

COX FARM, STONEYGATE LANE,
KNOWLE GREEN

PRELIMINARY ECOLOGICAL APPRAISAL AND
BIODIVERSITY NET GAIN ASSESSMENT

DECEMBER 5, 2025

project ecology

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1 Executive Summary

- 1.1.1 The site at Cox Farm, Stoneygate Lane, Knowle Green will be the subject of a planning application for the construction a timber frame agricultural building with stable and associated access.
- 1.1.2 The habitats on site are of low ecological value and ubiquitous.
- 1.1.3 The site proposals and mitigation demonstrate the scheme provides >10% in habitat units and is therefore compliant with current policy and law regarding biodiversity net gain.
- 1.1.4 The proposed habitats on site will be the subject to a 30-year Management and Monitoring Plan (HMMP).
- 1.1.5 Reasonable Avoidance Measures for terrestrial mammals are to be implemented, prior to/during site clearance works.

2 Introduction

2.1 Site Location

- 2.1.1 The site is located at Cox Farm, Stoneygate Lane, Knowle Green, Preston (OS grid reference: SD 64769 37432).

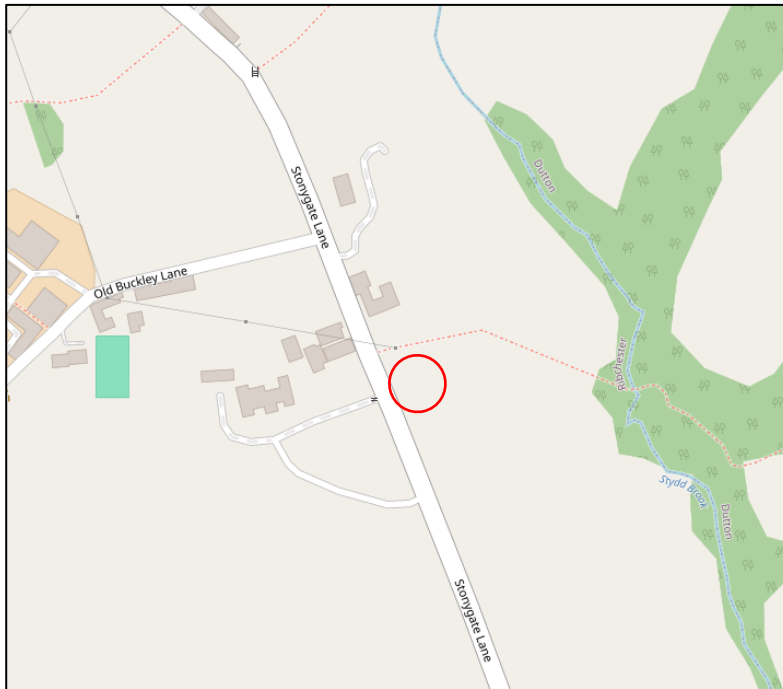


Figure 1: Site Location Courtesy of Open Steet Maps

2.2 Background

- 2.2.1 The site will be the subject of a planning application for the construction of a timber frame agricultural building with stable.

2.3 Scope of Work

- 2.3.1 Mr. and Mrs. Goodwin commissioned Project Ecology to:

- Conduct a desk-based study to obtain details of designated sites, protected and notable species within the search area.
- Carry out a site survey and record the extent, type and condition of the habitats within the site and adjacent to the site boundaries.

2.4 Aims and Objectives

- 2.4.1 Search for field signs of notable fauna and flora species and conduct an assessment of the potential habitats and features to support protected and notable species.

2.4.2 Provide mitigation measures to comply with current habitat and protected species policy and legislation.

2.4.3 Calculate the baseline and post-development biodiversity units.

2.5 Site Visit

2.5.1 The survey was undertaken on 26th November 2025 by Ben Crossthwaite *MCIEEM*. Ben has over 10 years' professional experience of undertaking JNCC Phase 1 Habitat Surveys, UK Habitat Classification Surveys.

