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The evaluation and assessment provided in this report is specific to the iteration of the proposal detailed in *Section 1*. It would no longer be valid should the layout be changed in anyway, should the report be used for a different proposal at the same site or should it be used a maximum of 12 months after the date of issue.

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1 INTRODUCTION

1.1 Project Background

1.1.1 Marches Ecology was commissioned by The National Trust to undertake a Preliminary Ecological Appraisal of land at Manor Farm, Rhostyllen, Wrexham (approximate OS Grid Ref. SJ 316 486). This Preliminary Ecological Appraisal comprised an ecological background data search and an Extended Phase 1 Habitat Survey.

1.1.2 The site that was subject to survey (henceforth referred to collectively as the 'survey site') is divided into two distinct land areas. These areas are henceforth referred to as the 'development site' and 'Glan yr Afon Wood' and are shown on *Figure 1*. The development site is the subject of a previous planning consent for residential housing (Ref. no. P/2008/1063). A Preliminary Ecological Appraisal (WYGE 2006) was submitted in support of this planning application. The main purpose of this report is to review and update the findings of the previous Appraisal.

1.1.3 Glan yr Afon Wood forms part of the survey site as the development includes a proposal to create footpaths through this woodland linked to the development site. These footpaths would require the installation of five bridges across the Glan Yr Afon Brook. Two bridges are proposed crossing the Brook by the development site with paths entering a 'Pocket Park' to the south of the watercourse. No access permission was provided to the Pocket Park for the current survey.

1.1.4 This report has three key aims:

- to provide/ review an initial appraisal of the ecological value of the site and local ecological resource and thereby identify ecological constraints relevant to the development;
- to identify further surveys that may be required; and
- to identify/ review potential mitigation/ compensation measures where possible along with opportunities to deliver ecological enhancement.

The structure of this Ecological Appraisal is based on the guidance provided in the Chartered Institute of Ecology and Environmental Management (CIEEM) documents CIEEM (2017a) and CIEEM (2017b).

1.1.5 [redacted]

1.2 Report Author

1.2.1 This report was produced by Tom Knight of Marches Ecology. Tom Knight is an ecologist with over twenty years of consultancy experience and has undertaken Extended Phase 1 Habitat Surveys on a wide range of sites. His relevant academic qualifications and professional memberships are as follows:

- Chartered Environmentalist (Society for the Environment).
- Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).
- PgDip Conservation Management.
- BSc (Hons) Environmental Studies.

- C&G Biological Surveying.

1.3 Site Description and Context

1.3.1 The survey site extends to approximately 11.61 hectares of land; the development site is 8.31 hectares and Glan yr Afon Wood is 3.3 hectares. It is located on the southern edge of Rhostyllen. The A5152 road forms the northwest boundary of the development site while the southeast boundary is formed by a railway line. The remaining boundary to the southwest is variously bordered by a minor road, Bersham Enterprise Centre and the Glan yr Afon Brook. The development site is bordered to the north by residential housing in Rhostyllen while to the south of the railway there are agricultural fields.

1.3.2 Glan yr Afon Wood is located on the other side (southeast) of the railway. It is bordered on all other sides by agriculturally improved grassland and arable fields that are part of The National Trust's Erddig Estate.

1.3.3 The development site is characterised by a single agriculturally improved field which is currently cattle grazed. Most of the boundary to the northwest is formed by hedges while the railway line is delineated by a fence. A short stretch of the Glan yr Afon Brook is included in the southwest corner. The Brook is lined with trees on both banks and to the south of the watercourse there is a Pocket Park which supports broad-leaved semi-natural woodland.

1.3.4 Glan yr Afon Wood is a relatively narrow strip of woodland located along the Glan yr Afon Brook corridor. Part of the woodland is of plantation origin while the remainder is broad-leaved semi-natural woodland.

1.4 The Development

1.4.1 A layout for the development site is shown on a National Trust plan entitled '*Erddig Revised Design Code*', dwg. no. SAE/GTP/May 2018. This plan broadly establishes a layout for the proposal and illustrates housing blocks, internal road layout, road junctions onto the A5152, footpaths with bridges over the Glan yr Afon Brook and areas of open space. Further detail on the layout is provided by a plan included in the Ecological Method Statement (URS 2012a) that was produced in order to discharge a condition attached to the original consent.

1.4.2 WYGE (2006) includes a plan which shows proposed footpaths and three further bridges across the Brook within Glan yr Afon Wood.

1.4.3 No further detail with regards the proposed development has been provided at this stage.

1.5 Planning Policy

Introduction

1.5.1 This section provides a brief summary of key national and local planning policies. It is not a comprehensive review of all such planning policy, the intention being to identify those considered to be of most relevance to ecology and provide context for the proposal.

Wales

Planning Policy Wales

1.5.2 Planning Policy Wales (PPW) sets out national land use planning policies (Welsh Government 2018). Chapter 6 is of particular relevance (though it is complementary to other themes within the document) and is entitled 'Distinctive and Natural Places'.

With specific reference to development proposals the following key statement is made:

'*Development plan strategies, policies and development proposals must consider the need to:*

- *support the conservation of biodiversity, in particular the conservation of wildlife and habitats;*
- *ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;*
- *ensure statutorily and non-statutorily designated sites are properly protected and managed;*
- *safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks'.*

Furthermore, it states that:

- *'It is important that biodiversity and resilience considerations are taken into account at an early stage in both development plan preparation and when proposing or considering development proposals'.*
- *'The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement'.*
- *'Where adverse effects on the environment cannot be avoided or mitigated, it will be necessary to refuse planning permission'.*

Use of the mitigation hierarchy is emphasised:

'*Planning authorities must follow a stepwise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for; enhancement must be secured wherever possible*'.

1.5.3 Areas that Chapter 6 covers include biodiversity and resilience of ecosystems duty, designated sites, maintaining and enhancing biodiversity, protected species, specific habitats/ areas, sustainable drainage systems (SuDS) and de-risking development.

Technical Advice Note 5

1.5.4 PPW is supplemented by a series of Technical Advice Notes (TAN). TAN 5 covers 'Nature Conservation and Planning' (Welsh Government 2009). It provides advice to local planning authorities on how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. It includes chapters covering the key principles of planning for nature conservation; the preparation and review of development plans; nature conservation in development control procedures; the conservation of internationally and nationally designated sites, habitats and local sites; and the conservation of protected and priority habitats and species.

1.5.5 In paragraph 2.4 it states that '...*when deciding planning applications that may affect nature conservation, local planning authorities should:*

- *pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective (PPW 2.2.1[1]);*
- *contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment (PPW 2.3.2);*
- *promote the conservation and enhancement of statutorily designated areas and undeveloped coast (PPW 2.3.2);*
- *ensure that appropriate weight is attached to designated sites of international, national and local importance (PPW 5.3.2);*
- *protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans (PPW 5.2);*
- *ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation (PPW paragraphs 5.5.1 and 5.5.2);*
- *ensure that the range and population of protected species is sustained (PPW 5.2.3, 5.5.11 and 5.5.12);*
- *adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered (PPW 5.2.2, 5.2.7 and 5.5.2)*.

Wrexham

1.5.6 Local planning authorities will consider biodiversity/ nature conservation issues in accordance with adopted policies and plans. The following are considered of particular relevance to the proposal.

Wrexham Unitary Development Plan

1.5.7 The Wrexham Unitary Development Plan (UDP) was adopted in February 2005. It will be replaced by the Local Development Plan. The UDP '...*provides a framework for local decision making and the reconciliation of development and conservation interests...*'.

Relevant strategic and general development policies include:

- *Policy PS2. Development must not materially detrimentally affect countryside, landscape/townscape character, open space, or the quality of the natural environment.*
- *Policy PS11. Encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced.*
- *Policy GDP1f). Ensure the safety and amenity of the public and safeguard the environment from the adverse effects of pollution of water, land or air, hazards from*

[1] References to the relevant part of PPW.

industry and quarrying, and associated noise, odour or vibration arising from development.

- *Policy GDP1h). Safeguard sites and areas of nature conservation and wildlife interest, and to provide new habitats where there is an unavoidable loss of existing habitats and areas of wildlife interest.*

Section 5 of the UDP concerns 'Environment and Conservation'. The relevant policies listed are as follows:

- *Policy EC4. Development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape. Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted.*
- *Policy EC6. Development either within or close to sites of biodiversity interest will only be permitted where it can be clearly demonstrated that the need for the development outweighs the need to safeguard the intrinsic nature conservation value of the site. Where such development is permitted, damage should be kept to a minimum, and compensatory measures should be provided. Measures to improve the biodiversity value of sites and enhance their natural conservation interest and landscape quality including the establishment of local nature reserves, will be supported.*
- *Policy EC13. Development which would result in an unacceptable adverse impact on the water environment due to additional surface water run-off will not be permitted.*
- *Policy EC14. Development which would have an unacceptable adverse impact upon the capacity, flow, quality or availability of controlled waters and associated land will not be permitted.*

Local Planning Guidance

1.5.8 Wrexham County Borough Council (WCBC) has produced a series of supplementary planning guidance documents which set out detailed advice on the way in which Development Plan policies will be applied. Supplementary planning guidance is a material consideration in the determination of planning applications for development. The following Local Planning Guidance (LPG) notes are of particular relevance:

- LPG 17 Trees and Development. Adopted September 2000, Updated December 2012. Provides further advice in relation to UDP policy EC4.
- LPG 32 Biodiversity and Development. Adopted March 2011. Provides further advice in relation to UDP policies PS2, PS11, EC4 and EC6. Of particular importance it details the requirements for ecological survey and reporting.

1.5.9 The Wrexham Biodiversity Action Plan (WBAP) is also listed as supplementary planning guidance on the WCBC website. This reference is out-of-date, the WBAP has been archived and is no longer available.

1.6 Legislation

Introduction

1.6.1 This sub-section provides a brief summary of key legislation relevant to ecology/ nature conservation and the development. It should not be considered a comprehensive review and is not meant to be so. It is provided here for information only and is not intended to replace specialised legal advice. It does not replace the text of the legislation but summarises the salient points. Further information on how this legislation affects the protection of particular species is provided in *Appendix 1*.

The Conservation of Habitats and Species Regulations 2017 (The Regulations)

1.6.2 Transposes the *EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992* into UK law. The Regulations provide for the protection of sites in the UK that support habitats and species of European importance (*e.g*. Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)). The Regulations also provide full protection for certain species which are frequently referred to as European Protected Species (EPS). EPS of potential relevance to the site include bats, Otters (*Lutra lutra*) and Great Crested Newt (*Triturus cristatus*).

The Wildlife and Countryside Act 1981, as amended (WCA)

1.6.3 The WCA strengthened protection for nature conservation sites of at least national importance and provides varying levels of protection for a number of species within the UK. This protection may include prohibition of some or all of: killing, injuring, disturbing, taking, sale/barter or possession of species and also protection of breeding/ sheltering places. The following species/ species groups that receive some level of protection under the WCA and are of potential relevance to the proposal include Badger (*Meles meles*), bats, Otter, Water Vole (*Arvicola amphibius*), Great Crested Newts, reptiles and birds. The WCA also prohibits the spread of certain non-native invasive species.

The Countryside and Rights of Way Act 2000 (The CRoW Act)

1.6.4 The CRoW Act includes legislation in relation to the Biodiversity Action Plan; more stringent management, protection and consenting measures for SSSIs; greater penalties for wildlife crime; and greater protection for species listed in the WCA. Some of this legislation was superseded by the NERC Act.

The Natural Environment and Rural Communities Act 2006 (The NERC Act)

1.6.5 *Sections 40* to *42* of the NERC Act replace *Section 74* of the CRoW Act. *Section 40* of the NERC Act extends to all public authorities (including local planning authorities) the existing *Section 74* duty to have regard to biodiversity as far as is consistent with the proper exercise of their functions. In addition, *Sections 41* (England) and *42* (Wales) provide a list of species and habitats of principal importance for conservation of biological diversity. Government has a statutory duty to promote steps "to further the conservation" of habitats and species listed in *Sections 41* and *42*.

Environment (Wales) Act 2016

1.6.6 The Environment Act enhances and replaces the current NERC Act (*Section 40*) duty to require all public authorities, when carrying out their functions in Wales, to seek to 'maintain and enhance biodiversity' where it is within the proper exercise of their functions. In doing so, public authorities must also seek to 'promote the resilience of ecosystems'. *Section 7* of

the Environment Act provides a list of the living organisms and habitats of principal importance for the purpose of maintaining and enhancing biodiversity in Wales. This list replaces that previously provided in *Section 42* of the NERC Act.

***The Protection of Badgers Act 1992* (The Badgers Act)**

1.6.7 The Badgers Act provides for the protection of Badgers and their setts. This legal protection is provided for welfare rather than the conservation value of the species.

2 METHODOLOGY

2.1 Desk Study

2.1.1 A desk study was undertaken to provide background information on the ecological status of the survey site and its surroundings (a 1 km search area centred on the site was defined). Information was requested from Cofnod. Information sought included designated (nature conservation) sites, Ancient Woodland/ other habitats, legally protected species and other species of nature conservation interest. In addition, contextual information available on the MAGIC environmental database (http://magic.defra.gov.uk/) was consulted.

2.1.2 Cofnod provide two sets of records – a 'Confidential' set which is not authorised for release into the public domain, and a 'Public Version' where the accuracy of some of the grid references has been reduced. The Confidential data set has been issued to the client as part of this study; 'Public Version' records are utilised in this document (the full report of which is provided as *Appendix 2*).

2.1.3 In addition to the data search, ecology reports (WYGE 2006; URS 2012a&b) produced for the previous planning application have been reviewed and any relevant information is included in this report.

2.2 Field Survey

Extended Phase 1 Habitat Survey

2.2.1 The Extended Phase 1 Habitat Survey was carried out on 2nd July 2019 by Tom Knight of Marches Ecology. The Extended Phase 1 Habitat plan is provided as *Figure 2*. The survey focussed on land within the site boundary (the 'survey site', refer to *Figure 1*). Immediately adjacent habitat was considered where deemed appropriate and viewed from the survey site boundary where possible. The weather during the survey was 50-90% white cloud with sunny spells and a light breeze.

2.2.2 Phase 1 Habitat Survey involves identifying areas or features of particular interest either in terms of their botanical interest, and/or habitat potential for protected or other notable species that are likely to occur in the region and within the survey site. The Phase 1 Habitat Survey has been adapted in this instance as an 'extended' Phase 1 Habitat Survey, where more information has been obtained to inform site assessment. The methods used centre on the Phase 1 Habitat Survey approach (JNCC 2010) as extended for use in Environmental Impact Assessment (Institute of Environmental Assessment 1995). Extended Phase 1 Habitat Survey involves the following elements:

- Habitat mapping using a set of standard colour codes to indicate habitat types on a Phase 1 Habitat map.
- Description of features of ecological or nature conservation interest in notes relating to numbered locations on the Phase 1 Habitat map, called target notes.

2.2.3 In addition to the habitat map and target notes, a plant species list was compiled (provided in *Table 1, Section 8*). Plant nomenclature in this report follows Stace (2010). July is within the accepted survey period for Extended Phase 1 Habitat Surveys. It is unrealistic to suppose that walk-through surveys can generate completely exhaustive species lists at any time of year. It is considered that the list in this report indicates the character of the vegetation and the ecological value of the area inspected.

2.2.4 Further information describing the assessment conducted during the Extended Phase 1 Habitat Survey for particular species is provided briefly below:

- Badger. Areas within the survey site that might be used by Badger for foraging and sett building were assessed. Incidental foraging signs, tree scratching, paths, latrines and setts were recorded if found (Harris *et al.*, 1989).
- Bats. The potential value of the habitat for foraging/ commuting and roosting was assessed in accordance with *Table 4.1* provided in Collins (2016).
- Otter. The assessment method was adapted from that described in JNCC (2004a).
- Water Vole. The potential value of available habitat for Water Voles was assessed in accordance with guidance provided in Dean *et al*. (2016) and JNCC (2004a).
- Great Crested Newts. The quality of terrestrial and aquatic habitat for Great Crested Newts was assessed. The assessment of aquatic habitat was based on the Habitat Suitability Index (Oldham, *et al*. 2000).
- Reptiles. A qualitative assessment of the habitat for reptiles was undertaken. The survey involved identifying potential basking areas, hibernation sites and foraging habitat. English Nature (2004) provides information on the distribution and ecology of the four widespread species. Habitat requirements differ between species but are summarised in Edgar *et al*. (2010).
- Birds. The habitat within the survey site was assessed for its potential value for breeding birds based on guidance provided in *e.g*. JNCC (2004b).

2.3 Survey Limitations

2.3.1 The following may be considered survey limitations:

- The ground was largely dry and hard at the time of the survey. Most of the development site is open to cattle and as such many areas were heavily poached. There is also relatively high recreational use of parts of the development site and Glan yr Afon Wood. All of these factors may have obscured/ destroyed evidence of use of the survey site by protected/ notable species.
- Some parts of the survey site are characterised by scrub or other dense vegetation which may have obscured evidence of use of the survey site by protected/ notable species.
- Access permission was not provided to private land beyond the survey site boundary including the Pocket Park to the southwest of the Glan yr Afon Brook.

