

United Environmental Services Ltd

1 Booths Park,
Chelford Road,
Knutsford,
Cheshire
WA16 8QZ

www.ues.org.uk

enquiries@ues.org.uk

01565 757788



PRELIMINARY ECOLOGICAL APPRAISAL

At

The Boat Inn

Erbistock

Wrexham

LL13 0DL

NGR: (SJ) 335505 341321

Prepared for:

Mr Peter Miller

Written by:

Suzie Whitnall, UES Assistant Ecologist

Approved by:

Toby Hart, UES Managing Director

A handwritten signature in black ink, appearing to read 'Toby Hart', is positioned below the 'Approved by:' text.

Date:

5th March 2019

UES reference:

UES02603/01



CONTENTS

EXECUTIVE SUMMARY	3
1 INTRODUCTION	4
1.1 Author, surveyors, qualifications and scope of study area.....	4
1.2 Survey objectives.....	4
1.3 Proposed development	4
1.4 Structure of the report	4
2 METHODOLOGY	6
2.1 Desk study.....	6
2.2 Field survey	6
2.3 Survey limitations.....	6
3 RESULTS.....	8
3.1 Desk study.....	8
3.2 Baseline conditions – Habitats	9
3.3 Baseline conditions – Protected species or resources	10
4 EVALUATION AND RECOMMENDATIONS	13
4.1 Habitats	13
4.2 Species.....	14
5 CONCLUSION.....	17
6 REFERENCES	18
APPENDICES.....	19
Appendix 1 – Desk study.....	19
Appendix 2 – Phase 1 habitat plan	20
Appendix 3 – Aerial photographs.....	21
Appendix 4 – Photographs	22
Appendix 5 - External lighting guidance.....	23
Appendix 6 – Planning and statutory context.....	24

EXECUTIVE SUMMARY

United Environmental Services Ltd (UES) was commissioned by Mr Peter Miller to carry out a baseline ecological survey of The Boat Inn, Erbistock. A desk study and preliminary ecological appraisal (PEA) survey were undertaken on 4th February 2019, including searches using the Multi Agency Geographic Information Centre (MAGIC).

The PEA provides an assessment of potential ecological impacts associated with the development of The Boat Inn site. The development proposals are for the renovations of the Boat Inn buildings and the reinstatement of the former ferry dock.

The proposed development site has an area of approximately 0.15ha and comprises the Grade II Boat Inn buildings, rear yard and outdoor seating area. The southern boundary lies on the Afon Dyfrdwy / River Dee embankment.

The results of the survey combined with the results of the desk study have highlighted the requirement for further work in relation to the following habitats and species:

- **Trees** – Site clearance and construction works should be mindful of the Root Protection Areas (RPAs) of the retained trees on and immediately adjacent to the development.
- **Bats** – Presence / absence surveys of the Boat Inn buildings are required in the bat survey season (May to September, inclusive).
- **Breeding birds** – Tree removal and maintenance works are to take place outside of the breeding bird season, which runs from March to August inclusive. If not possible, a targeted nest survey is to be undertaken or an ecological clerk of works appointed to oversee the works.
- **Otters** – Reasonable avoidance measures (RAMs) to be implemented during the construction phase of the development.
- **River Dee** – specific procedures and control measures to be implemented to ensure that there is no risk of input into the watercourse. The measures should be set out in a method statement prior to commencement and agreed with the LPA and other statutory consultees. A Flood Risk Activity Permit (FRAP) may need to be acquired from Natural Resources Wales (NRW).

Mitigation measures, as detailed in section 4, should be adhered to, which may in some cases negate the need for further survey work.

The development also presents an opportunity to improve the habitats on site for wildlife, such as bats and birds. The inclusion of nest boxes and bat boxes will provide suitable nesting and roosting features in the long term.

This report should be read with appendices 1 to 6, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

1 INTRODUCTION

1.1 Author, surveyors, qualifications and scope of study area

This report is written by Suzie Whitnall BSc MSc, UES Assistant Ecologist. Suzie holds a level 4 Botanical Society for Britain and Ireland (BSBI) field identification skills certificate (FISC), which certifies her as competent to undertake botanical and habitat surveys up to National Vegetation Classification (NVC) level.

The report provides an assessment of the potential ecological impacts associated with the proposed development of The Boat Inn, Erbistock.

The zone of influence considered within the scope of the survey includes all land within the red line boundary. Where relevant, other ecological resources, receptors and important habitats which are spatially separate from the site are considered.

1.2 Survey objectives

UES was commissioned in January 2019 to conduct a PEA of the proposed development site. This was completed in order to:

- Establish baseline conditions and determine the importance of ecological features present or potentially present within the survey area
- Identify key ecological constraints to the project
- Make recommendations for design options to avoid significant effects on important ecological resources at an early stage of development planning
- Identify potential requirement for further surveys for nationally or internationally protected species which may be present on site
- Identify potential requirement for mitigation or compensation, including measures that may be required based on further surveys

1.3 Proposed development

The development proposals include the renovation of the Boat Inn including demolition of the modern single storey extensions, construction of a single storey kitchen extension and re-roofing the building. The former ferry dock will be restored on the river bank. A line of mature leyland cypress *Cupressus × leylandii* will also be removed as part of the development.

1.4 Structure of the report

This report is a baseline appraisal that forms the basis for further ecological surveys and Environmental Impact Assessments (EIA) if required. In the majority of cases the preliminary ecological assessment will not provide all the ecological data required by the Local Planning Authority to determine an application, especially in the event that protected habitat or species issues are present or likely.



This report should be read with appendices 1 to 6, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

2 METHODOLOGY

This PEA comprises a desk study and a field survey. The desk study is conducted in order to collate ecological information on species and / or habitats of interest that may be present. The field survey is conducted in order to assess the habitats and their importance, both on site and in the context of their wider surroundings.

2.1 Desk study

The following resources were used to inform the desk study:

- National – Using the UK government’s MAGIC website, statutorily protected sites were scoped to a distance of 10km from the application site.
- Local – UES has not been commissioned to undertake an environmental records search at this point.

