PRELIMINARY ECOLOGICAL APPRAISAL

OAKHAVEN
CLAYTON-LE-DALE

RSC-19-04

Version	Prepared by	Date	Checked by	Date	Approved by	Date
R1	David Pollard	29/03/19	Julie Skinner	29/03/19	Graeme Skinner	29/03/19

This report is intended to provide an accurate description of findings from survey work undertaken on the date shown in the report; however, it cannot fully account for any changes to site conditions following the completion of the survey work due to activities carried out on site or the dynamic nature of the natural environment. All work carried out by Naturally Wild Consultants Ltd is subject to our Terms and Conditions.

The report has been produced in accordance with current best practice guidelines.

PRELIMINARY ECOLOGICAL APPRAISAL

OAKHAVEN
SHOWLEY ROAD
CLAYTON-LE-DALE
RIBBLE VALLEY
BB1 9DP

GRID REFERENCE:
SD 66163 32494

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REPORT CONTENTS

EXECUTIVE SUMMARY

Naturally Wild were instructed to undertake a preliminary ecological assessment, including a protected species risk assessment, at Oakhaven Clayton-le dale. The survey area is comprised of a number of buildings, a sand paddock and a series of pasture fields grazed by horses.

The surveyed area is located on the outskirts of the small hamlet of Clayton-le-dale and is accessed via Showley Road. The development area is located at National Grid Reference Point SD 66163 32494The proposed development comprises construction of houses.

The preliminary ecological assessment comprised two parts: a desktop study and a site visit. The desktop search collates all available public information regarding the biodiversity of the area, the habitat structure of the surrounding area and statutory designations. Biological records within 1 km of the development site were requested form LERN.

The site visit consisted of an assessment of all habitats on site and in the surrounding area to determine their ecological importance to protected species and was conducted on 23rd March 2019 by Director of Ecology David Pollard BSc (Hons) MRSB

Overall, the site was assessed to be of low ecological value with the buildings having negligible roosting opportunities for bats. Following the site assessment and in review of the findings, Naturally Wild would recommend the following:

- No further bat survey work is required with respects to the stables and the garage
- The hedgerows and buildings on site were identified as an area of moderate value for nesting birds within the breeding bird season. Vegetation/Buildings within this area should be removed outside of the breeding bird season (generally running from late February to late August) in order to avoid harming any actively breeding birds and their nests.
- Alternatively, if vegetation/buildings must be removed within the breeding bird season, a competent ecologist should undertake a breeding bird risk assessment to check for any active birds' nests. If an active nest is discovered, a 5 m buffer zone must be implemented in much no vegetation removal may occur until the end of the breeding bird season or the nest can be confirmed as no longer active.
- The standard trees in the hedgerow are to be protected using *Heras* or equivalent fencing around their Root Protection Areas, in accordance with British Standard documentations BS5837:2012 – '*Trees in relation to design, demolition and construction. Recommendations.*' Advice from a professional arboriculturist should be sought when establishing the protection areas.
- A low-level lighting scheme should be implemented during and after construction to avoid indirect disturbance to foraging and commuting bats, birds and small mammals that may be using the road margin or railway as a navigational aid

Providing the recommendations of this report are implemented in full, Naturally Wild would conclude that there will not be a significant impact to protected species or habitats as a result of development.

1 INTRODUCTION

Naturally Wild were instructed to undertake a preliminary ecological assessment, including a protected species risk assessment, at Oakhaven Clayton-le dale. The survey area is comprised of a number of buildings, a sand paddock and a series of pasture fields grazed by horses.

The surveyed area is located on the outskirts of the small hamlet of Clayton-le-dale and is accessed via Showley Road. The development area is located at National Grid Reference Point SD 66163 32494, with the site boundary shown in Figure 1.

As part of the planning process an ecological survey is required to determine if any European, BAP or important Protected Species and Habitats are likely to be affected by the proposed works, and to show how any negative ecological impacts would be mitigated and compensated.

