

Report

**Land to the North of The Drove Way, Istead Rise,
Gravesham**

Ecological Impact Assessment
For Pfarmigan Land A Ltd

3 June 2026

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1 Introduction

1.1 Project Background and Scope

Logika Consultants Ltd. ('Logika') has been commissioned by Ptarmigan Land A Ltd to undertake an Ecological Impact Assessment of a proposed development at Land to the North of The Drove Way, Istead Rise, Gravesham (hereafter referred to as 'the Site'). The proposal is for a new housing development (hereafter referred to as the 'Proposed Development').

The assessment has been prepared with reference to best practice guidelines for Ecological Impact Assessment in the UK and Ireland (Chartered Institute of Ecology and Environmental Management (CIEEM), 2018¹) and has been based on information gained from a desk-based review of relevant ecological information and an extended habitat. The assessment refers to relevant legislation policy and guidance, as appropriate.

The site photographs and scientific names of all species referred to in this document are provided in **Appendix A1 and A2**.

This report should be read with reference to the Illustrative Framework Plan (1509_006_V3), which is provided in **Appendix A3**.

The objectives of the assessment are to:

- Provide an overview of the ecological features present, or potentially present on or close to the Site;
- Provide an assessment of the potential effects the Proposed Development may have on identified features;
- Describe how the mitigation hierarchy has been applied to the evolution of the Proposed Development and the environmental measure incorporated to minimise and mitigate effects and provide compensation and enhancements.

The delivery of Biodiversity Net Gain, as mandated through Schedule 7A of the Town and Country Planning Act 1990, is described in detail in a separate Biodiversity Net Gain Assessment².

A Habitats Regulations Assessment (HRA) screening report has been provided separately³ to meet requirements under the Conservation of Habitats and Species Regulations 2017 (as amended).

1.2 The Site

The Site, as defined by the red line boundary in **Figure 1-1**, is located within the village of Istead Rise, Gravesham, Kent and comprises of an area of land under agricultural production. It is bounded to the north and west by further agricultural fields, to the east by woodland, and the south by a residential estate. The central grid reference for the Site is TQ 63383 70439 and is approximately 5.7ha in extent.

¹ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3 (updated September 2024). Chartered Institute of Ecology and Environmental Management, Winchester

² Logika (2026). Istead Rise - Biodiversity Net Gain Assessment. Document number: 16611A-30-R02-01

³ Logika (2026). Istead Rise HRA - Screening Report. Document number: 16611A-30-R05-02

1.3 The Proposed Development

Development for up to 100 residential dwellings (Class C3), including the formation of new accesses from The Drove Way, the provision of new areas of public open space and all other associated infrastructure and ancillary works (all detailed matters reserved other than means of access).



Figure 1-1: Site Boundary

2 Legislation and Policy

Reference has been made to the following national, regional and local planning policy and legislation. Full details are provided in **Appendix A4**.

- National Planning Policy Framework (NPPF)⁴ - Section 15 Conserving and Enhancing the Natural Environment.
- Kent Nature Partnership Biodiversity Strategy 2020 to 2045⁵
- Gravesham Borough Council Local Plan and Strategy Review⁶
- Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019⁷
- Countryside and Rights of Way Act 2000 ('the CRoW Act')⁸
- Natural Environment and Rural Communities Act 2006 (as amended by the Environment Act 2021) ('the NERC Act')⁹
- Protection of Badgers Act 1992 ("the Protection of Badgers Act")¹⁰
- The Environment Act 2021¹¹;
- The Hedgerows Regulations 1997 ('the Hedgerow Regulations')¹²
- The Town and Country Planning Act 1990¹³
- Wildlife and Countryside Act 1981 (as amended) (WCA)¹⁴

⁴ Ministry of Housing, Communities, and Local Government. National Planning Policy Framework. 2026 National Planning Policy Framework - Guidance - GOV.UK (www.gov.uk) (accessed 27th March 2026).

⁵ Kent Nature Partnership Biodiversity Strategy 2020 to 2045 (2020). Available at: <https://kentnature.org.uk/wp-content/uploads/2022/01/Kent-Biodiversity-Strategy-2020.pdf>

⁶ Gravesham Borough Council Local Plan and Strategy Review <https://www.naturerecoverykent.org.uk/wp-content/uploads/2025/01/Gravesham-local-plan-and-strategy-review-.pdf>

⁷ The Conservation of Habitats and Species Regulations 2017. Available at: <https://www.legislation.gov.uk/uksi/2017/1012/contents/made> (Accessed: 27th March 2026)

⁸ Countryside and Rights of Way Act 2000 c.37. Available at: <https://www.legislation.gov.uk/ukpga/2000/37/contents> (Accessed: 27th March 2026)

⁹ The Natural Environment and Rural Communities Act 2006 c.16. Available at: <https://www.legislation.gov.uk/ukpga/2006/16/contents> (Accessed: 27th March 2026)

¹⁰ The Protection of Badgers Act 1992 c.51. Available at: <https://www.legislation.gov.uk/ukpga/1992/51/contents> (Accessed: 27th March 2026)

¹¹ The Environment Act 2021. Available at <https://www.legislation.gov.uk/ukpga/2021/30/contents?section=102-3> (Accessed: 8th January 2024)

¹² The Hedgerow Regulations 1997. Available at: <https://www.legislation.gov.uk/uksi/1997/1160/regulation/1/made> (Accessed: 27th March 2026)

¹³ Town and Country Planning Act 1990. Available at: <https://www.legislation.gov.uk/ukpga/1990/8/contents/enacted> (Accessed: 27th March 2026)

¹⁴ Wildlife and Countryside Act 1981 c.69. Available at: <https://www.legislation.gov.uk/ukpga/1981/69> (Accessed: 27th March 2026)

3 Methodology

3.1 Desk Study

A desk study was undertaken to identify existing information on the presence of designated sites for nature conservation, protected and notable species and habitats within proximity to the Site.

