TAN Y BONT, RHOSROBIN, WREXHAM

PRELIMINARY ECOLOGICAL APPRAISAL

FEBRUARY 2021

Cheshire Ecological Services

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EXECUTIVE SUMMARY

- Cheshire Ecological Services (CES), the commercial division of Cheshire Wildlife Trust, was commissioned to conduct a Preliminary Ecological Appraisal of land at Tan Y Bont, Rhosrobin, Wrexham, where a residential development is proposed.

- The survey was conducted on 27th January 2021 and 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 15.78 hectares and is located to the east of the Rhosddu Industrial Estate, to the North of Wrexham.

- At the time of survey, the site comprised predominantly of several close-cropped horse-grazed fields divided by a central belt of small woodland copses and hedgerows, with a hedgerow-lined ditch in the west and the raised mound of Wat's dyke running north to south through the site.

- Cofnod, the Biodiversity Recording Centre for North Wales, provided records of protected and Priority Species occurring within 1km of the proposed development site within the past twenty years.

- No designated sites are thought to be directly affected by the development proposals. Indirect impacts though increased footfall are possible within the Bryn Alyn & Wormswood and Woodlands & Fishwood ponds LWS due to their proximity to site and footpath links from the site. The provision of on-site recreation and greenspace will however assist in limiting said impacts.

- The habitat composition of the site was considered to have potential to support legally protected and Priority wildlife species, including bats, nesting birds and hedgehogs.

- It is considered appropriate and proportionate to recommend further survey effort in respect of roosting, commuting and foraging bats before any potentially disturbing works take place. Ten trees (TR1 – TR10) were identified within the proposed development footprint as having potential for roosting bats. This potential was categorised as Low and Moderate suitability. Trees within the wider survey area not within the application redline boundary were not assessed for bat roost potential. Any proposals to impact upon Trees T1 – T10 will first required detailed bat survey. Similarly, if linear habitat features suitable for foraging and commuting bats cannot be retained and indirect impacts avoided, then bat activity surveys will first be required.

- Given the distance of Great Crested Newt (GCN) records from site, a lack of ponds and major barriers to their dispersal, GCN are thought unlikely to be present on site. As site habitats offer limited potential habitat for GCN, the implementation of Reasonable Avoidance Measures (RAMS) would further limit the low potential for harm to this species. Such measures would also serve to avoid the disturbance of reptiles, which are highly unlikely to be present on site.

- A number of recommendations are made in respect of the protection of nesting birds and hedgehog which may utilise habitats within the site.

1.0 INTRODUCTION

1.1 Cheshire Ecological Services (CES), the commercial arm of Cheshire Wildlife Trust, was commissioned to conduct a Preliminary Ecological Appraisal of land at Tan Y Bont, Rhosrobin, Wrexham where a residential development is proposed.

1.2 The purpose of the 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.

1.3 The survey was conducted by CES Consultant Ecologist Kyle Mellish ACIEEM on 27th January 2021.

1.4 Weather conditions at the time of survey were mild and with sunny spells, with a temperature of 8ºC, 60% cloud cover and a light air (Beaufort Scale 1).

2.0 SITE DESCRIPTION

2.1 The survey was centred on the following OS grid reference SJ 33264 52804.

2.2 The area of land requested to be surveyed totals approximately 15.78 hectares and is hereafter referred to as the 'site'. The site is located to the east of the Rhosddu Industrial Estate to the North of Wrexham.

2.3 At the time of survey, the site comprised predominantly of several close-cropped horse-grazed fields, divided by a central belt of small woodland copses and hedgerows, with a hedgerow-lined ditch in the west and the raised mound of Wat's dyke running north to south through the site.

2.4 Land-use in the wider area comprised a mixture of residential usage to the north, further residential to the east and south beyond the A483 (a banked dual carriageway at this point) and the Rhosddu industrial estate and rough grassland fields to the west beyond a railway, as shown in **Appendix A - Site Location Plan**.

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
- 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. Any records returned outside this period was disregarded, as they can no longer be considered relevant.

3.4 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

3.5 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).

3.6 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.

3.7 Preliminary searches were also carried out for protected and Priority 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.

3.8 The abundance of all recorded botanical species identified in potential Biodiversity Action Plan (BAP)/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.

3.9 All trees within the proposed development area of the site 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 where necessary, detail the required further actions and likely mitigation. Trees were allocated the categories outlined in **Table 3.1** (based on an assessment of potential roost features when viewed from the ground).

Table 3.1: Suitability Criteria for Roosting Features and, Commuting and Foraging Habitats

Suitability	Description – Roosting habitats	Commuting and foraging habitats
Negligible	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	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 streams, 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	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	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 assessments. However, given the habitats present on site, this is not expected to have affected their classification.

4.0 RESULTS

Desk-based Study

4.1 Defra's online mapping facility 'MAGIC' indicates that there are eight statutorily designated nature conservation sites present within 5km of the site:

- Midland Meres and Mosses Phase 2 Ramsar, located 2.36km to the north-east of site. Ramsar sites are wetlands of international importance, with this site designated for its diverse range of wetland habitats, rare wetland flora and invertebrate assemblage.
- Gatewen Marsh SSSI (Site of Special Scientific Interest), located 1.5km south-west of site. The SSSI is a mesotrophic mire, with a floral assemblage typical of this habitat.
- Vicarage Moss SSSI, located 2.36km to the north-east of site (the designation of which overlaps with the Midland Meres and Mosses Phase 2 Ramsar). The site is designated for its geomorphology and mire, wetland and carr habitats.
- Llay Bog SSSI, located 2.47km north of site. A small area of bog, with associated plant assemblage and accompanying alder – birch carr.
- Marford Quarry SSSI, located 3.2km north-west of site. The site is formed of a disused sand and gravel workings and designated for its entomological interest; both for its diversity of species and possession of rare butterfly and moth species.
- Chwarel Singret SSSI, located 3.3km north of the site, a former quarry designated for its unusual rock exposures.
- Coedwig Ffosil Brymbo Fossil Forest SSSI, located 3.5km west of site, designated for its large amount of well-preserved plant fossils.
- Sontley Marsh SSSI, located 4.2km south of the site. The site is a good example of a mesotrophic mire, with associated tall fen vegetation, alder carr woodland as well as herb-rich damp grassland.

