Appendix B – Pump Lane Shuttle Working

CARRIAGEWAY AND FOOTWAY WIDTHS / ARRANGEMENTS TO BE DETERMINED AS MASTERPLAN DEVELOPS

SIGNAL-CONTROLLED SHUTTLE WORKING

52M INTERVISIBILITY SPLAY BETWEEN STOP LINES

2M FOOTWAY TO BE PROVIDED WHERE PUMP LANE PASSES UNDER RAILWAY BRIDGE

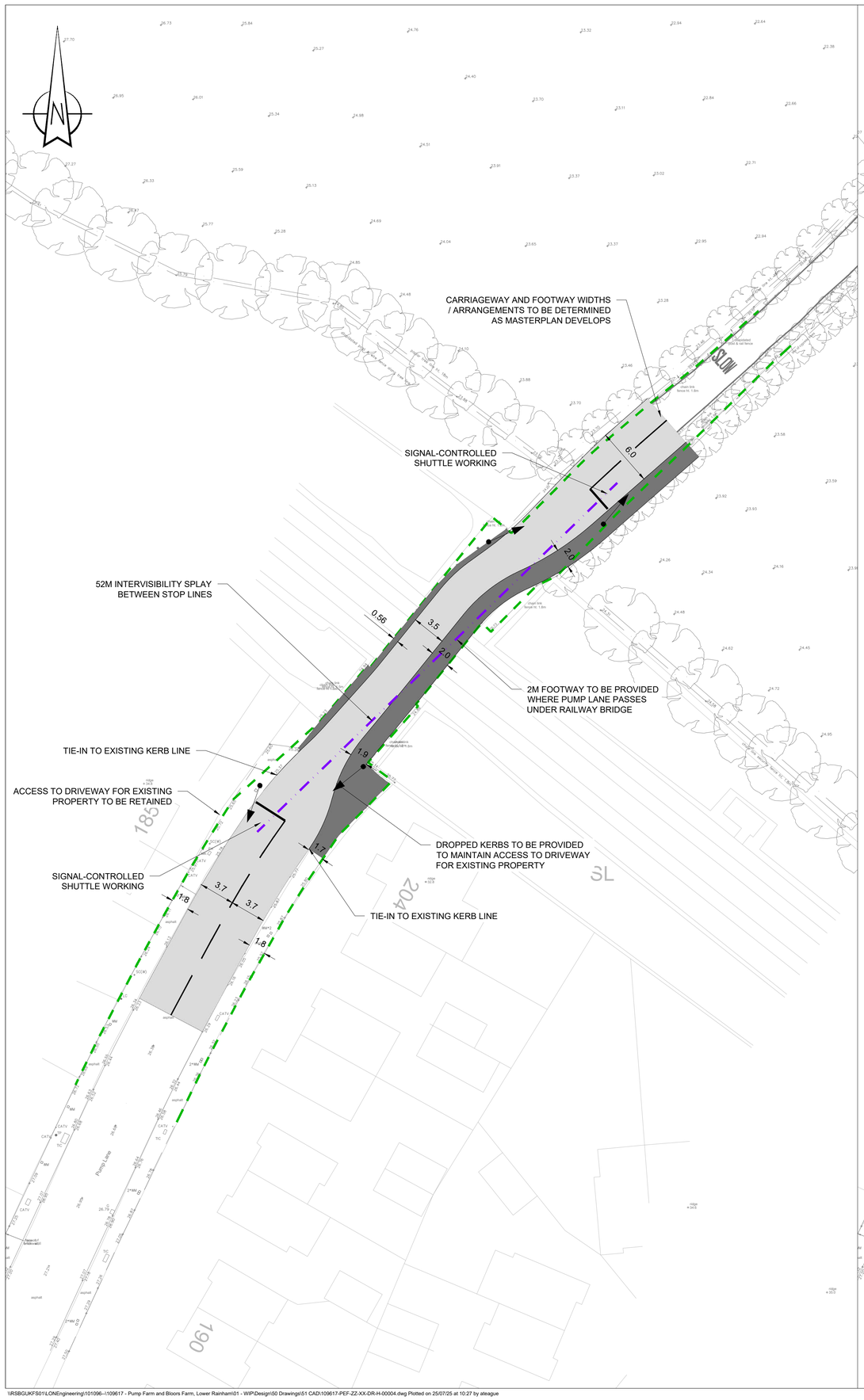
TIE-IN TO EXISTING KERB LINE

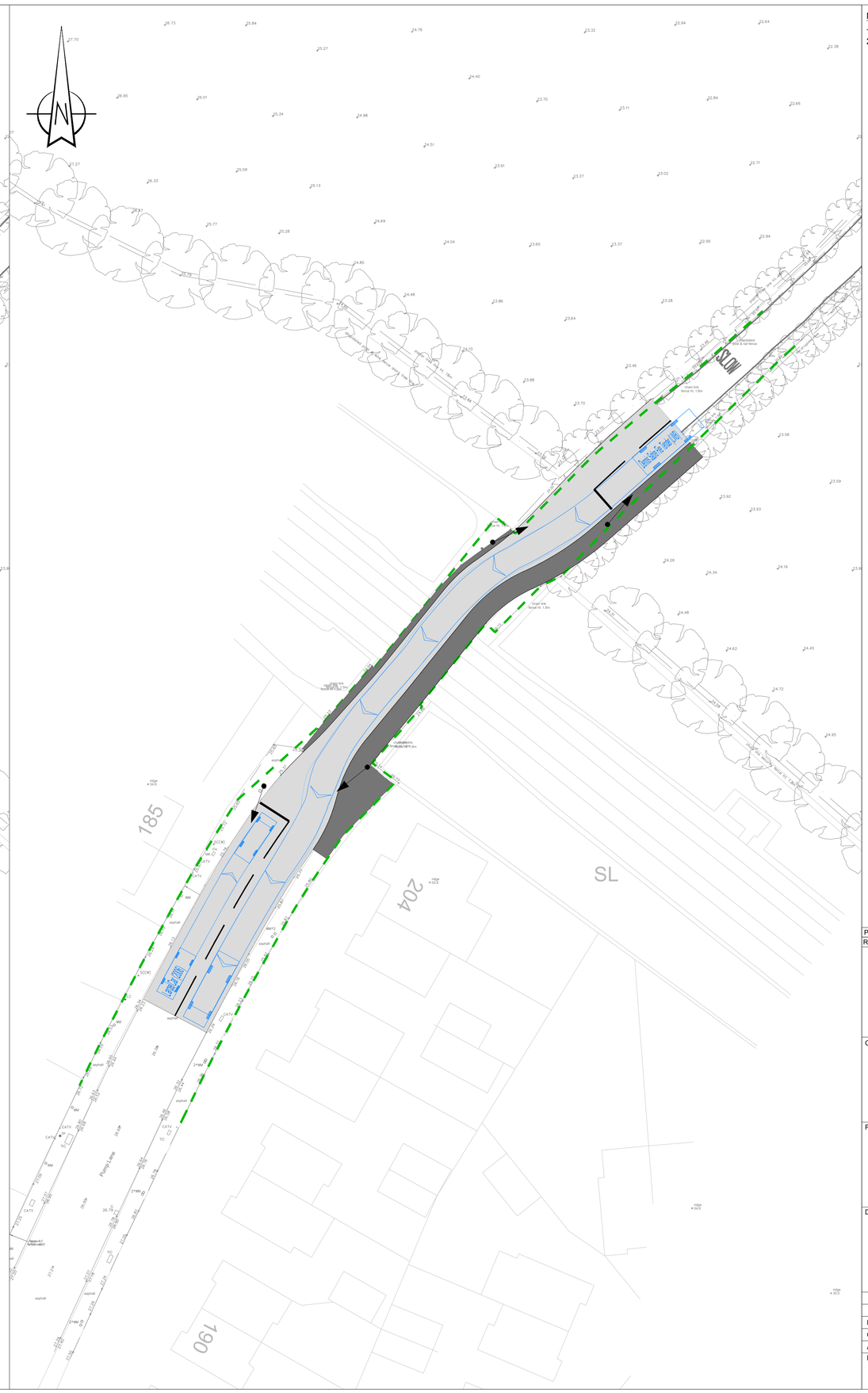
ACCESS TO DRIVEWAY FOR EXISTING PROPERTY TO BE RETAINED

SIGNAL-CONTROLLED SHUTTLE WORKING

DROPPED KERBS TO BE PROVIDED TO MAINTAIN ACCESS TO DRIVEWAY FOR EXISTING PROPERTY

TIE-IN TO EXISTING KERB LINE



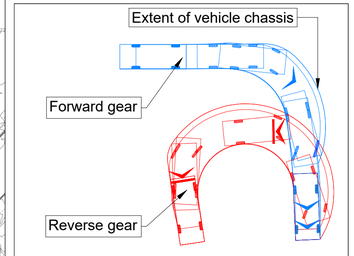


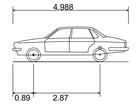
NOTES:

1. Do not scale from this drawing, work to figured dimensions only.
2. Dimensions are in metres unless stated otherwise.

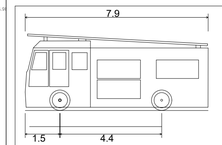
KEY:

EXISTING PUBLIC HIGHWAY BOUNDARY





Large Car	
Overall Length	4.988m
Overall Width	1.793m
Overall Body Height	1.502m
Min Body Ground Clearance	0.287m
Track Width	1.700m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.200m



Pumping Appliance	
Overall Length	7.900m
Overall Width	2.500m
Overall Body Height	3.300m
Min Body Ground Clearance	0.140m
Track Width	2.500m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	7.750m

REV	DESCRIPTION	DRN	CHK	APP	DATE
P01	FIRST ISSUE	EF	AJT	LC	24.07.25

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Client

ESQUIRE DEVELOPMENTS

Project

RAINHAM PARKSIDE VILLAGE

Drawing Title

PROPOSED PUMP LANE SIGNAL-CONTROLLED SHUTTLE ARRANGEMENT

	Name	Date
Drawn	EF	JULY 2025
Designed	EF	JULY 2025
Checked	AJT	JULY 2025
Approved	LC	JULY 2025

Scale: 1:250 @ A1

Status Code: S0

Drawing Status: FOR INFORMATION

Project No.: 109617-PEF-ZZ-XX-DR-H-00004

Revision: P01

Appendix C – Arriva Correspondence

Adam Teague

From: Tony Bull <Bullt@arriva.co.uk>
Sent: 14 August 2024 07:33
To: Dr Chris Osowski
Cc: Adam Teague; Luke Craddy; Michael Jennings
Subject: RE: Rainham Medway - Pump & Bloors Farm Bus Extension

Good Morning Chris

Thanks for your email.

I can confirm that Arriva would still be supportive of extending a bus service into the site if development was to happen, as per the correspondence that took place in January 2021.

Regards
Tony

From: Dr Chris Osowski <COsowski@pellfrischmann.com>
Sent: Tuesday, August 13, 2024 5:30 PM
To: Tony Bull <Bullt@arriva.co.uk>
Cc: Adam Teague <ateague@pellfrischmann.com>; Luke Craddy <LCraddy@pellfrischmann.com>; Michael Jennings <jenningsm.sc@arriva.co.uk>
Subject: RE: Rainham Medway - Pump & Bloors Farm Bus Extension

Hi Tony

I've received an Out of Office on my email to Michael below and was hoping that it might be something you would be able to have a look at in the interim?

Happy to discuss if that would be helpful

Thanks
Chris

Dr Chris Osowski He/Him
Associate Transport Planner
5th Floor, 85 Strand
London T: 0207 486 3661
WC2R 0DW M: 07484 162582
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Excellence through innovation
www.pellfrischmann.com

From: Dr Chris Osowski
Sent: Tuesday, August 13, 2024 5:12 PM
To: jenningsm.sc@arriva.co.uk

Cc: Adam Teague <ateague@pellfrischmann.com>; Luke Craddy <LCraddy@pellfrischmann.com>
Subject: Rainham Medway - Pump & Bloors Farm Bus Extension

Hi Michael

Hope you're well, and that you're able to help us with the below.

We are currently working on behalf of our client to provide inputs to support Local Plan representations for a proposed development of circa 800 homes on Land at Pump Farm and Bloors Farm in Lower Rainham, Kent. An outline planning application (planning application ref: MC/19/1566) was submitted to Medway Council in June 2019 for the development of up to 1,250 dwellings on the site. The planning application was refused by MC in June 2020 and the subsequent appeal was dismissed in July 2021.

The applicant of the previous scheme had discussed the potential for the existing bus service 1, which currently terminates at The Strand, to be extended to continue along Lower Rainham Road into the development site to the north. I have attached a copy of the correspondence from January 2021 between Arriva and the Transport Consultant for the previous applicant, which confirms this. The site location is shown in Appendix A of the DTA letter in the attached correspondence. I'm hoping that this falls under your role as I think Charlton has since moved on from the company?

Given that we are supporting representations for allocation of this development site, I was wondering whether you would be able to provide confirmation on behalf of Arriva that you would still be supportive of extending a bus service into this site if development were to come forward?

Happy to discuss if need be; otherwise look forward to hearing from you.

Thanks
Chris

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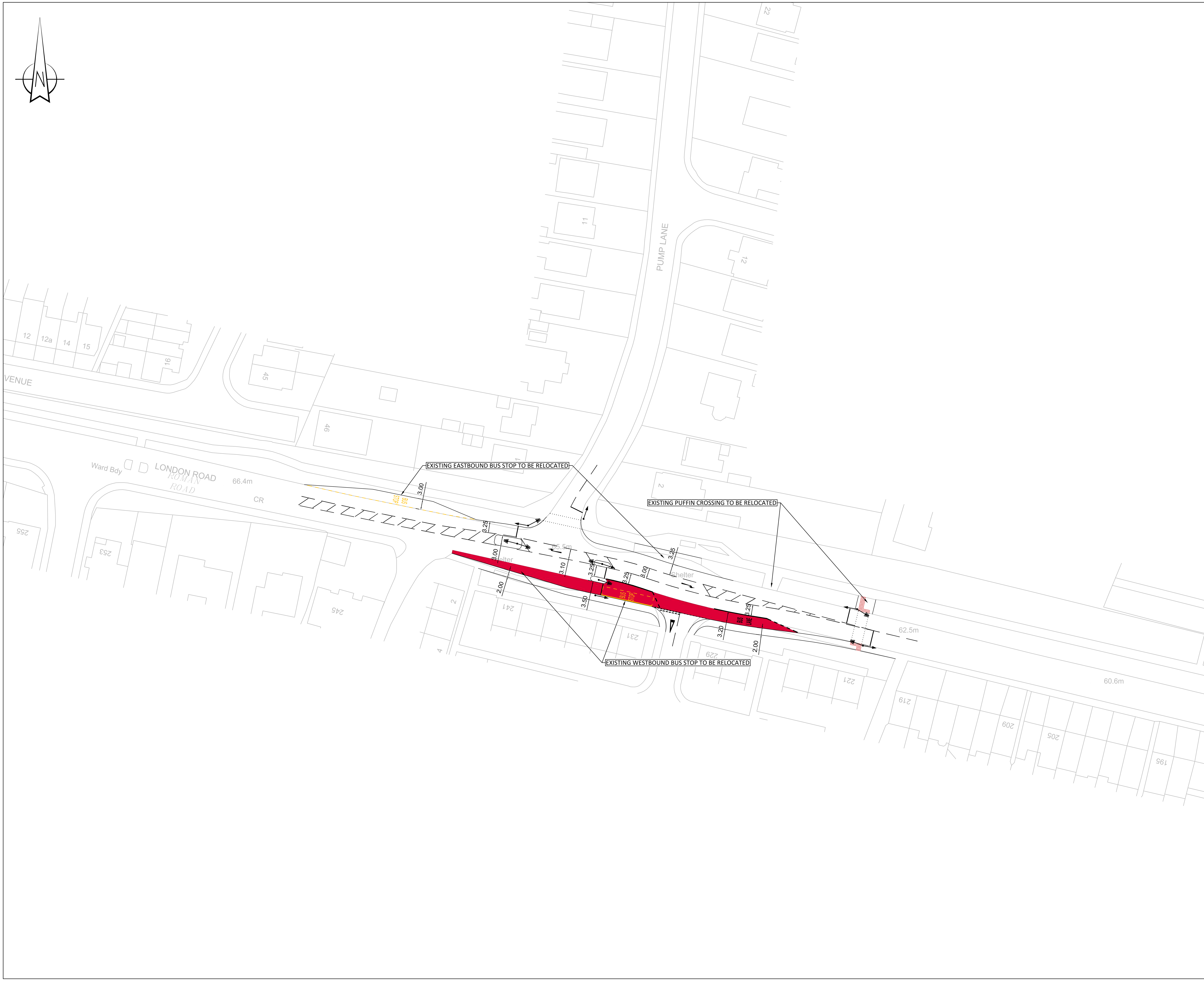
Appendix D – Proposed Pump Lane / London Road Signals



NOTES:

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REV	DESCRIPTION	DRN	CHK	APP	DATE
P01	FIRST ISSUE	AJT	LC	LC	29.01.25

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Client

ESQUIRE DEVELOPMENTS

Project

RAINHAM PARKSIDE VILLAGE

Drawing Title

LONDON ROAD / PUMP LANE PROPOSED JUNCTION IMPROVEMENTS

	Name	Date
Drawn	AJT	JAN 2025
Designed	AJT	JAN 2025
Checked	LC	JAN 2025
Approved	LC	JAN 2025

Scale: 1:500 @ A1

Status Code: S0

Drawing Status: FOR INFORMATION

Project No.: 109617-PEF-ZZ-XX-DR-H-00003

Revision: P01

\\RSBGUKFS01\LONEngineering\101096--\109617 - Pump Farm and Bloors Farm, Lower Rainham\01 - WIP\Design\50 Drawings\51 CAD\109617-PEF-ZZ-XX-DR-H-00003.dwg Plotted on 30/01/25 at 10:14 by ateague

Appendix E

Preliminary Ecological Appraisal

ECOLOGICAL EXPERTISE, EVOLVED

Rainham Parkside Village

Preliminary Ecological Appraisal Report

Prepared on behalf of

Esquire Developments Ltd

Final Report

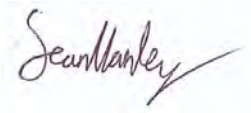
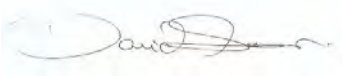
15 April 2025

32/52-1A

Rainham Parkside Village

Preliminary Ecological Appraisal Report

Report Release Sheet

Draft/Final:	Final Report
Issue Number:	32/52-1A
Date:	15 April 2025
Client:	Esquire Developments Ltd Studio 3 The Old Laundry Longfield Kent DA2 8EB
Main Author(s):	Sean Manley BSc (Hons)
Contributors/Surveyors:	Sean Manley BSc (Hons) David Smith BSc (Hons) Phd, MCIEEM Becky Sanders BSc (Hons) Holly Pay BSc (Hons), MSc
Report Prepared for Issue by:	 …… Sean Manley BSc (Hons)
Report Approved for Issue by:	 …… David W. Smith BSc (Hons) PhD MCIEEM

Ecological Planning & Research Ltd

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Company registration number: 8592380

Rainham Parkside Village

Preliminary Ecological Appraisal Report

Contents

MAPS

APPENDICES

Rainham Parkside Village

Preliminary Ecological Appraisal Report

Executive Summary

Ecological Planning & Research Limited conducted a Preliminary Ecological Appraisal of Rainham Park Side Village, to inform the suitability of the Site for development. Whilst the quantum of housing has yet to be determined, the proposals are likely to be up to 750 new dwellings.

The Site is dominated by intensively managed orchards with modified grassland, most of which appears to have been treated with herbicide. The majority of the on-site field boundaries are formed of non-native treeline and hedgerow planting, dominated by Leyland Cypress and non-native Poplar trees. Remnant native hedgerows and recently planted hedgerows are present within the Site but have been re-stocked with Blackthorn and Hawthorn.

Ecological features of potential importance include limited sections of treelines and native hedgerows, reptiles, bats and potentially Hazel Dormouse. Badger activity was recorded during the Site visit. Whilst off-site ponds are present, Great Crested Newt eDNA surveys by other ecologists indicates likely absence and most of the Site lies within the low 'Green' risk zone. Given that almost all of the ecological interest is likely to be on the Site boundaries, and given the size of the Site, there are no significant ecological constraints to development and significant opportunities to secure benefits though investment in habitat restoration and creation, and the on-going management of this.

The below recommendations are based on the ecological mitigation hierarchy, where impacts are first avoided, and when this is not possible, mitigation, compensation and enhancement measures are applied. For design and Biodiversity Net Gain purposes this could be summarised into a 'Protect, Restore, Create' framework.

Protect: Ecologically important trees and tree-line boundaries. In doing so it demonstrates the emerging proposals adhere to CIEEM's ecological mitigation hierarchy (CIEEM, 2018) and the Biodiversity Gain Hierarchy associated with the implementation of the Environment Act;

Restore: Traditional orchard habitats through enhancing and planting up existing orchards. Where impacts on grasslands can be avoided, explore opportunities to encourage a greater diversity of wildflower species. Restore on-site hedgerows and field boundaries by re-connecting gaps and replacing non-native planted species with native varieties; and

Create: New traditional orchards with a mosaic of open wildflower grassland habitat including scattered heritage fruit tree varieties to acknowledge the Sites historic land-use. This should include the creation of flower rich meadows and ponds.

A development at Rainham Parkside Village has the potential to deliver significant ecological benefits, especially if a 'bat friendly' lighting scheme, based on the Bat Conservation Trust's Bats and Artificial Lighting in the UK document, is implemented, which should dark habitat corridors that bats are most likely to use.

Rainham Parkside Village
Preliminary Ecological Appraisal Report

1. INTRODUCTION

Brief

1.1 Ecological Planning & Research Limited (EPR) was commissioned by Esquire Developments Ltd to carry out a Preliminary Ecological Appraisal associated with emerging proposals for Rainham Parkside Village.

1.2 During the initial site visit on-site habitats were appraised for their suitability to support protected and priority species. The ecological importance of the Site, habitats, and surrounding area with the Zone of Influence (ZoI) were also assessed.

1.3 An initial high-level UK Habitats Survey (Butcher *et al.,* 2020a) (Butcher *et al.,* 2020b) was conducted to inform the emerging proposals with respect to Biodiversity Net Gain (BNG), but the assessment has not included a detailed botanical survey. Therefore, baseline habitats have been mapped to UK Habitats Classification Level 3.

Previous Ecological Surveys

1.4 A previous PEA was conducted in 2017 by EPR (EPR, 2019). Bat Activity Transects, Badger Monitoring, Breeding Bird, Reptile, and Great Crested Newt *Triturus cristatus* eDNA surveys were conducted by the Ecology Partnership in 2018. Since then, no further work has been completed.

Site Location and Context

1.5 **Map 1** shows the location of 'the Site', which comprises intensive orchards bisected by Pump Lane. The 51.60ha site is *c.*200m south of the River Medway estuary, situated between Rainham in the east and Gillingham to the west.

1.6 The Site is bordered to the north-west by agricultural fields; to the north and north-east partly by houses and the B2004 Lower Rainham Road, beyond which is the Riverside Country Park; to the south by allotments and Bloors Lane Community Woodland; and to the west by a railway and houses.

Relevant Legislation, Policy, and Guidance

1.7 The legislation, planning policy and guidance referred to in this report is summarised in **Appendix 1**.

1.8 Those of relevance are detailed below:

- The Environment Act 2021;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);

- The Countryside and Rights of Way (CROW) Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Protection of Badgers Act 1992;
- The National Planning Policy Framework (NPPF) (2024);
- Strategic Access Management and Mitigation Medway Council Interim Policy Statement, Nov 2015;
- Medway Local Plan 2003 policies; and
- BNE 5 Lighting;
- BNE 6 Landscape Design;
- BNE 35 International and National Nature Conservation Sites;
- BNE 36 Strategic and Local Nature Conservation Sites; and
- BNE 37 Wildlife Habitats.
- Medway Emerging Local Plan 2041.
- Medway Green and Blue Infrastructure Framework.

1.9 In addition to the above, biodiversity objectives detailed in the following documents have been considered:

- The Government's Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (2011), 25 Year Environment Plan (2018) and Environmental Improvement Plan (2023).

The Study Area

National Character Area (NCA)

1.10 The study area is located within Natural England's North Kent Plains National Character Area (NCA) (Number 113), and the Site lies along the northern edge of this. It is an area characterised by open, low and gently undulating landscape with orchards and other horticultural crops in what is a very productive agricultural area with predominantly high-quality, fertile loam soils characterised by arable use. Traditional orchards, soft fruits and other horticultural crops exist in central and eastern areas giving rise to the use of the title 'Garden of England'.

1.11 Within each NCA, there are associated Statements of Environmental Opportunity (SEO). Consideration of these SEOs has been made with respect to the potential biodiversity gains that the proposals at Rainham Parkside Village could deliver. The SEOs for NCA 113 are:

- SEO1: Maintain the historic character and long tradition of a farmed landscape, creating habitats to establish more resilient and coherent ecological networks within the farmed and peri-urban areas. Protect traditional practices including the longstanding associations of the fruit belt, maintaining a strong sense of place and reinforcing Kent's reputation as the Garden of England;

- SEO3: Increasing the area of broadleaved woodland where appropriate, while increasing the connectivity of the mosaic of associated habitats notably wooded heath and semi-improved grassland while enhancing the recreational resource; and

- SEO4: Plan for the creation of significant new areas of green space and green corridors to provide a framework for new and existing development in urban areas and along major transport routes.

Making Space for Nature: Kent and Medway – Local Nature Recovery Strategy

1.12 Formed under the Environment Act 2021 (as amended), Local Nature Recovery Strategies (LNRS) are a system of country wide spatial strategies for nature recovery. Within Kent the draft *Kent and Medway Local Nature Recovery Strategy* was consulted on in early 2025, and it is based on the 'Lawton Principles' of bigger, better, more and joined up. It has ten ambitions for nature recovery, and these are: -

- Connectivity;

- Nature based solutions;

- Land management and land use;

- Species;

- Grasslands;

- Successional Habitats;

- Woodland, trees and hedgerows;

- Freshwater;

- Urban; and

- Coasts.

1.13 The emerging proposals have the potential to contribute to many of the above ambitions, whilst also connecting people with nature and the environment at the same time.

Kent Nature Partnership Biodiversity Opportunity Areas (BOAs)

1.14 The Site does not sit within a Biodiversity Opportunity Area (BOA), but is near to several BOAs, which the project can use to guide targeted nature delivery on-site to benefit local nature conservation objectives. The following BOAs are near the Site.

North Kent BOA

1.15 The North Kent Marshes Biodiversity Opportunity Area lies to the north-east and along the coast. Of relevance to the Site are the following targets: -

- Maintain and enhance important ecological features within new development and create ecological networks within the built environment;
- Implement a sustainable access strategy, including the creation of alternative natural greenspace, to mitigate recreational impacts including monitoring the impact of new development and coastal access; and
- Action for naturally widely dispersed habitats (ponds, traditional orchards), wildlife associated with arable farmland, and widely dispersed species such as Great Crested Newt.