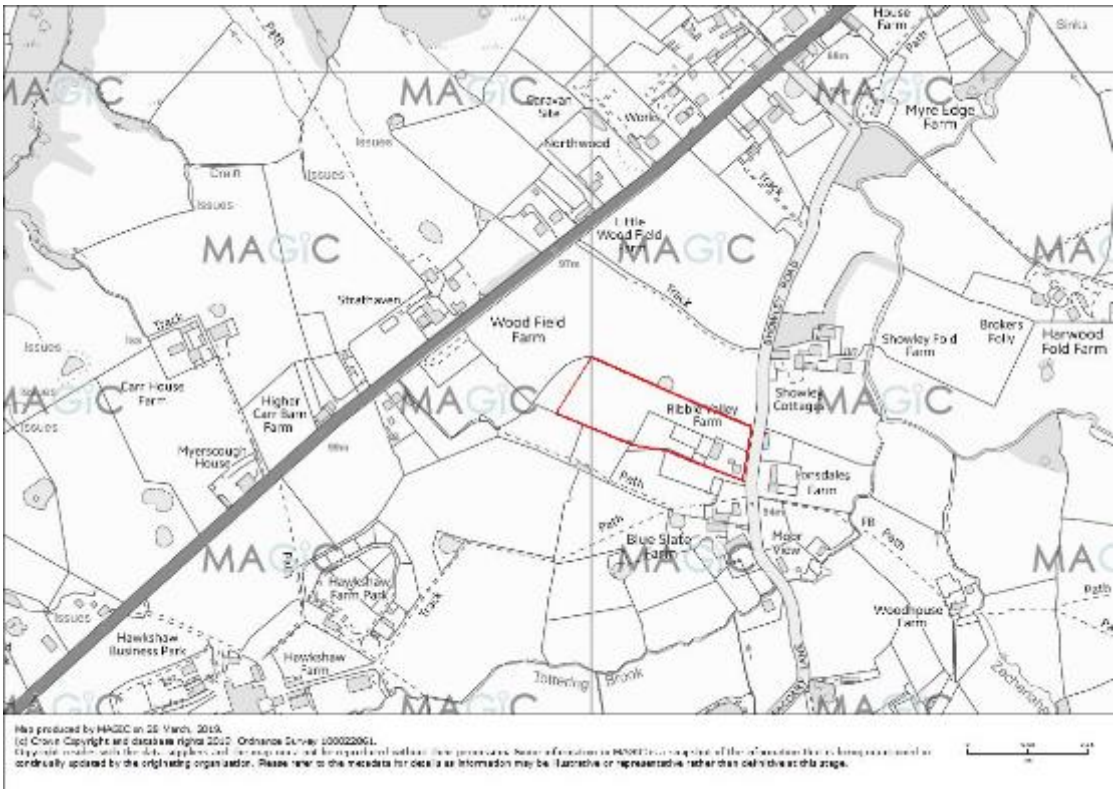

Figure 1. Red line shows the surveyed area.

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2 RELEVANT LEGISLATION

British wildlife is protected by a range of legislation, the most important being the Wildlife and Countryside Act 1981, The Conservation of Habitats and Species Regulations 2017 and the Countryside Rights of Way Act 2000. The Wildlife and Countryside Act as amended mainly by the Countryside Rights of Way Act protects species listed in Schedules 5 and 8 of the Act (animals and plants respectively) from being killed, injured, and used for trade. For some species, such as Great Crested Newts and all bat species, the provisions of this act go further to protect animals from being disturbed or taken from the wild and protects aspects of their habitats. The act also stipulates that offences occur regardless of whether they were committed intentionally or recklessly. The parts of this legislation that apply to most reptile species are in regard to killing, injury and trade only and do not protect their habitat, nor are they protected from disturbance or from being taken from their habitat.

The Conservation of Habitats and Species Regulations 2017 is the English enactment of European legislation and provides similar but subtly different protection for species listed on Schedules 2 and 4 of those regulations. A recent change in this legislation means that the provisions of this act now complement those of the Wildlife and Countryside Act more. Species to which these provisions apply are the European Protected Species. Activities that might cause offences to be committed can be legitimised by obtaining a licence from the relevant statutory body.

Birds receive protection under the Wildlife and Countryside Act also. It is an offence to intentionally or recklessly kill, injure or take any wild bird; take, damage or destroy a nest of a wild bird whilst it is in use or being built; or to take, damage or destroy an egg of a wild bird. The bird-nesting season is defined as being from 1st March until 31st August with exceptions and alterations for some species.

3 ECOLOGICAL SURVEY

3.1 Objective of Survey

The objective of the survey was to ascertain if any protected species may be using the site, document the habitats present and determine any potential ecological risks posed by the development during and post construction. The survey would include a desktop assessment using a range of available resources. The site survey would be completed under suitable weather conditions and by experienced ecologists. Further to this, the survey would assess the details of the survey findings and the ecological risks posed by the work, and how such impacts should be mitigated and compensated for.

