ECOLOGICAL EXPERTISE, EVOLVED

Blackthorn Farm, Culverstone Green

Outline Ecological Impact Assessment

Prepared on behalf of

Esquire Developments Ltd

Final Report

17 September 2025

32/74-2D

Blackthorn Farm, Culverstone Green

Outline Ecological Impact Assessment

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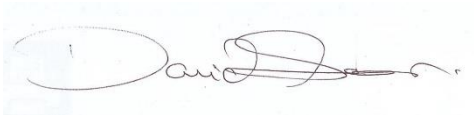
Client:	Esquire Developments Ltd Studio 3 The Old Laundry Longfield Kent DA2 8EB
Main Author(s):	Holly Pay BSc (Hons), MSc Sean Manley BSc (Hons)
Contributors/Surveyors:	Sean Manley BSc (Hons) Holly Pay BSc (Hons), MSc
Report Prepared for Issue by:	 …… Sean Manley BSc (Hons)
Report Approved for Issue by:	 …… David W. Smith BSc (Hons) PhD MCIEEM

Ecological Planning & Research Ltd, The Barn, Micheldever Station, Winchester, Hampshire, SO21 3AR

t. 01962 794720 **e.** info@epr.uk.com **w.** www.epr.uk.com

Company registration number: 8592380

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Executive Summary

Ecological Planning & Research Limited conducted a Preliminary Ecological Appraisal of land at Blackthorn Farm, Culverstone Green to inform the proposals for residential development. The recommended further survey work for botany/habitats, reptiles, breeding birds, bats and Hazel Dormouse commenced in April/May 2025, and is on-going.

The Site comprises short-grazed grass fields, and between 16 to 24 plant species per m^2. There are also native hedgerows, mature treelines and mature trees of ecological interest, bisected by a small strip of woodland, which supports woodland flora of ecological importance. The Site is bordered by the A227 road to the west and ancient woodland to the east.

Ecological features of importance include grasslands, woodland flora, a small number of trees of ecological interest, woodland, and historic field boundaries comprising treelines and hedgerows.

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, historic hedgerows, woodlands 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 Environment Act;

Restore: On-site grasslands, especially in those locations where impacts on grassland can be avoided. Where appropriate, restore on-site hedgerows and other boundary features; and

Create: A mosaic of grassland habitat with scattered fruiting trees, and ponds. Scrub habitat will be encouraged in field corners to benefit additional species.

Further botanical survey work of the grassland, woodland and scrub habitats will be detailed in the associated Habitats, Flora and Vegetation Survey Report. In addition, further information relating to bats and Hazel Dormouse will also be provided in the associated baseline survey reports. Information related to breeding birds and reptiles has been submitted alongside this Outline Ecological Assessment.

A pre-commencement Badger survey is recommended to address minor residual legal risks of Badger moving onto Site prior to construction.

A detailed Biodiversity Net Gain calculation has been produced and submitted, and a short BNG Technical Note has also been produced.

Any lighting scheme should be bat friendly and based on the Bat Conservation Trust's Bats and Artificial Lighting in the UK document.

1. INTRODUCTION

1.1 Ecological Planning & Research Limited (EPR) was commissioned by Esquire Developments Ltd to carry out a Preliminary Ecological Appraisal (PEA) of land at Blackthorn Farm, Culverstone Green.

1.2 After this, Esquire Developments instructed further survey work for botany/habitats, an eDNA survey of an off-site pond (if access can be obtained), reptiles, breeding birds, bats and Hazel Dormouse *Muscardinus avellanarius*.

1.3 During the initial site visit, associated with the PEA, 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.

1.4 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 initial assessment did not include a detailed botanical survey. Therefore, baseline habitats were initially mapped to UK Habitats Classification Level 3. However, a BNG metric has now been submitted (Gravesham Planning Application ref: 20250802) and this is based that detail shown on **Map 2a**.

Site Location and Context

1.5 The Site (as shown on **Map 1a**) is approximately 5.4ha of land, most of which is used as horse paddocks. The grazed grass fields are bordered by native hedgerows, mature treelines and mature trees, and a small woodland shaw is present in the centre of the Site.

1.6 The Site is bordered by the A227 road to the west and ancient woodland to the east.

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 (as amended);
- The Natural Environment and Rural Communities (NERC) Act 2006 (as amended);
- The Protection of Badgers Act 1992 (as amended);
- National Planning Policy Framework (NPPF) 2024;

- Circular 06/05: Biodiversity and Geological Conservation;
- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018);
- Biodiversity Net Gain: Gravesham Borough Council;
- Gravesham Local Plan Core Strategy:
- Policy 4.0 Spatial Policies; and
- Policy 5.7 Green infrastructure.

The Study Area

National Character Area (NCA)

1.9 The study area is located within Natural England's North Downs National character Area (NCA) (Number 119). This is a chain of chalk hills extending from the Hog's Back in Surrey to the White Cliffs of Dover. The settlement pattern is characterised by traditional small, nucleated villages, scattered farms and large houses with timber framing, flint walls and Wealden brick detailing. Twisting sunken lanes, often aligned along ancient drove roads, cut across the scarp and are a feature of much of the dip slope.

1.10 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 Blackthorn Farm could deliver. The SEOs for NCA 119 are:

- **SEO 1:** Manage, conserve and enhance the distinctive rural character.... Protect the tranquillity of the landscape and sensitively manage, promote and celebrate the area's rich natural heritage for future generations;
- **SEO 2:** Protect, enhance and restore active management to the diverse range of woodlands and trees of the North Downs, for their internationally and nationally important habitats and species, cultural heritage and recreational value and to help to deliver climate change mitigation and adaptation;
- **SEO 3:** Manage and enhance the productive mixed farming landscape of the North Downs and the mosaic of semi-natural habitats including the internationally important chalk grassland;
- **SEO 4:** Plan to deliver integrated, well-managed multi-functional green space in existing and developing urban areas, providing social, economic and environmental benefits and reinforcing landscape character and local distinctiveness, particularly on or alongside the boundaries of the designated landscapes within the North Downs.

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

1.11 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.

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

Biodiversity Opportunity Areas (BOAs)

1.13 This Site does not fall within a BOA. However, the Medway Gap and North Kent Downs Biodiversity Opportunity Area (BOA) is 300m to the east. This area stretches from the Ash Downs near Meopham, across the lower Medway Valley, to the downland between Medway and Maidstone as far as Queendown Warren. The area includes some very significant blocks of nationally and internationally important woodlands on a range of geologies from gravel to chalk, including areas of Lowland Beech *Fagus sylvatica* and Yew *Taxus baccata* Woodland. Chalk grassland exists as isolated fragments. Of relevance to the Site are the following targets:-

- Maintain and enhance existing and recently created chalk grassland and pursue opportunities for additional chalk grassland;
- Enhance or reinstate woodland management on ancient woodland sites. Extend and reconnect fragmented woodlands where this would not conflict with grassland conservation and enhancement; and
- Pursue opportunities for creation of species-rich neutral grassland and enhance at least 15ha of species-rich neutral grassland to bring it to UK BAP priority habitat 'Lowland Meadow' quality.

Kent Biodiversity Action Plan (BAP)

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

1.15 Habitats that are included in the Kent BAP, and of relevance to the Site include: -

- Woodland and Scrub;

- Hedgerows;
- Chalk Grassland; and
- Ancient Semi-natural Woodland (although the adjacent woodland is ancient replanted).

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

- Hazel Dormouse;
- Great Crested Newt *Triturus cristatus* (there is an off-site pond)
- Nightingale *Luscinia megarhynchos*; and
- Serotine Bat *Eptesicus serotinus*.

1.17 The proposals provide an opportunity to contribute to the Kent Biodiversity Action Plan. For example, there are opportunities to improve woodland, scrub and hedgerow habitats.

2. ASSESSMENT METHODOLOGY

2.1 The assessment approach used in this report has been informed by guidelines 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 report has been informed by the guidance presented in *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland* (CIEEM, 2018), this report does not yet provide details associated with all the further survey work that has been instructed and the associated impact assessment.

2.4 Some of the significant ecological effects arising from the proposal are not fully understood at the time of producing this report. Therefore, a detailed Ecological Impact Assessment (EcIA) will be produced once all the survey work has been completed, data analysed, and baseline reports produced.

Likely Biophysical Changes and Zone of Influence

2.5 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).

2.6 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."*

2.7 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).

2.8 The ZoIs predicted in **Table 2.1** are based on the construction and operational phase of the 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.*

Activity	Potential Impact	Zone of Influence
Site Clearance and Construction Phase		
Vegetation clearance and ground works	Loss and fragmentation of habitat. Disturbance. Direct harm or death of individual animals/plants.	The Site and immediate surrounds in most cases but could be up to 4km to capture in relation to bats roosting within the wider landscape that may also use the Site
Access and travel on / off site	Noise / visual / lighting disturbance of sensitive species	The Site and immediate surrounds.
Assembly and storage areas for machines and materials; construction compounds	Loss and fragmentation of habitats. Noise / visual / lighting disturbance to sensitive species.	The Site and immediate surrounds in most cases but could be up to 4km in relation to bats (as per above).
Lighting of work area	Disturbance to sensitive species.	The Site and immediate surrounds in most cases but could be up to 4km in relation to bats (as per above).
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.	The Site and immediate surrounds, as well as downstream water bodies.
Creation of new habitats	Beneficial impacts on flora and fauna.	The creation of new habitats has the potential to benefit a range of species, including invertebrates, birds, and foraging bats. Therefore, the ZoI will be mainly within 300-400m, but potentially up to 4km.
Operational Phase		
Implementation of Biodiversity Gain and Ecological Management Plan	Continued benefit to flora and fauna over time, with benefits increasing as habitat quality improves and habitats establish.	The Site and areas within 300-400m of it. May extend up to 4km.
Maintenance and operation of project infrastructure	Disturbance	Site and areas within 400m of it.
Outflow / discharge of potable wastewater into the River Thames	Localised change in water quality. Scouring of bank sides	The Site and immediate surrounds and downstream water bodies.