2.5.2 The weather at the time of the survey was clear, dry and cold.

3 Survey Methodology

3.1 Desktop Survey

3.1.1 A desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations within 1km of the site boundary. To do so, the 'Multi Agency Geographic Information for the Countryside (MAGIC – provided by Defra)' along with data from the 'Natural England Open Data Geoportal' was accessed to gather such information; this interactive mapping service was also used to locate any European Protected Species Mitigation Licenses (EPSML) and species records to further inform conclusions concerning protected species in the context of the study site and its proposed development.

3.1.2 A data search was not undertaken given the small-scale, low impact nature of the proposals.

3.2 Habitat Survey

3.2.1 A Habitat Survey was carried out on site. The survey was carried out in accordance with the UK Habitat Classification system¹ and Guidelines for Preliminary Ecological Appraisal (CIEEM 2017²). The method records the habitat types present in and immediately surrounding the site, based on the UK Hab descriptions. Habitats, species and features of particular interest were target noted.

3.3 Biodiversity Net Gain

3.3.1 During the site survey, the ecological condition of each habitat was assessed in accordance with the Defra (2023) guidelines³. Habitat types recorded and mapped during the field survey were also recorded using the UK Habitat Classification system⁴, that forms the basis of the Statutory Metric habitat classifications.

3.3.2 Habitat data including type, area (or length), condition and strategic location were uploaded to the Defra Statutory Biodiversity Metric Calculation Tool spreadsheet to determine the baseline value of the site. The extent of any habitats to be retained or enhanced was also entered into baseline worksheets.

¹ Butcher, B., Carey, P., et al. (2020). UK Habitat Classification – Habitat Definitions V1.1. at <http://UKhab.org>

² CIEEM 2017. Guidelines for Preliminary Ecological Appraisal.

³ Defra (2023) The Statutory Biodiversity Metric: User Guide (draft). November 2023.

⁴ Butcher, B., Carey, P., et al. (2020). UK Habitat Classification – Habitat Definitions V1.1. at <http://UKhab.org>

3.4 Bat Survey

- 3.4.1 An assessment of the surrounding habitat quality for bats was carried out by walking the area on foot and later from reference to aerial images (Google Maps). These searches were used to identify important land use and habitat features known to be favoured by bats.
- 3.4.2 Interpretation of survey findings and assessment of roosting potential was undertaken using professional judgement and criteria described in published guidance⁵.

3.5 Nesting Bird Survey

- 3.5.1 Evidence of nesting birds found on site or close to the site was recorded during the survey.
- 3.5.2 Habitats throughout the site and in the immediate surrounding area were assessed for their value to roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.

3.6 Survey Limitations and Constraints

- 3.6.1 The survey was conducted during the sub-optimal time of year for botanical surveys. However, given the ubiquitous habitats present on site, a robust characterisation of the sites habitats could be achieved.
- 3.6.2 The site was fully accessible. There were no constraints to the survey of the site.
- 3.6.3 Field survey results are valid for a limited duration and no investigation can provide a complete description and characterisation of a site. The composition of habitats and species can change depending on environmental variables and the mobility of species, so the results of a study become less reliable over time. In some cases, surveys that are 3 years old may be acceptable for a project assuming that habitats have not significantly changed in the intervening period, but for protected species it is likely that survey data will need to be no more than 18 months old.

⁵ Mitchell-Jones, A. J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.

4 Results

4.1 Desktop Survey

- 4.1.1 The desk study results for statutory sites returned zero result within the study area.
- 4.1.2 The desk study results for non-statutory protected sites returned 2 result within the study area. These are shown in Table 1 below.

Designation	Site Name	Distance From Site Boundary
Biological Heritage Site (BHS)	Davies Gate Wood	0.14km southeast
BHS	Stydd Wood	0.5km southeast
BHS	Buckley Wood and Dale Hey Wood	0.81km southwest
BHS	Duddel Wood	0.96km east

Table 1 showing the results of the non-statutory sites located within the study area

- 4.1.3 The desk study identified that the site is located within the Impact Risk Zone of Red Scar and Tun Brook Woods Site of Special Scientific Interest (SSSI). The proposals are unlikely to require the Local Planning Authority to consult with Natural England as the proposals do not trigger any of the criteria.

