



C.B.E. Consulting

Extended Phase 1 Habitat Survey
Land off Vasey Close
Bassingham
Lincolnshire
NGR SK91346 59663

Survey by
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Non-Technical Summary

The site surveyed comprises the northern part of a larger arable field lying to the south of Vasey Close and Bassingham Surgery, centred at NGR SK91346 59663. An inspection of the site was completed on afternoon of the 16th of June 2021. A review of the available data confirms that the site is not a Statutory or Non-Statutory site of ecological significance. The defined site area comprises part of an arable field situated on the south-eastern edge of the village of Bassingham in a rural location. There are recently constructed houses to the north and a new Surgery to the north-west. Land to the west, east and south is open arable land. There is very little mature tree canopy cover in the location surveyed.

The survey has identified the following habitats within the site area:

- Cultivated arable land
- Boundary Hedgerows with trees
- Field verge with perennials and ruderals

An assessment of the survey area has identified the following potential for protected species to be present:

Species	Present within 1km	Suitable habitat on site / evidence of presence	Likelihood of presence on site	Further Survey / Mitigation recommended
Nesting Birds	Yes	Intensively cultivated ground not highly suitable for ground nesting. Nesting along the boundary hedgerow is quite likely.	Low within the site interior but likely within the hedgerow	Measures to avoid disturbance to any nests or nesting activity in the boundary hedgerow will need to be considered
Reptiles	No	Site is not habitat of high terrestrial value to reptiles and no field signs found.	Very low.	None required
Amphibians	Yes	Site is not habitat of high terrestrial value to amphibians and no field signs found.	Very low.	None required
Bats	Yes	No potential roost locations are present within the site. The lack of canopy cover or invertebrate habitat makes significant foraging activity unlikely	No roosting. Low likelihood of foraging along the field boundaries.	None required
Badger and larger mammals	Yes	No field signs of badger or other larger mammal was found. Habitat is of low terrestrial value to these species.	Some occasional foraging possible but not likely around the proposed development area.	Construction methods to avoid harm to badgers recommended.

Constraints:

No significant ecological constraints have been identified during the survey. However, the following constraints should be taken into consideration:

- There is potential for nesting birds to be present associated with the boundary hedgerow,
- There is low potential for badger to be foraging around this area and accessing the site from time to time.
- There is potential for hedgehogs to be present within the site, particularly around the site boundaries.

Conclusion and Recommendations

There are no Statutory or Non-statutory sites nearby that could potentially be impacted by the proposed construction of the new residential houses. The River Witham LWS is over 500m from the site and on the opposite side of the village of Bassingham.

The survey area comprises a field of intensively managed arable land with box-trimmed boundary hedgerow along the eastern perimeter. The area where the new houses are proposed contains no significant ecological features and the houses and garages will be a sufficient distance from the boundary hedgerow to avoid any disturbance of this, although it is noted that it may be prudent to remove the young oak tree as this lies close to Plot 9. No evidence of any significant locally rare plants or plant communities within or around the site area surveyed was identified during the survey.

Biodiversity within the proposed development area is limited by the intensive management and cultivation of this land. It is considered likely that development of the site area surveyed could be carried out in a manner that does not have any significant impact on local biodiversity. The proposal includes tree planting and the creation of a soakaway area which could be sympathetically landscaped to provide habitat for wildlife.

The inspection completed in June 2021 did not identify any physical evidence or field signs of protected species within the survey area but assessment of records and the landscape has identified that there is potential for some protected species to be present which will require mitigation:

Birds: The eastern boundary hedgerow could support nesting birds and measures should be taken to avoid disturbance to this.

Badger: Measures to protect these species from harm during construction activities will be required. These measures should also be applicable to the protection of hedgehogs.

General Recommendations: It is recommended that as part of landscaping works biodiversity enhancements should be incorporated. Bat boxes, bird nest boxes and hedgehog refugia should be included within any development, particularly near to the western boundary of the development area.



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Part 1: Site Details

1. Introduction

1.1 Site Description and Location

The site surveyed comprises the northern part of a larger arable field lying to the south of Vasey Close and Bassingham Surgery, centred at NGR SK91346 59663. The location of the site is shown on the plan within **Figure 1** and an aerial photograph has been provided within **Figure 2** to place the site in context.



Figure 1: Site location.

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The Client has requested an ecological survey of the land to determine whether there is anything of ecological value or any evidence of protected species present. An inspection of the site was completed on afternoon of the 16th of June 2021 and details of the survey are provided in the table below. A photographic record of key areas is included alongside target notes within the report and a list of plant species identified in the site during the survey is included within **Appendix 1**.

Date	Time	Location	Weather
16 / 06/ 2021	15.30pm	Field off Vasey lose to the south of the Surgery. LN5 9FU	Clear with occasional high cloud. Temperature 22 degrees C humidity 61% at 1012hPa. Breeze 10mph from the south-west.
Accessibility	All areas of the site accessible to search for evidence of protected species.		

The defined site area comprises part of an arable field situate don the south-eastern edge of the village of Bassingham in a rural location. There are recently constructed houses to the

north and a new Surgery to the north-west. Land to the west, east and south is open arable land as can be seen within the aerial photograph below. There is very little mature tree canopy cover in the location surveyed.