2.2 Field survey

An ecological walkover survey was carried out on 4th February 2019 by Suzie Whitnall. The purpose of the survey was to identify, record and map dominant habitats types within the development area and highlight any further species surveys that may be required based on the quality of those habitats. When conducting the surveys particular focus was concentrated on the following species and habitat features:

- | | |
|------------------|-------------------------|
| • Amphibians | • Hedgerows |
| • Reptiles | • Plant communities |
| • Badger | • Invasive species |
| • Bats | • Otter |
| • Hazel dormouse | • Water vole |
| • Birds | • White-clawed crayfish |
| • Trees | |

The habitats were assessed by using the phase 1 habitat survey technique, which is a system for environmental audit widely used within the environmental consultancy field. The survey was undertaken in accordance with the methodology in the ‘Handbook for phase 1 habitat survey - A technique for environmental audit’ (JNCC, 2010) as recommended by Natural Resources Wales, and in the “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2013).

The survey area encompasses all of the land within the development footprint and the land to a distance of 30m outside it where accessible. In line with recognized guidelines, ponds were also scoped to a distance of 500m (250m radius from the survey area).

The phase 1 habitat survey methodology was extended to record any signs of habitats suitable to support protected / invasive species and any incidental observations of other noteworthy species.

2.3 Survey limitations



The survey was conducted in February when not all plants are readily identifiable. However sufficient vegetative identification was possible, allowing a robust assessment of habitats to be undertaken.

3 RESULTS

3.1 Desk study

A desk study was conducted for the proposed development site and surrounding area. Statutorily protected sites were scoped to a distance of 10km. Further results of the desk study can be found at Appendix 1 – Desk study.

There are two statutorily protected sites within 2km of site:

- Afon Dyfrdwy / River Dee SSSI¹
This designation is located on the southern boundary of the proposed development site. The main channel of the river lies within both Wales and England, and is notified as two separate SSSIs – the Afon Dyfrdwy SSSI (Wales) and the River Dee (England). The source of the river lies within Snowdonia National Park. It enters the Cheshire plain at Erbistock.

*The river is of special interest for its fluvial geomorphology, range of river habitats, saltmarsh transition habitats, populations of floating water plantain *Luronium natans*, slender hare's-ear *Bupleurum tenuissimum*, sea barley *Hordeum marinum*, hard-grass *Parapholis strigosa*, otter *Lutra lutra*, salmon *Salmo salar*, bullhead *Cottus gobio*, brook lamprey *Lampetra planeri*, river lamprey *Lampetra fluviatilis*, sea lamprey *Petromyzon marinus*, club-tailed dragonfly *Gomphus vulgatissimus* and other aquatic invertebrates.*
- Afon Dyfrdwy a Llyn Tegid / River Dee and Bala Lake SAC²
*The habitat types for which the site is designated are watercourses of plain to montane levels with *Ranunculus fluitans* and *Callitriche Batrachion* vegetation. Species of note are bullhead, river lamprey, brook lamprey, floating water plantain, otter, sea lamprey, Atlantic salmon*
- Shell Brook Pastures SSSI
*The designation is located approximately 2km south of the proposed development site. The site is a series of unimproved calcareous clay pastures, largely developed on the steep valley side of the Shell Brook. The pastures are botanically rich and support a range of plants including quaking grass *Briza media*, timothy *Phleum pratense*, meadow fescue *Festuca pratensis*, cowslip *Primula veris* and the uncommon Adder's tongue fern *Ophioglossum vulgatum*, pepper saxifrage *Silene silaus*, hoary ragwort *Senecio erucifolius*, Dyer's greenweed *Genista tinctoria* and green-winged orchid *Orchis morio*.*

There are ten statutorily protected sites within 2 – 10km of site:

- | | |
|---|--------------------------------------|
| • Castelly waun a's barredjr / Chirk Castle & parkland SSSI | • Nant-y-Belan & Prynella Woods SSSI |
| • Fernhill Pasture SSSI | • Sontley Marsh SSSI |
| • Hanmer Mere SSSI | • Strytlas a'r Hafod SSSI |
| • Ifton Meadows LNR ³ | • West Midland Mosses SAC |
| • Johnstown Newt Site SAC | • White Mere SSSI |

¹ Site of Special Scientific Interest

² Special Area of Conservation

³ Local Nature Reserve

3.2 Baseline conditions – Habitats

The results of the PEA are also shown on the accompanying map at Appendix 2 – Phase 1 habitat plan. Habitats are colour-coded in accordance with the phase 1 standard.

The local area predominantly consists of pasture fields, woodland copses and the River Dee. The following principle habitat types were characterised on site:

- A2.1 Continuous scrub
- A3.3 Scattered, mixed trees
- G2 Running water
- J1.2 Amenity grassland
- J2.5 Wall
- J3.6 Building
- J5 Hardstanding

3.2.1 A2.1 Continuous scrub

The steep rocky outcrop at the northern boundary has been colonised by scrub. Species present include young sycamore *Acer pseudoplatanus* and oak *Quercus robur* saplings, hawthorn *Crataegus monogyna*, hazel *Corylus avellana* and bramble *Rubus fruticosus* agg.

3.2.2 A3.3 Scattered, mixed trees

Several mature trees are present within the site boundaries. These include a line of Leyland cypress at the north-west corner, oak, ash *Fraxinus excelsior*, sycamore and yew *Taxus baccata*.

3.2.3 G2 Running water

The southern boundary lies on the Afon Dyfrdwy / River Dee. The embankment along this section is relatively steep with limited marginal vegetation. Scrub vegetation has developed in the riparian zone between the amenity grassland and river channel which is managed and regularly trimmed. Species present along the banks include willow sp *Salix* sp, hazel, bramble and teasel *Dipsacus sylvestris*.

The Boat Inn was the location of a hand-operated chain ferry crossing in the C17, the position of the ferry dock can still be identified on the embankment (Target note 1).

3.2.4 J1.2 Amenity grassland

The outdoor seating areas along the river comprises well-managed amenity grassland. Species present include annual meadow grass *Poa annua*, Yorkshire fog *Holcus lanatus* with the occasional daisy *Bellis perennis*, speedwell *Veronica* sp, lesser celandine *Ficaria verna*, yarrow *Achillea millefolium*, creeping buttercup *Ranunculus repens*, daffodil *Narcissus* sp, *Crocus* sp, white clover *Trifolium repens*, snowdrop *Galanthus nivalis*, teasel, common ragwort *Jacobaea vulgaris* and ribwort plantain *Plantago lanceolata*.

