

**SITE AT LAND OFF WREXHAM ROAD,
HOLT**

PRELIMINARY ECOLOGICAL APPRAISAL

OCTOBER 2019



ces ecology
consultant ecologists

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**OCTOBER 2019
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EXECUTIVE SUMMARY

- Cheshire Ecological Services Ltd. (CES), the consultancy arm of Cheshire Wildlife Trust, to which all profits are covenanted, was commissioned to conduct a Preliminary Ecological Appraisal of land at Wrexham Road, Holt, where a residential development is proposed.
- The purpose of the survey was to gain 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 development areas and/or the surrounding land, and to recommend further survey, if necessary.
- The proposed development site totalled 1.2 hectares, and was located to the southern edge of the village of Holt adjacent to Wrexham Road and approximately 250m west from the River Dee.
- At the time of survey, the site comprised a poor semi-improved grassland field with an area of hard standing at the site entrance. The field boundaries are demarcated by fencing and native hedgerows. A small concrete shed was also present on site.
- As part of the desk-based study, the Local Biodiversity Recording Centre (Cofnod) provided records of protected and/or BAP Priority Species occurring within 1km of the proposed development site, within the past twenty years.
- Features of ecological interest identified during the survey included a mature sycamore tree with low suitability for roosting bats and native mature hedgerows. Although not necessarily afforded legal protection, it was 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/BAP wildlife species, including, bats, nesting birds, brown hare and hedgehog.
- *Bats* - It is recommended that boundary hedgerows and mature trees on site be retained and that a scheme of bat sensitive lighting be implemented to ensure no disturbance to bat foraging and commuting habitat. A pre-cautionary internal inspection of Building 1 pre-demolition is also recommended.
- *Birds* - Vegetation clearance should be undertaken outside the breeding bird season (i.e. between September and February) otherwise nesting bird surveys by an ecologist should be undertaken. Bird nest boxes should be provided at the post-development site to enhance the sites biodiversity.
- *Brown hare* - The grassland on site should be cut to a short sward height (<10cm) and maintained at this level until development works begin to discourage brown hare from using the site.
- *Hedgehogs* - Where possible, gaps should be provided in fences/walls to allow hedgehogs to move through the site post-development.

1.0 INTRODUCTION

- 1.1 Cheshire Ecological Services Ltd. (CES), the consultancy arm of Cheshire Wildlife Trust, to which all profits are covenanted, was commissioned to conduct a Preliminary Ecological Appraisal of Land at Wrexham Road, Holt, where a residential development is proposed.
- 1.2 Outline planning permission was granted (ref P/2013/0823) by Wrexham Council for a residential development including formation of multi-user games area. The current proposals include the construction of 24 dwellings with associated infrastructure and public open space at the south-east of the site.
- 1.3 The purpose of this survey was to gain up to date 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 development area and/or the surrounding land, and to recommend further survey if necessary.
- 1.4 The survey was conducted by Suzie Whitnall BSc (Hons) MSc Consultant Ecologist, assisted by Leo Plevin BSc (Hons) MSc Grad CIEEM Graduate Ecologist on 22nd October 2019.
- 1.5 Weather conditions at the time of survey were dry and still with a temperature of 11°C.

2.0 SITE DESCRIPTION

- 2.1 The survey was centred on the following OS grid reference SJ 40695 53435.
- 2.2 The area of land requested to be surveyed totals approximately 1.2 hectares, and is hereafter referred to as the 'site'. The site was located to the southern edge of the village of Holt adjacent to Wrexham Road and approximately 250m west from the River Dee.
- 2.3 At the time of survey, the site comprised a poor semi-improved grassland field with an area of hard standing at the site entrance. The field boundaries are demarcated by fencing and native hedgerows. A small concrete shed was also present on site.
- 2.4 Land-use in the wider area comprised the built environs of the village of Holt, mixed use farmland and roads (refer to Appendix A - Site Location Plan).
- 2.5 The site was bounded to the north by Wrexham Road, to the east and south by residential housing and to the west by mixed-use farmland.

3.0 SURVEY METHODS

Desk-based study

- 3.1 The desk-based study comprised consultation with the following consultees:
 - Defra's online mapping facility 'MAGIC'

- Cofnod - the local biological records centre for North Wales
 - Cheshire Wildlife Trust - the administrative body of the Local Wildlife Sites Partnership (England)
 - Ordnance Survey – OS mapping of the local and wider area
- 3.2 The desk-based study comprised consultation with Defra's online mapping facility 'MAGIC' to search for statutorily designated nature conservation sites within the local and wider area.
- 3.3 Cofnod was asked to provide information on statutory and non-statutory nature conservation sites within 1km of the site, and to provide records of protected and Priority species within a 1km radius from the site boundary, within the past 20 years.
- 3.4 Cheshire Wildlife Trust was asked to provide information on non-statutory Local Wildlife Sites and Priority Habitats in England occurring within, approximately a 1km radius, of the proposed development site.
- 3.5 Ordnance Survey mapping of the local area was reviewed to search for the presence of habitats and features of potential ecological relevance to this survey, such as ponds.

