



Bringing Together Over 20 Years of
Ecological Excellence

Tyrer Ecological Consultants Ltd, Formby Business Centre, 42 Duke Street, Formby, L37 4AT

Preliminary Ecological Appraisal

March 2021

No 35 Moreton Inn
Ruabon Road
Wrexham
LL14 6PD

National Grid Reference: SJ30174548



No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD
Preliminary Ecological Appraisal

Document Title	Preliminary Ecological Appraisal
Prepared for	Blueprint Architectural Ltd
Prepared by	Tyrer Ecological Consultants Ltd

Authors	Jonathan Pescod
Surveyor	Jonathan Pescod
Survey Date	11/02/2021
Reviewed by	Kylee Wilding
Review Date	11/03/2021
Approved by	Kylee Wilding
Date of Issue	11/03/2021

Terms of use:

This report has been prepared by Tyrer Ecological Consultants Ltd with all reasonable skill, care and diligence within the terms of the instruction and permissions granted by the client. The results, conclusions and recommendations of this report are proportionate and in line with the British Standard 42020:2013.

Tyrer Ecological Consultants Ltd have produced this report with all due integrity and adhere to the CIEEM Professional Code of Conduct, with the aim of upholding their objectives and the reputation of the profession.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client.

This report and contents therein are to be used only in conjunction with the Planning Application for which the report has been produced. It must not be used for any other purpose, copied, re-produced or sent to any other party other than the Local Planning Authority Department without the express permission of Tyrer Ecological Consultants Ltd. Furthermore the data contained herein must not be copied, re-produced or sent to any other party/organisation whatsoever without the express permission of Tyrer Ecological Consultants Ltd.

Tyrer Ecological Consultants Ltd will however allow forwarding data that is collected as part of its reports to the relevant wildlife records centre.

Executive Summary

As part of a proposed planning application regarding the former Moreton Inn located off the Ruabon Road, Wrexham; a Preliminary Ecological Appraisal (PEA) was undertaken by Tyrer Ecological Consultants Ltd during February 2021, in accordance with the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and other best practice guidance. It is understood that proposals entail demolition of the existing former public house (B1) and outhouse (B2) along with clearance of the site, to allow for subsequent redevelopment into 9 new dwellings with associated landscaping. This report was commissioned by Blueprint Architectural Ltd.

As part of the ecological appraisal process habitats on site have been identified using Phase 1 Habitat categories from the Joint Nature Conservation Committee Phase 1 Habitat Methodology standards (JNCC, 2010). Two buildings and three trees present within the site boundary were assessed for their suitability to host roosting bats.

Extensive findings, conclusions and recommendations are presented throughout the report; however, the reader should be aware of the following Key recommendations.

Bats: Both buildings (B1-2, see Figure 1.1) have been identified to possess moderate roost suitability for bats on the basis of identified potential roost features. *Further nocturnal surveys are recommended in order to determine if/how bats are using the buildings. These surveys may be followed by the requirement for a Natural Resources Wales European Protected Species Mitigation Licence (EPSML), or precautionary method statement, dependent upon the outcome (see section 8.4).*

Breeding Birds: The site contains nesting platforms suitable for use by birds, namely the buildings, hedgerow, trees, and scrubby habitat. *This hedgerow should be retained, however if any vegetation clearance is carried out it is recommended to occur outside of the breeding bird season of March-August in order to avoid potential disturbance to birds, unless it can be demonstrated by a suitably qualified professional ecologist that birds are absent beforehand.*

Other Terrestrial Mammals: The site can broadly be considered of commuting, foraging and hibernating value to European Hedgehogs subject to their presence in the area. *It is recommended that a Method Statement including details of Reasonable Avoidance Measures is created by a suitably qualified Ecologist/Ecological Clerk of Works to avoid risk of harm to this species.*

Herptiles: Whilst there are limited areas of suitable terrestrial habitat for Great Crested Newts (GCN) and other amphibians on the site, there is poor connectivity between the site and any ponds in the wider area. *Therefore, as a precautionary measure, these species and especially GCN should be included within the Reasonable Avoidance Methods Statement (RAMS) described above which should be strictly adhered to from commencement to completion of the proposed works to ensure no risk to GCN/other amphibians ensues.*

Biodiversity Enhancement: A series of recommendations have been given within section 8.0 and Appendix III which provide opportunities for biological enhancement at the development site and within the wider area. Enhancement opportunities include recommendations relative to the provision of favourable planting and landscaping, with wildlife boxes.

Table of Contents

- 1.0** Introduction & Scope
- 2.0** Legislation & Policy
- 3.0** Priority Habitats & Species
- 4.0** Survey Methods
- 5.0** Limitations
- 6.0** Desk Study Results
- 7.0** Field Study Results
 - 7.1. Habitat Survey
 - 7.2. Vegetation
 - 7.3. Bats
 - 7.4. Breeding Birds
 - 7.5. Other Terrestrial Mammals
 - 7.6. Herptiles
- 8.0** Conclusions & Recommendations
- 9.0** Bibliography

Appendix I: Site Photographs

Appendix II: Botanical Species List

Appendix III: Biodiversity Enhancement: Recommendations

Appendix IV: Phase 1 Habitat Map

1.0 Introduction & Objectives

- 1.1 As part of a proposed planning application regarding the former Moreton Inn located off the Ruabon Road, Wrexham, (see Figure 1.1); a Preliminary Ecological Appraisal (PEA) was undertaken by Tyrer Ecological Consultants Ltd during February 2021, in accordance with the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and other best practice guidance. It is understood that proposals entail demolition of the existing former public house (B1) and outhouse (B2) along with clearance of the site, to allow for subsequent redevelopment into 9 new dwellings with associated landscaping.
- 1.2 Ecological surveys, particularly where a specially protected / noteworthy species is or may be present, are generally required as part of the Local Authority's Planning Policies. This survey and report was commissioned by Blueprint Architectural Ltd.

Aims & Objectives

- 1.3 The aim of the survey was to ascertain the nature of the land, and where possible obtain information on any priority wildlife habitats, or species, that may be present and if so determine if they will be affected by the proposals. The survey therefore includes the following objectives:
- Gather baseline ecological information on site/off site (as necessary),
 - Identify any likely ecological constraints associated with the proposals for the site (i.e. the presence of protected/priority habitats or species that exist within the confines of the application boundary, or zone of influence (ZOI),
 - Identify mitigation / compensation measures likely to be required in line with the mitigation hierarchy (i.e. avoidance > impact minimisation > mitigation > compensation),
 - Identify additional survey requirements following on from this preliminary appraisal,
 - Identify a series of enhancement opportunities for biodiversity in line with national and local planning policy following '*Biodiversity Net Gain: Good practice principles for development*' (CIEEM *et. al.*, 2019).
- 1.4 As part of this ecological appraisal:
- Habitats on site have been identified and mapped using the '*Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Handbook*' (JNCC, 2010), and
 - Two buildings on site were assessed for their suitability to host roosting bats.
- 1.5 As part of the Local Planning Authorities (LPA) planning policies and obligations to the Planning Framework, ecological surveys are generally required prior to planning permission being granted, particularly where protected/priority species are, or may be present, that could be affected by the proposals for which the application seeks consent.
- 1.6 This report will therefore provide baseline information as derived from the diurnal appraisal process outlined above and recommend any necessary additional surveys, or work, where applicable, to provide a conclusive ecological impact assessment.

- 1.7 The Applicant should be aware that if during the appraisal:
- The application site/area was found to be suitable for any European Protected Species (EPS), otherwise protected, or priority habitats/species, or,
 - Signs of use by particular protected species were found, or suspected, or,
 - Seasonal constraints significantly limit the gathering of ecological information to arrive at an accurate conclusion on which the planning application can proceed,
- Then more detailed surveys may be recommended where necessary, to allow the ecologist to arrive at a conclusive impact assessment.
- 1.8 If any protected species was subsequently found during detailed further surveys and / or may be affected by the development proposals, then a European Protected Species Mitigation Licence (EPSML) may be required to proceed with the development.
- 1.9 Where more detailed surveys are recommended by the ecologist, following ecological appraisal, then Local Planning Authorities (LPA's) on the advice of their ecological advisors, may not grant permission until such time that all relevant material information is gathered in accordance with their obligations to the legislature.
- 1.10 Protected/priority species omitted from this report have been discounted due to factors including obvious absence/isolation of suitable habitats, and/or distributional aspects negating the necessity to survey for them, and/or the proposed works were not considered to negatively impact the species or encroach on areas where the species may be present.

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD
Preliminary Ecological Appraisal



Figure 1.1: Existing location plan (top) with the former Moreton inn (B1) and outbuilding (B2) indicated, and proposed site plan (bottom) (©Blueprint Architectural Ltd).

2.0 Legislation & Policy

2.1 The legislature considered for the purposes of this report includes the following:

- Conservation of Habitats and Species Regulations (amendment) (2019) (EU Exit)
- Wildlife and Countryside Act (1981) (as amended)
- Countryside Rights of Way (CRoW) Act (2000)
- Natural Environment and Rural Communities (NERC) Act 2006
- The Environment (Wales) Act (2016)

2.2 These acts entail relevance to both protected and invasive species. The degree of protection offered to taxa provided within existing UK and EU legislature often varies depending on species/group, for example, some species may purely be protected during one of its life stages (e.g. common species of breeding bird whilst nesting/with eggs/young); some species may receive full protection within the EU (e.g. otter), whereas others may be protected solely on a national basis (e.g. grass snake).

2.3 Table 2.1 contains appropriate legislature to each species/group specifically respective to the site, and provides the relevance of said legislation.

Table 2.1 - Relevant Legislation

Species Group/Species	Relevant Legislation	Level of Protection
Bats	CRoW Act (2000) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579) Wildlife and Countryside Act (1981) (as amended) Environment (Wales) Act (2016)	All British bats and their roosts are afforded full protection from damage/destruction and bats may not be injured/killed/taken at any stage. Bats are also protected from reckless disturbance; once identified, roosts are protected whether the bat is in occupation or not.
Birds (Breeding)	CRoW Act (2000) Wildlife and Countryside Act (1981) (as amended) Environment (Wales) Act (2016)	All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected.

