



Report Type: Ecological Appraisal

Client Name: Godsall

Site Address: Iscoyd Park
Iscoyd
Whitchurch
SY13 2AT

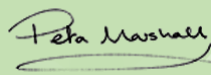
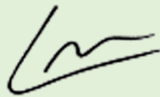
Report Reference: 20-10 288.2R

Date of Issue: 5th March 2021

Author: Peta Marshall BSc (hons)
peta@greenscape.pm

Report Details	
Classification	Ecological Appraisal
Status	Final
Reference	20-10 288.2R

Version History	
Report Reference	Date of Revision
20-10 288.2R	5 th March 2021

Quality Assurance			
	Name	Signature	Date
Author:	P. Marshall BSc(hons) MCIEEM PIEMA Principal Consultant		20 th January 2021
Reviewed by:	L. Maggs BSc(hons) Lead Consultant		20 th January 2021
Revised	P. Marshall BSc(hons) MCIEEM PIEMA Principal Consultant		5 th March 2021

Greenscape Environmental Ltd.
Registered Office: Long Acres, Lyth Bank, Shrewsbury, Shropshire, SY3 0BW
Company Reg number: 5364283

This report is the copyright of Greenscape Environmental Ltd. Any unauthorised reproduction or usage by any person without the specific authority of Greenscape is prohibited.

The report should be read in its entirety.

Questions arising from the survey report should be directed to the author of the report who will be pleased to clarify any technical issues raised.

Whilst the surveyors make every reasonable effort, Greenscape Environmental Ltd cannot guarantee that all protected species have been identified and survey results are definitive. Many species are cryptic and transitional in habit.

Reports are considered valid for one year for planning purposes, after which time further survey information may be required.

Greenscape Environmental Ltd can provide advice and support for recommendations and planning conditions.

The use of this report or survey data for any form of formal submission to an NGO or other authority implicitly implies acceptance of the terms and conditions.

Table of Contents

1	EXECUTIVE SUMMARY.....	1
1.1	Purpose of the Report	1
1.2	Methodology	1
1.3	Key Impacts and Mitigation Measures.....	1
1.4	Conclusion	1
2	INTRODUCTION	3
2.1	Project Background.....	3
2.2	Purpose of the Report	3
2.3	Site Context and Location	3
3	METHODOLOGY.....	4
3.1	Desk Study	4
3.2	Field Survey.....	4
3.3	Species Survey.....	4
3.4	Constraints of the Survey	4
4	BASELINE ECOLOGICAL CONDITIONS.....	5
4.1	Nearby Features of Importance	5
4.2	Habitats on Site.....	6
4.3	Bats.....	9
4.4	Other Mammals.....	11
4.5	Birds	11
4.6	Amphibians.....	12
4.7	Reptiles.....	14
4.8	Invertebrates	14
4.9	Invasive Species.....	14
5	DESCRIPTION OF PROPOSED DEVELOPMENT.....	15
6	IMPACTS, ENHANCEMENTS AND MITIGATION	17
6.1	Nearby Features of Importance	17
6.2	Habitats on Site.....	17
6.3	Bats.....	18
6.4	Other Mammals.....	19
6.5	Birds	19
6.6	Amphibians.....	19
6.7	Reptiles.....	22
6.8	Invertebrates	22
6.9	Invasive Species.....	22
7	CONCLUDING REMARKS.....	23
APPENDIX A	– SURVEYOR DETAILS.....	24
APPENDIX B	– METHODOLOGY	25
APPENDIX C	– POLICY	28
APPENDIX D	– HSI SCORES.....	34
APPENDIX E	– BIBLIOGRAPHY	35

Table of Figures

Figure 4.1. Identifying any designated areas near Parkland site, a 1km buffer is shown	5
Figure 4.2. Showing the red line boundary for the site	6
Figure 4.3. Site for Luxury Shepherds Hut.....	7
Figure 4.4. Walled garden	8
Figure 4.5. Pigeon House	9
Figure 4.6. Showing trees around formal garden	10
Figure 4.7. OS Map showing a 250m buffer around site, highlighting ponds.....	12
Figure 4.8. Pond 3.....	13
Figure 5.1. Proposed site plan	16
Figure 6.1. Example woodcrete bat box: Schwegler 1FF.....	18
Figure 6.2. Bird boxes	19
Figure 6.3. Hibernacula design from Froglife ©	21

Table of Tables

Table 1.1. Timing of Works.....	2
Table 3.1. Survey conditions	4
Table A.1. Details of surveyors' experience and licences held.....	24
Table B.1. Data sources	25
Table B.2. Criteria of ecological values.....	25
Table B.3. Categorisation of trees for bats.....	26

1 Executive Summary

1.1 Purpose of the Report

Greenscape Environmental Ltd was commissioned by Carter Jonas on behalf of the client, Mr Godsall, to undertake a preliminary ecological appraisal of sites around Iscoyd Park to provide supporting information for a planning application for the creation of a glamping project around the Park.

The survey report has these principal aims:

- To provide an initial assessment of the ecological value of the site in local context.
- To provide details supporting further surveys that may be required.
- To identify potential ecological constraints relating to the development, and recommend measures to avoid, reduce or manage negative effects, and to provide a net ecological gain.

1.2 Methodology

The appraisal included a desktop study, reviews of other surveys previously conducted in the area by Greenscape Environmental, and a site visit undertaken at the site, OS grid reference SJ50744206 on 12th October 2020 by P Marshall.

1.3 Key Impacts and Mitigation Measures

The desktop study included a search for nearby designated sites and previously recorded protected species.

Two sites have been identified close to the Hall and Estate Buildings which provide flat ground suitable for the glamping pods and huts. All of these were assessed for potential for axiophytes and invasive plants. The sites are on managed grassland, typical of the parkland area and former walled garden, and no negative impact has been identified. No trees are to be removed in these areas. No evidence of protected species such as badgers were seen within 30m of the proposed development areas, although evidence in more distant parkland has been identified. No permanent negative impact is anticipated.

The pigeon house was surveyed in 2009 for a conversion. The work on this commenced and the building has been in daily use since. The current application will result in the creation of a door in stead of a window. No alterations to the roof or other features is anticipated. Further surveys are not considered necessary.

