

Site A – The Existing Bognor Regis Golf Course
Historic Environment Desk-Based Assessment
November 2021

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Report

Historic Environment Desk-Based Assessment

Site

Site A – The Existing Bognor Regis Golf Course

Clients

Hallam Land Management Ltd (SE)

Date

November 2021

Planning Authority

Arun District Council

Site Centred At

SU 95077 01293

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Contents

Executive Summary

- 1.0 Introduction
- 2.0 Aims, Objectives & Methodology
- 3.0 Statutory and Planning Policy Framework
- 3.0 Archaeological & Historic Baseline
- 4.0 Proposed Development and Potential Impact on Heritage Assets
- 5.0 Summary and Conclusions

Sources Consulted

Appendix A – Geoarchaeological and Paleoenvironmental Desk-based Assessment

List of Illustrations

- Figure 1: Site Location Map
- Figure 2: HER Data Plot – Monuments data
- Figure 3: HER Data Plot – Event data
- Figure 4: NHLE – Designated Assets
- Figure 5: 1610 Speed Map of Sussex
- Figure 6: 1778-83 Yeakell and Gardner map of Sussex
- Figure 7: 1805 Ordnance Surveyors Drawing
- Figure 8: 1876 OS Map 1:10,560
- Figure 9: 1910 OS Map 1:10,560
- Figure 10: 1938-1940 OS Map 1:10,560
- Figure 11: 1957-1961 OS Map 1:10,560
- Figure 12: 1975-1980 OS Map 1:10,000
- Figure 13: 1989-1993 OS Map 1:10,000
- Figure 14: 2010 OS Map 1:10,000
- Figure 15: 2020 OS Map 1:10,000
- Figure 16: Google Earth Image
- Figure 17: Scheme proposals

Timescales Used in This Report

Prehistoric

Palaeolithic	450,000 -12,000 BC
Mesolithic	12,000 - 4,000 BC
Neolithic	4,000 - 2,200 BC
Bronze Age	2,200 - 700 BC
Iron Age	700 - AD 43

Historic

Roman	43 – 410 AD
Saxon/Early Medieval	410 – 1066 AD
Medieval	1066 – 1485 AD
Post Medieval	1486 – 1901 AD
Modern	1901 - Present Day

Executive Summary

This historic environment desk-based assessment considers land at Bognor Regis Golf Club, West Sussex, which is proposed for a residential development (Fig. 1).

A geoarchaeological deposit model and paleoenvironmental assessment has been produced (QUEST 2021; Appendix A). The eastern part of the study site is underlain by Pagham Raised Beach of probable Ipswichian age overlain by 'brickearth' of Devensian age. These deposits are considered to have low potential for Palaeolithic artefacts. There is, however, potential for paleoenvironmental evidence within the underlying sequence.

A review of the available evidence has confirmed that the study site has a moderate potential for Prehistoric and Roman archaeological finds or features based in proximity to known sites and location of the study site within an Archaeological Notification Area. Excavations to the east, north and west have all revealed evidence attesting to transient activity in the Mesolithic and Early Neolithic periods and land management practices dating from the mid-Bronze Age onwards; alongside funerary activity and structures. All point to a heavily exploited environment next to the former estuary or embayment of the Lidsey and Aldingbourne Rifes.

There is a low potential for *in-situ* remains of all other periods, although there may be relics of the Post-Medieval landscape, or material associated with the development of the site as a golf club in the early 20th century.

Current proposals involve the redevelopment of the site for residential housing. Archaeology is not considered to present a design constraint on development of the site, although should any archaeological remains be present, they would be impacted in areas where ground reduction is required.

Based on available evidence the proposed development is considered likely to result in a medium adverse impact to potential non-designated archaeological remains of local to regional significance. This would result in a minor to moderate effect. It is anticipated that the implementation of a staged programme of archaeological works would secure the archaeological interest of the study site and ensure that effects to archaeology are minor, not significant. It is recommended that the scope of further works includes provision for geoarchaeological assessment.

As the study site is a working golf course and taking into consideration that there are no known archaeological remains within the study site it is anticipated that the programme of archaeological works can be secured as a condition of planning. This will be discussed with the archaeological advisor to Arun District Council.

There are no designated heritage assets or listed buildings that will be affected by the proposed development. In the event that development proposals require the demolition of the golf course club house, further detailed site survey is recommended to determine the significance of any historic fabric that may survive.

On this basis it is clear that the impact of the proposed development on the archaeological potential of the study site could be adequately mitigated, and the development made acceptable in terms of archaeological impacts. It therefore accords with the requirements in paragraph 203 of the NPPF and policies DM1, DM3 and DM6 of the Arun local plan 2011-2031 (2018). It also accords with NPPF paragraph 202 regarding designated assets.

1.0 Introduction

- 1.1 This historic environment desk-based assessment considers land at Bognor Regis Golf Club, West Sussex (Figure 1). It has been researched and prepared by Orion Heritage on behalf of Hallam Land Management Ltd (SE). The site (hereinafter referred to as the “study site”) is located at grid reference SU 95077 01293.
- 1.2 The assessment has been prepared for the purpose of providing initial advice to the commissioning client and to form a technical appendix to the Cultural Heritage ES Chapter. A geoarchaeological deposit model and paleoenvironmental assessment has been produced (QUEST 2021; Appendix A).
- 1.3 In accordance with the Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists 2017), the assessment draws together available information on designated and non-designated heritage assets, topographic and land-use information so as to establish the potential for non-designated archaeological assets within the study site. The assessment includes the results of a site survey, an examination of published and unpublished records, and charts historic land-use through a map regression exercise. The assessment also considers the setting of heritage assets, and provides an assessment of how their settings contribute to their significance.
- 1.4 The assessment enables relevant parties to assess the significance of heritage/ archaeological assets on and close to the study site and considers the potential for hitherto undiscovered archaeological assets, thus enabling potential impacts on assets to be identified along with the need for design, civil engineering or archaeological solutions. It also provides an understanding of any constraints to development of the study site due to the presence of nearby heritage assets, and provides an assessment of the potential impact development would have on the significance of heritage assets and also provides design responses that would serve to reduce that impact in line with local and national policy.
- 1.5 The study area used in this assessment is a 1km radius from the boundary of the study site (Figures 2 and 3).
- 1.6 A site visit was undertaken on 28th September 2021 when the conditions were clear and bright with good visibility.

Location, Topography and Geology

- 1.7 Site A measures approximately 40ha. The Site currently comprises the existing Bognor Regis Golf Course and associated Club House and car parking. Vehicular and pedestrian access is provided from Golf Links Road. The golf course comprises fairways, fairway trees with occasional drainage ditches. A practice green is also located close to the Club House.
- 1.8 Site A is located to the north of Felpham and Bognor Regis, and is adjacent to the north-western edge of the built up area of Felpham.
- 1.9 It is bounded to the west by Lidsey Rife, beyond which is the LEC Airfield, the Railway Line and beyond which are areas of commercial development. To the north is the A259. To the east is the existing residential environs of Felpham and Downview Primary School. To the south are open fields extending to the B2259 and further afield Felpham.
- 1.10 The study site is relatively level, although with local variation with an average height above ordnance datum of 1m (aOD).
- 1.11 The solid geology of the study site comprises Chalk of the Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation, Culver

Chalk Formation and Portsdown Chalk Formation (undifferentiated). Superficial deposits consist of Raised Marine Deposits of Clay, Silt, Sand and Gravel in the west of the site and River Terrace Deposits of Sand, Silt and Clay in the east of the site (BGS Geology of Britain Viewer 2021).

- 1.12 Borehole data taken directly to the north of Downview Primary School, c.200m to the south of the site boundary, recorded a surface level of 3.6m (SU 90 SW 55). Chalk bedrock was encountered at 6.1m depth. Raised beach deposits of clayey sandy gravel were found at 2.6m. Brickearth deposits of silt with particles of peat were found at 1.6m (BGS Geology of Britain Viewer 2021).

2.0 Aims, Objectives & Methodology

2.1 The principal aim of this desk-based assessment is to identify potential significant environmental effects to the historic environment, which might result from the proposed development. The assessment will identify and evaluate the nature and likelihood of the impacts of the proposed development on archaeological and heritage assets against clearly defined criteria.

2.2 The objectives of the desk-based assessment are to:

- ✦ Gain an understanding of the archaeological potential of the study site;
- ✦ Identify any heritage constraints to the development of the study site;
- ✦ Assess the likely impact of the proposed development;
- ✦ Identify potential significant environment effects;
- ✦ Make recommendations for further work, if necessary.

2.3 The results of the archaeological desk-based assessment will inform an archaeological strategy for further on-site assessment and formulation of a mitigation strategy, as appropriate to the archaeological potential of the study site.

2.4 This desk-based assessment conforms to the requirements of current national and local planning policy (including *National Planning Policy Framework 2021*) and it has been designed in accordance with current best archaeological practice, and the appropriate national and local standards and guidelines, including:

- ✦ Management of Recording Projects in the Historic Environment: MORPHE (English Heritage 2006);
- ✦ Code of Conduct (Chartered Institute for Archaeologists [CIfA] [revised edition] 2014); and
- ✦ Standard and Guidance for Historic Environment Desk-Based Assessment (CIfA January 2017).

2.5 It is noted that the Chartered Institute for Archaeologists defines desk-based assessment as:

“a programme of study of the historic environment within a specified area or site on land, the inter-tidal zone or underwater that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets and, in England, the nature, extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate.”

2.6 The Chartered Institute for Archaeologists Standard for desk-based assessment states that:

“Desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of conduct and other relevant regulations of CIfA. In a development context desk-based assessment will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so) and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.”

Methodology

2.7 The archaeological desk-based assessment will include:

- ✧ Map regression based on Ordnance Survey maps and tithe/enclosure maps and apportionments held at West Sussex Record Office;
- ✧ Examination of material currently held in the West Sussex Historic Environment Record, including Historic Landscape Characterisation, for the proposed routes and for a 1km search radius;
- ✧ Consultation of the National Heritage List for England; and
- ✧ Site inspection.

2.8 Lidar provides topographic data and is particularly useful in the detection and identification of heritage assets that survive as earthworks. The Environment Agency (EA) regularly collects Lidar data for England and makes these data available for public use through their online portal. Digital Terrain Models (DTM) are routinely used for heritage purposes as this model shows the grounds surface with buildings and trees filtered out to create a 'bare earth' effect. The Environment Agency collected Lidar data that covers the study site at 2m resolution in 2006 and 2008, at 1m resolution in 2002, 2010, 2011, 2014, 2018 and 2019; at 25cm resolution in 2013 and 50cm resolution in 2017 and as part of the National LIDAR Programme at 1m resolution in 2019. The 1m 2019 NLP data covers the study area and was considered to provide the best resolution and most up-to-date coverage of the site. These data were processed using the Relief Visualisation Toolkit (RVT) version 1.2 and were reviewed using QGIS.

3.0 Planning Background and Development Plan Framework

Ancient Monuments & Archaeological Areas Act 1979

- 3.1 The Ancient Monuments & Archaeological Areas Act 1979 (as amended) protects the fabric of Scheduled Monuments but does not afford statutory protection to their settings.

Planning (Listed Building and Conservation Areas) Act 1990

- 3.2 The Planning (Listed Building and Conservation Areas) Act 1990 sets out broad policies and obligations relevant to the protection of listed buildings and conservation areas and their settings.

- 3.3 Section 66(1) states:

“In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses”.

- 3.4 Section 69 of the Act requires local authorities to define as conservation areas any ‘areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance’ and Section 72 gives local authorities a general duty to pay special attention ‘to the desirability of preserving or enhancing the character or appearance of that area’ in exercising their planning functions. These duties are taken to apply only within a Conservation Area. The Act does not make specific provision with regard to the setting of a Conservation Area that is provided by the policy framework outlined in section 2.2, below

National Planning Policy Framework (NPPF) & National Planning Practice Guidance (NPPG)

- 3.5 Government policy in relation to the historic environment is outlined in Section 16 of the National Planning Policy Framework (NPPF), entitled ‘Conserving and Enhancing the Historic Environment’. This provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 16 of the NPPF can be summarised as seeking the:

- ✦ Delivery of sustainable development;
- ✦ Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment;
- ✦ Conservation of England's heritage assets in a manner appropriate to their significance; and
- ✦ Recognition of the contribution that heritage assets make to our knowledge and understanding of the past.

- 3.6 Section 16 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term.

- 3.7 Paragraph 194 states that planning decisions should be based on the significance of the heritage asset, and that the level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to understand the potential impact of the proposal upon the significance of that asset.

- 3.8 Paragraph 198 states that decisions regarding the removal or alteration of historic statues, plaques, memorials or monuments should have regard to the importance

of their retention in situ and, where appropriate, explaining their historic and social context rather than removal.

- 3.9 Paragraph 203 requires the decision-maker to take into account the effect on the significance of non-designated heritage assets and to take a balanced judgement having regard to the scale of harm or loss and the significance of the asset(s) potentially affected.
- 3.10 *Heritage Assets* are defined in 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. It includes designated heritage assets and assets identified by the local planning authority (including local listing).
- 3.11 *Archaeological Interest* is defined as: a heritage asset which holds or potentially could hold evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
- 3.12 *Designated Heritage Assets* comprise: A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Parks and Garden, Registered Battlefield or Conservation Areas designated under the relevant legislation.
- 3.13 *Significance* is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.
- 3.14 *Setting* is defined as: The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. 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.
- 3.15 The NPPF is supported by the PPG (July 2019). In relation to the historic environment, paragraph 002 (002 Reference ID: 18a-002-20190723) states that:
- “Where changes are proposed, the National Planning Policy Framework sets out a clear framework for both plan-making and decision-making in respect of applications for planning permission and listed building consent to ensure that heritage assets are conserved, and where appropriate enhanced, in a manner that is consistent with their significance and thereby achieving sustainable development. Heritage assets are either designated heritage assets or non-designated heritage assets.”*
- 3.16 Paragraph 18a-013 (Paragraph: 013 Reference ID: 18a-013-20190723) outlines that although the extent and importance of setting is often expressed in visual terms, it can also be influenced by other factors such as noise, dust and vibration. Historic relationships between places can also be an important factor stressing ties between places that may have limited or no intervisibility with each other. This may be historic as well as aesthetic connections that contribute or enhance the significance of one or more of the heritage assets.
- 3.17 Paragraph 18a-013 concludes:
- “The contribution that setting makes to the significance of the heritage asset does not depend on there being public rights or an ability to access or experience that setting. This will vary over time and according to circumstance. When assessing any application for development which may affect the setting of a heritage asset, local planning authorities may need to consider the implications of cumulative*

change. They may also need to consider the fact that developments which materially detract from the asset's significance may also damage its economic viability now, or in the future, thereby threatening its on-going conservation."

