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Request for a Scoping Opinion on behalf of Quadrant Eureka LLP

Proposed development of between 400-600 dwellings, a retirement village and a five-hectare business park on land at Eureka Park, Ashford

April 2020 TS/AP/14384



Town & Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2017

REQUEST FOR SCOPING OPINION

Client: **Quadrant Eureka LLP**
Project: **Land at Eureka Park, Ashford**
Date: **April 2020**

Reference: **TS/14384**

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1 Introduction

1.1 Purpose of this Document

1.1.1 Quadrant Eureka LLP intends to apply to Ashford Borough Council (ABC) for planning permission for a mix used development to comprise between 400-600 dwellings, a retirement village and a five-hectare business park (the "Proposed Development") on land at Eureka Park, Ashford.

1.1.2 It is considered that the location, scale and nature of the Proposed Development notwithstanding the selection criteria in Schedule 3 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (hereafter the EIA Regulations) may have the potential to give rise to significant effects on the environment. The Proposed Development falls within Schedule 2 part 10(b) of the EIA Regulations and is considered to be an Environmental Impact Assessment (EIA) development, as defined by the EIA Regulations. The planning application will therefore be accompanied by an Environmental Statement (ES), prepared in accordance with the EIA Regulations. DHA on behalf of Quadrant Eureka LLP has prepared this report in order to inform ABC's formal EIA Scoping Opinion under the EIA Regulations.

1.1.3 The EIA Regulations require that planning applications for a specified range of projects, termed EIA developments, are accompanied by an Environmental Statement (ES) that reports the findings of an EIA of the development's potentially significant environmental effects. The Ministry for Housing, Communities and Local Government's (MHCLG) online National Planning Practice Guidance defines the purpose of EIA as:

"The aim of Environmental Impact Assessment is to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process."

1.1.4 The ES accompanies the planning application for the proposed EIA development.

1.1.5 There is no standard format for an ES. The EIA Regulations require that an ES at least contains the information specified in Regulation 18(3) and must meet the requirements of Regulation 18(4). It must also include any additional information specified in Schedule 4 of the Regulations which is relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

1.1.6 This report presents information to assist the Council in the process of preparing a written opinion on the scope of the information that should be set out in the ES. It outlines DHA's and the consultant team's initial assessment of the potentially significant environmental effects that the EIA would need to examine and the preliminary scope of the information that would need to be provided in the ES. To assist the Council in meeting its regulatory requirements to engage with the consultation bodies ahead of issuing its Scoping Opinion, a suggested list of consultees is included at **Appendix I**.

1.1.7 This Scoping Report constitutes a formal request for a Scoping Opinion.

1.2 Site Description

Location Plan

- 1.2.1 Regulation 15(2)(a) requires a request for a Scoping Opinion to be accompanied by “a plan sufficient to identify the land”. Such a plan is provided in Figure 1.1. The plan shows the site in the wider local context.

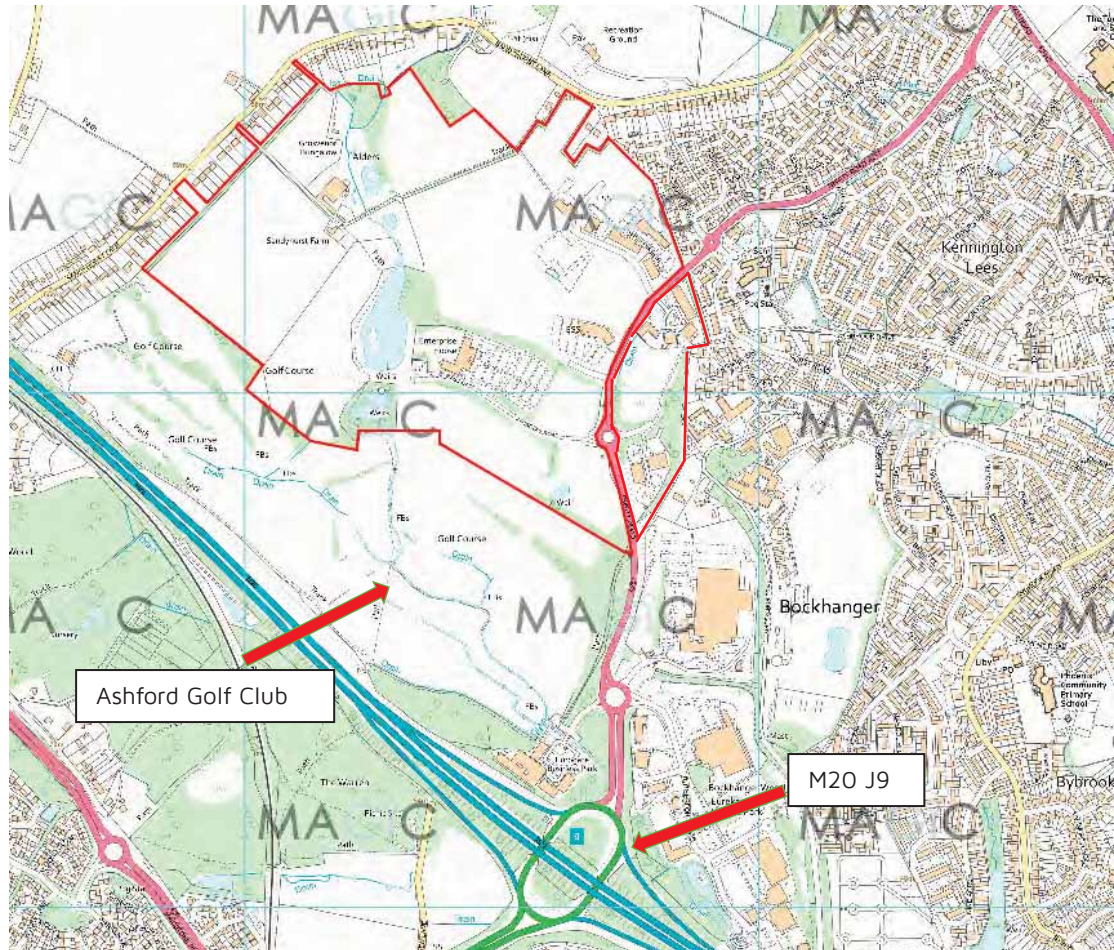


Figure 1.1: site Location Plan (red line indicative)

Proposed Development Site

- 1.2.2 The site comprises approximately 62ha of land west of the Trinity Road, south and east of Sandyhurst Lane and north of the M20 and Ashford Golf Course.
- 1.2.3 The eastern half of the site comprises a number of existing business premises included Brake Bros, Smiths Medical, Verifone Services UK, Rift Group and Trinity House with inter-dispersed rough grassland fields and tree belts. In the centre of the site lie two lakes which partially bisect the site. The land to the west of the lakes is in arable production abutting residential properties along Sandyhurst lane.
- 1.2.4 A residential property and associated farm buildings are located in the northwest quarter of the site with a block of woodland to the north. The entire southern boundary of the site abuts Ashford Golf Club.

- 1.2.5 A public footpath runs east to west across the site, joining a further footpath which runs to the south in the locality of the lakes.
- 1.2.6 The topography of the site broadly slopes from the north and west at approximately 60m above ordnance datum (AOD) to c.50m AOD in the locality of the central lakes and the south east of the site.
- 1.2.7 Figure 1.2 provides an aerial view of the site.



Figure 1.2: Aerial view of the proposed development site (red line indicative).

1.3 Proximity to Sensitive sites

- 1.3.1 There are no designated historic or environmental sites within or in immediate proximity to the site including sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA), Special Areas of Conservation (SAC), Nature Reserves (NR), Scheduled Monuments (SM), World Heritage sites (WHS) or Registered Battles Fields (RBF).
- 1.3.2 The nearest statutory nature conservation designation is Ashford Green Corridors Local Nature Reserve, located approximately 1.3km to the south-east of the site. Hothfield Common SSSI is located 2.8km due west of the site.
- 1.3.3 There are two grade II listed buildings within 500m of the site boundary; Sandpit Cottages to the north and Kingland to the west. There are no grade II* or grade I listed buildings in proximity to the site.

1.3.4 The site lies approximately 0.9km south and 0.4km east of the North Downs Area of Outstanding Natural Beauty (AONB) at its closest points.

1.3.5 Figure 1.3 shows the location of sensitive sites relative to the site of the Proposed Development.

1.4 Planning History

1.4.1 The table below provides a list of relevant planning applications related to the site obtained from Ashford Borough Council's online planning register.

Ref.	Description	Status
87/01002/AS	Building for science/business park, leisure, hotel and conference centre and housing.	Permitted
93/00858/AS	Outline application: science/business park, housing, petrol filling station, leisure park and offices.	Permitted
99/00198/AS	Science/Business Park, petrol filling station and related roads.	Permitted
04/00044/AS	Outline application for Science and Business Park Development comprising up to 115,000m ² of B1 Floorspace on remainder of undeveloped land.	Permitted
08/01403/AS	Variation of condition 16 of outline planning permission 04/00044/AS to allow 12,720m ² of B1 office space to be occupied prior to the completion of certain works to junction 9 M20.	Permitted

1.5 Nature and Purpose of the Development

1.5.1 The site is allocated in Ashford's adopted Local Plan pursuant to Policy S20 Eureka Park for a mixed use commercial and residential development.

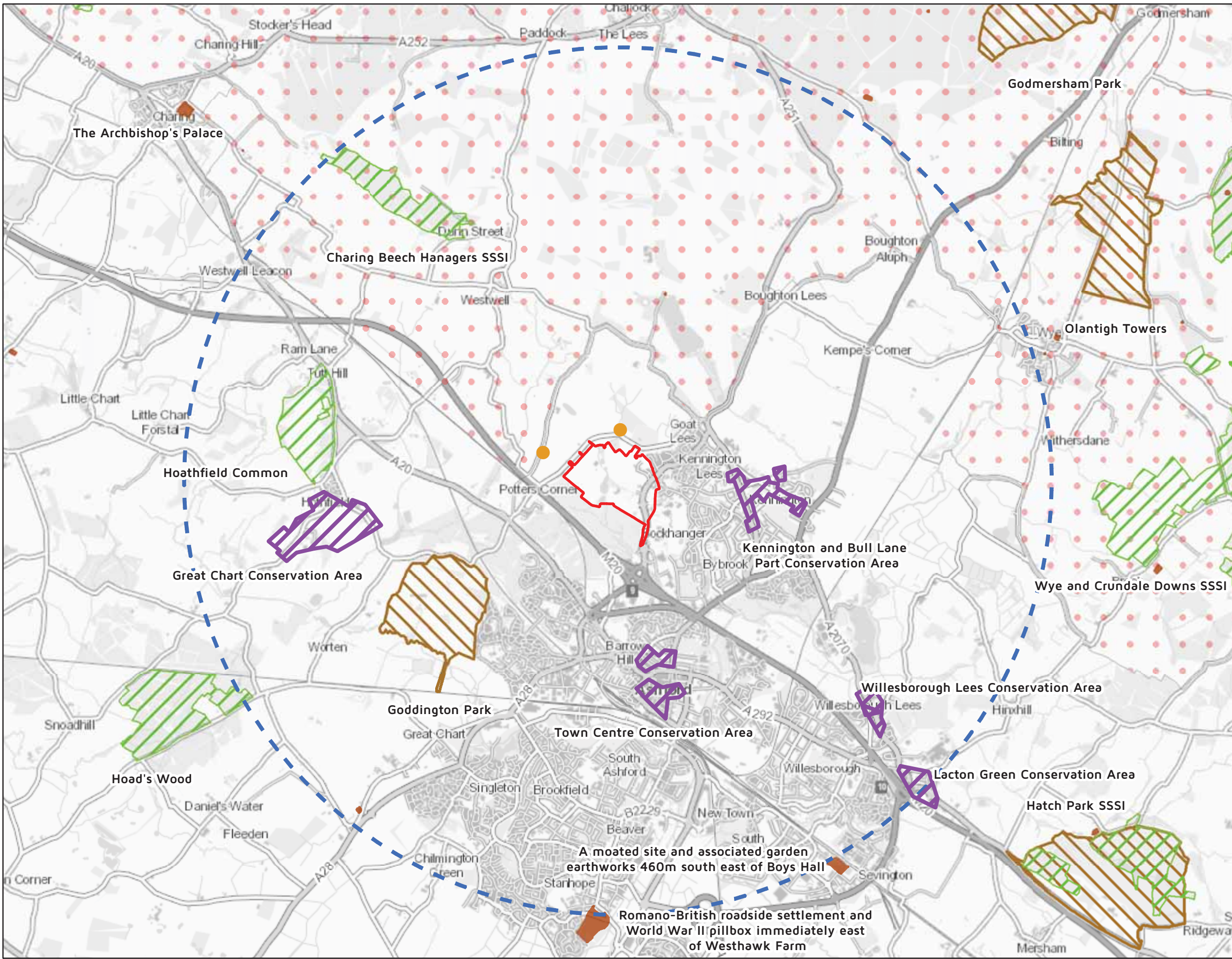
1.5.2 The Proposed Development will seek permission for:

- Residential development of between 400-600 dwellings;
- A c.130-150 bed retirement village;
- A c.5ha business park;
- C.11ha of open space;
- Retention of the existing lakes;
- Pedestrian and cycle routes;
- Primary access from Trinity Road using existing vehicular accesses;
- Secondary access to a single residential parcel of the development (c.150 dwellings) (no through road) from Sandyhurst Lane;
- Sustainable urban drainage systems; and
- Associated infrastructure and other works as necessary.









1.5.3 The exact mix and quantum of these uses is to be refined through the design and EIA process. An early illustrative concept plan indicating how the site may be developed is provided as Appendix II to this report.

1.6 Limitations and Assumptions

- 1.6.1 This Scoping Report has been informed by ongoing survey work at the site supplemented by desk-based information sources. All assumptions and recommendations set out in this report are based on professional experience by members of the consultant team. DHA is an IEMA EIA Quality Mark registrant.



Legend

-  Site Location
-  5Km Buffer
-  Conservation Area
-  Listed Building within 500m of the site
-  Scheduled Ancient Monument
-  Site of Special Scientific Interest (SSSI)
-  Registered Park & Garden
-  Area of Outstanding Natural Beauty (AONB)

TITLE
Statutory Environmental Designations

CLIENT
Quadrant Eureka LLP

PROJECT
Eureka

SCALE AT A3 DATE JOB NO.
1:43,042.9 March 2020 14384



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2 Scoping an Environmental Impact Assessment

2.1 Background

- 2.1.1 The advice given in the MHCLG EIA guidance (under the section “What Information should the Environmental Statement contain”) is that:

“Whilst every Environmental Statement should provide a full factual description of the development, the emphasis of Schedule 4 is on the “main” or “significant” environmental effects to which a development is likely to give rise. The Environmental Statement should be proportionate and not be any longer than is necessary to assess properly those effects. Where, for example, only one environmental factor is likely to be significantly affected, the assessment should focus on that issue only. Impacts which have little or no significance for the particular development in question will need only very brief treatment to indicate that their possible relevance has been considered.”

- 2.1.2 This approach is reinforced by case law. Judgements have stated that, even in relation to the minimum requirements for an ES, not every possible effect has to be considered. The focus should be on the main effects and on remedying the significant adverse effects. The Milne judgement (R v Rochdale ABC ex parte Milne) states that,

“the Environmental Statement does not have to describe every environmental effect, however minor, but only the main effects or likely significant effects”.

- 2.1.3 The Tew judgement (R v Rochdale ABC ex parte Tew) noted that the underlying objective of EIA is that decisions be taken “in full knowledge” of a project’s likely significant effects and stated:

“that is not to suggest that full knowledge requires an environmental statement to contain every conceivable scrap of environmental information about a particular project. The Directive and the Assessment Regulations require the likely significant effects to be assessed. It will be for the local planning authority to decide whether a particular effect is significant.”

2.2 Purpose of Scoping

- 2.2.1 There is no statutory provision as to the form of an Environmental Statement. However, it must contain the information specified in Regulation 18(3) and must meet the requirements of Regulation 18(4). It must also include any additional information specified in Schedule 4 of the Regulations which is relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

- 2.2.2 The planning authority’s Scoping Opinion (provided pursuant to Regulation 15(1) of the EIA Regulations) represents its formal opinion on the information that needs to be presented in the ES. A local planning authority must consult the consultation bodies before providing a Scoping Opinion.

- 2.2.3 A comprehensive and focused Scoping Opinion that identifies the likely significant effects and any EIA methodologies that ABC (and relevant consultees) wishes to see employed will enable the production of an ES that provides a concise and objective analysis that deals with the significant areas of impact and highlights the key issues relevant to the decision- making process.
- 2.2.4 The purpose of scoping is to 'scope in' only those aspects considered to have the potential to result in likely significant environmental effects. Where a particular environmental feature, or component of it, has not been included within the proposed scope of the EIA, this is not to suggest that there will be no associated effects; rather that these are not considered to be among the potentially significant effects.
- 2.2.5 In line with MHCLG's EIA guidance (as highlighted in Section 6, paragraph 4), these effects will be given (within this scoping report) "very brief treatment" to indicate that their possible relevance has been considered.
- 2.2.6 As for EIA Screening it should be noted that 2017 EIA Regulations in accordance with the Court of Appeals decision in [Loader] 2012 EWCA Civ 869 allow mitigation measures that are modest in scope and/or plainly and easily achievable to be taken into account by the local planning authority when determining likely significant effects.
- 2.2.7 As required under the EIA Regulations, scoping is an identification process that will need to be kept under review throughout the EIA process, ensuring any new potentially significant environmental effects are identified and included. DHA will amend the scope of the EIA as required and, in the event of a significant change to the proposals or the baseline conditions, may approach ABC for a further Scoping Opinion.

2.3 Scoping Methodology

- 2.3.1 The scoping methodology used in this report is summarised below.
- 2.3.2 Decisions about the likely significant effects of the Proposed Development and therefore the scope of the assessment have been based upon professional judgement, with reference to the project description, and using information about:
- the receptors (people and environmental resources) that could be affected by the proposed development; the activities involved in constructing and operating the proposed development;
 - changes that could result from these activities (e.g. changes in traffic flows or landcover as a result of the proposed development);
 - the expected magnitude and other characteristics of the environmental changes that could result from these activities and that could affect important receptors; and
 - the susceptibility of important receptors to exposure to these changes e.g. how biodiversity receptors might be affected by changes in land cover.

2.3.3 Table 2.1 uses a checklist of environmental features and their components to identify:

- i. Those environmental features, or components of them, that clearly have the potential to be subjected to likely significant environmental effects arising from the Proposed Development and those environmental features, or components of them, that may be subjected to effects arising from the Proposed Development, but it is not clear whether these effects have the potential to be 'likely significant' at this stage.
- ii. Those environmental features, or components of them, that are either of no relevance to the Proposed Development or will clearly not be subjected to 'likely significant' effects from the Proposed Development. Reasons are stated for potential effects that are assessed as being unlikely to be significant and that do not therefore require further assessment (i.e. they are scoped-out).

2.3.4 This checklist is based on the features of the environment referred to in the EIA Regulations and:

- Environmental Impact Assessment (EIA), A handbook for scoping projects (Environment Agency 2002).
- Guidance on EIA Scoping (European Commission, 2001)
- Guidelines for environmental impact assessment (The Institute of Environmental Management and Assessment, 2004)

2.3.5 A large group of potential environmental effects have been examined, as set out in Table 2.1 below. Where potential significant environmental effects were identified these are highlighted orange.

Environmental aspect	Component	Possible significant demolition/construction effect envisaged?	Possible significant operational effect envisaged?	Comments
Traffic and transport	Infrastructure	No	Yes	<p>Access from Trinity Road will use existing vehicle access points.</p> <p>A new vehicular access into the site is proposed from Sandyhurst Lane to serve c.150 dwellings. This will not be a through road for vehicles into or out of the rest of the site but will nonetheless increase vehicle traffic on a rural road. This has the potential to affect highway safety along Sandyhurst Lane, pedestrian and cyclist safety and key junctions between Sandyhurst Lane and the A20 in addition to the Sandyhurst Lane and A251 Faversham Road junction. The Transport Assessment will therefore need to assess the effect on Sandyhurst Lane by virtue of provision of a new access junction.</p>
	Traffic flows	Yes	Yes	<p>The Proposed Development will increase the flow of traffic on the local road network, including the strategic road network, particularly in the am and pm peak times and has the potential to adversely affect driver delay. The majority of traffic heading west is likely to use Junction 9 of the M20 to access either the motorway or the wider Ashford urban area. This has the potential to be significant when considered cumulatively with other proposed development in the local area both during construction and following completion and occupation of the development.</p> <p>The Transport Assessment will also need to consider how the Proposed Development will affect the capacity of other key junctions along Trinity Road.</p>
	Pedestrians and cyclists	No	Yes	<p>There are existing safe pedestrian and cycling facilities along Trinity Road and an adverse effect on safety is not therefore envisaged. However, the Transport Assessment will need to consider whether increased traffic flows will adversely affect pedestrian crossing times and/or significantly increase fear and intimidation and severance.</p> <p>Pedestrian/cycling safety along Sandyhurst Lane will be addressed appropriately.</p>
	Air traffic	No	No	There is no potential for effects on air traffic.
	Public transport	No	Yes	<p>There are bus services available along Trinity Road to Faversham and Ashford town centre. These services are likely to experience increased use as a direct result of the Proposed Development. There is therefore a potential effect on the demand and capacity on existing public transport services which will be assessed in the Transport Assessment.</p>

Air Quality	Local air quality (criteria pollutants)	No	No	<p>The Defra UK Ambient Air Quality Interactive Map identifies the 2020 annual mean for Nitrogen Dioxide for the 1km grid square within which the site is located as 11.87µg m⁻³ which is well below the Air Quality Objective of 40µg m⁻³ (set for the protection of human health). Similarly, the PM2.5 annual mean is estimated to be 9.79µg m⁻³ and below the 25µg m⁻³ Air Quality Objective. Air quality at the site is likely to therefore to be good.</p> <p>There are no designated Air Quality Management Areas in the Ashford Borough. Air quality monitoring in the Ashford Area has recorded concentrations of nitrogen dioxide below objective levels in all locations.</p> <p>Whilst in proximity to the site, the M20 motorway is over 200m from the site. As such, future residents are unlikely to be subject to elevated levels of pollution from associated road traffic emissions. Further, monitoring locations for NO₂ situated significantly closer to the M20 Motorway all record levels well below Air Quality Objectives.</p> <p>Whilst there will be an effect on air quality from traffic emissions associated with the Proposed Development it is unlikely that the effect will be significant and therefore does not warrant inclusion in the Environmental Statement.</p> <p>It is therefore proposed that air quality is dealt with in the usual manner and a standalone Air Quality Report is submitted with the application.</p>
	Dust	No	No	<p>Standard and proven construction methodologies are available to minimise dust effects as set out in the Institute of Air Quality Management guidance 'Assessment of dust from demolition and construction 2014'.</p> <p>The IAQM guidance states that following the application of appropriate levels of mitigation to control dust emissions (as set out therein) that residual effects will be reduced to a level that is "not significant".</p> <p>It is expected that a Construction Environmental Management Plan will form of a condition of any planning consent for the Proposed Development within which dust mitigation measures form standard practice.</p>
	Odour	No	No	<p>There will be no significant odour emitting sources associated with the development.</p>
	Transboundary air quality	No	No	<p>The scale and location of the Proposed Development suggests the potential for significant effects on transboundary air quality is negligible.</p>

Climate Change	Global climate and greenhouse gas emissions	Yes	Yes	The Institute of Environmental Management and Assessment's (IEMA) guidance <i>Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2017</i> states that all greenhouse gas emissions are significant. On this basis an assessment of the greenhouse emissions of the Proposed Development and mitigation thereof will be included in the ES.
	Vulnerability of the development to climate change	No	Yes	<p>The nature and type of development proposed does not suggest it will be particularly vulnerable to the predicted effects of climate change. The site is located in Flood Zone 1, which suggests it will not be particularly vulnerable to the predicted effects of climate change by virtue of flood risk and surface water flooding.</p> <p>With regard to surface water flood risk and run off, all drainage solutions are required to make a 40% allowance for climate change in accordance with Kent County Council guidance as the Lead Local Flood Authority.</p> <p>Matters relating to flood risk and drainage will be dealt with in the Flood Risk Assessment to be submitted in support of the application.</p> <p>In light of the above, no significant climate change related effects are therefore envisaged.</p>
Noise and vibration	Noise	Yes	Yes	<p>There is the potential for construction noise to adversely affect existing noise sensitive receptors including residential dwellings and existing employment premises. This will be quantified in the ES and mitigated as required.</p> <p>Noise levels at the site are likely to be dominated by road traffic from surrounding roads and principally the M20 Motorway.</p> <p>It is possible that road traffic noise may require mitigation to achieve internal and external noise level guidelines and this will be assessed in the ES as appropriate. In addition, increases in road traffic on the local road network and particularly along Sandyhurst Lane could affect existing properties. The assessment will therefore quantify any impact and identify any mitigation required as appropriate.</p> <p>The Proposed Development will not introduce significant noise generating sources to the locality.</p>
	Vibration	No	No	Currently, it is not expected that piling would be required to facilitate the proposed development. Without piling, no significant vibration related effects are anticipated. Should this change the need for a vibration assessment to be undertaken and included in the ES will be reviewed.

