



**Land West of Garboldisham Road,
East Harling, Norfolk**

**Ecological Impact Assessment &
Biodiversity Net Gain Statement**



September 2025



Client	Silverley Properties
Job title	Land at East Harling
Job number	0404
Date	16/09/2025

	Name	Position	Date
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Revision	Dr Matthew Denny	Director	16/09/2025

Declaration of compliance

The information we have provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinion.

Disclaimer

This report has been prepared for Silverley Properties, jointly with the current landowners: Isla Marion McTaggart, Terry Davidson, Damian John Sullivan, Graeme Matthew Robertson.

This report can be relied upon by the above and any future purchaser and developer of the land in line with the purpose of this report.

The surveys within this report can be relied upon for two years of seasonal survey opportunities, i.e. until spring 2026 for bat and reptile surveys, and until spring 2027 for the PEA. After these dates, further use should be subject to review by a suitably qualified ecologist.

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Summary

Considerations	Description	Comments & Recommendations
Ecological Importance of the Site	The site comprised nine habitats, all of which are common and widespread in the area. There are specific habitats of local ecological value, including the boundary hedgerows, trees and scrub, the muck heaps, wood pile and longer grassland/tall forbs around some field margins.	The site contains habitat suitable for widespread birds and invertebrates. From dedicated reptile surveys, grass snakes and slow worms are known to be present around the field margins, with grass snake breeding on the site. Reptiles are protected from killing and injuring, and precautionary measures should be taken to ensure they are not harmed during site clearance and development work. Bat activity surveys in the spring, summer and autumn seasons, have shown the scrub and boundary hedgerows/trees provide foraging and commuting habitat for four common and widespread bat species, whilst two mature trees on the western boundary have potential to support roosting bats. There are two ponds and two wide ditches within 250m of the site, marked on the 1:10,000 scale OS map, with an additional pond 260m away. The two ditches were flowing and unsuitable for breeding great crested newts (GCNs). The closest pond 135m away has good suitability for GCNs. One marked 220m away was found to only be ephemeral after very heavy winter rain, with no standing water in February. The third, in woodland 260m away, has good suitability for GCNs. The site supports some suitable habitat for great crested newts during their terrestrial phase. However, the distance from the ponds and the fact the majority of the habitat on the site is suboptimal (grazed grassland) means the species is unlikely to make regular use of the site even if they do breed nearby. A new dedicated wildlife pond is proposed and will be designed specifically to encourage amphibians.
Further Assessments / Surveys	Badger Survey	No evidence of badger presence was found during any of the surveys, but the site provides suitable habitat for the species. Badgers and their setts are legally protected from disturbance and damage. They are an itinerant species and may colonise suitable habitat rapidly. To ensure this has not happened prior to development work, a badger survey of the site is recommended approximately six weeks prior to any works commencing.

Considerations	Description	Comments & Recommendations
	Habitats Regulations Assessment	As the site is located within 5km of the Thetford Forest SPA/SSSI, Natural England's Impact Risk Zone Tool recommends that an assessment of recreational pressure impacts on this designated site should be undertaken for residential development at this location. A separate standard HRA will be provided and there is a recommendation that the standard financial contribution per new residential unit be made to the Norfolk GIRAMS Strategy (March 2021)
	2no willow trees with possible bat roost potential (BRP) hidden behind heavy ivy cover.	All existing trees will be retained and should be screened from any external lighting.
Avoidance and General Mitigation / Enhancements	Precautionary working measures	To avoid potential harm to reptiles, amphibians, hedgehogs and other terrestrial fauna, we recommend appropriate precautionary working measures during site clearance work, such as careful hand removal of potential sheltering habitat (muck heaps and wood pile) during the active (non-hibernation) season, and the careful phased cutting of longer and woody vegetation during the appropriate seasons.
	Trees, hedgerows and scrub provide the most important on-site habitats	Three 4.5m wide sections of the eastern hedgerow and a 3m section of the central linear scrub will be lost to development. This will be offset by planting new hedgerows and re-enforcing existing hedgerows with supplementary planting and appropriate management, such that there will be an overall increase in hedgerow and scrub habitat. Lighting should be designed such that light is not shed onto these habitats, which is known to reduce insect and bat use.
	Nesting Birds	Potential bird nesting habitat such as the wooden stable building and woody vegetation should be removed between September and February, which is outside the nesting bird season. Replacement bird-nesting opportunities should be provided within the new development. Retained vegetation should be protected from damage during the construction phase using standard tree protection fencing.
	Site measures	Cover trenches or provide planked escape routes to allow any animals that fall in to escape. Store materials off the ground and do not leave temporary standing water. Store fuel and chemicals where leaks can be contained. Consider the use of silt traps close to the wet ditch where appropriate. Avoid the use of pesticides and slug pellets.

Considerations	Description	Comments & Recommendations
	To increase the ecological value of the site	Create species-rich grassland in new communally managed grassland areas by sowing appropriate wildflower seed mixture to increase botanical species diversity. In the south-west wildlife mitigation area, this will be managed using traditional hay meadow methods, whilst other communal open spaces can be sown with a wildflower lawn mixture and managed as a normal lawn/amenity grassland. Plant new species-rich native hedgerows and trees where appropriate on site and manage them and existing hedgerows appropriately to increase their species diversity and improve their structure. This will also provide replacement and enhanced habitat for reptiles, amphibians and hedgehogs.
	To increase the ecological value of the site	Install roost features for bats, and nest boxes for appropriate bird species (e.g. house sparrow, swift, swallow and house martin) on the new buildings and boundary trees and minimise artificial lighting following a specific bat-sensitive lighting scheme. Include hedgehog links in any new fencing. Install insect nesting boxes and habitat piles for reptiles, amphibians and hedgehogs.

1. Introduction

1.1 Aims of Study

Denny Ecology was commissioned to undertake a Preliminary Ecological Appraisal of the potential development site (from hereon referred to as 'the site') in June 2021, further Phase 2 ecology surveys in spring 2023, and PEA updates in 2023 and 2025. This report details the methods and results of this study and assesses these results in relation to the potential ecological effects of the proposed development.

1.2 Site Location

The site is located on the southwest edge of the village of East Harling in Norfolk, approximately 32km southwest of the city of Norwich. The site and its location are shown on the aerial image in Figure 1. It is situated to the west of the B1111 Garboldisham Road, with most of the village housing located to the north and east, although there are some houses to the south, forming ribbon development along the Garboldisham Road. The wider landscape around the site is mostly grassland, with some small, scattered areas of deciduous woodland. Arable farming becomes the most dominant land use further away from the village.

1.3 Site Description

The proposed development site is 0.6985 ha in area and comprises a grass field with a central band of scrub. In 2021, electric fencing divided the field into compartments, with sections being grazed in rotation by horses and sheep in 2021. In 2023 and 2025, the field was not subdivided, and was being grazed by two horses. In the northeast corner is a wooden stable building, with an area of rotational compost/muck heaps immediately to the south, interspersed with tall ruderal vegetation. The northern end of the field is bounded by fencing with a short section of intact non-native hedgerow. The eastern boundary is native hedgerow, whilst the southern boundary is native hedgerow with trees. The western boundary is a mix of linear mixed scrub, , whilst the remainder is bounded by an intact hedgerow with trees. A well vegetated, narrow wet ditch runs along the western boundary, and the narrow field margins, beyond electric fencing, were in a generally ungrazed state in 2023 with tall ruderal/tall grassland mosaic.

