

ARCHAEOLOGY
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SOLUTIONS

**Land at Bilsham
Farm, Yapton,
West Sussex**

**Archaeological
Assessment**

Prepared for:
BNRG Renewables

22nd October 2013



Contents

Non Technical Summary	1
1 Introduction	2
2 Methodology	3
3 Planning Guidance	4
4 Recorded Heritage Assets	7
5 Historic Mapping, Aerial Photography & Site Visit	9
6 Proposed Works and Potential Archaeological Impacts	11
7 References	12
Appendix 1: The Known Relevant Heritage Resource within a 1km radius (supplied by the West Sussex HER)	13
Appendix 2: Consulted Historic Maps (from the West Sussex Record Office)	14
Appendix 3: Consulted Aerial Photographs (from the National Monuments Record)	14

Figures 1-7

APS 12/404

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Non Technical Summary

Introduction

This report presents the results of an assessment of the potential archaeological impacts of a proposed solar photovoltaic farm on land (the Site) at Bilsham Farm, Yapton in West Sussex. The aim of the assessment is to inform on the potential impact that groundworks may have on buried archaeological remains.

Results

Archaeological fieldwork directly to the east of the Site has identified the presence of a Bronze Age hoard, a possible Bronze Age occupation/activity site, large quantities of prehistoric artefacts and two possible Romano-British settlement/activity sites. It can therefore be inferred that the Site may also contain significant archaeological remains in the form of occupation/activity sites along with artefactual evidence. Should such archaeological remains exist within the Site their extent, nature and full significance are presently unknown. Study of historic mapping has shown that by 1838 the south-western part of the Site was mostly divided into small linear land parcels by drainage ditches, probably a reflection of the post medieval or earlier drainage of this part of the coastal plain. The remainder of the Site was divided into larger land parcels, although these had largely disappeared by 1876.

Recommendation

The proposed groundworks, notably the trenches required for the underground cables, have the potential to expose archaeology of later prehistoric and Romano-British date. Although this should not be viewed as an over-riding constraint to development it is recommended that consultation be carried out with the Environment and Heritage Team of West Sussex County Council as archaeological mitigation may be required, such as the imposition of a planning condition requiring the archaeological monitoring of all groundworks as they are carried out.

1 Introduction

1.1 This report presents the results of an assessment of the potential archaeological impacts of a proposed solar photovoltaic farm on land (the Site) covering approximately 36 hectares at Bilsham Farm, Yapton in West Sussex, which is centred on NGR SU 9607 0243 (Figure 1).

1.2 The Site consists of four large fields (Figure 1, F1-F4) within an agricultural landscape and is accessed from a trackway which leads to a stone-built barn known as Hams. It is bounded to the east by Drove Lane, to the south-west by a drainage ditch known as Ryebank Rife, to the north-west by a further drainage ditch known as Lidsey Rife and to the north-east by a hedgerow. The Site is located within the West Sussex coastal plain and topographically the eastern corner of the Site is located on an area of higher ground at around 4.5m AOD which then falls away to the west and south to around 1m AOD. The geology of the site is recorded as the Lewes Nodular, Seaford, Newhaven and Culver Chalk Formations overlain by river terrace deposits of sand, silt and clay (www.bgs.ac.uk).

2 Methodology

2.1 This report has been produced in accordance with guidelines in the *Standard and Guidance for historic environment desk-based assessment* issued by the Institute for Archaeologists (revision 2011).

2.2 The assessment included consultation of readily available archaeological and historical information from documentary, cartographic and aerial photographic sources together with the results of a Site walkover. The major repositories of information comprised:

- the on-line *National Heritage List for England* database for details of designated heritage assets close to the Site. No such assets were identified in the search;
- the West Sussex Historic Environment Record for recorded heritage assets within 1km of the Site. Relevant details are listed in Appendix 1;
- the West Sussex Record Office for historic maps. The consulted maps are listed in Appendix 2;
- the National Monuments Record for historic aerial photographs. The consulted photographs are listed in Appendix 3; and
- the results of a Site walkover.

2.3 Section 3 of this report summarises relevant planning guidance and Section 4 summarises recorded heritage assets close to the Site. These assets are marked on Figure 1. Section 5 details the results of cartographic and aerial photographic research along with a Site walkover and extracts from historic maps are shown in Figures 2-4, an aerial photograph in Figure 5 and site photographs in Figures 6-7. The proposed works and potential archaeological impacts are summarised in Section 6.