Human Health	Direct or indirect deleterious effects on human health	Yes	Yes	<p>The potential significant human health impacts of the Proposed Development are considered to relate to air quality, noise and potential ground contamination.</p> <p>These effects are to be addressed within the relevant technical chapter/appendices, where necessary, as set out in this table. A standalone human health assessment is not therefore proposed.</p>
Community, Social and Economic Effects	Demography	No	Yes	<p>The Proposed Development will result in between 400 - 600 new dwellings and up to 150 new bed spaces within a retirement village. This would equate to an increase in population of between 1,100 and 1,590 people based on an average household size of 2.4 persons per dwelling.</p> <p>Together with the other permitted, proposed and allocated sites in Ashford there is the potential for a significant cumulative effect on local demography.</p>
	Housing supply	No	Yes	<p>Ashford Borough Council are understood to have a five-year housing land supply. It is not known if the delivery of affordable housing is keeping track with demand as this does not appear to be publicly available.</p> <p>The development proposes to increase the number of dwellings in Ashford including market and affordable dwellings in addition to retirement provision. The Proposed Development is an allocated site and therefore integral to the Council's housing land supply. Development of the site will also help ABC's annual delivery of housing.</p> <p>The Proposed Development therefore has the potential to result in a significant beneficial effect on housing supply in Ashford.</p>
	Employment	Yes	Yes	<p>The construction of the Proposed Development will generate employment for a number of years with beneficial effects on the local economy. The Proposed Development will also generate employment through the provision of a 5ha business park (likely to provide 25,000sqm of employment floorspace) and a retirement village which will generate a large number of jobs which has the potential to result in significant beneficial effects in Ashford.</p>
	Education, health and other local services	No	Yes	<p>The Proposed Development will increase demand for school places, health services (e.g. GPs and dentists) and other local services within Ashford which could result in a significant adverse effect if not mitigated.</p>
	Public health and safety	No	No	<p>If the Proposed Development was permitted there would be no public access to the site during construction. The nature of the Proposed Development does not present a public health and safety risk.</p>

	Local environmental amenity	No	No	The construction of the Proposed Development may affect the local amenity of residents. These will mainly relate to air quality/dust, noise and visual impact and these issues are to be addressed within the relevant topic chapters.
	Electromagnetism/radiation	No	No	The Proposed Development will not generate any electromagnetic or radiation effects.
	Telecommunications	No	No	The Proposed Development will not affect telecommunications.
	Tourism	No	No	The location and nature of the Proposed Development suggest that the proposed development will not have significant effects on the local tourism economy.
Heritage	Archaeology	No	No	<p>A desk based archaeological assessment of the site has been undertaken, a copy of which is provided as Appendix 5.</p> <p>The site has a high potential for finds or features dating to the Late Iron Age and Early Roman periods, and a low to moderate potential for finds or features relating to Medieval agricultural activity.</p> <p>A low archaeological potential has been identified for evidence dating to all other periods.</p> <p>Whilst the site holds archaeological potential the likely rarity and importance of the archaeology as inferred by finds and archaeological evaluation in the study area is likely to be low.</p> <p>There is unlikely to be archaeology of national significance within the site that would necessitate preservation in-situ. Preservation by record is the industry standard mitigation following archaeological investigation which can be enforced by way of suitable planning condition.</p> <p>Any archaeological evaluation that takes place before development would identify and preserve any archaeology of significance in-situ or otherwise.</p> <p>It can therefore be concluded that no likely significant effects on archaeology will result from the Proposed Development.</p>
	Scheduled Monuments	No	No	There are no World Heritage sites, Scheduled Monuments, Historic Battlefield, or Historic Wreck sites identified within a 1.5km study area from the site.

	Architecture / buildings / structures	No	No	<p>There are two grade II listed buildings within 500m of the site boundary; Sandpit Cottages to the north and Kingland to the west. There are no grade II* or grade I listed buildings in proximity to the site.</p> <p>Open views and the rural setting of these properties in relation to the site has been severed by latter development along Sandhurst lane. Significant effects on these listed buildings are not therefore envisaged. Effects on listed buildings has therefore been scoped out of the ES but will be addressed in a standalone Heritage Report submitted in support of the application.</p>
	Historic parks and gardens	No	No	<p>There are no historic parks and gardens in proximity to the site such that there could be a significant effect on their setting.</p>
	Other historic interest	No	No	<p>The Proposed Development will have an effect of the historic landscape of the site. However, there are only remnants of the historic landscape within the site remaining. Significant effects are not envisaged and effects on historic landscape features will be assessed in a standalone Heritage Report submitted in support of the application.</p>

Ground Conditions	Geology and geomorphology	No	No	The nature of the proposed development is unlikely to have an effect on geology or geomorphology.
	Ground contamination	No	No	<p>A desk-based Phase I Ground Conditions Survey including a site walk over has been completed (a copy of which is provided as Appendix III). The site lies within zone three of a groundwater protection zone and also has hydraulic connectivity to the Alluvium and Sandgate Formation which comprise a Secondary A Aquifer and the Folkestone Formation which comprises a Principal Aquifer.</p> <p>Notwithstanding this, the risk from the Proposed Development to groundwater is moderate/low.</p> <p>There are potential areas of contamination on the site associated with historic pesticide use and the small areas of made ground. The risk to future residents is assessed as being moderate/low.</p> <p>It should be noted that standard and proven mitigation exists to address contaminated land and groundwater risks. Further, the risks identified are not considered to be prohibitive to the Proposed Development and can be mitigated in accordance with standard practice as set out in CRL11 Model procedures for the management of land contamination - contaminated land report.</p> <p>It is therefore considered that no likely significant effects will result from the Proposed Development subject to standard model procedures and does not therefore warrant inclusion in the ES.</p> <p>It is proposed that a standalone report be submitted in support of the application.</p>
	Mineral resources	No	No	<p>Whilst the site lies within a Silica/Construction Sand and Sandstone Mineral Safeguarding Area this was addressed as part of the Sustainability Appraisal prior to the site's allocation in the Ashford Development Plan.</p> <p>The adverse effect resultant from the loss of the mineral resource was therefore addressed at the wider strategic level and in that context deemed acceptable. It is not therefore considered appropriate to duplicate this at the application stage.</p>

Land Use	Agricultural	No	No	<p>The net loss of agricultural land subject to land allocations in Ashford's Development Plan was assessed as part of the Sustainability Appraisal prior to its adoption.</p> <p>The adverse effect resultant from the loss of best and most versatile agricultural land was therefore addressed at the wider strategic level and in that context deemed acceptable. It is not therefore considered appropriate to duplicate this at the application stage.</p>
	Forestry	No	No	There are no commercial forests or woodland on or near the site.
	Recreation / open space / rights of way	No	No	A public footpath runs east to west across the site, joining a further footpath which runs to the south in the locality of the lakes. It is possible that these may need to be diverted as part of the Proposed Development but there will be no net loss of accessibility across the site and with the wider PROW network.
	Mineral extraction	No	No	No mineral extraction is proposed on site.
	Industrial / commercial / retail	No	No	No industrial or retail development is proposed but includes a 5ha business park. The principal effects associated with the new commercial land-use are assessed in the relevant topic areas within the ES i.e. socio-economic effects, traffic and transport etc. To avoid duplication a separate standalone land use assessment is not required.
	Residential	No	Yes	Between 400-600 residential dwellings are proposed as part of the development. The principal effects associated with the new residential land-use are assessed in the relevant topic areas within the ES i.e. socio-economic effects, traffic and transport etc. This will include the assessment of the co-existence of the residential land use with other existing and proposed land uses in amenity terms i.e. noise. To avoid duplication a separate standalone land use assessment is not required.
	Health / social / education	No	Yes	The principal effects associated with the new residential land-use on health, social and education factors are assessed in the relevant topic areas within the ES i.e. socio-economic effects, traffic and transport etc. To avoid duplication a separate standalone land use assessment is not required.
	Waste disposal	No	No	No historic waste disposal is recorded as being within the site and none is proposed.

Landscape and visual effects	Landform / topography	No	No	Currently, no significant changes to the topography of the site are proposed. Notwithstanding this, any such change would be embedded in the landscape assessment.
	Landscape character	Yes	Yes	<p>The site lies within the Wealden Greensand Landscape Character Area which runs parallel to the North Downs and on through to Surrey.</p> <p>The character of the site itself is presented to two halves; the eastern half in proximity to Trinity Road which already contains some urban features include employment uses and the western half which retains its agriculture character associated with Sandyhurst Farm.</p> <p>The Proposed Development will change the character of the site from semi-rural to a suburban environment in the western half. This will have an adverse effect on the character of the site but the potential for an adverse significant effect on the wider local landscape which will be assessed in the ES.</p>
	Protected landscapes	Yes	Yes	The site lies approximately 0.9km south and 0.4km east of the North Downs Area of Outstanding Natural Beauty (AONB) at its closest points and therefore has the potential to affect long distance views from within the AONB but also its rural setting. Whilst the visual envelope of the site is well contained effects on the AONB will be addressed in the ES on a precautionary basis.
	Sensitive views	Yes	Yes	The Proposed Development is likely to change views of and across the site particularly along Sandyhurst Lane as well as users of the local footpath network, the on-site lake and potentially long-distance vistas from the AONB.
Biodiversity	Habitat loss	Yes	Yes	The site is approximately 62ha in size, the majority of which is undeveloped and will be lost to the Proposed Development. The priority habitats within the site include woodland, open mosaic habitat, hedgerows, waterbodies and reedbeds. This is a large effect which is considered to be potentially significant at the local level. The Proposed Development also has the potential to affect any retained and or replaced habitat on site through trampling, recreational pressures and light spill.
	Designated sites	No	Yes	There are no statutory or non-statutory nature conservation designations present within or adjacent to the site, or with connected ecological function that would be affected by the Proposed Development. However, adverse effects could arise due to increase recreational pressure and so this issue is scope into the ES.

	Protected Species	Yes	Yes	<p>A suite of targeted faunal species surveys has been undertaken. The site supports: roosting and foraging bats, badgers, reptiles, birds and potential habitat for invertebrates.</p> <p>Whilst the likely populations of the species recorded are to be considered of local importance, the scale of habitat loss, displacement and disturbance and the future potential pressures on any new or created habitats has the potential to result on an adverse effect at the local level. In combination with other green field developments sites within the Ashford Borough this could result in a permanent significant adverse cumulative effect without mitigation.</p>
	Natural processes	No	No	<p>The proposed development is not considered likely to significantly affect natural processes which would impact on the ecological interest of the locality.</p>

Water Environment	Surface water quality	No	No	<p>Surface water quality will be safeguarded during construction through the use of standard and proven mitigation measures such as bunds and temporary attenuation to be incorporated within a Construction Environmental Management Plan (CEMP).</p> <p>The Proposed Development will include a surface water management scheme which will accord with the various guidance and requirements of the Lead Local Flood Authority (LLFA) as the statutory consultee on surface water management for new proposals. A contemporary surface water management scheme both treats and attenuates surface water runoff, avoiding an impact on both the quality and quantity of the receiving water environment and will ensure the proposed development will not affect the water storage volume of the site and therefore will not alter the runoff rate of the fields.</p> <p>Treatment of runoff (from roads, roofs, driveways, etc) will be achieved within the proposed Sustainable Drainage System (SuDS), with reference to the number of treatment stages recommended within the CIRIA SuDS Manual C753 and overseen by the Lead Local Flood Authority in their role as statutory consultee on surface water management.</p>
	Surface water quantity and flood risk	No	No	<p>The site lies entirely within Flood Zone 1 and is therefore at low risk of flooding as classified by the Environment Agency. A contemporary surface water management scheme both treats and attenuates surface water runoff, avoiding an impact on both the quality and quantity of the receiving water environment and will ensure the Proposed Development will not affect the water storage volume of the site and therefore will not alter the runoff rate of the fields.</p> <p>No likely significant effects pursuant to flood risk are therefore predicted. A standalone flood risk assessment and surface water drainage strategy will be submitted in support of the application.</p>
	Surface water temperature	No	No	No processes are proposed that could change surface water temperature.
	Groundwater quality	No	No	A Phase I desk based geo-environmental report is provided as Appendix III to this report. The nature of the Proposed Development and the expected contamination status of the site do not suggest there is a significant risk to groundwater subject to standard best practice.
	Groundwater temperature	No	No	No processes are proposed that could change groundwater temperature.
	Coastal / oceanic water quality	No	No	The site is not near the coast.
	Coastal water temperature	No	No	The site is not near the coast.
	Coastal processes / hydrodynamics	No	No	The site is not near the coast.

	Water resources	No	No	<p>South Eastern Water's Water Resource Management Plan (WRMP) for the next 25 years explicitly accounts for any reductions in abstraction that are required for the growth predicted by ABC and other LPAs in its forecasting. Therefore, the future water resource requirements of ABC are factored into the abstraction regime.</p> <p>Given the above and in light of the fact that water abstraction by South Eastern Water is controlled via the water abstraction permitting process independent of the planning process no significant effects are therefore likely.</p> <p>Wastewater treatment requirements at the receiving Wastewater Treatment Works falls within the remit of the sewerage operator to assess and manage. Liaison with Southern Water through the normal pre-planning process would establish any required upgrades, permits or funding (with the potential for developer funding).</p>
Waste	Waste Management	No	No	<p>In accordance with the Duty of Care (Section 34 of the Environmental Protection Act) all those who produce or handle wastes from demolition, earthworks and construction activities are legally obligated to ensure its safekeeping, best practice management, transport and subsequent recovery or disposal.</p> <p>The construction contractors, waste transfer company and the receiving waste disposal site will all be fully responsible for waste classification, retaining legal responsibilities for fulfilling waste management duty of care requirements and ensuring that waste is deposited lawfully. No likely significant effects during construction are therefore envisaged.</p>
Risk of major accidents and or disasters	Risk of major accidents and or disasters and their potential for significant environmental effects	No	No	<p>The nature of the development and its location indicate that it is not likely to result in accidents or disasters that would result in significant environmental effects or is vulnerable to accidents and disasters from neighbouring land uses.</p> <p>It is noted that the proposed development does not fall within the scope of EU legislation 2012/18/EU (control of major-accident hazards involving dangerous substances) or Council Directive 2009/71/Euratom (Community framework for the nuclear safety of nuclear installations) as identified in Schedule 4 of the EIA Regulations.</p>

2.3.6 For each potentially significant effect identified in Table 2.1, section 4 provides an outline of the baseline conditions (where these are known at this stage). This information is followed by an outline of the scope of the assessment (i.e. those effects scoped into the assessment) and the proposed assessment methodology.

2.3.7 Section 6 of this scoping report summarises all of the matters that will be addressed in the EIA.

3 EIA Methodology

- 3.1.1 An environmental effect is an alteration, positive or negative, to some aspect of the environment (sensitive receptors¹) that occur as a result of a proposed development.
- 3.1.2 The purpose of the ES is to identify the significant positive and negative environmental effects of a scheme. The evaluation of the significance of an effect is fundamental to the EIA process. The degree of an effect i.e. significant or not significant determines the resources that should be deployed in avoiding or mitigating an adverse effect. Conversely, it identifies the degree of value of a beneficial effect.
- 3.1.3 Typically, the degree of an effect is determined by the interaction of two factors: (i) the magnitude, scale, severity or probability of an impact or change, and (ii) the value, importance or sensitivity of the resource being affected. This is then used to determine whether an effect is significant or not.
- 3.1.4 As a general rule significance is determined by taking into account a variety of factors, as follows:
- the value of the resource (e.g. whether it is of international, national, regional and local level importance);
 - the magnitude of the impact;
 - the duration involved;
 - the reversibility of the effect; and
 - the number and sensitivity of receptors.
- 3.1.5 As far as possible, standard words will be used to define degrees of effect (i.e. "very substantial", "substantial", "moderate", "slight" and "negligible"), but not so rigorously as to remove the flexibility of professional judgement. It is noted that several topics e.g. noise have their own individual requirements and professional body guidance with regard to impact classification and degree of significance. Therefore, in accordance with best practice guidance, significance will be determined on the basis of expert judgement and industry specific guidelines. Where possible, to ensure that the way significance has been attributed is transparent and repeatable, the aforementioned standard words will be used where feasible to define the degrees of effect.

¹ A receptor is a part of the natural or man-made environment, such as a river, woodland, protected species, a person or a building etc., that is affected by an impact.

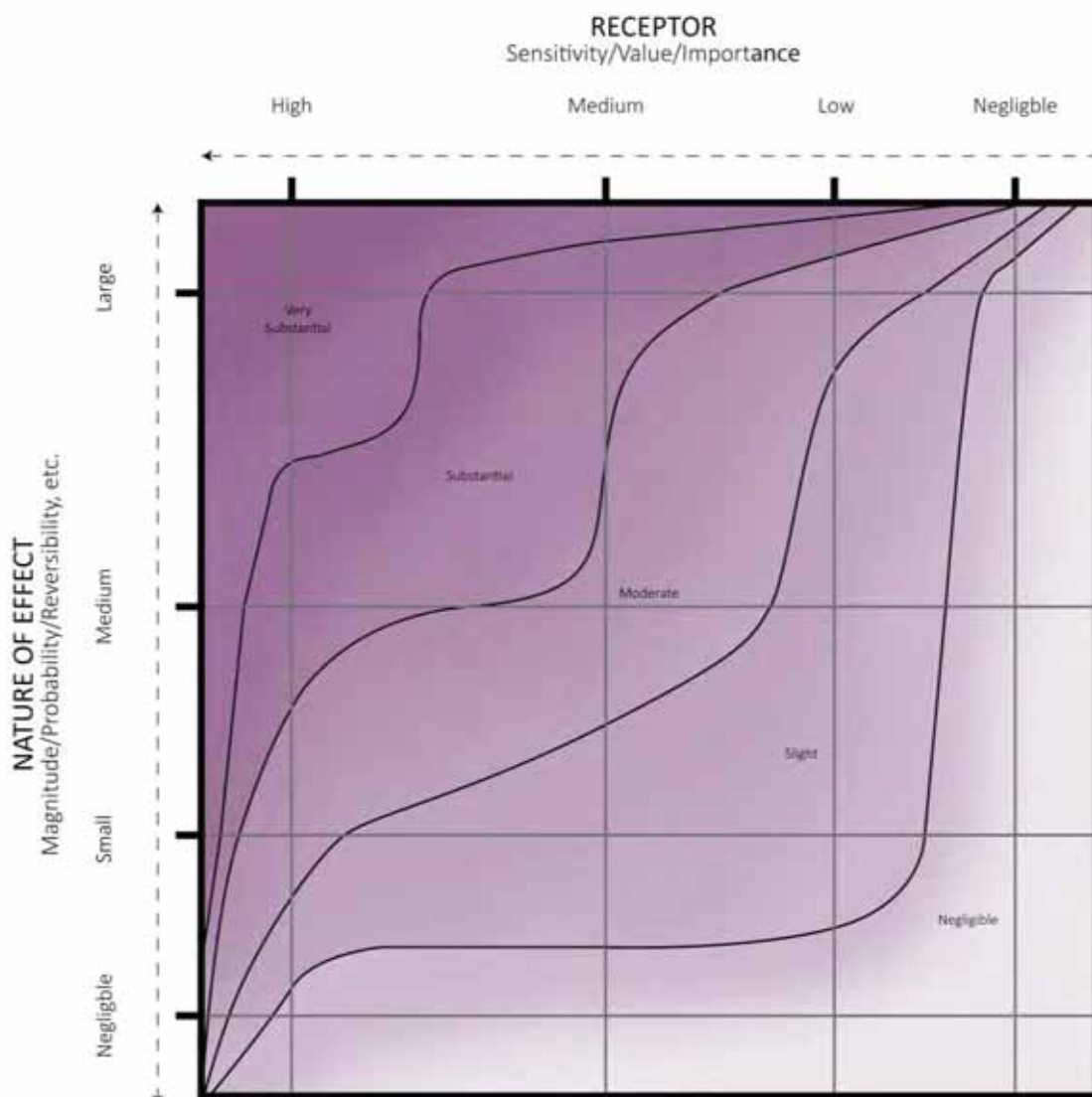


Figure: Significance matrix adapted from the Institute of Environmental Assessment and Management's *State of Environmental Impact Assessment Practice in the UK 2011*.

3.2 Identification of mitigation measures and significant residual effects

3.2.1 Where appropriate, the identification of significant effects will guide the mitigation measures proposed. The effects of the Proposed Development with the proposed mitigation in place will then be reassessed to determine the significance of effect post mitigation i.e. the residual effect. At the end of each environmental assessment, where relevant, a residual effects table will be presented. A summary chapter collating all significant residual effects will be provided.

3.3 Cumulative effects

3.3.1 The effects of the Proposed Development with other schemes that are under construction, consented or for which planning permissions are currently being sought, will be assessed within the EIA where appropriate.

3.3.2 Cumulative effects will be considered on an issue-by-issue basis and the scope of the EIA will be expanded, if necessary, to include any cumulative issues that arise in the future. The cumulative effects of other developments will be considered only where sufficient information is available, i.e. when a project is within the planning domain and there is adequate information publicly available. See Section 5 of this report for further details.

3.4 General format of the topic chapters

3.4.1 The ES topic chapters are intended to be structured in general as follows:

- Introduction
- Legislation and policy (brief summary only)
- Methodology (including standards, guidance and criteria used in the assessment, and any problems experienced)
- Baseline conditions (including identification of sensitive receptors)
- Assessment of potential effects during construction and post completion of the Proposed Development
- Mitigation measures proposed
- Residual effects
- Cumulative effects
- Summary

4 Potential Environmental Effects of the Proposed Development

- 4.1.1 For each potentially significant effect identified in Table 2.1, an outline of the baseline conditions (where these are known at this stage), an outline of the scope of the assessment (i.e. those effects scoped into the assessment) and the proposed assessment methodology is presented below.
- 4.1.2 The effects of the Proposed Development cumulatively with other schemes that are operational/constructed, consented or for which planning permissions are currently being sought, will be assessed in each technical assessment (see section 5).
- 4.1.3 Section 6 of this scoping report summarises all the matters that will be addressed in the EIA.

4.2 Traffic and transport

Background

- 4.2.1 The Proposed Development will lead to increased traffic on the local road network and the strategic road network during construction and once completed and occupied. Increased traffic volumes can affect highway capacity and driver delay particularly at peak hours, in addition to highway safety and pedestrian delay amongst others, both during construction and following completion and occupation of a development.

Currently known baseline

- 4.2.2 The site lies in relative proximity to M20 J9 and the A20, both of which form the key route into and out of Ashford from the west. The operational capacity of these junctions is not currently known but ongoing development in Ashford is likely to have an effect on them, particularly during peak hours.

Potential significant effects

- 4.2.3 As identified in Table 2.1 the Proposed Development has the potential to result in the following traffic and transport effects both during construction and operation:
- Effects on highway capacity and driver delay.
- 4.2.4 As identified in Table 2.1 the Proposed Development has the potential to result in the following traffic and transport effects once operational:
- Effects associated with a new junction onto Sandyhurst Lane;
 - Effects on M20 J9 amongst others;
 - Effects on highway safety;
 - Effects on pedestrians and cyclists;

- Effects on public transport.

Proposed assessment methodology

- 4.2.5 Relevant guidance to the assessment of traffic and transport are set out in the following documents:
- Planning Practice Guidance: Travel Plans, Transport Assessments and Statements in Decision Taking (PPG, 2014);
 - Guidelines for the Environmental Assessment of Road Traffic (IEMA, 1993); and
 - The Design Manual for Roads and Bridges (DMRB) Volume 11 Environmental Assessment (Highways Agency et al. 2008).
- 4.2.6 A Transport Assessment (TA) will be scoped with Kent County Council and Highways England and will be submitted in support of the planning application. The TA will assess the impact of the Proposed Development on the capacity of the highway infrastructure.
- 4.2.7 A desktop review, site visits and traffic surveys will be undertaken to identify the key locations where transport issues may arise. The routes for HGVs and other vehicles are largely determined by the location of the site. Roads and infrastructure within the study area will be identified from Ordnance Survey (OS) mapping and will include A20 – Sandyhurst Lane, A251 – Sandyhurst Lane, M20 – Junction 9 and A2042 – Trinity Road.
- 4.2.8 Traffic surveys will be used at key junctions and links surrounding the site to establish the existing highways conditions. Trip generation from the proposed dwellings will be estimated using sources such as the TRICS database and surveyed traffic flows. The predicted traffic flows and junction capacities will be modelled as necessary using appropriate software to determine the effect of the development. Mitigation measures will be recommended, should the results of the assessment show any adverse effects arising from the Proposed Development.
- 4.2.9 On refinement of the traffic and transport study area, existing traffic flow information will be obtained from the Local Highway Authority (Kent County Council), and Highways England (HE) where relevant, and from recent traffic surveys undertaken for other projects and applications nearby to identify the current capacity and potential constraints of the road network. This will include results from Automatic Traffic Counts (ATC), Manual Classified Counts (MCC) and Annual Average Daily Flow (AADF) calculations.
- 4.2.10 Personal Injury Accident (PIA) data for highway accidents will be obtained from the Local Highway Authority.
- 4.2.11 Records of existing bus service routes, cycle paths and train services will be obtained from Kent County Council, Ashford Borough Council and relevant service operators.