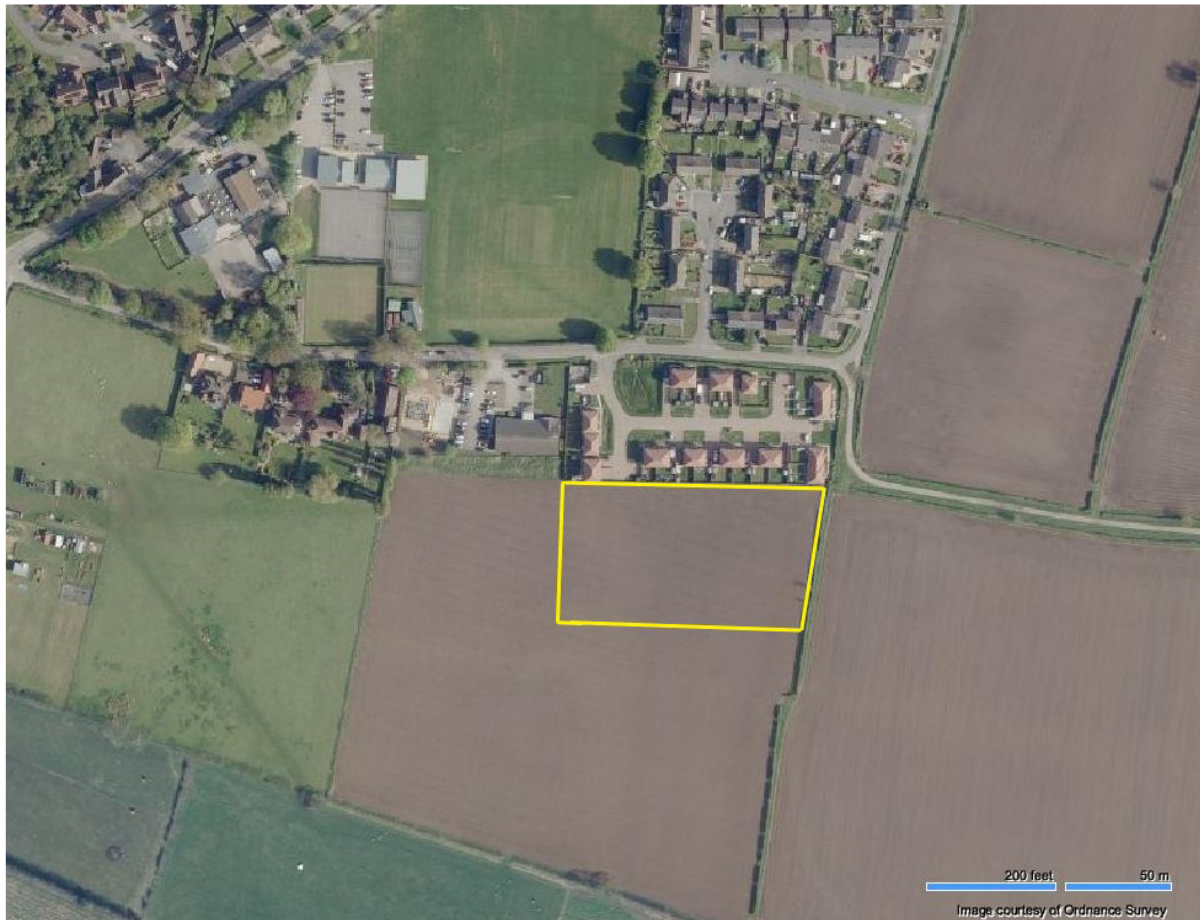


Figure 2: Site Contextual Aerial Photograph

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1.2 Objective of the Report

This report is an extended Phase 1 Habitat Survey and ecological appraisal of the area identified in yellow within the aerial photograph above. The objective of the ecological appraisal is to identify the habitat(s) present on, and surrounding, the site area being assessed. Development of the site for the purpose of constructing new residential houses will require planning approval and this report has been prepared to provide information as part of any future planning application process. To this end the report is required to comply with the recommendations and principles set out in the National Planning Policy Framework 2019 as amended (NPPF). The report contains Biological Records and has been prepared to meet the standard required by BS42020 (British Standard for Biodiversity and Development).

Chapter 11 of the National Planning Policy Framework (NPPF) describes the Government's national policies on promoting 'an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment.' NPPF is accompanied by Planning Practice Guidance on 'Biodiversity, ecosystems and green infrastructure' (2014) and ODPM Circular 06/2005.

The National Planning Policy Framework 2019 Chapter 15 sets out the Government's objectives for planning in regard to the protection of habitats and biodiversity. The planning objectives in relation to biodiversity and the natural environment are stated within paragraph 170 of the NPPF 2019 and are as follows:

“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.”*

Within the NPPF the planning policy context requires that Planning policies and decisions should be based on up-to-date information about the natural environment and other characteristics of the area including an assessment of existing and potential components of ecological networks (NPPF paragraph 43).

The above approach encapsulates the ‘mitigation hierarchy’ described in British Standard BS 42020:2013 which involves the following stepwise process:

- **Avoidance** – avoiding adverse effects through good design,
- **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects,
- **Compensation** – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm,
- **Enhancement** – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.

The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5).

This ecological appraisal provides information on the existing ecological and biodiversity value of the land on the site and also reports any evidence of protected species or significant habitats present. It has been provided to provide information to the Planning Authority in order to help meet the requirements of the NPPF and enable the Authority to assess the site area in accordance with the Code of Practice within BS42020 and

guidelines issued by CIEEM in 2012. The report also identifies any habitats or species present that require more detailed surveys prior to any improvements being undertaken.

Part 2: Survey Methodology and Results

2. Appraisal Methodology

2.1 Baseline Study

Within NPPF it states that there are three dimensions to sustainable development: “economic, social and environmental.” The environmental role includes “contributing to protecting and enhancing our natural, built and historic environment” and, as part of this, helping to improve biodiversity.

Within the NPPF 2019 it states that: *“Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight....”* Paragraph 172

Within paragraphs 174 and 175 of NPPF 2019 the principles by which the protection and enhancement of biodiversity and geodiversity within the context of proposed development are described. These principles state in Paragraph 174 that any development proposal 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 175: 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 incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

The biodiversity of a site area and the potential presence of protected species are factors relevant to all developments irrespective of the size scale and will apply to any development on the site being assessed. Available information on the baseline ecology of the site and the presence of protected species within the locality has been obtained from the local biological records centre and reviewed (**Appendix 2**) and the records obtained are provided as separate appendices.

