



Providing *ecology* support for *everyone*

Ena Tansley
34 Redwood Drive
Longridge
Preston
PR3 3HA

7th October 2022

Dear Ena

Re: Proposed development at Knotts Farm, Thornley-with-Wheatley, Longridge, Lancashire, PR3 2TX (Grid Reference SD 61403 40246)

Thank you for your request for an ecology survey and assessment in relation to a proposed development at the above site. I understand that the proposal is for the conversion of an existing barn building into a dwelling house.

1. Background and Qualifications

The survey and the assessment were carried out by Pat Waring and Janette Gazzard.

Pat Waring is a licensed great crested newt worker (Class 2 licence), a licensed bat worker (Class 2 licence), registered consultant of the Bat mitigation Class Licence, a Chartered Environmentalist and a full member of the Chartered Institute of Ecology and Environmental Management, with a Bachelor of Science degree in Biology.

Pat has been working as an ecological consultant for over twenty-four years, including over seventeen years as Director of Ecology Services UK Ltd. This work includes provision of expert advice and guidance to Statutory Nature Conservation Organisations, National Park Authorities and Lancashire Police Authority, as well as the delivery of professional training courses.

Pat has recognised and extensive experience and knowledge of ecological survey, monitoring, condition assessment and impact assessment techniques; these include impact assessment in relation to bats, great crested newts, nesting birds and changes to habitats, as well as ecological surveys and assessments.

Janette is a full member of Chartered Institute of Ecology and Environmental Management, with a Bachelor of Science degree in Environmental Management.

Janette has over eighteen years professional experience working in ecology and nature conservation, including roles as a Senior Ecologist for a large multidisciplinary company and as a lead adviser for Natural England throughout the North West of England. She

has a range of demonstrable skills including habitat surveys, ecological appraisals, protected species surveys, conservation management advice and condition assessments.

Pat and Janette meet the requirements for knowledge, skills and practical experience as outlined in the CIEEM technical guidance series, Competencies for Species Surveys available at: <http://www.cieem.net/competencies-for-species-survey-css>

This advice letter complies with national best practice guidance as outlined in: *Chartered Institute of Ecology and Environmental Management (2017) Guidelines for Preliminary Ecological Appraisal. Second Edition*. CIEEM, Hampshire.

Advisory Note

The information in this note represents the professional opinion of an ecological consultancy and does not constitute professional legal advice. You may wish to seek professional legal interpretation of the wildlife legislation associated with this area of work.

The information, opinion and advice that Ecology Services UK Ltd has prepared are true, and have been prepared in accordance with the CIEEM Code of Professional Conduct. Ecology Services UK Ltd confirms that the opinions expressed are our true professional bone fide opinions.

Ecology surveys are time-limited; as a rule survey findings can generally be relied on for the season in which surveys took place. However, mobile species such as bats and great crested newts may increase or decrease in numbers and change behaviours over time. Statutory agencies will often accept survey results for 12-18 months, but this varies around the country.

Ecology Services UK Ltd personnel make a professional judgement as to how long the results of our surveys will remain current. Advice and recommendations as regards currency and its impacts on decision making are included in relevant sections below.

2. Methodology

2.1 General

In order to assess the habitats and likelihood of protected species being present at the proposed development site, a site visit was undertaken on the 23rd September 2022.

The proposed development site and its close surroundings were searched and assessed for their potential to support a range of protected species known to occur in the Lancashire area.

Given the small-scale of the proposed development, the type of works proposed and the habitats present, a methodology was used that was proportionate for this project.

2.2 Desk study surveys

Geographic Information about land use designations and European Protected Species mitigation schemes was accessed from the Multi Agency Geographic Information for the Countryside (MAGIC) website.

2.3 Habitats

A Habitat Survey was carried out, whereby the accessible vegetation and habitats of the whole site and immediate surroundings were examined on foot.

Habitats were described in terms of plant species composition and categorised as follows:

- Phase 1 Habitats (using descriptions in the Phase 1 Habitat Survey Handbook).
- UK Habitat Classification accessed at <https://ecountability.co.uk/ukhabworkinggroup-ukhab/>
- Habitats of Principal Importance which are listed under Section 41 of the Natural Environment and Rural Communities Act (NERC) Act 2006.