- 4.2.12 The EIA will summarise the findings of this but will focus on environmental issues associated with potential increases in traffic flows and any consequential effects on the local community.
- 4.2.13 The significance of the environmental effects resulting from traffic associated with the Proposed Development will be assessed by considering the interaction between the magnitude of the impacts and the sensitivity of the receptors in the vicinity of transport corridors.
- 4.2.14 To establish whether significant environmental effects are likely, a comparison will be made between predicted traffic flows on potentially affected roads with and without development taking account of the sensitivity of the receptors as well as any changes in the composition of traffic. This includes traffic from other local proposed development (see Cumulative Effects).
- 4.2.15 For the purpose of the EIA, IEMA guidance recommends two rules to be considered when determining whether the impact of traffic should be assessed on a road link:
- Rule 1: Include highway (road) links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and
 - Rule 2: Include any other specifically sensitive areas where total traffic flows have increased by 10% or more.
- 4.2.16 The 30% threshold is based upon research and experience of the environmental effects of traffic, with less than a 30% increase generally resulting in imperceptible changes in the environmental effects of traffic. The guidance considers that projected changes in total traffic flow of less than 10% create no discernible environmental effect.
- 4.2.17 The guidance considers the following receptors to be sensitive to the potential impact of traffic increase:
- People at home;
 - People in work places;
 - Sensitive groups, such as children;
 - The elderly or the disabled;
 - Sensitive locations, such as hospitals, churches, schools or historical buildings;
- 4.2.18 Transport environmental effects will also be assessed in terms of their duration, their frequency and in terms of their reversibility and these will be taken into account in identifying the significance of the environmental effects of traffic.
- 4.2.19 The significance of effects will be evaluated, taking into consideration the relevant policy context and the likely changes to baseline conditions. The significance levels will also be informed by the sensitivity and magnitude of effects and the significance matrix set out in the Table below.

Sensitivity	Magnitude of Change				
	No change	Negligible	Low	Medium	High
Negligible	Negligible	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	Negligible	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	Negligible	Negligible/Minor	Minor	Moderate	Moderate or Major
High	Negligible	Minor	Minor or Moderate	Moderate or Major	Major or Substantial
Very High	Negligible	Minor	Moderate or Major	Major or Substantial	Substantial

Source: HA 205/08, DMRB Volume 11, Section 2 Part 5, Table 2.4

Table 4.1: Significance matrix.

4.2.20 For the purposes of the assessment, those effects identified as being 'moderate' or greater will be regarded as being significant for the purpose of the EIA Regulations. Effects of 'minor' or lesser significance will be identified but will not be considered significant. Effects will either be adverse or beneficial.

Cumulative effects

4.2.21 Cumulative impacts on traffic arising from the project alongside other projects within the area will be considered in accordance with consultation with Kent County Council and Highways England as the relevant authorities and include those set out in section 5.

4.3 Climate Change

Background

- 4.3.1 The Institute of Environmental Management and Assessment's (IEMA) guidance *Assessing Greenhouse Gas Emissions and Evaluating their Significance*, 2017 states that all greenhouse gas emissions are significant in light of the cumulative nature of the effect and the predicted scale of climate change.
- 4.3.2 The guidance further advocates as good practice that greenhouse gases (GHG) emissions should always be reported at an appropriate, proportionate level of detail in an ES.
- 4.3.3 A dedicated Climate Change Chapter for the ES is proposed, which will report the impacts, mitigation and any significant effects of GHG emissions.

Baseline Conditions

- 4.3.4 The baseline of the application site with regard to GHG emissions is its current use; predominantly undeveloped with the exception of existing buildings which will be consuming fossil fuels for energy and heating purposes. The UK Government has called a 'Climate Emergency' and intends to achieve net zero carbon emissions nationally by 2050.

Proposed assessment methodology

- 4.3.5 The main sources of GHG emissions due to the Proposed Development may include:
- Household electricity consumption and fuel combustion in the completed development;
 - Fuel consumption by road traffic generated by the development; and
 - Embodied carbon in the construction materials, and fuel or energy consumption during construction work.
- 4.3.6 The Climate Change Act 2008 as amended by the 2050 Target Amendment Order 2019 [commits the UK government to reducing greenhouse gas emissions by at least 100% of 1990 levels by 2050 (a net zero carbon target for the UK), and created a framework for setting a series of interim national carbon budgets and plans for national adaptation to climate risks.
- 4.3.7 Energy efficiency and GHG emission levels for residential development are set at a national level by the Government in part L of the 2013 Building Regulations (as amended) and secure a 6% improvement in emission levels from 2010 standards for new builds (which secured a 25% improvement on 2006 levels) [Ref 6.4]. All house builders are obligated to meet the requirements of the Building Regulations but there are no legal requirements to seek improvements beyond this.
- 4.3.8 The Government published The Future Homes Standard: 2019 Consultation on changes to Part L (conservation of fuel and power) and Part F (ventilation) of the Building Regulations for new dwellings in October 2019. It is understood that these

changes are proposed to be officially incorporated in mid/late 2020. These seek to implement a 20-31% improvement on GHG emissions above existing standards.

- 4.3.9 The UK Government is the body responsible for ensuring that the obligations of the Climate Change Act are met. Notwithstanding this, guidance produced by the Institute of Environmental Management and Assessment (IEMA) states that all GHG emissions may be considered to be potentially significant as GHG emissions have a global cumulative effect rather than directly affecting any specific local receptor.
- 4.3.10 There is currently no guidance that presents generally agreed thresholds or methods for evaluating the significance of GHG effects in EIA, suggesting that several possible approaches could be taken. However, the IEMA guidance states that, where relevant, contextualising the magnitude of a development's GHG impacts on sectorial basis is appropriate.
- 4.3.11 Therefore, in accordance with IEMA guidance, the GHG emissions pursuant to the Proposed Development will also be contextualised against the sectoral emissions budgets. For the purposes of this assessment these are the relevant minimum energy and efficiency requirements stipulated by the Government in the Building Regulations, which is the industry standard.
- 4.3.12 Whilst a judgement of significance against the existing baseline will be made it is noted that the site as existing is predominantly undeveloped. Therefore, a comparison of almost any form of built development to an undeveloped site is always going to demonstrate a significant increase in carbon emissions compared to the baseline scenario.
- 4.3.13 GHG emissions will be estimated using published benchmark data published by Defra and BEIS at the time of preparing the EIA will be used where specific fuel or electricity consumption data is not available for the Proposed Development.

Mitigation

- 4.3.14 The assessment will recommend good-practice mitigation measures to be considered and where feasible taken forward in detailed design.
- 4.3.15 The planning application will be supported by an Energy Strategy that will identify sustainability measures for the Proposed Development in line with policy requirement and further opportunities to improve sustainability, to which the climate change mitigation recommendations in the ES chapter will also refer.

Residual Effects

- 4.3.16 The significance of residual effects after implementation of recommended mitigation measures will be predicted.

Cumulative Effects

- 4.3.17 The sensitive receptor affected by the effects of the Proposed Development is the 'global atmosphere' and as such it has been defined as being of 'high' sensitivity on the basis of the cumulative effects of all anthropogenic GHG emissions. Cumulative effects from other specific individual developments are therefore not proposed to be assessed separately.

4.4 Noise and Vibration

Background

- 4.4.1 The Proposed Development has the potential to generate loud noises during site preparation and construction. The Proposed Development and other cumulative sites will increase road traffic on the local road network including Sandyhurst Lane and consequentially increase the noise that is associated with it.
- 4.4.2 The site is in relative proximity to the M20 to the south that could affect the amenity of the future residents.

Currently known baseline

- 4.4.3 The noise baseline at the site is dominated by the M20. There are no known existing sources of vibration within or adjacent to the site.

Potential significant effects

- 4.4.4 As identified in Table 2.1 the proposed development has the potential to result in the following noise effects during construction and post-construction:
- Generation of noise during site preparation and construction works; and
 - Increased traffic noise post-construction.
- 4.4.5 Existing road traffic noise has the potential to affect the amenity of future residents of the Proposed Development.

Proposed assessment methodology

- 4.4.6 The scope of the proposed noise monitoring locations and the assessment methodology will be agreed with ABC's Environmental Health Officer. The potential for increases in noise during construction will be assessed in accordance with the guidance set out in BS5228:2009 *Noise and vibration control on construction and open sites (Part 1 Noise)*, with assumptions made regarding construction plant. Mitigation including timing and construction methods will be proposed where deemed necessary.
- 4.4.7 The modelling of noise from road traffic will use the CRTN methodology which is used to determine noise levels from roads using variables such as the volume and speed of traffic.
- 4.4.8 Following the results of the modelling BS8233:2014 *Guidance on sound insulation and noise reduction for buildings* will be referred to. BS 8233, in relation to this planning application, sets out desirable guideline values in habitable rooms, such as living rooms and bedrooms.
- 4.4.9 Vibration will be assessed in accordance with BS6472-1:2008 Guide to evaluation of human exposure to vibration in buildings if deemed relevant.

- 4.4.10 Mitigation measures to improve noise levels during the operational phase will be recommended, should initial results of the assessment show any adverse noise effects arising from the existing baseline or by consequence of the Proposed Development.

Cumulative effects

- 4.4.11 The potential cumulative effects will be qualitatively assessed for potential effects of the Proposed Development with other schemes that are operational, constructed, consented or for which planning permissions are currently being sought will be considered.

4.5 Socio-Economic

Background

- 4.5.1 The Proposed Development has the potential to cause a range of social and economic effects. These include the generation of employment, demographic changes, demand on services and housing supply.

Currently known baseline

- 4.5.2 The site is located adjacent to the urban boundary of Ashford of which it will form an urban extension. Ashford had an estimated population of 80,430 in 2018. The average household size in Ashford is 2.4 persons per dwelling.
- 4.5.3 There are 3 GP surgeries within 2km of the site, 24 primary schools within 3 miles of the site and 18 secondary schools within 10 miles of the site.
- 4.5.4 It is understood that ABC have a demonstrable 5-year housing land supply. It is not known if the delivery of affordable housing is keeping track with demand as this does not appear to be publicly available.

Potential significant effects

- 4.5.5 As identified in Table 2.1 the Proposed Development has the potential to result in the following socio-economic effects:
- Effect on ABC's supply of market and affordable housing;
 - Effect on local population and demography;
 - Increase in demand for local facilities – including schools and GP surgeries; and
 - Effects on employment provision.

Proposed assessment methodology

- 4.5.6 The existing social and economic baseline conditions will be established in detail through a desk-based study, which will obtain data from a range of sources, including ABC, Kent County Council and the Office for National Statistics.
- 4.5.7 The likely significant environmental effects will be determined by combining the sensitivity of identified receptors with the predicted magnitude of change, using a matrix. Potential effects will be considered at the ward, town and borough level as appropriate.

Cumulative effects

- 4.5.8 Cumulative impacts on the socio-economic effects arising from the Proposed Development alongside other developments within the study area will be considered within the Environmental Statement.

4.6 Landscape and visual effects

Background

- 4.6.1 The landscape and visual effects chapter of the ES will describe and assess the existing landscape character and views of the site and study area. This will include the character and features of the landscape and the changes as a result of the Proposed Development during construction and operation. In addition, it will consider the potential visual effects as a result of the Proposed Development.

Currently known baseline

- 4.6.2 The site lies within the Wealden Greensand Landscape Character Area which runs parallel to the North Downs and on through to Surrey.
- 4.6.3 ABC's Landscape Character SPD identifies the site as forming part of the Hothfield Heathy Farmlands local character area no. 59 Sandyhurst Farm.
- 4.6.4 The character of the site itself is presented to two halves; the eastern half in proximity to Trinity Road which already contains some urban features including employment uses and the western half which retains its agriculture character associated with Sandyhurst Farm.
- 4.6.1 The site lies approximately 0.9km south and 0.4km east of the North Downs Area of Outstanding Natural Beauty (AONB) at its closest points.

Potential significant effects

- 4.6.2 As identified in Table 2.1 the Proposed Development has the potential to result in the following landscape and visual effects during construction and post-construction:
- Landscape features: the proposed scheme would result in a change in existing land cover and land use.
 - Landscape character: the proposed scheme would result in a change in character to the existing site, and therefore the nature of the changes, both in the context of the site and its immediate surroundings, and the wider landscape character will be considered.
 - Views: new built form may result in the change in views experienced by visual receptors, principally from the immediate vicinity of the site, but also from the wider landscape.
 - Protected landscapes – the potential effect of the Proposed Development on the setting of the Kent Downs AONB.

Proposed assessment methodology

- 4.6.3 The Countryside Agency's Landscape Character Assessment Guidance for England and Scotland (2002) and the Guidelines for Landscape and Visual Impact Assessment 3rd Edition (2013) produced by the Landscape Institute and the

Institute for Environmental Management and Assessment will be used to guide the assessment of the development and surrounding area.

- 4.6.4 The landscape and visual assessment will include a determination of the landscape character of the site and surrounding area, the quality of the landscape, the existing land cover and the site's existing topography. This will be undertaken through a desk study and site visits. A detailed study of the visual setting of the site and the potential visual receptors that may be affected by the Proposed Development will also be undertaken through desk study and site visits which will inform the extent of the study area.
- 4.6.5 Representative viewpoints will be established and agreed with ABC's landscape department. Photographs will be taken at each viewpoint with precise locations (Ordnance Survey grid reference), date, time of day and weather conditions described for each.
- 4.6.6 Measures to maximise beneficial landscape and visual effects, and to avoid, reduce, remedy or compensate for adverse effects will be identified, as part of an iterative design process, and where appropriate, further measures will be recommended as additional proposed mitigation measures to be incorporated at within a reserved matters application.
- 4.6.7 The significance of the effects on landscape and visual receptors will be determined by combining the sensitivity of identified receptors with the predicted magnitude of change, using a matrix.

Cumulative effects

- 4.6.8 Cumulative effects on landscape, townscape and visual resources arising from the proposed development and in combination, with other projects within the study area would be included in the assessment.

4.7 Biodiversity

4.7.1 Potential biodiversity effects that could arise from a development such as that proposed include habitat loss, disturbance of animals during and post construction, and loss of, or modification to breeding and foraging habitat.

Currently known baseline

4.7.2 A desk study and phase 1 habitat survey, encompassing the entire site has been undertaken by a suitably qualified ecologist.

4.7.3 The site is approximately 62ha in size. The priority habitats within the site include woodland, hedgerows, Open Mosaic Habitat, waterbodies and reedbeds.

4.7.4 A suite of targeted faunal species surveys has been undertaken. The site supports roosting and foraging bats, badgers, Dormouse, reptiles, birds and potential habitat for invertebrates.

4.7.5 The nearest statutory nature conservation designation is Ashford Green Corridors Local Nature Reserve, located approximately 1.3km to the south-east of the site. Hothfield Common SSSI is located 2.8km due west of the site.

4.7.6 The nearest non-statutory nature conservation designation is Tile Lodge Wood, Eastwell Local Wildlife Site located approximately 200m to the north of the site.

Potential significant effects

4.7.7 As identified in Table 2.1 the Proposed Development has the potential to result in the following ecological effects during construction and/or completion/occupation of the site:

- Effects on on-site habitats through direct loss but also through increased recreation and other pressures on retained/replaced habitats;
- Effects on protected species for example through loss of habitat, disturbance, cat predation, road traffic and light pollution amongst others; and
- Recreational pressure on nearby designated sites.

Proposed assessment methodology

4.7.8 The assessment of the Proposed Development on biodiversity will be carried out in accordance with the Institute of Ecology and Environmental Management's *Guidelines for Ecological Impact Assessment in the United Kingdom* (2018). The evaluation will identify features on a geographical scale, based on that provided in the CIEEM guidance, as follows: International > National > County > District > Local > Site > Negligible.

4.7.9 Information and assessments undertaken in the preparation of the ES will be used to consider the potential effects of the development on nature conservation.

- 4.7.10** The results of habitat and species surveys will be used to inform the layout and design of the Proposed Development to avoid effects where possible and identify additional mitigation where required including replacement habitat.
- 4.7.11** The Proposed Development will seek to achieve a net biodiversity gain in accordance with NPPF policy.

5 Cumulative effects

- 5.1.1 The effects of the Proposed Development in combination with other schemes that are operational/constructed, consented or for which planning permissions are currently being sought, will be assessed within the EIA, where appropriate.
- 5.1.2 Cumulative effects will be considered on an issue-by-issue basis and the scope of the EIA will be expanded, if necessary, to include any cumulative issues that arise in the future. The cumulative effects of other developments will be considered only where sufficient information is available, i.e. when a project is within the planning domain and there is adequate information publicly available.
- 5.1.3 Consultees are requested to suggest projects that should be covered in the cumulative effect assessment. DHA is currently aware of the following projects for inclusion in the assessment of cumulative effects (see Appendix IV):
- 1) 18/01554/AS Outline planning application with details of access and layout provided for developer-led custom-build residential development of up to 18 dwellings, open space and landscaping, wildlife habitat reserve, new access to Sandyhurst Lane, parking, engineering (including ground modelling) works and infrastructure, with appearance, landscaping and scale reserved for future determination. Sand pit to the south of 200 and east of 198, Sandyhurst Lane, Boughton Aluph, Kent. Awaiting decision.
 - 2) 17/01613/AS Hybrid application for up to 79 new residential dwellings consisting of a full planning application for the development of 21 new residential dwellings, access, drainage and landscaping to the south of the site and outline planning application with all matters reserved except for access for the development of up to 58 new dwellings with associated access, landscaping, open space and community orchard at the land to the north and west of Lenacre Hall Farm, Sandyhurst Lane, Ashford. Awaiting decision.
 - 3) 16/00808/AS Reserved matters application for the development of Parcels 34-37 for 86 dwellings together with associated access roads, footpaths, drainage, car/cycle parking, groundworks and infrastructure. Land Parcels 34, 35, 36 and 37 Former Rowcroft and Templer Barracks site, Templer Way, Ashford, Kent. Permitted.
 - 4) 18/00405/AS Construction of retail warehousing and detached drive thru restaurant together with associated access, servicing, landscaping, car parking and SUDs provision. Land east of railway and north of John Lewis at Home, Fougeres Way, Ashford, Kent. Permitted.
 - 5) 19/01307/AS Full planning application for the development of a 75 bed care home and 9 residential dwellings at the site of the former Ashford Hospital, land between 3 and 23 Chart Road, Ashford, Kent. Awaiting decision.
 - 6) 17/00894/AS Construction of a 120 space car park with vehicle access from Bridge Road and pedestrian access from Carlton Road. Land at junction of Carlton Road and, Bridge Road, Ashford, Kent. Permitted.

- 7) 17/01118/AS Demolition of existing public houses and associated buildings and erection of a five storey apartment building containing fourteen 2 bedroom units and 84m² of commercial space at ground floor level including 14 car parking spaces, refuse and cycle storage and a vehicle layby. Prince Albert, 109 New Street, Ashford, Kent, TN24 8TP. Permitted.
- 8) 08/00396/AS The Conversion and alteration of Charter House to provide up to 234 one and two bed flats and up to 3,581m² of flexible commercial floorspace (Use Classes B1 office, A1 retail, A2 Financial and professional, A3 restaurant, D1 community, D2 gym only) and the construction of two new buildings providing 110 flats including associated parking and landscaping, including open and covered amenity space to roof top level. The Panorama, Park Street, Ashford, Kent. Permitted.
- 9) 19/00025/AS Hybrid planning application seeking: Outline planning permission (all matters reserved except for points of access) for up to 437 dwellings; formal and informal open space incorporating SuDS; and associated services, infrastructure and groundworks; and (ii) full planning permission for the erection of 288 dwellings; the creation of serviced plot of land to facilitate the delivery by Kent County Council of a two-form entry primary school with associated outdoor space and vehicle parking; a new Bowls Centre including a clubhouse of 292 sq m, ancillary buildings and a bowling green; a local centre to provide 280 sq m of A1 (retail), 180 sq m of A1 (retail foodstore) , 100 sqm A3 (café), 75 sq m A5 (takeaway), 190 sq m D2 (gym/fitness studio space), open space incorporating SuDS; vehicle parking; and associated services, structural landscaping, infrastructure and groundworks. Land between railway line and, Willesborough Road, Kennington, Kent. Awaiting permission.
- 10) 12/01245/AS Creation of a country park for recreational and water-sports purposes with a range of associated facilities including an activity centre, a public house/restaurant, change of use of Manor to offices, car parks and other ancillary works and structures including works to the Julie Rose Stadium; construction of 300 dwelling residential development with associated infrastructure and landscaping; and provision of an aggregates storage and distribution facility. Conningbrook, Willesborough Road, Kennington, Kent. Permitted.
- 11) 18/00236/AS Outline application for the demolition of existing agricultural buildings and the erection of up to 625 dwellings with public open space, a park and ride, land for an A1 retail unit (up to 280 sqm) and a D1 community centre including doctor's surgery, landscaping and sustainable drainage system and vehicular access point from Canterbury Road. All matters reserved with the exception of the means of access. Land east of East Mountain Lane and, Canterbury Road, Kennington, Kent. Awaiting decision.
- 12) 19/00834/AS Outline application for the change of use of land from agricultural to residential and erection of 25 dwellings with associated access. Land at Orchard Farm, Canterbury Road, Kennington, Kent. Awaiting decision.

Ashford Borough Council Local Plan (2019) Allocations

- 13) Allocation S2 for 700 dwellings. Land North-East of Willesborough Road, Kennington.
- 14) Allocation S19 for 170 dwellings. Conningbrook Residential Phase 2.
- 15) Allocation S8 for 40 dwellings. Lower Queen's Road.
- 16) Allocation S1 for 55,000sqm of B1 floorspace. Commercial Quarter.
- 17) Allocation S46 for 25 dwellings. Chart Road.
- 18) Allocation S9 for 25 dwellings. Kennard Way, Henwood.

5.2 Alternatives

- 5.2.1** The ES will include details of alternatives considered by Quadrant Eureka LLP (e.g. site layout, access arrangements, location etc.) and will set out the reasons for the final selection. This will include comparison of the associated environmental effects where relevant in accordance with Schedule 4 of the Regulations.

6 Summary

6.1.1 From this scoping exercise, it has been possible to reach a preliminary view on the environmental features that are potentially likely to be significantly affected by the Proposed Development and should be included within the EIA. All of the identified effects that are potentially significant are listed in Table 6.1.

Feature	Potentially significant effects
Traffic and Transport	<ul style="list-style-type: none"> • Effects on highway capacity and driver delay. • Effects associated with a new junction onto Sandyhurst Lane; • Effects on highways safety; • Effects on pedestrians and cyclists; and • Effects on public transport.
Climate Change	<ul style="list-style-type: none"> • Generation of greenhouse gas emissions.
Noise & Vibration	<ul style="list-style-type: none"> • Generation of noise during site preparation and construction works; and • Existing road traffic noise on future residents and increased traffic noise resulting from the Proposed Development.
Socio-economic	<ul style="list-style-type: none"> • Effect on ABC's supply of market and affordable housing; • Effect on local population and demography; • Effect on employment; and • Increase in demand for local facilities – including schools and GP surgeries.
Landscape and Visual Effects	<ul style="list-style-type: none"> • Effects on landscape character during and post-construction; • Effects on sensitive visual receptors during and post-construction phase. • Potential effects on the setting of the AONB during and post-construction.
Biodiversity	<ul style="list-style-type: none"> • Recreational pressure on nature conservation designations; • Effects on on-site habitats; and • Effects on protected species communities on the site, and local populations as appropriate.

Table 6.1: Potentially significant effects.

6.1.2 Although the environmental features are described here under separate headings, the EIA will pay close attention to the interrelationships between the various factors to assemble a holistic picture of the likely significant effects and mitigation measures.

6.1.3 It should be noted that EIA is an iterative process, enabling matters not recognised at a preliminary stage to be addressed subsequently.

6.1.4 It should be reiterated that the purpose of scoping is to 'scope in' only those aspects considered to have the potential to result in likely significant environmental effects. Where a particular environmental feature, or component of it, has not been included within the proposed scope of the EIA, this is not to suggest that there will be no associated effects; rather that these are not considered to be among the significant effects.

6.1.5 Standalone reports for other topic areas will be prepared where necessary and submitted in support of the application e.g. flood risk assessment, air quality etc.