4.2 Cofnod indicates that there are two non-statutorily designated nature conservation sites present within 1km of the site:

- Bryn Alyn & Wormswood Local Wildlife Site (LWS) located approximately 170m to the north of the site at its closest point. The wildlife site comprises a semi-natural woodlands and semi-improved grasslands situated around a meander of the River Alyn, with significant botanical diversity.
- Woodlands and Fishpond Woods LWS located approximately 680m north-west of the site at its closest point. The wildlife site comprises predominantly wetland habitats based around a former lake, with marshy grassland communities with good herb assemblage and areas of alder and semi-natural woodland outside the wetter areas.

4.3 Cofnod highlighted the presence of protected species occurring within approximately 1km of the proposed development site. **Table 4.1** below displays those records that are applicable given the habitats present on site.

Table 4.1 Protected species identified within 1km of the site boundary

Scientific Name	Common Name	Designations
Birds		
Acanthis cabaret	Lesser Redpoll	UKBRd, WBRd, EWA7
Alauda arvensis	Skylark	EWA7, UKBRd, BDir2.2, WBAm
Anthus pratensis	Meadow Pipit	UKBAm, WBAm
Apus apus	Swift	UKBAm, WBAm
Cuculus canorus	Cuckoo	UKBRd, WBRd, EWA7
Delichon urbicum	House Martin	UKBAm, WAMm
Dendrocopos minor	Lesser Spotted Woodpecker	UKBRd, WBRd, EWA7
Emberiza citrinella	Yellowhammer	UKBRd, WBRd, EWA7
Falco tinnunculus	Kestrel	UKBAm, WBAm, EWA7
Fringilla montifringilla	Brambling	WCA1.1
Hirundo rustica	Swallow	WBAm
Linaria cannabina	Linnet	UKBRd, WBRd, EWA7
Motacilla flava	Yellow Wagtail	UKBRd, WBRd, EWA7
Muscicapa striata	Spotted Flycatcher	UKBRd, WBRd, EWA7
Passer domesticus	House Sparrow	UKBRd, WBAm, EWA7
Phoenicurus phoenicurus	Redstart	UKBAm, WBAm
Poecile palustris	Marsh Tit	UKBRd, WBRd, EWA7
Prunella modularis	Dunnock	UKBAm, EWA7
Pyrrhula pyrrhula	Bullfinch	UKBAm, WBRd, EAW7
Sturnus vulgaris	Starling	UKBRd, WBRd, EWA7, BDir2.2
Turdus iliacus	Redwing	UKBRd, WBAm, WCA1.1, BDir2.2
Turdus philomelos	Song Thrush	UKBRd, WBAm, EWA7, BDir2.2, LBAP
Turdus pilaris	Fieldfare	UKBRd, WBAm, BDir2.2
Tyto alba	Barn Owl	WCA1.1, WCA9, WBAm, LBAP
Vanellus vanellus	Lapwing	UKBRd, WBRd, EWA7, BDir2.2

Insects		
Erynnis tages	Dingy Skipper	EWA7, UKBAP,
Mammals		
Erinaceus europaeus	Hedgehog	EWA7
Meles meles	Badger	Bact, LBAP
Pipistrellus	Pipistrellus Bat Species	HabRegs4, WCA5
Pipistrellus pipistrellus	Common Pipistrelle	HabRegs4, WCA5, EWA7
Pipistrellus pipistrellus agg.	Pipistrelle agg.	HabRegs4, WCA5
Pipistrellus pygmaeus	Soprano Pipistrelle	HabRegs4, WCA5, EWA7
Plecotus auritus	Brown Long-eared Bat	HabRegs4, WCA5, EWA7
Herpetofauna		
Natrix helvetica	Grass Snake	WCA5, EWA7
Triturus cristatus	Great Crested Newt	WCA5, HabRegs2, EWA7, LBAP
Zootoca vivipara	Common Lizard	WCA5, EWA7

Note: All species names and designations provided by Cofnod.

Designations key:

UKBRd - RSPB UK Birds Red List (not based on IUCN criteria)
WBRd - RSPB Welsh Birds Red List (not based on IUCN criteria)
UKBAm - RSPB UK Birds Amber List (not based on IUCN criteria)
WBAm - RSPB Welsh Birds Amber List (not based on IUCN criteria)
EWA7 – Environment Wales Act – Section 7
LBAP - Local Biodiversity Action Plan species for Wrexham
WCA1.1 - Wildlife & Countryside Act 1981 Schedule 1.1 (Birds which are protected at all times)
WCA5 - Wildlife & Countryside Act 1981 Schedule 5
PBA - Protection of Badgers Act 1992

4.4 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.

4.5 Cofnod highlighted the presence of Semi-Natural Ancient Woodland habitat located within 1km of the site, with the closest area 165m north of site beyond a road, railway and a small industrial estate; all ancient woodland habitat within 1km of site is contained within the two local wildlife sites earlier described in **Section 4.2**.

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

Target Notes

TN1 – Small vegetated earth mound with limited potential to support amphibians & reptiles (Plate 1).

TN2 – Small area of ruderal vegetation by gateway (too small to map as a habitat (Plate 2).

TN3 – Small fenced children's playground set in amenity grassland (Plate 3).

TN4 – Small ephemeral pool connected to ditch with sluggish flow (Plates 4 & 5).

TN5 – Line of juvenile to early mature sycamores along south-east site boundary (Plate 6).

5.0 DISCUSSION

Designated Sites

5.1 The Defra 'Magic' website indicated that the only internationally designated site within the 5km search area was the Midland Meres and Mosses Phase 2 Ramsar site. Ramsar sites are designated as wetlands of international importance, with the above Ramsar designated for its range of wetland habitats, rare wetland fauna and invertebrate assemblage.