1.4 Proposed Works

The proposal is to build new residential housing comprising 12 new semi-detached dwellings and associated garages and/or parking spaces and access roads/pavements. A small public open space with a new pond is proposed for the southwest corner of the site. Three short sections (4.5m wide) of the existing eastern boundary hedgerow and a 3m section of the linear scrub dividing the field will be removed to facilitate new access. The preliminary layout plan is shown in Figure 2. Note, this application is for outline planning permission and the layout may be subject to change at the detailed design stage.

Under current proposals, all trees on or overhanging the site are to be retained and do not require further work, although the Arboricultural Impact Assessment (Haydens 2022) recommends that the ivy cover on the willow along the west boundary (marked T004 in the AIA and T2 in this report) be removed to allow a detailed arboricultural inspection.

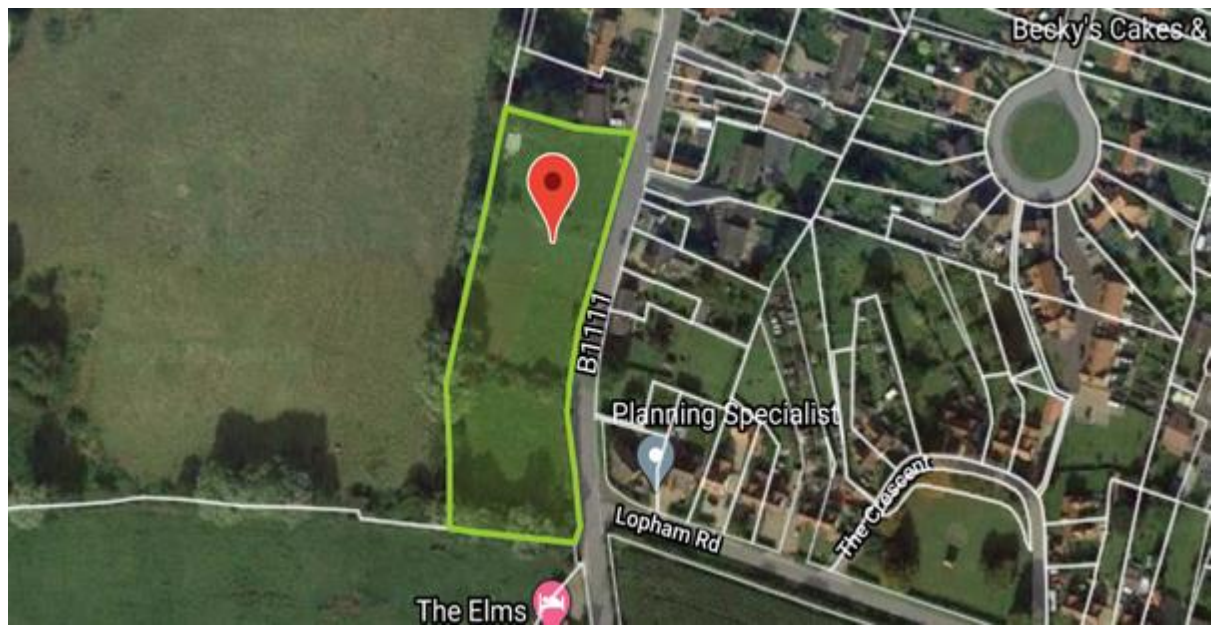


Figure 1. Site location (outlined in green)



Figure 2. Preliminary layout plan

2. Methods

2.1 Desktop Survey

A formal request was made for existing ecological data up to 2km from the site, including statutory and non-statutory designated sites, held by the Norfolk Biodiversity Information Service (NBIS) in 2021. As these data are no more than two years old, they are considered to remain relevant to the site and the proposed development impact assessment.

The Multi Agency Geographic Information for the Countryside (MAGIC) website, which is managed by Natural England, was reviewed to identify further ecological information pertaining to the 2km search area, including links to statutory designated site citations, impact risk zones (IRZs) for these sites, European protected species information, and locations of priority habitats.

The OS 1:10,000 map of the area and an aerial photograph on Google Earth (Google Inc 2011) were also used to determine the possible habitats present on, and adjacent to the site. We searched for ponds within a 500m buffer of the site, to assess potential for great crested newts *Triturus cristatus* (GCNs) to disperse onto the site. A 500m radius was used as the search area as almost all great crested newts stay within 500m of their breeding pond, although it should also be noted that research shows that few disperse over 100m from their pond (Müllner 2001, Cresswell and Whitworth 2004).

2.2 Field Survey

The first survey was undertaken on 22nd June 2021. It was dry, with a temperature of 20°C, 50% cloud cover, and a light breeze (Beaufort 2). The field survey area extended across the whole of the site. The site was walked to create a Phase 1 habitat map. In addition, the surrounding fields to the west and south were viewed from the site, and the two ponds within 500m were visually inspected (in the case of Pond 1 only distantly due to access restrictions), and GCN Habitat Suitability Index scores calculated (Oldham et al. 2000). All areas of the site were accessible for survey, and the weather conditions and time of year were optimal for undertaking the survey.

A repeat survey was undertaken on 30th May 2023 to check whether the baseline conditions remained the same. Weather conditions and time of year for this survey were optimal.

Further updating surveys, checking the recategorization of the habitats to UKHab and that no significant changes had taken place, on 21st February 2025 and 15th May 2025.

Surveys were undertaken variously by Rebecca Cattell (Ecologist), Joe Solomon (Assistant Ecologist) and Dr Matthew Denny MCIEEM (Principal Ecologist). Matthew Denny, who has 33 years working as a professional ecologist, directed all surveys.

2.2.1 Extended Phase 1 / UKHab habitat Survey

During the 2021 and 2023 visits, the survey area was walked to categorise habitats according to Phase 1 survey methodology (JNCC 2010) and assess them and the potential impact of the proposal using standard PEA methodology (CIEEM 2017). During the 2025 visits, the habitats were categorised using UKHab methods, to align with the requirements of Biodiversity Net Gain (BNG).

In addition, on all survey visits, evidence of, and potential for habitats to support protected species

and other species of importance, was recorded, and general potential ecological constraints for the proposed development were assessed. In particular, trees on the site were assessed for potential to support roosting bats (following methods recommended by the Bat Conservation Trust (Collins 2023)) and nesting birds, and habitats were assessed for their potential to support amphibians, reptiles, badgers and other protected species. Where possible the surrounding area up to 30m away was searched for evidence of badgers.

2.2.2 Building Inspection

The wooden stable building was inspected internally and externally during the survey, searching for evidence of, and potential to support roosting bats, following methods recommended by the Bat Conservation Trust (Collins 2023), as well as for evidence of use by barn owls and other nesting birds.

2.2.3 Reptile survey

As the site was identified as having some reptile potential, and grass snakes were recorded on site in 2021, a seven-visit reptile survey was commissioned in summer 2023. Methods followed standard methodology guidelines (Froglife 1999; Sewell *et al.* 2013). Surveys were undertaken by ecologist Joe Solomon, who has been undertaking reptile surveys for over 10 years.

Thirty artificial refugia (roof felting mats of 0.5m²) were deployed across the survey area, concentrated in areas of habitat considered most suitable for reptiles: the taller vegetation around the field margins, behind the perimeter electric fence beyond the grazing distance of the horses. Grazed areas where horses would be likely to tread on the mats which could injure reptiles, were therefore avoided.

