

Preliminary Ecological Appraisal (PEA) Survey Report	
<b>For:</b>	Keigar Homes
<b>Site:</b>	Applefields, Wrawby, Brigg, DN20 8GD
<b>Report Date:</b>	17 <sup>th</sup> December 2025
<b>Report Reference:</b>	SQ-3337

**Lead Ecologist:**

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- *Natural England Bat Licence: 2018-35446-CLS-CLS*
- *Natural England Great Crested Newt License 2019-41851- CLS-CLS*



<b>Client:</b>	Keigar Homes
<b>Site Name:</b>	Applefields, Wrawby, Brigg, DN20 8GD
<b>Grid Reference:</b>	TA 01655 08750
<b>Report:</b>	Preliminary Ecological Appraisal
<b>Date of Survey:</b>	30th May 2025
<b>Surveying Ecologists:</b>	Samuel Toon BSc (hons)

<b>Issue:</b>	<b>Revision:</b>	<b>Stage:</b>	<b>Date:</b>	<b>Prepared by:</b>	<b>Approved by:</b>
-	N/A	Draft for Review	17 <sup>th</sup> June 2025	Samuel Toon BSc (hons), Estrada Ecology Ltd	Natasha Estrada MRes, MCIEEM, Estrada Ecology Ltd
1	V1	Final	18 <sup>th</sup> June 2025	Samuel Toon BSc (hons), Estrada Ecology Ltd	Natasha Estrada MRes, MCIEEM, Estrada Ecology Ltd
2	V2	Amendment	17 <sup>th</sup> December 2025	Emily Southern Bsc (hons), Estrada Ecology Ltd	Natasha Estrada MRes, MCIEEM, Estrada Ecology Ltd



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The site was deemed to hold suitability for European Badger (*Meles meles*) habitats. No field sign evidence was recorded within the site, however, due to the open nature of the site and the suitability, it is deemed likely that badger presence could occur. Recommendations in regard to European Badgers are given in the conclusion of this report.

The site was deemed to hold suitability for reptile habitats. A drainage ditch was recorded to the south of the site which contained water and passed beyond the site boundary to the west. Furthermore, suitable terrestrial habitats were recorded within the site and immediately outside the site to the west. No field sign evidence was recorded within the site. Recommendations in regard to reptiles are given in the conclusion of this report.

The site was deemed to hold suitability for amphibian habitats. The drainage ditch to the south and the attenuation basin that has been created within Phase 1 of this development, were both present within the immediate vicinity, offering suitability for amphibians. It is, however, deemed unlikely that great crested newt would be present, due to the relative age of the attenuation basin and the lack of suitable vegetation within the ditch. Furthermore, the ditch was recorded to cease within 100 meters to the west when surveyed, limiting connectivity. Recommendations in regard to amphibians are given in the conclusion of this report.

The site was deemed to hold limited suitability for riparian mammals. A ditch was recorded off-site to the south, which recorded multiple potential burrows at both water level and at differing elevations along the bank gradient. The survey was conducted following heavy rainfall, which could have potentially removed field sign evidence of aquatic/riparian species within the section. A riparian mammal buffer has been created between the build site and the ditch; therefore, no further survey effort is recommended.

A Construction Environment Management Plan (CEMP) is recommended to mitigate potential impacts of runoff pollutants of the site during works.

No species listed on Schedule 8 of the Wildlife and Countryside Act 1981 were recorded within the site. No species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the site.

The site was recorded to lack significant floral diversity and is unlikely to support important assemblages of invertebrates.

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- 1. Introduction and Background to the Site**
- 2. Protected Species Legislation**
- 3. Survey Methodology**
- 4. Ecological Constraints**
- 5. Survey Results**
- 6. Conclusions**
- 7. Biodiversity Enhancements**

**Appendices and References**

Whilst every effort has been taken to ensure the accuracy of this report and its contents in view of potential ecological constraints to development or the likely presence or absence of species it must only be viewed as a snapshot in time and not be viewed as definitive. Due to external factors, such as seasonality, weather etc having the potential to affect survey results, no liability can be assumed for omissions or changes that may or may not occur after the date this report was produced.

