National Consultancy, Locally Delivered

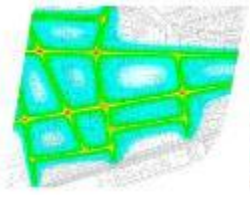
EXTENDED PHASE 1 HABITAT SURVEY REPORT
LAND AT ASHBOURNE ROAD, LEEK

REC REFERENCE: 101087EC1R1

REPORT PREPARED FOR:
GREEN GATE HOMES (NW) LTD

AUGUST 2016





QUALITY ASSURANCE

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EXECUTIVE SUMMARY

Site Address	Land at Ashbourne Road, Leek, ST13 5BU
Grid Reference	SJ995559
Site Area	Approximately 4000 m^2
Current Site Use	Two grassland paddocks used for grazing.
Adjacent Site Use	Residential housing is located to the north and east. Agricultural land is present to the south and west.
Designated Sites	There are no statutory designated sites in close proximity to the development area. Four non-statutory designated sites are located within 1 km of the site boundary. It is not anticipated that the development will have a negative impact on these sites due to the small scale nature of the proposals.
Habitat Features	The following habitat features were identified within the site and immediately adjacent to the site (within the 30m zone of influence): • Improved grassland; • Broadleaved trees; • Earth bank; and • Dry stone wall.
Conclusions and Recommendations	It is proposed that the site is developed to accommodate a residential development. It is anticipated that impacts upon the site ecology will be minimal. Nevertheless, the following recommendations have been made: • Undertake a nesting bird check prior to removal of suitable nesting bird habitats and to ensure absence of ground nesting species in the works area. NB: only required if works undertaken during the breeding bird season (generally considered to be March to September, inclusive); and • Undertake an updated badger survey before development commences. The development provides the opportunity to enhance the site's biodiversity and, in line with the National Planning Policy Framework, suggestive measures to enhance the site's biodiversity have also been recommended.

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DRAWINGS		**SCALE**
101087-001	Site Location Plan	N.T.S
101087-002	Extended Phase 1 Habitat Plan	1:4000 @ A3

1.0 INTRODUCTION

1.1 Background

Resource and Environmental Consultants Ltd (REC) have been commissioned by Green Gate Homes (NW) Ltd to undertake an Extended Phase 1 Habitat Survey at Land at Ashbourne Road, Leek; hereafter referred to as the 'site'. It is proposed that the site is developed to accommodate a residential development.

1.2 Objectives

The purpose of the Extended Phase 1 Habitat Survey was to identify:

- The major habitats present;
- The potential for legally protected species to be present; and,
- Additional ecological surveys likely to be required.

The Extended Phase 1 Habitat Survey included a desktop review, consultation and a site visit. The results of this review were used to assess the nature conservation importance of the site. The potential for each habitat to support protected species was also noted. An Extended Phase 1 Habitat Survey does not constitute a full survey for protected species to standard survey methodologies, but is used as a tool to recommend which surveys are required for protected species (or other species of significant nature conservation interest). Recommendations for further ecological surveys are made at the end of the report.

1.3 Site Description

The site is located to the south of Leek, to the west of Ashbourne Road, from which the site is accessed. The area surrounding the site to the north is predominantly residential, with agricultural land to the south and west. Ladydale Local Wildlife Site (LWS) is located immediately west of the site.

Please refer to Drawing No. 101087-001 for a site location plan.

2.0 SURVEY METHODOLOGY

2.1 Desk Study & Consultation

The desktop study involved conducting database searches for statutory and non-statutory designated sites, legally protected species and features of interest within and immediately surrounding the site within a 1km radius. The central grid reference of the parcel was used as the central point of all searches. The baseline conditions were based on a review of existing available information including:

- MAGIC (Multi-Agency Geographical Information for the Countryside) website;
- Ordnance Survey mapping (to identify potentially notable habitats);
- Aerial photography (e.g. google mapping);
- UK Biodiversity Action Plan (UKBAP); and,
- Consultation with the local biological records centre.

2.2 Habitat Survey

The Extended Phase 1 Habitat Survey of the site was carried out on the 26th January 2016 by a suitably qualified ecologist from REC. Weather conditions on the day were overcast and dry. The field survey comprised a walkover of the land and habitats present, with a classification of the habitats to Phase 1 Habitat Survey standard, following the 'Preliminary Ecological Appraisal' methodology as set out in the 'Guidelines for Preliminary Ecological Appraisal' (Chartered Institute of Ecology and Environmental Management [CIEEM], 2012), which is a development of the method described in the 'Handbook for Phase 1 Habitat Survey – a technique for environmental audit' (Joint Nature Conservation Committee, 2010). The Extended Phase 1 Habitat Survey provides information on the habitats in the survey area and identifies actual or potential presence of legally protected or otherwise notable species/habitats in or where appropriate, adjacent to the site.

The main habitats within the site were mapped and are shown at an appropriate scale on Drawing No. 101087-002 - Extended Phase 1 Habitat Plan.