3 Planning Guidance

National Planning Policy Framework

3.1 The most relevant national planning guidance concerning archaeology and other heritage assets is to be found in the National Planning Policy Framework (2012) which sets out planning guidance concerning archaeological remains and other elements of the historic environment.

3.2 Paragraph 128 addresses planning applications, stating that *"local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation"*.

3.3 Designated heritage assets are addressed in Paragraph 132 which states that *"when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens and World Heritage Sites, should be wholly exceptional"*.

Arun District Local Plan

3.4 Archaeology is protected under Saved Policy Area 17 (Sites of Archaeological Interest) in the Arun District Local Plan. This policy states that:

"Permission will not be granted for development that would be harmful to the significant archaeological interest of a site. Where the presence of archaeological remains is known or suspected:

- (i) the applicant must arrange for archaeological assessment of the site to be carried out before the planning application is determined;*
- (ii) where the assessment shows that the physical preservation of remains in situ is not justified, conditions may be attached to any permission granted that development will not take place until provision has been made by the developer for a programme of archaeological investigation and recording. The programme will be carried out prior to the commencement of the development; and*
- (iii) whenever practicable, opportunities should be taken for the enhancement and interpretation of archaeological remains left in situ."*

Arun District Council Emerging Local Plan

3.5 Archaeology is also protected under the Arun Council Emerging Local Plan. Policy DM 30 (Sites of Archaeological Interest) states the following:

There will be a presumption in favour of the preservation of scheduled and other nationally important monuments and archaeological remains. Where proposed developments will have either a direct impact on sites listed in Table 16.1 (i.e. developments requiring Scheduled Monument Consent) or where developments will have an indirect impact on the settings of those sites listed in Table 16.1, or where a site on which development is proposed has the potential to include heritage assets with archaeological interest (having consulted the Historic Environment Record) permission will only be granted where it can be demonstrated that development will not be harmful to the archaeological interest of these sites.

In all such instances:

1 applicants must arrange for a desk based archaeological assessment of the proposed development site to be undertaken by a suitably qualified person. The archaeological assessment will take the form of a factual review of the known information on historic assets and an appraisal of these assets. This information shall accompany the planning application, and, where not supplied, will be required before any planning application is determined. Where the Planning Authority has reason to*

believe, either from the archaeological assessment as above, or from other evidence sources, that significant archaeological remains may exist, further assessment in the form of a field evaluation will be required to be carried out before the planning application is determined. Any field survey undertaken shall be carried out by a professionally qualified archaeological organisation or consultant only. All stages of archaeological fieldwork shall be subject to a Written Scheme of Investigation approved by the local planning authority. No development shall take place on the proposed development site until the applicant, or their agents or successors in title, is in receipt of a Written Scheme of Investigation that has been approved by the Local Planning Authority; **or**

2 A field evaluation as above, which shall include a historic environmental record of the archaeological site without the requirement to undertake a separate desk based archaeological assessment.

3 Preservation in situ of archaeological sites or remnants of such sites, is the preferred option. However, where the assessment, which shall be subject to a Written Scheme of Investigation, shows that the preservation of archaeological remains in situ is not justified, conditions may be attached to any permission granted that development will not take place until provision has been made by the developer for a programme of archaeological investigation and recording. Any such programme shall be carried out prior to the commencement of the development.

4 Whenever practicable, opportunities should be taken for the enhancement and interpretation of archaeological remains left in situ. Developers shall record any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and possible impact, and to make this evidence (and any archive generated) publicly accessible.

Developments shall also be consistent with all other Local Plan Policies.

* Those submitting planning applications are strongly advised however to undertake a desk based archaeological assessment in advance of a planning application being lodged as, depending on the outcome of this assessment, further assessment in the form of a field evaluation may be required (as outlined in (1) above).