5.2 The proposed development site contains no such aquatic habitats; those areas currently under water being seasonally inundated, with particular extent at the time of survey due to recent heavy rain and snowmelt, and is over 2km from the Ramsar. As such no impacts are expected to the Ramsar site as a result of development.

5.3 The closest nationally designated site was Gatewen Marsh SSSI, located 1.5km south-west of the site. The SSSI is a mesotrophic mire, with an associated floral assemblage. As no wetland habitats are present on the proposed development site, the site is over 1.5km south west of the development site with no habitat links and is not publicly accessible, no impacts are expected as a result of development.

5.4 All other nationally designated sites are beyond 2km from the proposed development site, and therefore no direct or indirect impacts are expected as a result of development.

5.5 Cofnod indicated that there are two Local Wildlife Sites within 1km of the site, the closest being Bryn Alyn & Wormswood Local Wildlife Site at approximately 170m from the site, the other being Woodlands & Fishpond Woods LWS 680m north-west of site; these two sites also contain all Semi-Natural Ancient Woodland priority habitat within 1km of site and are functionally linked to each other.

5.6 The sites comprise riverine and wetland habitats with associated wet woodland, as well as semi-improved and marshy grassland. Though the development site does contain small pockets of wet woodland, these comprise predominantly plantation willow species, with little understorey, in contrast to the wet alder and sycamore woodland within the LWS. The proposed development site also contains semi-improved grassland, though it is notably less diverse and contains none of the species highlighted in the LWS description. The site is also separated from both LWS's by a busy minor road, railway track and a retail estate, and as such no direct impacts are expected as result of development.

5.7 The public footpath on site along Wat's dyke does however provide easy pedestrian access to both LWS sites, both of which are publicly accessible. Ample footpaths are provided within both LWS site's however, the provision of public greenspace and recreational opportunities should help to limit impacts on these local sites (and associated semi-natural ancient woodland) as result of increased foot traffic.

Habitats

5.8 Amenity Grassland (Plate 7)
A small area of amenity grassland was present in the north-east of the site, comprising a children's playground (see TN3). The grassland comprised a typical seeded rye grass sward, regularly mown, with juvenile specimen cypress and cherry trees. It was of low botanical interest and low habitat distinctiveness.

5.9 Ditch with Pool (Plates 4 & 5)
A ditch was present in the west of the site, connected to a small pool at its southern extent and bordered by a hedgerow. The ditch possessed a sluggish flow at the time of survey despite recent rain, snowmelt and flooding elsewhere on site with a base of ivy, and the pool was a maximum of 25cm deep with no aquatic vegetation. As such, both the ditch and accompanying pool are thought to be highly ephemeral. This habit was of low habitat distinctiveness and is not thought to fit the classification of a priority habitat.

5.10 Grassland – Improved (Plates 8 & 9)
Two large fields of improved grassland fields were present in the north-west of the site, partially separated by Wat's dyke and remnants of a long defunct hedgerow, both with a short sward. The fields appeared to be managed for a grass crop, though evidence of past grazing was evident through old horse droppings.

Species diversity was very poor; comprising almost entirely of perennial ryegrass, with white clover and Yorkshire fog very occasionally present within the sward. These fields were of low botanical interest and low habitat distinctiveness.

5.11 Grassland – Semi-improved (Plates 10 & 11)
Several semi-improved grassland fields occupied the south and east of the site, maintained as a close-cropped sward by horse grazing, with access for livestock between all fields. With the exception of the field in the north-east, this habitat contained numerous pockets of bramble scrub (described separately below). The small central field is noticeably wetter and with reduced botanical diversity.

The sward was dominated by perennial rye-grass, though Yorkshire fog, dandelion, red clover, creeping buttercup and ribwort plantain are also abundant, with ragwort, mouse ear, sorrel, catsear and selfheal occasionally present throughout the sward.

5.12 Hedgerows with Trees (Plates 12-15)
Numerous hedgerows were present on site and on the site's northern & southern boundaries (Hedgerows H1 – H8). All were species-poor, however, as they all consisted predominantly of native woody species, they all qualify as Priority Habitat in Wales under Section 7 of the Environment Wales Act (EWA). Almost all hedgerows contained mature

trees (predominantly pedunculate oak), and barring H5 all displayed lapsed management – having become tall and bushy, with large gaps evident at ground level. The individual hedgerows are detailed below:

- H1 – A defunct species-poor hedgerow with trees separating the two southernmost fields, with largely lapsed management. Hawthorn dominant, with occasional mature oak, blackthorn and holly, with individuals of field maple and crab apple, with few understorey species comprising predominantly of adjacent semi-improved grassland species as well as occasional nettle, wood avens and woundwort.
- H2 - Partially defunct species-poor hedgerow with trees on the south-west site boundary, dominated by hawthorn with occasional blackthorn, elder and both juvenile and mature sycamore. Understorey vegetation almost entirely formed of ivy, with occasional nettle and cleavers.
- H3 – Intact species poor-hedgerow with mature trees bordering an ephemeral ditch in the west of site. Hawthorn was dominant, though blackthorn was abundant, with occasional mature pedunculated oak & sycamore, holly, juvenile sycamore, alder and willow species. Ground flora was dominated by ivy, with occasional bramble, common nettle, wood avens and cleavers and rarely wild raspberry and foxglove.
- H4 – Defunct hedgerow with mature trees in the centre of site, with a variable height. Dominated by hawthorn but also containing blackthorn, holly, mature and juvenile peduncuate oak and elder, with an understorey of nettle, bramble, cleavers and upright hedge parsley.
- H5 – Intact species-poor and recently flailed hedgerow along Plas Acton road in the north of site. Dominated by hawthorn but also containing elder, silver birch, willow species, silver bitch, holly and blackthorn, with a sparse understory of upright ivy, upright hedge parsley, nettle, cleavers and woundwort.
- H6 – Remnants of a species-poor hedgerow along the top of Wat's Dyke, comprising isolated patches of blackthorn and little to no understorey.
- H7 – Defunct species-poor hedgerow with large gaps in the north-east of site. Dominated by holly, with hawthorn abundant and elder and pedunculate oak (mature & juvenile) also present. Little understorey present consistent with sparse nature.
- H8 – Intact species poor hedgerow also along Plas Acton road in the north east of site, quite tall with evidently recent lapse of management. Holly, willow species, elder, silver birch and blackthorn all abundant, with an understorey of nettle, cleavers, cow parsley and woundwort.