Preliminary Ecological Appraisal

- 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 on 22nd October 2019. 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 42 of the Natural Environment and Rural Communities Act, 2006 (for Wales), were recorded as such where present. The Section 42 list of Priority habitats and species has now been superseded by the Section 7 list of the Environment (Wales) Act 2016, however the lists are currently exactly the same and the two should therefore be considered interchangeable.
- 3.8 Preliminary searches were also carried out for protected/BAP species such as badgers, 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 All trees and/or buildings 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, (2015). The guidelines outline the initial survey requirements of all trees and buildings, and where necessary, detail the required further actions and likely mitigation. Trees and buildings were allocated the following categories (based on an assessment of potential roost features when viewed from the ground):

Suitability	Description – Roosting habitats	Commuting and foraging habitats
Negligible	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,
Low	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.
Moderate	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.
High	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 foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Survey Limitations

3.10 The observations made during this survey have been used to assess the presence, or potential presence, of protected and/or 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.

- 3.11 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.
- 3.12 The survey was conducted outside of the optimal survey season for undertaking botanical assessment. However, it was considered that it was possible to make an appropriate assessment of habitat type/categorisation.

4.0 RESULTS

Desk-based Study

- 4.1 Defra's online mapping facility 'MAGIC' indicates that there are four statutorily designated nature conservation sites present within 5km of the site:
- River Dee/ Afon Dyfrdwy Site of Special Scientific Interest (SSSI) (England/Wales) Special Protected Area (SPA) (Wales), located 0.25 km to the east of the site, at its closest point.
 - Dee Cliffs, Farndon SSSI (England) located 1.1km to the north-east of the site, at its closest point.
 - Old Pulford Brook Meadows SSSI (England) located 4.4km to the north of the site, at its closest point.
 - Vicarage Moss SSSI (Wales/England) located 4.5km to the west of the site, at its closest point.
- 4.2 Cheshire Wildlife Trust indicates that the closest non-statutorily designated nature conservation sites in England are:
- Meadow Chase Pit, Farndon Local Wildlife Site (LWS), located 1.1km to the east of the site
 - Crewe Lane Pond, Farndon (LWS), located 1.2km to the east of the site.
- 4.3 Cofnod indicates that there are no non-statutorily designated nature conservation sites in Wales within 1km of the site.
- 4.4 Cofnod highlighted the presence of the following protected species occurring within approximately 1km of the proposed development site since 1999:

Scientific name	Common name	Designations
<i>Acanthis cabaret</i>	Lesser Redpoll	S7, UKBR, WBR
<i>Aegithalos caudatus</i>	Long-tailed Tit	WBA
<i>Alauda arvensis</i>	Skylark	BDir2.2, S7, UKBR, WBA
<i>Anthus pratensis</i>	Meadow Pipit	Bern, UKBA, WBA
<i>Apus apus</i>	Swift	UKBA, WBA
<i>Cotoneaster horizontalis</i>	Wall Cotoneaster	INNS, WCA9
<i>Coturnix coturnix</i>	Quail	BDir2.2, UKBA, WBA, WCA1.1

<i>Delichon urbicum</i>	House Martin	Bern, UKBA, WBA
<i>Emberiza citrinella</i>	Yellowhammer	Bern, S7, UKBR, WBR
<i>Emberiza schoeniclus</i>	Reed Bunting	Bern, S7, UKBA, WBA
<i>Erinaceus europaeus</i>	Hedgehog	Bern, S7
<i>Hirundo rustica</i>	Swallow	Bern, WBA
<i>Impatiens glandulifera</i>	Himalayan Balsam	INNS, WCA9
<i>Lepus europaeus</i>	Hare	S7
<i>Linaria cannabina</i>	Linnet	Bern, S7, UKBR, WBR
<i>Locustella naevia</i>	Grasshopper Warbler	S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]
<i>Meles meles</i>	Badger	Bern, PBA, LBAP
<i>Motacilla flava</i>	Yellow Wagtail	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI]
<i>Passer domesticus</i>	House Sparrow	S7, UKBR, WBA
<i>Passer montanus</i>	Tree Sparrow	S7, UKBR, WBR
<i>Periparus ater</i>	Coal Tit	Bern, WBA
<i>Phylloscopus trochilus</i>	Willow Warbler	UKBA, WBR
<i>Poecile palustris</i>	Marsh Tit	Bern, S7, UKBR, WBR
<i>Prunella modularis</i>	Dunnock	Bern, S7, UKBA
<i>Pyrrhula pyrrhula</i>	Bullfinch	S7, UKBA, WBR
<i>Sturnus vulgaris</i>	Starling	BDir2.2, Bern, S7, UKBR, WBR
<i>Sylvia borin</i>	Garden Warbler	WBA
<i>Sylvia communis</i>	Whitethroat	WBA
<i>Turdus iliacus</i>	Redwing	BDir2.2, UKBR, WBA, WCA1.1
<i>Turdus philomelos</i>	Song Thrush	BDir2.2, Bern, S7, UKBR, WBA, LBAP
<i>Turdus pilaris</i>	Fieldfare	BDir2.2, UKBR, WBA, WCA1.1
<i>Vanellus vanellus</i>	Lapwing	BDir2.2, S7, UKBR, WBR