Kent Biodiversity Action Plan (BAP)

1.16 This document has not been updated since 1997, but it remains of relevance and a useful information reference to inform the emerging proposals.

1.17 Habitats that are included in the Kent Biodiversity Action Plan (BAP), and of relevance to the Site include:

- Woodland and scrub;
- Old orchards (of particular relevance to the Site);
- Hedgerows;
- Lowland farmland; and
- Chalk / acid/ neutral and marshy grassland;

1.18 Species that are included in the Kent BAP and of relevance include:

- Dormouse;
- Nightingale; and
- Serotine Bat.

2. ASSESSMENT METHODOLOGY

2.1 The assessment approach used in this Preliminary Ecological Appraisal Report (PEAR) has been informed by guidelines provided within the Guidelines for Preliminary Ecological Appraisals (CIEEM, 2017) produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) and *BS 42020:2013: Biodiversity: Code of practice for planning and development* (BSI, 2013).

2.2 Of relevance is Section 5.5 of this guidance, which states:

> *'The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development.'*

2.3 Whilst the approach in this PEAR has been informed by the guidance presented in *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland* (CIEEM, 2018), this report is not suitable to inform a formal planning submission. It is, however, sufficient to inform the emerging master plan associated with the development at Rainham Parkside and consultation with the council and/or other parties.

2.4 Some of the potentially significant ecological effects arising from the proposal are not fully understood at the time of producing this report. Therefore, the ecological assessment should be updated once the proposals have been fixed, and the recommended further ecology survey work and assessment have been completed.

2.5 Finally, the report structure and content are informed by guidance provided within CIEEM's Guidelines for Ecological Report Writing (CIEEM, 2015). CIEEM 2015 states:

> *'It is important to remember that the structure and content of a report should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Authors should only provide information that is relevant, necessary, and material to the purpose identified, while at the same time ensuring that adequate details are provided for the intended reader and / or audience….'*

Likely Biophysical Changes and Zone of Influence

2.6 Biophysical change means an *"alteration in biological and/or physical conditions of the environment (e.g. changes in the atmospheric concentration of carbon dioxide, altered soil pH or change in the frequency of a plant species in an area)"* (CIEEM, 2018).

2.7 The ZoI of a proposed development is defined by the EcIA Guidelines (CIEEM, 2018) as *"…the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities."*

2.8 The activities associated with the proposed development that are likely to lead to biophysical changes, and could accordingly give rise to ecological impacts, are set out in **Table 2.1** below, which is drawn from Box 9 of the EcIA Guidelines (CIEEM, 2018).

2.9 The ZoIs predicted in **Table 2.1** are based on the construction and operational phase of the emerging proposals. Potential effects are likely to extend to different areas, and thus potentially impact upon different ecological receptors, depending upon the spatial extent of the relevant biophysical change (e.g., habitat loss and disturbance during construction).

Table 2.1: *Summary of predicted changes and Zone of Influence. This is not an exhaustive list at this stage.*

Activity	Potential Impact	Zone of Influence
Site Clearance and Construction Phase		
Vegetation clearance and ground works	Loss and fragmentation of habitat. Direct harm or death of ecologically important trees and animals.	The Site and immediate surrounds generally extending up to 400m from the Site boundary, but up to 4 to 6km in relation to bats.
Access and travel on and off the Site	Loss and fragmentation of habitats. Disturbance to animals.	The Site and locations around access points.
Assembly and storage areas for machines, materials, and construction compounds	Loss and fragmentation of suitable habitat; Direct harm or death of individual animals; and Disturbance to fauna.	The Site and immediate surrounds in the most part.
Construction of new roads and buildings	Habitat fragmentation	The Site and immediate surrounds generally extending up to 400m from the Site boundary, but up to 4 to 6km in relation to bats.
Lighting	Fragmentation of bat roosting, foraging, and/or commuting habitats; Potential effects on other nocturnal mammals, such as Badger *Meles meles;* and Disturbance to nocturnal fauna.	The Site and up to 4 to 6km beyond.
Creation of new habitats through implementation of a soft landscaping scheme	Beneficial impacts on flora and fauna.	The Site and immediate surrounds generally extending up to 400m from the Site boundary, but up to 4 to 6km in relation to bats.
Drainage	Change of ground and surface water flows Change of water quality in ground and surface water Change in habitats fed by ground and surface water flows	Proposed development site and immediate surrounds and downstream water bodies.

Activity	Potential Impact	Zone of Influence
Operational Phase		
Implementation of habitat management plans	Enhancement of existing boundary habitats and creation/improvement of new habitats.	Habitat management will benefit a range of species, including invertebrates, birds and foraging bats. Therefore, the ZoI will be mainly within 300-400m, but potentially up to 4 to 6km.
Access and travel on and off-site, including increased number of people visiting the Site and nearby designated sites for recreational purposes	Disturbance of existing populations of flora and/or fauna via, for example, increased interactions with people and their pets; Increased deposition of nitrogen and other pollutants associated with car travel; and Potential increase in mortality rates from increased access, domestic pets (such as cats) and interactions with people.	The Site and immediate surrounds generally extending up to 400m from the Site boundary. However, it will extend beyond this for effects associated with recreational activities and the ZoI can extend up to (and beyond) 7km in some cases (e.g. The Medway Estuary and Marshes Special Protection Area (SPA)).
Occupation of new houses: urban effects	Disturbance and predation by domestic pets; Loss and fragmentation of habitats by trampling, which in turn can have knock-on impacts on ecologically important fauna and plants; and Degradation and pollution of habitats through urban effects (such as fly tipping and introduction of non-native species).	The Site and immediate surrounds generally extending up to 400m from the Site boundary. However, it could extend beyond this as per above.
Lighting of homes, roads, and paths	Lighting of homes, roads, and paths.	The Site and up to 4 to 6km beyond in relation to bats.

2.10 Most of the activities and resultant biophysical changes listed in **Table 2.1** are unlikely to have an effect beyond the site boundary and the immediate surrounding area. There are some exceptions to this, which are described below.

2.11 It is generally considered that Great Crested Newt will use terrestrial habitat within 250m (English Nature, 2004; Langton *et al.,* 2001), and potentially up to 500m from a breeding pond (English Nature (now Natural England), 2001). Therefore, Great Crested Newt in any pond within 500m of the Site and not isolated by barriers to movement could be affected by the proposed development in the absence of mitigation. However, surveys at a distance greater than 250m from a pond are necessary only when the following conditions are met (Natural England, 2015):

- Maps, aerial photos, walk-over surveys, or other data indicate that the pond(s) has potential to support a large Great Crested Newt population;
- The footprint contains particularly favourable habitat for Great Crested Newt, especially if it constitutes the majority available locally;
- The development would have a substantial negative effect on that habitat; and
- There is an absence of dispersal barriers.

2.12 However, Great Crested Newts are most commonly found within 100m of water bodies, and in particular at distances of 50m or less from ponds (English Nature, 2001, 2004; Natural England 2015). Furthermore, the likelihood of newts being present in terrestrial habitat decreases as the distances from a water body increase beyond 100m. Some studies indicate the probability of Great Crested Newts being present markedly decreases at distances beyond 150m (Jehle and Arntzen, 2000) and/or at distances of 200m (English Nature, 2004). Therefore, this research together with the Survey Guidance Table contained within the Great Crested Newt method statement (which is used when making an application for a European Protected Species Licence (EPSLs)), has also been used to inform the need and/or scope of any Great Crested Newt survey work that might be needed to support a planning application.

2.13 Major roads (such as motorways and major A-roads) are likely to act as dispersal barriers to Great Crested Newt (Oldham *et al*., 2000). Therefore, ponds and waterbodies on the opposite side of the B2004 'Lower Rainham Road' north of the Site, Berenegrave Lane to the east of the Site and Pump Lane intersecting the Site are not likely to act as major dispersal barriers because the road traffic is significantly less compared to a major road. Therefore, ponds within 250m of the Site have been identified (see **Map 2c**).

2.14 If rivers and streams are present, they are also likely to act as dispersal barriers to Great Crested Newt (Oldham *et al.,* 2000).

2.15 If reptiles are present, and if Grass Snake *Natrix Helvetica* is also present, the ZoI may extend further than 300m to 400m because this species has a relatively large home range.

2.16 Recreational disturbance arising from new residents, such as dogs off leads, and increased predation rates from domestic cats, is likely to extend beyond the Application Site boundary. In the latter case, there is evidence cats have a home range of approximately 300m to 400m (Thomas, *et al.*, 2014). This is of importance because cats predate reptiles, birds, and small mammals. Dogs may disturb farmland bird species and/or assemblages. Furthermore, recreational effects and deposition of nitrogen and other pollutants associated with car travel may occur several kilometres from a Site (for example up to 7km or more).

2.17 Whilst the ZoI for most bird species is likely to be less than 1km, effects on certain farmland birds, such as Skylark *Alauda arvensis,* have been detected at a 1km scale (e.g., Gillings *et al*., 2005) in grassland dominated landscapes. Post-natal dispersal of young may also be another important factor. For example, post-natal dispersal of young Skylark indicates a tendency to remain within *c.*20km of the area in which they are born (Donald, 2004).

2.18 With specific reference to breeding birds another important factor is the likely forging distances that breeding birds will travel, and in particular the foraging distances birds travel from the nest. This could vary from as little as 100m-300m (e.g., Kuiper *et al*., 2013; Stoate *et al.*, 2010) for

Skylark and farmland buntings, to greater distances for species such as Starling *Sturnus vulgaris*. Therefore, the ZoI associated with different breeding bird species could be greater than 400m in those instances when the area over which the biophysical changes occur also overlaps with bird species that travel further from the nest to forage (such as Starling).

2.19 Due to their mobile nature, the ZoI for bats is likely to be greater than other faunal groups. For the most common and larger bat species that are most likely to occur in the landscape surrounding the Site (e.g. Noctule *Nyctalus noctula*) this could potentially be up to 4km. The 4km distance is based on Bat Conservation Trust Core Sustenance Zones (CSZs) (BCT, 2016). However, the ZoI could be larger if Barbastelle *Barbastella barbastellus* is regularly using habitats within or near to the Site because their associated CSZ extends to 6km.

Method of Ecological Valuation

2.20 When relevant (and it is often not possible to evaluate ecological features at the PEA stage), evaluation uses the following geographical scale of importance:

- International and European;
- National;
- Regional;
- County/Metropolitan;
- Local; and
- Within the ZoI.

2.21 When completing ecological assessments, features that are valued at below 'Local' importance (often after further survey work) are not considered to be sufficiently important for an impact to be considered "significant". This approach is based on CIEEM guidance.

Desktop Study

2.22 A desktop study has been included as part of this Preliminary Ecological Appraisal. This allows existing information about features of nature conservation priority (within the predicted ZoI) to be considered. The desk study included an interrogation of online resources such as aerial images and current and historical maps, as well as Multi Agency Geographic Information for the Countryside (MAGIC) maps.

2.23 A biological records data search was commissioned from Kent and Medway Biological Records Centre (KMBRC) as part of the appraisal. These records are discussed in **Section 3**.

Field Survey Methodology

2.24 The Preliminary Ecological Appraisal field survey was conducted on the 12th March 2025 by Senior Ecologist Sean Manley BSc (Hons) and EPR Director David W. Smith BSc (Hons) PhD MCIEEM. Features of ecological importance were mapped using target notes. A summary of the methodology is described in **Appendix 2**.

Survey Constraints and Limitations

2.25 A Preliminary Ecological Appraisal only provides an initial assessment of the ecological importance of the Site and those areas beyond that fall within the potential ZoI of the proposals. It does not constitute a detailed survey of flora or fauna and reflects the conditions of habitats at the time the survey work was conducted.

2.26 The survey was conducted outside of the optimal survey window for grassland habitats. Therefore, the number of detectable forbs and grasses was significantly reduced, and this affected the surveyor's ability to accurately identify grassland habitat types.

2.27 The assessment did not examine the possible presence of priority fungi species and/or assemblages or the likely importance of habitats for this group (as per Box 2 of CIEEM's PEA guidance, 2017). However, many fungal assemblages of ecological importance are associated with habitats that have been present in the landscape for a long-period of time, for example ancient woodland, ancient and veteran trees and/or old grasslands. Furthermore, there is a broad correlation between fungal diversity and plant diversity (Griffith *et al.,* 2004), which is considered as part of this ecological assessment. Furthermore, the proposals are at an early stage of design. Therefore, this is a minor limitation.

2.28 When the biological data search or other ecologists in their reports recorded a 'Long-eared Bat' *Plecotus* sp, it has been assumed that they are most likely to be of the common and widespread species Brown Long-eared Bat *Plecotus auritus* because the Site is outside of the known distribution for the much rarer and range-restricted Grey Long-eared Bat *P. austriacus*.

3. RESULTS

Geology and Soils

3.1 The British Geological Survey's Open Geoscience Viewer indicates that part of the Site is underlain by Seaford Chalk Formation - Chalk. Part of the Site is also underlain by Thanet Formation - Sand, silt and clay.

3.2 Head - Clay, silt, sand and gravel superficial deposit overlays most of the Seaford Chalk Formation. Along Lower Bloors Lane to the east of the Site and to the north of the Site along the railway line there are no recorded superficial deposits.

3.3 The Cranfield Soil and Agrifood Institute Soilscapes describes the soils within the Site as Soilscape 6: Freely draining slightly acid loamy soils. This is associated with habitats such as neutral and acid pastures and deciduous woodlands; acid communities such as bracken and gorse in the uplands

3.4 The above geological and soil characteristics should be considered when deciding on the most appropriate habitat restoration or creation measures as part of the Biodiversity Net Gain Strategy.

Hydrology

3.5 The Governments 'Flood Map for Planning' website indicates that the Site is within Flood Zone 1 and has low probability of flooding from rivers and the sea. The risk of flooding from other sources, such as surface water, should be determined by relevant technical specialists.

3.6 The frequency of flooding should be considered when deciding on the most appropriate habitat restoration or creation measures and habitat management practices associated with Biodiversity Net Gain.

Ecological History

3.7 The Site, which approximately 51.6ha, has been managed as arable farmland since at least the early 1900s.

3.8 Before this, the six-inch OS maps published in 1869 show that the north-east corner of the Site, between Pump Farm and the intersection between Lower Bloors Lane and Lower Rainham Lane, was orchard. The orchards expanded in size and covered most of the Site and the land-use can be seen on six-inch OS Maps published in 1898 and continued be the majority land-use according to OS maps published in 1961.

3.9 Freely accessible aerial imagery shows that the Site continued to be dominated by extensive Orchard formed by loosely distributed larger orchard trees. Following 1960, the mature orchard was felled and removed and replaced with a closely planted modern intensive orchard.

Designated Sites

3.10 **Map 1a and 1b** shows sites that have designations because of their ecological importance.

Statutory Designated Sites of International Importance

3.11 There are two designated nature conservation sites within 5km of the Site boundary that are of ecological importance at the **International Level** (i.e., Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites). These are:

- Medway Estuary and Marshes Special Protection Area (SPA) and Ramsar, which is *c.*250m from the Site to the north. It is designated for its; internationally important breeding populations of Little Tern *Sternula albifrons* and Avocet *Recurvirostra avosetta*; internationally important populations of Dark-bellied Brent Goose *Branta bernicla bernicla*, Common Shelduck *Tadorna tadorna*, Northern Pintail *Anas acuta*, Ringed Plover *Charadrius hiaticula*, Grey Plover *Pluvialis squatarola*, Red Knot *Calidris canutus*, Dunlin *Calidris alpina* and Common Redshank *Tringa totanus*; and internationally important assemblage of waterfowl. It contains intertidal mud and sand flats, saltmarsh and shallow waters. It is of international importance for its diverse assemblage of wetland plants and invertebrates. It contains rain-fed, brackish and floodplain grazing marsh with intertidal marsh and mudflats.

- Queendown Warren (SAC) and SSSI is 4.4km from the Site to the south-east. It is designated as it hosts the priority habitat type "orchid rich sites". Queendown Warren consists of CG3 *Bromus erectus* grassland. It contains an important assemblage of rare and scarce species, including Early Spider Orchid *Ophrys sphegodes*, Burnt Orchid *Orchis ustulata* and Man Orchid *Aceras anthropophorum*.

3.12 According to MAGIC, the Site falls within the associated Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ) for Medway Estuary and Marshes SSSI, a component part of the Medway Estuary and Marshes Special Protection Area (SPA).

Recommendations for Further Survey and Assessment Work

3.13 Given the Site location, and proximity to the nearby SPA, the project would benefit from early engagement with Natural England (NE) via their Discretionary Advice Service (DAS). This would allow the project to screen and scope potential bespoke mitigation measures with NE prior to submission. This could then in turn would feed into a ‘Information for Habitats Regulations Assessment’ report, which would enable the competent authority sufficient information for them to complete their duties under the Habitat Regulations.

3.14 Furthermore, given the scheme falls with the 6km Zone of Influence for the North Kent Estuary and Marshes (Medway Estuary SPA), the project is likely to be required to make developer contributions to the strategic mitigation scheme.

Statutory Designated Sites of National Importance

3.15 There are five sites of ecological importance at the **National Level** within 5km of the Site, four of which are SSSIs, and one is a Marine Conservation Zone (MCZ).

3.16 Medway and Marshes SSSI is c.250m from the Site and a component of the SPA. It is designated for its large area of intertidal habitats, including mudflats, salt- and grazing-marsh, which support important populations of wintering, migratory, and breeding birds.

3.17 Medway Estuary MCZ is also c.250 m from the Site. The designation includes intertidal habitats, the Tentacled lagoon-worm *Alkmaria romijni*, *Pholas dactylus*, *Barnea candida*, Sandwich Tern *Thalasseus sandvicensis*, Smelt *Osmerus eperlanus*, and nursery grounds for commercially important fish.

3.18 A further three SSSIs are present within 5km these are: -

- Queendown Warren SSSI is 4.3km to the south-east. This is designated for its grasslands and woodlands that support two nationally rare plant species. The grassland and woodland are on the south-facing slope of a dry chalk valley. The grassland is largely dominated by Upright Brome *Bromus erectus* and Sheep's Fescue *Festuca ovina* with numerous plants characteristic of grazed but otherwise undisturbed chalk grassland. Among the more interesting species are Chalk Milkwort *Polygala calcarea*, Squinancywort *Asperula cynanchica*, Horseshoe Vetch *Hippocrepis comosa* and several species of orchids including the Early Spider Orchid *Ophrys sphegodes*. The grassland is rich entomologically and two characteristic species, the Adonis Blue butterfly *Lysandra bellargus* and the Rufous Grasshopper *Gomphocerippus rufus* are found;

- Purple Hill SSSI is 4.4km to the south. It supports areas of chalk grassland, scrub and woodland. The grassland is of the Upright Brome, Sheep's Fescue and is extremely herb rich, with one nationally rare plant species occurring. Among the many chalk downland herbs to be found here is the nationally rare Kentish Milkwort *Polygala austriaca*.

- Tower Hill to Cockham Wood SSSI is 4.6km to the north-west: This site is of both biological and geological interest. It supports a rich insect fauna, with neglected coppice of principally Ash *Fraxinus excelsior*, with Oak *Quercus robur* standards.

3.19 There are no National Nature Reserves (NNR) within 5km of the Site.

Recommendations for Further and Assessment Work

3.20 If the project decides to use NE's DAS, then this could also be used to engage with NE about the SSSI and MCZ detailed above.

Statutory Designated Sites of Local Importance

3.21 Seven Local Nature Reserves (LNRs) are within 5km of the Site. These are of ecological importance at the **Local Level**, and are listed below: -

- Berengrave Chalk Pit LNR is *c.*300 m to the south-east of the Site. This constitutes an old chalk pit which contains a small lake, reedbed, and woodland with areas of scrub. It is open to the public and managed by the Woodland Trust;

- Ambley Wood LNR is 2 km to the south-west of the Site. This is an ancient woodland with associated flora. It is open to the public and is managed by Medway Council;

- Darland Banks LNR is 2km to the south-west of the Site. This is chalk grassland and scrub on a steep south-west facing escarpment on the North Downs renowned for its plants including Man Orchid. Fauna of interest includes the Chalkhill Blue butterfly *Lysandra coridon,* as well as Strawbelle *Aspitates gilvaria* and Fox moth *Macrothylacia rubi;*

- Foxburrow Wood LNR is 2.4km to the south of the Site. It is a remnant of a large ancient woodland stretching from the River Medway to Queen's Down Warren on the North Downs. Ancient Woodland indicators present include Herb Paris *Paris quadrifolia* and Bluebell *Hyacinthoides non-scripta;*

- Levan Strice LNR is 3.2km to the south of the Site. Levan Strice contains ancient woodland and associated flora;

- South Wood LNR is 3.6km to the south-west of the Site. It is one of the richest remaining woodland areas in Medway. It was worked for centuries for timber but is now managed as a nature reserve. The wood is particularly important as it contains a population of Dormice.

- Queendown Warren LNR is 4.3km to the south-east. This designation overlaps with its SSSI status, as described above;

Recommendations for Further and Assessment Work

3.22 This should be reviewed as the emerging proposals develop and regard of effects on nearby LNRs should be considered.

Non-Statutory Designated Sites

3.23 Local Wildlife Sites (LWS) are non-statutory designated sites of ecological importance at the **County Level**. Of relevance are:

- Berengrave Pit, Rainham LWS is *c.*300 m to the south-east of the Site. This constitutes an old chalk pit which contains a small lake, reedbed, and woodland with areas of scrub. It is open to the public and managed by the Woodland Trust;

- Riverside Country Park is *c.*1 km to the north-west of the Site. This is located next to the Medway Estuary and contains a mosaic of mudflats, salt marsh, ponds, reedbeds, scrub and grassland; and

- Darland Banks and Adjacent Woodland LWS is 2 km to the south-west of the Site. Darland banks contains chalk grassland with specialist plant species, such as Man Orchid. It is open to the public and managed by Kent Wildlife Trust.

Ancient Semi-Natural and Ancient Replanted Woodland

3.24 There are no ancient semi-natural and ancient replanted woodland listed on Natural England's Provisional Ancient Woodland Inventory within the Site boundary. Nor are there any within 1km of the Site.

Habitats

3.25 **Map 2a, 2b and 2c** details the location and types of habitats within the Site.

3.26 The Site is predominantly intensively managed orchards, planted over modified grasslands much of which appeared to have recently been treated with herbicide.

3.27 The majority of the on-site field boundaries are formed of non-native treeline and hedgerow planting. Dominated by Leyland Cypress *Cupressus x leylandii* and non-native Poplar trees *Populus sp.* Remnant native hedgerows and recently planted hedgerows are present within the Site but have been re-stocked with Blackthorn *Prunus spinosa* and Hawthorn *Crataegus monogyna*.

3.28 The distribution of broad habitat types and features noted during the field visit are presented on **Maps 2a, 2b and 2c,** and are described further below.

Cropland

3.29 The Site is dominated by intensive orchards. Trees are managed as either low individual standard plants or grown intensively using high density planting methods along wooden and concrete trellis systems. The ground flora of the orchard is highly modified with narrow strips of Perennial Rye Grass *Lolium perenne* alongside Common Bent *Agrostis capillaris* and Fescue sp., *Festuca sp.* Few herbs are present within the margins, and on the visit they appeared to be dying back due to herbicide treatment. Herbs present include Dwarf Nettle *Urtica urens*, Annual Mercury *Mercurialis annua*, Common Groundsel *Senecio vulgaris*, Common Daisy *Bellis perennis* and Red Dead Nettle *Lamium purpureum*. Of most interest within the intensive orchards was the presence of occasional Mistletoe *Viscum album*.

Grassland

3.30 Little grassland habitat is present within the Site, and that present is formed of short mown 'modified' Perennial Rye Grass lawns associated with the on-site workers accommodation and small areas of marginal rougher grassland in field corners.

3.31 These marginal grasslands are formed of Perennial Rye Grass, Common Bent and Cocksfoot with scattered herbs including Yarrow, Ribwort Plantain, Cinquefoil and Common Daisy. The largest block of grassland adjacent to Pump Lane has Bee Hives.

Scrub

3.32 Small marginal areas of scrub are present within the Site. These scrubby corners supported dense growths of Blackthorn *Prunus spinosa*, Cherry Plum *Prunus cerasifera*, Elder *Sambucus nigra*, Hawthorn *Crataegus monogyna*, Bramble *Rubus fruticosus* and Ivy *Hedera helix*.

Treelines and Hedgerows

3.33 The on-site orchards and Site boundaries are intersected by many hedgerows and treelines, almost all of which are re-planted hedgerows dominated by non-native species. Most within the land east of Pump Lane comprise of Leylandii, either as managed hedgerows or tall out-grown treelines. Occasional Poplar sp., treelines have in some cases been allowed to grow tall and mature, however most have been topped to form short dense windbreaks.

3.34 Of interest is the presence of several ‘colonies’ of Mistletoe that are established within some of the largest Poplar trees.

3.35 One species rich native hedgerow on the roadside embankment of Lower Bloors Lane has Alder *Alnus glutinosa* and Birch *Betula pendula* trees, with a single mature Oak *Quercus robur*.

3.36 The land west of Pump Lane supports numerous Poplar tree boundaries, some of have been cut short to form low ‘hedges.’ Several modern planted Hawthorn and Blackthorn hedgerows intersected the Site, and these created managed narrow field boundaries.

3.37 Two boundaries have been allowed to grow wider and shrubbier adjacent to ‘abandoned’ land outside of the Site.

Built Areas and Buildings

3.38 The Site supports a cluster of farm buildings and mobile workers homes. The largest building, a metal farm warehouse, appears to be in use. Adjacent to the warehouse is a long and narrow shed supporting a bitumen roof, the building appears to be in a state of disrepair and is currently disused.

3.39 The Site supports a network of gravel tracks and hard standing to facilitate the day-to-day intensive management of the farm.

Fauna

Invertebrates

Desktop Study

3.40 The biological records search returned records of several Section 41 and invertebrate species. Many invertebrates were associated with nearby chalk downlands and included species such Adonis Blue and Chalkhill Blue. Several scarce bees were also recorded within 250m of the Site including the Shrill Carder Bee *Bombus sylvarum* and Brown-banded Carder Bee *Bombus humilis*.

3.41 Records of Stag Beetle *Lucanus cervus* were also returned directly adjacent to the Site boundary.

Field Survey

3.42 The long-term use of the land for intensive agriculture means the site is of negligible to low quality for terrestrial invertebrate assemblages.

3.43 Only in pockets of the Site are there habitats with the potential to support invertebrate assemblage of greater variety, including in those areas where there standing and fallen dead wood, alongside occasional deadwood piles. Most of this habitat is associated with mature Poplar treelines, and these could support certain the relatively more common and widespread Hornet Clearwing *Sesia apiformis*.

3.44 The Site also supports abundant Mistletoe, which is a food plant for six specialist species of invertebrate, some of which are scarce in England.