Target notes (more detailed descriptions of a particular area in terms of habitat and species composition or means of highlighting a particular feature of ecological interest), are given in Appendix 1.

Plant names follow 'New Flora of the British Isles' (Stace, 2011). The common and scientific name of each of the botanical species is provided when first mentioned in the text, but only the common name is stated thereafter. All species identified during the site survey are listed in Appendix 2. In addition to establishing the baseline ecological interest within the area, the survey intended to identify areas where further surveys may be required, during the appropriate season.

2.3 Protected Species Assessment

The potential of the site to support legally protected or national/local BAP species was assessed from field observations carried out during the site walkover and combined with the results of the desk top study. The site was inspected for indications of the presence of protected species as follows:

- The presence of nesting habitat for breeding birds, such as mature trees, dense scrub, hedgerows and buildings and/or field margins suitable for ground nesting birds, and evidence of bird nesting including bird song, old nests, faecal marks etc;
- The presence of features in, and on trees, indicating potential for roosting bats such as fissures, holes, loose bark and ivy and those associated with buildings such as cavities, roof voids, hanging tiles, unenclosed soffits etc. Direct evidence such as the presence of bats, staining, droppings and feeding remains was also looked for;
- Evidence of badger, including setts, runs, snuffle holes and hairs;
- Scrub/grassland mosaic and potential hibernation sites for reptiles;
- Suitable habitat for dormice, such as woodland, scrub and dense/species-rich hedgerows, particularly when connected to suitable habitats across the wider landscape;
- Assessment of any on-site ponds and surrounding terrestrial habitat as to their potential to support great crested newts and other amphibians; and,
- Assessment of water bodies, such as ditches and streams as to their potential to support water vole and/or otter.

The likelihood of occurrence of any protected and/or invasive species is ranked as follows and relies on habitat suitability and an evaluation of existing data:

- **Negligible** – while presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species or species group. There may be no local returns from a data search and the surrounding habitats are considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to the known natural range for a species/species group;
- **Low** – habitats within the site are of poor to moderate quality for a given species/species group. There are few or no returns from the data search, but presence cannot be discounted on the basis of national distribution, the nature of surrounding habitats, habitat fragmentation or recent on-site disturbance, etc.
- **Medium** – habitats within the site are of moderate quality providing opportunities for a given species/species group. Desk study reveals local occurrence or site is within the national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, habitat isolation, and/or disturbance;
- **High** – habitats within the site are of high quality for a given species/species group. Desk-top study provides evidence of local occurrence. The site is within/peripheral to a national or

regional stronghold and/or has good quality surrounding habitat and good connectivity; and,

- **Confirmed Presence** - presence confirmed from the current survey or by recent, confirmed records.

Natural England's Great Crested Newt Mitigation Guidelines (English Nature, 2001) recommend that any waterbodies within 500 m of a site and sites with suitable terrestrial habitats within 500 m of a waterbody should be assessed for great crested newt potential. However, the great crested newt Rapid Risk Assessment (RRA; from Natural England's EPSL method statement for the species) assesses habitat losses of up to 5 ha of land situated greater than 250 m from a breeding pond as 'Green: offence highly unlikely'. Thus, for sites less than 5 ha, assessing ponds up to 250 m from the site boundary is more appropriate.

The CIEEM EcIA guidelines (2016) recommend that the value or potential value of an ecological resource or feature should be determined within a defined geographical context. They recommend that the following frame of reference be used (or adapted to meet local circumstances):

- International and European;
- National;
- Regional;
- County (or Metropolitan); or
- Local.

The purpose of this assessment is to identify whether sufficient information is available to accurately assess the nature conservation value of a site for a given protected species or whether more comprehensive Phase 2 surveys for protected species are necessary.

2.4 Limitations

Ecological surveys are limited by a variety of factors which affect the presence of flora and fauna (e.g. climatic variation, season and species behaviour). A lack of evidence of a protected species during a survey does not mean that the species is absent; hence the survey also records and assess' the ability of habitats to support such species. The time frame in which the survey is implemented provides a snapshot of activity within the survey area and cannot necessarily detect all evidence of use by a species. The survey was completed in January. The timings of the habitat surveys did not present any issues when classifying habitats in this circumstance. The surveyors undertaking the habitat surveys were suitably skilled at classifying habitats and identifying plants outside of the core flowering season.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the natural environment. The Extended Phase 1 habitat survey does not constitute a full botanical survey. Plant species may have been under-recorded, unidentifiable or not visible due to a number of factors including the time of year the survey was carried out.

The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. This is based on the suitability of the habitat, known distribution of the species in the local area (provided by data searches) and any direct evidence within the survey area. It should not be taken as providing a full and definitive survey of any protected species group. It is only representative of the time the survey was carried out. Additional surveys may be recommended if,

on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present. Desk study data is not likely to be exhaustive and it is therefore possible that protected species not identified during the data search do in fact occur within the vicinity of the site.