The survey work and the preparation of this report has been conducted by Director of Ecology David Pollard BSc (Hons) MRSB who has over 20 years of experience in protected species survey work The report will detail the results of the field and desk surveys and note the potential risk associated with the development. The requirement for further survey work will be detailed within the report, as will any recommendations for ecological mitigation and compensation input as part of the development.

3.2 Survey Area

The application site is located at Grid Reference SD 66163 32494. The application site can be accessed directly via Showley Road. The assessment focused on the application site, including all habitats on site and in the immediate surrounding area. The full National Grid Reference Point for the centre of the site is E 36163, N 432494. The bordering habitats and surrounding area were also assessed during the site visit.

Figure 2. Location of the surveyed area shown by red line (satellite imagery).

(Image taken from Google Earth Pro: ©2019 Getmapping plc).

3.3 Survey Constraints

There were no constraints with regards to site access or completion of the survey objectives across the development site.

4 METHODOLOGY

4.1 Preliminary Ecological Appraisal

The preliminary ecological appraisal comprised of a desktop study and a site visit. The desktop search collates all available public information regarding the biodiversity of the area, the habitat structure of the surrounding area and statutory designations. A records search would be completed for the presence of protected species in the area using desktop resources such as the National Biodiversity Network (NBN) Gateway and the Multi-Agency Geographic Information for the Countryside (MAGIC) resource. Biological records for a 1 km buffer of the site were requested from Lancashire Environmental Records Network (LERN), including nearby non-statutory designated sites.

The field survey consisted initially of an assessment of the habitats on site on 23rd March 2019. The dominant vegetation structure was identified, allowing the habitats on site to be classified. Following this, the site was searched using visual encounter survey techniques; checking under any refugia present for sheltering animals. Any thick vegetation bordering the site was assessed in detail for commuting tracks used by species such as badger and fox. All bird species of interest were recorded. A detailed examination was undertaken to ascertain if the field was suitable for ground nesting birds. The vegetation on site was assessed for presence of invasive species. Any trees of habitat importance would be noted. These activities were not limited solely to the site and the surrounding area was also investigated. Any wet soil would identify animal prints on site.

An initial assessment of any trees was completed. The assessment confirmed species, age, size, ecological importance and the requirement for any protection measures during the construction phase. An initial assessment for invasive plant species was also completed.

All survey and assessment work was completed in line with official assessment guidelines produced by Natural England and the Chartered Institute for Ecology and Environmental Management (CIEEM) and British Standard document BS 42020: 2013 *'Biodiversity – Code of practice for planning and development.'*

4.2 Protected Species Risk Assessment

The habitats on site were assessed for the following species:

- Great crested newts: Terrestrial and aquatic habitat assessment, on site and in surrounding area.
- Bats: identify potential roosting points, foraging habitat and commuting pathways.
- Badgers: identify any setts or evidence of foraging or presence on site or in the surrounding area.
- Reptiles: habitat assessment. Check potential refugia on site and in the surrounding area.
- Birds: evidence of roosting and nesting. Assessment of potential bird habitat on site.
- Other mammal species identified during the desktop assessment.

4.3 Preliminary Roosting Assessment (PRA) of trees/buildings for bats

An assessment of the on-site buildings was carried out in order to identify the presence of any potential roost features (PRFs) for bats, and/or evidence of roosting bats, in accordance with the current Bat Conservation Trust (BCT) survey guidelines (Collins, 2016). An external inspection of the buildings was carried out, focussing on features that may provide roosting opportunities or access points to roosting features internally, such as the roof and ridge tiles. An internal inspection was also carried out, with any roof spaces present checked for any evidence of bats. The buildings were then categorised based on their assessed value for roosting bats, in accordance with the BCT guidelines, detailed in Table 1

Trees near to, and occurring on the proposed development site were assessed using preliminary roost assessment (PRA) methodology to assess for suitability of roosting opportunities for bats. This methodology has been adapted from Bat Conservation Trust guidelines (Hundt 2012), which are freely available online. A PRA of all nearby trees was undertaken from the ground level, using binoculars to inspect tree features up to the canopy, and from every aspect of the tree wherever possible. Mature trees are usually more supportive of bat roosts, but semi-mature trees with relatively thick trunks may also support roosting. Each tree across the survey site is designated a category depending on the maturity and presence of features for roosting, as listed below. Categories can be found below in Table 1, as well as recommendations for each defined category.