There are three bodies of water within 250m which have been taken into consideration. These have been assessed in the past and considered to be of low ecological value to newts as there is significant population of cyprid fish in them. There is significant barrier to the walled garden. There is no anticipated immediate impact on the ponds, services can be dug to the sites when there is least impact on amphibians and there will be minimal loss of habitat suitable for foraging amphibians. Recommendations for enhancement for amphibians include leaving an area of grassland unmanaged and providing hibernacula.

1.4 Conclusion

A positive enhancement can be made with the erection of bat and bird boxes in the trees around the parkland. Native hedge planting is recommended around the glamping sites to provide privacy and an enhancement for biodiversity.

The method statements provided in section 6.6 will be followed in order to allow the natural dispersal of small mammals and amphibians.

There are no other ecological constraints to the development as currently proposed.

Table 1.1. Timing of Works

Action	Timing	Justification
Update phase 1 survey	After 18 months from survey issue date	Ecological features can change and develop over time

2 Introduction

This report has been compiled by Peta Marshall BSc (hons) MA who has over 10 years' experience conducting ecological appraisals. It has been reviewed in line with Greenscape's Quality Management System.

For full details of surveyors and licences please see Appendix A.

2.1 Project Background

Greenscape Environmental Ltd was commissioned by Carter Jonas to conduct a survey to determine the presence of protected species and potential for the damage or destruction of habitats of value. This forms part of the planning application for the creation of a glamping project at Iscoyd Park

2.2 Purpose of the Report

This report aims to:

- Identify the key ecological constraints to the proposed development.
- Inform planning to allow significant ecological effects to be minimised or avoided where possible.
- Allow any necessary mitigation or compensation measures to be development following the mitigation hierarchy.
- Identify any additional surveys that may be required to inform the assessment.
- Identify the opportunities offered by a project to deliver ecological enhancement.

2.3 Site Context and Location

The site is located to the west of Whitchurch, based around OS grid reference SJ50744206. It is set in a rural environment, Parkland, surrounded by woodland, open fields and surrounds the buildings at Iscoyd Park. There is high connectivity to the surrounding countryside with Century Plantation to the north, Bubney Moor to the east and The Warren and Iscoyd Wood to the west. These woodland areas provide potential foraging, resting, hibernating and commuting opportunities for bats, nesting opportunities for birds, and suitable habitat for badgers, amphibians and reptiles.

3 Methodology

Broad methodologies for data collection and interpretation were informed by guidance outlined in CIEEM (2017) – Guidelines for Preliminary Ecological Appraisals. Full details can be found in Appendix B.

3.1 Desk Study

The desk study provides contextual information such as the site's proximity to designated areas and known records of protected or notable species. Reference to previous surveys conducted in the area have been made.

3.2 Field Survey

3.2.1 Date and Survey Conditions

Table 3.1. Survey conditions

Date	Time Start – End	Equipment Used	Weather
12/10/2020	14:00-16:00	Camera	Overcast, mild, 12C, occasional rain

3.2.2 Habitats

The level of survey is aimed to identify field signs of, or habitats with the potential to support protected species and therefore assist in the determination of site value.

3.2.3 Hedgerows

The aim of the assessment is to ascertain whether the hedgerow could be classified as important according to the definitions listed in the Hedgerow Regulations (1997).

3.3 Species Survey

Features on site were assessed for potential for bat roosts, foraging and commuting. These were conducted in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition, BCT, Collins (ed.) (2016).

Badger surveys were conducted using guidance from Scottish Natural Heritage commissioned Report No. 096 (2003).

Features on site were assessed for potential for nesting birds.

The assessment of aquatic habitat for great crested newts is based on the Habitat Suitability Index. The terrestrial habitats at the application site were surveyed and assessed with respect to suitability and potential value for great crested newts.

3.4 Constraints of the Survey

All areas were accessible for this survey. It was conducted at a suboptimal time of year for the assessment of nesting birds but this was not considered a constraint because no habitat likely to support nests is to be disturbed.

The HSI assessment is based on ponds as they would be during the aquatic phase of a great crested newt, between March and the end of September. As the ponds have previously been assessed and are known to support cyprinid fish no constraints have been identified. One section of potential development area is set in a walled garden, likely to be a major barrier for movement of amphibians.

4 Baseline Ecological Conditions

4.1 Nearby Features of Importance

4.1.1 Designated Sites

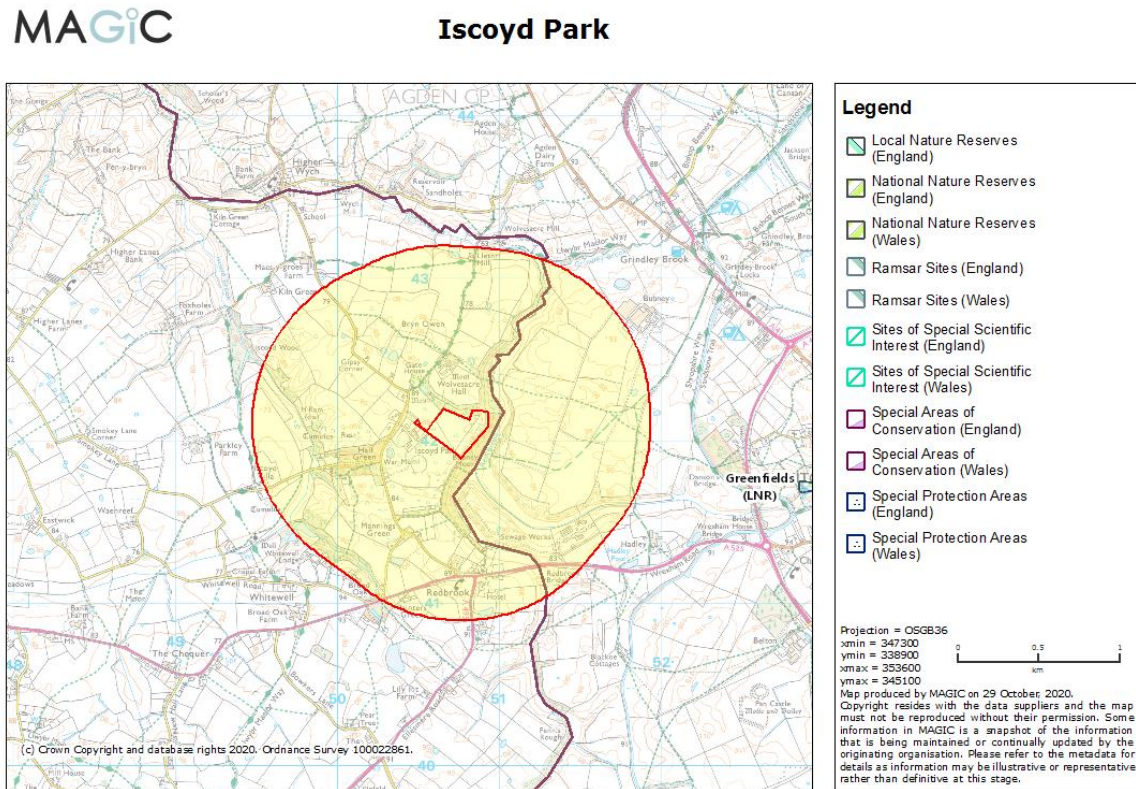


Figure 4.1. Identifying any designated areas near Parkland site, a 1km buffer is shown