Note: All species names and designations provided by Cofnod.

Designations key:

UKBR - RSPB UK Birds Red List (not based on IUCN criteria)
WBR - RSPB Welsh Birds Red List (not based on IUCN criteria)
LBAP - Local Biodiversity Action Plan species for Wrexham
WBA - RSPB Welsh Birds Amber List (not based on IUCN criteria)
RD2(UK) - Red Data Book listing for the UK not based on IUCN guidelines
INNS - Invasive Non-native Species
WCA1.1 - Wildlife & Countryside Act 1981 Schedule 1.1 (Birds which are protected at all times)
WCA5 - Wildlife & Countryside Act 1981 Schedule 5
WCA8 - Wildlife & Countryside Act 1981 Schedule 8
Bern - Bern Convention on the Conservation of European Wildlife and Natural Habitats
UKBA - RSPB UK Birds Amber List (not based on IUCN criteria)
CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora
Bern - Bern Convention on the Conservation of European Wildlife and Natural Habitats
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 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.

Fieldwork

- 4.6 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 Maps (Appendix B). Species lists for each area and photographic plates are presented within Appendices C and D respectively.

Target Notes

TN1 – Tree with Low bat roost potential (Plate 4)

TN2 – Building with Low bat roost potential (Plate 8 and 9)

TN3 – Bird species present within hedgerow and neighbouring development

5.0 DISCUSSION

Designated Sites

- 5.1 Defra's online mapping facility 'MAGIC' indicated that the closest statutorily designated nature conservation site is the River Dee / Afon Dyfrdwy SSSI (England/Wales), SPA (Wales) totalling 371.50ha and located 0.25 km to the east of the site. The River Dee is notified for its nationally important transition through a range of river types. The river is host to otter (*Lutra lutra*), water vole (*Arvicola terrestris*) and significant spawning tributaries for Atlantic salmon (*Salmo salar*).
- 5.2 MAGIC indicates that the site lies within the SSSI Impact Risk Zone for River Dee / Afon Dyfrdwy. Small residential developments such as this, within an existing urban/residential area is not listed as a potential impact and therefore consultation between the LPA and Natural England is unlikely to be required.
- 5.3 Cheshire Wildlife Trust indicated that the closest non-statutorily designated nature conservation sites are Meadow Chase Pit, Farndon LWS, located approximately 1.1km from the site and Crewe Lane Pond, Farndon LWS, located approximately 1.2km from the site. Cofnod and MAGIC did not highlight the presence of any non-statutory designated sites within Wales. It is considered unlikely that the proposed development would adversely affect the status of these important sites, due to the apparent lack of habitat connectivity between the sites.
- 5.4 MAGIC highlighted the presence of 'Deciduous woodland' Priority habitat present within 1km of the site. This area is located approximately 0.9km to the south-east of the site on the outskirts of Crewe-by-Farndon. It is considered unlikely that the proposed development would adversely impact upon this important habitat on the grounds of distance and lack of habitat connectivity.

Habitats

5.5 Hard Standing (Plate 1)

A small area of hard standing was present at the site entrance. This area was sparsely vegetated, with the exception of small areas of short perennial species such as moss sp., broad-leaved dock, bramble, dandelion and common nettle. The vegetation was not considered substantial enough to effectively map.

5.6 Poor semi-improved Grassland (Plate 2)

The majority of the site comprised a poor semi-improved grassland field. This area had previously been used as a sports pitch however, it was not currently managed and contained rank grassland. Species present predominantly included; false oat-grass, creeping bent, cock's-foot, Yorkshire fog, ribwort plantain and dandelion, occasional species included broad-leaved dock, common nettle and common knapweed.