3.0 BASELINE CONDITIONS

3.1 Aerial Photography and OS Maps

From aerial photography, the site appears to comprise an area of grassland which is bordered to the north by a petrol station and residential, to the east by Ashbourne Road and to the south and west by agricultural land.

Ladydale LWS is present to the west and comprises an extensive area of grassland defined by tree lines, as well as woodland copses. This area is expected to provide extensive foraging resources for a range of wildlife including birds and bats, as well as terrestrial mammals.

Natural England's Great Crested Newt Mitigation Guidelines (English Nature, 2001) recommend that any waterbodies within 500 m of a site and sites with suitable terrestrial habitats within 500 m of a waterbody should be assessed for great crested newt potential. However, the great crested newt Rapid Risk Assessment (RRA; from Natural England's EPSL method statement for the species) assesses habitat losses of up to 5 ha of land situated greater than 250 m from a breeding pond as 'Green: offence highly unlikely'. Thus, for sites less than 5 ha, assessing ponds up to 250 m from the site boundary is more appropriate. A review of aerial photography and OS maps highlighted the presence of one pond within this search area, located approximately 125 m east of the site boundary.

3.2 Statutory and Non-Statutory Designated Sites

The desk study highlighted the presence of no statutory sites within 1 km of the site. However, the site is located within the Risk Zone for Coombes Valley Site of Special Scientific Interest (SSSI), which highlights certain types of developments that local planning authorities should scrutinise for potential indirect impacts. The proposed development is not anticipated to impact on the SSSI.

Four non statutory designated sites were identified within a 1km search area:

- Ladydale Local Wildlife site, located adjacent west of the site boundary. This site comprises an area of poor semi-improved grassland with a large proportion of neutral semi-improved grassland. The Lady o' th' Dale Well runs through the northern area;
- Ballington Wood Local Wildlife Site, located approximately 430 m south west of the site boundary, This area is designated for semi natural ancient woodland;
- Lowe Hill Retained Biodiversity Alert Site (BAS), located approximately 500 m south of the site boundary. This area predominantly comprises marshy grassland; and,
- Kniveden Hall Local Wildlife Site, located approximately 850 m east of the site boundary. This area is predominantly comprised of marshy grassland, with some neutral semi-improved grassland areas as well as broadleaved woodland.

Due to the small scale and nature of the development proposals, it is not anticipated that development will have a negative impact on any of the above non-statutory designated sites.

3.3 Biodiversity Action Plans (BAP)

Consultation with Natural England's 'Magic Map' website identified many areas of UKBAP habitat within 1 km of the site boundary. The main areas of interest were associated with the above non-statutory designated sites and included areas of:

- Good quality semi-improved grassland BAP Priority Habitat;
- Deciduous woodland BAP Priority Habitat; and,
- Wood pasture and parkland BAP Priority Habitat.

4.0 HABITATS

4.1 Site Summary

The main habitats within each parcel are described below. The location of each habitat is shown on the Extended Phase 1 Habitat Plan (see drawing number 101087-002) and target notes are listed in Appendix 1. An indication of the species present in each habitat is listed in Appendix 2.

The site was comprised of two paddocks which were being grazed by pigs and goats at the time of survey (Target Note 1). The sward height was short, and much of the paddocks (especially to the north) were waterlogged and muddy. The improved grassland of the paddocks was found to contain common and widespread species such as; creeping buttercup (Ranunculus repens), ribwort plantain (Plantago *lanceolata*), common nettle (*Urtica dioica*), perennial rye grass (*Lolium perenne*) and creeping thistle (*Cirsium arvense*).

The paddocks were enclosed by fencing to all sides, except to the east where dry stone walling separated the site from Ashbourne Road (Target Note 2). An earth bank and tree line containing alder (*Alnus glutinosa*), sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), elder (*Sambucus nigra)*, hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*) and rhododendron (*Rhododendron* spp.) was present along the southern boundary (Target Note 3).

A shallow dry ditch was present to the south of the paddock, separated from the site by fencing (Target Note 4). This area was dominated by common nettle, with creeping buttercup, common cleavers (*Galium aparine*) and broad leaved dock (*Rumex obtusifolius*) also present. To the west of the ditch, holly and sycamore were present which formed a hedgerow boundary to the site.

No permanent building structures were present on site, however to the north, directly between the two paddocks; an animal shelter was present, as well as a chicken house (Target Note 5). A large soil mound was also present in this area.

5.0 PROTECTED SPECIES

5.1 Overview

The legislation that relates to the protected species referred to in this section is included in Appendix 3. Additional species/species groups have been considered as part of this report; however, only those that occur within the same geographical range and where suitable habitats are present within or adjacent to the site are included below.

5.2 Amphibians

Consultation with the local records centre identified local records for great crested newt (*Triturus cristatus*), the closest of which was located approximately 300 m north of the site boundary, and two records of common toad (*Bufo bufo*), the closest of which was located approximately 360 m west of the site boundary.

No waterbodies were located within or immediately adjacent to the site, and it is therefore concluded that the site does not have the capacity to support the species in their aquatic/breeding phase.

