	Undiscovered heritage assets of low importance are likely to be present; and it is possible, though unlikely, that assets of high or medium importance may also be present within the PDA.
Low	The PDA may contain undiscovered heritage assets, but these are unlikely to be numerous and are highly unlikely to include assets of high or medium importance.
Negligible	The PDA is highly unlikely to contain undiscovered heritage assets of any level of importance.
Nil	There is no possibility of undiscovered heritage assets existing within the PDA.

4 RESULTS

4.1 Overview of the historic environment

Previous investigations

Previous archaeological investigations within the study area have been driven by development and have therefore been focused within the existing settlements – historic building recording, small scale evaluation and watching briefs and other mitigation have been carried out on a number of sites in Radlett, Bushey, Elstree and Aldenham.

There was fieldwalking and geophysical survey of several fields along the route of the proposed Elstree bypass (1-2km southeast of the PDA) in 1995-6 and an evaluation at Patchett's Equestrian Centre (1km northwest of the PDA) in 2016-17.

A geophysical survey of the Penne's Place moated site (Figure 2: 18, 101 and 103) was carried out on two areas, inside the main gates off Butterfly Lane and to the south-west of the carpark in 2002 in advance of groundworks to extend existing school buildings. The geophysical survey indicated there were anomalies present in both surveyed areas which were identified as blocked field drains following the digging of an exploratory test pit to identify the anomalies. Watching briefs have also been carried out during works to extend the buildings at the Haberdasher's schools within Aldenham park c300-800m south of the PDA.

Geology and geomorphology

The solid geology of the application site is recorded as being London Clay Formation across most of the site although the northern edges are of Lambeth Group - Clay, Silt and Sand. No superficial deposits are recorded by the British Geological Survey and no useful borehole data was recorded within the PDA (NERC 2020).

Prehistoric

Palaeolithic- Mesolithic

The majority of Palaeolithic sites across Hertfordshire comprise of single findspots or assemblages of artefacts of flint tools in the form of hand axes, flakes and flint cores and come from the Clactonian, Acheulian and Levallois industries. There is however the potential for pre-Anglian glaciation sites given recent discoveries at Pakefield in Norfolk and High Lodge in Suffolk (Bennet A, Gilman P, Medlycott M 2011).

Although located outside of Hertfordshire itself, A nationally significant Upper Palaeolithic/ Mesolithic site was discovered in the Colne River valley at Three Ways wharf in Uxbridge approximately 20km to the south-west of the PDA. In total five separate in-situ flint artefact scatters were identified spanning the Upper Palaeolithic and Mesolithic periods. Faunal remains appeared to be dominated by reindeer and horse, the presence of these species indicating a landscape of open grassland and cool climactic conditions (Juby 2011).

The Lea River valley, approximately 20km to the east of the PDA, has also been identified as being of particular importance for the survival of Mesolithic remains and appears to have been a favoured area for settlement. Remains of occupation have been found within the organic peat deposits which began accumulating in the area during the Mesolithic period. Such sites have the potential for the survival of organic and environmental evidence. An example of the potential of the Lea valley is the site at Rikoff's Pit at Broxbourne over 28km to the north-west of the PDA (Austin 1997).

The Hertfordshire HER records two stray findspots of prehistoric artefacts within the study area. These are: a Palaeolithic axe found at Ridgeway in Radlett (Figure 2: 87), and a Mesolithic flint scraper found in Bushey (Figure 2: 120). Information from the Hertfordshire Historic Environment Advisor indicates that the London Clay areas of Hertfordshire have low potential for remains of this date (Simon Wood *pers comm*).

Neolithic and Bronze Age

The Neolithic and Bronze Age form a convenient block of time for study, from about the 4th millennium BC to the first half of the 1st millennium BC. There are clear similarities and continuities which link the Late Neolithic and Early Bronze Age across the traditional divide of c. 2000BC. However, there are significant differences between aspects of the archaeology of the Early Neolithic and that of the Late Bronze Age (Brown N & Murphy P 1997). The period saw a shift away from a predominately hunter-gatherer lifestyle to a more settled agriculturally based one involving cultivated plants as a food source, however plant remains from Neolithic sites across east Anglia indicate that wild plant resources were still at least as important as cultivated ones. Evidence from Blackwater and the A41 Berkhamsted Bypass excavations indicate that although plant diets were dominated by emmer wheat, bread wheat, einkorn, barley and flax substantial amounts of hazelnut, sloe, bramble and crab apple pointed towards continued reliance on woodland plants through foraging (ibid 1997).

Within the study area the HER records a Neolithic polished flint axe found at Tyler's Farm in Bushey (Figure 2:1). Residual finds of Neolithic or Bronze Age flints were also discovered during an evaluation at Charnwood in Radlett (Figure 2:125).

Nationally Neolithic and Early Bronze Age settlement sites are rare and most of the evidence for these periods consists of funerary monuments.

On the claylands of Hertfordshire a series of sites have been excavated that date to the later Bronze Age. These include an extensive Bronze Age/early Iron Age settlement at the Hatfield Aerodrome development, and a late Bronze Age settlement including roundhouses, cremations, evidence for arable agriculture and an assemblage of pottery and flintwork, on the Cole Green Bypass. By contrast, the late Bronze Age structures from Mangrove Road in Hertford were mostly rectangular in plan. Several late Bronze Age settlements, with cremations and a ritual site, have been recorded to the north of Harlow, both within the valley of the River Stort and on the higher ground further north (Medlycott 2011 p17).

Late Bronze Age worked flints have been recorded at Elstree and an Early Bronze Age flint arrowhead was found at Little Martins, Bushey, these indicate activity in the wider area in this period.

Iron Age

The transition from the late Bronze Age into the early Iron Age is marked by the ending of bronze hoards and provides a reasonable chronological change in Hertfordshire at the end of the 8th century BC. Pottery assemblages begin to be dominated by flint gritted coarse-ware jars with styles which live long into the later Iron Age (Bryant 1997).

Archaeological evidence suggests that across East Anglia settlements were sporadic, centring on lighter soils along river valleys or the edge of the Fens. However, evidence from Baldock, Letchworth, Whitely Hill, Wilbury Hill and Gadebridge in Hertfordshire indicate there was some colonisation of the heavier Boulder Clay areas. Settlements are also known at Hertford, Foxholes and Turnford along the Lea Valley to the east of the PDA (ibid 1997). The majority of early Iron Age settlement sites from the region tend to be unenclosed, typically consisting of post built round houses, pits and two and four post structures. They usually spread over a relatively large area and cover multiple periods of occupation.

There is evidence of expansion and intensification of settlement in most parts of the region including the boulder clays areas during the later Iron Age, and settlement is known to varying degrees of intensity over most of the soils and environmental zones across East Anglia. The exceptions however are the heavier clay-with-flints areas in Hertfordshire and the London Clay areas of Hertfordshire including the PDA.