4 Recorded Heritage Assets

Listed buildings and conservation areas

4.1 There is a cluster of four Grade II listed buildings in the village of Flansham approximately 650m to the south of the Site and the Grade II listed Old Bilsham Farmhouse is located approximately 750m to the east with a Grade II listed chapel and the Grade II listed Bilsham Manor and Hobbs Farmhouse beyond. There is a further cluster of Grade II listed buildings, along with the Grade I listed parish church of St. Mary and the Grade I listed Barnham Court, within a conservation area in the village of Barnham approximately 850m to the north. In addition there are also several Grade II listed buildings and the Grade I listed parish church of St. Mary in two conservation areas in the village of Yapton approximately 1.5km to the north-east.

Other recorded heritage assets

4.2 No archaeological sites or artefact findspots are recorded within the Site on the West Sussex Historic Environment Record (HER). However, it should be emphasised that the HER is constantly being updated as new discoveries are made and must not be interpreted as a definitive list of all surviving archaeological remains. Indeed several significant archaeological sites are recorded to the east of the Site and these are summarised below.

4.3 A hoard of five middle Bronze Age palstaves was found after ploughing in a shallow pit in 1982 approximately 275m to the east of the Site (Figure 1, no. 1). A small excavation identified artefacts including bronze slag, a scatter of flint including roughouts, reworked flakes and wasters, and a sherd of coarse gritted pottery and these may be indicative of a Bronze Age occupation site. Part of another palstave was also found approximately 50m to the south-west of the hoard. A scatter of Roman pottery and coins, including one dating to 393-423AD, was also found in fieldwalking immediately to the north-east of the hoard where traces of a potential enclosure have been identified on aerial photographs (Aldsworth 1982, 196-8).

4.4 An archaeological evaluation was also carried out in this area in 2009 in advance of the construction of a reservoir. A large infilled 2.5m deep depression or pond which contained late 3rd or 4th century AD pottery and coins in the uppermost fills was found along with Bronze Age/ late Iron Age-Romano-British field systems and features which may be associated with a Romano-British farmstead (DAS 2009).

4.5 Directly to the east of the Site a small archaeological excavation in 1984 identified four pits which contained pottery dating to the late Bronze Age (Figure 1, no. 2). The area around the excavation was also fieldwalked and this produced a considerable quantity of burnt flint along with some worked flint and a Roman coin (Rudling, 1987). A possible burnt mound consisting of fire-cracked flint has also been identified approximately 300m to the east (Figure 1, no. 3). A further programme of archaeological fieldwalking approximately 500m to the east of the Site produced a large assemblage of prehistoric worked flint including 276 scrapers, 113 piercers/awls, 11 knives, 33 multi-purpose tools, 3 rods, 32 notched pieces, a hammerstone and a microlith (Figure 1, no. 4).

4.6 The potential presence of a Romano-British occupation site may be indicated by a scatter of pottery, several coins and lead loomweights found approximately 400m to the south (Figure 1, no. 5). A Roman coin and a late Iron Age or Roman strap or belt buckle have also been found approximately 425m to the east (Figure 1, no. 6).

Summary

4.7 Archaeological fieldwork directly to the east of the Site has identified the presence of a Bronze Age hoard, a possible Bronze Age occupation/activity site, large quantities of prehistoric artefacts and two possible Romano-British settlement/activity sites. It can therefore be inferred that the Site may also contain significant archaeological remains in the form of occupation/activity sites along with artefactual evidence. Should such archaeological remains exist within the Site their extent, nature and full significance are presently unknown.

5 Historic Mapping, Aerial Photography & Site Visit

Historic mapping

5.1 The earliest consulted map of the Site was the Ordnance Survey First Series map of 1813 (not illustrated), which shows the presence of the existing trackway within the Site leading off Drove Lane and accessing the barn which survives today as Hams. Old Bilsham Farm to the east is described as *Bilsom* and the Lidsey Rife is referred to as *Flansham Brooks*.

5.2 The earliest consulted detailed map of the Site was the Yapton tithe map of 1839 (Figure 2). This shows that the Site was under a complex of fields and field strips which were probably defined by field ditches which were a consequence of the post medieval and earlier drainage of the coastal plain, although the fieldnames in the accompanying tithe apportionment give no indication of any archaeological associations. The strips are shown to the south of a watercourse within what is now field F4, while those to the north of this watercourse tend to be larger and regular.