- 3.18 The key test in NPPF paragraphs 199-202 is whether a proposed development will result in substantial harm or less than substantial harm to a designated asset. However, substantial harm is not defined in the NPPF. Paragraph 18a-017 (Paragraph: 018 Reference ID: 18a-018-20190723) of the PPG provides additional guidance on substantial harm. It states:

"What matters in assessing whether a proposal might cause harm is the impact on the significance of the heritage asset. As the National Planning Policy Framework makes clear, significance derives not only from a heritage asset's physical presence, but also from its setting."

- 3.19 Proposed development affecting a heritage asset may have no impact on its significance or may enhance its significance and therefore cause no harm to the heritage asset. Where potential harm to designated heritage assets is identified, it needs to be categorised as either less than substantial harm or substantial harm (which includes total loss) in order to identify which policies in the National Planning Policy Framework (paragraphs 199-202) apply.
- 3.20 Within each category of harm (which category applies should be explicitly identified), the extent of the harm may vary and should be clearly articulated.
- 3.21 Whether a proposal causes substantial harm will be a judgment for the decision-maker, having regard to the circumstances of the case and the policy in the National Planning Policy Framework. In general terms, substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset's significance rather than the scale of the development that is to be assessed. The harm may arise from works to the asset or from development within its setting.
- 3.22 While the impact of total destruction is obvious, partial destruction is likely to have a considerable impact but, depending on the circumstances, it may still be less than substantial harm or conceivably not harmful at all, for example, when removing later additions to historic buildings where those additions are inappropriate and harm the buildings' significance. Similarly, works that are moderate or minor in scale are likely to cause less than substantial harm or no harm at all. However, even minor works have the potential to cause substantial harm, depending on the nature of their impact on the asset and its setting."
- 3.23 Paragraph 202 of the NPPF outlines that where a proposed development results in less than substantial harm to the significance of a heritage asset, the harm arising should be weighed against the public benefits accruing from the proposed development. Paragraph 18a-020 of the PPG (Paragraph: 020 Reference ID: 18a-020-20190723) outlines what is meant by public benefits:
- "Public benefits may follow from many developments and could be anything that delivers economic, social or environmental objectives as described in the National Planning Policy Framework (paragraph 8). Public benefits should flow from the proposed development. They should be of a nature or scale to be of benefit to the public at large and not just be a private benefit. However, benefits do not always have to be visible or accessible to the public in order to be genuine public benefits, for example, works to a listed private dwelling which secure its future as a designated heritage asset could be a public benefit."*

Examples of heritage benefits may include:

- ✧ *sustaining or enhancing the significance of a heritage asset and the contribution of its setting;*
- ✧ *reducing or removing risks to a heritage asset; and*
- ✧ *securing the optimum viable use of a heritage asset in support of its long-term conservation.”*

3.24 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF, by current Development Plan Policy and by other material considerations.

Local Planning Policy

3.1 Local planning policy for the study site is currently provided by the adopted Arun Local Plan 2011-2031 (July 2018) and the Felpham Neighbourhood Plan (2013-2029). This contains the following policies relevant to this assessment:

Arun Local Plan 2011-2031 (July 2018)

Policy HER DM1 Listed Buildings

Proposals affecting statutory Listed Buildings will be required to:

- a. *Preserve or enhance the historic character, qualities and special interest of the buildings;*
- b. *Be necessary and not detrimental to the architectural and historical integrity and detailing of a Listed Building's exterior;*
- c. *Protect the architectural and historical integrity and detailing of a Listed Building's interior;*
- d. *Protect the special interest of buildings of architectural or historic interest; and*
- e. *Protect, and where possible enhance the setting of the building.*

Total or substantial demolition of a Listed Building will only be permitted in wholly exceptional circumstances, and where it meets the following specific criteria:

- f. *Clear and convincing evidence has been provided that viable alternative uses cannot be found, through, for example the offer of the unrestricted freehold of the property on the market at a realistic price reflecting its condition and that preservation, in some form of charitable or community ownership, is not possible;*
- g. *The redevelopment would produce substantial benefits for the community which would decisively outweigh the resulting loss from demolition or major alteration; and*
- h. *The physical condition of the building has deteriorated, through no fault of the owner / applicant for which evidence can be submitted, to a point that the cost of retaining the building outweighs its importance and the value derived from its retention. A comprehensive structural report will be required to support this.*

The Local Planning Authority will support proposals for alternative uses for Listed Buildings which retain their structure and preserve character and setting where the change will provide for the long term conservation of the structure and fabric of the building.

The Local Planning Authority will only support alterations to Listed Buildings in order to mitigate climate change where such proposals respect the significance of the Listed Building and do not have an adverse impact on its appearance, character or historic fabric.

The Local Planning Authority will only approve a proposal for enabling development where there is no other alternative option available, the benefits of such as scheme outweigh any dis-benefits that arise and mechanisms are in place to ensure the conservation of the heritage asset. In determining any application the Local Planning Authority will take into account whether:

- ✧ it will materially harm the significance of the heritage asset or its setting;*
- ✧ it will avoid detrimental fragmentation of management of the heritage asset;*
- ✧ it will secure the long term future of the heritage asset and, where applicable, its continued use for a purpose sympathetic to its conservation;*
- ✧ it is necessary to resolve problems arising from the inherent needs of the heritage asset, rather than the circumstances of the present owner, or the purchase price paid;*
- ✧ there is a source of funding that might support the heritage asset without the need for enabling development; and*
- ✧ the level of development is the minimum necessary to secure the future conservation of the heritage asset and of a design and type that minimises harm to other public interests.*

Policy HER DM3 Conservation Areas

In order to preserve or enhance the character or appearance of the Conservation Area, planning permission or relevant consent will normally be granted for proposals within or affecting the setting of a Conservation Area, provided that:

- a. New buildings and structures acknowledge the character of their special environment in their layout, form, scale, detailing, use of materials, enclosure and the spaces created between buildings;*
- b. Alterations or additions to existing buildings are sensitively designed, constructed of appropriate materials and are sympathetic in scale, form and detailing and retain or emphasise the features and qualities of the existing buildings, townscape or streetscape in the area;*
- c. Traditional features such as shop fronts, walls, railings, paved surfaces and street furniture are retained and restored;*
- d. Unsympathetic features are removed and missing features are restored or reinstated;*
- e. It retains historically significant boundaries, important open spaces and other elements of the area's established pattern of development, character and historic value, including gardens, roadside banks and verges;*
- f. It does not harm important views into, out of or within the Conservation Area.*

Within Conservation Areas, permission for development involving demolition or substantial demolition will only be granted, subject to conditions, if it can be demonstrated that:

- g. The structure to be demolished makes no material contribution to the special character or appearance of the area; or,*
- h. It can be demonstrated that the structure is wholly beyond repair or incapable of beneficial use; or*
- i. It can be demonstrated that the removal of the structure and its subsequent replacement would lead to the enhancement of the area; and*
- j. Permission has been granted for the redevelopment of the site.*

Policy HER DM6 Sites of Archaeological Interest

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:

- a. *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
- b. *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.*
- c. *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.*
- d. *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.*
- e. *Where development is to be phased the presumption would normally be that the whole site should be recorded as one project in order to maintain the continuity of the archaeological record.*
- f. *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 a. above).*

Felpham Neighbourhood Plan (2013-2029)

Policy ESD7: Felpham conservation area

Proposals within or affecting the setting of the Conservation Area will be dealt with in accordance with ADC emerging Local Plan February 2014 policy number HER DM3.

Policy ESD8: Building design

The design of new buildings must re-ect the design principles of their time so that the richness of varied character would continue and would be extended into the future. However, the quality of design must ensure that new buildings contribute positively to the historic character of the area. Listed Buildings and their setting, and Conservation Areas and their settings, will be conserved or enhanced to reinforce the quality and character of Felpham.

Guidance

Historic Environment Good Practice Advice In Planning Note 2: Managing Significance in Decision-Taking in the Historic Environment (Historic England 2015)

- 3.2 The purpose of this document is to provide information to assist local authorities, planning and other consultants, owners, applicants and other interested parties in implementing historic environment policy in the NPPF and NPPG. It outlines a six-stage process to the assembly and analysis of relevant information relating to heritage assets potentially affected by a proposed development:
- ✧ Understand the significance of the affected assets;
 - ✧ Understand the impact of the proposal on that significance;
 - ✧ Avoid, minimise and mitigate impact in a way that meets the objectives of the NPPF;
 - ✧ Look for opportunities to better reveal or enhance significance;
 - ✧ Justify any harmful impacts in terms of the sustainable development objective of conserving significance and the need for change; and
 - ✧ Offset negative impacts on aspects of significance by enhancing others through recording, disseminating and archiving archaeological and historical interest of the important elements of the heritage assets affected.

Historic Environment Good Practice Advice In Planning Note 3: The Setting of Heritage Assets (Historic England 2017)

- 3.3 Historic England's Historic Environment Good Practice Advice in Planning Note 3 provides guidance on the management of change within the setting of heritage assets.
- 3.4 The document restates the definition of setting as outlined in Annex 2 of the NPPF. Setting is also described as being a separate term to curtilage, character and context; while it is largely a visual term, setting, and thus the way in which an asset is experienced, can also be affected by noise, vibration, odour and other factors. The document makes it clear that setting is not a heritage asset, nor is it a heritage

designation, though land within a setting may itself be designated. Its importance lies in what the setting contributes to the significance of a heritage asset.

- 3.5 The Good Practice Advice Note sets out a five-staged process for assessing the implications of proposed developments on setting:
1. Identification of heritage assets which are likely to be affected by proposals;
 2. Assessment of whether and what contribution the setting makes to the significance of a heritage asset;
 3. Assessing the effects of proposed development on the significance of a heritage asset;
 4. Maximising enhancement and reduction of harm on the setting of heritage assets; and
 5. Making and documenting the decision and monitoring outcomes
- 3.6 The guidance reiterates the NPPF in stating that where developments affecting the setting of heritage assets results in a level of harm to significance, this harm, whether substantial or less than substantial, should be weighed against the public benefits of the scheme.

4.0 Archaeological and Historic Baseline

- 4.1 The heritage assets under consideration have been identified by means of a review of the following resources:
- ✧ West Sussex Historic Environment Record (HER) Data;
 - ✧ The National Heritage List for England (NHLE) held by Historic England;
 - ✧ Historic England Archive;
 - ✧ Pastscape;
 - ✧ Local studies and record office research; and
 - ✧ Review of historic mapping
- 4.2 This resource has been used to provide an understanding of the heritage assets which may be affected by the proposed development. This chapter will describe the heritage assets which may be affected and assess their significance.
- 4.3 The location of heritage assets mentioned in the text are shown on Figs. 2, 3 & 4.
- 4.4 Felpham Conservation Area lies approximately 750m to the south of the study site.
- 4.5 Bognor Regis, c.800m to the south-west of the study site, has been included in the Sussex Extensive Urban Survey (DWS8102) a study of 41 towns undertaken on behalf of East Sussex Council, West Sussex Council and Brighton and Hove City Council and funded by English Heritage.

Historic Landscape Characterisation

- 4.6 The study site is covered by an Historic Landscape Characteristic defined as 'Recreation' of the type 'Golf Club' (HWS25597, HWS25676). Golf courses are modern phenomenon in the rural landscape, though some examples date from the latter part of the 19th century. They often result from the conversion of heath and farmland in the modern period. Many of the older golf courses in the county still retain features of the previous landuse, although examples originating in the late 20th century exhibit very little of this, the landscape character having been completely re-worked and engineered. This golf course on the edge of Flansham is dated to between 1914 and 1945 (Sussex Historic Landscape Characterisation Volume II – Interpretation. p.44, 46).

Archaeological Notification Areas

- 4.7 The south of the study site is covered by an Archaeological Notification Area, where there is a likelihood of archaeological work being necessary based on known activity (DWS8461). This denotes the high possibility in this area for Prehistoric remains associated with Prehistoric flint working and possible occupation; as revealed during the excavation of the Bognor Regis to Littlehampton Pipelines and findspots in the vicinity, a Late Bronze Age founders hoard and Roman coins.
- 4.8 Another ANA extends over a large area, at least 300m away to the west of the study site at North Bersted (DWS8448). This is an area of multi-period finds and features, with indications of Mesolithic and Prehistoric flint working and possible occupation, Neolithic pottery, and a Beaker Settlement dating to the early Bronze Age. Other evidence revealed in this area includes a Middle Bronze Age cremation urn with associated burnt mounds of the same date and a Bronze Age field system along with occupation evidence and cremations. Further settlement sites dating to the later Bronze Age, Iron Age and Roman periods, including an Iron Age Warrior grave and a Roman field system all point to further archaeological remains in the vicinity and a landscape heavily exploited over the Prehistoric and Roman periods.

Previous archaeological investigations

- 4.9 There are a total of 16 recorded archaeological events within the study area which includes 4 desk-based assessments and 1 historic building survey. There are two intrusive evaluations of relevance to the archaeological potential of the study site;
- ✧ (EWS1559). Archaeological evaluation of 245 trenches, undertaken directly to the east and north of the study site on land between Felpham and Flansham, revealed evidence of land management dating from the mid-Bronze Age to the present day - with increased activity on areas of higher ground. The evaluation was able to identify three zones across the site of moderate to high archaeological potential dating to the Bronze Age and Romano-British periods.
 - ✧ (EWS1147/EWS1531). Evaluations to the west of the railway line at Oldlands Farm in 2008 revealed two cremations dating to the Middle Bronze Age and Iron Age alongside field systems of the same period (EWS1147). Seventeen trenches were then excavated in 2014 (EWS1531) and fourteen trenches in 2015-2017 (EWS1832). Overall the evaluations identified environmental remains and artefacts attesting to transient activity in the Mesolithic and Early Neolithic periods. Parts of a Late Bronze Age field system with three Roman ditches were excavated in the south of the area. A significant L-shaped and a later enclosure were also detected; located near to a waterhole which provided the first example of a log-ladder found in Sussex and a rare and important pollen sequence. A Medieval field system was also recorded. Borehole survey carried out along the Lidsey Rife indicated the nature of the pre-drained landscape. It demonstrated that during the Neolithic and Bronze Age the area was once a large, open estuary or embayment fringed by tidal mudflats flats and saltmarsh.
- 4.10 These investigations, and others will be discussed as appropriate in the sections below.