6.1.6 Based on the preliminary scope determined within this report, the provisional ES chapters are envisaged to be as follows:

Non-Technical summary

1. Introduction
2. site description and proposed development (incl. alternatives)
3. Methodology
4. Traffic and Transport
5. Climate Change
6. Noise
7. Socio-Economics
8. Landscape and Visual Impact Assessment
9. Biodiversity
10. Summary tables
11. Glossary

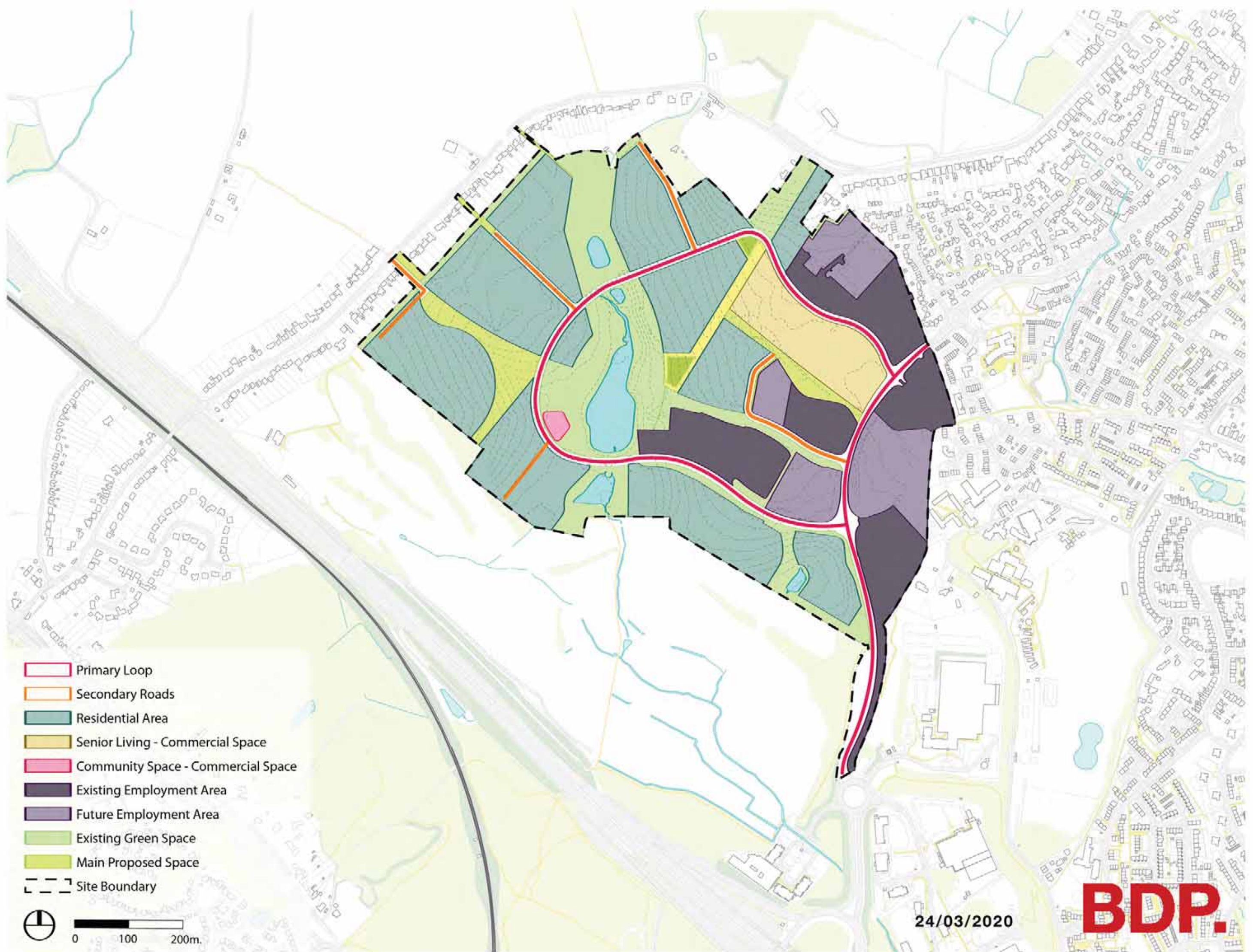
6.1.7 Each ES environmental chapter will follow a similar format, including sections on guidance and legislation, methodologies, reporting the baseline conditions, discussion of the future baseline, impact assessment during and post-construction, mitigation, residual effects and cumulative effects (where relevant).

6.1.8 The consideration of the potential significant effects in this scoping report is preliminary. ABC and consultees are invited to comment on the intended scope of the EIA and to highlight any likely significant environmental issues that they consider should be included in the EIA.

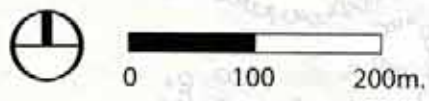
Appendix I – Requested Consultees

- Ashford Borough Council:
 - Planning and Environmental Health
- Kent County Council:
 - Highways and Transportation
 - Natural Environment
 - Heritage and Archaeology
- Natural England
- Historic England
- Environment Agency
- Highways England

Appendix II–Indicative site Concept Plan (DRAFT)



- Primary Loop
- Secondary Roads
- Residential Area
- Senior Living - Commercial Space
- Community Space - Commercial Space
- Existing Employment Area
- Future Employment Area
- Existing Green Space
- Main Proposed Space
- Site Boundary



24/03/2020

BDR.

Appendix III– Phase I Desk Study



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EUREKA PARK - ASHFORD

PHASE 1 DESK STUDY








NON-TECHNICAL SUMMARY

ITEM	SUMMARY
Site	Eureka Park in Ashford, Kent, TN25 4AG
Proposed Development	575 residential units and construction of 20 hectares of commercial land use
Current Use	Mixed agricultural, rural and commercial land use
Site History	Since earliest available historical records site has been used Buildings associated Sandhurst Farm were identified in the north and west of the site. An old chalk pit was identified by 1898 and removed by 1908 (assumed to have been infilled). Changes to layout of the farmyard building is observed by 1980 and 1992. Development of the wider site is identified by 1992 and continues to present. This comprises the ponds within the centre of the site by 1992, the Brakes Bros building adjacent to the west of Trinity Road and the NHS commercial units in the southeast of the site by 1999 and the remaining commercial units in the northeast of the site by 2020.
Key Sources of Potential Contamination	On-site: potential for localised areas of Made Ground, Agricultural land use, Asbestos Containing Materials (ACMs) identified within the fabric of agricultural buildings and offsite landfill located 450m east of the site.
Geology, Hydrogeology and Hydrology	<p>Variable geology, undulating topography and significant elevation changes identified. Localised Made Ground and reworked topsoil expected. Superficial deposits are localised comprising alluvium and head. Bedrock geology comprises Sandgate Formation overlain by the Folkestone Formation in the north, northeast and northwest of the site.</p> <p>Groundwater is considered to comprise a single water body in hydraulic continuity. Alluvium and Sandgate Formation comprise Secondary A Aquifer and the Folkestone Formation comprises a Principal Aquifer. The site partially lies within an EA Groundwater SPZ associated with a potable water abstraction located 750m northwest of the site.</p> <p>Ponds and streams are located onsite which are connected to the Great Stour River 1.5km southeast of the site.</p>
Risk Assessment	<p>Risks which require further consideration are as follows:</p> <ul style="list-style-type: none"> • Moderate to Moderate/Low risks have been identified to future site residents and visitors due to potential contaminants within Made Ground, ACM/ACS, anthropogenic inclusions within reworked topsoil and potential for pesticides and herbicides in the areas currently used to grow crops. • Moderate/Low risk have been identified to groundwater, surface water, flora, and below ground infrastructure from potential contaminants associated with Made Ground • Moderate/Low risk has been identified to groundwater and flora from pesticides and/or herbicides associated with fields used for crop planting
Conclusions and Recommendations	<p>A targeted Environmental Phase 2 Site Investigation is therefore required to determine:</p> <ul style="list-style-type: none"> • The presence / absence of Made Ground within each of the potential areas identified as well as identify any risks from contamination. • Assess for presence of pesticides and herbicides within fields used for crop planting • Validate suitability of existing shallow soils for use in proposed garden areas with consideration to presence of anthropogenic inclusions. • Depending on the soil data identified, further assessment of groundwater may be required. <p>A site wide geotechnical investigation will also be required to inform foundation design due to the presence of varying geology and topography at the site. This can be combined with the environmental investigation recommended above.</p>



PROJECT RECORD		
PROJECT NAME	EUREKA PARK - ASHFORD	
CLIENT	QUADRANT DEVELOPMENT MANAGEMENT LTD	
REPORT DETAILS		
TYPE	PHASE 1 DESK STUDY	
REFERENCE	3526 - 200129 - CM	
ISSUE DATE	FEBRUARY 2020	
AUTHOR	CLAIRE MUNNS BSc (Hons) MEnvSc SENIOR CONSULTANT	
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- APPENDIX B: HISTORICAL MAPS
- APPENDIX C: HISTORICAL BOREHOLE LOGS
- APPENDIX D: NOTES ON LIMITATIONS

DRAFT

REGISTRATION OF AMENDMENTS

Revision and Date	Amendment Details	Revision Author	Revision Reviewer





1.0 INTRODUCTION

- 1.1 This Phase 1 Desk Study has been prepared for additional development within a site known as Eureka Park in Ashford, Kent, TN25 4AG by Lustre Consulting Limited (Lustre) for Quadrant Development Management Ltd. The assessment has been undertaken in accordance with our fee proposal dated 05/10/2016, which was formally approved by Quadrant Development Management Ltd on 29/01/2020.
- 1.2 The site, irregular in plan, is centered at National Grid Reference 600380, 145300, and occupies an approximate area of 63 ha as shown in Figure 1. The site currently comprises mixed agricultural, rural and commercial land use which is in keeping with the surrounding area. Commercial land uses are present adjacent to Trinity Road in the north and east of the site. Agricultural land uses are present in the west of the site and are associated with Sandyhurst Farm. The central and southern portions of the site are present as rural land use comprising grassed fields, woodland land areas and surface water features.



Figure 1: Site Location Plan





- 1.3 Quadrant Development Management Ltd requires this Phase 1 Desk Study to support the construction of 575 residential units and construction of 20 hectares of commercial land use. Residential units are predominantly proposed in the west of the site and along the southern boundary. Additional commercial land uses are proposed in the north and eastern portions of the site. No changes are proposed to the existing commercial land-uses as part of the development proposals. Figure 2 illustrates the proposed development scheme



Figure 2: Proposed Site Layout

Objective

- 1.4 The objective of this Phase 1 Desk Study (also known as a Contaminated Land Assessment) is to determine the contaminative status of the site and to provide a general indication of the likely geoenvironmental issues which may be present on site or affect the site, as well as to provide guidance on any resultant liabilities. Information on likely geotechnical conditions and hazards is also to be assessed.





Scope of Works

- 1.5 The scope of works for the desk study is summarised below:
- Review of available historical Ordnance Survey maps (dating back to the mid-1800s) of the site and surrounding areas to identify current or former potential sources of contamination both on-site and within the immediate surrounds;
 - Review of published geological, hydrogeological and hydrological records to assess the environmental setting of the site and surrounding areas;
 - Review of available public information and up-to-date regulatory information from relevant authorities to identify any potentially significant environmental issues at the site and surrounding areas;
 - Review of any existing information and reports relating to the site and surrounding area, including any available plans, development layouts etc; and
 - Development of a conceptual site model and risk assessment following the source-pathway-receptor pollution linkage.
- 1.6 The Phase 1 Desk Study has been prepared in keeping with best practice and current planning guidance. *The National Planning Policy Framework (NPPF)*¹ advises regulatory consultees to ensure that adequate site investigation information is provided at the initial planning stage, whilst the Environment Agency's *Model Procedures for the Management of Land Contamination (CLR11)*² requires a phased, risk-based approach when dealing with land affected by contamination in the UK.
- 1.7 This Phase 1 Desk Study forms the first stage of an iterative contaminated land assessment, to identify any potential sources of contamination before undertaking any further intrusive Phase 2 investigation works or remedial action, if required. The methodology adopted in this Phase 1 Desk Study is based on the source-pathway-receptor model as set out in *CLR11*². More information on Lustre's approach to such assessments can be found at the following link: www.lustreconsulting.com/Services/ContaminatedLandAssessment.aspx.

¹ Department for Communities and Local Government, National Planning Policy Framework, February 2019.

² DEFRA/Environment Agency, Model Procedures for the Management of Land Contamination, CLR11, September 2004.





Asbestos Containing Materials (ACM)

- 1.8 Under Regulation 4 of the Control of Asbestos Regulations 2012³, those parties (“duty holders”) who have control over the maintenance or repair of non-domestic premises are required to identify and manage any asbestos or presumed asbestos found in their premises. Where asbestos is or is liable to be present, the duty holder(s) shall ensure that they have an adequate management plan, undertake and review risk assessments and maintain an Asbestos Register detailing the probable exposure to all employees and site users. The duty holder may be the business owner, landlord, tenant, or others by virtue of a contract.
- 1.9 Regulation 5 requires duty holder(s) to identify asbestos prior to maintenance or any other work which exposes or is liable to expose employees to asbestos unless there has been a sufficient assessment. There is always a risk that asbestos will be present in soils, under hardstanding and below ground structures, and that it may spread particularly during clearance and demolition works. It is therefore essential that any asbestos or presumed asbestos is identified, managed, removed and disposed by a licensed remover (if licensable work) in accordance with relevant HSE guidance. It is the responsibility of the duty holder under Regulation 16 to ensure measures are put in place to prevent the ‘spread’ of asbestos.
- 1.10 Where ACM in existing structures (i.e. within the building fabric) is observed during the site walkover, a brief description will be included in this report in order to inform our assessment of Asbestos Containing Soils (ACS) (presented in Chapter 2.0). It must be noted however, that this Phase 1 Desk Study does not include detailed identification and assessment of ACM within existing structures both above and below ground (i.e. basements, services). This should be carried out by an appropriately experienced and qualified asbestos surveyor and is outside of our agreed scope of works.
- 1.11 Where ACM is present on proposed development sites, there is always a risk of impacting the underlying soils, particularly during clearance and demolition works. It is therefore essential that any ACM identified by the asbestos surveyor is appropriately managed, removed and disposed offsite by specialist contractors in accordance with good practise and current guidance. It is the responsibility of the duty holder and / or client to ensure measures are put in place to prevent contamination of the soils during such works.

³ Control of Asbestos Regulations (CAR) 2012





Reliance and Limitations

- 1.12 This report has been prepared using published information and information provided by the Client made available at the time of writing only. Lustre Consulting accepts no liability for any information which has become available since this time.
- 1.13 Lustre Consulting owes no duty of care and has no liability to any Third Party who is not authorised by Lustre Consulting to use this report. Any unauthorised Third parties using information contained in this report do so at their own risk.
- 1.14 Whilst this report references observations made regarding the presence of features/ issues such as invasive species, ACM, site drainage and evidence of structural abnormalities, this report does not constitute specialist surveys on these matters. Should further specialist surveys be carried out in this regard, the findings of these should be reported to Lustre so that we may determine if this has any discernible impact on the findings of this report.
- 1.15 Third party information which has been reviewed and used to inform the assessments presented herein, including public records held by various regulatory authorities and environmental database data has been assumed to be true and accurate.
- 1.16 This assessment has been carried out to determine the potential risks posed to future end users, along with other key receptors, based on the current development. Should revisions in the development proposals result in a change any assessment parameters detailed in this report, a re-assessment of the risk should be carried out.

Report Structure

- 1.17 The report structure generally follows the pollution linkage approach described above. Chapter 2 of the report provides information relating to the "**source(s)**" of potential contamination through a study of current and historical land uses, whilst the sensitivity and anthropology information in Chapter 3 relates to the "**receptor**" and "**pathway**" components. Report conclusions and recommendations, including a summary of the conceptual site model and risk assessment Appendix, are set out in Chapter 4.





2.0 LAND USE

Introduction

- 2.1 This Chapter identifies and provides information on any potential on-site and off-site **"sources"** of contamination within the source-pathway-receptor model. The chapter includes a review of information obtained from photographic records, publicly recorded information on environmental issues and controls within relevant distances of the site (which may indicate the presence of potential source(s) of contamination, such as licensed landfills), available planning records obtained from regulatory websites and OS historical mapping. A summary of the identified sources and potential contaminants are given at the end of the chapter.

Site Description

- 2.2 A site walkover was undertaken by a qualified consultant from Lustre on 7th and 11th February 2020. Access was granted to external areas only. Topography across the site and wider area was noted to be undulating.



Figure 3: Aerial Photograph





- 2.3 The site comprises farmland, open grassed fields, ponds, scrubland and commercial units. Each section of the site is explored in further detail below:

Sandyhurst Farm

- 2.4 A farmyard area containing five disused farm buildings was identified adjacent to a private access road from Sandyhurst Lane. The fabric of the disused buildings was observed to contain asbestos corrugated cement as roofing and/or cladding. Asbestos warning signs were present, and the buildings had been secured with Herras fencing. Hardstanding was present across the main farmyard area however it was in poor condition.



Disused Agricultural Barn labelled with Danger Asbestos



View of the Farmyard towards northwest

- 2.5 To the north of the farmyard was a small area of scrubland followed by a large open field used for crop planting. A disused cottage was identified in a fenced off area adjacent to the east of the field. Evidence of a concrete base for a former structure and a concrete trough were also identified. The woodland area was located adjacent to the east of the cottage although it was separated by a steep change in elevation; cottage was located at a higher elevation compared to the woodland. Surface water streams were identified running from north to south along the bank as well as branching off towards to the northeast.





Disused Cottage



Boundary between cottage land and main woodland

- 2.6 The area adjacent to the east of the farmyard comprised a large area of woodland (known as Alders Wood) which also extended north up to boundary of the site. A pond was identified on mapping in close proximity to the farmyard area, however, this could not be accessed due to overgrowth of vegetation. A small corrugated metal structure was observed in close proximity to the location that a pond was identified on current mapping records.



View of woodland area to the east of Sandyhurst Farm



View of woodland area to the east of Sandyhurst Farm

- 2.7 In addition, beyond the wooded area to the east and southeast a further three large fields used for crop planting were observed. These were present on either side of a soft access track present to the south of farmyard.





Access track along the southern boundary of woodland area



Field used for crops

- 2.8 To the south of the farmyard two residential properties were present one of each side of the access road. The residential property located adjacent to the east of the access track closest to the farm buildings was observed to have a heating oil tank in the rear garden. It was plastic and located within a brick built bunded area. No evidence of spills / leaks were observed. No access was possible to view rear garden of the second residential property located to the west of the private access road.



Residential land use at Sandyhurst Farm



Heating Oil tank in rear garden

- 2.9 To the west and southwest of the farmyard large open field used for crop planting were observed.





Commercial Area: West/Northwest of Trinity Road

- 2.10 Three areas of commercial land use were present to the west/northwest of Trinity Road.
- 2.11 The first area was present adjacent to the northern site boundary. It comprised five large buildings occupied for use as offices by a number of companies including Verifone, Rift and Kent Community Health NHS Trust. The buildings were surrounded by associated car parking and soft landscaped areas. In the car parking areas two active electricity substations managed by UK Power Networks were identified. Topography of soft landscaped areas was variable in this area containing both raised and reduced areas. In addition, artificial mounds and bunds had also been placed in various areas particularly along edges of the access roads and car parking areas.
- 2.12 To the northwest of the commercial land use area there were large open grassed fields. These did not appear to be in use and were present up to the boundary with the agricultural land. The grassed field adjacent to the northern boundary of the site was noted to be at a substantially higher elevation compared to adjacent land which comprised Sandyhurst lane.



Electricity Substation



Soil bunds around car parking areas

- 2.13 The second area and third areas both comprised large single units and were located either side of Lower Pemberton Road (see Figure 3). The unit occupied by Smith's Medical was present to the north and the unit occupied by Brake Bros was present to the south. Both units had associated car parking and soft landscaping.
- 2.14 Immediately adjacent to the west of Smiths Medical a construction area was identified which planning records indicate is for a commercial unit to be occupied by Bizspace.





View of Commercial Area to north of Lower Pemberton Road



View towards Brake Bros commercial unit

Commercial Area: East/Southeast of Trinity Road

- 2.15 Two commercial areas were present to the east/southeast of Trinity Road separated by an area of scrubland.
- 2.16 The first commercial area present to the north of the scrubland area comprised four large commercial buildings with associated car parking and soft landscaping. This included a warehouse style building with nine small commercial units within it, a pub/restaurant, a nursery and a medical centre. Waste materials and additional car parking was present to the rear of the units. Waste materials appeared to be general domestic and commercial waste stored in suitable bins ready for collection. Some electrical appliances including fridge-freezer and cooker were also being stored in this area. Hardstanding was in good condition.



Commercial land use in the northeast of the site



Waste storage area to rear of commercial units





- 2.17 The second commercial land use area comprised two buildings occupied by National Health Service with associated car parking. An electricity substation was identified in the car park which was managed by UK Power Networks.



Electricity substation



View of NHS commercial land use in the southeast of the site

Scrubland

- 2.18 The scrubland area contained a number of mounds and depressions. Sand was present at the surface in places.



Mound within scrubland area



Depressions within scrubland area

- 2.19 A footpath was present adjacent to the east of the commercial and scrubland area up to the eastern boundary of the site. A steep increase in elevation was observed up to the footpath.

Rural Areas

- 2.20 The central and southern areas of the site comprised open grassed fields and a number of surface water features. Ground adjacent to the ponds was noted to be saturated with water





and areas of flooding were observed particularly in the field west of the surface water and adjacent to the southern boundary of the site. The main pond was noted to be associated with a pumping station and had a man-made concrete inlet. A concrete lined fish breeding pond was identified in a fenced off area of the site close to the southern boundary.



Man-made concrete inlet to pond



Saturated soils adjacent to pond

- 2.21 Underground infrastructure including manhole cover, an underground brick built structure and a rectangular concrete feature filled with water was identified in a field to southeast of Sandyhurst Farm. The Estate Manager confirmed that these were used historically to pump water offsite but are no longer in use.



Underground brick-built feature



Concrete feature

- 2.22 A Gas Substation operated by Southern Gas Networks was located adjacent to Trinity Road within the fields in the southern area of the site.





Gas Substation



Grassed field

Observations on Ground Stability and Structural Damage

- 2.23 No evidence of structural damage was observed on site. However, significant elevation changes were observed across the site and adjacent land. This includes the boundary with Sandyhurst Lane in the north and with the footpath along the eastern boundary of the site. A retaining wall was observed in the NHS commercial area in the southeast of the site.
- 2.24 This report does not constitute a structural survey or similar survey.



Retaining wall feature within NHS commercial area in the southeast of the site



Sloped boundary between footpath and scrubland area

Bulk Storage of Fuels and Hazardous Material

- 2.25 A heating oil tank was identified within the rear private garden of a residential property associated with Sandyhurst Farm.





- 2.26 Lustre has not been made aware of, or observed, any other current or former bulk above ground fuel storage areas/ hazardous material storage on site. No evidence of any current underground fuel tanks (e.g. unexplained manhole covers, vents, fill points etc) was noted during the site walkover.

Asbestos Containing Soils (ACS)

- 2.27 ACM was commonly used in construction and refurbishment projects until their use was prohibited in 1999. Given the age of the building(s) present on site (including any refurbishment works), the potential for ACM to be present within the building fabric and curtilage is likely for buildings associated with Sandyhurst Farm, Brake Bros commercial unit and NHS commercial buildings in the southeast of the site. Asbestos Containing Materials were observed within the disused barns associated with Sandyhurst Farm. All other units were constructed after 1999 and are therefore unlikely to contain asbestos.

- 2.28 Soil contamination from asbestos can be caused through inappropriate use and poor care of ACM in the building fabric and curtilage causing cross contamination during historical demolition or renovation works. ACS can also be encountered within infilled land and/or imported sub base / fill materials associated with previous construction or renovation works (such as the construction of a new hardstanding). Taking into account the ACMs observed during the site walkover within Sandyhurst Farm area and potential for infilled land due to the presence of a historic chalk pits (see site history section), there is considered to be localised potential for presence of asbestos containing soils.

Waste

- 2.29 Based on the site use, potentially contaminative waste streams are not considered likely. General domestic / commercial type waste is stored in small volumes for regular collection by an appointed and licensed waste contractor.

Drainage

- 2.30 Only sanitary wastewater, surface water run-off (from roof areas and hardstanding) is generated on site. No evidence of activities that would require a Discharge Consent was observed. Lustre has not been made aware of any oil / water interceptors within the site drainage system by the Client. Existing drainage plans were not made available for viewing.

Persistent Organic Pollutants (POPs, inc. Polychlorinated Biphenyls (PCBs))

- 2.31 Three electricity sub-stations were identified within the site boundary; however, these are all in active use and are managed by UK Power Networks.





2.32 Disused fridge freezers were identified in the waste area for the commercial units in the northeast of the site. There was no evidence of damage to the integrity of the external housing of the white goods.

2.33 No other specific POP point sources were identified during the site inspection that could have adversely impacted soils on site.

Invasive Species

2.34 No invasive species (e.g. Japanese knotweed, Giant Hogweed, Himalayan Balsam) were identified during the site walkover, however the site visit conducted does not constitute a full 'injurious weeds and invasive plants' survey.

Further Surveys

2.35 Whilst the site walkover discussion references observations made regarding the presence of features/issues such as invasive species, ACM, site drainage and evidence of structural abnormalities, this report does not constitute specialist surveys on these matters. Should further specialist surveys be carried out in this regard, the findings of these should be reported to Lustre so that we may determine if this has any discernible impact on the findings of this report.

Public Record Information

2.36 Information on potentially significant environmental issues and controls at the site and surrounding area may be held on public records by various regulatory authorities. Information referenced in this Chapter has been sourced directly from the regulatory authorities and from the Landmark database (data summarised within relevant distances of the site centre). A copy of the Envirocheck report is attached at Appendix A. A summary of the significant environmental issues and controls in the Envirocheck report is summarised in the following table.

Public Record	Features
Environmental Permits and Controls	No Local Authority Pollution Prevention and Controls have been identified within 250m of the subject site.
Pollution Incidents to Controlled Waters	<p>Two pollution incidents to controlled waters have been identified within 250m of the subject site as follows:</p> <ol style="list-style-type: none"> 1. Adjacent to northern boundary: related to sewage. The incident occurred on 17 March 1993 and was classified as Category 3 – Minor. 2. 150m southwest: Fire water and foam associated with a Lorry Fire on M20 Junction 9. The incident occurred on 24 August 1994 and was classified as Category 3 – Minor.





Public Record	Features
Hazardous Substances	There are no hazardous substances (e.g. Control of Major Accident Hazards (COMAH), Notification of Installations Handling Hazardous Substances (NIHHS) or Planning Hazardous Substance Consents) recorded within 250m.
Landfill Sites	A single historical landfill site has been identified within 1km from the subject site: 450m E. The record states that deposited waste included inert and commercial waste. No further information is supplied.
Waste Management Facilities	No Waste Management Facilities have been identified within 250m of the subject site.
Contemporary Trade Directory Entries	Nine contemporary trade directory entries have been identified within the site boundary: kitchen furniture manufacturers, frozen food processors & distributors, medical equipment manufacturers, cash registers & check-out equipment, Kent community health trust, Invicta food products, office furniture & equipment, meat products and textile manufacturing.
Petrol Filling Stations (PFS)	No fuel station entries have been identified within 250m of the subject site.