3.2.5 J2.5 Wall

A stone wall is present at the south-west boundary of the proposed site, separating the embankment and driveway.

3.2.6 J3.6 Building

The Boat Inn is located in the centre of the proposed site. The buildings are Grade II listed and comprise two 17th Century buildings joined together with 19th and 20th Century extensions. For further descriptions see UES Bat scoping report (UES02603/02).

3.2.7 J5 Hardstanding

A tarmac driveway is present at the front (south) of the Inn and tarmac yard at the rear.

3.3 Baseline conditions – Protected species or resources

As part of the PEA, specific observations of wildlife were also recorded. Wildlife observations focused on protected species, invasive species or species of conservation concern. Habitats with potential to support protected species were noted with a view to follow up surveys if required.

3.3.1 Amphibians

There is a single mapped pond within 250m of the proposed development. It is located 55m north-west of site within The Garden House, the curtilage of which includes landscaped gardens including the lozenge-shaped garden pond. The steep rocky outcrop on the northern site boundary separates the pond from proposed development site.

The terrestrial habitats within the development footprint are broadly unsuitable for GCNs. A large proportion is either hardstanding, buildings or amenity grassland that would provide limited opportunities for amphibians. Furthermore, the area is already subject to vehicle traffic from visitors and deliveries to the Inn. The scrub area on the steep slope directly north of the northern boundary presents the only suitable habitat to provide potential sheltered commuting and foraging opportunities for amphibians.

Despite the scrub providing suitable habitat for amphibians, great crested newts *Triturus cristatus* are not considered to be present on site or within the immediate vicinity of the site and are not considered to be at risk of impact.

3.3.2 Reptiles

The habitats on site provide limited foraging and commuting opportunities for reptiles. The site is also isolated from suitable areas of reptile habitat within the local areas which predominantly comprise improved grassland fields.

Reptiles are not considered to be present on site or within the immediate vicinity of the site.

3.3.3 Badger

There are no suitable sett building habitats for badgers *Meles meles* and no evidence of badger activity was observed on site during the walkover survey.

Given that no evidence of badgers was observed on site, badgers are not considered to be present on site or within the immediate vicinity of the site.

3.3.4 Bats

The Boat Inn is situated in an area which provides high quality habitat for bats. The network of hedgerow and tree-lined fields, riparian vegetation and woodland copses will all provide good foraging opportunities, whilst the mature trees, agricultural buildings and villages will provide an abundance of suitable roosting opportunities. Furthermore, the connectivity between habitats in the local area is good due to the presence of hedgerows and tree lines and riparian vegetation along the River Dee.

The quality of roosting habitats within the buildings is low, with a number of external potential roosting features (PRFs) such as gaps under raised roof tiles, gaps under ridge tiles, gaps under lead flashing and gaps in the stonework (see UES' bat scoping survey report for further details – UES02603/02).

The Leyland cypress trees at the north-west boundary of the site contain no potential roosting features for bats.

3.3.5 Hazel dormouse

The habitats on site are unsuitable for hazel dormice *Muscardinus avellanarius*. There are no woodland or hedgerows present on site or within the immediate vicinity.

Hazel dormice are not considered to be present on site or within the immediate vicinity of the site.

3.3.6 Birds

Although a targeted bird survey was not conducted during the site visit, blue tit *Cyanistes caeruleus*, blackbird *Turdus merula*, great tit *Parus major*, robin *Erithacus rubecula*, moorhen *Gallinula chloropus* and red kites *Milvus milvus* were observed on site or within the immediate vicinity of the site.

The mature trees and scrub on site provide suitable nesting opportunities for breeding birds in the summer.

3.3.7 Trees

There are no tree species on site which are afforded statutory protection.



3.3.8 Hedgerows

There are no hedgerows within the proposed development boundaries.

3.3.9 Plant communities

No plant communities or individual species were recorded on site which are afforded statutory protection in their own right.

3.3.10 Invasive species

No invasive species were recorded on site.

3.3.11 Otter and water vole

Otters *Lutra lutra* and water voles *Arvicola amphibius* are known to be present in the River Dee. The proposed development plans include proposals to restore the ferry dock on the embankment of the river.

The embankment is broadly suitable for otter holts. However, no holts or other field signs of the species were found within the proposed development.

Water voles are not considered to be present in this part of the river due to the fast flowing water.

3.3.12 White-clawed crayfish

The waterbody will not be directly affected by the development. Furthermore, white-clawed crayfish *Austropotamobius pallipes* are not known to be present in the River Dee.

4 EVALUATION AND RECOMMENDATIONS

This section provides a brief assessment of the likely impacts associated with the proposed development on the receptors identified during the walkover survey and desk study. It also includes any mitigation and compensation measures which may be required for the proposed development to proceed.

4.1 Habitats

4.1.1 Designated sites

The sites identified during the desk study were cross-referenced with the survey area relevant to this report. The closest statutorily protected sites are the Afon Dyfrdwy / River Dee SSSI and Afon Dyfrdwy a Llyn Tegid / River Dee and Bala Lake SAC, which lie directly on the southern boundary of the site.

The majority of the proposed development to the Boat Inn buildings and removal of trees will have a negligible impact on river. However, the reinstatement of the ferry dock including uncovering the former steps or constructing new steps could have a direct impact on the river.

Without mitigation and prevention measures the development has the potential to have direct impacts on the watercourse through pollution and sedimentation during the construction and operational phase of the development. Specific procedures and control measures will need to be implemented to ensure that no abiotic or biotic material pollute the watercourse. A Flood Risk Activity Permit (FRAP) acquired from NRW may be required for any works close to the river. A method statement should also be prepared and agreed with the Local Planning Authority to minimise impacts on the river during the works.

4.1.2 Trees

The line of Leyland cypress trees on the north-west boundary are to be removed and the yew on the eastern boundary will be subject to a crown works. The remaining trees will be retained.

Construction impacts

Site clearance and setting out may involve the direct loss of trees on site as an ecological resource, or may result in damage to any trees which are to be retained.

Mitigation

A BS5837 arboricultural survey should be undertaken to catalogue the location and species of the trees on site. Root protection areas (RPAs) should be established and implemented around the trees which are to be retained. These areas should be adequately protected by appropriately designed protective barriers and ground protection throughout the entire development process.