4.2 Habitat Survey

- 4.2.1 The habitat maps are located in Appendix B. Target notes and photographs are contained in Appendix C.

Modified Grassland

- 4.2.2 The site comprises a section of a wider field of modified grassland. The grass and herbaceous species are indicative of eutrophic soil conditions with Perennial Rye-grass *Lolium perenne* dominating.
- 4.2.3 The grassland is managed by horse grazing and is poached.
- Developed Land; Sealed Surface
- 4.2.4 This habitat comprises a hardstanding pad.

Priority Habitats

- 4.2.5 No priority habitats are located on site. The nearest priority habitat, deciduous woodland, is located 0.14km southeast of the site (Davies Gate Wood BHS) (unique identification of PHID36499994_043731400).

4.3 Biodiversity Net Gain

- 4.3.1 The results of the Biodiversity Net Gain baseline should be read in conjunction with the Statutory Metric Condition Assessment and Calculation Tool documents⁶.
- 4.3.2 A summary of the baseline unit scores on site can be seen in Table 1.

Habitat	Size/Length	Unit Type (Habitat, Hedgerow, River)	Condition	Unit Total
Modified Grassland	0.0231ha	Habitat	Poor	0.05
Developed Land; Sealed Surface	0.0024ha	Habitat	N/A - Other	Zero
Total				0.05

Table 1 showing the base unit totals for each unit/habitat type on site

4.4 Bats

- 4.4.1 The nearest record of a granted European Protected Species Licence for bats is located 1.45km south of the site. The record is of a Common Pipistrelle *Pipistrellus pipistrellus* 'resting site' dated 2019-2020 (2019-43634-EPS-MIT)⁷.
- 4.4.2 No habitat on site provides potential roost habitat for bats.
- 4.4.3 The sites habitat does not provide potential bat foraging and commuting habitat. However, an adjacent hedgerow provides suboptimal habitat for bats.

4.5 Badger

- 4.5.1 No evidence of Badger was located on site or within 10 metres of the site boundary.

4.6 Nesting Bird

- 4.6.1 No habitat on site provides potential nesting habitat for passerine bird species.
- 4.6.2 Nesting birds are not considered further in this report.

4.7 Amphibians

- 4.7.1 The site does not provide breeding habitat for amphibians.
- 4.7.2 14 ponds are located within 500 metres of the site boundary, of which 2 of the ponds are located within 250m from the site boundary (see Figure 2).

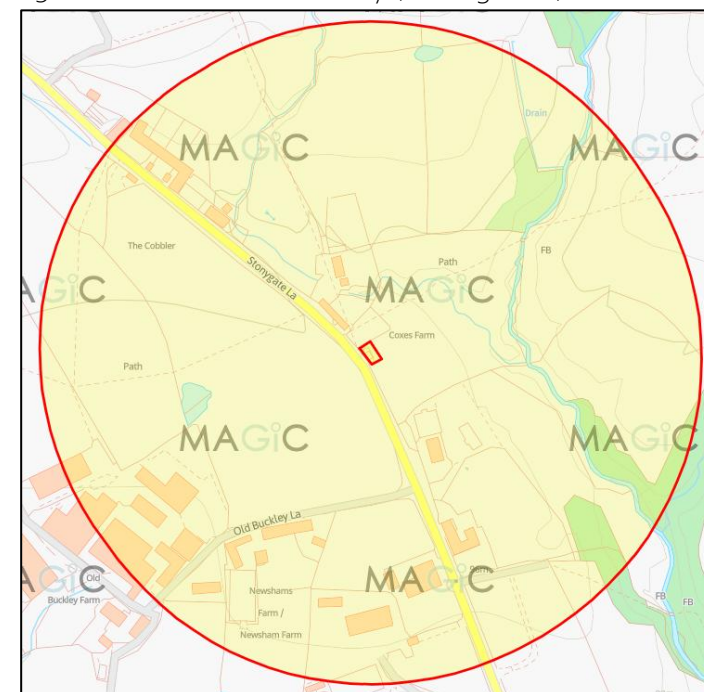


Figure 2. Site redline boundary, 250m buffer

⁶ Both documents will be provided separately.