2.9 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.

2.10 Recreational disturbance arising from new residents, such as dogs off leads, and increased predation rates from domestic cats, is likely to extend beyond the Site boundary. In the latter

case, there is evidence cats have a home range of approximately 300m to 400m (Thomas, *et al.*, 2014). As the Site is adjacent to several woodland habitats, increased cat predation could have a significant impact upon reptiles (on woodland edges), breeding birds, and small mammals. Dogs off leads may disturb bird species. 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 5 to 6km).

2.11 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) 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).

2.12 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.

2.13 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, and 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 scope of any Great Crested Newt survey work that might be needed to support a planning application.

2.14 Major roads (such as motorways and major A-roads) are likely to act as dispersal barriers to Great Crested Newt (Oldham *et al*., 2000). However, any ponds and other waterbodies on the opposite side of the A227 to the Site cannot be ‘scoped out’ from further survey work as the A227 would not be considered a busy enough road to create a complete barrier to the dispersal of Great Crested Newt.

2.15 The pond closest to Site is within the ancient woodland, Willow Wood to the south, and there are no dispersal barriers between this pond and the Site. Efforts are being made to obtain access to this pond so that an eDNA survey can be completed.

2.16 Grass Snake *Natrix Helvetica* is present, and therefore the ZoI may extend further than 300m to 400m because this species has a relatively large home range.

2.17 Due to their mobile nature, the ZoI for bats is likely to extend further afield. For the most common and larger bat species that are most likely to occur in the landscape surrounding the Site (e.g. Noctule *Nyctalus noctule,* Natterer's bat *Myotis nattereri* and Serotine bat) this could potentially be up to 4km. The 4km distance is based on Bat Conservation Trust CSZs (BCT, 2016).

Method of Ecological Valuation

2.18 When relevant (and it is often not possible to evaluate ecological features at this initial stage because further survey work has not been completed); ecological evaluation uses the following geographical scale of importance:

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

2.19 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

2.20 A desktop study has been included as part of this assessment. 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.

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

Field Survey Methodology

2.22 The Preliminary Ecological Appraisal field survey visit was conducted on the 18th March 2025 by Senior Ecologist Sean Manley BSc (Hons) and Ecologist Holly Pay BSc (Hons) MSc. Features of ecological importance were mapped using target notes. A summary of the methodology is described in **Appendix 2**.

2.23 Further survey work has been instructed (as previously detailed), and some initial high-level results have been included in the results section when relevant. For example, some initial botanical findings arising from a Site visit on 16th May 2025 have been included.

2.24 Further survey work and data analysis is on-going and will be provided once complete.

Considerations

2.25 This assessment only provides an outline 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 initial survey visit associated with the PEA was conducted outside of the optimal survey window for grassland habitats. Therefore, the number of detectable forbs and grasses was significantly reduced. However, further survey work has now addressed this, and the results will be detailed in the Habitats, Flora and Vegetation Survey Report, which will be submitted in due course. **Map 2a** does incorporate relevant detail associated with the further survey work, and this was also used to inform the submitted BNG assessment.

2.27 The surveyors were initially unable to access the southern grass field, because young horses were present, and the owners indicated it would not be safe to enter. Therefore, this meant approximately 0.7ha of the Site could not be initially accessed.

2.28 Further survey work was also be constrained because of the presence of these horses, due to the associated H&S risk to surveyors. However, some of these constraints have been addressed through survey work later in the survey period.

2.29 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. Therefore, this is likely to be a minor limitation.

2.30 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*.

2.31 On the 16th May 2025, a rapid botanical survey was completed. This followed a period of heavy drought and was completed after a period of grazing. As such, certain flora may have been missed during the rapid assessment. After being bitten by one horse, no further effort was made to access field containing horses due to health and safety concerns until later in the season (July). This data will be presented in the Habitats, Flora and Vegetation Survey Report.

3. RESULTS

Site Context

Geology and Soils

3.1 The British Geological Survey's Open Geoscience Viewer indicates the whole of the Site is underlain by Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation – Chalk.

3.2 One superficial deposit overlays the bedrock on most of the Site, which is Clay-with-flints Formation - Clay, silt, sand and gravel. The eastern most field has no superficial deposit according to online data sources.

3.3 The Cranfield Soil and Agrifood Institute Soilscapes describes the soils within the Site as Soilscape 8: Slightly acid loamy and clayey soils with impeded drainage. This is associated with a wide range of pasture and woodland types.

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.

3.6 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.

Topography and other Context

3.7 The Site includes a gently sloping grassland on the eastern most field. The woodland shaw within the middle of the Site is also on a step. This woodland block includes two chalk pit areas, one of which is identified on the OS 25-inch map of 1892 to 1914.

Ecological History

3.8 The Site comprises grass fields bisected by a woodland shaw.

3.9 The Site is bordered by woodland to the east (which is an ancient woodland called Willow Wood) and the A227 road to the west.

3.10 Using freely accessible online imagery, it appears that the fields to the west of the woodland shaw that bisects the Site were largely arable prior to 1990.

3.11 The arable use seems to have stopped by 1990, and the north-west and largest field has been used for grazing since then and has been largely unchanged since. The easternmost field was not arable and appears to have been used for hay cropping. It has been grazed since at least 1990.

3.12 The six-inch OS map from 1888 to 1915 shows that the woodland, which runs north to south, was present. The woodland that borders the Site to the east is also present on the same map.

3.13 The woodland shaw within the Site is shown on the 1830s to 1880s OS 6-inch map. On the OS 25-inch map of 1892 to 1914 a chalk pit is shown within this narrow strip of woodland.

Designated Sites of Nature Conservation Importance

3.14 **Maps 1a and 1b** show those sites that have designations because of their ecological importance.

Statutory Designated Sites of International Importance

3.15 There is one designated nature conservation site within 5km of the Site boundary that is of ecological importance at the **International Level** (i.e., Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites). This is:

- The North Downs Woodlands SAC, which is c.3km to the east. This site consists of mature Asperulo-Fagetum Beech forests and Yew woods on steep slopes. The stands lie within a mosaic of scrub and other woodland types and are the most easterly of the beech woodland sites selected. This site is also associated with, scrub and small areas of unimproved grassland on thin chalk soils. Where the shade is not too dense Dog's Mercury *Mercurialis perennis* predominates in the ground flora.

Recommendations for Further Work

3.16 A review of Magic and the Site of Special Scientific Interest (SSSI) Impact Risk Zones (IRZ) for Halling to Trottiscliffe Escarpment SSSI, a component part of the North Downs Woodland SAC, says… "t*he Impact Risk Zones for* the *Sites of Special Scientific Interest (SSSI IRZ) indicates that at the location selected, the proposed development is unlikely to have a harmful effect on terrestrial Sites of Special Scientific Interest (SSSIs) and the Special Areas of Conservation (SAC) that they underpin".*

3.17 Therefore, impacts upon this SSSI and SAC is unlikely, and no further survey or assessment is needed.

Statutory Designated Sites of National Importance

3.18 There are two sites of ecological importance at the **National Level**, which are:

- Halling to Trottiscliffe Escarpment SSSI, which is just under 2km from the Site; and
- Houlder and Monarch Hill Pits, Upper Halling SSSI, which is just under 5km away.

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

Recommendations for Further Work

3.20 The SSSI IRZ associated with the Halling to Trottiscliffe Escarpment SSSI and Houlder and Monarch Hill Pits, Upper Halling SSSI says… "*the Impact Risk Zones for Sites of Special Scientific Interest (SSSI IRZs) indicate that at the location selected, the proposed development is unlikely to have a harmful effect on terrestrial Sites of Special Scientific Interest (SSSIs)."*

3.21 Therefore, impacts upon these SSSIs are unlikely and no further survey or assessment is needed.

Statutory Designated Sites of Local Importance

3.22 There are no Local Nature Reserves (LNRs) within 5km of the Site

Non-statutory Designated Sites

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

- Happy Valley Local Wildlife Site (LWS) (TQ642632). This is 300m from the Site to the east., and it includes Beechen Wood, Coopreed Wood, Willowlands Wood, Eastfield Shaw, Copicar Wood, and Haddocks Wood. 350m to the north of the Site is also Hopehill Wood, which forms part of Happy Valley LWS.