As the hedgerows are a priority habitat, their retention should be sought where possible within site proposals, with replacement with species-rich hedgerows where this is not possible.

Due to their largely defunct and species-poor nature, abundant opportunities exist to reinforce and increase the species diversity and structure of the retained hedgerows on site. Ideally, enhanced hedgerows should contain at least 5 locally native woody species, be allowed to achieve a width of at least 1.5m and a height of 2.5m and be cut on a maximum of a three-year rotation to promote production of fruit. Local native woody species include: 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*).

None of the hedgerows were considered likely to qualify as Important under the Landscape and Wildlife criteria of the Hedgerow Regulations 1997.

5.13 Scattered Mature Trees (Plates 16 & 17)
Mature trees were present in low numbers outside the two small areas of woodland (see below), though almost all were associated with hedgerows. Pedunculate oak was the most common species, with sycamore and ash also present.

5.14 Scrub - Dense & Scattered (Plate 18 & 19)
Dense and scattered scrub was present throughout the south of the site, with particularly large amounts of dense scrub within the south-eastern field.

The vast majority of the scrub was dominated and often exclusively comprised of bramble, with blackthorn also frequent and occasional elder, buddleia and dog rose present. Scattered scrub also contained sapling and juvenile trees, with isolated goat willow, blackthorn, hawthorn and sycamore and an area of juvenile alder in the centre of site.

5.15 Woodland – Broadleaved Plantation (Plates 20 & 21)
Two small areas of plantation woodland were present within the centre of site.

The easternmost stand occupied a currently flooded area to the east of the centre of site, and was bordered by hedgerows H1 & H9. It comprised almost exclusively of mature pedunculate oak, with willow species present within the shrub layer. Due to the waterlogged nature of the ground, ground flora was largely absent, with isolated patches of Yorkshire fog and red fescue in drier areas comprising less than 10% ground cover.

The other area of woodland largely comprised an area of evenly spaced willows, all of which were of a juvenile age class, with goat willow most common. This woodland area also incorporates a former lapsed hedgerow dominated by hawthorn, with blackthorn mature pedunculated oak trees and standing deadwood also present. Understorey species were sparse, formed of encroaching grass species from the surrounding fields, with Yorkshire fog and annual meadow grass most common.

It is considered that these stands of woodland do not qualify as Priority habitat, due to the fact they are plantation woodlands of very limited diversity of both woody, shrub and understorey species.

Features of Ecological Interest

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

- Grassland – Semi-improved
- Hedgerows – Priority habitat

- Scrub - Dense
- Woodland and Scattered Mature Trees

5.17 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.

5.18 Current draft plans indicate the loss of hedgerows H1 & H3, as well as the majority of semi-improved grassland and scrub. Plans for the northern half were not available at the time of writing, and it is therefore not possible to assess whether or not they are likely to be impacted.

5.19 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, although the potential for the study site to support the following species is discussed below:

- Badger
- Barn owl
- Bats
- Birds
- Great Crested Newt and other amphibians
- Hedgehog
- 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.

5.20 <u>Badgers</u>

Badgers and their setts are protected under British law. 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 several records of badgers occurring within around 1km of the proposed development site since 2000, though none of the records were present on site. Additionally, no signs of badger were identified during the site survey, though several signs of rabbit were found in hedgerows across the site.

As such, it is considered that badger are not currently domicile within or adjacent to the site. Badgers are however an active and highly mobile species which can readily move into new areas and excavate new setts. It is therefore recommended that an updated badger survey is completed prior to the commencement of works on site, or if a period of 12 months' elapses before this time.

5.21 Barn owl

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.

Cofnod provided 7 records of barn owl occurring within 1km of the site within the last 20 years. No evidence of barn owls was found during the site visit (e.g. the presence of pellets beneath trees) and none of the mature trees within the development area were found to provide features of sufficient size for barn owl. Foraging opportunities on site are also thought to be sub-optimal for barn owl, due to the close-cropped nature of the sward. As such, barn owl are expected to use the site for no more than occasional foraging.

5.22 Bats

All British species of bat are protected under both European and British law. Surveys are required to check for their presence in areas where bats or their roosts are likely to be disturbed for any reason.

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.

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 navigation.

Cofnod provided 12 records of bats present within 1km of the site, comprising brown long-eared, common pipistrelle, soprano pipistrelle and an unidentified pipistrelle species, though the records do not elucidate whether these are merely passes or roost records.

A ground-level roost assessment was conducted of trees likely to be affected by the current site layout in the south of the site. Trees outside this area were not assessed, and will need to subject to assessment should they be affected by site proposals within this area.

Several mature trees and standing deadwood on site provide Low to Moderate potential for roosting bats; these predominantly comprising mature oaks in hedgerows with potential roost features (PRFs) such as knot holes and cracks formed from limb tear outs and are noted as TR1-TR10 in **Appendix B**, with example plates provided within **Appendix D** (Plates 22-25).

If trees noted as having low or moderate potential are to be removed, then further ground inspections followed by aerial tree inspections will first be required, to determine if bats are using the trees to roost. The ideal timings to carry out the surveys is November to April, when the trees are not in leaf.

Bats use linear features such as tree lines and hedgerows to navigate at night. Loss or damage to such features can negatively impact bats by fragmenting roost and feeding sites. The features can also act as important feeding resources. The row of trees along the south-east boundary offers suitable commuting and foraging habitat for bats.

The hedgerows and tree lines both within and outside the site boundary also form suitable commuting and foraging routes for bats. The site is however quite isolated from surrounding suitable habitats by dual carriageways, busy lit single carriageways and industrial and retail estates, and as such is thought to be of use for low numbers of commuting and foraging bats.