5.7 Hedgerows (Plates 3-6)

The site was bounded by three hedgerows which are discussed below:

Hedgerow 1 (H1) was located along the south-western boundary of the site and was approximately 120m in length. The intact, unmanaged hedge was approximately 3m in height and 1.5 wide. The hedge consisted predominantly of the woody species common hawthorn with the occasional sycamore. This hedgerow was connected to Hedgerow 2

Hedgerow 2 (H2) was located along the south-eastern boundary of the site and was approximately 75m in length. The intact, unmanaged hedge was approximately 4m in height and 2m wide. The hedge consisted predominantly of the woody species common hawthorn with the occasional oak sp. and goat willow. House sparrows were seen foraging within hedgerow 2.

Hedgerow 3 (H3) was located along the north-western boundary of the site and was approximately 75m in length. The intact, unmanaged hedge was approximately 4m in height and 2m wide. The hedge consisted predominantly of the woody species common hawthorn with the occasional ash and goat willow.

The site layout plan shows that Hedgerow 3 will be partially removed in order to facilitate a new access road into the development. Hedgerow 1 and 2 are not due to be impacted by the proposed development. It should be noted that all hedgerows consisting predominantly (i.e. 80% or more) of at least one woody UK native species qualify as UK Biodiversity Action Plan Priority habitat, and as such are a material consideration for planning. It is considered that all on site hedgerows qualify as BAP Priority habitat and as such it is recommended that Hedgerow 1 and 2 and the remainder of Hedgerow 3 are retained as part of the development and suitably protected during the works.

Furthermore, it is recommended that hedged boundaries between plots are included in the scheme where practicable. It is recommended that any new hedgerow planting associated with the proposed development should contain a minimum of five of the following species: Common hawthorn (*Crataegus monogyna*), field maple (*Acer campestre*), alder (*Alnus glutinosa*), hazel (*Corylus avellana*), crab apple (*Malus*

sylvestris), field rose (*Rosa arvensis*) wild cherry (*Prunus avium*), holly (*Ilex aquifolium*) and guelder rose (*Viburnum opulus*).

5.8 Tall ruderal vegetation (Plates 7 & 10)

Two small areas of tall ruderal vegetation were present along the north-eastern and north-western boundaries of the site. Species present included bramble and common nettle.

5.9 Buildings (Plates 8-9)

A small concrete shed-like building was present to the north-west of the field, close to Hedgerow 3. The building had a concrete panel wall construction with flat corrugated metal roof. Timber fascia boards were present under the eaves.

5.10 Boundaries (Plate 10)

The north-east of the site was bounded by a chain-link fence with over spilling ornamental vegetation from neighbouring gardens. Species included buddleia, leyland cypress, honeysuckle and willow sp. Bird species such as house sparrow, great tit and blue-tit were seen utilising the adjacent gardens and garages.

Features of Ecological Interest

5.11 The following features of 'significant ecological interest' were identified during the survey:

- Tree with Low bat roost potential
- Native hedgerows

5.12 Although not necessarily afforded legal protection, it is recommended that where practicable, the above features of ecological interest should be retained and sufficiently protected during development works.

5.13 The habitat composition of the site has potential to support legally protected/BAP wildlife species. It was not within the scope of this survey to carry out detailed searches for protected species, although the potential for the study site to support the following species is discussed below:

- Badger
- Bats
- Birds
- Brown Hare
- Hedgehog
- Great crested newt and amphibians

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.

5.14 Badgers

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.

Cofnod provided details of badgers occurring within around 1km of the proposed development site since 1999.

No badger setts were recorded within or adjacent to the site, and no evidence of badger activity was recorded anywhere within the site. The site currently does not offer suitable sett building habitat for badgers.

No further survey effort in respect of this species is currently considered necessary. If evidence of badgers and/or sett building activity is subsequently recorded within the site or 30m of the site, CES should be contacted for advice.

5.15 Bats

All British species of bat 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.

Bats are known to 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.

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.

Cofnod did not provided details of bats occurring within around 1km of site since 1999.

On site trees were limited to a single sycamore tree within H1 and three semi-mature ash trees within H3. The single sycamore tree was ivy-clad and categorised as having **Low** suitability for roosting bats (TN1). Ivy-clad trees are difficult to assess for bat roost potential. Ivy can obscure suitable features and could itself offer suitable concealment to support opportunistic roosting for individual bats. It is recommended that these trees be retained and protected throughout the works. If this is not possible and the trees need to be removed or de-limbed, then in accordance with the BCT Guidelines (2016) no further surveys are recommended however, it is recommended that the following reasonable avoidance measures are adopted:

- *The tree should be felled in such a way that its branches cushion the impact of the fall, or alternatively it should be climbed and felled in sections with any suitable bat roost features (i.e. ivy clad sections or dead wood) being carefully lowered to the ground. Once on the ground, a suitably experienced ecologist shall inspect the tree for the potential presence of roosting bats before the tree is removed or mechanically destructed. In the unlikely event that roosting bat(s) are found to be present, the*

appointed ecologist shall contact Natural Resources Wales for advice on how to proceed.