Ancient Semi-Natural and Ancient Replanted Woodland

3.24 There are 18 ancient semi-natural and ancient replanted woodland listed on Natural England's Provisional Ancient Woodland Inventory within 1km of the Site boundary, including one ancient, replanted woodland that is directly adjacent to the Site to the east, and is called Round Wood (or Willow Wood on MAGIC Maps and the 6-inch OS map from 1888 to 1915). Herein within this report, it will be referred to as 'Willow Wood.'

3.25 During the field survey another section of possible ancient woodland was recorded off-site and running alongside the eastern edge and adjacent to the grass field.

3.26 The on-site woodland shaw is shown on the 1830s to 1880s OS 6-inch maps, as well as the 1888 to 1915 maps.

3.27 Ancient woodlands within 1km include:

- Carter's Hill Wood, to the south of the Site;
- Ridge Wood, Willowlands Wood and Highlands Shaw to the south-east;
- Coopreed Wood and Beechen Wood to the east;
- To the north-east are Steele's Wood, Hopehill Wood, Beechfield Wood, Haddocks Wood, Copicar Wood and Eastfield Shaw;
- To the west of the Site are Long Bottom Wood, Carlows Wood, Lion Wood and one unnamed Woodland; and
- Goose Wood is south-west of the Site.

Recommendations for Further Work

3.28 No detailed further work with respect to the above LWS or off-site Ancient Semi-natural Woodlands is recommended.

Habitats and Flora

3.29 **Map 2a and 2b** details the location and types of habitats within the Site and further detailed will be provided in the Habitats, Flora and Vegetation Survey Report, which will be submitted in due course.

3.30 This more detailed information arising from survey habitat survey work was used to inform the submitted BNG metric, and the associated BNG baseline maps.

3.31 The Site comprises a mixture of other neutral grassland, lowland meadow, scrub and a broad-leaved woodland shaw, which supports ancient woodland vascular plant indicator species (see below).

3.32 The Site contains and is bordered by ecologically important treelines and trees. There are also native, mixed-species hedgerow.

3.33 There are five on-site buildings located on hard standing and a small area of former allotments.

Grassland

3.34 The on-site grassland is short and grazed by horses.

3.35 The initial walkover (on the 18th March 2025) of the eastern most field included a 1m x 1m quadrat of the eastern most field, which identified Perennial Rye-grass, Common Bent *Agrostis capillaris*, Fescue species *Festuca spp.*, Creeping Buttercup *Ranunculus repens*, Selfheal *Prunella vulgaris*, Ox-eye Daisy *Leucanthemum vulgare*, Ribwort Plantain *Plantago lanceolata* and Common Sorrel *Rumex acetosa*. Other species identified across the paddock included Lady's Smock *Cardamine pratensis*, Meadow Vetchling *Lathyrus pratensis*, Vervain *Verbena sp.*, Bird's-foot Trefoil *Lotus corniculatus* and St John's Wort *Hypericum sp*.

3.36 The western most fields were also short, grazed by horses, and supported poached areas with extensive bare ground. A 1m x 1m quadrat within the centre of the grassland identified Perennial Rye-grass, Common Bent, Fescue species and Cocksfoot *Dactylis glomerata*. Herbs recorded included Ribwort Plantain, Common Cat's-ear *Hypochaeris radicata*, Creeping Buttercup and Common Daisy *Bellis perennis*. Other species recorded within the field and along ungrazed margins included Ox-eye Daisy, Yarrow *Achillea millefolium* and Crested Dog's Tail *Cynosurus cristatus*.

3.37 Smaller grassland patches are scattered throughout the Site, including a small area of grassland used for horse jumping adjacent to the on-site woodland shaw. This grassland supported a suite of similar species including Perennial Rye-grass, Common Bent, Crested Dog's Tail, Cocksfoot, Yarrow, Ribwort Plantain, Creeping Buttercup and Selfheal.

3.38 On the 16th May 2025, some habitats were surveyed again by Senior Ecologist Sean Manley – after a period when horses had been removed from grazing.

3.39 A rapid walkover, and after the completion of both a 1x1 m and 2x2m quadrat, it indicated that the sward supported abundant Birds-foot Trefoil. Other frequent species within the sward included Bulbous Buttercup *Ranunculous bulbosus*, Ox-eye Daisy, Red Clover *Trifolium repens*, Autumn Hawkbit *Scorzoneroides autumnalis*, Red Bartsia *Odontites vernus,* Lesser Stitchwort *Stellaria graminea* and Lesser Trefoil *Trifolium dubium*.

3.40 Although Perennial Rye-grass was present within the sward, other finer leaved grass species were more dominant, and included Fescue species, Sweet Vernal Grass *Anthoxanthum odoratum*, Crested Dogs Tail, Yorkshire Fog *Holcus lanatus,* and Cocksfoot.

3.41 22 species were recorded in the 1x1 quadrat, and 27 species were recorded in the 2x2m quadrat. **Tables 3.1 and 3.2** provides further detail.

Table 3.1: Botanical species recorded within the 1x1m quadrat on 16th May 2025.

Species (1x1m Quadrat)		**Frequency (DAFOR)**
Common Name	Scientific Name	
Yarrow	*Achillea millefolium*	O
Meadow Buttercup	*Ranunculus acris*	F
Common Daisy	*Bellis perennis*	F
Red Clover	*Trifolium pratense*	F
Ox-eye Daisy	*Leucanthemum vulgare*	O
Birds Foot Trefoil	*Lotus corniculatus*	A/LD
Ribwort Plantain	*Plantago lanceolata*	F
Lesser Trefoil	*Trifolium dubium*	F/A
Dandelion	*Taraxacum officinale*	O
Wall Speedwell	*Veronica arvensis*	R
Common Cat's Ear	*Hypochaeris radicata*	O
Autumn Hawkbit	*Scorzoneroides autumnalis*	O
White Clover	*Trifolium repens*	O
Fescue sp	*Festuca* sp.	A/LD
Cocksfoot	*Dactylis glomerata*	O
Sagina sp	*Sagina* sp.	R
Perennial Rye Grass	*Lolium perenne*	F
Lesser Stitchwort	*Stellaria graminea*	R
Yorkshire Fog	*Holcus lanatus*	O
Creeping Bent	*Agrostis stolonifera*	O
Thyme-leaved Speedwell	*Veronica serpyllifolia*	R
Selfheal	*Prunella vulgaris*	O

Table 3.1: Botanical species recorded within the 2x2m quadrat on 16th May 2025.

Species (2x2m Quadrat)		Frequency (Domin)
Common Name	Scientific Name	
Yarrow	*Achillea millefolium*	3
Meadow Buttercup	*Ranunculus acris*	4
Common Daisy	*Bellis perennis*	3
Red Clover	*Trifolium pratense*	3
Ox-eye Daisy	*Leucanthemum vulgare*	4
Birds Foot Trefoil	*Lotus corniculatus*	7
Ribwort Plantain	*Plantago lanceolata*	4
Lesser Trefoil	*Trifolium dubium*	6
Dandelion	*Taraxacum officinale*	3
Wall Speedwell	*Veronica arvensis*	1
Common Cat's Ear	*Hypochaeris radicata*	4
Autumn Hawkbit	*Scorzoneroides autumnalis*	3
White Clover	*Trifolium repens*	3
Fescue sp	*Festuca* sp.	8
Cocksfoot	*Dactylis glomerata*	4
Sagina sp	*Sagina* sp.	1
Perennial Rye Grass	*Lolium perenne*	5
Lesser Stitchwort	*Stellaria graminea*	2
Yorkshire Fog	*Holcus lanatus*	4
Creeping Bent	*Agrostis stolonifera*	4-5
Thyme-leaved Speedwell	*Veronica serpyllifolia*	2
Selfheal	*Prunella vulgaris*	3
Red Bartsia	*Odontites vernus*	2
Sweet Vernal Grass	*Anthoxanthum odoratum*	4-5
Common Chickweed	*Stellaria media*	1
Sticky Chickweed	*Cerastium glomeratum*	1
Crested Dogstail	*Cynosurus cristatus*	2-3

Woodland, Trees and Treelines.

3.42 Extending north to south through the centre of the Site is a broad-leaved, deciduous woodland shaw, which is approximately 0.19ha in size. It supports ancient woodland indicator vascular plants.

3.43 The canopy and shrub layers comprise frequent Hazel *Corylus avellana* and Ash *Fraxinus excelsior* coppice stools with very occasional Field Maple *Acer campestre* coppices. Several mature English Oak *Quercus robur* standards are present along the edge of the woodland parcel. Wild Cherry *Prunus avium* is also present.

3.44 Those vascular plant species identified during the initial PEA visit included Yellow Archangel *Lamium galeobdolon*, Bluebell *hyacinthoides non-scripta*, Wood Anemone *Anemone nemorosa* and Dog's Mercury *Mercurialis perennis*. Other species included abundant Lords and Ladies *Arum maculatum*, Cow Parsley *Anthriscus sylvestris* and Bramble.

3.45 Variegated Yellow Archangel *Lamiastrum galeobdolon argentatum* was also found within the woodland shaw, which is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

3.46 On the 16th May, following the rapid assessment of woodland flora, it was found that Wood Anemone is widespread within the woodland shaw, and it is found frequently within the parcel alongside a dominant presence of Bluebell and patchy Dogs Mercury and Yellow Archangel. Other species present at the base of old Field Maple and Cherry trees were Toothwort *Lathraea squamaria* and Moschatel *Adoxa moschatellina*. **Table 3.3** provides further detail.

