EXTENDED PHASE 1 HABITAT SURVEY OF GWERN-Y-TO, WORTHENBURY, WREXHAM

2014

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PHASE 1 HABITAT MAP

1.0 INTRODUCTION

1.1 Rachel Hacking Ecology Limited was commissioned in 2014 by Matthews & Goodman LLP to carry out an Extended Phase 1 Habitat Survey of Gwern-y-to, Worthenbury, Wrexham. The site is the subject of a full planning application for the demolition of a cottage on the site and the construction of a detached dwelling. A barn will be converted as part of the proposals and a new access track into the site will be constructed. An Extended Phase 1 Habitat Survey is required to provide an overview of the habitats present within the site and to assess any potential protected species issues on the site.

Site Description

1.2 Gwern-y-to is located off Frog Lane, between Worthernbury, Wrexham and Shocklach, Cheshire (O.S. grid reference: SJ430469). The site comprises of a detached two-storey dwelling, a two-storey barn and a dilapidated (roofless) barn. The land around the buildings is overgrown vegetation including patches of dense scrub. A stream flows just outside of the northern and western boundaries to the site.

Aims of Survey

1.3 The aims of the survey were to:

- Describe and map the habitats present on the site,
- Assess the potential for protected species to be present on the site or just outside the immediate site boundary,
- Identify where further survey may be necessary.

2.0 METHODOLOGY

2.1 A Phase 1 Habitat survey was undertaken to JNCC standards (JNCC, 2010). The site was walked and each habitat was assigned a Phase 1 habitat category. The habitats surrounding the site were also mapped. Species lists were taken at locations of botanical interest. All botanical nomenclature follows Stace, 2010. A Phase 1 map was produced showing habitat boundaries.

2.2 During the Phase 1 Habitat survey, the habitats were assessed for their potential to support protected species. This included, for example, looking for signs of Badger activity (e.g. setts, paths, latrines and hairs on fences), assessing any waterbodies on site or near the site for their potential to support Great Crested Newt and assessing the potential for any buildings or mature trees to be used by bats.

2.3 Rachel Hacking (Principal Ecologist) and Andy Harmer undertook the survey on 26th November 2014. The weather was dry and warm. November is outside of the optimum time of year for botanical assessment. However, given the type of habitats present on site, a full assessment could be made. Both surveyors have many years of experience in undertaking habitat and protected species work.

3.0 RESULTS

HABITATS

3.1 The Phase 1 Habitat Map can be found at the back of the report. The habitats on site are described below.

Neutral Grassland

3.2 The grassland on site is rank and unmanaged. It occurs within the centre of the site, where presumably access to the buildings was taken (see Photograph 1). The grassland is species-poor and comprises of rank grass species and herbaceous species such as Couch Grass *Elytrigia repens*, Cock's-foot *Dactylis glomerata*, Yorkshire Fog *Holcus lanatus*, Nipplewort *Lapsana communis*, Creeping Buttercup *Ranunculus repens* and Dove's-foot Crane's-bill *Geranium molle.*

Photograph 1 showing the neutral grassland habitat

Tall, Ruderal Herb

3.3 The site supports large areas of tall, rank vegetation. This is mapped as tall, ruderal herb. The species include Stinging Nettle *Urtica dioica*, Cow Parsley *Anthriscus sylvestris*, Hogweed *Heracleum sphondylium* and Creeping Thistle *Cirsium arvense.*

Continuous Scrub

3.4 Pockets of dense Bramble *Rubus fruiticosus* agg. occur throughout the site, notably close to the buildings (see Photograph 2). These areas are mapped as continuous scrub.

Photograph 2 showing the Bramble scrub to the left

Existing Buildings

3.5 Three buildings exist on site. One is a detached brick-built two-storey dwelling with a pitched slate tile roof. One is a brick-built two-storey barn with a pitched slate tile roof. A dilapidated barn exists on the site. This has collapsed and currently comprises of just the first floor walls (see Photograph 3).

Photograph 3 showing the dilapidated barn

Hedgerows

3.6 A species-poor intact hedgerow exists on the eastern boundary to the site. This is dominated by Blackthorn *Prunus spinosa* with Hawthorn *Crataegus monogyna.* Two small sections of hedgerow exist on the site, bordering an old track. These comprise of Hawthorn.

Flowing Water

3.7 A small stream exists flowing outside of the northern and western boundaries to the site. The stream is extremely shallow and supports no aquatic vegetation. The banks and substrate are mud and silt.

Bare Ground

3.8 Patches of hardstanding on site are mapped as bare ground.

Trees

3.9 A number of mature trees exist, scattered throughout the site and on the northern boundary to the site. Species include Ash *Fraxinus excelsior*, Sycamore *Acer pseudoplatanus* and Lombardy Poplar *Populus nigra* 'Italica'. Mature Apple trees *Malus domestica* var. exist on the site.