However, a pond was located approximately 120 m east of the site boundary (see Figure 1 below), on the opposite side of Ashbourne Road. This pond was assessed using the Habitat Suitability Index. The great crested newt Habitat Suitability Index (HSI) is a quantitative measure of habitat quality that evaluates the suitability of habitat for great crested newts (ARG UK, 2010). The scoring system evaluates the suitability of the habitat quality and quantity for great crested newts based on a numerical score for ten indices. The ponds located within the search areas were assessed for their potential to support great crested newts following these criteria (i.e. HSI; ARG UK, 2010) and the results are provided in Table 3.1.

Figure 1 Photograph of the pond

The pond was located within an agricultural field, which at the time of survey was unused. The pond was fenced off from the rest of the field by barbed wire fencing. The survey was undertaken after a period of localised snow fall in the area, and as such some areas of the pond contained ice. The pond was found to be dominated by floating sweet grass (*Glyceria fluitans*), with the margins dominated by hard rush *(Juncus inflexus*).

Table 3.1 HSI Score

Pond	P1	
SI1 - Location	A	1
SI2 - Pond area	80 m^2	0.2
SI3 - Pond drying	Sometimes	0.5
SI4 - Water quality	Poor	0.33
SI4 - Shade	10%	1
SI6 - Fowl	Absent	1
SI7 - Fish	Absent	1
SI8 - Ponds	1	0.65
SI9 – Terr. habitat	Moderate	0.67
SI10 - Macrophytes	90%	0.9
HSI Scores	**0.65**	**Poor**

The ponds suitability for great crested newts is assessed as "poor" though this technique is not definitive of great crested newt absence. For comparison purposes, great crested newts were only found to be present in 3% of ponds scoring poor (ARG UK, 2010). The presence of Ashbourne Road between the site and the pond is thought to act as a limiting factor for amphibian dispersal in the direction of the site.

The site is predominantly comprised of improved grassland fields, which offer negligible value for amphibians as they provide no cover. However, the dry stone wall as well as the earth bank which border the site could provide some terrestrial habitat for the species group, though these features are widespread in the local area and offer little motivation for the species to migrate in this direction.

Based on the site size, habitats and immediately surrounding areas the likely presence of amphibians within the site is assessed as low. The ecological value of the site with regards to amphibians is assessed as local, within the zone of influence.

5.3 Avifauna

Consultation with local record centre identified a range of notable bird species, as detailed in Table 3.2 below.

Table 3.2 Notable Bird Species

Species	Scientific name
Skylark (*Alauda arvensis*)	Spotted fly catcher (*Muscicapa striata*)
Common kingfisher (*Alcedo atthis*)	Eurasin Curlew (*Numenius arquata*)
Mallard (*Anas platyrhynchos*)	Eurasian tree sparrow (*Passer montanus*)
Meadow pipit (*Anthus pratensis*)	House sparrow (*Passer domesticus*)
Pink-footed goose (*Anser brachyrhynchus*)	Green woodpecker (*Picus viridis*)
Common Swift (*Apus apus*)	Willow warbler (*Phylloscopus trochilus*)
Tufted duck (*Aythya fuligula*)	Dunnock (*Prunella modularis*)
Black-headed gull (*Chroicocephalus ridibundus*)	Willow tit (*Poecile Montana*)
Peregrine falcon (*Falco peregrines)*	Common starling (*Sturnus vulgaris*)
Eurasian hobby (*Falco subbuteo)*	Redwing (*Turdus iliacus*)
Common kestrel (*Faclo tinnunculus*)	Field fare (*Turdus pilaris*)
Brambling (*Fringilla montifringilla*)	Song thrush (*Turdus philomelos*)
Common snipe (*Gallinago gallinago*)	Ring Ouzel (*Turdus torquatus*)
Barn swallow (*Hirundo rustica*)	Mistle thrush (*Turdus viscivorus*)
Lesser black-backed gull (*Larus fuscus*)	Barn owl (*Tyto alba*)
Red kite (*Milvus milvus)*	Northern lapwing (*Vanellus vanellus*)

The presence of trees bordering the site makes it likely that passerine bird species will utilise the site for breeding. The site is bordered to the south by extensive agricultural land, which is assessed to provide suitable foraging opportunities for the species. The disturbed nature of the grassland due to grazing and presence of pigs is considered to reduce the suitability of the site to support notable ground nesting species such as skylark. Based on the habitats present and the scale of the site, the site is considered to be of local importance, within the zone of influence only, with regards to birds.

5.4 Badger

Consultation with the local records centre identified several records for badger within the search area. A sett is known to be located within the 1 km search area, and field signs have been recorded within the site, the most recent record of which being in 2008.

No signs of badger activity were recorded during the survey and no sett (used or disused) was encountered during the survey. No other burrowing mammal evidence (e.g. rabbits) was apparent within the site.

The site is small, and provides limited opportunities for sett building due to its exposed and disturbed nature, however could provide limited foraging opportunities for the species. Therefore, the like ecological value of the site with regards to badgers is assessed as local, within the zone of influence.