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD
Preliminary Ecological Appraisal

Great Crested Newt (GCN)	CRoW Act (2000) Conservation of Habitats and Species Regulations (2019) (EU Exit) Wildlife and Countryside Act (1981) (as amended) Environment (Wales) Act (2016)	Great Crested Newts (GCN's) are fully protected from disturbance, killing, injuring or possession at any life stage. Confirmed breeding ponds and resting places are afforded the same protection.
Invasive Plant Species	Wildlife and Countryside Act (1981) (as amended)	Species listed within Schedule 9 Wildlife and Countryside Act (1981) (as amended) as invasive, including Japanese Knotweed (<i>Reynoutria japonica</i>) and Himalayan Balsam (<i>Impatiens glandulifera</i>). The Act makes it an offence for any person to grow or cause to grow in the wild any plants listed as invasive.
Reptiles	Conservation of Habitats and Species Regulations (2019) (EU Exit) - SL/SS Wildlife and Countryside Act (1981) (as amended) - SL/SS CRoW Act (2000) Environment (Wales) Act (2016)	All native reptile species have some degree of protection in the UK, through section 9(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). Sand lizard (SL) and smooth snake (SS) are species of principal importance however with greater protection(s).

Policy

- 2.4 Planning Policy Wales, 10th Edition (2018) is the Welsh Government's policy document and it describes the land use context for using land sustainably. The document supports every strategy published by the Welsh Government and it is supplemented by a variety of Technical Advice Notes (TAN's) and any circulars.
- 2.5 There are several plans, strategies and national, sub-regional and local policy statements which provide a framework for development in the Plan area. The Planning and Compulsory Purchase Act (2004) makes it a requirement for local planning authorities in Wales to prepare a Local Development Plan (LDP) for their areas.

Wrexham Borough Council prepared a plan, namely the 'Wrexham Unitary Development Plan (1996 – 2011)', which was formally adopted in February 2005 and supersedes any previous development plans for the area. A new plan, the 'Wrexham Local Development Plan 2 (2013 - 2028)', which will replace the current adopted plan, is currently under review. Until this new plan is adopted, the Wrexham Unitary Development Plan remains in effect.

- 2.6 Planning authorities must therefore follow a step-wise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse

environmental effects are firstly avoided, or minimized, or mitigated, and as a last resort compensated for; enhancement must be secured wherever possible.

- 2.7 The first priority for planning authorities is therefore to avoid damage to biodiversity and ecosystem functioning. Where there may be harmful environmental effects, planning authorities will need to be satisfied that any reasonable alternative sites that would result in less harm, no harm or pro-gain have been fully considered.
- 2.8 Planning authorities should ensure that features and elements of biodiversity value are retained on site, and enhanced or created where ever possible, by adopting best practice site design and green infrastructure principles. The provision of up to date ecological survey information will assist in this process. Where necessary, planning authorities should seek to modify the development proposal through discussion with the applicant at the earliest possible stage. Biodiversity and green infrastructure modifications should draw on the issues and opportunities identified in a preliminary assessment. In some circumstances, it will be appropriate to attach planning conditions, obligations or advisory notes to a permission, to secure biodiversity outcomes.
- 2.9 When all other options have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes, offsite compensation for unavoidable damage must be sought. This should normally take the form of habitat creation, or the provision of long-term management arrangements to enhance existing habitats and deliver a net benefit for biodiversity.

Where the adverse effect on the environment clearly outweighs other material considerations, the development should be refused.

- 2.10 The Environment (Wales) Act 2016 ("the Act") - requires local planning authorities to have regard to area statements in the development of Local Development Plans.

Part 1 of the Act promotes sustainable management of natural resources, and in Part 1 section 6 states:

"A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions."

- 2.11 All British bats and their ****roosts** are afforded protection under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2017. When dealing with cases where a European Protected Species (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the 2017 Regulations and therefore has a statutory duty to have due regard to the provisions of the Regulations in the exercise of its functions.
- 2.12 The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained.
- 2.13 Figure 2.2 below is a process model that surmises how ecological issues should be dealt with in the context of the planning process.

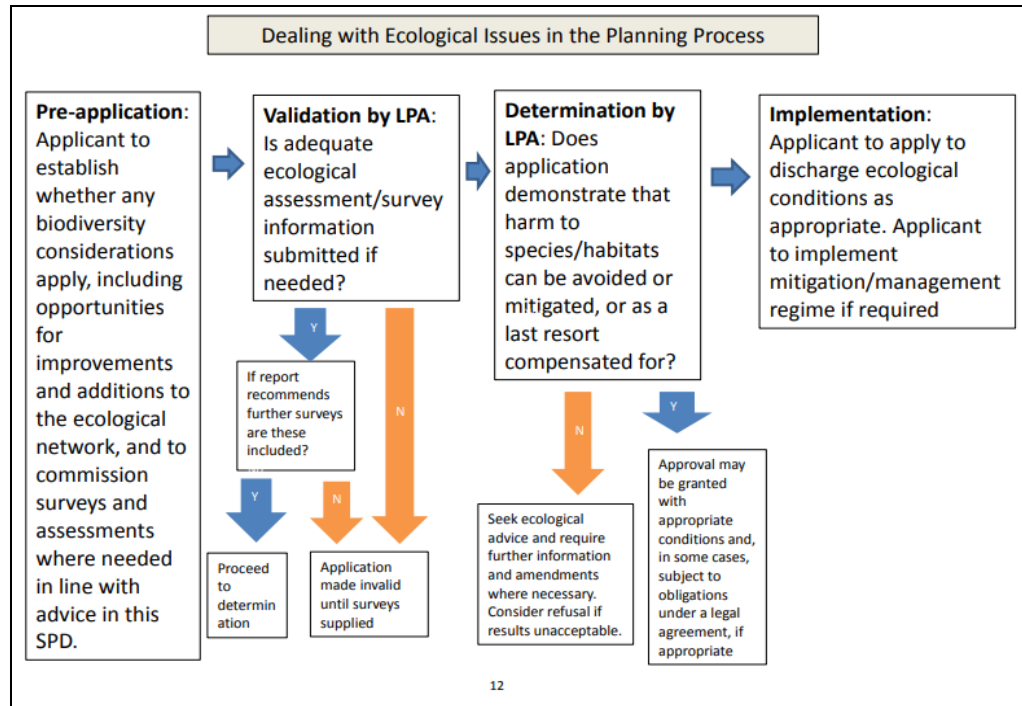


Figure 2.2 - Dealing with ecological issues in the planning process

3.0 Priority Habitats & Species

National context

- 3.1 In the United Kingdom, legal protection and otherwise legislative recognition is afforded to particular habitats and species. Certain habitats and species are considered to hold nature conservation importance and are thus protected due to factors such as their ecological functionality, their rarity, their vulnerability, environmental importance or declining population/status. They are referred to as priority habitats and priority species.
- 3.2 The UK Biodiversity Action Plan (UKBAP) provided a statutory basis for lists of habitats and species of national conservation importance - now transposed under section 7 of the Environment (Wales) Act 2016.
- 3.3 The following Priority habitats and species are considered relevant to the survey area:

Habitats:

- Hedgerows

Species:

- Brown long-eared (*Plecotus auritus*),
- Soprano Pipistrelle (*Pipistrellus pygmaeus*),
- Bird species that include: House Sparrow (*Passer domesticus*), Dunnock (*Prunella modularis*), Song Thrush (*Turdus philomelus*), Bullfinch (*Pyrrhula pyrrhula*),
- Great Crested Newt (GCN) (*Triturus cristatus*),
- Common toad (*Bufo bufo*),
- Flora that includes Purple ramping-fumitory (*Fumaria purpurea*)

District context

- 3.4 Local Biodiversity Action Plans (LBAP's) are a way of encouraging people to work together and deliver a programme of continuing action for biodiversity at a local level. LBAPs also embrace the idea of 'local distinctiveness'; habitats and species which are not considered UK conservation priorities can be catered for by LBAPs if they are of particular local significance.

LBAP's set out practical steps that aim to:

- Help protect biodiversity,
- Enhance and improve biodiversity where possible, and,
- Promote biodiversity at a local level

4.0 Survey Methods

- 4.1 As part of the Preliminary Ecological Appraisal report, a desk-top and field-based study was conducted. Methods for both components of the appraisal are given below.

Desktop Study

- 4.2 Prior to a site visit a desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations within 3.0km of the site boundary. To do so, the 'Multi Agency Geographic Information for the Countryside (MAGIC – provided by Defra)' was accessed to gather such information; this interactive mapping service was also used to locate any European Protected Species Mitigation Licenses (EPSML) and species records to further inform conclusions concerning protected species in the context of the study site and its proposed development.
- 4.3 Historic satellite imagery was reviewed using sources such as Google Earth (© 2020/21) to help establish past use of the land and determine the nature of adjoining and extending habitats; such information aids in the understanding of how the site might interact with its surroundings ecologically and its value in that context, and how the development may impact at a wider scale.
- 4.4 In addition the Council Planning Portal 'Search for planning applications' function was utilised to help inform the desktop study by analysis of existing publicly accessible ecological survey results that have been carried out locally within the previous five years.
- 4.5 A commercial data request to the Local Environment Records Centre serving the area has not been sourced during this preliminary appraisal assessment and is justified through application of the following recent guidance:

1) The Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK (CIEEM, 2020) states: "It is generally expected that a desk study, including a data search, will be a key part of the ecological surveys or reports produced to inform a planning application. **Freely available web-based sources of data and contextual information should always be used**; in some cases, it may be acceptable to not undertake a data search with the LERC or other relevant NSS or local interest groups, for example:

ii) Situations where the data search would be extremely unlikely to provide information needed to inform the assessment; due to the **scale** and **location** of the proposed development. The appropriateness of excluding a data search will need to be judged on a case-by-case basis as, in most situations, it will be essential to carry out such a search even if the development is very small or is likely to have a low impact. It can be very difficult to demonstrate that a data search would not have provided relevant information without obtaining and reviewing those data.

iii) In some cases for Preliminary Roost Assessments of buildings in low impact / small-scale scenarios, such as an extension to a residential property, loft conversions (full or partial), installation of Velux/dormer windows, single modern agricultural or similar building conversion or demolition; however, it should not be assumed that data searches are never required for such scenarios and this must be judged on a case by case basis and justified accordingly.