## **1 Introduction and Background to the Site**

1.1 Estrada Ecology Ltd was commissioned to conduct a Preliminary Ecological Appraisal (PEA) of the land at Applefields, Wrawby, Brigg, DN20 8GD.

1.2 The site consists of

- Modified grassland
- Bare ground
- Hedgerow with trees

1.3 It is understood that the current development proposal is redevelopment, subject to the necessary consents.

### **1.4 Report Objectives**

- Present the findings of the ecological survey.
- Assess the potential of existing on-site habitats to support protected or notable species.
- Evaluate any likely ecological impacts on protected and notable species or habitats because of the proposed development.
- Provide recommendations for any further species-specific survey and mitigation measures that may be required; and
- Provide habitat enhancement recommendations in line with the National Planning Policy Framework (NPPF, 2024).

### **1.5 Site Location and Wider Area**

1.5.1 The surrounding site is comprised of residential and commercial use, with extensive open vegetated land present which includes agricultural land, waterbodies and pockets of woodland.

1.5.2 The survey site's central OS grid reference is TA 01655 08750.

**Figure 1:** The survey site within its wider setting.



## 2 Protected Species Legislation

2.1 Relevant legislation includes the Conservation of Natural Habitats and Species Amendment (EU Exit) Regulations which came into force on 31 December 2020.

2.2 The Natural Environment and Rural Communities (NERC) Act came into force on 1 Oct 2006. 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. The list has been drawn up in consultation with Natural England, as required by the Act. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when conducting their normal functions.

2.3 The UK Post-2010 Biodiversity Framework was developed in response to the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011 - 2020. Its five strategic goals and twenty biodiversity targets supersede the UK Biodiversity Action Plan.

### 2.4 Environment and Biodiversity

2.4.1 Under the National Planning Policy Framework (NPPF, 2024), local planning authorities should aim to conserve and enhance the natural environment when determining planning applications. Local planning authorities also have an obligation to seek opportunities to further enhance the conservation status of Species and Principal Habitats.

2.4.2 Species and Habitats of Principal Importance for the conservation of biodiversity in



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2.6.4 **Amphibians** (all native species) are protected by the Wildlife and Countryside Act 1981 (as amended). The sale, barter, exchange, transportation for sale, and advertising to sell or to buy are an offence.

2.6.5 **Eurasian Badgers** are protected by the Protection of Badgers Act 1992 and under the Wildlife and Countryside Act 1981 (as amended). It is an offence: to wilfully, or attempt, to kill, capture, ill-treat or injure any badger; to obstruct, destroy or damage a badger sett or to disturb a badger whilst within its sett; to sell or offer for sale a live badger, or have possession or control of a live badger; and marking a badger or attaching any ring, tag, or other marking device to a badger.

2.6.6 **Eurasian Otters** are a European Protected Species (EPS) and are also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. It is against the law to capture, kill, disturb or injure otters (on purpose or by not taking enough care); damage or destroy a breeding or resting place (deliberately or by not taking enough care); obstruct access to their resting or sheltering places (deliberately or by not taking enough care); and possess, sell, control or transport live or dead otters, or parts of otters.

2.6.7 **European Water voles** are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and are a priority conservation species. It is against the law to: Intentionally capture, kill, or injure water voles, damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care), disturb them in a place of shelter or protection (on purpose or by not taking enough care), and possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).

### 3 Survey Methodology

#### 3.1 Desktop Survey

3.1.1 A biological data records search was commissioned from Greater Lincolnshire Nature Partnership for a 2 km radius from the central grid reference.

3.1.2 Further inspection, using colour 1:25,000 OS base maps ([www.ordnancesurvey.co.uk](http://www.ordnancesurvey.co.uk)), MAGIC ([www.magic.defra.gov.uk](http://www.magic.defra.gov.uk)), aerial photographs from Google Earth ([www.maps.google.co.uk](http://www.maps.google.co.uk)), was also undertaken to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

3.1.3 Furthermore, consultation with MAGIC was undertaken to ascertain any European Protected Species Mitigation Licenses granted within a 2 km radius from grid.