The map from Natural England presented in Figure 4.1 indicated that the site is not within 1km of any designated areas. The park is within Cadw's Statute register of historic Parks and Gardens in Wales (ref PGW © 16 Grade II Complete small eighteenth -century park with fine specimen trees and boundary oak paling).

The nearest LNR is 2km to the east. This is Greenfields. The nearest SSSI is 3km to the south.

4.2 Habitats on Site

The red line area for the whole site includes the access drive and car park area to the north. These are formed of hardstanding. The area for the Luxury Shepherds Hut has been designated as Site 1 for this report. The area for the 10 Bell Tents has been designated as Site 2. The Pidgeon House is adjacent to the main house with formal gardens adjacent.



© Crown Copyright 2020. Carter Jonas LLP QS0100004458

Client: Mr P Godsall

Project: Walled Garden and Surroundings

Title: Location Plan

Scale 1:1,250 @A4

Date: 3/4/2021

Drawn By: CS

Dwg no:

Carter Jonas
Two Snow Hill, Birmingham, B4 6GA
T: 0121 794 1050
carterjonas.co.uk

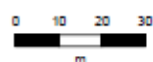


Figure 4.2. Showing the red line boundary for the site

Site 1

Site 1 is located to the west of the formal garden. It is proposed to locate one luxury Shepherd Hut on an area disturbed currently with an access track. This is an area of managed grassland, with adjacent saplings. These are not being moved.

A wall separates the site from the road to the east.



Figure 4.3. Site for Luxury Shepherds Hut

Site 2

Site 2 is situated in the Walled Garden. This is an area of amenity grassland which is occasionally mown and also supports some former formal garden planting and horticultural areas.



Figure 4.4. Walled garden

Areas of ruderal including species such as dock and nettle can be found in this area.

There is a building which is a former gardeners area and a glasshouse to the north of the walled garden, but these buildings are out of the red line area.

Pidgeon House

This is constructed on two floors and is currently used for storing gardening equipment. It has a well sealed roof.



Figure 4.5. Pigeon House

4.3 Bats

4.3.1 Records

Records of bats within 2km include brown long eared bats, common and soprano pipistrelles.

The nearest records are from the Coach house and surrounding buildings which were surveyed in 2012.

Work has been conducted under EPS mitigation licence for brown long eared bats, soprano and common pipistrelle bats within 2km of the site at Kiln Green.

4.3.2 Field Observations

Areas where the proposed bell tents and Shepherds hut are to be erected are not considered to be likely to support bat roosts. However there is likely foraging and commuting along tree boundaries.



Figure 4.6. Showing trees around formal garden

The pigeon house was surveyed in 2009 for a conversion. No evidence of bats was found within this building. The work on this commenced and the building has been in daily use since. The current application will result in the creation of a door in stead of a window. No alterations to the roof or other features is anticipated. The walls are not suitable for crevice dwelling bats. Further surveys are not considered necessary.

4.4 Other Mammals

4.4.1 Field Observations

Site 1

No evidence of mammals such as badgers were observed within 30m of this potential development area.

Site 2

No evidence of badger activity was recorded within the walled garden. There is potential for small mammals such as vole in the tussocky grass.

Pigeon House

No evidence of mammals within 30m of the pigeon house was observed.

4.5 Birds

4.5.1 Records

Records of significant bird species within 2km include barn owl using the buildings around the main Hall. This was in 2009 and 2012. Since then, barn owl boxes have been erected around the trees on site. Barn owl access has also been prepared at Kiln Barns to the North of Iscoyd Park.

Field Observations

The areas identified for potential development are mainly areas of mown / managed grassland that do not offer suitable habitat for ground nesting birds. This is of low potential for foraging for barn owl, with open parkland to the east being likely more attractive.

Bird species recorded during the site visit include typical garden bird species such as robin, blackbird, chaffinch, blue tit, great tit and long tailed tit.

4.6 Amphibians

4.6.1 Records

There are no previous records of newts in the ponds on the Estate.