Any proposed losses or indirect impacts on linear habitat features suitable for foraging and commuting bats should be proceeded by bat activity surveys to determine the usage and any necessary mitigation measures required.

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. **As such, an appropriate lighting scheme is recommended to negate any effects of artificial lighting on bats.**

5.23 Birds

All species of wild bird, their nest and eggs are protected under Section 1 of the *Wildlife and Countryside Act*, 1981 (as amended). Surveys are required to check for their presence where they are likely to be disturbed during the breeding season. 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 2000.

The site is subject to high foot traffic, with an official footpath and several intention pathways that criss-cross the site. It is therefore likely that only birds tolerant to frequent human activity such dunnock, starling and song thrush are likely to nest on site. Ground nesting species such as skylark and lapwing are not likely to breed on site. The semi-

improved grasslands, hedgerows and trees do however present suitable foraging and shelter habitats for a range of passerines.

All woody vegetation on site has potential to support nesting birds. It is not currently known whether any on site woody vegetation is being lost as part of the development, though the loss of H1 is considered likely. 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, be conducted between October and February (i.e. outside of the 'core' 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 should be contacted and a nesting bird survey be conducted prior to any potentially disturbing works taking place. Outside this time, contractors should display due diligence in searching for nesting birds, which can nest outside the 'core period, the likelihood depending on temperatures and species. Where surveys identify the presence of active nests, an appropriate mitigation strategy should be formulated and implemented (usually consisting of the establishment of a suitably sized exclusion zone around the nest).

5.24 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 provided numerous records of great crested newt within 1km of the site as well as palmate newt, smooth newt, common toad and common frog. The closest GCN record to site was located 300m west of site within a ditch north of the Rhosrobin industrial estate. The terrestrial range of individual GCN is typically within 250m of their breeding ponds, occasionally up to 500m and rarely beyond 1km.

Though an area of standing water was present on site, the lack of aquatic flora and lack of depth indicated that it is highly ephemeral in nature, being fed by a ditch which also lacked any aquatic fauna; the water level being this low despite recent heavy rainfall and snow-melt, rendering it unsuitable as GCN breeding habitat.

OS mapping highlighted no ponds within 250m of site (see **Appendix A**). Given the site is bordered by a busy road to the south and west, a busy road and residential housing to the north, and a dual carriageway to the east, it is unlikely that GCN would be able to

migrate to site from the ponds in the surrounding area (albeit beyond 250m from the site). Consequently, GCN are considered likely to be absent from the site.

The site does however contain habitats suitable for GCN, namely woodland, scrub and semi-improved grassland (if allowed to grow taller at different times of year). **As such, and for the avoidance of doubt, non-licenced GCN Reasonable Avoidance Measures (RAMs) should be sufficient to negate any remaining likelihood of harm should GCN be present on site**.

This should consist of:

• Prior to commencing the approved development at the site, a suitably experienced and GCN licensed consultant ecologist will be appointed to ensure that the RAM mitigation strategy is followed.

• A copy of this report and supporting materials including amphibian identification sheets and 'on call' ecologist contact details will be kept on-site and available at all times.

• Prior to commencement of any 'development', the grassland sward within the application site will be maintained low by cutting or continued grazing to dissuade amphibians from these areas. The grassland sward will be maintained short thereafter, e.g. frequent mowing/cutting/grazing.

• No materials will be stored on site pre-'development' and it will be kept free of materials and debris (e.g. plastic sheeting and boarding, which can be used by amphibians for sheltering). Where possible, materials stored on-site during the development phase will be placed off the ground on pallets or timber rails to dissuade amphibians from seeking shelter within.

• Any excavations required to be left open overnight will be covered by boarding and any gaps will be sealed with earth to prevent animals from falling into the excavations.

• All excavations will be checked for the potential presence of trapped animals before in-filling.

• In the event that a frog, toad or smooth newt is found, they shall be captured by site workers and released into suitable terrestrial cover habitat (e.g. in rough grassland or at the base of a hedgerow) at the edge of the site out of harm's way.

• The RAMs do not allow GCN to be captured or removed from the site/working area and released at another location. If GCN are found within the working area, work will stop and the appointed ecologist will be contacted immediately.

The provision of new native hedgerows as recommended in section 5.2 will also serve to benefit any amphibians on site, proving suitable foraging and shelter habitat.

5.25 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 24 records of

hedgehog within 1km of site, the closest at 470m to the east beyond the A483 dual carriageway, though some records were only available with a four figure grid reference which produces a 1km grid square.

The site offers potential foraging and shelter habitat for hedgehog through the grassland, scrub, woodland and hedgerow habitats. As such it is recommended that all dense woody and scrub vegetation (standing or fallen) to be affected by the works is to be subject to a hand search prior to disturbing works taking place, to ensure hedgehogs are not harmed during vegetation clearance. Any hedgehogs found should be placed in a large bucket or garden trug with shredded newspaper or hay, and the site ecologist contacted for further advice.

Suitable habitats for hedgehog should be retained where possible within site proposals, with further habitat provision provided where this is not possible. It is also recommended that hedgehogs be able to gain access to new 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 x 13cm, and incorporated in to each garden.

5.26 Invertebrates

A single record for Dingy Skipper was returned by Cofnod, 320m North of the site.

The preferred food plant of the Dingy Skipper caterpillar is bird's-foot trefoil, with horse shoe vetch and greater trefoil also used where this food plant may not be available. Bird's-foot trefoil was not identified on-site during the phase 1 habitat survey, however it is noted that the survey was conducted at a sub-optimal time of year for botanical survey. However, the management practices of the sites' grassland habitats suggest that bird's-foot trefoils and other herbaceous species important for dingy skipper and other invertebrates of conservation concern are not likely to be present in abundance.

5.27 Reptiles

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 distribution of the UK's 'common' reptile species (i.e. adder, grass snake, slow worm and common lizard) is widespread but rarely frequent. 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.