⁷ Magic Maps - Granted European Protected Species Applications (England)

4.7.3 The sites habitats provide suboptimal foraging, dispersal, and cover opportunities for amphibians.

4.7.4 No records of granted Great Crested Newt European Protected Species Licences are located within the study area.

4.7.5 Impacts on amphibians are not anticipated, due to the lack of breeding habitat with connectivity to the site in the locality, and are not considered further in this report.

4.8 Amphibious Mammals

4.8.1 The site does not provide habitat for Otter *Lutra lutra* or Water Vole *Arvicola amphibius*. Therefore, the permanent presence of these species is not anticipated.

4.8.2 Impacts on amphibious mammals are not anticipated and are not considered further in this report.

4.9 Reptile

4.9.1 The site provides suboptimal habitat for reptiles. The site does not provide suitable basking sites for reptiles.

4.9.2 No sightings or evidence of any reptile species was recorded during the site survey. It is considered reptiles are unlikely to be present on site and are not considered further in this report.

4.10 Hedgehog

4.10.1 The presence of Hedgehog cannot be discounted as the site provides suitable foraging and commuting habitat.

4.11 Invasive Species

4.11.1 No invasive, non-native species are located on site.

5 Evaluation

5.1 Development Context

- 5.1.1 The site proposals are predicted to result in the loss of modified grassland only.

5.2 Impacts on Designated Sites

- 5.2.1 It is unlikely any direct or indirect impacts will occur to any statutory or non-statutory protected site recorded within the desk study due to the relatively small scale, low-impact nature of the site proposals and the lack of impact pathways, considering the aforementioned.

5.3 Impacts on Habitats

Modified Grassland

- 5.3.1 The grassland is considered to be of low ecological value. This habitat provides a minor source of pollen and nectar for invertebrates and limited foraging and commuting habitat for amphibians and small mammals. Potential impacts to this habitat are to be at site level only.

Priority Habitat

- 5.3.2 No priority habitat is located on site. The nearest priority habitat is located 0.14km southeast of the site. Considering the small, low impact nature of the proposal and lack of impact pathways, direct or indirect impacts are unlikely.

5.4 Biodiversity Net Gain

- 5.4.1 The evaluation of the Biodiversity Net Gain Assessment should be read in conjunction with the Statutory Condition Assessment and Metric Calculation Tool documents.
- 5.4.2 An extract of the headline results, from the Statutory Defra Metric Calculation Tool result, can be seen in Appendix D.
- 5.4.3 Within the application site the baseline unit values are as follows:
- Habitat units are 0.05
- 5.4.4 The post-development calculations for each unit category are summarised in Table 2. See Appendix B for the post-development habitat map.

Habitat	Size/Length	Unit Type (Habitat, Hedgerow, River)	Condition	Unit Total
Modified Grassland - Enhanced	0.0046ha	Habitat	Poor - Good	0.01 – 0.02
Developed land; sealed surface - Retained	0.0024ha	Habitat	N/A - Other	Zero
Developed land; sealed surface (access track and building)	0.0186ha	Habitat	N/A - Other	Zero
Individual Tree	0.0122ha	Habitat	Moderate	0.04
Total (as shown in the metric)				0.05

Table 2 showing a summary of post-development biodiversity net gain calculations

- 5.4.5 The net change in biodiversity units is as follows:
- Habitat units is a fraction of a unit (14.59%)
- 5.4.6 An extract of the headline results, from the Statutory Defra Metric Calculation Tool result, can be seen in Appendix D.
- 5.4.7 The trading rules have been satisfied within the metric calculation.

