

**SITE OFF UPPER DENBIGH ROAD, ST  
ASAPH, DENBIGHSHIRE**

**PRELIMINARY ECOLOGICAL APPRAISAL**

**(SEPTEMBER 2021)**

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<b>Revised</b>	<b>-</b>

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## EXECUTIVE SUMMARY

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- Cheshire Ecological Services (CES), the commercial arm of Cheshire Wildlife Trust, was commissioned to conduct a Preliminary Ecological Appraisal of an area of land off Upper Denbigh Road, St Asaph, Denbighshire, where a residential development is proposed.
- The survey was conducted on 11<sup>th</sup> August 2021 by Kyle Mellish BSc ACIEEM. The purpose was to gain baseline ecological information of the site in order to assess its current status, to identify any ecological constraints to development, and to recommend further survey if necessary.
- The proposed development site totals approximately 4.8 hectares and is located to the south of the village of St Asaph, within Denbighshire, Wales.
- At the time of survey, the site comprised predominantly of improved and semi-improved grassland fields, with a farmhouse and outbuildings surrounded by hardstanding and amenity grassland gardens in the centre of the site. A pond was also present in the west of the site and hedgerows and a tree-line were present on site and field boundaries.
- As part of the desk-based study, the Local Biodiversity Recording Centre – The North Wales Environmental Information Service (Cofnod) - provided records of protected and Priority species occurring within 2km of the proposed development site, within the past twenty years.
- Features of ecological importance identified during the survey included semi-improved grassland, species-rich hedgerows (two of which likely qualify as Important hedgerows), a tree-line, a pond and scattered mature trees. It is recommended that where practicable, these features be retained and sufficiently protected during development works.
- The habitat composition of the site was considered to have potential to support legally protected wildlife species, including bats, amphibians (including GCN), common reptile species, badger, hedgehog and nesting birds.
- It is considered appropriate to recommend further survey effort in respect of bats, GCN and reptiles to inform the development proposal and planning application.
- It is also recommended that proposed tree losses be considered and avoided if possible, in respect of scattered trees but particularly treeline TL01. Should the loss of the trees be unavoidable within site designs, surveys will be required to determine the use of the treeline by commuting bats, and therefore options for mitigation/compensation.
- Recommendations are also made to provide positive enhancements in respect of protected species on site, such as bats and nesting birds.

## 1.0 INTRODUCTION

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- 1.1 Cheshire Ecological Services (CES), the commercial division of Cheshire Wildlife Trust, was commissioned to conduct a Preliminary Ecological Appraisal (PEA) of an area of land off Upper Denbigh Road, St Asaph, Denbighshire, where a residential development is proposed.
- 1.2 The PEA consisted of a desk-top study and an Extended Phase 1 Habitat Survey of the site. The purpose of the appraisal was to gather baseline ecological information of the site in order to assess its current status, to identify any ecological constraints to development that may currently be associated with the site and/or the surrounding land, and to recommend further survey if necessary.
- 1.3 The survey was conducted by CES Consultant Ecologist Kyle Mellish BSc (Hons) ACIEEM on 11<sup>th</sup> August 2021.
- 1.4 Weather conditions at the time of survey were overcast, with intermittent drizzle and a temperature of 18 °C

## 2.0 SITE DESCRIPTION

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- 2.1 The survey was centred on OS grid reference SJ 04409 73556.
- 2.2 The area of land requested to be surveyed total approximately 4.83 hectares and is hereafter referred to as the 'site'. The site is located to the south of the small cathedral city of St Asaph, in North Wales.
- 2.3 At the time of survey, the site comprised predominantly of improved and semi-improved grassland fields, with a farmhouse and outbuildings surrounded by hardstanding and amenity grassland gardens in the centre of the site. A pond was also present in the west of the site and hedgerows and a tree-line were present on site and field boundaries.
- 2.4 The site was bounded to the north by a new development of residential properties and to the east by a woodland belt, which likely occupies the site of an old railway line. To the south were agricultural fields, and to the west was Upper Denbigh Road (A525), beyond which are further agricultural fields.
- 2.5 Land-use in the wider area comprised of agricultural pasture fields and agricultural buildings (refer to Appendix A - site location plan) and the cathedral city of St Asaph to the North. St Asaph (and the site) sits in a valley between the River Elwy and River Clwyd, the confluence of which is located approximately 1.6km north of the city.

### 3.0 SURVEY METHODS

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3.1 The PEA comprises of a desk-based study and field survey.

#### **Desk-based study**

3.2 The desk-based study comprised consultation with the following consultees:

- Defra's online mapping facility 'MAGIC'
- Cofnod - the local Biodiversity Information Service for North Wales
- Ordnance Survey - OS mapping of the local and wider area

3.3 The desk-based study comprised consultation with Defra's online mapping facility 'MAGIC' to search for statutorily designated nature conservation sites within a 5km radius of the site.

3.4 Cofnod was requested to provide information on non-statutory nature conservation sites and protected, Priority habitats and Priority species within a 2km radius from the site boundary, within the past 20 years.

3.5 Ordnance Survey mapping of the local area was reviewed for the presence of habitats and features of potential ecological relevance to this survey, such as ponds.

#### **Extended Phase 1 Habitat Survey**

3.6 This survey involved the mapping of various habitat types on the site in addition to any habitat features and botanical species of conservation importance. A thorough walk-over survey was undertaken of the site. The methodology for this survey followed that described by the Joint Nature Conservation Committee (JNCC, 2010).

3.7 Priority habitats and species, for which there is a national or local Biodiversity Action Plan (BAP) and those listed under Section 7 of the Environment Wales Act (2016), were recorded as such where present. The UK BAP list of Priority habitats and species has now been superseded by the Section 7 list, however, as it is still widely recognised the two should be considered interchangeable. Priority habitats and species are of material consideration to planning.

3.8 Preliminary searches were also carried out for legally protected and Priority species such as bats, reptiles and great crested newts (GCN) that may potentially use the site. Scientific names and the national status of vegetative species recorded follow Stace (2019). Scientific and common names stated in the text are also presented in Appendix C.

3.9 The abundance of all recorded botanical species identified in potential Priority habitats was assessed using the DAFOR scale, as described by Sutherland (1996). The DAFOR scale is a broad interpretive assessment whereby the surveyor assigns one of the following categories to the abundance of the species; Dominant, Abundant, Frequent, Occasional or Rare.

- 3.10 In addition, a badger walkover survey was carried out for the site and all areas within 30m (where access was available), under guidance provided within The Mammal Society's 'Surveying Badgers' (The Mammal Society, 1989).
- 3.11 All buildings and trees with features such as holes, cracks and crevices were assessed for their suitability to support roosting bats, and were categorised in accordance with the Bat Conservation Trust's (BCT) 'Bat Survey: Good Practice Guidelines', (BCT, 2016). The guidelines outline the initial survey requirements of all buildings and trees, and where necessary, detail the required further actions and likely mitigation. Buildings/Trees were allocated the following categories (based on an assessment of potential roost features when viewed from the ground), as contained in Table 1 below.

Table 1: Bat Roost Classification Guidelines

Suitability	Description – Roosting habitats	Commuting and foraging habitats
<b>Negligible</b>	Buildings/trees with negligible habitat features to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats,
<b>Low</b>	Buildings/trees with one of more potential roost sites that could be used by individual bats opportunistically, although they are unlikely to be suitable for maternity or hibernation roosting. This category also includes buildings/trees of sufficient size and age that elevated inspection may reveal features not previously identified, or features seen that have very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as gappy hedgerows 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.
<b>Moderate</b>	Buildings/trees with one or more potential roost sites to support roosting bats but unlikely to support a roost of high conservation status (with respect to roost type only).	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.
<b>High</b>	Buildings/trees with one of 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.	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



		<p>foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>
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3.12 All on-site ponds were subject to a GCN habitat suitability index (HSI) assessment. The HSI score is a measure of habitat suitability and can be used to help determine the likelihood of GCN presence within a pond. The HSI score is determined by assessing 10 factors, including: the likely presence of fish, water quality and vegetation cover. A calculation is then performed to give each pond a score between 0 and 1. This score can then be used to categorise GCN pond habitat with 0 indicating unsuitable and 1 optimal habitat. However, the system is not sufficiently precise to allow the conclusion that any particular pond with a high score will support newts, or that any pond with a low score will not do so.

### Survey Limitations

3.13 The observations made during this survey have been used to assess the presence, potential presence or likely absence of protected and Priority species within the proposed area of works, and to recommend further actions where required. It should however be noted that this survey serves as a single visit representing a 'snap-shot in time' whereby only the species present at the time of survey were recorded.

3.14 Positive evidence of species that use this site periodically or are in growth at different times of the year may not have been recorded. It is important to consider that the absence of a species from a particular survey does not necessarily indicate the absence (or continued absence) of that species from the area.

## 4.0 RESULTS

### Desk-based Study

- 4.1 Defra's online mapping facility 'MAGIC' indicates that there are five statutorily designated nature conservation sites present within 5km of the site:
- Coedwigoedd Dyffryn Elwy / Elwy Valley Woods (SAC) located 3.1km to the south west of the site.
  - Coedydd Ac Ogofau Elwy A Meirchion Site of Special Scientific Interest (SSSI) located 3.1km to the south west of the site.
  - Ffynnon Beuno and Cae Gwyn Caves SSSI located 3.9km to the south east of the site.
  - Mwyngloddfa Pennant SSSI located 4.3km to the north east of the site.
  - Moel Hiraddug A Bryn Gop SSSI located 4.4km to the north east of the site.
- 4.2 Cofnod indicates that there are eight Local Wildlife Sites (LWS) present within 2km of the site:
- Coed Fron and Eryl Hall Wood located 0.6km west of the site
  - Nant y Waen located 0.7km east of the site
  - Fachwen Dingle located 0.8km east of the site
  - Rickfield Wood/Coed Ddol Fawr/Coed Llanddol/Maes Elwy Covert (R Elwy Woods) located 0.8 km south of the site
  - Mount Road Churchyard, St Asaph located 1km north west of the site
  - Ty'n-y-Coed Rough (2 areas) located 1.4km south west of the site
  - Ty Isa and Pen Palmant valley located 1.7km north east of the site
  - Vale Of Clwyd Grassland located 1.7km north of the site
- 4.3 Cofnod also indicated the presence of a 65 ancient woodland sites within 2km of the site, most of which are concurrent with Local Wildlife Sites. The closest ancient woodland area to the site was located 70m to the south-west, within the grounds of the Bryn Asaph Manor House.
- 4.4 Cofnod highlighted the presence of the following protected and Priority species occurring within approximately 2km of the proposed development site since 2001, as detailed in Table 2 below.