Settlements during the late Iron Age tended to be enclosed, generally consisting of square or rectangular enclosures. The primary domestic building type was the roundhouse with circular eaves-drip gullies common during the 3rd and 2nd centuries BC (ibid 1997). The late Iron Age saw an increase in trade with Rome, most notably imported wine. Archaeological evidence from late Iron Age sites suggest shrines were replaced with structured temple complexes, typically Iron Age roundhouses were gradually replaced by rectangular structures, gravelled roads and an open market place suggest that the transition from the late Iron Age to the Roman period may not have been the sudden event previously thought (Bennet A, Gilman P, Medlycott M 2011).

Six grassmark / cropmark sites recorded by the HER within the study area are of unknown date but may represent prehistoric sites (Figure 2:57, 58, 59, 60, 61 and 62).

Roman

By the time of the arrival of the Romans in 43AD, East Anglia was known to be divided up into four principal tribal areas held by the Iceni, the Catuvellauni, the Trinovantes and the Coritani and the archaeological evidence would suggest that the rural landscape remained largely unchanged from the Iron Age. The landscape was dominated by open grassland with wheat and barley being staple arable crops. Aerial photography and archaeological excavation has revealed a landscape of Roman field systems identified as being well laid out with right angles and regular fixed measurements. Fieldwork on the National Trust's Ashridge Estate, c.35km north of the assessment site, has recorded a number of surviving earthworks of field systems and enclosures, possibly of Roman date, in established woodland (Hunn 2013).

The principal town in Roman Hertfordshire was Verulamium (modern day St Albans). This town emerged during the 1st century AD as an early local Capital. It was burnt down and destroyed during the Boudiccan revolt of 65AD however it was rebuilt and continued to thrive with civic amenities continuing into the 5th century (Going 1997; Bennet A, Gilman P, Medlycott M 2011).

The A5183 Watling Street which bounds the east side of the PDA (Figure 2: 8) has origins as a Roman road and the HER records 13 sites within the study area where Roman material has been discovered during archaeological work. These include the supposed line of a Roman road from Elstree to Eaton Bray which is

recorded within the eastern part of the PDA (Figure 2: 83) as well as Roman pottery kilns at Loom Lane, Radlett (Figure 2:110) and findspots of Roman pottery, tile and coins in a fairly even distribution through the study area.

Early Medieval and Medieval

To date there is little evidence for the political structures of 5th century East Anglia with an apparent power vacuum between the withdrawal of Roman power and the establishment of the Anglo-Saxon kingdoms in the 6th century. However, work on dating the construction of the Cambridgeshire Dykes to the 5th century suggests some form of political power was located in East Anglia at that time (Wade 1997; Medlycott 2011). The Middle Saxons of Hertfordshire were subsumed into the Kingdom of the East Saxons (Essex) by 600AD with London as the capital (ibid 1997).

The Saxons probably made their way into the eastern side of the county in the latter part of the 6th century from the east, by way of the Rivers Lea and Stort and their tributaries. It was, however, a long time before they penetrated into the forest lands of south Hertfordshire. The western side of the county was, probably in the first half of the 6th century, within the territory of the Chilternsætna, who inhabited the Chiltern country in Bucks, and are mentioned in the Tribal Hidage. At what period this side of the county was subdued by the Saxons is not definitely known, but the country adjoining Watling Street and Akeman Street was too important to be left long in the hands of the Britons (BHO 2020a).

Towns came into existence where opportunities of trade arose such as those which occurred at a crossing of roads, a ford or bridge, a castle, a religious house, or a place of pilgrimage. Trade being the essential qualification for a town, the marketplace was the most important spot within it. On one side of the marketplace, which is usually triangular, generally stands the church, and on the others the moot, or town hall, and the houses and shops of the townsmen. The three most important of the early boroughs are Hertford, St. Albans, and Berkhamstead, while Cheshunt, Ashwell, and Stanstead Abbots were becoming considerable market towns at the time of the Domesday Survey (ibid 2020).

Hertfordshire, north of the Lea, was included in the Danish Territory about 885, and the Danes harried the country between the Lea and St. Albans in the time of Athelstan (925–941). The Danish invasions, however, left few permanent marks in Hertfordshire beyond the towns at Hertford and the survival, possibly, of place names such as the Hundred of Dacorum, Danesbury, Daneswich, Danes End and Odsey (ibid 2020).

Moated sites began to appear during the reigns of Richard I, King John and Henry II as landowners required protection during the Barons Wars. Some of these are possibly earlier than the reign of Richard I., while, on the other hand, many are considerably later, as the practice of constructing moats continued into the 16th century. The moats were always wet, and consequently were usually placed on low ground, but they are occasionally found on high land fed by springs. Their shape was generally four-sided, although they vary considerably in this respect. The earth from the moat was thrown on the inside and spread over the island thus formed, upon which was built the house, with its barns and cattle sheds (Ibid 2020).

The HER contains thirty-eight records attributed to the medieval period within the Study Area. The closest of these records is for the moated site of Little Kendalls (Figure 2: 116) which is located adjacent to Field 13. The HER describes this monument as rectangular in shape but with no apparent northern arm. The western side has possibly two banks with the outer bank being the more prominent. The site measures approximately 67m NE-WS by 45m (Hertfordshire HER 2020).

The moated site is associated with an Area of Archaeological Sensitivity (AAS) which is shown extending into the northern part of Field 13. However, no earthworks are visible on LiDAR data within Field 13 itself indicating that the moat does not encroach into the PDA.

The next closest recorded medieval site is the moated site of Pennes Place (Figure 2: 101) which is located south of Butterfly Lane opposite Fields 19 and 20. The HER describes this moat as two rectangular moated enclosures with the eastern moat in good condition and 2-7m wide with a leat on its western side. This may have been extended during the 17th century to incorporate three weirs, a bathing pool and other later ornamental features. An external bank 0.70m high is visible on the eastern side with only the northern arm of the western moat surviving. A site visit in 2003 indicated that there was no sign of the western moat and it was considered that the feature was originally a single moated site which was later extended into a formal garden during the 17th century. The moat complex was described in 2003 as being silted up and overgrown (Hertfordshire HER 2020).

The available HER data indicates that records for the medieval period are concentrated around the site of Bhakdivedanta Manor in Letchmere Heath (Figure 2: 14) to the east and north of the two PDAs and around Pennes Place to the south of Fields 19 and 20. The distribution of recorded finds away from the PDAs suggests that that proposed developments are mostly located in the rural hinterland away from centres of settlements.