Preliminary Recommendations for Impact Avoidance, Mitigation and Compensation

3.45 Where possible, the emerging proposals should avoid direct impacts to mature trees of ecological importance and native woody vegetation on boundaries. The project should aim to retain trees supporting Mistletoe, from which the population can continue to thrive.

3.46 Furthermore, where possible, artificial lighting in areas close to these habitat types should also be avoided because this is known to have an adverse effect on invertebrate assemblages and populations.

3.47 The extent of mitigation and/or compensation is unknown until more detailed designs have been provided.

Recommendations for Further Work

3.48 No further survey work is considered necessary especially if the proposals avoid mature tree lines, including those with native mature trees.

Great Crested Newt and other Amphibians

Desktop Study

3.49 The biological records search returned eight records Great Crested Newt within 2km of the Site. The most recent was from 2021, 460m to the south of the Site. The most recent after that was in 1991, and all other records are older than this. There were none returned within 250m of the Site.

3.50 There are two ponds within 250m of the Site to the north-east and north within the ZoI of the proposals. There are also a further five ponds within 500m of the Site. Two of which are present within Riverside Country Park *c*. 350m away.

3.51 The previous eDNA survey by The Ecology Partnership in 2018 returned negative results for two ponds located *c.*350 m to the north-east of the Site. The same company was not able to access two ponds within 250m of the Site.

3.52 Most of the Site falls within a low / Green Risk Zone for Great Crested Newt.

3.53 Common Toad *Bufo bufo* was recorded within 160m of the Site in 2011. Two further records were returned from within 250m, and there are numerous records were returned within 2km of the Site.

3.54 Many Common Frog *Rana temporaria* records were returned within 2km of the Site, but none within 250m of the Site.

Field Survey

3.55 No ponds are present within the Site.

3.56 Marginal and suitable terrestrial habitat is present within the Site, which includes log piles, hedge banks and ruderal vegetation that could provide natural refugia under which animals could shelter and/or forage.

Preliminary Recommendations for Impact Avoidance, Mitigation and Compensation

3.57 The emerging scheme should, where possible, avoid and minimise impacts to field boundaries, especially when they support native hedgerows, native trees and scrub. The risks to Great Crested Newt however is considered to be low.

Recommendations for Further Work

3.58 Prior to determining whether to conduct further work, the project should decide on whether it wishes to use/opt into the District Level Licence Scheme, because this would inform the scope/need for further survey work.

3.59 If the project decides not to proceed with opting into the District Level Licence, eDNA survey work is recommended of all ponds within 250m of the Site.

Reptiles

Desktop Study

3.60 The biological records search returned 14 records of Adder *Vipera berus* within 250m of the Site, including one record adjacent to the Site to the east.

3.61 Three records, and a possible fourth record of Slow Worm *Anguis fragilis* were recorded within 250m of the Site and numerous records were returned from within 2km of the Site. One record was adjacent to or just outside of the Site on the south-west edge and has 100m level of accuracy in terms of the record location.

3.62 There were no Common Lizard *Zootoca vivipara* records returned from within 250m of the Site but numerous records were returned from within 2km of the Site.

3.63 Slow Worms and Common Lizards were recorded during the reptile survey conducted by The Ecology Partnership in 2018.

Field Survey

3.64 The Site supports suitable reptile habitat and the 2018 survey results above confirm this. This includes natural refugia, such as dead wood piles, and field boundary margins.

Preliminary Recommendations for Impact Avoidance, Mitigation and Compensation

3.65 Where possible, the emerging proposals should avoid direct impacts to on-site boundary habitats that support grassland/tall herb and scrub mosaic (see **Map 2a and 3**).

Recommendations for Further Work

3.66 A presence / likely absence survey in the period April to September (inclusive), and ideally targeting the optimum months of April, May and/or September, is recommended.

Birds

Desktop Study

3.67 Interpreting bird data returned from biological records centres is challenging because it is hard to differentiate birds that use the site for foraging/breeding from birds are passage migrants and/or vagrants.

3.68 It is also, possibly more than other groups, heavily bias by recording efforts of local enthusiasts and the location of nearby ‘hotspots’ (such as the nearby Riverside Country Park). Therefore,

at this preliminary stage, this assessment has not completed a detailed assessment of bird records.

3.69 The Ecology Partnership conducted a breeding bird survey in 2018 and recorded 26 species, of which 17 were likely to be breeding within the Site. The bird activity was focused along the boundary tree and hedge lines. The Ecology Partnership concluded the Site was not functionally linked to the nearby SPA or Ramsar site. However, no wintering survey work was conducted.

Field Survey

3.70 The Site provides foraging opportunities for common and widespread red status bird species, such as House Sparrow *Passer domesticus*, and Starling *Sterna vulgaris*. These species are also Species of Principal Importance (i.e S41 species).

3.71 Though intensively managed, Fieldfare *Turdus pilaris*, Redwing *T. iliacus*, Song Thrush *T.philomelos* and Mistle Thrush *T. viscivorus* were recorded during survey work.

Preliminary Recommendations for Impact Avoidance, Mitigation and Compensation

3.72 Where possible, the emerging proposals should avoid direct impacts mature native trees and woody vegetation on boundaries, especially those that support native mixed-species hedgerows and/or patches of scrub (see **Map 2a and 3**).

Recommendations for Further Work

3.73 A breeding and wintering bird survey, in accordance with the Bird Survey Guidelines, should be conducted by an ornithological specialist.

Bats

Desktop Study

3.74 Bat records within 5km of the Site were obtained from KMBRC, and included records of the following species from the last 10 years:

- Common Pipistrelle Pipistrellus pipistrellus;
- Soprano Pipistrelle *Pipistrellus pygmaeus*;
- Daubenton's Bat Myotis daubentoniid;
- Nathusius' Pipistrelle Bat *Pipistrellus nathusii*;
- Brown Long-eared Bat *Plecotus auritus*;
- Serotine Eptesicus serotinus;
- Noctule Nyctalus noctula;
- Leisler's Nyctalus leisleri;
- Natterer's Bat *Myotis nattereri*;
- Whiskered Bat *Myotis mystacinus*; and
- One record of either Whiskered or Brandt's Bat *Myotis brandtii*

Bat Roosts

3.75 Details of bat roosts within approximately 2.5km of the Site were returned in the records search by KMBRC, including five maternity roosts and two hibernating bat records. Records of 11 roosts of unknown type were returned from within 5km of the Site.

3.76 Two of the maternity roosts were adjacent to the Site to the north-west of the western most part of the Site. These were a Common Pipistrelle roost in 2014 and a Pipistrelle roost in 2016.

Previous Surveys

3.77 Bat activity transects conducted by the Ecology Partnership in 2018 recorded Common Pipistrelle, Soprano Pipistrelle, Nathusius Pipistrelle, Serotine, and Noctule.

Field Survey: Habitats

3.78 The habitats within the Site do not appear to be illuminated, and consequently the Site provides a 'dark' refuge for the local bat assemblage.

3.79 The orchards, scrub, and boundary habitats, including the adjacent country lanes and associated treelines, provide habitat for foraging and commuting bats.

Field Survey: Trees

3.80 The Site supports trees with 'Potential Roosting Features' (PRFs) for bats. PRFs include woodpecker holes, flaking/loose bark, and rot holes.

Field Survey: Buildings

3.81 The on-site metal barn was assessed externally, and it appears to support few features suitable for roosting bats.

3.82 The on-site long wooded shed has a bitumen felt, pitched roof and wooden weather boarded walls. The weather boarding, vents in the walls and gaps around the base of the building provide potential entry points for roosting bats.

3.83 Several modern mobile homes were present and were not inspected closely. These buildings appeared to be in good condition.

3.84 Multiple off-site structures were identified (Map 3, Target Notes 4, 5 and 6) with potential to support roosting bats.

Preliminary Recommendations for Impact Avoidance, Mitigation and Compensation

3.85 Where possible, the emerging proposals should avoid direct impacts to mature trees, and woody vegetation on boundaries, such as native mixed-species hedgerows (see **Map 2a** and **3**).

3.86 Furthermore, where possible artificial lighting in areas close to these habitat types should also be avoided. The Lux levels within dark corridors should not exceed 0.2 lux in the horizontal plane and 0.4 lux in the vertical plane (Bat Conservation Trust, 2018; 2023).

3.87 Furthermore, any lighting scheme that is required should be bat friendly and based on the Bat Conservation Trust's (BCT) Bats and Artificial Lighting in the UK (BCT, 2018) document, and include measures such as:

- No lighting should be provided along important bat features (as determined by survey work). This is likely to include woodland, wetland, hedgerows, tree lines, scrub, and rough grassland edges unless there are overriding needs of public health and safety, which cannot otherwise be addressed;

- The use of LED lights where possible because they enable increased control and improve colour definition (they also save on energy);

- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component, and luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Bat Conservation Trust 2018);

- Luminaires should be designed and oriented to restrict light directionality only to those areas necessary. This should, where possible, include double asymmetrical luminaires and full horizontal cut-off designs to prevent light spill;

- In pedestrian or cycleway areas, lights should be low-level and of a cowled lighting design;

- Minimisation of the temporal extent of lighting through the use of timers and PIRs, where appropriate; and

- The use of hoods, cowls, louvres, and shields to further reduce light-spill where needed.

Recommendations for Further Work

3.88 A Daytime Bat Walkover (DBW) by a suitably competent and licenced bat ecologist is recommended, which should include a Ground Level Tree Assessment (GLTA) of on-site trees (and those on or just beyond the Site boundary).

3.89 Internal and external building inspections by a licenced bat specialist should also be conducted of the on-site buildings to search for evidence of roosting bats, and to determine the full scope of survey work that is likely to be needed.

3.90 Nighttime Bat Walkovers (NBW), manual bat activity surveys, and automated/static bat activity surveys should be conducted to inform detailed mitigation measures, especially in relation to foraging and commuting bats.

3.91 The need for further emergence/re-entry surveys and/or aerial tree inspections will be determined by the DBW.

3.92 Overall, the extent of additional bat survey work will be dependent on the degree to which direct and indirect impacts on bat roosting, foraging and/or commuting habitat can be avoided. This includes impacts associated with habitat loss, fragmentation, or illumination from artificial lighting.

Hazel Dormouse, Hedgehog, and Badger

Desktop Study

3.93 The biological records search returned six records of Hazel Dormouse *Muscardinus avellanarius* from the early 2000's. Four of these were 2.7km from the Site and the other two records were from Hempstead and Gillingham South.

3.94 The biological records search returned many records of Hedgehog *Erinaceus europaeus* within 2km of the Site, and four records of Badger *Meles meles* were returned. The latest Badger record was from 2024 and was *c.* 2.8km south of the Site. There was one record from 2023, and the other two records were from the early 2000s.

3.95 No Badger setts were identified within the Site by the Ecology Partnership in 2018, but Badger activity was recorded.

Field Survey

3.96 The Site provides suitable, but very limited habitat for Hazel Dormouse. Suitable habitat includes native hedgerows connected to woodland and other woody features off-site.

3.97 Numerous Badger latrines were recorded during the Site visit. Latrines were recorded within hedgerow either side of Pump Lane and north of the allotments off Lower Bloors Lane. This is not surprising because the on-site habitat provides foraging opportunities for Badger.

3.98 An off-site Badger sett was recorded just beyond the boundary of the Site, within abandoned orchard (**TN1, Map 3**).

3.99 The Site supports suitable habitat for Hedgehog.

Preliminary Recommendations for Impact Avoidance, Mitigation and Compensation

3.100 Where possible, the emerging proposals should avoid direct impacts to mature trees, and woody vegetation on boundaries, such as native mixed-species hedgerows (see **Map 2a** and **3**).

Recommendations for Further Work

3.101 Further Badger survey work is recommended, and so is a Hazel Dormouse survey if the emerging proposals cannot avoid impacts to suitable habitat. However, if the scheme can largely avoid impacts to suitable Hazel Dormouse habitat, then the need to survey is reduced.

4. DESIGN IMPLICATIONS AND BIODIVERSITY NET GAIN STRATEGY

4.1 The proposals should:

- **Protect**: Ecologically important trees and tree-line boundaries. In doing so it demonstrates the emerging proposals adhere to CIEEM's ecological mitigation hierarchy (CIEEM, 2018) and the Biodiversity Gain Hierarchy associated with the implementation of the Environment Act;

- **Restore**: Traditional orchard habitats through enhancing and planting up existing planted orchards. Green links to off-site traditional orchard style habitats (Map 3, Target Notes 1, 2 and 3) can be sought. Where impacts on grasslands can be avoided, explore opportunities to encourage a greater diversity of wildflower species. Finally, restore on-site hedgerows and field boundaries by re-connecting gaps to improve habitat connectivity and replacing non-native planted hedgerows species with native varieties; and

- **Create**: New traditional orchards with a mosaic of open grassland habitat including scattered trees using heritage fruit varieties to acknowledge the Site's historic land-use. This should include the creation of flower rich meadows and ponds.

4.2 The protection, restoration and creation of habitats will in turn benefit flora and fauna within the ZoI, by creating larger areas of habitat, that are of higher quality, and which are better connected (Lawton, 2010). Sensitive management of habitats will ensure the long-term quality of these.

4.3 The above should form the basis of a Biodiversity Gain Strategy and Ecological Management Plan, which must also reflect the results of ecological survey work as and when it is conducted. The importance of basing the Biodiversity Gain Strategy on evidence and further survey work is highlighted by Zu Ermgassen *et al.*, (2021) and Conservation Evidence.

4.4 Zu Ermgassen *et al.*, (2021) also highlighted the production and implementation of an Ecological Management Plan is essential to ensure BNG is realised, and that net gain targets are delivered as they had been assessed in the submitted planning documents.

4.5 Recommended 'themes' for the Biodiversity Gain Strategy and/or Ecological Management Plan when they are produced are:

- **Traditional Orchards at the Doorstep, Where Every Home Has a Harvest:** This theme promotes the restoration and creation of Traditional Orchards, reflecting the ecological history of the Site. By encouraging mature fruiting trees, it will benefit saproxylic and pollinating invertebrates, and birds. It also has the potential to connect people with nature and their food.

- **Flower-rich Spaces for Insects and People**: This theme promotes the restoration and creation of flower-rich habitats that suit the on-site soils. In turn this will benefit invertebrate pollinators and create a wonderful space for new residents.

- **Wetter the Better**: Climate change predications suggest the UK will experience wetter winters and hotter, drier summers. Therefore, habitats that support permanent water throughout the year will become ever more important for wildlife (such as for dragonflies

and damselflies, amphibians etc). This theme encapsulates how the emerging proposals can create new freshwater habitats (i.e. ponds).

- **Scrub-Loving Birds:** Native-mixed scrub provides habitat for a range of fauna, including various red status bird species. Allowing the natural regeneration of some scrub in selected areas could also promote a 'wilder' approach to some areas of the Site, which in turn delivers a diversity of complimentary habitat benefits.

- **Homes for Wildlife**: Some animal species benefit from the provision of structures that they can use for breeding and/or shelter, and this can include integrated Swift bricks, bee bricks and earth banks formed of friable substrates for ground nesting bee species.

5. RECOMMENDATIONS AND CONCLUSIONS

5.1 The development proposals at Rainham Parkside Village create a significant opportunity to secure significant ecological benefits if the emerging scheme avoid the important ecological features identified in this PEAR and restores and creates new habitats within the green and blue infrastructure.

5.2 Furthermore, based on the PEAR and assuming the project continues to follow a sensitive approach to design, there are no biodiversity related legal or planning policy reasons that would prevent a scheme being built.

5.3 The scheme has sufficient space to secure 10%+ BNG within the Site. The feasibility of delivering 20% BNG, which Medway Council is currently investigating, would require significant areas of informal open space.

Ecological Constraints and Opportunities

5.4 An Ecological Constraints and Opportunities Plan (ECOP) has been provided to inform the emerging designs (**Map 3**).

5.5 Those areas of greatest ecologist importance and/or of highest risk are shown in red on **Map 3**. Where practically possible impacts in these areas should be avoided. Areas of likely moderate ecological risk are shown in amber. Areas in green are areas of lowest ecological risk.

5.6 In locations where works are likely to impact areas in red or amber, then further survey work, mitigation and/or compensation is more likely. However, further survey work (and the new information this provides) may change the current areas of high, moderate, and low ecological risk.

5.7 An ecologist should form part of the design team to ensure best practice guidance is followed, specifically in relation to the ecological mitigation hierarchy detailed by CIEEM (2018).

Recommended Further Work

5.8 **Table 5.1** provides a summary of the further work that might be required depending on the emerging proposals.

Table 5.1: Recommended further survey work and impact avoidance

Further Work	Seasonal Timing Constraints / Considerations	Recommended Stage of the Project	Reason for Recommendation
Botanical survey, especially of grasslands, treelines and hedgerows.	May – June.	Prior to planning application	Features of potential ecological importance and more information is needed to inform ecological evaluation, impact avoidance, mitigation, compensation, and Biodiversity Net Gain Assessments
Statutory Biodiversity Net Gain Metric condition assessments of habitats within the red-line of the proposals.	April - June	Prior to planning application	A requirement for planning
Great Crested Newt Habitat Suitability Index (HSI) Survey and/or eDNA survey. Initial day-time visit to assess habitat suitability of ponds within 250m of the development areas. Completion of a water sampling survey to identify the potential presence of Great Crested Newt.	Whilst the HSI can be conducted at any time, assessment outside of the period April/May to September have minor limitations. The eDNA survey must be completed between mid-April to end-June inclusive.	Prior to planning application (although information from the survey might be useful to inform layout design)	Feature of potential ecological importance and more information is needed to inform further survey requirements, evaluation, impact avoidance, mitigation, and compensation. However, use of District Level Licence may negate the need for this work.
Reptile survey Initial survey to set out refugia in suitable habitat, and then seven follow up visits.	Optimal periods are April, May and September, but surveys can be conducted between April and September (inclusive)	Prior to planning application	Feature of potential ecological importance and more information is needed to inform ecological evaluation, impact avoidance, mitigation, and compensation.
Breeding Bird Survey	6 visits between early to mid-April and mid-June, including a nocturnal visit	Prior to planning application	Feature of potential ecological importance and more information is needed to inform evaluation, impact avoidance, mitigation, and compensation

Further Work	Seasonal Timing Constraints / Considerations	Recommended Stage of the Project	Reason for Recommendation
Winter Bird Survey	4 daytime visits between November and February (inclusive), and an additional nocturnal visit.	Prior to planning application	Feature of potential ecological importance and more information is needed to inform evaluation, impact avoidance, mitigation, and compensation
Daytime Habitat Assessment for bats, including a Ground Level Tree Assessment	Preliminary tree assessments are best conducted in winter	Prior to planning application, but early enough to inform other bat survey work (see below for timings)	Needed to inform scope of survey work (see below re bat activity and emergence/re-entry surveys). Bats likely to be of feature of ecological importance and more information is needed to inform ecological evaluation, impact avoidance, mitigation, and compensation
Bat activity survey Bat dusk emergence/dawn re-entry roost surveys	April-October (seasonal transects and potentually monthly static deployments) May-August (up to three surveys per tree or building depending on suitability identified during daytime assessment)	Prior to planning application (although information from the bat activity survey can be useful to inform layout design)	Feature of potential ecological importance and more information is needed to inform evaluation, impact avoidance, mitigation, and compensation. This could include a NE licence if present.
Hazel Dormouse Survey	Survey between April and November with the initial deployment in March/April.	Prior to planning application	Feature of potential ecological importance if present, and more information would be needed to inform ecological evaluation, impact avoidance, mitigation, and compensation. This could include a NE licence if present.
Badger Survey	Anytime, but finding setts is usually more effective in winter	Useful to inform layout design, especially in main sett is likely to be present.	Most likely to relate to legal compliance, however if EIA development prudent to conduct this prior to planning submission.

Legal Considerations

Great Crested Newt

5.1 The Great Crested Newt is afforded legal protection by the Wildlife and Countryside Act 1981 (as amended) and the Habitats Regulations 2017 (as amended). Further detail is provided in **Appendix 1**.

5.2 Therefore, if Great Crested Newt are present, a licence is likely to be required to facilitate development. This could either be a 'traditional' NE mitigation licence or a District Level Licence, which can negate the need for extensive survey work. Furthermore, the planning authority has certain legal duties when making planning decisions with respect to this species.

Reptiles and Nesting Birds

5.3 All four common reptile species and nesting birds are afforded legal protection by the Wildlife and Countryside Act 1981 (as amended).

5.4 Given the legal protection afforded to reptiles, careful consideration must be given to the timings and methods of habitat management. For example, the type and density of any stock used for grazing and/or the timing and height of any grass cutting.

5.5 Given the legal protection afforded to nesting birds, their nests, eggs, and chicks; vegetation clearance should be conducted during the period mid-September to February (inclusive), which is outside of the bird nesting season (but see caveat below).

5.6 If this is not possible (perhaps because of the risks to other protected species, such as reptiles) and vegetation clearance is required within the bird nesting season (March to mid-September, inclusive), a nesting bird check will need to be undertaken by a suitably experienced ecologist prior to the commencement of vegetation clearance. If any active nests are discovered, these will need to be retained and protected in situ until they are no longer in use by nesting birds.

Bats

5.7 Bats are afforded legal protection by the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

5.8 Therefore, if roosting bats are present and their roosts will be impacted, a licence from Natural England is likely to be required to facilitate development. Furthermore, the planning authority has certain legal duties when making planning decisions with respect to roosting bats.

Hazel Dormouse

5.9 Hazel Dormouse is afforded legal protection by the Wildlife and Countryside Act 1981 (as amended) and the Habitats Regulations 2017 (as amended). Further detail is provided in **Appendix 1**.

5.10 Therefore, if present and Hazel Dormouse habitat is impacted, a licence from Natural England is likely to be required to facilitate development. Furthermore, the planning authority has certain legal duties when making planning decisions with respect to this species.

Badger and Other Mammals

5.11 Badger is afforded legal protection by the Protection of Badgers Act 1992 (as amended). In the event an active Badger sett is found on-site prior to or during works (or field evidence indicating the presence of them), works within 30m of any potential sett should cease immediately because of the nature of the legal protection afforded to these species, and a suitably qualified ecologist should be contacted for advice.

5.12 All Wild Mammals receive some protection under the Wild Mammals (Protection) Act 1996 (as amended). This Act includes offences of crushing and asphyxiation of any wild mammal with intent to inflict unnecessary suffering.

5.13 The above legislation may be of particular importance if there is likely to be significant ground works.

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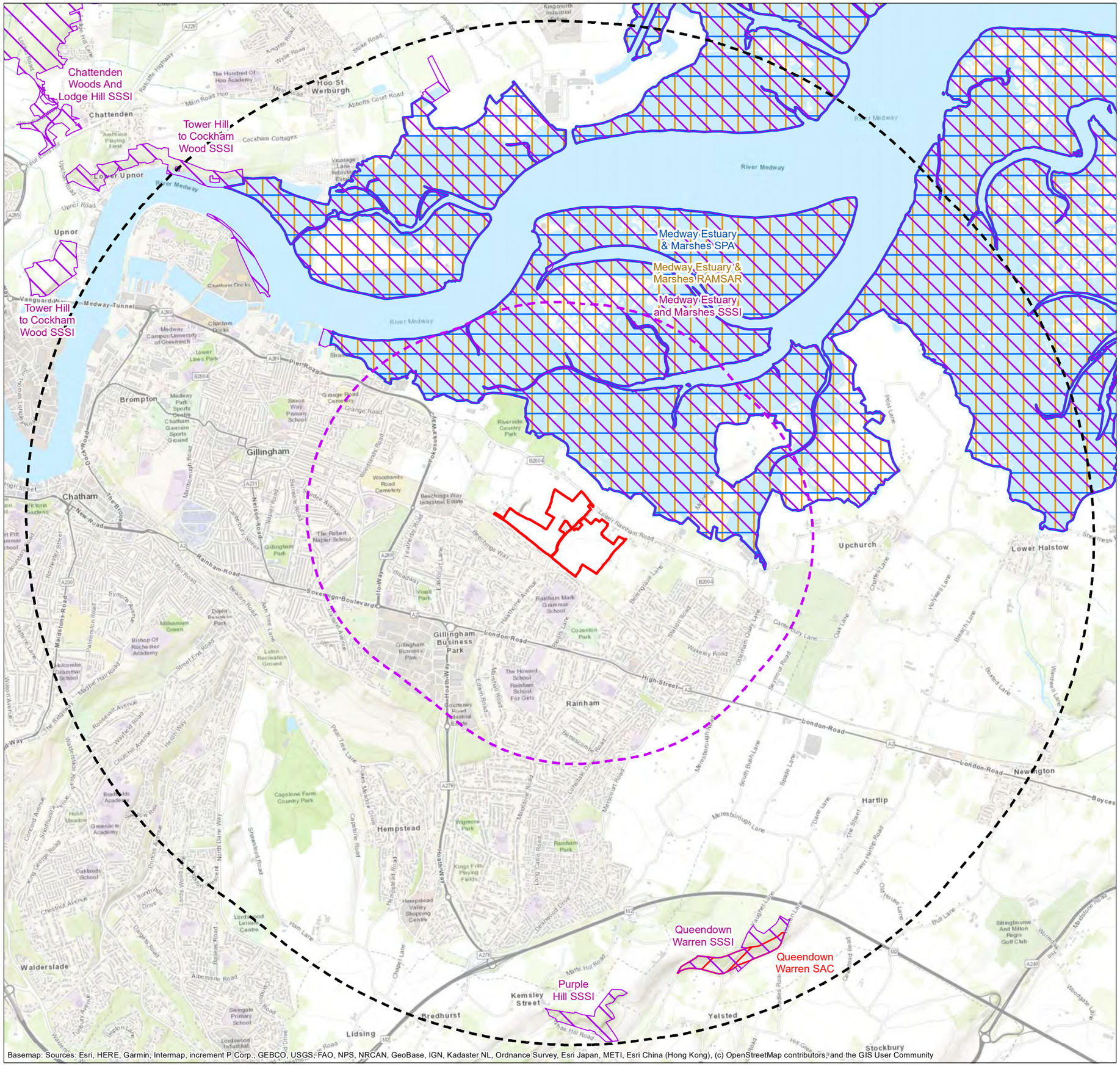
Maps



MAP 1a Site Location & Statutory Designated Sites

KEY

- Site boundary
- 2km linear distance from site boundary
- 5km linear distance from site boundary
- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)
- Sites of Special Scientific Interest (SSSI)
- Ramsar

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Rainham Parkside Village

DATE: 19 March 2025

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MAP 1b Site Location & Non-Statutory Designated Sites

KEY

- Site boundary
- 2km linear distance from site boundary
- Local Nature Reserves (LNR)
- Local Wildlife Sites (LWS)
- Roadside Nature Reserve (RNR)

Natural England's Provisional Ancient Woodland Inventory

- Ancient & Semi-Natural Woodland

Berengrave Chalk Pit LNR

Berengrave Pit, Rainham LWS

Hoath Way north & Courtney Road (East side) RNR

Ambley Wood LNR

Darland Banks LNR

Darland banks & adjacent woodlands LWS

SCALE: 1:20,000 at A3

0 250 500 750 1,000 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Rainham Parkside Village