None of the survey limitations listed above significantly affected the findings of the survey and therefore the conclusions and prescribed mitigation measures.

2.4 Evaluation

2.4.1 The ecological importance (value) of habitats and/or species is often assessed according to a number of widely used criteria of which perhaps the most frequently used are naturalness, extent, rarity, and diversity. For the purpose of this report the ecological importance of the habitat and species present on the site has been determined using the approach detailed in CIEEM (2018). Geographical context is used as a frame of reference for identifying the importance of ecological features. The frame of reference has the following categories: International/ European - National - Regional - Metropolitan/County/Vice-county/ other local-

authority wide area - Local. Within this report Local is defined as relating to district or parish; less than local refers to features of value at a Site level.

2.4.2 Broadly speaking habitat importance should be determined by identifying designated sites, 'priority habitats' (as defined in CIEEM, 2017a) or by using published, ideally local, site selection criteria. The ecological importance of a species considers its distribution and legal or conservation status, the latter is mostly due to inherent rarity. 'Priority species' are also defined in CIEEM (2017a) and include legally protected species as well as those identified on various conservation lists.

3 BASELINE ECOLOGICAL CONDITIONS

3.1 Protected Sites

Statutory

3.1.1 There are no statutory designated sites within 1 km of the survey site. The closest such site is the Johnstown Newt Sites Special Area of Conservation (SAC)/ Stryt Las a'r Hafod Site of Special Scientific Interest (SSSI) which is located approximately 1.2 km southwest of the development site at its closest point.

Non-statutory

3.1.2 There is one non-statutory designated site within 1 km of the survey site: Erddig Estate Wildlife Site (WS). Erddig Estate WS is located approximately 586 m to the east of the development site at its closest point. The citation for this WS states that it includes various woodlands, semi-improved neutral grasslands and marshes. The woodland includes some wet *Alnus glutinosa* (Alder) woodland and the ground flora of the woodlands is species-rich in places. The marshy grassland is also noted as being species-rich. Mature parkland trees and an insect assemblage that includes a number of rare/ notable species are particular features.

3.1.3 There are nine areas of Ancient Semi-natural Woodland (ASNW) either wholly or partly within 1 km of the survey site. A small part of Glan yr Afon woodland (in the northern corner) is shown as ASNW. The other areas are either associated with the River Clywedog corridor to the north of Rhostyllen or around the main house at Erddig.

3.2 Habitats and Flora

Introduction

3.2.1 The Extended Phase 1 Habitat map is provided as *Figure 2*. The Target Notes (numbered 1 to 28) are provided in *Section 6* and shown on *Figure 2*. *Target Notes 1* to *20b* concern the development site while *Target Notes 21* to *27* cover Glan yr Afon Wood. *Target Note 28* briefly describes the Pocket Park which is outside the survey site.

Development Site

Hedgerows and Trees

3.2.2 The development site field is largely bounded by stretches of hedgerow on the southwest and northwest boundaries (*Target Notes 1, 2, 3, 7, 9, 13* and *14*). A small number of these hedges are moderately species-rich (*Target Notes 3, 9* and *14*). The hedge at *Target Note 9* is managed to approximately 1.3-2.5 m high and 1.1 wide. It appears to be located on a low earth bank. It contains abundant *Crataegus monogyna* (Hawthorn), occasional *Prunus spinosa* (Blackthorn), *Fraxinus excelsior* (Ash), and small amounts of *Acer campestre* (Field-maple), *Acer pseudoplatanus* (Sycamore), *Ilex aquifolium* (Holly), *Sambucus nigra* (Elder) and *Rosa canina* agg. (Dog-rose). The base is dominated by *Hedera helix* (Ivy) with abundant *Urtica dioica* (Common Nettle) and locally frequent *Mercurialis perennis* (Dog's Mercury). *Geranium robertianum* (Herb-robert), *Geum urbanum* (Wood Avens) and *Brachypodium sylvaticum* (False Brome) were also recorded.



The hedgerow at *Target Note 9* and Ash tree at *Target Note 10*.

3.2.3 Several of the hedges (*Target Notes 2, 7, 8* and *13*) are characterised by ornamental shrubs largely where they form the boundary of residential properties.

3.2.4 Other than the trees along the bank of the Glan yr Afon Brook there is one tree within the development site. It is a large, mature Ash tree at *Target Note 10* with an approximate diameter at breast height (dbh) of 1.3 m.



The Ash tree at *Target Note 10*.

3.2.5 Both banks of the Glan yr Afon Brook are lined with trees (*Target Note 20*), mostly Alder, but also locally frequent *Ulmus glabra* (Wych Elm), Hawthorn, *Salix viminalis* (Osier), occasional *Betula pendula* (Silver Birch), *Salix caprea* (Goat Willow), Ash, and lesser amounts of Holly and *Salix cinerea* (Grey Willow). There are also some patches of dense *Rubus fruticosus* agg. (Bramble). The ground flora beneath the trees is variable but does contain several woodland plants including Dog's Mercury, *Allium ursinum* (Ramsons), Wood Avens, Herb-robert, *Veronica montana* (Wood Speedwell), *Viola odorata* (Sweet Violet), False Brome and *Bromopsis ramosa* (Hairy Brome).



Part of the Glan yr Afon Brook corridor (*Target Note 20*).

Scrub

3.2.6 There is a patch of young and mature scrub on a low bank at *Target Note 18*. The cattle have access throughout this area and as such the ground beneath the shrubs is bare and poached. It is dominated by Hawthorn with small amounts of Elder, Holly and Dog-rose. There are scattered shrubs elsewhere within the development site, around the boundaries.

3.2.7 As mentioned above there are patches of dense scrub by the Glan yr Afon Brook.

Grassland

3.2.8 The development site is characterised by species-poor agriculturally improved grassland. It is dominated by *Lolium perenne* (Perennial Rye-grass) with *Holcus lanatus* (Yorkshire-fog), a few other species of grass and a small number of forbs.



Part of the agriculturally improved grassland within the development site.

Waterbody

3.2.9 There is a small oval-shaped waterbody that measures approximately 8 m by 6 m and 0.1-0.2 m deep at *Target Note 16*. The cattle have access throughout and as such it is heavily poached and apparently polluted. The margins are dominated by *Agrostis stolonifera* (Creeping Bent) with occasional to locally frequent *Alopecurus geniculatus* (Marsh Foxtail), occasional *Rumex conglomeratus* (Clustered Dock), and a small amount of *Glyceria fluitans* (Floating Sweet-grass). No aquatic vegetation was visible. The edge is very soft and muddy and there are some concrete kerb-stones in one end.



The waterbody at *Target Note 16*.

Watercourse

3.2.10 The short stretch of the Glan yr Afon Brook within the development site is approximately 3-5 m wide with a moderate flow over gravel/ cobbles (*Target Note 20*). The banks have a slope of 45-90° and rise to approximately 2 m above the water level. There is quite a lot of

rubbish/ tipped debris in the watercourse. No aquatic vegetation was visible. Marginal vegetation is limited to small amounts of *Oenanthe crocata* (Hemlock Water-dropwort) and *Apium nodiflorum* (Fool's Watercress) on gravel bars.



The Glan yr Afon Brook within the development site (*Target Note 20*).

Adjacent Habitat

3.2.11 The railway cutting sides to the southeast of the development site (*Target Note 15*) support stretches of tall ruderals - Common Nettle, *Chamerion angustifolium* (Rosebay Willowherb) – with largely species-poor unmanaged grassland dominated by *Arrhenatherum elatius* (False Oat-grass) and *Dactylis glomerata* (Cock's-foot), with scattered Hawthorn shrubs, patches of Bramble and frequent young/ semi-mature *Quercus* sp. (Oak) trees. Locally the grassland is moderately species-rich and includes *Geranium pyrenaicum* (Hedgerow Crane's-bill), *Centaurea nigra* (Common Knapweed), *Hypericum perforatum* (Perforate St. John's-wort), *Leucanthemum vulgare* (Oxeye Daisy), *Trifolium pratense* (Red Clover) and *Linaria vulgaris* (Common Toadflax).

3.2.12 There are a small number of trees adjacent to, but outside, the development site boundary. These include a mature *Quercus robur* (Pedunculate Oak) tree at *Target Note 17* and a line of mature trees at *Target Note 4*. The latter includes three *Aesculus hippocastanum* (Horse Chestnut), two Sycamore, three *Tilia ×europaea* (Common Lime) and one Silver Birch trees. The largest have approximate dbh's of 0.6-0.7 m.



Oak trees along the railway including that at *Target Note 17*.



The line of trees at *Target Note 4*.

Glan yr Afon Wood

3.2.13 The northwest corner of Glan yr Afon Wood appears to be of plantation origin (*Target Note 21*). The canopy includes a range of trees, both native and ornamental. The shrub layer is sparse with small amounts of Wych Elm, Elder and *Prunus avium* (Wild Cherry) saplings. The ground layer is characterised by abundant Ivy, Common Nettle, *Galium aparine* (Cleavers), locally frequent Dog's Mercury, occasional to locally frequent Wood Avens and Herb-robert.

3.2.14 The remainder of Glan yr Afon Wood is semi-natural broad-leaved woodland. The canopy includes abundant Alder particularly by the watercourses/ wet areas. Otherwise the canopy includes Ash, Sycamore, *Fagus sylvatica* (Beech), *Carpinus betulus* (Hornbeam), *Quercus* sp. (Oak) and *Larix* sp. (Larch). The trees largely have dbh's of 0.2-0.5 m though there are a number of much larger trees. The shrub layer contains occasional to locally frequent Holly, occasional Elder, *Corylus avellana* (Hazel), Hawthorn and lesser amounts of Blackthorn, Field-maple and *Cornus sanguinea* (Dogwood).



The woodland and Glan yr Afon Brook at *Target Note 25.*

3.2.15 The ground flora is variable and includes locally abundant Ivy, Bramble, locally frequent Ramsons, Wood Speedwell, *Aegopodium podagraria* (Ground-elder), Dog's Mercury, occasional *Circaea lutetiana* (Enchanter's-nightshade), with lesser amounts of several woodland plants including *Hyacinthoides non-scripta* (Bluebell), *Anemone nemorosa* (Wood Anemone), *Galeopsis luteum* (Yellow Archangel) and *Conopodium majus* (Pignut).

3.2.16 There appear to be several spring-lines in the wood and these wet areas are characterised by Grey Willow. They drain into the minor watercourse at *Target Note 24* and the Glan yr Afon Brook. The ground layer includes *Deschampsia cespitosa* (Tufted Hair-grass), *Filipendula ulmaria* (Meadowsweet), Hemlock Water-dropwort, *Caltha palustris* (Marsh-marigold), *Phalaris arundinacea* (Reed Canary-grass), *Eupatorium cannabinum* (Hemp-agrimony), Fool's Watercress, *Epilobium hirsutum* (Great Willowherb), *Chrysosplenium oppositifolium* (Opposite-leaved Golden-saxifrage), *Mentha arvensis* (Corn Mint) and *Equisetum palustre* (Marsh Horsetail).

The Pocket Park

3.2.17 The Pocket Park is located outside the survey site; no access was provided to this area (*Target Note 28*). It is characterised by broad-leaved semi-natural woodland by the Glan yr Afon Brook. It has been greatly modified by historic and more recent industrial activity. There is a well frequented footpath through it and a considerable amount of litter/ tipped rubbish. Similarly, there is quite a lot of rubbish/ debris in the Brook. The woodland is likely to be secondary in nature particularly that on sloping ground up to Bersham Enterprise Park.

3.2.18 The canopy contains frequent Alder, locally frequent Goat Willow, occasional Silver Birch, Ash and lesser amounts of Wild Cherry, Sycamore and Pedunculate Oak. Some of the Alder are large and multi-stemmed. The shrub layer contains frequent Elder, locally frequent Ash, occasional Blackthorn, Dogwood, Hazel, Hawthorn and a lesser amount of Wych Elm.

3.2.19 The ground flora is variable and greatly disturbed. It is often dominated by Common Nettle, Cleavers and Ivy with locally frequent Ground-elder. There is also a range of woodland

plants present including Ramsons, Wood Speedwell, Wood Avens, Herb-robert and various ferns.

Flora

3.2.20 Two species of Cotoneaster were recorded from the development site at *Target Notes 3a* and *11*. Both species recorded; *Cotoneaster horizontalis* (Wall Cotoneaster) and *Cotoneaster simonsii* (Himalayan Cotoneaster), are listed in *Schedule 9* to the *Wildlife and Countryside Act 1981*.

3.2.21 *Fallopia japonica* (Japanese Knotweed) is frequent throughout the Pocket Park though particularly close to the Brook, where *Impatiens glandulifera* (Indian Balsam) and a small amount of *Crocosmia* ×*crocosmiiflora* (Montbretia) are also present. The former two species were recorded from the Brook corridor within the development site (*e.g. Target Notes 20a* and *20b*). All of these plants are listed on *Schedule 9*.

3.2.22 There are several stands of Japanese Knotweed in Glan yr Afon Wood, mostly along or close to the Brook, some of which appear to have been treated with herbicide. A small amount of Indian Balsam is also present.

3.2.23 None of the plant records provided by Cofnod are from within or close to the survey site. Records of Wall Cotoneaster and Indian Balsam are provided for 'Rhostyllen' with a four-figure grid reference dated 2016. Cofnod provided a small number of records for lichen and fungi from close to Erddig house.

3.3 Species/ Species Groups

Badgers

3.3.1 No setts were recorded within the development site. Opportunities for sett excavation within the development site are limited to hedge bases, the Brook bank and perhaps the slope at *Target Note 18*. Dense vegetative cover that is often favoured for sett locations is generally limited within the development site.

3.3.2 [redacted] Further setts could be concealed in dense vegetation in this woodland – it was not possible to access all areas. There is suitable sloping ground within the wood.

3.3.3 [redacted]

3.3.4 Two well used paths with associated breaches were recorded in Glan yr Afon Wood at *Target Notes 22* and *26*. A latrine was recorded by each of these paths (*Target Notes 22a* and *27*) along with evidence of foraging. Other evidence may have been obscured by dense vegetation.

3.3.5 The grassland within the development site provides habitat of moderate to high potential value for foraging. Glan yr Afon Wood is likely to be of similar potential value.

3.3.6 [redacted]

Bats

3.3.7 There are no buildings within the survey site. There is a raised pipeline on stone pillars to approximately 3-4 m high at *Target Note 19*. The mortar is largely well sealed though some small holes were noted. The tops of the pillars are covered in dense Ivy. The pillars are of low potential value for roosting bats at most. There are a small number of buildings adjacent to the development site boundary (*e.g. Target Notes 6* and *12*). These buildings were not assessed.

3.3.8 Other than the trees along the bank of the Glan yr Afon Brook there is one tree within the development site, the Ash at *Target Note 10*. It contains some dead wood and two rot-holes at pruning wounds. It was not possible to confirm whether there were cavities at these rot-holes. There are several broken branches and another large rot-hole in a branch. This tree is of at least low potential value for roosting bats.

3.3.9 This Ash tree was climbed and inspected for potential roosting features in July 2011 (URS 2011). Several potential roosting features were identified and inspected but no evidence of use by bats was recorded.

3.3.10 There are a number of trees along the Glan yr Afon Brook (*Target Note 20*). Some of these trees may contain features of potential value for roosting bats but were not assessed in detail.

3.3.11 There are a small number of trees adjacent to the development site boundary, particularly along the railway. The mature Pedunculate Oak at *Target Note 17* has its roots partly within the development site. It has an approximate dbh of 0.6 m. It contains some dead wood and there is a possible cavity where a branch has come off. It was not possible to assess this tree or any of the other trees along the railway in detail as they are outside the site. Due to the size of the trees at *Target Note 4* they are likely to contain features of potential value to roosting bats.

3.3.12 The trees in Glan yr Afon Wood were not assessed in detail for their potential value to roosting bats. However, there are a number of very large, mature specimens, particularly around the boundaries, that are likely to contain features of potential value for roosting bats.

3.3.13 The improved grassland that characterises most of the development site is likely to be of low potential value for foraging/ commuting bats. Features of greater potential value include the various hedgerows, the Brook corridor, and the lines of trees along the railway and at *Target Note 4*. Glan yr Afon Wood provides foraging habitat of high potential value for several species of bat.

3.3.14 Cofnod provided nine records for at least two species of bat: Brown Long-eared bat (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*) as well as Long-eared bat sp., Pipistrelle agg. and 'Unknown bat'. None of these records is from the survey site, most are from Rhostyllen to the north. None of the records is specifically identified as a roost.

Otter

3.3.15 Glan yr Afon Brook is of value to Otters. The dense bank-side vegetation in places within the development site provides potential resting places. In Glan yr Afon Wood large trees and other features provide potential resting places and holt sites. Small numbers of Brown Trout (*Salmo trutta*) were visible in the Brook providing a potential food source.