Post-medieval

The Hertfordshire Historic Landscape Characterisation Project (HLC) recorded the PDA as being mostly formed of irregular enclosures dating from before the 18th century with areas of boundary loss recorded in the east of the PDA and within the former parkland in the west of the PDA (Figure 2:9, Figure 10). The surrounding area contains a mixture of HLC types, including further enclosures of both irregular and co-axial types, large areas of urban development as well as the reservoirs, the airfield and the schools at Aldenham House.

The HER records Aldenham House Ornamental Garden (Figure 2: 109) to the immediate south of the eastern PDA. The gardens were designed by Henry Hucks Gibbs during the late 19th century. The gardens extended for approximately 150ha with around 80ha given over to woodland. Hucks Gibbs moved into Aldenham House in 1869 and began redeveloping the gardens thereafter with the help of his son, Vicary Gibbs. The Tykes Water was developed into an ornamental lake and the medieval Grubbs Lane (Figure 2: 79) was removed in 1891. The result was hugely celebrated with special renown for the arboretum. The gardens rivalled Kew for many years until the death of Vicary Gibbs in 1932 when all the plants and trees were sold and the majority removed. The estate was sold in 1959 to the Haberdashers Company and became the Haberdashers' Aske's School (HER 2020).

The course of Sawyer's Lane (Figure 2: 81) is recorded by the HER within Fields 10, 11, 13, and 17 of the eastern PDA and is seen on historic mapping leading north from Grubb's Lane from 1766 onwards. By 1839 the lane continued north and came to an end at a meeting point of several field boundaries to the west of Little Kendals Wood. The lane is recorded as being up to 27m broad and lined with hedges, however the southern end was removed along with Grubb's Lane in 1898, likely during the redevelopment of ornamental gardens (see above). Only the northern part survives today as a public right of way (HER 2020).

The HER records the park at Hilfield Castle (Figure 2: 9) as located to the immediate south of the western PDA. Hilfield Castle was built in 1799. Historic mapping from the 19th century shows a series of three ornamental ponds with small, wooded islands within them running eastwards from the surviving pond and all connected by Hilfield Brook. The surviving pond is the smallest of these but was allowed to silt up by 1898 (HER 2020). Within the park grounds are recorded a 19th century ice-house, and Hilfield Castle itself.

19th Century and Modern

The landscape around the manor of Aldenham appears to have been heavily wooded since at least the Norman Conquest with little industrial activity recorded. Indeed the hamlet of Radlett only began to significantly increase its population due to its location near the newly established railway line during the late 19th century (BHO 2020b).

The Elstree Aerodrome (Figure 2: 27) began in the 1920s and 1930s as a small grass airfield with a tiny hangar. The concrete runway was laid in the Second World War and in 1941 the airfield became a Link Trainer School with a flight simulator allowing training on a wide variety of military aircraft. The airfield was also used by Fairchild Aviation for modification of aircraft including Lysander IIIs and Wellingtons. It is still in use as a civil airfield partly for recreational use.

Aldenham Grange (Figure 2: 34) was built in 1910 for Lord Aldenham on a previously empty field. The HER notes that many elements of the ornamental garden survive, although the site is now within the Elstree aerodrome.

Two WWII pillboxes are recorded within the study area (Figure 2: 98 and 99).

Historic Map Data

Drury and Andrew's 1766 survey of Hertfordshire (Hertfordshire Record Society (2004)) records the settlements of Delrow, Patchett's Green and Letchmore Heath. It also shows the gardens around Aldeham House and indicates that a building still stood at Penne's Place. The line of Sawyers Lane is visible and other buildings (including Slades Farm) are recorded stylistically. The map is not however detailed enough to trace the boundaries of the PDA with any accuracy.

The 1839 Aldenham Tithe Map (Figure 4) does not record all of the PDA, large areas of the eastern parcel and parts of the western parcel are not mapped. The areas that are mapped record the PDA as enclosed fields. The parkland to Hilfield Castle is shown with a number of lakes to the southeast of the house and the line of Sawyers Lane is also shown running north from Aldenham park. The 1871 Ordnance Survey (OS) map clearly

shows Sawyers Lane as a wide tree and hedge lined strip heading north from Slade's Farm. The course of Grubb's Lane is also visible on the 1871 map, prior to its removal in 1898-1899 during the redevelopment of the gardens of the Aldenham House estate. The moated site of Pennes Place is clearly shown to the north of Aldenham House as a series of earthworks.

The 1898 OS map shows that redeveloped Aldenham Park and the route of 'New Grubb's Lane' which follows the existing Butterfly Lane and incorporated and redeveloped Pennes Place.

The landscape appears to remain largely the same throughout the first half of the 20th century, although there appears to be a gap in the historic maps from 1934 to 1960. The Elstree Aerodrome first appears on the 1960 OS Plan to the immediate north of Hog Lane, this omission from the 1930s mapping is likely to be a result of censoring. A single grass runway is depicted with approximately six buildings which are likely to comprise hangers, storage and administration buildings.

Historic maps from the 1970's to 1990's show little change to the landscape with Sawyers Lane still present as a grass road and public right of way.

Aerial Photographs

Aerial photographs from the 1940s to 2019 (Getmapping.com 2020; Google Earth 2020; NCAP 2020) show that the general landscape has not significantly changed over that time as reflected in the historic maps. However, aerial photos from 1999 show Sawyers Lane was much narrowed by that time, indicating that the lane has narrowed between 1990 and 1999. Aerial photos from the 1940s also clearly show the Elstree Aerodrome with a concrete runway which was laid down during World War II.

Aerial photos from 1999 onwards do not reveal any archaeological cropmarks or shadow marks within the redline boundary of the proposed development.

LiDAR

A LiDAR survey of the PDA area did not identify any previously recorded earthworks or anomalies within the redline boundary, though this was only available at 2 m resolution, so smaller features such as narrow banks or ditches may not have been identified.

Geophysical Survey (Appendix 3)

A geophysical survey (Webb 2020) of the proposed development area was begun in October 2020 but was abandoned (with the agreement of the archaeological advisor) due to ground contamination. Although the survey was abandoned prematurely, initial results of the north-eastern part of the PDA suggested that remains associated with Sawyers Lane may still exist below the present ground surface.

Trial Trenching (Appendix 4)

As the geophysical survey did not provide good evidence to inform the archaeological potential of the PDA, archaeological trial trenching was carried out over a targeted area. This was carried out in accordance with a Written Scheme of Investigation agreed with Simon Wood and focused on the areas of greatest potential impact from the Proposed Development as well as Field 14 which lies adjacent to Watling Street and was therefore considered to have the highest potential for archaeological remains of Roman date. The archaeological evaluation revealed only one archaeological feature – an undated ditch. A full report on the trial trenching evaluation will be submitted separately, interim results are presented in Appendix 4.