**Table 2: Protected & Priority Species Records within 2km of the site since 2001.**

Scientific name	Common name	Designations
<b>Herpetofauna</b>		
<i>Anguis fragilis</i>	Slow-worm	EWAS7, WCA5, LBAP
<i>Lissotriton helveticus</i>	Palmate Newt	WCA5, LBAP
<i>Lissotriton vulgaris</i>	Smooth Newt	WCA5, LBAP
<i>Natrix helvetica</i>	Grass Snake	EWAS7, WCA5, LBAP
<i>Triturus cristatus</i>	Great Crested Newt	HabRegs2, EWAS7, WCA5, LBAP
<i>Zootoca vivipara</i>	Common Lizard	EWAS7, WCA5, LBAP
<b>Birds</b>		
<i>Acanthis cabaret</i>	Lesser Redpoll	EWAS7, UKBR, WBR, LBAP
<i>Accipiter gentilis</i>	Goshawk	WCA1, WCA9

Scientific name	Common name	Designations
<i>Aegithalos caudatus</i>	Long-tailed Tit	WBA
<i>Alauda arvensis</i>	Skylark	EWAS7, UKBR, WBA, LBAP
<i>Anthus pratensis</i>	Meadow Pipit	UKBA, WBA
<i>Apus apus</i>	Swift	UKBA, WBA
<i>Cuculus canorus</i>	Cuckoo	EWAS7, UKBR, WBR, LBAP
<i>Delichon urbicum</i>	House Martin	UKBA, WBA
<i>Emberiza schoeniclus</i>	Reed Bunting	EWAS7, UKBA, WBA, LBAP
<i>Falco columbarius</i>	Merlin	UKBR, WBA, WCA1, LBAP
<i>Falco peregrinus</i>	Peregrine	WCA1
<i>Falco subbuteo</i>	Hobby	WBA, WCA1
<i>Falco tinnunculus</i>	Kestrel	EWAS7, UKBA, WBR, LBAP
<i>Fringilla montifringilla</i>	Brambling	WCA1
<i>Hirundo rustica</i>	Swallow	WBA
<i>Linaria cannabina</i>	Linnet	EWAS7, UKBR, WBR, LBAP
<i>Loxia curvirostra</i>	Common Crossbill	WCA1
<i>Milvus milvus</i>	Red Kite	WBA, WCA1, WCA9
<i>Muscicapa striata</i>	Spotted Flycatcher	EWAS7, UKBR, LBAP
<i>Oenanthe oenanthe</i>	Wheatear	WBA
<i>Passer domesticus</i>	House Sparrow	EWAS7, UKBR, WBA
<i>Passer montanus</i>	Tree Sparrow	EWAS7, UKBR, WBR, LBAP
<i>Periparus ater</i>	Coal Tit	WBA
<i>Phoenicurus phoenicurus</i>	Redstart	UKBA, WBA
<i>Phylloscopus trochilus</i>	Willow Warbler	UKBA, WBR
<i>Picus viridis</i>	Green Woodpecker	WBA, LBAP
<i>Poecile palustris</i>	Marsh Tit	EWAS7, UKBR, WBR, LBAP
<i>Prunella modularis</i>	Dunnock	EWAS7, UKBA
<i>Pyrrhula pyrrhula</i>	Bullfinch	EWAS7, UKBA, WBR, LBAP
<i>Regulus regulus</i>	Goldcrest	WBA
<i>Sturnus vulgaris</i>	Starling	EWAS7, UKBR, WBR
<i>Sylvia borin</i>	Garden Warbler	WBA
<i>Sylvia communis</i>	Whitethroat	WBA
<i>Sylvia curruca</i>	Lesser Whitethroat	LBAP
<i>Turdus iliacus</i>	Redwing	UKBR, WBA, WCA1
<i>Turdus philomelos</i>	Song Thrush	EWAS7, UKBR, WBA, LBAP
<i>Turdus pilaris</i>	Fieldfare	UKBR, WBA, WCA1
<i>Tyto alba</i>	Barn Owl	WBA, WCA1, WCA9, LBAP
<i>Vanellus vanellus</i>	Lapwing	EWAS7, UKBR, WBR, LBAP
<b>Mammals</b>		
<i>Erinaceus europaeus</i>	Hedgehog	EWAS7,
<i>Lepus europaeus</i>	Hare	EWAS7, LBAP
<i>Meles meles</i>	Badger	PBA, LBAP
<i>Myotis</i>	Myotis Bat Species	HabRegs2, WCA5, LBAP
<i>Nyctalus noctula</i>	Noctule Bat	HabRegs2, EWAS7, WCA5, LBAP
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	HabRegs2, EWAS7, WCA5, LBAP
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	HabRegs2, EWAS7, WCA5, LBAP
<i>Plecotus auritus</i>	Brown Long-eared Bat	HabRegs2, EWAS7, WCA5, LBAP
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	HabRegs2, EWAS7, WCA5, LBAP

Scientific name	Common name	Designations
<b><i>Invasive Species</i></b>		
<i>Cotoneaster simonsii</i>	Himalayan cotoneaster	WCA9
<b><i>Invertebrates</i></b>		
<i>Satyrium w-album</i>	White letter hairstreak	EWAS7, WCA5

Note: All species names and designations provided by Cofnod.

### Designations key:

EWAS7 – Environment Wales Act, 2016 – Section 7  
 WCA1 – Wildlife & Countryside Act, 1981 – Schedule 1  
 WCA5 – Wildlife & Countryside Act, 1981 – Schedule 5  
 WCA9 – Wildlife & Countryside Act, 1981 – Schedule 9  
 HabRegs2 – Conservation (Habitats and Species) Regulations 2017 – Schedule 2  
 LBAP – Local Biodiversity Action Plan Species  
 UKBR – UK Birds of Conservation Concern (RSPB) - Red  
 UKBA – UK Birds of Conservation Concern (RSPB) – Amber  
 WBR – Welsh Birds of Conservation Concern – Red  
 WBA – Welsh Birds of Conservation Concern – Amber  
 PBA – Protection of Badgers Act 1992

- 4.5 A number of other species records were provided but have not been included in this report as it is considered highly unlikely that they would be associated with the proposed development site. For example, numerous records of wading and riverine birds were provided. Given the habitat composition of the site and the nature of the proposed works, it is considered highly unlikely that the proposed development would impact upon such species.
- 4.6 With the exception of ancient woodland as described earlier, no other Priority Habitats were highlighted by Cofnod within 1km of the site.

### Fieldwork

- 4.7 Features of interest recorded on the site during this survey are described in the Target Notes (TN) below. All numbered Target Notes correspond with the Phase 1 Habitat Map (Appendix B). Species lists for each area and photographic plates are presented within Appendices C and D respectively.

#### Target Notes

- TN1 – Pond (Plates 1 & 2)
- TN2 – Tall ruderal herbs (Plate 3)
- TN3 – Buildings and hardstanding (Plates 4-14)
- TN4 – Other habitat - dog/horse exercise area (Plate 15)
- TN5 – Badger latrines (Plate 16)
- TN6 – Trees with Low Bat Roost Potential
- TN7 – Trees with Moderate Bat Roost Potential

TN8 – Trees with High Bat Roost Potential (Plates 17-20 for examples of trees with low, moderate and high bat potential)

## 5.0 DISCUSSION

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### Designated Sites & Priority Habitats

#### Statutory Designated Sites

- 5.1 The closest statutorily designated sites are Coedwigoedd Dyffryn Elwy / Elwy Valley Woods SAC and Coedydd Ac Ogofau Elwy A Meirchion SSSI (the two designations coincide over the same area). The primary reason for the SAC selection is due to the Tilio-Acerion forests of slopes, screes and ravines Annexe 1 habitat that it contains. The site is particularly notable for its excellent woodland ground flora and the presence of rare bryophytes. The SSSI citation notes the site to be designated for its semi-natural broadleaved woodland, rare flowering plant assemblage, its bryophyte assemblage and geological and palaeontological interest of caves.
- 5.2 Given that the proposed development site is over 3km from the SAC & SSSI, that it does not contain any woodland and does not possess habitat connections to the site, it is considered unlikely that the proposed development would adversely affect the status of these important sites.
- 5.3 Additionally, due to the distance and lack of habitat connectivity, it is also considered that the proposals would be very unlikely to affect other statutorily designated sites listed within Section 4. However, there remains the possibility that new residential development can result in increased visitor pressures to nature conservation sites where public access is permitted.

#### Non-Statutory Designated Sites

- 5.4 The closest non-statutorily designated site to the proposed development site is Coed Fron and Eryl Hall Wood LWS, located 0.6km west of the site. The site is designated for its Ancient woodland with alder (*Alnus glutinosa*), ash (*Fraxinus excelsior*), oak (*Quercus sp.*) and birch (*Betula sp.*) communities and predominantly surrounds a caravan site.
- 5.5 The proposed development site is a significant distance from the site and possesses no woodland habitats or habitat connectivity to the LWS. As such, it is considered unlikely that the proposed development would adversely affect the status of the site, which does not appear to be publically accessible. Likewise, all other LWS sites are located even further from the site with no habitat connectivity, and are unlikely to be impacted by the proposed development.

#### Priority Habitats

- 5.6 The only Priority habitat type identified by Cofnod within 2km of the site was ancient woodland, which was widespread in the area with 65 ancient woodland sites present within 2km of the site. The proposed development site does not border any areas of ancient woodland (the closest being 70m south-west of site) and contains no areas of woodland on site which may form habitat links to other ancient woodland areas. As such, no impacts on ancient woodland sites are likely to result from the development.

## Habitats

### Pond (Plates 1 & 2 and TN1)

- 5.7 A single pond was present within a grassland field in the north-west of site. The pond was approximately 8m in diameter and surrounded by a floating vegetative mat of grasses, with a dense covering of aquatic plants dominated by duckweed (*Lemna sp.*) and pondweed (*Potamogeton sp.*) within the ponds centre. The pond was bordered by a small ring of uncut tall ruderal vegetation and partially shaded by two large pedunculate oaks on the pond edge.
- 5.8 Ponds support a wide variety of species, particularly amphibians and invertebrates, and are a habitat of principal importance under Section 7 of the Environment Wales Act (2016). A great crested newt HSI assessment of the pond is available within the species section of this report.

### Buildings, Hardstanding & Amenity Grassland (Plates 4-14 and TN3)

- 5.9 Several buildings are present in the centre of the site constituting a farmhouse, summerhouse and accompanying outbuildings. The buildings are surrounded by hardstanding, a gravel driveway and a small area of amenity grassland constituting the garden of the farmhouse. Buildings 1 & 2 constituted agricultural outbuildings, Building 3 constituted the main farmhouse and Building 4 was a small summerhouse. The buildings, hardstanding and amenity grassland were of negligible ecological value, though their capacity to support protected species is considered within the species section of this report.

### Semi-improved Grassland (Plates 21-23)

- 5.10 The majority of the western area of site consisted of semi-improved grassland fields of low-moderate botanical diversity. The sward was quite tall in the northernmost field suggesting a recent lack of intensive management, and of low/moderate length in the southern field, and evidently maintained by sheep grazing at moderate stocking densities. Yorkshire fog (*Holcus lanatus*) and perennial rye-grass (*Lolium perenne*) were the most abundant grasses, but fine-leaved grasses including sweet vernal grass (*Anthoxanthum odoratum*), common bent (*Agrostis capillaris*), crested dog's-tail (*Cynosurus cristatus*) and smooth meadow grass (*Poa pratensis*) were frequently encountered within the sward. The hemi-parasite red bartsia (*Odontites vernus*) was also frequently encountered within the sward, as well as other flowering plants in lower quantities including meadow vetchling (*Lathyrus pratensis*), sticky mouse-ear (*Cerastium glomeratum*), ribwort plantain (*Plantago lanceolata*) and yarrow (*Achillea millefolium*).
- 5.11 The low numbers of injurious weeds within the sward combined with moderate diversity of herbaceous species and fine-leaved grasses suggest that the underlying soils have been subject to minimal/low levels of agricultural improvement.

### Improved Grassland (Plates 3 & 24-26)

- 5.12 A large improved grassland field was present in the east of the site, along with a smaller area to the north of the farmhouse. The sward within the smaller field was short-grazed by sheep and partially shaded by a large oak, whereas the sward within the larger field

was long and appeared predominantly unmanaged – though sheep were present at very low stocking densities. The sward was species-poor and dominated by coarse grasses such as Yorkshire fog and perennial rye grass, with cock's foot (*Dactylis glomerata*) and false oat-grass (*Arrhenatherum elatius*) also occasionally present. Injurious weeds such as broadleaved dock (*Rumex obtusifolius*), spear (*Cirsium vulgare*) and creeping thistle (*Cirsium arvense*) and ragwort (*Senecio jacobaea*) were also frequently encountered within the sward, with few flowering herbs present such as red bartsia, buttercup (*Ranunculus*) and clover (*Trifolium*) species.