DATE: 19 March 2025

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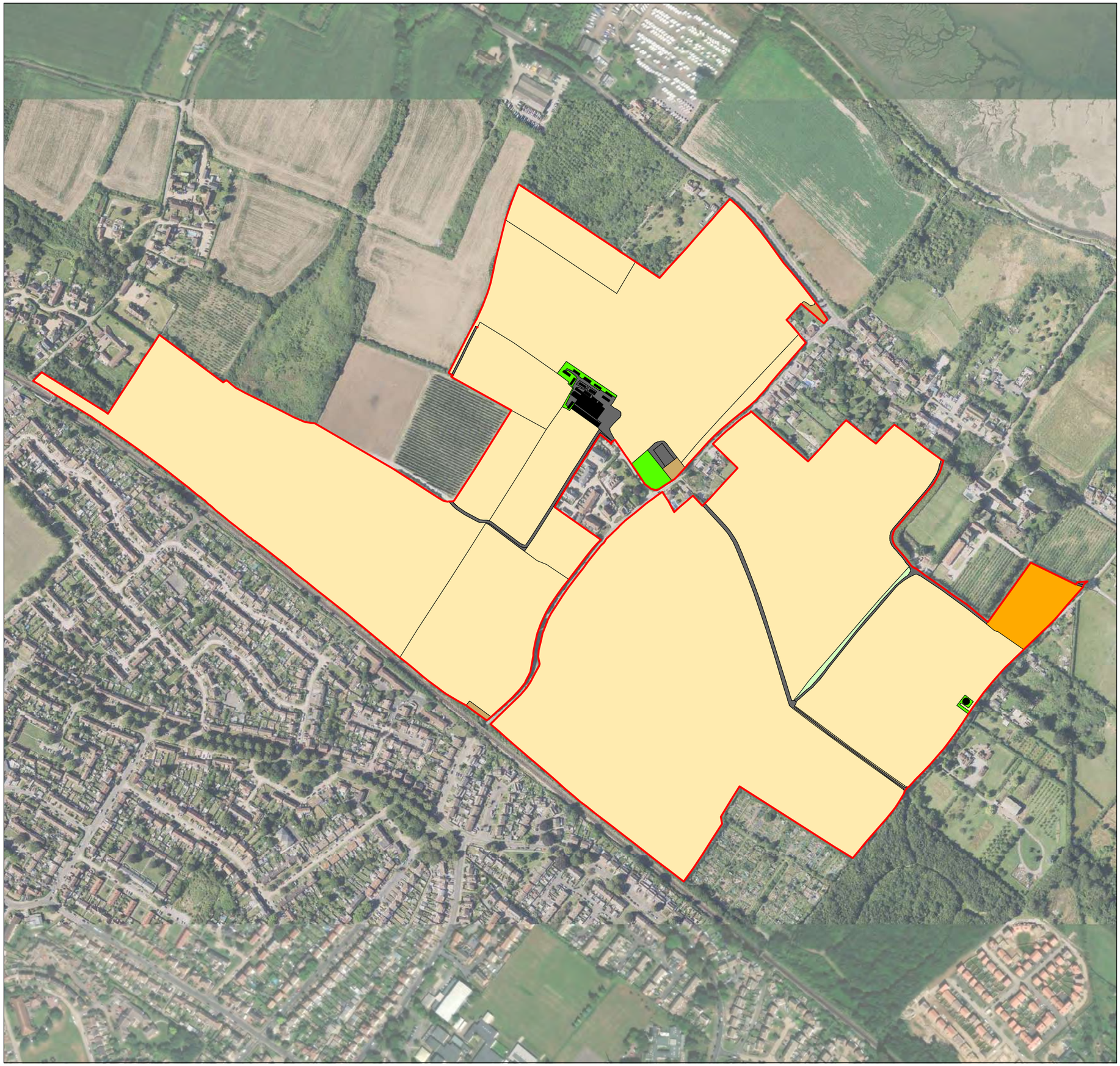

MAP 2a UK Habitats Classification: Level 3

KEY

- Site boundary
- c - cropland
- g - grassland
- c1 - arable and horticulture
- g3 - neutral grassland
- h3 - dense scrub
- u1 - built-up areas and gardens
- u1b5 - buildings

SCALE: 1:5,000 at A3

0 50 100 150 200 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Rainham Parkside Village

DATE: 04 April 2025

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MAP 2b UK Habitats Classification: Level 3 Linear Features

KEY

- Site boundary
- w1 - Broadleaved and mixed woodland
- w1g - Other broadleaved woodland
- w2c - Other coniferous woodland
- h2 - Hedgerows
- h2a - Native hedgerow
- h2a5 - Species-rich native hedgerow
- h2b - Non-native and ornamental hedgerow

SCALE: 1:5,000 at A3

0 50 100 150 200 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Rainham Parkside Village

DATE: 04 April 2025

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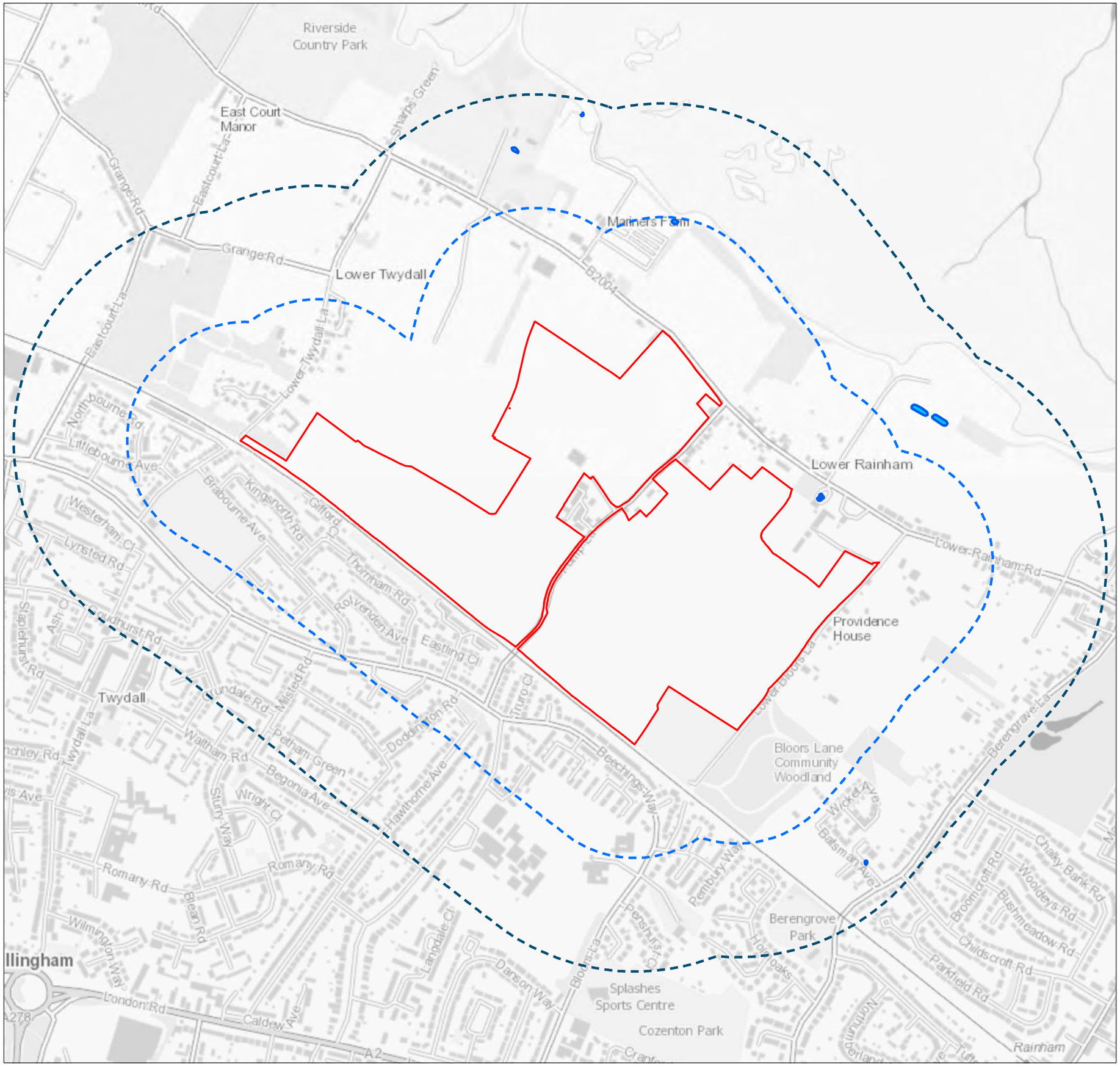
Aerial Imagery Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community & GetMapping



MAP 2c Ponds

KEY

- Site boundary
- 250m linear distance from site boundary
- 500m linear distance from site boundary
- Ponds

SCALE: 1:8,250 at A3

0 100 200 300 400 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Rainham Parkside Village

DATE: 19 March 2025

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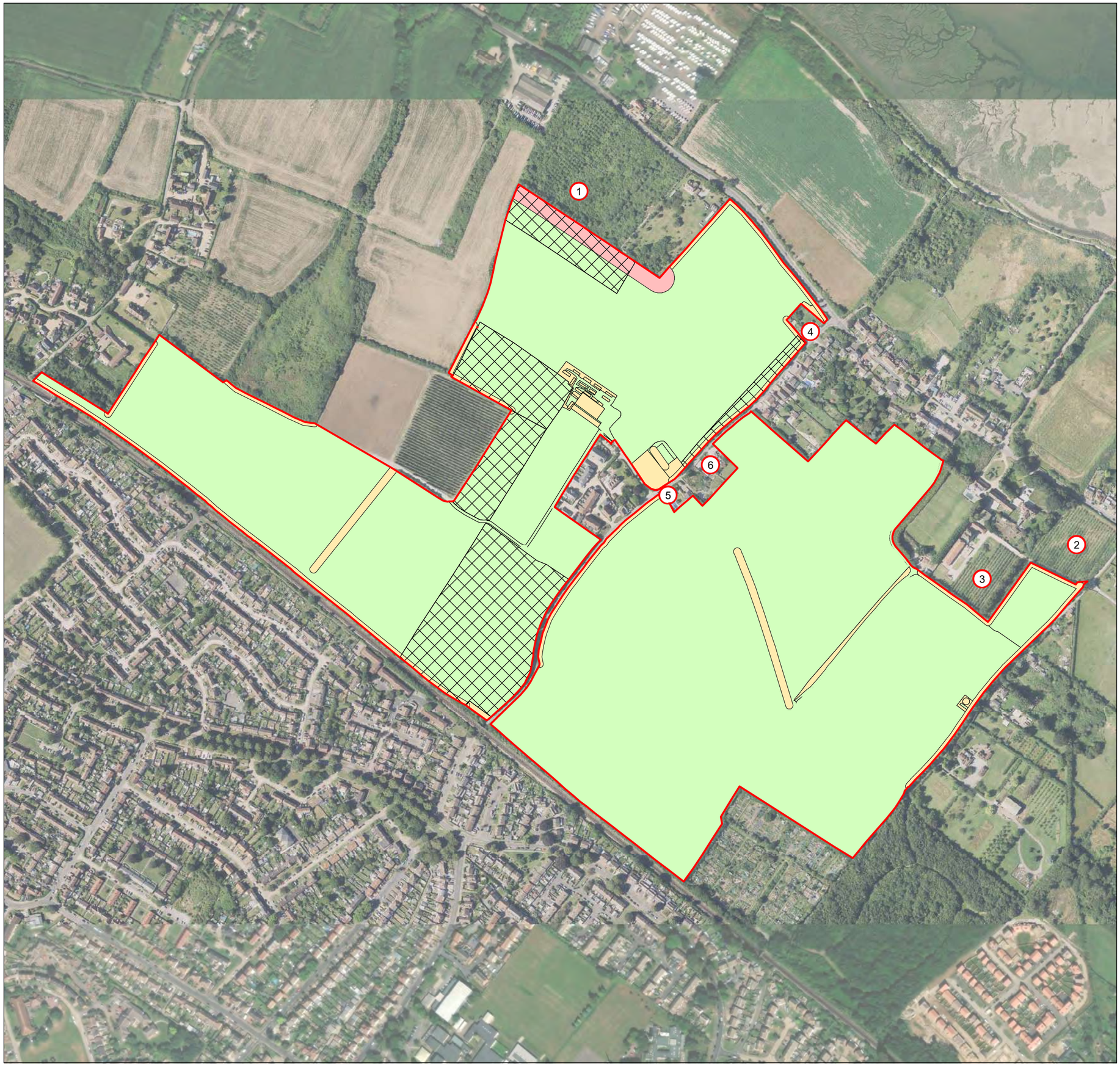

MAP 3 Ecological Constraints and Opportunities

KEY

- Site boundary
- Targte notes
- Green
- Amber
- Precautionary buffer for possible Badger Setts
- Opportunity area - retain trees to create traditional orchard habitats

Target Notes:
1, 2 & 3 Off-site Traditional Orchard Restoration and Green Link opportunity
4, 5 & 6 Off-site Building With Bat Potential

SCALE: 1:5,000 at A3

0 50 100 150 200 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Rainham Parkside Village

DATE: 04 April 2025

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Appendix 1

Relevant Legislation and Planning Policy Relating to Wildlife and Development in England

LEGISLATION

The Environment Act 2021

The Environment Act 2021 placed a requirement on the Secretary of State to make regulations setting out long-term targets for air quality, water, biodiversity, resource efficiency and waste reduction. It also required the Government to produce an Environmental Improvement Plan, to report on progress towards its goals annually, to meet the targets that are set in relation to the improvement of the natural environment and to produce remedial plans should this not be achieved.

In relation to water quality, the Act placed new duties on the Government, Environment Agency and sewerage undertakers to reduce the frequency and harm of discharges from storm overflows on the environment, and for monitoring the quality of watercourses affected by those overflows.

It also included a requirement for an independent Office for Environmental Protection (OEP) to be established, with responsibilities for monitoring and reporting on progress against environmental improvement plans and targets. The OEP also has investigation and enforcement powers against public authorities failing to comply with environmental law when exercising their functions.

The Act made provision for 10% biodiversity gain to become a condition of planning permission in England, through amendments to the Town and Country Planning Act 1990. These amendments came into force on the 12th February 2024 (delayed to 2nd April 2024 for 'small sites') and are implemented through a series of new statutory instruments collectively referred to in this document as the 'Biodiversity Net Gain Regulations' (detailed further below). The 10% biodiversity gain is measured through a biodiversity metric published by the Department of the Environment, Food and Rural Affairs (DEFRA) on behalf of the Secretary of State. The Act also establishes Biodiversity Net Gain as a requirement for Nationally Significant Infrastructure Projects (NSIPs).

The Act also strengthens the biodiversity duty placed on public authorities through amendments to the Natural Environment and Rural Communities Act 2006 Section 40, requiring such authorities to not only conserve but also enhance biodiversity when exercising their functions. Public authorities will also be required to publish summary reports of actions taken under Section 40 at least every five years.

The Act provides the legal basis for the creation of Local Nature Recovery Strategies (LNRSs) for England (including specifying their content), and the preparation and publication of species conservation strategies and protected sites strategies.

The Act also created a new legal vehicle known as a 'Conservation Covenant' which is a voluntary, legally binding private agreement between landowners and responsible bodies (the latter designated by the Secretary of State) which conserve the natural or heritage features of the land, enabling long-term conservation. Conservation Covenants are designed to 'run with the land' when it is sold or passed on and are intended to become a primary mechanism for the delivery of Biodiversity Net Gain (BNG).

The Act provides new powers for the Government to amend in future Regulation 9 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') – but "only if satisfied that the regulations do not reduce the level of environmental protection provided by the Habitats Regulations".

Several aspects of protected species licencing have also been adjusted by the Act. These include the removal of several inconsistencies between the Habitats Regulations and the Wildlife & Countryside Act 1981 (as amended), ensuring that licences issued under the former piece of legislation also apply under the latter, and making it now possible for licences to be issued under Section 16(3) of the Wildlife & Countryside Act 1981 (as amended) for purposes of overriding public interest. The maximum term of a licence that can be issued by Natural England has also been extended from 2 to 5 years.

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (known as the "Habitats Regulations") were originally drawn up to transpose the European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive") into UK legislation. Following the UK's exit from the European Union, the Habitats Regulations – as amended by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – remain in force until such a time as they are superseded by new or updated domestic legislation.

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which previously formed part of the Natura 2000 network of protected areas across Europe and are now part of the UK's "National Sites Network". New National Sites may be designated under the Regulations.

The Regulations also prohibit certain actions relating to European Protected Species (EPS), which include *inter alia* Hazel Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, European Otter *Lutra lutra*, Sand Lizard *Lacerta agilis*, Smooth Snake *Coronella austriaca* and all native species of bat.

Further information on SPAs, SACs and European Protected Species is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is a key mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Table A1.1: Relevant Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.
Schedule 9a	Allows environmental authorities to issue species control orders to landowners, obliging them to control/eradicate invasive and/or non-native species.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000 have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England. This was published in 2007 and is commonly referred to as the "S41 list". Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on Species and Habitats of Principal Importance is provided in the relevant sub-sections of this Appendix.

SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory (legal) protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

Statutory Sites: International

Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2017 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK.

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the European Habitats Directive 92/43/EEC. SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the European Birds Directive 2009/147/EC. Following the UK's exit from the EU, these now form part of the "National Sites" network rather than the EU Natura 2000 network.

Ramsar sites are wetlands of international importance designated under the Ramsar Convention held in Iran in 1971 and although not covered under the Habitats Regulations they are, as a matter of national planning policy, subject to the same strict protection as SACs and SPAs. The majority of terrestrial Ramsar sites in England are also notified as SPAs, SACs and/or Sites of Special Scientific Interest (SSSIs).

To avoid confusion with the nationally designated sites described below, EPR refers to SACs and SPAs as 'International sites', given the reasons for their designation.

Any plan or project considered likely to affect an International site (SAC, SPA or Ramsar) must be subject to a Habitats Regulations Assessment (HRA), as set out under Regulation 63 (and Regulation

105 in respect of Land Use Plans) of the Conservation of Habitats and Species Regulations 2017 (as amended) and the National Planning Policy Framework (NPPF) 2024.

The ‘competent authority’ determining whether a plan or project should proceed carries out the HRA, but the onus is on the developer to provide the necessary information to inform this process, usually in the form of a report.

Under the Conservation of Habitats and Species Regulations 2017 (as amended), the competent authority must determine in the first instance whether a proposed development is ‘likely to have a significant effect on the International Site, either alone or in combination with other plans and projects’. This stage of the HRA process is known as ‘screening’, and ‘measures intended to avoid or reduce the harmful effects’ of the subject plan or project cannot be taken into account at this stage.

If a likely significant effect cannot be precluded (screened out) on the basis of objective information, the competent authority must undertake an ‘Appropriate Assessment’ to fully assess these implications against the site’s conservation objectives, to determine if there would be an adverse effect on the integrity of the affected International Site(s). A precautionary approach must be taken with respect to determining whether or not there would be an adverse effect, and the appropriate nature conservation body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed and no alternative to achieving the objectives of these reasons that are less harmful to the International Site(s), the competent authority may not undertake or authorise the plan or project until they have established (based on the conclusions of the Appropriate Assessment) that the activity will not adversely affect the integrity of the International Site. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

Regulation 16A of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 sets out the management objectives of the National Site Network, which can be summarised as follows:

- to maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive within the UK’s territory to a favourable conservation status (FCS); and
- contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

The appropriate authorities must also have regard to:

- the importance of protected sites in meeting the above objectives, including breeding, moulting, staging and wintering areas for in the case of migratory bird species;
- their importance for the coherence of the national sites network; and
- the threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

Government guidance[1] also states that competent authorities have a duty to help protect, conserve and restore the designated features of SACs and SPAs when carrying out their statutory work, including taking decisions that might affect a site. They also have a duty to consider how they can help to prevent the deterioration of the site's habitats from human activity or natural changes, including habitats that support designated species, and prevent significant disturbance of the site's designated species from human activity or natural changes.

Depending on which entity is responsible for authorising a plan or project, competent authorities can include (but are not limited to) local planning authorities, planning committees, the Secretary of State and statutory agencies such as Natural England and the Environment Agency.

Statutory Sites: National

Nationally important sites include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). A development proposal that is likely to affect a nationally important site will be subject to special scrutiny by the local planning authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites, as set out in Section 15 of the National Planning Policy Framework (NPPF).

Sites of Special Scientific Interest

The Wildlife and Countryside Act 1981 (as amended) and the CRoW Act 2000 provide the primary legal basis for the protection of Sites of Special Scientific Interest (SSSIs). These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity. Natural England are responsible for assessing the condition of these areas and agreeing management plans for their conservation.

Public bodies have a duty to take reasonable steps to conserve and enhance the special features of sites of special scientific interest (SSSIs) when carrying out their statutory duties and giving others permission for works, such as reviewing planning applications.

Natural England has produced, for every SSSI in England, a list of 'Operations Requiring Natural England's Consent' (ORNECs). Activities listed as ORNECs cannot be carried out within the relevant SSSI unless Natural England has issued their written assent to the activity taking place.

National Nature Reserves

National Nature Reserves (NNRs) are declared under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990. They are managed to conserve their habitats or to provide special opportunities for scientific study

[1] https://www.gov.uk/guidance/duty-to-protect-conserve-and-restore-european-sites

of the habitats communities and species represented within them. NNRs represent the very best parts of England's SSSIs. The majority of NNRs also have European nature conservation designations.

Statutory Sites: Regional/Local

Local Nature Reserves

Local Nature Reserves (LNRs) are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

Non-Statutory Sites

Local Wildlife Sites

Local planning authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. Guidance for selecting and designating such sites have been produced by Defra. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites' (CWSs), 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of sites as set out above. Further information is typically provided in local level planning policy and related guidance.

Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance for the conservation of biodiversity in England under Section 41 (S41) of the NERC Act 2006. Although these habitats are not legally protected, the NPPF, Government Circular 06/05, good practice guidance, the NERC Act 2006 and the Environment Act 2021 place a clear responsibility on planning authorities to further the conservation of these habitats. They can be a material consideration in planning decisions, and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

The S41 list also includes species as explained below under 'Species of Principal Importance in England'.

Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include

rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

Hedgerows

Hedgerows can act as wildlife corridors that are essential for migration, dispersal and genetic exchange of wild species. Hedgerows that qualify as a Habitat of Principal Importance under S41 of the NERC Act 2006 are a material consideration in the planning system.

Under the Hedgerow Regulations 1997, it is an offence to remove a hedgerow classed as 'important' under the criteria set out by the Regulations without submitting a notice to the Local Planning Authority and waiting for their decision. The Regulations are aimed at countryside hedges and do not apply to hedges around private dwellings or where planning permission has been granted for a project that includes hedge removal. Hedgerows that satisfy wildlife, archaeological, historical or landscape criteria qualify as 'important' under the Regulations. If a hedgerow is not important, the Local Planning Authority may not prevent its removal; however, Local Planning Authorities are required under the Regulations to protect and retain important hedgerows unless satisfied that the circumstances justify their removal.

Tree Preservation Orders

Tree Preservation Orders (TPOs) may be declared under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999 to protect individual trees and woodlands from development and cutting. TPOs are primarily put in place to preserve amenity or for landscape conservation reasons. The importance of trees as wildlife habitat may be taken into account, but alone is not sufficient to warrant a TPO. For this reason, TPOs do not fit comfortably under the remit of nature conservation and are generally dealt with by an arboricultural consultant rather than an ecologist. Further guidance on TPOs in relation to development is available from the Department for Levelling Up, Housing and Communities.

Ancient Woodland & Veteran Trees

Ancient woodlands are defined in England as areas continuously wooded since at least 1600 AD (although certain open areas such as rides and glades within woodlands are also considered part of a woodland and brief periods of tree cover removal will not remove ancient woodland status). Even an ancient wood which has been replanted may still have remnants of ancient woodland wildlife and historical features and has potential to be restored. For this reason, Natural England's Provisional Ancient Woodland Inventory (PAWI) draws a distinction between Ancient and Semi Natural Woodland (ASNW) and 'Plantation on an Ancient Woodland Site' (PAWS). The inventory also lists ancient pasture woodland.

Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are directed under the NPPF and National Planning Practice Guidance (NPPG) not to grant planning permission for any development that would result in the 'loss or deterioration' of irreplaceable habitats such as ancient woodland, ancient trees or veteran trees unless there are 'wholly exceptional reasons' and 'a suitable compensation strategy in place'. Local Planning Authorities must take into account Natural England and the Forestry Commission's *Standing Advice for Ancient Woodland and Veteran Trees,* available at: https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions

Surface & Ground Waters

Surface waters (including flowing and standing water) and ground water can directly and indirectly impact upon the conservation of nature.

Guidance on pollution prevention is hosted on the Government's website and focuses on regulatory requirements. This covers topics including the prevention of pollution if you are a business, managing business and commercial waste, oil storage, working on or near water, and managing water on land. Careful planning and the application of these guidelines can help reduce the risk of construction and maintenance work causing pollution to surface and ground waters. Some activities with the potential to impact watercourses or groundwater may require consent under the Water Resources Act 1991.

Water Resources Act (WRA) 1991 (as amended)

Under the WRA there is strict regulation of discharges (including sediment, chemicals, nutrients) to rivers, lakes, estuaries and groundwaters. It also aims to ensure that polluters cover the costs associated with pollution incidents.

SPECIES PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England. When preparing a planning application, it is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by a proposed development. This can best be achieved by undertaking surveys early in the planning process. Impact avoidance and/or mitigation measures may be required to address any predicted impacts upon protected species and may necessitate the obtaining of a licence. The Government website offers standing advice from Natural England and DEFRA which can be applied to planning applications that affect protected species.

Bats

There are 18 species of bat native in the UK, seven of which are Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species mitigation licence from Natural England.

Great Crested Newt

The Great Crested Newt *Triturus cristatus* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Great Crested Newts;
- Intentionally, deliberately or recklessly disturb Great Crested Newts in such a way as to be likely to significantly affect the ability of any significant group of Newts to survive, breed, or rear or nurture their young or the local distribution of or abundance the species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Great Crested Newts for shelter or protection, or intentionally or recklessly disturb a Great Crested Newt whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Great Crested Newt; and
- Possess, sell or transport a Great Crested Newt, or anything derived from it.

Development proposals affecting the Great Crested Newt require a European Protected Species mitigation licence from Natural England.

Hazel Dormouse

The Hazel Dormouse *Muscardinus avellanarius* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Dormice;
- Intentionally, deliberately or recklessly disturb Dormice in such a way as to be likely to significantly affect the ability of any significant group of Dormice to survive, breed, or rear or nurture their young or the local distribution of or abundance of the species;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Dormice for shelter or protection (whether occupied or not) or intentionally or recklessly disturb a Dormouse whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Dormouse;
- Possess or transport a Dormouse (or any part thereof) unless under licence; and
- Sell or exchange Dormice.