Scientific names follow Stace (4th Edition 2019).

2.4 Bats

The barn building was subject to a daytime inspection. Observations were made from ground level as well as from telescopic ladders to examine potential bat roost features. An endoscope, although available, was not required during the investigation. A Coast HP 10R 1000 lumens torch and close-focussing Zeiss Victory FL 8x42 binoculars were also used as aids to visibility.

The survey techniques and general approach complied with those described in: Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1.

2.5 Amphibians (including great crested newts)

A search for amphibians was made across the survey area, including likely breeding ponds and sheltering features such as areas of dense sheltering vegetation and rubble. This was followed by an assessment of potential breeding ponds, sheltering places and likely availability of feeding resources.

The survey techniques and general approach complied with those described in: Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143-1 55.H.

2.6 Reptiles

A search for reptiles was made across the survey area, including likely sheltering features such as artificial refugia piles and areas of dense vegetation. This was followed by an assessment of potential sheltering sites and likely availability of feeding resources

The methods used for the reptile survey complied with the following documents:

<https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences>

Sewell, D. (2017) *Survey protocols for the British herpetofauna. Version 1.0. Amphibian and Reptile Conservation*

2.7 Badgers

The survey area was searched for signs of use by badgers, including setts, runs and latrines.

The badger survey was carried out following guidance in Harris et al (1989).

2.8 Nesting birds

The survey area was assessed for its potential to support a range of nesting bird species (including barn owls) known and likely to occur in the local area.

All structures and trees within and immediately adjacent to the proposed development site were closely examined for signs of nesting and assessed for their potential to support nesting birds.

2.9 Other important species (including Species of Principal Importance)

The survey area was assessed for its potential to support the following Species of Principal Importance:

- Common toad *Bufo bufo*
- Hedgehog *Erinaceus europaeus*
- Brown hare *Lepus europaeus*

2.10 Non-native invasive species

The survey area was searched and assessed for its potential to support non-native invasive species.

2.12 Limitations

The presence and behaviour of species, especially mobile species such as bats and birds, can change over time. The condition of habitats and the visibility of some flowering plant species can also vary over time. It is recognised, therefore, that ecology surveys are always time-limited in their currency.

It is recognised that limiting the survey in 2022 to a single visit in September does not take account of protected species activity on the site through the whole of the relevant active seasons (e.g. March/April to October = bats, February to September = nesting birds) or at other times of the year.

Limiting the survey period as outlined above does not take account of plant growth through the year. It is possible that a number of flowering vascular plant species would not have been evident during the survey.

Some bat species are typically crevice dwellers. Droppings and other field signs of the presence of such species are often not visible, as they accumulate in hidden areas which may not be found during routine, non-invasive surveys. This is a frequent limitation when surveying buildings.

As with most buildings, roof coverings at Knotts Farm could not be closely examined due to limits on access and concerns about the safety of surveyors. However, all of these features were visible at a distance from vantage points.

3. Results

3.1 Protected sites

The proposed development site lies within The Forest of Bowland Area of Outstanding Natural Beauty (AONB).

The proposed development site is not within, adjacent to or functionally connected to any protected areas designated for special features of wildlife interest.

3.2 Habitats

The proposed development site lies within a former farm complex with a farm house and other farm buildings immediately adjacent and bordered by open farm fields.

The proposed development site boundary covers an area of approximately 0.005 hectares and comprises a detached barn building, hardstanding, timber sheds and an area of unmanaged land, dominated by tall herb, developing scrub vegetation, scattered trees and artificial refugia (e.g. stone slabs, timber logs and debris).

The barn is a disused, two-storey building with a single storey extension to the east and an adjoining mono pitch, hay barn to the west. The main barn and single storey extension are constructed of red brick walls with dual pitched slate roofs. The hay barn is constructed of brick lower walls with corrugated asbestos upper walls and roof. There is a large timber sliding door which was partially open during the survey. The doors and windows on the remaining barn were all secured and closed during the survey.