5.5 Bats

Consultation with the local records centre identified a number of records for bats including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared (*Plecotus auritus*). The majority of these records were distant and associated with the residential area of Leek to the north of the site, with some records associated with Ladydale LWS and Lowe Hill retained BAS.

The site, being comprised of improved grassland paddocks, does not provide an extensive foraging resource for the species. However, the site is situated within a predominantly agricultural area, and the tree lines and hedgerows which define the fields may be used as linear commuting routes.

During the site survey a visual assessment of all trees within and adjacent to the site was undertaken to determine their potential to support bat roosts (as per the categories listed within the Good Practice Guidelines; Collins, 2016). Most of the trees were classified as Category 3 (i.e. trees with no potential to support bats). However, three trees (T5, T9 and T19) were assessed as having Category 2 bat roosting potential. These tress had crevices/holes or ivy coverage which could provide some roosting opportunities for crevice dwelling species.

The majority of the habitats within the site were sub-optimal in terms of foraging. The likelihood of bat presence within the site is assessed as high. The ecological value of the site was considered to be local and within the zone of influence for bats.

5.6 Reptiles

Consultation with the local records centre identified local records for grass snake (*Natrix natrix*) and slow-worm (*Anguis fragilis*), the closest records for each being located approximately 1.4 km north west and 980 m south of the site boundary respectively.

Owing to the species poor and disturbed nature of the site, and the distance of known records of the species from the site, the likely presence of reptiles within the site is assessed as negligible. The ecological value of the site with regards to reptile is assessed as negligible.

5.7 Invertebrates

Consultation identified three records of notable invertebrates within the search area. Small heath (*Coenonympha pamphilus*), bumble bee (*Bombus sp*) and common wasp (*Vespula (Paravespula) vulgaris*) were located 650 m west, 330 m north and 1.4 km north west of the site boundary respectively.

The site habitats were species poor and heavily disturbed by grazing and as such lacked structural diversity or significant areas of established habitat. As such the ecological value of the site for invertebrates was considered to be negligible.

5.8 Flora

Consultation identified numerous records of Bluebells (*Hyacinthoides non-scripta*) across the site as well as throughout Ladydale LWS.

At the time of survey, the habitats on site were species poor and heavily grazed, making the likelihood of notable species of flora being present low. Bluebell is a woodland species and as such any historic records are likely to be associated with the small woodland copses and hedgerow boundaries in the locality.

5.9 Other species

Consultation with the local records centre identified records for European hedgehog (Erinaceus europaeus) and brown hare (*Lepus europaeus*) associated with the established habitats to the north-west.

The sites improved grassland fields provide limited foraging habitat for the above species, though the tree line associated with the earth bank to the south of the site may provide limited cover for the species. It is anticipated that more suitable habitats lie to the west of the site, within Ladydale LWS. Therefore, the ecological value for the site with regards to the above species is assessed as local, within the zone of influence.

5.10 Invasive Species

No records of invasive species were identified during the consultation process.

Well established stands of rhododendron were located along the south and western boundary of the site.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Development Proposals

At the time of writing, the proposed site layout indicates the construction of several residential dwellings, each of which will have associated car parking facilities, as well as rear amenity gardens. Tree planting and landscaping is also proposed, and it is indicated that the boundary features will remain generally intact, with residential gardens bordering them. A new road will also be constructed to provide access from Ashbourne Road.

6.2 Statutory/Non-Statutory Designated Sites

It is not anticipated that the proposed development would impact upon any statutory or non statutory sites as described above due to the distance they are from the site, and the small scale of the proposals.

6.3 Habitats

The proposed residential development would result in the loss of species poor habitats which comprise common and widespread species. As such, direct habitat impacts are limited to common and widespread habitat types of negligible value.

Protection and enhancement proposals where required are provided at Section 6.5 below to ensure impacts are negated and that the scheme would result in a net gain for biodiversity.

6.4 Protected Species

Below is a description of the potential impact to species and species groups that may be adversely affected as a result of development. The National Planning Policy Framework (NPPF) requires that developments should "contribute to conserving and enhancing the natural environment". Thus, where appropriate, recommendations have also been made to enhance the sites biodiversity for these species.

Amphibians

There are no ponds present within the site, and thus it does not have the capacity to support amphibians within their aquatic/breeding phase. A single pond was located within 250 m of the site, and this was assessed using the HSI as having "poor" suitability for great crested newts. The pond is also situated on the opposite side of Ashbourne Road within an agricultural field. It is considered that the road will limit dispersal in the direction of the site, and the site provides limited motivation for migration in this direction.

As such, it is not anticipated that the site supports populations of great crested newt or other amphibians and there will be no impact on this group.

Reptiles

The presence of reptile species is considered unlikely due to poor terrestrial habitat on site and linkages to other habitat features in the locality. As such it is concluded that the impact on this species group will be negligible.