2) The Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) states: “Very occasionally it might be possible to carry out a robust PEA without obtaining LERC/NBDC/CEDaR data; this will usually only apply to **low impact or small-scale projects** (e.g. by virtue of size, extent, duration of works, magnitude and locality), and should be determined on a case-by-case basis.”

As exemptions as made **bold** above can be applied for the proposed development at the former Moreton Inn in good practice, it is considered unnecessary to conduct a commercial data request at this time, however, if a data search is considered to be necessary by the Local Authority or advisory body to better inform the appraisal, a proportionate data search should be commissioned with results interpreted into the conclusions and recommendations of a re-issued/updated report.

Field Survey

- 4.6 A daytime preliminary ecological appraisal was conducted on 11th February 2020 in bright, dry conditions (-2°C), wind 1/12 (Beaufort scale), 0% cloud by the following surveyor (Table 4.1).

Table 4.1 - Surveyor credentials

Name	Description of relevant credentials
Mr. Jonathan Pescod MRes (Junior Ecologist)	Three years professional consultant experience & training; accredited agent on the Natural Resources Wales bat licence of Mrs. K. Wilding (S086007/1); Qualifying CIEEM

Floristic assessment

- 4.7 The survey followed UK industry standard Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology standards (JNCC, 2010) with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Technical Guidance Series “Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM, 2017).

- 4.8 During the survey walkover, botanical assemblages were assessed and the land was inspected for the presence of red-listed (Stroh *et al*, 2014; Hodgetts, 2011), s.41 and LBAP species alongside specially protected species as listed under Schedule 8 of the Wildlife and Countryside Act (WCA) (1981) (as amended) and / or Schedule 5 The Conservation of Habitats and Species (amendment) (EU exit) Regulations (2019). Species nomenclature follows Stace, C. (2019) – definitive English names.
- 4.9 Additional to attributing ecological value to red-listed / BAP species, in accordance with existing CIEEM guidance, a geographic frame of reference is also adopted. Plant species and habitats may be recognised for their ecological notoriety on a geographical scale which is adopted on a site-to-site basis (see Figure 4.1 below).

For a site-relevant species list, see Appendix II.

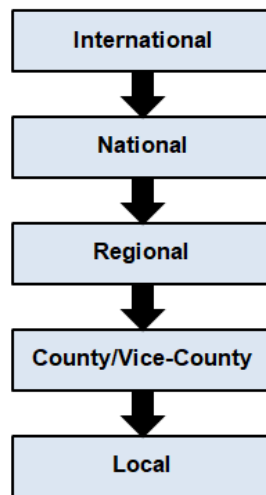


Figure 4.1 - Geographic Frame of Reference entailing degrees of conservation importance

- 4.10 In combination with assessing the area in relation to flora and habitats of conservation importance, the land was also assessed in relation to the presence of invasive non-native species (INNS) as listed under Schedule 9 (Part II) of the Wildlife and Countryside Act (1981) (as amended).

Faunal assessment

- 4.11 The identification and/or evidence of fauna encountered would be documented whilst in tandem the area was assessed for the potential to support the priority species covered in the previous tables. The 'walkover' also aimed to identify any ephemeral pools or unmapped waterbodies.

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD **Preliminary Ecological Appraisal**

Bats

- 4.12 The site would be assessed for bats, buildings (where present) would be inspected for potential places that may be of value to bats and to determine evidence of use. This typically involves a search for potential roost features (PRF) both internally (investigation of loft spaces/upper floors/internal elevations) as well as externally, comprising an investigation of features (roof material, building components) using a high powered torch. Field signs of bats typically comprise bat droppings, incidental animal presence, dead specimens and/or prey items. The surrounding habitat was also considered in terms of general suitability. Two buildings are present within the application site boundary.
- 4.13 Trees (where present) would be inspected for places that may be of value to bats and to determine if evidence of use was present; this typically involves a search for potential roost features along with an investigation of those features using a high powered torch or close focus binoculars. Potential roost features can include woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed lifted bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached Ivy with stem diameters in excess of 50mm or bat/bird boxes. Three mature trees are present within the application site boundary.
- 4.14 Criteria for preliminary bat roost assessment are based upon the determinants given in the Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016): (see Figure 4.2).

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation ^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

^a For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Figure 4.2 - Bat Conservation Trust (BCT) guidelines extract

4.15 Factors considered during the preliminary roost assessment include:

- Knowledge of bat species relevant to the site location and geographical range,
- Nature of the immediate / surrounding habitat in relation to foraging opportunities,
- Presence and conditions of loft spaces, upper floors, roof linings,
- Presence / absence of roost potential,
- Value of roost potential, if present.

Breeding Birds

4.16 Buildings, trees, hedges, and scrub (where present) would be checked for evidence of nesting birds and suitability for relevant species. Bird species observed and heard were recorded on site, and a search was made for nest material, or areas suitable for nesting. Additional to the site's capacity to support generally common species for breeding, the area was also subject to an assessment for the site's capacity to support species especially protected under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended), for example Barn Owl (*Tyto alba*) and other priority species.

Other terrestrial mammals

4.17 The walkover included a search for field signs of Badger (*Meles meles*) which includes signs of activity such as digging, setts, 'runs' leading to and from a sett and the existence of latrines or 'snuffle' holes where badgers have foraged in the ground.

GCN

4.18 During desktop assessment a 500m search was undertaken from a site-central grid reference in relation to the presence of ponds, ditches or other water bodies that may support Great Crested Newts (GCN). The information gathered would then be used to aid in establishing if more detailed surveys are required.

NB: *English Nature's (now Natural England) Great Crested Newt Mitigation Guidelines (2001) states ponds within 500m of a proposed development site should be considered for their potential to support GCN, however, in some instances this distance may be reduced to 250m due to the presence of physical barriers and obstructions, or based on the likely magnitude of impacts arising from the proposed development.*

Given the low impact nature and small scale of the development (less than 0.5 hectares) and following best practice, and taking into account the significant physical barriers to connectivity presented by the adjacent busy Ruabon Road and surrounding developments, a proportionate assessment of ponds within 250m from site has been applied; ponds outside of this range and associative flora/fauna are highly unlikely to be impacted.

4.19 No ponds were located within the site boundary or within a 250m buffer. Two ponds were located within the wider 500m buffer; the GCN Rapid Risk Assessment extracted from the Natural England 'Template for Method Statement' was therefore applied to the site to assess the risk of causing an offence in relation to this species.

4.20 The site and its surroundings were assessed for suitability for use by reptiles, with particular attention paid to features that could be used as basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of hardcore) and opportunities for foraging (e.g. rough grassland and scrub). Beebee & Griffiths (2000) state specific habitat preferences of common UK reptiles:

- Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to heaths, walls and pastures, as well as brownfield sites,
- Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land under refugia,
- Grass Snakes (*Natrix natrix*) have broadly similar requirements to Common Lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians.

In assessment of a site for reptiles important habitat characteristics are considered, outlined in Table 4.2, as derived from the Reptile Habitat Management Handbook (Edgar, 2010).

Table 4.2 - Important habitat characteristics for reptiles

1. Location (in respect of species range)	7. Connectivity to good quality habitat
2. Vegetation structure	8. Prey abundance
3. Insolation	9. Refuge opportunity
4. Aspect	10. Hibernation habitat potential
5. Topography	11. Disturbance regime
6. Surface geology	12. Egg-laying site potential

- 4.21 The results, conclusions and recommendations of this report are based on a number of factors i.e.
- Skills and experience of the surveyor,
 - Knowledge of flora and fauna relevant to the site location and geographical range,
 - Nature of the immediate and surrounding habitat in relation to shelter, foraging and commuting opportunities.
- 4.22 All aspects of the field survey were undertaken in line with the current government and CIEEM standing guidance during the COVID-19 'Coronavirus' pandemic.
- 4.23 The results, conclusions and recommendations of this report have been assessed by Mrs. K. Wilding, Director of Tyrer Ecological Consultants Ltd, and her assessment concurs with the findings and recommendations of Mr Pescod.

5.0 Limitations

- 5.1 This report does not contain a comprehensive list entailing the totality of botanical taxa on site. Species listed within Appendix II are recorded from a combination of the seasonal timing the survey took place and botanical identification skills of the surveyor. Many plant species are only evident at certain times of the year; consequently it is possible that some plant species may have gone undetected.
- 5.2 The optimal time of the year to carry out a preliminary ecological appraisal / phase 1 habitat survey is April to October; therefore the survey was carried out in a sub-optimal period; notwithstanding, the nature and value of the habitats on site could be accurately assessed irrespective of this factor and seasonal timing is not considered a constraint.
- 5.3 No internal access was possible into B2, nor into the loft spaces of B1, however taking into account the results of the survey in relation to these structures, this was not a constraint. Taking everything into consideration no significant limitations affected the survey effort that would affect the results, conclusions and recommendations in this report.

6.0 Desk Study Results

- 6.1 The former Moreton Inn (“the application site”, circa 0.27 hectares) is situated off the Ruabon Road in Wrexham, approximately 5.8km south-west of Wrexham town centre (see Figure 6.1).