The slated roof above the 2-storey section is unlined on the southern aspect and contains roof lights. These roof coverings are in poor condition and there are holes due to missing, broken and slipped slates. The roof coverings on the northern aspect are lined with bitumastic hessian roof liner and although largely intact, gaps are present between the slates, and some of these are suitable for use by roosting bats. In addition, there are exposed purlins along the roof edges with gaps present at the wall top and around the purlins; these gaps provide potential roosting opportunities for bats as well as potential access for use by bats and birds.

The area of land within the proposed developments site boundary includes mixed communities, characteristic of disturbed and enriched ground. Dominant species include rosebay willowherb, nettle, creeping thistle, Yorkshire fog and bramble. There are also mature fruit trees, as well as a stand of conifer and broadleaved trees connected and immediately adjacent to the south and east boundary.

There are also two timber shed buildings. Both structures are in poor condition and starting to collapse. Potential for bats roosting in these sheds is negligible but potential for nesting birds is high.

Habitat categories for the survey area are best regarded as:

- **Phase 1 Habitat:** *Built-up areas - building; woodland and scrub – scattered scrub and scattered trees, tall herb and fern – tall ruderal, cultivated/disturbed land -introduced shrub*
- **UK Habitat Classification:** *u1b516 developed land; sealed surface, building, tall herb, H3f11Heathland and scrub, dense scrub bramble scattered trees*
- **Habitats of Principal Importance:** *None*

3.3 Bats

A small cluster of bat droppings was found on the north east corner of the first floor of the barn and scattered bat droppings were also found occasionally throughout the first floor. Feeding signs (moth and butterfly wings) are also present throughout the first-floor area.

Potential roost features for bats include the underlined roof section (north aspect), internal wall tops and internal wall cavities. These features have potential for bats to use throughout the year (including winter roosts).

The barn, particularly the first floor and hay barn have fly in access for bats and, these areas are suitable for use by feeding and night roosting bats during the active season (April to October).

Potential roosting features for bats are:

Night roosting

- Confirmed roost – Bat feeding signs found on first floor of barn
- High potential - The buildings are open and accessible for use by night roosting bats throughout the active season (April to October)

Day roosting

- Confirmed roost – A small cluster of bat droppings found on the internal north east corner (floor and wall) of barn
- High potential – Underlined slate roof coverings and internal wall cavities and wall tops

Hibernation roosting

High potential – Slate roof coverings and internal wall cavities and wall tops

There is a reasonable likelihood that bat roosts could be present within potential roosting features listed above, at any time of the year.

Based on the available evidence, professional judgement and extensive professional experience, there is high potential (reasonable likelihood) for bats to roost within the barn at Knotts Farm.

3.4 Amphibians, including great crested newts

No great crested newts or other amphibian species were found during the survey.

There are no waterbodies within the proposed developments site or immediately adjacent that are suitable for use as breeding sites for amphibian species.

There are potential sheltering features for great crested newts (refugia) and other amphibians within the proposed development site, including areas of dense vegetation, large stone slabs, timber and debris piles.

There are potential sheltering features for great crested newts and other amphibians within the immediate and wider surrounding of the proposed development site. These include small wooded areas, tree belts and hedges that provide, refugia and partial connections through the landscape.

Based on professional judgement and extensive professional experience, there is low potential for individual great crested newts to be present within the proposed development site.

3.5 Badgers

No badgers or signs of badgers were found during the survey.

Based on professional judgement and extensive professional experience, there is low potential for badger to be present and occupy areas within the proposed development site.

3.6 Reptiles

No reptiles were found during the survey.

Based on professional judgement and extensive professional experience, there is low potential for use by reptiles within the proposed development site associated with dense vegetation and refugia piles.

3.7 Nesting birds (including barn owls)

Robin, great tit, blackbird, chiffchaff and pied wagtail were all observed within and immediately adjacent to the proposed development site during the survey.

Unoccupied swallow nests and other bird nests were found in various locations throughout the barn building.

