

Gunby Farm, Netherseal Preliminary Ecological Appraisal

Prepared for Michael Poultney

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Revision 00

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SURVEY AND REPORT VALIDITY

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases there will be specific guidance on this (such as for the age of data which may be used to support a protected species licence application) but in circumstances where such advice does not already exist, the Chartered Institute of Ecology and Environmental Management (CIEEM) has provided the general advice set out below.

<i>Age of Data / Survey / Report</i>	<i>Validity</i>
Less than 12 months	Likely to be valid in most cases.
12-18 months	Likely to be valid in most cases with the following exceptions: • Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe; • Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment; • Where country-specific or species-specific guidance dictates otherwise.
18 months to 3 years	A professional ecologist will need to undertake a site visit and then review the validity of the report. Some or all of the other ecological surveys updated.
Protected Species Licensing	Licence applications usually only possible using data less than 2 years old

The likelihood of surveys needing to be updated increases with time and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

- Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site;
- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management;
- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.

Table of Contents

1	Introduction.....	6
1.1	Purpose of Report	6
1.2	Ecological Context.....	7
2	Methods.....	8
2.1	Desk-based Study.....	8
2.2	Baseline Habitat Assessment	8
2.3	Biodiversity Net Gain	8
2.4	Protected Fauna Survey and Assessment	9
2.4.1		10
2.4.2	Bats.....	10
2.4.3	Nesting birds.....	10
2.4.4	Great Crested Newt.....	10
2.4.5	Reptiles.....	11
2.5	Constraints	11
2.6	Criteria for Assessment.....	11
3	Results.....	13
3.1	Desk Study.....	13
3.1.1	Designated Sites	13
3.1.2	Protected Species Licence Sites.....	13
3.2	Baseline Habitats	13
3.2.1	Modified Grassland (UKHabs code: g4 814).....	14
3.2.2	Native Hedgerow (h2a).....	15
3.2.3	Non-native and Ornamental Hedgerow (h2b)	17
3.2.4	Scattered Trees (g4 32)	18
3.3	Biodiversity Net Gain Metric: Baseline Data	19
3.4	Protected Fauna.....	20
3.4.1		20
3.4.2	Bats.....	20
3.4.3	Birds	20
3.4.4	Great Crested Newt.....	20
3.4.5	Reptiles.....	21
4	Evaluation	22

4.1	Summary of Proposals	22
4.2	Designated Sites.....	22
4.3	Habitats, Impacts and Mitigation	22
4.3.1	General	22
4.3.2	Habitat Retention.....	23
4.3.3	Habitat Creation.....	24
4.3.4	Statutory Metric Summary.....	25
4.3.5	Habitat Management.....	25
4.4	Protected Fauna.....	27
4.4.1		27
4.4.2	Bats.....	28
4.4.3	Nesting Birds	28
4.4.4	Great Crested Newt.....	29
4.4.5	Reptiles.....	30
5	Legal Protection	31
5.1		31
5.2	Bats	31
5.3	Nesting Birds	32
5.4	Great Crested Newt.....	32
5.5	Common Reptile Species	33
6	Biodiversity Net Gain Plans	34
7	Habitat Trading Rules Summaries.....	36

1 INTRODUCTION

1.1 Purpose of Report

This report has been completed in connection with the proposed housing development at Gunby Farm, Netherseal, Derbyshire DE12 8AS (National Grid Reference: SK 28560 13971). The location of the proposed development site (the ‘Site’) is shown in *Figures 1 and 2* and the proposed development plans are fully detailed in *Section 4*.

A survey was conducted on the 22nd of January 2026 by Turnstone Ecology Ltd and consisted of a Preliminary Ecological Appraisal using the UK Habitat Classification Approach, a Protected Fauna Survey and Habitat Suitability Assessment and a Biodiversity Net Gain Assessment (BNG) using the Statutory Metric (full version).

This report details survey and assessment methodology along with the results of a desk-based study and on-site survey. It also provides a quantitative assessment of potential impacts from retention, loss, enhancement and creation of habitats on-site and appropriate mitigation to offset any impacts associated with the proposal and to satisfy national and local planning policies in relation to Biodiversity Net Gain (BNG).

Figure 1. Location of proposed development (Accessed on QGIS 3.40.12)



Figure 2. Site Context and Wider Landscape

1.2 Ecological Context

The proposed development site is located within the outskirts of the village of Netherseal, approximately 6 km south of Swadlincote town centre. The site comprises a grassland field which has two management styles. The western side of the field had recently been re-seeded with grass species. Hedgerows border the south, north and east of the site and a wooden palisade fence is present on the southeastern boundary of the site. Access gates are situated within the southern and eastern hedgerow.

Grangewood Road is present beyond the site's southern boundary and Gunby Hill Road is to the east of the site. Residential properties are located immediately adjacent to the north and south of the site. Woodland is present immediately to the west of the site and is separated from the site by a wooden post and rail fence. An area of deciduous woodland is present approximately 15m to the east of the site (beyond Gunby Hill Road). The wider landscape consists of woodland, agricultural fields, hedgerows and residential properties.

2 METHODS

2.1 Desk-based Study

A data request through the local environmental records centre was not undertaken as the site is small, the habitats that will be impacted are limited and it is very unlikely that the records obtained would impact the site assessment and mitigation proposed.