Cofnod provided details of a single record each of grass snake & common lizard within 1km of site, the closest grass snake record being 180m north of site within the Bryn Alyn & Wormwood LWS, and the closest common lizard on a railway track 730m west of site.

The proposed development site is highly disturbed, with an official footpath and multiple unofficial footpaths criss-crossing the site. The habitats on site are also of very limited suitability for reptiles, comprising patches of scrub, with the short-cropped grassland assessed as not being suitable, due to providing no cover and minimal foraging

opportunities. The site also possesses no suitable waterbodies for the semi-aquatic grass snake, and is surrounded by active railways, residential, industrial and retail estates and a dual carriageway to the east, and as such reptiles are thought to be absent from the site.

Nevertheless, for the avoidance of doubt, potential harm to reptiles can be avoided by the implementation of GCN Reasonable Avoidance Measures as detailed in paragraph 5.24. In the unlikely event that reptiles or any species are discovered on site, the site's ecologist should be contacted immediately for advice.

5.28 Water Vole

Water voles receive strict legal protection through their inclusion on Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The on-site ditch does not offer suitable habitat to this species due to its ephemeral nature and lack of water depth as demonstrated by lack of aquatic flora and consequently this species is concluded likely to be absent from the site. No further survey in respect of water vole is recommended.

6.0 SUMMARY RECOMMENDATIONS TABLE

	Species potentially associated with the site/s?	Further survey effort required?	Survey timing	Recommendations
Badger	Yes	Yes: An update badger survey will be required prior to the commencement on works on site, or if 12 months' elapse since the previous survey (Jan 2022).	Any time of year ideally when vegetation is not in full leaf.	A pre-commencement **badger survey** will be required at the site and on land within 30m of the site boundary where possible prior to the commencement of works, or if 12 months elapse since the previous survey (Jan 2022).
Barn owl	No	Potentially: If any trees beyond the proposed development area on site are to be affected/lost as part of the development, they first should be assessed for their potential to support barn owl. This could be combined with the further **bat roost potential assessment.**	**Any time of year Ideally when the trees are not in leaf.**	No potentially disturbing work should take place until the results of the assessment are known.
Bats	Yes	**Yes:** **Activity Survey** – To assess the use by bats of suitable habitats. **Yes:** **Tree climbing Inspection** – To determine any use of trees identified as possessing bat potential. With potential for dusk/dawn emergence/rentry	**One visit per season – from Mid-May until September** **Any time of year Ideally when the trees are not in leaf.** **Emergence/re-**	No potentially disturbing work should take place to habitat features suitable for foraging and commuting bats until a bat activity survey has been conducted. No potentially disturbing work should take to any trees identified as having bat roost potential (Trees TR1 – TR10) place until the results of the assessment are known.

		surveys where climbing surveys cannot determine usage. Potentially: If any further trees outside the development area on site are to be affected/lost as part of the development, a **bat roost potential assessment** prior to the commencement of works**.**	**entry surveys May - September** **Any time of year Ideally when the trees are not in leaf.**	No potentially disturbing work should take place until the results of the assessment are known.
Birds	Yes	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.
Great crested newt	No	No	Not applicable	Implementation of GCN RAMs
Hedgehog	Yes	No	Not applicable	Where possible, all woody/scrub vegetation to be affected should be searched by hand prior to potentially disturbing works taking place.
Reptiles	No	No	Not applicable	Implementation of GCN RAMs.
Water vole	No	No	-	-

7.0 REFERENCES

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

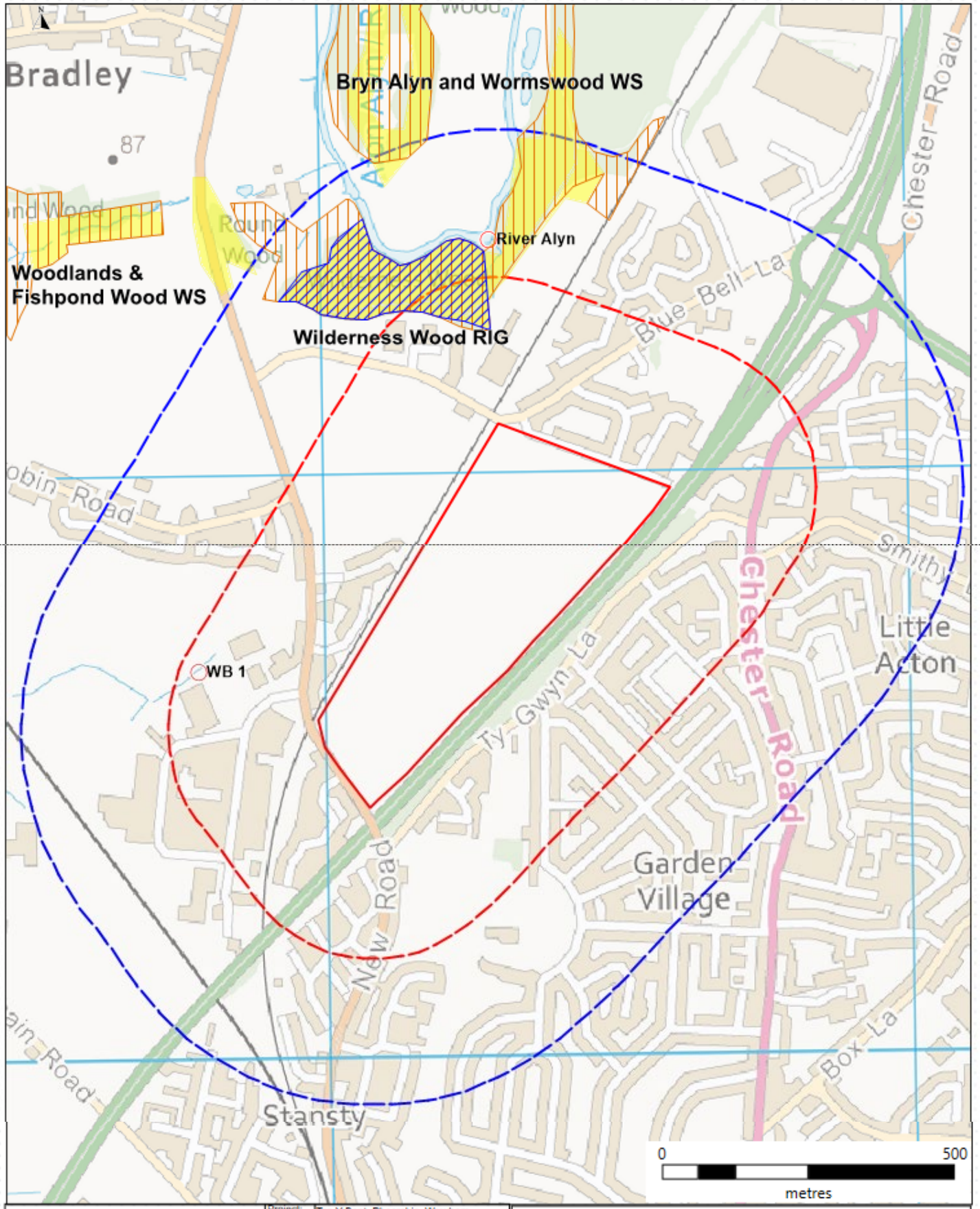
JNCC (2010). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Joint Nature Conservation Council.