Compensation

If any native trees are to be removed, they should be replaced accordingly as part of a detailed landscaping scheme, with only native species to be planted.



Operational impacts

No operational impacts are envisaged.

4.2 Species

4.2.1 Bats

The buildings on site have low potential to support roosting bats. The trees to be removed do not contain any features suitable for bats.

Construction impacts

If bats are roosting within the buildings during the re-roofing works, they are at risk of direct harm and disturbance and the roosts will be lost permanently.

Mitigation

A bat presence / absence survey should be undertaken of the buildings on site by an appropriately licenced ecologist during the bat survey season, May to September inclusive. The survey results will need to be submitted as part of the planning application, and will inform further mitigation or compensation measures, if required. It should be noted that these further measures may include an application for a European Protected Species (EPS) mitigation licence from Natural Resources Wales (NRW).

Operational impacts

To be assessed following the further surveys.

When planning external lighting, consideration is to be given to the commuting and dispersal routes used by bats. External lighting is to be directed away from the tree lines and river. See Appendix 5 – External lighting guidance for further information.

4.2.2 Birds

The trees and scrub at the site boundaries could support breeding birds in the summer.

Construction impacts

Vegetation and tree removal could result in the direct loss of nests, any individuals within the nests and of available nesting territories if conducted during the breeding season.

Mitigation

Vegetation and tree removal should be carried out outside of the breeding bird season, which runs from March to August inclusive. If this is not possible, a targeted breeding bird nest scoping survey should be conducted prior to the start on site or an ecological clerk of works appointed.

Compensation

Consideration should be given to providing replacement habitat for foraging and nesting birds. Bird boxes that could be affixed to mature trees within the site include:

- Schwegler 1B nest box (28mm or 32mm entrance hole)
- Schwegler 2H open fronted nest box
- Schwegler 1MR Avianex

Correct siting of bird boxes should be conducted with the aid of the project ecologist.

Operational impacts

Inappropriate management of the habitats on site could degrade them and render them unsuitable for wildlife.

Mitigation

It is important to implement good horticultural practice in any landscaping scheme, including the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) should be discouraged to prevent fatal effects on the food chain. Any pesticides used should be non-residual.

Excessive removal or pruning of trees should be avoided to maximise the growth and plant matter available to wildlife. Pruning should be left until late winter to leave seeds and berries for wintering wildlife and to ensure no impact on breeding and nesting birds.

4.2.3 Otter

Otters are known to be present in the River Dee. However, at the time of the survey no evidence of otter were found on the embankment in the proposed development. Due to a small residual risk of otters, works on site should still be completed under reasonable avoidance measures to ensure otters are not negatively impacted.

Construction impacts

Potential impacts include direct harm, injury and / or death to individuals.

Mitigation

The following RAMs should be implemented on site during the construction phase of the development:

- Prior to the proposed works on the river bank, a walkover otter survey should be carried out to assess whether there are any holts, couches or resting places on the bank.
- If any holts, couches or resting places are found, these should be left undisturbed and a 30m buffer established around the location. All buffer zones will be fenced off. No access or works will be allowed within the buffer zone.
- If breeding is found, works will be suspended until the cubs are mobile, for up to 10 weeks.
- During night construction, lighting must be directed away from the river banks



- If otters are seen during construction, work close to the river bank should be stopped immediately and an experienced UES ecologist contacted.

Operational impacts

None.



5 CONCLUSION

The proposed development site has an area of approximately 0.15ha and comprises the Grade II Boat Inn buildings, rear yard and outdoor seating area. The southern boundary lies on the Afon Dyfrdwy /River Dee SSSI embankment.

The preliminary ecological appraisal has highlighted potential issues with the following ecological receptors on or adjacent to site: the River Dee, trees, breeding birds, bats and otter. Provided these issues are addressed in accordance with the recommendations detailed in this report, the development may proceed without adversely impacting the aforementioned ecological receptors.

The development also presents an opportunity to enhance the habitats available to wildlife on site. The provisioning of bat and bird nest boxes on site will provide improved roosting and nesting opportunities into the long-term future of the site.



6 REFERENCES

CIEEM (2013). *Guidelines for Preliminary Ecological Appraisal*.

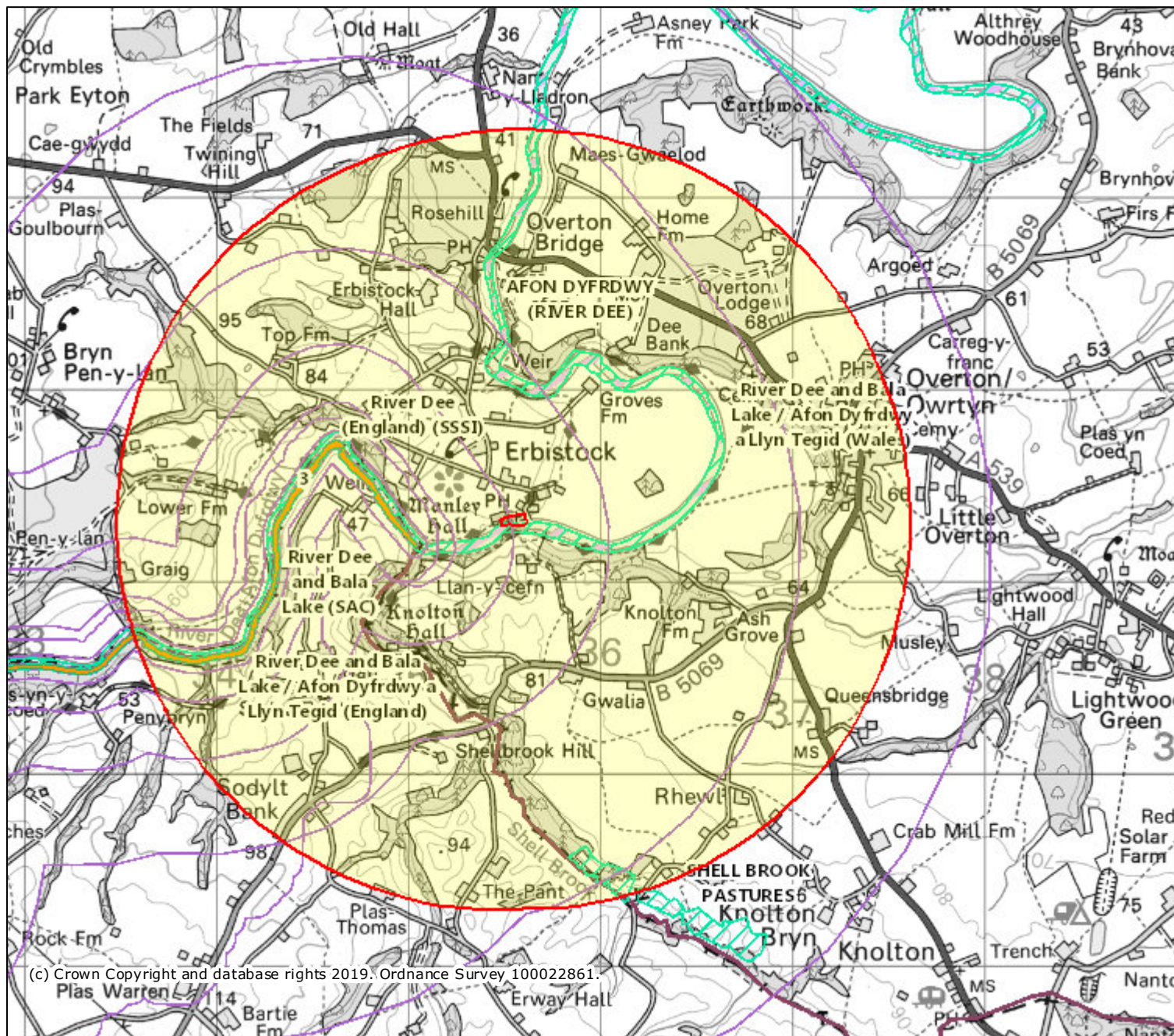
DEFRA (2016). *MAGIC* [online]. Available at: <http://magic.defra.gov.uk/>.