Information relating to designated sites, and historic records of protected species within 2 km of the proposed development site were obtained from Magic (www.magic.gov.uk) and other freely available information on the internet, such as planning portals.

Any relevant historic records within 2 km of the proposed development have been obtained from freely available information on the internet, such as planning portals and NBN Atlas (<https://nbnatlas.org/>) where unless stated otherwise, all records are provided to the NBN Atlas under licences CC-BY or OGL.

2.2 Baseline Habitat Assessment

The survey methods were based on the UK Habitat Classification approach (<https://ukhab.org>, updated January 2021), which is a standardised method to survey main habitat types in the UK and comprises of a five level Primary Habitat Hierarchy system with Secondary Codes. Plant nomenclature in this report follows Rose (Revised Edition 2006) for native, naturalised and garden varieties of vascular plant and Stace; New Flora of the British Isles (Fourth Edition 2019) for cryptic or hybrid flora. Introduced species and garden varieties of flora are identified to genus level due to the number of cultivars, some flora may be listed to species level where that cultivar is easily identifiable.

UK Habitat Classification is the industry standard survey method used when determining baseline conditions for Biodiversity Net Gain Assessments.

2.3 Biodiversity Net Gain

Biodiversity Net Gain (BNG) is required in England under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). This statutory framework is referred to as *biodiversity net gain* in Planning Practice Guidance. Under the statutory framework for biodiversity net gain, subject to some exceptions, every grant of planning permission is deemed to have been granted subject to the condition that the biodiversity gain objective is met. This objective is for development to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of the onsite habitat. This increase can be achieved through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits.

The biodiversity gain condition is a pre-commencement condition: once planning permission has been granted, a Biodiversity Gain Plan must be submitted and approved by the planning authority before

commencement of the development. There are exemptions and transitional arrangements which disapply the condition from certain planning permissions, as well as special modifications for planning permissions for phased development and the treatment of irreplaceable habitats. The statutory framework for biodiversity net gain also includes provisions about information requirements for planning applications and the treatment of the condition on decision notices on the grant of planning permission.

Habitat condition assessments are undertaken during the baseline site survey and is a measure of the state of a habitat based on current and past management practices. Habitat condition is used to measure variation between parcels of the same habitat type and the scores determined are required to complete the Biodiversity Net Gain Assessment using the Statutory Biodiversity Metric Tool (<https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>). The metric tool evaluates how the proposed development will impact biodiversity by calculating the lost, retained, enhanced and created habitats using a quantitative approach which follows four rules:

- Trading rules: the trading rules set minimum habitat creation and enhancement requirements to compensate for specific habitat losses, up to the point of no net loss. They are based on the habitat type and distinctiveness of the lost habitat and the metric must meet the trading rules as well as a 10% net gain.
- Biodiversity unit outputs: The requirement to deliver at least a 10% net gain applies to each type of unit: habitat, hedgerow and watercourse (where present within the redline boundary). These are to be treated independently and must not be summed, traded, or converted between the three types of units.
- The statutory metric tools (small sites or full) as provided on the gov website, are to be used to ascertain whether biodiversity objectives have been met, other formula to determine biodiversity value are not accepted under the Statutory Metric rules.
- In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority, in these situations a bespoke compensation agreement must be arranged.

The biodiversity metric principles have been applied to the site by a competent Ecologist. Protected species considerations are covered separately within the report, following Principle 2. As required under Principle 7, habitat interventions are determined to be realistic and deliverable within the project timeframe with summarised management prescriptions given within this report that demonstrate achievability of proposed habitat mitigation and/or compensation long-term.

2.4 Protected Fauna Survey and Assessment

The habitats on site were assessed for suitability for protected fauna that occur in the region and obvious signs and incidental sightings of protected species were noted where present. Taking into consideration the geographical region and habitat types on and adjacent to site, the protected species and species groups that could be encountered are listed below.

- [REDACTED]

- Bats
- Nesting birds
- Great Crested Newt
- Reptiles

Details of initial survey methods for each relevant species are given below.

2.4.1 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

2.4.2 Bats

Any trees on or adjacent to the proposed development site were visually surveyed to assess them for their potential to support roosting bats, although a thorough inspection of all potential roosting features would not be undertaken as part of the baseline survey. Trees were surveyed following Bat Conservation Trust Survey Guidelines 2024 to determine initial suitability for roosting bats using the below categorisation. The trees were assessed from ground level for potential roosting features (PRFs) that bats could use and a tree is determined as having either no suitability for roosting bats, having confirmed features which may require further inspection, or be of a size and structure which is likely to have PRF's but cannot be confirmed using a ground level inspection. The assessment of roosting suitability is further refined where possible by using additional surveys such as tree climbing. During further inspection a potential roost feature may be ruled out, be determined to have potential for individual bats (PRF-I), or potential for multiple bats (PRF-M).

Habitats were assessed for their suitability for use by foraging or commuting bats. Areas of particular interest vary between species but generally include sheltered areas and those habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland.

2.4.3 Nesting birds

Habitat that might be used by nesting birds was identified and actively nesting birds or evidence of nesting birds noted where present.