#### Treeline TL01 & Scattered mature (Plates 27 & 28)

- 5.13 A line of mature pedunculate oak (*Quercus robur*) trees was present along an internal field boundary in the west of the site. The oaks were predominantly well-spaced, with little understorey along much of its length, though sections with hedgerow species were present at both eastern and western ends of the line. Hedgerow species present consisted of hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*), with an understorey largely consisting of bramble (*Rubus fruticosus agg.*) and ivy (*Hedera helix*) in these areas.
- 5.14 Though they predominantly lack understorey vegetation, the treeline of mature oaks offers valuable foraging and shelter habitat, and provides a habitat corridor across the site. Treelines fall within classification criteria as a type of hedgerow, and as it consists of one or more woody species and the gaps present are less than 20m, this treeline would therefore fall within the hedgerow habitat of principal importance under the Environment Wales Act. Further information on the classification of hedgerow priority habitat is given within the hedgerow section below.
- 5.15 Though the majority of trees were associated with tree-line or hedgerow features, small numbers of trees were present scattered around site. All scattered trees comprised mature pedunculate oak trees.

#### Hedgerows (Plates 29-34)

- 5.16 Three hedgerows were present on site; as described below:
- Hedgerow H1 (Plates 29 & 30) – consisted of a species-rich intact hedgerow present along the southern boundary of the south-west field. The hedgerow had an average height of 4m and an average width of 3m. The predominate woody species was blackthorn, but common hawthorn, pedunculate oak (mature trees and saplings) dog rose (*Rosa canina*), sycamore (*Acer pseudoplatanus*), ash, hazel (*Corylus avellana*) and elm (*Ulmus sp*) were also present in good numbers, with individuals of field maple (*Acer campestre*), midland hawthorn (*Crataegus laevigata*) and yew (*Taxus Baccata*). The understorey was dominated by ivy, with bramble, creeping thistle and common nettle (*Urtica dioica*) frequent, and meadowsweet (*Filipendula Ulmaria*), common hogweed (*Heracleum sphondylium*) and meadow vetchling also occasionally present.
  - Hedgerow H2 (Plates 31 & 32) – consisted of a species-rich intact hedgerow along the western boundary of the north-west field, bordering Upper Denbigh Road. The hedgerow had an average height of 4m and an average width of 3.5m. Blackthorn was dominant, though hawthorn was abundant, with frequent dog



rose and hazel and occasional pedunculate oak trees, holly (*Ilex aquifolium*), ash saplings and crab apple (*Malus sylvestris*) present. Understorey vegetation was dominated by bramble, with ivy abundant and common nettle and hogweed also frequent.

- Hedgerow H3 (Plates 33 & 34) – consisted of a species-poor intact hedgerow on the eastern boundary of the north-west field, bordering the neighbouring development. The hedgerow had an average height of 5m and an average width of 6m, the width primarily associated with young self-seeded blackthorn saplings. Blackthorn was the dominant species, with frequent mature pedunculate oak trees and small numbers of ash and pedunculate oak saplings. The understorey was dominated by bramble, with common nettle and ivy frequent and broadleaved dock and common thistle occasionally present.

5.17 It is therefore concluded that Hedgerows H1 & H2 could potentially qualify as Important under the Wildlife and Landscape criteria of the Hedgerow Regulations, 1997, due to their diversity of woody species and/or associated features. Therefore, a detailed hedgerow assessment will be required if these hedgerows or their associated features are to be affected by the proposed development.

5.18 Hedgerow H3 is unlikely qualify as Important under the Wildlife and Landscape criteria of the Hedgerow Regulations, 1997 because of its lack of woody species. It should however be noted that hedgerows over thirty years old can be protected by the Regulations for a number of other factors such as historical and archaeological interest. It is not the place of this ecological report to assess such other factors.

5.19 A hedgerow assessment differs from the phase 1 hedgerow classification as it is far more detailed. It assesses each 30m stretch of hedgerow, looking at species diversity, associated features and management regimes. Even if the further surveys determine that the hedgerows are not ecologically important (under the Regulations), it is recommended that they be retained wherever possible.

5.20 Hedgerows comprising 80% or more of locally native woody species qualify as Priority habitat and those which meet certain criteria are protected under the Hedgerow Regulations 1997. As such Hedgerows H1, H2 and H3 (as well as tree-line TL01) would all qualify as hedgerow Priority habitat.

#### Habitats adjacent to site (Plates 35-36)

5.21 The site is bordered by Upper Denbigh Road to the west, which is a busy A road and to the north by a new residential development and St Kentigern hospice, which effectively form the current southward extent of St Asaph city. A reasonably well-used access track borders the south of the site beyond which are further improved pasture fields.

5.22 The west of the site borders a linear strip of woodland, running roughly north to south, thought to be a former railway line. The woodland is separated from the field by post and wire fencing and is thought likely to have be planted, due to the similar age structure of the trees and dominance of aspen, which self-seeds readily in the north of the field. The woodland is dominated by trees including aspen (*Populus tremula*), pedunculate oak, ash and a sycamore in the north, but becomes shrubbier in the south with hawthorn

and other shrubs becoming dominant. While the understorey was dominated by ivy, the understorey species were moderately diverse, with plants such as enchanter's nightshade (*Circaea lutetiana*), wood dock (*Rumex sanguineus*), St John's wort species (*Hypericum*) and a variety of fern species (*Dryopteris sp.*) observed.

5.23 The woodland provides suitable habitats for a range of species, but is particularly important as a commuting corridor within the local landscape, particularly for mammals, such as bats.

### **Features of Ecological Importance**

5.24 The following features were considered to be of ecological importance at the site level or higher:

- Pond
- Semi-improved grassland
- Tree-line (TL01)
- All hedgerows (H1, H2 & H3)
- Scattered Mature Trees

5.25 It is recommended that where practicable, the above features of ecological importance should be retained and sufficiently protected during development works.

5.26 In addition, the woodland adjacent to the eastern site boundary is considered to be of local ecological importance. The site proposals should therefore ensure that the woodland is not subject to any adverse effects during development, such as damage to vegetation, excessive noise or dust. An undeveloped buffer of at least 10m should ideally be implemented.

5.27 The habitat composition of the site has potential to support legally protected and Priority wildlife species. It was not within the scope of this survey to carry out detailed searches for protected species (with the exception of badgers), although the potential for the study site to support the following species is discussed below:

- Badger
- Barn owl
- Bats
- Birds
- Brown Hare
- Great crested newt and other amphibians
- Hedgehog
- Invasive species
- Invertebrates
- Reptiles

Legislation relating to each species discussed in this report is presented in Appendix E – Legislation. No other legally protected species are considered likely to be associated

with the proposed development site due to a lack of suitable habitat on, and surrounding the site.

#### Badger

- 5.28 Badgers and their setts are protected under British law. Therefore, surveys are required to check for the presence of badgers or their setts if they are likely to be disturbed for any reason. Statutory guidance indicates that a licence may be required if potentially disturbing works are to take place within 30m of a badger sett.
- 5.29 Cofnod provided details of badgers occurring within 1km of the proposed development site since 2001, including badger setts, though no sett records were returned on or adjacent to the site.
- 5.30 A badger walkover survey was conducted of all habitats on site and within 30m of the site boundary where observations could be made.. The survey found no badger setts on or within 30m of the site, but did observe two badger latrines with several dung pits and fresh dung within the west of site (see TN5 in Appendix B for locations and Plate 15). Mammals paths were also observed, spread over most of the site. Whilst they could not be positively confirmed to have been caused by badgers, the presence of badger latrines makes this likely.
- 5.31 Given the presence of badger latrines and likely badger paths, it is reasonable to conclude that badgers use the site on a regular basis. Development of the site would result in some loss of foraging habitat for badger, but given the apparent availability of other suitable habitat in the wider area and retention and provision of green spaces on site, the effect of the development on the wider badger population is thought to be low level, providing that suitable badger commuting routes are maintained across the site post-development.
- 5.32 Though no setts were encountered on site during the survey, badgers are a highly mobile species and readily able to dig new setts during most of the year. As such, it is recommended that the planning application be supported by an up-to-date badger survey that is undertaken within 12 months of the date of submission (if the survey undertaken as part of this assessment is no longer within this period). Providing that badger setts remains to be absent from the site and within 30m of it, then an updated badger survey should also be undertaken immediately prior (within 1 month) to the commencement of development at the site. Should a badger sett be identified on site or within 30m of the site, works should cease and a suitably experienced ecologist conducted to re-survey the site. Works would only be able to proceed given the production of an appropriate badger mitigation strategy, in conjunction with a badger disturbance license from Natural Resources Wales (if required).
- 5.33 Given that badgers are present in the area, construction activities associated with the proposed development have the potential to kill, injure or trap badgers, particularly within excavations. The following Reasonable Avoidance Measures (RAMs) should there be enacted during construction of the site:
- 5.34 The badger RAMs detailed below should be implemented during development works and may be secured by means of planning condition(s):

**Badger Reasonable Avoidance Measures (RAMs)**

- a) Prior to commencing development at the site, a suitably experienced consultant ecologist should be appointed by the developer to ensure that the badger RAMs are successfully implemented.
- b) As badgers are a highly mobile species and can quickly create new setts, a pre-commencement check of the site should be undertaken by the appointed ecologist no more than one month prior to the commencement of development activities at the site, in order to ensure the status of badgers at the site has not changed and that no setts are present on or within 30m of the working area.
- c) Wherever practicable, excavations should be made good to ground level at the earliest opportunity so as to remove any hazard to badgers or other wildlife that may inadvertently stray on to the construction site.
- d) Should any excavations be required to be left open at night, they should be covered with boards or similar. Alternatively, for shallower excavations that cannot easily be covered, a means of escape (e.g. a wooden ramp or plywood, etc.) should be provided.
- e) **If evidence of badger sett building activity is recorded on or adjacent the working area (within 30m) during the development works, work should cease and CES be contacted for advice.**

**Barn owl**

- 5.35 Barn owls receive special protection under Schedule 1 of the Wildlife & Countryside Act, 1981 (as amended). In addition to the protection afforded to all wild birds under Section 1 of the Act, species listed on Schedule 1 also receive special legal protection when breeding; making it an offence to intentionally or recklessly disturb any wild barn owl whilst it is at or near a nest containing eggs or young, or disturb the dependent young of such a bird. Barn owls nest and roost in buildings and within deep cavities in trees, and will readily utilise nest boxes where available.
- 5.36 Cofnod provided details of Barn Owl occurring within around 2km of the site since 2001.
- 5.37 Habitats on site including the tall semi-improved and improved grasslands provide suitable foraging habitats for barn owl. Development of the site would therefore result in loss of potential foraging habitat for barn owls, though given the presence of similar and more suitable foraging habitats in the local area, the potential effects on the local barn owl population are considered to be of a low level.
- 5.38 The buildings and trees on site were also considered for their potential to provide roosting locations for barn owl. None of the buildings on site were considered suitable for roosting or nesting barn owl. A single tree on site (TN8 a pedunculate oak) was considered to possess suitable roost features for barn owls, though no observations of

barn owl or signs such as barn owl pellets were found around the tree. This tree is to be lost as part of the proposed development

- 5.39 It is therefore recommended that the tree (as identified by TN8, Plate 18) be assessed via an aerial climbing survey for the signs of use by barn owl and the suitability of the feature (a large partial limb tear-out) for this species, which has been commissioned. Results of the inspection would be detailed within a separate combined bat and barn owl inspection report, as well as survey or mitigation recommendations should signs of barn owl be found. If the feature is suitable for barn owl but no signs of barn owl are found, a pre-commencement check of the tree should be carried out by an appropriately licensed ecologist prior to its felling. Consideration should however be given to retaining this tree within the site layout, if at all possible.