5.3 Most of the internal field boundaries/ditches had been removed by the time of the Ordnance Survey map of 1876 (Figure 3) where the Site is shown divided into four land parcels separated by drainage ditches and the trackway leading to and from Hams. Two small stretches of field boundaries had been added in the north-western and south eastern corners of the Site by the Ordnance Survey map of 1898 (Figure 4) and this layout then remained unchanged on later Ordnance Survey maps dating up to 1947 (not illustrated).

Aerial photography

5.4 Aerial photographs dating to between 1942 and 1999 in collections held by the NMR were also accessed. A photograph taken in 1946 (Figure 5) show the former field ditches in the southern part of the Site which were marked on the 1839 tithe map. These ditches still appear on photographs dating up to 1963. The remaining boundaries appear to have all been hedged.

Site Visit

5.5 Fields F1 and F2 were under arable cultivation at the time of the Site walkover. Fields F3 and F4 were under grassland. No earthworks suggestive of buried archaeological features were observed. Selected Site photographs are shown in Figures 6-7.

Summary

5.6 Study of historic mapping has shown that by 1838 the south-western part of the Site was mostly divided into small linear land parcels by drainage ditches, probably a reflection of the post medieval or earlier drainage of this part of the coastal plain. The remainder of the Site was divided into larger land parcels, although these had largely disappeared by 1876.

6 Proposed Works and Potential Archaeological Impacts

Proposed groundworks

6.1 The mounting system for the arrays will consist of one or two posts piled into the ground to a depth of between 1.5 - 2m every 5m along the length of each array.

6.2 Cables will take the electricity from the arrays along the mounting system and above ground level. At the end of the arrays the cables will then be placed in trenches approximately 1.1m deep terminating at central inverter buildings.

6.3 The primary substation foundations will measure approximately 10m x 10m with a depth of approximately 2.5m. The foundations for the central inverters will be approximately 7m x 4m with a depth of approximately 1.5m. A security fence around the Site will also be required.

Recommendation

6.4 The proposed groundworks, notably the trenches required for the underground cables, have the potential to expose archaeology of later prehistoric and Romano-British date. Although this should not be viewed as an over-riding constraint to development it is recommended that consultation be carried out with the Environment and Heritage Team of West Sussex County Council as archaeological mitigation may be required, such as the imposition of a planning condition requiring the archaeological monitoring of all groundworks as they are carried out.

7 References

- Aldsworth FG 1982 A Bronze Age hoard and settlement at Yapton. In Sussex Archaeological Collections, Volume 121, 196-8.
- DAS 2009 Interim results of an archaeological evaluation at Bilsham Farm Reservoir. Development Archaeology Services Ltd.
- HER West Sussex Historic Environment Record.
- Rudling D 1987 The excavation of a late Bronze Age site at Yapton, West Sussex, 1984. In Sussex Archaeological Collections, Volume 125, 51-67.

Appendix 1: The Known Relevant Heritage Resource within 1km (supplied by the West Sussex HER)