PROTECTED SPECIES

Great Crested Newt

3.10 Great Crested Newt *Triturus cristatus* is a European Protected Species (EPS) under the Conservation (Natural Habitats etc.) Regulations 1994. This is implemented in the UK through the Conservation of Habitats and Species Regulations 2010 and the species is fully protected under the Wildlife and Countryside Act 1981 (as amended).

3.11 No ponds exist on the site. The nearest pond is approximately 220 metres south-east from the development site. A new access track will be constructed as part of the proposals. At present, the only access is across a grass field. This access track will be constructed of pea gravel and lies approximately 90 metres from the pond at its nearest point. No other ponds exist within 250 metres of the site.

3.12 The hedgerows, scrub, tall, ruderal herb and rank grassland all provide suitable terrestrial habitat for Great Crested Newt.

Bats

3.13 All bat species are European Protected Species under the Conservation (Natural Habitats etc.) Regulations 1994. This is implemented in the UK through the Conservation of Habitats and Species Regulations 2010. Bats are also protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act (NERC, 2006). It is illegal to disturb or damage a bat roost.

3.14 Two intact buildings exist on the site. These have been surveyed for bats and the results are detailed in a separate report (see *Bat Surveys at Gwern-y-to, Worthenbury, Wrexham, 2014 - Rachel Hacking Ecology Limited*). Evidence of bat activity was located within the barn and the detached dwelling.

3.15 The Lombardy Poplar trees are likely to be felled as part of the development proposals. These trees do not support features which could be used by bats, such as cavities or peeling bark. Similarly, the apple trees on site do not support features which could be used by bats. The mature trees on the boundaries of the site do not appear to be affected by the proposals but some of these trees do appear to support cavities.

Badger

3.16 Badgers *Meles meles* are protected under the Protection of Badgers Act 1992 and The Wildlife and Countryside Act 1981 (as amended). These Acts, for example, make it illegal to disturb a Badger whilst it is in a sett, to kill, injure or take a Badger and to obstruct the entrance to a Badger sett.

3.17 No Badger sett could be located on site or immediately adjacent to the site. No evidence of Badger activity could be located during the survey.

Water Vole

3.18 Water Vole *Arvicola amphibius* is protected under the Wildlife and Countryside Act 1981 (as amended). This act, for example, makes it illegal to intentionally kill, injure or take (capture) a Water Vole or intentionally or recklessly damage, destroy or obstruct access to any structure or place which Water Voles use for shelter or protection or disturb Water Voles while they are using such a place.

3.19 A small stream exists just outside of the northern and western boundaries of the site. The stream was surveyed for evidence of Water Vole during the Phase 1 survey. The stream is considered to be sub-optimal habitat for Water Vole. The water is extremely shallow (maximum 7 inches deep) and the banks and stream lack vegetation. In addition, the banks are extremely shallow sloping and offer little opportunity for burrows. No evidence of Water Vole activity could be located.

Barn Owl

3.20 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 but Barn Owls *Tyto alba* are afforded extra protection through inclusion within Schedule 1 of the Act which makes it an offence to 'recklessly disturb a Barn Owl whilst it is building a nest.…or recklessly disturb a Barn Owl whilst near a nest….or recklessly disturb dependent young of a Barn Owl'.

3.21 No evidence of Barn Owl activity could be located. The barn and the detached dwelling are well sealed and do not offer any opportunities for nesting Barn Owl. The mature trees on site do not offer suitable nesting habitat for Barn Owl.

Nesting Birds

3.22 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 (as amended).

3.23 The mature trees, hedgerows, dense scrub and buildings all provide suitable bird nesting habitat.

4.0 ASSESSMENT

HABITATS

4.1 The Phase 1 Habitats present on the site are common throughout the UK. No nationally rare or locally rare plant species were located during the extended Phase 1 Habitat Survey.

4.2 The neutral grassland is species-poor and offers little ecological value, other than cover for small mammals. The mature trees, hedgerows and scrub are of high ecological value, offering bird nesting habitat and cover and foraging for birds and small mammals. The western hedgerow offers a valuable wildlife dispersal route.

4.3 The proposed development will take place within the grassland, scrub and tall, ruderal herb habitats. These habitats will be lost to the development as the site is cleared.

PROTECTED SPECIES

Great Crested Newt

4.4 No ponds exist on the site. One pond exists within 250 metres of the site, approximately 220 metres to the south-east of the site. This pond is approximately 90 metres from the proposed new access track to the site. The track will be constructed of pea gravel. The track is separated from the pond by improved grassland, a habitat which is considered to be sub-optimal for Great Crested Newt dispersal.

4.5 The site supports suitable terrestrial Great Crested Newt habitat. It is recommended that a series of Reasonable Avoidance Measures are instigated during the construction of the new access track and during the demolition and site clearance (see Section 5 - Recommendations).