Features which are suitable for roosting bats include: naturally occurring holes in the trunk; large woodpecker holes; cracks/splits in major branches; loose or peeling bark; hollows/cavities; bird and bat boxes. Features that are symptomatic of bat use include: bat droppings in, around or below an entrance hole; staining around an entrance hole; small scratches around an entrance hole; audible squeaking at dusk or in warm weather; smoothening of surfaces around cavity or an entrance hole; distinctive smell of bats.

Table 1. Guidelines for assessing bat roosting potential of structures and trees.

Suitability	Habitat description	Further action required?
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further bat risk assessment effort or bat activity surveys are required.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	**Structures:** One bat activity survey is required to determine whether the structure is being utilised by roosting bats; this may be a dusk or dawn survey. This survey must occur between May and August. The discovery of a roosting bat during this single bat activity survey will require further survey effort.
	A tree of sufficient size and age to contain PRFs, but with none seen from the ground or features seen with only very limited roosting potential.	**Trees:** No further bat risk assessment effort or bat activity surveys are required.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection conditions and	Two bat activity surveys are required to determine whether the structure or tree is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey.

	surrounding habitat, but unlikely to support a roost of high conservation status.	One survey must occur between May and August.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three bat activity surveys are required to determine whether the structure or tree is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey, with an additional survey (either dusk or dawn). Two surveys must occur between May and August.

4.4 Habitat Suitability Index (HSI) Assessment of ponds

Any ponds on-site or within 500 m of the site boundaries were assessed for their habitat suitability for great crested newts (*Triturus cristatus*), utilising the modified Great Crested Newt Habitat Suitability Index (ARG UK 2010; Oldham *et al*. 2000). The habitat suitability index provides a means of evaluating habitat quality for the species. The Habitat Suitability Index (HSI) is a numerical index between 0 and 1, where 0 indicates completely unsuitable habitat and 1 represents optimal habitat. The HSI score is then utilised to define the suitability of the pond on a categorical scale (Table 2). However, the system is not precise enough to allow the conclusion that a pond with a high score will support great crested newts, whilst those with a low score will not.

Table 2: Respective pond suitability categories for each band of HSI scores.

HSI Score	Pond Suitability
< 0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

The HSI is given by assigning a quantitative figure between 0 and 1 to each of the 10 Suitability Indices assessed during desktop and field assessments, e.g. pond area, water quality, level of shading. The 10 Suitability Indices are multiplied by each other, with the tenth root of the product of the multiplied Indices then calculated, giving a figure for habitat suitability.

A HSI assessment was completed for 2 ponds where access was permitted. The results of the HSI assessment are discussed within Section 5.3 of this report, with the calculation of the HSI score for the pond provided within the Appendices.

5 RESULTS

5.1 Desktop Search

5.1.1 RECORDS CENTRE Data

Biological records have been requested from LERN for a 1 km radius surrounding the application site. These have not yet arrived and when they do they will be incorporated into a revision of this report and reissued.

5.1.2 Statutory and Non-statutory Protected Sites

STATUTORY PROTECTED SITES: The closest internationally designated site is Bowland Fells Special Protected Area (SPA) at 13,409m to the north of the site. The closest nationally designated site is Darwen River Sections Site of Special Scientific Interest (SSSI) at 5,424m to the west of site. There are no statutory protected sites are within 5 km.

Figure 3. Location of the surveyed site in relation to the surrounding area (satellite imagery).

(Image taken from Google Earth Pro: ©2019 Getmapping plc).

5.2 Site Assessment

Naturally Wild staff whom have been fully trained in ecological surveying, assessment and mitigation techniques completed day-time site assessments on 23rd March 2019 following the desktop survey which used satellite images and data resources. The assessment determined the overall characteristics of the site and its potential value of all habitats for protected species.

5.2.1 On-Site Ecological Features

The site comprised of a number of building (former mink farm) now utilised as stables and a garage, a sand paddock and three pasture fields used for grazing horses. The fields are delineated by post and wire fencing and the outer border is a thorn dominated hedgerow with standard oak trees (*Quercus sp.*).