The desk study identified existing information on the presence of the following;

- Statutory designated sites for nature conservation within 2km of the Site, extended to 5km for international protected sites;
- Non-statutory designated sites for nature conservation within 2km of the Site; and
- Existing records of protected and notable faunal species within 2km of the Site dating from the past 10 years.

The following key sources of were consulted;

- The Multi Agency Geographic Information for the Countryside (Magic) website (Magic.gov.uk¹⁵)
- Natural England and Joint Nature Conservation Committee (JNCC) websites^{16, 17}; and
- Kent and Medway Biological Records Centre (KMBRC)¹⁸

3.2 Field Survey

The following section contains a summary of the field survey methodology, with more detailed information provided in baseline survey reports which are included as appendices to this assessment or are available separately.

3.2.1 Extended Habitat Survey

An Extended habitat survey was undertaken on the 4th April 2025 by a suitably experienced and qualified ecologist when weather conditions were clear and dry, with temperatures around 15*c.

The survey was undertaken in accordance with the UK Habitats Classification, v2.0 (2023)¹⁹ with broad habitat types identified and mapped. A condition assessment²⁰ of the habitats onsite was also undertaken to inform a BNG assessment.

The survey included all habitats within the Site and a 30m buffer, where access was available, to account for habitats and/or species which may not occur on the Site itself but have potential to be impacted by the Proposed Development.

¹⁵ Multi-Agency Geographic Information for the Countryside (MAGIC). Available at: www.magic.gov.uk

¹⁶ Available at: <https://designatedsites.naturalengland.org.uk/>

¹⁷ Available at: <https://jncc.gov.uk/>

¹⁸ Available at: <https://www.kmbrc.org.uk/>

¹⁹ UKHab (2023) UK Habitats Classification, version 2.0.

²⁰ Defra (2024) available at [Statutory biodiversity metric tools and guides - GOV.UK](#) [27th March 2026]

The survey was extended to search for the potential presence of protected and / or priority species, invasive species or other species of conservation importance. Target Notes (TNs) were used to record any features or habitats of ecological interest.

3.2.2 Badger survey

A badger survey was conducted on the 11th March 2026 by a suitably experienced ecologist when weather conditions were dry and with good visibility. The methodology employed accorded with the Mammal Society publication 'Surveying Badgers' (Harris *et al* 1989²¹) and guidance produced by Scottish Badgers (2018)²².

The activity signs of badgers searched for included:

- Faeces: badgers usually deposit faeces in characteristic excavated pits, concentrations of which (latrine sites) are typically found at home range boundaries.
- Setts: comprising either single isolated holes or a series of holes, likely to be interconnected underground.
- Paths: between setts or leading to feeding areas.
- Scratching posts at the base of tree trunks.
- Snuffle holes: (small scrapes where badgers have searched for insects, earthworms and plant tubers).
- Day nests (bundles of grass and other vegetation where badgers may sleep above ground).
- Hair traces.
- Footprints.

In addition sightings of individuals were also recorded.

Any setts located were classified using the following definitions²³:

- Main - The continuously used, breeding and over-wintering sett for a social group of badgers. Only one main sett will exist in each social groups territory and will be relatively centrally located within the group's range. Main setts normally consist of several holes with large spoil heaps and obvious paths emanating from and between sett entrances.
- Annexe - An annexe of the main sett, linked by well-used surface paths to the main sett (but not connected underground). Not continuously used. Annex setts must be less than 150m from a main sett, comprising several holes. Will not be continuously used, even if main sett is very active.
- Subsidiary - Distant from main sett. Several entrances, but with no well-used paths connecting to main sett and used only seasonally. Usually at least 50m from main sett.

²¹ Harris S, Creswell P and Jeffries D (1989) Surveying Badgers, Occasional publication of The Mammal Society No 9, London

²² Scottish Badgers (2018) Surveying for Badgers: Good Practice Guidelines. Version 1.

²³ CIEEM (2013) Classification of badger setts *Meles meles* in the UK: A Review and Guidance for Surveyors. Richard Andrews published in CIEEM In Practice magazine, December 2013

- Outlier - Distant from the main sett. Small, with one or two entrances only. Used for short periods sporadically, with no obvious, well-used paths connecting to other setts. Often signs of little spoil outside holes. Outliers may be used by foxes and rabbits.

Full details are provided within the Badger Report²⁴.

3.2.3 Bats

Ground Level Tree Assessment

The extended habitat survey also included a Ground Level Tree Assessment (GLTA) of trees within the Site accordance with the criteria set out in Bat Conservation Trust (BCT) guidance²⁵ and with reference to both the British Standard²⁶ and Bat Roosts in Trees²⁷ guidance documents.

The GLTA included a visual inspection of trees on site, to assess their potential to support roosting bats. In assessing potential to support roosting bats, the external inspection considers the following factors:

Trees within the survey area, were assessed for their potential suitability to support roosting bats using close focussing binoculars to search for Potential Roost Features (PRFs). Suitable features include cracks in limbs and trunks, split branches, knot or woodpecker holes, rot holes, or areas of dense ivy forming plates.

Details of trees which supported PRFs were recorded, including:

- Grid reference.
- Tree species.
- PRF number and type.

Trees were categorised as either:

- None – Either no PRFs in the tree or highly unlikely to be any,
- FAR – Further assessment required to establish if PRFs are present in the tree, or
- PRF – A tree with at least one PRF present.

Static Acoustic Monitoring

To monitor bat activity throughout the night, three full spectrum bat detectors (Anabat Rangers and Swifts) were deployed and set to record continuously from 30 minutes before sunset until 30 minutes after sunrise for a minimum period of five days at the same monitoring location in each month of the active bat period (April to October). Location of the remote static detectors are shown on Figure 3-1.