Table 3.3: Woodland flora within the woodland shaw. Bold = indicator species as per Rose (1999).

Species (Field layer)		**Frequency (DAFOR)**
Common Name	Scientific Name	
Bluebell	***Hyacinthoides non-scripta***	A/LD
Cleavers	*Galium aparine*	F
Bramble	*Rubus fruticosus*	O
Common Nettle	*Urtica dioica*	F/LD
Cow Parsley	*Anthriscus sylvestris*	A
Wild Cherry*	***Prunus avium***	R
Creeping Buttercup	*Ranunculus repens*	R
Dog's Mercury	***Mercurialis perennis***	F/VLA
Dog Violet	*Viola riviniana*	R/O
Ivy	*Hedera helix*	LF
Ivy-leaved Speedwell	*Veronica hederifolia*	O
Herb Robert	*Geranium robertianum*	O/F
Garlic Mustard	*Alliaria petiolata*	VLO
Ground Ivy	*Glechoma hederacea*	R
Hogweed	*Heracleum sphondylium*	R
Lesser Celandine	***Ficaria verna***	O
Lords and Ladies	*Arum maculatum*	R
Moschatel*	***Adoxa moschatellina***	R
Meadow Buttercup	*Ranunculus acris*	R
Rough Meadow Grass	*Poa trivialis*	LF
Pendulous Sedge*	***Carex pendula***	R
Toothwort*	***Lathraea squamaria***	VLO/R
Scaly Male Fern*	***Dryopteris affinis***	R
Wood Anemone*	***Anemone nemorosa***	F-A
Wood Avens	***Geum urbanum***	F
Wood Speedwell*	***Veronica montana***	F
Wood Dock	*Rumex sanguineus*	R
Hairy-Brome	***Bromopsis ramosa***	R
Yellow Archangel*	***Lamium galeobdolon***	F-A

Species (Shrub Layer)		Frequency (DAFOR)
Common Name	Scientific Name	
Elder	*Sambucus nigra*	LO
Holly*	***Ilex aquifolium***	O
Hazel	*Corylus avellana*	A
Hawthorn	*Crataegus monogyna*	A
Yew	*Taxus baccata*	R
Species (Canopy Layer)		Frequency (DAFOR)
Common Name	Scientific Name	
Ash (Coppiced)	*Fraxinus excelsior*	A
English Oak (some coppiced)	*Quercus robur*	F
Hornbeam*	***Carpinus betulus***	O
Cherry	***Prunus avium***	R
Field Maple (coppiced)*	***Acer campestre***	LF
Willow Sp	*Salix sp*	R

3.47 Whilst the woodland appears to be suffering from high levels of nutrient enrichment, perhaps because of horse manure additions and disturbance from regular access, **Table 3.3** indicates there are at least 17 plant species that are Ancient Woodland Indicators.

3.48 Plants indicative of nutrient enrichment include dense stands of Cow Parsley *Anthriscus sylvatica* and Common Nettle, and therefore this might provide opportunities for habitat restoration.

3.49 The woodland changes in character towards the north, and here the trees are no longer coppiced but are still mature. These include Oak, Ash and Hornbeam. These trees surround two 'pits' in the ground, one of which is an old chalk pit. Here the vascular plant community has been significantly disturbed and is present in remnant patches along the upper edge of the pit.

3.50 A line of mature trees that borders the woodland, includes Oak, Field Maple *Acer Campestre* and Ash.

Trees and Treelines

3.51 There are several on-site treelines, as shown on **Map 2b**. Treeline 1 (TL1) connects a potential ancient and mapped ancient woodland together, and it contains a mix of Hazel, Ash and Field Maple.

3.52 TL2 as shown on **Map2b**, contains coppiced Hazel and mature Ash.

3.53 TL3 contains two mature Field Maple trees of ecological importance. These trees appear to be remnant features of a laid hedge, and contain cavities, loose bark and rot holes, and have exposed heart wood due to damage from horses. There is a third Field Maple with the same characteristics as those within TL3. These three trees together appear to form part of an historic laid hedge line or field boundary that has since been mostly removed. TL3 also contains two mature Hornbeam trees near to buildings B4. There is also a large mature Oak.

3.54 TL4 appears to be a hedgerow that has grown out due to lack of management. The species present are Blackthorn *Prunus spinosa,* Hawthorn *Crataegus monogyna*, Dog Rose *Rosa canina*, Elder *Sambucus nigra* and a larger Ash Tree.

3.55 TL5 contains mature trees of Hornbeam and Ash.

3.56 TL6 is a line of six mature Beech trees, bordering a vegetable patch (see **Map 2b)**. There is also a mature Sycamore *Acer pseudoplatanus* in this broad location.

Hedgerows

3.57 Three hedgerows were recorded during the Site visit. H1 is a short section of dense native hedgerow and supports species such as Holly *Ilex aquifolium*, Hawthorn, Ash and Dog Rose.

3.58 H2 is a mature native hedgerow, including parts that have 'grown out' and includes species such as Hawthorn, Blackthorn, Field Maple, Sycamore and mature trees, including a Poplar species *Populus sp*.

3.59 H3 runs along the outside of the western Site boundary and alongside the A227. It is a more recently planted hedgerow and includes a species rich mix including Hawthorn, Blackthorn, Oak, Holly, Field Maple, Hazel and Dog Wood *Cornus sanguinea*.

Scrub

3.60 Within the northern part of the Site there is a patch of dense Blackthorn scrub. Other areas supported small areas of Bramble scrub *Rubus fruticosus* agg (see **Map 2a**).

Other Developed Land, Buildings and Other Notes

3.61 There are five buildings on Site. Buildings 1 to 4 are accessed from the main gravel track that leads to the centre of the Site, where these buildings are situated either side of the track.

3.62 Building B1, shown on **Map 2a**, is a single skinned corrugated iron and asbestos cement barn which is partially open on one side.

3.63 Building 2, B2 on **Map 2a**, is a single skinned wooden stable connected to a breeze block stable, which is accessed from the rear of B2. B3 is another single skinned wooden stable.

3.64 B4 is a static caravan made from aluminium.

3.65 B5 is a corrugated iron simple shed building within the woodland shaw on Site and is single skinned. All five buildings have flat roofs.

3.66 On the 22nd May 2025, Himalayan Balsam *Impatiens glandulifera* was recorded along one of the south-west boundaries.

Further Work

3.67 Further work was commissioned with respect to the on-site grasslands and woodland, and this will be presented in the Habitats, Flora and Vegetation Survey Report.

3.68 The above survey work will also map the extent of Himalayan Balsam.

Fauna

Invertebrates

Desktop Study

3.69 The biological records search returned records of several Section 41 invertebrate species including Grizzled Skipper *Pyrgus malvae* and Small Heath *Coenonympha pamphilus* within 2km of the Site.

Field Survey

3.70 Suitable on-site habitats with the potential to support invertebrates includes standing and fallen dead wood, as well as 'BNG veteran trees' and other over mature trees, with a variety of decaying features.

3.71 The short-grazed fields with exposed bare earth provide habitat for burrowing invertebrates such as solitary bees and wasps. The grasslands may also provide some flowering diversity for pollinators.

Recommendations for Impact Avoidance, Mitigation and Compensation

3.72 Where possible, the emerging proposals should avoid direct impacts to woodland habitat, and mature trees of ecological importance. This includes any trees that have been identified by the arboricultural consultant as either veteran or ancient.

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

Recommendations for Further Work

3.74 Further invertebrate survey work is unlikely to be required.

Great Crested Newt and other Amphibians

Desktop Study

3.75 The biological records search returned no records of Great Crested Newt within 1km of the Site.

3.76 The nearest Great Crested Newt licence record shown on MAGIC is approximately 1.4km west of the Site.

3.77 Common Toad *Bufo bufo* and Common Frog *Rana temporaria* have been recorded within 250m to 300m of the Site in 2010 and 2013 respectively.

3.78 Palmate Newt *Lissotriton helveticus* and Smooth Newt *Lissotriton vulgaris* have been recorded within 250m of the Site in 2010.

3.79 There are no ponds within the Site boundary (**Map 2c**). However, there is a pond approximately 8m from the southern Site boundary.

Field Survey

3.80 The field survey confirmed that there are no on-site ponds.

3.81 Terrestrial habitat for Great Crested Newt within the Site, includes woodland, hedgerows and tall ruderal edge habitats, as well as natural refugia, such as dead wood. However, the short, grazed paddocks are unsuitable.

Impact Avoidance, Mitigation and Compensation

3.82 Where possible, the emerging proposals should avoid impacts within 50m of the off-site pond.

Recommendations for Further Work

3.83 Details of further survey work are provided in the Herptile Survey Report (EPR ref: 32/74-3B, dated 17th September 2025).

Reptiles

Desktop Study

3.84 No records of Grass Snake *Natrix Helvetica* were returned by KMBRC. One record of Common Lizard *Zootoca vivipara* was returned within 1km of the Site in 2010.

Field Survey

3.85 The Site has potential to support reptiles, and suitable habitat includes natural refugia, such as dead wood, and the woodland edges support a mosaic of scrub and taller grass/ruderal vegetation. However, the short, grazed grassland over most of the Site is unsuitable for reptiles.