There are no signs of use by barn owls, but accessible areas of the barn are suitable for nesting and roosting at other times.

Based on the evidence available, our professional judgement and extensive professional experience, there is high potential for birds to be present within the buildings and vegetation within and immediately adjacent the proposed development site during the nesting season (February to September).

3.8 Common toad (Species of Principal Importance)

No common toads were found during the survey.

Based on our professional judgement and extensive professional experience, the proposed development site has sheltering features with potential to support common toad. Potential sheltering features for common toad include areas dense vegetation and stone, timber and debris piles.

3.9 Hedgehog (Species of Principal Importance)

No hedgehogs were found during the survey.

Based on our professional judgement and extensive professional experience, the proposed development site has limited sheltering features with potential to support hedgehog. Potential sheltering features for hedgehog include dense vegetation, timber and debris piles.

3.10 Brown hare

No brown hares were found during the survey.

Based on our professional judgement and extensive professional experience, the proposed development site has high potential to support Brown hare associated with areas of tall vegetation and boundary trees.

3.11 Non-native invasive species

Himalayan balsam is present on the access track, approximately 50 metres south of the proposed development site boundary. Infestations of Himalayan balsam are also present associated with the River Loud in close proximity.

Himalayan balsam is a non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

3.12 Other Protected Species

No other protected species were found during the survey. The proposed development site is considered unsuitable to support other protected species as a result of current use of the site and the availability, size and condition of habitats present.

4.0 Advice and Recommendations

4.1 Protected and designated sites

Ecological Receptor	Impacts, Issues & Rationale	Action
Protected/ designated sites	<p>There are no predicted impacts to designated sites.</p> <p>The proposed development site does not form part of or lie adjacent to and is not functionally connected to a protected wildlife site.</p>	No action required

Table1.Protected Sites: Impacts and Action

4.2 Habitats

Ecological Receptor	Impacts, Issues & Rationale	Action
Buildings	<p>All buildings (barn and sheds) will be affected by the proposed developments.</p> <p>There are predicted impacts (disturbance and loss) and therefore potential impacts to species using the buildings.</p>	<p>Advice (surveys): Further surveys in relation to bats will be required. These surveys are outlined in Table 3.</p> <p>Advice (mitigation): Precautions in relation to protected species including nesting birds will be required in order to avoid potential issues. These precautions are outlined in Table 3</p>
Scattered trees	<p>There are predicted impacts (disturbance) and therefore potential impacts to the trees and any species using trees.</p>	<p>Advice (mitigation): Protect retained trees. Storage of materials, equipment and plant should not take place under the 'dripzone' of trees (i.e. under their canopy) which are to be retained. Best practice should be followed (i.e. BS5837: 2012 Trees in Relation to Design, Demolition and Construction) to ensure individual trees which are to be retained are not adversely affected.</p> <p>Advice (mitigation): If any tree work is required, precautions in relation to bats, birds and non-native species will be required in order to avoid potential issues. These precautions are outlined in Tables 3 and</p>

Ecological Receptor	Impacts, Issues & Rationale	Action
Refugia (dense vegetation logs, stone and material piles)	There are predicted impacts (disturbance and loss to refugia and therefore potential impacts to the trees and any species using refugia.	<p>Recommendations (mitigation): In order to minimise impacts to potential sheltering features that are likely to be affected by the development, including any material piles and areas of dense vegetation, these should be removed carefully by hand, avoiding where possible the hibernation period (October to March).</p> <p>Retain or re-create suitable refugia for use by amphibians and hedgehogs within or adjacent to the proposed development site; these should comprise stone, earth or log piles. The extent of refugia to be created should be at least equal to that being lost due to the proposed development.</p>