The three ash trees within H3 were immature and had no suitable roosting features, and categorised as having **Negligible** suitability for roosting bats.

Building 1 was inspected externally for field signs of bats and/or potential roosting features. The single skin concrete walls and corrugated sheet roof offer no suitable roosting features. However, small gaps were identified between the concrete walls and fascia boards. These features were inspected in detail with a high powered torch and found the features to be shallow and unsuitable for large numbers of bats. Furthermore, no evidence of bats or bats were found during the survey.

Building 1 was categorised as offering **Low** suitability for roosting bat given the lack of suitable roosting features, and as such bats are considered to likely absent. **A precautionary internal inspection by a licensed bat ecologist is recommended prior to demolition.**

Bats use trees, hedgerows and linear features to navigate at night. Loss or damage to such features can negatively impact bats by affecting their ability to commute safely between roosts and feeding sites. The on-site trees and mature hedgerows offer potential commuting and feeding resources for bats.

Artificial lighting is considered to be particularly harmful if used near hedgerows and tree lines used by bats. Artificial lighting disrupts the normal light patterns of night and day and may, as a result, affect the natural behaviour of bats. Bats may move away from lit areas and some areas of continuous lighting may create a barrier that bats will not cross. This may affect social interaction. The effect of lighting on bats depends upon the level of light spillage onto roosting, commuting and foraging areas, and the duration of that light pollution.

The proposals should ideally include the retention of the hedgerows as part of the development. It is recommended that any lighting of the proposed development site should be kept to a minimum, and every effort should be made to reduce light spillage onto the south-east and south-west boundaries. Consideration should be given to using bollard type lighting and/or using low pressure sodium lamps rather than high pressure sodium or mercury lamps; if mercury lamps are to be used they should first be fitted with a filter. Guidance on lighting issued by the Bat Conservation Trust can be found here: <https://www.bats.org.uk/news/2018/09/new-guidance-on-bats-and-lighting> .

If an appropriate lighting scheme cannot be implemented, a bat activity survey will be required at the site to assess the likely effects on bats.

5.16 Birds

All species of wild bird, their nest 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 development of land.

Cofnod provided numerous records of priority and protected bird species occurring within the search area since 1999. The sites potential to support these species, is restricted to the boundary hedgerows on site and neighbouring gardens offsite. The hedgerows provide suitable nesting and foraging opportunities for Priority and protect bird species. Priority and protected species, including house sparrow were seen to be utilising gardens, garages and overhanging ornamental vegetation on the north-eastern boundary of the site.

All woody vegetation on site has potential to support nesting birds. Retention of hedgerows and mature trees would help reduce the potential development impacts on breeding birds.

It is recommended that all site preparation works, including vegetation removal and building demolition within Hedgerow 3, be conducted between October and February (i.e. outside of the nesting bird season, which generally encompasses March to September). If this is not possible and works are required to be conducted during the bird nesting season, CES Ecology should be contacted and a nesting bird survey be conducted prior to any potentially disturbing works taking place. In the event that nesting birds are found to be present, an appropriate mitigation strategy should be formulated and implemented.

It is recommended that bird nesting features be installed at the post-development site, to enhance the sites biodiversity. Nesting features for house sparrow, swift and starling should be provided; these species are most likely to utilise the site post-development and readily utilise bird boxes.

5.17 Brown hare

Brown hare is a Local and UK BAP Priority species, and is listed on Section 42 of the Natural Environment & Rural Communities Act, 2006. Cofnod provided details of brown hare occurring within around 500m of the proposed development site since 1999.

Brown hares are associated with farmland habitats, such as those found adjacent to the site, where they feed on grass shoots and utilise areas of tall vegetation for cover. Although, no evidence of brown hare or brown hare were found on site. However, 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.

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

5.18 Hedgehog

Hedgehog is a UK BAP Priority species and is listed on Section 42 of the Natural Environment & Rural Communities (NERC) Act, 2006. Cofnod provided details of

hedgehog occurring within approximately 1km of the proposed development site since 1999.

The site was considered to offer hedgehog with suitable foraging and shelter habitat. Development at the site does have 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 10cm by 15cm, and incorporated in to each garden.

5.19 Great crested newt and other amphibians

GCN are protected under both European and British law. Adult GCN 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

Cofnod did not provide any details of great crested newt or other amphibians present within 1km of the site. However, Cofnod indicates that the site is situated within the 50-70% likelihood of presence area within their GCN distribution modelling dataset.

No ponds/water-bodies were identified on OS mapping on site or within 500m of the proposed development site boundary (refer to Appendix A).

Given the lack of suitable aquatic habitat on site and distance from suitable aquatic habitat, it is considered highly unlikely that GCN would be impacted by the proposed development and no further survey in respect of this species is currently considered necessary.