Recommendations for Impact Avoidance, Mitigation and Compensation

3.86 Where possible, the proposals should avoid direct impacts to woodlands and boundary habitats that support the grassland/scrub mosaic.

Recommendations for Further Work

3.87 Details of further survey work are provided in the Herptile Survey Report (EPR ref: 32/74-3B, dated 17th September 2025).

Birds

Desktop Study

3.88 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 that are passage migrants and/or vagrants.

3.89 It is also, possibly more than other groups, heavily bias by recording efforts of local enthusiasts and the location of nearby 'hotspots.' Therefore, this assessment has not completed a detailed assessment of bird records.

3.90 However, red status species were returned in the records search, including Woodcock *Scolopax rusticola*.

Field Survey

3.91 The Site supports suitable habitat for breeding birds, including mature trees, patches of scrub, and grassland habitats. However, these habitats are not suitable for a wintering bird assemblage of ecological importance.

3.92 The Site is therefore likely to provide foraging opportunities for common and widespread red status bird species, such as Song Thrush *Turdus philomelos* and Starling *Sturnus vulgaris*. These species are also Species of Principal Importance (i.e. S41 species).

Recommendations for Impact Avoidance, Mitigation and Compensation

3.93 Where possible, the emerging proposals should avoid direct impacts to mature native trees, and woody vegetation on historic boundaries, especially those that support native mixed-species hedgerows and/or patches of scrub.

3.94 Standard mitigation associated with breeding birds is likely to be required during the construction phase of development.

Recommendations for Further Work

3.95 Details of further survey work are provided in the Breeding Bird Survey Report (EPR ref: 32/74-4B, dated 17th September 2025).

Bats

Desktop Study

3.96 Bat records within 5km of the Site were obtained from KMBRC and included records of the following species:

- Common Pipistrelle *Pipistrellus pipistrellus;*
- Soprano Pipistrelle *Pipistrellus pygmaeus;*
- Noctule *Nyctalus noctula*;
- Leisler's *Nyctalus leisleri*.
- Brown Long-eared bat *Plecotus auritus*;
- Daubenton's bat *Myotis daubentonii*;
- Natterer's bat *Myotis nattereri*;
- Serotine bat;
- Long-eared species of bat (unknown) *Plecotus*; and
- Myotis species (unknown) *Myotis*.

Maternity Roosts

3.97 Two maternity bat roost records were returned for unknown species from within 250m of the Site to the south, one from 1991 and the other from unknown date (not later than 2011), with a further two records within 2km of the Site, no later than 2011.

3.98 Ten Brown Long-eared bats and a further eight unknown Long-eared species maternity roosts were returned between 2km and 5km from the Site. These records were not recorded later than 2011.

3.99 Two unknown Pipistrelle species maternity roost records were returned around 250m from the Site to the south-east, along with a further two records within 2km, and a further 13 records within 5km of the Site.

3.100 The most recent of these was from 2015 and was 1.2km to the south-east of the Site at TQ651632. The most recent after that was from 2009, approximately 2.2km to the south of the Site at TQ6461.

Other Roost Type

3.101 A record of a 'hibernating bat' of unknown species was returned from within or adjacent to the Site. This record was included in a 'Roost Map' provided as part of the KMBRC search. However, there was no accompanying record to show the date of the record.

3.102 Three roosts of unknown type or species were also returned within 1km of the centre of the Site to the south. No unknown roost type and species records were provided later than 1999.

3.103 Two hibernation roosts of unknown species were also recorded within 1km of the Site to the east. However, there was no accompanying record to show the date of the record.

3.104 A Leisler's Roost record, as well as a Myotis roost record, was returned around 5km to the north-west.

3.105 Four Common Pipistrelle and two Soprano roosts were returned within 5km of the Site.

3.106 One Serotine roost was recorded just over 1km south-west of the Site in 2007, at TQ634623.

Field Survey: Habitats

3.107 The suitability of habitats and features for bats was assessed using categories set out within the Bat Conservation Trust's Bat Surveys Good Practice Guidelines (2016).

3.108 The grassland, scrub and woodland mosaic provide habitat for foraging bats. Furthermore, these habitats are not currently illuminated, and consequently the Site provides a 'dark' refuge for the local bat assemblage. The habitats on-site provide suitable foraging and commuting bats.

Field Survey: Trees

3.109 The Site supports numerous mature trees, as well as mature oaks (at the northern boundary of the southernmost field on Site) that contain Potential Roosting Features (PRFs). The woodland shaw contains mature trees along its eastern and western boundaries, as well as surrounding the 'chalk pit' areas, that also support PRFs for bats. Features include woodpecker holes, flaking/loose bark, and rot holes.

Field Survey: Buildings

3.110 Buildings B1 and B2 were assessed to have low suitability for roosting bats, and an emergence survey has been completed, which recorded no roosting bats. Details of further survey work will be provided in the Bat Survey Report in due course.

3.111 The other on-site buildings provided negligible roosting suitability.

Recommendations for Impact Avoidance, Mitigation and Compensation

3.112 Where possible, the emerging proposals should avoid direct impacts to ecologically important trees, and woody vegetation on historic boundaries, such as native mixed-species hedgerows and historic woodland features.

3.113 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).

3.114 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 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

3.115 Details of further survey work will be provided in the Bat Survey Report in due course, but no roosting bats were recorded during survey work of the on-site buildings.

Hazel Dormouse, Badger and Other Mammals

Desktop Study

3.116 No records of Hazel Dormouse were returned within 1km of the Site and no European species licence returns are shown on MAGIC from within 2km of the Site.

3.117 The biological records search returned eight records of Badger *Meles meles* from within 1km of the Site, including a record from 2001, 700m from the Site to the south at grid reference TQ635626. The most recent Badger record is 650m north of the Site from 2004 at TQ637642. There is also a record of Badger from 2016, but the grid reference is only two figures TQ66, which could either be close to the Site or up to 5km to the south-east.

3.118 Three records of Hedgehog *Erinaceus europaeus* were returned from within 1km of the Site.

Field Survey

3.119 The Site provides suitable habitat for Hazel Dormouse, including Blackthorn scrub, low Bramble scrub, the woodland shaw, treelines and hedgerows. The Site is well connected to 'Willow

Wood,' as well as treelines and shaws that link the Site to the wider landscape. This connectivity increases the likelihood of Hazel Dormice being present.

3.120 No field evidence of Badger was recorded during the Site visit. However, the western most field could not be accessed during the visit and therefore the presence of Badger within the ZoI of the Site cannot be ruled out. The on-site and adjacent woodland and grassland habitats are suitable for this species and provide high quality habitat.

3.121 The Site supports suitable habitat for Hedgehog, which includes the mosaic of woodland, scrub edges and grassland.

Recommendations for Impact Avoidance, Mitigation and Compensation

3.122 Where possible, the emerging proposals should avoid direct impacts to woody vegetation on historic boundaries, such as native mixed-species hedgerows. Furthermore, where possible artificial lighting in areas close to these habitat types should also be avoided. The recommendations for impact avoidance associated with bats will also be sufficient to avoid and mitigate for effects on other nocturnal mammals.

Recommendations for Further Work

3.123 Details of further survey work will be provided in the Hazel Dormouse Survey Report in due course. To date, no field evidence of Hazel Dormouse has been found, but further survey effort is needed to ensure 'sufficient effort' as per guidance.

3.124 Habitats adjacent to the Site and within the Site are suitable for Badger. Given the number of local records of Badger, a pre-commencement Badger survey three to six months prior to construction should be conducted because of the legal protection afforded to this species. Especially as badgers are highly mobile 'digging' animals that can create setts overnight.

4. DESIGN IMPLICATIONS AND BIODIVERSITY NET GAIN STRATEGY

4.1 The proposals:

- Protect: Ecologically important trees and tree-line boundaries, and some of the on-site grassland habitat. 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 where possible;
- Restore: wildflower grassland, on-site hedgerows and field boundaries by re-connecting gaps to improve habitat connectivity; and
- Create: A mosaic of grassland habitat with scattered fruiting trees and ponds. Scrub should be allowed in field corners, and new ponds could benefit people and wildlife.

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 detailed 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:

- **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.
- **Woodland, Deadwood and Trees:** This theme captures the importance of the mature trees across the Site and how these have shaped the master plan. Whether the trees are part of the woodland or wider on-site habitat habitats, this theme also shows how the emerging scheme will protect and benefit saproxylic invertebrates, birds, and bats. This theme will also capture the importance and sensitive approach to the protection and restoration of an 'elevated tree scape' for animals to move through the landscape.
- **Scrub-Loving Birds:** Blackthorn and Bramble scrub provide habitats 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 proposal at Blackthorn Farm has the potential to deliver ecological benefits, if the emerging scheme avoids many of the important ecological features identified in this report. **Appendix 3** provides details of Proposed Development.

5.2 10% BNG will be delivered through a combination of on-site and off-site measures, and there are now opportunities to secure off-site BNG units within Kent if needed across a variety of habitat types of different levels of distinctiveness.

Ecological Constraints and Opportunities

5.3 An Ecological Constraints and Opportunities Plan (ECOP) was used to inform the emerging designs. This resulted in material changes to the proposals (where possible) to avoid and reduce ecological impacts. Further detail will be provided in the detailed Ecological Impact Assessment (EcIA) Report.