²⁴ Logika Consultants Limited (2026) Istead Rise – Badger Report. 16611A-30-R07-01

²⁵ Collins, J (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition) The Bat Conservation Trust, London.

²⁶ British Standards Institution (2015) BS 8596:2015 *Surveying for bats in trees and woodland*.

²⁷ Andrews (2018) *Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-Care and Ecology Professionals*. Bat Tree Habitat Key.



Figure 3-1: Remote Static Locations

3.2.4 Breeding Birds

The breeding bird surveys covered the red line boundary area and the adjacent fields where access was provided. The survey area consisted of predominantly arable land with boundary hedgerows and treelines. The surveys followed an adapted method based on the BTO's CBC methodology (Gilbert et al., 1998)²⁸, whereby the observer undertakes a census of all species present. The location of each bird detected (visually and / or aurally) was mapped using the standard two-character BTO codes, and bird activity was recorded using standard behaviour codes (Marchant, 1983).

Four survey visits were undertaken between May and June 2025, at broadly 10-day intervals from the previous visit. The proposed four-visit survey is reduced from the recommended six-visit survey due to the habitats present within the Site and the likelihood of interest features being recorded – four well-timed visits are considered sufficient to establish if farmland bird species (such as skylark) are present and have the potential to be impacted by the development.

Full details are provided within the Breeding Bird Report²⁹.

3.3 Baseline Data Limitations

The desk study includes data on habitats and species that have been collected by both professional ecologists and members of the public both as part of focused survey efforts and as a result of incidental encounters. The desk study information therefore only provides contextual data and does not rule out the presence of habitats and species for which records have not been provided.

An extended habitat survey does not constitute a detailed account of the presence or potential presence of protected and/or notable species, or comprise a detailed botanical survey, but it does provide sufficient information to enable a competent ecologist to identify potential presence or constraints in line with the objectives of this assessment.

3.4 Scope of the Assessment

The proposed scope of assessment for biodiversity is defined by the type and importance of ecological features that occur within or close to the Site and the type of potential effects that could be realised by the Proposed Development throughout the project life cycle (i.e. during construction, occupation). **Table 3-2** provides details of how importance, spatial and temporal scope have been defined with reference to CIEEM guidance (CIEEM 2018).

Table 3-1: Scope of Assessment

Importance	Spatial Scope	Temporal Scope
The importance of each ecological feature has been determined and justified based on legislation and policy, considering the extent of habitat or population that may be significantly affected by the Proposed	The extent of potential effects on important ecological features is determined by estimating a Zone of Influence (Zoi). This considers a feature's sensitivity to environmental	The temporal scope is aligned with the duration of the Proposed Development, covering the construction and occupation phases. These are defined as follows: Construction – 1 to 2 years; Occupation –in perpetuity.

²⁸ Gilbert, G, Gibbons, D.W. & Evans, J. (1998). *Bird Monitoring Methods: A manual of techniques for key UK species*. RSPB, Bedfordshire

²⁹ Logika Consultants Limited (2026) Istead Rise – Breeding Birds Report. 16611A-30-R04-01.

Importance	Spatial Scope	Temporal Scope
Development. The following categories have been assigned, where relevant: • International / European • National (England) • County (Kent) • Borough/District (Gravesham Borough) • Local • Negligible	change and the nature of any actions required to deliver the Proposed Development. Zols are defined for ecological features scoped in for assessment in Section 5	

3.5 Approach to Detailed Assessment

CIEEM (2018) defines a significant effect as one "that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general". When assessing potential significant effects, whether adverse or beneficial, the following characteristics of environmental change are considered:

- Extent – the spatial or geographical area over which the environmental change may occur;
- Magnitude – the size, amount, intensity or volume of the environmental change;
- Duration – the length of time over which the environmental change may occur;
- Frequency – the number of times the environmental change may occur;
- Timing – the periods of the day/year etc. during which an environmental change may occur;
- Reversibility – whether the environmental change can be reversed through restoration actions.

3.5.1 Magnitude of change

The scale of environmental change resulting from the Proposed Development, is outlined in **Table 3-2**, illustrating the relative change from the baseline position and whether adverse or beneficial.

Adverse effects are considered significant if the Proposed Development results in the loss of an ecological feature's favourable conservation status. Beneficial effects are those that improve environmental quality, with significance requiring a 'high' magnitude of change. The determination of any change in conservation status is based on professional judgement, desk study, field survey and assessment of potential impacts. For designated sites, effects on integrity are assessed based on the conservation status of the designated features.

Table 3-2: Guidelines for the Assessment of the Scale of Magnitude

Scale of change	Criteria and resultant effect
High	The change permanently or long-term affects a habitat or species' conservation status, reducing or increasing the ability to sustain itself within a given geographic area. For designated sites, integrity is compromised, and the ecological features' importance within the project context may change.
Medium	The change permanently or long term affects a habitat or species' conservation status, reducing or increasing the ability to sustain itself within a

Scale of change	Criteria and resultant effect
	given geographic area. This may change the ecological features importance in the project context.
Low	Designated sites, habitats, or species populations may experience small-scale changes, typically within natural variability. These changes are unlikely to permanently affect conservation status, site integrity, or the ecological feature's importance.
Very Low	While some effects may occur on individuals or parts of a habitat or designated site, overall quality, extent, and population sizes remain largely unchanged. Any variations are within natural variability, with no short- or long-term impact on conservation status or site integrity.
Negligible	An undetectable change on designated sites, habitats or species' populations, or changes that balance out over the projects lifespan, resulting in neutral impact.