Bats

- 5.40 All British bat species are protected under both European and British law. Therefore, surveys are required to check for their presence in areas where bats or their roosts are likely to be disturbed for any reason.
- 5.41 Bats roost in buildings and mature trees, where they rest, give birth, raise young and hibernate. Buildings provide a choice of safe, dry places and can present a whole range of potential roost sites such as within wall cavities, eaves or roofs.
- 5.42 Some bat species rely exclusively on trees for roost sites; others use them for only part of the year. The importance of trees to bats depends on species, season and foraging behaviour. Even in winter, deep cavities can provide protection against bad weather and fluctuations in temperature. Furthermore, trees and hedgerows, especially native ones, can host many species of insects, which are food for bats, and can also aid bat navigation.
- 5.43 Cofnod provided twenty-three bat records within around 2km of site since 2001, comprising soprano pipistrelle, common pipistrelle, pipistrelle species, brown long-eared bat, myotis bat species, noctule, lesser horseshoe and unknown bats species. Several records of roosts were returned, but no roosts were noted on site or within adjacent land parcels.

Trees

- 5.44 A ground level roost assessment was conducted of all trees proposed to be lost as part of the proposed development (totalling six trees), the results of which are detailed in Table 3 below. The location of the trees is available in Appendix B, with example plates available in Appendix D (Plates 17-20). All trees assessed were mature pedunculate oaks. Ground level roost assessments were not carried out for any other trees on site, and will be required should further loss of trees be necessary as part of the proposed development.

Table 3: Potential Features of Trees to be Lost to Development

Tree Number (consistent with Tree	Tree description	Bat Potential Roost Features	Classification of Tree

Removal Plan)			
T8	Large mature oak on field boundary with large central limb tear out and dead wood on ground.	<ul style="list-style-type: none"> <li>Large partial tear-out in centre of tree at 6m with multiple large downward-facing cavities.</li> </ul>	High (TN8)
T10	Large mature oak on east side of pond, with decaying upper branches.	<ul style="list-style-type: none"> <li>Cavity in upward facing broken branch at 4m on east side.</li> <li>Knot hole at 3m on east side appears to lead into cavity, though entrance is small.</li> </ul>	Moderate (TN7)
T11	Moderate-sized mature oak on west side of pond.	<ul style="list-style-type: none"> <li>Rot hole on south side of trunk, mostly covered by spider's webs though a cavity may be possible behind this.</li> <li>Of sufficient size and age to possess potential roost features, that may be able to be missed from ground level.</li> </ul>	Low (TN6)
T17	Early mature gnarled oak in tree-line. Previously damaged, with epicormic growth.	<ul style="list-style-type: none"> <li>Split branch with cavity at 2m on west side.</li> <li>Decayed former tear out forming possible cavity, south side at 2m.</li> <li>Callus roll at 3.5m on north side.</li> <li>Upward facing hole in branch at 2m on west side.</li> <li>Broken off trunk, heavily decayed with various natural and excavated holes at 4.5m, north side.</li> </ul>	Moderate (TN7)
T18	Mature oak within tree line with hole at base.	<ul style="list-style-type: none"> <li>Heartwood decay with entrance at base of tree at 0m, south side.</li> <li>Multiple rot holes in decaying limb at 6m, south-west side.</li> <li>Decayed branch with possible entry point at base at 6m, south-east side.</li> <li>Decayed branch with small holes at 6m on east side.</li> </ul>	Moderate (TN7)
T21	Mature oak at west end of treeline with multiple large decayed limbs.	<ul style="list-style-type: none"> <li>Two large holes in decayed central trunk at 6m.</li> <li>Lifted bark on southeast facing limb at 3.5m.</li> <li>Multiple decay features in central trunk at 8m.</li> </ul>	Moderate (TN7)

5.45 As Table 3 displays, all six trees on site proposed to be lost possess suitable features for roosting bats – the classification of the trees ranging from low to high bat roost

potential. **It is therefore recommended that all six trees be subject to aerial tree inspections by a suitably licensed and qualified ecologist in order to determine if the features are in use by roosting bats.** The close-up inspection of the features can also re-classify the suitability of potential features, as they may not be fully visible from the ground. It should also be acknowledged that should bat features not be able to be investigated fully from the aerial inspection survey, that further nocturnal roost surveys may be required to determine any presence of bats, to be conducted in the appropriate season. The results of the aerial bat inspection will be contained within a separate standalone report, along with recommendations for further survey and/or species licensing should these be required.

### Buildings

5.46 Four buildings were present on site (refer to B1-4 within Appendix B for locations) which were subject to an external ground-level roosts assessment for bats, as listed below:

- Building 1 (Plate 4-6) comprised a large agricultural shed with an attached lean-to to the south. The building had a breeze-block base, with upper walls of corrugated metal. The roof was also formed of corrugated metal, and no internal roof structure was present, with internal wooden partitions that did not reach the ceiling. This building was considered of **negligible** potential for roosting bats.
- Building 2 (Plates 7-9) also comprised a large agricultural shed with a breeze block base, corrugated metal walls and a corrugated metal roof. As with building 1, no roof void was present and internal wooden partitions did not reach the ceiling. This building was also considered to be of **negligible** potential for roosting bats.
- Building 3 (Plates 10-12) comprised the farmhouse, with brick walls (which may have been a façade over breeze blocks) and a tiled roof and with soffit boxes present. The building itself was in good structural condition, but both end panels of the soffit boxes on the northern extension were missing, potentially allowing access by bats into both soffit boxes. An old bird nest was evident within part of the entrance of the north-west soffit box, though a gap to allow access was still present behind the nest. Lead flashing was also present around the building, with two lifted pieces on the north elevation which potentially created small spaces suitable for crevice dwelling bat species. Due to these features, the building was considered to be of **moderate** bat roost potential.
- Building 4 (Plates 13-14) comprised a small summer house to the immediate north of the main farmhouse. The exterior of the building was also formed of brickwork, though this was likely to be facade over a breeze block interior and possessed a tiled roof. Two small potential entry points for bats were present where mortar had disintegrated under to gable tiles; these located in the south-east and north-west corners of the building. The gaps potentially allowed entry into a roof void between the tiles and the roof structure, and as such the building was considered to be of **moderate** bat roost potential.

5.47 The proposed development seeks to demolish Buildings 1 & 2, with Buildings 3 & 4 to be retained. As Buildings 1 & 2 were of negligible bat roost potential, their loss is unlikely to affect roosting bats, and can be demolished without further survey assuming planning permission is granted. As Buildings 3 & 4 are to be retained and immediate surrounding

commuting features are to be retained, any bat roosts present within the buildings would not be adversely affected by the development, and therefore further surveys for bats would not be necessary. Should the proposals change however and the buildings are to be impacted or demolished, further surveys to ascertain any presence of roosts within Buildings 3 & 4 will be required. A sensitive lighting scheme will be required for the site, which should avoid lighting of the building or connecting habitats.

#### Linear features

- 5.48 Linear features on site suitable for commuting bats comprise the hedgerows and tree line within the site and on the site boundary. The site proposals include the retention of the majority of hedgerows, with a loss of approximately 3m of H1 to allow a footpath link from the adjacent access track and approximately 15m of hedgerow H2 to allow traffic access from Upper Denbigh Road and loss of a single tree from H3. The loss of these small areas of hedgerow would be considered likely to have a low-level effect on their commuting and foraging value for commuting bats on site.
- 5.49 Proposals also include the removal of three trees and a section of hedgerow within Treeline TR01. As the hedgerow contains only contains ten trees in total and a small proportion of it also possesses hedgerows, this would constitute removal of a significant proportion of this feature and therefore detrimentally affect its value as a commuting habitat for bats.
- 5.50 **It is recommended that options to retain trees within the treeline should be retained if at all possible (as they are likely to over a century old and present valuable habitat) and ideally be subject to supplementary planting with additional native tree stock and shrubs, to re-inforce this commuting feature for bats, as well as providing additional foraging resources in this area (in combination with a new sustainable urban drainage feature). If it is not possible to retain the trees, then bat activity surveys will be required to determine use of the tree-line by bats, in order to assess its importance for bats and therefore options available to mitigate for the loss of trees within it.**
- 5.51 **A sensitive lighting scheme should also be input for the site, to avoid the lighting of commuting features including the hedgerows and treeline TL01, as well as maintaining a predominantly unlit corridor where an internal road intersects the TL01 in the south-west of site. Low level, downward-projecting bollard lighting may be suitable in this location to maintain low light levels while ensuring adequate lighting for the public.**

#### Potential for further enhancement of the site

- 5.52 Opportunities also exist on site and within site designs to provide additional habitat resources for bats.
- 5.53 The provision of bat boxes on new buildings and retained trees is recommended to provide roosting opportunities for bat species on site, to be specified within a bat box scheme for the site to be prepared by a suitably qualified ecologist. The bat box scheme would likely be prepared in conjunction with a bird nest box scheme.



5.54 Opportunity also exists to expand the existing hedgerow network on site and therefore the commuting and foraging opportunities this habitat provides. In particular, it is recommended that hedgerow H2 be expanded at its western end to meet the junction of hedgerow H2 and treeline TL01. The provision of this section of hedgerow would also fully screen the site from the adjacent busy road.

#### Birds

5.55 All species of wild bird, their nests and eggs are protected under Section 1 of the Wildlife and Countryside Act, 1981 (as amended). Therefore, surveys are required to check for their presence where they are likely to be disturbed for any reason. In addition to the protection afforded to all wild birds under Section 1 of the Act, species listed on Schedule 1 receive special legal protection when breeding; making it an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 whilst it is at or near a nest containing eggs or young, or disturb the dependent young of such a bird. Legislation does not permit disturbance licences to be issued for nesting birds in relation to the development of land.

5.56 Cofnod provided numerous records of priority and protected bird species occurring within the search area since 2001.

5.57 All woody vegetation on site has potential to support nesting birds, with applicable habitats on site including hedgerows, the treeline and scattered trees.

5.58 The majority of hedgerows and tree-lines on site are to be retained under current proposals, which is recommended in order to minimise impacts. While the habitats on site present suitable foraging and nesting habitat for priority bird species, the availability of these habitats is plentiful in the wider landscape, and the losses under the proposed development are not envisaged to significantly affect the conservation status of protected and priority bird species in the local area.

5.59 **It is recommended that all site preparation works, including vegetation removal and building demolition, be conducted between September and February (i.e. outside of the 'core' nesting bird season, which generally encompasses March to August inclusive).** If this is not possible and works are required to be conducted during the 'core' bird nesting season, CES should be contacted and a nesting bird survey be conducted prior to any potentially disturbing works taking place. This would include the two agricultural buildings to be lost, as birds may build nests on internal wooden partitioning and species such as pigeon may nest on the internal roof structure supports (though no nests were observed at the time of survey). In the event that nesting birds are found to be present, an appropriate mitigation strategy should be formulated and implemented.

5.60 It is also acknowledged that birds may nest outside the 'core' nesting bird season, and as such, due diligence must be shown by site staff or contractors when undertaking vegetation clearance activities outside this time. Should a nest be suspected, vegetation clearance works should cease and CES contacted for advice.

5.61 The site could also be enhanced via the provision of nest boxes for birds within new buildings and on retained mature trees, via a bird box specification. Priority species tolerant of nearby human habitation should be targeted, including house sparrow (*Passer domesticus*) and swift (*Apus apus*).

#### Brown hare

5.62 Brown hare are a Local and UK BAP Priority species, and is listed on Section 41 of the Natural Environment & Rural Communities Act, 2006.

5.63 Brown hare are associated with farmland habitats, such as those found at the site, where they feed on grass shoots and utilise areas of tall vegetation for cover.

5.64 Cofnod provided details of brown hare occurring within around 1km of the proposed development site since 2001, the closest record located 1.1km to the south-west within open pasture fields.

5.65 Though the improved and semi-improved grassland habitats on site present suitable habitat for brown hare, extensive areas of similar habitat exist within the local area, and therefore the loss of these habitats on site would be considered to have a negligible effect on the conservation status of brown hares in the local areas.