Reptiles are cryptic species, rarely seen without deployment of refugia. Refugia provide reptiles with the opportunity to warm up as well as provide protection from predators and therefore act as an attractant where reptiles tend to congregate, facilitating detection during surveys.

Following initial refugia deployment in June 2023, seven survey visits were subsequently made until the last in mid-August. Weather conditions in July were hot and sunny, so the final three survey visits were undertaken in the first half of August, when the weather was unseasonably cool and ideal for reptile surveys. Dates, times and weather conditions on all surveys are presented in Table 1.

During each survey visit, a transect was slowly walked around the survey area, checking for reptiles basking on and under refugia and checking suitable habitat between refugia. The transect start and end points, and direction of walking, was varied between different survey visits, to ensure there was no systematic survey bias in terms of spatio-temporal sequencing.

Table 1. Reptile survey dates, times and weather conditions

DATE	TIME	TEMP	CLOUD COVER	WIND	RAIN
6/21/2023	8am-2pm	21	sun	gentle	day before
6/23/2023	6am-noon	22	sun	still	none
6/26/2023	6am-noon	22	sun/cloud	windy	none
6/28/2023	6.30-11am	22	sun/cloud	gentle	none
8/1/2023	9.30-2pm	17	cloudy	windy	day before
8/11/2023	6am-noon	19	cloudy	gentle	light rain
8/14/2023	4pm-7pm	22	sun/cloud	gentle	light rain

2.2.4 Bat Activity Survey

The original draft PEA report (Denny Ecology 2023) assessed the site as having potential for foraging and commuting bats. Following standard recommendations (Collins 2016) (note these surveys were undertaken before the publication of the 2023 edition of the guidelines), the site was assigned overall low suitability for foraging and commuting bats at PEA stage, with value assigned mainly because of the presence of the mature boundary hedgerows, surrounding pasture and nearby buildings. As a result, bat activity surveys were recommended and commissioned in spring 2023.

Surveys were undertaken by Matthew Denny and Joe Solomon, who are experienced bat surveyors. All surveys followed standard methodology guidelines (Collins 2016), with spring, summer and autumn survey sampling periods.

Matthew Denny, who is a licensed bat surveyor (Natural England class 2 licence registration number: 2015-14774-CLS) and has been carrying out bat surveys since 2003, coordinated all bat surveys.

Transect surveys

A transect was walked around the whole site, repeating the route twice on each of three evenings: one each in the spring, summer and autumn seasons (June, August & October 2023) respectively. The transect route followed the site boundaries and an inner route weaving across the field to cover more open field habitats. The start and end points of the transect were at the northeast corner of the site, at the field gate.

Surveys were started 15 minutes before sunset on each visit and continued for approximately 1.5 hours after sunset. Bat detectors used were Wildlife Acoustics EM Touch 2 Pro. Dates, times and weather conditions for these surveys are presented in Table 1 below.

Table 1. Dates, times and weather conditions for bat surveys

Date	Times	Sunset time	Weather
30/05/23	20:52-22:37	21:07	15oC start; 14oC end; cloud 100%; ight NE; dry
14/08/23	20:10-21:55	20:25	17oC start; 14oC end; cloud 60%; light SW; dry
17/10/23	17:44-19:29	17:59	13oC start; 11oC end; cloud 30%; light E; dry

Static surveys

For low bat potential sites, Collins (2016) recommended undertaking static surveys of a single location in the three active bat seasons (spring, summer and autumn), recording for five nights in each season. We followed this protocol, deploying the detector on the following dates in 2023: 25-30 May, 14-19 August & 12-17 October.

An autonomous-recording static bat detector (Titley Anabat Express zero-crossing) was deployed in a hawthorn tree in the central linear scrub, about 5m from the eastern hedgerow. This location was chosen as it provided suitable bat foraging and commuting habitat close to the proposed hedgerow breaches and was away from inquisitive horses. It afforded a high, uncluttered location from which good recordings can be made. The static detector was programmed to record each

night, starting 30 minutes before sunset and ending 30 minutes after sunrise, as is standard practice.

Weather conditions were generally good during these monitoring periods, with light winds and low rainfall. Temperatures were consistently at, or above the long-term average for the spring (8°C), summer (11°C) and autumn (8°C).

Call sonogram analysis

Transect detector call data were recorded in full spectrum and viewed and analysed visually post-hoc, using the software package Kaleidoscope (Wildlife Acoustics) to identify the species. Static detector call data were recorded in zero-crossing and were analysed visually using AnalookW software.

Sound recordings are split into files a maximum length of 15 or 30 seconds. A vast majority of these files are much less than 15 seconds, so in effect each sound file can be equated to a bat pass at the detector location, the number of which can be used as a proxy measure of bat activity intensity.

In some circumstances recorded passes constitute a single individual commuting or foraging for a very short time at the location. A relatively continuous sequence of files can be generated either from individual bats repeatedly passing the location back and forth, whilst foraging, or from a stream of different individuals passing the detector and moving on. The analysis does not automatically distinguish between these types of passes as individual bats of the same species cannot be identified.

The density of recorded bat calls/passes was used as a proxy for habitat use across the site. However, bat call analysis does not allow individual bats to be identified, so unless more than one individual can be elucidated from the sequence of calls within a single sound file, the level of activity cannot be related to individual bat density, but rather to a relative index of use.

2.3 Duration of validity

The information provided within this report, including all assessments, conclusions and recommendations, are based on the studies and limitations to survey detailed. This appraisal is based on the knowledge that the development proposals are for residential housing, but they should be reviewed once a detailed design scheme is available and once the further recommended surveys are undertaken. The assessments made assume that site habitats will continue to be used for their current purpose without significant change until development commences.

Changes in site habitats and the ability of the site to support protected species may alter over time. Our professional judgement and knowledge of the site and the species it may support can be used to determine the period for which the undertaken surveys and this appraisal remain valid.

For the purposes of this report, all information presented is valid for two seasonal years, i.e. until spring 2026 for the reptile and bat surveys, and spring 2027 for the PEA, or until new information becomes available from further surveys, or if the proposed development plans change, requiring revised interpretation of the results and assessment.

2.4 BNG Plan

The Site does not meet the requirements for using the Small Site Metric (SSM) as over nine new units are proposed. The Statutory Guidance and Metric Calculator published in July 2024 were used to calculate the BNG value of the existing baseline as well as the predicted BNG from the current draft proposals. There are no existing watercourses on the Site (all ditches surrounding the site are outside the red line boundary). Therefore, the target BNG was for a 10% uplift in area and hedgerow habitats only.

Proposed habitat creation was assigned to habitat types and areas of these habitats were measured. These formed the proposed scheme within the BNG calculation.

3. Results

3.1 Desktop Survey

3.1.1 Ponds

Two ponds were identified within 250m of the site, both to the northwest and mapped in Figure 3 below. Pond 1 is located within a grass field 135m from the site boundary. Pond 2 is located 220m west of the site. Pond 3 is located within deciduous woodland 260m from the site boundary. Whilst there are ditches immediately adjacent to the site, these were found to be too narrow and flowing to support great crested newts (GCNs). However, the map identified two wider sections of ditch 220m south-west of the site, which could be suitable for GCNs.