4 Baseline Ecological Conditions

4.1 Summary of Ecological Features and Importance

The desk study identified the following:

- One International Designated Sites within 5km – the closest being the Thames Estuary & Marshes Ramsar 4.6km northeast from the Site;
- No National Designated Sites within 2km;
- No Local and Non-statutory Sites within 2km.

Habitats within the Site include:

- 4.17ha of Cereal crops;
- 0.22ha of Arable field margins tussocky;
- 0.94ha of Lowland mixed deciduous woodland; and
- 0.01ha of Mixed scrub.

Legally protected or notable species identified as occurring or potentially occurring on the Site and adjacent areas include:

- Badger;
- Bats (commuting and foraging);
- Birds – breeding;
- Invertebrates; and
- Reptiles.

Figure 4-1 shows the distribution of habitats within the Site boundary.

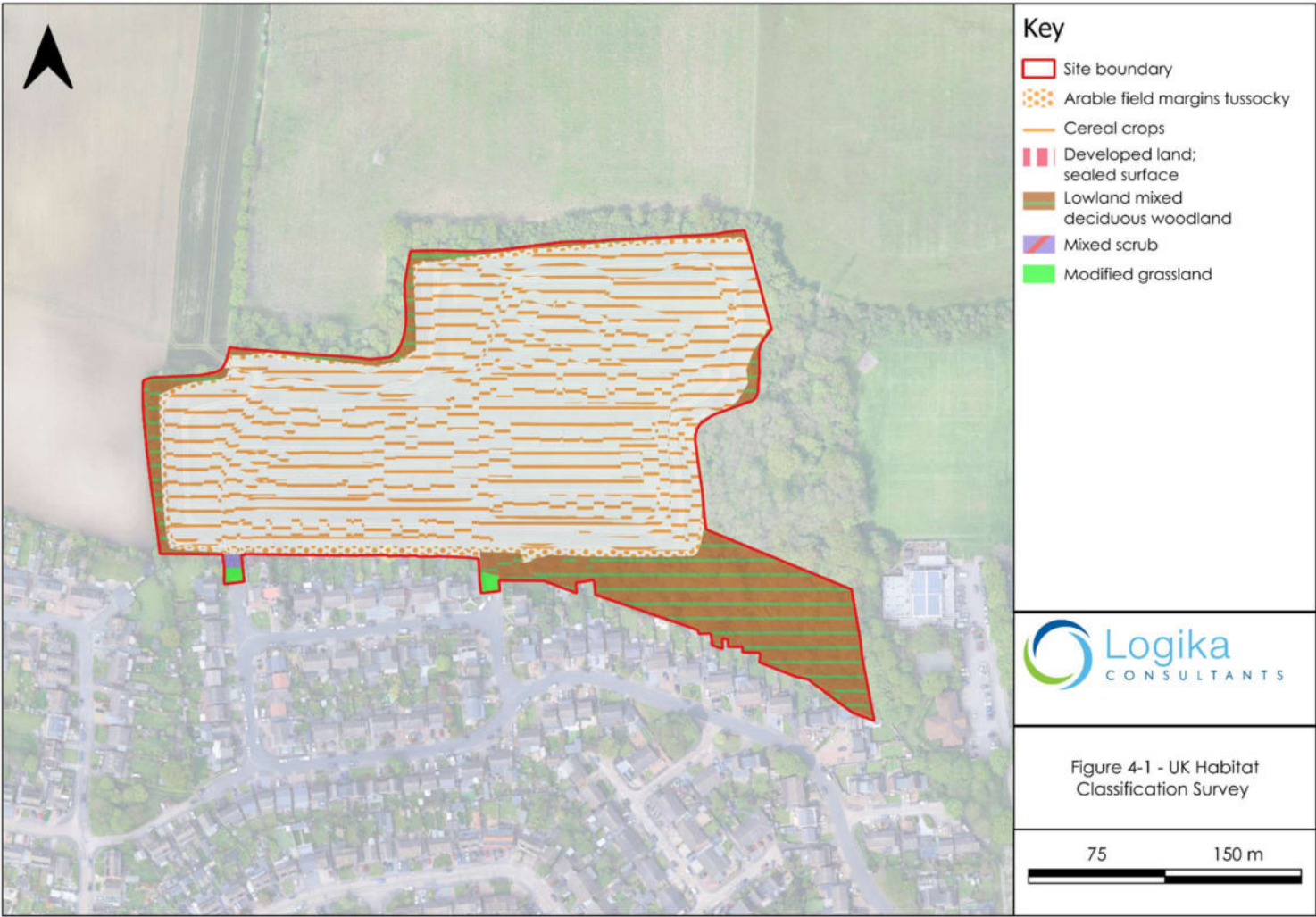


Figure 4-1: UK Habitat Classification Survey

Table 4-1: Summary of Ecological Features which are Scoped in for Assessment

Ecological Feature	Baseline Summary	Importance (Legislation/Site)	Justification of Site Importance
International Designated Sites Thames Estuary & Marshes Ramsar	The Thames Estuary and Marshes Ramsar is designated for comprising a complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflat along the River Thames between Gravesend and Sheerness in Essex and Kent. The habitats support internationally important numbers of wintering waterfowl, and the saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.	International/ International	Site designated at an international level.
Habitats	The Site comprises of one habitat of high distinctiveness (lowland mixed deciduous woodland), two habitats of medium distinctiveness (arable field margins tussocky and mixed scrub), and one habitat of low distinctiveness (cereal crops).	Local/Local	The Site comprises habitats of medium and high distinctiveness.
Badger	The data search returned one record of badger within 2km of the Site in the past 10 years located 1.38km south from the Site boundary. The habitat survey recorded scrub and cropland habitat which offer potential commuting and foraging opportunities. Food resources are likely available in both areas, such as wild seasonal fruits, invertebrates and small mammals. Potential is also noted within the woodland, which is likely to support similar food resources, as well as opportunities for sett establishment, particularly in the east and southeast of the Site. The uneven ground within these areas provides ideal areas for setts to be created. Two potential setts were noted within 30m of the Site; however, these were declassified during the badger survey. No evidence of badger was noted within the Site, or within 30m of the Site during the badger survey.	National/Local	Badgers are protected under the Protection of Badgers Act 1992 and WCA. Although no badger signs were noted during the habitat survey, the Site contains potential to support foraging, commuting and sett establishment for badgers. They are included on a precautionary basis.
Bats	The data search returned 115 records of at least 10 bat species, within 5km of the Site in the past 10 years, with the closest record being <i>pipistrelle</i> species 0.5km south in 2021. Other species include brown long-eared bat, Daubenton's bat, Leisler's, natterer's bat, noctule, Myotis	International/Local	Bats are a European Protected Species under the Habitats Regulations.