5.66 Due to the presence of suitable habitats on site, it is recommended that any work within these habitats which has potential to disturb leverets (young brown hares) be conducted outside of the brown hare breeding season; which generally encompasses February to August. If this is not practicable, it is recommended that the site be made unsuitable for breeding brown hares before February. The grass on site should be cut to a short sward height (<10cm) and maintained at this level until development works begin. This should deter brown hares from breeding on the site.

5.67 If brown hares or leverets are discovered during development works, CES should be contacted for advice. No further survey effort in respect of this species is considered necessary.

#### Great crested newt and other amphibians

5.68 GCN are protected under both European and British law, and palmate newt and smooth newt are classed as priority species within Denbighshire. Adult newts predominantly live terrestrially, but utilise ponds for breeding purposes during the spring and summer months. Statutory guidance indicates that a survey may be necessary to check for the presence of GCN if background information on distribution suggests that they may be present. Detailed indicators include:

- Any historical records for GCN on the site, or in the general area
- A pond on or near the site (within around 500m), even if it holds water only seasonally. Note that muddy, cattle-poached, heavily vegetated or shady ponds, ditches and temporary flooded hollows can be used by GCN
- Sites with refuges (such as piles of logs or rubble), grassland, scrub, woodland or hedgerows within 500m of a pond

- 5.69 However, the terrestrial range of GCN from their breeding ponds is typically restricted to within 250m. This lesser range is recognised by Natural England’s new scheme of GCN licensed mitigation called District Level Licencing, which only assesses and compensates for development impacts associated with ponds within 250m.
- 5.70 Cofnod provided details of great crested newt, palmate newt and smooth newt occurring within 1km of the proposed development site since 2001. The closest record of GCN was located within a farmland pond 390m south of the site. The closest record of palmate newt to the site was 970m to the east and the closest record of smooth newt 980m to the north.
- 5.71 A single pond (Pond 1) was present on site within a semi-improved grassland field in the west of the site (see Plates 1 & 2). The pond was observed to hold water during the survey and was densely covered by duckweed and pondweed. Immediate suitable terrestrial habitat for amphibians included a ring of ruderal vegetation around the pond, the surrounding semi-improved grassland and a treeline nearby to the south. A Habitat Suitability Index Assessment (HSI) for Pond 1 is displayed in table 4 below.

Table 4: HSI Assessment of Pond on site

HSI Criteria	Pond 1
S11 - Location	1
S12 - Pond area	0.2
S13 - Pond drying	0.9
S14 - Water quality	0.67
S14 - Shade	0.8
S16 - Fowl	1
S17 - Fish	0.67
S18 - Ponds	1
S19 - Terrestrial habitat	0.67
S110 - Macrophytes	0.8
<b>Overall HSI Score</b>	<b>0.71</b>
<b>Categorisation</b>	<b>Good</b>

- 5.72 OS mapping highlighted the presence of no further ponds/waterbodies within 250m and a further five ponds/waterbodies within 250m to 500m of the proposed development site boundary (refer to Appendix A).
- 5.73 Given the pond on site, suitable surrounding terrestrial habitats, ponds within 500m of the site and GCN records in the local area, it is possible that GCN are present on site, and may breed within Pond 1. **It is therefore recommended that an environmental DNA (eDNA) survey be conducted of Pond 1. The survey should be conducted within the appropriate survey season for eDNA (mid-April – end June inclusive) and by appropriately licensed and experienced surveyor.**
- 5.74 Should a positive eDNA result be returned following the survey, population size class surveys of the pond will be required to assess the size of the GCN population within the pond. An appropriate mitigation strategy will be required to avoid damage to individual GCN or the status of the local GCN population, and a protected species license sought from Natural Resources Wales for the development to proceed. Mitigation measures

required would likely involve the creation of suitable replacement ponds and terrestrial habitats and a translocation exercise used to move GCN from the development area.

5.75 Should a negative result be returned, this would mean that GCN are considered likely to be absent from the pond and therefore the site. Given suitable available habitat however, and for the avoidance of doubt, non-licensed RAMs should be implemented to negate any remaining likelihood of harm to GCN in the unlikely event they are present, as set out below:

- All excavations (such as footings) should be infilled at the end of the day, or if this is not possible they should be covered with boards.
- As a further protection measures, excavations that are required to be left open over successive days should be constructed with a ramp so as to allow any animals that may become trapped a means of escape.
- All excavations should be checked before being filled-in.

#### Hedgehog

5.76 Hedgehog are a UK BAP Priority species and listed on Section 7 of the Environment Wales Act. Hedgehogs favour mosaic habitats such as scrub, woodland edges and mature gardens, where they can forage amongst short vegetation and shelter in dense scrub and amongst cover objects.

5.77 Cofnod provided details of hedgehog occurring within approximately 1km of the proposed development site since 2001, the closest record on Lower Denbigh Road 630m west of the site.

5.78 The hedgerows, treeline and improved and semi-improved grassland habitats on site were considered to offer hedgehog with suitable foraging and shelter habitat. Development at the site has the potential to impact upon hedgehogs, therefore it is recommended that all woody and scrub vegetation (standing or fallen) to be affected by the works be removed by hand prior to any potentially disturbing works taking place. These measures should be sufficient in discouraging and/or displacing hedgehogs from the working areas. Upon completion of the development, it is also recommended that hedgehogs be able to gain access to the gardens through a series of holes/gaps if close-panel fencing or walls are to be used; although ideally boundaries would comprise hedgerows. Gaps should be at ground level, approximately 13cm by 13cm, and incorporated in to each garden.

#### Invasive Species

5.79 Cofnod provided details of Himalayan cotoneaster (*Cotoneaster simonsii*) occurring within around 1km of the proposed development site, though as only a 4 figure grid reference was provided this could have been anywhere within a 1km area. While other records for invasive species were also returned, none were located on or in close-proximity to the site. Himalayan cotoneaster is listed under Schedule 9, Part II of the Wildlife and Countryside Act 1981. As such, it is an offence under section 14(2) of the Act to plant this species or to cause it to grow in the wild.

5.80 No invasive species were noted on site during the phase 1 survey, including Himalayan cotoneaster, and no further survey effort is recommended for invasive species. It should be noted however that many invasive species spread profusely and can quickly colonise a new site. As such site contractors should be aware of the identification features of common invasive species, and CES contacted for advice should invasive species be suspected on site.

#### Invertebrates

5.81 Cofnod provided details of white letter hairstreak butterfly occurring within 2km of the site since 2001, the closest record at 1.8km north-west of the site.

5.82 Food plants for the white letter hairstreak are largely restricted to elms, including wych elm (*Ulmus glabra*), English elm (*Ulmus procera*) and small-leaved elm (*Ulmus minor*). Hedgerow H1 was the only hedgerow containing an elm species on site, with individuals only occasionally present within the hedgerow.

5.83 The site is therefore considered unlikely to be an important resource for white letter hairstreak, and no further survey is recommended in regard of this species or other invertebrates. Opportunity does exist however to provide additional food resources for white letter hairstreak, through using wych elm as a component of any new hedgerow planting on site.

#### Reptiles

5.84 All six species of British reptile are protected against intentional killing, injury or sale under Schedule 5 of the Wildlife and Countryside Act, 1981. The sand lizard and smooth snake are afforded a higher degree of protection under European law, which, amongst other things, makes it an offence to damage, destroy or obstruct their places of shelter or disturb these species in such a place. However, the distribution of these species is limited, and is largely restricted to a few southern counties in England, with the exception of some coastal sites in Merseyside and North Wales which support populations of sand lizard.

5.85 The distribution of the remaining 'common' species (i.e. adder, grass snake, slow worm and common lizard) is widespread. With some variation between species, reptiles prefer undisturbed habitats with open areas for basking and warmth, and more vegetated areas for shelter and feeding. They shelter and hibernate in crevices underground, such as within old mammal burrows, cracks within concrete bases and within spoil/rubble mounds.

5.86 Cofnod provided details of slow worm, common lizard and grass snake occurring within around 2km of the proposed development site since 2001, with all species present within a graveyard approximately 980m north of the site.

5.87 Though limited in extent, the site does provide some suitable habitats for reptiles in the form of tall ruderal, grassland and pond habitats. Grass snake are considered the most likely reptile to be present on site, given the suitable hunting habitat afforded to this species by the on-site pond; grass snake being semi-aquatic. The home range of an individual grass snake can be large, however, they show a high fidelity to aquatic

habitats such as ponds and slow-flowing water courses, and their home range is usually centred on such features.

- 5.88 Though the records of reptiles are at a considerable distance to the site, the woodland (former railway) which is situated adjacent to the site's eastern boundary provides a linear habitat link between the site and the graveyard; with woodland and scrub habitats forming a continuous habitat corridor.
- 5.89 **Given the presence of reptiles in the wider area, suitable habitats on site, the habitat link afforded by the woodland and the level of legal protection afforded to the 'widespread' reptile species, it is therefore recommended that a reptile presence/likely absence survey be undertaken in respect of the proposed development to establish the status of reptiles at the site.** The reptile survey should involve the deployment of artificial cover objects (ACO) at the site followed by a minimum of seven survey visits to check the ACO and suitable existing site features (such as exposed logs and stones) for basking/sheltering reptiles. The optimal survey window for surveying for reptiles is April, May and September, although summer surveys can be undertaken during periods of suitable weather. In the event that reptiles are found to be associated with the site, further survey effort may be required and a suitable mitigation strategy will need to be formulated and implemented.

## 6.0 SUMMARY RECOMMENDATIONS TABLE

	Species potentially associated with the site/s?	Further survey effort required?	Survey timing	Recommendations
Badger	Yes	Yes: A <b>badger survey</b> will be required at site and on land within 30m of the site boundary if one year elapses since the current survey, and within one month prior to the commencement of works on site.	<b>Any time of year Ideally November-April</b>	No potentially disturbing work should take place until the results of the survey are known.
Barn owl	Yes	Yes: Tree T8 should be assessed for any signs of barn owl presence, through an aerial inspection survey. If any further tree loss is required, these trees should also be subject to an assessment for barn owls.	<b>Any time of year Ideally when the trees are not in leaf</b>	No potentially disturbing work should take place until the results of the assessment are known.
Bats	Yes	Roost Assessment Surveys - Yes: All trees (T8, T10, T11, T17, T18 & T21) to be lost as part of the development should be subject to an aerial <b>bat roost potential assessment</b> .  <b>Activity Surveys – Potentially Activity surveys would be required if supplementary</b>	<b>Any time of year Ideally when the trees are not in leaf</b>  <b>April-September</b>	No potentially disturbing work should take place until the results of the assessment are known. Further survey effort may be required if the bats are found to be present within trees, their absence cannot be determined, or additional tree or building losses are required.  No potentially disturbing works should take place until it is confirmed that re-enforcement planting of the tree line is planned, expected to be secured via a planning condition.