Prehistoric

- 4.11 There are no historic environment records of Prehistoric date within the study site.
- 4.12 As outlined in the geoarchaeological assessment of the Site by QUEST, Appendix A, the Site is located on a complex of raised beaches that form the West Sussex Coastal Plain. Most of the sand and gravel resting on bedrock beneath the lower coastal plain, including deposits beneath the Golf Course site can be regarded as remnants of the Pagham Formation (Pagham Raised Beach), the lowest of the Sussex raised beaches. Judging by the Optically Stimulated Luminescence (OSL) dates reported by Bates et al (2007), this beach is of Last Interglacial (Ipswichian) age. Evidence from other sites on the lower coastal plain indicate a low probability that Palaeolithic artefacts and/or palaeoenvironmental remains may be present in any of these deposits. However, the underlying gravels have the potential to contain geoarchaeological remains, which have the potential to increase the knowledge and understanding of the early environmental history of the study site.
- 4.13 The silty and clayey deposits ('brickearth') overlying the raised beach sediments are therefore likely to be of Devensian age. The geoarchaeological assessment concluded that it is likely that the western half of the golf course site is underlain by the estuarine alluvium of the Lidsey Rife. If present, such alluvial deposits have the potential for peat layers and other organic units.
- 4.14 The potential alluvial and brickearth deposits lain in the Holocene within the site have the potential to build a detailed understanding of the former landscapes and environmental changes. The potential for Mesolithic, Neolithic or Bronze Age occupation evidence from these deposits cannot be entirely discounted at this stage. The southern part of the Site is covered by an Archaeological Notification Area due to the potential in this area for evidence of prehistoric flint working.

- 4.15 Archaeological evaluation of land between Felpham and Flansham, directly to the east and north of the study site, noted features of land management dating from the Middle Bronze Age onwards, alongside structural evidence in the form of post-holes (MWS12237). Zone 1 was seen to contain features predominantly of Bronze Age date that may be suggestive of settlement and associated field systems. Zone 2 revealed further ditches with one containing a number of Late Iron Age pottery sherds. Zone 3 may have been a further area of small-scale occupation, indicative of a potential Romano-British period farmstead.
- 4.16 Fourteen worked flints (12 flakes, a core and an end scraper) of likely Bronze Age date, were recovered during a watching brief on the Bognor Regis and Littlehampton transfer pipeline (segment 10) adjacent to the southern study site boundary (MWS6760). Segments 11 and 12 of the watching brief were conducted just to the east of the study site. These revealed a lithic working site of seventeen worked flints, eleven burnt flints and a Late Iron Age pottery sherd (MWS6761). The worked flints included two retouched flakes a scraper and a small core. Eight flints and six burnt flints were retrieved in segment 12 (MWS6762). Further flints were found at distance to the east in segments 13 -17 of the route (MWS6763-MWS6766).
- 4.17 Two areas of land were evaluated by Archaeology South East as part of the excavations at Oldland Fam, the nearest lying at least 300m to the west of the study site. Field boundary ditches, gullies and pits dating to the Late Bronze Age and Roman period were detected; as well as Bronze Age funerary activity, potential structures and trackways (MWS12157). The Neolithic to Bronze Age evidence was felt to be of particular significance. The location of the site close to an estuary or embayment associated with the Lindsey and Aldingbourne Rifes, with rich pastures and saltmarsh habitats, probably acted as a draw to people throughout prehistory. The report summarises as follows;
- “During the late Neolithic period the area seems to have been used, perhaps on a seasonal basis, for feasting and possibly the production and consumption of alcohol. Associated with this phase was Grooved Ware pottery, a ritualised pit, the earliest known burnt mound from south-east England and a pit cluster. The latter two classes of monument may have acted as beacons in the landscape for transient local groups” (Margetts 2019).*
- 4.18 To the west of this investigations noted further Bronze Age activity across the excavated area, with middle Iron Age activity concentrated in the centre and Roman activity confined to the south west (MWS9845). The majority of the features here were ditches but a small number of post-holes were revealed as well as a Bronze Age and an Iron Age cremation. Just to the north a series of linears were probably associated with stock control (MWS14430).
- 4.19 Only sparsely distributed features were found at excavations to the west of Shripney Road at Saltbox, suggesting this area was more marginal land for considerable periods in the past and outside the foci of previous settlement (MWS15091).
- 4.20 A Late Bronze Age Founders Hoard was discovered in 1936 when making a new driveway for a house on Hoe Lane, Flansham (MWS2393). The hoard was dated to 1000-750BC and is now on loan to Littlehampton Museum. Its findspot location is given as c.420m to the north east of the study site (MWS2393).
- 4.21 A sub-rectangular pit produced four Iron Age pottery sherds during excavations at The Old Scrapyard, c.840m to the south west of the study site (MWS7428).
- 4.22 An Archaeological Notification Area covers the south of the study site and highlights the potential in this area for Prehistoric remains associated with

Prehistoric flint working activities. Excavations to the east, north and west have all revealed evidence attesting to transient activity in the Mesolithic and Early Neolithic periods and land management practices dating from the mid-Bronze Age onwards; alongside funerary activity and potential structures. The study site therefore has a high potential for Prehistoric finds or features, based on its proximity to known sites (not taking into consideration past impacts).

Roman

- 4.23 There are no historic environment records of Roman date within the study site and it lay away from known Roman routes through Chichester to the south coast (Rural Settlement of Roman Britain, ADS).
- 4.24 The Prehistoric occupation detected in excavations to the north and east of the study site was seen to continue into the Roman period where features of this date provided indication of small-scale occupation and farming and a probable circular enclosure (MWS12237).
- 4.25 Features representative of Roman field systems were also found at excavations at Oldlands Farm c.300m west of the study site, alongside a circular enclosure in use in the Roman period (MWS12157). Further fields and a curvilinear ditch, potentially indicative of occupation, were also found on land adjacent but further to the west (MWS9845).
- 4.26 Three Roman coins were found in a garden in Flansham c.700m to the east of the study site (MWS2395). These included two 3rd century radiates and a 4th century Constantinopolis.
- 4.27 A Saxon post-hole produced three fragments of thick unfrogged Roman tile at excavations at The Old Scrapyard, c.840m to the south-west of the study site (MWS7428).
- 4.28 A scatter of coarse and colour-coated wares, several late Bronze coins and lead loom weights indicate an area of Roman occupation c.970m to the north west of the study site (MWS2419).
- 4.29 Land management practices are known to have continued to the east, north and west of the study site into the Roman period, with evidence of settlement also detected. This indicates a moderate potential for Roman period archaeological finds or features to be present within the study site based on proximity to known activity.

Saxon and early Medieval

- 4.30 There are no historic environment records of Saxon or early medieval date within the study site.
- 4.31 The name Bognor is derived from the Old English personal female name 'Bucge' with the second element Ora meaning bank (Sussex EUS, Bognor).
- 4.32 The lower part of the Aldingbourne Rife was known as 'bynes fleot' in 680 and 953 and by the latter date it bounded the Anglo-Saxon estate of Felpham. This estate had been devised by King Alfred to Osferth, a relative and in 953 King Eadred seems to have granted it to his mother Eadgifu. From description of the bounds it was likely as large as the ancient parish (VCH Sussex).
- 4.33 Settlement is recorded at Bilsham and Middleton in Domesday. Both were in the ownership of Earl Roger of Shrewsbury in 1086 with a population of 14 and 16 households respectively. Felpham was a larger settlement at that date with a population of 73 households, making it among the 20% of the largest settlements recorded. It was land of Shaftesbury Abbey at that time and remained so until the dissolution (opendomesday.org).

- 4.34 Numerous pits and other features dating from the Middle Saxon to the end of the Medieval period were suggestive of occupation at this time at The Old Scrapyard, c.840m to the south-west of the study site (MWS6751).
- 4.35 The study site appears to have been part of the rural hinterland surrounding settlement in the Saxon and early medieval period, with the evidence suggesting nearest occupation was taking place at Felpham by the end of the period. There is therefore a low potential for Saxon and early Medieval remains to be present within the study site.

Medieval

- 4.36 Bognor was a minor beach-based landing place from at least the 16th century onwards but possibly also in the Medieval period. It had a chapel dedicated to St Bartholemew, described in the *Taxatio Ecclesiastica* of Pope Nicholas IV in 1291 as dependant on the church at Pagham (Bognor EUS).
- 4.37 The northern and western boundaries of the ancient parish of Felpham followed the Aldingbourne Rife and its tributaries. Felpham Bridge had been constructed by 1405 and the sea wall or bank on the archbishop of Canterbury's land to the west of the bridge is mentioned in 1436. The wall prevented incursions of the sea which are referenced many times in the 15th century.
- 4.38 In 1574 the manor of Felpham passed from the Crown to Robert Dudley, earl of Leicester, other than the manor house and demesne. It passed through various owners following much of the subdivision of the land by the earl and these leasehold grants became kernels of later farms (VCH)
- 4.39 A Medieval strip field system was excavated c.300m to the west of the study site during excavations at Oldlands Fam (MWS12157). Borehole sampling suggested that the formation of the Lidsey rife as a formal channel probably relates to Medieval land management practices.
- 4.40 An English Jetton of 15th century date was found c.100m to the south of the study site boundary (MWS5208).
- 4.41 A possible site of an Early English chapel has been inferred from stonework incorporated within Headhone House and quantities of glass and stone found in adjacent fields. The potential location is given as c.580m to the north of the study site (MWS3484).
- 4.42 The evidence points the rural nature of the landscape throughout the Medieval period with evidence for Medieval strip fields detected in excavations to the west at Oldlands Farm. There is therefore a low potential for features associated with *in-situ* occupation, although evidence of Medieval farming practices and finds may be present.

Post Medieval

- 4.43 There is one historic environment record of Post-Medieval date within the study site. This refers to Clap Barn, a historic outfarm or field barn lying at the southern boundary of the study site in the area of the present golf club house (MWS9815).
- 4.44 The Speed Map dated to 1610 indicates settlement at Flansham and Felpham (Fig.5). The Aldingbourne and Lidsey Rife are also shown, with occupation at Shripney between the tributaries.
- 4.45 A Post-Medieval rubbish dump was identified in Flansham during excavation of the Bognor Regis and Littlehampton pipeline segment 15 (MWS6765). Finds included a fragment of 14th/15th century peg tile and sherds of probable 16th century pottery and oyster shells.

- 4.46 Four groynes were put up in Felpham before 1721 but further erosion instigated the construction of further sea defences by the sewers commissioners in the early 19th century with embankments and groynes to the east put up by 1828 at the expense of landowners. Settlement before the 18th century seems to have been relatively nucleated and the road through Felpham had little importance before the 19th century (VCH Sussex).
- 4.47 Bonhams is a late 17th or early 18th century house located south of Hoe Lane in Flansham (MWS10090). It has been delisted by English Heritage due to extensive alterations and remodelling but it remains of local interest. The cottage to the south was historically the chauffeur accommodation for the house which was built in the 1930's (MWS10092).
- 4.48 On the 1778-83 Yeakell and Gardner map of Sussex a number of fields lie at the periphery of the site which is primarily a large unenclosed field adjacent to the river (Fig.6). Flansham is situated to the east with Hoe Lane and Stanover Lane both shown.
- 4.49 A Post-Medieval barn and flint wall was noted at The Old Scrapyard, c.840m to the south-west of the study site (MWS7428).
- 4.50 By the time of the Ordnance Surveyors Drawing of 1805 Barns indicate farmsteads in the area of Hoe Farm, Yapton, to the north of the site as well as in the vicinity of Clap Barn at the south of the site (Fig.7). No other structures are depicted within the red line site boundary.
- 4.51 The Felpham Enclosure map of 1826 shows the study site made up of a number of fields in the ownership of Thomas Cosens, George Amooore, W.H. Hussey and William Tichman and W.M Bridger (Fig.8). An east/west orientated track running from Flansham to the east bisects the site with a central path running from this to the south. Footpaths are also indicated within the site in the west.
- 4.52 Clap Barn is represented in the far south of the study site on the 1844 Felpham Tithe Map, by which time Flansham is represented by twelve dwellings loosely scattered around a junction of three lanes. The tithe map (Fig.9) indicates the study site as being in the following ownership;

Owner: William Allin

158 (pt: very south western tip) Penny Mead

Owner: Thomas Sanctuary

238 Little Brook

239 Red Barn

240 Wish Field

254 East Brook

255 Middle East Brook

256 Bay Bridge Brook

240 Wish Field

288 [pt: northwestern part of site] Collins large Brook

Owner: Thomas Cosens

224 (pt: southeastern tip) Fifteen acres

225 Barn and Yard

226 Clap Brook

229 Middle Clap Brook

230 Farther Brook

Owner: Hussey & Titchman

232 West Brook

233 East Brook

235 West Brook

Owner: Reverend John Bishop Beed

234 Road

Owner: William Milton Bridger

236 Wish Field

Owner: Thomson's Charity

37 Wish Field

- 4.53 The early OS map of 1:10,560 scale of 1876 depicts the study site as made up of a number of rural fields bisected by a track from Flansham to the east. Clap Barn Farm is visible in the south east of the study site (Fig.10). The railway line to the west is in place by this time. A number of 19th century historic farmsteads sites are located in the vicinity;
- ✧ Brook Gate lay to the west of the railway line in the 19th century (MWS9533).
 - ✧ Oldlands Farm to the west of the railway is still extant (MWS12726).
 - ✧ An outfarm south east of Lindsey Lodge is also still extant and lies c.400m to the north of the study site (MWS13133).
 - ✧ Hope Farm lies c.300m to the north east of the study site and is still in place (MWS11542).
- 4.54 There are no significant changes to the study site on the map of 1910 (Fig.11).
- 4.55 Farms continued to abut the main street in Felpham until around 1917 when the growth of Bognor facilitated development in the parish. Already by 1930 one visitor noted that it had lost its village atmosphere and become like other parts of the town. Farm buildings near the church were demolished to make way for shops and a garage after 1920 and a brickworks was in operation at the junction of Hoe Lane and Stanover Lane in the 1930's (MWS4713).
- 4.56 Sports facilities were provided for residents and visitors from the early 20th century. A 9-hole golf club was first opened in Felpham in 1906 but was replaced by the 18 hole course in the north west of the parish in 1922. Here the existing trees, bushes and ditches were complemented by new planting and landscaping. The club had 600 playing members in 1978 (VCH).
- 4.57 The golf course is recorded on the 1938-1940 Ordnance Survey, with the Golf Club House occupying Clap Barn Farm (Fig.12). A small structure appears to be in place in the centre of the study site. Buildings have been constructed to the south of this, one of which is labelled as a Pumping Station. Clap Lane, North Road and Golf Links Road have all been laid out to the south-east of the site and the encroachment of Felpham is evident in this direction.
- 4.58 There is some development along Downview Road to the south of the study site by 1957-1961 (Fig.13). Felpham has been further developed by 1975 and the airfield is indicated on the western boundary of the site (Fig.14)
- 4.59 There are no changes to the study site on the maps of 1989 (Fig.15) and 2010 (Fig.16). The A259 has been constructed to the north by 2021 (Fig.17).