2.4.4 Great Crested Newt

The suitability of any aquatic and terrestrial habitat on the site, and in the immediate vicinity, was assessed for suitability for use by Great Crested Newts (*Triturus cristatus*). Great Crested Newts are known to travel up to 500m between breeding ponds and suitable terrestrial habitat, however, they are only likely to travel up to 250m away from a breeding pond if there is suitable terrestrial habitat within that distance. A desk-based search was therefore undertaken for any ponds up to 250m from the site

using OS maps and aerial imagery. The terrestrial habitat between the site and any ponds, and therefore connectivity to the site, was also considered.

2.4.5 Reptiles

The site was assessed for suitability for use by widespread species of reptiles, with particular attention paid to those features that could be used as basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of hardcore) and opportunities for foraging (e.g. rough grassland and scrub). The site was assessed for its suitability for the commoner reptile species which have broadly similar habitat requirements, but more specific requirements include those shown below (Beebee & Griffiths 2000).

- Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to walls and pastures, although one habitat they use is brownfield sites
- Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land
- Grass Snakes (*Natrix natrix*) have broadly similar requirements to Common Lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians
- Adder (*Vipera berus*) use a range of fairly open habitats with some cover, but are most often found in dry heath.

2.5 Constraints

The survey was conducted in January which is considered to be outside of the optimal floristic period (April – September) however this is not considered to be a significant constraint due to the dominant habitats present on the Site as well as the high levels of management the Site receives throughout the year and the results of the survey are unlikely to be significantly different if the survey was completed during the optimal floristic period.

2.6 Criteria for Assessment

The scientific value of habitats for nature conservation is assessed according to widely accepted criteria of which the most important are naturalness, extent, rarity, and diversity.

The assessment of impacts is based on the principles within Chartered Institute of Ecology and Environmental Management (CIEEM) Ecological Impact Assessment (EcIA) Guidance (2024) which assesses the impacts of the proposal on ecological receptors taking into consideration extent, duration, reversibility, timing, frequency and certainty.

Mitigation and enhancement is designed to reduce the level of impact upon receptors and provide ecological enhancement in order to meet current legislation and planning policy. The information below has therefore been considered during assessment.

- Criteria that have been developed to assist in the identification of statutory Sites of Special Scientific Interest (SSSIs) (JNCC 2013)

- Habitats and species of Principal Importance included under Section 41 (England) and Section 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006
- The legal status of habitats and species according to The Conservation of Habitats and Species Regulations 2017 (as amended)
- CIEEM Guidelines (2024) for assessing the value of ecological receptors within a defined geographical context using the following categories: international (*i.e.* Europe); UK and national (England); regional; county; Unitary Authority; local or parish; and zone of influence. Receptors are identified as ‘important’ at these levels, or as ‘not important’
- Species protected by European directives
- Species protected by the *Wildlife and Countryside Act 1981* (as amended)
- Other species listed as scarce or notable in literature issued by conservation organisations or learned societies *e.g.* vascular plant species listed in Stewart *et al.* (1994) and Red and Amber List Birds of Conservation Concern (Stanbury *et al.* 2021)
- Local Wildlife Site selection criteria
- National Policy Planning Framework (NPPF), 2024
- BS42020:2013 – Biodiversity Code of practice for planning and development
- Protected species handbooks and best practice guidelines
- Lowland Derbyshire Local Biodiversity Action Plan – National Forest Area:
 - Habitats: Habitat targets have been set for the following habitat types found within the National Forest area. Primary Habitat features are lowland meadows, hedgerows, lowland mixed deciduous woodland, wet woodland, wood-pasture and parkland, lakes and canals, and ponds. Secondary habitat features are field margins, lowland dry acid grassland, and floodplain grazing marsh. Localised features are heathland, traditional orchard, open mosaic habitats, lowland calcareous grassland.
 - Species: Specific targets have been set for the following species/groups found within the National forest area; Dingy Skipper (*Erynnis tages*), Dormouse (*Muscardinus avellanarius*), Great Crested Newt, Grizzled Skipper, Oak Polypore (*Piptoporus quercinus*), Otter (*Lutra lutra*), Water Vole (*Arvicola amphibius*), White-clawed Crayfish (*Austropotamobius pallipes*). A further 85 UK BAP species are listed within the National Forest, however, specific targets have not been set for these species.

3 RESULTS

3.1 Desk Study

3.1.1 Designated Sites

There is one statutory designated site within 2 km of the Site:

- River Mease Special Areas of Conservation (SAC) is located approximately 1.1 km south of the site. The site is primarily designated for the presence of Spined Loach (*Cobitis taenia*) and Bullhead (*Cottus gobio*). The River Mease is also designated as a Site of Special Scientific Interest (SSSI) for the above reasons.

3.1.2 Protected Species Licence Sites

There are no records of Protected Species licences that have been issued for development works within 2 km of the site.

There is one Great Crested New Class Survey Licence return located 1.4 km southwest of the site.