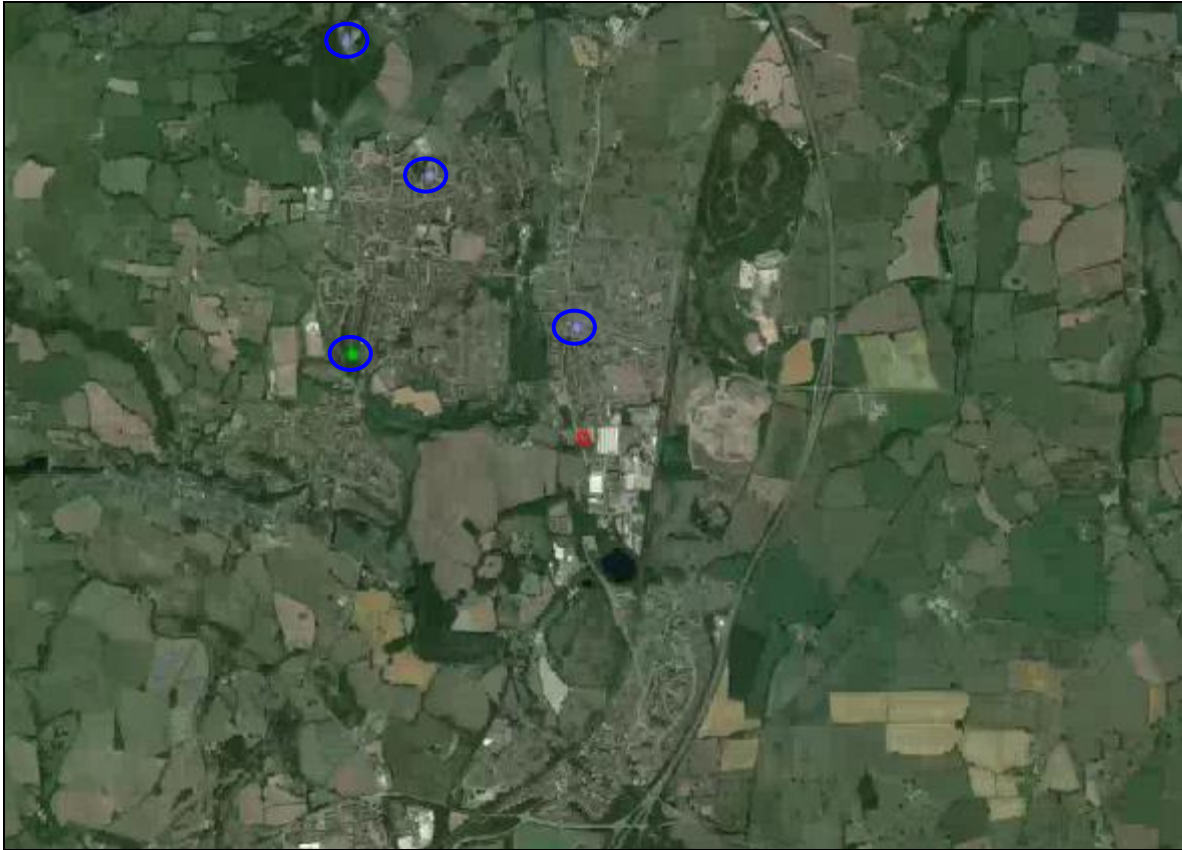


Figure 6.1 - Location of application site within the surrounding landscape, with bat records held by Tyrer Ecological Consultants Ltd (Source: Google 2020/21)

- 6.2 The application site can be broadly described as a former public house with associated hardstanding car park and garage/outhouse, and a pub garden lawn and shrubbery; there is existing access from the west via the Ruabon Road.
- 6.3 Immediate environs include the developed area of Johnstown to the north, the Vauxhall industrial estate to the south, and agricultural fields to the east and west. Boundary features in the area are a combination of hedgerows, fences, walls and ditches.
- 6.4 The extending habitat continues in similarity to that of the immediate with the Rhosllanerchrugog community forming a developed region to the north before giving way to country parks and rural regions at the south-western reaches of Wrexham. Ruabon lies to the south, and in all other directions a mixture of arable and pasture fields makes up the majority of habitat. The agricultural areas are intersected by modest deciduous woodlands, including Gardden Wood to the south-west, the Yew Tree Dingle and Llwyneinion Wood to the north-west, and Hafod Wood to the north-east; and a number of small streams and brooks including the Black Brook, Afon Goch and Nant y Crogfryn.

- 6.5 In respect to connectivity, the site has poor access with a road directly to the west and developed areas in all other directions; the wider area is also divided by the A483 and A539 along with various B-roads. Whilst flying species would have no issue accessing the site, terrestrial fauna and in particular slower moving species may be discouraged.
- 6.6 The described ecological frameworks are considered to offer a limited array of habitats with poor inter-connectivity in the landscape and to the application site, which is of benefit to several species/groups for which the survey was undertaken, notably flying animals such as bats and birds associated with rural settings; whilst small mammals and herptiles are unlikely to be present. Additionally, open, grassland and developed areas such as that which makes up a large part of the application site will provide limited shelter/value for herptiles from predators such as corvids, versus more structured habitats such as the local woodlands and hedgerows, which limits site suitability for species such as newts, lizards and snakes.
- 6.7 The protected species most typically associated with the habitats described is the Common Pipistrelle (*Pipistrellus pipistrellus*) bat, frequently associated with buildings in rural settings, and this species presence in surrounding landscape is likely. In addition, the wider landscape holds hunting value for Barn owl.
- 6.8 There are two statutory designated sites for nature conservation within 3.0 kilometres of the application site (see Table 6.1).

Table 6.1 - Statutory designated sites in the area

Site name	Designation type	Interest features
Johnston Newt Sites To the west, east, and north-east	Special Area of Conservation (SAC)	A series of three areas containing inland water bodies, heath, scrub, woodland, bog and marsh habitats. The sites have historically held large populations of Great Crested Newt.
Stryt Las a'r Hafod To the west, east, and north-east	Site of Special Scientific Interest (SSSI)	A series of three areas designated for their wildlife and habitats present.

- 6.9 In relation to ponds none exist on site; there are no ponds mapped within 250 metres, and two within 500 metres (Ponds 1-2); there is poor connectivity between the site and these ponds due to the presence of the busy Ruabon Road and various residential developments, and each is also adjacent to more favourable terrestrial habitat which is likely to be utilised by GCN and other amphibians subject to their presence.

NB: *Only ponds within 250 metres of site need be considered for potential to support GCN for a proposed development of this size, scale and anticipated duration in accordance with the relative guidance. Therefore whilst the report recognises ponds up to 1.0 kilometre away, it will focus on ponds with 250 metres.*

For visual aid / pond layout see Figure 6.2.

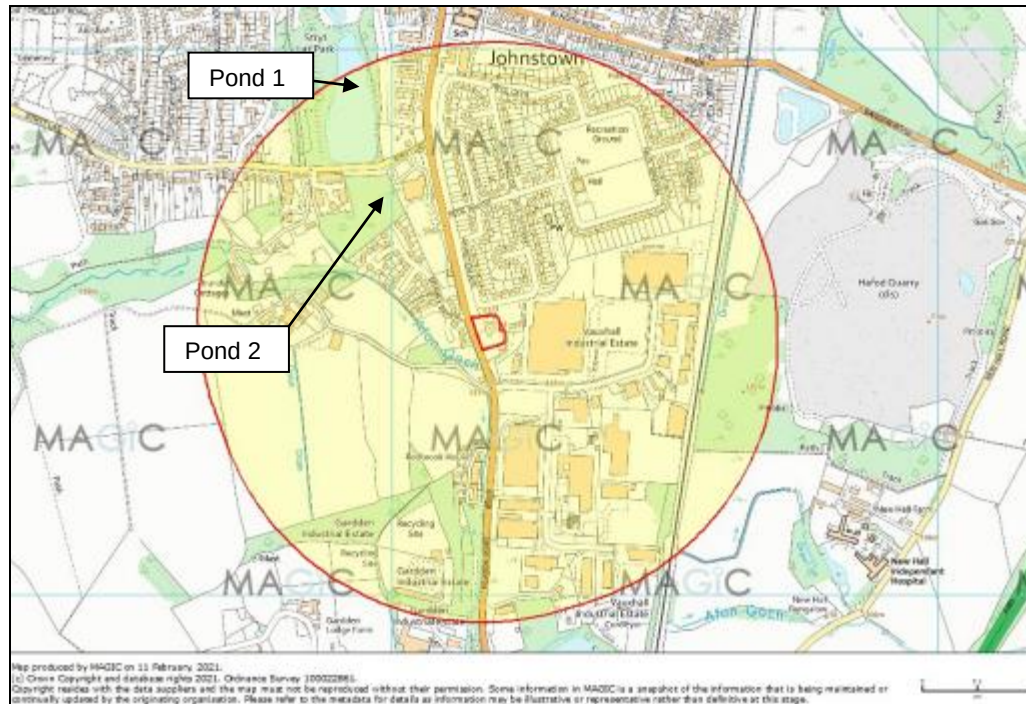


Figure 6.2 - Location of ponds 1-2 within the surrounding landscape in a 500m buffer (Source: adapted from MAGIC Maps, 2021)

Desktop study - Species records

- 6.10 **Bats:** A search of extensive bat records held by Tyrer Ecological Consultants Ltd revealed records relating to Common Pipistrelle (*Pipistrellus pipistrellus*) day roosts approximately 1.6km and 2.5km to the north-west along with activity by Common and Soprano Pipistrelle, Brown Long-eared (*Plecotus auratus*), Noctule (*Nyctalus noctula*) in the area. These records date from 2016-2019 and have been submitted to the Local Environmental Record Centre for the area.
- 6.11 **Great Crested Newt** – Whilst no records of GCN were identified during the desktop assessment, the presence of the aforementioned Johnstown Newt Sites SAC in the immediacy of the site (>100m at its closest point) suggests that they are present in the wider area.
- 6.12 A series of planning applications in relation to an immediately adjacent plot of land involving demolition of a former depot to allow for the erection of a number of new houses (Earliest Case Number: P/2002/0744) have had planning permission granted with no reference to GCN or other ecological concerns; this includes a granted application to modify the design of one of the dwellings which involved a Natural Resources Wales consultation (). Natural Resources Wales' response was: "*we do not consider that the proposed development affects a matter listed on our Checklist, Natural Resources Wales and Planning consultations (March 2015)... We therefore do not have any comment to make on the proposed development*".

As this site is also within the immediacy of the Johnstown Newt Sites SAC and is of similar habitat composure and connectivity, it can be inferred that development of the application site will be unlikely to impact on local populations of GCN.