3.3.16 Cofnod provided two records for Otter one is from the bridge over the Glan yr Afon Brook just upstream of the development site (dated 2009) and one is from the River Clywedog at Felin Puleston (dated 2013). Both records are of spraints.

Water Vole

3.3.17 Glan yr Afon Brook has a moderate flow, no aquatic vegetation, very little marginal vegetation and is generally well shaded within the survey site. The Glan yr Afon Brook and other minor watercourses within the survey site are unlikely to be of value for this species.

3.3.18 Cofnod provided one historic (1981) record for Water Vole from the River Clywedog approximately 1 km from the development site. This species will not be considered further in this report.

Great Crested Newts

3.3.19 There is one waterbody within the development site, at *Target Note 16*. It is described above. This shallow waterbody is likely to dry out in most years. It is not considered to be of any potential value to Great Crested Newts.

3.3.20 An initial review of the OS map 1:25, 000 scale and relevant internet-based mapping including aerial photography[2] indicates that there may be two waterbodies (excluding that at *Target Note 16*) within approximately 250 m of the development site. They are both located to the east of the development site, on the opposite side of the railway. A detailed pond scoping exercise has not been undertaken to confirm the presence/ absence of these waterbodies.

3.3.21 There may be two further waterbodies within 250 m of Glan yr Afon Wood.

3.3.22 WYGE (2006) states that Deeside Urban Wildlife Group were commissioned to undertake a survey of the pond at *Target Note 16* in 2002. The pond was found to be dry in May 2002.

3.3.23 The development site is largely characterised by agriculturally improved grassland. This potential terrestrial habitat is of limited value for Great Crested Newts. The hedgerows and unmanaged vegetation along the Brook corridor are of greater potential value. Glan yr Afon Wood provides potential terrestrial habitat of high value. Habitat adjacent to the development site (*e.g*. the railway line) also provides potential habitat of high value.

3.3.24 Cofnod did not provide any records for Great Crested Newt from the 1 km search area. The likelihood that this species may be present at the development site is negligible. Great Crested Newts will not be considered further in this report (with the exception of the proposed footpaths/ bridges in Glan yr Afon Wood).

[2] https://www.google.co.uk/maps/place/Rhostyllen/@53.0268524,-3.0138949,182m/data=!3m1!1e3!4m5!3m4!1s0x487ac80adbbb3747:0xfd5b063886b5fe59!8m2!3d53.031159!4d-3.0278409

Reptiles

3.3.25 Habitat of potential value for reptiles is limited within the development site particularly due to the agricultural improvement and continued grazing of this grassland resource. Most of the habitat within the development site is not of any potential value for reptiles. Habitat features of potential value for reptiles are limited to the Glan yr Afon Brook corridor (*Target Note 20*). Some parts of Glan yr Afon Wood, particularly around the edges and where it is more open, may be of limited potential value for reptiles.

3.3.26 Cofnod provided three records (one of which is historic) of Grass Snake (*Natrix helvetica*) from the 1 km search area. There is one record from Felin Puleston close to the River Clywedog dated 1995 and one record from Hafod Wood 1996. Both records are on the edge of the 1 km search area.

3.3.27 There are also two unconfirmed records of Adder (*Vipera berus*) from Felin Puleston dated 1992 and 2011.

Birds

3.3.28 Nineteen species of bird were recorded during the Extended Phase 1 Habitat Survey either within the development site or flying over it. The House Sparrow (*Passer domesticus*), Dunnock (*Prunella modularis*), Long-tailed Tit (*Aegithalos caudatus*), Swift (*Apus apus*) and Herring Gull (*Larus argentatus*) are priority species[3]. The House Sparrow, Dunnock and Long-tailed Tit could nest within the development site. The development site provides nesting opportunities for species of bird associated with trees, scrub, hedgerows and a minor watercourse.

3.3.29 Further species of bird were recorded in Glan yr Afon Wood including priority species such as Song Thrush (*Turdus philomelos*). The wood provides a range of opportunities for woodland species.

3.3.30 Cofnod provided a large number of bird records from within 1 km of the survey site largely with four-figure grid references (dated between 1995 and 2016). Records of potential relevance to the development site include Kestrel (*Falco tinnunculus*), Dipper (*Cinclus cinclus*), House Sparrow, Dunnock, Starling (*Sturnus vulgaris*), Swift, Swallow (*Hirundo rustica*), House Martin (*Delichon urbicum*), Bullfinch (*Pyrrhula pyrrhula*), Song Thrush, Redwing (*Turdus iliacus*), Fieldfare (*Turdus pilaris*), Willow Warbler (*Phylloscopus trochilus*), Garden Warbler (*Sylvia borin*), Whitethroat (*Sylvia communis*), Marsh Tit (*Poecile palustris*), Coal Tit (*Periparus ater*), Long-tailed Tit, Goldcrest (*Regulus regulus*) and Spotted Flycatcher (*Muscicapa striata*).

Other Species

3.3.31 Cofnod provided a small number of butterfly and moth records from the 1 km search area. One record of Wall (*Lasiommata megera*) is from Rhostyllen, just to the north of the development site and is dated 2014. Two records of White-letter Hairstreak (*Satyrium w-album*) may be considered 'historic' as they are dated between 1976 and are from further east within The National Trust estate. Records of two common species of moth are provided.

3.3.32 Cofnod provided six records for Hedgehog (*Erinaceous europaeus*). Most of these records are from Rhostyllen to the north of the development site. There are four widely scattered

[3] As defined in CIEEM (2017a).

records of Polecat (*Mustela putorius*), none close to the development site, and one record of Hare (*Lepus europaeus*). The latter is from Erddig Park.

3.3.33 A number of invertebrate records were provided, nearly all from Erddig Park, to the east of the development site. Many of these invertebrates are associated with mature/ senescent trees and or decaying wood.

4 EVALUATION, ASSESSMENT AND RECOMMENDATIONS

4.1 Introduction

4.1.1 Brief details regarding the proposal are provided in *Section 1.4*. An assessment of ecological issues based on the information provided is detailed below and considers:

- potential ecological constraints relevant to the proposal;
- further survey requirements; and
- potential mitigation/ compensation measures along with opportunities for ecological enhancement.

These are dealt with in turn for habitats and flora, and specific species groups. This assessment initially concentrates on the development site and potential broad impacts on Glan yr Afon Wood. The proposed footpaths/ bridges through the Pocket Park and Glan yr Afon Wood are considered separately at the end.

No further detailed information regarding the proposal has been provided. In the absence of such information potential impacts have been considered with reference to the plan/ information provided only. Potential impacts may need to be re-assessed once such information is available.

4.2 Evaluation, Assessment and Recommendations

Designated Sites

4.2.1 No statutory or non-statutory designated sites would be directly impacted by the proposed development. The Erddig Estate WS is located 586 m away at its closest point. Due to the distance involved, nature of the proposal and intervening habitat no indirect impacts are predicted.

4.2.2 One of the proposed footpaths does cross part of the ASNW within Glan yr Afon Wood. Appropriate avoidance/ mitigation measures with regards these paths are further discussed below. No other ASNW would be directly or indirectly impacted.

Habitat

4.2.3 The development site includes the following habitat resources:

- Improved grassland;
- Tall ruderal vegetation;
- Dense scrub;
- Introduced shrubs;
- Hedgerows;
- Individual trees;
- A small waterbody; and
- Glan yr Afon Brook.

4.2.4 Due to the size, quality and geographical location of most of the habitat resources listed above they are considered to be of no more than site value[4]. No further survey of this habitat resource is considered necessary at this time and no particular mitigation measures are proposed (other than the avoidance/ best practice measures detailed below). The loss

[4] In accordance with CIEEM (2018).

of these habitat resources would not give rise to a significant impact. The hedgerows, individual trees and Brook corridor are of greater value and are considered further below.

4.2.5 'Hedgerows' is a priority habitat listed on *Section 7*. This priority habitat covers all hedgerows consisting predominantly (*i.e*. 80% or more cover) of at least one woody UK species (Biodiversity Reporting & Information Group, 2011). The hedgerows at *Target Notes 3*, *9* and *14* are moderately species-rich in terms of their woody component and could potentially qualify as being 'important' in accordance with the 'ecological criteria' established in the *Hedgerow Regulations 1997*. It should be noted that it is not possible to confirm whether any hedgerow could be considered important (using ecological criteria only) under the *Hedgerow Regulations 1997* without further survey (or indeed is excluded from the *Regulations*).

4.2.6 The draft Wrexham Wildlife Sites selection criteria (WCBC 2015) indicates a minimum length of 50m for 'Ancient and/ or species-rich hedgerows' to be considered. Qualification for this definition is based on the species richness of the woody component and the presence of 'ancient woodland indicator' species. Further survey would be required to determine whether these criteria are met. Similarly, these features could qualify based on the species they support but further survey would be required to confirm this. In the absence of such survey data it is considered that the hedges at *Target Notes 3*, *9* and *14* are of local value.

4.2.7 Large/ mature trees are not specifically recognised in the *Section 7* list. Due to the size of the Ash tree at *Target Note 10* it is considered to be of local value. This tree is the subject of a Tree Preservation Order (WYGE 2006). The trees at *Target Notes 4* and *17* (outside the development site) are also of local value.

4.2.8 'Rivers' is a priority habitat listed on *Section 7*. This priority habitat covers '*a very wide range of types, encompassing all natural and near natural running waters*' (Biodiversity Reporting & Information Group, 2011). The Glan yr Afon Brook within the development site has been much modified and as such is unlikely to qualify. Some of the less modified stretches within Glan Yr Afon Wood may qualify. The criteria in WCBC (2015) also largely refer to the amount of modification. While the Glan yr Afon Brook is much modified at this location it does form an important habitat corridor which flows into the Black Brook and subsequently the River Clywedog at Erddig Country Park. These watercourses are frequently wooded. The Glan yr Afon Brook is of local value; the network of watercourses to which it contributes may be of greater value.

4.2.9 Of the valued ecological resources identified above, the hedgerows at *Target Notes 3*, *9* and *14* will be directly impacted. One footpath will bisect the hedge at *Target Note 3*, that at *Target Note 9* will be bisected by two roads, and that at *Target Note 14* by a road/ roundabout and a footpath. The Ecological Method Statement (URS 2012a) outlines an appropriate approach for the removal of hedgerows. The stretches of hedge to be removed should be minimised wherever possible and replacement should be on a minimum like-for-like basis. The hedgerow planting mix should reflect the existing resource and contain native species of local provenance. The remainder of these hedges should be retained. A detailed soft landscaping plan should be produced in conjunction with a suitably qualified ecologist. New hedgerows should be provided along the 'Southern Buffer Strip' and around the 'Proposed Meadow' (URS 2012a&b).

4.2.10 The loss of short stretches of hedgerow of local value along with appropriate replacement planting would not give rise to a significant impact.

4.2.11 The retained stretches of hedgerow at *Target Notes 3*, *9* and *14* should be protected during any construction phase by the installation of temporary protective fencing. This is further discussed below.

4.2.12 The Glan yr Afon Brook (with the exception of pedestrian bridges) and the tree at *Target Note 10* will not be directly impacted. To avoid any possible inadvertent impacts on these resources and adjacent features (the trees at *Target Notes 4* and *17*), prior to the start of any preparatory or construction work, temporary protective fencing (*e.g*. heras) will be installed around these features. The scrub at *Target Note 18* may also need to be protected due to the proximity of built development. The fence along the Brook could be combined with the proposed Otter exclusion fencing (URS 2012a&b). The purpose of this fencing would be to protect these valued resources. These fences will remain in-situ, and in an effective state of repair, until the completion of the proposed development. No access/ storage of materials/ construction work, *etc* will be allowed beyond this fence.

4.2.13 The fences around the trees at *Target Notes 4, 10* and *17*, and the hedgerows at *Target Notes 3*, *9* and *14* should be in accordance with '*BS 5837:2012 Trees in Relation to Design, Demolition and Construction. Recommendations*' and Local Planning Guidance Note 17: Trees and Development (WCBC 2012).

4.2.14 General best practice measures should be implemented during the construction phase to avoid any indirect impacts (*e.g*. dust, diffuse pollution, *etc*) on adjacent habitat. It is assumed for the purpose of this assessment that temporary storage, vehicle parking, *etc*, will be located well away from the Brook, and close to the A5152. The general advice contained in the Pollution Prevention Guidance (PPG) leaflets produced by SEPA, EA and the Environment and Heritage Service (Northern Ireland) will be adhered to, particularly the following:

- PPG1: Understanding Your Environmental Responsibilities - Good Environmental Practices.
- GPP5: Works and Maintenance in or Near Water.
- PPG6: Working at Construction and Demolition Sites.

4.2.15 Assuming the appropriate installation and maintenance of the temporary protective fencing along with the adoption of best practice measures, no significant impact is anticipated on valued habitat resources located within or close to the development site.

4.2.16 The plan provided in URS (2012a&b) illustrates a 'Southern Buffer Strip' adjacent to the railway as well as a 'proposed meadow' adjacent to the Glan yr Afon Brook corridor. In addition, the Pocket Park will be enhanced and managed by The National Trust (URS 2012a&b). The Southern Buffer Strip is largely proposed for tree/ shrub planting. URS (2012a) states that the proposed meadow 'will be allowed to develop into meadows' to be mown once annually and URS (2012b) proposes 'over-seeding'. It is suggested that as this grassland has been the subject of agricultural improvement it may be of greater benefit to wildlife to cultivate this area and re-sow it with an appropriate native wildflower/ grass seed mix.

4.2.17 It is not known what surface water drainage arrangements have been provided for the proposed development. If it is possible the use of a Sustainable Drainage System (SuDs) should be considered as this could deliver further wildlife gains.

4.2.18 The Ecological Method Statement (EMS) should be reviewed and updated once further information on the proposed development becomes available (*e.g*. Including construction

duration/ phasing) and with further detail provided on the recommendations made in this report. It is anticipated that the final EMS would be included in a Construction Environmental Management Plan (CEMP). All ecological mitigation requirements and individual responsibility in that regard should also be included in all site inductions.

Flora

4.2.19 No species of plant listed in categories (above Least Concern) in the most recent Vascular Plant Red Data List for Wales (Dines 2008) or in Williams (2014) were recorded from the survey site. No further survey of the flora within the site and no specific mitigation measures are currently considered necessary.

4.2.20 Four species of plant listed in *Schedule 9* to the *Wildlife and Countryside Act 1981* (as amended) were recorded from the survey site as follows:

- Japanese Knotweed.
- Indian Balsam.
- Wall Cotoneaster.
- Himalayan Cotoneaster.

Montbretia is also present in the Pocket Park.

4.2.21 It is illegal to plant or otherwise cause to grow in the wild any plant listed in *Schedule 9* to the Act. The *Schedule 9* list of animal and plant species has been amended by the *Wildlife and Countryside Act 1981 (Variation of Schedule 9)(England and Wales) Order 2010*'[5]. *Section 14 (1)* covers spreading the species or transferring polluted ground material from one area to another.

4.2.22 A survey for *Schedule 9* plants should be undertaken prior to the commencement of construction and at an appropriate time of year. Subsequent to this survey a Biosecurity Risk Assessment should be produced that will both detail any control measures required pre- and during construction, and identify appropriate working practices in order to minimise the risk of spreading these plants.

4.2.23 URS (2012a) prescribes a programme of control measures for Japanese Knotweed within the Pocket Park.

Fauna

Badgers

4.2.24 No setts were recorded within the development site and opportunities for sett excavation within the development site are limited. [redacted]

4.2.25 [redacted]

[5] http://www.nonnativespecies.org/index.cfm?pageid=67

4.2.26 [redacted]

4.2.27 Best practice will be implemented during any construction phase as a precautionary approach and to avoid any potential impacts on Badgers. If construction includes the excavation of deep holes or trenches, such features will be required to be filled in overnight or otherwise made safe by securely covering them or the provision of suitable ramps. All open ends of pipes or other materials that Badgers may access would need to be securely blocked up overnight. Any fencing that may be required during the construction and operation phases will consider Badger movements so that they are not unnecessarily obstructed.

4.2.28 July is a sub-optimal time for general Badger surveys, particularly for finding setts, as dense vegetation at this time of year obscures features and prevents access to some areas. A detailed Badger survey should be undertaken by a suitably qualified ecologist of the survey site at an appropriate time of year (*e.g*. ideally in autumn) prior to the construction phase.

Bats

4.2.29 There are no buildings that could provide potential roosting features located within the development site. The raised pipeline at *Target Note 19* will not be affected. No trees are to be felled within the development site. The tree at *Target Note 10* will be retained and protected during the construction phase. This tree was inspected in 2011 and no evidence of bats was recorded. This inspection should be repeated prior to the commencement of the construction phase.