4.6.2 Field Observations

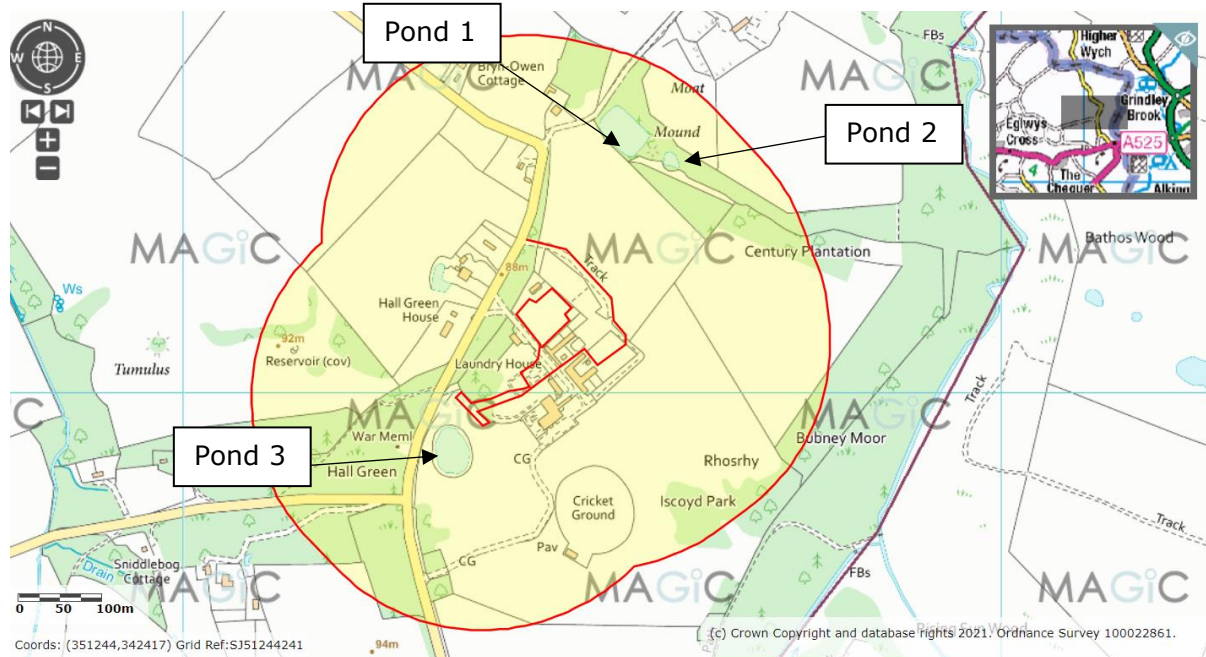


Figure 4.7. OS Map showing a 250m buffer around site, highlighting ponds

Site 1 is within 50m of Pond 3, but 300m from ponds 1 and 2. Ponds 1 and two have therefore been discounted for this site.

The habitat around site one comprises managed grassland lawn. This does not provide any hibernation or significant foraging opportunity for newts.

Site 2 where the bell tents are to be erected comprises grassland with some areas of former formal garden still remaining. This is enclosed in a walled garden with no significant access potential for amphibians to the ponds. Further surveys on the ponds to the north are not considered imperative.

Ponds 1 and 2

These have recently been excavated and cleared, and are heavily managed.

Pond 3



Figure 4.8. Pond 3

Pond 3 is set in an area of managed Parkland. This is known to support a significant population of cyprinid fish. It scored as Below Average on the HSI (Appendix D).

4.7 Reptiles

4.7.1 Field Observations

Site 1 has negligible features suitable for reptiles, being short mown grass.

Site 2 The grassland in the walled garden is managed less frequently, but no obvious basking sites were observed.

4.8 Invertebrates

4.8.1 Field Observations

The site had minimal features suitable for invertebrates, being low diversity, managed grassland.

4.9 Invasive Species

4.9.1 Field Observations

No evidence was found of invasive species. The areas were examined for Japanese Knotweed and the potential for Himalayan Balsam. Rhododendron are grown in the pleasure gardens, but in a garden area such as this, this is not considered a significant species.

5 Description of Proposed Development

The current plans are for the creation of a glamping project in areas around the Parkland at Iscoyd. The access to the site is a track to the hard standing car park, already used by the Estate for weddings and functions. This will continue to be used for this development and a small utility building constructed to one side of the car parking area.

Site 1

There will be a connection to mains water and a pre-existing sewerage system.

Site 2

The bell tents will be situated within the walled garden, with walking access to a service building and the car park. No major construction will be needed within the garden and it will be possible to return it to horticulture in the future. A building is to be constructed on the hard standing of the car park to provide services for the glamping pods.

The building to the north of the walled garden is to remain, along with the fruit tree. No access to the building will be permitted.

Pigeon House

The pigeon house has consent for conversion into bride's accommodation. The application will involve replacing a window with a door and whitewashing the internal walls.



Client: Mr P Godsall

Project: Walled Garden and Surroundings

Title: Location Plan

Scale 1:1,250 @A4

Date: 3/4/2021

Drawn By: CS

Dwg no:

Carter Jonas
Two Snow Hill, Birmingham, B4 6GA
T: 0121 794 6250
carterjonas.co.uk

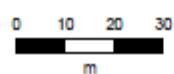


Figure 5.1. Proposed site plan

6 Impacts, Enhancements and Mitigation

6.1 Nearby Features of Importance

Figure 4.1 shows that the nearest designated site is over 2km away. No impact is expected so no mitigation is required.

6.2 Habitats on Site

6.2.1 Impacts

The development as proposed will result in the temporary loss of amenity grassland beyond the formal garden and Walled Garden.

This is not considered to be of high value, being typical habitat in the region. No negative impact is anticipated.

6.2.2 Mitigation / Enhancements

In order to obtain an ecological net gain for the site, the remaining green spaces and site boundaries will require enhancement for local wildlife. It is recommended that the parkland is further planted to replace trees lost over the years.

6.2.3 Monitoring

All habitat enhancements will be monitored post-development and any failing plants or features will be addressed as appropriate to maintain the value of the enhancement.

6.3 Bats

6.3.1 Impacts

Without consideration for bat species known to be in the area, there may be disturbance for flight paths from external lighting. This has been taken into consideration.

Determination of conservation significance of roosts was taken from Figure 4: Guidelines for proportionate mitigation (Bat Mitigation Guidelines P. 39).

6.3.2 Mitigation / Enhancements

Lighting

Lighting needs to be designed to have minimal impact on bats and their commuting and foraging areas. This results in the recommended use of downlights with the horizontal spread of lighting being kept to a minimum up in line with ILP and BCT Guidance Note 08/18.

Where it is not possible to reduce the horizontal spread of light, a 2700°K to 3000°K LED light bulb is recommended, which will provide a warm white light. This range has the least impact on bats and invertebrates.

1. All external lighting will be directed away from any vegetated boundary features to retain dark corridors for commuting bats.
2. There will be no direct illumination of any enhancement features erected for bats.
3. All lighting will be below 10 lux, orientated towards the ground and controlled by PIR (Passive Infra-red), set on a short timer.

Artificial Habitats

It is recommended that provision be made for roosting opportunities for bats with the erection of 3 woodcrete bat boxes suitable for day roosts of crevice dwelling bats around the parkland. These will be erected at a height of 3-4 m and in a southerly, westerly, or easterly facing direction on a large mature tree and positioned with clear flight paths below.



Figure 6.1. Example woodcrete bat box: Schwegler 1FF

6.3.3 Monitoring

Monitoring is not considered necessary.

6.4 Other Mammals

6.4.1 Impacts

It is considered unlikely that there will be any negative impact on mammals using the parkland. The known badger activity is situated over 150m from these developments. No mitigation or enhancements specifically for mammals is considered necessary.