The approximate bearing of identified features is abbreviated with the first letter(s) (e.g. south-west = SW).

Review of Regulatory Information

- 2.37 A review of the available online planning records held by Ashford Borough Council has identified a planning application (ref: 18/00826/AS) for the construction of a three storey office building with associated car parking and hard & soft landscaping along with an extension to the existing estate road within the site boundary. This corresponds to the area of construction works observed during the site walkover.
- 2.38 The documents within the planning application included a report for a desk study and intrusive site investigation which had been undertaken to support the proposed development. The results of the works identified that Made Ground was present up to a depth 0.75m bgl comprising reworked topsoil. However, based on the commercial use of the site, no remedial measures were required.
- 2.39 An environmental search for the site has been requested from Ashford Borough Council. We will update the report with any pertinent information once their response has been received.

Site History

- 2.40 The site history has been assessed by reviewing historical Ordnance Survey maps provided by Landmark and aerial photographic imagery from Google Earth. Relevant maps are reproduced in Appendix B. The historical development of the site and the surrounding area are summarised in the following tables. Where features are identified as having a potential





impact on the proposed development, an indication of potential contaminants has been provided at the end of the Chapter.

- 2.41 It is noted that the mapping process adopted in generating the historical Ordnance Survey records (mapping intervals/frequency, scale, inclusion/exclusion of features etc), may result in an incomplete account of a site's history. Changes in land use between mapping dates, or small yet potentially contaminative land uses, may not be identified from the records. The following account is therefore based solely on the information provided in the mapping records and the dates listed should be considered as approximate.
- 2.42 According to the earliest available historical mapping records (1876) the site was predominantly undeveloped and comprised a mixture of fields and woodland areas. Buildings associated Sandhurst Farm were identified in the north and west of the site. A stream was identified in the west of the site crossing from south to north. By 1898 an old chalk pit is identified in the northern half of the site and a tank and sheepfold were identified in the southern portion of the site. By 1908 the old chalk pit is no longer identified assumed to have been infilled. No other changes occurred until 1980 when the farm buildings in the west of the site were redeveloped.
- 2.43 Further development of the farm building is identified by 1992 along with development of the ponds within the centre of the site. By 1999 the Brakes Bros building adjacent to the west of Trinity Road and the NHS commercial units in the southeast of the site are identified. By 2020 the remaining commercial units in the northeast of the site have been constructed.
- 2.44 Environmentally pertinent historical information from the immediate surrounding area (within 250m) has been summarised in the following table.

Surrounding Land Use	Distance / Bearing	Date Feature Present	Date Feature Absent
Sandpit	75 / N	1898	1999
Romano-British burial site	200 / N	1962	1980

The approximate bearing of identified features is abbreviated with the first letter (e.g. south-west = SW). Approximate distances are interpreted from historical mapping and in metres.

Summary of Identified Potential Sources of Contamination

- 2.45 This section has assessed both the current and historical uses of the site and surrounding areas, as well as publicly available regulatory information. In accordance with *CLR11*, this assessment has allowed potential sources of contamination to be identified.





2.46 Based on our understanding, it is considered that some potential sources can be discounted at this stage of the assessment. Potential sources of contamination have only been discounted where sufficient evidence has been gathered to indicate that the particular source, for reasons relating to the viability of its presence/significance, need not be considered further.

- All current commercial land uses including those listed as contemporary trade directory entries. Commercial units are modern and hardstanding is in good condition. No evidence of activities externally that would be considered to be potentially contaminative. In addition, no changes are proposed in these areas.
- Three onsite electricity substations; all of fairly recent construction (post 1990) and are maintained by UK Power Networks.
- Historical chalk pit in the north of the site; infilling occurred according to historical map recorded by 1907 and therefore gas generation is no longer expected to be active.
- Sandpit located 75m north of the site as there is no evidence of infilling based on a review of current and historical aerial images from Google Earth.
- Both pollution incidents due to their minor impact (Category 3) and the fact that these incidents would have affected a relatively small area.

2.47 Viable potential sources of contamination noted in this chapter, which will be carried forward into the conceptual model and risk assessment, include:

- On-site: localised areas of Made Ground of unknown chemical composition associated within the farmyard at Sandyhurst Farm, disused cottage, mounds within the scrubland area, historical chalk pit (infilled) and disused below ground infrastructure associated with pumping of water offsite. Made Ground may contain contaminants such as asbestos, metals, inorganics, polyaromatic hydrocarbons (PAH) and total petroleum hydrocarbons (TPH). Waste materials from the demolition/ clearance of historical structures/sheds may be present in the Made Ground. Depending on the amount of putrescible material present in these soils, the Made Ground may also represent a source of ground gas;
- On-site: Agricultural land use has the potential to impact shallow soils through the use of herbicides and pesticides.
- On-site: Heating oil tank at the rear of residential property within Sandyhurst Farm. Modern construction and located within a bunded area. No evidence of spills or staining.





- On-site: Asbestos Containing Materials (ACMs) identified within the fabric of agricultural buildings associated with Sandyhurst Farm. In addition, there is potential for ACM to present within the fabric of the disused cottage. Potential to impact shallow soils.
- Off-site: Historical landfill site located 450m east of the site represent potential sources of ground gas.

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3.0 SENSITIVITY & ANTHROPOLOGY

Introduction

- 3.1 This chapter provides information relating to on-site and off-site **'pathways'** and **'receptors'** and includes a review of the geology, hydrogeology, hydrology and ecological setting of the site. A general assessment and review of the site anthropology, such as identified human / built environment receptors, including current and future site occupiers, below ground structures, flora etc is also provided. A summary of identified receptors and site-specific pollutant linkages is given at the end of the chapter. Any pathways (contaminant migration, exposure pathways), which can be discounted in conceptual terms (i.e. considering the unviable nature of the pathway given the proposed development setting or local geology/hydrogeology etc), are discussed at the end of the chapter.

Geology

- 3.2 The 1:50,000 British Geological Survey (BGS) map (Sheet 289)⁴ and the BGS website (National Geoscience Information Service)⁵ shows that no superficial deposits are present beneath the majority of the site. Superficial deposits of Alluvium and Head Deposit are present beneath localised areas of the site:
- Alluvium is present beneath the central portion of the site following line of the pond and extending through Alders Woodland area. Alluvium comprises soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel.
 - Head Deposit is present beneath the commercial areas of the site in the northeast and are also located in close proximity to the northern and northwest boundaries of the site. Head deposits comprise clay and silt.
- 3.3 Bedrock geology across the site comprises the Sandgate Formation. In addition, the Sandgate Formation is overlain by the Folkestone Formation in the north, west and northeast portions of the site. The Folkestone Formation comprises medium and coarse grained, well-sorted cross-bedded sands and weakly cemented sandstones. The Sandgate Formation comprises fine

⁴ BGS Solid and Drift Map Sheet 289

⁵ Information from BGS website: www.bgs.ac.uk consulted in month of report issue





sands, silts and silty clays, commonly glauconitic; some sands limonitic or calcareous; some soft sandstones.

3.4 No artificial or Made Ground is record onsite within the BGS records. However, localised areas of Made Ground are expected associated with the historical development of the site. Made Ground is expected within

- The area of the former chalk pit due to infilling;
- The vicinity of the Sandyhurst Farmyard;
- The disused cottage;
- Mounds within the scrubland area; and
- Below ground infrastructure associated with historical water pumping.

3.5 Reworked topsoil which has the potential contain anthropogenic materials is expected across the rural soft landscaped areas in the central and eastern portions of the site as aerial images show that this area has been previously disturbed to create a development platform for the commercial land use area.

3.6 Historical borehole records have been identified relating to boreholes drilled within the general vicinity of the site and surrounding area. Borehole Reference TQ94NE349 was identified 250m south of the site identified Folkestone Bed to a depth of 15.3m (brown lightly silty sand). This was underlain by very stiff grey silty sandy clay to a depth of 30.5m and grey/green silty clayey sand with occasional shell and rock layers to a depth of 35m. Borehole Reference TR04NW9 was identified 120m northeast of the site identified Head Deposits to a depth of 10m comprising sandy clay over grey sand. Folkestone Formation was then identified as blowing sand to a depth of 22.8m. A copy of each borehole log is included in Appendix C.

Ground Hazards

3.7 BGS data has also been reviewed to determine potential ground stability hazards which may affect the site. The table below summarises the ground stability hazards anticipated on the subject site based upon the expected ground model.

Details	On-Site Hazard Potential
Coal Mining Affected Area	No Hazard
Non-Coal Mining Affected Area	Rare





Details	On-Site Hazard Potential
Potential for Collapsible Ground Stability Hazards	Very Low
Potential for Compressible Ground Stability Hazards	Moderate (associated with Alluvium). Remainder of site – No hazard
Potential for Ground Dissolution Stability Hazards	No Hazard
Potential for Landslide Ground Stability Hazards	Very Low
Potential for Running Sand Ground Stability Hazards	Low
Potential for Shrinking or Swelling Clay Ground Stability Hazards	Very Low

- 3.8 The BGS also holds data on non-coal mining areas, natural cavities and radon, and the Coal Authority holds data on coal mining affected areas for the UK. Data collated by Landmark on these matters (sites/features within 1km of the subject site) are presented below.

Category	Details
BGS Recorded Mineral Sites	One BGS Recorded Mineral Site has been identified 75m north of the site: Sandyhurst Lane Sandpit. Mineral site operated as an opencast site extracting soils from the Folkestone Formation. Status is listed as ceased.
Man-Made Mining Cavities	No man-made mining cavities have been identified within a 1km radius from the centre of the subject site.
Natural Cavities	No natural cavities have been identified within a 1km radius from the centre of the subject site.
Radon Potential - Radon Affected Areas	No radon protective measures are necessary in the construction of new dwellings or extensions

Hydrogeology

- 3.9 The Groundwater Vulnerability Map of England and the Environment Agency website⁶ have been reviewed to determine the aquifer designations. The designation for each is detailed below:
- 3.10 Head Deposits (where present) are recorded as an Unproductive Stratum. These are low permeability strata which are not considered to retain significant quantities of groundwater. If

⁶ Information from Environment Agency Website: www.environment-agency.gov.uk consulted in month of report issue





groundwater is present within unproductive strata, for example within more permeable lenses or small fissures, it is typically discontinuous, of low value and very low sensitivity.

- 3.11 Alluvium (where present) and the Sandgate Formation are recorded as being Secondary A Aquifers. These are permeable strata capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
- 3.12 The Folkestone Formation (where present) is recorded as being a Principal aquifer. These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.
- 3.13 The Environment Agency has defined Source Protection Zones (SPZs) for groundwater sources used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The maps show three main zones (inner, outer and total catchment) and a fourth zone of special interest.
- 3.14 The site is partially located within an EA Source Protection Zone. This covers the west and northwestern portion of the site and categorised as Zone 3 (Total Catchment). The protection zone relates to a potable water abstraction 750m northwest of the site.
- 3.15 One groundwater abstraction is recorded within 1km of the site. This is a potable water abstraction is recorded approximately 750m northwest of the site operated by Mid Kent Water Company under license 4/0278/GR. Daily rate is listed as 3273m³ and yearly rate is listed as 1194688.8m³.
- 3.16 Three groundwater discharge consents are recorded within 250m of the site. Two are located adjacent to north of the site and one is located adjacent to the west of the site. All are related to sewage discharges (final treated effluent) from soakaways associated with Domestic Properties.

Hydrology

- 3.17 A number of surface water features are identified onsite; these comprise a series of ponds and streams orientated from north to south within the centre of the site. These are linked by a number of drains and streams to the Great Stour River which is located 1.5km southeast of the site.
- 3.18 Four surface water abstractions are recorded onsite as follows:





- Small pond within Adlers Wood located to the east of Sandyhurst Farm - operated by Bockhanger Farms Ltd (Points A-B, Watercourse At Bockhanger) and pertains to the abstraction of surface for general agriculture: spray irrigation - direct, under licence no. 9/40/04/0157/Sr.
- Main pond adjacent to the west of Enterprise House - operated by Trinity College (Bockhanger Business Park, ASHFORD) and pertains to the abstraction of surface for impounding, under licence no. 11/052.
- Small pond in south of the site associated with fish breeding – two records identified one operated by Bockhanger Farms Ltd (BOCKHANGER) and pertains to the abstraction of surface for spray irrigation, under licence no. 4/0157/ /SR and one operated by Trinity College (Bockhanger Business Park, ASHFORD) and pertains to the abstraction of surface for impounding, under licence no. 11/052.

3.19 No surface water discharge consents are recorded within 250m of the site.

Environmental Statutory Designations

3.20 A review of the environmental sensitive receptors' database indicates that the site is not located within an ecologically sensitive area. There are no Special Protection Areas, Sites of Special Scientific Interest, Ramsar Sites, Local Nature Reserves, Environmentally Sensitive Areas within 250m of the site.

Environmental Sensitivity

3.21 The sensitivity of each of the identified receptors is rated depending upon the environmental setting of the site, the likelihood for pollutant linkages to be present and potential consequence of those potential pollutant linkages. The assessment approach adopted is based on guidance set out in the *NHBC R&D 66*⁷ document.

3.22 Groundwater is considered to have a High (H2) groundwater sensitivity, which is described in the guidance as being a "Major or minor vulnerable aquifer with probably use nearby (either direct abstraction or baseflow to sensitive watercourses and springs). Likely to be within Outer or Source Catchment protection zones (Zones II or III). Most contaminant releases to the

⁷ Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66, NHBC, 2008





ground environment of concern." Groundwater within the Alluvium, Folkestone Formation and Sandgate Formation is considered to be in hydraulic continuity based on the lack of impermeable geology which could provide an aquitard. It is also likely that onsite surface water is also in hydraulic continuity with groundwater. A number of surface water abstraction are present within the site boundary and the site lies within the outer catchment of an EA Source Protection Zone associated with a potable water abstraction 750m northwest of the site.

- 3.23 The site is considered to have a Moderate (M2) surface water sensitivity, which is listed in the guidance as a "Site within catchment of and relatively close (less than 1000m) to moderate or poor quality (GQA C to F) watercourse that may be subject to planned improvement by attainment of surface water quality objectives. May be potential for transmission of pollutants via baseflow from a highly permeable formation." Surface water is connected to Great Stour River 1.5km southeast of the site via a number of interconnecting streams and drains. The Folkestone Formation and Sandgate Formations are highly permeable and therefore there is potential for transmission of contaminants *via* baseflow.
- 3.24 The site is considered to have a low ecological sensitivity given the absence of any statutory designated ecological receptors either on-site or within proximity to the site.
- 3.25 The sensitivity classifications noted above have been taken into consideration in the development of the conceptual model presented at the rear of this report.

Anthropology

- 3.26 Proposed anthropological receptors at the site are considered to include future residents, site workers and visitors. In the short term, groundworkers and construction personnel will also be considered.

Summary of Identified Receptors and Site-Specific Pollutant Linkages

- 3.27 A review of the environmental sensitivity and proposed anthropological use of the site has identified the following **receptors**, as detailed below.

Identified receptors:

- Future site workers and visitors,
- Future site residents and visitors,
- Ground / construction workers,
- Groundwater within the Alluvium, Sandgate Formation and the Folkestone Formation,
- Surface water (onsite ponds and stream),





- Adjacent land (including neighboring residential dwellings, wild animals),
- Flora,
- Below ground structures and foundations, and
- Potable water pipes.

Viable pathways and pollution linkages:

3.28 A number of **viable migration and exposure pathways** and potential pollutant linkages have been identified, whereby a receptor may be exposed to a source. The viable pollutant linkages have then been used to develop a conceptual model. The following is a summary of **viable**, site specific pathways and pollutant linkages to be considered further:

- In areas of open ground, the following exposure pathways to humans are considered to be active:
 - Inhalation of contaminated dust,
 - Dermal contact and direct ingestion of contaminated soils, and
 - Indirect ingestion of contaminated soils sorbed to home-grown produce.

It is noted that these exposure pathways are only active in soft landscaped areas; permeant hardstanding breaks the potential pathways.
- Inhalation of toxic vapours, potentially migrating into above ground structures from organic contaminants within the Made Ground, contaminated groundwater or localised spills / leaks. Potential for vapours to migrate through hardstanding and open ground.
- Hazardous ground gases, potentially generated by the Made Ground or organic-rich natural soils, may migrate into above ground structures and accumulate within building voids and enclosed spaces (resultant risk of asphyxiation and / or explosion).
- Shallow soil contamination has the potential to vertically migrate downwards into the underlying natural soils and perched or shallow groundwater by leaching and infiltration. These processes are enhanced in areas of soft landscaping due to an increased infiltration potential. Conversely, areas of hardstanding reduce infiltration potential and leaching rates, which results in a lower mobility of any shallow contamination.
- Vertical mixing of groundwater (assumed to be in hydraulic continuity) between the Alluvium, Sandgate Formation and the Folkestone Formation.
- Lateral migration of site-borne contaminants to off-site areas (down hydraulic gradient), including adjacent land and surface water (via surface water runoff and baseflow).
- Lateral migration of potentially contaminated shallow groundwater from off-site areas (up hydraulic gradient), impacting on-site groundwater.
- Flora grown within areas of soft landscaping may be exposed to contaminants through root uptake mechanisms.





- Below ground concrete structures and foundations are susceptible to chemical attack from aggressive ground conditions (pH and water-soluble sulphate).
- Potable water pipes are susceptible to chemical attack from shallow soil contamination.
- Ground gases generated off-site may also migrate through the Made Ground and more permeable lenses of the underlying natural soils onto site.

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4.0 CONCLUSIONS & RECOMMENDATIONS

Geoenvironmental Considerations

4.1 A conceptual model and qualitative risk assessment have been included at the end of this report. The risk ratings assigned in the risk table, and summarised in this Chapter, are based on information obtained through desk-based research, a site walkover and on our experience in assessing risks from similar sites. The proposed end use of the site, anticipated ground conditions, environmental receptors and viable exposure pathways have been considered.

4.2 In summary, this Phase 1 Desk Study has determined that there is a potential for contamination to be present on site in a circumstance which could lead to risks to identified receptors. Identified sources of potential contamination have been identified on site including

- Potential for localised Made Ground in the vicinity of the following:
 - I. Sandyhurst Farmyard;
 - II. Disused cottage;
 - III. Former chalk pit,
 - IV. Mounds within scrubland area; and
 - V. Disused below ground infrastructure associated with water pumping.
- Potential for use of pesticides and/or herbicides due to longstanding agricultural use in fields which are still currently used for growing crops;
- Potential for anthropogenic inclusions within shallow soils beneath soft landscaped areas in the central and eastern portions of the site due to previous works to create a development platform; and
- Potential for impact of asbestos containing materials (ACM) and fibres (ACS) within shallow soils in the vicinity of agricultural barns and disused cottage.

4.3 As illustrated in the risk assessment table, several of the risks attributable to viable pollutant linkages were considered to be low or acceptably low. **The risk ratings identified in this assessment are not considered prohibitive for the development and can be effectively managed in accordance with CLR11.** The risks which require further consideration in this regard are detailed below:





- Moderate to Moderate/Low risks have been identified to future site residents and visitors in areas of proposed soft landscaping including private gardens due to potential contaminants within Made Ground, ACM/ACS associated with former agricultural barns and disused cottage, anthropogenic inclusions within reworked topsoil and potential for pesticides and herbicides in the areas currently used to grow crops.
- Moderate/Low risk have been identified to groundwater, surface water, flora, and below ground infrastructure from potential contaminants associated with Made Ground
- Moderate/Low risk has been identified to groundwater and flora from pesticides and/or herbicides associated with fields used for crop planting
- An initial moderate/ low risk has been identified from ground gases within the shallow soils underlying the site and a landfill located 450m east of the site. Based on the CIRIA C665 risk matrices, the severity of this risk is the principal driver for the moderate / low risk rating. Acknowledging the unlikely occurrence from shallow soils due to the anticipated absence of any significant Made Ground and naturally low organic content of the underlying natural soils (*Folkestone and/or Sandgate Formation*) as well as the unlikely ongoing gas source from a nearby landfill due its redevelopment into residential housing and distance from site (450m east); the risk from ground gas is considered to be **acceptably low** and it is our opinion that no further work or assessment is required regarding ground gas.

4.4 The qualitative nature of the risk assessment is not absolute. Furthermore, although very low and low risks may have been assigned to various pollutant linkages, the risk cannot be eliminated (i.e. “no risk”) at this stage of the assessment and residual risks will remain which should not be discounted on the basis that the risk is low.

4.5 Based on the above risk ratings, further investigation is required to refine the risk assessment and validate the conceptual site model. A targeted Phase 2 Site Investigation is therefore recommended which would aim to determine:

- The presence / absence of Made Ground within each of the potential areas identified as well as identify any risks from contamination.
- Assess for presence of pesticides and herbicides within fields used for crop planting.





- Based on the soil data identified, consider if a viable source of contamination exists that presents a potential risk to groundwater. If appropriate assess depth and chemical quality of groundwater.
- Validate suitability of existing shallow soils for use in proposed garden areas with consideration to presence of anthropogenic inclusions.

4.6 A suitable asbestos survey should be undertaken prior to the start of any site refurbishment/demolition works, if not already completed. If encountered, asbestos and asbestos containing materials, should be dealt with in accordance with CAR 2012.

Comments on Waste Classification

4.7 Separate to the human health and wider environmental risks from potential contamination, the presence of some contaminants can also impact the waste spoil disposal costs. Depending on the chemical composition of the Made Ground and any contaminants present and their distribution, soils may require different levels classification for waste disposal purposes. For example, the presence of asbestos within the Made Ground or any historical demolition waste can significantly change the classification of waste soils which could incur greater disposal costs. The Client should consider the impacts that this may have the overall waste disposal strategy for the site.

4.8 Should there be a need for the disposal of soils as part of the development, it is recommended that the Client consider the need for undertaking a waste spoil assessment as part of any intrusive works. This may include an assessment of the hazardous nature of the soil by virtue of any contamination (in accordance with the Waste Framework Directive and the Environment Agency's *Technical Guidance WM3 Hazardous Waste*⁸), and Waste Acceptance Criteria (WAC) testing.

Preliminary Ground Model & Ground Hazard Recommendations

4.9 The BGS information shows that the site is underlain by variable geology. Alluvium deposits are present within the central portion of the site which have a Moderate risk for compressible ground. Head deposits comprising clay and silt are potentially present in the northeast of the site. Folkestone Formation is present in a U-shaped area around the north, northwest and

⁸ Technical guidance WM3: Guidance on the Classification and Assessment of Waste (1st Edition 2015). Environment Agency.





northeast of the site. This is underlain by the Sandgate Formation which is present across the entire site area.

- 4.10 Potential for groundwater at depths of between 10 to 12 metres below ground level based on historical BGS logs.
- 4.11 A historical chalk pit was identified in the northern portion of the site adjacent to the west of Alders Wood; it was subsequently infilled by 1907. A sand pit was identified 75m north of the site; which is disused but has not been infilled.
- 4.12 A site wide geotechnical investigation will be required to inform foundation design. This is required due to the presence of varying geology and topography at the site. The geotechnical investigation can be combined with the environmental investigation recommended in section 4.5.

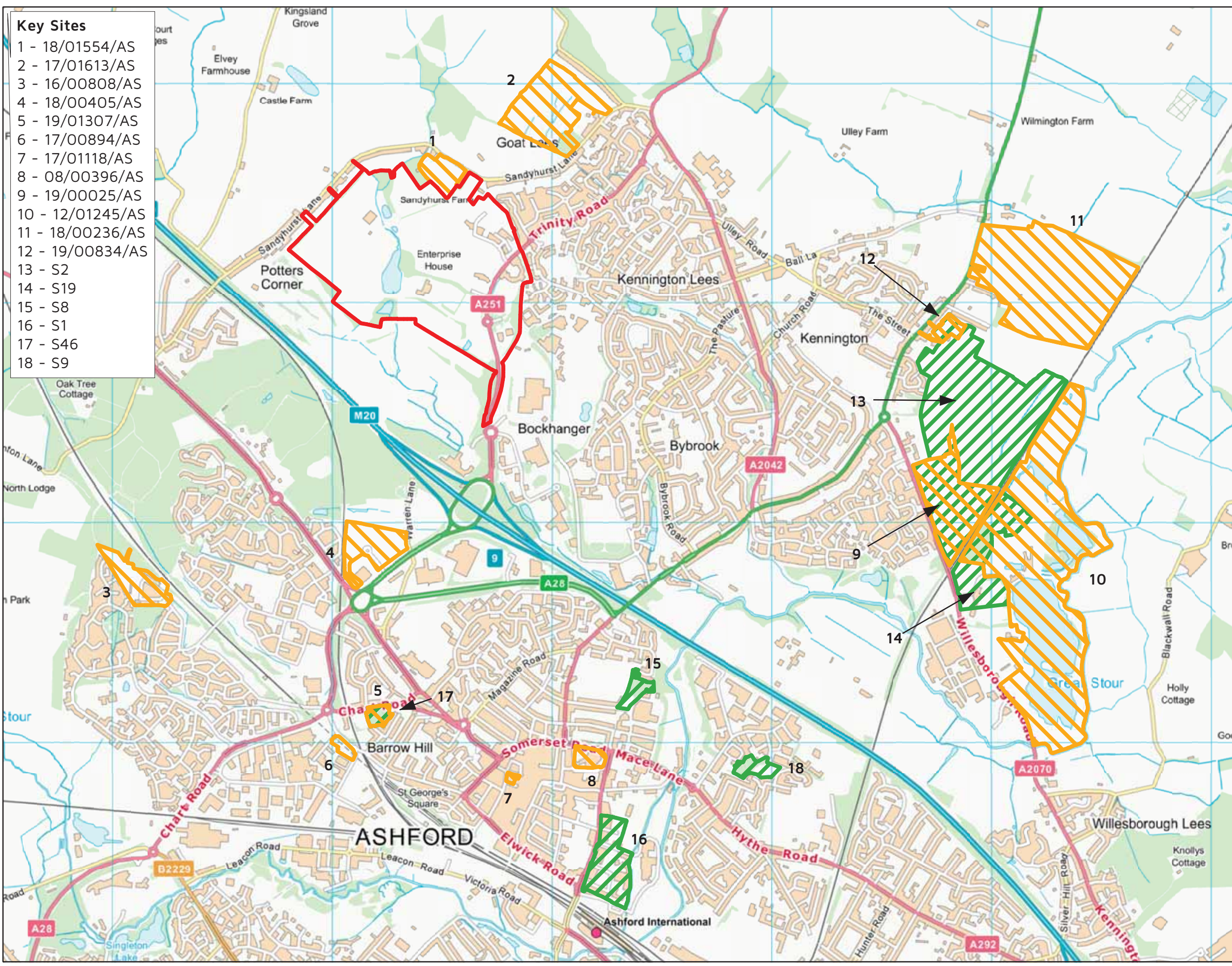
Statutory Designation

- 4.13 The *National Planning Policy Framework (NPPF)* states that “land should be suitable for its new use and as a minimum, after carrying out remediation (if required), the land should **not** be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990”. It is our opinion that, based on the findings of this Phase 1 Desk Study, it is unlikely the site would be designated as statutory contaminated land by the Local Authority under the provision of the published Statutory Guidance. It is advisable however, that any recommendations made in this report are implemented in line with current guidance and good practice, especially where verification of the risk assessment is necessary.