There were no significant barriers to the dispersal of GCNs, such as roads, housing or rivers, between these ponds/ditches and the site with the intervening grassland considered being suitable habitat across which GCNs could freely disperse.

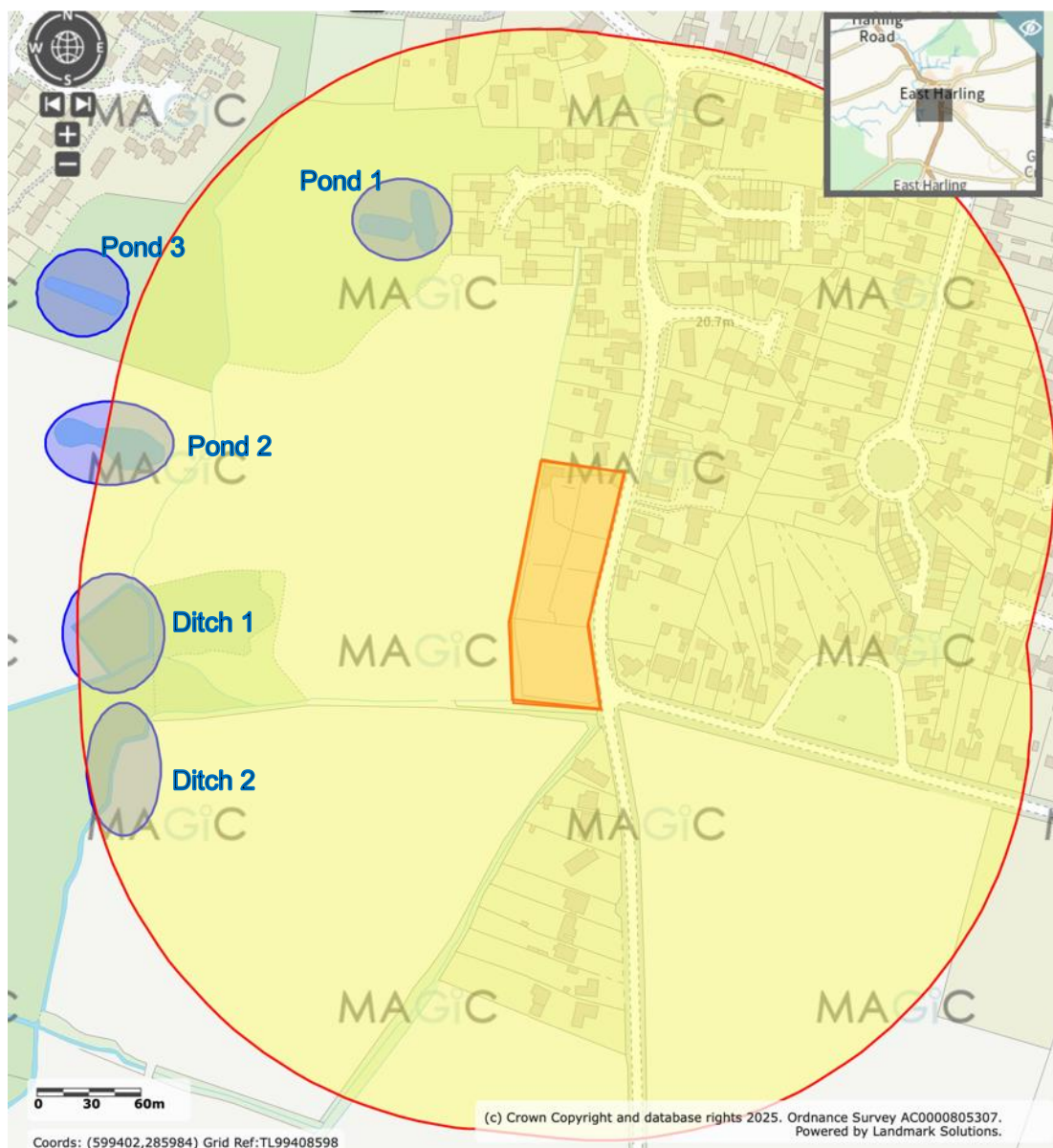


Figure 3. Map showing the ponds and wider ditches within a 250m buffer (red circle with yellow fill) around the site (central red/pink polygon), and a third pond just beyond the buffer

3.1.2 Designated Sites

All statutory and non-statutory designated sites within 2km of the site are mapped in Figure 4 below.

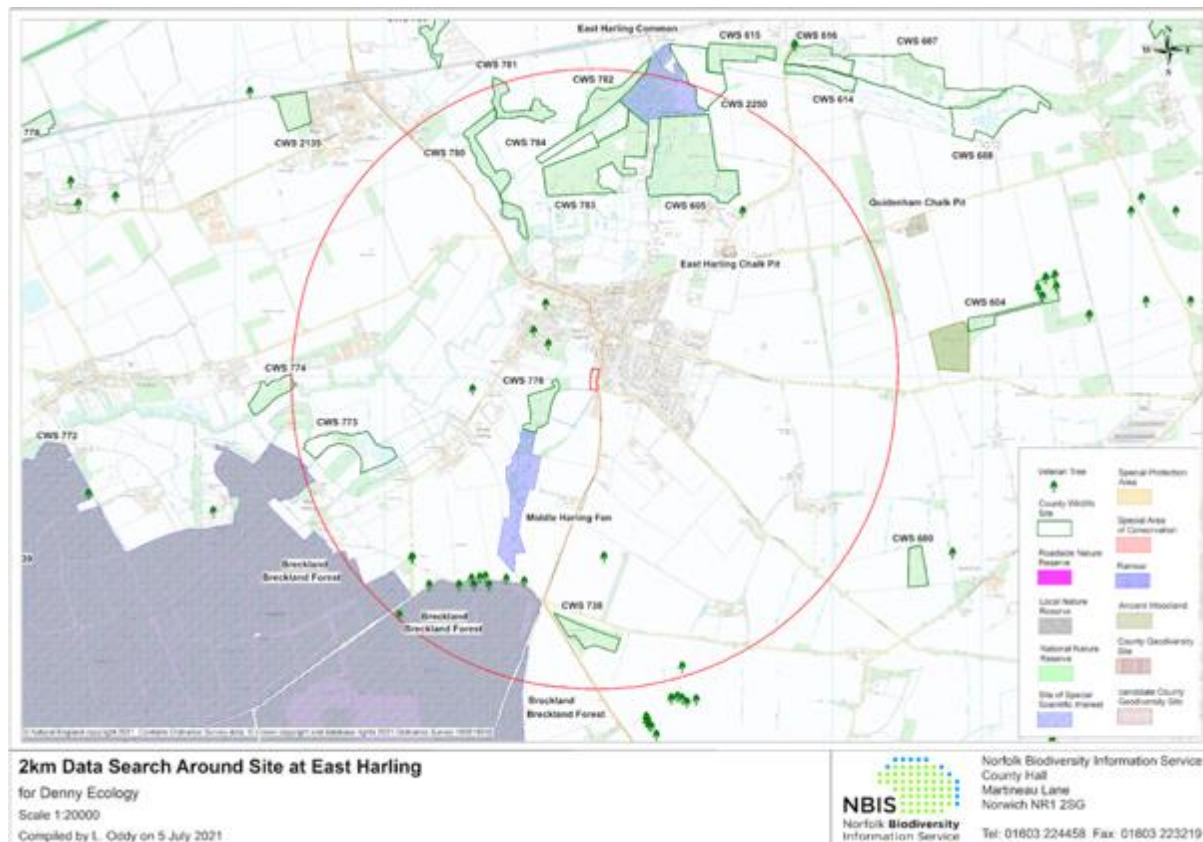


Figure 4. Statutory and non-statutory designated sites within 2km (red circle buffer) of the site (central red polygon)