Ecological Feature	Baseline Summary	Importance (Legislation/Site)	Justification of Site Importance
	species, Nathusius' pipistrelle, whiskered bat, Brandt's bat, Alcahoie bat, and serotine. The habitat survey recorded woodland habitat which offers potential shelter for commuting bats and is likely to support an abundant invertebrate prey for foraging. A total of two mature trees are noted with Further Assessment Required (FAR) which are located on-site within the southeastern woodland habitat. A further seven trees were also noted as FAR, however they sit outside of the Site boundary. Further surveys were not necessary as the woodland is being retained and protected through the scheme. The static acoustic monitoring results confirm that at least six species of bats occur within the Site, with common pipistrelle accounting for 92% of all recorded bats from April to October. Activity was primarily associated with linear features including field margins to the north and woodland habitats to the east of the Site. These areas provide important foraging and commuting corridors within the wider arable landscape.		The habitats on Site offer potential to support a local population of commuting and roosting bat species with a small number of potential roosting features present within the woodland, with connectivity between the Site and wider area noted within the wider landscape.
Birds	The desk study returned records of notable bird species within 2km of the Site; however, these include a number of species that are unlikely to breed within the Site due to habitat requirements (e.g. peregrine, which nests on cliffs or tall structures, and fieldfare, which is typically a winter visitor). Breeding bird surveys undertaken between May and June 2025 recorded a total of 34 species, comprising a typical assemblage of common and widespread farmland and urban-edge birds. Two Schedule 1 species (red kite and hobby) were recorded, although these were observed foraging or commuting rather than exhibiting breeding behaviour within the Site.	Local/Local	The Site is of Local ecological importance for birds, supporting a common and widespread assemblage associated with boundary habitats. No notable species were confirmed to breed within the Site, and the arable interior provides limited nesting suitability.

Ecological Feature	Baseline Summary	Importance (Legislation/Site)	Justification of Site Importance
	Breeding activity was largely associated with boundary habitats, including hedgerows, trees and scrub, which provide suitable nesting and foraging opportunities. The arable land was found to have limited suitability for breeding birds, with no evidence of ground-nesting species; notably, skylark was recorded breeding off-site only. Overall, the Site supports a common and widespread breeding bird assemblage, with ecological value primarily associated with retained boundary features.		
Invertebrates	The desk study returned four records of two species of notable and protected invertebrates, within 2km of the Site in the past 10 years. Four records of jersey tiger moth were returned with the closest located 0.52km south in 2021. One record of dusky thorn moth was located 1.5km east of the Site in 2021. The woodland and scrub habitats recorded during the habitat survey provide a diverse range of food resources and are likely to support deadwood and leaf litter, which are key features for invertebrates such as beetles, flies and woodlice. The cereal crop provides pollen and nectar resources for pollinators and offers open, sunlit conditions that benefit ground beetles, solitary bees and other heat-loving taxa. The arable field margin has the potential to provide important overwintering habitat, with its tussocky vegetation structure offering shelter and protection from adverse weather conditions. Plant species within this habitat also contribute to pollination opportunities.	National/Local	The habitats on Site offer potential to support a locally important population of invertebrates.
Reptiles	The data search returned 13 records of two reptile species within 2km of the Site in the past 10 years. One record was returned for grass snake, located 0.78km south of the Site in 2019, and 12 records were returned for common lizard with the closest record located 1.05km north in 2019. The habitat survey recorded scrub and woodland habitats which offer potential for commuting and foraging reptiles. A brash pile was noted in	National/Local	The habitats within the Site offer potential to support commuting and foraging reptiles, as well as potential refugia for hibernation.

Ecological Feature	Baseline Summary	Importance (Legislation/Site)	Justification of Site Importance
	the northwest corner of the cropland, representing a potential refuge for reptiles.		

Table 4-2: Summary of Ecological Features Scoped out of Assessment

Ecological Feature	Baseline Summary	Importance (Legislation/Site)	Justification for scoping out
Amphibians	The data search returned two records of common frog within 2km of the Site in the past 10 years. The closest record was 1.35km northeast in 2024. Suitable terrestrial habitat is present within the Site boundary; however, no ponds or waterbodies are present within 500m of the Site.	Local/Negligible	As no ponds are located within 500m of the Site, it is unlikely amphibians are present within the Site.
Dormouse	The data search returned no records of dormouse, within 2km of the Site in the past 10 years. The woodland contains hazel coppice and a dense understory, which could potentially provide nesting, foraging and commuting opportunities for dormice. No field signs were recorded during the survey.	National/Negligible	No records of dormouse were returned from the data search, and suitable habitat will be retained throughout the development.
Otter	The data search returned no records of otter within 2km of the Site in the past 10 years. No ponds or waterbodies are present within 500m of the Site.	International/Negligible	Due to the Site's isolation from suitable aquatic habitats, it is considered unlikely that otter could occur
Invasive Non-Native Species (INNS)	The desk study returned three records of four species of Invasive and non-native species (INNS), within 2km of the Site in the past 10 years, with the closest record being western conifer seed bug 0.17km southwest in 2021. Other species include winter heliotrope and three-cornered garlic.	National/Negligible	No INNS are present within the Site boundary.