Recommended Further Work

5.4 **Table 5.1** provides a summary of the further work that was instructed and/or has been completed.

Table 5.1: Further survey work and impact avoidance

Further Work	Seasonal Timing Constraints / Considerations	Instructed	Notes
Botanical survey, especially of grasslands, woodland, treeline/s, trees.	May – June.	Yes	Details will be provided in the associated Habitats, Flora and Vegetation Survey Report.
Statutory Biodiversity Net Gain Metric condition assessments of habitats within the red line of the Proposed Development.	May - June	Yes	Submitted as part of planning application.
Daytime habitat assessment for bats, including a Ground Level Tree Assessment (GLTA)	Preliminary tree assessments are best conducted when leaves are not on trees.	Yes	Details will be provided in the associated Bat Survey Report.
Bat activity survey **Bat dusk emergence/dawn re-entry roost surveys**	April-October (seasonal transects and monthly static deployments) May-August (up to three surveys per tree or building depending on suitability identified during daytime assessment)	Yes	Details will be provided in the associated Bat Survey Report.
Great Crested Newt Habitat Suitability Index (HSI) Survey and/or eDNA survey.	Whilst the HSI can be conducted at any time, assessment outside of the period April/May to September do have limitations. The eDNA survey must be completed between mid-April to end-June inclusive.	Yes, but access not obtained	Further detail has been provided in the associated Herptile Survey Report.
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)	Yes	Further detail has been provided in the associated Herptile Survey Report.

Further Work	Seasonal Timing Constraints / Considerations	Instructed	Notes
Breeding Bird Survey	4 daytime visits only.	Yes	Further detail has been provided in the associated Breeding Burd Survey Report.
Hazel Dormouse Survey To understand the need for this survey more information in relation to the impacts to woody vegetation is needed. E.g. the level of scrub/ hedgerow removal alongside the A277 to facilitate access etc, and any other removal works.	Survey between June and October/ November because the initial deployment was in May.	Yes	Details will be provided in the associated Hazel Dormouse Survey Report.
Badger Survey Light-touch walkover initially when completing other survey work.	Anytime, but finding setts is usually easier in winter/early spring.	Recommendation	Complete 3-6 months prior to construction works to address legal risks (see **Section 6**).

6. LEGAL CONSIDERATIONS

Great Crested Newt

6.1 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**.

6.2 Therefore, if Great Crested Newt are present and/or if animals are found on-site prior to or during works, 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.

Hazel Dormouse

6.3 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**.

6.4 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.

Bats

6.5 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).

6.6 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.

Reptiles and Nesting Birds

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

6.8 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.

6.9 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).

6.10 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.

Badger and Other Mammals

6.11 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.

6.12 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.

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

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Maps

Rectory Meadow LNR
Shorne and Ashenbank Woods SSSI
Cobham Woods SSSI
Halling to Trottiscliffe Escarpment SSSI
Houlder and Monarch Hill Pits, Upper Halling SSSI
North Downs Woodlands SAC
Trottiscliffe Meadows SSSI

Basemap: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

MAP 1a Site Location & Statutory Designated Sites

KEY

- Site boundary
- 2km linear distance from site boundary
- 5km linear distance from site boundary
- Special Areas of Conservation
- Sites of Special Scientific Interest
- Local Nature Reserves

SCALE: 1:40,000 at A3

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

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 26 March 2025

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P32/74

MAP 1b Site Location and Non-Statutory Designated Sites

KEY

- Site boundary
- 1km linear distance from site boundary
- Local Wildlife Sites (LWS) - indicative locations

Natural England's Provisional Ancient Woodland Inventory

- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland

SCALE: 1:10,000 at A3

0 100 200 300 400 500 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 04 April 2025

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P32/74

MAP 2a UK Habitat Classification Areas

KEY

- Site boundary
- g3a - Lowland meadows
- g3a6 - Other lowland meadows
- g3c - Other neutral grassland
- g3c6 - Lolium-Cynosurus neutral grassland
- h3a - Blackthorn scrub
- h3d - Bramble scrub
- h3h - Mixed scrub
- u1b5 - Buildings
- u1c - Artificial unvegetated, unsealed surface
- u1d - Suburban mosaic of developed and natural surface
- w1f - Lowland mixed deciduous woodland

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm

DATE: 17 September 2025

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P32/74

Aerial Image: Maxar, Microsoft

MAP 2b UK Habitat Classification Linear Features

KEY

- Site boundary
- h2a - Native hedgerow
- h2a5 - Species-rich native hedgerow
- w - Woodland and forest

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm

DATE: 17 September 2025

Y:\Blackthorn Farm, Mecpham 3274\GIS\Outline Ecological Assessment\Map2b_UKHabitatClassificationLinear_P3274_170925.aprx

Aerial Image: Maxar, Microsoft

MAP 2c Pond Locations

KEY

- Site boundary
- 250m linear distance from site boundary
- Pond

SCALE: 1:3,250 at A3

0 50 100 150 200 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 04 April 2025

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Appendix 1
Summary of Relevant Legislation and Policy

LEGISLATION

The Environment Act 2021

The Environment Act 2021 places 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 requires 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 places 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 includes 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 will also have investigation and enforcement powers against public authorities failing to comply with environmental law when exercising their functions.

The Act makes provisions 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 are due to come into force on the 12th February 2024 (2nd April 2024 for 'small sites'). This will be measured through a biodiversity metric to be published by the Secretary of State. The Act also establishes Biodiversity Net Gain (BNG) 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.

It also creates 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 eventually become a primary mechanism for the delivery of 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.

All biodiversity-related commitments and requirements (as set out in Part 6 of the Act) will come into force upon the adoption of secondary legislation and regulations, following a period of consultation. Timescales are to be confirmed, but this is currently expected to be around late 2023.

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* 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 and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the principal 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 and 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.

The Water Environment Regulations 2017

Currently, the overriding legislation relating to freshwater is the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The Regulations set out objectives to deliver a better water environment based upon achieving a 'good status' for freshwater bodies. The concept of 'good status' is a more rigorous measure of environmental quality than previous measures, which now takes into account not just the chemical status but also the ecological health and the extent of artificial physical modification to rivers.

The Regulations are based upon the concept of protecting water through the management of river basin districts (RBDs) and require the implementation of River Basin Management Plans (RBMPs). Regulation 33 requires public bodies to 'have regard' to the RBMP when making planning decisions, for example through the granting of planning permission with appropriate planning conditions and/or obligations. These could require measures to be implemented (e.g. Sustainable Urban Drainage Systems (SUDS), grey water recycling etc.) or funds to be provided for habitat enhancement schemes.

The Regulations also affect planning policy through the implementation of Programmes of Measures for each river basin district. This involves bringing together funding from various sources and co-ordination of the activities of organisations with an interest in the use of land and water, including developers.

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: 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.

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.

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 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. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites', 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local and structure 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.

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 of the NERC Act 2006. Although these habitats are not legally protected, the NPPF, Government Circular 06/05, good practice guidance and the NERC Act 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 Communities and Local Government.

Ancient Woodland and Veteran Trees

Ancient woodlands are defined as areas continuously wooded since at least 1600 AD. 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. Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are advised 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 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 on the www.gov.uk website.

Surface and 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

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. Avoidance and/or mitigation measures may be required to address any predicted impacts upon protected species and may necessitate 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 in the UK, seven of which are Species of Principal Importance in England. 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 Habitats 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 Habitats 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.

Intentional or reckless behaviour leading to an offence being committed as detailed above may result in maximum penalties of:

- Up to £5,000 fine per offence committed;
- A custodial sentence of up to six months instead of, or in addition to, a fine; and/or
- Items of equipment involved in committing the offence may be seized and detained.

In addition to the above penalties, it is likely that any EPS mitigation licence obtained for a site will be revoked whilst any wildlife offence is investigated. This will lead to immediate temporary and, depending on investigation outcomes, possible permanent restrictions on site works, as well as associated cost.

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 Habitats 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 Hazel 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.

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 Habitats Regulations 2017 (as amended); including *inter alia* all species of bats, Hazel Dormouse, Great Crested Newt, 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 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

There are a number of species not ordinarily resident in the UK, such as Japanese Knotweed. 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 constitute an offence.

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.

If the owner does not comply with the species control order, the maximum penalty if convicted is a fine of up to £40,000 and/or imprisonment for up to 51 weeks. The environmental authority can also recover costs for carrying out the necessary work themselves.

PLANNING POLICY AND 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 thy 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.

MHCLG Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG) was launched by the Department for Communities and Local Government (now the Ministry of Housing, Communities and Local Government, MHCLG) 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.

Local Level

Biodiversity Net Gain: Gravesham Borough Council

Under the Environment Act 2021 and supporting Statutory Instruments Biodiversity Net Gain (BNG) is now mandatory for most development. The legislation requires a minimum 10% gain in biodiversity from applicable development either onsite, offsite or a combination of both.

BNG provided under the mandatory requirements offsite and significant BNG onsite must be secured by a legal agreement for 30 years under an approved Habitat Management and Monitoring Plan (HMMP).

The Council's approach to BNG for all applicable development will now follow the Statutory Instruments and supporting guidance.