4.2 Assessment of heritage significance

Known heritage assets within the Proposed Development Area

Part of the Area of Archaeological Sensitivity known as Little Kendals Wood Moated Site, as mapped by the Hertfordshire HER, extends into the eastern part of the Proposed Development Area (PDA). This has archaeological interest for the below ground and earthwork remains that provide evidence of the site's function and date of use as a moated site. Nothing is visible on the available Lidar to suggest that the earthwork extends beyond the woodland which lies outside the PDA, therefore although this asset is considered to be of medium to high importance (as reflected in its local, non-statutory designation as an area of sensitivity) it is not included as being an asset within the site.

Heritage assets identified within the PDA are listed in Table 3. These are all non-designated assets.

Part of the former parkland associated with Hilfield Castle (Figure 2: 9) extends into the western parts of the PDA. It has historic interest and may have archaeological interest if below ground evidence of the park is present. It is considered to be of low importance as despite its connection with a Grade II* Listed Building this area is now arable fields with no surface evidence of its former function as parkland.

A Roman road is recorded as crossing the eastern parts of the PDA (Figure 2: 83) although only point data is recorded in the HER it is possible that this road leads from a Roman settlement in the vicinity of Aldenham School northwest of the eastern part of the PDA towards Watling Street to the east of the PDA. If present, any below ground remains of this asset would have archaeological interest, no evidence of the Roman road was identified in the archaeological trial trenching. Such remains are very unlikely to be of national importance and it is unlikely that these remains would contribute materially to the regional research agenda, but would be evidence of local land use in the Roman period, and therefore they would be considered to be of low importance.

Two post-medieval roads are also recorded within the eastern part of the PDA (Figure 2: 81 and 51). These are also assets of low importance, archaeological interest inherent in the below ground remains of which would add to understanding of local land use in the post-medieval period. The road from Elstree to Aldenham (Figure 2: 51) has some additional historic interest which adds slightly to its importance as it was diverted in 1891 after the creation of the Haberdasher's Girls School at Aldenham House.

Table 3: Heritage assets within the PDA

Map number	HER reference	Asset name	Period	Importance
9	2863	Park at Hilfield Castle	Post-medieval	Low
83	4565	Part of supposed line of Roman Road "Elstree to Eaton Bray"	Roman	Low
81	31518	Course of Sawyers Lane	Post-medieval	Low
51	16659	Line of post-medieval road	Post-medieval	Low

Archaeological potential of the PDA

The proximity of the Roman road Watling Street to the east of the PDA, the supposed Roman road within the PDA and the quantity of Roman material found in the study area indicated strong likelihood of the PDA containing currently unrecorded remains of Roman date. The proximity of two medieval moated sites also indicated that there may be associated archaeological remains (most likely evidence of field systems relating to these settlements) within the PDA.

However, the archaeological advisor to Hertsmere council has advised that the London Clay soils of this area have "been shown to be unfavourable for archaeological remains" (Simon Wood, pers comm), and the archaeological trial trenching did not reveal any archaeological remains of significance. The overall archaeological potential of the PDA is therefore assessed as low, archaeological remains may be present (particularly within the fields which have not been evaluated) but are unlikely to be numerous or of high importance.

Heritage assets in the Study Area with potential for change in their setting

Scheduled Monuments

There is one Scheduled Monument within 1km of the PDA. This is the moated site of Penne's Place (NHLE:1013001). The double island site consists of two rectangular enclosures and it is a good example of this type of double moated site. The enlarged south arm has been adapted to form a concrete-lined bathing pool and the moat also includes three weirs added as ornamental features. Within the interior of the northern enclosure is a rectangular pond. Only the north arm of the southern island survives as an earthwork feature crossed by a modern causeway. The remaining west and south arms have been infilled and the interior of the southern island is interpreted as the site of Penne's Place manor house. The monument has archaeological interest as it will contain evidence of its date of use, function and internal arrangement as well as potential waterlogged remains of paleo-environmental interest. It also has historic interest for its connections with the Penne family dating back to the 13th century. The later alterations also have historic and architectural interest as part of the landscaping of the park around Aldenham House. It is included in the assessment for its proximity to the Proposed Development.

Table 4: Scheduled Monuments within the study area

List Entry no.	Name	Grid ref.
1013001	Penne's Place moated site	TQ 16648 96868

Listed Buildings

There are 40 Listed Buildings within 1km of the PDA. The Grade II Listed barn at Hilfield Farm (NHLE: 1346908) which was included in the datasets used for the EIA Screening report, is no longer included in the National Heritage List as the building collapsed following a storm in September 2019 (Historic England pers comm; https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=1471370&resourceID=8). Its former location is included on Figure 3. There is also a further Grade II Listed Building within the Registered Park of Aldenham House (Home Farmhouse, NHLE:1103644) which is located just over 1km from the PDA and is also included in the assessment. These assets are detailed in Appendix 2.

Most are Grade II Listed but there are three Grade II* Listed examples – Hilfield Castle (NHLE: 1103569), Batlers Green House (NHLE: 1296473) and Aldenham House and Stable Block (NHLE: 1346891). These are all large houses ranging from 16th to late 19th century in date. The closest Listed Buildings to the PDA are Slades Farmhouse (NHLE: 1103614), an 18th century timber framed farmhouse which is bounded to the west and north by the eastern PDA; and the Lodge at Hilfield Castle (NHLE: 1103570) which lies on the opposite side of the road to the western PDA.

Nine of the Grade II Listed Buildings are located within the Letchmore Heath Conservation Area and five are within the Patchett's Green Conservation Area. These are mainly houses but include the Letchmore Heath war memorial, a public house and a barn. Outside of these main settlements the listed buildings include farmhouses, barns, small rural dwellings, larger houses and a group of early 19th century buildings constructed for the Brewers' Company of London to replace the earlier Tudor school buildings (The School House (NHLE: 1103646), Library (NHLE: 1103647) and Elm Cottages (NHLE: 1103468)).

5 PREDICTED EFFECTS OF THE DEVELOPMENT

The available archaeological, documentary, cartographic and documentary evidence suggests that the site has a generally low potential for archaeological remains from the prehistoric, Romano-British, post-medieval and modern periods and this is supported by the targeted trial trenching undertaken (see appendix x).

The medieval moated site of Little Kendalls is located adjacent to Field 13. The moated site is associated with an Area of Archaeological Sensitivity (AAS) which is shown extending into the northern part of Field 13. Although no earthworks are visible on LiDAR data within Field 13 itself indicating that the moat does not encroach into the PDA, further associated buried medieval archaeological remains cannot be ruled out within Field 13. The next closest recorded medieval site is the moated site of Pennes Place which is located on the southern boundary of Fields 19 and 20. Again, although LiDAR evidence indicates that no earthworks are present within Fields 19 and 20, it cannot be ruled out that buried archaeological remains associated with this non-heritage asset may be present within Fields 19 but is very unlikely within field 20, which is a former landfill site and therefore unlikely that any archaeological remains remain undisturbed.