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD Preliminary Ecological Appraisal

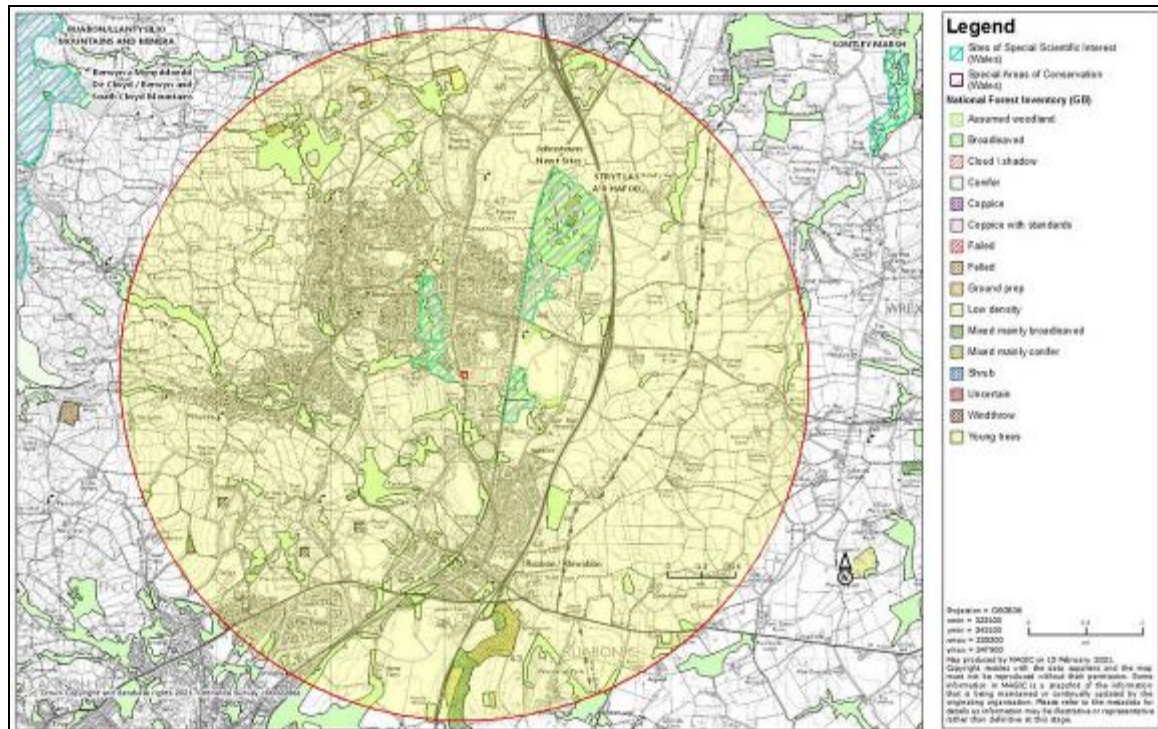


Figure 6.3 – Location of granted EPSMLs and designated sites relative to the application site
(Source: adapted from MAGIC Maps, 2021)

7.0 Field Survey Results

7.1 Habitat Survey

- 7.1.1 See Table 8.1 (below) for habitat descriptions. Refer to Appendix IV - Phase 1 Habitat Map for the location of all described habitats & Target Notes (TN). Species nomenclature follows Stace, C. (2019) – definitive English names.

Table 8.1 - Phase 1 habitat types within the survey area with target notes

Habitat Code	Broad Habitat	Description
A2.1	Scrub – dense/continuous	An overgrown area of vegetation at the south-east corner of the site, with Bramble (<i>Rubus fruticosus</i> agg.), Giant Blackberry (<i>Rubus armeniacus</i>), Wilson's Honeysuckle (<i>Lonicera nitida</i>), and occasional ground flora including non-native Bluebell (<i>Hyacinthoides non-scripta</i>) and Common Nettle (<i>Urtica dioica</i>).
A3.1	Broadleaved Parkland/scattered trees	Three mature trees fall within the survey boundary; two Ash (<i>Fraxinus excelsior</i>) and one Sycamore (<i>Acer pseudoplatanus</i>).
B4	Improved grassland	A former amenity pub lawn which has been left unmanaged since closure of the facility, with a mix of common grass species including Creeping Bent (<i>Agrostis stolonifera</i>), Cock's-foot (<i>Dactylus glomerata</i>), and False Oat-grass (<i>Arrhenatherum elatius</i>), and forbs including Creeping Buttercup (<i>Ranunculus repens</i>), Daisy (<i>Bellis perennis</i>), and Dandelion (<i>Taraxacum</i> agg.).
J1.4	Introduced shrub	Planted shrubberies in the car park and the lawn, with remnants of the former species including Primrose (<i>Primula</i> sp.) and non-natives, and some native species recolonising including Vetch (<i>Vicia</i> sp.) and Herb Robert (<i>Geranium robertum</i>).
J2.1.2	Intact hedge – species-poor	A scrubby hedgerow along the southern end of the western site boundary, with species including Hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>), and Hazel (<i>Corylus avellana</i>), with ground flora of Wood Avens (<i>Geum urbanum</i>), Yarrow (<i>Achillea millefolium</i>), and Common Ivy (<i>Hedera helix</i>). Much of the hedgerow is comprised of the non-native Garden Privet (<i>Ligustrum ovalifolium</i>).
J2.4	Fence	A wooden fence separating the scrubby area from the rest of the site.
J3.6	Buildings	The former Moreton Inn and associated outbuilding.
J5	Other habitat	Car park and patio hardstanding.
Target Note	1	Piled materials, located within the scrubby area to the south-west.
	2	A derelict brick outhouse, missing the roof.

- 7.1.2 No priority habitats are present anywhere within the application site.

7.2 Vegetation

- 7.2.1 No species of conservation importance were located anywhere within the survey area.
- 7.2.2 No invasive species listed on Schedule 9 of the WCA were encountered in the red line site boundary or within the immediacy of the site.

N.B One species of Cotoneaster, a genus containing five Schedule 9 listed species, was identified to genus level at the site. Whilst it was not identified to species level due to the large number of species in this genus, it was positively identified as not being on the five Schedule 9 species.

7.3 Bats

- 7.3.1 Two buildings are present within the site boundary: the former Moreton Inn (B1) and an associated outhouse (B2).

B1

- 7.3.2 The former Moreton Inn is a brick-built two-storey structure with a slate multi-pitched roof and a single-storey conservatory on the southern elevation, to the maximum approximate dimensions of 28m x 16m x 7m (Length x Width x Height). B1 is disused and has been unoccupied for approximately 6 months, and is in a moderate aesthetic condition with some signs of vandalism and dereliction to the rear.
- 7.3.3 A loft space is present above the entire footprint of the building, however no access into the void was possible during the survey due to an absence of loft hatches; instead observations about the interior were made through a small gap in the ceiling of a second-storey room. The loft space appears to be dark and heavily restrictive with historic timbers and roofing materials enclosed within the newer external roof; the timbers are covered in abundant cobwebs if loft-dwelling bats were present, and the internal temperature of the building as a whole was generally slightly warmer than the external temperature. Therefore, due to the restrictive nature of the space, it is considered unsuitable for use by loft-dwelling bat species such as the Brown Long-eared bat; this is a species which favours undisturbed, spacious and darkened loft spaces that allow free flight for entry/exit and offer a reasonably consistent climate.
- 7.3.4 The area of roof visible was lined with a traditional bitumen 1F underfelt; where present such under linings markedly increase a buildings value to bats, notably for the crevice-dwelling bats of the *Pipistrellus* genus, whereby the bats roost between the lining and roof cover material given external access. It was not possible to ascertain the presence of further internal crevices in the loft space, or to look for evidence of either crevice-dwelling or loft-dwelling bats.

NB: *The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.*

- 7.3.5 A cellar is present beneath B1, at the time of survey this was found to be heavily flooded and was not safe to enter, however an appraisal from the stairs revealed no presence or evidence of hibernating bats. As it has been used in recent history as a frequently accessed storage room, with electric lighting, it is considered of poor suitability for hibernating bats.
- 7.3.6 The external assessment of B1 revealed abundant potential roost features (PRFs) to all elevations of the building, these include:
- Lifted and missing slates on all elevations
 - Gaps beneath ridge tiles
 - Gaps at wall-plate level
 - Minor gap in a window lintel to the north
 - Minor and major gaps in brickwork to the north and east

On the basis of the presence of the above PRFs in tandem with the presence of suitable foraging habitat in the wider area, the former Moreton Inn B1 has been duly categorised as pertaining to 'Moderate' bat roost suitability in line with existing bat conservation trust (BCT) guidelines.

B2

- 7.3.7 B2 is an outbuilding formerly utilised as a storage area garage, of brick construction with a slate pitched roof; B2 is to the approximate dimensions of 7m x 5m x 4m.
- 7.3.8 No internal access was possible to B2, and as such its suitability for loft- or crevice-dwelling bats could not be ascertained. The external assessment of B2 found it to contain ingress features which might be used by bats, including gaps in the brickwork to the southern elevation, and minor gaps beneath lifted slates. Due to the presence of these PRFs, B2 has duly been categorised as pertaining to 'Moderate' bat roost suitability in line with BCT guidelines.

Trees

Three mature trees are present within the survey area, one Sycamore and two Ash. An assessment from ground level found no cracks, splits, rot-holes, or other crevice features typically used by bats, however each is covered in a dense layer of Common Ivy which may obscure PRFs; therefore all trees have been categorised as having "Low" potential for roosting bats.

7.4 Breeding Birds

- 7.4.1 In relation to Schedule 1 (WCA) specially protected bird species such as Barn owl, no suitability exists for breeding given an absence of appropriate buildings or trees. No value exists on the proposed development site for breeding or hunting and impacts to such species are anticipated.
- 7.4.2 The buildings, hedgerow, trees, and scrub present through the site have potential to support nesting birds and as the proposed development may impact upon these features, even temporarily, nesting birds are a material consideration, specifically in relation to timings.

7.4.3 All birds encountered during the survey are presented in Table 8.4.1:

Table 7.4.1 - Bird species encountered during the survey

Species	Scientific Name	Conservation Status
Coal Tit	<i>Periparus ater</i>	Green
House sparrow	<i>Passer domesticus</i>	Red, S.41
Long-tailed tit	<i>Aegithalos caudatus</i>	Green
S.41 - a bird listed on section 41 of the Natural Environment Rural Communities Act 2006 (NERC Act) BoCC 4 - a bird of conservation concern, Amber or Red, Red being the highest conservation priority		

7.5 Other Terrestrial Mammals

Badger

7.5.1 No field signs were located to suggest the presence of Badgers, including any setts, latrines, pathways, hairs, footprints or feeding signs such as snuffle holes and scratched trees/logs; no habitat in the immediate area is suitable for badger and their presence on the site is not likely.