- 4.60 Google Earth provides readily available satellite imagery between 2001 and 2020. The central structure and the Golf Club House are in place throughout the period. There are no significant changes to the site which remains laid out as a golf course at this time.
- 4.61 LiDAR assessment of the study site revealed no anomalies of likely archaeological significance, although the former field boundaries evident on historic mapping were visible.
- 4.62 There is low potential for significant below-ground Post-Medieval archaeological remains within the study site based on proximity to known occupation sites. However, there is potential for post-medieval agricultural and land management in areas not truncated by the construction of the golf course.

Site Walkover

- 4.63 A site visit was undertaken on the 27th September 2021 to gain a greater understanding of existing land use and the potential for archaeological constraints within the study site. The conditions were clear and bright.
- 4.64 The golf course occupies a large, generally flat landscape with mature high trees around the perimeter and throughout the golf course. The site walkover confirmed localised truncation for the construction of bunkers and re-landscaping for the creation of features, however, generally the topography seemed in keeping with the surrounding landscape. The site walkover identified no evidence of extant or buried archaeological remains.



Plate 1: General view of the south-eastern area of Bognor Regis Golf Course (dir. north)



Plate 2: General view of the north central area Bognor Regis Golf Course (dir. south-east)



Plate 3: General view of western boundary of Bognor Regis Golf Course towards airfield (dir. north-east)



Plate 4: General view of western boundary of Bognor Regis Golf Course towards airfield (dir. south-west)

Past Impacts, Summary of Archaeological Potential and Assessment of Significance

- 4.65 Past impacts are likely to have resulted from historic ploughing and the construction of the golf course itself. It is currently unclear whether the construction of the golf course required general or localised re-landscaping of the study site.
- 4.66 An Archaeological Notification Area covers the south of the study site and highlights the potential in this area for Prehistoric remains associated with Prehistoric flint working. Excavations to the east, north and west have all revealed evidence attesting to transient activity in the Mesolithic and Early Neolithic periods and land management practices dating from the mid-Bronze Age onwards; alongside funerary activity and potential structures. All point to a heavily exploited environment next to the former estuary or embayment of the Lidsey and Aldingbourne Rifes. Taking into consideration the impact of the golf course is currently undefined, the study site is considered to have a moderate potential for Prehistoric and Roman archaeological finds or features. Such remains are considered likely to be fragmentary and of local to regional significance.
- 4.67 There is a low potential for *in-situ* remains of all other periods, although there may be relics of the Post-Medieval landscape or material associated with the development of the site as a golf club in the early 20th century. Such remains would be considered to be of negligible significance.

5.0 Designated / Built Heritage Assets

- 5.1 This assessment will consider the potential effects of development within the study site on the significance of built heritage and designated assets. Heritage assets and potential impacts will be assessed using best practice, including that set out in Historic England guidance on setting (Historic England 2017).
- 5.2 There are no strict parameters for the setting of study areas. This has been defined based on the results of the site visit, professional judgement and experience of potential significant direct and indirect effects likely to arise from the proposed development.
- 5.3 A radius of 1 km from the boundary of the Site has been used for assessing indirect effects on all non-designated and designated heritage assets.
- 5.4 The distribution of built heritage designated heritage assets in relation to the study site can be found in Figure 4. The area beyond this radius was also reviewed and no sensitive heritage assets were present in the wider area that merited further consideration in this assessment.
- 5.5 A site visit was undertaken on 27th September to assess the setting of nearby designated heritage assets. The conditions were sunny with good visibility. Additional desk-based assessment using Google Earth and maps was also utilised.

Designated assets not requiring assessment

- 5.6 Not all built heritage assets within the study area will require full assessment for impacts on an individual basis; where a heritage asset has been excluded, a clear justification will be provided, for example, if the asset is sufficiently far, and well screened from the study site. Also, not all assets will require the same level of assessment: the level of detail will be sufficient to inform the nature and degree of effect of development within the study area on the significance of the heritage asset in question.
- 5.7 The following designated assets excluded from further assessment due to a combination of topography, the distance from the site and the built-up nature within they are located. The assets not assessed in detail (although visited during the site visit) are Flansham Farmhouse, Grade II, NHLE 1237817; Flansham Manor North Manor, Grade II, NHLE 1222550; Oak Bay, Grade II, NHLE 1274488; Whyke Cottage including wall to road, Grade II, NHLE 1027784; Outerwyke Farmhouse, Grade II, NHLE 1191050; Richmond House and The Whyke House, Grade II, NHLE 1353797; Bentnick House including wall to road, Grade II, NHLE 1293532; The Manor House including garden wall to the east, Grade II, NHLE 1027752; No 17 including walls to road, Grade II, NHLE 1293467; Church Cottage, Grade II, NHLE 1353794; K6 Telephone kiosk, The Post Office, Grade II, NHLE 1221501; Churchyard wall of St Marys Church, Grade II, NHLE 1027781; Church of St Mary, Grade II*, NHLE 1293356; Church House, Grade II, NHLE 1293528; Manor Place, Grade II, NHLE 1191005; Lavenham Cottage, Grade II, NHLE 1353795; The George Inn, Grade II, NHLE 1353796; The Barn, Grade II, NHLE 1027783; Thatched Roof, Grade II, NHLE 1027782; Lavender Cottage, Grade II, NHLE 1293524.

Designated assets requiring assessment

- 5.8 No designated assets have the potential to be affected by the proposed development.

Non-Designated assets requiring assessment

- 5.9 The current golf club house comprises a complex of single and two-storey structures, some of clear modern construction, with some elements potential of more historic origin (for example sections of the western and central bays). A

review of historic mapping indicate that these are located on the approximate location of 19th century 'Clap Barn'. It is noted that the HER description states that the barn has been demolished or lost. In the event that development proposals require the demolition of these buildings, further detailed site survey to determine its level of significance is recommended.

6.0 Proposed Development Proposed Development and Predicted Impact on Designated and Non-Designated Heritage

Site Conditions

- 6.1 The site is currently the Bognor Regis Golf course and Club House. The study site is located to the north of Felpham and Bognor Regis, it is adjacent to the north-western edge of the built up area of Felpham.

The Proposed Development

- 6.2 Current proposals are for the relocation of the Bognor Regis Golf Course to an area approximately 3.1km to the east and the golf course developed for housing. The Applicant intends to submit an outline planning application for the following proposed development:

The redevelopment of the Bognor Regis Golf Course to deliver up to 500 new homes with associated landscaping and works.

- 6.3 The Applicant intends to reserve appearance, landscaping, layout and scale for subsequent approval (reserved matters). A maximum height of three storeys has been assumed for the proposed houses.

Potential Archaeological Impacts and Recommendations

- 6.4 A geoarchaeological deposit model and paleoenvironmental assessment has been produced (QUEST 2021; Appendix A). The assessment identified potential for Holocene estuarine alluvium in the west of the study site. It is noted that this part of the study site will be retained as open space so no development impacts are anticipated in relation to this. The eastern part of the study site is underlain by Pagham Raised Beach of probable Ipswichian age overlain by 'brickearth' of Devensian age. These deposits are considered to have low potential for Palaeolithic artefacts. There is, however, potential for paleoenvironmental evidence within the underlying sequence. The potential for archaeological evidence, ie Mesolithic to Bronze Age flint artefacts within the brickearth cannot be discounted at this stage. Potential impacts to the underlying quaternary sequence are likely to occur by deep excavations (ie foundations / attenuation ponds) in the eastern part of the study site. Such impacts are likely to be relatively superficial and localised; the overall impact is considered low adverse.
- 6.5 An Archaeological Notification Area covers the south of the study site and highlights the potential in this area for Prehistoric remains associated with Prehistoric flint working. Excavations to the east, north and west have all revealed evidence attesting to transient activity in the Mesolithic and Early Neolithic periods and land management practices dating from the mid-Bronze Age onwards; alongside funerary activity and potential structures. All point to a heavily exploited environment next to the former estuary or embayment of the Lidsey and Aldingbourne Rifes. Taking into consideration the impact of the golf course is currently undefined, the study site is considered to have a moderate potential for Prehistoric and Roman archaeological finds or features. Such remains are considered likely to be fragmentary and of local to regional significance.
- 6.6 There is a low potential for *in-situ* remains of all other periods, although there may be relics of the Post-Medieval landscape or material associated with the development of the site as a golf club in the early 20th century. Such remains would be considered to be of negligible significance.
- 6.7 Although no depths of foundation/service trenches have been provided at this stage, if a foundation depth for a two-storey building is assumed to be 1m, any

groundwork associated with the proposed development (including topsoil stripping) is likely to have a damaging impact upon any sub-surface archaeological remains that may be present. There will be more limited impacts in areas away from building foundations and in those places reserved for car parking and public open space.

- 6.8 Based on available evidence the proposed development is considered likely to result in a medium adverse impact to potential non-designated archaeological remains of local to regional significance. This would result in a minor to moderate effect.
- 6.9 It is anticipated that the implementation of a staged programme of archaeological works would secure the archaeological interest of the study site and ensure that effects to archaeology are minor, not significant. It is recommended that the scope of further works includes provision for geoarchaeological assessment. The exact scope of further geoarchaeological works would benefit from on site borehole data, as such it is recommended that any future geotechnical works are integrated into the archaeological strategy for the site.
- 6.10 As the study site is a working golf course and taking into consideration that there are no known archaeological remains within the study site it is anticipated that the programme of archaeological works can be secured as a condition of planning. This will be discussed with the archaeological advisor to Arun District Council.
- 6.11 There are no known archaeological constraints in terms of the evolving masterplan design.

Potential Impacts on Designated / Built Heritage Assets

- 6.12 The study site contains no designated archaeological or built heritage assets. As outlined in section 5, the development of the site will have no impact in the setting of any designated heritage assets.
- 6.13 In the event that development proposals require the demolition of the golf course club house, further detailed site survey is recommended to determine the significance of any historic fabric that may be present.

7.0 Summary and Conclusions

- 7.1 This historic environment desk-based assessment considers land at Bognor Regis Golf Club, West Sussex, which is proposed for a residential development (Fig. 1).
- 7.2 A geoarchaeological deposit model and paleoenvironmental assessment has been produced (QUEST 2021; Appendix A). The eastern part of the study site is underlain by Pagham Raised Beach of probable Ipswichian age overlain by 'brickearth' of Devensian age. These deposits are considered to have low potential for Palaeolithic artefacts. There is, however, potential for paleoenvironmental evidence within the underlying sequence.
- 7.3 A review of the available evidence has confirmed that the study site has a moderate potential for Prehistoric and Roman archaeological finds or features based in proximity to known sites and location of the study site within an Archaeological Notification Area. Excavations to the east, north and west have all revealed evidence attesting to transient activity in the Mesolithic and Early Neolithic periods and land management practices dating from the mid-Bronze Age onwards; alongside funerary activity and structures. All point to a heavily exploited environment next to the former estuary or embayment of the Lidsey and Aldingbourne Rifes.
- 7.4 There is a low potential for *in-situ* remains of all other periods, although there may be relics of the Post-Medieval landscape, or material associated with the development of the site as a golf club in the early 20th century.
- 7.5 Current proposals involve the redevelopment of the site for residential housing. Archaeology is not considered to present a design constraint on development of the site, although should any archaeological remains be present, they would be impacted in areas where ground reduction is required.
- 7.6 Based on available evidence the proposed development is considered likely to result in a medium adverse impact to potential non-designated archaeological remains of local to regional significance. This would result in a minor to moderate effect. It is anticipated that the implementation of a staged programme of archaeological works would secure the archaeological interest of the study site and ensure that effects to archaeology are minor, not significant. It is recommended that the scope of further works includes provision for geoarchaeological assessment.
- 7.7 As the study site is a working golf course and taking into consideration that there are no known archaeological remains within the study site it is anticipated that the programme of archaeological works can be secured as a condition of planning. This will be discussed with the archaeological advisor to Arun District Council.
- 7.8 There are no designated heritage assets or listed buildings that will be affected by the proposed development. In the event that development proposals require the demolition of the golf course club house, further detailed site survey is recommended to determine the significance of any historic fabric that may survive.
- 7.9 On this basis it is clear that the impact of the proposed development on the archaeological potential of the study site could be adequately mitigated, and the development made acceptable in terms of archaeological impacts. It therefore accords with the requirements in paragraph 203 of the NPPF and policies DM1, DM3 and DM6 of the Arun local plan 2011-2031 (2018). It also accords with NPPF paragraph 202 regarding designated assets.