Development proposals affecting the Dormouse require a European Protected Species mitigation licence from Natural England. Reptiles

All four of the widespread British species of reptile, namely the Common Lizard *Zootoca vivipara,* Slow-Worm *Anguis fragilis*, Grass Snake *Natrix helvetica (*previously *Natrix natrix)* and Adder *Vipera berus*, are Species of Principal Importance in England. They are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife & Countryside Act 1981 (as amended) from intentional killing, injury and trade. The habitat of the four widespread reptiles is not legally protected; however the replacement of habitat lost through development may be required through the planning system. Mitigation for these species is not subject to licensing by Natural England but should nonetheless be planned to minimise disturbance and potential project delays.

The Smooth Snake *Coronella austriaca* and the Sand Lizard *Lacerta agilis* are the rarest reptile species in Britain. In addition to the protection that is afforded to the widespread species of reptile listed above, these species are protected further under Schedule 5 (Sections 9.4b and 9.4c) of the Wildlife and Countryside Act 1981 (as amended). They are also European Protected Species protected under the Conservation of Habitats and Species Regulations 2017 (as amended). This legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Sand Lizards or Smooth Snakes;
- Intentionally, deliberately or recklessly disturb Sand Lizards or Smooth Snakes in such a way as to be likely to significantly affect the ability of any significant group of Sand Lizards or Smooth Snakes to survive, breed, or rear or nurture their young or the local distribution or abundance of either species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Sand Lizards or Smooth Snakes for shelter or protection, or intentionally or recklessly disturb a Sand Lizard or Smooth Snake whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Sand Lizard or Smooth Snake;
- Keep, sell, or exchange Sand Lizards or Smooth Snakes or their eggs; and
- Deliberately take or destroy their eggs.

Development proposals affecting Smooth Snake or Sand Lizard require a European Protected Species mitigation licence from Natural England.

Birds

49 species of bird are listed as Species of Principal Importance in England. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) affords extra protection for certain species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependent young, constitutes an offence.

Regulation 10 of the Conservation of Habitats and Species Regulations 2017 (as amended) requires appropriate authorities and conservation bodies, in the exercise of their functions, to take such steps that they consider appropriate in order to secure "*the preservation, maintenance and re-establishment*

of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat (…)".

European Badger

The Protection of Badgers Act 1992 offers considerable protection to both Badgers and Badger setts. This legislation was enacted to protect the European Badger *Meles meles* against baiting and not as a means of species recovery as it is common in England. It is an offence to cruelly treat, kill or take Badgers, but it is also illegal to intentionally or recklessly damage or disturb a Badger sett while it indicates signs of current use by a Badger.

The Government website contains information to help developers and their proponents avoid sett disturbance and to identify setts that are in current use. It is important to maintain adequate foraging territory in development proposals affecting Badgers as the destruction or severance of large areas of foraging territory could also be taken to include habitat loss. Licences to disturb Badgers and their setts in respect of development may be issued by Natural England provided provisions are made to minimise disturbance.

Wild Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set out in the legislation, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

European Protected Species Mitigation Licences

A European Protected Species mitigation licence (EPSML) is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended); including *inter alia* all species of bats, Hazel Dormouse, Great Crested Newt, Sand Lizard, Smooth Snake, European Otter and Eurasian Beaver. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

1. The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
2. There is no satisfactory alternative; and
3. The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Other Protected Species Mitigation Licences

Natural England can issue mitigation licences for reasons of "overriding public interest" in respect of animal and plant species listed on Schedules 5, 6 and 8 of the Wildlife and Countryside Act 1981 (as amended), excluding birds and European Protected Species (as these have separate licensing systems). In the context of development, the most relevant species are likely to include Adder, Grass Snake, Common Lizard, Slow-worm and several species of plant.

Applicants must demonstrate that the licence is for the purpose of overriding public interest, and also that there are "no other satisfactory solutions". In practice, therefore, this type of licence is likely to be difficult to obtain for most types of development.

Conservation Licences

In the context of development, conservation licences are normally only relevant to mitigation involving the capture of Water Voles or White-Clawed Crayfish. Conservation licences are granted to permit the trapping and translocation of these species on the condition that the development activity is properly planned and executed and thereby contributes to the conservation of the population of the species.

Badger Licences

Licences to disturb Badgers and their setts in respect of development (including closure of setts if required) may be issued by Natural England, provided provisions are made to minimise disturbance.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance for the conservation of biodiversity in England under Section 41 (S41) of the NERC Act 2006. The S41 list includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier). While many of these species may not be legally protected (some are protected under the legislation described above), there is a clear responsibility on local planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species, and to enhance their habitats where possible. Additional guidance to developers is typically provided in local level planning policies.

Invasive Non-Native Species (INNS)

There are a number of species not ordinarily resident in the UK, such as Japanese Knotweed, Himalayan Balsam and others. Those which pose a significant threat, if uncontrolled, to our ecology and economy are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). For an offence to be committed, a species must be released or allowed to escape into the wild. For example, if a plant listed on Schedule 9 is not adequately controlled by a land owner, once they are aware that it is present, and the species is allowed to spread into adjoining areas, then this could potentially constitute an offence.

Further guidance on INNS can be found on the website of the GB Non Native Species Secretariat: https://www.nonnativespecies.org/

Japanese Knotweed is also classed as ‘controlled waste’ under the Environment Protection Act 1990 (as amended) and if taken off site it must be disposed of safely at a licensed landfill site. Soil containing rhizome material should also be regarded as contaminated and treated accordingly.

Species Control Orders

A new schedule 9A was inserted into the Wildlife and Countryside Act 1981 (as amended) by Sections 23 to 25 of the Infrastructure Act 2015. This gives environmental authorities (in England the Secretary of State, Environment Agency, Natural England and the Forestry Commission) the power to offer ‘species control agreements’ to landowners in respect of invasive and/or non-native species, such as Japanese Knotweed. If the landowner does not comply with a species control agreement, or refuses to enter into one, the environmental authority may issue a ‘species control order’, requiring the owner to eradicate or control the species, or to allow the environmental authority access to carry out these operations themselves.

PLANNING POLICY & GUIDANCE

This section set out the main planning policy and government guidance that relates to the conservation of nature at all levels of government.

National Level

National Planning Policy Framework 2024

The National Planning Policy Framework (NPPF) 2024 sets out the Government’s planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear “presumption in favour of sustainable development” (paragraph 11), with economic, social and environmental objectives. This presumption does not apply where a plan or project has failed the ‘appropriate assessment’ test under the Habitats Regulations (paragraph 195).

Section 15 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system, as summarised below.

Firstly, planning policies and decisions should contribute to and enhance the natural and local environment by applying the following key principles:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and

- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.

Section 15 also requires planning policies and decisions to limit the impact of artificial light pollution on nature conservation.

Secondly, when determining planning applications, local planning authorities should apply the following key principles:

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and ancient or veteran trees, unless there are 'wholly exceptional reasons' and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported, while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

In the case of SSSIs and irreplaceable habitats, exceptions may be made if it can be demonstrated that the benefits of the development, in that location, clearly outweigh the costs in terms of loss or adverse impacts.

Section 15 specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Section 15 includes the following text on air quality:

- Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas;
- Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications; and
- Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

The NPPF also sets out principles for plan-making, including the allocation of land with the least environmental or amenity value, and taking a strategic approach to maintaining and enhancing

networks of habitats and green infrastructure by identifying, mapping and safeguarding components of local wildlife-rich habitats, wider ecological networks, wildlife corridors and stepping stones, and those areas identified by national and local partnerships for habitat management, enhancement, restoration or creation.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05 to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;
- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG) was launched by the Department for Communities and Local Government (now the Department for Levelling Up, Housing and Communities) as a web-based tool in March 2014 to accompany the NPPF. The webpages are set out in a Q&A format. The PPG consolidates and supersedes existing guidance on a range of planning-related topics, clarifies some of the statements made in the NPPF, and provides links to relevant legislation and other sources of advice.

The Guidance outlines a number of important principles in relation to nature conservation and biodiversity, including the need to integrate biodiversity into all stages of the planning process and to consider opportunities to enhance biodiversity and contribute to the Government's commitments and targets set out in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

The guidance also requires that "an ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate", and recommends that "local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development."

Other guidance

In addition to the Planning Practice Guidance, various other forms of guidance and standards are available in relation to biodiversity and the development process. Of particular note is *British Standard BS42020:2013 Biodiversity – Code of practice for planning and development*, published in August 2013, which replaces *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*.

This document is designed to complement the NPPF and is aimed at organisations concerned with ecological issues throughout the planning process, including local authorities, developers, planners and ecological consultants. It sets out step-by-step recommendations on how to incorporate biodiversity considerations at all stages of the planning process, with a focus on the provision of consistent, high quality and appropriate ecological information, effective decision making, and high standards of professional conduct and competence.

Regional Level

Regional plans (such as the South East Plan Regional Spatial Strategy) have been revoked, but some specific policies have been saved. The only policy saved from the South East Plan is Policy NRM6, which relates to the Thames Basin Heaths Special Protection Area (TBH SPA).

Local Level

Medway Local Plan

Strategic Objectives

(i) New development should follow sustainable development principles through its relationship to transport infrastructure, the location and mix of uses and the use of natural resources.

(ii) The emphasis should be on creating an urban renaissance, through the redevelopment of brownfield sites within the urban area in preference to continued outward suburban expansion. The development of greenfield sites should be restricted to those well related to the structure of the urban area and avoiding visual intrusion into the surrounding countryside, particularly the valuable urban fringe.

(iii) The environmental quality and image of the area should be upgraded through the highest urban design and landscape standards being pursued in new development and regeneration.

(viii) Firm protection for the Green Belt, the best and most versatile agricultural land, sites of international, national and other strategic importance for nature conservation and landscape.

Strategic Access Management and Mitigation

Medway Council Interim Policy Statement November 2015

Purpose:

This policy statement sets out the council's position on a strategic approach to managing and mitigating the potential impact to the protected habitats of the Thames, Medway and Swale Estuary and Marshes Special Protection Areas and Ramsar sites. In advance of adopting an appropriate policy in an updated Medway Local Plan, the council is establishing its commitment to a strategic mitigation and management approach, to satisfy the requirements of the Conservation and Habitats and Species Regulations, 2010.

Context:

Much of the estuary and marshes along the north Kent coast on the Thames, Medway and Swale are designated Special Protection Areas, or Ramsar sites in recognition of their international importance for wildlife, in particular wintering birds. These designations establish legal requirements for the protection

of these special environments, and specific duties on local authorities, particularly with regards to planning.

The Conservation of Habitats and Species Regulations 2010 (known as the 'Habitats Regulations') set out how Local Planning Authorities must deal with planning applications that have the potential to impact on Special Protection Areas and other European protected sites. As a matter of national policy, the Habitats Regulations also apply to Ramsar Sites. The legislation states that local planning authorities must not grant permission for a development that would, either alone or in-combination with other developments, have a likely significant effect on a European protected site. Only if any likely significant effects can be mitigated can permission be granted.

Over 1,000 new homes are planned to be built each year in North Kent - cumulatively these could have a considerable impact on the three Special Protection Areas and Ramsar sites, with each new home potentially contributing to that cumulative impact. Research carried out in north Kent has found that there have been marked declines in the numbers of birds using the SPAs, and these have occurred at the locations with the highest levels of access. It identified that disturbance caused by the presence of people was a potential cause of the decline. A range of activities were found to create disturbance. Walking dogs off the lead had a noted impact, but also running and cycling.

It identified that 75% of visits to the coast originated from within 6km. Beyond the 6km threshold there is a measurable decline in visitors coming to the coast. It was estimated that there would be 15% additional coastal recreation resulting from new housing planned in the surrounding area.

The research concluded that a likely significant effect cannot be ruled out from residential developments within six kilometres of the coastal designated sites and from larger residential developments further away. This is therefore a consideration when determining planning applications.

Addressing the Issue:

Further work was undertaken to develop a response to this issue. This identified that a strategic approach to management and mitigation was the most appropriate measure. The research identified a suite of strategic access, management and monitoring projects, which combine to deliver complementary measures capable of addressing a 15% increase in visitor numbers. These include wardening, development of a code of conduct, targeted activities with dog owners, management of access and site works, and ongoing monitoring.

The strategic package of mitigation and management measures was costed, and from this a tariff was calculated. It was recommended that the tariff should be applied to new development within 6km of the SPAs and Ramsar sites, addressing the impact from projected increases in the population of north Kent. This was established at £223.58 per new dwelling within the 6km buffer, based on an assumed increase of 35,000 dwellings in the area.

Natural England has worked with the North Kent local planning authorities on the measures that are necessary to mitigate the effects of recreational disturbance on the protected sites and has issued advice in August 2015. It advises the council that the likely significant effect of recreational impact on the over wintering bird interest from new residential development can be screened out if an appropriate contribution is made to the provision of strategic access management measures across the north Kent marshes. This relates to development within 6km of the SPA/ Ramsar sites.

Implementation:

The council will work in collaboration with local planning authorities in north Kent to contribute to the delivery of a strategic access mitigation scheme to address potential damage from population increases on the designated habitats of the Thames, Medway and Swale Estuaries and Marshes.

Natural England has advised that one single dwelling can cause an impact and so planning applications for development of 1 dwelling or more that fall within within 6 km of the SPAs/Ramsar sites should either contain sufficient information to enable the Local Authority to undertake an Appropriate Assessment under the Habitats Regulations; or Medway Council would expect to secure a financial contribution. Medway Council have therefore drafted a Unilateral Undertaking for the purposes of securing the contribution, which is £223.58 per dwelling. It is noted that this figure is index linked and subject to review based on monitoring the implementation of the scheme.

Natural England's advice sets out further details for other categories of development, and this will be followed by the council. Other uses, including hotels / guesthouses, residential care homes / institutions and camp / caravan sites will be looked at on a case-by-case basis. Furthermore, Natural England advise that large developments beyond the 6km zone could also cause impacts and these will again be considered on a case-by-case basis.

Conclusion:

Medway Council confirms its support for implementation of the mitigation as a partnership between the North Kent local authorities, and contribute funding collected through the tariff to a pooled budget to implement the strategic approach.

The council will participate in the establishment and operation of governance structures, coordination of activities, and commissioning of projects as appropriate.

The extent of the 6 km buffer is set out overleaf.

Medway Local Plan 2003,

- BNE 5 Lighting;
- BNE 6 Landscape Design;
- BNE 35 International and National Nature Conservation Sites;
- BNE 36 Strategic and Local Nature Conservation Sites; and
- BNE 37 Wildlife Habitats.

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to "promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity" (paragraph 174). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level.

An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The Government's Environmental Improvement Plan 2023 is the first revision of the 25 Year Environment Plan published in 2018. It sets out ten goals aimed at restoring nature – of which the 'apex goal' is to halt the decline of biodiversity. The EIP 2023 includes targets and commitments to:

- Halt the decline in species abundance by 2030;
- Restore or create more than 140,000 hectares of wildlife-rich habitat outside protected sites by 2028;
- Improve the Red List Index for England by 2042;
- Achieve favourable condition for 48% of designated features in Marine Protected Areas by 2028;
- Complete update condition assessments for all SSSIs by 2028;
- Increase tree canopy and woodland cover by 0.26% by 2028;
- Reduce water pollution from agricultural nitrogen, phosphorus and sediments by at least 40% by 2038; and
- Reduce phosphorus loadings from treated wastewater by 80% by 2038.

Other targets have been set in relation to, water demand, residual waste, air quality, and. pollution from abandoned metal mines and agriculture.

The *UK Biodiversity Action Plan 2007* (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framewo*rk and individual national biodiversity strategies. The UK Framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010.

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services* is the national biodiversity strategy, which has the stated mission "(…) to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people." In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets out objectives relating to terrestrial and marine habitats and ecosystems, species and people.

Progress towards the National biodiversity targets are measured by the UK's Joint Nature Conservation Committee (JNCC) through a suite of biodiversity 'indicators', with annual reports published here: https://jncc.gov.uk/our-work/uk-biodiversity-indicators/

Local level

Biodiversity Opportunity Areas (BOAs)

Local Nature partnerships have in most areas of England now identified BOAs and produced documentation setting out the existing features of ecological importance within those areas, and a state of how opportunities to enhance biodiversity could be actioned. These provide a useful starting point

when considering how individual planning applications might best go about contributing toward enhancements to the natural environment.

Local Nature Recovery Strategies (LNRSs)

In pursuance of obligations under the Environment Act 2021, the Secretary of State for the Environment, Food and Rural Affairs identified 48 ‘strategy areas’ that collectively cover the whole of England, and appointed a ‘responsible authority’ to produce an LNRS for each strategy area. An LNRS must contain a habitat map for the area and a statement of biodiversity priorities to include a descriptions of the opportunities that are available for recovering or enhancing biodiversity.

When complete, the LNRS for an area will effectively supersede earlier documents including local BAPs. The Defra Biodiversity Metric utilises multipliers to disincentivise development that causes the loss of habitats that are considered to be priorities under an LNRS for the area, and reward proposals that create or enhance them.

Appendix 2
PEA Methodology

This Ecological Appraisal has considered and referred to the guidance in The Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the UK and Ireland* (2018). Further work, such as field surveys and assessment will follow this guidance as the assessment process goes forward.

DESK STUDY METHODOLOGY

A desk study was carried out to gather and refer to existing biodiversity and contextual information with respect to the Zone of Influence and the wider area. This involved interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), aerial photos, current Ordnance Survey maps and historical maps. Reference was also made to local planning policies, strategies and initiatives relating to biodiversity.

A biological records data search was commissioned from Kent and Medway Biological Records Centre (KMBRC) as part of the ecological appraisal. This, along with other information sources, such as that held by the National Biodiversity Network (NBN) atlas and nearby planning applications have been used when available.

FIELDWORK METHODOLOGY

The site walkover was completed by Sean Manley BSc (Hons) and EPR Director David W. Smith BSc (Hons) PhD MCIEEM on 12th March 2025. Features of potential importance to wildlife and any evidence of, or potential for, protected or notable species or habitats were recorded. The broad methods used are described below.

Land use, habitat types, vegetation communities and flora
Within the Site the land use, habitat types and landscape features (such as hedgerows) were described. For each main habitat type the dominant vegetation communities were recorded, along with any priority or indicator plant species, (including Japanese Knotweed where present). A preliminary evaluation of the structure, quality and likely management of each habitat or feature was also carried out.

Fauna
The potential of habitats and features to support protected or priority species, or Species of Principal Importance (SPIs) for the purpose of conserving biodiversity, were recorded, as were any signs encountered. The following is a summary of the approach taken for this Ecological Appraisal.

Badgers
Consideration was given to the presence of habitat potentially suitable for supporting Badgers, including woodland and grassland. Potential evidence of the presence of Badgers was looked out for and noted, including earthworks that might be Badger setts, and signs such as dung pits, mammal pathways through ground vegetation and under fences, and hairs on fences.

Bats
The instructed work did not include an assessment of the existing building for its suitability to support a bat roost.

Existing trees within the footprint of the landscape proposals were assessed for Potential Roosting Features (PRFs). This preliminary assessment of the potential for these features to support bats was undertaken during the survey in accordance with categories set out within the Bat Conservation Trust's Bat Surveys Good Practice Guidelines (2016). Potential features associated with trees include woodpecker holes, splits in branches and peeling bark.

An evaluation was also undertaken of potential bat foraging habitat in the area, including woodland, pasture, hedges, and watercourses.

Hazel Dormouse
The type and quality of habitat with the potential to be suitable for supporting Hazel Dormice, such as woodland and hedgerows, was considered during the survey. In particular the presence of Oak, Hazel and berry-bearing shrubs was noted, and the connectivity of habitat recorded.

Birds
Any birds seen whilst carrying out the survey were recorded, and the type and quality of habitats available for birds was considered, including vegetation suitable for nesting, and habitat with the potential to support valued species, including breeding and wintering birds.

Amphibians
Consideration was given to the presence of habitat potentially suitable for supporting amphibians, including waterbodies (ponds, ditches), woodland, scrub and rough grassland, and features such as log piles that might provide hibernation areas.

Reptiles
The presence and quality of habitat considered potentially suitable for supporting reptiles was recorded. This included areas that provide basking and foraging opportunities, hibernation and breeding sites, such as rough grassland and scrub, banks, burrows, rubble piles, compost heaps, hedge banks and waterbodies.

Invertebrates
Habitats and features likely to support noteworthy groups and species were noted, for example herb-rich grasslands, areas of bare ground and deadwood habitats.

Water Voles
The presence and quality of watercourses with the potential to support Water Voles was recorded during the survey. Potential evidence of Water Voles, including burrows in the tops and vertical face of riverbanks, and feeding evidence was recorded where appropriate.

European Otter
Where watercourses are present, a preliminary evaluation of the quality of the riparian habitat for potentially supporting Otters was made. A preliminary search was made for signs of Otters, including spraints which are often left in prominent places on riverbanks, such as logs and bare patches of ground.

Appendix F

Heritage Assessment

Heritage Appraisal

Rainham Parkside Village, Pump Lane, Gillingham

Introduction

1. This Heritage Assessment has been produced HCUK Group on behalf of Esquire Developments Ltd and seeks to provide a high level assessment pertaining to potential built heritage impacts associated with the allocation and subsequent development of Rainham Parkside Village with a residential-led mixed-use development.

2. This note has been informed by a site visits (undertaken in January 2025), desk based research and an appraisal of online HER data for the site. Archaeological matters concerning the site's potential development are assessed separately in an Archaeological Assessment (HCUK Group, 2025).

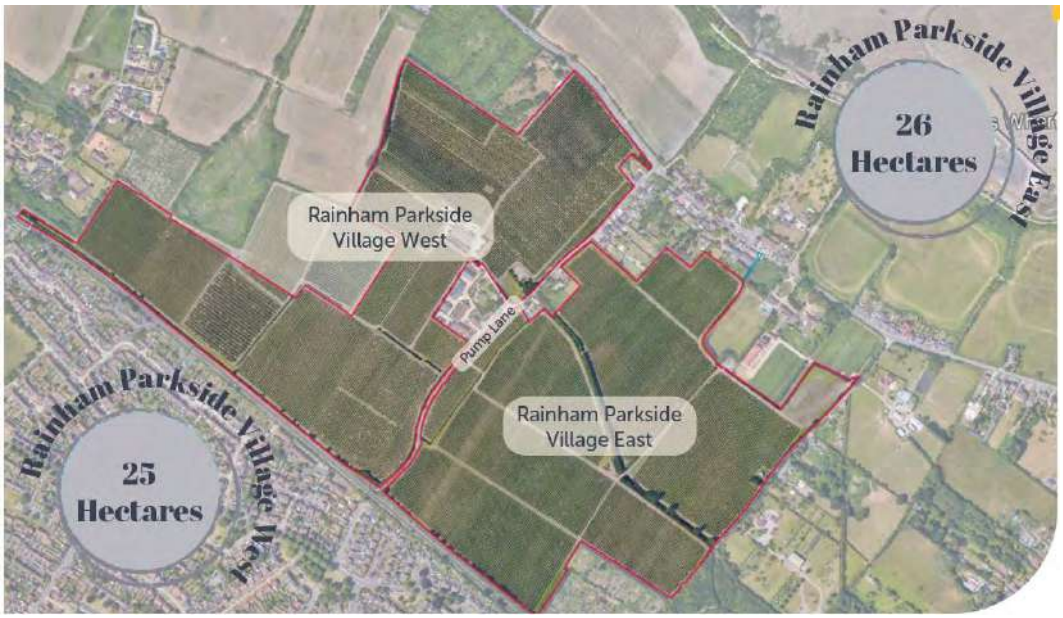


Figure 1: Site location plan showing Rainham Parkside Village East and West

3. The site can be considered to be of two parts as follows:

- Rainham Parkside Village West: Previously known as Pump Farm, and located to the west of Pump Lane, this area is approximately 25ha and comprises commercial orchards and associated agricultural buildings.

- Rainham Parkside Village East: Previously known as Bloor Farm, and located to the east of Pump Lane, this area is approximately 26ha and comprises commercial orchards and a vegetation lined bridleway.

4. The draft concept masterplan for Rainham Parkside Village is contained at Appendix 1 with proposals designed to provide approximately 750 residential units, a local centre, school, care home, open space and associated access.

5. A previous outline application on the site (LPA ref: MC/19/1566) related to an permission for a mixed use redevelopment providing approximately 1,250 residential units, a local centre, a village green, primary school, extra care facility, care home and associated access. The application was subsequently refused in June 2020 with the second reason for refusal relating built heritage matters specifically an identification of harm to a number of heritage assets. While the subsequent appeal was refused, the Inspector concluded that the public benefits of the scheme would outweigh the heritage harm. The masterplan associated with this application and appeal is contained at Appendix 2.

6. At this early stage it is not intended to provide a detailing appraisal of relevant legislation, policy and guidance. However, it is noted that the following documents etc. are of particular relevance:

- Planning (Listed Buildings and Conservation Areas) Act 1990

- Section 16 of the National Planning Policy Framework (NPPF)

- Section 18 of the Planning Practice Guidance (PPG)

- The relevant policies in the Medway Local Plan 2003

- The relevant policies in the as yet unadopted Medway Local Plan 2041 (Regulation 18)

- Historic England 'The Setting of Heritage Assets: Good Practice Advice 3' (GPA3) 2017

Built Heritage Asset Scoping

Designated Heritage Assets

7. There are no designated heritage assets within the site boundary. Designated heritage assets located within a 1km search radius of the site include listed buildings and conservation areas only (i.e. no Scheduled Monuments or Registered Parks and Gardens) and these are summarised in the table below.

Asset Name	Grade and UID	Date of Designation	Scoped In?
Listed Buildings			
Bloors Place	Grade II* UID: 1267763	24 February 1950	*
Garden walls to south and east of Bloors Place	Grade II UID: 1267767	27 January 1984	*
Range of outbuildings including cart lodge and granary west of Bloors Place	Grade II UID: 1267769	28 February 1989	*
The Old House	Grade II UID: 1267776	24 February 1950	
497, 499 and 501 Lower Rainham Road	Grade II: UID: 1259732	21 December 1973	
Chapel House	Grade II UID: 1259635	21 December 1973	*
Pump Farmhouse	Grade II UID: 1259637	21 December 1973	*
York Farmhouse	Grade II UID: 1259716	16 August 1983	*
Little London Farmhouse	Grade II UID: 1259706	21 December 1973	
Twydall Barn and attached wall	Grade II UID: 1259714	19 November 1985	
Manor House and attached garden wall	Grade II UID: 1259712	24 February 1950	
Manor Barn and attached north and west walls	Grade II UID: 1259709	19 November 1985	

Holy Trinity Church	Grade II UID: 1393500	29 October 2009	
Conservation Areas			
Lower Rainham Conservation Area	NA	8th March 1989	*
Lower Twydall Conservation Area	NA	6th March 1984	*

8. As part of the earlier application and appeal concerning the site, extensive heritage assessments were undertaken insofar as ascertaining which heritage assets were capable of being affected. Those identified as capable of being affected by the site's redevelopment are clearly highlighted in the above table and on Figures 2 and 3. There are no known changes to the baseline and with the scheme not materially different (with a consistent site boundary) to the earlier appeal proposals, those heritage assets previously scoped in remain relevant to consider with other assets scoped out of this assessment.