6.5 Birds

6.5.1 Impacts

There is no anticipated negative impact on bird species should this development proceed as no tree or hedge removal is anticipated.

6.5.2 Mitigation / Enhancements

1. It is recommended that a range of woodcrete boxes are erected around the parkland to provide an enhancement for passerine birds, and a selection of the following would be appropriate.



Figure 6.2. Bird boxes

6.6 Amphibians

6.6.1 Impacts

Site 1 is in the Pleasure garden. The shepherds hut will be raised on wheels and as such, no habitat is likely to be lost. Installation is likely to be in daylight hours when amphibians are least likely to be moving. This no negative impact is anticipated.

Site 2 for the glamping pods is in the walled garden. There is very poor connectivity with any open water, so no negative impact is anticipated.

6.6.2 Mitigation / Enhancements

The creation of hibernacula and refugia are recommended in the parkland to provide an enhancement for amphibians. This will be designed to meet the requirement for habitat creation.

A working method statement is recommended to provide safe working practices for mammals and amphibians.

Working Method Statement

Pre-Construction

1. The site will be kept under management prior to construction. This will reduce the potential for newts to cross the land and reduce the potential for the terrestrial features to improve. All plants will be kept short (<10cm) to ensure there is no shelter for amphibians.

Site Setup

1. The grassland in the walled garden will be mown in sections to allow the dispersal of small mammals such as vole.
2. The site will be checked thoroughly by the ECoW prior to construction commencing. This will confirm there are no newts present and that there are no potential places of shelter.
3. Soil and vegetation will be stripped prior to setting up the site compound to ensure the compound contains no vegetation which could potentially attract great crested newts
4. All cabins and equipment will be located on firm compacted ground, preferably a stone or concrete base.
5. Contractors are advised not to handle newts at any time.

Construction Phase

6. Contractors are advised to avoid handle newts at any time.
7. Subsoil to be stored must not be tipped onto any tall vegetation.
8. Any plants around the site will be kept short to stop the development of an area of terrestrial habitat more suitable for newts.
9. All groundwork will be conducted during daylight hours as amphibians and small mammals are least likely to move during this time.
10. Trenches will be dug and filled in on the day created or will be covered over with close-fitting boards at the end of each working day, and then checked the following morning. This is particularly important when newts are most active, between March and November.
11. If necessary, a ramp will be placed in trenches to allow newts and small mammals to escape.
12. Stored material will be raised on pallets to reduce the potential they might act as a temporary resting place. This reduces the potential for damage or destruction of individual amphibians.
13. All waste will be placed straight into skips to reduce the potential of creating refugia.
14. If a newt is found, then work will stop immediately and the consultant contacted for advice.

15. Great crested newts will not be handled or moved without express permission from Natural Resources Wales as this would constitute an offence.
16. It is recommended that regular site visits are carried out by the ECoW to ensure compliance with the legislation and the Method Statement. A record of these visits will be made as part of the audit trail.

Enhancements for Amphibians

1. A hibernaculum will be constructed to the west of the pond near the Pleasure garden.

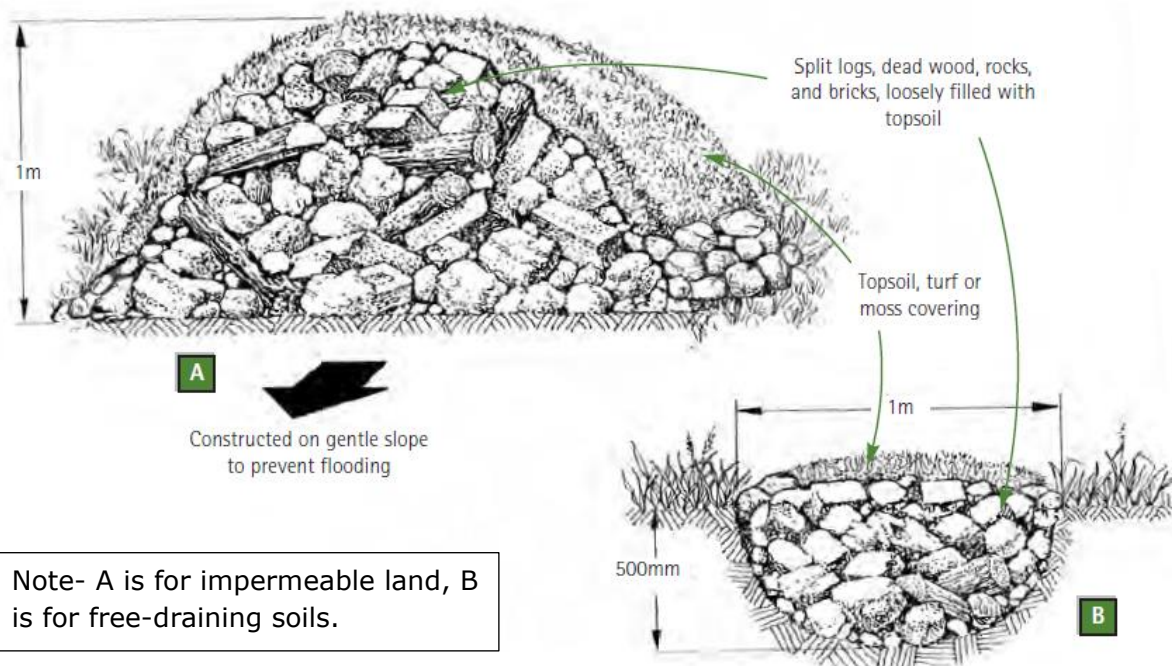


Figure 6.3. Hibernacula design from Froglife ©

6.7 Reptiles

6.7.1 Impacts

No negative impact on reptile species is anticipated.

Enhancements

1. The hibernaculum created for amphibian species may well attract reptile species too. A pile of brash will be created adjacent to the hibernaculum.

6.8 Invertebrates

6.8.1 Impacts

As the developments are on habitat of low ecological value, no negative impact is anticipated on invertebrates. The Estate has already planted a wildflower meadow close to the car park, thus providing a positive enhancement for invertebrates.

6.8.2 Enhancements

Further wildflower/ flowering shrub planting is recommended.

6.9 Invasive Species

6.9.1 Impacts

No evidence of invasive plant species was observed in the development areas. No negative impact is anticipated.

7 Concluding Remarks

The survey has focussed on the potential habitats or protected species to be damaged or destroyed as part of this development.