3.2 Baseline Habitats

General

UK Habitats Classification was used to record habitat types within and immediately adjacent to the proposed development site. The habitats found onsite and immediately adjacent to site are listed below and shown in *Figure 3*:

- Modified grassland
- Hedgerows
- Individual Trees

Figure 3. Habitats within and adjacent to the proposed development



3.2.1 Modified Grassland (UKHabs code: g4 814)

The Site consisted of a modified grassland field (*Plate 1*). The western area of grassland had recently been re-seeded and was dominant with Meadow Oat-grass (*Helictochloa pratense*). Scattered scrub was present on the margin and consisted of Holly (*Ilex aquifolium*), Blackthorn (*Prunus spinosa*), and Oak (*Quercus robur*). The grassland sward height was between 5-10cm on average and areas of bare ground were present.

The eastern area of grassland was abundant with Common Couch (*Elymus repens*) and frequent with Cock's Foot (*Dactylis glomerata*), Dock (*Rumex spp.*), and Yarrow (*Achillea millefolium*) (*Plate 2*). There were occasional instances of Common Bent (*Agrostis capillaris*), Red-dead Nettle (*Lamium purpureum*), Chickweed (*Stellaria media*), and Common Mouse-ear (*Cerastium fontanum*). There were rare instances of moss, Dandelion (*Taraxacum officinale*), and Doves Foot Cranesbill (*Geranium molle*). The grassland sward height was around 5cm on average and areas of bare ground were present. The grassland was in poor condition and had less than 6 species per m².

Plate 1. Recently re-seeded modified grassland (looking north)



Plate 2. Eastern area of modified grassland (looking east)



3.2.2 Native Hedgerow (h2a)

There are two native hedgerows on the Site's southern (H1) and eastern (H3) boundaries.

H1 is located along the southern boundary of the site and is a species rich native hedgerow with trees (h2a5 11 50) (Plate 3). A ditch is present within the centre of the hedgerow which was wet at the time of the survey. The hedgerow is abundant with Hawthorn (*Crataegus monogyna*) and frequent with Holly and Bramble (*Rubus fruticosus*). There were rare occurrences of Dogrose (*Rosa canina*) and Elder (*Sambucus nigra*). Cleavers (*Galium aparine*), Meadow Oat Grass, and Yorkshire Fog (*Holcus lanatus*) were present on the margin of the hedgerow and a gap less than 5m intersected the hedgerow in the west of the hedge. Mature trees within the hedgerow consisted of an individual Oak and Holly tree.

H3 is located to the east of the site and is a native hedgerow (Plate 4) and is abundant with Hawthorn. There were occasional instances of Blackthorn and rare occurrences of Gorse (*Ulex europaeus*) and Sycamore (*Acer pseudoplatanus*). The hedgerow is less than 1.5m in height and appeared to have a regular management regime. There is a single Holly tree present in the hedgerow. The hedgerow margin consisted of Cleavers, Yorkshire Fog, Bramble, and Yarrow.

Plate 3. Species-rich Native hedgerow along south boundary (H1) (looking east)



Plate 4. Native hedgerow along east boundary (H3) (looking north)



3.2.3 Non-native and Ornamental Hedgerow (h2b)

There are two non-native and ornamental hedgerows present on the Site's southeast and northeast boundaries of the site.

H2 is a Leyland Cypress (*Cupressus x leylandii*) dominated hedgerow which acts as a barrier between the site and an adjacent residential property (Plate 5). The hedgerow is more than 1.5m in height and appeared to have a regular management regime. Variegated Lords and Ladies (*Arum italicum*) were present in the hedgerow margin.

H4 is an ornamental hedgerow which is a boundary for the adjacent residential property to the north of the site (Plate 6). The hedgerow is abundant with Beech (*Fagus sylvatica*), with occasional Yew (*Taxus baccata*), Holly, and Hawthorn. Grassland species similar to those present in the grassland field were present in the hedgerow margin. The hedgerow appeared to have regular management.

Plate 5. Leyland Cypress hedgerow along southeast boundary (H2) (looking east)



Plate 6. Ornamental hedgerow along north boundary (H4) (Looking northwest)



3.2.4 Scattered Trees (g4 32)

There were two trees present in the south of the site. T1 is a medium sized Ash tree located on the margin of the agricultural grassland parcel (*Plate 7*). T2 is a small sized Ash tree and had visible signs of damage from pruning to its canopy branches.

Plate 7. Medium sized Ash tree (T1) (Looking east)



3.3 Biodiversity Net Gain Metric: Baseline Data

The red line area totals 0.88 Ha and 0.3 km of hedgerow. Individual area sizes per habitat were measured during the 2026 survey when habitat borders were defined and mapped. Where condition scores differed across the site for the same habitats these have been separated out to ensure proposed management prescriptions can be targeted per habitat and are based upon the current baseline habitat conditions.

A summary of the habitats and hedgerows present on site, current habitat condition scores and their total area/length size (per habitat) in hectares/km can be seen in *Tables 1 and 2*. Habitat unit values, as calculated using the Statutory Biodiversity Metric Tool have also been included within the tables below.