5.5 Mitigation Hierarchy

- 5.5.1 The mitigation hierarchy is a widely used tool that guides users towards limiting as far as possible the negative impacts on biodiversity from development projects.
- 5.5.2 The mitigation hierarchy steps are as follows:
- Avoid - Project proposals must give the highest priority to 'avoidance' strategies in accordance with the mitigation hierarchy.
 - Minimise - Where avoidance is not feasible, it is essential to minimise negative impact by modifying the project design/strategy. All sensitive habitats must be avoided at all costs.
 - Mitigate - All non-avoidable ecological damage must be compensated.
 - Offset - Final resort after all options have been exhausted: the most expensive, complex, and high-risk approach.
- 5.5.3 The site comprises modified grassland, a habitat of low ecological value, and avoidance or minimising measures for this habitat are not considered to be necessary.
- 5.5.4 The site proposals have mitigated for the loss of modified grassland by the planting of individual trees and enhancement of modified grassland from poor – good condition via scarifying, seeding and management changes.

5.6 Impacts on Species

Bats

- 5.6.1 The application site does not provide potential roost or bat foraging and commuting habitat. However, suitable habitat, a native hedgerow, is located adjacent to the site's boundary.
- 5.6.2 This habitats suitability to provide bat foraging and commuting habitat is not considered to be affected by the site proposals given the small scale and lack of new external artificial light sources.
- 5.6.3 Direct or indirect impacts to bats are considered unlikely.

Badger and Hedgehog

- 5.6.4 No evidence of a Badger sett was recorded during the site survey.
- 5.6.5 It is likely the sites habitats are utilised by Hedgehog for foraging and commuting.
- 5.6.6 These species can be attracted to active sites because of soil heaps and bare ground, which creates foraging opportunities. Without mitigation Hedgehog can be harmed on sites that include excavation works.
- 5.6.7 In the absence of mitigation, the proposed development has the potential to result in direct impacts to Hedgehog.

6 Conclusion and Recommendations

6.1 Further Survey Work

- 6.1.1 No further survey work is required at this time.

6.2 Mitigation and Enhancement Measures

Habitats

- 6.2.1 The adjacent hedgerow is to be protected during the clearance and construction phases via the erection of Heras fencing.

Biodiversity Net Gain

- 6.2.2 The site proposals and mitigation demonstrate the scheme provides >10% in habitat units and is therefore compliant with current policy and law regarding biodiversity net gain.
- 6.2.3 The proposed habitats on site will be the subject to a 30-year Management and Monitoring Plan (HMMP).

Terrestrial Mammals

- 6.2.4 To ensure that Hedgehog and any other mammals are not trapped or harmed during the site clearance works, smaller excavations should be covered if left overnight. Larger excavations, if left overnight or for longer periods, should be ramped to enable animals to escape.

7 Appendix A: Planning Policy and Legislation

National Policy

The National Planning Policy Framework (NPPF 2025) describes the Government's planning policy for England and how it should be applied. Within this framework, the requirements in relation to biodiversity are included within several policies. The two most relevant to individual planning decisions are Paragraphs 187 and 193, shown below:

- 187. Planning policies and decisions should contribute to and enhance the natural and local environment by:
 - a) 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);
 - b) 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;
 - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - e) 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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 193. 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 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 improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Legislation

The Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) includes the notification and confirmation of Sites of Special Scientific Interest (SSSIs). SSSIs can be notified for their floral, faunal, geological, or physiographical features. Protection against damaging operations and management of SSSIs is also included within the Act. Impact Risk Zones (IRZs) are zones around an SSSI account for the particular sensitivities of the features for which it is notified and identify development proposal which could have adverse impacts.

The Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) protects native animals, plants and habitats. Under the Act it is an offence to intentionally kill, injure or take any wild animal listed on Schedule 5 and it is an offence to interfere with places used for shelter or protection, or intentionally disturb animals occupying such places. The Act prohibits picking, uprooting or destroy any wild plant (or any attached seed or spore) listed in Schedule 8.