These data sources have been reviewed and the character and nature conservation value of habitats and species assessed. The aims of this appraisal of information are:

- To characterize all the existing available information regarding habitats and species that may be present at the site and provide up to date information about the environmental characteristics of the site area.
- To identify any habitats potentially present of nature conservation value in terms of local, regional and national context and within the context of local, regional and national policy; and,
- To identify any areas of ecological interest in order to either a) make recommendations to minimize the potential impact of any site works, or b) identify the need for a further survey work.

Following the appraisal of the available information, a site inspection has taken place to obtain specific site data at the site.

2.2 Habitat Assessment Methodology

The site was inspected on the afternoon of 16th June 2021. The inspection used the extended Phase 1 Habitat Assessment methodology as adopted by Natural England (Joint Nature Conservation Committee 1993) and in accordance with the Guidelines for Preliminary Ecological Appraisal (2012) issued by the Institute of Ecology and Environmental Management (IEEM) and BS42020 (British Standard for Biodiversity and Development).

The survey required a systematic walkover of the site to classify the habitat types present and was completed using standard Phase 1 Habitat Survey methodology whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail through Phase 2 surveys. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal to record details on the actual or potential presence of any notable or protected species or habitats.

Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified summarised within **Appendix 1**. A habitat base map and target notes have been prepared and included as **Figure 3** within section 3 of this report.

2.3 Protected Species Assessment Methodology

A methodical inspection was carried out to look for any evidence of protected species using the site and to identify any habitats with potential to provide significant shelter or foraging opportunities for these. The survey was carried out by Christopher Barker, an experienced

ecological consultant and Chartered Environmentalist holding Class Licenses issued by Natural England.

The Conservation of Habitats and Species Regulations 2010 consolidates the various amendments that have been made to the Regulations. The original (1994) Regulations transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

“European protected species” are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are subject to the provisions of Regulation 41 of those Regulations. All European Protected Species are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- a. Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
- b. Possess or control any live or dead specimens or any part of, or anything derived from these species
- c. deliberately disturb wild animals of any such species
- d. deliberately take or destroy the eggs of such an animal, or
- e. intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

- a. to impair their ability—
 - i. to survive, to breed or reproduce, or to rear or nurture their young, or
 - ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate;or,
- b. to affect significantly the local distribution or abundance of the species to which they belong.

Although the law provides strict protection to these species, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of the Regulations (2010), a licence can only be issued where the following requirements are satisfied:

- i) The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’
- ii) ‘There is no satisfactory alternative’
- iii) The proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Specific attention was also paid to the potential presence of any protected, rare or notable species, and specific consideration was given to bats, birds, badgers, amphibians and reptiles as described below.

Breeding Birds: All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it 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. The inspection of the site included a search of hedgerows, ground vegetation and tree canopies looking for evidence of active or former nests.

Bats: All species of Bat within the UK are protected under the Conservation of Habitat and Species Regulations 2010 (Habitat Regulations) that amended and incorporated the Wildlife and Countryside Act 1981. These regulations make it an offence to:

- Intentionally kill, injure or take a bat [WCA section 9(1)]
- Possess or control any live or dead specimen or anything derived from a bat [WCA section 9(2)]
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat [WCA section 9(4)(a)]
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose [WCA section 9(4)(a)]

Any building or significant trees present within the survey area have been assessed for their suitability to support roosting bats based on the presence of features such as holes, crevices, cracks, splits or loose bark. Potential bat roost locations in relation to buildings are described within this report (taken from Bat Survey Guidelines 2016) as:

Confirmed Roost – a structure with physical evidence confirming the presence of bats or bats visibly seen.

High – a structure with one or more potential roost features that are obviously suitable for use by a large number of bats on a regular basis and which is situated in an area of continuous high-quality foraging habitat suitable for bats.

Moderate – a structure with one or more potential roost features that could be used by bats, but which is unlikely to support a roost of high conservation status and which is in an area of connected habitat suitable for foraging by bats.

Low – a structure with one or more potential roost features that could be used by individual bats opportunistically. However, these potential roost features do not provide sufficient potential to be used by a larger number of bats or on a regular basis and the surrounding habitat is not of high value to foraging bats.

Negligible – a structure with negligible habitat features which is in a poor location making it highly unlikely roosting bats will be present.

Tree assessments were undertaken from ground level, with the aid of a torch and binoculars where required. During the survey features considered to provide suitable roost sites for bats such as the following were sought:

- Trunk / branch cavities – significant holes in the trunk caused by rot or injury.
- Trunk / branch split – split / fissure in trunk caused by rot or injury.
- Branch socket cavity – Where a fallen branch has resulted in the formation of an access point into a cavity.
- Woodpecker hole – created by nesting birds suitable for use by roosting bats.
- Lifted bark – bark which has rotted / lifted to form suitable access point/roost site for bats.
- Trunk hollows – decay in heartwood leading to internal cavity in trunk.
- Ivy cover – dense / mature ivy cover where the woody stems could create small cavities / crevices.

Common Reptiles: All species of British reptile are protected by the Wildlife and Countryside Act 1981 (as amended). The common species (adder, grass snake, slow worm and common lizard) are only protected against intentional killing and injuring (but not taking).

The survey included a search of all areas where suitable habitat for reptiles to shelter under or bask may be present, lifting logs and other suitable features to search underneath. The

surveyor also maintained a careful watch whilst moving across the site to look for signs of reptiles moving to cover.