JNCC (2010). *Handbook for Phase 1 habitat survey: A technique for environmental audit*.



APPENDICES

Appendix 1 – Desk study



Legend

- | | | | |
|---|-------------------------------------|--|---|
| | Limestone Pavement Orders (England) | | SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England) |
| | Local Nature Reserves (England) | | Sites of Special Scientific Interest (Scotland) |
| | Moorland Line (England) | | Sites of Special Scientific Interest (Wales) |
| | National Nature Reserves (England) | | Special Areas of Conservation (England) |
| | National Nature Reserves (Scotland) | | Possible Special Areas of Conservation (England) |
| | National Nature Reserves (Wales) | | Special Areas of Conservation (Scotland) |
| | National Parks (England) | | Special Areas of Conservation (Wales) |
| | Ramsar Sites (England) | | Special Protection Areas (England) |
| | Proposed Ramsar Sites (England) | | Potential Special Protection Areas (England) |
| | Ramsar Sites (Scotland) | | Special Protection Areas (Scotland) |
| | Ramsar Sites (Wales) | | Special Protection Areas (Wales) |
| Sites of Special Scientific Interest Units (England) | | | Biosphere Reserves (England) |
| | Favourable Condition | | Biosphere Reserves (Scotland) |
| | Unfavourable Recovering | | Biosphere Reserves (Wales) |
| | Unfavourable no change | | |
| | Unfavourable Declining | | |
| | Part Destroyed | | |
| | Destroyed | | |

Projection = OSGB36

```
xmin = 330400
```

```

xmin = 338700
ymin = 338800

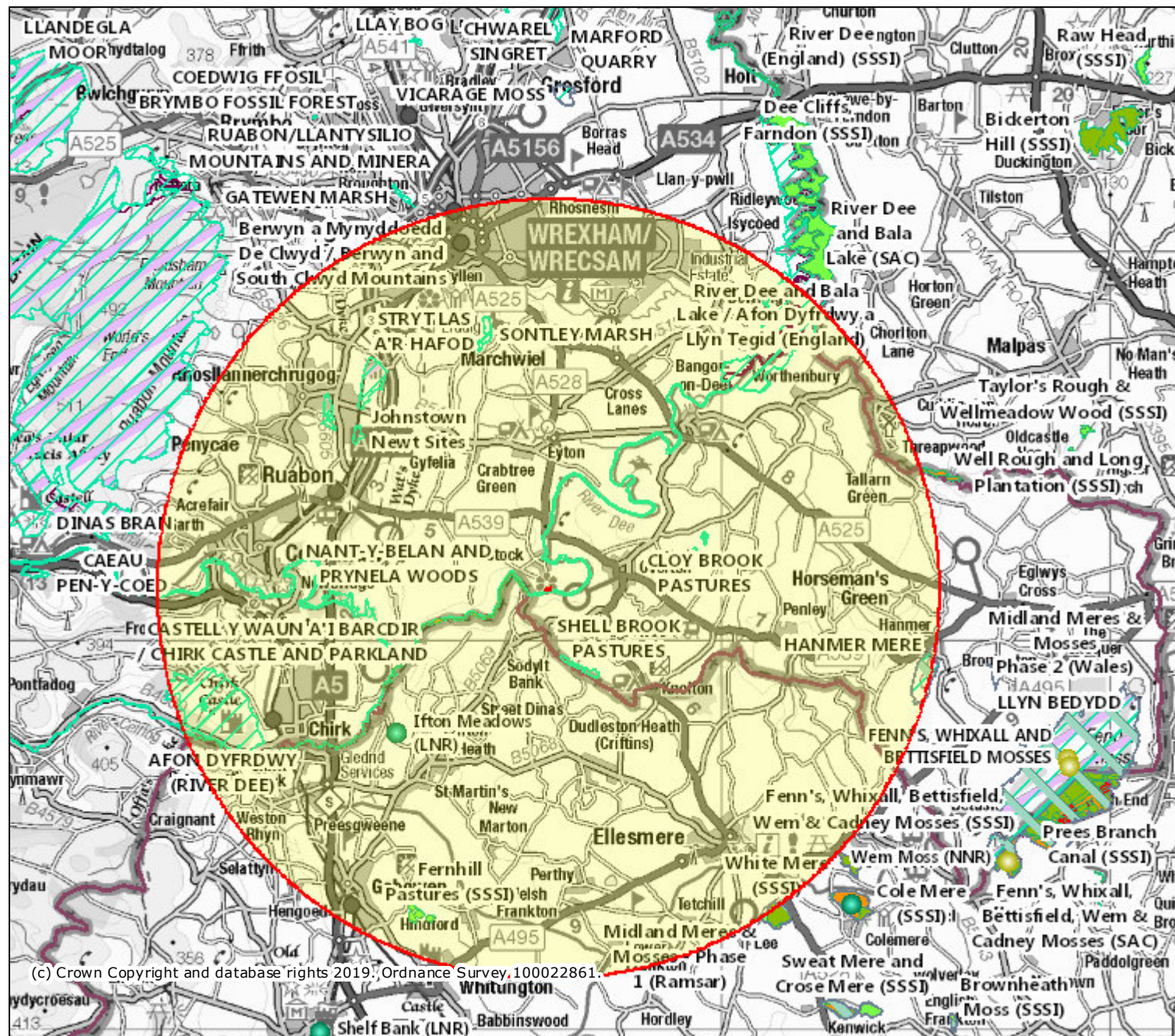
```

```
xmax = 341500
```

```
xmax = 541500
ymax = 343800
```