Avifauna

It is not anticipated that the site supports significant numbers of notable bird species. Nevertheless, the site provides some breeding opportunities for birds and thus, it is recommended that any vegetation removal is undertaken outside of the breeding bird season (generally considered to be March to September inclusive). However, should these works be required within the breeding bird season then it is recommended that a check for breeding birds is undertaken by a suitably experienced surveyor prior (within 24 hours) to works commencing. If a nest (or nest in construction) is found, a suitable stand-off area should be maintained until the young have fledged.

In line with the NPPF, it is recommended that any proposed tree and shrub planting for landscaping/screening purposes aims to include native fruit bearing specimens to increase foraging opportunities for birds within the site. Species such as dogwood (*Cornus sanguinea*), hazel (*Corylus avellana*), rowan (*Sorbus aucuparia*) and wild cherry (*Prunus avium*) are considered appropriate for this development as they have both aesthetic and nature conservation qualities.

Where possible, bird boxes should be installed in appropriate locations such as within landscaped areas and on outbuilding walls (e.g. wall mounted boxes such as house sparrow nest boxes).

Badger

No active setts were recorded on site or in close proximity and no signs of foraging were observed. However, because the species are known to be active in the area, and the highly mobile nature of the species, it is possible that badger may begin using this area before development begins. It is therefore advised that an updated badger survey be undertaken immediately prior to the commencement of works on site. If a badger sett is located, a suitable stand of distance should be maintained and a Natural England License may be required.

Bats

The majority of the habitats within the site are of low value for bats. However, three trees along the boundary of the site were identified as having Category 2 bat roosting potential.

It is not anticipated that development will require the loss of the boundary features, however, should these Category 2 trees require removal, “soft fell” techniques should be used under the supervision of an Ecological Clerk of Works (ECoW):

- Carefully section fell the tree avoiding cutting through or close to any cavities;
- Cut sections will be lowered to the ground with the use of ropes; and,
- Allow all felled sections to lie on the ground for 24 hours before removing side branches.

In addition, it is recommended that working hours within the site should be restricted to daylight hours. The use of artificial lighting should aim to follow the protocols outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and BCT’s “Artificial Lighting and Wildlife Interim Guidance: Recommendations to Help Minimise the Impact of Artificial Lighting” (2014) to minimise disturbance and sky-glow across the site and particularly towards the boundary features.

The recommended native tree species listed above could provide limited foraging opportunities for bats once established.

Flora

No notable species of flora were identified during the site survey; however records of bluebell are present from within the site boundary. It is therefore assessed as possible that this species could be present in the spring, likely associated with the site boundaries and nearby wooded areas. The boundaries remain unaffected by the development and as such no impact on notable flora is anticipated.

6.5 Recommended Further Ecological Surveys and Mitigation

Table 6.1 summarises further ecological survey and mitigation requirements.

Table 6.1 Recommended further ecological surveys and mitigation

Species / Feature & Location	Recommended Survey/Action	Potential Impact/Mitigation Required	Survey Timing
Avifauna Vegetation	Nesting bird check prior to removal of suitable nesting bird habitats. NB: only required if works undertaken during the breeding bird season.	Disturbance of breeding birds. Area to be declared free immediately prior to site works.	March to September.
Badger	Updates site walkover to look for fresh signs of badger activity	Disturbance/destruction of a badger sett	All year

7.0 REFERENCES

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APPENDIX 1 TARGET NOTES

APPENDIX 1 – TARGET NOTES (TN)

TN	Feature	Photograph of feature
1	The site predominantly comprised of two improved grassland paddocks which, at the time of survey, were being grazed by pigs and goats.	
2	To the east of the site, a dry stone wall separates the paddock from Ashbourne Road.	
3	Along the southern boundary, an earth bank is present which supports a number of trees as well as rhododendron.	
4	Dry ditch is present to the west of the site, which was dominated by common nettle with holly.	

5	The only buildings present on the site were animal shelters and a chicken house.	

APPENDIX 2 SPECIES LIST

APPENDIX 2 – INDICATIVE SPECIES LIST

Flora

Sycamore (*Acer pseudoplatanus*)
Alder (*Alnus glutinosa*)
Creeping thistle (*Cirsium arvense*)
Hawthorn (*Crataegus monogyna*)
Beech (*Fagus sylvatica*)
Ash (*Fraxinus excelsior*)
Common cleavers (*Galium aparine*)
Holly (*Ilex aquifolium*)
Perennial rye grass (*Lolium perenne*)
Ribwort plantain (Plantago *lanceolata*)
Creeping buttercup (Ranunculus repens)
Rhododendron (*Rhododendron*)
Broad leaved dock (*Rumex obtusifolius*)
Elder (*Sambucus nigra)*
Common nettle (*Urtica dioica*)

Fauna

Pig (*Sus scrofa domesticus*)
Goat (*Capra aegagrus hircus*)
Feral pigeon (*Columba livia domestica*)
Magpie (*Pica pica*)
Blackbird (*Turdus merula*)

APPENDIX 3 PROTECTED SPECIES LEGISLATION

APPENDIX 3 – PROTECTED SPECIES LEGISLATION

Breeding Birds

Under the Wildlife & Countryside Act 1981 (as amended), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to;

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is being built or in use;
- Take or destroy the eggs of any wild bird; and,
- Possess or control any wild bird or egg unless obtained legally.