European Hedgehog

7.5.2 In relation to European Hedgehog, the habitats present offer moderate foraging and sheltering/hibernation provisions as it currently exists, with areas to hide in the hedgerow and scrubby areas. Use of the site by European Hedgehog is possible, and recommendations to prevent risk of injury to individuals of this species are provided in section 8.

7.6 Herptiles

Great Crested Newt (GCN)

7.6.1 In order to assess risk to GCN, a number of factors need to be considered. These include:

- Site proximity to a potential breeding pond and to any additional ponds,
- Habitat linkage / barriers between potential breeding ponds and the site,
- Nature and extent of available terrestrial habitat (50-100m) around the pond(s),
- Area of site habitat loss and permanence of that loss,
- Nature of habitat to be lost and its potential value to GCN as refuge/overwintering habitat

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD
Preliminary Ecological Appraisal

7.6.2 No ponds are present within the application site or indeed within 250m of the site boundary. Two waterbodies are present within 500m at approximately 270m and 340m to the north-west. There is little to no feasible connectivity between these waterbodies and the application site due to the presence of the busy Ruabon Road and other developed areas, and there is also more favourable terrestrial habitat in proximity to these ponds which would be more likely favoured by GCN subject to their presence, including woodland, scrub and tussocky grassland.

7.6.3 As derived from the desktop assessment evidence of GCN in the locale included:

- The presence of a SAC designated for GCN within 100m of the site
- identification of two ponds within 500 metres of the site, and 10 within 1.0km, all with low-no connectivity

7.6.4 The main hypothetical worst-case impacts (subject to presence of GCN in any of the aforementioned ponds) to consider include potential for terrestrial habitat loss (up to 0.27ha) within a range of 270 metres of a breeding pond, and harm to individual GCN. See results of the Rapid Risk Assessments below, as extracted from the Natural England 'Template for Method Statement' (Tables 7.6.4-7.6.5).

Table 7.6.4 – Rapid Risk Assessment in relation to loss of habitat

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	0.1 – 0.5 ha lost or damaged	0.005
Individual great crested newts	No effect	0
Maximum:		0.01
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

Table 7.6.5 – Rapid Risk Assessment in relation to harm to individual GCN

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	Killing or injuring newts	0.8
Maximum:		0.8
Rapid risk assessment result:	RED: OFFENCE HIGHLY LIKELY	

- 7.6.5 Based on the above rapid risk assessments, the proposed development is highly likely to cause an offence in relation to GCN due to the potential to damage or kill individual newts during the works, recommendations to remove risk with regards to this species have been provided in section 8.0.

Common amphibians

- 7.6.6 Given the surrounding habitats as described the application site could be used by generalist common amphibians including Common Frog (*Rana temporaria*) and Common Toad (*Bufo bufo*), subject to their presence in the landscape.

Reptiles

- 7.6.7 In respect to reptiles, their presence on site is highly unlikely due to an absence of mosaic habitat with varying vegetation height structure, high disturbance and poor connectivity, and further contains no egg-laying or hibernation habitat. The development area is thus unsuitable for reptiles and impacts to this group of animals can be effectively ruled out given the above.

8.0 Conclusions & Recommendations

Habitats

- 8.1 No UKBAP or LBAP priority habitats were encountered at the application and there are no recommendations in relation to habitats.

Vegetation

- 8.2 No species of conservation importance, or species listed under Schedule 9 of the Wildlife and Countryside Act (as amended) (1981) were identified anywhere within the site boundary, and there are no recommendations in relations to plants.
- 8.3 To provide an opportunity for Biodiversity Net Gain and to improve the value of the site for native wildlife, a list of appropriate native species that might be incorporated into the proposed development has been supplied (see Appendix III).

Bats

- 8.4 Both the former Moreton Inn (B1) and associated outbuilding (B2) have been classified to possess 'moderate' roost suitability in line with best-practice guidance (Collins, 2016), on the basis of identified PRFs and quality of the surrounding habitat (see Figure 8.1 below). All mature trees on the site have been classified to possess 'low' suitability.

Based upon the categorisation of buildings and the potential impacts of the proposed works to bats, it is recommended that two dusk/dawn emergence or/and dawn re-entry surveys are conducted in the main active season of bats (May - August) in order to establish if/how the buildings are being used by bats and if so identify the species, abundance, roost locations and flight lines following emergence/re-entry. No further surveys are required in relation to the trees.

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).		
Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^b
^a Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see Section 5.2.9). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.		
^b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.		

Figure 8.1: Bat Conservation Trust extract

- 8.5 In the event that the presence of roosting bats at either building is initially established then an additional survey may be required and a European Protected Species Mitigation Licence (EPSML) and subsequent granting of a licence from Natural Resources Wales will be required for the development to legally proceed where bat roosts will be destroyed, altered, obstructed or damaged or if bats will be disturbed or capture/exclusion is required prior to demolition. However, it should be noted that if a breeding roost is discovered then work that will result in any of the above actions cannot take place until after the breeding season, which is broadly May- end of August inclusive.
- 8.6 Natural Resources Wales provide online information and guidance concerning the requirement for EPSML's and the following extract is included in that guidance:

When would works require a licence?

"A licence is required for anything that would be an offence under the Regulations (covered in section 2 of this report). For example, this could include works which would disturb (as defined in the legislation) bats, damage a bat roost, or damage or destroy a breeding site.

NRW can only grant a licence if the following three tests are met:

1) The purpose of the work is for preserving public health or public safety or other imperative reasons of over-riding public interest (IROPI) including those of a social or economic nature and beneficial consequences of primary importance for the environment,

2) There is no satisfactory alternative,

3) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range; this last test might require that the work is modified to avoid or minimise adverse effects (mitigation), or that an alternative breeding site/resting place or habitat is provided instead to safeguard the FCS (compensation). Either way, you will need the advice of an ecological consultant. Along with filling in the licence application form, the ecological consultant will need to write a method statement (within the EPSML) explaining how the work will be done to minimise any detrimental effects.

If the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence being committed then no licence is required. However, in these circumstances Natural Resources Wales would urge that reasonable precautions be taken to minimise the effect on European protected species should they be found during the course of the activity. If protected species are found, cease the work until you have assessed whether you can proceed without committing an offence.

When might I work without a licence?

There might be situations in which you could continue without a licence. If the work can be organised in such a way that there would be no offences committed (i.e. no damage or destruction of a breeding site/resting place, no capturing, killing or injuring of individuals) then there is no need for a licence. This is a difficult area legally and your ecological consultant will be able to advise you further.

Developers should be aware that if work is held up or modified and there is a possibility that animals will be disturbed, or a breeding site / resting place will be unavailable to them (even if only temporarily), they should apply for a licence in good time.

Example: If a building with a bat roost requires re-roofing or repair work, you would not need a licence if:

- the existing materials are replaced like-for-like (i.e. similar type of roofing slates, similar felt or membrane),*
- the same access points are retained and there are no structural changes made to the roost,*
- the work is done whilst bats are absent and is completed before they would normally return to the roost.*

NB: *Where more detailed bat surveys are recommended, following an initial investigation, then Local Authorities on the advice of their ecological advisors, may not determine the application until such time that all relevant information is gathered, i.e. by conducting dusk/dawn surveys. The advice that is provided by the ecological advisors is also in accordance with the obligations placed upon Local Authorities by way of its duties under the Conservation of Habitats & Species Regulations 2017. Therefore it would be prudent to make enquiries to the relevant departmental Planning Officer before submitting a Planning Application that includes an ecological survey report that recommends more detailed surveys.*

- 8.7 Installation of lighting as part of the development, that exceeds current levels, may have a negative impact upon foraging/commuting bats, particularly if increased light spillage occurs in areas of that are currently subjected to no-low levels of illumination; particularly along existing boundary features and mature trees.

If inappropriate and ill designed lighting is implemented, then there is likely to be an adverse impact upon bats; see extract below from Bat Conservation Lighting Guidelines.

Type of lamp (light source)

The impact on bats can be minimized by the use of low-pressure sodium lamps or high pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics.

Lighting should be directed to where it is needed, and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only. Planting can also be used as a barrier or manmade features that are required within the build can be positioned so as to form a barrier.

Predicting where the light cone and light spill will occur

There are lighting design computer programs that are widely in use which produce an image of the site in question, showing how the area will be affected by light spill when all the factors of the lighting components listed above are taken into consideration. This should be a useful tool to inform the mitigation process.

Light levels

The light should be as low as guidelines permit. If lighting is not needed, don't light. Numerous software programmes are currently available which can be used inform lighting plans, demonstrating how lighting decisions will illuminate a site. Refer to the Bat Conservation Lighting Guidelines for further information.

Breeding Birds

- 8.8 No impacts are applicable in relation to specially protected bird species such as Barn owl, and no further recommendations need be applied in relation to WCA Schedule 1 protected species.
- 8.9 Whilst no current or historic evidence of nesting was identified anywhere within the site, the buildings, hedgerow, trees, and scrubby habitat provide suitable nesting platforms which might be used by breeding birds. Any vegetation clearance or demolition works should therefore be undertaken outside of the breeding birds season of March-August unless it can be demonstrated by a suitable qualified, professional ecologist that breeding birds are absent beforehand.
- 8.10 It is recommended enhancement for nesting birds be incorporated into the proposed development, as per Appendix III.

Terrestrial Mammals

Badger

- 8.11 No evidence of badger was identified anywhere within the survey boundary, and the habitat present is considered of low suitability for such species; there are no recommendations with regards to badger.

European Hedgehog

- 8.12 Due to the presence of scrubby habitat with piled materials which provide abundant shelter opportunities, and grassland which provides foraging opportunities, presence of European Hedgehog on the site is considered possible. It is therefore recommended that an appropriate Method Statement is created by a suitably qualified Ecologist/Ecological Clerk of Works (ECoW), detailing a list of Reasonable Avoidance Measures (RAMs) to prevent risk to this species.
- 8.13 To help the development achieve a biodiversity net gain on site, suggestions in relation to hedgehog have been provided within Appendix III.