Great crested newts are afforded legal protection under European and UK law under the auspices of The Conservation (Natural Habitats &c.) (Amendment) Regulations which came into force on 21 August 2007, superseding the Habitat Regulations 1994. The 2007 amendments have increased the protection afforded to European Protected Species.

The law provides protection to adults, juveniles, efts (immature GCN) and eggs and it is an offence to intentionally or recklessly or as an incidental result of actions:

- Intentionally or deliberately capture, kill, or injure Great Crested Newts
- Intentionally or recklessly damage, destroy or obstruct access to any place used for shelter or protection (including resting or breeding places) whether occupied or not
- Deliberately, intentionally or recklessly disturb Great Crested Newts when in a place of shelter
- Possess a Great Crested Newt, or any part of it, unless acquired lawfully
- Sell, barter, exchange or transport or offer for sale Great Crested Newts or any part of them.

The survey included a search of any ponds and wetland areas within the site or immediate surrounding area nearby (where these features were accessible) and an assessment of ponds in the local area using Ordnance Survey Maps and aerial photographs to consider the potential for these species to access the site area.

Badger: Badgers are protected under the Protection of Badgers Act 1992. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as “*a structure or place, which displays signs indicating current use by a badger*”.

The survey searching for evidence of badger activity comprised two main elements. The first element involved searching for evidence of Badger setts. For any setts that were encountered, each sett entrance was noted and mapped. The following information was recorded:

- Number and location of well used / active entrances; these are clear from any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
- Number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
- Number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the
- entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

The second element of the survey involved searching for signs of Badger activity such as well-worn paths and push-throughs, snagged hair, footprints, latrines and foraging signs, so as to build up a picture of any use of the site by Badger.

Invasive Species: Attention was paid to the presence of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, the detectability of such species varies due to a number of factors, e.g. time of year, site management, etc., and hence the absence of invasive species should not be assumed even if no such species were detected during the Phase 1 survey.

A range of invasive non-native plant species are listed in Schedule 9 (Part 2) of the Wildlife and Countryside Act 1981, which makes it an offence to plant or cause these introduced invasive plants to grow in the wild, effectively making it illegal to spread the plants during development operations.

2.4 Consultations

The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2016). In evaluating ecological features. The *Geographic Frame of Reference* is a key factor taken into account when assessing the potential ecological value of a site being surveyed. The value of an ecological feature or resource is determined within a defined geographical context using the following frame of reference:

- International.
- National.
- Regional.
- County (or Metropolitan).
- District (or Unitary Authority, City or Borough).
- Local (or Parish).
- Site level only.

Within this frame of reference, certain sites may carry a statutory ecological designation, e.g. Special Area of Conservation (SAC) for internationally important sites or Site of Special Scientific Interest (SSSI) for sites of national importance. Sites of more localised nature conservation importance do not receive statutory protection but may be designated by Local Planning Authorities or other bodies, e.g. Wildlife Trusts. Such non-statutory designations or 'Local Sites' include Local Wildlife Sites (LWSs) and Sites of Nature Conservation Interest (SNCIs), for example.

A review of the available data confirms that the site is not a Statutory or Non-Statutory site of ecological significance. There are no Statutory sites within a 1km radius. The River Witham LWS runs to the east of the village of Bassingham and is 590m from the edge of the survey area at its =nearest point. The river and riverbank support botanical interest and this is a linear river habitat of local value. The river is on the opposite side of Bassingham village to the area being surveyed.

A review of the data for protected species has identified a small number of significant records relating to the immediate vicinity of the site which are summarised within the table below.

Scientific Name	Common Name	Latest Record	Number of Records
Bufo bufo	Common Toad	2012	5
Rana temporaria	Common Frog	2009	5
Triturus cristatus	Gt Crested Newt	2005	2
Tyto alba	Barn Owl	2017	13
Cygnus columbianus	Bewick's Swan	2011	5
Chlidonias niger	Black Tern,	2017	12
Podiceps nigricollis	Black-necked Grebe	2012	14
Fringilla montifringilla	Brambling	2016	4
Melanitta nigra	Common Scoter	2016	4
Bucephala clangula	Goldeneye	2017	89
Tringa ochropus	Green Sandpiper	2014	33
Tringa nebularia	Greenshank	2011	3

Alcedo atthis	Kingfisher	2016	11
Falco subbuteo	Hobby	2014	2
Falco columbarius	Merlin	2005	1
Turdus iliacus	Redwing	2011	8
Turdus pilaris	Fieldfare	2017	16
Falco peregrinus	Peregrine	2015	4
Calidris pugnax	Ruff	2011	1
Aythya marila	Scaup	2016	1
Cygnus cygnus	Whooper Swan	2017	32
Natrix natrix	Grass Snake	1977	1
Meles meles	Badger	2020	9
Lutra lutra	Otter	2020	4
Arvicola amphibius	European Water Vole	2017	2
Micromys minutus	Harvey Mouse	2013	1
Chiroptera	Bats	2019	17
Pipistrellus	Pipistrelle	2014	5
Pipistrellus pipistrellus	Common Pipistrelle	2012	4
Plecotus auritus	Brown Long-eared Bat	2003	2
Myotis sp	Myotid bat	2012	1

There are two records of **great crested newt (GCN)** within this area but these are for a pond at Carlton le Moorland situated over 750m to the south-west of the site area with open arable land providing a reasonable barrier. The nearest other amphibian records are for Common Frog and Toad situated in a pond 600m distance. Since there are no ponds or drainage ditches within or immediately adjacent to the site being surveyed and it comprises open arable land that is intensively cultivated, **the potential for amphibians to be present is considered to be very low.**

There is a single record of Grass Snake in this area but it dates from 1977. The land surrounding the field is not suitable habitat for a large number of reptiles and since there are no areas of scrub land, ponds or drainage ditches within or immediately adjacent to the site being surveyed and it comprises open arable land which is intensively cultivated, **the potential for reptiles to be present is considered to be very low.**