3.1.4 Natural England's Geoportal: England-wide data for great crested newts (GCN) was analysed for any records within a 1 km radius from grid. The dataset contains eDNA pond surveys for district level licensing (England). When available for the location, the Risk Zones for GCN are considered for the site.

#### 3.2 Field Survey

3.2.1 The survey area was investigated on foot to ascertain habitats on site and the potential of those habitats to support ecological diversity. The vegetation types present within the site were assessed by experienced senior ecologist; Samuel Toon using methodology based on that described in the UK Habitat Classification User Manual Version 2.0 (2023) and CIEEM's Guidelines for Ecological Impact Assessment (2024).



**Table 1:** Key habitats and field signs of protected and priority species.

Taxon	Indicative Habitats	Field Signs
<b>Bats</b>	Roosts - Trees, buildings, bridges caves etc. Foraging areas - e.g., parkland, water bodies and streams, wetlands, woodland edge, hedgerow Commuting routes - linear features (e.g., hedgerows).	In or on potential roost sites: Droppings stuck to walls; urine spotting in roof spaces; oil from fur staining around roost entrances; feeding remains (e.g., moth wings).
<b>Great Crested Newts (<i>Triturus cristatus</i>)</b>	Ponds within 500m of suitable habitat within the site boundary. Suitable (terrestrial) habitat includes rough grassland, scrub and woodland, log and rubble piles and other debris, animal burrows.	Eggs, Individuals of all life stages. Egg rolled plants.
<b>Reptiles</b>	Rough grassland, log and rubble piles, compost heaps.	Sloughed skins; eggs, individuals.
<b>Birds</b>	Trees, scrub, hedgerow, field margins, grassland.	Nests; droppings below nest sites (especially in buildings of trees); tree holes.
<b>Badgers</b>	Found in most rural and many urban habitats.	Excavations and tracks: sett entrances, latrines, hairs, well-worn paths; prints; snuffle holes.
<b>Otter</b>	Water bodies / water courses.	Holt entrances; prints; latrine / spraint sites; anal jelly / smears.
<b>Water Vole</b>	Water bodies / water courses.	Burrow entrances; prints; latrine areas; faeces; feeding stations.
<b>BAP invertebrates</b>	Each butterfly species has its own habitat requirements determined by the food plant of the caterpillar, the nectar source for the adult and the conditions needed for the caterpillar to survive and then pupate successfully.	Eggs, larva, Pupa, adult butterfly. Habitat type and presence of food plants.





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(*Medicago lupulina*).

5.1.2.3 Under current works proposals, this habitat will be impacted. Recommendations regarding this habitat and any species within it are given in the conclusion of this report.

**Figure 2:** Other Neutral Grassland



### 5.1.3 Bare Ground

5.1.3.1 The northern parcel of the site was observed as having historically been utilised for agricultural purposes but was not in use during the survey. No crop had been planted and demonstrated a bare substrate throughout, with small sections of perennial ryegrass starting to sprout.

5.1.3.2 This habitat was deemed to yield limited ecological value, with potential suitability for brown hare recorded as the main constraint within the habitat parcel.

### 5.1.4 Hedgerow with Trees

5.1.4.1 A single native hedgerow with trees was recorded to dissect the southern and northern parcels centrally. A ditch was also present to the north of the hedgerow but was recorded dry at the time of the survey.

5.1.4.2 The ditch was deemed to be seasonal (contain water for less than 4 months of the year) and present to alleviate flooding of the land. As such, the ditch is not considered to be its own habitat and will not be included within the biodiversity net gain assessment, in line with the user guide definition:

*Artificially created linear water-conveyancing features which are:*

- less than 5 meters wide; and
- are likely to retain water for more than 4 months of the year.

5.1.4.3 Trees were also present within the hedgerow, with mature trees present. Several trees recorded dense ivy coverage, suggesting the need for further recommendations.