		<b>planting is not used to reinforce the central tree line</b>		
Birds	Yes	Potentially: <b>Nesting bird surveys</b> will be required <u>if</u> vegetation removal or building demolition works are to take place between March & September.	<b>March - August</b>	Vegetation removal and building demolition works should take place outside of the bird breeding season (i.e. October – February). A survey will not be required if potentially disturbing works are undertaken during this period.
Brown hare	Yes	No	-	Grassland on site should be kept low (<10cm) to deter brown hare from using the site.
Great crested newt	Yes	Yes: Further <b>survey/appraisal effort</b> in respect of <b>GCN</b> will be required prior to the commencement of works on site.	<b>Mid-March – June, with eDNA surveys possible from mid-April to end of June.</b>	No potentially disturbing work should take place until the further survey/appraisal effort has been carried out.
Hedgehog	Yes	No	-	Where possible, all woody/scrub vegetation to be affected should be removed by hand prior to potentially disturbing works taking place.
Reptiles	Yes	Yes: Reptile <b>presence/likely absence survey</b> is required	Optimum period: <b>April - May or September</b>	No potentially damaging/disturbing works should take place until the results of the survey are known.
<b>Recommendations for enhancement</b>	<ul style="list-style-type: none"> <li>Existing semi-improved grassland should be retained wherever possible.</li> <li>Bat and bird boxes on new buildings and retained trees</li> <li>Treeline TL01 to be subject to reinforcement planting of trees and shrubs, to enhance its value as a commuting habitat</li> <li>Hedgerow H1 to be extended via additional planting to meet H2.</li> <li>A sensitive lighting scheme should be used to avoid the lighting of features suitable for bats.</li> </ul>			



## 7.0 REFERENCES

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Collins, J. (ed.) (2016) BCT Bat Surveys for Professional Ecologists Good Practice Guidelines (3<sup>rd</sup> edn). The BCT, London.

JNCC (2010). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Joint Nature Conservation Council.

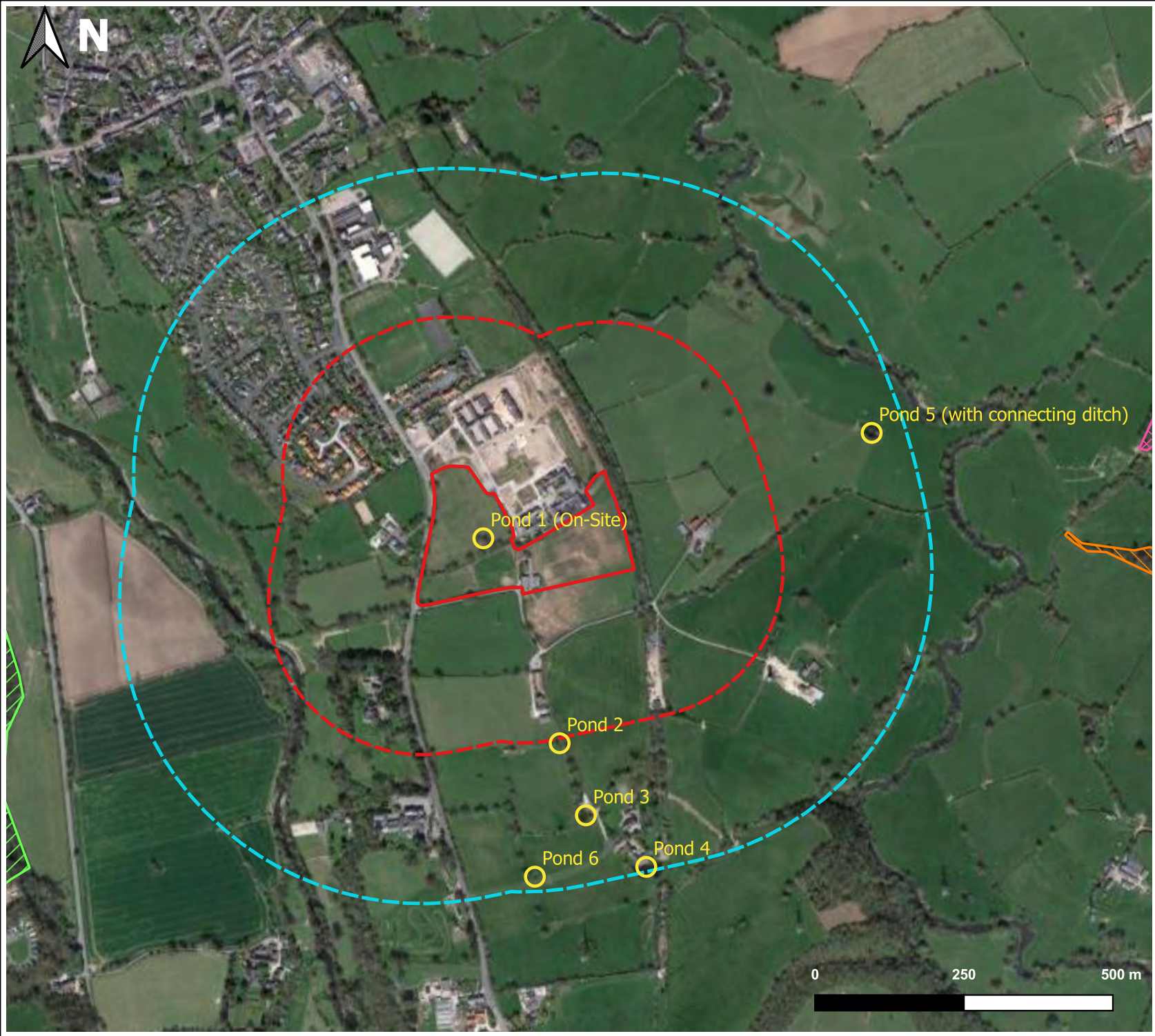
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## Appendices

**Appendix A: Site Location Plan**



- Site Boundary
- 250m Buffer
- 500m Buffer
- Ponds
- Local Wildlife Sites
- Coed Fron & Eryl Hall Wood
- Fachwen Dingle
- Nant Y Waen

Pond 5 (with connecting ditch)

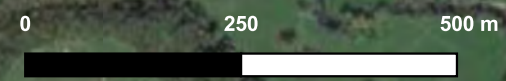
Pond 1 (On-Site)

Pond 2

Pond 3

Pond 6

Pond 4

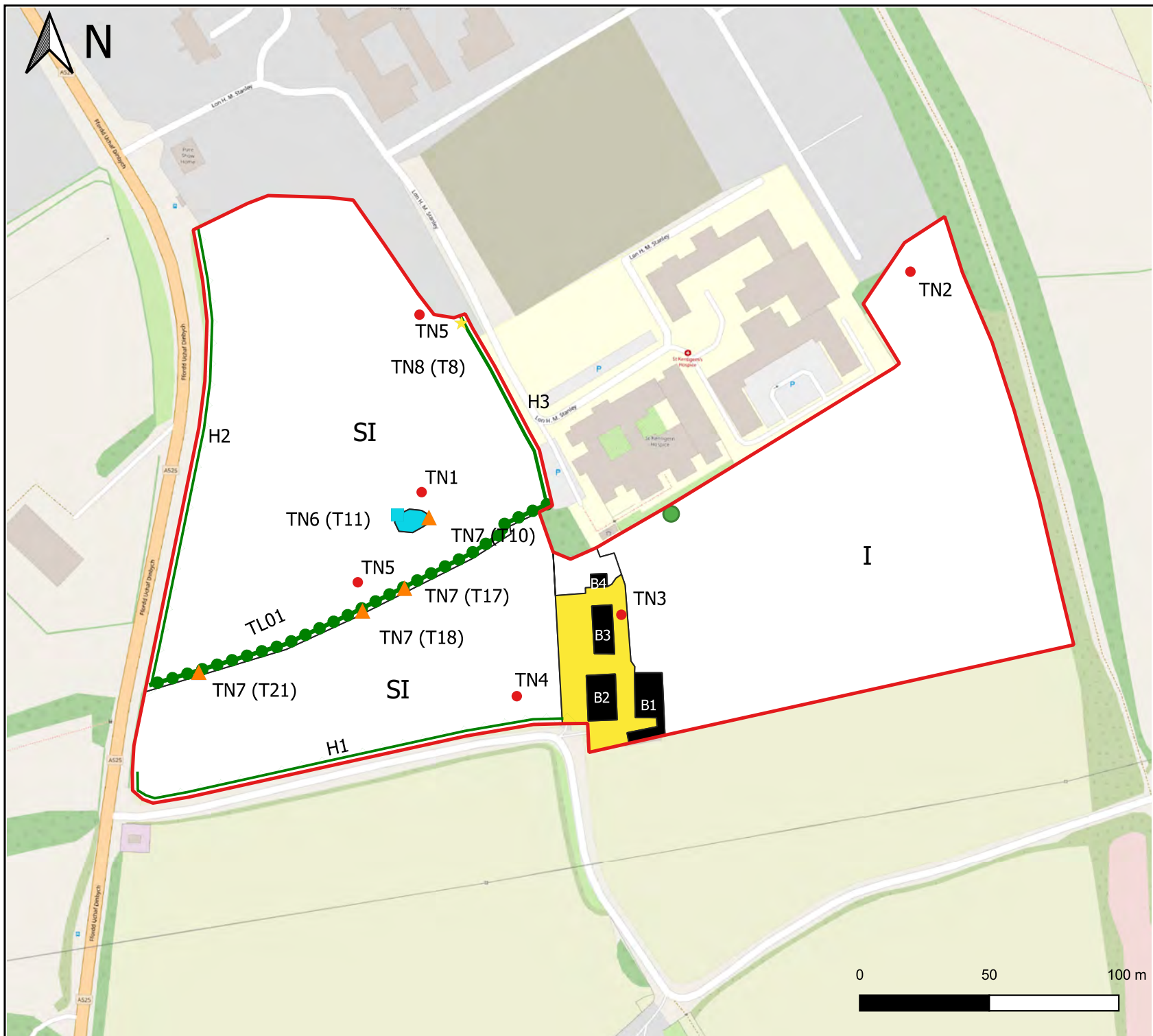


Project:	Land off Upper Denbigh Road, St Asaph, Denbighshire
Map:	Site Location Plan
CES Ref:	CES/750.105/09-21/KM
Scale:	Approximate
Date:	September 2021

Aerial Baselayer obtained from Google Maps, Google LLC, with whom all rights remain.


**Cheshire**  
 Ecological Services  
 Bickley Hall Farm  
 Bickley  
 Malpas  
 Cheshire  
 SY14 8EF

## **Appendix B: Extended Phase 1 Habitat Survey Plan**



- Site Boundary
- Farmhouse Garden (Hardstanding & Amenity Grassland)
- Improved grassland
- Semi-improved grassland
- Building
- Pond
- Hedgerow - Species-poor
- Hedgerow - Species-rich
- Tree-line
- Scattered Trees (where not forming part of a hedgerow or proposed to be removed with bat potential)
- TN1 - Pond
- TN2 - Tall Ruderal Strip
- TN3 - Buildings, Hardstanding & Garden
- TN4 - Horse/Dog Exercise Enclosure
- TN5 - Badger Latrine Locations
- TN6 - Tree with Low Bat Roost Potential (T\* denotes tree number)
- ▲ TN7 - Tree with Moderate Bat Roost Potential
- ★ TN8 - Tree with High Bat Roost Potential

Project:	Land off Upper Denbigh Road, St Asaph, Denbighshire
Map:	Phase 1 Habitat Survey Plan
CES Ref:	CES/750.105/09-21/KM
Scale:	Approximate
Date:	September 2021

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**Cheshire**  
Ecological Services

Bickley Hall Farm  
Bickley  
Malpas  
Cheshire  
SY14 8EF

## Appendix C: Species List

## Semi-improved Grassland

Scientific Name	Common Name	DAFOR (Measuring frequency of plant within habitat, with D =Dominant, A = Abundant, F Frequent, O =Occasional, R = Rare)
<i>Achillea millefolium</i>	Yarrow	R
<i>Agrostis capillaris</i>	Common bent	F
<i>Alopecurus pratensis</i>	Meadow foxtail	O
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	A
<i>Cerastium glomeratum</i>	Sticky mouse-ear	F
<i>Cirsium arvense</i>	Creeping thistle	F
<i>Cirsium vulgare</i>	Spear thistle	O
<i>Cynosurus cristatus</i>	Crested dog's tail	F
<i>Festuca rubra</i>	Red fescue	F
<i>Hieracium sp.</i>	Hawkweed species	R
<i>Holcus lanatus</i>	Yorkshire Fog	A
<i>Lathyrus pratensis</i>	Meadow vetchling	O
<i>Lolium perenne</i>	Perennial rye-grass	A
<i>Lotus corniculatus</i>	Bird's foot trefoil	R
<i>Medicago lupulina</i>	Black medic	R
<i>Odontites vernus</i>	Red bartsia	F
<i>Plantago lanceolata</i>	Ribwort plantain	O
<i>Poa pratensis</i>	Smooth meadow grass	F