**CONCEPTUAL
MODEL & RISK
ASSESSMENT**

Appendix IV- Cumulative sites



- Key Sites**
- 1 - 18/01554/AS
 - 2 - 17/01613/AS
 - 3 - 16/00808/AS
 - 4 - 18/00405/AS
 - 5 - 19/01307/AS
 - 6 - 17/00894/AS
 - 7 - 17/01118/AS
 - 8 - 08/00396/AS
 - 9 - 19/00025/AS
 - 10 - 12/01245/AS
 - 11 - 18/00236/AS
 - 12 - 19/00834/AS
 - 13 - S2
 - 14 - S19
 - 15 - S8
 - 16 - S1
 - 17 - S46
 - 18 - S9

Legend

- Site Location
- Planning Applications
- Local Plan Allocations

TITLE
Cumulative Sites

CLIENT
Quadrant Eureka LLP

PROJECT
Eureka

SCALE AT A3 DATE JOB NO.
1:17,000 March 2020 14384



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Appendix V – Desk based archaeological assessment

ARCHAEOLOGICAL DESK BASED ASSESSMENT

Eureka Park, Ashford, Kent

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Eureka Park, Ashford, Kent
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ARCHAEOLOGICAL DESK BASED ASSESSMENT

Quality Management

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EXECUTIVE SUMMARY

Eureka Park, Ashford has been assessed for its below ground archaeological potential.

At present, the study site comprises a farm, agricultural land, a river and a pond in the west and office buildings, car parks and agricultural land in the east.

In terms of designated archaeological assets, no World Heritage sites, Scheduled Monuments, Historic Battlefield, or Historic Wreck sites are identified within the study area. The study site is situated within an Area of Archaeological Priority.

The study site has a high archaeological potential for finds or features dating to the Late Iron Age and Early Roman periods, and a low to moderate potential for finds or features relating to Medieval agricultural activity. A low archaeological potential has been identified for evidence dating to all other periods.

Chalk extraction in the north west of the study site and the construction of buildings and stripping of soil in the north east of the study site will have had a severe impact on any surviving archaeology. Agricultural activity will have had a widespread below ground impact on any surviving archaeology.

The study site is proposed for mixed use redevelopment, comprising residential, commercial and employment space alongside associated infrastructure and landscaping. The proposed development has the potential to have an impact on any archaeological remains which may be present on the study site.

The Local Planning Authority will require further archaeological mitigation. It is suggested that this could follow the granting of planning permission, secured by an appropriately worded archaeological planning condition.

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ARCHAEOLOGICAL DESK BASED ASSESSMENT

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Fig. 18: 2019 Aerial Photograph

1 INTRODUCTION AND SCOPE OF STUDY

- 1.1 This below ground archaeological desk-based assessment has been prepared by Sophie Bell and edited by Duncan Hawkins of RPS on behalf of Quadrant Estates.
- 1.2 The subject of this assessment, also known as the study site, is Eureka Park, Ashford, Kent (Fig. 1). The study site is centred on TR 00393 45305.
- 1.3 In accordance with central and local government policy and guidance on archaeology and planning, and in accordance with the 'Standard and Guidance for Historic Environment Desk Based Assessments' (Chartered Institute for Archaeologists August 2014), Quadrant Estates has commissioned RPS Consulting Services Ltd to undertake this below ground archaeological desk based assessment.
- 1.4 In terms of designated archaeological assets, no World Heritage sites, Scheduled Monuments, Historic Battlefield, or Historic Wreck study sites are identified within the study area. The study site is situated within an Area of Archaeological Priority.
- 1.5 This desk-based assessment comprises an examination of evidence on the Kent Historic Environment Records (HER) and other sources, together with the results of a comprehensive historic map regression exercise.
- 1.6 This document draws together the available archaeological, topographic and land-use information in order to clarify the archaeological potential of the study site and to consider the need for design, civil engineering, and archaeological solutions to the archaeological potential identified.

2 PLANNING BACKGROUND AND DEVELOPMENT PLAN FRAMEWORK

- 2.1 National legislation regarding archaeology, including scheduled monuments, is contained in the Ancient Monuments and Archaeological Areas Act 1979, amended by the National Heritage Act 1983 and 2002, and updated in April 2014.
- 2.2 In March 2012, the government published the National Planning Policy Framework (NPPF), and it was last updated in February 2019. The NPPF is supported by the National Planning Practice Guidance (NPPG), which was published online 6th March 2014, with the guidance on Conserving and Enhancing the Historic Environment last updated 23 July 2019. (<https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment>).
- 2.3 The NPPF and NPPG are additionally supported by three Good Practice Advice (GPA) documents published by Historic England: GPA 1: The Historic Environment in Local Plans; GPA 2: Managing Significance in Decision-Taking in the Historic Environment (both published March 2015). The second edition of GPA3: The Setting of Heritage Assets was published in December 2017.

National Planning Policy

- 2.4 Section 16 of the NPPF, entitled Conserving and enhancing the historic environment 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 that heritage makes to our knowledge and understanding of the past.
- 2.5 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. Paragraph 189 states that planning decisions should be based on the significance of the heritage asset and that level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to review the potential impact of the proposal upon the significance of that asset.
- 2.6 *Heritage Assets* are defined in Annex 2 of the NPPF as: a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. They include designated heritage assets (as defined in the NPPF) and assets identified by the local planning authority during the process of decision-making or through the plan-making process.
- 2.7 Annex 2 also defines *Archaeological Interest* as a heritage asset which holds or potentially could hold evidence of past human activity worthy of expert investigation at some point.
- 2.8 A *Nationally Important Designated Heritage Asset* comprises a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area.
- 2.9 *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.

- 2.10 *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.
- 2.11 In short, government policy provides a framework which:
- Protects nationally important designated Heritage Assets;
 - Protects the settings of such designations;
 - In appropriate circumstances seeks adequate information (from desk based assessment and field evaluation where necessary) to enable informed decisions;
 - Provides for the excavation and investigation of sites not significant enough to merit *in-situ* preservation.
- 2.12 The NPPG reiterates that the conservation of heritage assets in a manner appropriate to their significance is a core planning principle, requiring a flexible and thoughtful approach. Furthermore, it highlights that neglect and decay of heritage assets is best addressed through ensuring they remain in active use that is consistent with their conservation. Importantly, the guidance states that if complete, or partial loss of a heritage asset is justified, the aim should then be to capture and record the evidence of the asset's significance and make the interpretation publicly available. Key elements of the guidance relate to assessing harm. An important consideration should be whether the proposed works adversely affect a key element of the heritage asset's special architectural or historic interest. Additionally, it is the degree of harm, rather than the scale of development, that is to be assessed. The level of 'substantial harm' is considered to be a high bar that may not arise in many cases. Essentially, whether a proposal causes substantial harm will be a judgment for the decision taker, having regard to the circumstances of the case and the NPPF. Importantly, harm may arise from works to the asset or from development within its setting. Setting is defined as the surroundings in which an asset is experienced and may be more extensive than the curtilage. A thorough assessment of the impact of proposals upon setting needs to take into account, and be proportionate to, the significance of the heritage asset and the degree to which proposed changes enhance or detract from that significance and the ability to appreciate it.
- 2.13 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

- 2.14 The site is located within the district of Ashford, which adopted the Ashford Local Plan 2030 in February 2019, and Eureka Park is allocated for development in the document. The Local Plan contains the following policy relating to archaeology:

Policy ENV15 - Archaeology

The archaeological and historic integrity of Scheduled Monuments and other important archaeological sites, together with their settings, will be protected and where possible enhanced. Development which would adversely affect such designated heritage assets will be assessed in line with Policy ENV13.

In addition, where the assessment outlined in Policy ENV13 reveals that important or potentially significant archaeological heritage assets may exist, developers will be required to arrange for field evaluations to be carried out in advance of the determination of planning applications.

Where the case for development affecting a site of archaeological interest is accepted, any archaeological remains should be preserved in situ as the preferred approach. Where this

is not possible or justified, appropriate provision for preservation by record may be an acceptable alternative dependent upon their significance. Any archaeological recording should be by an approved archaeological body and take place in accordance with a specification and programme of work to be submitted to and approved by the Borough Council in advance of development commencing.

- 2.15 In terms of designated archaeological assets, no World Heritage sites, Scheduled Monuments, Historic Battlefield, or Historic Wreck study sites are identified within the study area. The study site is situated within an Area of Archaeological Priority.
- 2.16 In line with relevant planning policy and guidance, this desk-based assessment seeks to clarify the site's archaeological potential and the likely significance of that potential and the need or otherwise for additional mitigation measures.

3 GEOLOGY AND TOPOGRAPHY

Geology

- 3.1 The underlying geology of the study site is recorded by the British Geological Survey (BGS Online 2020) as Sandgate formation in the south of the study site (Sandstone, Siltstone and Mudstone) and Folkestone Formation (Sandstone) in the east, north and west.
- 3.2 Superficial deposits comprising Alluvium (Clay, Silt, Sand and Gravel) are recorded running in a narrow north-west strip through the centre of the study site. Superficial deposits are not recorded for the rest of the study site.
- 3.3 No site-specific geotechnical information was available at the time of writing this report.

Topography

- 3.4 The topography of the study site is uneven, measuring 68m AOD (Above Ordnance Datum) in the north., 58m AOD in the west and east, 47m AOD in the south, and 49m AOD in the centre.
- 3.5 A tributary of the Great Stour river runs through the study site on a roughly north to south alignment. A body of water associated with this tributary is located in the centre of the study site.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE

Timescales used in this report

Prehistoric

Palaeolithic	900,000 -	12,000 BC
Mesolithic	12,000 -	4,000 BC
Neolithic	4,000 -	1,800 BC
Bronze Age	1,800 -	600 BC
Iron Age	600 -	AD 43

Historic

Roman	AD 43 -	410
Saxon/Early Medieval	AD 410 -	1066
Medieval	AD 1066 -	1485
Post Medieval	AD 1486 -	1799
Modern	AD 1800 -	Present

Introduction

- 4.1 This chapter reviews the available archaeological evidence for the study site and the archaeological/historical background of the general area, and, in accordance with NPPF, considers the potential for any as yet to be discovered archaeological evidence on the study site.
- 4.2 What follows comprises a review of known archaeological assets within a 1.5km radius of the study site (Fig. 2), also referred to as the study area, held on the Kent Historic Environment Record (HER), together with a historic map regression exercise charting the development of the study area from the eighteenth century onwards until the present day.
- 4.3 Chapter 5 subsequently considers the site conditions and whether the proposed development will impact the theoretical archaeological potential identified below.

Previous Archaeological Work

- 4.4 A number of archaeological investigations have taken place on the study site. Investigations include:
- An archaeological evaluation took place in the north east of the study site in 2006. 500m of trenching identified Late Iron Age / Early Roman activity in the south west corner of the area investigated comprising cremations and ditches. The northern half of the area investigated had previously been lowered thus removing any archaeological traces. An excavation subsequently took place on this site (EKE10753, EKE9215, TR 0077 4528).
- An archaeological evaluation took place on two plots in the eastern part of the study site in 2007. Late Iron Age to Early Roman ditches and pits were identified in the eastern part of the area investigated. Nothing was identified in the western part of the area investigated. The

eastern plot was subsequently excavated. More ditches and pits were identified, along with a Roman driveway (EKE10754, EKE10755, TR 0076 4511).

- An archaeological evaluation took place in the centre of the study site in 1995. No features of archaeological interest were identified during the evaluation (EKE4896, TR 0046 4505).

Prehistoric

- 4.5 No Palaeolithic finds have been identified within the study area. A low archaeological potential has been identified for evidence dating to this period.
- 4.6 Mesolithic artefacts have been found in the north west of the study site. The flints comprised an axe, thirty five blades or flakes and seven scrapers (MKE3918, TR 001 455). A number of residual Mesolithic flints were found at Potters Corner, 794m south west of the study site, during the laying of foundations for a house (MKE3411, TQ 9925 4467).
- 4.7 A flint working site was identified at The Warren, 840m south west of the study site, in 1933. The site lies on the false crest of a prominent ridge (MKE3406, TQ 9958 4427). A Neolithic serrated flint flake was recovered from The Warren, 557m south west of the study site, in the 1960s (MKE3404, TQ 999 444).
- 4.8 Two Bronze Age axes have been found at Ashford Golf Club, 358m south of the study site (MKE3956, TR 0009 4455). A Late Bronze Age urn was found at Potters Corner, 753m south west of the study site, in 1935. No associated finds or bones were found with the urn (MKE3408, TQ 9982 4422).
- 4.9 On the basis of available information, the study site is considered to have a low archaeological potential for finds or features dating to the Mesolithic, Neolithic and Bronze Age periods.

Iron Age and Roman

- 4.10 A Middle to Late Iron Age coin is recorded as having been found at an unknown location to the north of the study site (MKE56497, TQ 998 462).
- 4.11 An archaeological evaluation took place in the north east of the study site in 2006. 500m of trenching identified Late Iron Age to Early Roman activity in the south west corner of the area investigated comprising cremations and ditches. The northern half of the area investigated had previously been lowered thus removing any archaeological traces. An excavation subsequently took place on this site (MKE44676, EKE10753, EKE9215, TR 0077 4528).
- 4.12 An archaeological evaluation took place on two plots in the eastern part of the study site in 2007. Late Iron Age to Early Roman ditches and pits were identified in the eastern part of the area investigated. Nothing was identified in the western part of the area investigated. The eastern plot was subsequently excavated. More ditches and pits were identified, along with a Roman driveway (MKE44677, EKE10754, EKE10755, TR 0076 4511).
- 4.13 A Late Iron Age or Early Roman cremation burial was identified 35m north east of the study site in 1963. The burial comprised a jar used as a cinerary urn, a bowl and a dish, and dated to the first century AD (MKE3911, TR 0080 4546).
- 4.14 A Roman cremation burial and flagon was identified near Sandhurst farm, 170m north of the study site, in 1914 (MKE3896, TR 0051 4572).
- 4.15 A Roman cremation burial was also discovered at Potters Corner in 1929, 838m west of the study site. Finds included a small whitish urn, another small urn, an inkpot, a cup of Samian ware and eighteen gold coins or disks (MKE3407, MKE112333, MKE112334, MKE112337, TQ 9913 4474).
- 4.16 A Roman glass bottle was found at Kennington in 1923, 777m east of the study site. The bottle dates from the second to third centuries AD (MKE3895, TR 0167 4525).

- 4.17 Features dating to the Late Iron Age and Early Roman periods have been identified both on and in the immediate vicinity of the study site. The study site is considered to have a high archaeological potential for further finds or features dating to these periods.

Anglo-Saxon and Medieval

- 4.18 A tenth to eleventh century copper alloy finger ring is recorded as having been found at an unknown location to the north of the study site (MKE55623, TQ 998 462).
- 4.19 On the basis of available evidence, the study site is considered to have a low archaeological potential for finds or features dating to the Anglo Saxon period.
- 4.20 Two Medieval pits were identified at Goat Lees School Site, 104m east of the study site, and were dated to 1175-1375 AD. Both pits contained charcoal and Medieval pottery (MKE78325, TR 0100 4514).
- 4.21 A large quantity of pottery, mostly comprising waste material, was recovered during the laying of the foundations for a house at Potters Corner, 794m south west of the study site. Although no traces of a kiln were found during the excavations, a large quantity of ash and charcoal was encountered and was taken as proof that there was a Medieval pottery kiln in the area. The pottery assemblage dated to the thirteenth century (MKE3411, TQ 9925 4467). Spherical iron nodules were found in a garden near the kiln site 621m south west of the study site (MKE97607, TQ 9933 4483).
- 4.22 A copper alloy seal matrix dating to c. 1400 to 1700 AD is recorded as having been found at an unknown location to the north of the study site (MKE56500, TQ 998 462).
- 4.23 During the Medieval period, the study site would have been located within the agricultural hinterland of Ashford. It is considered to have a low to moderate potential for archaeological evidence dating to these periods, most likely comprising features associated with agricultural use of the land.

Post Medieval & Modern (including map regression exercise)

- 4.24 A number of Post Medieval farmsteads are identified within the study area. Those closest to the study site include Sandyhurst Farm, located in the west of the study site (MKE87314, TR 0016 4537), out farms located 152m south of the study site (MKE87315, TQ 9992 4487) and 35m south of the study site (MKE87316, TR 0036 4487), and Sandhurst Farm, located 138m north of the study site (MKE87328, TR 0045 4569).
- 4.25 In the Post Medieval and Modern periods, cartographic sources are useful in charting the historic development of the study site.
- 4.26 The 1769 Andrews and Dury Map of Kent (Fig. 4) shows the study site located within an agricultural landscape to the north of the main settlement of Ashford. A number of farmsteads are visible in the immediate vicinity, including Sandy Hurst. The 1789 Ordnance Survey Drawing (Fig. 5) shows a stream and pond running through the centre of the study site. The 1842 Ashford Parish Tithe Map (Fig. 6) shows the farmstead at Sandy Hurst in more detail. The remainder of the study site continued to be used for agriculture.
- 4.27 The 1872 Ordnance Survey Map (Fig. 7) shows the study site comprising several large fields and with the farmstead in the centre west. By 1896 (Fig. 8), an old chalk pit is shown in the north west of the study site. This appears to have been filled in by 1906 (Fig. 9).
- 4.28 Aside from some changes to field boundaries, no significant changes are noticeable on the 1938 Ordnance Survey Map (Fig. 10). The 1940 Aerial Photograph (Fig. 11) shows the study site in

more detail at this time, comprising a mixture of arable and pasture fields. A woodland is located in the north west, and an orchard in the south east. Sandyhurst farm is visible in the north west, and a number of small structures are visible in the surrounding fields.

- 4.29 The 1960 Aerial Photograph (Fig. 12) and 1961 Ordnance Survey map (Fig. 13) show the study site remaining in agricultural use for the next couple of decades, although utilisation and size of some of the fields has changed. A number of residential properties have now been constructed just to the north west of the study site. No significant changes are visible on the 1980 Ordnance Survey Map (Fig. 14).
- 4.30 The 2006 Aerial Photograph (Fig. 15) shows the study site comprising the farm in the north west, though structures visible on earlier maps appear to have been replaced by new barns and other storage units. Adjacent to the farm, a woodland is located either side of the river which runs south into a large pond. To the north east and west of the ponds, a number of arable fields are located. To the south east of the pond, an office building and associated car parking has been constructed. A road and commercial space occupy the far east of the study site. By 2007 (Fig. 16), the soil across much of the eastern part of the site has been stripped. A new office block is in the process of being built in the north east of the study site. Further buildings have been constructed in the north east by 2013 (Fig. 17).
- 4.31 The 2019 Aerial Photograph (Fig. 18) shows the study site at present. The west of the study site comprises a farm and agricultural land. A river and pond run down the middle of the study site, with a woodland following the river in the north. A number of office buildings and car parks have been constructed in the east of the study site.

Undated

- 4.32 A couple of undated ditches were identified during an evaluation at the Goat Lees School, 118m east of the study site (MKE78323, TR 0099 4522; MKE78324, TR 0101 4515).
- 4.33 A ring ditch has been identified as a cropmark 77m north west of the study site (MKE91130, TQ 9983 4547). A number of cropmarks have also been identified in the wider study area (MKE90812, TR 0046 4637; MKE90873, TR 0133 4633).

Assessment of Significance (Designated Assets)

- 4.34 Existing national policy guidance for archaeology (the NPPF as referenced in section 2) enshrines the concept of the 'significance' of heritage assets. Significance as defined in the NPPF centres on the value of an archaeological or historic asset for its 'heritage interest' to this or future generations.
- 4.35 In terms of designated archaeological assets, no World Heritage sites, Scheduled Monuments, Historic Battlefield, or Historic Wreck sites are identified within the study area. The study site is situated within an Area of Archaeological Priority.

Assessment of Significance (Non-Designated Assets)

- 4.36 As identified by desk based work, archaeological potential by period and the likely significance of any archaeological remains which may be present is summarised in table form below:

Period:	Identified Archaeological Potential	Identified Archaeological Significance
Palaeolithic, Mesolithic, Neolithic and Bronze Age	Low	Low (Local)
Iron Age and Roman	High	Low (Local)

Anglo-Saxon	Low	Low (Local)
Medieval	Low to Moderate	Low (Local)
Post Medieval	Low	Low (Local)

5 SITE CONDITIONS, THE PROPOSED DEVELOPMENT & REVIEW OF POTENTIAL DEVELOPMENT IMPACTS ON ARCHAEOLOGICAL ASSETS

Site Conditions

- 5.1 The 2019 Aerial Photograph (Fig. 18) shows the study site at present. The west of the study site comprises a farm and agricultural land. A river and pond run down the middle of the study site, with a woodland following the river in the north. A number of office buildings and car parks have been constructed in the east of the study site.
- 5.2 Chalk extraction in the north west of the study site and the construction of buildings and stripping of soil in the north east of the study site will have had a severe impact on any surviving archaeology. Agricultural activity will have had a widespread below ground impact on any surviving archaeology.

Proposed Development

- 5.3 The study site is proposed for mixed use redevelopment, comprising residential, commercial and employment space alongside associated infrastructure and landscaping.

Review of Potential Development Impacts on Designated and Non-Designated Archaeological Assets

- 5.4 In terms of designated archaeological assets, no World Heritage sites, Scheduled Monuments, Historic Battlefield, or Historic Wreck study sites are identified within the study area. The study site is situated within an Area of Archaeological Priority.
- 5.5 The study site has a high archaeological potential for finds or features dating to the Late Iron Age and Early Roman periods, and a low to moderate potential for finds or features relating to Medieval agricultural activity. A low archaeological potential has been identified for evidence dating to all other periods.
- 5.6 The proposed development has the potential to have an impact on any archaeological remains which may be present on the study site.

6 SUMMARY AND CONCLUSIONS

- 6.1 The study site has been assessed for its below ground archaeological potential.
- 6.2 At present, the study site comprises a farm, agricultural land, a river and a pond in the west and office buildings, car parks and agricultural land in the east.
- 6.3 In terms of designated archaeological assets, no World Heritage sites, Scheduled Monuments, Historic Battlefield, or Historic Wreck sites are identified within the study area. The study site is situated within an Area of Archaeological Priority.
- 6.4 The study site has a high archaeological potential for finds or features dating to the Late Iron Age and Early Roman periods, and a low to moderate potential for finds or features relating to Medieval agricultural activity. A low archaeological potential has been identified for evidence dating to all other periods.
- 6.5 Chalk extraction in the north west of the study site and the construction of buildings and stripping of soil in the north east of the study site will have had a severe impact on any surviving archaeology. Agricultural activity will have had a widespread below ground impact on any surviving archaeology.
- 6.6 The study site is proposed for mixed use redevelopment, comprising residential, commercial and employment space alongside associated infrastructure and landscaping. The proposed development has the potential to have an impact on any archaeological remains which may be present on the study site.
- 6.7 The Local Planning Authority will require further archaeological mitigation. It is suggested that this could follow the granting of planning permission, secured by an appropriately worded archaeological planning condition.