4.2.30 The trees at *Target Note 4* may contain features of potential value for bats as may the Holy Trinity Church to the north of the development site. This church/ church-yard will be isolated from the surrounding countryside by the proposed development. It is recommended that if possible, a green corridor is provided to retain a link between the church-yard and the proposed meadow to the south. This link could perhaps be a track to 5 m wide lined with shrubs/ hedges on either side.

4.2.31 The tree at *Target Note 17* and those along the Glan yr Afon Brook (*Target Note 20*) will not be directly affected and will be protected during the construction phase.

4.2.32 At present it is considered unlikely that the proposal would have any impact on (roosting) bats.

4.2.33 The hedgerows along the northwest boundary will be further fragmented by the proposed development. However, they are already fragmented by existing commercial/ residential properties and are likely to be well lit by adjacent street lights. These hedgerows are not likely to be of high value for foraging/ commuting bats and are only likely to be used by species that are more tolerant of high light levels/ gaps.

4.2.34 The improved grassland that characterises most of the development site is of low value for foraging/ commuting bats. The proposed meadow and southern buffer strip will strengthen the value of the habitat associated with the Brook corridor and railway. Overall no significant impact is anticipated on foraging/ commuting bats.

4.2.35 No information is currently available on external lighting with regards the proposal. The potential impact of lighting (both during construction and operation) on bats that may use the development site/ adjacent habitat should be considered. Any external lighting at the proposed development site should follow guidance provided by The Bat Conservation Trust and Institution of Lighting Professionals (2018). Lighting that reduces vertical and horizontal light spillage should be used. The Brook corridor, proposed meadow and southern buffer strip should be kept as dark as possible. Measures to avoid/ minimise light spillage should include:

- 'Warm white' LED lamps should be used;
- All luminaires should lack UV elements when manufactured and have an upward light ratio of 0%;
- All luminaires used will be fully directional (*e.g*. LED) and will point straight down to where the light is required. They will be mounted on the horizontal, *i.e*. no upward tilt. Lighting that reduces vertical and horizontal light spillage will be used;
- The number of poles/ bollards/ lamps installed will be kept to a minimum and will be as low (in height) as possible;
- Low wattage lamps (<70W) will be used;
- All external lighting will only be turned on when the area is in use wherever possible (and should be fitted with motion detectors, automatic timers and/ or dimmers);
- Cowls/ hoods/ baffles or similar will be used where the light spillage is likely to cause an unacceptable light level increase in adjacent retained habitat; and
- Lighting near the Brook corridor, proposed meadow and southern buffer strip should be avoided/ limited.

4.2.36 URS (2012b) includes provision for the installation of 10 bat-boxes (Schwegler 2F) within the Pocket Park. The proposed development presents an opportunity to increase potential roost features, in particular for crevice-dwelling bats. There are a number of different ways in which roosting opportunities can be included in the constriction of houses. The simplest are the inclusion of bat access tiles, though roof-blocks at the eaves, built-in bat-boxes/ bat bricks and/ or access beneath ridge tiles are all readily available. Where access is provided beneath roof tiles the new roof must be lined with bituminous roofing felt only that does not contain polypropylene filaments (*e.g*. Bitumen felt type 1F, which is hessian reinforced)[6]. Further information on installation is provided in Gunnell, Murphy & Williams (2013).

4.2.37 It is recommended that (the equivalent to) at least 10% of the housing units contain built-in bat roost features. These features should be located close to the areas of open space and away from any external lighting. A suitably qualified bat ecologist should be consulted on their appropriate siting. Information on these roost features and their value to bats should be provided to each of the new home-owners where they have been installed.

Otters

4.2.38 The Glan yr Afon Brook provides habitat of value for Otters and signs of their presence have previously been recorded from this watercourse. With the exception of the proposed pedestrian bridges the Brook corridor will not be directly impacted. URS (2012a) proposed the installation of Otter exclusion fencing though no particular detail is provided other than its alignment and specification. This fencing will both prevent Otters accessing the construction

[6] http://www.bats.org.uk/news.php/254/bats_and_breathable_roofing_membranes_update_of_findings_%20

site and any inadvertent incursions into the Brook corridor by construction personnel. It is suggested that once the construction phase is completed that this fence should be removed.

4.2.39 At present no impacts on Otters are anticipated.

Reptiles

4.2.40 Most of the habitat within the development site is not of any potential value for reptiles. Features of potential value are limited to the Glan yr Afon Brook corridor and this will not be directly impacted.

4.2.41 The adjacent railway corridor provides habitat of potential value for reptiles. Should the grass within the development site be allowed to become long then there is a risk that reptiles that may be present in adjacent habitat could enter the development site. It is recommended that the development site is grazed right up until the commencement of construction. If this is not possible the grass should be kept short (less than 10 cm high) by other means. No mitigation measures are considered necessary.

4.2.42 At present no impacts on reptiles are anticipated.

Birds

4.2.43 The proposal would result in the loss of some short stretches of hedge and a few scattered shrubs that could be used by nesting birds. Such nesting birds may include some species of conservation interest. Habitat of potential value for nesting birds should be retained as far as is possible and protected during the construction phase (as detailed above). The proposed hedgerows and trees to be planted should offset the loss of these habitat features in the medium-term. It is considered unlikely that the proposal would give rise to a significant impact on local bird populations.

4.2.44 No further survey for birds is deemed necessary (other than a pre-work check should work be undertaken during the nesting season as detailed below).

4.2.45 The destruction of any bird nests that are in use is illegal. The simplest option to avoid issues arising from the presence of nesting birds is to schedule work that affects nesting habitat (*e.g.* clearance of trees/ shrubs/ hedges) outside the nesting period (March to August inclusive). Should any occupied nests be found during the construction phase, a buffer zone (determined on the basis of the species concerned and the location of the nest in the context of the surrounding vegetation, but no less than 5 m) would be retained until it can be ascertained that the chicks have left the nest. The buffer zone will be appropriately fenced and signed.

4.2.46 If it is not possible to clear vegetation/ fell/ prune trees outside the nesting season all such areas should be checked by a suitably qualified ecologist prior to commencement of works. If any active nests are found at this time a buffer zone as detailed above would be provided.

4.2.47 URS (2012b) includes provision for the installation of 10 bird-boxes within the Pocket Park. The construction of a large number of houses at the development site also presents an opportunity to provide appropriate enhancements for birds that nest within built structures, some of which are priority species. It is recommended that (the equivalent to) at least 10% of the housing units contain built-in nest-boxes for the House Sparrow (*e.g*. Schwegler Brick Box No.24[7]). These boxes should be located close to the areas of open space but ideally be provided on the north-east and or east elevations. A suitably qualified ecologist should be

[7] http://www.nhbs.com/title/173236/schwegler-brick-nest-boxes

consulted on their appropriate siting. Information on these nest-boxes and their value to House Sparrows should be provided to each of the new home-owners where they have been installed. Further information on installation is provided in Gunnell, Murphy & Williams (2013).

4.2.48 Provision for other species of conservation interest (*e.g*. Starling, Swift) should also be considered.

Other Species

4.2.49 A number of records of Hedgehog were provided for the area. New garden fences can prevent Hedgehogs from accessing gardens and traversing across built-up areas. To facilitate access to these gardens for Hedgehogs boundary fences should either incorporate a gap of 13 cm (in height) beneath them or otherwise a hole measuring 13 cm by 13 cm[8] should be cut into the base of the fence on each side of each garden. To ensure that home-owners understand the reason for the holes in their fence each hole should be labelled on both sides with an appropriate sign, *e.g*. available from the British Hedgehog preservation Society[9].

4.2.50 URS (2012b) provides a list of tree/ shrub species for the proposed planting. This list does not include any species of Elm. The White-letter Hairstreak is known to be present in the Wrexham area. Various species of Elms are the larval host-plant for this species. It is recommended that Wych Elm is included in any tree/ shrub and hedgerow planting. However, Wych Elm is known to suffer from Elm disease in this area. It is therefore considered appropriate in this instance to include a disease-resistant elm (DRE) cultivar within the planting (as well as Wych Elm). Any planting of DREs must be in accordance with the Butterfly Conservation guidance note[10]. This guidance note also lists the cultivars known to support White-letter Hairstreak.

4.2.51 No significant impact on any other species of conservation interest is anticipated.

Footpaths/ Bridges in the Pocket Park/ Glan yr Afon Wood

4.2.52 Based on the criteria in WCBC (2015) Glan yr Afon Wood is of local and perhaps county value. The proposed development includes for the creation of two paths through this woodland and the Pocket Park along with five new crossing points on the Glan yr Afon Brook and minor tributary (*Target Note 24*). No details are available on the specification for these paths (*e.g*. width, material, *etc*).

4.2.53 For the most part the proposed footpaths would utilise existing paths. As such the loss of ground flora is likely to be minimal. Other impacts due to this proposal are likely to be associated with the potential increase in recreational use of these routes, *e.g*. increased disturbance. The paths through the Pocket Park and woodland already appear to be quite well used, and conversely increased public presence may be reflected in a decrease in the more anti-social activities. The installation of well-made and installed surfaced paths may also reduce access into other parts of the woodland.

4.2.54 A plan included in WYGE (2006) illustrates the alignment of proposed new paths and bridges within the Pocket Park and Glan yr Afon Wood. Due to the scale and lack of detail

[8] http://www.hedgehogstreet.org/pages/link-your-garden.html

[9] https://www.britishhedgehogs.org.uk/shop/product/hedgehog-highway-sign/

[10] https://butterfly-conservation.org/sites/default/files/2018-12/Planting%20of%20Disease-Resistant%20Elm%20Cultivars%20for%20Lepidoptera%20and%20the%20Biosecurity%20Implications.pdf

on this plan it proved difficult to confirm the exact alignment of the paths/ location of the bridges on the ground. However, the following potential ecological constraints were identified:

- Japanese Knotweed is located close to, or at, all of the proposed bridge locations with the exception of 'Crossing 4'.
- Indian Balsam is located at some of the proposed bridge locations (Crossings 1 and 2).
- There are potential Otter resting places along the Brook corridor within the Pocket Park, and resting places/ potential holt sites within Glan yr Afon Wood.
- There is a single entrance Badger sett near 'Crossing 4'.
- The footpath between Crossing 4 and Crossing 5 would go through an area of species-rich wet woodland.
- The footpath to the east of Crossing 3 appears to go through an area of Ancient Semi-natural Woodland.

4.2.55 The following avoidance/ mitigation measures are recommended:

- The route of the footpaths and location of the bridge points should be reviewed in conjunction with a suitably qualified ecologist. Once confirmed they should be clearly marked out.
- Wherever possible the footpaths should use existing paths.
- The ASNW should be avoided if possible.
- The route of the footpaths should avoid the areas of valuable wet woodland.
- The route of the footpaths should avoid the more floristically rich areas.
- The footpaths should be aligned so as to avoid the felling/ pruning of any large trees.
- A suitably qualified ecologist will need to survey the bridge locations for potential Otter resting places/ holt sites. Should any potential constraints be identified then it is recommended that the location of the bridge is amended.
- A Badger survey has been recommended.
- The alignment of the proposed footpaths/ bridge should be amended to avoid the known sett/ any other setts identified. They should be moved a sufficient distance to ensure that the work would not be licensable.
- The detailed proposal for construction of the paths/ bridges within Glan yr Afon Wood should be reviewed by a suitably qualified ecologist to consider whether there may be any risk to Great Crested Newts (that might use the terrestrial habitat provided in the wood). It may be deemed necessary to implement non-licensed Reasonable Avoidance Measures (RAMs) should any risks be identified.
- A *Schedule 9* plant survey and Biosecurity Risk Assessment have been recommended.
- Locations where there are *Schedule 9* plants should be avoided wherever possible.
- Control of *Schedule 9* plants should be commenced well in advance (several years) of the installation of the footpaths/ bridges.
- Any vegetation clearance should be undertaken outside the nesting bird season.

4.2.56 Assuming the above recommendations are followed no significant impacts are anticipated.

5 SUMMARY CONCLUSIONS

5.1.1 This report concludes the following with regards existing (on- and off-site) ecological resources:

- No designated sites would be directly or indirectly impacted by the proposed development.
- A proposed footpath through Glan yr Afon Wood may cross an area of ASNW. No other ASNW will be directly or indirectly affected.
- A field of improved grassland, some tall ruderal vegetation, scattered shrubs and a small waterbody of no more than site value would be lost due to the proposed development. Three hedgerows of local value will be bisected by proposed footpaths/ roads. Some valued habitat features (*e.g*. the Glan yr Afon Brook at *Target Note 20*; the tree at *Target Note 10*) are located close to the proposed built development.
- There are no locally notable plants within the development site. Four non-native invasive plants listed in *Schedule 9* were recorded from the development site.
- No Badger setts were recorded from the development site. A single entrance sett was recorded in Glan yr Afon Wood. A small amount of evidence of Badger activity was recorded from the development site. The habitat resource within the proposed development site is of moderate/ high value for foraging.
- There are no buildings within the development site. A raised pipe that will not be affected by the development offers low value roosting opportunities. Other than those along the Glan yr Afon Brook there is one tree (*Target Note 10*) that provides potential roosting features for bats within the development site. This tree is to be retained and the Brook corridor will not be affected (other than footpaths). Most of the habitat within the proposed development site is of low potential value for foraging/ commuting bats though some features (*e.g*. hedgerows) are of greater value.
- Glan yr Afon Brook provides habitat for Otters. There are potential resting places within the development site and potential resting places/ holt sites within Glan yr Afon Wood.
- Habitat of potential value for reptiles is very limited within the development site.
- Opportunities for breeding birds are limited within the development site and are largely associated with the hedgerows.

5.1.2 This report recommends the following avoidance/ mitigation measures:

- The stretches of hedge to be removed should be minimised wherever possible and replacement should be on a minimum like-for-like basis. The hedgerow planting mix should reflect the existing resource and contain native species of local provenance.
- A detailed soft landscaping plan should be produced in conjunction with a suitably qualified ecologist.
- Temporary protective fencing should be installed to protect the habitat features at *Target Notes 3*, *4, 9, 10, 14, 17, 18* and *20*.
- General best practice measures should be implemented during the construction phase to avoid any indirect impacts on adjacent habitat/ release of pollutants to waterbodies or the watercourse.
- The proposed meadow should be sown with an appropriate native wildflower/ grass seed mix.
- The Ecological Method Statement (EMS) should be reviewed and updated. It should be included in a Construction Environmental Management Plan (CEMP) and ecological responsibilities should be covered in all site inductions.

- A survey for *Schedule 9* plants should be undertaken. Subsequent to this survey a Biosecurity Risk Assessment should be produced and implemented.
- Best practice should be implemented during the construction phase to avoid any potential impacts on Badgers. A detailed Badger survey should be undertaken at an appropriate time of year prior to the construction phase.
- The inspection of the tree at *Target Note 10* for bats/ evidence of use should be repeated prior to the commencement of the construction phase.
- If possible, a green corridor should be provided to retain a link between the church-yard and the proposed meadow to the south (for bats).
- Any external lighting provided as part of the proposed development should accord with best practice guidance to minimise impacts on foraging/ commuting bats.
- URS (2012b) includes provision for the installation of 10 bat-boxes within the Pocket Park.
- URS (2012a) proposed the installation of Otter exclusion fencing.
- The grassland within the development site should be kept short right up to the construction phase to minimise the risk of any reptiles accessing the site.
- Site clearance works/ removal of vegetation should be undertaken outside the bird nesting season. Should this not be possible then suitable habitat would need to be checked by a qualified ecologist prior to the commencement of work.
- URS (2012b) includes provision for the installation of 10 bird-boxes within the Pocket Park.
- All garden fences should include holes at the base to allow Hedgehogs to access the new gardens. These holes should be clearly identified.
- A number of avoidance/ mitigation measures are provided for the proposed footpaths/ bridges through the Pocket Park and Glan yr Afon Wood.

5.1.3 This report recommends the following enhancement measures:

- Should a Sustainable Drainage System (SuDs) be required for surface water it should be designed to benefit biodiversity. A suitably qualified ecologist should be consulted.
- Roosting opportunities for crevice-dwelling bats should be included in (the equivalent to) at least 10% of the housing units.
- Nest-boxes for House Sparrows should be included in (the equivalent to) at least 10% of the housing units. Provision for other species of conservation interest (*e.g*. Starling, Swift) should also be considered.
- Elms should be included in the tree/ shrub and hedgerow planting for the benefit of the White-letter Hairstreak.

6 TARGET NOTES

Target Note 1. A hedge managed to approximately 4-5 m high and 1 m wide (only the sides appear to be managed). There is a young *Acer pseudoplatanus* (Sycamore) tree at the southern end with an approximate diameter at breast height (dbh) of 0.2 m. The hedge is dominated by *Crataegus monogyna* (Hawthorn) with a small amount of *Rosa canina* agg. (Dog-rose). The base is dominated by *Hedera helix* (Ivy) with frequent *Urtica dioica* (Common Nettle), locally frequent *Rubus fruticosus* agg. (Bramble) and *Aegopodium podagraria* (Ground-elder). *Geranium robertianum* (Herb-robert), *Geum urbanum* (Wood Avens), *Arum maculatum* (Lords-and-ladies) and *Veronica montana* (Wood Speedwell) were also recorded.