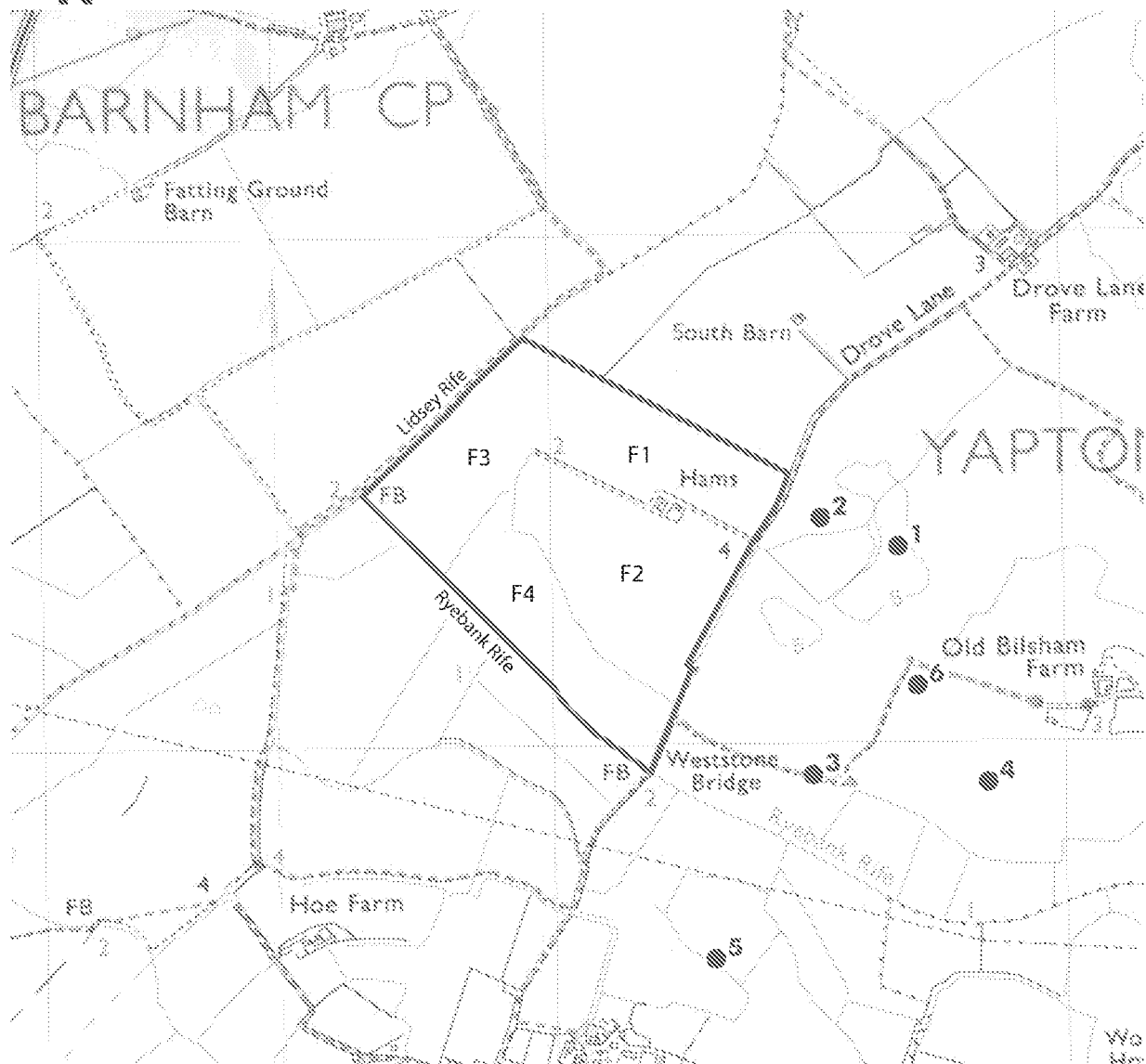
Figure 1 no.	Date	HER no.	Description
1	Bronze Age	MWS2417 MWS2418	A hoard of five middle Bronze Age palstaves found after ploughing in 1982. Three of the axes were almost certainly from the same mould. Excavation revealed that the hoard had originally been placed in a small 'pit' about 20cm in diameter and surviving to a depth of a little over 10cm in the underlying clayey brickearth. Fragments of bronze and bronze mould were also found in the pit. A scatter of flint including roughouts, reworked flakes and wasters and a sherd of coarse gritted pottery found around the excavation area probably indicate Bronze Age occupation. Part of another palstave was also found approximately 50m south-west of the hoard in 1983. Bronze slag was also found in the vicinity of the hoard. In addition a scatter of Roman pottery and coins, including one of Honorius dating to 393-423AD, was found immediately to the north-east of the hoard. Traces of an enclosure are visible on aerial photographs here.
2	Bronze Age/Iron Age (REPORT IN NMR)	MWS2421 MWS8492	Fieldwalking produced, among other finds, a considerable quantity of burnt and worked flint. The excavation of a concentration of burnt flint, charcoal and prehistoric pottery here revealed four pits which are dated by associated pottery to the late Bronze Age. An Iron Age occupation site was also found here in 1984. Finds included pottery, burnt daub, firecracked flints, burnt soil with charcoal and a few flint flakes, some retouched as crude scrapers.
3	Bronze Age	MWS6958	A dense circular spread measuring about 15cm in diameter of fire-fractured flint identified during fieldwork. A small test pit identified a compact layer of fire-cracked flint at a depth of 75cm. This feature is believed to represent a "burnt mound".
4	Prehistoric	MWS6959	Fieldwalking produced 276 scrapers, 113 piercers/awls, 11 knives, 33 multi-purpose tools, 3 rods, 32 notched pieces, a hammerstone and a microlith.
5	Romano-British	MWS2419	A Roman occupation site may be indicated by a scatter of coarse and colour-coated wares, coins and lead loomweights.
6	Romano-British	MWS7676	Findspot of a Roman coin and a late Iron Age /Roman strap or belt buckle.