Herptiles

- 8.14 Whilst the habitats present in the application site are of low value to Great Crested Newt, and there is poor connectivity between the site and the nearest ponds, due to the proximity of the Johnstown Newt Sites SAC it is recommended as a precautionary measure that they and other more robust amphibian species such as Common Frog (*Rana temporaria*) are included within the RAMs recommended within section 8.12. These RAMs in combination with supervision by an ECoW will prevent risk to individual GCN, and thus prevent an offence being committed.

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD
Preliminary Ecological Appraisal

The applicant and all contractors should be aware that in the event that if at any stage GCN are encountered during works, or at any other stage of the work programme, works would be required to immediately cease and an Ecologist made aware as to provide further guidance in this situation.

In the event that GCN or their habitat would be directly impacted upon, including disturbance, an EPSML to legally proceed with the development may be required following detailed further presence/absence surveys.

- 8.15 No suitable habitats exist at the site for reptile species known in the locality, and their presence on site is considered highly unlikely.

9.0 Bibliography

- **Baker, J., Beebee, T., Buckley, J., Gent, T. and Orchard, D.** 2011. *Amphibian Habitat Management Handbook*. Amphibian & Reptile Conservation, Bournemouth.
- **Beebee, T. & Griffith, R.** 2000. *Amphibians and Reptiles*. Collins
- **Bat Conservation Trust (BCT)**, 2018. *Bats and artificial lighting in the UK: Bats and the Built Environment series*. Available from: www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/
- **British Standards Institution (BSI)**. 2012. Trees in relation to design, demolition and construction - recommendations. BS 5837:2012. ISBN 978 0 580 69917 7.
- **BSBI**, 2020. *BSBI Maps*. Available from: www.bsbi.org/maps
- **CIEEM**, 2016. *Guidelines for Ecological Impact Assessment in the UK and Ireland*, 2nd edition. Available from: www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- **CIEEM**. 2020. Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester, UK
- **CIEEM**, 2017. *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Available from: www.cieem.net/data/files/Publications/Guidelines_for_Preliminary_Ecological_Appraisal_Jan2018_1.pdf
- **CIEEM**, 2019. *Biodiversity Net Gain: Good practice principles for development*. Available from: www.cieem.net/data/files/Publications/Biodiversity_Net_Gain_Principles.pdf
- **CIEEM**. 2020. Advice on Covid-19 and Undertaking Site-Based Ecological Work. Available Online - <https://cieem.net/wp-content/uploads/2020/03/CIEEM-COVID-19-Advice-31March2020-FINAL.pdf>
- **Chorley Council, Preston City Council, and South Ribble Council**, 2015. *Central Lancashire Biodiversity and Nature Conservation Supplementary Planning Document*. Available from: <https://centrallocalplan.lancashire.gov.uk/media/1049/july-2015-biodiversity-and-nature-conservation-spd-v1.pdf>
- **Collins, J (ed.)**, 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 3rd edition. The Bat Conservation Trust, London.
- **Communities & Local Government (C&LG)**, 2019. *National Planning Policy Framework*. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/60777/2116950.pdf
- **Dean, M; Strachen, R; Gow, D; Andrews, R**, 2016. *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. The Mammal Society, London.
- **DEFRA**, 2018. *Net gain: Consultation Proposals*. Available from: https://consult.defra.gov.uk/land-use/net-gain/supporting_documents/netgainconsultationdocument.pdf

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD
Preliminary Ecological Appraisal

- **Edgar, P., Foster, J. and Baker, J.** 2010. *Reptile Habitat Management Handbook*. Amphibian & Reptile Conservation. Bournemouth.
- **English Nature**, 2001. *Great Crested Newt Guidelines*. Version Aug 2001.
- **Froglife**, 2015. *Surveying for reptiles*. Available from: <https://www.froglife.org/wp-content/uploads/2013/06/Reptile-survey-booklet-3mm-bleed.pdf>
- **Global Biodiversity Information Facility (GBIF)**, 2019. Available from: <https://www.gbif.org/>.
- **GOV.UK**. 2015. *Reptiles: surveys and mitigation for development projects*. Available online www.gov.uk/guidance/reptiles-protection-surveys-and-licences.
- **Gunnell, K. Grant, G. and Williams, C.** 2012. 'Landscape and urban design for bats and biodiversity'. Bat Conservation Trust.
- **Joint Nature Conservancy Council (JNCC)**, 2010. *Handbook for Phase 1 habitat survey*. Available from: http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- **Magic Maps Application**, 2020. Available from: www.natureonthemap.naturalengland.org.uk/MagicMap.aspx
- **Mitchell-Jones, A. J. (ed.)**, 1987. *The bat worker's manual*. Dept. BWM, Nature Conservancy Council, Northminster House, Peterborough, PE1 1UA
- **Mitchell-Jones, A. J.**, 2004. *Bat mitigation guidelines*. External Relations Team, English Nature, Northminster House, Peterborough, PE1 1UA.
- **Natural England**, 2015. *Great Crested Newts: Surveys and mitigation for developments and projects*. Available from: <https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects>.
- **North West Biodiversity Audit Group (NWBAG)**, 1999. *A biodiversity audit of north-west England*
- **Oldham R.S.; Keeble J.; Swan M.J.S.; Jeffcote M.**, 2000. *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.
- **Rose, F.**, 1999. *Indicators of ancient woodland: The use of vascular plants in evaluating ancient woods for nature conservation*. Available from: <http://pad.basingstoke.gov.uk/documents/4753/01/02/76/01027625.PDF>
- **Sewell, D; Griffiths, R.A; Beebee, T.J; Foster, J; Wilkinson, J. W.**, 2013. *Survey protocols for the British herpetofauna*. Available from: http://www.narrs.org.uk/documents/Survey_protocols_for_the_British_herpetofauna.pdf
- **Stace, C.**, 2019. *New Flora of the British Isles*, 4th edition. Cambridge University Press, The Edinburgh Building, Cambridge, CB2 2RU.
- **Strachen, R; Moorhouse, T.**, 2011. *The Water Vole Conservation Handbook*, 3rd ed. Wildlife Conservation Research Unit, University of Oxford.
- **Stroh, P. A; Leach, S. J; August, T. A; Walker, T. J; Pearman, D. A; Rumsey, F. J; Harrower, C. A; Fay, M. F; Martin, J. P; Pankhurst, T; Preston, C. D; Taylor, I.**, 2014. *Vascular Plant Red-List for England*, 2nd edition. Trolius Publications.

Appendix I: Site Photographs



Plate 1: Front (western) elevation of the former Moreton Inn



Plate 2: Gap beneath slates on the north-west corner of B1



Plate 3: Southern elevation of B1



Plate 4: Gap between slates and under a lifted ridge tile on the southern elevation of B1



Plate 5: Northern elevations of B1 and B2 with missing/lifted slates on B2



Plate 6: Gap at wall-plate level on the northern elevation of B1



Plate 7: Gaps in the brickwork of the northern elevation of B1



Plate 8: Eastern elevation of B1 with cracks in brickwork



Plate 9: Northern elevation of B1 with lifted slates and window lintel crevice



Plate 10: External character of the outbuilding B2 from the north-west



Plate 11: External character of the outbuilding B1 from the south-east, with a gap leading into the interior



Plate 12: Internal character of B1



Plate 13: Internal character of the loft space of B1, with historic roofing materials visible along with some new areas with bitumen 1F underfelt



Plate 14: Character of the flooded cellar area of B1



Plate 15: Scrubby habitat in the south-east corner of the site



Plate 16: Piled materials in the scrub (Target Note 1)



Plate 17: Derelict/collapsed outbuilding (Target Note 2)



Plate 18: Character of the former pub garden/lawn with western boundary hedgerow



Plate 19: Areas of non-native/introduced shrub



Plate 20: Hardstanding car park

Appendix II: Site-Specific Botanical Species List

Each species recorded was given an abundance value according to the standard DAFOR scale, where:

- D = Dominant
- A = Abundant
- F = Frequent*
- Occasional*
- R = Rare*

*These values can be prefixed by the letter L (locally) to provide more subtle biogeographical data.

Phylum	Common Name	Scientific Name	DAFOR
Bryophyta (Mosses)	Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	LF
Anthophyta (Flowering plants)	Annual Meadow-grass	<i>Poa annua</i>	F
	Ash	<i>Fraxinus excelsior</i>	O
	Atlantic Ivy	<i>Hedera hibernica</i>	O
	Blackthorn	<i>Prunus spinosa</i>	F
	Bluebell sp.	<i>Hyacinthoides sp.</i>	O
	Bramble	<i>Rubus fruticosus agg.</i>	LA
	Broad-leaved Dock	<i>Rumex obtusifolius</i>	O
	Broom	<i>Cystisus scoparius</i>	R
	Buddleja	<i>Buddleja davidii</i>	LF
	Cherry sp.	<i>Prunus sp.</i>	R
	Cleavers	<i>Galium aparine</i>	F
	Cock's-foot	<i>Dactylus glomerata</i>	F
	Colombine sp.	<i>Aquilegia sp.</i>	R
	Common Chickweed	<i>Stellaria media</i>	O
	Common Ivy	<i>Hedera helix</i>	A
	Common Nettle	<i>Urtica dioica</i>	O
	Cotoneaster sp.	<i>Cotoneaster sp.</i>	R
	Cow Parsley	<i>Anthriscus sylvestris</i>	O
	Creeping Bent	<i>Agrostis stolonifera</i>	A
	Creeping Buttercup	<i>Ranunculus repens</i>	F
	Creeping Thistle	<i>Cirsium arvense</i>	O
	Curled Dock	<i>Rumex crispus</i>	O
	Daffodil	<i>Narcissus sp.</i>	O
	Daisy	<i>Bellis perennis</i>	O
	Dandelion	<i>Taraxacum agg.</i>	O
	False Oat-grass	<i>Arrhenatherum elatius</i>	F
	Garden Privet	<i>Ligustrum ovalifolium</i>	LA
	Giant Blackberry	<i>Rubus armeniacus</i>	LF
	Greater Celandine	<i>Chelidonium majus</i>	R
	Groundsel	<i>Senecio vulgaris</i>	R
	Hawthorn	<i>Crataegus monogyna</i>	F