Map produced by MAGIC on 5 February, 2019.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



Legend

- | | |
|--|--|
| Areas of Outstanding Natural Beauty (England) | Destroyed |
| Limestone Pavement Orders (England) | Not Assessed |
| Local Nature Reserves (England) - points | Sites of Special Scientific Interest (England) |
| Moorland Line (England) | Sites of Special Scientific Interest (Scotland) |
| National Nature Reserves (England) - points | Sites of Special Scientific Interest (Wales) |
| National Nature Reserves (Scotland) - points | Special Areas of Conservation (England) |
| National Nature Reserves (Wales) - points | Possible Special Areas of Conservation (England) |
| National Parks (England) | Special Areas of Conservation (Scotland) |
| Ramsar Sites (England) | Special Areas of Conservation (Wales) |
| Proposed Ramsar Sites (England) | Special Protection Areas (England) |
| Ramsar Sites (Scotland) | Potential Special Protection Areas (England) |
| Ramsar Sites (Wales) | Special Protection Areas (Scotland) |
| Sites of Special Scientific Interest Units (England) | Special Protection Areas (Wales) |
| Favourable Condition | Biosphere Reserves (England) |
| Unfavourable Recovering | Biosphere Reserves (Scotland) |
| Unfavourable no change | Biosphere Reserves (Wales) |
| Unfavourable Declining | |
| Part Destroyed | |

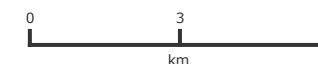
Projection = OSGB36

xmin = 309400

ymin = 330800

xmax = 364100

ymax = 355200



Map produced by MAGiC on 5 February, 2019.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



Appendix 2 – Phase 1 habitat plan

Target note 1 – Proposed area for ferry dock

PRELIMINARY ECOLOGICAL APPRAISAL

Site: The Boat Inn, Wrexham
NGR: SJ 335505 341321

Author: Suzie Whitnall
Date: 06/03/2019



KEY:



A2.1 Continuous scrub



A3.3 Scattered mixed trees



G2 Running water - River Dee



J1.2 Amenity grassland



J2.5 Wall



J3.6 Buildings



J5 Hardstanding



- Site boundary



- Target note

The Boat (PH)