Scientific Name	Common Name	DAFOR (Measuring frequency of plant within habitat, with D =Dominant, A = Abundant, F Frequent, O =Occasional, R = Rare)
<i>Potentilla reptans</i>	Creeping cinquefoil	R
<i>Prunella vulgaris</i>	Selfheal	F
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Ranunculus repens</i>	Creeping buttercup	F
<i>Rumex acetosa</i>	Common sorrel	R
<i>Rumex obtusifolius</i>	Broad-leaved dock	O
<i>Senecio jacobaea</i>	Common ragwort	O
<i>Taraxacum officinale</i>	Dandelion	O
<i>Tragopogon pratensis</i>	Goatsbeard	R
<i>Trifolium pratense</i>	Red clover	A
<i>Trifolium repens</i>	White clover	A

### Improved Grassland

Scientific Name	Common Name	DAFOR (Measuring frequency of plant within habitat, with D =Dominant, A = Abundant, F Frequent, O =Occasional, R = Rare)
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	F
<i>Arrhenatherum elatius</i>	False oat-grass	O

Scientific Name	Common Name	DAFOR (Measuring frequency of plant within habitat, with D =Dominant, A = Abundant, F Frequent, O =Occasional, R = Rare)
<i>Cerastium glomeratum</i>	Sticky mouse-ear	O
<i>Cirsium arvense</i>	Creeping thistle	F
<i>Cirsium vulgare</i>	Spear thistle	O
<i>Cynosurus cristatus</i>	Crested dog's tail	O
<i>Dactylis glomerata</i>	Cock's foot	F
<i>Festuca rubra</i>	Red fescue	F
<i>Holcus lanatus</i>	Yorkshire Fog	A
<i>Lolium perenne</i>	Perennial rye-grass	A
<i>Odontites vernus</i>	Red bartsia	O
<i>Poa pratensis</i>	Smooth meadow grass	F
<i>Prunella vulgaris</i>	Selfheal	O
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Ranunculus repens</i>	Creeping buttercup	F
<i>Rumex obtusifolius</i>	Broad-leaved dock	F
<i>Senecio jacobaea</i>	Common ragwort	O
<i>Sonchus asper</i>	Prickly sow-thistle	O
<i>Trifolium pratense</i>	Red clover	O
<i>Trifolium repens</i>	White clover	F

### Treeline (TL01)

Scientific Name	Common Name	DAFOR (Measuring frequency of plant within habitat, with D =Dominant, A = Abundant, F Frequent, O =Occasional, R = Rare)
Trees		
<i>Quercus robur</i>	Pedunculate oak (only)	D
Hedgerow Species		
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Prunus spinosa</i>	Blackthorn	O
Understorey Species		
<i>Calystegia sepium</i>	Hedge bindweed	O
<i>Cirsium arvense</i>	Creeping thistle	O
<i>Hedera helix</i>	Ivy	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Urtica dioica</i>	Common nettle	O

### Hedgerows (H1, H2 & H3)

Scientific Name	Common Name	DAFOR (Measuring frequency of plant within habitat, with D =Dominant, A = Abundant, F Frequent, O =Occasional, R = Rare)
<b>H1 (Species-rich)</b>		
Woody Species		
<i>Acer campestre</i>	Field Maple	R
<i>Acer pseudoplatanus</i>	Sycamore (Trees and saplings)	O
<i>Corylus avellana</i>	Hazel	O

<i>Crataegus laevigata</i>	Midland hawthorn	R
<i>Crataegus monogyna</i>	Common hawthorn	F
<i>Fraxinus excelsior</i>	Ash (saplings)	O
<i>Prunus spinosa</i>	Blackthorn	A
<i>Quercus robur</i>	Pedunculate oak (Trees and saplings)	O
<i>Rosa canina</i>	Dog rose	F
<i>Salix sp.</i>	Willow Species	R
<i>Taxus Baccata</i>	Yew	R
<i>Ulmus sp.</i>	Elm species	O
Understorey Species		
<i>Anthriscus sylvestris</i>	Cow parsley	R
<i>Arum maculatum</i>	Lords and ladies	R
<i>Bromus sterilis</i>	Barren brome	R
<i>Cirsium arvense</i>	Creeping thistle	F
<i>Clematis vitalba</i>	Travellers joy	R
<i>Filipendula Ulmaria</i>	Meadowsweet	O
<i>Hedera helix</i>	Ivy	D
<i>Heracleum sphondylium</i>	Common hogweed	O
<i>Lapsana communis</i>	Nipplewort	R
<i>Lathyrus pratensis</i>	Meadow vetchling	O
<i>rubus fruticosus agg</i>	Bramble	F
<i>Rubus ulmifolius</i>	Elm-leaved bramble	R
<i>Urtica dioica</i>	Common nettle	F
<b>H2 (Species-rich)</b>		
Woody Species		
<i>Corylus avellana</i>	Hazel	F
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Fraxinus excelsior</i>	Ash (saplings)	O
<i>Ilex aquifolium</i>	Holly	O

<i>Malus sylvestris</i>	Crab Apple	O
<i>Prunus spinosa</i>	Blackthorn	D
<i>Quercus robur</i>	Pedunculate Oak (Trees)	F
<i>Rosa canina</i>	Dog rose	F
Understorey Species		
<i>Calystegia sepium</i>	Hedge bindweed	O
<i>Hedera helix</i>	Ivy	A
<i>Heracleum sphondylium</i>	Common hogweed	F
<i>Lathyrus pratensis</i>	Meadow vetchling	R
<i>rubus fruticosus agg</i>	Bramble	D
<i>Rubus ulmifolius</i>	Elm-leaved bramble	R
<i>Urtica dioica</i>	Common nettle	F
<b>H3 (Species-poor)</b>		
Woody Species		
<i>Fraxinus excelsior</i>	Ash (saplings)	R
<i>Prunus spinosa</i>	Blackthorn	D
<i>Quercus robur</i>	Pedunculate oak (Trees and saplings)	R
Understorey Species		
<i>Calystegia sepium</i>	Hedge bindweed	R
<i>Cirsium arvense</i>	Creeping thistle	O
<i>Hedera helix</i>	Ivy	F
<i>rubus fruticosus agg</i>	Bramble	D
<i>Rumex obtusifolius</i>	Broad-leaved dock	O
<i>Urtica dioica</i>	Common nettle	F

### Scattered Trees

Scientific Name	Common Name	DAFOR (Measuring frequency of plant within habitat, with D =Dominant, A =
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		Abundant, F Frequent, O =Occasional, R = Rare)
<i>Quercus robur</i>	Pedunculate oak (only)	O

## Appendix D: Photographic Plates



**Plate 1: On-site pond with ring of marginal and ruderal vegetation.**



**Plate 2: On site pond, showing dense duckweed and pondweed cover.**



**Plate 3: Tall ruderal on the north-east site boundary (habitat too small to map).**





**Plate 4: Building 1 (agricultural shed) showing sheet metal walls and roof, with lower sections of breeze block construction.**



**Plate 5: Building 1 showing exterior structure and adjoin lean-to extension.**



**Plate 6: Interior of Building 1 showing lack of rood void.**



**Plate 7: Exterior of Building 2 (agricultural shed) showing breeze block base and sheet metal upper walls and roof.**



**Plate 8: Exterior of Building 2.**



**Plate 9: Internal structure of Building 2, showing lack of roof voids and partial chipboard partitioning.**



**Plate 10: Exterior of Building 3 (farmhouse) showing brick built construction, tiled roof and surrounding amenity grassland lawn.**



**Plates 11 & 12: Examples of Potential Roost Features for bats within structure of Building 3, consisting of open soffit boxes and lifted lead flashing.**



**Plate 13: Building 4 (summerhouse) opposite main farmhouse building.**



**Plate 14: Missing mortar beneath end tiles on summerhouse, potentially allowing access into roof space for bats.**



**Plate 15: Exercise enclosure for horses/dogs in south-west field.**



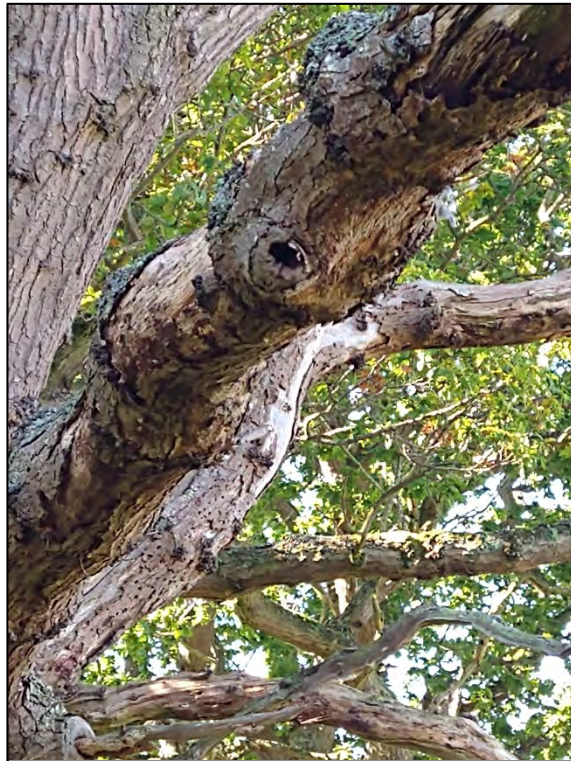
**Plate 16: Example of badger latrine found on-site.**



**Plate 17: Example of Tree with bat potential roost features (PRF's).**



**Plate 18: Example of tree with large PRF.**



**Plate 19: Example of branch with knot hole PRF.**



**Plate 20: Example of branch with multiple small PRFs.**



**Plate 21: Semi-improved grassland (south-west field).**



**Plate 22: Semi-improved grassland (north-west field).**



**Plate 23: Example of red bartsia within semi-improved grassland fields.**



**Plate 24: Improved grassland (eastern field).**



**Plate 25: Improved grassland (eastern field).**





**Plate 26: Improved grassland paddock north of farmhouse.**



**Plate 27: Tree-line TL01 predominantly consisting of mature oak trees.**



**Plate 28: Tree-line TL01 showing western section with hedgerow cover.**



**Plate 29: Hedgerow H1 – species rich intact hedgerow along south-west site boundary.**



**Plate 30: Hedgerow H1.**



**Plate 31: Hedgerow H2 – species-rich hedgerow along western site boundary.**



**Plate 32: Hedgerow H2.**



**Plate 33: Hedgerow H3 – species-poor hedgerow along central field boundary dominated by blackthorn.**



**Plate 34: Hedgerow H3.**



**Plate 35: Woodland adjacent to the site's eastern boundary.**



**Plate 36: Track within woodland adjacent to site's eastern boundary.**

## **Appendix E: Relevant Legislation**

Species/Habitat	Protected by:	UK BAP	Local BAP
Badger	<i>Protection of Badgers Act, 1992</i>	No	Yes
Barn owl	Schedule 1, Part 1 of the <i>Wildlife and Countryside Act, 1981</i>	No	Yes
Bats	Regulation 42 of <i>The Conservation of Habitats and Species Regulations, 2017</i>  Section 9 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)  Section 7 of the <i>Environment (Wales) Act 2016</i>	Dependent on species	Dependent on species
Bluebell	Schedule 8 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)	No	Yes
Brown hare	Section 7 of the <i>Environment (Wales) Act 2016</i>	Yes	Yes
Butterflies & Moths	Section 7 of the <i>Environment (Wales) Act 2016</i>	Dependent on species	Dependent on species
Common frog	Provision 5 of Section 9 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)	No	No
Common toad	Provision 5 of Section 9 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)  Section 7 of the <i>Environment (Wales) Act 2016</i>	Yes	Yes
Cotoneaster	Section 14 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)	No	No
Great crested newt	Regulation 42 of <i>The Conservation of Habitats and Species (Amendment) Regulations, 2017</i>  Section 9 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)  Section 7 of the <i>Environment (Wales) Act 2016</i>	Yes	Yes
Hedgehogs	Section 7 of the <i>Environment (Wales) Act 2016</i>	Yes	No
Hedgerows	<i>The Hedgerows Regulations, 1997</i>	Yes	Yes
Invasive species	Section 9 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)		
Nesting birds	Section 1 of the <i>Wildlife and Countryside Act, 1981</i>	Dependent on species	Dependent on species
Otters	Regulation 41 of <i>The Conservation of Habitats and Species Regulations, 2017</i>  Section 5 of the <i>Wildlife and Countryside Act, 1981</i>	Yes	Yes
Polecat	Section 6 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)  Section 7 of the <i>Environment (Wales) Act 2016</i>	Yes	Yes
Water vole	Section 9 of the <i>Wildlife and Countryside Act, 1981</i> (as amended)  Section 7 of the <i>Environment (Wales) Act 2016</i>	Yes	Yes
'Widespread'	Provisions 1 and 5 of Section 9 of the <i>Wildlife and</i>	Yes	Dependent

reptiles	<i>Countryside Act, 1981 (as amended)</i>		on species
	Section 7 of the <i>Environment (Wales) Act 2016</i>		