Table 2. Habitats Impacts and Action

4.3 Species

Ecological Receptor	Impacts, Issues & Rationale	Action
<p>Bats</p>	<p>There are predicted impacts (disturbance and loss) to bats and bat roosts as a result of the proposed development.</p> <p>It is advised that there are potential roost features suitable for bats associated with roof coverings and wall cavities of the barn.</p> <p>In this location and landscape setting, these features have potential for bats to use throughout the year.</p> <p>All bat species are afforded full protection under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019</p>	<p>Advice (surveys): It is advised that further surveys will be required both to comply with national guidance and to ensure a thorough investigation in relation to use by bats. Surveys focussing on all potential roosts and bat access points should be carried out during the bat active season, ideally between May and August.</p> <p>Prior to any works.</p> <p>Advice (surveys): Three surveys will be required to comply with current national best practice guidelines:</p> <p>Collins, J. (ed.) (2016) <i>Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)</i>. The Bat Conservation Trust, London</p> <p>The guidelines State on p41 “where the possibility of bats being present cannot be eliminated or evidence of bats has been found during a preliminary roost assessment, then further surveys are likely to be necessary if impacts to the roosting habitat (or the bats using it) are predicted.”</p> <p>The guidelines also include the table and associated text on p52 as shown below. It is our professional judgement that the section highlighted red is applicable to this site.</p>

<i>Low roost suitability</i>	<i>Moderate roost suitability</i>	<i>High roost suitability</i>
One survey visit. One dusk emergence or dawn re-entry survey (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn**
<i>Information from current national best practice guidelines for bat surveys</i>		
** Note that new guidance allows for more flexibility with the type, but not the number of surveys		

Ecological Receptor	Impacts, Issues & Rationale	Action
Great crested newts & other amphibians	<p>There is potential for individual amphibian species (including great crested newts) to be present within the proposed developments site at any time.</p> <p>If Reasonable Avoidance Measures (RAMS) are fully adopted, there is no reasonable likelihood of impacts to great crested newts, and their resting places.</p> <p>Great crested newts are fully protected under the Wildlife and Countryside Act 1981 (as amended) the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019</p>	<p>Advice (mitigation): It is advised that the following RAMS are fully complied with throughout the development process. RAMS for this development, are as follows:</p> <ul style="list-style-type: none"> All people working at the proposed development site should attend a toolbox talk by an ecologist, to be made aware of the likelihood of encountering great crested newts and how to identify them, the legal protection of great crested newts and the contractor responsibilities as regards implementation of precautionary measures. Prior to any work commencing. A pre-commencement check should be undertaken by an ecologist, including a fingertip search of any refugia to be disturbed Prior to any work commencing (check) and during work (supervision) All building materials should be stored on existing hardstanding and/or pallets. At all times

Ecological Receptor	Impacts, Issues & Rationale	Action
<p>Great crested newts & other amphibians continued</p>		<p>Advice (mitigation): It is advised that if great crested newts are found at any time during the development, work must stop until advice has been sought from directly from an appropriately experienced Ecologist. If the development will affect great crested newts, a licence may be required and suitable mitigation put in place. This may include provision of new refugia, which should then remain undisturbed.</p> <p>At all times</p>
<p>Reptiles</p>	<p>There is potential for reptiles to occur within the proposed development site at any time.</p> <p>If Reasonable Avoidance Measures (RAMS) are fully adopted, there is no reasonable likelihood of impacts to reptiles.</p> <p>Reptile species are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill or injure these animals.</p>	<p>Advice (mitigation): It is advised that the following RAMS are fully complied with throughout the development process. RAMS for this development, are as follows:</p> <ul style="list-style-type: none"> • All people working at the proposed development site should attend a toolbox talk by an ecologist, to be made aware of the likelihood of encountering reptiles (e.g grass snakes, common lizard) and how to identify them, the legal protection of reptiles and the contractor responsibilities as regards implementation of precautionary measures. Prior to any work commencing. • A pre-commencement check should be undertaken by an ecologist, including a fingertip search of any refugia to be disturbed Prior to any work commencing (check) and during work (supervision)