In the unlikely event that GCN are discovered on site, development should stop immediately and advice be sought from CES.

6.0 SUMMARY RECOMMENDATIONS TABLE

	Species potentially associated with the site/s?	Further survey effort required?	Survey timing	Recommendations
Badger	No	No	-	If evidence of badgers and/or sett building activity is subsequently recorded within the site or 30m of the site, CES should be contacted for advice.
Bats	Yes	Precautionary pre-demolition internal inspection of Building 1. Potentially: If appropriate lighting scheme cannot be implemented, a bat activity survey may be required.	Any time of year May – September, inclusive	Consideration required for external lighting near retained hedgerows
Birds	Yes	Potentially: Nesting bird surveys will be required <u>if</u> vegetation removal works are to take place between March & September.	March – September	Vegetation removal 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. Post-development installation of bird boxes.
Brown hare	Yes	No	-	Grassland on site should be kept low (<10cm) to deter brown hare from using the site.
Hedgehog	Yes	No	-	Where possible, all woody/scrub vegetation to be affected should be removed by hand prior to potentially disturbing works taking place.
Great crested newt	No	No	-	-
Hedgerows	On site	Potentially: Nesting bird surveys will be required if vegetation removal works are to take place between March & September.	March – September	Vegetation removal 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. Hedgerows to be retained should be adequately protected during the works.

7.0 REFERENCES

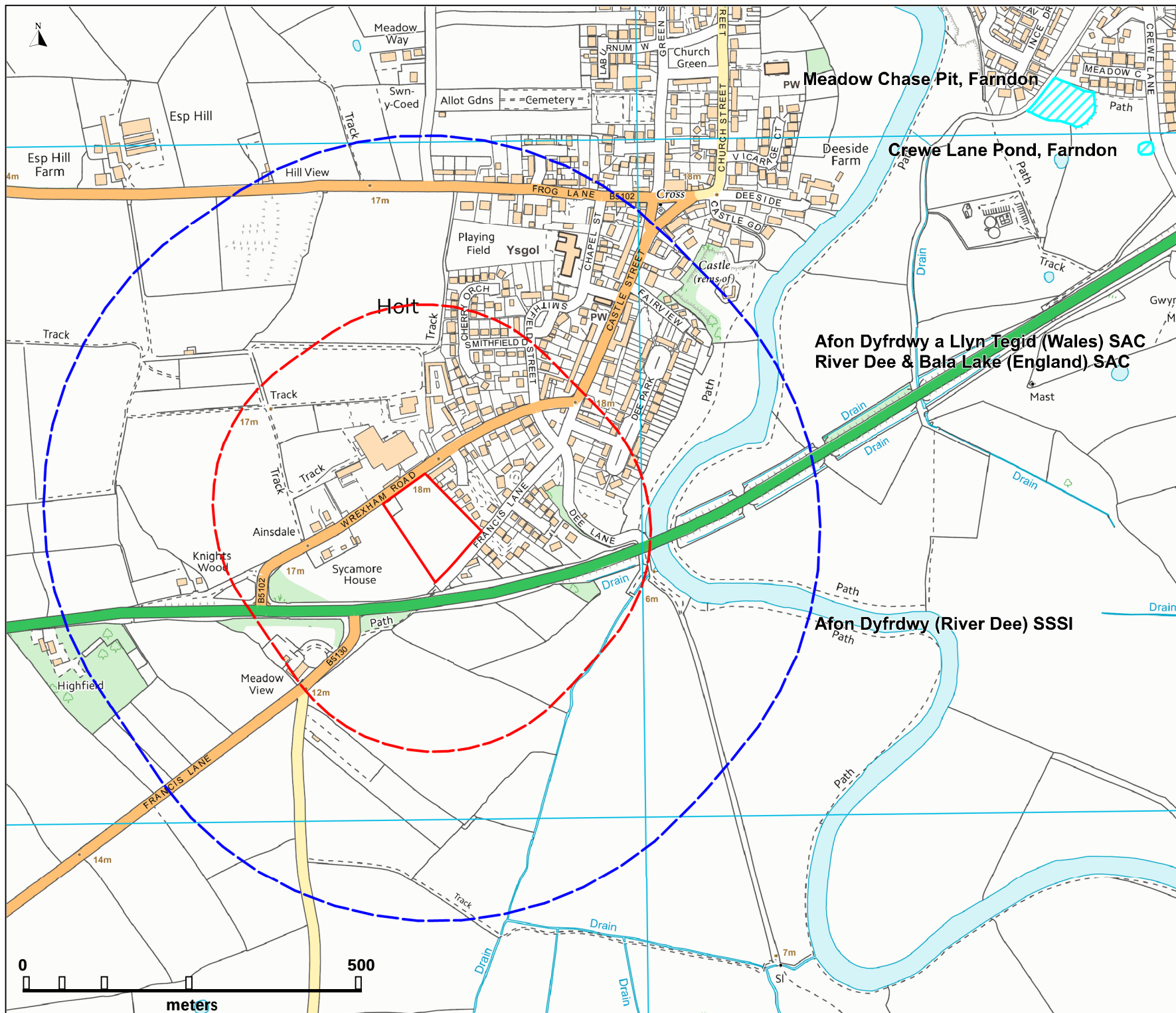
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Appendices