### ***The Conservation of Habitats and Species Regulations, 2017***

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European protected species are listed on Schedule 2 of the *Conservation of Habitats and Species Regulations 2010*. Those species listed on Schedule 2 are protected under Regulation 41, which refers to the protection of wild animals of a European Protected Species. The following is a summary of the offences listed under Regulation 41, however, the *Conservation Regulations* should always be referred to for the exact and current wording:

Under Regulation 41 of the *Conservation of Habitats and Species Regulations, 2010* it is an offence to –

- deliberately capture or kill a wild animal of a European protected species;
- deliberately disturb wild animals, in particular any disturbance which is likely:
  - to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; or
  - to impair their ability, in the case of animals of a hibernating or migratory species, to hibernate or migrate;
  - to affect significantly the local distribution or abundance of the species to which they belong
- deliberately take or destroy the eggs of such an animal; or
- damage or destroy a breeding site or resting place of such an animal.
- keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of a European protected species, or any part of, or anything derived from, such an animal.

### ***Wildlife and Countryside Act, 1981 (as amended)***

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British protected species of animal are listed on Schedule 5 of the *Wildlife and Countryside Act, 1981 (as amended)*. Those species listed on Schedule 5 are protected under Part 1, Section 9, which refers to the protection of certain wild animals. The following is a summary of the offences listed under Section 9; however the Act should always be referred to for the exact and current wording:

Under Section 9 of the *Wildlife and Countryside Act, 1981 (as amended)* if any person –

- intentionally kills, injures or takes any wild animal included in Schedule 5;
- has in his possession or control any live or dead wild animal included in Schedule 5 or any part of, or anything derived from such an animal;
- intentionally or recklessly damages or destroys, or obstructs access to, any structure or place which any wild animal included in Schedule 5 uses for shelter or protection;
- disturbs any such animal included in Schedule 5 while it is occupying a structure or place which it uses for that purpose;
- sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead wild animal included in Schedule 5, or any part of, or anything derived from, such an animal; or,

- publishes or causes to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things, he shall be guilty of an offence.

### ***Wildlife and Countryside Act, 1981 (as amended) - Birds***

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All species of wild bird, their nests and eggs are protected under Section 1 of the *Wildlife and Countryside Act, 1981* (as amended); therefore surveys are required to check for their presence where they are likely to be disturbed for any reason.

The following is a summary of the offences listed under Section 1; however the Act should always be referred to for the exact and current wording:

Under Section 1 of the *Wildlife and Countryside Act, 1981* (as amended), if any person:

- Intentionally kills, injures or takes any wild bird;
- Intentionally takes, damages or destroys the nest of any wild bird while that nest is in use or being built;
- Intentionally takes or destroys an egg or any wild bird, he shall be guilty of an offence;
- Has in his possession or control any live or dead wild bird or any part of, or anything derived from, such a bird; or
- Has in his possession or control an egg of any wild bird or any part of such an egg, he shall be guilty of an offence.

Schedule 1 (Part 1 and Part 2) of the *Wildlife and Countryside Act, 1981* (as amended) lists bird species that receive special attention under Section 1. Any person convicted of an offence listed above, in respect of a bird included in Schedule 1 or any part of, or anything derived from, such a bird; the nest of such a bird; or an egg of such a bird or any part of such an egg, shall be liable to a special penalty.

Also, if any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturbs dependent young of such a bird, he shall be guilty of an offence and liable to a special penalty.

Schedules 1, 2, 3 and 4 of the *Wildlife and Countryside Act, 1981* (as amended) list different species of bird and different Parts of Section 1 of the Act refer to different offences which may be committed in relation to the varying Schedules. The following is a summary of the type of protection offered to species of wild bird listed on each of the Schedules, however the Act itself should always be referred to for the exact and current wording and full species lists:

Schedule 1: Birds which are protected by special penalties:

Part 1: At all times.

Part 2: During the close season.

Schedule 2: Birds which may be killed or taken:

Part 1: Outside the close season.

Part 2: By authorised persons at all times.

Schedule 3: Birds which may be sold:

Part 1: Alive at all times if ringed and bred in captivity.

Part 2: Dead at all times.

Part 3: Dead from 1<sup>st</sup> September to 28<sup>th</sup> February.

Schedule 4: Birds which must be registered and ringed if kept in captivity.



## ***The Environment (Wales) Act, 2016***

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Section 7 of the *Environment (Wales) Act, 2016* replaces the duty in Section 42 of the *Natural Environment and Rural Communities (NERC) Act, 2006* (as amended). Section 7 comprises a list of species and habitats of principle importance which is the same as the list under the superseded Section 42 of the *NERC Act, 2006*. The *Environment (Wales) Act* itself should be referred to for the exact and current wording however a summary is detailed below:

- The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales;
- They must therefore consider any appropriate evidence, for example as provided in the State of Natural Resources Report, and also engage with any relevant stakeholders;
- The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps.

## ***The Hedgerow Regulations, 1997***

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Hedgerows are distinctive features in the countryside and are the traditional type of field boundary in many areas of England and Wales. Many of these date back to the original enclosure of the land and so are of historic interest and importance.

Hedgerows (particularly older hedgerows) can contain a diverse mix of species and provide important links between other areas of habitat thus allowing wildlife to disperse. This role that hedgerows play in conserving and enhancing biodiversity is recognised by the UK BAP for this habitat type.

Hedgerows which meet certain criteria are protected by *The Hedgerows Regulations, 1997*. The aim of the Regulations is to protect important hedgerows in the countryside by controlling their removal through a system of notification. Under the Regulations it is against the law to remove or destroy certain hedgerows without permission from the Local Planning Authority (LPA). The criteria used to assess hedgerows relate to the value of a hedgerow from an archaeological, historical, landscape or wildlife perspective. They exclude hedgerows that are less than 30 years old. If a hedgerow is at least 30 years old and qualifies under any one of the criteria, then it is important and LPA approval is required before it can be lawfully removed or destroyed.

Removal of a hedgerow in contravention of the Regulations is a criminal offence, punishable in some cases in the Magistrates Court, by a fine of up to £5,000. For anyone convicted on indictment in the Crown Court, the fine is unlimited.

If a hedgerow is over 30 years old and meets the criteria in the Regulations it is classified as 'important'. A summary of the criteria is set out below, however, *The Hedgerow Regulations, 1997* should be referred to for the exact and current wording:

- Marks a pre-1850 parish or township boundary; or
- Incorporates an archaeological; or
- Is part of, or associated with, an archaeological site; or
- Marks the boundary of, or is associated with, a pre-1600 estate or manor; or
- Forms an integral part of a pre-Parliamentary enclosure field system; or
- Contains certain categories of species of birds, animals or plants listed in the Wildlife and Countryside Act or Joint Nature Conservation Committee (JNCC) publications.

- Includes:
  - At least 7 woody species, on average, in a 30 metre length; or
  - At least 6 woody species, on average, in a 30 metre length and has at least 3 associated features; or
  - At least 6 woody species, on average, in a 30 metre length, including a black-poplar tree, or large-leaved lime, or a small-leaved lime, or wild service-tree; or
  - At least 5 woody species, on average, in a 30 metre length and has at least 4 associated features.
- Runs alongside a bridleway, footpath, road used as a public path, or byway open to all traffic and includes at least 4 woody species, on average, in a 30 metre length and has at least 2 of the associated features listed at (i) to (v) below.

(Note: The number of woody species is reduced by one in the North of England (which does not include Cheshire). The list of 56 woody species comprises mainly shrubs and trees. It generally excludes climbers (such as clematis, honeysuckle and bramble) but includes wild roses)

Associated features:

- (i) A bank or wall supporting the hedgerow;
- (ii) Less than 10% gaps;
- (iii) On average, at least one tree per 50 metres;
- (iv) At least 3 species from a list of 57 woodland plants;
- (v) A ditch;
- (vi) A number of connections with other hedgerows, ponds or woodland; and
- (vii) A parallel hedge within 15 metres.

### ***The Protection of Badgers Act, 1992***

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The following is a summary of the offences contained in the Act; however the *Protection of Badgers Act, 1992* itself should always be referred to for the exact and current wording.

Under the *Protection of Badgers Act, 1992* a person is guilty of an offence if, except as permitted by or under this Act he:

- wilfully kills, injures or takes, or attempts to kill, injure or take, a badger;
- has in his possession or under his control any dead badger or any part of, or anything derived from, a dead badger;
- cruelly ill-treats a badger;
- uses badger tongs in the course of killing or taking, or attempting to kill or take, a badger;
- digs for a badger; or,
- sells a live badger or offers one for sale or has a live badger in his possession or control.

A person is also guilty of committing an offence under the *Protection of Badgers Act, 1992* if he intentionally or recklessly interferes with a badger sett by doing any of the following things:

- damaging a badger sett or any part of it;
- destroying a badger sett;
- obstructing access to, or any entrance of, a badger sett;
- causing a dog to enter a badger sett; or,

- disturbing a badger when it is occupying a badger sett,

The definition of a badger sett within the meaning of the 1992 Act is given as “any structure or place, which displays signs indicating current use by a badger”. ‘Current’ is not defined in the Act, and may be open to interpretation. Natural England indicates that a sett is in ‘current’ use if it has been occupied at all over the previous 12 months. Whatever the interpretation of ‘current use’ however, it is important to note that a sett is protected whether or not there is a badger actually in residence at the time of inspection.

Natural England Guidelines (which is also referred to in Wales) state that work that disturbs badgers or their setts is illegal if not carried out under licence. Badgers could be disturbed by work near their sett even if there is no direct interference or damage to the sett itself, for example, using very heavy machinery within 30 metres of an active sett. Lighter machinery (particularly for any digging operation) within 20 metres, or light work such as hand digging or scrub clearance within 10 metres of an active sett, all require a licence. There are some activities which can cause disturbance at a far greater distance (such as using explosives or pile driving) and should therefore be given individual consideration. Certain criteria must be met before a licence can be issued to enable otherwise prohibited works to proceed. Such criteria may be subject to change without notice.

Timing of operations should also be considered. If required, site-specific badger disturbance licences are normally only issued between the months of July and October so as to avoid the badger’s breeding season. This aspect should be borne in mind when assessing any possible constraints upon the development timetable.



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