The areas where the developments are to occur are habitats of low ecological value. Ponds have been taken into consideration, and as the development is small and of a temporary nature, no negative impact is anticipated. Reasonable avoidance measures have been recommended for the construction phase. This will also provide sensible precautions for small mammals.

The building has negligible value for bats and no further surveys are considered necessary.

Enhancements include the erections of bird and bat boxes, and the construction of hibernacula for amphibians and reptiles.

The development can proceed without the loss of habitat of significant value, and without the loss of the favourable conservation status of any protected species. As there is no evidence of protected species within and around the development site, there is no requirement to address the three tests under Regulation 55 of the Conservation of Habitats and Species Regulations (2017).

Other than those listed above, there are no ecological constraints to the development as currently proposed.

Appendix A – Surveyor Details

Table A.1. Details of surveyors' experience and licences held

Name	Membership of associations/ experience	Licenses
Peta Marshall BSc(hons)MA	Principal Consultant MCIEEM PIEMA Peta has a degree in Applied Biology and has been working in commercial environmental assessment for over 10 years. She has 10+ years' experience surveying for protected species. As a member of the CIEEM she is bound by professional conduct.	Holder of survey licenses for bats and newts in England and Wales. Registered Consultant for Mitigation Class Licence for Bats <u>England:</u> Bats - 2015-12200-CLS-CLS BMCL - RC084 GCN - 2015-18939-CLS-CLS Dormice - 2017-29225-CLS-CLS <u>Wales:</u> Bats – S087133-1 GCN – S087606-1
Logan Maggs BSc(hons)	Lead Consultant Logan has a degree in Conservation and Land Management. He has 10 years' experience conducting environmental appraisals and phase 2 surveys for bats and newts in England and Wales.	Holder of survey licenses for bats and newts in England and Wales. <u>England:</u> Bats - 2016-24901-CLS-CLS GCN - 2017-29218-CLS-CLS <u>Wales:</u> Bats – S086874/1 Newts - 79665:OTH:SA:2018

Appendix B – Methodology

Desk Study

Table B.1. Data sources

Organisation/Resource	Information Assessed
MAGIC website	International statutory designations (1km) • Special Protection areas (SPA) • Special Areas of Conservation (SAC) • RAMSAR sites National statutory designations (1km) • Sites of Special Scientific Interest (SSSI) • National Nature Reserves (NNR) EPS Licenses for protected species (2km)

As the development is a small-scale application a full data search is not required.

A search on Multi Agency Geographic Information for the Countryside (Magic Maps) determined nearby designated areas. The map is presented in Section 4.1.

A review of other surveys conducted in the area by Greenscape Environmental was also conducted. Survey reports include: surveys of surrounding buildings on the estate, and further afield at Kiln Green.

Field Survey

An assessment of habitats was conducted broadly following the JNCC Handbook for Phase 1 Surveys 2010.

The level of survey is aimed to identify field signs of or habitats with the potential to support protected species and therefore assist in the determination for detailed phase 2 surveys.

Determination of Ecological Value is based on the general criteria provided by IEEM (IEEM 2006).

Table B.2. Criteria of ecological values

Ecological Value	Description and Examples
High	Habitats or features that have high importance for nature conservation, such as statutory designated nature conservation sites of international or national importance or sites maintaining viable populations of species of international or national importance (e.g. Red Data Book species; European protected species).
Medium	Sites designated at a county or district level, e.g. Local Wildlife Site (LWS), ancient woodland site, ecologically 'important' hedgerows or ecological features that are notable within the context of a region, county or district (e.g. a viable area of a Priority Habitat on the county BAP or a site that supports a viable population of a county BAP species).
Low	Sites of nature conservation value within the context of a parish or neighbourhood, low-grade common habitats, such as arable fields and improved grasslands and sites supporting common, widespread species.

Species Surveys

Bats

Methodology used is in accordance with recommendations by BCT, Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Collins (2016).

Features on site were assessed for potential for bat roosts, foraging and commuting.

All trees were assessed from ground level. All trees examined were categorised on their potential roost features (PRF). These features include cracks, splits in limbs, cavities, loose bark and thick stemmed ivy. Where appropriate and accessible these features were assessed using binoculars and/or endoscopes.

Table B.3. Categorisation of trees for bats

Value for Bats	Example Features
Negligible	Young tree with no potential roost features
Low	Mature enough to have PRF, but no holes in trunk or limbs visible from ground level, very light ivy cover
Moderate	Broken limbs or hazard beams, raised bark, extensive ivy coverage
High	Extensive holes in trunk or limbs, dense ivy coverage, presence of cavities
Confirmed roost	Bat presence has been confirmed

Daytime surveys were conducted with the aid of a strong torch and a pair of binoculars where needed. Bat species may leave little evidence of their presence.

Evidence for the presence of bats includes:

- Holes, cracks and rot holes used as roosts, marked by streaks of urine and faeces.
- Smoothed, darkened edges where bats have rubbed and left natural body oils when entering and exiting a space.
- Faeces under a well-used feeding point or a resting spot.
- Feeding signs such as discarded insect wings under a feeding point.
- Presence of droppings in a cobweb.
- Presence of roosting or dead bats in or behind any object.

Badgers

Surveys were conducted using guidance from Scottish Natural Heritage commissioned Report No 096 (2003).

Daytime surveys for badgers involved looking for:

- Scrapings where badgers have dug for food or used as latrines.
- Signs of a sett, including signs of use such as presence of badger hair
- Tracks and prints.

Birds

Searching for evidence of nesting birds, including barn owls, involved looking for:

- Presence of nests
- Collections of droppings and/or feathers
- Highly distinctive droppings or splats under roosting points.
- Presence of owl pellets/feathers

- Listening for bird song
- Recording bird activity

Amphibians and Reptiles

The assessment of aquatic habitat is based on the Habitat Suitability Index (HSI) and is applied according to guidance set out by the Oldham 2000, superseded by ARG in 2010, ARG UK Advice note 5. The HSI is a quantitative method of assessing the potential quality of a body of water in terms of its ability to sustain a population of great crested newts.

The terrestrial habitats at the application site were surveyed and assessed for their suitability and potential value for the support of GCN. The general topography, ground conditions and presence or absence of vegetation were recorded. A refugia search was conducted for amphibians and reptiles by looking under any logs, large stones and other debris.