Birds listed under Schedule 1 of the Wildlife & Countryside Act 1981 (as amended) are afforded additional protection, which makes it an offence to disturb a bird while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

The UK's birds can be split in to three categories of conservation importance - red, amber and green.

Red list criteria:

- Globally threatened;
- Historical population decline in UK during 1800–1995;
- Severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period (the entire period used for assessments since the first BoCC review, starting in 1969); or,
- Severe (at least 50%) contraction of UK breeding range over last 25 years, or the longer-term period.

Amber list criteria:

- Species with unfavourable conservation status in Europe (SPEC = Species of European Conservation Concern);
- Historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years;
- Moderate (25-49%) decline in UK breeding population over last 25 years, or the longer-term period;

- Moderate (25-49%) contraction of UK breeding range over last 25 years, or the longer-term period;
- Moderate (25-49%) decline in UK non-breeding population over last 25 years, or the longer-term period;
- Rare breeder; 1–300 breeding pairs in UK;
- Rare non-breeders; less than 900 individuals;
- Localised; at least 50% of UK breeding or non-breeding population in 10 or fewer sites, but not applied to rare breeders or non-breeders; or,
- Internationally important; at least 20% of European breeding or non-breeding population in UK (NW European and East Atlantic Flyway populations used for non-breeding wildfowl and waders respectively).

Green list species occur regularly in the UK but do not qualify under any or the above criteria.

Badgers

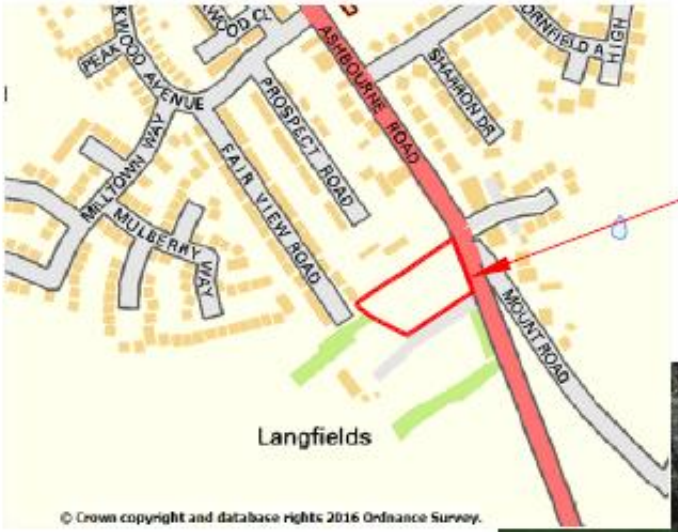
Badgers and their setts are legally protected under The Protection of Badgers Act (1992), which is based primarily on the need to protect badgers from baiting and deliberate harm or injury. Under this legislation it is illegal to:

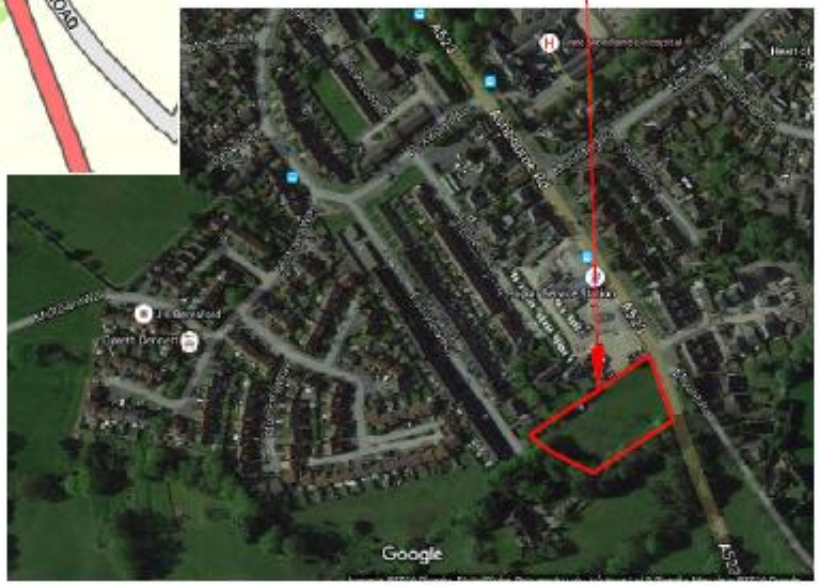
- Wilfully kill, injure, take, or cruelly ill-treat a badger, or attempt to do so;
- Possess any dead badger or any part of, or anything derived from, a dead badger; and,
- Intentionally or recklessly interfere with a sett which includes, disturbing badgers whilst they are occupying a sett, damaging or destroying a sett, causing a dog to enter a sett, or obstructing access to it.

A badger sett is defined in the legislation as "*any structure or place, which displays signs indicating current use by a badger*".