Ap

Tb

Cuxl

Qr

Fe

TN1

A



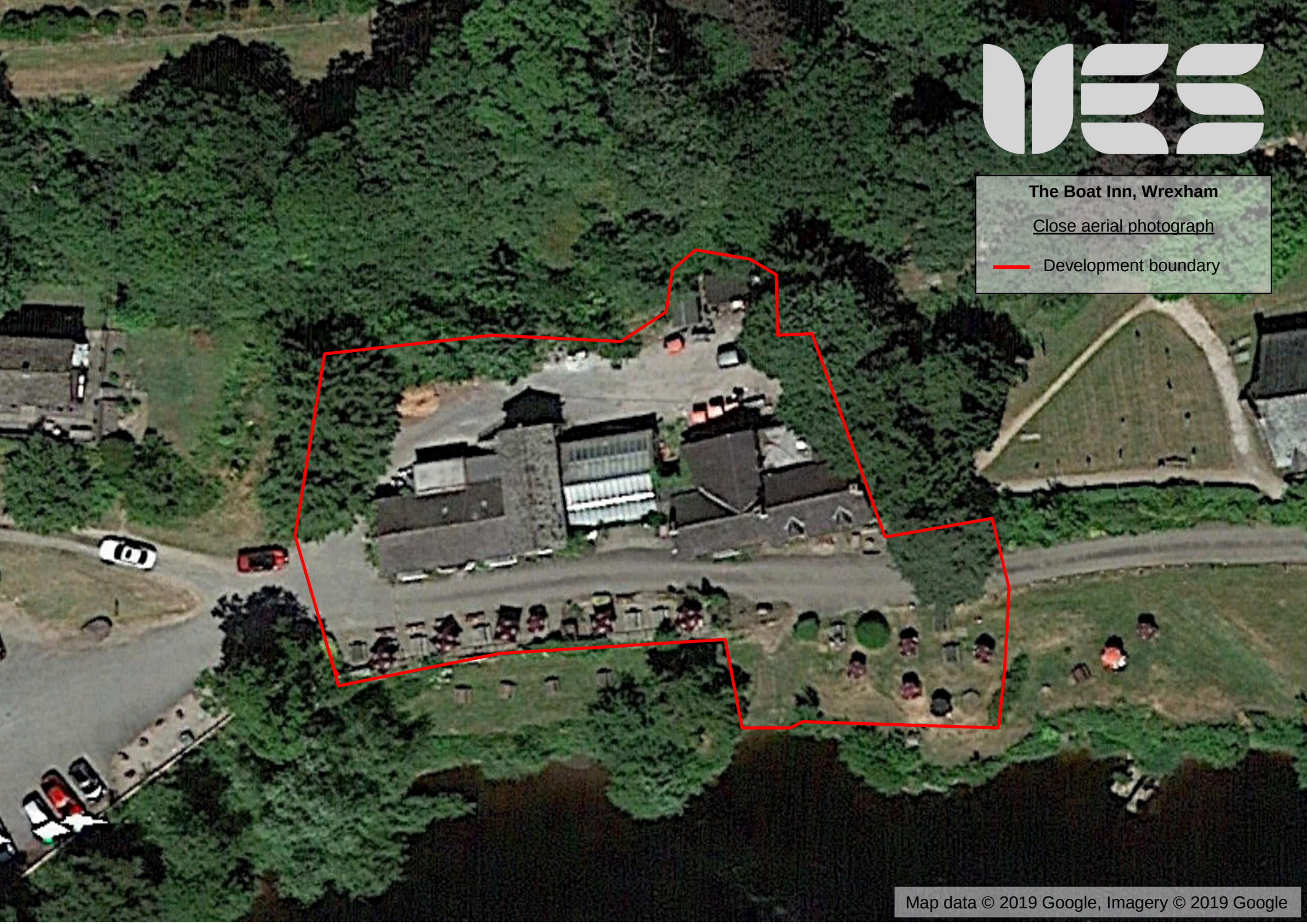
Appendix 3 – Aerial photographs



The Boat Inn, Wrexham

Close aerial photograph

— Development boundary





The Boat Inn, Wrexham

Wide aerial photograph



Site location



Appendix 4 – Photographs



Photo 1. The Boat Inn – Grade II listed building.



Photo 2. Driveway and outdoor seating area at the southern boundary of the site.



Photo 3. Embankment of the River Dee on the southern boundary of the site.



Photo 4. Former ferry dock on the river embankment.



Photo 5. River Dee on the southern boundary of the site.



Photo 6. Rear (north) of the Boat Inn.



Photo 7. Rocky outcrop with scrub on the northern boundary.



Photo 8. Line of Leyland cypress trees to be removed.



Appendix 5 - External lighting guidance

Lighting scheme in relation to bats

The two most important features of street and security lighting with respect to bats are:

1. The UV component. Low or zero UV installations are preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.
2. Restriction of the area illuminated. Lighting must be shielded to maintain dark areas, particularly above lighting installations, and in many cases, land adjacent to the areas illuminated. The aim is to maintain dark commuting corridors for foraging and commuting bats. Bats avoid well lit areas, and these create barriers for flying bats between roosting and feeding areas.

UV characteristics:

Low

- Low pressure Sodium Lamps (SOX) emit a minimal UV component.
- High pressure Sodium Lamps (SON) emit a small UV component.
- White SON, though low in UV, emit more than regular SON.

High

- Metal Halide lamps emit more UV than SON lamps, but less than Mercury lamps
- Mercury lamps (MBF) emit a high UV component.
- Tungsten Halogen, if unfiltered, emit a high UV component
- Compact Fluorescent (CFL), if unfiltered, emit a high UV component.
- Variable
- Light Emitting Diodes (LEDs) have a range of UV outputs. Variants are available with low or minimal UV output.
- Glass glazing and UV filtering lenses are recommended to reduce UV output.

Street lighting

- Low-pressure sodium or high-pressure sodium must be used instead of mercury or metal halide lamps. LEDs must be specified as low UV. Tungsten halogen and CFL sources must have appropriate UV filtering to reduce UV to low levels.
- Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each lamp to direct light and contain spillage. Light leakage into hedgerows and trees must be avoided.
- If possible, the times during which the lighting is on overnight must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to reduce the amount of 'lit time' and provide dark periods.

Security and domestic external lighting

The above recommendations concerning UV output and direction apply. In addition:

- Lighting should illuminate only ground floor areas. Light should not leak upwards to illuminate first floor and higher levels.
- Lamps of greater than 2000 lumens (150 W) must not be used.
- Movement or similar sensors must be used. They must be carefully installed and aimed, to reduce the amount of time a light is on each night.
- Light must illuminate only the immediate area required, by using as sharp a downward angle as possible. Light must not be directed at or close to bat roost access points or flight paths from the roost. A shield or hood can be used to control or restrict the area to be lit.
- Wide angle illumination must be avoided as this will be more disturbing to foraging and commuting bats as well as people and other wildlife.
- Lighting must not illuminate any bat bricks and boxes placed on buildings, trees or other nearby locations.



Appendix 6 – Planning and statutory context

STATUTORY AND PLANNING CONTEXT

Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of the legislative protection that is relevant to the findings of this report.

Habitats

Section 7 of the Environment Act (Wales) places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists, and encourage others to take such steps.

Amphibians

Great crested newts

Great crested newts (GCN) *Triturus cristatus* and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture GCN
- Deliberately, intentionally or recklessly disturb GCN in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of GCN
- Damage or destroy breeding sites or resting places of GCN
- Intentionally or recklessly disturb sheltering GCN, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead GCN, any part of GCN or anything derived from GCN

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

GCN are also protected by the Protection of Animals Act 1911, which prohibits cruelty and mistreatment. Releasing a GCN in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960.

In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare. GCN are also listed under Section 7 of the Environment (Wales) Act 2016.

It is important to identify the presence of GCN individuals and also to identify suitable habitat on sites so that legal obligations regarding this species can be observed. If a survey identifies the presence of GCN on the site, an assessment of the population size class is required. This can then inform a mitigation scheme, which would need to be developed in liaison with the local Natural Resources Wales (NRW) team, and which minimises direct threats to newts and compensates for any loss of habitat. A licence issued by NRW is required for the legal implementation of a mitigation scheme.

An NRW mitigation licence application requires a Mitigation Method Statement and a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

Other amphibians

More common British amphibians, such as common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *Triturus helveticus* are protected only by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

The above named species are also listed as UK Species of Conservation Concern. Due to general declines in most British amphibian species in recent years, many local authorities require amphibian surveys as a planning condition, or as part of environmental information submitted as part of a planning application, even where the presence of GCN is ruled out.

Natterjack toad *Bufo calamita* and pool frog *Pelophylax lessonae* are also offered the same level of protection as GCN, through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017.

Natterjack and common toad are also listed under Section 7 of the Environment (Wales) Act 2016.

Water bodies that support all five (more common) species of British amphibians in high numbers, may be afforded protection in local plans, as Sites of Importance for Nature Conservation (SINC), or a similar equivalent, for sites of local importance. A site may require statutory protection as a Site of Special Scientific Interest (SSSI).