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1805 Ordnance Surveyors Drawing
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1826 Felpham Inclosure Map Add Mss 5179 tithe map viewer
1871 Middleton and Ancton Farms, plan WSRO Add Mss 11807
OS mapping 1876-2021

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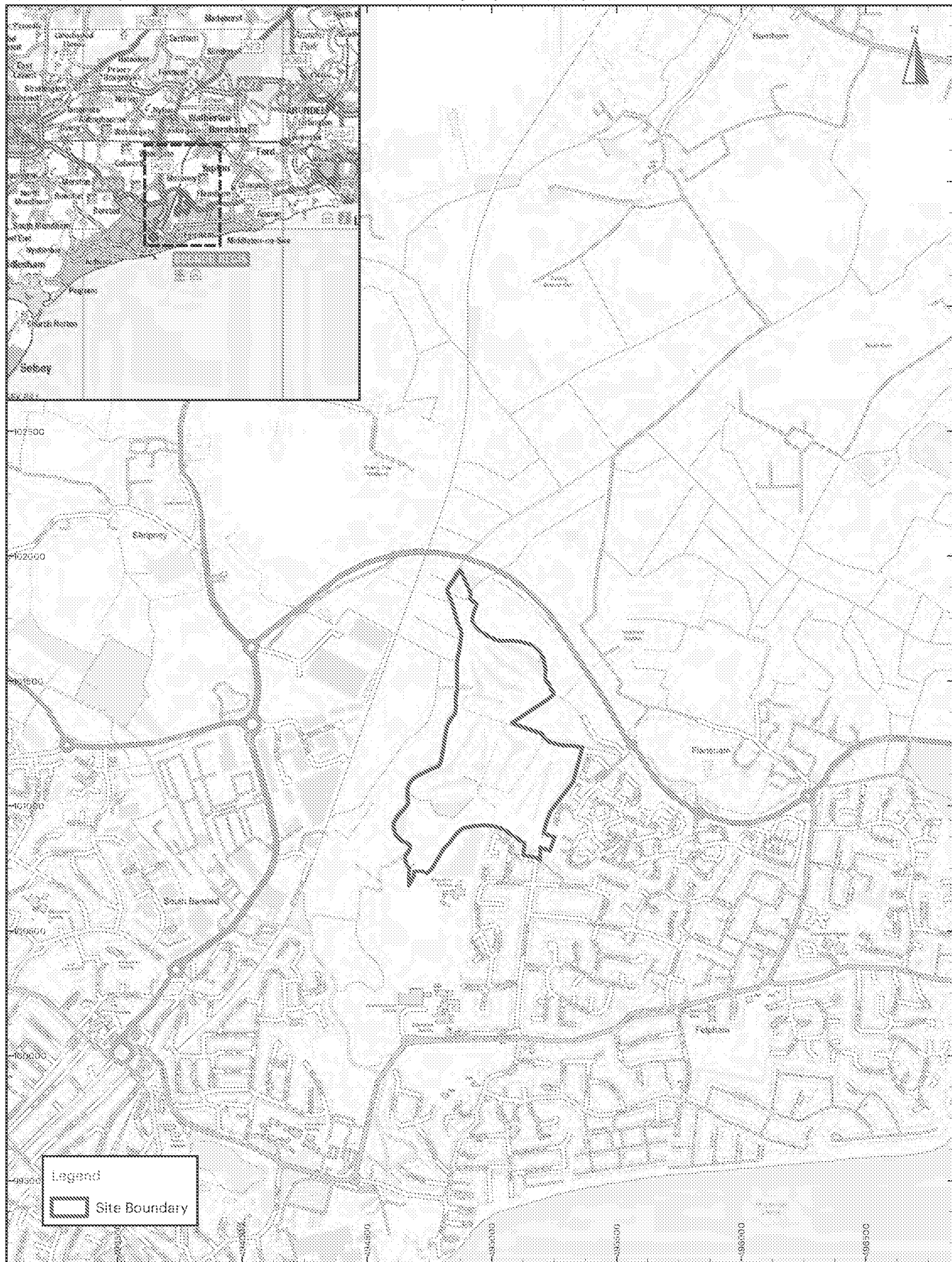
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<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>
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Lidar data were downloaded from the Environment Agency website in September 2021 - <https://environment.data.gov.uk/DefraDataDownload/?Mode=survey>

File Name	Year	Resolution (m)
SU 90 SW	2013	0.25
SU 90 SE	2013	0.25
SU 90 SW	2017	0.50
SU 90 SE	2017	0.50
SU 90 SW	2002	1
SU 90 SE	2002	1
SU 90 SW	2010	1
SU 90 SE	2010	1
SU 90 SW	2011	1
SU 90 SE	2011	1
SU 90 SW	2014	1
SU 90 SE	2014	1
SU 90 SW	2018	1
SU 90 SE	2018	1
SU 90 SW	2019	1
SU 90 SE	2019	1
SU 90 SW	2019 (NLP)	1
SU 90 SE	2019 (NLP)	1
SU 90 SW	2006	2
SU 90 SE	2006	2
SU 90 SE	2008	2
SU 90 SW	2008	2



Title:
Figure 1: Site Location
Address:
Bognor Regis Golf Club 1

Scale at A4: 1:20,000

0 500m

orion.





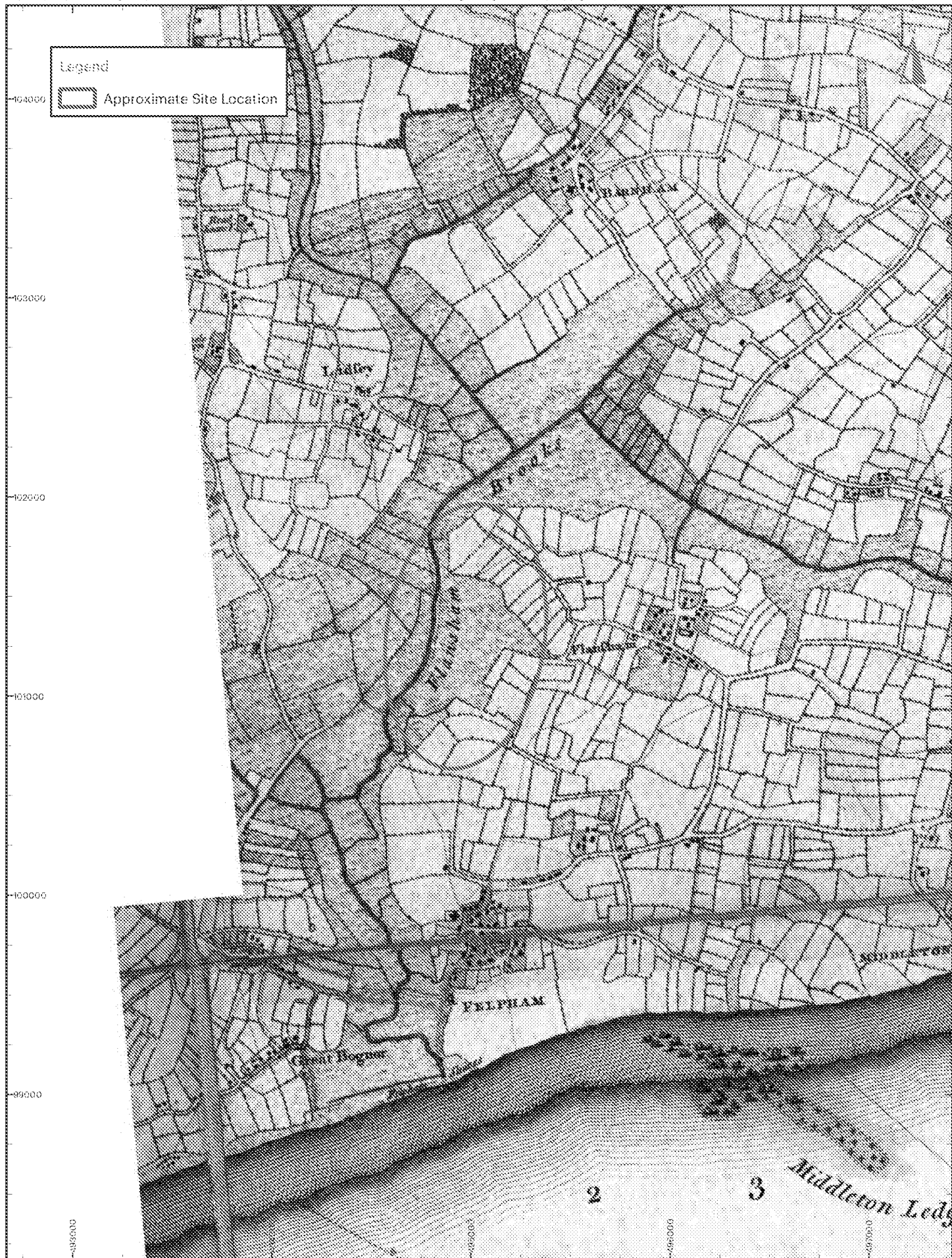




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Figure 5: 1610 Speed Map of Sussex
Address:
Bognor Regis Golf Club 1

Not to Scale:
Illustrative Only

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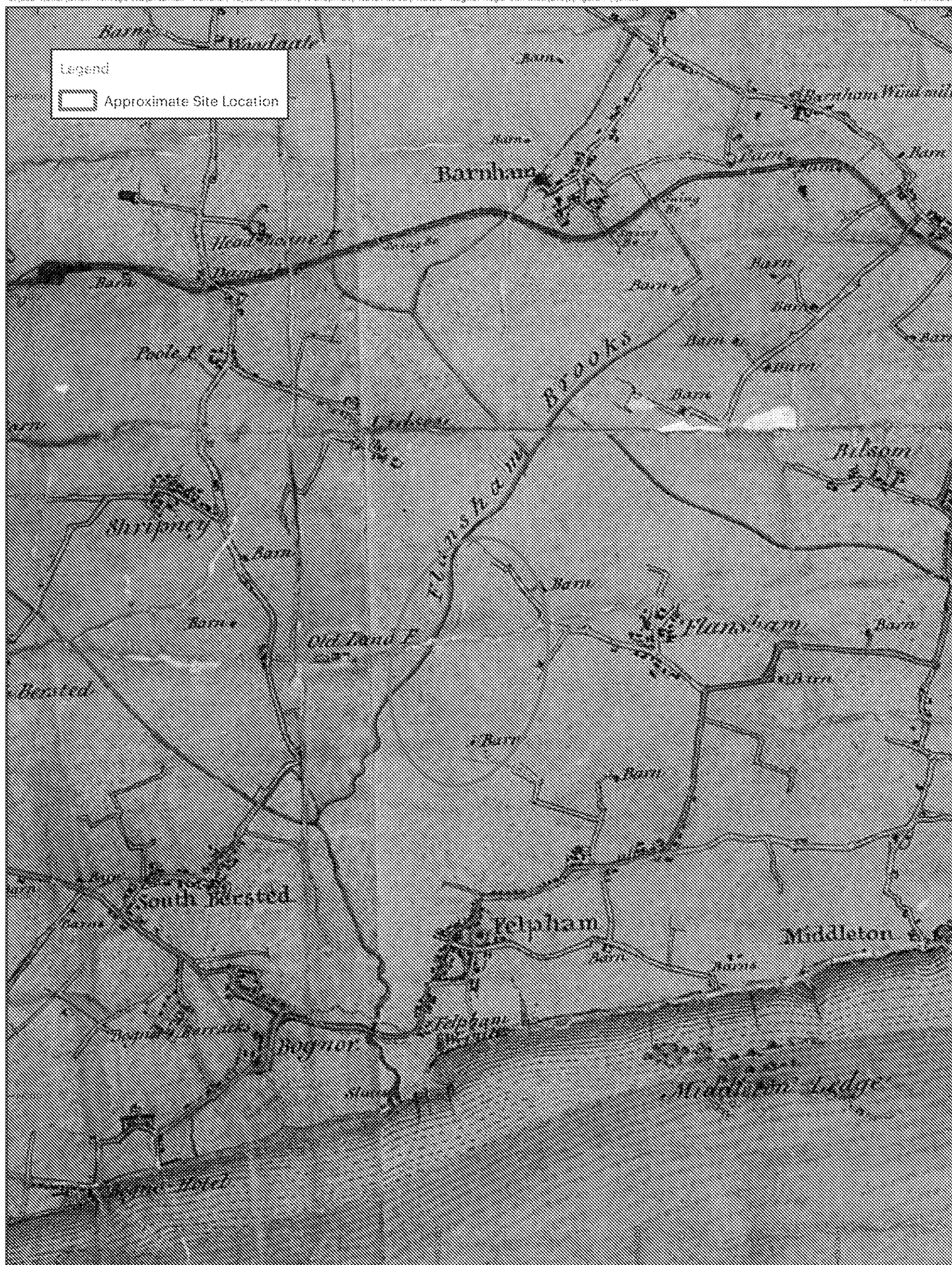


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Figure 6: 1778-83 Yeakell and Gardner map of Sussex
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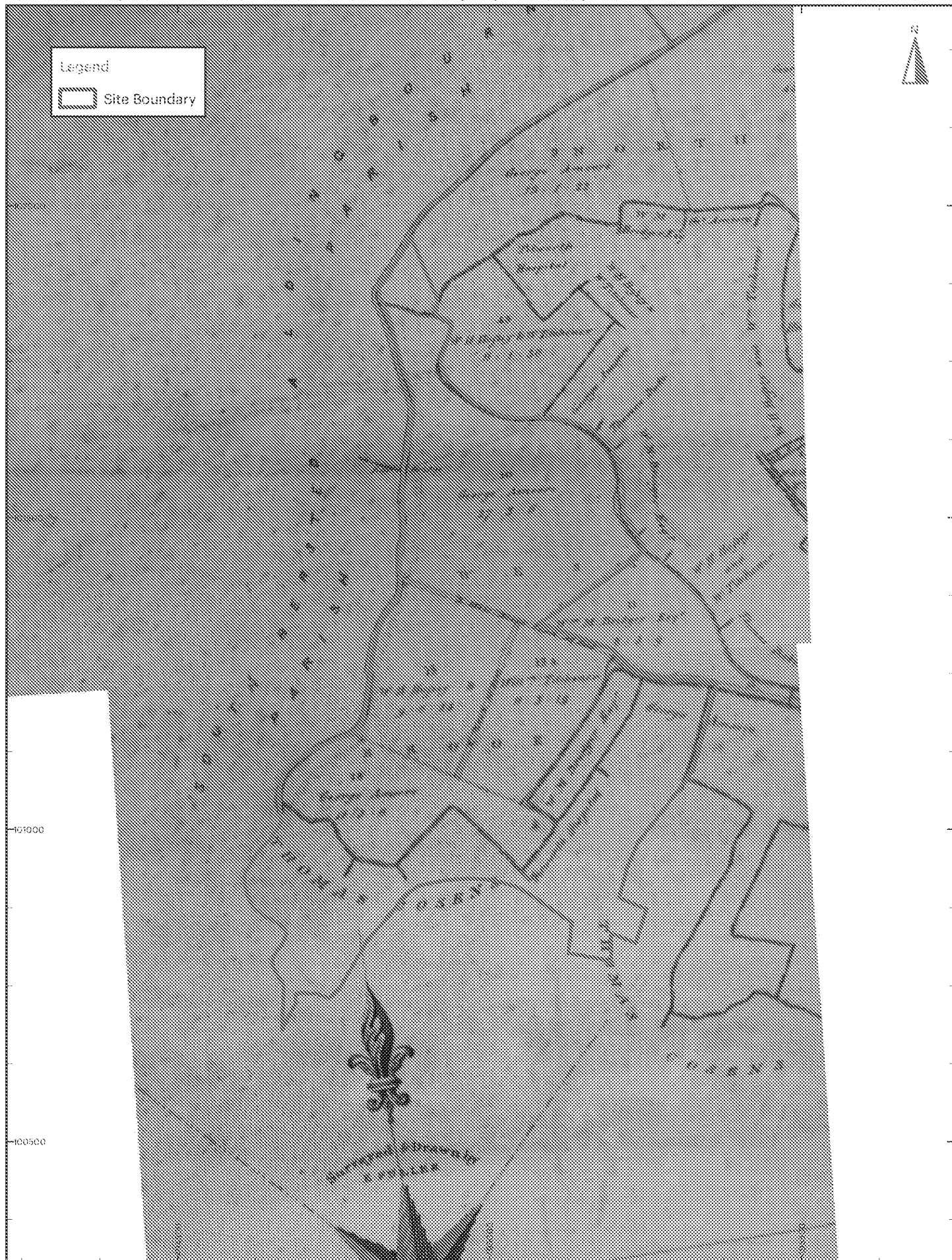