The majority of the site area surveyed is very open and exposed cultivated land and is close to those which will impact ground nesting in this location. There are no trees present except for a young Oak within the eastern boundary hedgerow. However, the boundary hedge is dense and seasonally trimmed and there is **potential for nesting and foraging within this hedgerow in the future.**

There are a small number of records of roosting and foraging **bats** in this area. The Surveyor has personal experience of Brown Long-eared and Pipistrelle bats roosting in Carlton le Moorland to the south and the River Witham is identified as being a significant foraging route for a number of bat species. However there are no building structures or any mature trees within the land surveyed so **the potential for roosting bat to be present is considered to be negligible and the likelihood of this being a significant foraging route is very low.**

There are records of **badger** activity in this area associated with West Brant Syke which is 600m from the survey area closer to the Witham. There are no records of setts or foraging activity within 250m of the site. Given the records of activity and the character of this land **the potential use of this land for foraging purposes by badger is considered unlikely.** The records of otter, water vole and harvest mouse are all for locations on or immediately adjacent to the River Witham over 500m from the site.

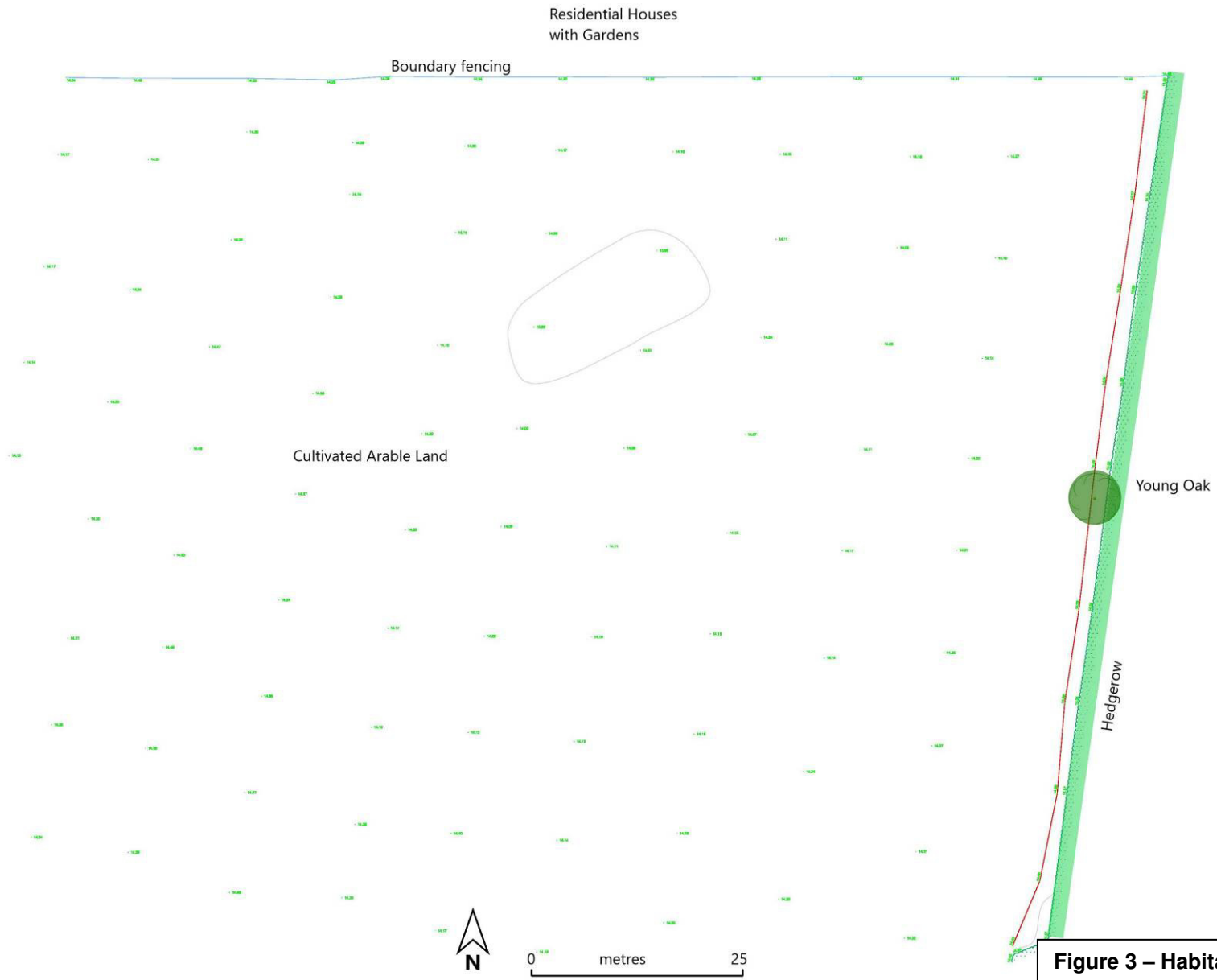


Figure 3 – Habitat Plan

3. Survey Findings

3.1 Habitat Classifications and Target Notes

The survey has identified the following habitats within the proposed development:

- Cultivated arable land
- Boundary Hedgerows with trees
- Field verge with perennials and ruderals

Target Note: Cultivated Arable Land

The entirety of the site area surveyed comprises intensively managed cultivated land sown to an arable crop. This is a uniform crop with very few arable weed species present and very narrow field margins at the base of the hedgerows.



Target Note: Boundary Hedgerows

There is a single trimmed Hawthorn (*Crataegus monogyna*) hedgerow along the eastern boundary of the area surveyed. This contains a single young Oak (*Quercus petraea*).