Table 1. Area sizes and condition scores for all baseline habitats present on site

Habitat Type	Condition	Area Size (Ha)	Habitat Units
Modified Grassland	Poor	0.8828	1.77
Urban Tree	Moderate	0.0204	0.16
Total:		0.9032 (including urban trees)	1.93

Table 2. Hedgerow Lengths and Condition Scores for all baseline hedgerows present onsite

Habitat Type	Condition	Area (Ha)	Size	Habitat Units
Native Hedgerow	Moderate	0.113		0.45
Non-native and Ornamental Hedgerow	Poor	0.091		0.09
Species-rich Native Hedgerow with Trees – Associated with Bank or Ditch	Moderate	0.094		1.5
Total:		0.298		2.04

3.4 Protected Fauna

3.4.1 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

3.4.2 Bats

Two Ash trees were present within the site and were assessed at ground level for any Potential Roosting Features (PRF). Hedgerow trees were also assessed during the walkover survey. No features suitable for roosting bats were observed on any of the trees within or on the boundary of the Site during the survey.

Hedgerows offer commuting routes to wider environment as well as suitable foraging habitats. The grassland has some, albeit limited, foraging opportunities.

3.4.3 Birds

The larger modified grassland field could have some suitability for open-ground nesting birds (e.g. Skylark (*Alauda arvensis*)) due to the large size of the field. The area of grassland within the site boundaries is regularly managed and relatively enclosed due to the site's hedgerows. The hedgerows and scattered trees offer suitable habitat for a wide range of common and ubiquitous lowland farmland bird species.

3.4.4 Great Crested Newt

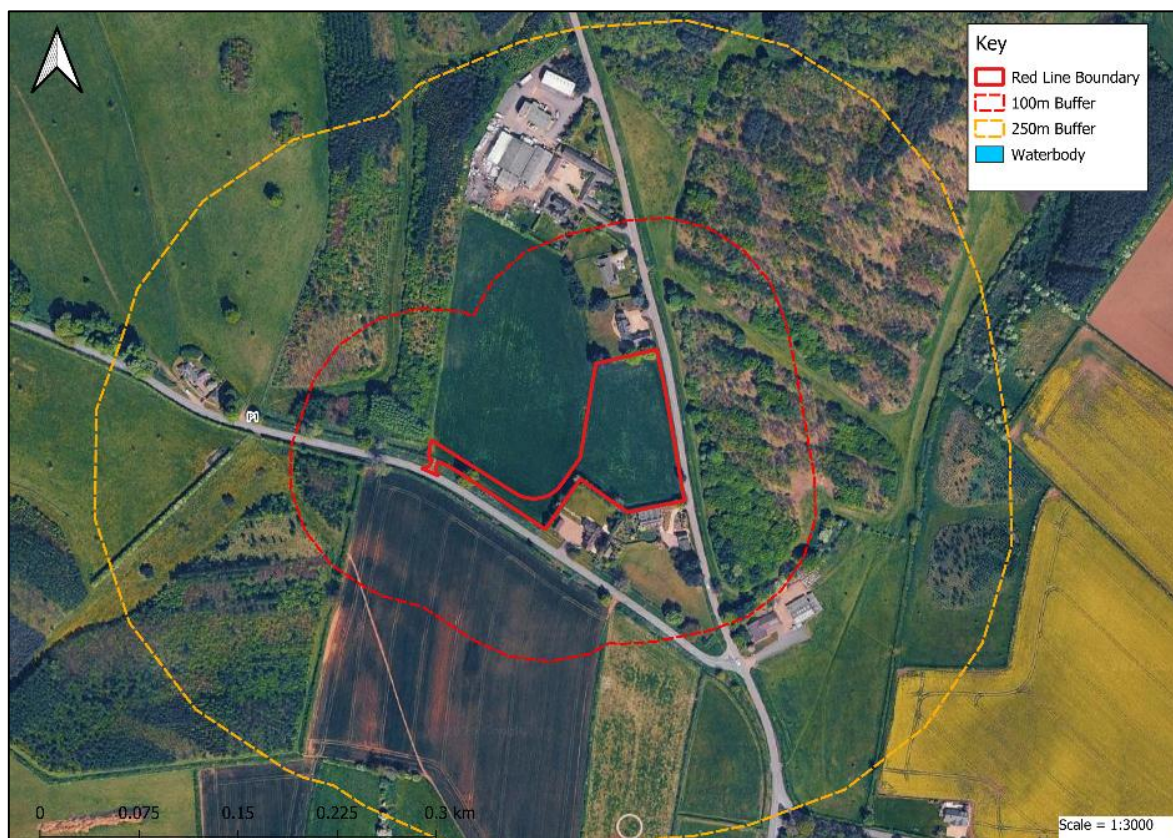
There are 11 obtainable records of Great Crested Newt within 2 km of the site, with the closest located 1.3 km southwest of the site¹. There is one waterbody within 250m of the Site (Figure 4):

¹ [Record: 28552985 | Occurrence record | NBN Atlas](#)

- P1 is located approximately 130m west of the site and is heavily shaded by trees and shrubs. It is unclear from aerials whether the pond still contains water.

Suitable terrestrial habitat onsite for Great Crested Newts is limited to the hedgerows. The majority of the site consists of short sward, managed grassland which offers limited opportunities for commuting Great Crested Newts.

Figure 4. Pond plan



3.4.5 Reptiles

There is one obtainable record for Grass Snake within 2 km of the site, which is located approximately 1.6 km northeast of the site².

The majority of habitat onsite has very limited suitability for foraging and dispersal as the modified grassland onsite lacks protective cover. However, the hedgerows onsite offer some opportunities for dispersal and refuge.