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Figure 7: 1805 Ordnance Surveyors Drawing
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Bognor Regis Golf Club 1

Scale at A4: 1:25,000

0 800m

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Title:
Figure 8: 1826 Felpham Enclosure
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Bognor Regis Golf Club 1

Scale at A4: 1:8,000
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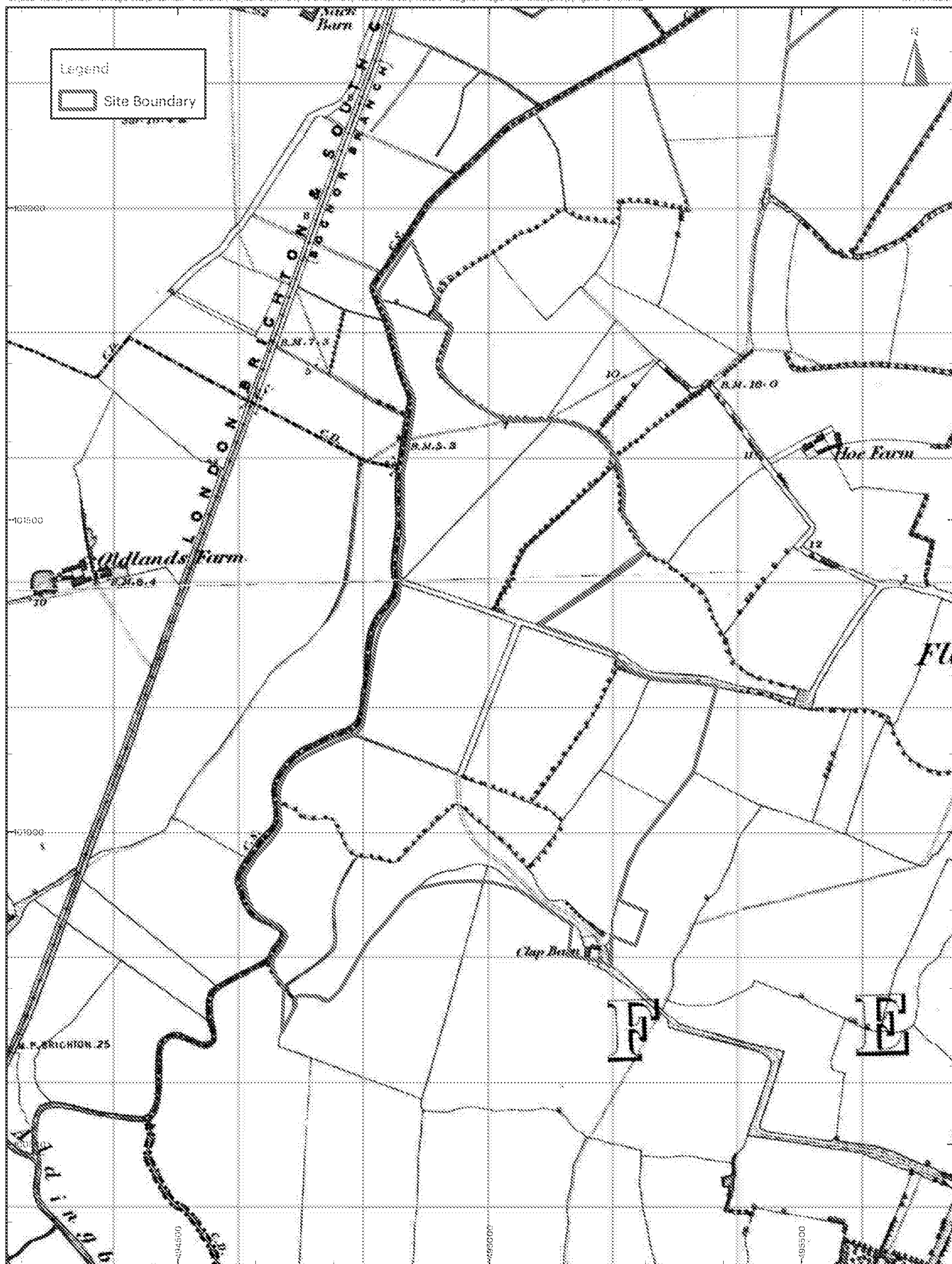
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Figure 9: 1844 Felpham Tithe Map
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Bognor Regis Golf Club 1

Scale at A4: 1:8,000
0 250m

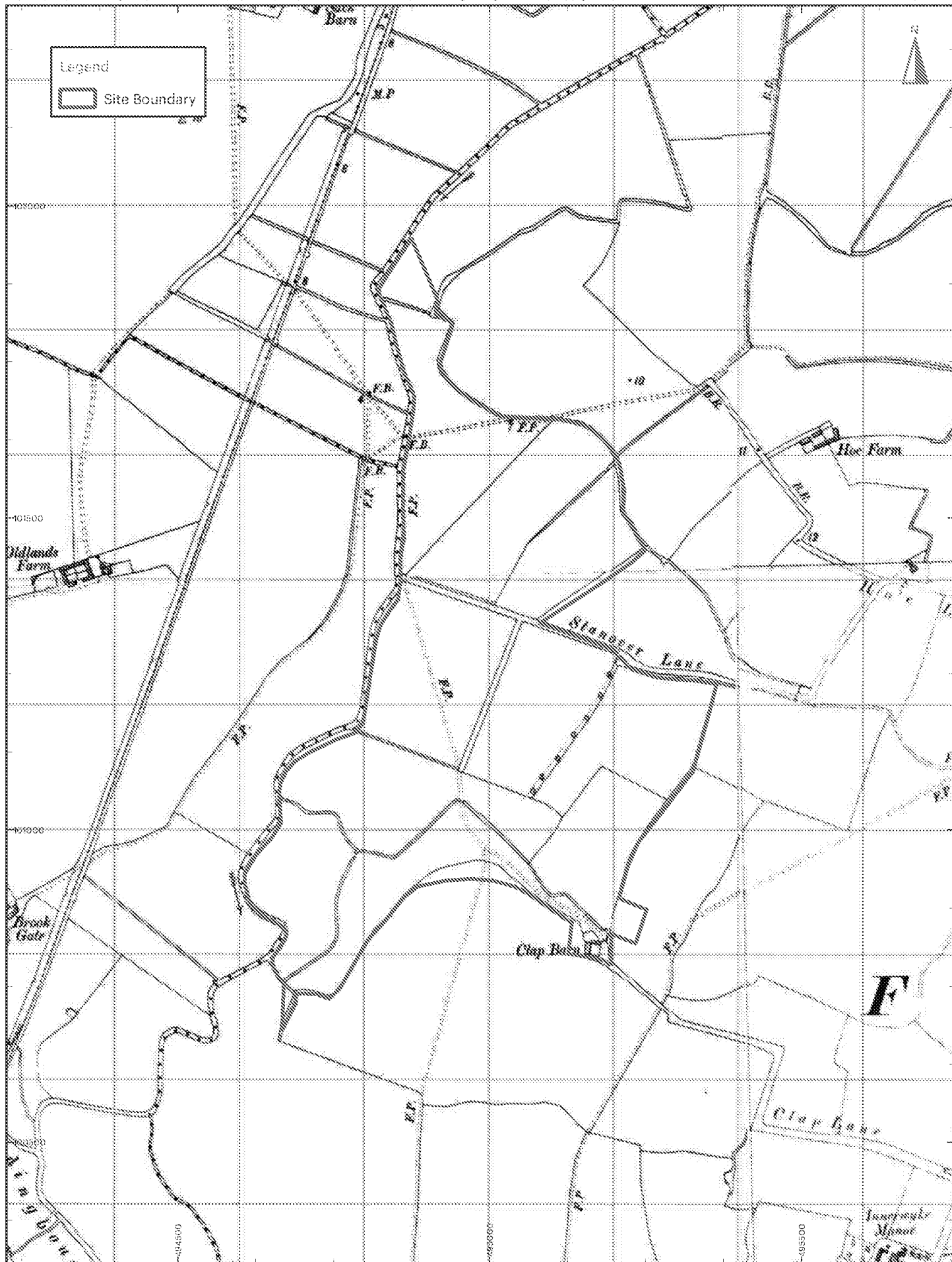
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Title:
Figure 10: 1876 OS Map 1:10,560
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Bognor Regis Golf Club 1

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0 250m

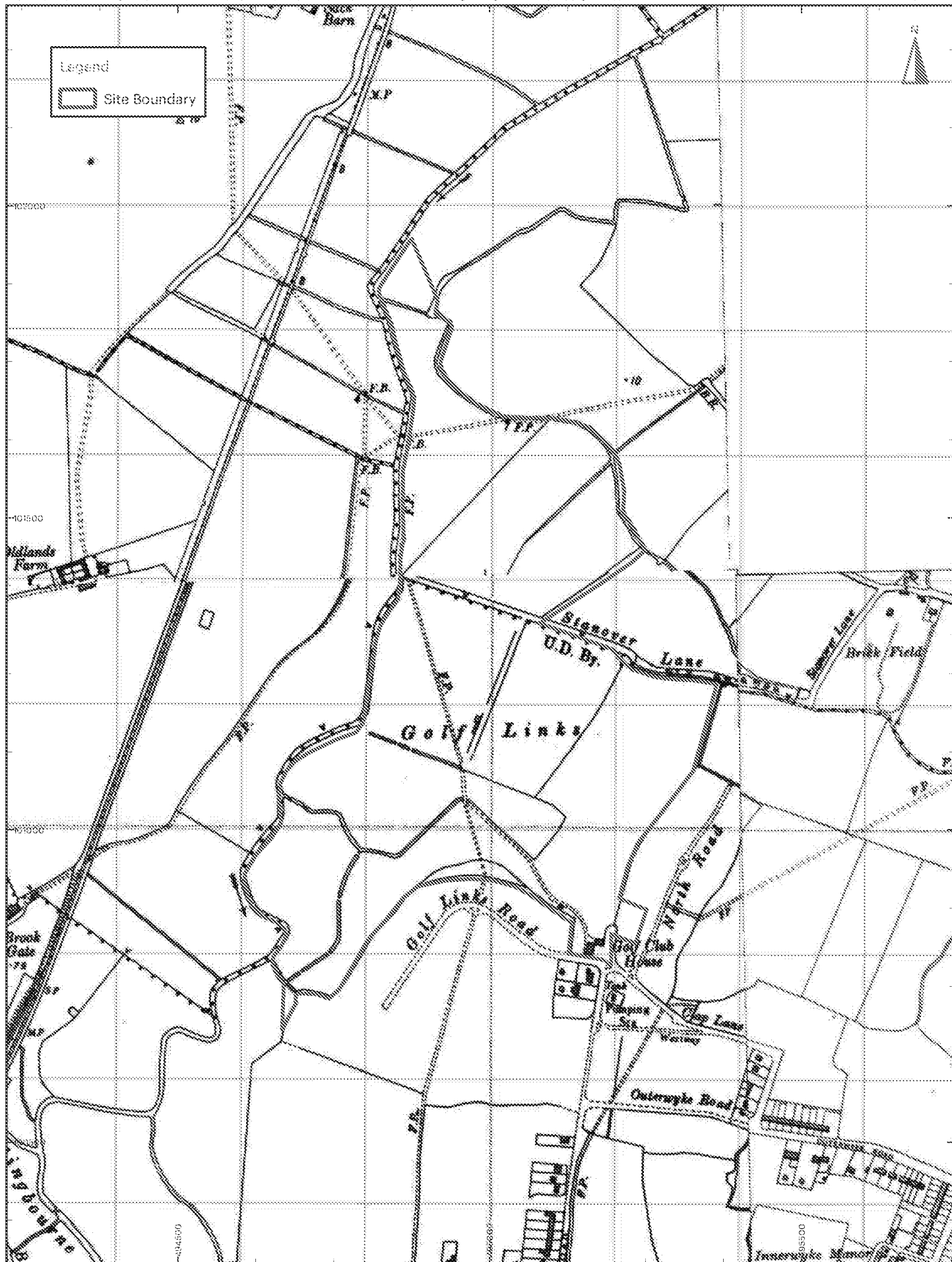
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Figure 11: 1910 OS Map 1:10,560
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Bognor Regis Golf Club 1