Statutory Sites

Three SSSI sites are located within 2km of the site: Middle Harling Fen, 470m to the southwest, Breckland Forest 1.37km to the southwest, and East Harling Common, 1.65km to the north. Middle Harling Fen is designated for its calcareous fen communities and associated flora, with dry calcareous and unimproved neutral grassland on surrounding land within the SSSI. Breckland Forest is designated for its internationally important breeding populations of nightjar and woodlark, for its important assemblage of Nationally Rare and scarce vascular plants including five rare species listed on Schedule 8 or the Wildlife and Countryside Act, and its exceptionally rich invertebrate fauna, including a number of Red Data book and nationally scarce species. East Harling Common consists of a mosaic of vegetated calcareous and acid fen and intervening dry chalk grassland, and their associated flora.

The only Internationally Designated Site for wildlife is Breckland Special Protection Area (SPA), 1.37km to the southwest. This is designated for its internationally important populations of breeding woodlark and nightjar, both of which are Annex I species on the European Bird Directive (1979).

The site falls within the Impact Risk Zone (IRZ) for these SSSIs and SPA, with the LPA is advised

to consult Natural England for any residential developments with a total net gain in residential units, which would include this proposal. More specifically, the following is stated:

Further information required - recreational pressure impacts to European Sites (habitats sites) in Norfolk

This development site is within the zone of influence (Zoi) for recreational pressure impacts to one or more European Sites (habitats sites) scoped into the [Norfolk GI RAMS Strategy, March 2021.pdf \(west-norfolk.gov.uk\)](#).

Within this Zoi, proposals for any net increase in residential units (including new tourist accommodation) will have a likely significant effect on the qualifying features of the European Site(s) (habitats site(s)) through increased recreational pressure when considered either alone or in combination with other plans and projects.

Your authority has measures in place to manage these potential impacts through a strategic solution which Natural England considers will be effective in preventing adverse impacts on the integrity of the site(s).

Notwithstanding this, Natural England advises that these measures should be formally checked and confirmed by your authority, as the competent authority, via an **appropriate assessment** in view of the [Natural England Access to Evidence - Conservation Objectives for European Sites](#) and in accordance with the Conservation of Habitats & Species Regulations 2017 (as amended).

Non-Statutory Sites

Eleven County Wildlife Sites (CWSs) lie within 2km of the site. The closest is Woodland adjacent to Middle Harling Fen (code 776), approximately 200m to the west, which is designated for its dry woodland interest. The others are all over 1km from the site, and therefore considered very unlikely to be impacted by the proposed development.

There are no Priority Habitats or Veteran Trees recorded from the site.

3.1.3 Protected and Notable Species

The NBIS data search returned 284 records of species of conservation concern, including 56 records of mammals, 136 records of 45 different species of birds, two of fish, two of reptiles, 52 of moths, two crustacean and seven plant records.

Of these records, of most relevance to the proposal include nine records of brown hare, six records of hedgehog (including one on the opposite side of Garboldisham Road from the site), three records of badger, two records of white-clawed crayfish and a single record each of grass snake and adder. There are also small numbers of records of nine species of bat, including the uncommon Western barbastelle.

Of the bird species recorded, most are unlikely to occur on the site, given the habitats present. These include the Schedule 1 species nightjar and woodlark, which have been recorded holding breeding territory within the 1km² to the north of the site (TL9986) but which are specialist open woodland and heathland species, habitats which do not occur on or adjacent to the site.

Five invasive, non-native species have been recorded within the search radius: least duckweed, parrot's-feather, Canada goose, American mink and Chinese muntjac.

A search of MAGIC for granted European Protected Species (EPS) mitigation licences and existing great crested newt eDNA and licence return records, showed no licences (bats or great crested newts) issued, or great crested newt records within 2km of the application site.

Updated web-based desk studies in 2023 and 2025 did not find any significant additional records.

3.2 Field Survey

A total of nine UKHab habitats are present on the site. These are mapped in Figure 5, and each is described in turn below. The condition of each habitat (where applicable) has been assessed using the standard Defra assessment forms. Completed forms are available in the separate excel file (East Harling - Condition assessment sheets).

3.2.1 UKHab Habitats

Area habitats

Modified grassland – poor condition

The majority of the site comprised species-poor modified grassland, divided up into sections by electric fencing in 2021 (but not other years) and a linear section of dense scrub (see below). The compartments were variously ungrazed or grazed by horses and sheep in 2021. In 2023 and 2025, the whole field was undivided, but still with a perimeter electric fence, with two horses grazing the field. Dominant species were grasses, including cock's-foot, annual meadow grass and perennial rye grass. The margins of the field in all years, and those sections with less intensive grazing in 2021, were characterized by a longer and less uniform sward structure, providing suitable reptile habitat. Photos of the grassland in each survey year are presented in Photos 1-3, below.

The standard condition assessment for this grassland demonstrated it was in poor condition in all years surveyed, as it didn't pass the key criterion of number of species per square-metre. See the separate condition assessment excel file.

Tall forbs – moderate condition

Two patches of tall forbs were present on the site in 2025 – nettles around the muck heap (see photo below), and a more varied and established strip of nettles and gallium along the northern boundary (Photo 4).

Mixed Scrub – moderate condition

A line of dense mixed scrub runs west-east through the site, approximately one-third of the way north from the southern boundary (see Photo 4 above), and a similar line in the south-west corner of the site. They were dominated by elder *Sambucus nigra* and bramble and are considered likely to be the remnants of a former hedgerow.

Bare ground (poached ground and muck/compost heaps) – poor condition

In the northwest corner of the site, immediately south of the stable, was an area of rotational compost/muck heaps, some covered in black plastic sheeting. This habitat is ideal for breeding grass snakes, as the t and compost provide a warm substrate in which to lay eggs. An adult grass snake and hatched grass snake egg cases were seen in this area during the survey.

An extensive area of bare ground formed by the poaching of grazing animals, was present at the western end of the central linear scrub patch. This is particularly evident from the Google Aerial image (Photo 10) but was still present in 2025 (see Photo 4).