Bats

4.6 A daytime bat survey has taken place at the two intact buildings on site; the barn and the detached dwelling. The results are detailed in a separate report (see *Bat Surveys at Gwern-y-to, Worthenbury, Wrexham 2014 - Rachel Hacking Ecology Limited*). Evidence of bat activity was located within both buildings.

4.7 The trees to be affected by the development proposals do not support features which could be used by bats, such as cavities, Ivy or peeling bark.

Badger

4.8 No evidence of Badger activity or Badger setts could be located within the site or immediately adjacent to the site. No further Badger work is necessary and Badger is not considered to be a constraint on development.

Water Vole

4.9 A small stream lies just outside of the site on the northern and western boundaries. This was surveyed for evidence of Water Vole and no evidence could be located. The stream is considered to be sub-optimal habitat for Water Vole as it is very shallow, with no suitable bank structure. Water Vole is not considered to be a constraint on development at this time. The stream will not be affected by the development proposals.

Barn Owl

4.10 No evidence of Barn Owl activity could be located during the Phase 1 surveys or the daytime bat surveys. The buildings and the mature trees on site are not considered to be suitable for Barn Owl. Barn Owl is not considered to be a constraint on development at this time.

Nesting Birds

4.11 The scrub, hedgerows, mature trees and the buildings provide suitable nesting sites for birds. If work to the trees, scrub, hedgerows or buildings will proceed within the bird nesting season (generally March-August), then a nesting bird survey will be required immediately prior to any work commencing. Nesting birds can be somewhat mitigated for by allowing no works to be carried out to potential nesting sites within the bird nesting season.

5.0 RECOMMENDATIONS

5.1 Protected species are a material consideration within the planning process. A daytime bat survey has been undertaken at the site and the separate report details the findings. No other protected species surveys are required at the site. However, depending on the timing of the site clearance works and demolition, the following survey may need to be undertaken:

- **Nesting Birds** - If any tree felling or other vegetation clearance work needs to be carried out within the bird nesting season (generally March to August), then a nesting bird survey will be required immediately prior to work commencing.

Great Crested Newt

5.2 Due to the presence of one pond within 250 metres, and the fact that the site supports suitable terrestrial Great Crested Newt habitat, The following Reasonable Avoidance Measures are recommended.

Reasonable Avoidance Measures

The following procedures will be strictly implemented during the construction period of the development:

- Should any GCN, or indeed any other protected species, be found during construction, work will stop and a licensed ecologist will be contacted immediately.

- If possible, all work will be undertaken during the newt hibernation period (the winter months). The work should be undertaken in as short a time span as possible.

- It is recommended that prior to commencement of work each day, a brief site walkover is undertaken by construction personnel to ensure no GCN have entered the construction site overnight. It is anticipated that a toolbox talk will be given to construction personnel before the work commences so that all personnel are familiar with a GCN.

- It is advisable that only building products to be used on the day are brought and stored on the site.

- If building products need to be stored on site (e.g. overnight or for a few days) these products will be stored on palettes or retained in bags on palettes to ensure that refuges are not created that will attract newts. If possible building products should be placed on existing hardstanding.

- All holes created during the construction period (e.g. to lay foundations) will be filled in and finished on the same day so as

not to leave any ‘pitfall’ traps. If this is unavoidable, then one of the following measures needs to be implemented:

- An escape route is provided overnight from the hole which can be in the form of a wooden plank OR
- The hole is completely covered by a heavy stone slab which is flush to the surrounding ground so no newts can access the hole.

- If a storage container is brought to site, this needs to be placed on either existing hard standing or on an area of short grassland which has destructively been searched for GCN beforehand.

- Any spoil resulting from any excavations will be removed from the construction area on the same day and will be taken off site or placed on hard standing or on palettes to be removed at a later date.

- Demolition and clearance of the dilapidated barn should be undertaken under ecological supervision, as the brickwork provides suitable terrestrial habitat for GCN.

Habitat enhancement and creation

5.3 It is recommended that the following measures are taken into account to increase the biodiversity of the site.

- Hedgerow and mature tree retention – the existing hedgerows, and associated mature boundary trees, should be retained. During construction, the hedgerows and trees will be protected from harm. The aim is to protect the most ecologically valuable habitats on the site and retain the wildlife dispersal routes. The hedgerows also provide a valuable habitat for birds and small mammals. Bats are also attracted to linear landscape features for foraging.

- Wildflower area - Any green space designed into the development should take into account the need to provide pollen and nectar sources for invertebrates, which in turn attract other wildlife such as bats. Where practical, a lowland neutral native wildflower seed mix could be sown.

- Soft landscaping should include the provision of native and non-native flowering shrubs, to provide a pollen and nectar source for invertebrates.