Target Note 2. A ×*Cupressocyparis leylandii* (Leyland Cypress) hedge managed to approximately 2.2 m high by 2 m wide.

Target Note 3. A hedge managed to approximately 1.8-2.2 m high and 1.8-2 m wide. Part of the hedge appears to be on a raised earth bank. The hedge contains one small gap of approximately 8 m. The hedge is dominated by *Crataegus monogyna* (Hawthorn) with small amounts of *Ulmus glabra* (Wych Elm), *Fraxinus excelsior* (Ash), *Rosa canina* agg. (Dog-rose), *Sambucus nigra* (Elder), *Ilex aquifolium* (Holly) and *Corylus avellana* (Hazel). The base is dominated by *Hedera helix* (Ivy) with occasional to locally frequent *Aegopodium podagraria* (Ground-elder). *Geum urbanum* (Wood Avens) was also recorded.

Target Note 3a. A small shrub and seedling of *Cotoneaster* cf. *simonsii* (Himalayan Cotoneaster) at the base of the hedge. It is heavily browsed by the cattle.

Target Note 4. A line of mature trees located just outside the site boundary. It includes three *Aesculus hippocastanum* (Horse Chestnut), two *Acer pseudoplatanus* (Sycamore), three *Tilia* ×*europaea* (Common Lime) and one *Betula pendula* (Silver Birch) trees. The largest have approximate dbh's of 0.6-0.7 m. It was not possible to view these trees in detail due to the foliage and as they are outside the site but due to their size, they are likely to contain some features of potential value for roosting bats.

Target Note 5. Several Badger footprints in exposed damp soil.

Target Note 6. A single-storey small brick building located immediately outside the site. It has a sloping corrugated metal sheet roof. It was not viewed in detail but is unlikely to be of value for roosting bats.

Target Note 7. A short stretch of hedge managed to approximately 4 m high and 2.5 wide (only the sides appear to be managed). It forms the boundary of a residential property. It contains abundant *Ligustrum ovalifolium* (Garden Privet), occasional *Crataegus monogyna* (Hawthorn) and small amounts of *Ilex aquifolium* (Holly), *Prunus spinosa* (Blackthorn) and *Sambucus nigra* (Elder). The base is dominated by *Hedera helix* (Ivy).

Target Note 8. A ×*Cupressocyparis leylandii* (Leyland Cypress) hedge managed to approximately 4 m high. It forms the boundary of a residential property.

Target Note 9. A hedge managed to approximately 1.3-2.5 m high and 1.1 wide. It appears to be located on a low earth bank. It contains abundant *Crataegus monogyna* (Hawthorn), occasional *Prunus spinosa* (Blackthorn), *Fraxinus excelsior* (Ash), and small amounts of *Acer campestre* (Field-maple), *Acer pseudoplatanus* (Sycamore), *Ilex aquifolium* (Holly), *Sambucus nigra* (Elder) and *Rosa canina* agg. (Dog-rose). The base is dominated by *Hedera helix* (Ivy) with abundant *Urtica dioica* (Common Nettle) and locally frequent *Mercurialis perennis* (Dog's Mercury). *Geranium robertianum* (Herb-robert), *Geum urbanum* (Wood Avens) and *Brachypodium sylvaticum* (False Brome) were also recorded.

Target Note 10. A large, mature *Fraxinus excelsior* (Ash) tree with an approximate dbh of 1.3 m. It contains some dead wood and two rot-holes at pruning wounds. It was not possible to confirm

whether there were cavities at these rot-holes. There are several broken branches and another large rot-hole in a branch. This tree is of at least low potential value for roosting bats.

Target Note 11. Two small *Cotoneaster horizontalis* (Wall Cotoneaster) shrubs and one *Cotoneaster simonsii* (Himalayan Cotoneaster).

Target Note 12. An apparent single-storey warehouse type building immediately outside the site boundary. It has a corrugated sheet material roof and one elevation has been pebble-dashed. It was not viewed in detail.

Target Note 13. A hedge which forms part of a residential garden boundary. It is managed to approximately 1.7 m high by 1.3 m wide. It is dominated by *Ligustrum ovalifolium* (Garden Privet) with small amounts of *Crataegus monogyna* (Hawthorn) and *Rosa canina* agg. (Dog-rose). The base is dominated by *Hedera helix* (Ivy). *Geranium robertianum* (Herb-robert) and *Geum urbanum* (Wood Avens) were also recorded.

Target Note 14. A hedge managed to approximately 1.6-1.9 m high and 2 wide. It appears to be on a low earth bank. It is dominated by *Crataegus monogyna* (Hawthorn) with occasional *Fraxinus excelsior* (Ash), *Ulmus glabra* (Wych Elm), and small amounts of *Acer pseudoplatanus* (Sycamore), *Acer campestre* (Field-maple), *Sambucus nigra* (Elder) and *Rosa canina* agg. (Dog-rose). The base is dominated by *Hedera helix* (Ivy) with abundant *Urtica dioica* (Common Nettle). *Geranium robertianum* (Herb-robert) and *Geum urbanum* (Wood Avens) were also recorded.

Target Note 15. The railway cutting sides support stretches of tall ruderals - *Urtica dioica* (Common Nettle), *Chamerion angustifolium* (Rosebay Willowherb) – with largely species-poor unmanaged grassland dominated by *Arrhenatherum elatius* (False Oat-grass) and *Dactylis glomerata* (Cock's-foot), with scattered *Crataegus monogyna* (Hawthorn) shrubs, patches of *Rubus fruticosus* agg. (Bramble) and frequent young/ semi-mature *Quercus* sp. (Oak) trees. Locally the grassland is moderately species-rich and includes *Geranium pyrenaicum* (Hedgerow Crane's-bill), *Centaurea nigra* (Common Knapweed), *Hypericum perforatum* (Perforate St. John's-wort), *Leucanthemum vulgare* (Oxeye Daisy), *Trifolium pratense* (Red Clover) and *Linaria vulgaris* (Common Toadflax).

Target Note 16. A small oval-shaped waterbody that measures approximately 8 m by 6 m and 0.1-0.2 m deep. The cattle have access throughout and as such it is heavily poached and apparently polluted. The margins are dominated by *Agrostis stolonifera* (Creeping Bent) with occasional to locally frequent *Alopecurus geniculatus* (Marsh Foxtail), occasional *Rumex conglomeratus* (Clustered Dock), and a small amount of *Glyceria fluitans* (Floating Sweet-grass). No aquatic vegetation was visible. The edge is very soft and muddy and there are some concrete kerb-stones in one end.

Target Note 17. A mature *Quercus robur* (Pedunculate Oak) tree with its roots partly within the survey site. It has an approximate dbh of 0.6 m. It contains some dead wood and there is a possible cavity where a branch has come off. It was not possible to assess this tree in detail as it is outside the site.

Target Note 18. A patch of young and mature scrub on a low bank. The cattle have access throughout this area and as such the ground beneath the shrubs is bare and poached. It is dominated by *Crataegus monogyna* (Hawthorn) with small amounts of *Sambucus nigra* (Elder), *Ilex aquifolium* (Holly) and *Rosa canina* agg. (Dog-rose).

Target Note 19. A raised pipeline on stone pillars to approximately 3-4 m high. The mortar is largely well sealed though some small holes were noted. The tops of the pillars are covered in dense *Hedera helix* (Ivy). The pillars are of low potential value for roosting bats at most.

Target Note 20. The Glan yr Afon Brook at this location is approximately 3-5 m wide with a moderate flow over gravel/ cobbles. The banks have a slope of 45-90° and rise to approximately 2 m above the water level. There is quite a lot of rubbish/ tipped debris in the watercourse. No aquatic vegetation was visible. Marginal vegetation is limited to small amounts of *Oenanthe crocata* (Hemlock Water-dropwort) and *Apium nodiflorum* (Fool's Watercress) on gravel bars. Both banks are lined with trees, mostly *Alnus glutinosa* (Alder), but also locally frequent *Ulmus glabra* (Wych Elm), *Crataegus*

monogyna (Hawthorn), *Salix viminalis* (Osier), occasional *Betula pendula* (Silver Birch), *Salix caprea* (Goat Willow), *Fraxinus excelsior* (Ash), and lesser amounts of *Ilex aquifolium* (Holly) and *Salix cinerea* (Grey Willow). There are also some patches of dense *Rubus fruticosus* agg. (Bramble). The ground flora beneath the trees is variable but does contain several woodland plants including *Mercurialis perennis* (Dog's Mercury), *Allium ursinum* (Ramsons), *Geum urbanum* (Wood Avens), *Geranium robertianum* (Herb-robert), *Veronica montana* (Wood Speedwell), *Viola odorata* (Sweet Violet), *Brachypodium sylvaticum* (False Brome) and *Bromopsis ramosa* (Hairy Brome). The trees were not individually assessed for their potential value to roosting bats.

Target Note 20a. *Fallopia japonica* (Japanese Knotweed) is frequent on both sides of the brook.

Target Note 20b. A stand of *Fallopia japonica* (Japanese Knotweed) with a small amount of *Impatiens glandulifera* (Indian Balsam) also present.

Target Note 21. Broad-leaved plantation woodland. The canopy includes *Prunus avium* (Wild Cherry), *Fraxinus excelsior* (Ash), *Acer platanoides* (Norway Maple), *Alnus glutinosa* (Alder), *Fagus sylvatica* (Beech), *Fagus sylvatica* f. *purpurea* (Copper Beech), *Quercus* sp. (Oak) and *Larix* sp. (Larch). The trees largely have an approximate dbh of 0.2-0.4 m. There are a few very large trees including *Acer pseudoplatanus* (Sycamore) and *Fraxinus excelsior* (Ash) largely restricted to the boundaries. The shrub layer is sparse with small amounts of *Ulmus glabra* (Wych Elm), *Sambucus nigra* (Elder) and *Prunus avium* (Wild Cherry) saplings. The ground layer is characterised by abundant *Hedera helix* (Ivy), *Urtica dioica* (Common Nettle), *Galium aparine* (Cleavers), locally frequent *Mercurialis perennis* (Dog's Mercury), occasional to locally frequent *Geum urbanum* (Wood Avens) and *Geranium robertianum* (Herb-robert). *Hyacinthoides non-scripta* (Bluebell) was recorded along the boundaries.

Target Note 22. A Badger path – a hair was recorded at the breach. The route of the Badger path was lost where it joins a footpath.

Target Note 22a. A Badger latrine with at least two recently used dung-pits and several unused pits along with evidence of foraging.

Target Note 23. A Badger sett with a single entrance. It has a moderately sized spoil pile and there were leaves and twigs in the entrance. There are no signs of recent use though a recently used path does lead away from it and via a breach into the adjacent arable field. GPS OS grid ref. SJ 31707 48257 +/- 5 m.

Target Note 24. A small stream to approximately 0.4-1 m wide and 0.05 m deep.

Target Note 25. Semi-natural broad-leaved woodland that includes some planted trees. The canopy includes abundant *Alnus glutinosa* (Alder) particularly by the watercourses/ wet areas. Otherwise the canopy includes *Fraxinus excelsior* (Ash), *Acer pseudoplatanus* (Sycamore), *Fagus sylvatica* (Beech), *Carpinus betulus* (Hornbeam), *Quercus* sp. (Oak) and *Larix* sp. (Larch). The trees largely have dbh's of 0.2-0.5 m though there are a number of much larger trees. The shrub layer contains occasional to locally frequent *Ilex aquifolium* (Holly), occasional *Sambucus nigra* (Elder), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn) and lesser amounts of *Prunus spinosa* (Blackthorn), *Acer campestre* (Field-maple) and *Cornus sanguinea* (Dogwood). There are several stands of *Fallopia japonica* (Japanese Knotweed) in the wood, mostly along or close to the brook, some of which appear to have been treated with herbicide.

The ground flora is variable and includes locally abundant *Hedera helix* (Ivy), *Rubus fruticosus* agg. (Bramble), locally frequent *Allium ursinum* (Ramsons), *Veronica montana* (Wood Speedwell), *Aegopodium podagraria* (Ground-elder), *Mercurialis perennis* (Dog's Mercury), occasional *Circaea lutetiana* (Enchanter's-nightshade), with lesser amounts of several woodland plants including *Hyacinthoides non-scripta* (Bluebell), *Anemone nemorosa* (Wood Anemone), *Galeopsis luteum* (Yellow Archangel) and *Conopodium majus* (Pignut).

There appear to be several spring-lines in the wood and these wet areas are characterised by *Salix cinerea* (Grey Willow). The ground layer includes *Deschampsia cespitosa* (Tufted Hair-grass), *Filipendula ulmaria* (Meadowsweet), *Oenanthe crocata* (Hemlock Water-dropwort), *Caltha palustris* (Marsh-marigold), *Phalaris arundinacea* (Reed Canary-grass), *Eupatorium cannabinum* (Hemp-agrimony), *Apium nodiflorum* (Fool's Watercress), *Epilobium hirsutum* (Great Willowherb), *Chrysosplenium oppositifolium* (Opposite-leaved Golden-saxifrage), *Mentha arvensis* (Corn Mint) and *Equisetum palustre* (Marsh Horsetail).

Target Note 26. A Badger path and breach.

Target Note 27. A Badger latrine with four used dung-pits, a number of unused pits and evidence of foraging.

Target Note 28. A Pocket Park located outside the survey site. It is characterised by broad-leaved semi-natural woodland by the Glan yr Afon Brook. It has been greatly modified by historic and more recent industrial activity. There is a well frequented footpath through it and a considerable amount of litter/ tipped rubbish. Similarly, there is quite a lot of rubbish/ debris in the brook. The woodland is probably all secondary in nature particularly that on sloping ground up to Bersham Enterprise Park.

The canopy contains frequent *Alnus glutinosa* (Alder), locally frequent *Salix caprea* (Goat Willow), occasional *Betula pendula* (Silver Birch), *Fraxinus excelsior* (Ash) and lesser amounts of *Prunus avium* (Wild Cherry), *Acer pseudoplatanus* (Sycamore) and *Quercus robur* (Pedunculate Oak). Some of the *Alnus glutinosa* (Alder) are large and multi-stemmed. The shrub layer contains frequent *Sambucus nigra* (Elder), locally frequent *Fraxinus excelsior* (Ash), occasional *Prunus spinosa* (Blackthorn), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn) and a lesser amount of *Ulmus glabra* (Wych Elm). *Fallopia japonica* (Japanese Knotweed) is frequent throughout though particularly close to the brook, where *Impatiens glandulifera* (Indian Balsam) and a small amount of *Crocosmia* ×*crocosmiiflora* (Montbretia) are also present.

The ground flora is variable and greatly disturbed. It is often dominated by *Urtica dioica* (Common Nettle), *Galium aparine* (Cleavers) and *Hedera helix* (Ivy) with locally frequent *Aegopodium podagraria* (Ground-elder). There is also a range of woodland plants present including *Allium ursinum* (Ramsons), *Veronica montana* (Wood Speedwell), *Geum urbanum* (Wood Avens), *Geranium robertianum* (Herb-robert) and various ferns.

7 REFERENCES

Bat Conservation Trust and Institution of Lighting Professionals (2018). *Guidance Note 08/18. Bats and Artificial Lighting in the UK*. Bats and the Built Environment Series.

Biodiversity Reporting and Information Group (ed. Maddock, A.) (2011). *UK Biodiversity Action Plan; Priority Habitat Descriptions*.

CIEEM (2017a). *Guidelines for Preliminary Ecological Appraisal, 2nd Edition*. CIEEM, Winchester.

CIEEM (2017b). *Guidelines on Ecological Report Writing, 2nd Edition*. CIEEM, Winchester.

CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edn)*. The Bat Conservation Trust, London.

Dean, M., Strachan, R., Gow, D. & Andrews, R. (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. Eds Fiona Mathews & Paul Chanin. The Mammal Society, London.

Department of the Environment (1997a). *The Hedgerow Regulations 1997*. Statutory Instrument 1997 No. 1160, Countryside.

Department of the Environment (1997b). *The Hedgerow Regulations 1997 – A Guide to the Law and Good Practice*. Department of the Environment, London.

Dines, T. (2008). *A Vascular Plant Red Data List for Wales*. Plantlife International, Salisbury.

Edgar, P., Foster, J. and Baker, J. (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

English Nature (2004). *Reptiles: guidelines for developers*. English Nature, Peterborough.

Gunnell, K., Murphy, B. & Williams, C. (2013). *Designing for Biodiversity: A Technical Guide for New and Existing Buildings*. Second Edition. RIBA Publishing, London.

Harris, S., Cresswell, P., & Jeffries, D. (1989). *Surveying Badgers*. Occasional Publication No. 9, The Mammal Society.

HMSO (1981). *The Wildlife and Countryside Act 1981*. HMSO, London.

HMSO (1992). *The Protection of Badgers Act 1992*. HMSO, London.