Photo 1. Horse-grazed modified grassland in a) 2021, b) 2023 & c) 2025, showing very short uniform sward. Note, b) also shows eastern boundary hedgerow behind



Photo 2. a) Sheep-grazed section in 2021 showing more varied sward height and structure, with
b) same area in 2023 now uniformly short and horse-grazed



Photo 3. Typical area of grazed sward in 2021



Photo 4. Tall forbs along northern boundary

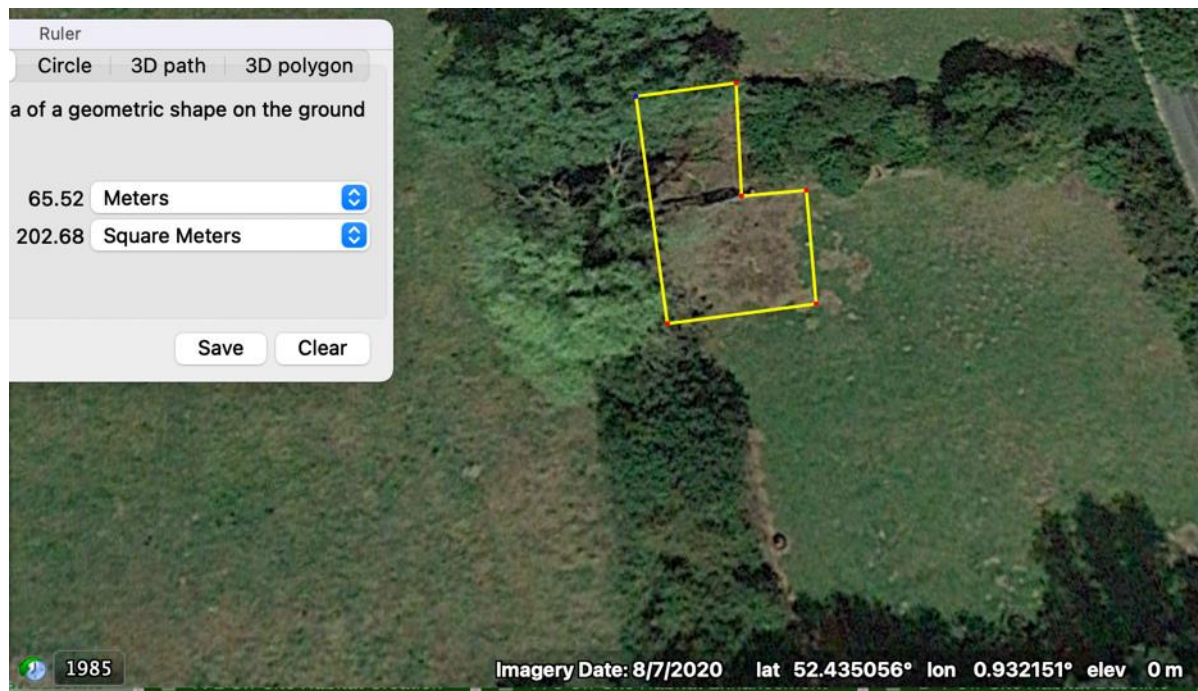


Photo 5. Google Earth aerial image from 2020 showing 200m² area of poached bare ground still present in 2025. Note also the two areas of linear mixed scrub to the east and south



Photo 6. Muck and compost heaps surrounded by tall forbs (nettles) taken in 2021. In 2023 the area of muck heaps had reduced significantly, but had increased by 2025 (see Photo 10)



Photo 7. Muck and compost heaps south of the stables taken in May 2025. Note area of surrounding tall forbs (nettles) still present



Photo 8. Poached bare ground (right), log pile and western boundary hedgerow with trees (background right)

Other habitat features

A log pile (see photo 8) near the south-west corner of the site provides ideal shelter for a range of small animals throughout the year, including potentially for hibernating animals. This pile should either be retained *in-situ* or should be dismantled carefully by hand and relocated to an appropriate undisturbed location within the new development.

Linear habitats

All hedgerows on the site, except the northern boundary hedgerow, comprised native species, but were species-poor. Dominant species present were willow *Salix sp*, ash *Fraxinus excelsior*, oak *Quercus robur*, hawthorn *Crataegus monogyna* and bramble *Rubus fruticosus*.

Native Hedgerow with Trees associated with ditch – both in good condition

Hedgerows with trees were found along the south and central west site boundaries. The south and west boundary hedgerows were associated with an off-site ditch. The only trees with possible bat roost potential were two mature willows along the western boundary, numbered T11 & T14 in the associated tree survey report (Ligna Consulting 2025). T14 was a mature willow with ivy cover. Although no potential bat roosting features were seen, it was considered large and mature enough to likely support some features obscured by the ivy. T11 was a mature willow, not identified to species, which was covered in thick ivy and considered to possibly support bat roosting features, although none could be seen.



Photo 9. Tree T11 on western boundary, with heavy ivy cover possibly obscuring features with bat roost potential. Below is a shrubby layer of low brambles and hedgerow

Native Hedgerow – Good condition

A mixed species native hedgerow, largely intact and dominated by hawthorn, along the eastern boundary. It is 2.5m wide and 3m high.



Photo 10. Native hedgerow along east boundary (to left) and dense linear scrub running through the centre of the Site (to right) in 2021



Photo 11. Native hedgerow along east boundary in 2023

Non-native hedgerow

The northern site boundary comprised both a fence and a section of intact non-native species-poor hedgerow, composed of a single species – Leyland cypress *Cypressus leylandii*.



Photo 12. Intact non-native Leyland cypress hedge and tall forb vegetation along northern boundary

Line of trees – Moderate condition

Part of the western boundary is lined a mix of native trees of mixed ages, with no shrubby layer beneath. This corresponds to trees labelled T3-T10 in the arboricultural report.



Photo 13. Line of trees along western boundary

Buildings

In the northwest corner of the site was a single-storey wooden horse-stable, comprised of two adjoining blocks at right angles to each other. Their construction was essentially the same, with a fascia of rough single-ply wooden boards, and corrugated metal side and rear walls lined internally with composite plywood boarding. The roofs were single-ply corrugated metal sheeting. The only cavities were the gaps between the metal sheet and internal plywood walls. These would be unsuitable for roosting bats as the metal sheeting does not have suitable stable thermal properties. All parts of the stable building were considered unsuitable for roosting bats and the building as a whole has negligible bat roosting potential. No evidence of nesting birds was found in the building. These buildings were still present in the same state in 2023 and 2025, with no nesting birds evident.



Photo 14. Wooden stable building in northwest corner – southern section



Photo 15. Wooden stable building in northwest corner – northern section

Figure 5. Baseline UKHab Habitat Plan



Off-site ditches and ponds

Narrow ditches, with shallow water at the time of survey, ran the length of the western and southern site boundaries, on the outside of the hedgerow/line of trees. The hedgerows form the site boundary and the ditches are located just outside the site. The western ditch was well vegetated at the time of survey, mostly with tall ruderal vegetation along the banks, overgrowing and obscuring most of the narrow watercourse (c.50cm wide), although some aquatic plants were evident, such as yellow iris. The southern ditch was slightly less well vegetated, being more shaded by overhanging trees.

Pond 1 is located within a grass field 135m to the northwest the site boundary. It could only be inspected from a distance due to restricted access, but could clearly be seen to hold water with scattered surrounding willow scrub/trees, and little aquatic vegetation. It looked as if it sometimes dries out in high summer. An HSI score of 0.77 was calculated (see Table 3), indicating it potentially provides good GCN breeding habitat. It was in the same condition in 2023 & 2025.



Photo 16. Well-vegetated wet ditch along the western site boundary



Photo 17. Distant photo of Pond 1

Table 3. Pond 1 HSI measures and overall GCN suitability score

Criteria	Score
Zone	A
Area (m ²)	500-700
Drying	Sometimes
Water quality	Moderate
Shade (%)	0-60
Fowl	Minor
Fish	Absent
Ponds	9
Terrestrial habitat	Good
Macrophyte cover (%)	1-5
HSI score	0.77
Suitability	Good

Pond 2 was found to be dry in February 2025 and was considered likely to be dry throughout most of the year and therefore not be suitable for breeding GCNs.