Ecological Feature	Baseline Summary	Importance (Legislation/Site)	Justification for scoping out
	No INNS were noted during the habitat survey.		
Water vole	The data search returned no records of water vole within 2km of the Site in the past 10 years. No ponds or waterbodies are present within 500m of the Site.	International/ Negligible	Due to the Site's isolation from suitable aquatic habitats, it is considered unlikely that water vole could occur

5 Identification of Potential Effects

5.1 Potential Effects and Zones of Influence

The following effects have been considered:

Construction

- Permanent and temporary land take resulting in habitat loss / degradation;
- Disturbance to protected and/or notable species via construction activities; and
- Pollution and spillage risks associated with construction.

Occupation

- Increased light levels resulting in disturbance / displacement; and
- Increased recreational activities within International designated sites.

The Zol for each potential effect and each ecological feature varies depending on sensitivity, with the specific Zol for each feature defined in the scoping assessment in **Table 5-1**.

5.2 Embedded Mitigation

Where required, measures are proposed to mitigate anticipated effects in accordance with the Mitigation Hierarchy and proposed post-development enhancements and BNG are also provided.

The approach to environmental measures and mitigation refers to CIEEM (2018) and has adopted the mitigation hierarchy to address potential effects on ecological features.

Applying the mitigation hierarchy to ensure that impacts on biodiversity are accounted for within the proposed development.

Appendix A55 summarises the recommended mitigation and enhancement measures for the Proposed Development and outlines how the mitigation hierarchy approach would be followed. Key components of the recommended mitigation/enhancement measures include;

- A Construction Environment Management Plan (CEMP) which will include general best practice approaches and specific measures to account for the potential presence of protected species. This includes measures such as:
 - Timing restrictions to avoid sensitive periods (e.g. nesting or breeding seasons);
 - Restricting working hours to daylight hours (where possible);
 - Weather restrictions to avoid injury to protected species (e.g. no piles are lifted when temperatures are less than 10°C);
 - Establishment of exclusion zones (e.g. no machinery movement under tree canopy);
 - Good housekeeping (e.g. keeping material off the ground on pallets, covering manholes overnight);

- Gradual and/or directional clearance of vegetation to allow protected species to disperse; and
- Procedure for unexpected discovery of protected species.
- Species specific mitigation measures for badger, bats and reptiles including;
 - A sensitive lighting strategy, developed in accordance with Institution of Lighting Professional (ILP) and Bat Conservation Trust (BCT) guidance; and
 - Pre-works checks by an ecologist prior to construction for badger and reptiles.
- Habitat Management and Monitoring Plan (HMMP) which will include details on habitat creation, enhancement, and long-term management, this will be delivered through BNG.
- Habitat mitigation will also be addressed through BNG, full details of which are provided in a separate Biodiversity Net Gain Assessment².

Table 5-1: Definition of Effects, Zone of Influence and Justification for Scoping In/Out for Further Assessment

Potential Effect	Features Impacted	Zone of Influence	Justification	Embedded Mitigation	Scoped In/Out for Further Assessment
Construction					
Permanent and temporary land take resulting in habitat loss / degradation	International designated site, habitats, bats, badger, birds, invertebrates and reptiles.	Within Site Boundary	All habitat loss occurs within the red line boundary.	Retention of boundary features, including woodland and hedgerows, and protection of high value habitats. Implementation of a CEMP to minimise impacts on species during construction. Delivery of habitat creation and enhancement through HMMP as part of BNG, increasing overall biodiversity value.	International Designated Sites (Thames Estuary & Marshes Ramsar)– scoped out There are no direct impacts on Thames Estuary & Marshes Ramsar. The habitats present do not provide functionally linked land to the European Site. The field is enclosed with mature woodland and hedgerows and is therefore unsuitable for non-breeding birds. Habitats – scoped out All high value habitat will be retained as part of the development, as well as an area of scrub along the southern boundary. Badger, bats, birds, invertebrates, and reptiles – scoped out as permanent land take is limited to low-value arable land, with higher value boundary woodland retained. Affected species are widespread and mobile with alternative habitat available locally.
Disturbance to protected and/or notable species via construction activities	Badger, bats, birds, invertebrates and reptiles	Within Site Boundary	Construction activities are confined to the Site, and whilst disturbance may occur, retained woodland and	Retention of woodland and boundary habitats, together with a CEMP (including lighting controls, timing restrictions and pre-construction checks), will minimise disturbance effects on badger, bats and nesting birds.	Badger, bats, birds, invertebrates and reptiles – scoped out as effects are temporary and confined to the Site, with retained habitat and species mobility ensuring no significant effects arise.

Potential Effect	Features Impacted	Zone of Influence	Justification	Embedded Mitigation	Scoped In/Out for Further Assessment
			boundary habitats provide refuge. Affected species are mobile and able to avoid temporary disturbance.		
Pollution and spillage risks associated with construction	Habitats	Within Site Boundary	Construction activities could impact retained boundary woodland; however, effects would be temporary and localised	Implementation of a CEMP, including standard pollution prevention measures and good site practice, will minimise risks to retained habitats.	Habitats are scoped out as effects are temporary, localised and controlled through standard construction measures.
Occupation					
Increased light levels resulting in disturbance / displacement	Bats	Within Site Boundary	Increased lighting during operation will occur within the Site and may affect adjacent retained woodland used by commuting and foraging bats in the local area.	A sensitive lighting strategy will be implemented to minimise light spill onto retained habitats and maintain dark corridors.	Bats – scoped in as new residential lighting has the potential to spill into suitable bat habitat, which may disturb commuting and foraging behaviour.