HMSO (2000). *The Countryside and Rights of Way Act 2000*. HMSO, London.

HMSO (2006). *The Natural Environment and Rural Communities Act 2006*. HMSO, London.

HMSO (2016). *The Environment Act (Wales) 2016*. HMSO, London.

HMSO (2017). *The Conservation of Habitats and Species Regulations 2017*. HMSO, London.

Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. E & FN Spon, London.

JNCC (2004a). *Common Standards Monitoring for Terrestrial Mammals, Version August 2004*. ISSN 1743-8160.

JNCC (2004b). *Common Standards Monitoring Guidance for Birds. Version August 2004*. Joint Nature Conservation Committee, Peterborough.

JNCC (2010). *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*. Joint Nature Conservation Committee, Peterborough.

Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000). Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal, Vol 10*, pp143-155.

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

URS (2011). *Rhostyllen Climb-and-Inspect Survey*. Letter to Fira Landscape Ltd dated 1st August 2011.

URS (2012a). *Wrexham Road, Rhostyllen – Ecological Method Statement. May 2012 Final. Issue No. 2 46404407/NTRP0003*. Produced on behalf of fira Landscape Ltd.

URS (2012b). *Wrexham Road, Rhostyllen – Ecological Management Plan. October 2012 Final. Issue No. 2 46404407/NTRP0002*. Produced on behalf of fira Landscape Ltd.

Welsh Government (2009). *Planning Policy Wales - Technical Advice Note 5: Nature Conservation and Planning*. September 2009.

Welsh Government (2018). *Planning Policy Wales*. Edition 10, December 2018.

White Young Green Environmental (WYGE) (2006). *Rhostyllen: Preliminary Ecological Appraisal. July 2006*. Produced on behalf of fira Landscape Ltd.

Williams, D. (2014). *Denbighshire (VC50) Rare Plant Register*. BSBI & NRW.

Wrexham County Borough Council (2005). *Wrexham Unitary Development Plan 1996-2011*. Adopted 14th February 2005.

Wrexham County Borough Council (2011). *Local Planning Guidance Note 32 Biodiversity and Development*. Adopted March 2011.

Wrexham County Borough Council (2012). *Local Planning Guidance Note 17 Trees and Development*. Adopted September 2000, Updated December 2012.

WCBC (2015). *Wrexham Wildlife Sites - A System for their Selection and Designation. Draft March 2015*. Unpublished report.

8 DATA

Table 1 – Vascular plant species recorded within the survey site

Plant Species	Proposed Development Site	Glan yr Afon Wood
Acer campestre (Field-maple)	✓	✓
Acer platanoides (Norway Maple)		✓
Acer pseudoplatanus (Sycamore)	✓	✓
Alnus incana (Grey Alder)		✓
Alnus glutinosa (Alder)	✓	
Betula pendula (Silver Birch)	✓	✓
Carpinus betulus (Hornbeam)		✓
Cornus sanguinea (Dogwood)		✓
Corylus avellana (Hazel)	✓	✓
Cotoneaster horizontalis (Wall Cotoneaster)	✓	
Cotoneaster simonsii (Himalayan Cotoneaster)	✓	
Crataegus monogyna (Hawthorn)	✓	✓
×*Cupressocyparis leylandii* (Leyland Cypress)	✓	
Fagus sylvatica (Beech)		✓
Fagus sylvatica f. *purpurea* (Copper Beech)		✓
Fraxinus excelsior (Ash)	✓	✓
Ilex aquifolium (Holly)	✓	✓
Larix sp. (Larch)		✓
Ligustrum ovalifolium (Garden Privet)	✓	
Lonicera pileata (Box-leaved Honeysuckle)	✓	
Pinus sylvestris (Scots Pine)		✓
Prunus avium (Wild Cherry)		✓
Prunus spinosa (Blackthorn)	✓	✓
Quercus robur (Pedunculate Oak)		✓
Rosa arvensis (Field-rose)	✓	✓
Rosa canina agg. (Dog-rose)	✓	
Salix alba (White Willow)		✓
Salix caprea (Goat Willow)	✓	✓
Salix cinerea (Grey Willow)	✓	✓
Salix fragilis (Crack Willow)	✓	
Salix viminalis (Osier)	✓	✓
Sambucus nigra (Elder)	✓	✓
Taxus baccata (Yew)	✓	
Tilia cordata (Small-leaved Lime)		✓

Plant Species	Proposed Development Site	Glan yr Afon Wood
Ulmus glabra (Wych Elm)	✓	✓
Achillea millefolium (Yarrow)	✓	
Aegopodium podagraria (Ground-elder)	✓	✓
Agrostis capillaris (Common Bent)	✓	
Agrostis stolonifera (Creeping Bent)	✓	
Alliaria petiolata (Garlic Mustard)	✓	✓
Allium ursinum (Ramsons)	✓	✓
Alopecurus geniculatus (Marsh Foxtail)	✓	
Alopecurus pratensis (Meadow Foxtail)	✓	
Anemone nemorosa (Wood Anemone)		✓
Anisantha sterilis (Barren Brome)	✓	
Angelica sylvestris (Wild Angelica)	✓	✓
Anthriscus sylvestris (Cow Parsley)	✓	
Apium nodiflorum (Fool's Watercress)	✓	✓
Arctium minus (Lesser Burdock)	✓	
Arrhenatherum elatius (False Oat-grass)	✓	✓
Artemisia vulgaris (Mugwort)	✓	
Arum maculatum (Lords-and-ladies)	✓	✓
Asplenium adiantum-nigrum (Black Spleenwort)	✓	
Athyrium filix-femina (Lady-fern)	✓	✓
Bellis perennis (Daisy)	✓	
Brachypodium sylvaticum (False Brome)	✓	
Bryonia dioica (White Bryony)	✓	
Bromopsis ramosa (Hairy-brome)	✓	✓
Caltha palustris (Marsh-marigold)		✓
Calystegia sepium (Hedge Bindweed)	✓	✓
Capsella bursa-pastoris (Shepherd's-purse)	✓	
Cardamine pratensis (Cuckoo-flower)	✓	✓
Carex hirta (Hairy Sedge)	✓	
Carex remota (Remote Sedge)	✓	✓
Carex pendula (Pendulous Sedge)	✓	✓
Centaurea nigra (Common Knapweed)	✓	
Cerastium fontanum (Common Mouse-ear)	✓	
Chaerophyllum temulum (Rough Chervil)	✓	
Chrysosplenium oppositifolium (Opposite-leaved Golden-saxifrage)		✓

Plant Species	Proposed Development Site	Glan yr Afon Wood
Chelidonium majus (Greater Celandine)	✓	
Circaea lutetiana (Enchanter's Nightshade)		✓
Cirsium arvense (Creeping Thistle)	✓	
Cirsium vulgare (Spear Thistle)	✓	✓
Conopodium majus (Pignut)		✓
Crepis capillaris (Smooth Hawk-s-beard)	✓	
Dactylis glomerata (Cock's-foot)	✓	✓
Digitalis purpurea (Foxglove)	✓	
Dryopteris affinis (Scaly Male-fern)		✓
Dryopteris dilatata (Broad Buckler-fern)	✓	✓
Dryopteris filix-mas (Male-fern)	✓	✓
Deschampsia cespitosa (Tufted Hair-grass)		✓
Elytrigia repens (Common Couch)	✓	
Epilobium hirsutum (Great Willowherb)		✓
Epilobium montanum (Broad-leaved Willowherb)	✓	✓
Equisetum arvense (Field Horsetail)	✓	
Equisetum palustre (Marsh Horsetail)		✓
Eupatorium cannabinum (Hemp-agrimony)		✓
Fallopia convolvulus (Black-bindweed)	✓	
Fallopia japonica (Japanese Knotweed)	✓	✓
Festuca rubra (Red Fescue)	✓	
Filipendula ulmaria (Meadowsweet)		✓
Fumaria muralis (Common Ramping-fumitory)	✓	
Galeopsis luteum (Yellow Archangel)		✓
Galium aparine (Cleavers)	✓	✓
Geranium dissectum (Cut-leaved Crane's-bill)	✓	
Geranium molle (Dove's-foot Crane's-bill)	✓	
Geranium robertianum (Herb-robert)	✓	✓
Geum urbanum (Wood Avens)	✓	✓
Glechoma hederacea (Ground-ivy)	✓	✓
Glyceria fluitans (Floating Sweet-grass)	✓	
Hedera helix agg. (Ivy)	✓	
Heracleum sphondylium (Hogweed)	✓	✓
Holcus lanatus (Yorkshire-fog)	✓	✓
Hordeum murinum (Wall Barley)	✓	
Hyacinthoides non-scripta (Bluebell)		✓
Hypericum perforatum (Perforate St. John's-wort)	✓	

Plant Species	Proposed Development Site	Glan yr Afon Wood
Hypochaeris radicata (Cat's-ear)	✓	
Impatiens glandulifera (Indian Balsam)	✓	✓
Iris pseudacorus (Yellow Iris)		✓
Juncus effusus (Soft-rush)		✓
Lamium album (White Dead-nettle)	✓	
Lamium purpureum (Red Dead-nettle)	✓	
Lapsana communis (Nipplewort)	✓	✓
Lemna minor (Common Duckweed)		✓
Lolium perenne (Perennial Rye-grass)	✓	✓
Matricaria discoidea (Pineappleweed)	✓	
Medicago lupulina (Black Medick)	✓	
Mentha arvensis (Corn Mint)		✓
Mercurialis perennis (Dog's Mercury)	✓	✓
Oenanthe crocata (Hemlock Water-dropwort)	✓	✓
Parthenocissus quinquefolia (Virginia Creeper)	✓	
Pentaglottis sempervirens (Green Alkanet)	✓	
Petasites hybridus (Butterbur)	✓	✓
Phalaris arundinacea (Reed Canary-grass)		✓
Phyllitis scolopendrium (Hart's-tongue)	✓	✓
Pilosella aurantiaca (Fox-and-cubs)	✓	
Pilosella officinarum (Mouse-ear-hawkweed)	✓	
Plantago lanceolata (Ribwort Plantain)	✓	
Plantago major (Greater Plantain)	✓	✓
Poa annua (Annual Meadow-grass)	✓	
Poa pratensis (Soft Meadow-grass)	✓	✓
Polygonum aviculare (Knotgrass)	✓	
Polypodium vulgare (Polypody)	✓	
Polystichum setiferum (Soft Shield-fern)	✓	✓
Potentilla reptans (Creeping Cinquefoil)	✓	
Primula vulgaris (Primrose)	✓	
Prunella vulgaris (Selfheal)	✓	
Pteridium aquilinum (Bracken)		✓
Ranunculus acris (Meadow Buttercup)	✓	✓
Ranunculus repens (Creeping Buttercup)	✓	✓
Rubus fruticosus agg. (Bramble)	✓	✓
Rumex acetosa (Common Sorrel)	✓	
Rumex crispus (Curled Dock)	✓	

Plant Species	Proposed Development Site	Glan yr Afon Wood
Rumex conglomeratus (Clustered Dock)	✓	
Rumex obtusifolius (Broad-leaved Dock)	✓	✓
Scrophularia auriculata (Water Figwort)		✓
Senecio jacobaea (Common Ragwort)	✓	✓
Senecio vulgaris (Groundsel)	✓	
Silene dioica (Red Campion)	✓	✓
Sisymbrium officinale (Hedge Mustard)	✓	
Solanum dulcamara (Bittersweet)	✓	✓
Sonchus arvensis (Perennial Sowthistle)	✓	
Stachys sylvatica (Hedge Woundwort)	✓	✓
Stellaria holostea (Greater Stitchwort)		✓
Stellaria media (Common Chickweed)	✓	
Tanacetum vulgare (Tansy)	✓	
Tamus communis (Black Bryony)	✓	✓
Taraxacum sect. *Ruderalia* (Common Dandelion)	✓	✓
Torilis japonica (Upright Hedge-parsley)	✓	
Trifolium dubium (Lesser Trefoil)	✓	
Trifolium repens (White Clover)	✓	✓
Tussilago farfara (Colt's-foot)	✓	
Urtica dioica (Common Nettle)	✓	✓
Veronica arvensis (Wall Speedwell)	✓	
Veronica beccabunga (Brooklime)		✓
Veronica chamaedrys (Germander Speedwell)	✓	
Veronica montana (Wood Speedwell)	✓	✓
Veronica serpyllifolia (Thyme-leaved Speedwell)	✓	
Vicia sativa (Common Vetch)	✓	✓
Vicia sepium (Bush Vetch)	✓	
Viola odorata (Sweet Violet)	✓	
Viola riviniana (Common Dog's-violet)	✓	✓

9 APPENDIX 1 - SPECIES-SPECIFIC LEGISLATION

9.1 Introduction

9.1.1 The species-specific legislation below is presented here due either to the actual or suspected/ possible presence of each species on the site or within the zone of influence and is therefore considered to be relevant for this study.

9.1.2 This sub-section provides a brief summary of key relevant species legislation. It should not be considered a comprehensive review and is not meant to be so. It is provided here for information only and is not intended to replace specialised legal advice. It does not replace the text of the legislation, but summarises the salient points.

9.2 Badger

9.2.1 The Badger is protected in Britain under the *Protection of Badgers Act 1992* and *Schedule 6* of the *Wildlife and Countryside Act 1981* (as amended). The legislation affords protection to Badger and Badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or attempt to do so;
- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

9.3 Bats

9.3.1 All species of British bat are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. They are also listed as European Protected Species on *Schedule 2* of *The Conservation of Habitats and Species Regulations 2017* which gives them full protection under *Regulation 42(1)*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the *CRoW Act 2000*).

9.3.2 Under the above legislation it is an offence to intentionally or recklessly:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

9.3.3 Several species of bat are included on *Section 7* of the *Environment Act 2016*.

9.3.4 All species of British bat are also protected under *Schedule 6* of the *Wildlife and Countryside Act 1981* (as amended). This protection relates specifically to trapping and direct pursuit of the species.

9.4 Otter

9.4.1 The Otter is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. The 1981 Act was amended by the *Countryside and Rights of Way Act 2000* (the CRoW Act) which further extends the protection. It is also listed on *Annexe IV* of the European Union Directive on Natural Habitats and Wild Fauna

and Flora (*Council Directive 92/43/EEC*), which is implemented in the UK by *The Conservation of Habitats and Species Regulations 2017*. It is included on *Schedule 2* of these regulations which gives it full protection under *Regulation 42(1)*. The Otter is therefore a so-called European Protected Species.

9.4.2 Under the above legislation it is an offence to intentionally or recklessly:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

9.4.3 The Otter is included on *Section 7* of the *Environment Act 2016*.

9.5 Water Vole

9.5.1 The Water Vole (*Arvicola amphibius*) is protected under *Section 9* of *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended). This protection was extended by the *CRoW Act 2000*. Under the above legislation it is an offence to:

- intentionally or recklessly damage, destroy or obstruct access to any structure or place that Water Voles use for shelter or protection;
- intentionally or recklessly disturb a Water Vole while it is using such a place;
- intentionally kill, injure or take any wild Water Vole;
- possess or control any live or dead wild Water Vole or any part of, or anything derived from, such an animal;
- sell, offer or expose for sale, or have in his possession or transports for the purpose of sale, any live or dead water vole, or any part of, or anything derived from, such an animal; or
- publish or cause 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.

9.5.2 The Water Vole is included on *Section 7* of the *Environment Act 2016*.

9.6 Reptiles

9.6.1 Viviparous Lizard, Grass Snake, Slow-worm and Adder are all listed under *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the *CRoW Act 2000*.

9.6.2 Under the above legislation it is an offence to:

- intentionally or recklessly kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.

9.6.3 All four of the above listed reptiles are included on *Section 7* of the *Environment Act 2016*.

9.7 Great Crested Newt

9.7.1 Great Crested Newts are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. The 1981 Act was amended by the *CRoW Act 2000* which further extends the protection. It is also listed on *Annexes II* and *IV* of

the European Union Directive on Natural Habitats and Wild Fauna and Flora (*Council Directive 92/43/EEC*), which is implemented in the UK by *The Conservation of Habitats and Species Regulations 2017*. It is included on *Schedule 2* of the Habitats Regulations which gives it full protection under *Regulation 42(1)*. The Great Crested Newt is therefore a so-called European Protected Species. The legislation applies to all life stages of the Great Crested Newt, including eggs, larvae, juveniles and adults.

9.7.2 Under the above legislation it is an offence to intentionally or recklessly:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

9.7.3 The Great Crested Newt is included on *Section 7* of the *Environment Act 2016*.

9.8 Birds

9.8.1 All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the *CRoW Act 2000*.

9.8.2 The legislation makes it an offence to intentionally or recklessly:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

9.8.3 Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4)* and *1(5)* of the Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.

9.8.4 *Section 7* of the *Environment Act 2016* includes several birds.