Appendix 2: Consulted historic maps (from the West Sussex Record Office)

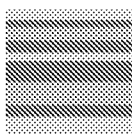
1813	First Series Ordnance Survey, sheet 9
1839	Yapton tithe map
1876	Ordnance Survey
1898	Ordnance Survey
1912	Ordnance Survey
1939	Ordnance Survey
1947	Ordnance Survey

Appendix 3: Consulted aerial photographs (from the National Monuments Record)

3.3.1942	RAF/HLA/411
3.8.1945	RAF/106G/UK/598
20.4.1946	RAF/3G/TUD/UK/162
21.9.1946	RAF/CPE/UK/1751
22.1.1947	RAF/CPE/UK/1947
1.3.1950	RAF/541/446
14.5.1950	RAF/541/529
21.3.1951	RAF/58/605
11.4.1951	RAF/540/456
17.4.1951	RAF/540/458
18.4.1951	RAF/540/460
12.5.1951	RAF/58/678
6.6.1951	RAF/540/526
14.5.1959	RAF/58/2860
4.11.1960	RAF/543/1105
5.11.1960	RAF/543/1107
27.2.1963	MAL/63569
12.3.1965	MAL/65008
15.5.1973	OS/73179
30.12.1978	MAL/78031
7.5.1981	MAL/81012
6.3.1989	OS/89026
16.6.1999	OS/99576



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Archaeology & Planning Solutions Ltd
10 Miles, 21 Cleveville Lane, Cleveville, SO7 1PQ
01263 441710 01263 662244
info@archaeologyandplanning.co.uk
www.archaeologyandplanning.co.uk



Site boundary



HER entries

DATE:

**Land at Bilsham Farm, Yapton,
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REF:

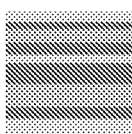
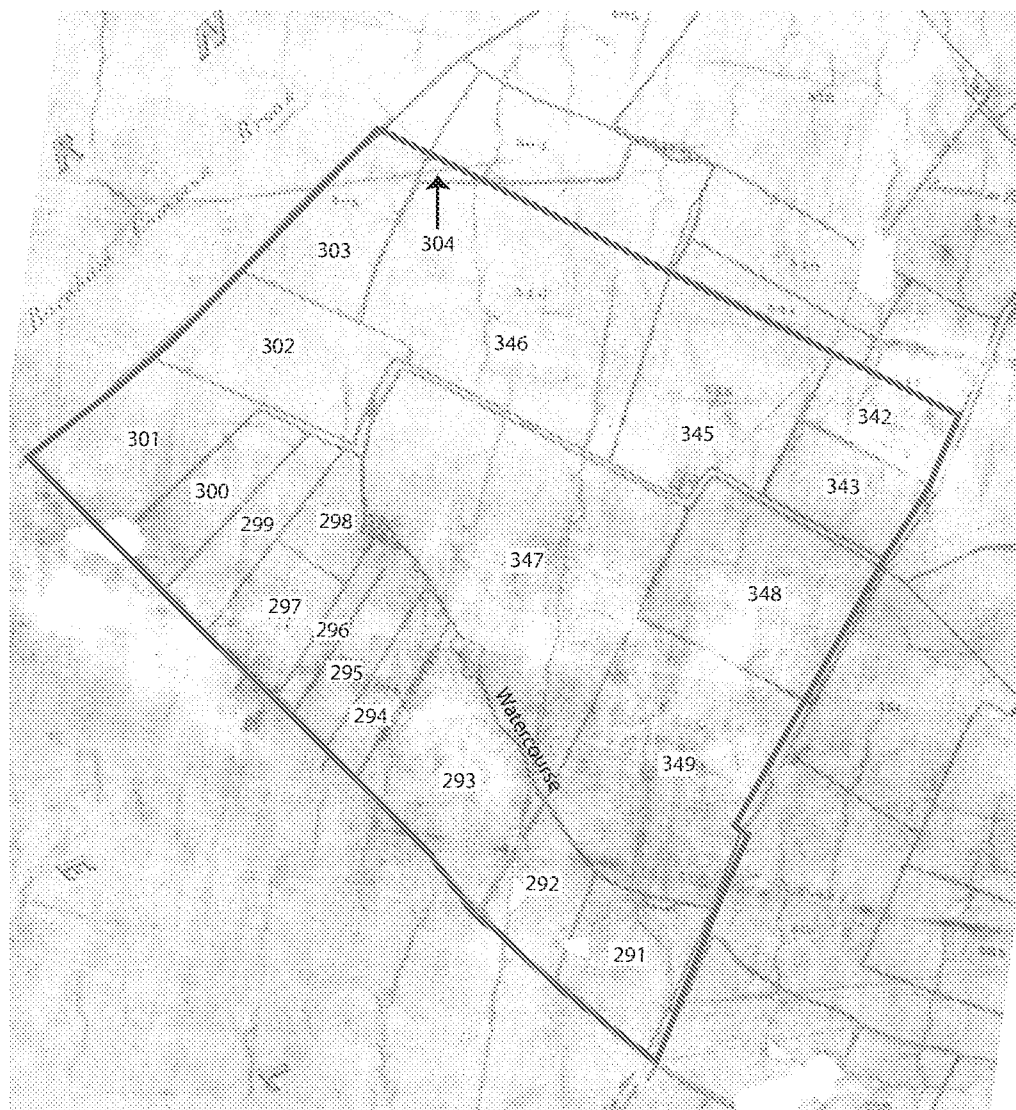
**Figure 1: Recorded heritage
assets (from the West Sussex HER)**