Potential Effect	Features Impacted	Zone of Influence	Justification	Embedded Mitigation	Scoped In/Out for Further Assessment
Increased recreational activities within International designated sites.	Designated site (Thames Estuary & Marshes Ramsar)	Within 5km of the Site Boundary	The closest designated site is located within 5km of the Site boundary	The Proposed Development will be self-contained and feature up to 100 new homes.	International Designated Sites (Thames Estuary & Marshes Ramsar) – scoped out as there is no direct access to the designated site and the development is not expected to measurably increase recreational pressure. Evidence from Bird Wise North Kent ³⁰ and Footprint Ecology (2012) ³¹ confirms that disturbance is linked to increased visitor access from local populations, which is not anticipated to result from this self-contained development.

³⁰ Available at: [FAQS | Bird Wise North Kent](#)

³¹ Liley, D., Lake, S. and Fearnley, H. (2012) *Phase I – Bird Disturbance Report*. Footprint Ecology for the North Kent Environmental Planning Group.

6 Biodiversity Assessment

Table 6-1 presents the assessment of effects on scoped in ecological features.

Table 6-1: Assessment of Effects during Construction

Ecological Feature	Potential Effects/ Mitigation/ Residual Effect	
Bats	Potential Effects	Increased light levels resulting in disturbance / displacement during operation. The Proposed Development of up to 100 new homes will result in potential external lighting on homes across the Site, which has potential to spill onto sensitive habitats all year round. This increased lighting has the potential to disturb commuting bats which are travelling through the Site, delay or prevent emergence from roosts, and displace roosting bats if light spill goes directly onto roost features.
	Mitigation	A sensitive lighting strategy will be required to ensure that all lighting structures are placed in a way that minimises the risk of light spill onto the tree line along the northern boundary. The lighting plan, as mentioned within the embedded mitigation in Section 5.2, should follow ILP and BCT guidance. Key points from the BCT guidance on lighting are noted below: • Light emitting diodes (LED) should be used, as these typically feature no UV component and as a result are less attractive to invertebrates and less disturbing to bats; • Only luminaires with 0 % upward light ratio should be used and fitted on the horizontal to avoid excessive up-lighting, back lighting and light spill onto boundary hedgerows and trees; • A warm white spectrum (ideally under 2700 Kelvin) should be used in order to reduce blue light component, therefore reducing the number of invertebrates attracted to the lights; • Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill; • Column heights should be carefully considered to minimise light spill; • Any external security lighting should be set on motion-sensors and short (e.g. 1 minute) timers; • Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats; • As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed; and • Where habitat needs to be unlit (e.g. important foraging and commuting corridors/roost sites), illuminance should be below 0.2 lux on the horizontal plane and below 0.4 lux on the vertical plane.
	Residual Effect	Disturbance of light on bats could result in the reduction of commuting/foraging on-site, delay leaving roosts which will miss the peak feeding time, or abandonment of roosts. The only roosting features on-site are well within the woodland, however one off-site feature sit close to the woodland edge close to the red line boundary; the embedded lighting plan will ensure that there is no light spill onto the woodland (where the features are located). This will reduce the risk of the roost being abandoned and keep the

Ecological Feature	Potential Effects/ Mitigation/ Residual Effect	
		commuting/foraging habitat dark. Any changes as a result of the Proposed Development are predicted to be permanent but of low magnitude and effects are therefore Not Significant .

7 Summary

The Site features commonly found habitats including cropland, mixed scrub and lowland deciduous woodland. Taking into consideration the nature of the Proposed Development and environmental enhancements incorporated within the design, the following effects and ecological features were taken through to assessment:

- Bats - Increased light levels resulting in disturbance / displacement during operation

Recommended mitigation and enhancement measures are to be secured through the following documents:

- A Construction Environmental Management Plan (CEMP);
- A sensitive lighting strategy;
- Biodiversity Net Gain (BNG) proposals and supporting documentation; and
- A Habitat Management and Monitoring Plan (HMMP) (secured through BNG delivery).

These embedded mitigation measures form part of the design of the Proposed Development and have been taken into account during scoping. As a result, it has been concluded that no significant effects on ecological features would arise as a result of the Proposed Development.

8 Appendices

A1 Site Photographs

Table A1-1: Site Photographs

Description	Photograph
Arable field margins tussocky	
Cereal crop	

Description	Photograph
Poor condition lowland mixed deciduous woodland	

A2 Scientific Names

Table A2-2-1: Summary of Species

Common Name	Scientific Name
Alcathoe bat	<i>Myotis alcathoe</i>
Badger	<i>Meles meles</i>
Barn owl	<i>Tyto alba</i>
Blackbird	<i>Turdus merula</i>
Brandt's bat	<i>Myotis brandtii</i>
Brown long-eared bat	<i>Plecotus auritus</i>
Common frog	<i>Rana temporaria</i>
Common lizard	<i>Zootoca vivipara</i>
Cuckoo	<i>Cuculus canorus</i>
Daubenton's bat	<i>Myotis daubentonii</i>
Dormouse	<i>Corylus avellana</i>
Dunnock	<i>Prunella modularis</i>
Dusky thorn moth	<i>Ennomos fuscantaria</i>
Fieldfare	<i>Turdus pilaris</i>
Grass snake	<i>Natrix helvetica</i>
Great tit	<i>Parus major</i>
Greater spotted woodpecker	<i>Dendrocopos major</i>
Hazel	<i>Muscadinus avellanarius</i>
Herring gull	<i>Larus argentatus</i>
Jersey tiger moth	<i>Euplagia quadripunctaria</i>
Leisler's	<i>Nyctalus leisleri</i>
Mediterranean gull	<i>Ichthyaetus melanocephalus</i>
Myotis bats	<i>Myotis spp.</i>
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>
Natterer's bat	<i>Myotis nattereri</i>
Noctule	<i>Nyctalus noctula</i>
Otter	<i>Lutra lutra</i>
Peregrine	<i>Falco peregrinus</i>
Pipistrelle bat	<i>Pipistrellus spp.</i>