Scale at A4: 1:8,000
0 250m

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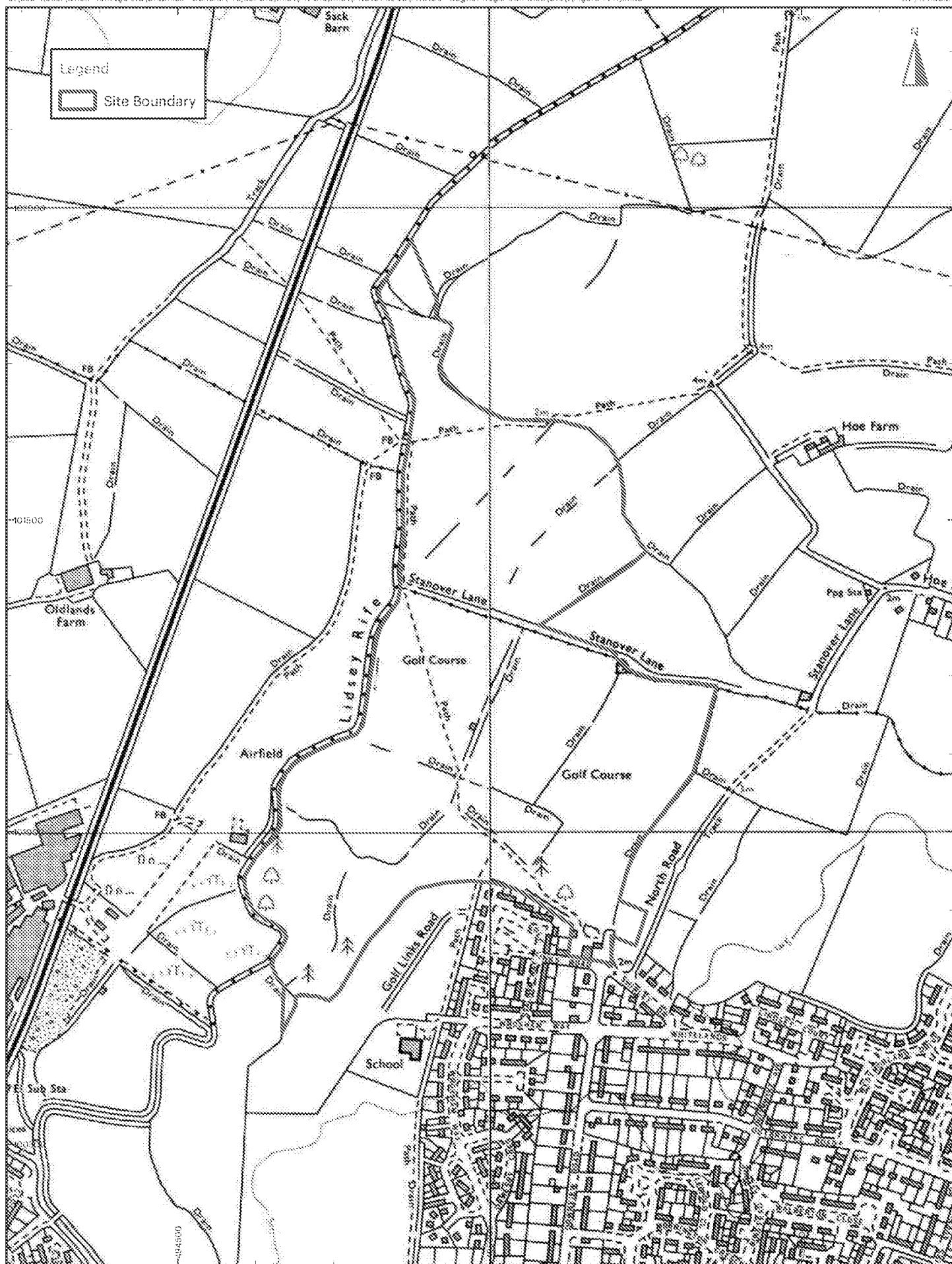


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Figure 12: 1938-1940 OS Map 1:10,560
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Scale at A4: 1:8,000

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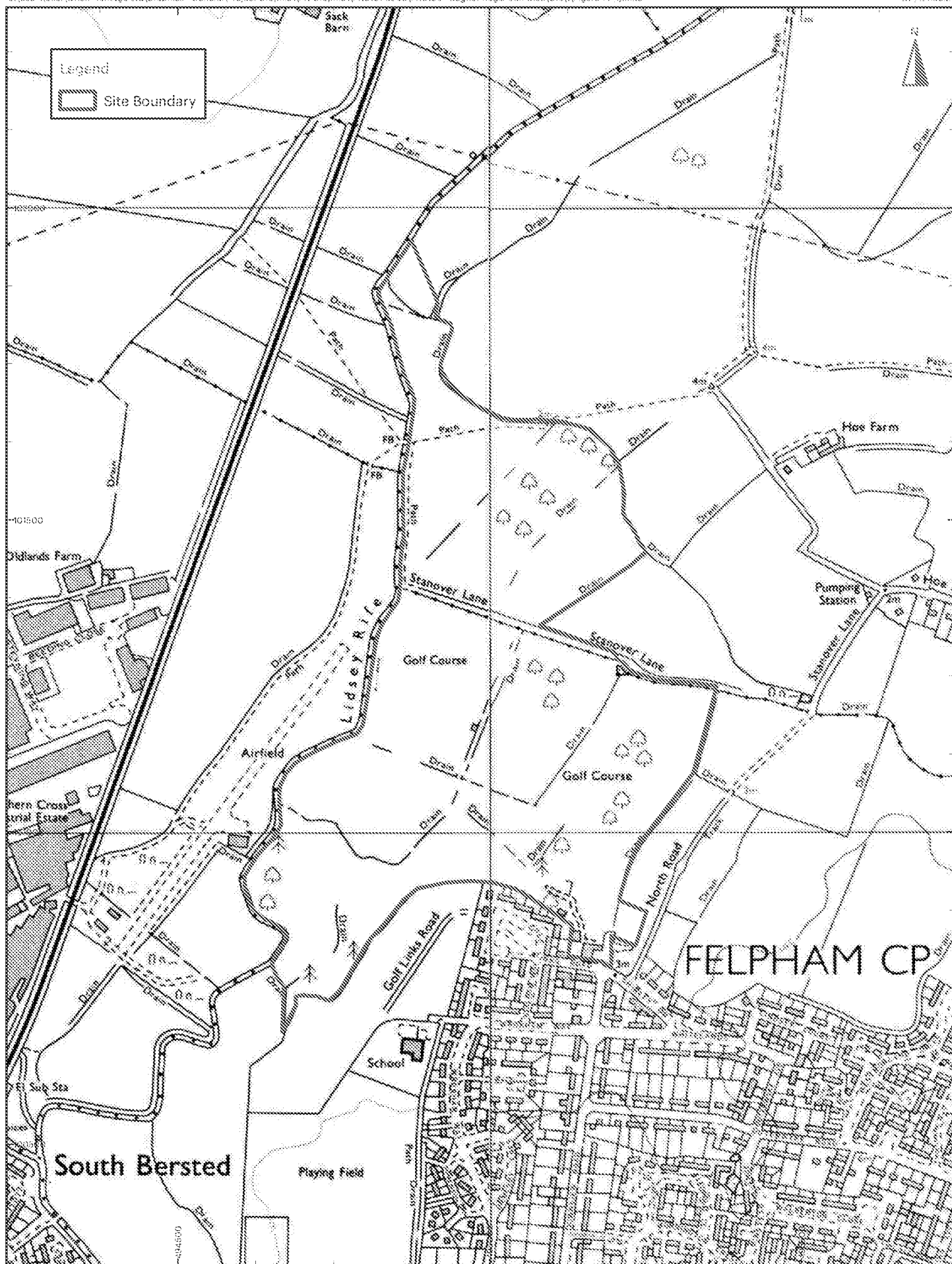


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Figure 14: 1975-1980 OS Map 1:10,000
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Bognor Regis Golf Club 1

Scale at A4: 1:8,000

0 250m

orion.



Title:
Figure 15: 1989-1993 OS Map 1:10,000
Address:
Bognor Regis Golf Club 1

Scale at A4: 1:8,000
0 250m

orion.



Title:
Figure 16: 2010 OS Map 1:10,000
Address:
Bognor Regis Golf Club 1

Scale at A4: 1:8,000
0 250m

orion.



Title:
Figure 17: 2021 OS Map 1:10,000
Address:
Bognor Regis Golf Club 1

Scale at A4: 1:8,000
0 250m

orion.



Legend

 Site Boundary



4944500

4950000

4955000

Title:
Figure 18: Google Earth Image
Address:
Bognor Regis Golf Club 1

Scale at A4: 1:8,000

0 250m



orion.

Appendix A -- Geoarchaeological and Paleoenvironmental Desk-based Assessment

SITE A – EXISTING GOLF COURSE, BOGNOR REGIS, WEST SUSSEX

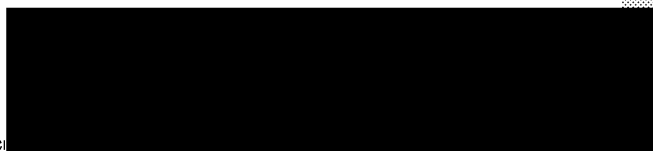
**Geoarchaeological & Palaeoenvironmental
Desk-Based Assessment**

NGR: SU 950 013

Date: 23rd November 2021

Written by: Dr C.P. Green

**QUEST, School of Archaeology, Geography
and Environmental Science, Whiteknights,
University of Reading, RG6 6AB**



DOCUMENT HISTORY:

REVISION	DATE	PREPARED BY	SIGNED	APPROVED BY	SIGNED	REASON FOR ISSUE
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v1	12/11/21	C.P. Green		C.P. Green		First edition

CONTENTS

1. INTRODUCTION.....	2
1.1 Site context	2
1.2 Aims and objectives	2
2. RESULTS OF THE DESK BASED ASSESSMENT.....	3
2.1 Topographic setting	3
2.2 Geological setting.....	3
2.3 Geoarchaeological, palaeoenvironmental and archaeological potential	5
3. CONCLUSIONS & RECOMMENDATIONS.....	6
4. REFERENCES.....	7

1. INTRODUCTION

1.1 Site context

This report summarises the findings arising from a Geoarchaeological and Palaeoenvironmental Desk-Based Assessment undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development of Bognor Regis Golf Course, West Sussex (National Grid Reference (NGR): *centred on* SU 950 013; Figure 1).

The site occupies just over 40 hectares on the northern outskirts of Bognor Regis. Irregular in outline, the site has a longer dimension of ca. 1.25km orientated N-S and is generally less than ca. 0.5km in width from E-W. The Golf Course is bounded on the west by the Lidsey Rife a left bank tributary of the Aldingbourne Rife which reaches the coast ca.1.5km south of the southern end of the site. To the NE the Golf Course is bounded by another, un-named water course. Elsewhere on its eastern side the site extends to the edge of the built-up area of the eastern suburbs of the town.

1.2 Aims and objectives

The aims of the Geoarchaeological & Palaeoenvironmental Desk-Based Assessment were as follows:

1. To determine the Geoarchaeological & Palaeoenvironmental significance and potential of the site;

2. To determine whether there are justifications for further work on the site based on current knowledge;
3. To outline a preliminary strategy for on-site investigation.

In order to address these aims, the following objectives are proposed:

1. To review relevant existing documents and sources related to the geoarchaeological and palaeoenvironmental history of the site;
2. To propose a strategy for further investigation (if necessary).

The following documents and sources were reviewed in an attempt to determine the significance and potential of the site including but not limited to: (1) historical borehole data held by the British Geological Survey (<http://mapapps.bgs.ac.uk>), (2) relevant geological, Quaternary and archaeological literature relevant to this area of Kent, and (3) a Historic Environment Record (HER) search.

2. RESULTS OF THE DESK BASED ASSESSMENT

2.1 Topographic setting

The site is in the shallow valley of the Lidsey Rife. There is very little topographic expression either within the site or in the immediately surrounding area. Natural ground levels within the site are between 1.0m and 2.0m OD on the west side of the site, close to the Lidsey Rife, rising eastward to 3.0m OD near the eastern edge of the site. The valley of the Lidsey Rife forms part of the regional topographic feature known as the West Sussex Coastal Plain, more specifically part of the Lower Coastal Plain. The slightly higher ground on either side of the Lidsey Rife valley and more widely across much of the Lower Coastal Plain between Brighton and Chichester is between 4.0m OD and 7.0m OD, rising gently northward to the 10m contour which is about 2.0km north of the Golf Course site. Further north the ground rises more steeply forming the Higher Coastal Plain and beyond that the dip slope of the South Downs.

2.2 Geological setting

Bedrock Geology

Bedrock beneath the site is Chalk of the White Chalk Subgroup (Mortimore 1986, 1997) which in this area includes the Newhaven Chalk and the Seaford Chalk. However, as the Chalk here and more widely underlying the coastal plain is lost to view beneath superficial geological deposits, the British Geological Survey (BGS) maps it simply as 'White Chalk Subgroup (undifferentiated)'.

Superficial Geology

The superficial deposits underlying the site are now mapped by BGS (www.mapapps.bgs.ac.uk/geologyofbritain) as 'Raised Marine Deposits (clay, silt, sand and gravel)' in the western half of the site, and as 'River Terrace Deposits (sand, silt and clay)' in the eastern half (Figure 2). These deposits were formerly mapped by BGS respectively as 'Alluvium' and 'Aeolian Deposits (Brickearth)' (1:50,000 Sheet 317/332 Chichester and Bognor 1996)). There are no BGS

archive boreholes within the Golf Course site. In the surrounding area the deposits that underlie the coastal plain are known from scattered borehole records of which those closest to the site are BGS archive boreholes SU90SW55 to the south, SU90SW54 to the west, SU9053 to the north and SU90SE23 to the east (all within 0.8km from the site boundary). All these boreholes are in areas mapped by BGS as River Terrace Deposits. In all these records the upper part of the sediment sequence is logged as 'brickearth' forming a unit ranging in thickness from 1.4m to 1.7m and described as silt or silty clay with subsidiary amounts of sand, gravel and chalk locally present. The silty nature of the 'brickearth' suggests the incorporation of windblown material (loess) but the common presence of sandy and pebbly horizons indicates reworking and incorporation of material from other sources.

In borehole SU90NE23 the 'brickearth' rests directly on the Chalk bedrock but in the other three boreholes the 'brickearth' is underlain by a unit termed in the borehole logs 'Raised Beach Deposits (younger)'. These deposits vary in thickness from 0.9m to 3.6m and vary considerably in their make-up, including units of clayey gravelly sand, clayey sandy gravel, gravelly silt and silty clay. These deposits rest on Chalk bedrock at levels between 2.8m and 5.2m OD.

Although these superficial deposits are mapped by BGS as River Terrace Deposits, most authorities (Bates *et al* 1997, 2000, 2007; Bates & Briant 2009) regard the deposits underlying the West Sussex Coastal Plain as part of a complex of raised beaches that is widely recognised between Chichester and Brighton. Throughout most of this area the bedrock beneath the lower coastal plain is recorded in BGS archive boreholes at levels between ca. -2.0m OD and ca. +4.0m OD, with some indication that more than one erosional bench is represented. Most of the sand and gravel resting on bedrock beneath the lower coastal plain, including deposits beneath the Golf Course site can be regarded as remnants of the Pagham Formation (Pagham Raised Beach), the lowest of the Sussex raised beaches. Judging by the OSL dates reported by Bates *et al* (2007), this beach is of Last Interglacial (Ipswichian) age (MIS 5e/6). The silty and clayey deposits ('brickearth') overlying the raised beach sediments are therefore likely to be of Devensian age.

Evidence supporting this view is provided by the results of a borehole investigation (ASE, 2015) on the floodplain of the Lidsey Rife on the west side of the stream directly adjacent to the Golf Course on the east side. Here more than 4.0m of fine-grained sediment were recorded including rich assemblages of ostracods, forams and diatoms, indicative of estuarine conditions with fringing mudflats and saltmarsh. Radiocarbon dating of organic remains from these sediments indicates significant reworking of material from earlier deposits but suggests that for much of the Neolithic and Bronze Age an estuary or marine embayment occupied what is now the lower valleys of the Aldingbourne and Lidsey Rifes. Evidence of these environments seem likely to be present underlying the western part of the Golf Course site.