Sources Consulted

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Kent Historic Environment Record

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Historic England Historic Environment Good Practice Advice in Planning: 3 The Setting of Heritage Assets December 2017 unpublished document

Cartographic and Aerial Photographic

1769 Andrews and Dury Map of Kent

1789 Ordnance Survey Drawing

1842 Ashford Parish Tithe Map

1872 Ordnance Survey Map

1896 Ordnance Survey Map

1906 Ordnance Survey Map

1938 Ordnance Survey Map

1940 Aerial Photograph

1960 Aerial Photograph

1961 Ordnance Survey Map

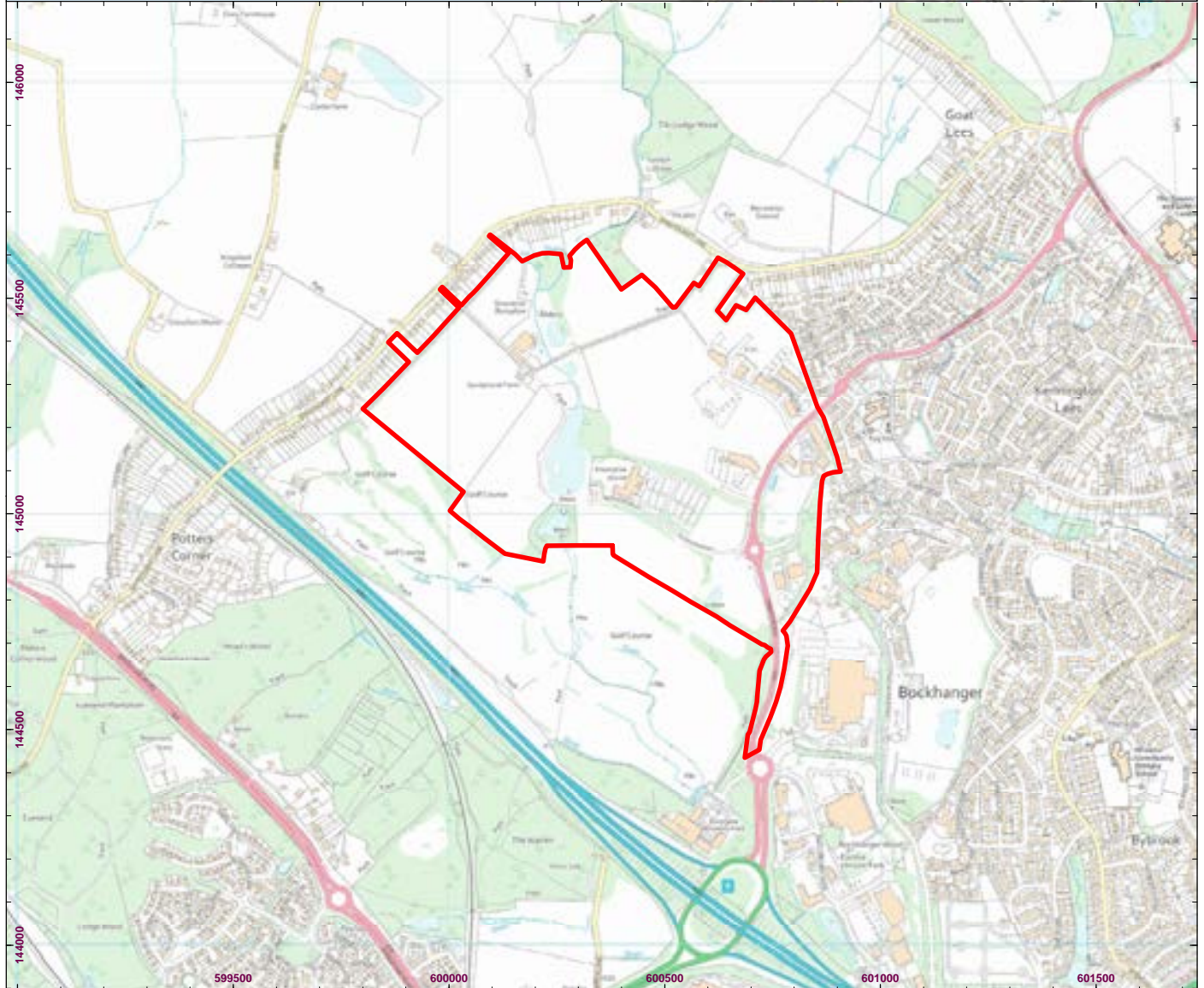
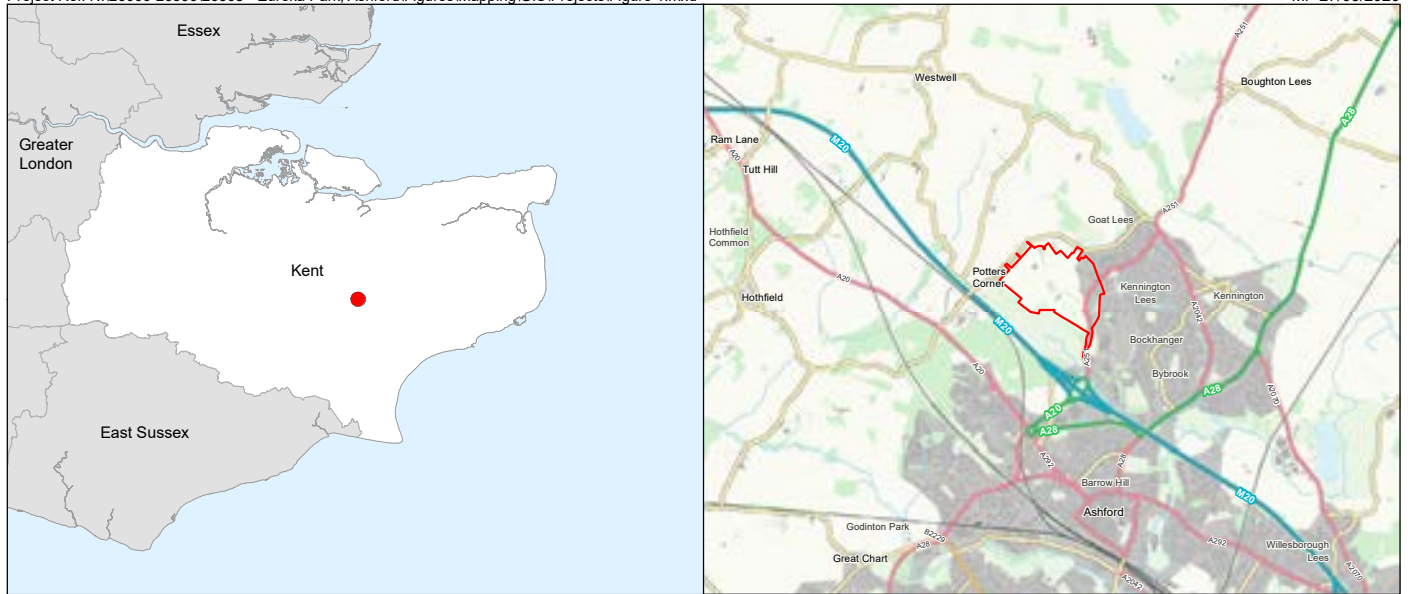
1980 Ordnance Survey Map

2006 Aerial Photograph

2007 Aerial Photograph

2013 Aerial Photograph

2019 Aerial Photograph



 Site Boundary



0 100 200m
Scale at A4: 1:15,000



Figure 1
Site Location

Project Ref: N:\26000-26999\26368 - Eureka Park - Astiford\Figures\Mapping\GIS\Projects\Figure 2 HER.mxd



Legend

- Site Boundary
- Search Radius 1.5km
- Non-designated Heritage Assets:**
- Area of Archaeological Potential
- HER Record (Point)**
- + Find Spot
- Monument
- ▲ Farmstead
- Building
- HER Record (Line)**
- Monument
- HER Record (Polygon)**
- Landscape
- Historic Park
- Previous Archaeological Work:**
- HER Event (Point)
- HER Event (Line)
- HER Event (Polygon)
- Stour Basin Palaeolithic Project - Potential:**
- LOW, apart from in vicinity of Late Glacial palaeo-landsurface
- MODERATE.
- MODERATE/HIGH. Deposits likely to contain important remains are relatively abundant in this area.

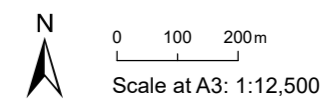
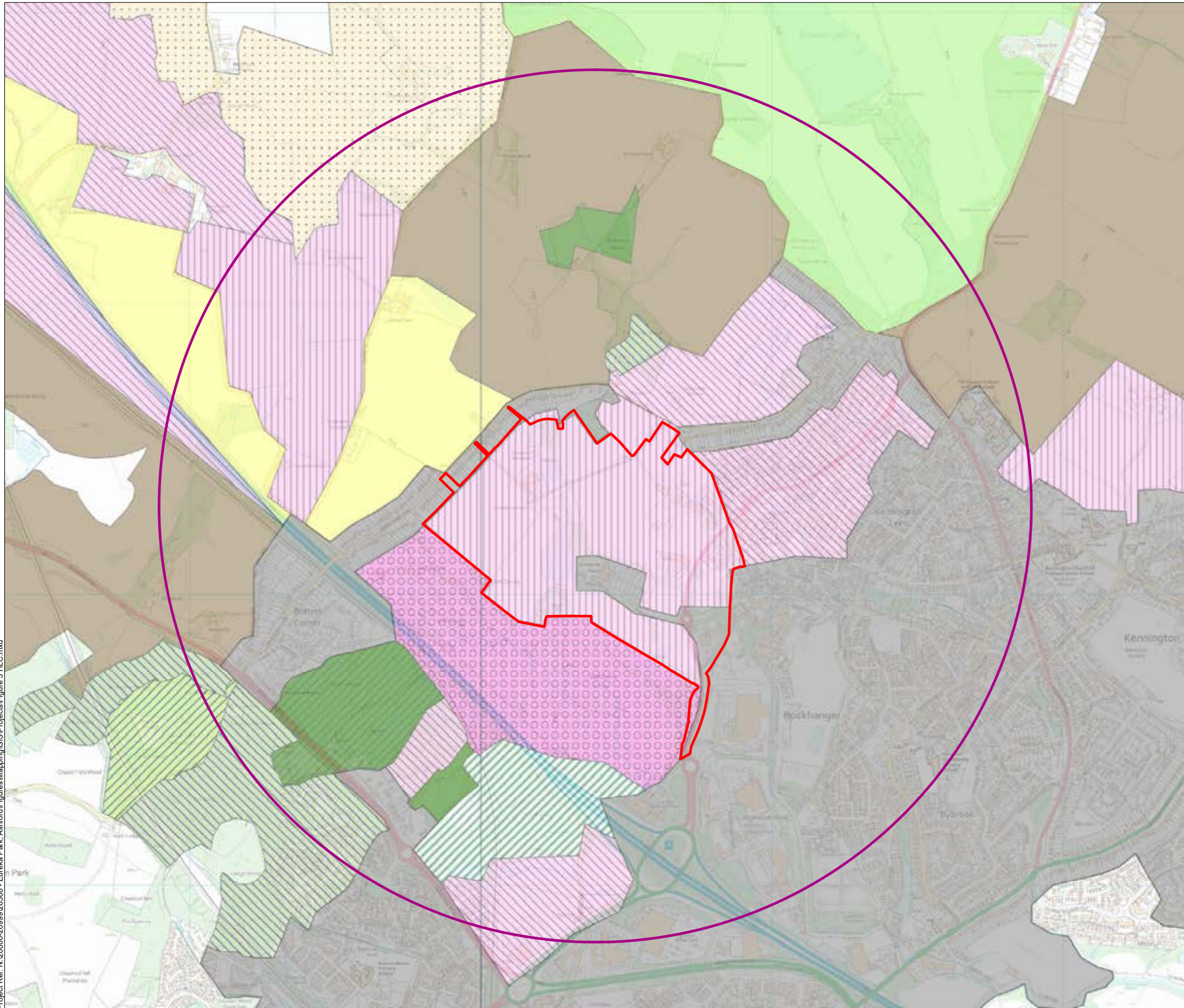


Figure 2
HER Data Plot (Data from Kent HER)



Legend

-  Site Boundary
-  Search Radius 1.5km
- Historic Landscape Characterisation:**
-  Pre-1810 parkland
-  Other pre-1810 Woodland
-  Replanted other pre-1810 Woodland
-  Pre 19th century Coppices
-  19th century Coppices
-  19th century Plantations (general)
-  Rectilinear with wavy boundaries (?late medieval to 17th / 18th century enclosure)
-  Prairie fields (19th cent enclosure with extensive boundary loss)
-  Small rectilinear with wavy boundaries
-  Small regular with straight boundaries (parliamentary type enclosure)
-  Medium regular with straight boundaries (parliamentary type enclosure)
-  Post 1810 settlement (general)
-  Golf Courses

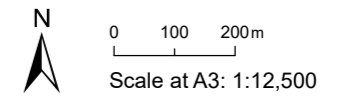



Figure 3

Historic Landscape Characterisation



 Approximate Site Location

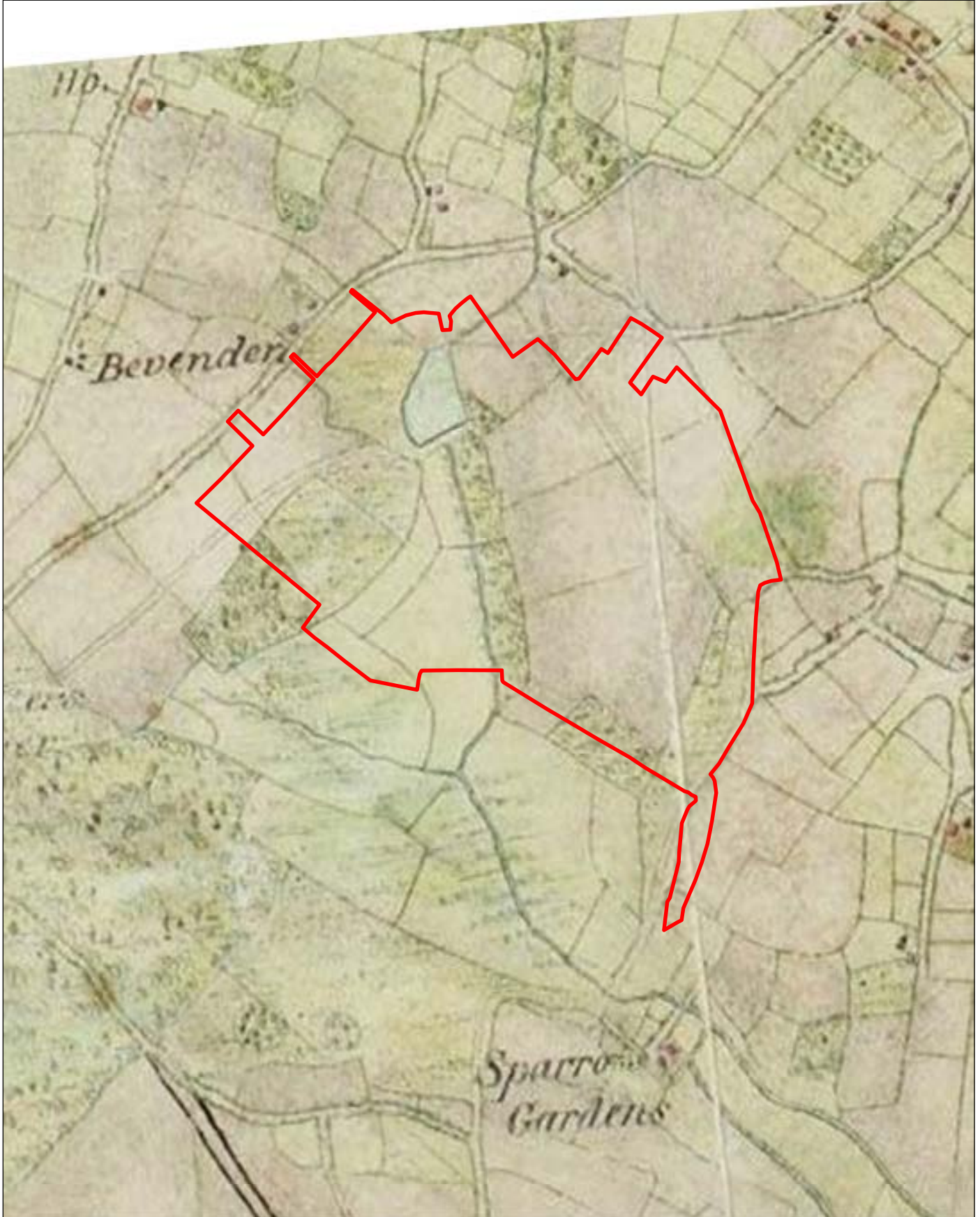


0 250 500 750m
Scale at A4: 1:25,000 approx.



Figure 4

1769 Andrews and Dury Map of Kent



 Approximate Site Location

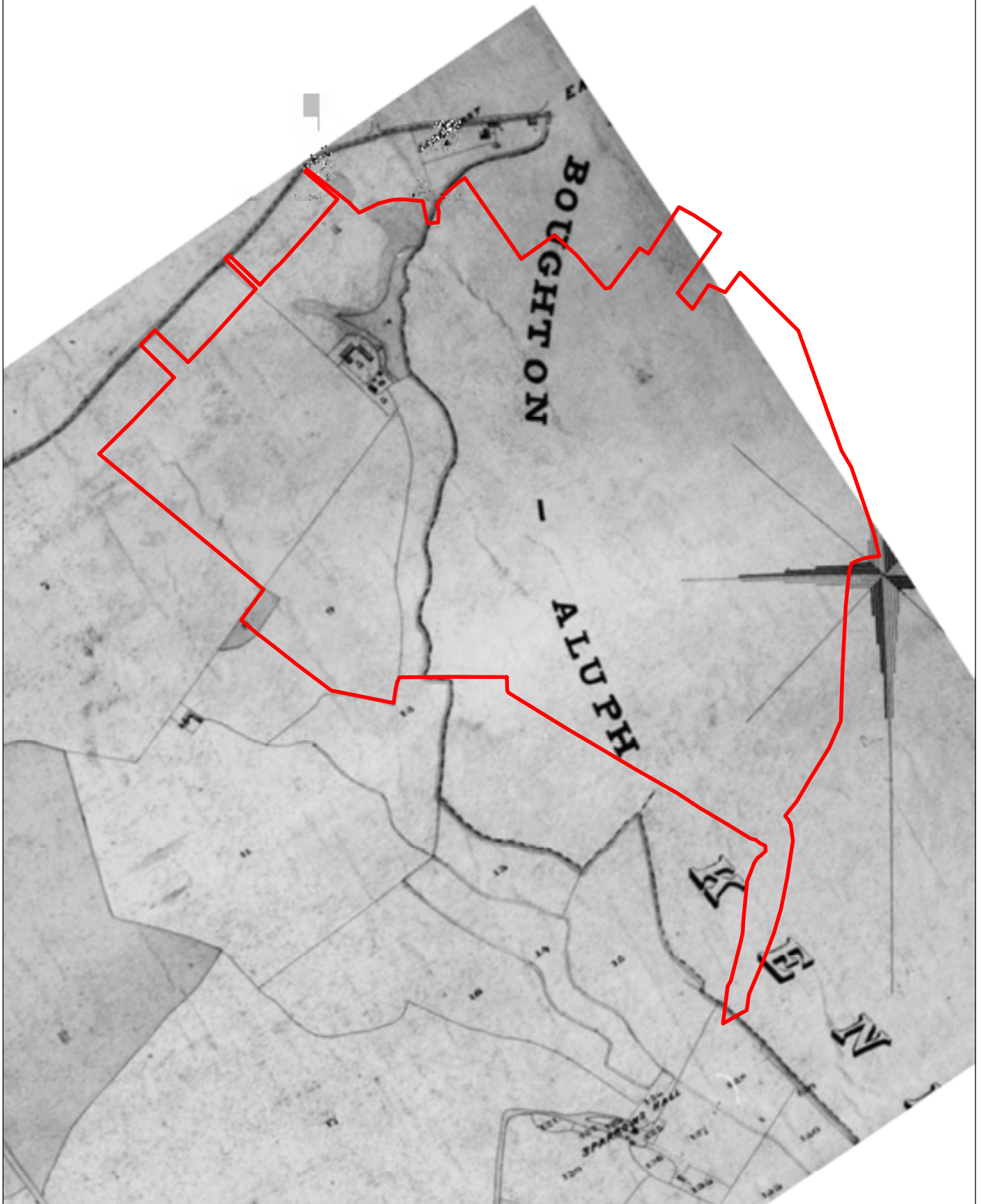



0 100 200 300m
Scale at A4: 1:10,000 approx.



Figure 5

1789 Ordnance Survey Drawing



 Approximate Site Location

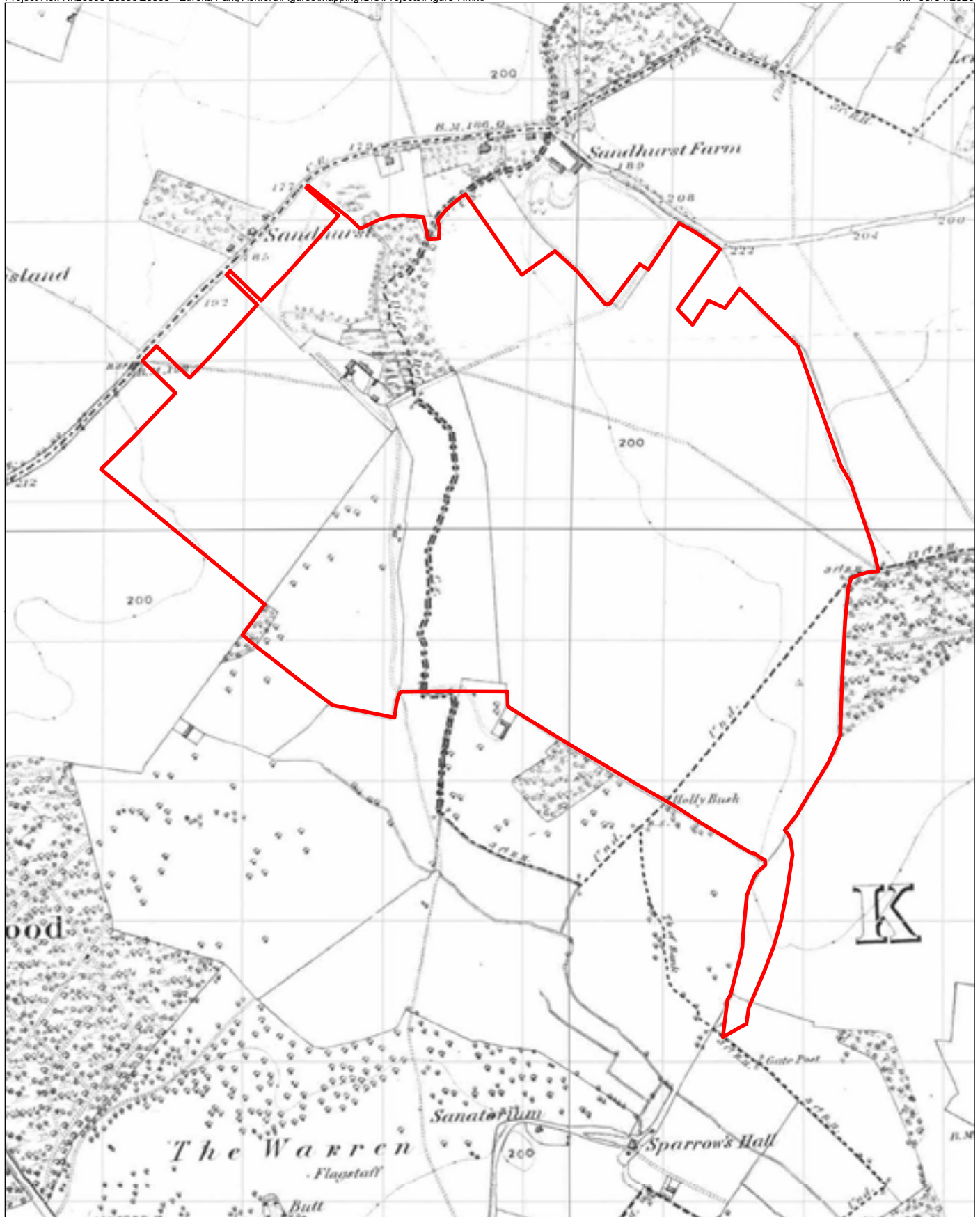


0 50 100 150m
Scale at A4: 1:7,500 approx.