10 APPENDIX 2 – DATA SUPPLIED BY COFNOD (PUBLIC VERSION)

Cofnod Environmental Information Search (PUBLIC VERSION)

Our Reference	E07307
Your Reference	C399
Requested By	Marches Ecology
Data Users	Tom Knight, Partner, Marches Ecology Max Ellson, Partner, Marches Ecology Lucy Maddox, Project Manager, The National Trust Nick Wynne, Consultancy Manager Estates Wales, The National Trust
Search Date	01/05/2019
Expiry Date	01/11/2019
Search Type	Chargeable

Important Issues

- Use of the data is governed by Cofnod's Terms & Conditions.
- Data marked as confidential or sensitive must not be released into the public domain, with the exception of the Public Version of the PDF report, which has had sensitive information removed or restricted.
- You should not amend any part of the downloaded records.
- Unless otherwise agreed, use of the data is valid until the Expiry Date (01/11/2019).
- The data was generated on the Search Date (01/05/2019) and is not live.
- The Dataset ID associated with each record can be used to find information about the provenance of the data. Verification Levels are given for each record. Refer to individual LERCs for further metadata and policies relating to the data.
- Please contact us if you have any questions about using the data or wish to add further Data Users.

Notes

- Cofnod uses a search system which optionally reports species (usually high priority or protected species) within a specified search radius or buffer. Where required a search will also include high priority 'Mobile Species', such as bats, otters, amphibians and certain invertebrates, which lie outside the specified search radius. These species are highlighted on the report with **(Mobile)** next to the distance. They have been selected as 'Mobile Species' as their territory (possibly due to foraging activity or life cycle) could intersect with the search radius.
- Records with 4 figure grid references are displayed as 1km squares on any relevant maps. They are highlighted with (1km) next to the distance.
- Records shown in **bold** typeface are sensitive species records, and some details have been restricted in this public version of the report.

- PUBLIC VERSION -

Data Description

Distance	Indicates the distance, in metres, between the GRID REFERENCE of the record (using the central point of the grid square) and the search location. For any Sensitive Species Records, this cannot be released into the Public Domain.
Species Name	Name of the taxon (usually identified to species level) using the binomial system.
Grid Reference	Full grid reference based on the Ordnance Survey grid system. For any Sensitive Species Records, this cannot be released into the Public Domain.
Date	Date on which the record was made. In some cases this might be a date range, or a vague date such as 'Summer 2010'.
Recorder(s)	One or more people who made the original observation and recorded it in some way. It may have subsequently been included in a data collation by another person or it may have been submitted to Cofnod directly.
Abundance	Number of individuals recorded. Where not specified it is assumed that at least one was present.
Record Type	The recording methods used (only where specified).
Site Name	The site name (if one has been supplied). For any Sensitive Species Records, this cannot be released into the Public Domain.
Comments	Any additional notes about the sighting, including any information on habitat or substrate if this is available. For any Sensitive Species Records, this cannot be released into the Public Domain.
Dataset ID	ID of this dataset. See 'Important Issues' for more details.
Lists	Any local, national or international conservation statuses or legal protection which apply to this species and whether it is included in any Local Biodiversity Action Plans. See 'Abbreviations' for more details.
V	Summarised record Verification Level. The following codes are used: 1 - Unassessed, 2 - Unconfirmed, 3 - Considered Correct by Cofnod, 4 - Considered Correct by Expert. See our Data Quality policy, available from the Cofnod website for more details.

- PUBLIC VERSION -

Abbreviations

ANG - Anglesey County Council Local Biodiversity Action Plan, **AONB** - Area of Outstanding Natural Beauty, **AW** - Ancient Woodland, **BAP** - UK Biodiversity Action Plan, **BDir1** - EU Birds Directive Annexe 1, **BDir2.1** - EU Birds Directive Annexe 2.1, **BDir2.2** - EU Birds Directive Annexe 2.2, **Bern** - Bern Convention on the Conservation of European Wildlife and Natural Habitats, **Bonn** - Bonn Convention on the Conservation of Migratory Species of Wild Animals, **CITES** - Convention on International Trade in Endangered Species of Wild Fauna and Flora, **CON** - Conwy County Borough Council Local Biodiversity Action Plan, **DEN** - Denbighshire County Council Local Biodiversity Action Plan, **EPS** - European Protected Species, **FLI** - Flintshire County Council Local Biodiversity Action Plan, **GWY** - Gwynedd County Council Local Biodiversity Action Plan, **HDir** - EU Habitats Directive, **INNS** - Invasive Non-native Species, **LBAP** - Local Biodiversity Action Plan species for the listed area, **LI** - Locally Important within the listed area, **LNR** - Local Nature Reserve, **MNR** - Marine Nature Reserve, **NNR** - National Nature Reserve, **NRW** - Natural Resources Wales Priority Species, **PBA** - Protection of Badgers Act 1992, **RD1(UK)** - Red Data Book listing for the UK based on IUCN guidelines, **RD1(Wales)** - Red Data Book listiing for Wales based on IUCN guidelines, **RD2(UK)** - Red Data Book listing for the UK not based on IUCN guidelines, **RIGS** - Regionally Important Geodiversity Site, **S7** - Environment (Wales) Act 2016 (Section 7), **SAC** - Special Area of Conservation, **SNP** - Snowdonia National Park Local Biodiversity Action Plan, **SPA** - Special Protection Area, **SSSI** - Site of Special Scientific Interest, **UKBA** - RSPB UK Birds Amber List (not based on IUCN criteria), **UKBR** - RSPB UK Birds Red List (not based on IUCN criteria), **WBA** - RSPB Welsh Birds Amber List (not based on IUCN criteria), **WBR** - RSPB Welsh Birds Red List (not based on IUCN criteria), **WCA1.1** - Wildlife & Countryside Act 1981 Schedule 1.1 (Birds which are protected at all times), **WCA1.2** - Wildlife & Countryside Act 1981 Schedule 1.2 (Birds which are protected at certain times), **WCA5** - Wildlife & Countryside Act 1981 Schedule 5 (Animals which are protected from killing and taking, possession, disturbance and sale), **WCA8** - Wildlife & Countryside Act 1981 Schedule 8 (Plants which are protected), **WCA9** - Wildlife & Countryside Act 1981 Schedule 9 (Non-native animals and plants which are established in the wild), **WRE** - Wrexham County Council Local Biodiversity Action Plan, **WS** - Wildlife Site, **WVP** - IUCN Threat Listing of Welsh Vascular Plants

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Search Location	Grid Reference
Rhostyllen	SJ31674860