² [Record: 3857763 | Occurrence record | NBN Atlas](#)

4 EVALUATION

4.1 Summary of Proposals

The proposed development involves construction of two residential properties with associated gardens. Access to the residential properties will be created through the construction of an access road to Grangewood Road to the south of the site utilising the existing access gate into the site (Figure 5). Habitat which will be managed by the client will be created around the perimeter of the site.

Figure 5. Proposed development plans



4.2 Designated Sites

There is one statutory designated site within 2 km of the site, which is located approximately 1.1 km from the site. The development will not impact the statutory designated site due to the distance from the site, lack of hydrological connectivity, and the nature and scale of the proposed development.

4.3 Habitats, Impacts and Mitigation

4.3.1 General

The proposed development will affect habitats of low ecological value, as the majority of the development area consists of poor modified grassland. All hedgerows and trees are to be retained, with

existing access points into the site utilised within the proposals. No specific mitigation measures are required for the grassland loss.

There is the potential for indirect impacts on retained boundary hedgerows and trees. Therefore, groundworks will be restricted in areas adjacent to retained hedgerow and root protection zones as defined in BS5837:2012 to be adhered to.

The proposals will result in the enhancement of grassland and creation of developed land, built linear features, trees, vegetated gardens and hedgerows *Figure 6*.

Figure 6. Proposed Habitats Plan



4.3.2 Habitat Retention

The proposed development will result in the retention of the following habitats:

Table 3. Retained and enhanced on-site habitat areas

Habitat Type	Area to be retained (Ha)	Area to be enhanced (Ha)
Modified Grassland	0.0065	0.24
Urban Tree	0.0204	0

Table 4. Retained and enhanced onsite hedgerow lengths

Hedgerow Type	Length to be retained (km)	Length to be enhanced (km)
Native Hedgerow	0.113	0
Non-native and Ornamental Hedgerow	0.091	0
Species-rich Native Hedgerow with Trees – Associated with Bank or Ditch	0.094	0

4.3.3 Habitat Creation

The proposed development will result in the creation of two residential buildings with associated garages and garden spaces. An access road and pedestrian pathway is to be created. A small plantation Woodland will be created in the west of the site with some additional tree planting scattered across the development site. Two hedgerows are to be created as natural borders for the pedestrian pathway and other neutral grassland and will remain in client ownership. The areas of proposed habitats are displayed in *Tables 5 and 6*.

Table 5. Proposed on-site habitat creation (red line development area only)

Proposed development	Habitat Type	Condition Score	Area (Ha)	Habitat Units
Residential buildings, bin storage area	Developed land; sealed surface	N/A - Other	0.0493	0
Access road	Built Linear Feature	N/A - Other	0.1616	0
Gardens	Vegetated Garden	Condition Assessment N/A	0.3491	0.67
Woodland Planting	Other Woodland; Broadleaved	Poor	0.0763	0.26
Tree Planting	Urban Tree	Poor	0.0489	0.14
Total:			0.6852	1.07

Table 6. Proposed onsite hedgerow creation (redline development area only)

Proposed development	Hedgerow Type	Condition Score	Length (km)	Hedgerow Units
Hedgerow Planting	Native Hedgerow	Poor	0.132	0.25

4.3.4 Statutory Metric Summary

The proposed development will result in a net gain of 0.37 habitat area units which equates to a **19.14% net gain on habitats** and a net gain of 0.25 hedgerow linear units which equates to a **12.45% net gain on hedgerows**.

Trading rules have been met for both habitat area and hedgerow linear units. Biodiversity Net Gain habitat plans and full habitat trading rules tables can be seen in Appendix 6 and 7.

Figure 7. Statutory Metric Summary

On-site baseline	Habitat units	1.93
	Hedgerow units	2.05
	Watercourse units	0.00
On-site post-intervention (including habitat retention, creation & enhancement)	Habitat units	2.30
	Hedgerow units	2.30
	Watercourse units	0.00
On-site net change (units & percentage)	Habitat units	0.37
	Hedgerow units	0.25
	Watercourse units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.37
	Hedgerow units	0.25
	Watercourse units	0.00
Total net % change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	19.14%
	Hedgerow units	12.45%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

4.3.5 Habitat Management

General

Management prescriptions will be implemented for all retained and created habitats on site to ensure the net gains detailed within this report are met.

Full details of required management, per habitat type, will be detailed in full within a Project specific Habitat Management and Monitoring Plan, should Planning Permission be granted. This plan will cover a period of 30 years and will include the following management prescriptions for each habitat type (prescriptions below are summarised, detailed management will be included in the Habitat Management and Monitoring Plan).

Hedgerow Planting

New hedgerow plants should be fully hardened off 40 – 60 cm bare root whips (1 + 1), planted at a density of six plants per metre (double spaced) between November and March and staked and protected with a bio-degradable tree/rabbit guard.

Locally occurring native species from British grown stock of local provenance will be used and hedgerow planting can include a mix of Blackthorn (*Prunus spinosa*), Hawthorn, Hornbeam (*Carpinus betulus*), Field Maple (*Acer campestre*), Hazel (*Corylus avellana*), Elder, Rowan (*Sorbus aucuparia*), Spindle (*Euonymus europaeus*), Holly, Dog Rose (*Rosa canina*) and Honeysuckle (*Lonicera periclymenum*).