The three buildings are of a similar construction – breeze block walls, corrugated asbestos roofs with numerous skylights. The garage structure is slightly different to the two stable blocks by having a small square room within the roof.

None of the structures offer prf's for bats; internally due to the skylights the buildings are illuminated which would limit occupation by bats. On the outside of the buildings there are little in the way of gaps or cracks offering little or no roosting opportunities for bats.

However, all the buildings offer nesting opportunities for commensal species of birds such as hirundines sparrows and starlings.

Outwit of the buildings the pasture fields are dominated by a perennial rye grass sward (*Lolium perenne*) with creeping buttercup (*Ranunculus repens*), broad leaved dock (*Rumex obtusifolium*) and mouse ear (*Cerastum fontanum*).

The border of the site is dominated by hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) with bramble (*Rubus fruiticosa agg*.) and elder (*Sambuccus nigra*). Within the hedgerow there are standard oak trees.

5.2.2 Off-Site Ecological Features

In the wider area there are a number of small fields bounded by either post and wire or thorn dominated hedgerows with small woodland copses and scattered houses in the hamlet of Clayton-le-dale. To the north there is a major road A59.

5.3 Protected Species

Great crested newts: There are seven ponds within 500m – three of those ponds are on the other side of A59 (main roads can be barriers to migration of amphibians). Of the four other ponds only two could be accessed at this time (closest to site) and both of these contained obvious fish i.e. sticklebacks (*Gasterosteus aculeatus*) in relatively high densities which normally precludes great crested newts due to predation of larvae. The two ponds accessible were subject to HSI examination and the values were 0.41 and 0.37 respectively – whilst reasonable ponds habitat wise the values reflect the presence of fish.

Badgers: There were no signs of badgers found during the walkover survey – it is highly likely badgers would use the pasture fields for foraging.

Birds: The hedgerows would offer opportunities for nesting birds as do the buildings as described above

Bats: The buildings offer negligible opportunities for roosting bats. The buildings and hedgerows offer foraging potential for common bat species.

Reptiles: There were no signs of common reptiles on site

5.4 Invasive Species

No invasive species – including non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) – were recorded within the site extent at the time of the site survey, or within habitats adjacent to the site.

6 RECOMMENDATIONS

Overall, the site was assessed to be of low ecological value with the buildings having negligible roosting opportunities for bats. Following the site assessment and in review of the findings, Naturally Wild would recommend the following:

- No further bat survey work is required with respects to the stables and the garage
- The hedgerows and buildings on site were identified as an area of moderate value for nesting birds within the breeding bird season. Vegetation/Buildings within this area should be removed outside of the breeding bird season (generally running from late February to late August) in order to avoid harming any actively breeding birds and their nests.
- Alternatively, if vegetation/buildings must be removed within the breeding bird season, a competent ecologist should undertake a breeding bird risk assessment to check for any active birds' nests. If an active nest is discovered, a 5 m buffer zone must be implemented in much no vegetation removal may occur until the end of the breeding bird season or the nest can be confirmed as no longer active.
- The standard trees in the hedgerow are to be protected using *Heras* or equivalent fencing around their Root Protection Areas, in accordance with British Standard documentations BS5837:2012 – '*Trees in relation to design, demolition and construction. Recommendations.*' Advice from a professional arboriculturist should be sought when establishing the protection areas.
- A low-level lighting scheme should be implemented during and after construction to avoid indirect disturbance to foraging and commuting bats, birds and small mammals that may be using the road margin or railway as a navigational aid. For this to be achieved, the following elements should be considered:
    - Position of lighting: proximity to the adjacent trees and hedgerow;
    - Angle of lighting: avoidance of direct lighting and light spill onto areas of habitat that are of importance as commuting pathways (vegetation on the southern boundary);
    - Type of lighting: studies have shown that light sources emitting higher amounts of UV light have a greater impact to wildlife. Use of narrow-spectrum bulbs that avoid white and blue wavelengths are likely to reduce the number of species impacted by the lighting;
    - Reduce the height of lighting columns to avoid unnecessary light spill.

Providing the recommendations of this report are implemented in full, Naturally Wild would conclude that there will not be a significant impact to protected species or habitats as a result of development.