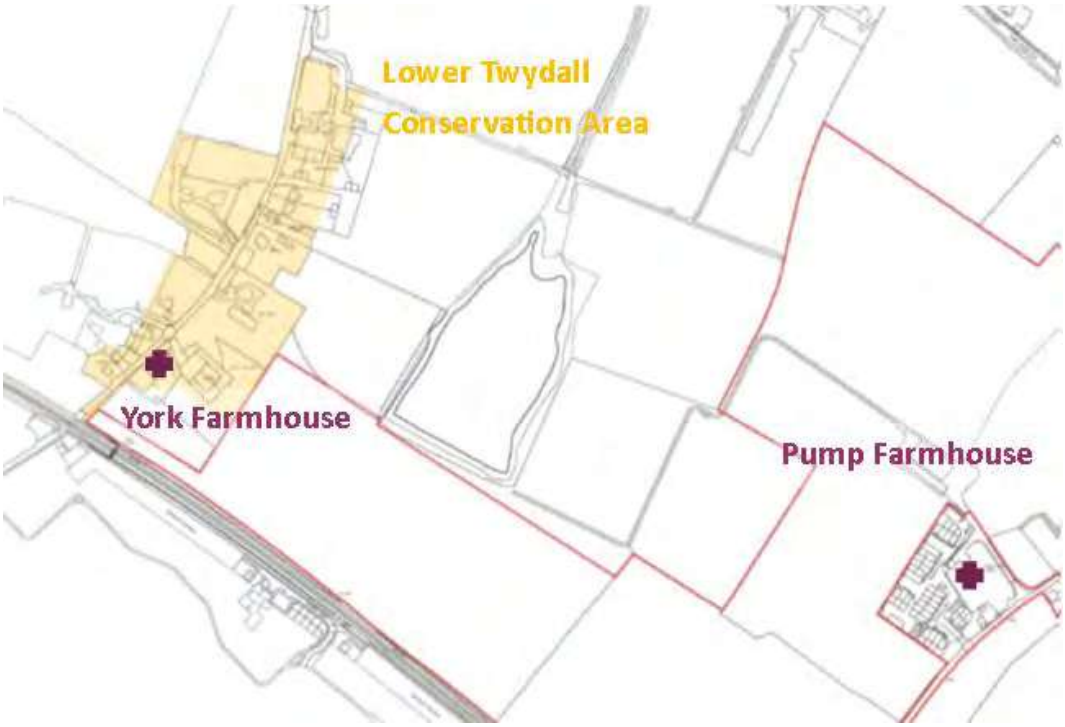


Figure 2: Site location plan (west) with heritage assets identified

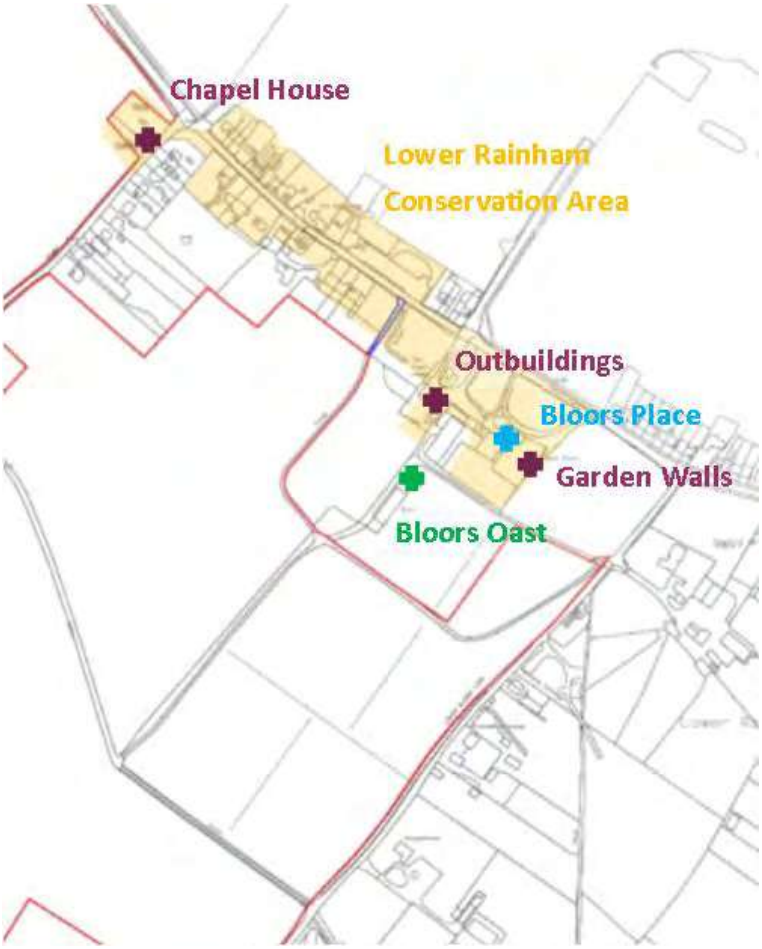


Figure 3: Site location plan (east) with heritage assets identified

Non-designated Heritage Assets

1. Non-designated heritage assets (NDHAs) are defined by paragraph 039 of the PPG (Reference ID: 18a-039-20190723) as:

   Non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of heritage significance meriting consideration in planning decisions but which do not meet the criteria for designated heritage assets.

2. The same paragraph goes onto note that:

   A substantial majority of buildings have little or no heritage significance and thus do not constitute heritage assets. Only a minority have enough heritage significance to merit identification as non-designated heritage assets.

3. As such, it is clear that non-designated heritage assets are not common and that, even where a building could lay claim to a little heritage significance, that does not mean that it should be considered a non-designated heritage asset.

4. At present Medway Borough Council does not retain a formal list of locally listed buildings or NDHA and it is relevant to note that the only non-designated heritage asset, Bloors Oast, was raised during the previous appeal on the site.

5. Following a site visit, no buildings etc. located within the site appeared to warrant identification as NDHA. There are a number of historic buildings located within the vicinity of the site Lower Twydall Conservation Area and Lower Rainham Conservation Area which have the potential to be identified as NDHA, however, these structures were not previously identified and are already covered by the statutory conservation area designations.

Assessment Methodology

6. In accordance with the guidance presented within GPA3, when dealing with the setting of heritage assets, a stepped methodology is proposed to be followed. This includes:

- Step 1: Identify which heritage assets and their settings are affected
- Step 2: Assess the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated
- Step 3: Assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it
- Step 4: Explore ways to maximise enhancement and avoid or minimise harm
- Step 5: Make and document the decision and monitor outcomes

Assessment of Significance and Setting

7. The following section provides an overview of the special interest (significance) and setting of each of the identified heritage assets with a focus on the contribution of the site. Where relevant, findings from the earlier appeal, alongside site visits and professional judgement, have informed assessments

Bloors Place Listed Buildings - Bloors Place (grade II*), Garden Walls (grade II), Range of Outbuildings (grade II) and Bloors Oast (NDHA)

8. Bloors Place is a c.1470-1510 hall house with later extensions dating from the 16th, 17th and 18th centuries. As a grade II* listed building, the structure is of more than special interest which primarily relates to its origins as a post medieval hall house with multiphase high quality alterations and interiors (which are known to include, arched doorways, panelling and a crown post roof). In addition, the building is thought to be a rare example of a hall house with an original rear stack given lack of any evidence of smoke blackening. Ancillary estate structures include the separately listed mid 17th century garden walls which are in an English bond with limestone rubble, and the grouping of 18th century outbuildings comprising a former cart shed, granary and cattle shed which have now been converted to residential use. Overall, as noted within the Bloors Place list entry, these asset comprise "*a fine and unusual complex with group value*".

9. While remaining an important grouping, the setting of these assets has seen notable change through the subdivision of the complex into multiple separate residences and ownerships and the introduction of new built form, including the introduction of a large storage building south of the complex, between the listed buildings and the site. As identified as part of the earlier appeal, it was concluded that the contribution the site makes to Bloors Place as part of its setting was "*very limited*" (Appeal Decision paragraph 12.83). Any historic functional links between the outbuildings and walls and the site has long since ceased with these assets visually and experientially well removed from them. As concluded as part of the earlier appeal, the site "*does not allow any meaningful appreciation or understanding of the listed outbuildings and walls*".

10. Bloors Oast, a non-designated heritage asset, is a late 19th century oast house (i.e. a building designed for drying hops as part of the brewing process) which has been converted into a dwelling. It's heritage value relates to its illustrative value

as a historic oast with clear links to the area's agrarian past. Important elements of setting primarily relate to relationship with Bloors Place and its complex of ancillary estate buildings and structures. Rural land does have some historic functional association with the building as a former oast house and does make some contribution to significance though this is limited given the lack of intervisibility between the asset and site. As identified by the earlier appeal decision, any contribution the site makes to the significance of this asset is "*modest at best*" (Appeal Decision paragraph 12.116).

Chapel House (grade II)

11. Chapel House comprises a pair of dwellings formed from a singular mid 15th century timber framed property which saw alteration in the mid 16th century and early 20th century. The building's significance relates to a combination of its architectural, archaeological and historic interest as a post medieval timber framed building which, as a result of its fabric and form, provides tangible evidence to the past.

12. The building is located within its own parcel of land which extends beyond historic garden boundaries and there is some established intervisibility between the listed building and site from the rear. However, aside from glimpsed views, roadside vegetation primarily screens visibility of the site and building together from surrounding lanes. While historically there were some ownership connections between this property and the site, these links are now severed. As part of the earlier appeal, the site was found to make a minor contribution to the significance of this asset (Appeal Decision paragraph 12.110).

Pump Farmhouse (grade II)

13. Pump Farmhouse is a late 18th century rendered farmhouse with a tile hipped roof which was extended and remodelled in the early 20th century. Its significance relates to combination of special architectural and historic interest derived from the building's inherent fabric and form as a late 18th century farmhouse and the illustrative value it provides as to social, domestic and agricultural practices of the period.

14. The farmhouse was historically located in an isolated position surrounded by orchards. It is set back from Pump Lane and beyond a well planted garden

restricting clear views of the asset. Its current setting has been comprehensively changed in form and character (Appeal Decision, paragraph 12.101) as a result of the modern residential development of the former farmstead to the south with 24 dwellings (Russet Farm) and large modern commercial agriculture structures to the north. The listed building retains a degree of visibility across the site towards the Medway Estuary (though visibility across parts of the site historically associated with the farmhouse are limited) and these views provide a historically illustrative context demonstrating the relationship the building historically shared with the landscape but overall the site's contribution to significance is limited.

York Farmhouse (grade II)

15. York Farmhouse is a 16th century structure with later 17th, 18th and 19th century alterations and additions. The building features later brick elevations but its substantial historic timber frame is understood to remain appreciable internally. The building is now converted into three separate cottages. Its heritage significance relates to a combination of architectural and historic interest due to its surviving historic fabric and form and illustrative and evidential value.

16. The setting of York Farmhouse has been considerably altered as a result of the residential conversion of historic outbuildings and construction of new dwellings (located between the listed building and site) which have severed any understanding of historic functional farming links. These changes have resulted in the asset no longer being experienced in a way that is illustrative of the relationship it once had with its wider landscape and there is little connection, either visual or experiential between York Farmhouse and the site (Appeal Decision, paragraph 12.97).

Lower Twydall Conservation Area

17. There is no adopted conservation area appraisal concerning the Lower Twydall Conservation Area. However, it is clear that this designated heritage asset is of significance due to a combination of its special architectural and historic interest. The conservation area is a linear area (on a broad north to south alignment) which follows Lower Twydall Lane and encompasses the historic core of the rural settlement. The conservation area is a traditional Kentish discrete rural settlement containing a number of historic farmsteads and dwellings. The residential conversion of the farmsteads has resulted in the conservation area now having a

domestic character, rather than a strictly agrarian one. The conservation area features a variety of styles of built form Kentish vernacular is prominent with combination of brick and timber framing evident.

18. The village is generally accepted to be an inward facing settlement primarily experienced from the central lane, however, its rural surroundings do allow for an appreciation of the village's historic context and legibility as a traditional discrete Kentish rural settlement which had strong links to agricultural practices. The site forms part of the surrounding rural setting of the conservation area but, aside from a small portion to the conservation area's southern end, is generally well removed from the conservation area by surrounding rural landscape.

Lower Rainham Conservation Area

19. There is no adopted conservation area appraisal concerning the Lower Rainham Conservation Area. However, it is clear that this designated heritage asset is of significance due to a combination of its special architectural and historic interest. The conservation area is a linear area (on a broad east to west alignment) which follows Lower Rainham Road and encompasses the historic core of the village. It features a mix of building styles and ages (though Kentish vernacular remains the most prominent) and is characterised by residential built form with two public houses and a chapel. While not readily appreciable from public realm, one of the main features within the conservation area is the grade II* listed Bloors Place.

20. The village is generally accepted to be an inward facing settlement, however, its rural surroundings do allow for an appreciation of the village's historic context and legibility as a traditional discrete Kentish rural settlement with salt marshes and estuary to the north and rural agricultural hinterland to the south. The site falls into this latter category and forms a positive component of the asset's significance being part of the immediate boundary and surroundings to the conservation area.

Assessment of Potential Impacts

21. The concept masterplan demonstrates how development of the quantum proposed could be accommodated across the site. As identified, the land currently forms part of the rural setting of the heritage assets identified allowing them to

be, in part, appreciated within a rural context akin to their historic surroundings, contributing to their historic legibility and sense of authenticity and integrity. There are also some historic links between the site and a number of listed buildings. While broadly positive in nature, the contribution the site makes to the significance of these assets varies in each individual case as per the assessment above.

22. As previously noted, the site was the subject of an earlier appeal which concluded that some harm to various heritage assets would be caused, but that this would be outweighed by the public benefits of the scheme when considered holistically. Findings reached as part of the earlier appeal with respect to harm to each asset are outlined in the table below.

Asset Name	Asset Type	Effect of Appeal Scheme
Bloors Place	Listed Building (grade II*)	Less than substantial harm at the lower end of the scale
Garden walls at Bloors Place	Listed building (grade II)	Less than substantial harm at the lower end of the scale
Range of Outbuildings at Bloors Place	Listed building (grade II)	No harm
Bloors Oast	Non-designated heritage asset	Minor harm
Chapel House	Listed building (grade II)	Less than substantial harm at the middle of the scale
Pump Farmhouse	Listed building (grade II)	Less than substantial harm at the lower end of the scale
York Farmhouse	Listed building (grade II)	No harm
Lower Twydall Conservation Area	Conservation Area	Less than substantial harm at the lower end of the scale
Lower Rainham Conservation Area	Conservation Area	Less than substantial harm at the middle of the scale

23. Based on a review of the earlier appeal scheme, while the density of the scheme has been reduced (previously c.1250 residential units were proposed as opposed

to the c.750 now included) the effect of the current concept masterplan proposals is likely to be comparable to those identified above given the general similarities in the nature and extent of development.

24. An exception to this includes the potential for harm to Pump Farmhouse to be slightly decreased (though still likely remaining in the lower end of the less than substantial harm bracket) due to a reduction in built form proposed around this asset through the provision of greater levels of open green space to its north, east and south.

25. The concept masterplan also demonstrates that the development has been informed by the presence of heritage assets as appropriate. For example, the introduction of new tree screening and planting indicated at key locations (including along lanes and adjacent to heritage assets), the presence of lower density parcels (20 and 25 dph) adjacent to the Lower Rainham Conservation Area boundary and Bloors Place complex and sensitively designed development within the local centre and residential parcels informed by the area's rural characteristics.

26. While at an early stage of design, opportunities for further reduction of impacts through various design mitigations are possible and can be summarised as:

- Targeted reductions in the density of housing proposed, for example adjacent to Chapel House (grade II) and the boundary of the Lower Rainham Conservation Area;
- Creating set backs of built form within parcels in key locations where beneficial to heritage assets; and
- Introduction of, or extensions to, landscape buffers to provide a green edge to new development to soften any visual experience of new development in context of assets.

27. The development of the Site, as shown on the concept masterplan, would result in some effect on the identified heritage assets as a result of the reduction of rural open land within the setting of the listed buildings, NDHA and conservation areas. However, based on a thorough understanding of the significance of these assets, any harm would be towards the lower end of the scale and, with regards to

designated heritage assets at the lower or middle end of less than substantial with opportunities for further reductions in harm subject to appropriate design mitigation.

28. In all cases, it is relevant to note that identified heritage assets do not derive a major proportion of their significance and special interest from their settings and that the proposals would have no physical bearing on the heritage assets themselves ensuring that all heritage significance embodied within their fabric and form would be entirely unaffected. It is also important to note that while the site's development would result in the provision of built form on a currently open part of their settings, the majority of the setting of these assets (including other primary contributory elements such as private gardens and group value etc.) would remain unaltered.

29. Overall, the nature of the effect on the significance of the assets (and the ability to appreciate this significance) will depend on the final design of any scheme with key factors including the number and siting of residential units, the form and appearance of development and landscaping and access proposals etc. However, as identified above, on the basis of the concept masterplan, any harm is likely to be comparable with that identified as part of the earlier appeal scheme on the site, i.e. minor harm to the identified NHDA and harm within the middle or lower realms of less than substantial harm to designated heritage assets.

Conclusion

30. This assessment presents an appraisal of built heritage constraints with regards to land at Rainham Parkside Village which is currently being proposed for allocation. Potential effects on identified heritage assets as a result of the allocation and subsequent development of the site are also considered.

31. While the full effect on significance of heritage assets cannot be confirmed at present due to the early stages of design development, it is likely that the development would result in comparable effects to the earlier appeal scheme. Namely that harm to heritage assets can be summarised as minor harm to Bloors Oast as a non-designated heritage assets, a low level of less than substantial harm to Bloors Place (grade II*), garden walls at Bloors Place (grade II), Pump

Farmhouse (grade II) and the Lower Twydall Conservation Area and a medium level of less than substantial harm to Chapel House (grade II) and Lower Rainham Conservation Area. No harm is expected to be caused to the outbuildings at Bloors Place (grade II) or York Farmhouse (grade II).

32. While subject to further scrutinization during design development (and ultimately through the preparation of a robust Heritage Impact Assessment), and with opportunities present for a reduction in harms identified, in accordance with the relevant paragraphs of the NPPF (i.e. paragraphs 215 and 216) any harm incurred would need to be weighed against the benefits of the scheme which include the contribution to housing but also the associated economic, environmental and social benefits as identified by others.

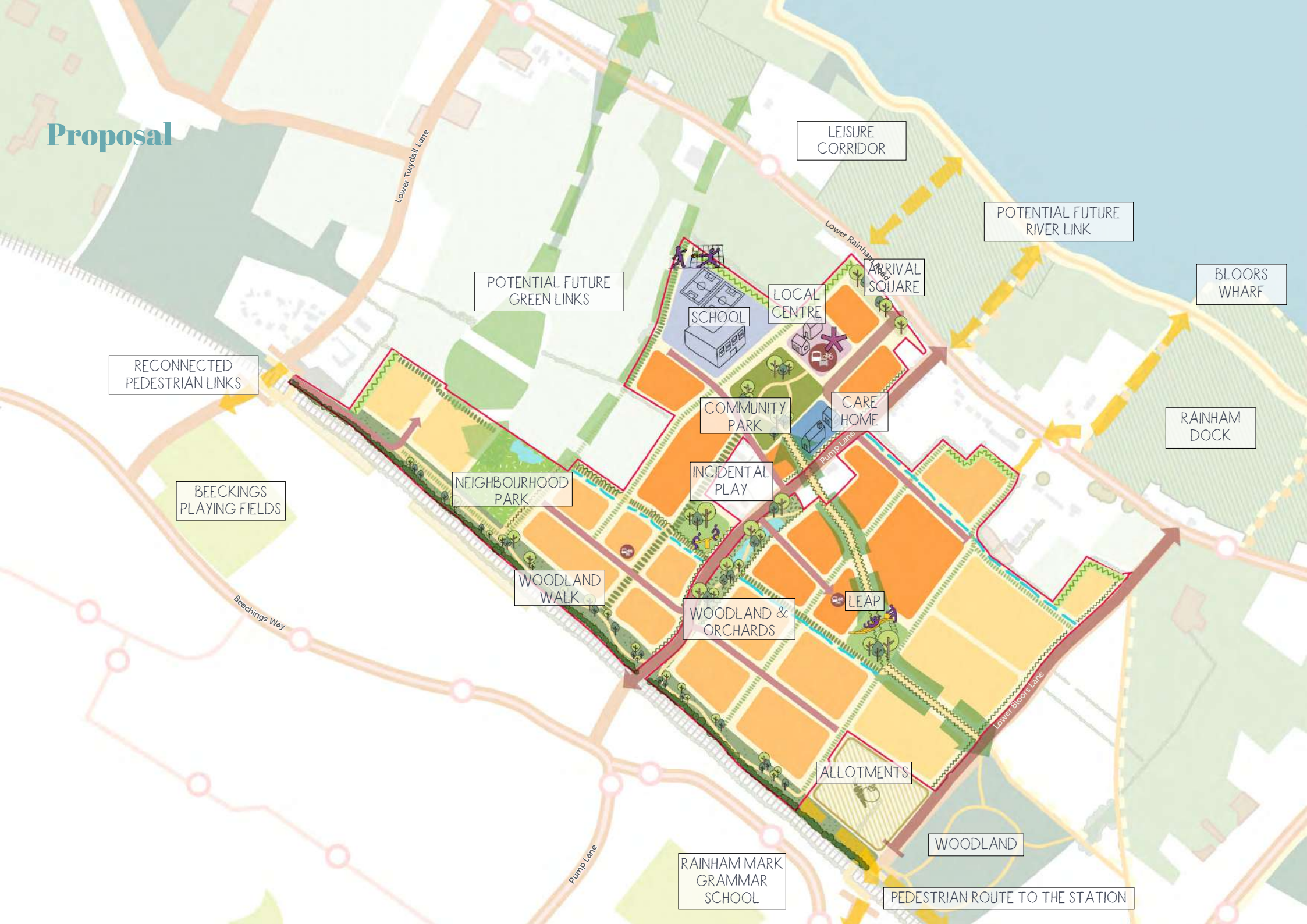
Sara Davidson BSc MSc IHBC
25th March 2025

No text or imagery within this report has been generated by Artificial Intelligence (AI).

Appendix 1

Rainham Parkside Village Concept Masterplan

Proposal


LEISURE CORRIDOR
POTENTIAL FUTURE RIVER LINK
BLOORS WHARF
POTENTIAL FUTURE GREEN LINKS
ARRIVAL SQUARE
LOCAL CENTRE
SCHOOL
RECONNECTED PEDESTRIAN LINKS
COMMUNITY PARK
CARE HOME
RAINHAM DOCK
INCIDENTAL PLAY
NEIGHBOURHOOD PARK
BEECKINGS PLAYING FIELDS
WOODLAND WALK
LEAP
WOODLAND & ORCHARDS
ALLOTMENTS
WOODLAND
RAINHAM MARK GRAMMAR SCHOOL
PEDESTRIAN ROUTE TO THE STATION
Lower Twydall Lane
Lower Rainham Road
Pump Lane
Beechings Way
Lower Bloors Lane
Pump Lane

Appendix **2**

2019 Dismissed Appeal Masterplan

Revisions:		Drawn / Chkd:	Date:
A	Issued for Planning.	TG/GS	17.05.2019
B	Updated as per comments received on 20.05.2019	TG/GS	20.05.2019

RESIDENTIAL
4.939ha (12.20acres)

RESIDENTIAL
0.276ha (0.68acres)

CARE
1.250ha (3.09acres)

RESIDENTIAL
0.675ha (1.67acres)

VILLAGE CENTRE
0.639ha (1.58acres)

SCHOOL
2.603ha (6.43acres)

VILLAGE GREEN
1.125ha (2.78acres)

RESIDENTIAL
8.342ha (20.60acres)

RESIDENTIAL
1.787ha (4.41acres)

RESIDENTIAL
1.527ha (3.77acres)

RESIDENTIAL
4.441ha (10.97acres)

RESIDENTIAL
4.637ha (11.45acres)

8no SELF BUILD
PLOTS
15m x 35m per plot

RESIDENTIAL
5.521ha (13.64acres)

Lower Rainham

N

0 100 150 200
Scale 1:2500

G:\11047 Lower Rainham Masterplan\2_Planning\Drg Sheets\11047 PL 009B - Site Masterplan.dwg

Client:
A. C . GOATHAM & SON

Project:
PUMP FARM & BLOOR FARM
LOWER RAINHAM, KENT

Drawing Title:
PROPOSED RESIDENTIAL
DEVELOPMENT
MASTERPLAN

Scale @ A0: 1:2500
Checked by : GS
Date : May 2019

Job No: 11047
Stage : PL
Drawing No : 009
Rev : B

Issue Status:
☐ Construction ☐ Preliminary
☐ Information ☐ Approval
☐ Tender

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Standard Sources

https://maps.nls.uk

https://historicengland.org.uk/listing/the-list

www.heritagegateway.org.uk

http://magic.defra.gov.uk

www.history.ac.uk/victoria-county-history

The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3

(Second Edition). Historic England (2017 edition)

Planning (Listed Buildings and Conservation Areas) Act, 1990

National Planning Policy Framework, 2024

National Planning Practice Guidance, 2019

Conservation Principles, Policies and Guidance, Historic England (2008)

Appendix G

Archaeological Assessment

Archaeology Assessment – Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Executive Summary

1. This assessment covers archaeological considerations for Rainham Parkside Village and has been researched and prepared on behalf of Esquire Developments Limited. This note seeks to provide a high level assessment relating to archaeological impacts associated with the potential allocation and subsequent development of Land off Pump Lane with a residential-led mixed-use development.

2. No known archaeological sites have been identified within the site that would preclude development from presently available information. However, there is potential for early prehistoric archaeological remains to be present within and it is very likely that the Kent County Council will recommend a programme of investigative archaeological fieldwork to be carried out in order to ascertain the significance of any archaeology present, potentially required in advance of a decision being made on planning permission. This is likely to be in the form of test putting in advance of and/or trial trenching following the clearance of the commercial orchards on the site.

Introduction

3. This Archaeology Assessment has been produced by Rebecca Mansfield ACIfA of HCUK Group on behalf of Esquire Developments Limited. This assessment has been informed by desk based research and an appraisal of Kent Historic Environment Record (KHER) data for the site. This initial assessment seeks to provide high level archaeological advice regarding archaeological impacts relating to the potential allocation and subsequent development of the site. This note relates to Land off of Pump Lane, known as Rainham Parkside Village (Figure 1). It is hereafter referred to as the Site.

4. This document is not a full archaeological desk-based assessment, which would be required for any forthcoming planning application, but an initial assessment to provide an early indication of the archaeological issues which may be present within the Site to inform development proposals.