Appendix A: Site Location Plan



- Legend**
- Proposed site boundary
 - 250m buffer
 - 500m buffer
 - Afon Dyfrdwy / River Dee SSSI / SAC
 - Local Wildlife Site (England)

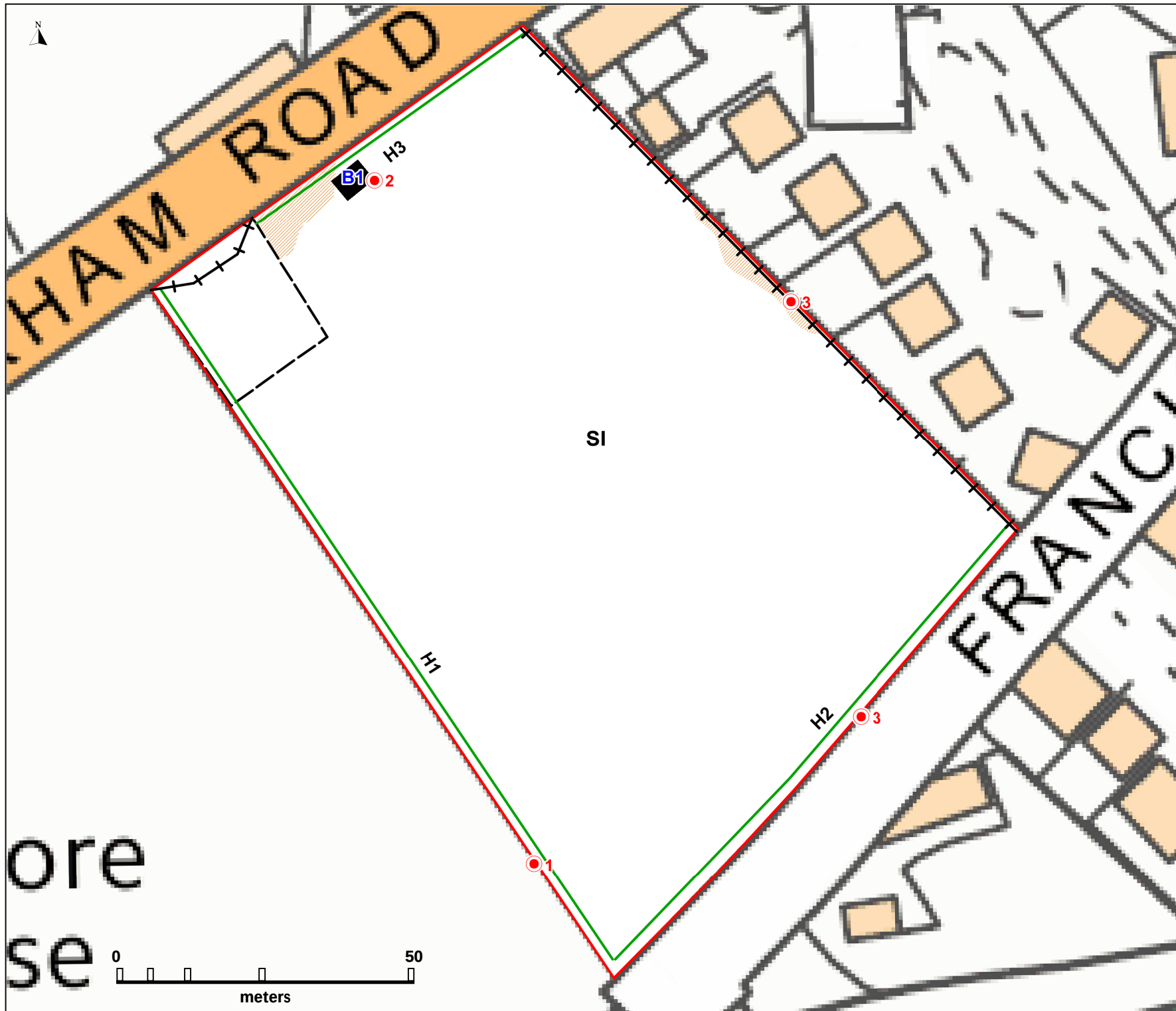
Project:	Wrexham Road, Holt
Map:	Site Location Plan
CES Ref:	CES/1486?10-19?SW
Scale:	Not to scale / indicative
Date	October 2019