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Archaeology & Planning Solutions Ltd
10 Mews, 21 Cleveville Lane, Chichester, PO1 1PQ
T: 01243 641713 F: 01243 642244
e: info@archaeologyandplanning.co.uk
w: www.archaeologyandplanning.co.uk



Site boundary

DATE:

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REF:

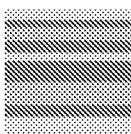
**Figure 2: Extract from the Yapton
tithe map of 1839**

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Archaeology & Planning Solutions Ltd
10 West, 21 Cleveville Lane, Cleveville, SO7 1PQ
t 01263 44710 01263 65244
e 01263 44710 01263 65244
www.archaeologyandplanning.co.uk



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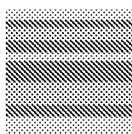
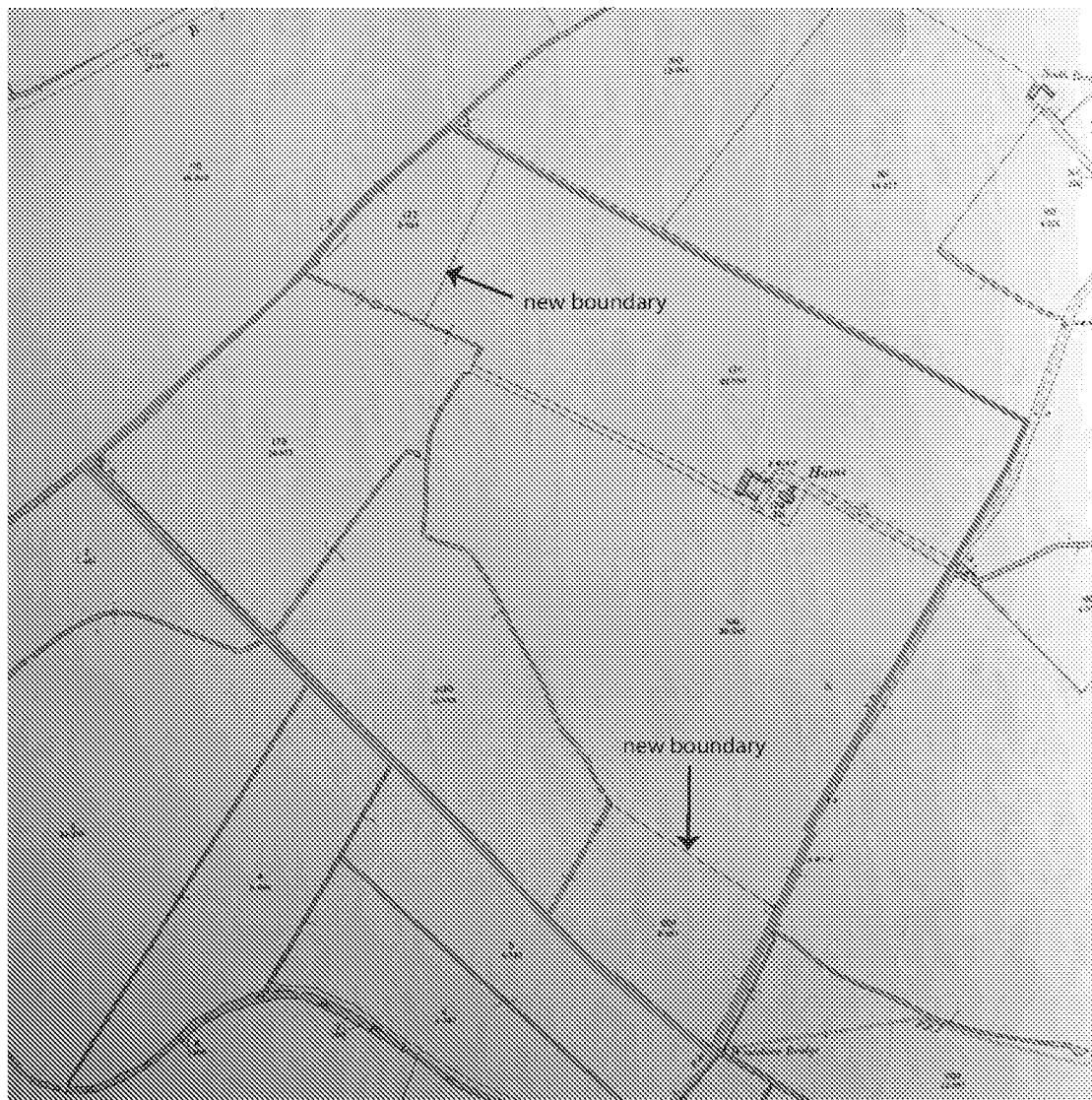
**Figure 3: Extract from an
Ordnance Survey Map of 1876**

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Archaeology & Planning Solutions Ltd
16 New, 21 Cleveville Lane, Chichester, PO1 1PQ
T: 01243 447100 F: 01243 652244
e: 01243 618500 a: info@archaeologyandplanning.co.uk
w: www.archaeologyandplanning.co.uk



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**Figure 4: Extract from an
Ordnance Survey Map of 1898**

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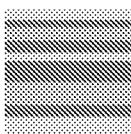
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Reproduced from an aerial photograph held by the National Monuments Record, English Heritage
RAF/CPE/UK/1751. Library no. 481. Frame no. 319. Taken 21st September 1946.



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Archaeology & Planning Solutions Ltd