Appendix C – Policy

The following areas of policy and legislation are of relevance to ecology and provide context to the surveys conducted. Findings presented in this report are in line with the following:

The Conservation of Habitats and Species Regulations (2017) – as listed in:

- Schedule 2. European protected species of animals
- Schedule 5. European protected species of plants

The Wildlife and Countryside Act (1981) – as listed in:

- Schedule 1. Birds protected by special penalties at all times
- Schedule 5. Protected animals
- Schedule 8. Protected plants

Countryside and Rights of Way Act (2000)

Hedgerow Regulations (1997)

The Protection of Badgers Act (1992)

Natural Environment and Rural Communities (NERC) Act (2006)

Planning Policy Wales 2002, updated Dec 2018

Section 6.4 – Biodiversity and Ecological Networks

The Nature Recovery Plan for Wales – Setting the course for 2020 and beyond (2015)

Environment Act (Wales) (2016)

Section 7

Wrexham Unitary Development Plan – EC6 Biodiversity Conservation

Bats

All bat species are protected under the Conservation of Habitats and Species Regulations 2017 which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- Deliberately capture or kill any wild animal of a European Protected Species.
- Deliberately disturb any such animal.
- Damage or destroy a breeding site or resting place of such a wild animal.
- Keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a European Protected Species, or any part of, or anything derived from such a wild animal or plant.

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine or to both.

Seven bat species are on the UK Biodiversity Action Plan and are listed as Species of Principal Importance under the provisions of the Natural Environment and Rural Communities (NERC) Act 2006. The National Planning Policy Framework (NPPF) states that to minimise impacts on biodiversity and geodiversity, *"planning policies should... promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations"*.

To allow a development that might result in an offence, a derogation licence can be sought via the implementation of a European Protected Species Licence. This is provided by Natural Resources Wales.

Work can be conducted under a derogation licence from Natural Resources Wales providing suitable compensation and mitigation is provided and the "three tests" can be met. These are:

Regulation 55(2)(e) states: a licence can be granted for the purposes of "preserving public health or public safety" or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.

Regulation 55(9)(a) States: the appropriate authority (Natural Resources Wales) shall not grant a licence unless they are satisfied "that there is no satisfactory alternative"

Regulation 55(9)(b) states that the appropriate authority shall not grant a licence unless they are satisfied "that the action licensed will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in its natural range."

The method statement in the EPS licence is a legally binding document which outlines the species, context of the colony, method of mitigating and compensating and ongoing habitat management for ensuring favourable conservation status.

Badgers

Badgers and their setts are specifically protected under the Protection of Badgers Act 1992. The act was primarily brought into force to prevent the deliberate injury to or death of badgers. Some aspects of the act affect developers. It is important that developers are aware of any badger setts located on the land they intend to develop.

All personnel working on sites where there are badgers should be aware of the Protection of Badgers Act 1992. Under this legislation it is an offence to:

- Damage a badger sett or any part of it.
- Destroy a badger sett.
- Obstruct access to, or any entrance of a badger sett.
- Causing a dog to enter a badger sett.
- Disturbing a badger when it is occupying a badger sett.

Birds

Under Section 1 of the Wildlife and Countryside Act 1981 (as amended), birds, their nests and young are all protected from damage, particularly during the breeding season. The Act allows for fines or prison sentences for every bird, egg or nest destroyed. It makes it an offence to:

- Intentionally kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird whilst it is in use or being built.
- Take damage or destroy the egg of any wild bird.
- To have in one's possession or control any wild bird, dead or alive or egg or any part of a wild bird or egg.

Some bird species are included in the UK and local BAPS and are recognised as species of principal importance for nature conservation in accordance with section 41 of the NERC Act 2006. Such species and their habitats receive protection through the provisions of the NPPF.

Barn Owls

Barn owls are listed on Schedule 1 which gives them special protection.

It is an offence to:

- Intentionally kill, injure or handle any wild barn owl.
- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being 'built'.
- Intentionally take or destroy a wild barn owl egg.
- Have in one's possession or control a wild barn owl (dead or alive) or egg (unless one can show it was obtained legally).
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst in, on, or near a nest containing young.
- Intentionally or recklessly disturb any dependent young of wild barn owls.

It is not an offence to:

- Take a disabled wild barn owl solely for the purpose of tending it until fully recovered and then returning it to the wild.
- Kill, injure, take or disturb barn owls if these were incidental results of a lawful operation and could not reasonably have been avoided.

Amphibians and Reptiles

All species of amphibians receive a measure of protection under legislation.

The Wildlife and Countryside Act 1981 has been amended by the Countryside and Rights of Way Act (CRoW) 2000. This applies to England and Wales only. The key relevant fact is:

- Section 9(4) is amended to create an additional offence of reckless damage to, destruction of, or obstruction of access to, any structure or place used for shelter or protection; and reckless disturbance while occupying such a structure or place.

Great Crested Newts

Great crested newts are protected under the Conservation of Habitats and Species Regulations 2017 which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- Deliberately capture or kill any wild animal of a European Protected Species.
- Deliberately disturb any such animal.
- Deliberately take or destroy eggs of any such wild animal.
- Damage or destroy a breeding site or resting place of such a wild animal.
- Keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a European Protected Species, or any part of, or anything derived from such a wild animal or plant.

Great crested newts are listed as a priority species on the UK BAP and Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The National Planning Policy Framework (NPPF) states that to minimise impacts on biodiversity and geodiversity, *"planning policies should... promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations"*.

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine, or to both.

Work can be conducted under derogation licence from Natural Resources Wales providing suitable compensation and mitigation is provided and the "three tests" can be met. These are:

- Regulation 55(2)(e) states: a licence can be granted for the purposes of "preserving public health or public safety" or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
- Regulation 55(9)(a) States: the appropriate authority (Natural Resources Wales) shall not grant a licence unless they are satisfied "that there is no satisfactory alternative"
- Regulation 55(9)(b) states that the appropriate authority shall not grant a licence unless they are satisfied "that the action licensed will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in its natural range."

The method statement in the EPS licence is a legally binding document which outlines the species, context of the colony, method of mitigating and compensating and ongoing habitat management for ensuring favourable conservation status.

Invertebrates

400 other species form the invertebrate species of Principal Importance in England and are included within Schedule 5 of the Wildlife and Countryside Act 1981, and Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006.