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SY14 8EF



Appendix B: Preliminary Ecological Appraisal Map & Key



- Proposed development site boundary
- Hard standing
- SI Poor semi-improved grassland
- Tall ruderal vegetation
- Hedgerows
- Fence
- Building
- Target notes

Project:	Wrexham Road, Holt
Map:	PEA map
CES Ref:	CES/1486/10-19/SW
Scale:	Not to scale / indicative
Date	October 2019

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SY14 8EF



Appendix C: Species Lists

Species present in the Poor semi-improved grassland

Scientific name	Common name
<i>Achillea millefolium</i>	Yarrow
<i>Agrostis stolonifera</i>	Creeping bent
<i>Arrhenatherum elatius</i>	False oat-grass
<i>Centaurea nigra</i>	Common knapweed
<i>Cerastium fontanum</i>	Common mouse-ear
<i>Dactylis glomerata</i>	Cock's-foot
<i>Galium aparine</i>	Cleavers
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Plantago major</i>	Greater plantain
<i>Ranunculus acris</i>	Meadow buttercup
<i>Rumex obtusifolius</i>	Broad-leaved dock
<i>Sonchus oleraceus</i>	Smooth sow-thistle
<i>Taxacum officinale</i> agg.	Dandelion
<i>Urtica dioica</i>	Common nettle

Species present in the Tall ruderal vegetation

Scientific name	Common name
<i>Buddleja</i> sp.	Buddleia sp.
<i>Leylandii</i> sp.	Leylandii sp.
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Rubus fruticosus</i>	Bramble
<i>Salix</i> sp.	Willow sp.
<i>Urtica dioica</i>	Common nettle

Species present within the area of Hard standing

Scientific name	Common name
<i>Artemisia vulgaris</i>	Mugwort
<i>Epilobium</i> sp.	Willowherb sp.
<i>Galium aparine</i>	Cleavers
<i>Geranium lucidum</i>	Shining crane's-bill
<i>Heracleum sphondylium</i>	Hogweed
<i>Mosses</i> sp.	Mosses sp.
<i>Rubus fruticosus</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved dock
<i>Taxacum officinale</i> agg.	Dandelion
<i>Urtica dioica</i>	Common nettle

Species present in Hedgerow 1

Scientific name	Common name
<i>Acer pseudoplatanus</i>	Sycamore
<i>Crataegus monogyna</i>	Common hawthorn
<i>Galium aparine</i>	Cleavers
<i>Hedera helix</i>	Ivy
<i>Rubus fruticosus</i>	Bramble
<i>Urtica dioica</i>	Common nettle

Species present in Hedgerow 2

Scientific name	Common name
<i>Anthriscus sylvestris</i>	Cow parsley
<i>Crataegus monogyna</i>	Common hawthorn
<i>Hedera helix</i>	Ivy
<i>Quercus sp.</i>	Oak sp.
<i>Salix caprea</i>	Goat willow
<i>Urtica dioica</i>	Common nettle

Species present in Hedgerow 3

Scientific name	Common name
<i>Anthriscus sylvestris</i>	Cow parsley
<i>Crataegus monogyna</i>	Common hawthorn
<i>Fraxinus excelsior</i>	Ash
<i>Galium aparine</i>	Cleavers
<i>Hedera helix</i>	Ivy
<i>Malva sylvestris</i>	Common mallow
<i>Ranunculus acris</i>	Meadow buttercup
<i>Salix caprea</i>	Goat willow
<i>Urtica dioica</i>	Common nettle

N.B. These species lists represent those species identified during the survey. Those species which were not in growth or could not be identified due to the growth stage are not included. Exotic species (such as garden escapes) may also have been omitted from the above lists. However, it is considered that the information gathered during the survey was sufficient to provide an accurate assessment of the site.

Appendix D: Photographic Plates



Plate 1: View looking at area hard standing at site entrance



Plate 2: View looking at poor semi-improved grassland field



Plate 3: View looking at Hedgerow 1



Plate 4: View looking at sycamore (TN1) within Hedgerow 1



Plate 5: View looking at Hedgerow 2



Plate 6: View looking at Hedgerow 3



Plate 7: View of tall ruderal vegetation



Plate 8: View of Building 1



Plate 9: View of gap between fascia boards on Building 1



Plate 10: View of fenced boundary on the north-eastern edge of the site and associated vegetation

Appendix E: 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
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
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
Nesting birds	Section 1 of the <i>Wildlife and Countryside Act, 1981</i>	Dependent on species	Dependent on species

The Conservation of Habitats and Species Regulations, 2017

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)

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

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 1st September to 28th February.

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

The Environment (Wales) Act, 2016

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

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

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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