Red kite	<i>Milvus milvus</i>
Serotine	<i>Cnephaeus serotinus</i>
Skylark	<i>Alauda arvensis</i>
Song thrush	<i>Turdus philomelos</i>
Swift	<i>Apus apus</i>
Three-cornered garlic	<i>Allium triquetrum</i>
Water vole	<i>Arvicola amphibius</i>
Western conifer seed bug	<i>Leptoglossus occidentalis</i>
Whinchat	<i>Saxicola rubetra</i>
Whiskered bat	<i>Myotis mystacinus</i>
Winter heliotrope	<i>Petasites pyrenaicus</i>
Wren	<i>Troglodytes troglodytes</i>
Yellow wagtail	<i>Motacilla flava</i>

A3 Illustrative Masterplan



Key

- 01 Vehicular and pedestrian access point
- 02 Potential pedestrian access point
- 03 Pedestrian, cycle and emergency access point
- 04 Sustainable urban drainage system (SuDS)
- 05 Development backing onto existing residential properties
- 06 Parkland area which could include naturalistic young children's play spaces, tree planting and meadow planting
- 07 Neighbourhood green
- 08 Edible landscapes including community gardens, orchard planting, and/or fruit bearing trees and plants
- 09 Meadow planting and species rich landscapes
- 10 Informal footpaths
- 11 Green corridor
- 12 Retained and enhanced vegetation
- 13 Foul water pumping station
- 14 Informal woodland walking route
- Public right of way: footpath
- ★ Potential play on the way features



0m 100m (1:2,000)

CLIENT:
Ptarmigan Land

PROJECT:
Land at Istead Rise, Gravesham

DRAWING:
Illustrative Masterplan

PROJECT NUMBER:
1509

DRAWING NUMBER: 006
CHECKED BY: SR

REVISION: V3
STATUS: Draft

DATE: 12/05/2026
SCALE: 1:2,000

A4 Legislation and Policy

Table A4-1: Summary of Relevant Planning Policy

Planning Policy Document/ Legislation	Relevant Policies
National Planning Policy Framework ⁴	Paragraph 192 states: "To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and steppingstones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and b) 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 193 states: "When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are

Planning Policy Document/ Legislation	Relevant Policies
	wholly exceptional reasons and a suitable compensation strategy exists; and d) 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."

Table A4-2: Summary of Relevant Legislation

Relevant Legislation	Relevance to Assessment
Gravesham Borough Council Local Plan and Strategy Review ⁶	Policy CS12: Green Infrastructure 5.7.23 Sites designated for their biodiversity value will be protected, with the highest level of protection given to internationally designated Special Protection Areas, Special Areas of Conservation and Ramsar sites, followed by nationally designated Sites of Special Scientific Interest, followed by Local Wildlife Sites and then by other areas of more local importance for biodiversity. 5.7.24 There will be no net loss of biodiversity in the Borough, and opportunities to enhance, restore, re-create and maintain habitats will be sought, in particular within the Biodiversity Opportunity Areas shown on the Strategic Green Infrastructure Network map and within new development. 5.7.25 Where a negative impact on protected or priority habitats/species cannot be avoided on development sites and where the importance of the development is considered to outweigh the biodiversity impact, compensatory provision will be required either elsewhere on the site or off-site, including measures for ongoing maintenance.

A5 Mitigation Hierarchy

Table A5-1: Mitigation Hierarchy outlining the recommended strategy for the Proposed Development

Mitigation Hierarchy	Measures Included
Avoid	The Proposed Development will retain all 0.939ha of high value habitat (lowland mix deciduous woodland), and 0.004ha of medium distinctiveness mixed scrub. A Construction Environmental Management Plan (CEMP) will include measures designed to avoid impacts on environmental features.
Minimise	All pre-construction and construction impacts on habitats and species would be minimised through the proposed CEMP. This would include sensitive clearance of habitats, to ensure that any habitat removal occurs during the least damaging season and pre-commencement checks to ensure that other species, not currently assumed to be present (such as badger, reptiles and bats) have started to use the site. The CEMP will also include measures designed to minimise the risk of impacts as a result of pollution or dust deposition.
Mitigate	Impacts which are unavoidable include habitat loss and disturbance during construction. The proposed CEMP will ensure that working measures are adopted which are designed to mitigate the risk and potential for un-intentional impacts, such as those which could occur as a result of pollution or dust deposition. Proposed measures to avoid impacts on species such as pre-works checks and sensitive site clearance also mitigate the risk of encountering protected species. The Proposed Development of up to 100 new homes will increase lighting within the area which has potential for light to spill onto the surround woodland habitat and affect bat commuting, foraging and roosting. A lighting strategy will be required to ensure that light spill onto the woodland is kept to a minimum.
Compensate	Whilst the proposed development results in the permanent loss of 4.40ha of habitats include cereal crop, arable field margins tussocky and mixed scrub, it retains and enhances 0.94ha. Habitat creation includes areas of grassland including modified grassland and other neutral grassland (wildflower areas), which will compensate for the loss of medium distinctiveness arable field margin. The proposed grassland enhancement will create a more species rich grassland which will be managed sympathetically to create a more diverse sward structure, providing a more distinctive habitat type. Further habitat creation includes low distinctiveness urban habitat including bare ground and vegetated garden, as well as one high distinctiveness habitat traditional orchard.



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