The location of the medieval and post-medieval Sawyers Lane within the eastern PDA is currently used as a public right of way. However, although the proposed development will not block this access track, the HER evidence suggests that the original lane was wider than is currently visible. As such it is considered likely that solar panels located close to this track may still impact any surviving remains of Sawyers Lane across its original width.

The main ground impacts from the proposed development are understood to be groundworks for the construction of the new solar park, battery capacity and grid connections. The metal framework that supports the solar panels would be fixed into the ground by posts centred c. 6m apart. The posts would be pile-driven (like a fence post) into the turf to a depth of around 2-2.5m. The cables linking all the PV arrays to the inverter/transformer stations will be via underground or cable trays above ground and underground from the inverter/transformer stations to the on-site substation. An area of topsoil stripping will be required for the site substation and battery storage areas as well as the contractor compounds. These impacts will amount to less than 4% of the total site area. The proposed development would therefore have a minimal impact on any known or currently unrecorded archaeological remains within the PDA.

Penne's Place Scheduled Monument (NHLE: 1013001) derives significance from its archaeological interest as it will contain evidence of the construction and use of the former manor house which preceded the current Aldenham House. It is experienced on the northern edge of the Registered Park and Garden adjacent to Butterfly Lane and close to the entrance drive which leads in and out of Haberdasher's School from this lane. The parkland setting contributes to the significance of the monument as it provides evidence of the continuity of these sites in a single (albeit changing) ownership. The agricultural land north of the monument (within the PDA) contributes to the significance as it reflects the historic setting of the moated site. The Proposed Development has been designed to retain green space within the fields immediately north of Butterfly Lane

adjacent to the monument and by retaining this historic setting there will be no harm to the significance of this monument.

The Registered Park and Garden of Aldenham House (NHLE: 1000902) derives significance from its architectural, historic and artistic interest as a designed landscape. It also has archaeological interest for its inclusion of the Penne's Place Scheduled Monument and for its potential to contain further archaeological remains associated with this asset, with the later development of the park and also with potential earlier phases of settlement – the eastern side of the park being bounded by Watling Street Roman road). The setting of the park within a rural area contributes to its significance as views out from the park, particularly to the west, south and east borrow from this wider setting. Views to the north are restricted by dense woodland planting alongside Butterfly Lane, but the view when entering and leaving the park via the entrance drive onto this lane affords some views of the adjacent farmland. The Proposed Development has been designed to retain green space within the fields adjacent to Butterfly Lane and to enhance the vegetation planting along the southern edges of the fields which will contain panels (c.150m north of the entrance). This will maintain the current setting of the park and no harm to its significance is predicted.

Aldenham House and Stable Block (NHLE:1346891) formed the principal building within the Registered Park but is now one of several buildings utilised by the Haberdasher's Aske School. These other buildings are located between the Listed Building and the PDA and obstruct views towards the PDA, its setting within the park will not be altered. Home Farmhouse (NHLE: 1103644) is considered sufficiently removed from the PDA that its setting within the park will not be altered.

Batlers Green House (NHLE: 1296473) is a large house with a c.1500 core and later alterations and extensions from the 17th, 18th and 19th centuries. This includes an 18th century replacement front (facing northeast). Multiple phases of extension are apparent to the rear where there is now a garden with formal and informal planting. The house is generally experienced within its gardens to the east of Common Lane on the southern edge of the town of Radlett. The adjacent barns to the northeast are Grade II Listed (NHLE: 1103651) as are two further barns (NHLE: 1103611 and 1103612) and Battlers Green Farmhouse (NHLE: 1346889) to the west of Common Lane. These buildings lie on the edge of predicted visibility and their immediate setting will not be altered.

Hilfield Castle (NHLE: 1103569) is a late 18th century house by Jeffry Wyatt in picturesque gothic style. The symmetrical villa has a four storey central tower that affords views over the former parkland around the house (now largely removed by the Hilfield Park Reservoir and Elstree Aerodrome) and also acts as a landmark in views from the wider area (including from the footpath through Field 1). The Proposed Development has been designed to retain green space within the areas of former parkland north of the house which will also retain the important view of the tower from within Field 1. There will be no effect on the surviving areas of parkland or on the designed view south from the house across the park (the PDA is located north and west of the house). No harm to the significance of Hilfield Castle is predicted. The Grade II Listed gatehouse (NHLE: 1346907) is located southwest of the castle and is contemporary with the house. It was also designed by Wyatt and was built to contain a water-engine. It is only experienced within the former parkland landscape adjacent to the house and this immediate setting will not be altered. The Grade II Listed lodge (NHLE: 1103570) is also contemporary with the house and marks the entrance to the park from Hilfield Lane. It is experienced on this stretch of the rural lane at the junction with the entrance drive and is located within 30m of the western PDA. The physical relationship between the lodge, road and driveway contributes to the significance of this building by providing an appropriate context which explains the historic function of this building. The rural character of the immediate surroundings makes a contribution by reflecting the historic setting of the lodge. The Proposed Development will not alter the historic relationship between the lodge and the park or the main house, the building will continue to be experienced on the junction between Hilfield Lane and the entrance drive to Hilfield Castle. The Proposed Development will alter the character of the land opposite the lodge but has been set back to retain the character of the immediate setting alongside the road at this point. There will be no harm to the significance of this asset.

The buildings within Letchmore Heath Conservation Area and Patchett's Green Conservation Area are all experienced as part of the street scene within their respective settlements and do not draw significance from the wider surroundings beyond the Conservation Area boundary. The setting of these assets is not considered to be affected by the proposed development. The Conservation Areas themselves both protect the character of these small rural settlements and as such the rural surroundings make a contribution to their significance, they will both be located over 500m from the Proposed Development and their immediate setting of fields will not be altered.

The Waggon and Horses Public House (NHLE: 1103627) and a group of barns at South Medburn Farmhouse (NHLE: 1173309) are predicted to have no visibility of the Proposed Development.

Six of the Grade II Listed Buildings are experienced within or on the edges of urban areas. They are: the Cat and Fiddle Public House (NHLE: 1103615), 29A Loom Lane (NHLE: 1245542), Reveley Lodge (NHLE: 1096108), Boiler House at Reveley Lodge (NHLE: 1096109), Coach House and Stables at Reveley Lodge (NHLE: 1096110), Prospect Cottage (NHLE: 1103576), Oundle (NHLE: 1173913) and Rosary Priory High School (NHLE: 1346919). These more built up settings will not be altered by the Proposed Development.