5.1.4.4 Species recorded within this habitat include hawthorn (*Crataegus monogyna*), European ash (*Fraxinus excelsior*), wild cherry (*Prunus avium*), apple (*Malus sp.*) and sycamore



5.3.2 Consultation with Greater Lincolnshire Nature Partnership returned two Non-Statutory Designated Sites within the 2 km search radius from grid.

**Table 5:** Non-Statutory Sites within the Search Radius

Site Name	Figure Ref	Designation
Elsham Golf Course	1	Local Wildlife Site (LWS)
Great Moor, Elsham	2	Local Wildlife Site (LWS)

## 5.4 Priority Habitats and Priority Species

5.4.1 No priority habitats were recorded within the redline site boundary.

5.4.2 One priority habitat was recorded outside the redline site boundary but within the search radius as displayed in table 6 below.

**Table 6:** Priority Habitats outside the Site Boundary but within the Search Radius

Habitat Type	Habitat Description
Deciduous Woodland	Closest compartment being immediately outside of the southern boundary

5.4.3 No protected species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the application boundary.

5.4.4 No non-native / invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the site boundary.

## 5.5 Protected Species

### 5.5.1 Breeding Birds

5.5.1.1 No current or historic evidence of breeding birds using the site was recorded within the surveyed area. It is predicted that birds will be affected by disturbance levels/proposed works.

5.5.1.2 Incidental sightings and calls for skylark (*Alauda arvensis*) were recorded during the site visit, suggesting potential use of the site by the ground nesting species.

5.5.1.3 Suitable habitats were recorded within the site in which both passerine and ground nesting birds could potentially utilise for nesting and breeding purposes. Further recommendations have been made within this report.



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5.5.5.3 Aquatic habitat deemed suitable for use by aquatic mammals was recorded within the immediate environment, but not within the curtilage of the site.

5.5.5.4 Terrestrial habitat deemed suitable for usage by aquatic mammals was recorded within the immediate environment, but not within the curtilage of the site.

5.5.5.5 A riparian mammal buffer has been created between the build site and the ditch; therefore, no further survey effort is recommended.

### **5.5.6 Amphibians**

5.5.6.1 The site is deemed to offer possible suitability for amphibians. No presence of great crested newts was detected within the site during the survey.

5.5.6.2 Terrestrial habitats suitable for amphibians were detected within the site. Both aquatic and terrestrial habitats suitable for amphibians were detected outside the site, within a 500m radius from the central grid reference.

5.5.6.3 The ditch which provides the watercourse habitats, along with the attenuation basin were determined to be unsuitable for great crested newt, due to the potential presence of predators within the immediate vicinity.

5.5.6.4 Furthermore, the basin which has been created in line with phase 1 of a previous application, is a recent addition to the landscape, suggesting it to be unlikely for immediate habitation considering site works are still a major presence within the wider setting, adding to disturbance factors.

5.5.6.5 Recommendations regarding amphibians are given within the conclusion of this report.

### **5.5.7 Reptiles**

5.5.7.1 The site holds potential for reptiles to be found. A ditch is present immediately outside the southern boundary which provides limited connective opportunities. Google Earth confirms a baseline map which shows the extent of the ditch expanding to the west, however, ground survey confirmed the ditch terminated within 100 meters to the west.

5.5.7.2 No aquatic habitat deemed suitable for use by reptiles was recorded within the curtilage of the site, however, suitable aquatic habitats were recorded immediately outside the southern boundary.

5.5.7.3 Suitable terrestrial habitat for use by reptiles was recorded within the curtilage of the site and immediately outside the southern and western boundaries of the site.

5.5.7.4 Recommendations regarding reptiles are given within the conclusion of this report.

### **5.5.8 Other species**

5.5.8.1 The site, particularly in the northern section, was deemed to provide suitable habitats for brown hare. Precautionary methods are recommended in line with site works.

5.5.8.2 The site was concluded to not provide further does not support suitable habitat for any



6.3.2.3 Due to the residual possibility of bats being present, it is deemed necessary that supervision by a licensed ecologist is necessary to facilitate the works. A formal method statement must be written and adhered to, prior to work commencing.