Figure 6

1842 Ashford Parish Tithe Map



 Site Boundary

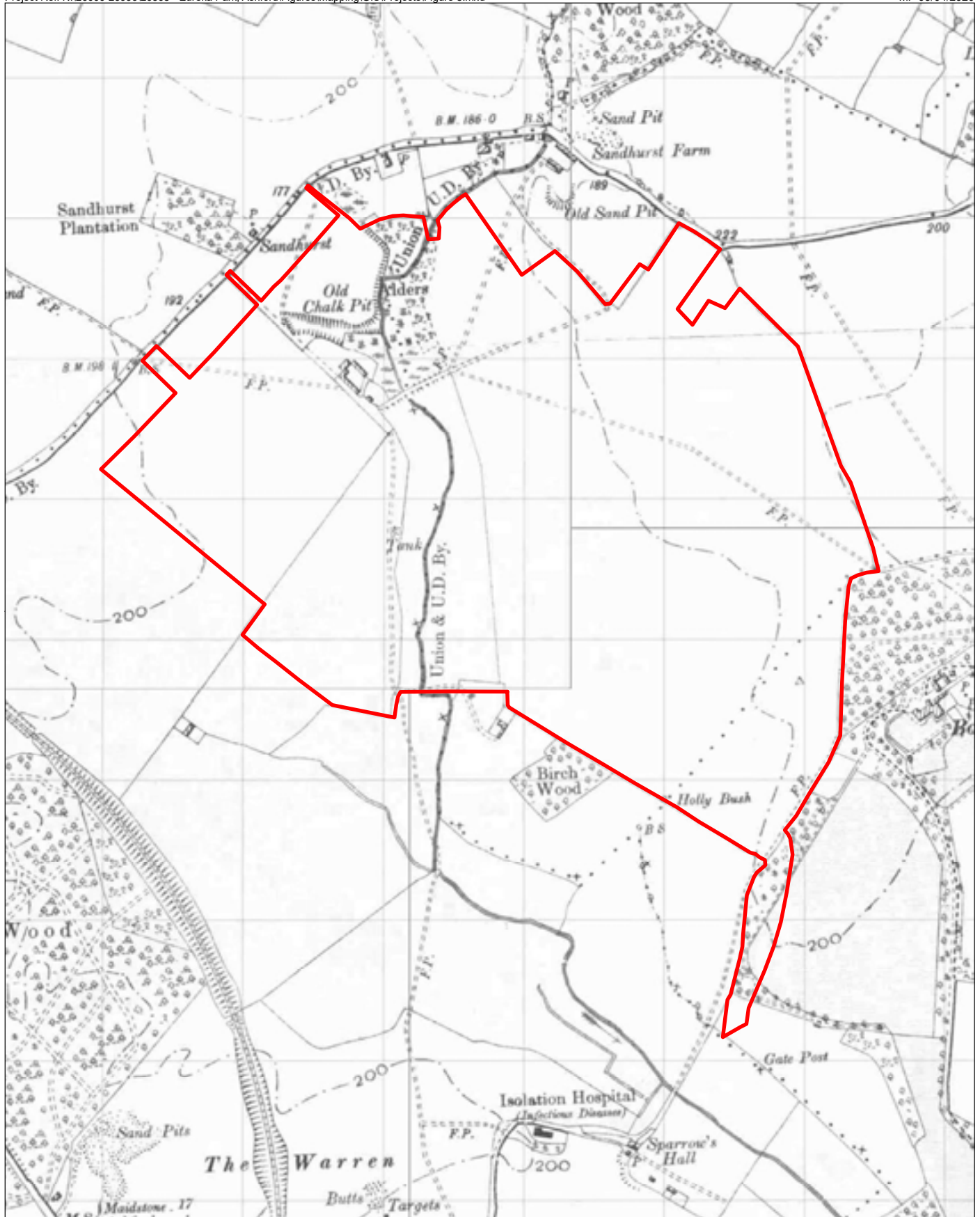


0 50 100 150m
Scale at A4: 1:7,500



Figure 7

1872 Ordnance Survey Map



 Site Boundary

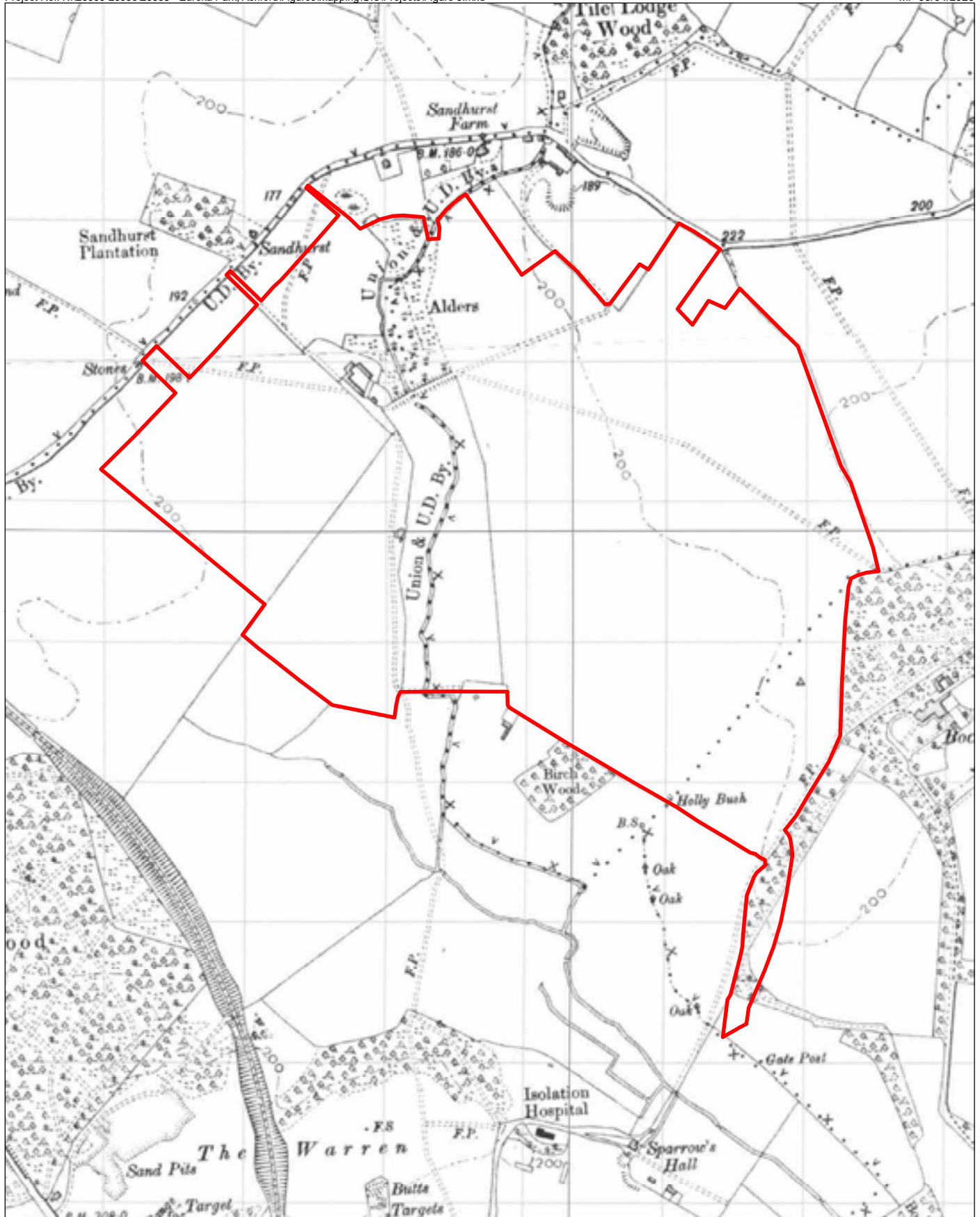


0 50 100 150m
Scale at A4: 1:7,500



Figure 8

1896 Ordnance Survey Map



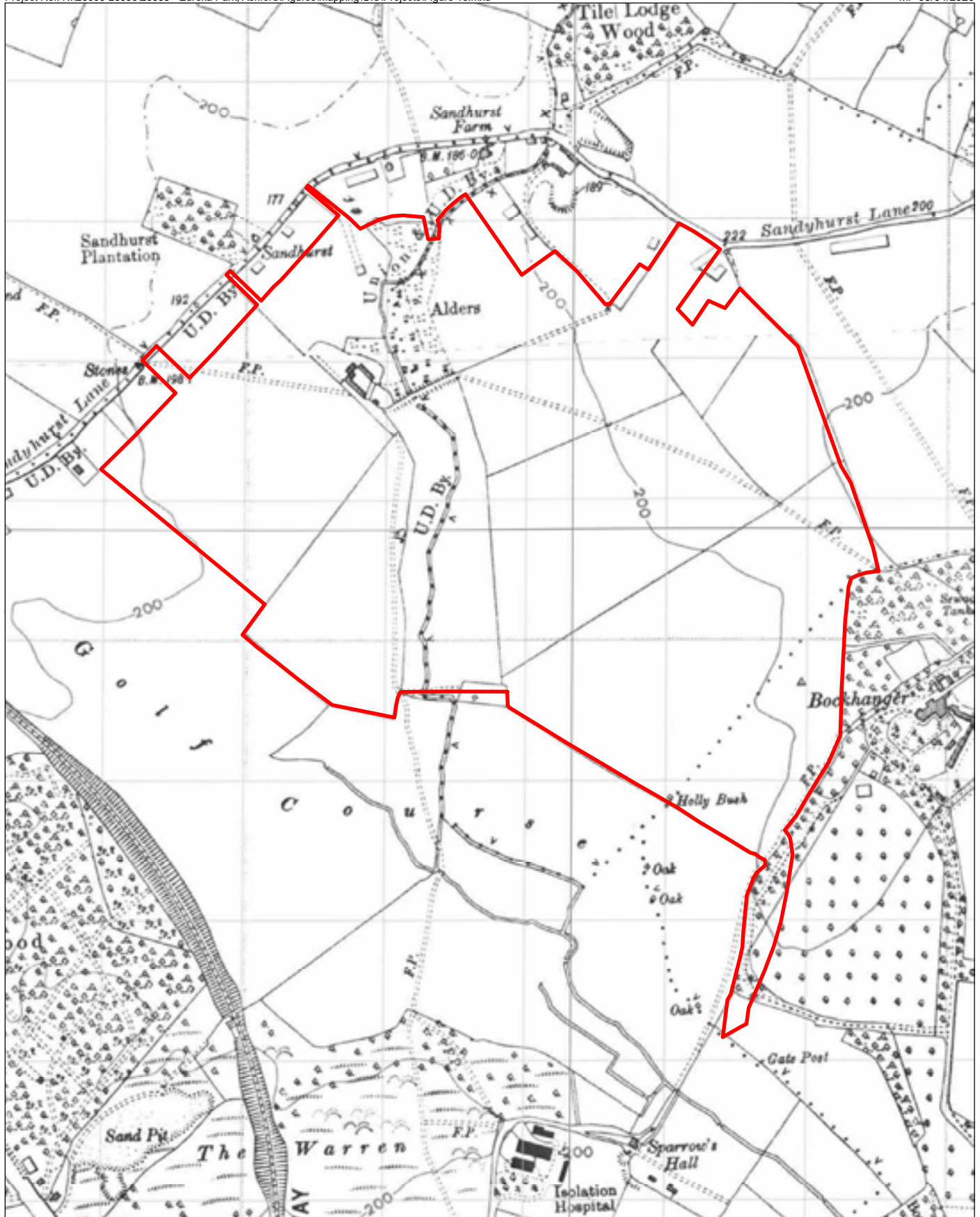
 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 9
1906 Ordnance Survey Map



 Site Boundary

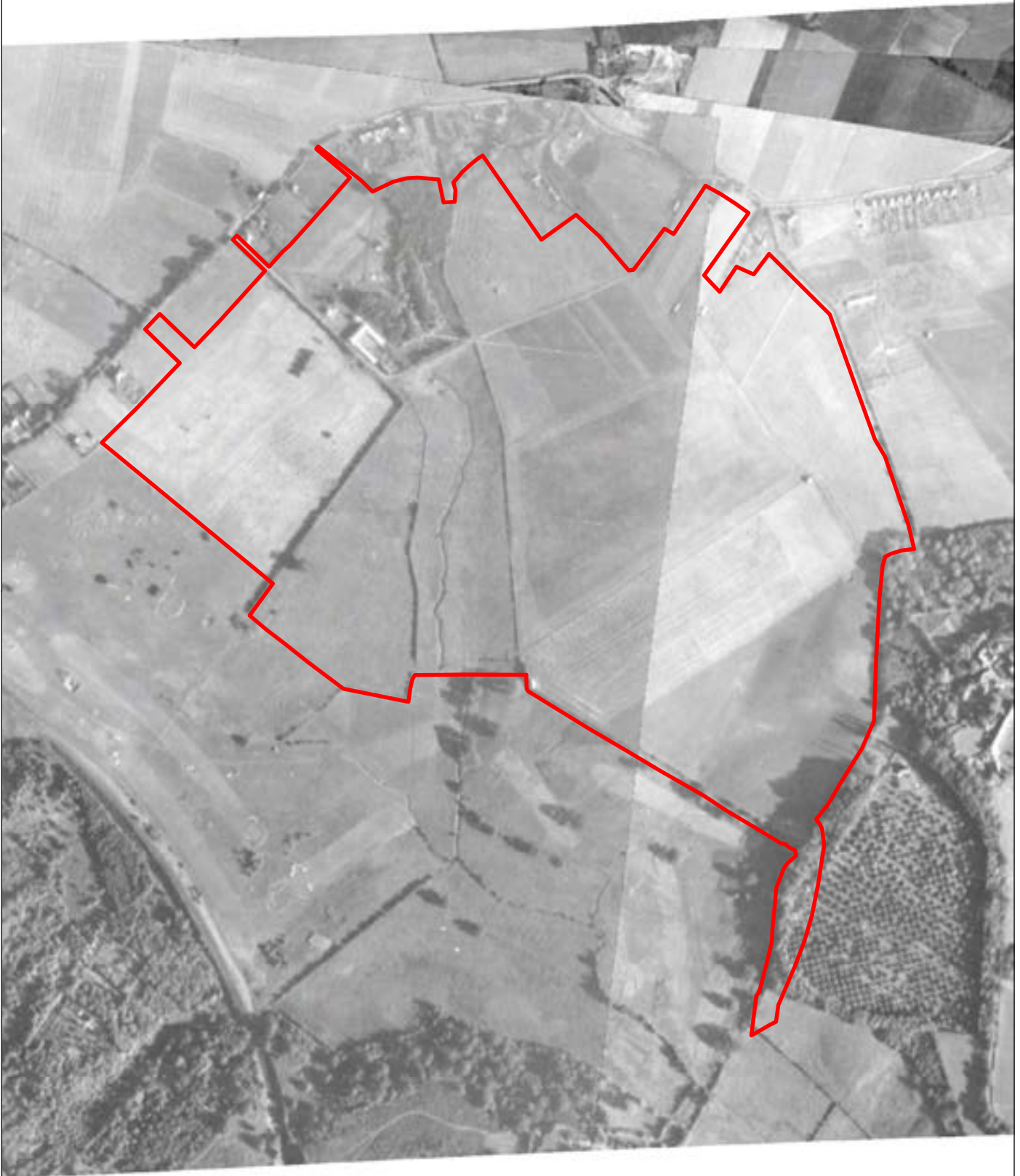


0 50 100 150m
Scale at A4: 1:7,500



Figure 10

1938 Ordnance Survey Map



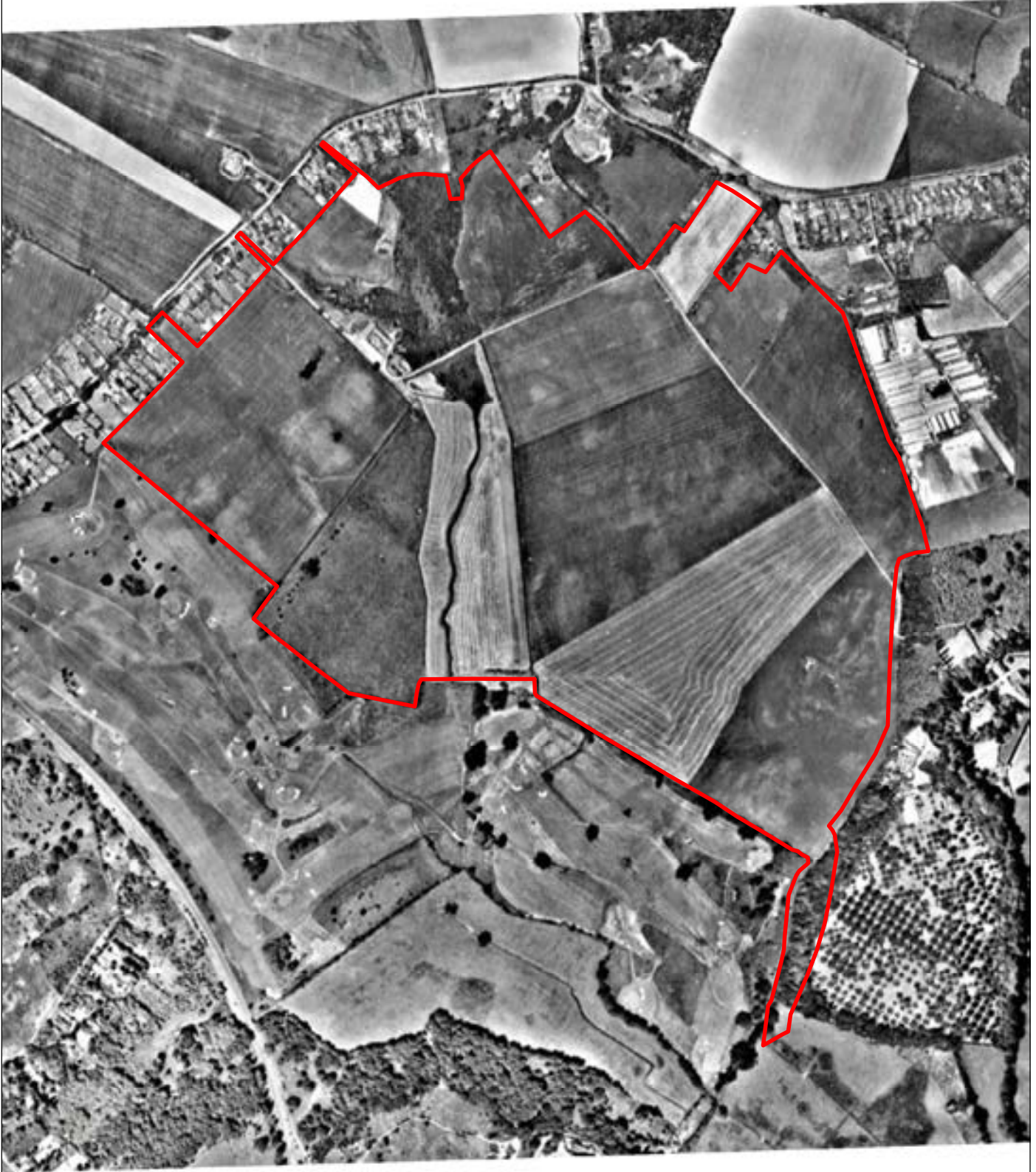
 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 11
1940 Aerial Photograph



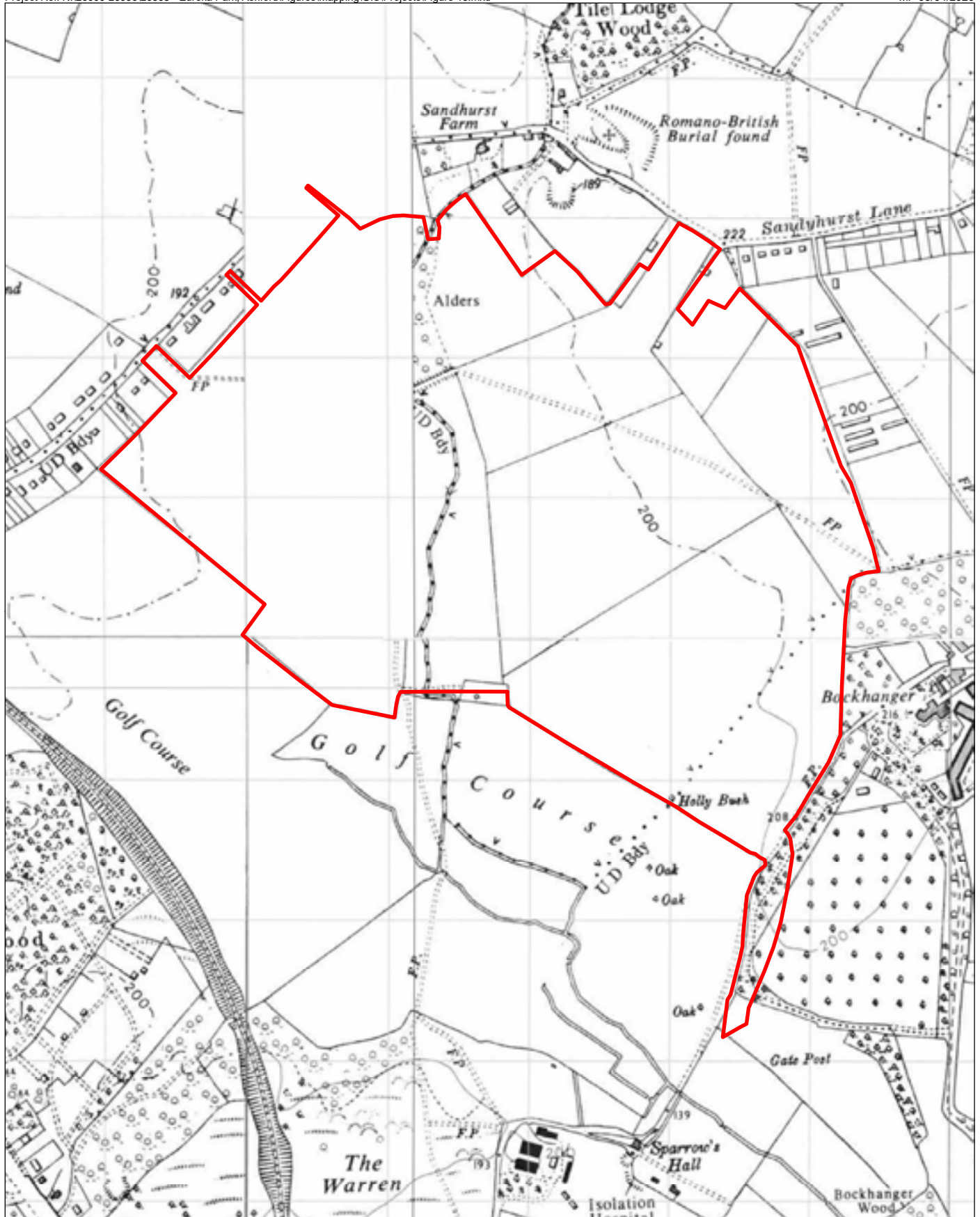
 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 12
1960 Aerial Photograph



 Site Boundary

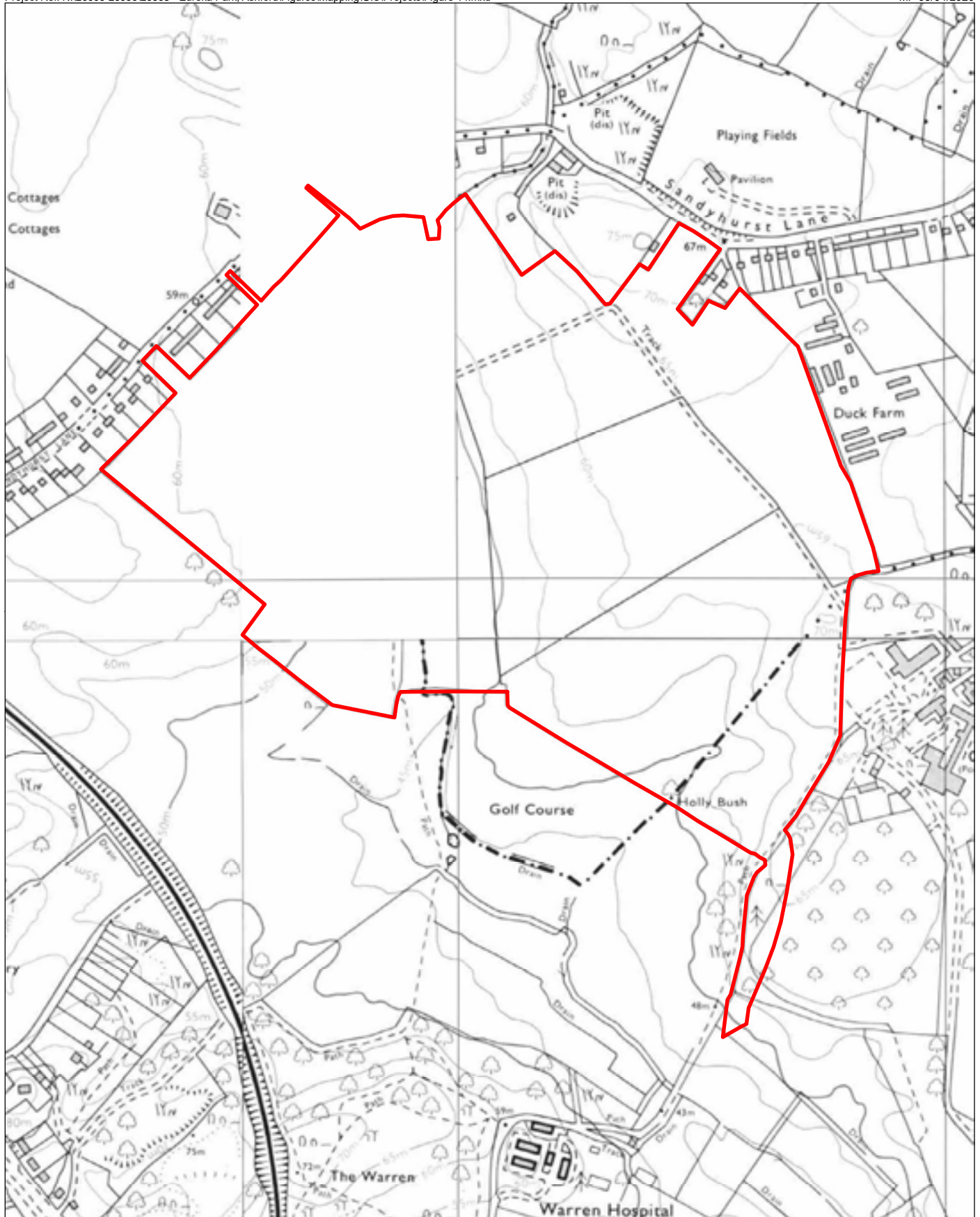


0 50 100 150m
Scale at A4: 1:7,500



Figure 13

1961 Ordnance Survey Map



 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 14

1980 Ordnance Survey Map



 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 15
2006 Aerial Photograph



 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 16
2007 Aerial Photograph



 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 17
2013 Aerial Photograph



 Site Boundary



0 50 100 150m
Scale at A4: 1:7,500



Figure 18
2019 Aerial Photograph