Pond 3 is located within deciduous woodland 260m northwest of the site boundary. It is a large rectangular pond, of likely man-made origin, surrounded by woodland and heavily shaded, with an unbroken surface layer of duckweed *Lemna sp.* An HSI score of 0.72 was calculated (see Table 4), indicating it potentially provides good GCN breeding habitat. It was in the same condition in 2023.



Photo 18. Pond 2

Table 4. Pond 2 HSI measures and overall GCN suitability score

Criteria	Score
Zone	A
Area (m ²)	1500
Drying	Sometimes
Water quality	Moderate
Shade (%)	91-95
Fowl	Minor
Fish	Possible
Ponds	>12
Terrestrial habitat	Good
Macrophyte cover (%)	96-100
HSI score	0.72
Suitability	Good

The two locations of wider ditches (ditches 1 & 2) were found to be flowing water, unsuitable for breeding GCNs.

3.2.2 Protected and Notable Species

Bats

No evidence of roosting bats was recorded during the survey, and the stable building offered negligible bat roost potential. However, as described above, two of the trees along the western boundary were of a size and age to potentially support roosting bats. In addition, a neighbour said he had seen multiple bats flying around one of these trees (T2) at dawn. As these trees form part of the western boundary and would provide good visual screening of the potential development, it is assumed they will be retained. However, should they be earmarked for removal further surveys will be required to establish whether they do support bat roosting features.

The field boundary hedgerows and trees, and the linear dense scrub, all provide suitable bat foraging and commuting habitat. However, the eastern boundary hedgerow ends near the northeast corner, at the field entrance, and does not continue to the north. The northern boundary comprises a fence and hedgerow.

The activity survey confirmed that bats use the site. The most frequently recorded was common pipistrelle, but three other species were also recorded occasionally: soprano pipistrelle, noctule, and brown long-eared bat. Common and soprano pipistrelles were seen foraging and commuting along all hedgerows during the transect surveys, with up to three individuals recorded simultaneously. However, activity was highest soon after dusk, dropping after this, suggesting these were individuals roosting nearby, commuting and opportunistically feeding on site, before dispersing to core foraging areas further afield. This pattern and the reverse later in the night, were evident from the static detector files. Only a few noctule calls were recorded, suggesting these were commuting individuals not using the site for foraging.

As only four common bat species use the site in low numbers, the site is assessed as being of Low value in the Parish context.

Reptiles

During the 2021 PEA survey, grass snakes were recorded breeding on the site, using the muck heaps in the northwest corner for egg-laying. The 2023 dedicated reptile survey recorded two grass snakes on different dates, an adult on 28 June and a juvenile on 1 August, both in the southeast section of the site. A single slow worm was recorded on 26 June in the field margin between the log pile and the western boundary ditch. Therefore, small populations of both species occur, with grass snake proved to have bred on or near the site in 2023, as in 2021.



Photo 19. Hatched grass snake egg cases amongst muck heap in northwest corner of site

Birds

The boundary hedgerows and trees and linear scrub all have high potential to be used by foraging and nesting birds.

Badgers

The grassland on the site offers suitable badger foraging habitat, whilst the boundary hedgerows and scrub offer cover for badger setts. However, no evidence of badger presence was found during the surveys in 2021, 2023 and 2025, and they are considered currently to not use the site.

Great Crested Newts (GCN)

Habitat on the site was considered variable for great crested newts, with the short-grazed sward being sub-optimal for the species, but boundary habitats providing abundant suitable terrestrial habitat. There are two suitable breeding ponds within 500m of the site, with the closest 134m away. Should GCNs use either of these ponds for breeding they may disperse as far as the site during their terrestrial life phase. However, the distance of potential breeding ponds from the site, intervening good quality habitats, and a lack of great crested newt records from the area, lead to a conclusion that the species is likely to be absent from the site. However, in the absence of more detailed survey information, we make further recommendations for precautionary working measures below.

White-clawed crayfish

A neighbour to the site reported seeing crayfish in the wet ditch along the western boundary. There are two records of the native white-clawed crayfish within 2km of the site (in the River Thet to the west), and none of the introduced signal crayfish. The ditch provides suboptimal habitat for white-clawed crayfish, as it is shallow and narrow, unlikely to support the material needed for crayfish refugia, and is likely to be impacted by agricultural runoff and siltation, all of which are unfavourable for the species (Peay 2002). However, their presence cannot be ruled out without a survey. But given that any development of the site is very unlikely to impinge directly on the ditch, and indirect impacts can be easily avoided, we recommend appropriate mitigation below rather than further survey.

Other Species of Principal Importance

The site provides suitable foraging and nesting habitat for hedgehogs *Erinaceus europaeus*.

3.3 BNG calculation

The Metric calculation spreadsheets were populated with figures from Table 3 to calculate the BNG for habitat areas.

The baseline habitat plan is shown in Figure 5. The proposed layout plan from which the proposed habitat areas are derived is shown in Figure 2.

Table 3. Existing and proposed habitats on the Site

Habitat type	Existing (ha/km)	Retained/created/enhanced (ha/km)
Modified grassland	0.5894	0
Developed land; sealed surface	0.009	0.2242
Mixed scrub	0.06	0.2
Tall forbs	0.014	0
Bare ground	0.026	0
Native hedgerow	0.13	0.185
Native hedgerow with trees/ditch	0.07	0.07
Line of trees	0.045	0.045
Non-native hedgerow	0.015	0.015
Other neutral grassland		0.0846
Vegetated garden		0.1844
Pond		0.0053

The BNG plan will result in a net gain in area habitats of 27%, and an increase of linear habitats (hedgerows/line of trees) of 18%, thereby meeting the target 10% for both.

Key BNG Metric results are:

- **Baseline (area) habitat units = 1.77 units**
- **Post-development (area) habitat units = 2.25 units**

Summary results are presented in Appendix 1, and full calculations are shown in the accompanying statutory BNG metric excel spreadsheet:

EastHarling_V1__The_Statutory_Biodiversity_Metric_Calculation_Tool_-
_Macro_disabled_tool_23.07.2024

4. Conclusions, Recommendations and Enhancements

Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC Act), and the National Planning Policy Framework (NPPF) (2024), place a duty on public authorities in England to conserve and enhance biodiversity. Enhancing, restoring or protecting a species population or habitat can achieve this. The Environment Act requires a demonstrable 10% net biodiversity gain for any new development. This is mandatory for this proposed development.

Designated sites

Natural England's IRZ tool states that new housing development in this location 'will have a likely significant effect on the qualifying features of the European Site(s) through increased recreational pressure'.

Breckland SPA is located 1.4km to the south of the site. Studies used to inform the Breckland Local Plan found Woodlark nesting attempts occurring approximately 2.7km from the site at the closest point, within Nightjar breeding attempts occurring further away. Due to the distance from the site, these species, and others supported by Breckland Forest, are unlikely to be affected directly by disturbance.

Middle Harling Fen SSSI lies 470m to the southwest. The site is designated for the plant communities it supports, including calcareous fen. The hydrology of the SSSI will not be impacted upon by the proposed development, as Middle Harling Fen is spring-fed and watercourses adjacent to the proposed development site do not drain into or through the SSSI.