Gravesham Local Plan Core Strategy

Role of the Local Plan Core Strategy

Habitats Regulations Assessment
Gravesham Borough contains sites of international importance for wildlife, i.e. a Special Protection Area, a Special Area of Conservation and a Ramsar site. As a result, the Core Strategy has also been subject to a Habitats Regulations Assessment (HRA). This considered the impacts of the plan on the international sites and ensured that the plan does not have a negative impact on them.

What are the Characteristics, Challenges and Opportunities in Gravesham Borough?

Natural Environment, Sport and Recreation
Gravesham has significant natural resources. These include sites of international and national significance for wildlife such as the Thames Estuary and Marshes as well as local wildlife sites. It also includes the Kent Downs Area of Outstanding Natural Beauty which is a nationally important landscape as well as large areas of accessible countryside. The Borough also has a number of public greenspaces such as Riverside Leisure Area and Shorne Country Park, indoor sports facilities such as Cygnet Leisure Centre and Meopham Leisure Centre, and outdoor sports facilities such as outdoor tennis courts and bowling greens at Windmill Hill Gardens. There are some issues in terms of the quantity, quality and access to some greenspaces and indoor and outdoor sports facilities in the Borough. 2.11.2 As a result of the above, there is a need to conserve and enhance the Borough's high quality natural environment. There is also a need to protect, enhance and make adequate provision for greenspaces and indoor and outdoor sports facilities to meet the needs of the existing and future population of the Borough. In addition, it will be important to prevent adverse impacts on the birds and habitats of the internationally important wildlife sites, including disturbance to birds from uncontrolled recreational intrusion on the marshes.

Strategic Objectives

Location and Amount of Development
SO8 Preserve the openness of the Green Belt, maintain its national and local planning purposes and protect it from inappropriate development.

SO9 Conserve and enhance the diverse rural landscape including the Kent Downs Area of Outstanding Natural Beauty and its setting.

Across the Borough

SO14 Ensure that all new development makes a positive contribution to the local character and distinctiveness of the Borough, minimises the risk of crime, responds to climate change, and integrates into the existing built, historic and natural environment.

SO15 Improve opportunities for recreation, sport, walking and cycling.

SO16 Safeguard and enhance the biodiversity of the Borough.

Spatial Policies

Sustainable Development

The National Planning Policy Framework (NPPF) explains that the purpose of the planning system is to contribute to the achievement of sustainable development. This has three dimensions: economic, social and environment. There is a need for the planning system to perform a number of roles under each of these as follows:

An environmental role - contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

For plan making, the presumption in favour of sustainable development means that:

The NPPF advises that the specific policies within it which indicate that development should be restricted include those relating to: sites protected under the Birds and Habitats Directives and/or where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined. Also included are: Sites of Special Scientific Interest; land designated as Green Belt, Local Green Space, or an Area of Outstanding Natural Beauty; designated heritage assets; and locations at risk of flooding or coastal erosion.

The national aim of the Green Belt is to prevent urban sprawl by keeping land permanently open. The extent of the Green Belt in Gravesham is defined on the Policies Map. Its local planning purposes are:

- To maintain the break in development between the eastern edge of Gravesend and the Medway Towns which is one of the few barriers preventing further eastward sprawl of London and the merging of towns along the southern part of the Thames Estuary;
- to assist in safeguarding the countryside by minimising the expansion of the Borough's rural settlements; and
- to assist in concentrating development on underused, derelict and previously developed land in the urban area of Gravesend and Northfleet.

The Core Strategy acknowledges that as development opportunities within the existing urban area and settlements inset from the Green Belt become more limited, some development may be required on land in the rural area before the end of the plan period to meet the Borough's housing needs and sustain rural communities. The Green Belt has therefore been identified as a broad location for future growth and its boundaries will be subject to a review.

Green Infrastructure

This section addresses Gravesham's multi-functional green space network and its Green Grid, together with wider biodiversity and landscape resources which are considered to form the green infrastructure network of the Borough.

Green Spaces

Gravesham Borough has a number of strategic green spaces and some of these have come about as a result of previous major investments in the Borough, e.g. Jeskyns Community Woodland, and the Cyclopark. The Borough also has a number of more local green spaces such as Windmill Hill and Northfleet Urban Country Park. All green spaces contribute towards the green infrastructure network. Further information on levels of provision and our approach towards them is given in the Green Space, Sport and Recreation section below.

Green Grid

There has been a long term aspiration to develop a linked network of open spaces and routes across the Borough, joining with a wider network beyond the Borough's boundaries. This is known as the Green Grid. The focus of the Green Grid in Gravesham is on building a network that:

- Links green spaces to create green continuity, including ecological continuity, wherever possible;
- Improves access within the urban area, between the urban area and the rural area and along the River Thames for leisure and sustainable travel purposes; and
- Creates safe and attractive routes for walkers, cyclists and mobility-impaired people.

The network includes: public highways, public rights of way and cycle routes, with their associated verges and planting; waterways with their associated bank-sides and verges; railway and road embankments; and green roofs and walls. Ultimately, the Council's aim for the Green Grid is for it to become a well-used, safe and attractive network of green links carrying a variety of non-vehicular paths and ecological corridors through the urban area, and connecting up with local and long distance riverside and countryside trails.

There is a long standing desire to develop a Thames Estuary Path to provide a continuous route for walkers and cyclists from the Thames Barrier in London to the Isle of Sheppey in Kent which the Council supports. Natural England is also implementing a Coastal Access Scheme which seeks to create and improve pedestrian access along the coast. Work has started on this scheme in Kent. The Urban Baseline Study recognises the importance of providing open access to the riverside in new developments and creating a continuous riverwalk from Canal Basin to Swanscombe Peninsula. This is supported through both the Green Infrastructure and Transport policies.

There is also an aspiration for a pedestrian link between Northfleet and Ebbsfleet stations. If implemented, such a link would provide part of the Green Infrastructure network but is considered in more detail under Policy CS11 Transport.

Biodiversity

Gravesham Borough has a significant biodiversity resource. This includes:

- Sites of international and national significance for wildlife, e.g. Thames Estuary and Marshes Special Protection Area (SPA) and Ramsar Site, North Downs Woodlands

Special Area of Conservation (SAC), and Cobham Woods Site of Special Scientific Interest (SSSI). Internationally significant sites are all designated as Sites of Special Scientific Interest and so are protected by national legislation;

- Species protected by European and/or national legislation, e.g. bats, great crested newts;
- Local wildlife sites which are important for the conservation of wildlife at the county level, e.g. Ebbsfleet Marshes, Court Wood Shorne;
- Roadside nature reserves, e.g. A226 Gravesend Road, Chalk; and
- Priority habitats and species identified in the UK Biodiversity Action Plan, e.g. native woodland including ancient woodland, lowland calcareous (chalk) grassland.

Some previously developed sites in the urban area have high biodiversity value. The green space and green grid networks together with other areas such as school grounds and private gardens also have a role in providing and connecting habitats.

Recent evidence suggests that there has been a decline in bird populations in the internationally significant Special Protection Areas (SPA) and Ramsar sites that make up the North Kent marshes (Thames Estuary and Marshes SPA/Ramsar Site, Medway Estuary and Marshes SPA/Ramsar Site, and The Swale SPA/Ramsar Site). There is currently insufficient evidence to adequately assess the cause of this decline although interim findings indicate that recreational activity causes disturbance to birds and that more development will lead to an increase in disturbance. Further work is being carried out by the North Kent Environmental Planning Group (NKEPG) in relation to this matter. In the meantime, a precautionary approach to development will be applied. This means that developers may need to provide or contribute to mitigation measures for the recreation needs arising from their developments, which may include provision of alternative greenspace, contributions to visitor control mechanisms and/ or management of the SPAs, to ensure that detrimental impacts on the integrity of the SPAs/ Ramsar sites are avoided.

As part of its commitment to ensuring the ongoing protection of SACs, SPAs and Ramsar sites, the Council will: implement the findings of the bird population and visitor studies commissioned by the NKEPG; ensure that any proposed strategic avoidance and/or mitigation measures are adopted as appropriate in all planning documents and in the assessment of planning applications; and adopt a flexible approach that enables development on a case by case basis, which also takes into consideration the potential for in-combination effects based on best available evidence until the full results of the NKEPG studies are available, using a precautionary approach to require Habitats Regulations Assessment (HRA) where effects are uncertain. The Council will consider the need for HRA to be undertaken for sites with outline planning permission at the reserved matters stage.

The Greater Thames Marshes has been declared a Nature Improvement Area (NIA). This recognises that it has a unique yet fractured landscape and significant biodiversity importance but that the biodiversity is in decline and struggling to compete with increasing pressures. The NIA seeks to protect and enhance this valuable habitat, increase numbers of endangered species and protect existing flora and fauna. In Gravesham, the NIA includes the River Thames and much of the marshland to the east of Gravesend.

Local Nature Partnerships have been set up to help local areas to manage the natural environment as a system and to embed its value in local decisions for the benefit of nature, people and the economy. Local Nature Partnerships have been approved for Kent and Thames Gateway.