Shawyer, C. R. (2011). Barn Owl (Tyto alba) Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester.

Stace, C. (2019). New Flora of the British Isles. Fourth Edition. Cambridge.

Appendices

Appendix A: Site Location Plan



Cheshire Ecological Services

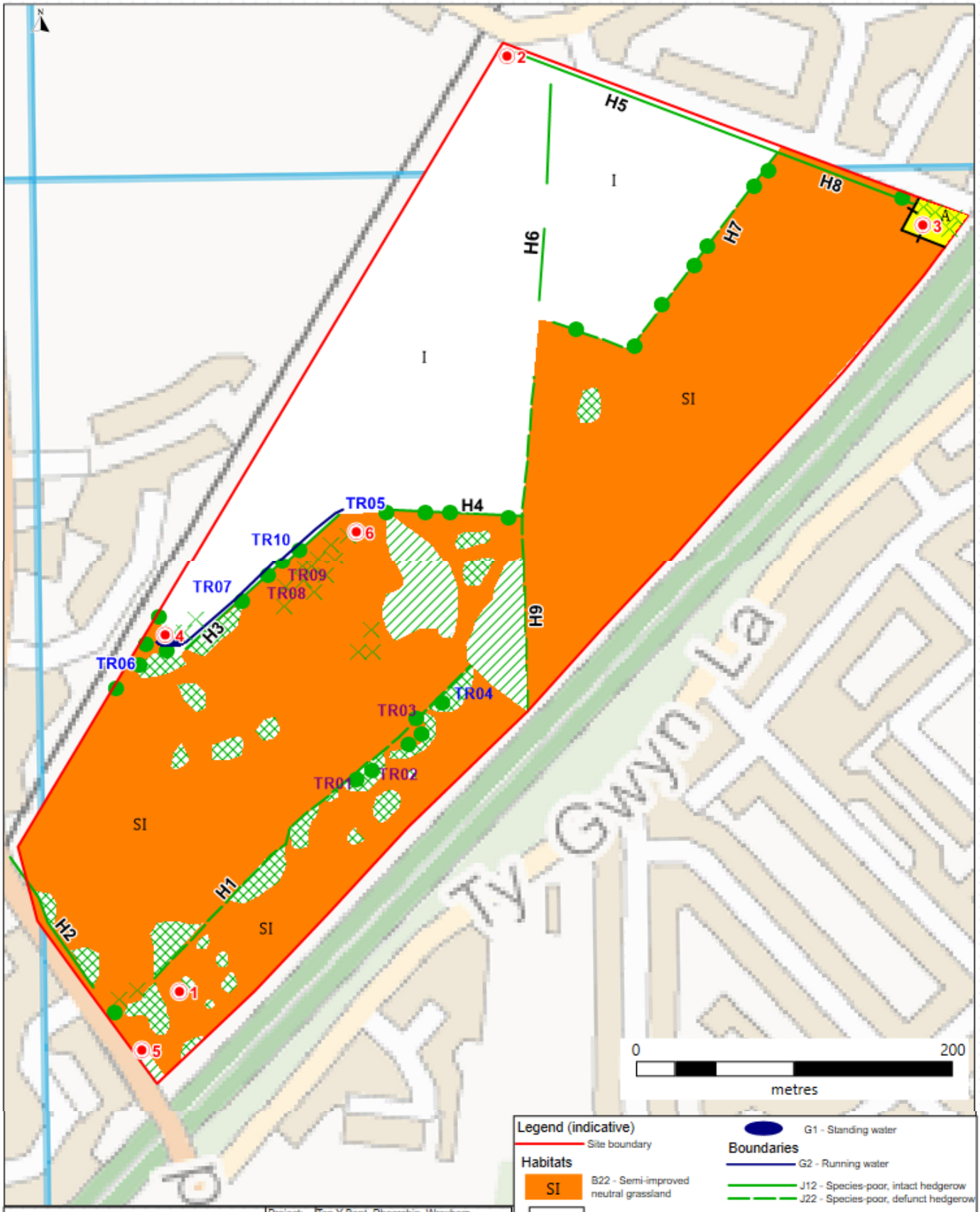
Bickley Hall Farm
Bickley
Malpas
Cheshire
SY14 8EF

Project:	Tan Y Bont, Rhosrobin, Wrexham
Map:	Site Locaiton Plan
CES Ref:	CES/048/01-21/LO
Scale:	Not to scale / indicative
Date:	January 2021

Legend (indicative)

- Site boundary
- 250m radius
- 500m radius
- Pond/waterbody
- Wildlife Site (WS)
- Regionally Important Geodiversity Site (RIG)
- Ancient Woodland

Appendix B: Extended Phase 1 Habitat Map



Legend (indicative)