The only foreseeable indirect impact would be from recreational pressure, e.g. increased dog walkers, as highlighted by the IRZ tool. The proposal is for 12 new dwellings, which given a household size multiplying of 2.4, would result in 29 new residents – a relatively small increase. However, given the generic advice, and the existence of the GIRAMS scheme, a standard Habitats Regulations Assessment (HRA) will be required along with appropriate payment to GIRAMS.

Bats

All species of bat and their roosts are protected under UK and European law. The results of this survey indicate that two of the trees on site may have potential to support roosting bats, but these fall outside the proposed development area. All existing trees will be retained, despite the arboricultural survey recommending some trees for removal.

The boundary hedgerows provide foraging and commuting habitat for small numbers of common and widespread bat species. The loss of approximately 14m of the eastern hedgerow in three sections and 25m² of the liner scrub, is likely to have a minor short-term impact on these species, although commuting routes are unlikely to be disrupted as bats can move down the west side of the site. In the longer term, new planting of hedgerows around the site should fully compensate for this loss, and the wildflower grassland recommended will provide improved foraging habitat.

To minimise disturbance to foraging bats it is recommended that lighting (during construction and in the operational phase design) be kept to a minimum sufficient to meet health and safety requirements and is designed specifically to reduce impacts on bats by avoiding any light pollution spilling onto retained bat habitats, such as the boundary hedgerows/trees. The Bat Conservation Trust in association with the Institute of Lighting Professionals provide advice on the design of external lighting schemes to avoid bat disturbance (Institute of Lighting Professionals 2023) and their guidance should be followed.

It is recommended that bat roosting provision should be made on new buildings and/or adjacent trees to enhance the ecological value of the site. This can be in the form of integrated bat bricks, bat tiles or bat boxes. If possible, these should be located close to hedges and tree lines, at least 4m above the ground, facing away from north and allow unobstructed access below. We recommend that at least 24 bat roost features are installed, two for each new dwelling.

Birds

All wild birds, their nests, eggs and dependent young are protected from destruction, killing and injuring.

Birds are likely to nest in any of the woody vegetation (trees and hedgerows) on site. To avoid harm to nesting birds, if the proposals involve removal of any woody vegetation (including the short section of the eastern hedgerow for the proposed new access), this should be undertaken in the period September-February, which is outside the bird-nesting season. This will mitigate any short-term impacts and legislative issues. Should this not prove possible, nesting bird surveys will need to be undertaken by an ecologist to ensure no active nests are present before clearance work commences.

Within the new development design, nesting provision should be made for a range of species, such as the declining swift *Apus apus*, house sparrow *Passer domesticus* and swallow *Hirundo rustica*. These are likely to be both nesting features built into the fabric of buildings and stand-alone boxes installed on buildings and trees. We recommend that at least 24 bird nesting features are installed, two for each new dwelling.

A number of common bird species may use the site for foraging. Retention of the boundary hedges where possible, will be of benefit to these species. Incorporation of new hedges within the development comprised of native fruiting species such as wild privet *Ligustrum vulgare*, guelder rose *Viburnum opulus*, dog rose *R. canina* and hawthorn *C. monogyna*, as well as the non-native firethorn *Pyracantha coccinea* in formal hedges, is recommended to boost the overall wildlife value of the site and provide new bird foraging and nesting habitat. For example, the northern and adjacent section of the western boundary, currently comprise sections of non-native cypress hedge and wooden board and wire fencing. The proposed planting of new linear scrub and hedgerow along these boundaries will provide screening, foraging habitat and a new east-west orientated wildlife dispersal corridor.

Badgers

Badgers and their setts are protected from killing, injury, damage, destruction and disturbance. The survey found no evidence of badgers using the site and no active sett present within 30m. However, badgers are very mobile species and can rapidly change their distribution and dig new setts. Therefore, it is recommended that a badger survey be carried out prior to works commencing to ensure badger legislation is not contravened.

Great Crested Newts

As any potential breeding ponds are beyond 100m from the site, combined with the presence of areas of good terrestrial grassland habitat in between them and the site (which would more likely be utilised), we consider the likelihood of significant numbers of great crested newts using the site to be low. However, to ensure they are not harmed during work, if present, we recommend taking

precautionary measures, such as strimming vegetation to a 10cm height and allowing animals to disperse before site clearance. A detailed precautionary working method statement will be provided and should be conditioned as part of any planning permission.

Reptiles

The muck heaps are known to support breeding grass snake, and there is a small grass snake and slow worm population present. We recommend encouraging these small populations to vacate the site during work by strimming, careful hand removal of the muck heap, and other measures. A detailed precautionary working method statement will be provided and should be conditioned as part of any planning permission. After the development is built, these species will be encouraged to return through the proposed provision of the pond and wildflower meadow area, and log habitat piles and compost heaps should also be provided.

White-clawed crayfish

It is unlikely that this species is present in the wet ditch to the west, but to ensure there are no potential impacts should they occur, there should be no planned development within 2m of the ditch banks, and measures should be taken to ensure the ditch water is not polluted by either chemicals or silt. Any fuel and chemicals should be stored such that leaks can be contained and disposed of safely, and silt traps should be implemented as appropriate. These measures will also protect other riparian species, such as otter and water voles should they occur, although they are considered unlikely to occur given the habitat and lack of records in the general area.

Other Species of Principal Importance

Hedgehogs are likely to occur on the site. Retention of most of the boundary hedges will be of benefit to this species. If new gardens are to be created then any new fencing should have hedgehog links between, allowing the animals to move around the habitat. These are holes at ground level of at least 15cm diameter.

Existing features of highest wildlife value are being retained and incorporated into the development (e.g. boundary hedges and trees). Features of highest wildlife value should be appropriately buffered.

Grassland

The grassland is species-poor and of low intrinsic value. The proposed creation of wildflower grassland will result in an increase in biodiversity value, helping to ensure the development meets a 10% biodiversity net gain.

General conclusion

Assuming the recommended mitigation are undertaken and implemented, the proposed development is unlikely to have significant residual negative ecological impacts. Should the recommended ecological enhancements be implemented, the proposed development could achieve a net gain in biodiversity on the site in line with the National Planning Policy Framework (2024) and the Environment Bill (2021), as demonstrated by the BNG calculation.

5. References

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6. Appendix 1. BNG Metric calculation summary results

Land off Garboldisham Road, East Harling		Return to results menu		
Headline Results				
Scroll down for final results ↴				
On-site baseline		Habitat units	1.77	
		Hedgerow units	2.42	
		Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)		Habitat units	2.25	
		Hedgerow units	2.87	
		Watercourse units	0.00	
On-site net change (units & percentage)		Habitat units	0.48	27.12%
		Hedgerow units	0.46	18.96%
		Watercourse units	0.00	0.00%
Off-site baseline		Habitat units	0.00	
		Hedgerow units	0.00	
		Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)		Habitat units	0.00	
		Hedgerow units	0.00	
		Watercourse units	0.00	
Off-site net change (units & percentage)		Habitat units	0.00	0.00%
		Hedgerow units	0.00	0.00%
		Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	0.48	
		Hedgerow units	0.46	
		Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions		Habitat units	0.00	
		Hedgerow units	0.00	
		Watercourse units	0.00	
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	0.48	
		Hedgerow units	0.46	
		Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	27.12%	
		Hedgerow units	18.96%	
		Watercourse units	0.00%	
Trading rules satisfied?		Yes ✓		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	1.77	1.94	0.00
Hedgerow units	10.00%	2.42	2.66	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 ✓				