The strategy is to ensure that there is no net loss of biodiversity in the Borough and to take every opportunity to improve biodiversity. Existing sites of biodiversity value will be protected according to their importance. Where development is proposed, ecological surveys must be conducted and mitigation strategies produced, where applicable, prior to seeking planning permission. Development will then be expected to be designed, laid out and constructed in a manner which protects habitats and important species and also includes features to enhance biodiversity. Biodiversity Opportunity Areas have been identified across Kent and the wider South East which incorporate areas of the greatest biodiversity value. In Gravesham, these comprise: North Kent Marshes; Thames-side Green Corridors; and Medway Gap and North Kent Downs. These areas give opportunities for the restoration or creation of new priority habitats and will be the focus for improvement where opportunities arise, for example through the Local Nature Partnerships and the Nature Improvement Area.

Gravesham has a diverse rural landscape, from the marshes around the Thames in the north, arable farmlands to the south and east of Gravesend, and downs and woodland in the south. Part of the nationally important landscape of the Kent Downs Area of Outstanding Natural Beauty (AONB) is located on the eastern side of the Borough and it extends from Shorne south to Vigo. It is designated because of its scarp slope and dry valleys which often retain a downland character and its woodlands are also highly valued. The views from the escarpment are also important. Great weight should be given to protecting the landscape and natural beauty of the AONB. The Kent Downs AONB Management Plan has been adopted by the Council. It sets out a clear vision, aims and policies for the conservation, management and enhancement of the AONB and its setting up to 2019.

The Council can only make informed and responsible decisions on the management and planning of landscapes if it pays proper regard to their existing character. A Landscape Character Assessment for the urban fringes and rural area of Gravesham has been produced. This sets out 11 local landscape character areas. For each area, there is an assessment of condition and sensitivity and guidelines for appropriate actions to protect and enhance the landscape. In addition, it contains generic guidelines for different types of landscape and development. This will be used to inform future decisions on proposals affecting the urban fringes and rural area

A number of Cluster Studies have been produced which assess the landscape to identify areas that could be enhanced for the benefit of communities in North Kent. As a result of these, funding was received for the creation of the Cyclopark, the restoration of part of the Thames and Medway Canal and the enhancement of the Riverside Leisure Area. The Shorne to Shore Cluster Study is more recent and covers the countryside to the east of Gravesend as far as the built up area of Medway. It seeks to protect vulnerable areas and enhance biodiversity, while also offering opportunities to increase access to the countryside, boost the local economy and raise the profile of the area

In addition significant investment has been made in terms of accessible green infrastructure in and around Cobham via the Cobham Ashenbank Management Scheme, a new visitor centre at Shorne Woods Country Park; Jeskyns Community Woodland and Ranscombe Farm, which is primarily in Medway.

Landscape features such as trees and hedgerows within the urban area are also important as they help to raise the quality of the environment and the quality of people’s lives, as well as providing

stepping stones and habitats for wildlife. Therefore, it is important that such landscape features within the urban area are retained and enhanced.

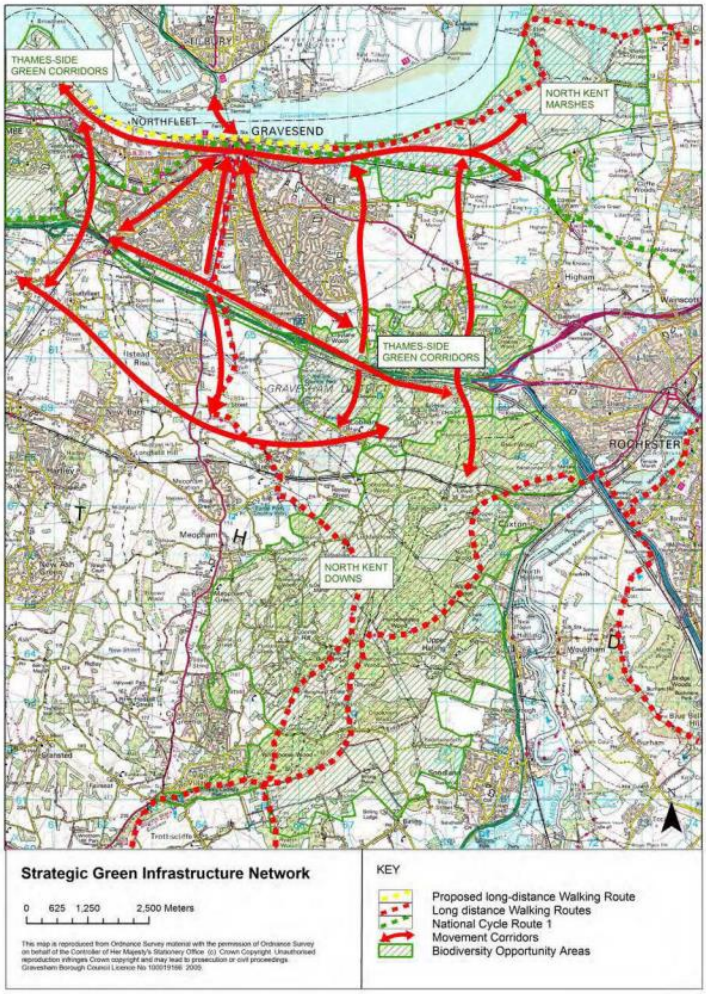
The Council's strategy is to conserve and enhance the landscape character and valued landscapes of the Borough, giving greatest weight to conserving and enhancing the Kent Downs Area of Outstanding Natural Beauty and its setting. Proposals affecting the urban fringe and rural area will be expected to take into account landscape character. All developments will be expected to protect and enhance landscape features as part of Gravesham's green infrastructure network.

Green Infrastructure Network

The strategic green infrastructure network for the Borough is identified on Figure 19. This shows: existing and proposed long distance walking and cycling routes; movement corridors; and Biodiversity Opportunity Areas. The latter includes: major green spaces, e.g. Shorne Wood Country Park, Jeskyns; strategic green grid corridors, e.g. Cyclopark; and most of the Kent Downs AONB nationally important landscape falling within Gravesham Borough.

It should be noted that all green spaces, the Green Grid, biodiversity resources, and landscape features contribute towards the Borough's green infrastructure network. The strategy is to protect and enhance this network.

Figure 19: Strategic Green Infrastructure Network



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.

Biodiversity Net Gain

The Environment Act 2021 makes provisions for 10% biodiversity gain, as measured by a metric, to become a condition of planning permission in England. This came into force upon the adoption of secondary legislation and regulations on the 12th February 2024 (delayed to 2nd April 2024 for sites meeting the published definition of a ‘small site’). A publicly accessible register of Biodiversity Gain Sites was published on this date, along with the Statutory Biodiversity Metric and associated guidance.

The Act specifies that biodiversity gain can be delivered on and/or offsite, and establishes the basis for purchasing off-site credits to meet the 10% obligation if required. In most cases the land used to deliver biodiversity gain must be maintained for at least 30 years, and the biodiversity gain planning condition requires a Biodiversity Gain Plan to be submitted to and approved by the planning authority prior to commencement of development.

The legislation also clarifies that the baseline biodiversity value of a site should be taken from the date on which planning consent is granted, unless otherwise agreed with the LPA. This excludes any activities undertaken without planning permission (or other relevant permissions) after 30 January 2020 which have had the effect of reducing the biodiversity value of the land. In such cases, “the pre-development biodiversity value is to be taken to be its biodiversity value immediately before the carrying on of the activities.”

Biodiversity net gain (BNG) is already enshrined in the key principles of the NPPF, and some local planning policies include a requirement to deliver net gain above the minimum statutory 10% figure.

Enhancement measures may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable drainage schemes (SUDS) and green roofs.

Appendix 2
Assessment Methods

This assessment 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 Greenspace Information for Greater London (GiGL) 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 Holly Pay BSc (Hons) MSc on the 18th 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.

Appendix 3

Illustrative Landscape Masterplan

The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

LEGEND

N

Site Boundary

Existing Vegetation

Proposed Soft Landscape Features:

Proposed Amenity Grass: Flowering Lawn Mix

Proposed Wildflower Meadow Grass

Existing Lowland Meadow Grass to be Retained and Enhanced

Proposed Vegetated Gardens

Proposed Trees

Proposed Native Hedgerow

Proposed Native Scrub

Proposed Public Open Space Shrub Mix

Proposed Residential Ornamental Shrub Mix

Proposed Verge Shrub Mix

Proposed Sensory Shrub Mix

Proposed Play Provision

Proposed Pond

Proposed Community Orchard

Proposed Hard Landscape Features:

Proposed Sealed Surface Footpath

Proposed Mown Pathway

Proposed Timber Post Fencing

Proposed Roadway

Proposed Block Paving

Proposed Access Path

Sources:

Aerial Photograph dated: 09/10/2022
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Data collated for constraints and analysis mapping is based on publicly available sources at the time of preparation inserted using the British National Grid and may itself not be accurate. Stantec shall not be liable for the accuracy of data derived from external sources.

FIGURE 7

Project
Land at Blackthorn Farm, Culverstone

Drawing Title
Illustrative Landscape Masterplan

Date	Scale	Drawn by	Check by
06.08.2025	1:500 @A0 1:1,000 @A2	EJ	GM
Project No	**Drawing No**		**Revision**
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Stantec

Stantec UK Limited
3rd Floor Arthur Stanley House
40-50 Tottenham Street
London
W1T 5AN
T: 020 7446 6888

stantec.com/uk