Reptiles

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure any of the species listed above
- Sell, offer, advertise or transport for sale a live or dead animal of the species listed above

If a proposed development is likely to have an impact on these reptiles the local statutory nature conservation organisation must be consulted.

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* receive full protection under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017. Read together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture any sand lizards or smooth snakes
- Deliberately, intentionally or recklessly disturb sand lizards or smooth snakes in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of such an animal
- Damage or destroy breeding sites or resting places of such animals
- Intentionally or recklessly disturb sheltering sand lizards or smooth snakes, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead sand lizards or smooth snakes, any part of such an animal or anything derived from such an animal

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

All reptile species (except for smooth snake) are also listed under Section 7 of the Environment (Wales) Act 2016.

Badger

European badgers *Meles meles* and their habitat are protected under The Protection of Badgers Act 1992 and are also included on Schedule 6 of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention. The legislation affords badgers protection against deliberate harm or injury making it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger (or attempt to do so)
- To interfere with a sett by damaging or destroying it
- To obstruct access to, or entrance of, a badger sett
- To disturb a badger whilst it is occupying a sett

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Works that disturb badgers whilst they are occupying a sett are illegal without a licence. Disturbance can occur even without direct interference or damage to the sett in question. In general, the following activities are likely to require a licence:

- Use of heavy machinery or significant earth moving within 30m of a sett
- Use of lighter machinery (usually any wheeled vehicles) within 20m of a sett
- Any digging, chain saw use or scrub clearance within 10m of a sett

Hazel dormouse

Hazel dormice *Muscardinus avellanarius* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture dormice
- Deliberately, intentionally or recklessly disturb dormice in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of dormice
- Intentionally or recklessly disturb sheltering dormice, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead dormouse, any part of a dormouse or anything derived from a dormouse

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Dormice are also listed under Section 7 of the Environment (Wales) Act 2016.

Bats

In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (known as the “Habitats Regulations”). The Wildlife and Countryside Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] ... uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by NRW.

The Environment (Wales) Act 2016 also lists the following bat species as species of principle importance under Section 7:

- Barbastelle *Barbastella barbastellus*

- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*

Birds

All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The Environment (Wales) Act 2016 offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

Trees

Trees may be protected on an individual or group level through a Tree Preservation Order (TPO). In order to carry out works to trees with a TPO, prior written consent must be obtained from the Local Planning Authority. Trees may also be protected through a condition of planning consent or designated conservation areas.

Hedgerows

The Hedgerow Regulations are made under Section 97 of the Environment Act 1995 and came into operation on 1st of June 1997. They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to the Local Planning Authority.

A hedgerow can only be considered for classification as "important" if it, or the hedgerow of which the section belongs to is over 20m in length (or which meets a hedgerow at either end) and has existed for 30 years or more.

Plants

Schedule 8 of the Wildlife & Countryside Act 1981 (as amended) lists a number of plant species which are protected under Section 13 of the same legislation. As such, it is an offence to:

- Intentionally or recklessly pick, uproot or destroy a plant, or any seeds or spores attached to it, which is listed on Schedule 8
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead wild plant on Schedule 8, any part of the plant or anything derived from the plant

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

The Conservation of Habitats and Species Regulations 2017 extends European legislative protection to a further subset of plants. It is therefore an offence to pick, collect, cut, uproot, destroy or trade any plant listed in Schedule 4 of these Regulations, unless the appropriate licence is first obtained.

A large number of species of vascular plants, lichens, algae, fungi, mosses, stoneworts and liverworts are also protected through planning policy as species of principal importance, as required under Section 7 of the Environment Act (Wales) 2016.

Invasive Plant Species

A number of non-native, invasive plant species, such as Japanese knotweed and giant hogweed, are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Section 14 of the Act makes it an offence to plant or to otherwise cause to grow in the wild any of these listed species. These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

Japanese knotweed has an extensive root system and new plants can regenerate rapidly from the smallest fragments of rhizomes. Material containing this species is classed as “controlled waste” under the Environmental Protection Act (Duty of Care) Regulations 1991. The disposal of such waste requires all involved parties to follow a strict code of practice and maintain adequate records regarding their conduct.

Otter

European otter *Lutra lutra* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture otters
- Deliberately, intentionally or recklessly disturb otters in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of otters
- Intentionally or recklessly disturb sheltering otters, or obstruct access to their resting place

- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead otter, any part of an otter or anything derived from otter

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Otters are also listed under Section 7 of the Environment (Wales) Act 2016.

Water vole

Water voles *Arvicola amphibius* are protected by the provisions of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take water vole
- Possess or control live or dead water vole or any part of a water vole
- Intentionally or recklessly damage destroy or obstruct access to any structure or place which a water vole uses for shelter or protection, or disturb water vole using such a place
- Sell, offer, advertise or transport live or dead water voles for sale

Licences are available from NRW to allow activities that would otherwise be an offence, including:

- Scientific or educational purposes
- For the purposes of ringing or marking
- Conserving wild animals or introducing them into particular areas
- Preserving public health or public safety
- Preventing the spread of disease
- Preventing serious damage to any form of property or to fisheries

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Water voles are also listed under Section 7 of the Environment (Wales) Act 2016.

White-clawed crayfish

White-clawed crayfish *Austropotamobius pallipes* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure white-clawed crayfish
- Sell, offer, advertise or transport for sale a live or dead white-clawed crayfish

If a proposed development is likely to have an impact on white-clawed crayfish then the local statutory nature conservation organisation must be consulted.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Their inclusion on the EC Habitats Directive allows areas to be designated as Special Areas of Conservation (SAC) for the presence of white-clawed crayfish. Such a designation brings

legal protection under the Conservation of Habitats Regulations 2017, this includes how the site is managed and what development can occur on and in proximity to these sites.

White-clawed crayfish are also listed under Section 7 of the Environment (Wales) Act 2016.

Planning Policy

National planning guidance is issued in the form of Planning Policy Wales (PPW - 2016). The most relevant sections are included in Chapter 5: Conserving and Improving Natural Heritage and the Coast. This chapter details the policies on issues such as the protection of trees, woodlands, species, and designated sites. The document is free and available to view online.