16 New, 21 Chestnut Lane, Chichester, PO1 1PS
t 01243 447100 f 01243 652444
e 01243 618500 e info@archaeologyandplanning.co.uk
w www.archaeologyandplanning.co.uk



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**Figure 5: Extract from an aerial
photograph of 1946**

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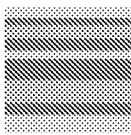
Plate 1: View looking north from trackway across field F1



Plate 2: View looking west from Drove Lane across field F2



Plate 3: View looking west from Hams barn across field F2



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Archaeology & Planning Solutions Ltd
16 New, 21 Chestnut Lane, Chichester, SO2 1PQ
t 01243 441713 f 01243 632244
e 01243 618533 e info@archaeologyandplanning.co.uk
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Figure 6: Site photographs

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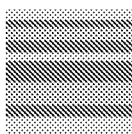
Plate 4: View looking north-west from Drove Lane along the trackway leading to Hams barn



Plate 5: View of Hams barn



Plate 6: View looking south-east from the Lidsey Rife across field F3 towards Hams barn



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Archaeology & Planning Solutions Ltd
16 West, 21 Cleveville Lane, Cleveville, SO2 1PQ
t 01263 447133 f 01263 632444
e 01263 447133 e info@archaeologyandplanning.co.uk
www.archaeologyandplanning.co.uk

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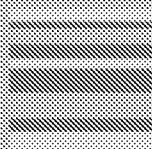
Figure 7: Site photographs

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