Hedgerow Regulations

A measure of statutory protection is afforded to hedgerows under the Hedgerow Regulations 1997, where any ecological or archaeological features are defined as being 'important'. The Removal of important hedgerows requires consent from the local planning authority, except in certain prescribed circumstances. The importance of hedgerows can be assessed according to the criteria identified in Part II Schedule I of the Hedgerow Regulations 1997. A hedgerow is identified as being 'Ecologically Important' if it has existed for 30 years or more and satisfies at least one of the criteria listed below.

- *Criteria 6:* Contain certain categories of species of birds, animals or plants listed in the Wildlife and Countryside Act 1981 or the British Red Data Books

- *Criteria 7:* The hedgerows include:
 - a) At least 7 schedule III woody species, on average in a 30m length;
 - b) At least 6 schedule III woody species, on average in a 30m length and has at least 3 associated features;
 - c) At least 6 schedule III woody species, on average in a 30m length, including a black poplar tree, or large-leaved lime, or small-leaved lime or wild service tree;
 - d) At least 5 schedule III woody species, on average in a 30m length and has at least 4 associated features.

The associated features are:

- i. a bank or wall which supports the hedgerow along at least one half of its length;
 - ii. gaps which do not exceed 10% of the length of the hedgerow;
 - iii. on average, at least one tree per 50 metres;
 - iv. at least 3 schedule 2 woodland species within one metre, in any direction, of the outermost edges of the hedgerow;
 - v. a ditch along at least one half of the length of the hedgerow;
 - vi. connections with other hedgerows, woods or ponds scoring 4 points or more (where a connection to another hedgerow scores 1 and a connection to a broad-leaved wood or pond scores 2); or
 - vii. a parallel hedgerow within 15 metres of the hedgerow.
- *Criteria 8:* Run alongside a bridleway, footpath, road used as a public path, or a byway open to all traffic and includes at least 4 woody species, on average, in a 30m length and has at least 2 associated features as listed above.

In accordance with these regulations, regular 30m sections of the hedgerow at the site were sampled i.e. woody species were recorded for 30m out of every 100m in order to sample the hedgerow in a systematic way. The average number of species for each hedgerow was derived by totaling the number of species recorded and dividing by the number of sections. This gives an average to compare with the Hedgerow Regulations Criteria. Only when the average number of species is 5 or more are associated features taken into account. An average of 5 woody species and 4 associated features are needed for a hedgerow to be defined as important hedgerow in accordance with the regulations. The exception to this is when a hedgerow runs alongside a footpath or bridleway. In this case only 4 woody species and 2 associated features are needed.

Each hedgerow is given a grade using HEGS with the suffixes '+' and '-', representing the upper and lower limits of each grade respectively. These grades represent a continuum on a scale from 1+ (the highest score and denoting hedges of the greatest nature conservation priority) to 4- (representing the lowest score and hedges of the least nature conservation priority) as follows:

- Grade 1 – High to very high value
- Grade 2 – Moderately high to high value
- Grade 3 – Moderate value
- Grade 4 – Low value

Hedgerows graded 1 or 2 are considered to be a priority for nature conservation. The hedgerows were also assessed against the wildlife and landscape criteria contained within Statutory Instrument No: 1160 – The Hedgerow Regulations 1993 to determine whether they qualified as 'Important Hedgerows' under the Regulations. This was achieved using a methodology in accordance with the Regulations.

Hedge	Height	Width	Management	Woody Species	Ground Flora	HEGS Cat.
H1	1.5m	1.5m	Box-trimmed Hawthorn with one young Oak	Hawthorn Field Rose Oak	Limited on the field side. Mostly nettle, cleaver and some dock	3



Target Note: Field Verge

The cultivation line is 1.5m from the base of the eastern boundary hedge and 1.5m from the base of the timber fence along the garden boundaries of the houses to the north. The vegetation comprises Yorkshire Fog (*Holcus lanatus*), Perennial Ryegrass (*Lolium perenne*) and Cocksfoot (*Dactylis glomerata*) with other species colonising the sward. Along the narrow north boundary field margin species such as Mugwort (*Artemisia vulgaris*), Creeping Thistle (*Cirsium arvense*) and Willowherb (*Epilobium* sp) are widespread with occasional Nettle (*Urtica dioica*), Cleaver (*Galium aparine*), Cow Parsley (*Anthriscus sylvestris*), Hogweed (*Heracleum sphondylium*), and juvenile bramble (*Rubus fruticosus*). Along the eastern boundary hedgerow these same species are present with occasional Lords and Ladies (*Arum maculatum*), Celandine (*Ranunculus ficaria*) and some Honeysuckle (*Lonicera periclymenum*) also present. Species diversity is limited and no evidence of any rare plants or plant communities was identified.



3.2 Evidence of Protected Species

During the inspection of the site notes were made on the suitability of habitats for protected species and any sightings or signs of protected species were recorded:

- The suitability of habitats for badger (*Meles meles*) was recorded and any evidence of badgers including setts, dung pits, badger paths, hairs, bedding, footprints and scratching trees was noted.
- Trees with features suitable for roosting bats were noted, such as hollows (e.g. old woodpecker holes), cracks and cavities within trunks and branches, crevices behind loose bark and ivy growth on trunks.
- The suitability of habitats was assessed for reptiles such as Grass snake (*Natrix natrix*) and amphibians (including great crested newts - *Triturus cristatus*).

- The suitability of site was assessed for nesting birds.

Surveying in June is an optimum time for many protected species such as birds, reptiles and amphibians. An experienced surveyor can make reliable judgements about the quality and composition of habitats and their potential suitability for protected species. Only an initial assessment of the site was made and no stage 2 surveys were carried out. As such, a lack of evidence of a protected species does not necessarily indicate an absence of these species. The table below provides a summary of the potential for protected species to be present within the site.