Site boundary

Habitats

SI — B22 - Semi-improved neutral grassland

I — B4 - Improved grassland

A — J12 - Amenity grassland

A112 - Broadleaved plantation woodland

A21 - Dense/continuous scrub

A22 - Scattered scrub

G1 - Standing water

Boundaries

G2 - Running water

J12 - Species-poor, intact hedgerow

J22 - Species-poor, defunct hedgerow

Scattered trees

J24 - Fence

H# — Hedgerow number

TR## — Tree with Moderate Bat Roost Potential

TR## — Tree with Low Bat Roost Potential

Target note

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

Project:	Tan Y Bont, Rhosrobin, Wrexham
Map:	Extended Phase 1 Habitat Map
CES Ref:	CES/048/01-21/LO
Scale:	Not to scale / indicative
Date:	January 2021

Appendix C: Species Lists

Appendix C: Species List

Acer campestre	Field maple
Acer pseudoplatanus	Sycamore
Agrostis stolonifera	Creeping bent
Alliaria petiolata	Garlic mustard
Alnus glutinosa	Common alder
Anthriscus sylvestris	Cow parsley
Bellis perennis	Daisy
Betula pendula	Silver birch
Bryophyte sp.	Mosses
Buddleja davidii	Butterfly-bush
Cardamine flexuosa	Wavy bittercress
Cerastium fontanum	Common mouse-ear
Cirsium arvense	Creeping thistle
Cornus sanguinea	Dogwood
Crataegus monogyna	Common hawthorn
Dactylis glomerata	Cock's-foot
Digitalis purpurea	Foxglove
Dipsacus fullonum	Teasel
Epilobium sp.	Willowherb sp.
Festuca rubra	Red fescue
Fraxinus excelsior	Ash
Galium aparine	Cleavers
Geum urbanum	Wood avens
Hedera helix	Ivy
Holcus lanatus	Yorkshire-fog
Hypochaeris radicata	Cat's-ear
Ilex aquifolium	Holly
Juncus effusus	Soft rush
Lamium purpureum	Red dead-nettle
Lolium perenne	Perennial rye-grass
Lonicera periclymenum	Honeysuckle
Malus sylvestris	Crab apple
Mosses sp.	Mosses sp.
Phleum pratense	Timothy
Plantago lanceolata	Ribwort plantain
Plantago major	Greater plantain
Poa annua	Annual meadow-grass
Poa trivialis	Rough meadow-grass
Prunella vulgaris	Self-heal
Prunus sp.	Cherry sp.
Prunus spinosa	Blackthorn
Prunusavium	Wild cherry
Pteridium aquilinum	Bracken
Quercusrobur	Pedunculate Oak
Ranunculus repens	Creeping buttercup
Rosa canina	Dog-rose
Rosa sp.	Rose sp

Rubus fruticosus	Bramble
Rubus sp.	Raspberry
Rumex acetosa	Common sorrel
Rumex obtusifolius	Broad-leaved dock
Salix caprea	Goat willow
Salix cinerea	Grey willow
Salix fragilis	Crack willow
Salix sp.	Willow sp.
Sambucus nigra	Elder
Senecio jacobaea	Common ragwort
Stachys sylvatica	Hedge woundwort
Stellaria media	Common chickweed
Taraxacum agg.	Dandelion
Torilis japonica	Upright hedge-parsley
Trifolium dubium	Lesser trefoil
Trifolium pratense	Red clover
Trifolium repens	White clover
Ulex europaeus	Gorse
Umbellifer sp.	Umbellifer sp.
Urtica dioica	Common nettle
Veronica persica	Common field speedwell

Appendix D: Photographic Plates


Plate 1 & Plate 2: Vegetated mound (TN1) & small area of tall ruderal (TN2).

Plate 3: Children's playground (TN3).


Plate 4 & Plate 5: Ephemeral pool & ditch with sluggish flow.

Plate 6: Line of sycamores on south-east site boundary.

Plate 7: Amenity Grassland within children's playground area.

Plates 8 & 9: Improved grassland fields.


Plates 10 & 11: Examples of semi-improved grassland.




Plates 12, 13, 14 & 15: Examples of intact and defunct species-poor hedgerows.


Plates 16 & 17: Examples of scattered trees throughout the site including within hedgerows.


Plates 18 & 19: Examples of dense scrub.


Plate 20 & Plate 21: Oak dominated plantation woodland & juvenile willow dominated woodland respectively.




Plate 22, 23, 24 & 25: Examples of potential roost features within trees on site.

Appendix E: Legislation

Species/Habitat	Protected by:	UK BAP	Local BAP
Badger	*Protection of Badgers Act,* 1992	No	Yes
Barn owl	Schedule 1, Part 1 of the *Wildlife and Countryside Act,* 1981	No	Yes
Bats	Regulation 42 of *The Conservation of Habitats and Species Regulations*, 2017 Section 9 of the *Wildlife and Countryside Act,* 1981 (as amended) Section 7 of the *Environment (Wales) Act 2016*	Dependent on species	Dependent on species
Dingy Skipper	Section 7 of the *Environment (Wales) Act 2016*	Yes	Yes
Great crested newt	Regulation 42 of *The Conservation of Habitats and Species (Amendment) Regulations*, 2017 Section 9 of the *Wildlife and Countryside Act,* 1981 (as amended) Section 7 of the *Environment (Wales) Act 2016*	Yes	Yes
Hedgehogs	Section 7 of the *Environment (Wales) Act 2016*	Yes	Yes
Hedgerows	The *Hedgerows Regulations,* 1997	Yes	Yes
Nesting birds	Section 1 of the *Wildlife and Countryside Act,* 1981	Dependent on species	Dependent on species
'Widespread' reptiles	Provisions 1 and 5 of Section 9 of the *Wildlife and Countryside Act*, 1981 (as amended) Section 7 of the *Environment (Wales) Act 2016*	Yes	Dependent on species

The *Conservation of Habitats and Species Regulations,* 2017 (as amended)

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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