In the area within and around the Golf Course site, BGS mapping distinguishes between Raised Marine Deposits, mapped on the lower ground of the river valleys (Aldingbourne Rife and Lidsey Rife) and River Terrace Deposits, mapped on the slightly higher ground. No alluvial deposits are now

mapped as such in the river valleys. There is good reason however to assume that the so-called Raised Marine Deposits are in fact estuarine alluvium. This is clearly the case in the nearby valley of the Arun where the valley floor is also mapped by BGS as underlain by Raised Marine Deposits. Boreholes there reveal a sequence of alluvial deposits that includes peat layers and other organic units. Similar organic sediments have been recorded in Bognor in the lower valley of the Aldingbourne Rife, beneath the Butlins Bognor Regis Resort (Bates *et al* 2007). It seems reasonable therefore to suppose that the western half of the Golf Course site, mapped by BGS as Raised Marine Deposits, is in fact underlain by the estuarine alluvium of the Lidsey Rife.

2.3 Geoarchaeological, palaeoenvironmental and archaeological potential

Variations in the type and height, type, thickness and potential age of the superficial deposits are thus likely at the site, which could encompass the Pleistocene and almost certainly Holocene periods. Each of these deposits has varying potential to represent an area that might have been utilised or even occupied by prehistoric and historic people, evidence of which may be preserved in the archaeological (e.g. features and structures) and palaeoenvironmental record (e.g. changes in vegetation composition).

The Pleistocene

Pleistocene remains are the geological and biological deposits laid down by various agents – water, wind and ice between 2.6 million and 11,500 years ago. Sediments and their contained faunal and floral remains enable us to reconstruct former landforms and environments that were occupied by Palaeolithic communities. Palaeolithic remains therefore form part of the Pleistocene record and can include stone tools and the flakes produced when making them, and, much more rarely, tools of wood and bone, bones bearing marks of butchery, rudimentary structures and the remains of early humans (hominins). Such remains are important as they are the evidence that enables us to understand our earliest prehistory – how the landscape of Britain was shaped and where and how our earliest ancestors fit into it.

The potential for Lower or Middle Palaeolithic remains at the Golf Course site is low. There are few Palaeolithic findspots associated with the Pagham Raised Beach or with the 'brickearth' overlying it and the artefacts that have been recorded lack detailed provenance and are in rolled condition. They comprise, from the raised beach, a single handaxe recorded between Ford and Climping to the east of the present site and another single handaxe from Selsey to the west of the present site; and from the 'brickearth', a single handaxe from Aldwick Road in the western suburbs of Bognor. No evidence of Upper Palaeolithic occupation has ever been identified on the Sussex Coastal Plain, although the valleys of the main rivers would seem to represent attractive environments for hunter-gatherer groups and Upper Palaeolithic occupation is known from the site at Beedings on the Lower Greensand to the north of the Chalk escarpment (Pope *et al* 2015).

Even in the absence of artefact remains, the Pleistocene sediments and their contained biological remains can be significant as they enable the reconstruction of landforms, climatic conditions and environments occupied by Palaeolithic communities. In many cases we already have, in museum

collections, artefacts from geological units equivalent to those being investigated, but because of the way in which Palaeolithic artefacts were collected in the 19th and early 20th centuries, we often lack the environmental record that modern investigations of the deposits can supply. In addition, it is important to build up an understanding of the way in which the character and preservation of Pleistocene remains varies from place to place, even in the same geological unit. Recent advances in direct dating techniques, including OSL (optically stimulated luminescence), ESR (electron spin resonance), and AAR (amino acid racemization), have added further significance to Pleistocene remains, enabling us to achieve more reliable dating, relevant both to artefacts and to an understanding of landscape evolution.

The Holocene

The Holocene encompasses the last 11,500 years and spans all cultural periods from the Mesolithic to the present day. During this period, sediments have been deposited by water and wind to form alluvial and head deposits. Variations in the elevation and thickness of these different deposits can be significant as they represent different environmental conditions that would have existed in a given location during the Holocene. For example: (1) the presence of peat or soil horizons represent former terrestrial or semi-terrestrial land-surfaces, and (2) the various alluvial units represent periods of changing fluvial conditions, possibly driven by hydrological variability (e.g. relative sea-level and/ or anthropogenic activity within the river catchment). Thus, by studying the sub-surface stratigraphy in greater detail, it will be possible to build a more detailed understanding of the former landscapes and environmental changes that took place across space and time.

Fine grained alluvial and organic-rich sediments (in particular peat) also have high potential to provide detailed reconstructions of past environment. They provide an opportunity to increase knowledge and understanding of the interactions between hydrology, human activity, vegetation succession and climate during the Holocene. Such investigations are carried out through the assessment/analysis of palaeoecological remains (e.g. pollen, plant macrofossils & insects) and radiocarbon dating.

Microfossil assemblages have been recorded from marine deposits of the Pagham Formation around Pagham Harbour (Bates & Briant 2009); and from supposed solifluction deposits underlying the Pagham Raised Beach at the King George V Recreation Ground, c.1.4km to the east of the Golf Course site (Bates *et al* 2007). More diverse organic remains, including pollen, plant macrofossils and Mollusca have been recorded from alluvial deposits in the lower valley of the Aldingbourne Rife beneath the Butlins Bognor Regis Resort (Bates *et al* 2007); and diatoms, forams and ostracods have been recorded from the floodplain deposits of the Lidsey Rife at Oldlands Farm (ASE, 2015). There is evidently potential for the preservation of palaeoenvironmental remains in the various deposits that underlie the coastal plain.

3. CONCLUSIONS & RECOMMENDATIONS

It can be assumed that the Golf Course site is underlain by superficial geological deposits representative of those that underlie the lower West Sussex Coastal Plain more widely. These

comprise the beach deposits of the Pagham Raised Beach of probable Last Interglacial (Ipswichian) age and overlying 'brickearth' of Devensian age. Near the Lidsey Rife, Holocene estuarine alluvium may also be present. Evidence from other sites on the lower coastal plain indicate a low probability that Palaeolithic artefacts and/or palaeoenvironmental remains may be present in any of these deposits.

There is little detailed information about the superficial deposits underlying the lower West Sussex Coastal Plain. Subject to the development impacts of the proposed development a staged approach to further assessment is recommended. The scope and timing of such works will be agreed with Orion Heritage and the Archaeological Advisor to ADC. The strategy for further evaluation may take the form of a preliminary geoarchaeological borehole survey to establish the distribution, thickness, age and nature of the deposits, and presence or absence of organic remains. Subsequent stages may include archaeological/geoarchaeological evaluation, excavation, laboratory assessment/analysis and publication following, depending on the initial findings of the evaluation. For each stage, a separate Written Scheme of Investigation (WSI) will need to be prepared.

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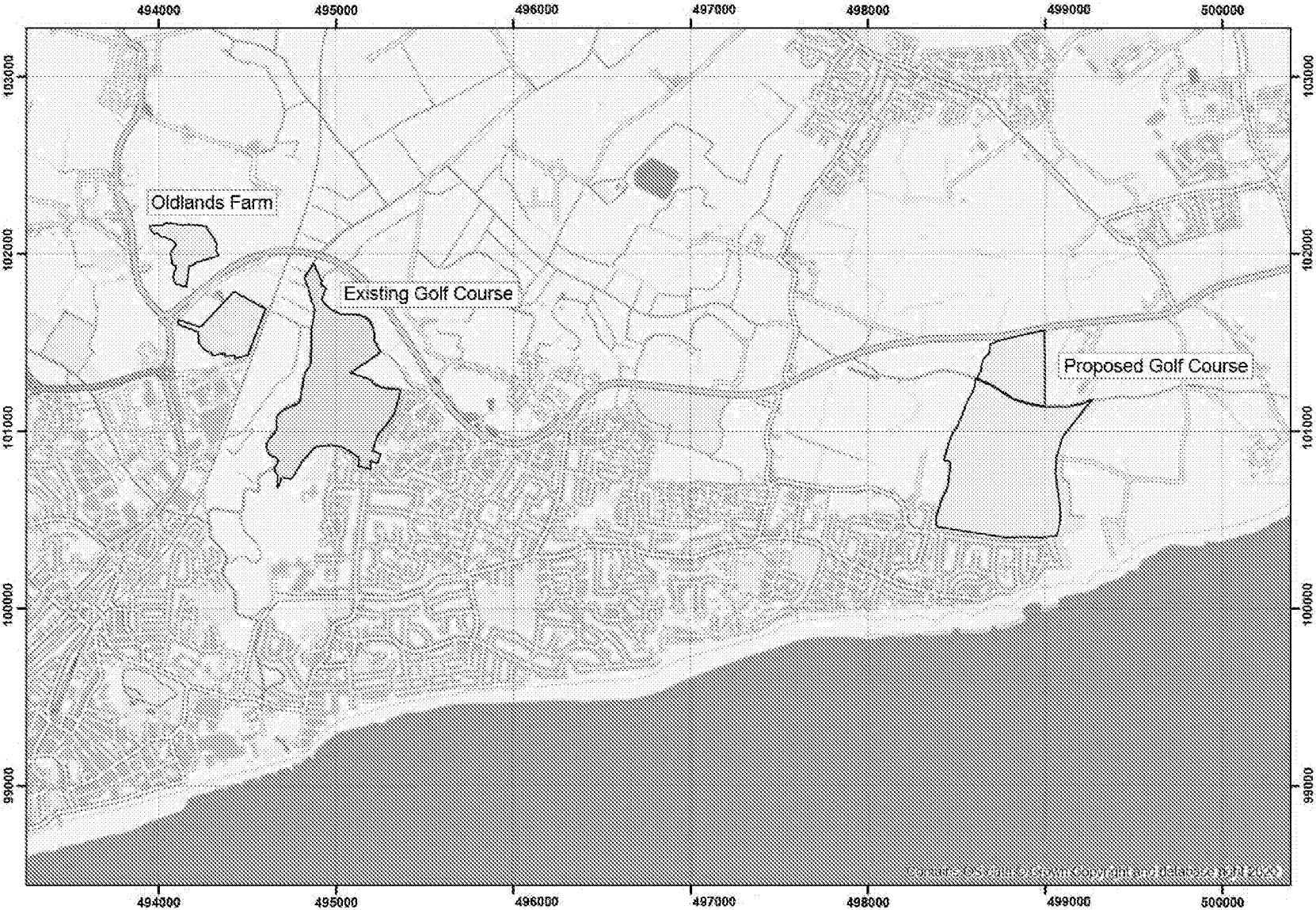


Figure 1: Location of the Bognor Regis Golf Course. Also displaying the location of the Proposed Golf Course and Oldlands Farm (ASE, 2015; Margetts, 2019)

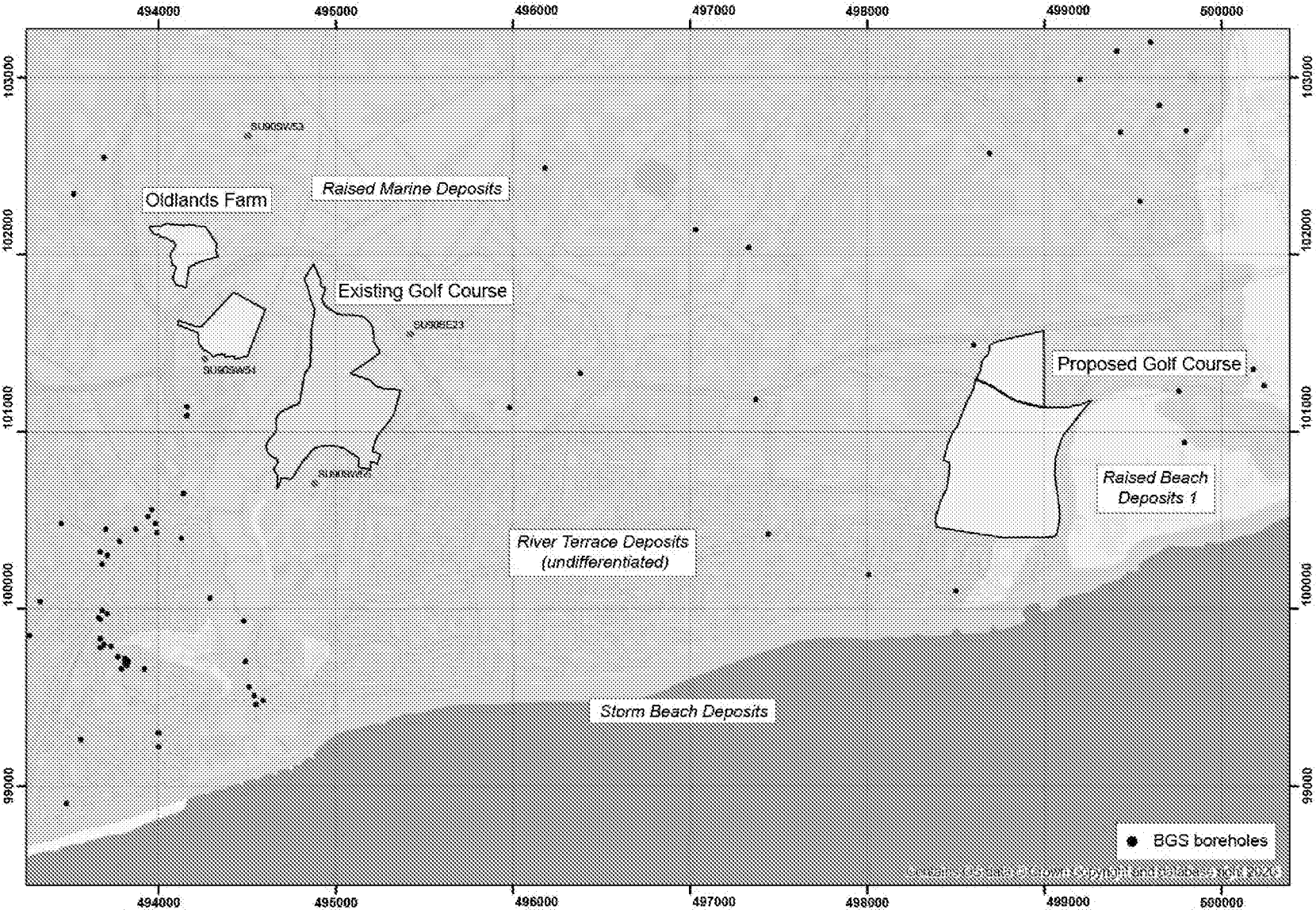


Figure 2: Superficial Geology (River Terrace Deposits, Raised Marine Deposits, Raised Beach Deposits & Storm Beach Deposits), and showing the location of nearby BGS borehole records. Contains British Geological Survey materials copyright NERC (2019).