Species	Present within 1km	Connectivity	Suitable habitat on site / evidence of presence	Likelihood of presence on site
Nesting Birds	Yes	Good via hedgerows and surrounding agricultural land.	Intensively cultivated ground not highly suitable for ground nesting. Nesting along the boundary hedgerow is quite likely.	Low within the site interior but likely within the hedgerow
Reptiles	No	Poor due to management of use of the surrounding agricultural grazing land.	Site is not habitat of high terrestrial value to reptiles and no field signs found.	Very low.
Amphibians	Yes	Poor due to management of use of the surrounding agricultural grazing land.	Site is not habitat of high terrestrial value to amphibians and no field signs found.	Very low.
Bats	Yes	Reasonable due to the presence of the River Witham to the west.	No potential roost locations are present within the site. The lack of canopy cover or invertebrate habitat makes significant foraging activity unlikely	No roosting. Low likelihood of foraging along the field boundaries.
Badger and larger mammals	Yes	Access into the site area from the surrounding agricultural grazing land is possible but there are no records of this species nearby	No field signs of badger or other larger mammal was found. Habitat is of low terrestrial value to these species.	Some occasional foraging possible but not likely around the proposed development area.

Birds: The local area supports a range of bird species which includes some Schedule 1 and red-list species. During the inspection of the open cultivated land this was not identified as an area of high potential as there is little cover and the field is close to houses so predation by cats will be an issue. The boundary hedgerow is sufficiently dense to provide some potential nesting locations for bird species associated with trimmed hedgerows. The presence of nests within the hedgerow is considered highly likely in the future. ***Measures to avoid disturbance to any nests or nesting activity will need to be considered within any development.***

Reptiles: The walkover survey of the field was completed on a grid pattern (as far as was possible) looking for evidence or indication of reptiles. No sightings or physical evidence of reptiles was seen during the inspection completed in June which is within the optimum survey period for these species. The character and location of the survey area and lack of records or reptile habitat in this area makes the presence of these species unlikely. No further surveys are recommended.

Amphibians: The walkover survey of the field was completed on a grid pattern (as far as was possible) looking for evidence or indication of amphibians. No sightings or physical evidence of amphibians was seen during the inspection completed in June which is within the optimum survey period for these species. The character and location of the survey area and lack of ponds or wetland areas within or adjacent to the site makes the presence of these species unlikely. No further surveys are recommended.

Chiroptera: There are no buildings or structures within the site that could offer potential roost locations and there are no boundary trees of sufficient size or maturity to provide potential roost locations. The open character of the site area makes the presence of foraging bats unlikely in large numbers and further surveys are not recommended.

Invertebrates: The area assessed is a field of intensively cultivated arable land and does not appear to support a diverse range of flora. It is not a location with a high density of nectar producing plants is present in the surrounding landscape that will support a significant range of invertebrates. The potential for a significant assemblage of invertebrates to be present within the survey area is quite low at the present time and further invertebrate surveys are not recommended.

Mammals: During the inspection of the survey area a thorough search for evidence of badger was completed. No significant established tracks or trails indicative of badger activity were found within the field or along the eastern boundary hedgerow. Given the records of badger activity within 1km of the site, occasional foraging activity around the field boundaries cannot be ruled out in the future. It would be prudent to assume there may be infrequent foraging by badger around the margins of the field and measures will be required to protect this species.

A further survey for badger is not recommended as there is no evidence of a sett being present within the field, field boundaries or within 30m of the proposed development area. It is recommended that a construction methodology to protect badgers from accidental harm is applied to any development work that may be approved within this site as a precautionary measure. The methodology should incorporate the following measures:

- The covering of excavations overnight to prevent animals falling in, or the provision of an escape ramp (e.g. secured scaffold boards) allowing animals to climb out.
- Secure storage of all materials, fuels, wire fencing etc, that may harm badgers and other animals.
- Restricting access by site personnel to any adjoining buffer zones of trees and scrub to the west of the development area.
- The eastern boundary hedge should be fenced with heras fencing on the side of the construction zone.
- Keeping works at night-time to a minimum will minimise disturbance to commuting and foraging badgers at the site. Where works after dark are necessary, lighting should be as low as possible and directed away from boundary features such as hedgerows and trees.
- A toolbox talk from a suitably experienced ecologist to all site workers will be given prior to construction works detailing the procedures to be followed if a badger is found within the construction zone during works.
- If a badger is found within the construction zone during works, all works must stop and a suitably experienced ecologist be contacted immediately. Their advice should be followed precisely.

The potential presence of Hedgehog (*Erinaceus europaeus*) is considered quite likely as there are local records of this species being seen within the surrounding 1km area. Measures to protect hedgehogs should be taken and this should include an inspection of any vegetation by an ecologist ahead of clearance work being carried out. Any found should

be moved to a temporary refugia located in a suitable position outside of the construction area. Measures to protect badger will also be effective in protecting hedgehog.

3.3 Ecological Constraints and Opportunities

Constraints:

No significant ecological constraints have been identified during the survey. However, the following constraints should be taken into consideration:

- There is potential for nesting birds to be present associated with the boundary hedgerow,
- There is low potential for badger to be foraging around this area and accessing the site from time to time.
- There is potential for hedgehogs to be present within the site, particularly around the site boundaries.

Part 3: Initial Ecological Appraisal

4. Impact of Proposed Site Development

Within the NPPF 2019, guidance on the provision or retention of biodiversity within any proposed areas for development and measures to ensure the safeguarding of protected species are provided. Development should seek to contribute a net gain in biodiversity with an emphasis on improving ecological networks and linkages where possible.

Based on the conceptual development plan provided, the proposal is to construct twenty new residential houses within the interior of the field with an access off Vasey Close off the north boundary. The existing east boundary hedgerow will be retained.