DRAWINGS

Site Location





Site Boundary

R0	03-02-2016	Revision	KD	OW
Revision	Date	Issue	Drawn	Authorised

Green Gate Homes (NW)Ltd

Job No: 101087 | Date: 03-02-2015

Drawing No: 001 | Scale: N.T.S

Land At Ashbourne Road, Leek

Site Location Plan

REC

Resource and Environmental Consultants Ltd
Osprey House, Pacific Quay
Manchester, M50 3UB
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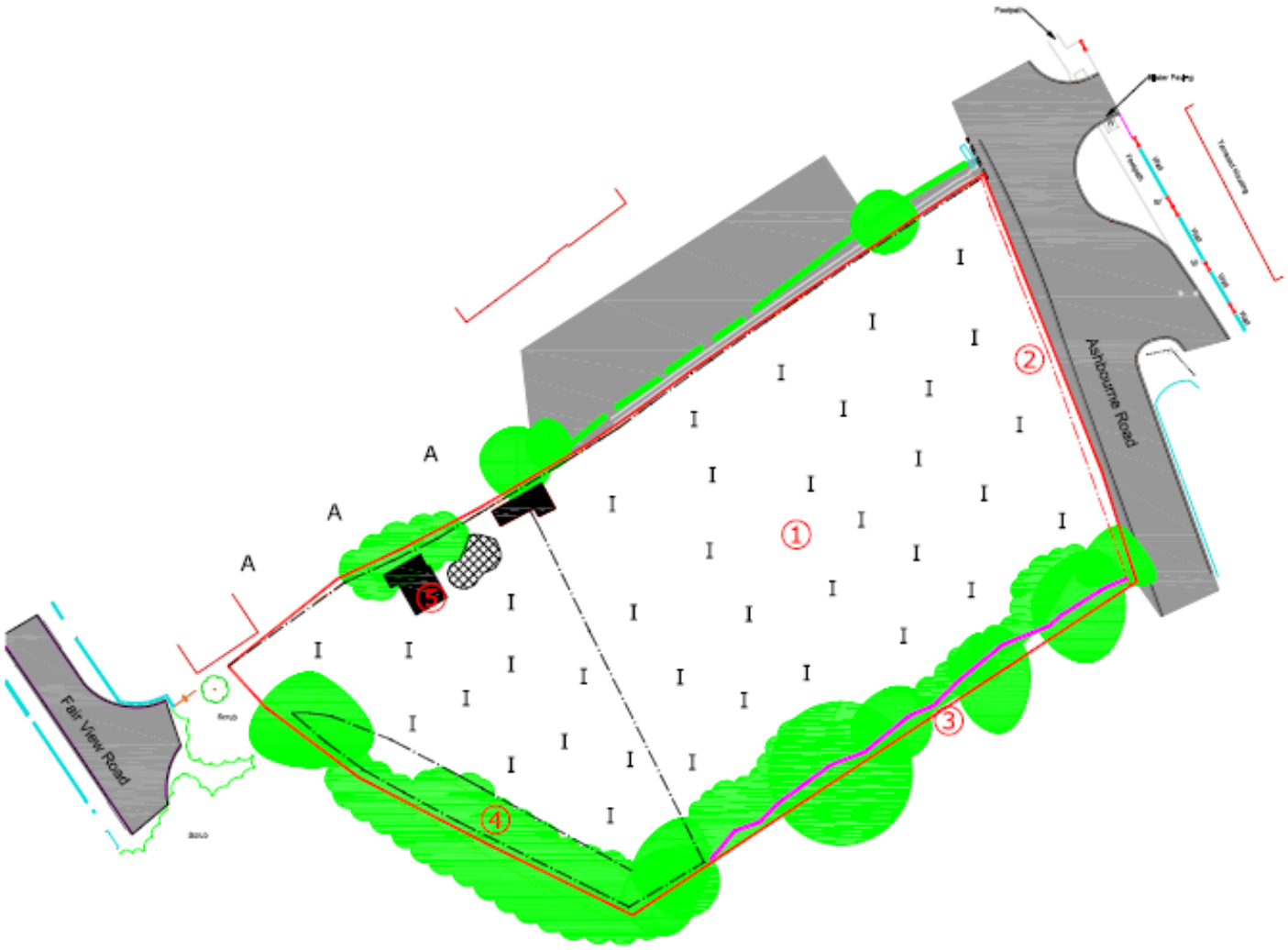
Fax: 0161 868 1301



Site Boundary

Target Note

Wall

Fence

Earth Bank

Species Poor Hedgerow

Building

Hardstanding

Broad-leaved Tree

Arable Land

Improved Grassland

Bull Hills

R0	03-02-2016	Revision	KD	OW
Revision	Date	Issue	Drawn	Authorised

Green Gate Homes (NW)Ltd

Job No	Date
101087	03-02-2015
Drawing No	Scale
002	N.T.S

Job Title: Land At Ashbourne Road, Leek

Drawing Title: Extended Phase 1Habitat Plan

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