A water supply will be provided at planting of a minimum 170 litres per standard/large, feathered tree, 10 litres per transplant tree or 4 litres per shrub and mulching or weed suppressing mats used to aid good establishment of woody species. Herbicides (e.g. Glyphosate) will not be used either at the planting stage or in long-term site management practices. Hedgerows can take 5 years to reach optimal condition, therefore a management plan covering this period will be required.

Other Neutral Grassland Enhancement

Modified grassland can be enhanced to other neutral grassland in moderate condition through a change in management practices (e.g. change in management to allow variation in sward height) and over seeding of a suitable seed mixture. Current grassland should be maintained at a short sward height and then scarified to 50% bare ground. A suitable seed mixture such as Emorsgate EM3 Special General-Purpose Meadow Mixture, or similar, will then be sown into these areas. The seed mixture will need to include Yellow Rattle (*Rhinanthus minor*) which is a plant which promotes diversity through controlling vigorous grass populations.

Modified Grassland Enhancement

Grassland in the southwest of the site is to be enhanced to a higher condition (poor to moderate condition) through overseeding and a change in management practices. Current grassland will be maintained at a short sward height and then scarified to 50% bare ground. A suitable seed mixture such as Emorsgate EM2 Standard General-Purpose Meadow Mixture, or similar, will then be sown into these areas.

Tree Planting

Twelve trees are to be planted within the site. The trees will be of native origin and from a local source. Species such as Field Maple (*Acer campestre*) or Rowan (*Sorbus aucuparia*) can be used. Pit planting will be used as a method for planting the saplings. Mulching or a weed suppressing mats will be used to aid good establishment of the tree. The saplings will be planted between November and March and staked and protected with bio-degradable tree guards to prevent pest damage. This will provide

enhancement to the site for species such as nesting birds and foraging bats, resulting in an overall improvement. The new saplings will be monitored for a minimum of 5 years to check establishment and if die-back or failure to establish occurs then re-planting will be required. Re planting will replace the original species and be of a similar size. Once established, the tree guards will be removed.

Woodland Creation

Native broadleaved woodland is to be created in the west of the site and is to be comprised of native tree species similar to those already found within the existing off-site woodland habitats. The woodland should include a mixture of at least 4-5 native tree species.

Tree specimens should be sourced from the same provenance as the Site using UK and Ireland Sourced and Grown certified stock (UKISG) to encourage adaptation to site conditions and soil type. If tree stock cannot be sourced from the same provenance, then any UKISG certified stock of the required tree species can be used. However, this should be the last resort as tree stock may not establish to the Site conditions as successfully as locally sourced stock. Trees should be planted with spatial variation in mind to create groves and areas of open woodland. Distances of tree planting can vary between 1.25m, 2.5m, 5m, and 10m.

Pit planting should be used as a method for planting whips. Mulchings or weed suppressing mats should be used to aid good establishment of woody species. Plants should be 80 – 100 cm bare root whips (1 + 1), planted between November and March and staked and protected with a bio-degradable treeguard to prevent pest damage. This will provide enhancement to the site for a number of species, resulting in an overall improvement. All new whips will be monitored for a minimum of 5 years to check establishment and if die-back or failure to establish occurs then re-planting will be required. Re-planting will replace the original species and be of a similar size. Once established, the tree guards should be removed.

4.4 Protected Fauna

To protect species of note and maintain and increase biodiversity of the site, the following mitigation measures and safe working methods will need to be incorporated into the proposals.

4.4.1

[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

4.4.2 Bats

No potential roosting features were observed within the site. As such, no further surveys or mitigation for roosting bats will be required.

The loss of poor modified grassland within the site is not likely to have a significant effect on foraging and commuting bats. Furthermore, all hedgerows and trees are to be retained within proposals, maintaining suitable commuting habitat to the wider environment.

Long term bat roosting provision will be incorporated and will comprise a minimum of two bat boxes, such as one Schwegler 2F and one Schwegler 1FF, or equivalent, erected on to the proposed buildings. External or integrated roosting features should be installed at eave height on the south-eastern or south-western elevations of the new dwellings.

Woodland creation and tree planting will also provide enhancement to bats through provision of roosting opportunities and foraging habitat.

If any new lighting is proposed, then the following measures will be considered:

- Any lights will have a Corrected Colour Temperature of less than 2700K and a brightness of under 500 lumens.
- Each light will be directed downwards with a 0-degree tilt angle and 0% upward light ratio.
- Where possible, the lights will be controlled by a PIR sensor with a maximum over-run time of 10 minutes.
- The lighting will be directed away from roosting provisions, hedgerows, and trees, and the use of downlighting will ensure that suitable foraging and commuting habitats remain unlit.
- All existing and any new lighting will also be directed away from access / egress points including those of the recommended bat boxes, and this will likely improve the suitability of the new buildings for roosting bats.

4.4.3 Nesting Birds

The wider field parcel could have some suitability for ground-nesting birds, however, it is unlikely they will be present within the site due to regular management of the grassland and close boundary features. Hedgerows and individual trees within the site are suitable for nesting birds. All hedgerows and trees are to be retained as part of proposals. As such, nesting bird habitat will not be impacted by the works.