No 35 Moreton Inn, Ruabon Road, Wrexham, LL14 6PD
Preliminary Ecological Appraisal

	Hazel	<i>Corylus avellana</i>	LO
	Herb Robert	<i>Geranium robertum</i>	O
	Holly	<i>Ilex aquifolium</i>	O
	Mugwort	<i>Artemisia vulgaris</i>	O
	Perennial Rye-grass	<i>Lolium perenne</i>	F
	Perennial Sow-thistle	<i>Sonchus arvensis</i>	O
	Primrose sp	<i>Primula sp.</i>	LF
	Red Dead-nettle	<i>Lamium purpureum</i>	O
	Ribwort Plantain	<i>Plantago lanceolata</i>	O
	Rose	<i>Rosa sp.</i>	O
	Sycamore	<i>Acer pseudoplatanus</i>	O
	Vetch sp.	<i>Vicia sp.</i>	R
	Willowherb sp.	<i>Epilobium sp.</i>	O
	Wilson's Honeysuckle	<i>Lonicera nitida</i>	R
	Wood Avens	<i>Geum urbanum</i>	O
	Yarrow	<i>Achillea millefolium</i>	O

Appendix III: Biodiversity Enhancement

Proposed - Native Landscaping

A series of trees, woody shrubs, climbers, herbaceous plants and ferns have been given within the table below which are suitable for incorporation into the proposed development at the former Moreton Inn; the list of plants given below are readily commercially available.

	Common Name	Scientific Name	Planting Preference
Ferns	Male Fern	<i>Dryopteris filix-mas</i>	Semi-shade or shaded
	Soft Shield-fern	<i>Polystichum setiferum</i>	Semi-shade or shaded
	Maidenhair Fern	<i>Adiantum capillus-veneris</i>	Suitable for rockeries / walled gardens
	Royal Fern	<i>Osmunda regalis</i>	Full sun in moist-damp areas
Herbaceous plants	Bloody Crane's-bill	<i>Geranium sanguineum</i>	Dry soils - suitable for rockeries
	Columbine	<i>Aquilegia vulgaris</i>	Semi-shade or open areas
	English Bluebell	<i>Hyacinthoides non-scripta</i>	Moist soils in semi-shade or open areas
	Giant Bellflower	<i>Campanula latifolia</i>	Semi-shade or open areas
	Greater Knapweed	<i>Centaurea scabiosa</i>	Dry-moist soils. Suitable for borders
	Greater Woodrush	<i>Luzula sylvatica</i>	Moist soils in semi-shade or open areas
	Meadow Crane's-bill	<i>Geranium pratense</i>	Humid-moist soils. Suitable for borders
	Musk Mallow	<i>Malva moschata</i>	Dry-moist soils. Suitable for borders and rockeries
	Sea Campion	<i>Silene uniflora</i>	Dry soils - suitable for rockeries
	Stinking Hellebore	<i>Helleborus foetidus</i>	Semi-shade or open areas
Climbers	Honeysuckle	<i>Lonicera periclymenum</i>	Dry-moist soils
	Hops	<i>Humulus lupulus</i>	Dry-moist soils
	Ivy	<i>Hedera helix</i>	Dry-moist soils
	Sweet-briar	<i>Rosa rubiginosa</i>	Dry-moist soils
Woody Shrubs	Dogwood	<i>Cornus sanguinea</i>	-
	Guelder Rose	<i>Viburnum opulus</i>	-
	Hawthorn	<i>Crataegus monogyna</i>	-
	Hazel	<i>Corylus avellana</i>	-
	Holly	<i>Ilex aquifolium</i>	-
Trees	Alder Buckthorn	<i>Frangula alnus</i>	-
	Osier	<i>Salix viminalis</i>	-
	Pedunculate Oak	<i>Quercus robur</i>	-
	Purple Willow	<i>Salix purpurea</i>	-
	Rowan	<i>Sorbus aucuparia</i>	-
	Silver Birch	<i>Betula pendula</i>	-
	Wild Cherry	<i>Prunus avium</i>	-
	Wych Elm	<i>Ulmus glabra</i>	-

Enhancing a development site for Breeding Birds

This traditional design has proved to be highly effective in attracting robins, as well as other small species such as black redstart, spotted flycatcher and wren. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.

This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box. Alternatively hide the box in ivy, honeysuckle or other climbing plants.

See - www.nhbs.com/2h-schwegler-robin-box



Enhancing a development site for Invertebrates

Bee bricks

The Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees. Alternatively, it can be used as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.

Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back. Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used.

Available in a choice of four colours: white grey, dark grey, yellow and red.

Specification

- * Material: Concrete
- * Origin: Cornwall, UK
- * Dimensions: W 215mm x D 105mm x H 65mm
- * Weight: 2.9kg
- * Colours: White grey, yellow, dark grey and red

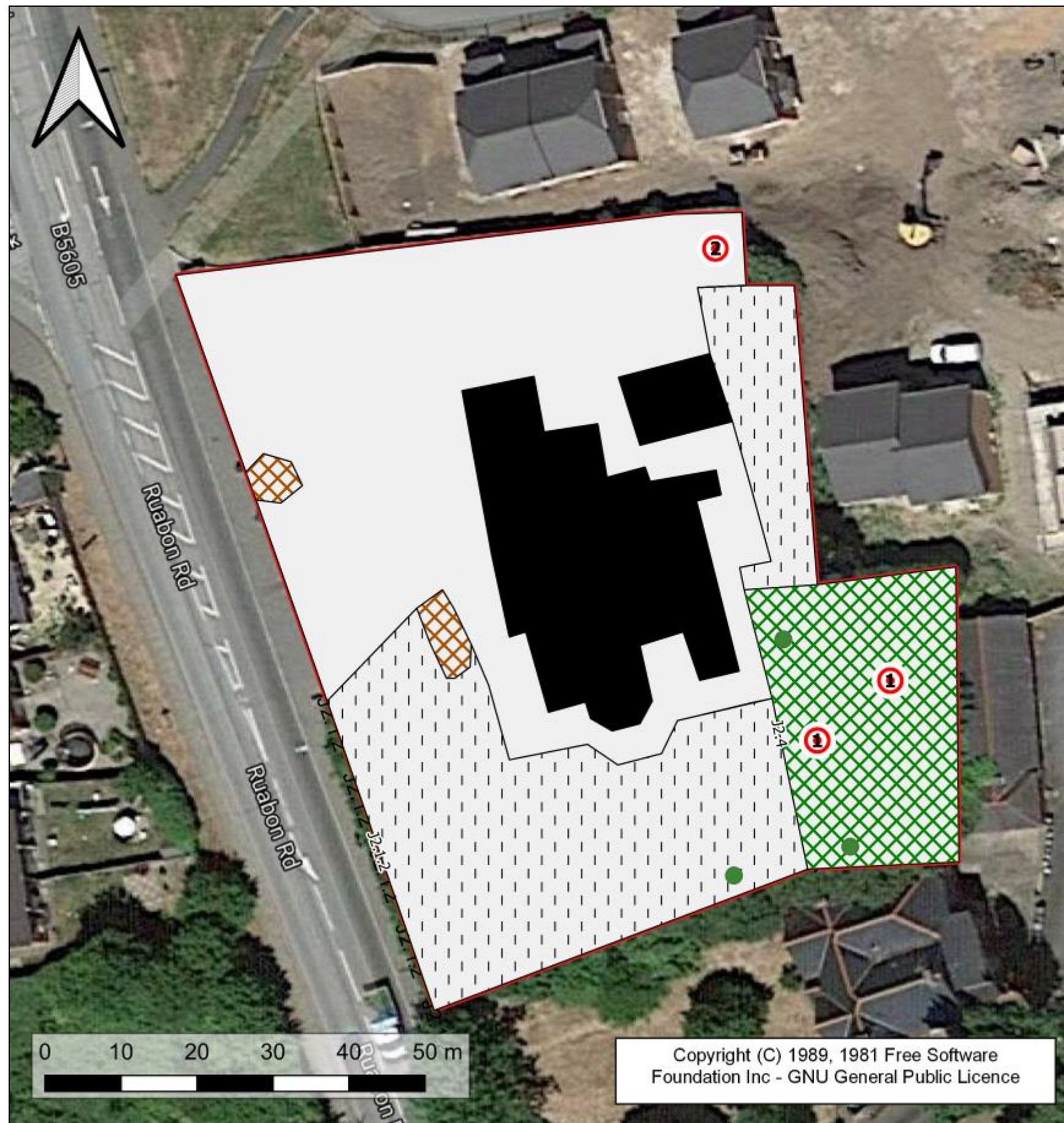


Enhancing a development site for Hedgehogs

Hedgehog Homes

As a means of enhancement and preserving local biodiversity, it is recommended that a 'Hedgehog home' be integrated into the scheme, placed along the site boundary at the base of a hedgerow. This will provide a receptor area for any Hedgehogs incidentally discovered/affected during works and promote local conservation of this species. Typical design suggestions can be found below, available online from reputable retailers.





Phase 1 Map

- Target Note
- A3.1 Broadleaved Parkland/scattered trees
- A2.1 - Scrub - dense/continuous
- B4 - Improved grassland
- J1.4 - Introduced shrub
- J3.6 - Buildings
- J5 - Other habitat
- J2.1.2 - Intact hedge - species-poor
- J2.4 - Fence
- Boundary

The Former Moreton Inn, Wrexham

Survey Date: 11/02/2021
 Drawn: J Pescod
 Date Drawn: 15/02/2021
 Checked & Approved: KW
 Size: A3
 Scale: 700.00

Tyrer Ecological Consultants Ltd
 Formby Business Centre
 42 Duke Street
 Formby
 L37 4AT

Tel: 01704 875781
 Email: enquiries@tyrer-ecologicalconsultants.co.uk
www.tyrer-ecologicalconsultants.co.uk



Bringing Together Over 20 Years of
 Ecological Excellence