Some species are listed under the Conservation of Habitats and Species Regulations 2017 and The Conservation Regulations 1994 which implement the EC Directive 92/43/EEC in the United Kingdom.

It is illegal to:

- Intentionally kill, injure or take a protected invertebrate.
- Possess or control any live or dead specimen of anything derived from a protected invertebrate.
- Cause intentional damage to or destruction of any structure or place used by a protected invertebrate for shelter or protection
- Cause intentional disturbance of a protected invertebrate occupying such a structure or place
- Cause obstruction of access to any structure or place used for shelter or protection
- Selling, offer for sale, possess or transport a protected invertebrate for the purpose of sale (live or dead animal, part or derivative)
- Advertise for buying or selling a live or dead protected invertebrate, part or derivative

Such species and their habitats listed under the NERC Act 2006 receive protection through the provisions of the NPPF. The National Planning Policy Framework (NPPF) states that to minimise impacts on biodiversity and geodiversity, *"planning policies should... promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations"*.

Invasive Species

Himalayan Balsam

Himalayan Balsam is identified as an invasive non-native plant. It is listed under Section 9 schedule 14 of The Wildlife and Countryside Act. It is illegal to plant or otherwise cause Himalayan Balsam to grow in the wild in the UK.

Action will be taken to prevent invasive plants on one's land to spread into the wild and cause a nuisance.

The current fine is up to £5000 or a 2-year imprisonment if contaminated soil or plant material from any waste transferred is spread into the wild. Removal of soil material containing any plant material must be treated as controlled waste.

Himalayan balsam out competes native species, causing shade and suppressing growth leaving the riverbanks prone to erosion following winter dieback. It is spread by seed dispersal and sections of plant and root travelling downstream. Removing it will benefit the land and wildlife along the riverbank.

Japanese Knotweed

The management of Japanese knotweed (*Fallopia japonica*) is regulated by several pieces of legislation:

- The Wildlife and Countryside Act (as amended) 1981
- The Environment Protection Act 1990
- The Waste (England & Wales) Regulations 2011
- Third party litigation where damages may be sought for allowing Japanese knotweed to spread onto other properties.

Japanese Knotweed is listed in Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to plant, cause the plant, or allow the plant to grow in the wild.

This puts the duty of care on to the landowner to be proactive in the control and eradication of the plant. For planning permission to be granted an eradication program will be necessary.

Japanese knotweed is considered to be probably the most invasive alien plant in Britain.

It is spread vegetatively with 1cm lengths of root and sections of stem being able to give rise to new plants.

The rhizomes can extend to a spread of up to 3m and 7m radius from the perimeter of a clump.

Planners and developers have a responsibility not to allow the spread of Japanese Knotweed.

Litigation for damages is possible where it can be proven it has been allowed to spread and cause damage.

It is a problem plant because it causes damage to roads, buildings, concrete, drains and damages the environment by destroying biodiversity.

Giant Hogweed

Giant hogweed is a non-native invasive species originally introduced as an ornamental plant. It is now listed under Schedule 9 of the Wildlife and Countryside Act 1981. This means it is an offence to plant or otherwise cause this species to grow in the wild.

The penalties for breaking the law with regard to Giant Hogweed are severe. A person found guilty of an offence can be liable to imprisonment for up to 6 months or a fine of up to £5,000, or to both.

It is notable that the legislation "does not impose an explicit obligation to manage Schedule 9 species not introduced onto your land by your own actions". However, in terms of development, the uncontrolled damage to the species and potential spread of parts of the plant could be considered a reckless spreading of a Schedule 9 species and therefore invoke the penalties outlined above.

The seeds of Giant Hogweed can remain viable for 7 years (possibly up to 15 years), although most become unviable after 2 years. As such, once a plant has seeded it must be assumed that seeds are present in the soil for at least two years.

Appendix D – HSI Scores

Table D.1. HSI score and justification for Pond 3

Pond 3 Grid reference: SJ50324192		
Geographic Location	1	Zone A
Pond Area	0.85	The pond is approximately 1754m ²
Permanence	0.9	Never dries
Water Quality	1	Abundant and diverse invertebrate community
Shade	1	There was estimated to be 60% shading of the area within 1m of the perimeter
Waterfowl	0.67	Waterfowl present but little indication of impact on pond vegetation Pond still supports submerged plants and banks are not denuded of vegetation
Fish	0.01	Dense populations of fish known to be present
Pond Count	1	There are 12 ponds within a 1km radius not separated by significant barriers
Terrestrial Habitat	0.67	Habitat offers opportunities for foraging and shelter but may not be extensive (25-75% of 250m ²)
Macrophytes	0.9	floating or emergent vegetation in this pond, cover was estimated to be between 86-90%
HSI Score	0.56 – Below average	

Appendix E – Bibliography

- ARG UK (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Amphibian and Reptile Groups of the United Kingdom.
- Barn Owl Trust (2012) *Barn Owl Conservation Handbook*, Pelagic Publishing, Exeter
- Chartered Institute of Ecology and Environmental Management (CIEEM), (2006). *EcIA Guidance (Terrestrial, Freshwater and Coastal 2006)*.
- Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). Bat Conservation Trust
- Conservation of Habitats and Species Regulations 2017:
http://www.opsi.gov.uk/si/si2010/uksi_20100490_en_1
- English Nature (2001) *Great crested newt mitigation guidelines* - English Nature
JNCC
- HMSO (2000) *Countryside and Rights of Way Act 2000* - HMSO, London
<http://www.legislation.gov.uk/ukpga/2000/37/contents>
- HMSO (1981) *Wildlife and Countryside Act 1981* - HMSO, London
<http://www.legislation.gov.uk/ukpga/1981/69>
- HMSO (1992) *The Protection of Badgers Act* - HMSO, London
<http://www.legislation.gov.uk/ukpga/1992/51/contents>
- ILP (2018) Guidance Note 08/18 Bats and artificial lighting in the UK, The Institute of Lighting Professionals
- Mitchell-Jones A.J. (2004) Bat Mitigation guidelines, English Nature
- Natural England – Nature on the Map, Magic Maps. Copyright Natural England, containing Ordnance Survey data, crown copyright and database right 2018:
<http://magic.defra.gov.uk/magicmap.aspx>
- Natural Environment and Rural Communities Act 2006:
<http://www.legislation.gov.uk/ukpga/2006/16/contents>