Enhanced nesting opportunities on site will be provided through the provision of additional nesting bird habitat and hedgerow planting. A minimum of two integrated nesting boxes will be installed on newly constructed buildings. External or integrated nesting boxes should be installed at eave height on the north or north-eastern / eastern elevations of the new dwellings.

4.4.4 Great Crested Newt

One pond is present within 250m of the site and is located approximately 130m west of the site.

Eleven records of Great Crested Newt were recorded within 2 km of the Site, with the closest situated 1.3 km southwest of the site. The modified grassland is considered to have limited opportunities for commuting Great Crested Newts and is not suitable foraging or hibernating habitat. Hedgerows bordering the site could be used as commuting routes or for refuge however these habitats will remain unaffected by the proposals. There is no suitable breeding habitat for Great Crested Newts within the site.

No suitable breeding, foraging or hibernating habitats will be directly impacted by the proposals and it is unlikely Great Crested Newt will disperse across the short sward grassland. Although presence within the Site is unlikely, to mitigate any impacts to commuting Great Crested Newts the following Reasonable Avoidance Measures (RAMs) will be adhered to:

- Affected grassland to be maintained short pre- and during the proposed works to deter amphibians and reptiles from occurring in this area.
- Any excavations will be completed during daylight and backfilled (and suitably compacted) before nightfall or if this is not possible a ramp (or similar structure) will be provided to allow animals an opportunity to escape. Checks of any excavations for animals will also be undertaken prior to backfilling.
- Groundworks are to occur within the Great Crested Newt inactive period (November- February inclusive) when newts are less likely to be commuting through the Site, and a grassland buffer of 5m will remain in place between groundworks and border hedgerows .
- During construction, any storage of piles of materials and excavated earth on the site should be kept to a minimum and stored away from the boundary hedgerows and raised (e.g. on pallets) to deter Great Crested Newt from using them for temporary cover. Excavated earth should be compacted on the day it is excavated and stored on site for a maximum of three nights.
- **If a Great Crested Newt is found during any stage of the above works all works must cease and an Ecologist called to provide advice and/or attend site. In the event of a Great Crested Newt being found Natural England (NE) will need to be contacted to discuss an acceptable course of action.**

4.4.5 Reptiles

The hedgerows have some suitability for foraging and dispersal reptiles, however, will not be impacted by the proposals. The majority of site is unlikely to be used by reptiles as the modified grassland has a short sward height and is subject to regular management. Due to the lack of suitable habitat to be lost, it is not expected that there will be any significant impact on any reptile species. Furthermore, methods discussed within section 4.4.4 will mitigate any potential impacts to Reptiles.

5 LEGAL PROTECTION

This section briefly describes the legal protection afforded to the protected species referred to in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation but summarises the salient points.

5.1 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

5.2 Bats

All species of British bat are protected by *The Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also listed on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017* (as amended). This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats in such a way as to be likely to (a) impair their ability to: (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; and
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.

Where it is necessary to carry out an action that could result in an offence under the regulations protecting bats and their roosts it is possible to apply for Mitigation Licence from Natural England (NE) or Natural Resources Wales (NRW). Three tests must be satisfied before this licence (to permit otherwise prohibited acts) can be issued:

- Regulation 55(1)(a) states that licences may be granted to “preserve public health or public safety or 55(6)(a) other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.”
- Regulation 55(2) and 55(7)(a) states that a licence may not be granted unless “there is no satisfactory alternative”.
- Regulation 55(7)(b) states that a licence, in respect of imperative reasons of overruling public interest (IROPI), cannot be issued unless the action proposed “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

5.3 Nesting Birds

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CRow Act.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4)* and *1(5)* of the Act. The protection was extended by the CRow Act. The legislation confers special penalties where the above-mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.

5.4 Great Crested Newt

Great Crested Newt is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. These species are also listed on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017* (as amended). Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
 - possess any part of such species either alive or dead;
 - intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
 - intentionally or recklessly disturb such a species whilst using any place of shelter or protection;
- or

- sell or attempt to sell any such species.

The Great Crested Newt is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under *Section 74* of the CRow Act.

5.5 Common Reptile Species

Common Lizard, Grass Snake, Slow-worm and Adder are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the CRow Act.

Under the above legislation it is an offence to:

- intentionally or deliberately kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.

6 BIODIVERSITY NET GAIN PLANS

Figure 8. Baseline Plan



Figure 9. Proposed Habitat Plan



Figure 10. Retention Plan

7 HABITAT TRADING RULES SUMMARIES

Figure 11. Habitat Area Unit Trading Summary

Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Same habitat required – bespoke compensation option A	Yes ✓
High	Same habitat required =	Yes ✓
Medium	Same broad habitat or a higher distinctiveness habitat required (2)	Yes ✓
Low	Same distinctiveness or better habitat required ≥	Yes ✓

Figure 12. Hedgerow Linear Unit Trading Summary

Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Same habitat required =	Yes ✓
High	Like for like or better	Yes ✓
Medium	Same distinctiveness or better habitat required	Yes ✓
Low	Same distinctiveness or better habitat required	Yes ✓
Very Low	Same distinctiveness or better habitat required	Yes ✓