5. This assessment will not address potential impacts relating to built heritage, which are assessed in a separate Heritage Assessment.[1]

6. The Site comprises two agricultural parcels separated by Pump Lane, which are currently in use as commercial fruit orchards (Figure 2). Rainham Parkside Village West, also known as Pump Farm, is *c.*25ha and is located west of Pump Lane. Rainham Parkside Village East, also known as Bloor Farm, is *c.*26ha and is located east of Pump Lane, extending to Lower Bloors Lane. The Site contains a number of buildings associated with the commercial orchards. Hedges surround the Site and separate individual parts of the orchard.

7. The proposed development is still to be confirmed but it is thought that it could comprise a residential-led mixed use development, providing approximately 750 residential units as well as a new local centre, school, care home, open space and associated access (Appendix 1).

8. There are several archaeological considerations associated with the Site which can be broadly summarised as:

    - The potential effect on any designated or non-designated archaeological assets either within the Site or within a 1km study area; and

[1] HCUK Group, 2025

- The archaeological potential of the Site.

9. At this early stage it is not intended to provide a detailing appraisal of relevant legislation, policy and guidance. However, it is noted that the following documents are of particular relevance:

    - Section 16 of the National Planning Policy Framework (NPPF) 2024
    - Historic Environment Section of the Planning Practice Guidance (PPG) 2024
    - The relevant policies in the *Medway Local Plan 2003*
    - The relevant policies in the as yet unadopted *Medway Local Plan 2041* (Regulation 18)
    - Kent County Council's *Heritage Conservation Strategy* (2022)

10. A previous outline application (LPA ref: MC/19/1566) associated with redeveloping the Site to provide approximately 1,250 residential units, a local centre, a village green, primary school, extra care facility, care home and associated access was submitted in 2019. The appeal was refused in 2020 (APP/A2280/W/20/3259868). An archaeological desk-based assessment[2] was produced for the 2019 application, which was accompanied by a Pleistocene and Palaeolithic desk-based assessment.[3] This Pleistocene and Palaeolithic desk-based assessment concluded that there is good evidence of Palaeolithic occupation in the immediate vicinity of the Site and a real possibility that deposits incorporating Palaeolithic material are present within the Site. The assessment recommended a programme of intrusive interventions to gain a clearer understanding of the superficial geology within the Site during the evaluation phase. Where possible test pits/boreholes should extend down to the bedrock. The assessment identified 11 areas within the Site for investigation and assigned the Palaeolithic potential for each area from high to low.

[2] Swale and Thames Archaeological Survey Company, 2019
[3] QUEST, 2018

Archaeology

Scoping

11. A search area of 1km around the development Site has been used to identify known archaeological remains and forms the baseline for this archaeology assessment.

12. There are no designated archaeological assets within a 1km radius of the Site boundary such as Scheduled Monuments or registered battlefields.

13. There are 12 Areas of Archaeological Potential (AAP) within the 1km study area (Figure 3). Three AAPs are partly located within the Site boundary. The AAP surrounding a Palaeolithic to Neolithic settlement terrace is located over the north-western part of the Site; the AAP around an area of probable Neolithic settlement is located over the south-east part of the Site; and the AAP surrounding multi-period coastal settlement zone is located over the north-east part of the Site.

14. A search of the KHER has been carried out for the proposed development site and 1km radius search area. A total of 206 records of either known or potential archaeological remains as well as findspots are recorded and the KHER also records 28 previous archaeological investigations (Figures 4 to 7). Three known records lie within the Site boundary, which relate to findspots. Below is a summary of the recorded archaeological sites within the proposed development site:

    - A polished Neolithic stone axe, found at Bloor's Place, Rainham (KHER TQ 86 NW 15)
    - Mesolithic blades and flakes, from Twydall, Gillingham (KHER TQ 86 NW 50)
    - Medieval copper alloy seal matrix (KHER MKE66595)

15. LiDAR data (1m resolution from 2022) has been downloaded and an initial assessment has been undertaken through QGIS software using hillshade settings and variations of light angles and azimuth heights to interrogate the data (Figure 8). This has so far identified one possible archaeological feature comprising a depression in a field north-west of Pump Lane, towards the south-west part of the Site. This field is described as 'Pump Farm Brick field' in the 1838 Tithe

Apportionment, indicating this feature may be related to brickearth extraction. No other archaeological features have been identified at this early stage.

Assessment Methodology

16. This initial assessment has complied readily available archaeological and historical information from documentary and cartographic sources, primarily:

- KHER for known archaeological sites, monuments and findspots within 1km of the Site (i.e. the study area)
- A review of relevant maps and documents held by online resources
- The National Heritage List for England (Historic England)
- Aerial photographs for the study area from various sources
- LiDAR data for the development site to include processing of data to ascertain if any archaeological features may be present

17. The information gathered from the above sources has been verified and augmented as far as possible, in order to arrive at conclusions on the significance of the various archaeological remains that have been identified.

Assessment

18. The assessment seeks to understand and define the significance of archaeological assets identified from the sources above, taking into account the categories of special interest defined in the NPPF, primarily archaeological interest, historic interest, architectural interest and artistic interest where applicable.

19. The importance of an archaeological asset is the overall value assigned to it based on its archaeological significance, reflecting its statutory designation or, in the case of undesignated assets, the professional judgement of the assessor.

20. Archaeological importance can be categorised in the following terms: negligible, local, regional or national importance (negligible, low, medium or high/very high).

21. At this stage three known sites are recorded on the KHER within the Site itself, but the potential for hitherto unknown archaeological sites to be present within the development area also needs to be considered. Archaeological potential is

determined by assessing the known archaeology of the study area, information from LiDAR data and historic mapping to determine land use and change. It also uses information from other archaeological investigations (or events) undertaken in the vicinity of the Site.

22. In addition to the three AAPs that the Site partly lies within, as noted above, there are nine other AAPS located within the 1km study area (Figure 3). The other AAPs relate to a range of periods, including the Roman road *c.*800m south of the Site, the medieval development of Rainham *c.*980m south-east of the Site, the post-medieval Fort Grange *c.*750m north-west of the Site. There are five areas covering historic farmsteads, including three in close proximity to the Site.

23. The KHER holds a total of 63 records of prehistoric date within the 1km study area, most of which relate to Neolithic worked flint. Many records relate to finds recovered from the mudflats of the River Medway and Bartlett Creek to the north of the Site, and for many of these finds the exact findspot location is unknown due to their discovery antiquity. However, an abundance of Palaeolithic finds were recovered during an evaluation at Twydall Chalk Pit, *c.*90m from the Site boundary on the south-east side of Lower Twydall Lane (KHER TQ 86 NW 4). An evaluation at Berengrave Nursery, *c.*410m south-east of the Site, revealed a large quantity of worked flints, of Mesolithic, Neolithic and Bronze Age date (KHER TQ 86 NW 177).

24. The Roman road known as Watling Street ran from Canterbury to Rochester, lies *c.*800m south of the Site (KHER TQ 86 SW 132). Roman activity in the area comprises settlement activity around Otterham Creek outside the 1km study area to the north-east and nearby cemeteries. This evidence includes Roman pottery and an urn which is thought to have been the remains of a cremation burial, found south-east of Pump Lane, *c.*30m from the Site boundary (KHER TQ 86 NW 3). A cemetery was recorded at the head of Otterham Creek, *c.*740m east of the Site (KHER TW 86 NW 7).

25. Rainham is described as a royal town in a AD 811 charter, however, there is no separate entry for Rainham in the Domesday Book of 1086. During the medieval period Rainham developed along Watling Street, *c.*800m south of the Site. Another settlement developed north-east of the Site in the area around Bloors Place, a late medieval hall house (KHER TQ 86 NW 1148) and Lower Rainham Road, which was once the main road from Chatham to Queenborough. A number

of medieval buildings survive within the study area, which are listed and discussed in more detail in a separate heritage assessment.[4] Some of the KHER entries of early medieval and medieval date within the 1km study area relate to findspots. These include a 5th century AD coin found immediately adjacent to the north-east boundary of the Site (KHER TQ 86 NW 1) and the medieval copper alloy seal matrix found within the Site boundary (KHER MKE66595).

26. During the post-medieval period development along Lower Rainham Road continued, with several of the KHER entries relating to listed buildings of post-medieval date. Several of the post-medieval KHER entries relate to farmsteads in the study area, including Pump Farm (KHER TQ 86 NW 59) and Bloors Farm (Bloors Place) (KHER MKE84966) which lie adjacent to the Site. Bloors Place was originally built in the 15th century as a Wealden House, which has been altered and extended several times. Cartographic sources from the late 18th century show that the Site comprised several individual fields which were a mix of arable land and orchards (Figures 9 to 14). The 1840 Tithe Map and accompanying Apportionment lists the Earl of Thanet as a large landowner in the area, with various tenants occupying the fields and farmsteads. Over the course of the 20th century, the orchards across the Site were extended, covering the majority of the Site. No significant built development within the Site is visible on historic mapping.

27. An initial assessment of the available data indicates that the potential for finding archaeological remains associated with the prehistoric period in the proposed development Site is high. It is likely that such remains would be associated with early prehistoric activity, similar to the activity identified during excavations north-west and south-east of the Site. These may be of regional importance if present.

28. The Site is considered to hold a moderate potential for Roman remains based on its proximity to known Roman sites. If present, Roman remains could be considered of regional importance. The presence of human remains associated with cemetery activity cannot be discounted.

29. The potential for finding archaeological remains associated with the early medieval and medieval periods is considered to be low to moderate. If remains are present, they would likely relate to isolated findspots or finds and features

[4] HCUK Group, 2025

associated with agriculture and the rural landscape. Such remains would be of local importance if present.

30. Furthermore, the potential for archaeological remains associated with the post-medieval period is high. Those remains would likely be associated with agricultural practices related to the numerous post-medieval farmsteads documented on the KHER. Such remains would be of local importance (possibly regional for some site types).

31. Cartographic sources show that parts of the Site have been used as orchards since the late 18th century, with most of the Site currently used as commercial orchards for fruit trees. This use is likely to have had some impact on potential buried archaeological remains. Historic England states that '*Whether or not tree cover would be beneficial or detrimental to archaeological evidence will depend upon both the nature of the archaeology, and its surrounding environment. In some cases, the trees will be of historic interest in their own right. However, tree planting, tree roots, forestry operations and events such as wind throw can damage archaeology*'. [5] The Forest Research state that trees typically have relatively shallow but wide-spread root systems, which are mainly found in the top 0.6m and rarely reach a depth greater than 2m.[6] Therefore, whilst there may be some disturbance of potential archaeological remains due to tree roots, the preservation of earlier and more deeply stratified remains, particularly of Palaeolithic date, may be good if present.

32. There is the potential for direct physical impacts to archaeological assets during the construction phase of any future development of the Site, as any ground moving activities associated with the proposed works would have the potential to expose, damage or destroy hitherto unknown archaeological remains. Such activities could include piling, topsoil stripping, ground reduction, digging of service trenches and landscaping as well as site set-up activities for development, including contractor's compounds, materials storage areas and temporary access roads.

[5] Historic England https://historicengland.org.uk/advice/technical-advice/monuments-and-sites/trees-and-archaeology/
[6] Forest Research https://www.forestresearch.gov.uk/tools-and-resources/fthr/historic-environment-resources/woodland-and-archaeology/tree-roots/

Archaeological Opportunities and Constraints

33. The Site provides archaeological opportunities to learn more about the archaeology of the Site area, and could tie in such results with those revealed on the nearby Twydall Chalk Pit and Berengrave Nursery sites.

34. Archaeological information recorded from the Site can be made available to existing and future local residents of the area, so that they can learn more about the archaeology and history of the area, including what archaeological work has been done and what has been found.

35. Opportunities might be considered to involve members of the local or wider community in archaeological works on-site, assuming this can be done appropriately.

36. Archaeological constraints include:

- Beyond the preparation of a full archaeological desk-based assessment, additional evaluative fieldwork will be needed. This could include trial trenching following the clearance of the commercial orchards or test pitting in the areas between trees prior to their removal, for determination of the presence of early prehistoric material. This may be required pre-determination of a planning application.
- Once the results of the evaluation phases of work have been determined further archaeological mitigation may be required, whether through relatively simple watching briefs, through to detailed excavation, whichever is appropriate. Such stages are very likely to be needed post-consent, but before or during development of the site. Reporting, archive preparation and appropriate publication of archaeological results will also be required.
- It is possible that if nationally significant remains are identified on the site then the area of such remains may preclude development. Should significant archaeology be revealed, redesign of the development may also be required to leave the archaeology *in-situ* and avoid having to excavate the remains.

37. Timescales for archaeological fieldwork should be factored into any development programme and such works will incur costs, which should also be factored into budgets for development.

Conclusion

38. This Archaeological Assessment, has been researched and prepared on behalf of Esquire Developments Limited. It provides an initial assessment of the potential impact on archaeology arising from development of a potential land allocation site on Land off Pump Lane, known as Rainham Parkside Village. It provides master planning advice in terms of archaeological constraints and opportunities. A full archaeological desk-based assessment will still be required for the Site once detailed development proposals have been prepared, to be submitted as part of any forthcoming planning application.

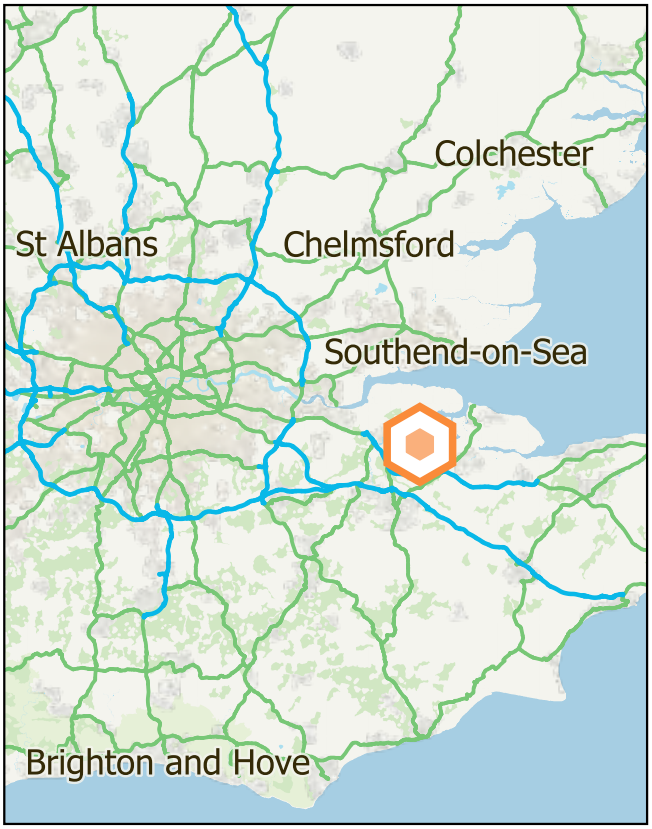
39. No known archaeological sites have been identified within the site that would preclude development from presently available information. Due to the potential for prehistoric archaeological remains to be present within the site it is very likely that the Kent County Council will recommend a programme of investigative fieldwork to be carried out prior to submission or determination of a planning application for the development in order to ascertain the significance of any archaeology present. It is likely this fieldwork will comprise test pitting in advance of and/or a trial trench investigation following the clearance of the commercial orchards. It is advised that the Archaeological Officer for Kent County Council is consulted at an early stage to seek guidance on this.

Rebecca Mansfield BA MA ACIfA

5th February 2025

No text or imagery within this report has been generated by Artificial Intelligence (AI).

Figures



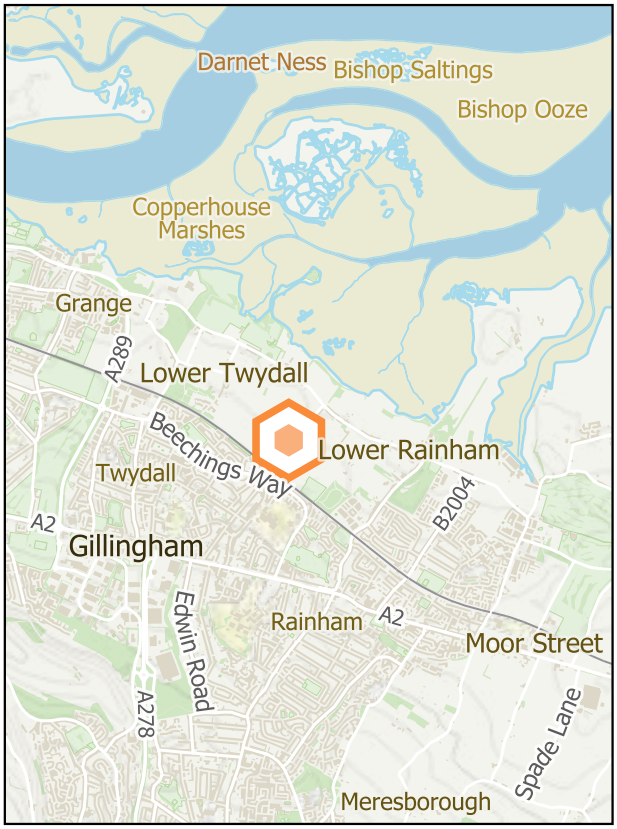


Figure 1: Site Location

Key:

Site Boundary

0 50 100 150 200 250 m

Scale @ A4: 1:7,000

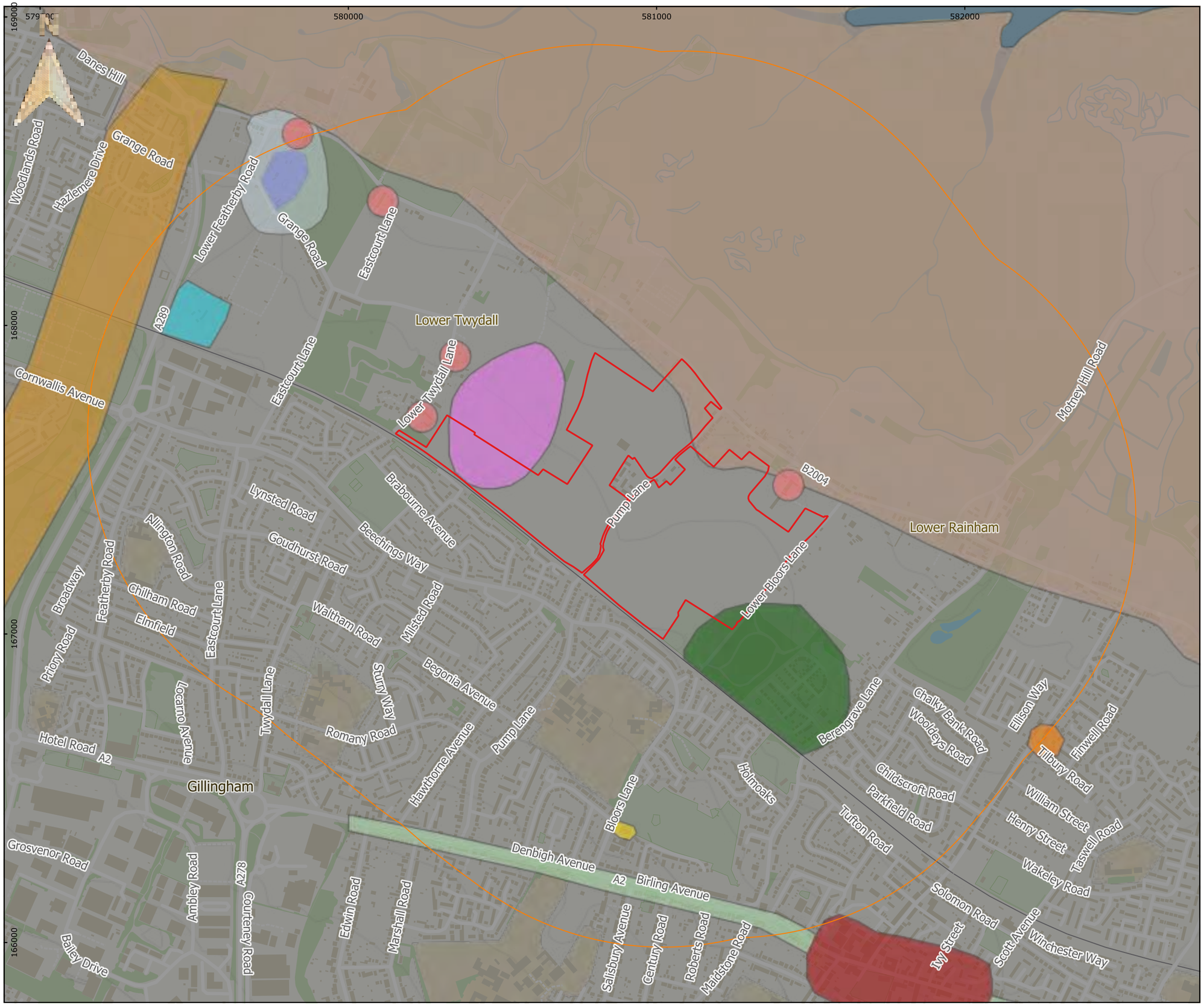
HCUK GROUP

Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Figure 2

Satellite View of the Site

Project No. 10714A | 30/1/2025 | Drawn By: RM



Key:

- Site Boundary
- 1km Study Area

Areas of Archaeological Potential

- Area of probable neolithic settlement
- Area of post medieval limeworks
- Early Rainham
- Historic farmstead
- Rrobable Roman road from Grange Manor to Watling Street and Medieval Grench Manor
- Woodlands Redoubt
- Chalk passages
- Fort Grange & setting
- Fort Grange, PM fort, Ro burial
- Multi-period coastal settlement zone
- Pa- Ne settlement terrace
- Roman road, Rochester to Canterbury

0 100 200 300 400 500 m

Scale @A3: 1:12,000

HCUK GROUP

Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Figure 3

Areas of Archaeological Potential within the 1km Study Area

Project No. 10714A | 30/1/2025 | Drawn By: RM

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Key:

- Site Boundary
- 1km Study Area

KHER Monuments

Point

- Prehistoric
- Roman
- Early Medieval
- Medieval

Line

- Roman

0 150 300 450 600 m

Scale @A3: 1:16,000

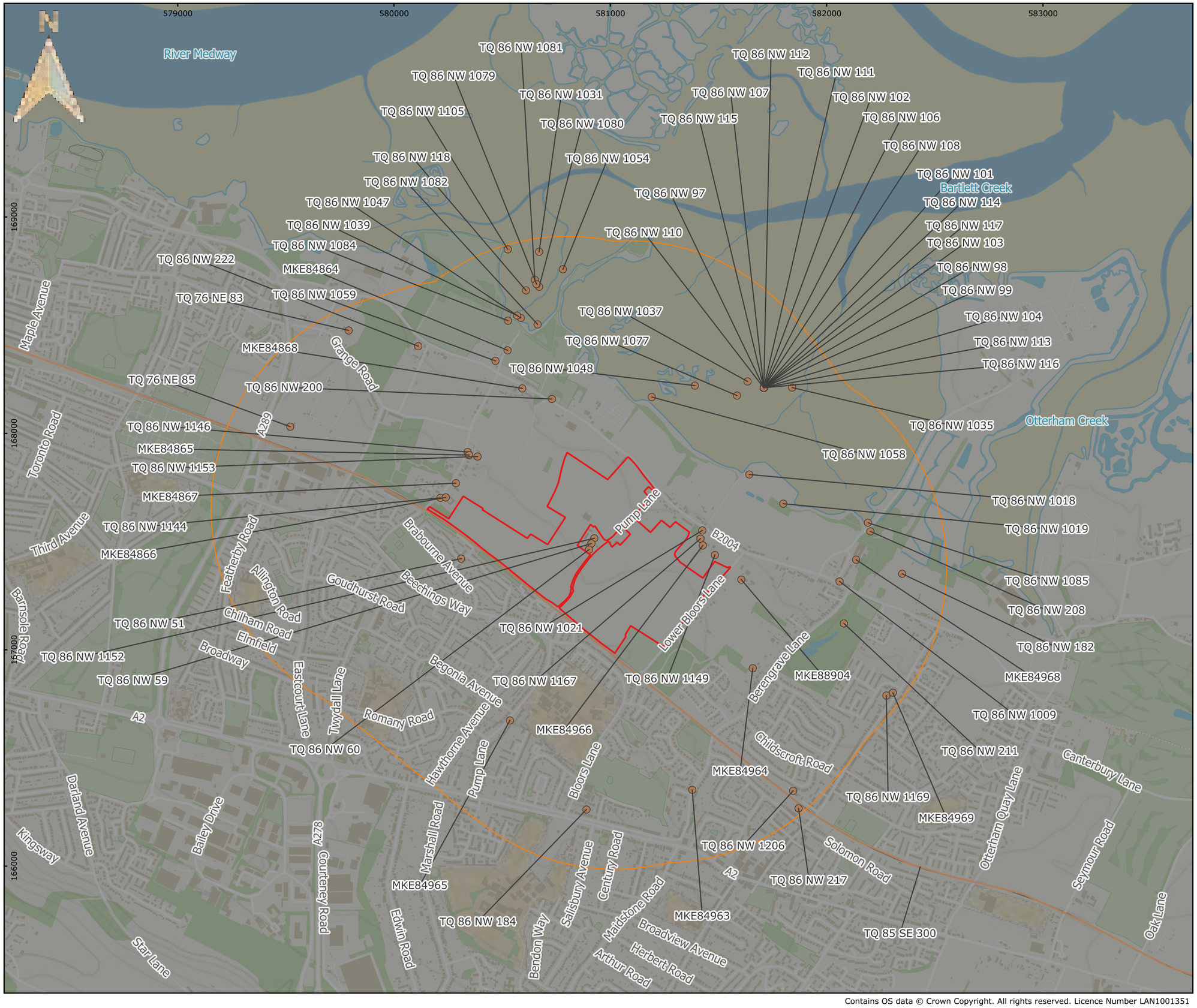
HCUK GROUP

Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Figure 4

Prehistoric, Roman, Early Medieval and Medieval KHER Monuments within the 1km Study Area

Project No. 10714A | 30/1/2025 | Drawn By: RM



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Key:

- Site Boundary
- 1km Study Area

KHER Monuments

Point

- Post-medieval

Line

- Post-medieval

0 150 300 450 600 m

Scale @A3: 1:17,000

HCUK GROUP

Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Figure 5

Post-medieval KHER Monuments within the 1km Study Area

Project No. 10714A | 30/1/2025 | Drawn By: RM

Key:

- Site Boundary
- 1km Study Area

KHER Monuments

Point

- Modern
- Unknown

Line

- Modern

Area

- Modern

0 150 300 450 600 m

Scale @A3: 1:17,000

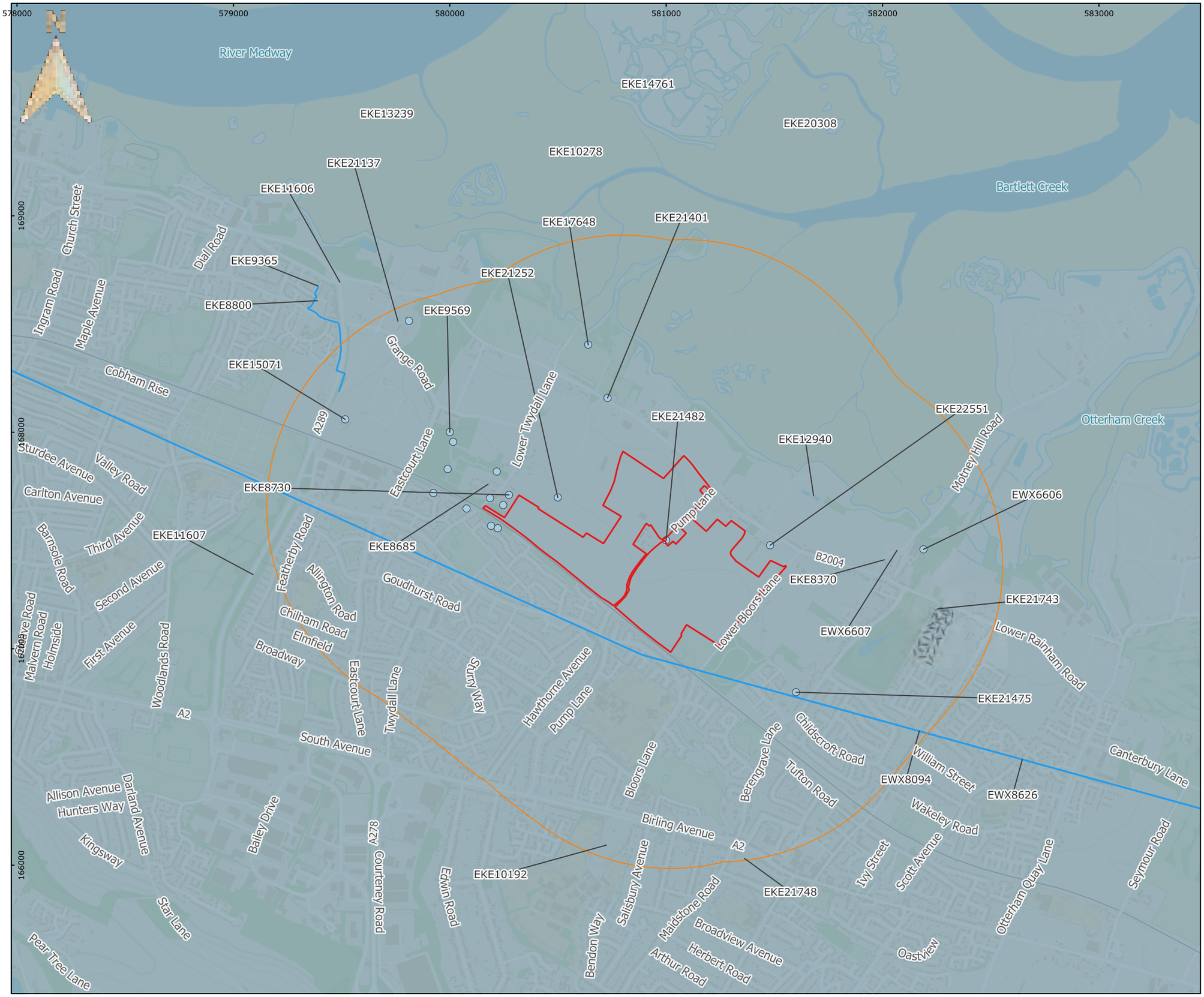
HCUK GROUP

Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Figure 6

Modern and Unknown Date KHER Monuments within the 1km Study Area

Project No. 10714A | 30/1/2025 | Drawn By: RM



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Key:

- Site Boundary
- 1km Study Area

Previous Archaeological Investigations

- Point
- Line
- Area

0 150 300 450 600 m

Scale @A3: 1:17,000

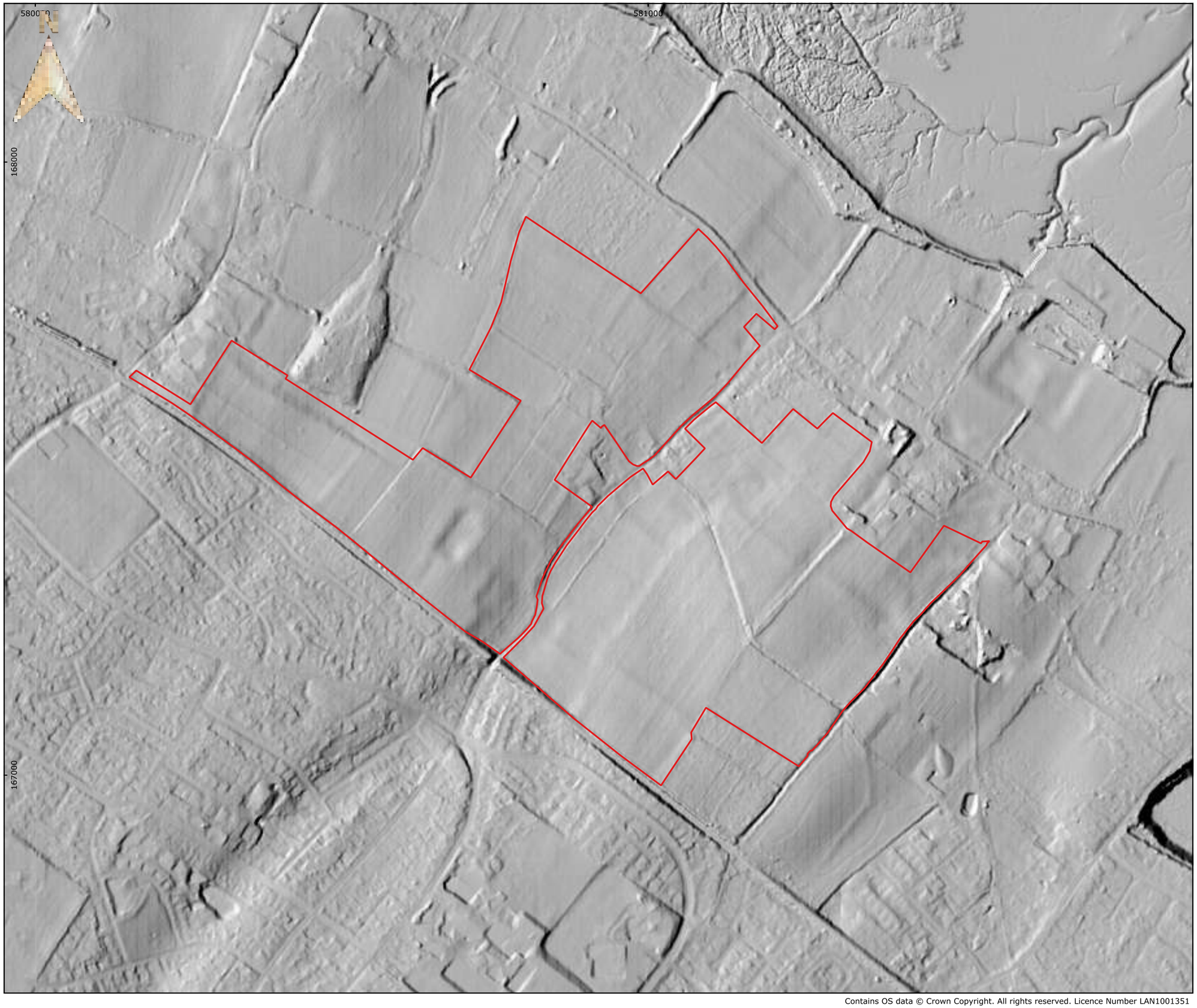
HCUK GROUP

Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Figure 7

Previous Archaeological Investigations Recorded on the KHER within the 1km Study Area

Project No. 10714A | 30/1/2025 | Drawn By: RM



Key:

Site Boundary

0 50 100 150 200 250 m

Scale @A3: 1:6,000

HCUK GROUP

Rainham Parkside Village, Land off Pump Lane, Lower Rainham, Kent

Figure 8

LiDAR Coverage of the Site

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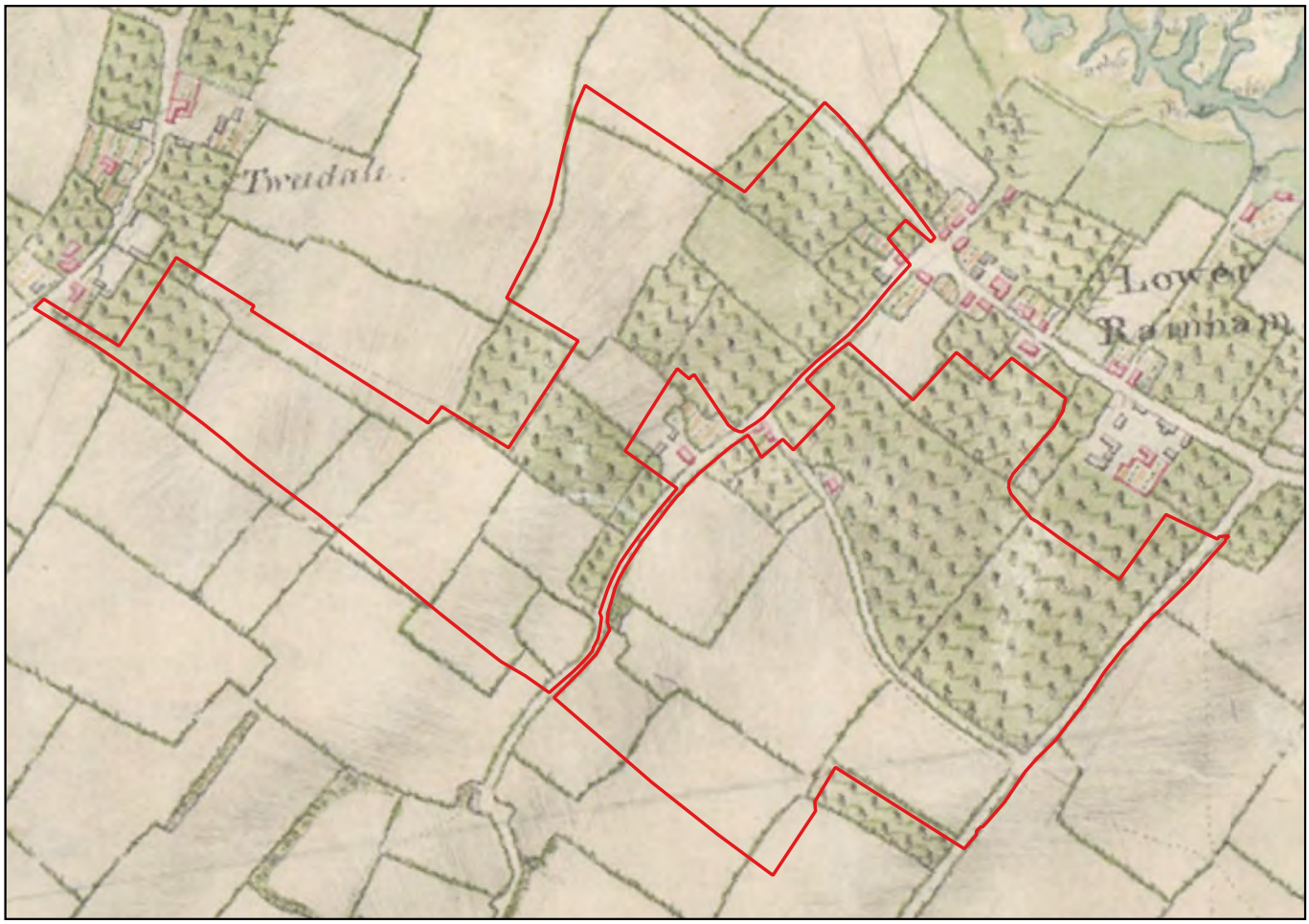

Figure 9: Ordnance Survey Drawing, Rainham (Kent) (1797)

Figure 10: Tithe Map of the Parish of Rainham (1840)

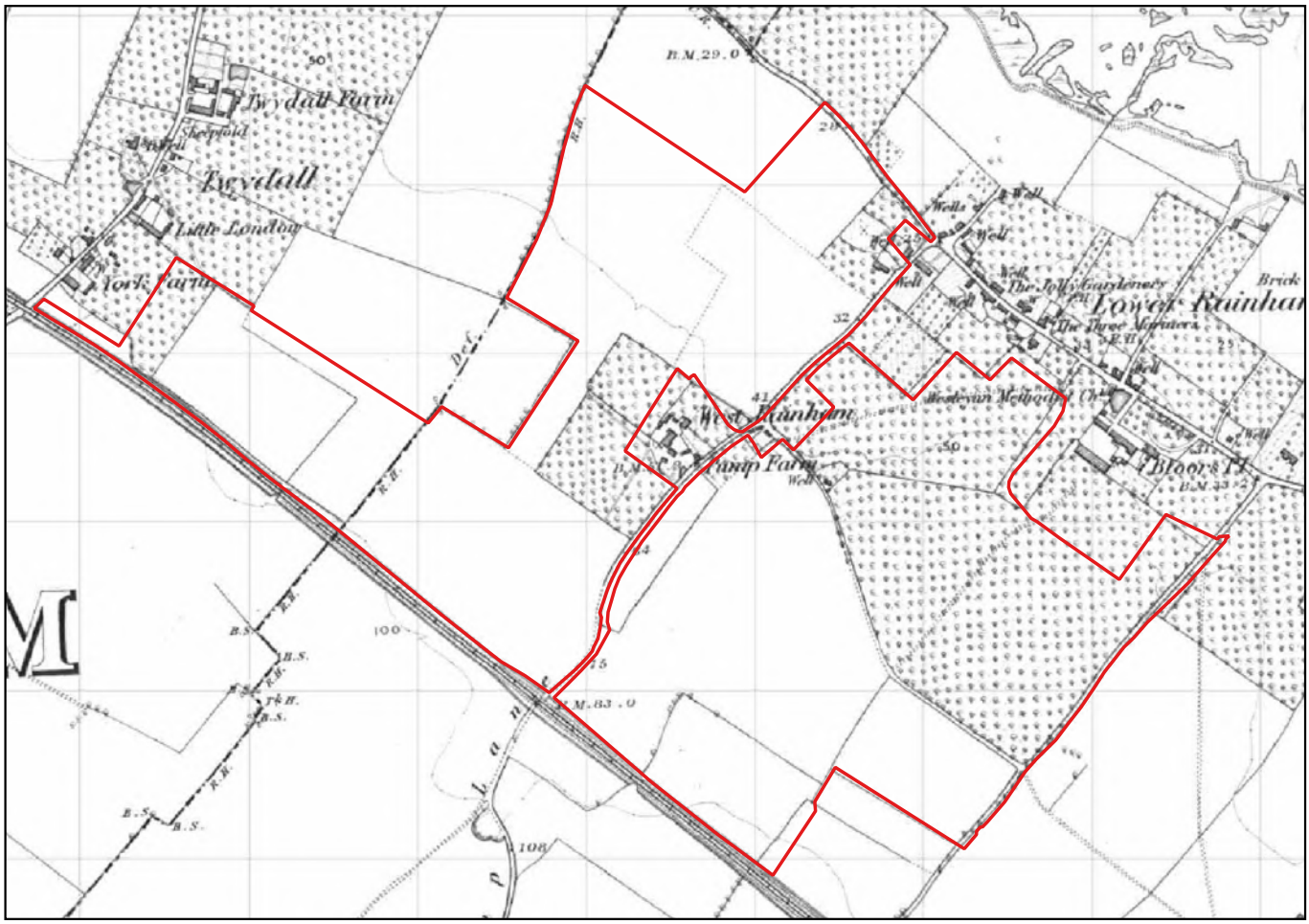

Figure 11: Ordnance Survey, 1: 10,560 (1865)

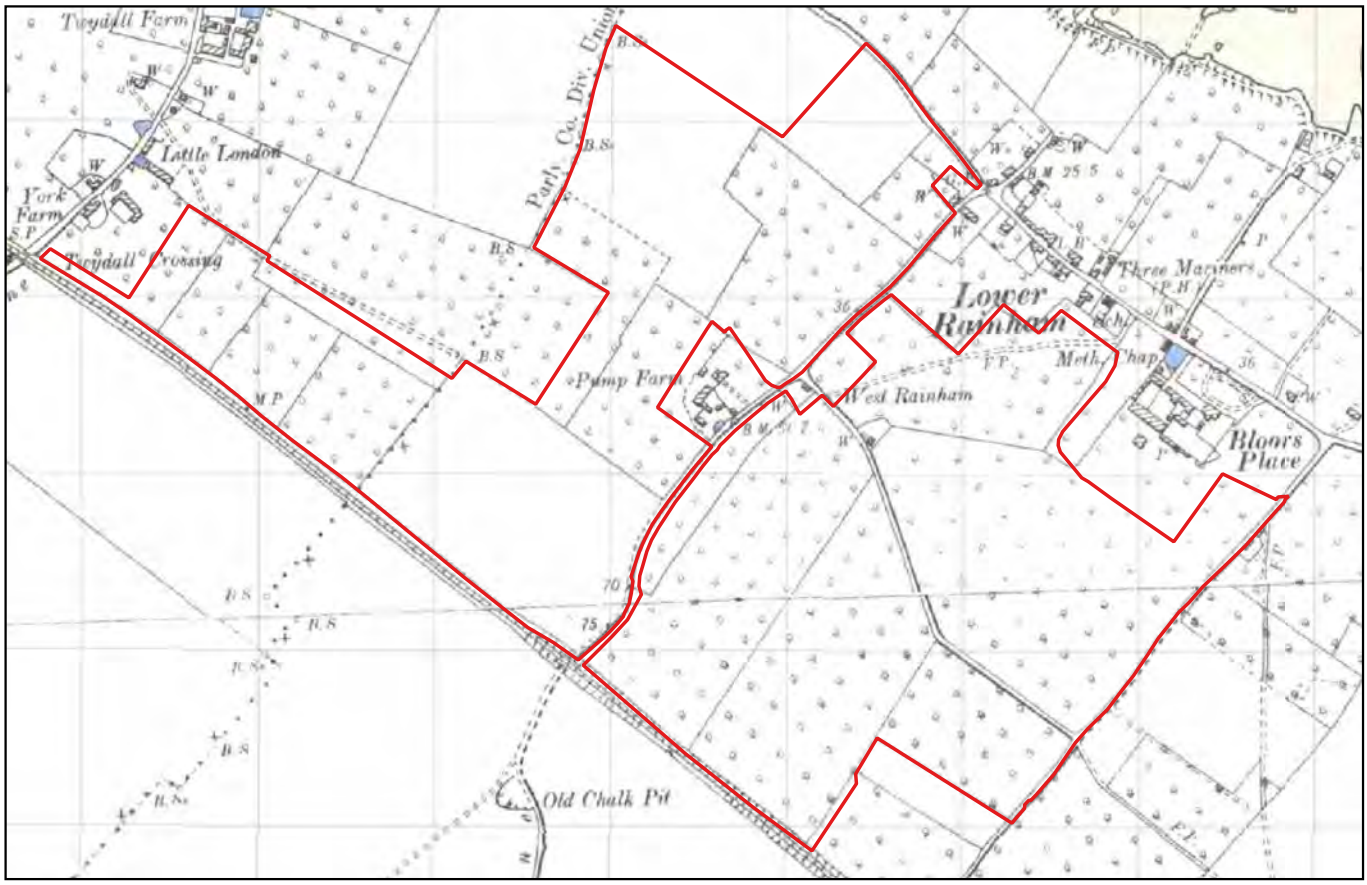

Figure 12: Ordnance Survey, 1:10,560 (1896)

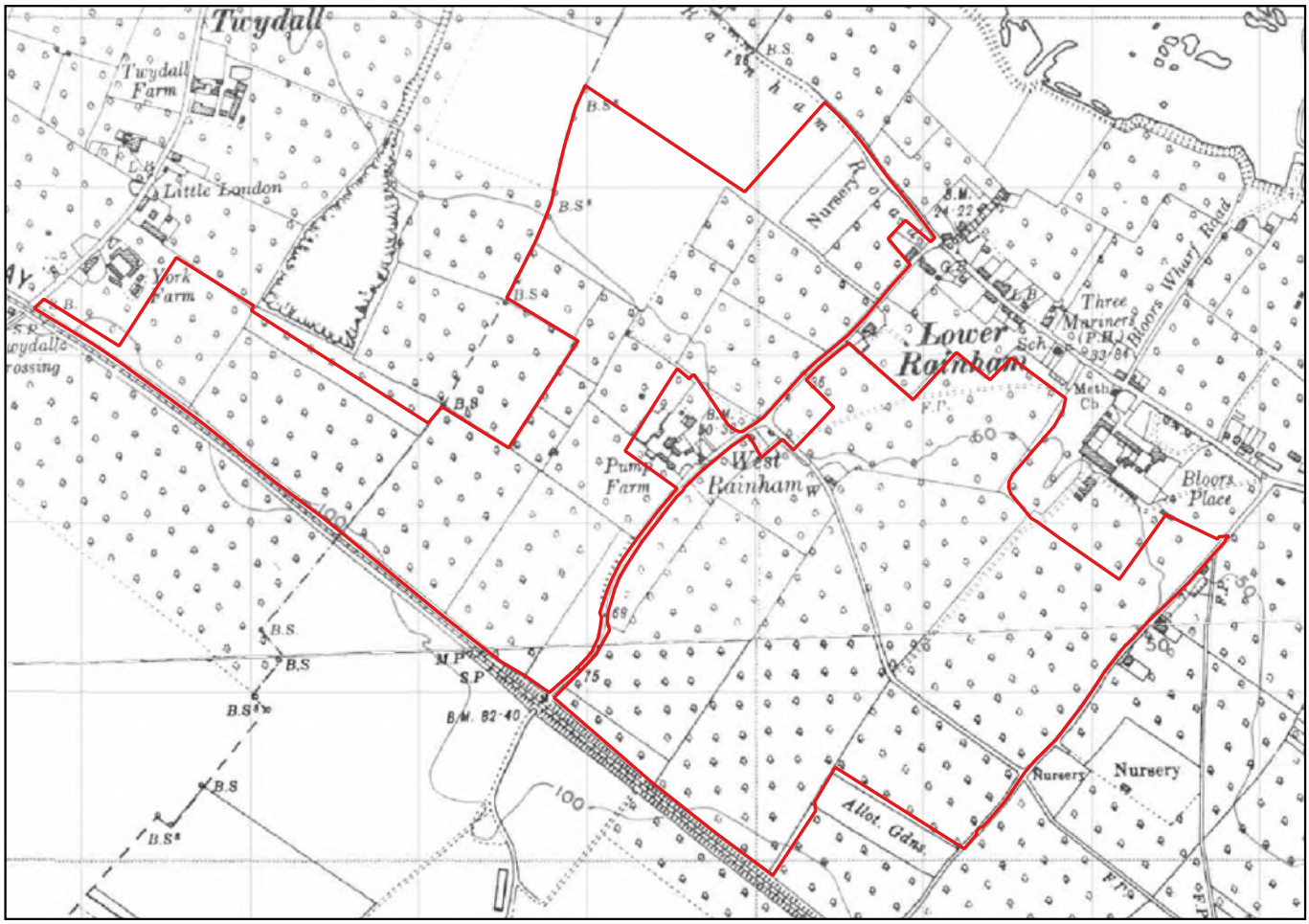

Figure 13: Ordnance Survey, 1: 10,560 (1938)

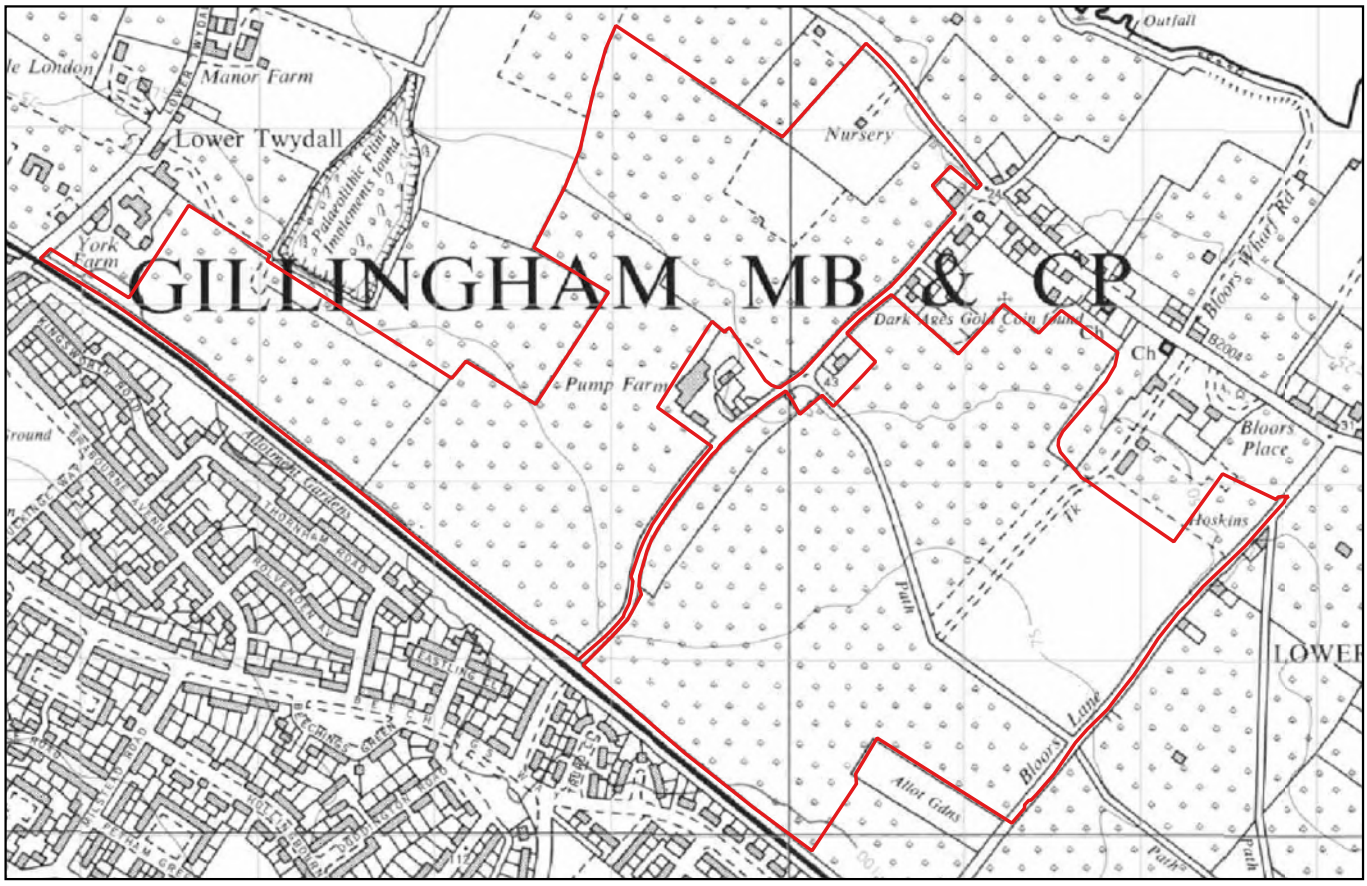

Figure 14: Ordnance Survey, 1:10,560 (1967-68)