- As a general recommendation, bird boxes and bat boxes should be erected on any new building or retained buildings, where possible.

6.0 REFERENCES

JNCC. *Phase 1 Habitat Survey – a technique for environmental audit*, JNCC, Updated 2010.

Preston, C.D., Pearman, D. & Dines, T. (2002). *New Atlas of the British and Irish Flora.* Oxford University Press.

Stace, C. A. (2010). *New Flora of the British Isles, 3rd Edition.* Cambridge University Press.

PHASE 1 HABITAT MAP

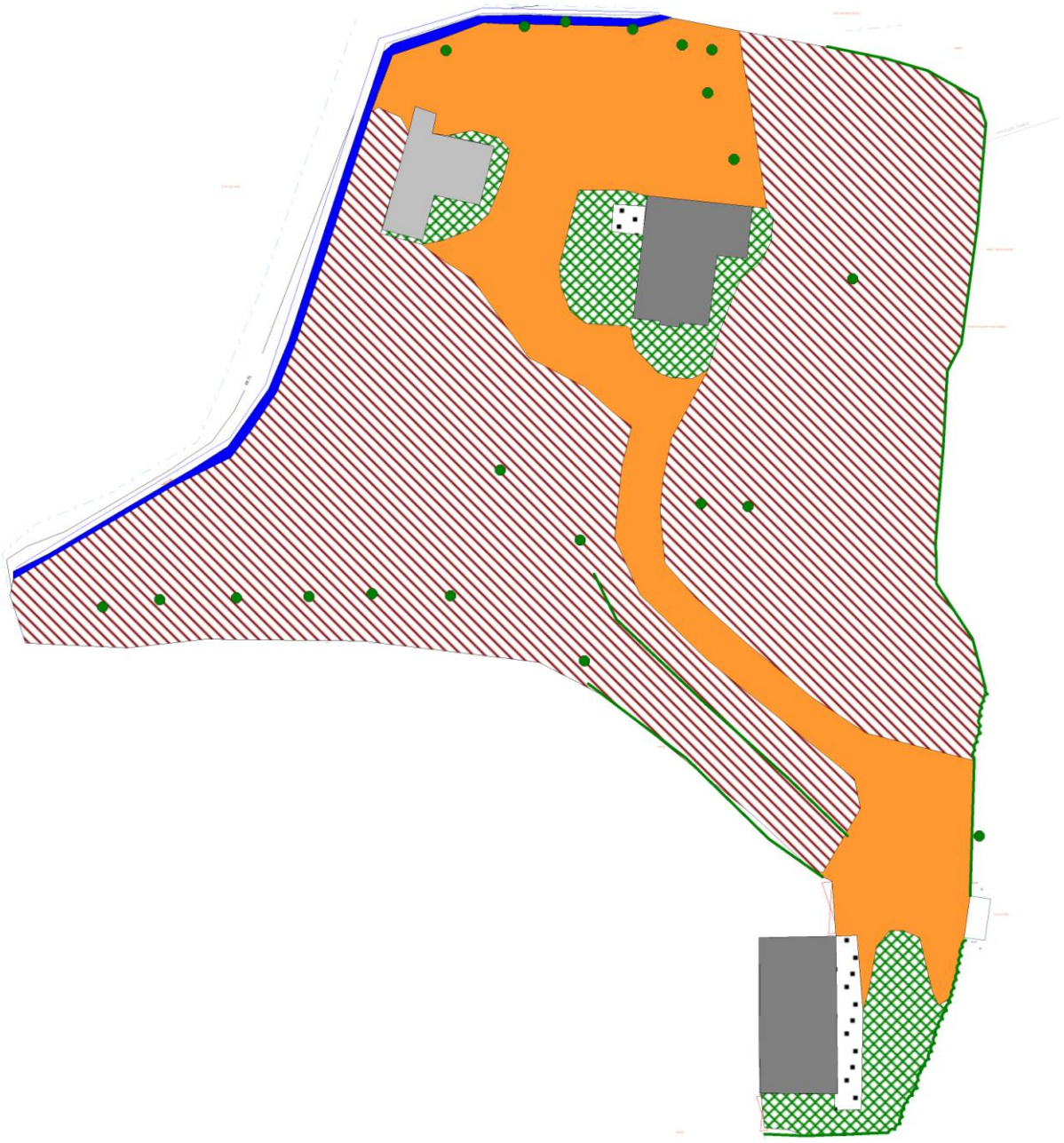
KEY

- Bare Ground
- Continuous Scrub
- Dilapidated Existing Building
- Existing Building
- Flowing Water
- Neutral Grassland
- Tall, Ruderal Herb
- Species-poor Intact Hedgerow
- Tree

Phase 1 Habitat Map

Gwern-y-to, Wrexham

Drawn by: RJH
Date: 19/12/14

NOT TO SCALE

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