Ecological Receptor	Impacts, Issues & Rationale	Action
<p>Reptiles continued</p>		<ul style="list-style-type: none"> All building materials should be stored on existing hardstanding and/or pallets, At all times. <p>Advice (mitigation): It is advised that if reptiles are found at any time during the development, work must stop until advice has been sought from directly from an appropriately experienced Ecologist. If the development will affect reptiles, then suitable mitigation will be required. This may include provision of new refugia, which should then remain undisturbed. At all times</p>
<p>Badger</p>	<p>There is potential for badgers to occupy the site proposed developments site at any time.</p> <p>If Reasonable Avoidance Measures (RAMS) are fully adopted, there is no reasonable likelihood of impacts to Badgers.</p> <p>Badgers are protected and so are their setts (burrows) they live in. Under the Protection of Badgers Act 1992, in England and Wales it is an offence to:</p> <ul style="list-style-type: none"> Wilfully kill, injure or take a badger (or attempt to do so). Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it. Disturb a badger when it is occupying a sett. 	<p>Advice (mitigation): It is advised that the following RAMS are fully complied with throughout the development process. RAMS for this development, are as follows:</p> <ul style="list-style-type: none"> All people working at the proposed development site should attend a toolbox talk by an ecologist, to be made aware of the likelihood of encountering badger setts and signs of badgers, the legal protection of badgers and the contractor responsibilities as regards implementation of precautionary measures. Prior to any work commencing. <p>Advice (mitigation): A pre-commencement check should be undertaken by an ecologist, to check for any badger setts and/or signs of use by badgers. Prior to any work commencing (check) and during work (supervision)</p>

Ecological Receptor	Impacts, Issues & Rationale	Action
<p>Badger continued</p>		<p>Advice (mitigation): It is advised that if badgers occupy the development site at any time, work must stop until advice has been sought from directly from an appropriately experienced Ecologist. If the development will affect badgers, a licence may be required and suitable mitigation put in place. At all times</p>
<p>Nesting birds (includes barn owls)</p>	<p>There are predicted impacts (disturbance, damage and destruction) to nesting birds, nests and eggs as a result of the proposed development</p> <p>There is high potential for barn owls to occupy the barn building at any time.</p> <p>Barn owls are included in Schedule One of the Wildlife & Countryside Act 1981 which affords them protection against disturbance whilst nesting. Specifically, under Part 1, Section 1 (5) it is an offence intentionally or recklessly to:</p> <ul style="list-style-type: none"> • Disturb any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young. • Disturb dependent young of such a bird. <p>There is high potential for a range of nesting bird species including swallows to be present and/or nesting during the bird nesting season (February to September).</p>	<p>Advice (mitigation): A pre-commencement check should be undertaken by an ecologist, to check for any use by barn owls. Prior to any work commencing</p> <p>Advice (mitigation): All people working at the proposed development site should be made aware of the likelihood of encountering barn owls and other nesting birds and should be made aware of the legal protection of barn owls and nesting birds and their own responsibilities as regards implementation of precautionary measures. Prior to any work commencing.</p> <p>Advice (mitigation): It is advised that the most appropriate way to address the risk to nesting birds is:</p> <ul style="list-style-type: none"> • Avoid working on the buildings and/or in close proximity to vegetation during the nesting season Or • If works cannot take place outside the nesting season, the following measures should be adopted: • All people working at the site should attend a tool box talk by an ecologist • All areas proposed for removal/disturbance should be carefully checked by an ecologist,

Ecological Receptor	Impacts, Issues & Rationale	Action
<p>Nesting birds continued</p>	<p>Under the Wildlife and Countryside Act 1981 (as amended), wild birds are protected from being killed, injured or captured, while their nests and eggs are protected from being damaged, destroyed or taken.</p>	<ul style="list-style-type: none"> • immediately prior to works commencing. • If the risk of nesting birds remains, then monitoring for nesting bird activity should continue for the duration of works. <p>Prior to any work commencing (checks) and throughout works in nesting season (monitoring)</p> <p>Advice (mitigation): If nesting birds are found at the site, or close enough to cause unlawful activities for development works, it will be necessary to delay works or seek advice as to whether or not any development can proceed lawfully at that time. Under these circumstances, work must stop until advice has been sought from an appropriately experienced Ecologist. Prior to and during works</p>
<p>Species of Principal Importance</p>	<p>There is potential for common toad, hedgehog and Brown hare being present within the proposed development site at any time.</p> <p>If Reasonable Avoidance Measures (RAMS) are fully adopted, there is no reasonable likelihood of impacts to Common toad, Hedgehog and Brown hare.</p> <p>These species are listed as Species of Principal Importance under NERC Act 2006.</p>	<p>Advice (mitigation): All personnel involved in the proposed development should be made aware of the likelihood of encountering common toad, hedgehog and Brown hare and how to identify these animals. Prior to the development.</p> <p>Recommendation (mitigation): In order to minimise impacts to common toad and hedgehog, potential sheltering features that are likely to be affected by the development, including areas of dense vegetation and refugia, should be removed where possible, carefully by hand, avoiding the hibernation period (October to March). During development.</p>