Figure 4 below is a copy of the conceptual development plan provided by the Architect for assessment. This report is not intended to be a suitable alternative to an Ecological Impact Assessment (EclA) in accordance with the CIEEM Guidelines on Ecological Impact Assessment, 2016.



Figure 4 – Conceptual Development Plan

As noted within this report, the ‘mitigation hierarchy’ described in British Standard BS 42020:2013 should be applied in regard to biodiversity within sites being considered for development which is a stepwise process:

- **Avoidance** – avoiding adverse effects through good design.
- **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects.
- **Compensation** – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm.
- **Enhancement** – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.

The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5).

The table below considers the features present on the site in the context of the hierarchy.

Feature	Ecological Significance	Hierarchy application	Impact of proposed development
Arable Land	Low	Mitigation	Low – the arable land will be replaced with houses and landscaped gardens.
Boundary hedgerows with trees	High	Avoidance / Mitigation	The proposed development will retain the hedgerow although it may be necessary to remove and replace the young Oak as this lies very close to Plot 09.
Field verge	Low	Avoidance / Mitigation	Low – the field margins will be replaced with houses and landscaped gardens.

4.1 Potential Impact on nearby Statutory and Non-statutory sites

There are no Statutory or Non-statutory sites nearby that could potentially be impacted by the proposed construction of the new residential houses. The River Witham LWS is over 500m from the site and on the opposite side of the village of Bassingham.

4.2 Impact of the Proposals on Site Biodiversity

The level of biodiversity within the site being assessed must be a consideration in determining the impact on biodiversity that may arise from any development on the site. Within the NPPF 2019 it states that any development proposal should seek to “*contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change.....*”

Within the Guidance it specifically states that “*Planning.... decisions should contribute to and enhance the natural and local environment by.....protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils.....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.*”

The survey area comprises a field of intensively managed arable land with box-trimmed boundary hedgerow along the eastern perimeter. The area where the new houses are proposed contains no significant ecological features and the houses and garages will be a sufficient distance from the boundary hedgerow to avoid any disturbance of this, although it is noted that it may be prudent to remove the young oak tree as this lies close to Plot 9. No evidence of any significant locally rare plants or plant communities within or around the site area surveyed was identified during the survey.

Biodiversity within the proposed development area is limited by the intensive management and cultivation of this land. It is considered likely that development of the site area surveyed could be carried out in a manner that does not have any significant impact on local biodiversity. The proposal includes tree planting and the creation of a soakaway area which could be sympathetically landscaped to provide habitat for wildlife.

4.3 Impact of the Proposals on Protected Species


The requirements of Part IV of ODPM / Defra Circular 06/2005 in regard to the protection of certain species are still applicable under NPPF. The presence of protected species at the site must be taken into consideration. Under the requirements of the NPPF provision in relation to the presence of protected species on, or making use of, a site proposed for any development must be taken into account. The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined or where the impact on protected species is considered to outweigh the benefit of development.

The inspection completed in June 2021 did not identify any physical evidence or field signs of protected species within the survey area but assessment of records and the landscape has identified that there is potential for some protected species to be present which will require mitigation:

Birds: There is negligible potential for nesting birds to be present within the area where the new houses are to be constructed. However, the eastern boundary hedgerow could support nesting birds and measures should be taken to avoid disturbance to this.

Badger: The presence of this species in the area where the new houses are being proposed is unlikely but since there are records of foraging by badger to the south of Bassingham measures to protect these species from harm during construction activities will be required. These measures should also be applicable to the protection of hedgehogs.

General Recommendations: It is recommended that as part of landscaping works biodiversity enhancements should be incorporated. Bat boxes, bird nest boxes and hedgehog refugia should be included within any development, particularly near to the western boundary of the development area.



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Web references

MAGIC: Designated area data downloaded from URL <http://www.magic.gov.uk.html>

National Biodiversity Network: Protected species data downloaded from URL <http://data.nbn.org/interactive/map>

Appendix 1 – Plant Species List

Tree and Shrub Species	Ground Flora and Perennial Species
<p>Oak (<i>Quercus petraea</i>) Field Rose (<i>Rosa arvensis</i>) Elder (<i>Sambucus nigra</i>) Hawthorn (<i>Crataegus monogyna</i>)</p>	<p>Bindweed (<i>Calystegia sepium</i>), Black Medick (<i>Medicago lupulina</i>), Bramble (<i>Rubus fruticosus</i>) Chickweed (<i>Stellaria media</i>) Cleaver (<i>Galium aparine</i>) Clover (<i>Trifolium repens</i>), Cocksfoot (<i>Dactylis glomerata</i>) Cow Parsley (<i>Anthriscus sylvestris</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Dandelion (<i>Taraxacum</i> sp), Dock (<i>Rumex obtusifolius</i>), Hogweed (<i>Heracleum sphondylium</i>) Lesser Celandine (<i>Ranunculus ficaria</i>) Lesser Willowherb (<i>Epilobium hirsutum</i>) Mayweed (<i>Chamomilla suaveolens</i>), Meadow Grass (<i>Poa trivialis</i>), Mugwort (<i>Artemisia vulgaris</i>) Nettle (<i>Urtica dioica</i>), Perennial Ryegrass (<i>Lolium perenne</i>) Plantain (<i>Plantago lanceolata</i>) Ragwort (<i>Senecio jacobaea</i>), Red-dead Nettle (<i>Lamium purpureum</i>) Spear Thistle (<i>Cirsium vulgare</i>), Wheat – arable crop Willowherb (<i>Epilobium</i> sp) Yorkshire Fog (<i>Holcus lanatus</i>)</p>

This species list records the species seen during the site inspection and is not presented as a detailed botanical survey of the site.

Appendix 2 – Biological Records

Separate Appendix