European Protected Species (EPS) such as bats, Hazel Dormouse, Otter, Natterjack Toad, Smooth Snake, Sand Lizard and Great Crested Newt are protected by the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and the Conservation of Habitats and Species Regulations 2017. The Acts make it an offence to:

- a. Deliberately capture, injure or kill an EPS;
- b. Deliberately impair an EPS's ability to survive, breed, reproduce, rear or nurture young; to hibernate or migrate; or significantly affect the local distribution or abundance of the EPS.
- c. Possess or control live or dead EPS or any part of, or anything derived from a EPS;
- d. Damage or destroy a breeding site or resting place of an EPS;
- e. Intentionally or recklessly obstruct access to any place that is used for shelter or protection by an EPS;
- f. Intentionally or recklessly disturb a structure or place that it uses for shelter or protection that is occupied by an EPS.

All common herptiles are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000). Grass Snake, Slow Worm, Common Lizard, Adder are protected against intentional killing or injury. Common Frog, Common Toad, Smooth Newt and Palmate Newt is protected against sale. In addition, all British reptiles, Common toad and Great Crested Newt are listed as Species of Principal Importance.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or take any wild bird or take, damage, or destroy its nest whilst in use or being built, or take or destroy its eggs. It is an offence to intentionally or recklessly disturb a species listed on Schedule 1 of the Act while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young.

The Protection of Badgers Act 1992 makes it an offence to wilfully, or to attempt to kill, injure, take, possess or cruelly ill-treat a Badger, or intentionally or recklessly interfere with a sett. Interference of a sett includes disturbing badgers during occupation of a sett, or damaging or destroying a sett, or obstructing access to the sett.

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on every public authority to have regard to conserving biodiversity. Section 41 of the same Act requires the Secretary of State to publish a list of the living organisms and types of habitats that are of 'Principal Importance' for the purpose of conserving biodiversity. The Secretary of State must take steps, as appear reasonably practicable, to further the conservation of those living organisms and habitats in any list published under this section. The list of species and habitats of principal importance currently includes 943 species and 56 habitats. These are the species and habitats found in England which are regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

The Hedgerows Regulations 1997 protect 'important' hedgerows from destruction or damage. A hedgerow is 'important' if it (a) has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Under the Regulations, it is against the law to remove or destroy 'important' hedgerows unless permitted by the local planning authority.

The Environment Act 2023 makes it mandatory for housing and development, subject to some narrow exemptions, to achieve at least a 10% net gain in value for biodiversity – a requirement that habitats for wildlife must be left in a measurably better state than before the development. Developers must submit a 'biodiversity gain plan' alongside usual planning application documents. The local authority must assess whether the 10% net gain requirement is met in order to approve the biodiversity gain plan.

The Environment Act 2023 strengthens the duty on public authorities (NERC Act, 2006) to have regard to the conservation of biodiversity.

The Environment Act 2023 amends the Wildlife and Countryside Act 1981 to introduce an additional purpose for granting a protected species licence in relation to development, 'for reasons of overriding public interest', and two additional tests for the granting of such licences: that there is 'no other

satisfactory solution' and that granting the licence is 'not detrimental to the survival of any the population of the species concerned'. These changes will reduce the scope for unlicensed activities to provide clear safeguards before licences can be granted, providing legal certainty and clarity to developers about their environmental obligations.

8 Appendix B: Habitat Map – Pre-development



Appendix B: Habitat Map – Post-development



9 Appendix C: Target Notes and Photographs

Target Notes		
Reference No.	Habitat/Feature/Species	Photograph
	Modified Grassland	
	Developed Land; Sealed Surface	

10 Appendix D: Calculation Tool, Headline Results Extract

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	0.01
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	14.59%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Area habitat units	10.00%	0.05	0.05	0.00
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional area habitat units required to meet target ✓

No additional hedgerow units required to meet target ✓

No additional watercourse units required to meet target ✓