Tylers Farmhouse (NHLE: 1346912) is a late 16th century timber framed house with later alterations experienced as part of a small farm complex to the southwest of the M1 motorway, the rural surroundings contribute to its significance but it is sufficiently removed from the PDA that its setting will not be materially altered. Similarly, Caldecote (NHLE: 1296023) is a later dwelling but experienced in similar surroundings.

Harmshall Cottage (NHLE: 1346894) is also of 16th century date with later alterations. It is located south of the Elstree aerodrome adjacent to the reservoir and is experienced only in close proximity. The fields to the south contribute positively to its significance as a rural dwelling. These will not be altered by the Proposed Development the two parcels of which will be located 600m northwest and 600m northeast of the house.

Kendal Hall (NHLE: 1296293) is an 18th century country house now in use as a school. It is experienced within former parkland now school playing fields with modern school buildings to the northeast and east. The principal elevations are to the north (across playing fields) and south (across a parking area with fields beyond past a line of trees). The PDA is c.275m southwest beyond the A5183. The positive contribution that this setting makes to the significance of this building will not be altered by the Proposed Development.

The barn and former cow house at Little Kendals farm (NHLE: 1103523) appear to have been converted to residential use. This building derives significance from its architectural and historic interest as an example of a late 18th century weatherboard clad timber framed barn. The listed building description notes a number of surviving internal features – although it is likely that at least some of these have been removed during conversion. It is experienced within the slightly gentrified former farmyard associated with Little Kendals. This setting contributes to its significance as a former agricultural building associated with the house. The main house is not listed but is probably a successor to the manor on the moated site to the southwest (which is an Area of Archaeological Sensitivity identified by Hertfordshire HER). This historic relationship also contributes to the significance of this asset. There will be no change to this immediate setting or to the historic relationship between the moated site and the farm and there will be no harm to the significance of this asset.

The School House (NHLE: 1103646), Library (NHLE: 1103647) and Elm Cottages (NHLE: 1103468) derive significance from their architectural and historic interest as a group of contemporary school buildings. They are experienced as a group north east of Aldenham Road c.350m southeast of Letchmore Heath with additional more recent school buildings to the northwest and sports fields to the northeast and east. This rural setting outside of any settlement contributes to the significance of these buildings as it illustrates the original rural setting of the school. The Proposed Development will result in a change of character to areas of these wider rural surroundings but will not alter the sense of the school buildings being separated from settlement nor the historic relationships between them and the modern school facilities. There will be no harm to the significance of these buildings.

Slades Farmhouse derives significance as a late 18th century farmhouse. It is experienced north of Butterfly Lane opposite Aldenham House park with adjacent modern farm and industrial buildings immediately to the east and north. Views of the farmhouse from Butterfly Lane are across pasture from the west and these contribute to its significance by allowing its architectural interest to be appreciated. These views, and the corresponding view from the house across these pasture fields also contribute positively to its significance by providing an appropriate context in which to appreciate its historic function as a farmhouse. The agricultural use of the fields to the north further contributes by continuing the historic land use of the farm. The Proposed Development has been designed to retain green space in the pasture fields which will maintain the views of the farmhouse from Butterfly Lane and the views west from the farmhouse. The change of land use of the other fields will alter the character of the farmhouse's wider surroundings from rural with localised intrusion of man-made features areas to an agricultural landscape, with energy and transport infrastructure which will result in a slight loss of significance equating to much less than substantial harm.

6 CONCLUSIONS

This assessment has identified that any currently unrecorded archaeological remains that may be present within the site are unlikely to be of more than low importance. Although a geophysical survey was initiated as part of this assessment process it was not completed due to inconclusive survey results. Archaeological trial trenching of the areas of greatest impact and potential (Field 14 which lies adjacent to Watling Street and the areas of the proposed substation, battery storage facility and construction compound) has been carried out to inform the application and an interim report is attached at Appendix x the findings of which found the areas investigated to be archaeologically sterile. This was conducted in accordance with a Written Scheme of Investigation (WSI)

agreed in advance with the Hertfordshire County Council Historic Environment Advisor.. A copy of the WSI is attached to the interim report.

The Proposed Development will result in up to 4% ground disturbance within the PDA, with most of this occurring in the areas of the construction compound, battery storage facility and substation, overall this is likely to result in less than substantial harm to any heritage assets within the PDA. This less than substantial harm to non-designated heritage assets within the site should be weighed against the benefits of the proposed development in line with paragraph 197 of NPPF and with policies outlined in the Hertsmeire Borough Council Local Plan 2012-2027.

No harm is predicted to the majority of designated heritage assets in the study area through change in their setting. The exception is Slades Farmhouse, Grade II Listed Building, which is predicted to experience much less than substantial harm as a result of the change of land use within the PDA. This should be weighed against the benefits of the proposed development in line with paragraph 197 of NPPF and local planning policy.

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8 PLATES AND FIGURES



Plate 1: View from the entrance to Hilfield Lodge towards PDA (supplied by occupier)



Plate 2: View towards Hilfield Castle from western edge of Field 1 (south of the public footpath)



Plate 3: View towards Slades Farm from north



Plate 4: View of Slades Farm from Butterfly Lane



Plate 5: View of fields north of Penne's Place from Butterfly Lane

Fig 1

Fig 2

Fig 3

Fig 4

Fig 5

Fig 6

Fig 7

Fig 8

Fig 9

APPENDIX 1: FIELD NUMBER MAP (SUPPLIED BY CLIENT)

APPENDIX 2: CULTURAL HERITAGE ASSETS WITHIN THE STUDY AREA

Table 1: Gazetteer of heritage assets within the study area

Map Number (on Figure 2)	HER reference	National Heritage List Entry number (on Figure 3)	Name	Designation
1	10370		NEOLITHIC POLISHED FLINT AXE, TYLER'S FARM, BUSHEY	
2	16659		LINE OF POST-MEDIEVAL ROAD, ALDENHAM HOUSE, ELSTREE	
4	30805		SITE OF BRIGHT OR BRIDE STREET HAMLET, ALDENHAM/BUSHEY	
5	30809		COURSE OF GRUBB'S LANE, ALDENHAM PARK, ALDENHAM	
6	10800	1103523	LITTLE KENDALS FARM, RADLETT	Grade II Listed
7	10851		CHALK PITS, WATLING STREET, RADLETT	
8	14339		ROMAN WATLING STREET, SE OF THE LONDON GATE, VERULAMIUM, ST ALBANS, TO ELSTREE	
9	2863		PARK AT HILFIELD CASTLE, ALDENHAM/BUSHEY	
10	11232	1346889	FARMHOUSE AT BATTLERS GREEN FARM, BATTLERS GREEN, ALDENHAM	Grade II Listed
11	11233	1103611 and 1103612	TIMBER-FRAMED BARNS, BATTLERS GREEN FARM, BATTLERS GREEN, ALDENHAM	Grade II Listed
12	11234	1103651	TIMBER-FRAMED BARN, BATLERS GREEN HOUSE, BATLERS GREEN, ALDENHAM	Grade II Listed
13	31518		COURSE OF SAWYERS LANE, ALDENHAM	
14	716	1173081	BHAKDIVEDANTA MANOR (PIGGOTT'S), LETCHMORE HEATH, ALDENHAM	Grade II* Listed
15	30217		SITE OF BUSHEY GRANGE, BUSHEY	
16	11641	1103569	HILFIELD CASTLE (HILFIELD PARK), PATCHETTS GREEN, ALDENHAM/BUSHEY	Grade II* Listed
17	31245		SITE OF POST-MEDIEVAL BRICKFIELD, PALMER AVENUE, BUSHEY	
18	11749	1013001	SITE OF PENNE'S PLACE/ALDENHAM HALL, BUTTERFLY LANE, ALDENHAM	Scheduled Monument
19	11756		ALDENHAM HOUSE	