7 SITE IMAGES

Image 1. Three buildings two stable blocks and the garage (showing skylights and construction)

Image 2. Small flat roofed room within garage

Image 3. Roof structure of the stables and garage

Image 4. Vegetation around garage suitable for nesting birds

Image 5 Vegetation around stables

Image 6. Grazed paddocks with hedgerows with standard trees

Image 7. Standard oak tree within hedgerow showing dead wood and occlusions

Image 8. Large standard oak on the periphery of site

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Wildlife and Countryside Act 1981 (as amended).

9 APPENDICES

9.1 Additional Information for the Legislation of Other Protected Species

Badger

The badger, *Meles meles*, is geographically widespread across the UK (NE, 2007); however, they are still vulnerable to baiting, hunting and detrimental impacts of development to their habitat.

Both the badger and its habitat are protected under The Protection of Badgers Act (1992), Schedule Six of the Wildlife and Countryside Act (1981) an Appendix Three of the Bern Convention. Therefore badgers have legal protection against deliberate harm or injury and it is an offence to:

- Interfere with a badger sett by damaging or destroying it
- Kill, injure, take or possess a badger
- Cruelly ill-treat a badger
- Obstruct access to a badger sett
- Disturb a badger whilst it is in a badger sett

Bats

All British bat species are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore afforded protection under Section 9 of this Act. In addition, all bat species are listed in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994 No. 2716) (as amended) (known as the Habitats Regulations) and are therefore protected under Regulation 39 of the Regulations. These Regulations make provision for the purpose of implementing European Union Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992, under which bats are included on Annex IV. The Act and Regulations makes it an offence, *inter alia,* to:

- Intentionally kill, injure, take (handle) or capture a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not) - under the Habitats Regulations it is an offence to damage or destroy a breeding site or resting place of any bat; or
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection - under the Habitats Regulations it is an offence to deliberately disturb a bat (this applies anywhere, not just at its roost) in such a way as to be likely to affect its ability to survive, breed, reproduce, rear or nurture their young or hibernate.

Further details of the above legislation, and of the roles and responsibilities of developers and planners in relation to bats, can be found in Natural England's Bat Mitigation Guidelines, which can be downloaded from the NE website:
http://naturalengland.communisis.com/naturalenglandshop/docs/IN13.6.pdf

Great Crested Newt

Great crested newts are a European Protected Species, listed on Annex II and IV of the EEC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora, receiving protection under The Conservation of Habitats and Species Regulations 2010. This species is also afforded full protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981) and Schedule 2 of the Conservation (Natural Habitats etc.) Regulations 1994 (Regulation 38). Under such legislation it is an offence to:

- Intentionally or recklessly kill, injure or capture a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly* damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and
- Intentionally or recklessly* disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.
- Damage or destroy a breeding site or resting place.
- Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.

**Reckless offences were added by the Countryside and Rights of Way Act 2000, which applies only to England and Wales.*

To undertake surveys for great crested newt it is necessary to hold an appropriate licence issued by Natural England.

Reptiles

All native British species of reptile (of which there are 6) are listed in Schedule Five of the Wildlife and Countryside Act (1981) and as such are protected from deliberate killing, injury or trade. Therefore, where development is permitted and there will be a significant change in land use, a reasonable effort must be undertaken to remove reptiles off site to avoid committing and offence. The same act makes the trading of native reptile species a criminal offence without an appropriate licence.

9.2 Calculation of HSI score

Pond 1: SD 66103 32584

Suitability Index		Value	Score
SI_1	Location	Optimal	1
SI_2	Pond Area	322m²	0.48
SI_3	Pond Drying	Never	0.9
SI_4	Water Quality	Moderate	0.67
SI_5	Shade	80%	0.6
SI_6	Fowl	Minor	0.67
SI_7	Fish	Major	0.01
SI_8	Ponds	1.9	0.7
SI_9	Terrestrial Habitat	Poor	0.33
SI_{10}	Macrophytes	25%	0.5
		OVERALL HSI SCORE:	**0.41**

Pond 2: SD 66043 32502

Suitability Index		Value	Score
SI_1	Location	Optimal	1
SI_2	Pond Area	191m²	0.38
SI_3	Pond Drying	Never dries	0.9
SI_4	Water Quality	Moderate	0.67
SI_5	Shade	90%	0.3
SI_6	Fowl	Minor	0.67
SI_7	Fish	Major	0.01
SI_8	Ponds	1.9	0.7
SI_9	Terrestrial Habitat	Poor	0.33
SI_{10}	Macrophytes	25%	0.5
		OVERALL HSI SCORE:	**0.37**