6.3.2.4 It is further concluded that a suitable lighting scheme is required to be incorporated within the scheme to mitigate impacts from artificial lighting on the local bat population.

### 6.3.3 European Hedgehog

6.3.3.1 No field sign evidence was recorded within the site during the survey. However, due to the suitability of habitats within the site and the surrounding area, it is deemed necessary for a precautionary method statement to be adopted within the scheme to ensure European hedgehogs are not impacted.

### 6.3.4 Amphibians

6.3.4.1 No field sign evidence was recorded within the site during the survey. However, due to the suitability of habitats within the site and the surrounding area, it is deemed necessary for a precautionary method statement to be adopted within the scheme to ensure great crested newts are not impacted.

### 6.3.5 Badgers

6.3.5.1 No field sign evidence was recorded within the site during the survey. However, due to the suitability of habitats both within the site and within the immediate vicinity, it is deemed necessary for a precautionary method statement to be adopted within the scheme to ensure badgers are not impacted.

### 6.3.6 Reptiles

6.3.6.1 Suitable habitats are recorded within the site and surrounding environment which have the potential for supporting reptile assemblages. It is therefore deemed necessary for a presence/likely absence survey to be conducted. This details the deployment of artificial refugia and seven routine checks for reptiles. The checks must be spaced at weekly intervals in suitable weather conditions between April and October (inclusive).

### 6.3.7 Other Species – Brown Hare

6.3.7.1 No field sign evidence was recorded within the site during the survey. However, due to the suitability of habitats within the site and the surrounding area, it is deemed necessary for a precautionary method statement to be adopted within the scheme.

### 6.3.8 Construction Environmental Management Plan (CEMP)

6.3.8.1 Due to the presence of sensitive receptors within close proximity of the site, a **CEMP** is deemed necessary. Any impacts during the demolition and construction phases of the proposed project on sensitive receptors should be mitigated for via the implementation of a CEMP.

## **7 Biodiversity Enhancement**

7.1 In line with the National Planning Policy Framework (2024) the application should demonstrate biodiversity enhancements. Upon finalisation of plans, calculations can be compiled.

7.2 Due to the size of the site and location, applicable specific habitat enhancements could include:

- Bat and bird boxes integrated into the scheme design to enhance roosting provision over the wider site.
- A planting scheme should be implemented within the scheme to create a green space within the site. Plantings should comprise native species of high biodiversity value.
- Boundary features should be kept open and allow passage for small mammals such as hedgehog.

7.3 Upon completion of a finalised scheme design the Biodiversity Net Gain assessment calculations can be completed.



Appendix One: Phase One Habitat Map



**Appendix Two: Species list (on site)**

Vernacular	Taxon
<b>Flora</b>	
<b>Apple</b>	<i>Malus sp.</i>
<b>Black Medick</b>	<i>Medicago lupulina</i>
<b>Common Bent</b>	<i>Agrostis capillaris</i>
<b>Common Comfrey</b>	<i>Symphytum officinale</i>
<b>Common Fiddleneck</b>	<i>Amsinckia micrantha</i>
<b>Creeping Buttercup</b>	<i>Ranunculus repens</i>
<b>Crested Dog'S Tail</b>	<i>Cynosurus cristatus</i>
<b>Dame's Violet</b>	<i>Hesperis matronalis</i>
<b>European Ash</b>	<i>Fraxinus excelsior</i>
<b>Field Forget Me Not</b>	<i>Myostis arvensis</i>
<b>Hawthorn</b>	<i>Crataegus monogyna</i>
<b>Perennial Rye Grass</b>	<i>Lolium perenne</i>
<b>Rosebay Willowherb</b>	<i>Chamerion angustifolium</i>
<b>Soft Brome</b>	<i>Bromus hordeaceus</i>
<b>Sycamore</b>	<i>Acer pseudoplatanus</i>
<b>Wild Cherry</b>	<i>Prunus avium</i>

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Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th (edn.) The Bat Conservation Trust, London. (Accessed June 2025).

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