20	12978		SITE OF TYKESWATER COTTAGE, TYKESWATER LANE, RADLETT	
21	12994		LITTLE ORGAN HALL, THEOBALD STREET, BOREHAMWOOD	
22	13195		OUNDLE, 46 LITTLE BUSHEY LANE, BUSHEY	
23	13196	1346908	POST-MEDIEVAL TIMBER-FRAMED BARN, HILFIELD FARM, PATCHETTS GREEN (Now demolished)	De-Listed
24	13248		REVELEY LODGE, 88 ELSTREE ROAD, BUSHEY	
25	13271		PROSPECT COTTAGE & THE HERMITAGE, 40-40A LITTLE BUSHEY LANE, BUSHEY	
26	13478		DELROW HOUSE, HILFIELD LANE, PATCHETTS GREEN, ALDENHAM	
27	13486		ELSTREE AERODROME, HOGG LANE, ALDENHAM	
28	1362		FISHPOND, BHAKTIVEDANTA MANOR, LETCHMORE HEATH, ALDENHAM	
29	13627		SITE OF TYKES WATER FARM (LITTLE ORGAN HALL FARM), THEOBALD STREET, BOREHAMWOOD	
30	13666		SITE OF THE WRESTLERS PH, ALDENHAM HOUSE, ALDENHAM	
31	13667		SITE OF ALDENHAM GROVE, ALDENHAM ROAD, ALDENHAM	
32	13668		HAM FARM, HOGG LANE, ALDENHAM	
33	13691		48 LITTLE BUSHEY LANE, BUSHEY	
34	13712		ALDENHAM GRANGE GARDEN, GRANGE LANE, ALDENHAM	
35	1441		MEDIEVAL POTTERY, S OF ORGAN HALL FARM, BOREHAMWOOD	
36	1486		ROMAN POTTERY, LETCHMORE HEATH, ALDENHAM	
37	15557		KENDAL HALL FARM, RADLETT	
38	16317	1173309	SOUTH MEDBURN FARM, WATLING STREET, ELSTREE	Grade II Listed
39	16318	1103627	THE WAGGON & HORSES, WATLING STREET, ALDENHAM	Grade II Listed

40	16324	1103646	ALDENHAM SCHOOL, BOYDENS HILL, ALDENHAM	Grade II Listed
41	16327		MEDBURN SCHOOL, WATLING STREET, ALDENHAM	
42	16441	1103615	THE CAT & FIDDLE, 14 COBDEN HILL, RADLETT	Grade II Listed
43	16442		SITE OF COBDENHILL FARM, COBDEN HILL, RADLETT	
44	16510	1174046	POST-MEDIEVAL BARN, SUMMERHOUSE LANE, PATCHETTS GREEN, BUSHEY	Grade II Listed
45	16511	1346909	GARDEN COTTAGE, HILFIELD LANE, PATCHETTS GREEN, BUSHEY	Grade II Listed
46	16512	1103575	PATCHETTS, HILFIELD LANE, PATCHETTS GREEN, BUSHEY	Grade II Listed
47	16513	1346911	DELROW COTTAGE, HILFIELD LANE, PATCHETTS GREEN, BUSHEY	Grade II Listed
48	16514		LEAPER COTTAGES, 1-4 THE GREEN, LETCHMORE HEATH	
49	16515		MANOR COTTAGE AND PIGGOTTS COTTAGE, THE GREEN, LETCHMORE HEATH	
50	16516		LETCHMORE HEATH FARM, THE GREEN, LETCHMORE HEATH	
51	16659		LINE OF POST-MEDIEVAL ROAD, ALDENHAM HOUSE, ELSTREE	
52	16660		SITE OF POST-MEDIEVAL COTTAGES, HABERDASHERS' ASKE'S BOYS' SCHOOL, ELSTREE	
53	17844	1346912	TYLER'S FARM, LITTLE BUSHEY LANE, BUSHEY	Grade II Listed
54	17845		HART'S FARM, LITTLE BUSHEY LANE, BUSHEY	
55	18023		CROPMARKS OF POST-MEDIEVAL FIELD BOUNDARY, LETCHMORE HEATH, ALDENHAM	
56	18025		CROPMARKS OF POST-MEDIEVAL FIELD BOUNDARIES, BATTLERS GREEN FARM, BATTLERS GREEN	
57	18026		CROPMARKS OF DITCHES AND PITS, COBDENHILL DELL, RADLETT	

58	18027		CROPMARKS OF DITCHED ENCLOSURES AND EMBANKED FEATURE, TYKESWATER LANE, ELSTREE	
59	18031		GRASSMARKS OF BURIED DITCHES OR TRACKS, EAST OF TYKESWATER LANE, ELSTREE	
60	18032		GRASSMARKS OF BURIED BOUNDARIES AND DITCHED ENCLOSURES, ELSTREE	
61	18033		GRASSMARKS OF PARALLEL CUT FEATURES AND DITCHES, EAST OF TYKESWATER LANE, ELSTREE	
62	18034		GRASSMARK OF TRACKWAY, KENDALL HALL FARM, RADLETT	
63	18572		SITE OF MILESTONE, WATLING STREET, RADLETT	
64	18573		SITE OF LOOM FARM, LOOM LANE, RADLETT	
65	18710	1296023	CALDECOTE, HILFIELD LANE SOUTH, BUSHEY HEATH	Grade II Listed
66	18711		CALDECOTE FARM, CALDECOTE LANE, BUSHEY HEATH	
67	18712	1346929	CALDECOTE TOWERS (ROSARY PRIORY), ELSTREE ROAD, BUSHEY HEATH	Grade II Listed
68	18713		SITE OF THE COACH & HORSES PH, CALDECOTE LANE, BUSHEY HEATH	
69	2049		ROMAN TILE, LETCHMORE HEATH	
70	2275		ANIMAL BONE AND OYSTER SHELL, ALDENHAM	
71	2277		SITE OF ICEHOUSE, HABERDASHERS ASKE'S SCHOOL, ALDENHAM	
72	2616	1296293	KENDALS HALL, RADLETT	Grade II Listed
73	2863		PARK AT HILFIELD CASTLE, ALDENHAM/BUSHEY	
74	30215		SITE OF BURNT FARM, LITTLE BUSHEY LANE, BUSHEY	
75	30216		SITE OF BUSHEY GRANGE FARM, LITTLE BUSHEY LANE, BUSHEY	
76	30804		SITE OF ICEHOUSE, HILFIELD CASTLE, ALDENHAM/BUSHEY	