Ecological Receptor	Impacts, Issues & Rationale	Action
<p>Species of Principal Importance continued</p>		<p>Recommendation (mitigation): Any common toads and/or hedgehogs encountered should be carefully moved to a safe area of suitable habitat, which should then remain undisturbed. Any Brown hares suspected to be breeding should not be disturbed and if encountered, advice should be sought from an appropriately experienced ecologist before proceeding. At all times</p>
<p>Non-native invasive plant species</p>	<p>There are predicted impacts as a result of the presence of Himalayan balsam on the access track, on the approach to the proposed development site.</p> <p>The proposed works will involve an amount of disturbance which could result in the spread of Himalayan balsam which is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Section 14(2) of the Wildlife and Countryside Act 1981(as amended) prohibits 'planting' or 'causing to grow' in the wild of any plant listed in Part 2 of Schedule 9.</p>	<p>Advice (mitigation): The best approach to control the spread of non-native species within small development sites is to avoid any disturbance of the plant(s) and/or ground around them. At all times</p> <p>Advice (mitigation): If the risk of disturbance to Himalayan balsam plants cannot be avoided. Working methods including control, removal and safe disposal of the plant species must be adopted. For this site, hand pulling of individual plants may be sufficient. If larger areas are likely to be disturbed, specialist advice may be required in order to prevent further spread. Prior to commencement of any work.</p> <p>Advice (mitigation): All people working at the proposed development site should be made aware of the legal issues associated with non-native invasive species and their own responsibilities as regards implementation of precautionary measures. Prior to any work commencing.</p>
<p>Other Protected Species</p>	<p>There are no predicted impacts in relation to other protected species.</p>	<p>No action required</p>

Table3. Species Impacts and Action



Compliance with the actions outlined in the tables above will help to avoid committing offences in relation to protected species and non- native invasive species. It will also help to maintain foraging and shelter opportunities for local wildlife post development.

For this site, bat surveys will be required during the bat active season (May to September). It is also recommended that if proposed works are not undertaken within 12 months of the ecology survey, advice should be sought as to the need for further surveys at that time.

If you require any further ecological advice or guidance, please do not hesitate to contact me.

Yours sincerely

A handwritten signature in black ink, appearing to read 'J Gazzard'.

Janette Gazzard MCIEEM
Senior Ecologist
Ecology Services UK Ltd
Tel: 07842 694 618



Indicative proposed development site shown by red line



View of the barn building showing slate roof with roof lights, adjoining mono pitch asbestos hay barn (lhs) with areas of unmanaged, disturbed land in the foreground and other farm buildings in background.



Internal view of the single storey section to the east. Slate roof is underlined with boards providing potential roost feature (gaps between slates and underboarding) for use by bats throughout the year.



Internal view of the first floor. Image showing unlined roof pitch (red arrow) with holes providing fly in access for use by bats, birds and owl; and lined roof pitch to the north (yellow arrow) providing potential day roosting opportunities for bats.



Bat droppings found in the north east corner of the first floor



Swallow nest found on the ceiling of the ground floor



Internal view of hay barn



Internal view of one of the timber sheds. Negligible potential for bats but high potential for use by nesting birds.



Example of refugia (potential shelter for amphibians and reptiles) including large timber logs lying in contact with the ground found amongst tall herb and bramble vegetation



Image of Himalayan balsam found present on the access track, within 50 metres of the proposed development site