77	30805		SITE OF BRIGHT OR BRIDE STREET HAMLET, ALDENHAM/BUSHEY	
78	30808	1103614	SLADES FARM, BUTTERFLY LANE, ALDENHAM	Grade II Listed
79	30809		COURSE OF GRUBB'S LANE, ALDENHAM PARK, ALDENHAM	
80	31085	1434608	LETCHMORE HEATH WAR MEMORIAL, LETCHMORE HEATH	Grade II Listed
81	31518		COURSE OF SAWYERS LANE, ALDENHAM	
82	4388		MOATED MANORIAL SITE, PAGE'S FARM, HOGGS LANE, ALDENHAM	
83	4565		PART OF SUPPOSED LINE OF ROMAN ROAD, 'ELSTREE TO EATON BRAY'	
84	4809	1296467	JASMINE COTTAGE, BACK LANE, LETCHMORE HEATH	Grade II Listed
85	4810	1346893	THREE HORSESHOES PH, LETCHMORE HEATH	Grade II Listed
86	5098		MEDBURN BRIDGE, WATLING STREET, ALDENHAM	
87	557		PREHISTORIC FLINT AXE, THE RIDGEWAY, RADLETT	
88	5580		RAILWAY BRIDGE, SOUTH OF RADLETT	
89	5885		REMAINS OF BRICKWORKS, MOSES DELL, ALDENHAM	
90	5913		ARCHED CULVERT CARRYING RAILWAY, ALDENHAM	
91	5914		RAILWAY BRIDGE, ALDENHAM	
92	5933		RAILWAY BRIDGE, THEOBALD STREET, ELSTREE	
93	5934		RAILWAY BRIDGE OVER TYKESWATER RIVER, ELSTREE	
94	5935		FOOTBRIDGE OVER TYKES WATER, ELSTREE	
95	6044	1296473	BATLERS GREEN HOUSE, BATLERS GREEN, ALDENHAM	Grade II* Listed
96	6210		BELLARMINE JUG, HABERDASHERS' ASKE'S SCHOOL, ALDENHAM	
97	6800		ROMAN POTTERY & TILE, ALDENHAM SCHOOL, BOYDENS HILL, ALDENHAM	

98	6827		SITE OF PILLBOX, DAGGER LANE, ELSTREE	
99	6828		PILLBOX, HILLFIELD LANE, PATCHETTS GREEN	
100	690		ROMAN POTTERY, ALDENHAM	
101	712		MOATED SITE, PENNES PLACE, ALDENHAM	
102	714		POSSIBLE MOATED SITE, OR POST-MEDIEVAL POND, KENDALS WOOD, RADLETT	
103	717		MANORIAL SITE, PENNES PLACE, ALDENHAM	
104	718		MANORIAL ESTATE OF WIGBOURNES, ALDENHAM	
105	721		POSSIBLE MANORIAL SITE, KENDALS, RADLETT	
106	723		POSSIBLE MANORIAL SITE, SOUTH MEDBURN FARM, ALDENHAM	
107	728		SITE OF ORGAN HALL FARM, THEOBALD STREET, BOREHAMWOOD	
108	7280		SITE OF A DENE HOLE, ALDENHAM AVENUE, RADLETT	
109	7347		ALDENHAM HOUSE ORNAMENTAL GARDENS AND PARKLAND, ALDENHAM	
110	735		ROMANO-BRITISH POTTERY KILN GROUP, LOOM LANE, RADLETT	
111	758		ROMAN TILE, LIME DELL, ALDENHAM	
112	759		MEDIEVAL POTTERY, LETCHMORE LODGE, ALDENHAM	
113	762		POST-MEDIEVAL COIN HOARD, LETCHMORE HEATH, ALDENHAM	
114	772		POST-MEDIEVAL MANOR, CALDECOTE HILL, BUSHEY	
115	774		SITE OF WINGFIELDS, LISTER INSTITUTE, DAGGER LANE, ALDENHAM	
116	927		MOATED SITE, LITTLE KENDALS WOOD, ALDENHAM	
117	928		ROMAN TILES, ALDENHAM HOUSE, ALDENHAM	
118	930		MEDIEVAL TO POST-MEDIEVAL POTTERY, LETCHMORE HEATH, ALDENHAM	

119	931		ROMANO-BRITISH POTTERY, HOME FARM, ALDENHAM PARK	
120	939		MESOLITHIC FLINT SCRAPER, BUSHEY	
121	940		ROMAN AMPHORA HANDLE, ELSTREE AERODROME, ALDENHAM	
122	941		ROMAN TILE AND POTTERY, CALDECOTE HOUSE, BUSHEY	
123	943		ROMAN COIN, LITTLE BUSHEY	
124	945		SITE OF POST-MEDIEVAL TILE KILNS, DAGGER LANE, ALDENHAM	
125	9788		ROMAN DITCHES AND POTTERY, CHARNWOOD, LOOM LANE, RADLETT	
126	9790		APPROXIMATE SITE OF LATE MEDIEVAL CHAPEL, COBDEN HILL, RADLETT	
		1103570	LODGE TO HILFIELD CASTLE	Grade II Listed
		1103616	OLD BAKERY COTTAGE	Grade II Listed
		1103647	LIBRARY	Grade II Listed
		1103648	ELM COTTAGES	Grade II Listed
		1103649	BARN IMMEDIATELY SOUTH EAST OF NUMBER 1 HORWOOD COTTAGES	Grade II Listed
		1103650	APPLE TREE COTTAGE / VERNON COTTAGE	Grade II Listed
		1172919	THE OLD REST	Grade II Listed
		1245543	29A, LOOM LANE	Grade II Listed
		1346892	THE FORTRESS	Grade II Listed
		1346894	HARMSHALL COTTAGE	Grade II Listed
		1346907	GATEHOUSE TO HILFIELD CASTLE	Grade II Listed

APPENDIX 3: GEOPHYSICAL SURVEY



APPENDIX 4: INTERIM REPORT ON TRIAL TRENCH EVALUATION