Birds

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ325485 *(GPS Reading)*	20/11/2017	Recorder Name Withheld	5		Wrexham	Woodland erddig	D1117/001/01	WBA	4
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ3248	6 records, between 10/12/2012 and 23/10/2016	Recorder Name Withheld	5; 14		Erddig estate	Group of 8 and 6	D1297/021/01, D0062/005/01	WBA	4
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ3149	3 records, between 10/12/2008 and 11/07/2009	Recorder Name Withheld	5; 3			Occurrence ID: NBN-GA000656-BGBW2009-16443853-106734647; H Activity	D1852/002/01, D0062/001/01	WBA	4
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ3048	04/07/2009	Recorder Name Withheld	3		Rhostyllen, W	H Activity	D0062/001/01	WBA	3
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ3249	8 records, between 24/01/2009 and 26/12/2016	Recorder Name Withheld	8; 4; 5; 7		Wrexham, Felin Puleston	Occurrence ID: NBN-GA000656-BGBW2009-16444227-106734764	D1297/021/01, D0062/001/01, D1852/002/01	WBA	4
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ3247	2 records, between 10/03/2016 and 21/08/2016	Recorder Name Withheld	2		Sontley lodge farm	Breeding status - pair in suitable nesting habitat	D1297/021/01	WBA	4
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ3049	3 records, between 10/12/2008 and 23/05/2009	Recorder Name Withheld	5			H Activity	D1779/001/01, D0062/001/01	WBA	3
Alauda arvensis (Skylark / Ehedydd)	SJ3048	2 records, between 2009 and 04/07/2009	Recorder Name Withheld	1			S Activity	D1779/001/01, D0062/001/01	BDir2.2, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Alcedo atthis (Kingfisher / Glas y Dorlan)	SJ3248	2 records, between 02/10/2016 and 23/10/2016	Recorder Name Withheld	1		Erddig hall		D1297/021/01	BDir1, Bern, UKBA, WBA, WCA1.1, LBAP[CON, DEN, FLI, GWY]	4
Anas platyrhynchos (Mallard / Hwyaden Wyllt)	SJ3248	16 records, between 18/02/2007 and 13/11/2016	Recorder Name Withheld	2; 8; 6; 1+		Wrexham, Erddig, Park	BirdTrack; Breeding status: Suitable habitat	D1297/005/01, D1297/012/01, D1297/021/01, D1297/002/01	BDir2.1, UKBA, WBA, LBAP[CON, GWY]	4
Anas platyrhynchos (Mallard / Hwyaden Wyllt)	SJ3247	2 records, between 27/06/2009 and 24/04/2016	Recorder Name Withheld	2		Wrexham, Erddig, Hafod Wood	H Activity	D0062/001/01, D1297/021/01	BDir2.1, UKBA, WBA, LBAP[CON, GWY]	3
Anthus pratensis (Meadow Pipit / Corhedydd y Waun)	SJ3149	10/12/2008	Recorder Name Withheld	2		Wrexham, Bersham, E		D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
Anthus pratensis (Meadow Pipit / Corhedydd y Waun)	SJ3048	10/12/2008	Recorder Name Withheld	2		Rhostyllen, W		D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
Apus apus (Swift / Gwennol Ddu)	SJ31454888	01/08/2014	Recorder Name Withheld	20			Estimated number of screaming swifts. Possible breeding. RecordID:50069	D1734/001/01	UKBA, WBA	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Apus apus (Swift / Gwennol Ddu)	SJ3148	27/06/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen	H Activity	D0062/001/01	UKBA, WBA	3
Apus apus (Swift / Gwennol Ddu)	SJ3248	4 records, between 10/08/2008 and 12/07/2016	Recorder Name Withheld	1+; 2		Wrexham, Erddig, Park	BirdTrack; Breeding status: Suitable habitat; Last sighting over house	D1297/005/01, D1297/012/01, D1297/021/01, D0062/001/01	UKBA, WBA	4
Apus apus (Swift / Gwennol Ddu)	SJ3149	23/05/2009	Recorder Name Withheld	3		Wrexham, Bersham, E	H Activity	D0062/001/01	UKBA, WBA	3
Apus apus (Swift / Gwennol Ddu)	SJ3147	27/06/2009	Recorder Name Withheld	20		Wrexham, Rhostyllen, S	H Activity	D0062/001/01	UKBA, WBA	3
Apus apus (Swift / Gwennol Ddu)	SJ3048	04/07/2009	Recorder Name Withheld	25		Rhostyllen, W	H Activity	D0062/001/01	UKBA, WBA	3
Apus apus (Swift / Gwennol Ddu)	SJ3249	7 records, between 24/04/2007 and 23/07/2016	Recorder Name Withheld	5; 6; 2; 3		Wrexham, Felin Puleston	H Activity	D0062/001/01, D1297/021/01, D0062/003/01	UKBA, WBA	3
Apus apus (Swift / Gwennol Ddu)	SJ3247	27/06/2009	Recorder Name Withheld	1		Wrexham, Erddig, Hafod Wood	H Activity	D0062/001/01	UKBA, WBA	3
Apus apus (Swift / Gwennol Ddu)	SJ3049	2 records, between 2009 and 23/05/2009	Recorder Name Withheld	2		Wrexham, Bersham Woods	H Activity	D0062/001/01, D1779/001/01	UKBA, WBA	3
Aythya fuligula (Tufted Duck / Hwyaden Gopog)	SJ3248	3 records, between 18/02/2007 and 06/03/2011	Recorder Name Withheld	2; 1; 15		Wrexham, Erddig, Park	BirdTrack	D1297/005/01, D0062/001/01, D1297/002/01	BDir2.1, WBA, LBAP[CON]	4
Branta canadensis (Canada Goose / Gwydd Canada)	SJ3248	2 records, between 22/05/2011 and 03/04/2016	Recorder Name Withheld	4		Erddig hall	BirdTrack	D1297/021/01, D1297/005/01	BDir2.1, INNS, WCA9	4
Chroicocephalus ridibundus (Black-headed Gull / Gwylan Benddu)	SJ3248	3 records, between 25/10/2013 and 12/07/2016	Recorder Name Withheld	30; 24		Erddig		D1297/012/01, D1297/021/01	BDir2.2, S7, UKBA, WBR, LBAP[GWY]	1
Chroicocephalus ridibundus (Black-headed Gull / Gwylan Benddu)	SJ3048	10/12/2008	Recorder Name Withheld	10		Rhostyllen, W		D0062/001/01	BDir2.2, S7, UKBA, WBR, LBAP[GWY]	3
Chroicocephalus ridibundus (Black-headed Gull / Gwylan Benddu)	SJ3249	4 records, between 10/12/2008 and 26/12/2016	Recorder Name Withheld	20; 2		Wrexham, Felin Puleston		D0062/001/01, D1297/021/01	BDir2.2, S7, UKBA, WBR, LBAP[GWY]	3
Cinclus cinclus (Dipper / Bronwen y Dwr)	SJ324483 *(Selected from Interactive Map)*	25/11/2014	Recorder Name Withheld	2 Adult		Erddig National Trust Estate		D1117/001/01	Bern, UKBA, WBA, LBAP[CON]	4
Cinclus cinclus (Dipper / Bronwen y Dwr)	SJ30944915 *(GPS Reading)*	18/10/2018	Recorder Name Withheld	1 Adult		Bersham	Dipper seen feeding up and down river	D1117/001/01	Bern, UKBA, WBA, LBAP[CON]	4
Cinclus cinclus (Dipper / Bronwen y Dwr)	SJ3248	12 records, between 03/01/2010 and 27/11/2016	Recorder Name Withheld	1; 2		Wrexham, Erddig, Park	Breeding status - pair in suitable nesting habitat	D0062/003/01, D1297/021/01	Bern, UKBA, WBA, LBAP[CON]	3
Cinclus cinclus (Dipper / Bronwen y Dwr)	SJ3149	10/12/2008	Recorder Name Withheld	1		Wrexham, Bersham, E		D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
Cinclus cinclus (Dipper / Bronwen y Dwr)	SJ3249	26/12/2010	Recorder Name Withheld	1		Wrexham, Felin Puleston		D0062/003/01	Bern, UKBA, WBA, LBAP[CON]	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Cinclus cinclus (Dipper / Bronwen y Dwr)	SJ3049	2 records, between 11/07/2009 and 16/04/2010	Recorder Name Withheld	1		Wrexham, Bersham Woods	H Activity; Breeding code: NE	D0062/001/01, D0062/003/01	Bern, UKBA, WBA, LBAP[CON]	3
Cinclus cinclus (Dipper / Bronwen y Dwr)	SJ3047	20/10/2004	Recorder Name Withheld	2		Wrexham, Pentrebychan	Singing	D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
Cuculus canorus (Cuckoo / Cog)	SJ3049	07/05/2013	Recorder Name Withheld	1		Wrexham, Bersham Woods	S Activity	D0062/005/01	S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3
Cygnus olor (Mute Swan / Alarch Dof)	SJ3248	7 records, between 10/09/1995 and 23/04/2016	Recorder Name Withheld	2; 5; 1; 4		Wrexham, Erddig, Park	BirdTrack; Breeding status: Occupied nest; Ringing records.	D1297/005/01, D1297/012/01, D0062/001/01, D1297/021/01, D1509/002/01	BDir2.2, UKBA, WBA, LBAP[CON]	4
Delichon urbicum (House Martin / Gwennol y Bondo)	SJ3248	4 records, between 01/06/2013 and 21/08/2016	Recorder Name Withheld	1; 20+		Erddig		D1297/012/01, D1297/021/01	Bern, UKBA, WBA, LBAP[CON]	4
Delichon urbicum (House Martin / Gwennol y Bondo)	SJ3149	04/07/2009	Recorder Name Withheld	15		Wrexham, Bersham, E	H Activity	D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
Delichon urbicum (House Martin / Gwennol y Bondo)	SJ3249	23/05/2009	Recorder Name Withheld	6		Wrexham, Felin Puleston	H Activity	D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
Delichon urbicum (House Martin / Gwennol y Bondo)	SJ3247	3 records, between 02/06/2010 and 21/08/2016	Recorder Name Withheld	4		Sontley lodge farm	Roving. Breeding code: N	D1297/021/01, D0062/003/01	Bern, UKBA, WBA, LBAP[CON]	4
Delichon urbicum (House Martin / Gwennol y Bondo)	SJ3049	04/07/2009	Recorder Name Withheld	1		Wrexham, Bersham Woods	H Activity	D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
Dendrocopos minor (Lesser Spotted Woodpecker / Cnocell Fraith Leiaf)	SJ3248	14/10/2013	Recorder Name Withheld	1 Female		Wrexham, Erddig, Park		D0062/005/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3
Dendrocopos minor (Lesser Spotted Woodpecker / Cnocell Fraith Leiaf)	SJ3048	2 records, both on 25/07/2010	Recorder Name Withheld	1; 3 Juvenile		Rhostyllen, W	Family, near suitable Alders	D0062/003/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3
Dendrocopos minor (Lesser Spotted Woodpecker / Cnocell Fraith Leiaf)	SJ3247	2 records, between 21/04/2006 and 28/04/2006	Recorder Name Withheld	1		Wrexham, Erddig, Hafod Wood		D0062/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3
Emberiza citrinella (Yellowhammer / Bras Melyn)	SJ3048	2 records, between 2009 and 04/06/2011	Recorder Name Withheld	1 Male				D1779/001/01, D0062/003/01	Bern, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Emberiza citrinella (Yellowhammer / Bras Melyn)	SJ3247	11/04/2009	Recorder Name Withheld	1 Male		Wrexham, Erddig, Hafod Wood	Singing, roving record	D0062/001/01	Bern, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Emberiza schoeniclus (Reed Bunting / Bras y Cyrs)	SJ3048	10/12/2008	Recorder Name Withheld	1		Rhostyllen, W		D0062/001/01	Bern, S7, UKBA, WBA, LBAP[CON, DEN, FLI, GWY]	3
Falco peregrinus **(Peregrine / Hebog Tramor)**	SJ34	**2 records, both on 12/08/2007**	**Recorder Name Withheld**	**1 Juvenile; 1 Adult**		**Site Name Withheld**	**Comments Withheld**	D0062/001/01	**BDir1, Bern, CITES, WCA1.1, LBAP[ANG, CON, GWY]**	**3**
Falco subbuteo **(Hobby / Hebog yr Ehedydd)**	SJ34 ***(Selected from Interactive Map)***	**12/06/2018**	**Recorder Name Withheld**	**1**	**Live Sighting**	**Site Name Withheld**	**Comments Withheld**	D1748/001/01	**Bern, CITES, WBA, WCA1.1, LBAP[CON, GWY]**	**4**
Falco subbuteo **(Hobby / Hebog yr Ehedydd)**	SJ34	**21/07/2014**	**Recorder Name Withheld**	**1**		**Site Name Withheld**	**Comments Withheld**	D0062/005/01	**Bern, CITES, WBA, WCA1.1, LBAP[CON, GWY]**	**3**
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ3148	2 records, between 09/07/2007 and 01/10/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen		D0062/001/01	Bern, CITES, S7, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ3248	26/12/2004	Recorder Name Withheld	1		Wrexham, Erddig, Park		D0062/001/01	Bern, CITES, S7, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ3149	2 records, between 10/12/2008 and 27/06/2009	Recorder Name Withheld	1 Female; 1 Juvenile		Wrexham, Bersham, E	FL Activity	D0062/001/01	Bern, CITES, S7, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ3048	14/02/2009	Recorder Name Withheld	1		Rhostyllen, W		D1297/002/01	Bern, CITES, S7, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	4
Hirundo rustica (Swallow / Gwennol)	SJ3148	27/06/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen	H Activity	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
Hirundo rustica (Swallow / Gwennol)	SJ3248	9 records, between 22/05/2011 and 07/08/2016	Recorder Name Withheld	1+; 7; 2		Wrexham, Erddig, Park	BirdTrack; Including adults going into suitable outbuildings at National Trust property. Breeding status: Suitable habitat	D1297/005/01, D1297/012/01, D1297/021/01	Bern, WBA, LBAP[ANG, CON, GWY]	4
Hirundo rustica (Swallow / Gwennol)	SJ3149	27/06/2009	Recorder Name Withheld	6		Wrexham, Bersham, E	H Activity	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
Hirundo rustica (Swallow / Gwennol)	SJ3048	2 records, between 2009 and 04/07/2009	Recorder Name Withheld	3			H Activity	D1779/001/01, D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
Hirundo rustica (Swallow / Gwennol)	SJ3249	27/06/2009	Recorder Name Withheld	1		Wrexham, Felin Puleston	H Activity	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
Hirundo rustica (Swallow / Gwennol)	SJ3247	4 records, between 27/06/2009 and 21/08/2016	Recorder Name Withheld	25; 1		Sontley lodge farm	Roving. Breeding code: N; H Activity	D1297/021/01, D0062/003/01, D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	4
Hirundo rustica (Swallow / Gwennol)	SJ3049	2 records, between 2009 and 23/05/2009	Recorder Name Withheld	1		Wrexham, Bersham Woods	H Activity	D0062/001/01, D1779/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
Larus argentatus (Herring Gull / Gwylan y Penwaig)	SJ3148	04/07/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen		D0062/001/01	BDir2.2, S7, UKBR, WBR, LBAP[CON, GWY]	3
Larus argentatus (Herring Gull / Gwylan y Penwaig)	SJ3248	5 records, between 07/05/2007 and 06/11/2016	Recorder Name Withheld	1		Wrexham, Erddig, Park		D0062/001/01, D1297/021/01	BDir2.2, S7, UKBR, WBR, LBAP[CON, GWY]	3
Larus argentatus (Herring Gull / Gwylan y Penwaig)	SJ3149	2 records, between 10/12/2008 and 23/05/2009	Recorder Name Withheld	1		Wrexham, Bersham, E		D0062/001/01	BDir2.2, S7, UKBR, WBR, LBAP[CON, GWY]	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Larus argentatus (Herring Gull / Gwylan y Penwaig)	SJ3147	27/06/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen, S		D0062/001/01	BDir2.2, S7, UKBR, WBR, LBAP[CON, GWY]	3
Larus argentatus (Herring Gull / Gwylan y Penwaig)	SJ3249	6 records, between 10/12/2008 and 20/11/2016	Recorder Name Withheld	3; 14; 4		Wrexham, Felin Puleston		D0062/001/01, D1297/021/01	BDir2.2, S7, UKBR, WBR, LBAP[CON, GWY]	3
Larus canus (Common Gull / Gwylan y Gweunydd)	SJ3149	24/01/2009 - 25/01/2009	Recorder Name Withheld				Occurrence ID: NBN-GA000656-BGBW2009-16443782-106179586	D1852/002/01	BDir2.2, UKBA, WBR	4
Larus canus (Common Gull / Gwylan y Gweunydd)	SJ3249	10/12/2008	Recorder Name Withheld	2		Wrexham, Felin Puleston		D0062/001/01	BDir2.2, UKBA, WBR	3
Larus fuscus (Lesser Black-backed Gull / Gwylan Gefnddu Leiaf)	SJ3148	04/07/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen		D0062/001/01	BDir2.2, UKBA, WBA, LBAP[CON, GWY, SNP]	3
Larus fuscus (Lesser Black-backed Gull / Gwylan Gefnddu Leiaf)	SJ3149	23/05/2009	Recorder Name Withheld	1		Wrexham, Bersham, E		D0062/001/01	BDir2.2, UKBA, WBA, LBAP[CON, GWY, SNP]	3
Larus fuscus (Lesser Black-backed Gull / Gwylan Gefnddu Leiaf)	SJ3048	04/07/2009	Recorder Name Withheld	2		Rhostyllen, W		D0062/001/01	BDir2.2, UKBA, WBA, LBAP[CON, GWY, SNP]	3
Larus fuscus (Lesser Black-backed Gull / Gwylan Gefnddu Leiaf)	SJ3249	2 records, between 11/07/2009 and 06/08/2016	Recorder Name Withheld	2; 1		Wrexham, Felin Puleston		D1297/021/01, D0062/001/01	BDir2.2, UKBA, WBA, LBAP[CON, GWY, SNP]	4
Linaria cannabina (Linnet / Llinos)	SJ3048	2009	Recorder Name Withheld					D1779/001/01	Bern, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3
Locustella naevia (Grasshopper Warbler / Troellwr Bach)	SJ3049	07/05/2013	Recorder Name Withheld	1		Wrexham, Bersham Woods	S Activity	D0062/005/01	S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3
Loxia curvirostra (Common Crossbill / Gylfingroes)	SJ3047	02/12/2005	Recorder Name Withheld	6		Wrexham, Pentrebychan		D0062/001/01	Bern, WCA1.1, LBAP[CON]	3
Muscicapa striata (Spotted Flycatcher / Gwybedog Mannog)	SJ324481 *(Selected from Interactive Map)*	06/06/2014	Recorder Name Withheld	1 Adult		Erddig		D1117/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4
Muscicapa striata (Spotted Flycatcher / Gwybedog Mannog)	SJ3248	27/06/2004	Recorder Name Withheld	1		Wrexham, Erddig, Park		D0062/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3
Passer domesticus (House Sparrow / Aderyn y To)	SJ3148	2 records, between 26/01/2008 and 27/06/2009	Recorder Name Withheld	20		Wrexham, Rhostyllen	H Activity; Occurrence ID: NBN-GA000567-BGBW2008-22135444-139320847	D0062/001/01, D1852/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
Passer domesticus (House Sparrow / Aderyn y To)	SJ3149	4 records, between 26/01/2008 and 11/07/2009	Recorder Name Withheld	20; 15		Wrexham, Bersham, E	H Activity; Occurrence ID: NBN-GA000567-BGBW2008-22135450-139468775; Occurrence ID: NBN-GA000656-BGBW2009-16443852-106609060	D0062/001/01, D1852/001/01, D1852/002/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Passer domesticus (House Sparrow / Aderyn y To)	SJ3048	2009	Recorder Name Withheld					D1779/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
Passer domesticus (House Sparrow / Aderyn y To)	SJ3249	4 records, between 26/01/2008 and 27/06/2009	Recorder Name Withheld	10		Wrexham, Felin Puleston	H Activity; Occurrence ID: NBN-GA000656-BGBW2009-16444227-106609269; Occurrence ID: NBN-GA000567-BGBW2008-22135474-139388039	D0062/001/01, D1852/002/01, D1852/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
Passer domesticus (House Sparrow / Aderyn y To)	SJ3247	24/04/2016	Recorder Name Withheld			Sontley lodge farm		D1297/021/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	4
Passer domesticus (House Sparrow / Aderyn y To)	SJ3049	2009	Recorder Name Withheld					D1779/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
Passer montanus (Tree Sparrow / Golfan y Mynydd)	SJ3047	16/05/2007	Recorder Name Withheld	1		Wrexham, Pentrebychan		D0062/001/01	S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3
Periparus ater (Coal Tit / Titw Penddu)	SJ3248	9 records, between 03/03/2007 and 13/11/2016	Recorder Name Withheld	1; 2; 4; 3		Erdigg National Trust estate	Breeding status: Singing male	D1297/012/01, D1297/021/01, D0062/001/01	Bern, WBA, LBAP[CON]	4
Periparus ater (Coal Tit / Titw Penddu)	SJ3149	04/07/2009	Recorder Name Withheld	1		Wrexham, Bersham, E	H Activity	D0062/001/01	Bern, WBA, LBAP[CON]	3
Periparus ater (Coal Tit / Titw Penddu)	SJ3249	6 records, between 27/06/2009 and 26/12/2016	Recorder Name Withheld	1; 3		Wrexham, Felin Puleston	H Activity	D0062/001/01, D1297/021/01, D0062/003/01	Bern, WBA, LBAP[CON]	3
Periparus ater (Coal Tit / Titw Penddu)	SJ3247	21/08/2016	Recorder Name Withheld			Sontley lodge farm		D1297/021/01	Bern, WBA, LBAP[CON]	4
Periparus ater (Coal Tit / Titw Penddu)	SJ3049	23/05/2009	Recorder Name Withheld	2		Wrexham, Bersham Woods	H Activity	D0062/001/01	Bern, WBA, LBAP[CON]	3
Phylloscopus trochilus (Willow Warbler / Telor yr Helyg)	SJ3048	2009	Recorder Name Withheld					D1779/001/01	UKBA, WBR, LBAP[CON]	3
Phylloscopus trochilus (Willow Warbler / Telor yr Helyg)	SJ3249	23/05/2009	Recorder Name Withheld	1		Wrexham, Felin Puleston	S Activity	D0062/001/01	UKBA, WBR, LBAP[CON]	3
Picus viridis (Green Woodpecker / Cnocell Werdd)	SJ3248	18 records, between 25/07/2007 and 17/07/2016	Recorder Name Withheld	1; 2		Erddig hall	Heard; 2 heard 1 of which seen; Seen	D1297/021/01, D0062/001/01	Bern, WBA, LBAP[CON, DEN, FLI, GWY, SNP]	4
Picus viridis (Green Woodpecker / Cnocell Werdd)	SJ3049	07/05/2013	Recorder Name Withheld	1		Wrexham, Bersham Woods	Calling.	D0062/005/01	Bern, WBA, LBAP[CON, DEN, FLI, GWY, SNP]	3
Poecile montana (Willow Tit / Titw'r Helyg)	SJ3248	07/04/2007	Recorder Name Withheld	1		Wrexham, Erddig, Park		D1297/002/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4
Poecile montana (Willow Tit / Titw'r Helyg)	SJ3249	2 records, between 29/03/2008 and 20/03/2009	Recorder Name Withheld	2		Wrexham, Felin Puleston	Visiting nest site in Alder tree, but not seen again; Calling	D0062/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4
Poecile montana (Willow Tit / Titw'r Helyg)	SJ3247	11/04/2006	Recorder Name Withheld	3		Wrexham, Erddig, Hafod Wood		D0062/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Poecile montana (Willow Tit / Titw'r Helyg)	SJ3049	11/07/2009	Recorder Name Withheld	2		Wrexham, Bersham Woods	A Activity	D0062/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4
Poecile palustris (Marsh Tit / Titw'r Wern)	SJ3248	14/06/2004	Recorder Name Withheld	2		Wrexham, Erddig, Park		D0062/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4
Poecile palustris (Marsh Tit / Titw'r Wern)	SJ3249	4 records, between 23/12/2007 and 24/12/2016	Recorder Name Withheld	1; 2		Wrexham, Felin Puleston	Calling	D0062/001/01, D1297/021/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4
Poecile palustris (Marsh Tit / Titw'r Wern)	SJ3247	4 records, between 14/02/2006 and 25/12/2007	Recorder Name Withheld	2; 1		Wrexham, Erddig, Hafod Wood		D0062/001/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ3148	27/06/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen	S Activity	D0062/001/01	Bern, S7, UKBA, LBAP[CON]	3
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ3248	4 records, between 07/04/2007 and 23/10/2016	Recorder Name Withheld	1; 2		Wrexham, Erddig, Park	Both singing. Breeding status: Singing male	D1297/002/01, D1297/012/01, D1297/021/01	Bern, S7, UKBA, LBAP[CON]	4
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ3149	2 records, between 10/12/2008 and 23/05/2009	Recorder Name Withheld	3; 1		Wrexham, Bersham, E	S Activity	D0062/001/01	Bern, S7, UKBA, LBAP[CON]	3
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ3147	27/06/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen, S	S Activity	D0062/001/01	Bern, S7, UKBA, LBAP[CON]	3
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ3048	2 records, between 10/12/2008 and 2009	Recorder Name Withheld	2				D1779/001/01, D0062/001/01	Bern, S7, UKBA, LBAP[CON]	3
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ3249	3 records, between 10/12/2008 and 20/11/2016	Recorder Name Withheld	1		Wrexham, Felin Puleston	S Activity	D0062/001/01, D1297/021/01	Bern, S7, UKBA, LBAP[CON]	3
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ3247	3 records, between 10/03/2016 and 21/08/2016	Recorder Name Withheld	1		Sontley lodge farm	Breeding status - in suitable nesting habitat	D1297/021/01	Bern, S7, UKBA, LBAP[CON]	4
Pyrrhula pyrrhula (Bullfinch / Coch y Berllan)	SJ3248	2 records, between 07/10/2004 and 23/04/2016	Recorder Name Withheld	2+		Wrexham, Erddig, Park		D0062/001/01, D1297/021/01	S7, UKBA, WBR, LBAP[CON, DEN, FLI, GWY]	3
Pyrrhula pyrrhula (Bullfinch / Coch y Berllan)	SJ3149	10/12/2008	Recorder Name Withheld	1		Wrexham, Bersham, E		D0062/001/01	S7, UKBA, WBR, LBAP[CON, DEN, FLI, GWY]	3
Pyrrhula pyrrhula (Bullfinch / Coch y Berllan)	SJ3048	04/07/2009	Recorder Name Withheld	2		Rhostyllen, W	H Activity	D0062/001/01	S7, UKBA, WBR, LBAP[CON, DEN, FLI, GWY]	3
Regulus regulus (Goldcrest / Dryw Eurben)	SJ3248	6 records, between 23/12/2007 and 13/11/2016	Recorder Name Withheld	1; 2; 7		Erdigg National Trust estate	Breeding status: Singing male	D1297/012/01, D0062/001/01, D1297/021/01	Bern, WBA, LBAP[CON]	4
Regulus regulus (Goldcrest / Dryw Eurben)	SJ3149	3 records, between 10/12/2008 and 04/07/2009	Recorder Name Withheld	1			Occurrence ID: NBN-GA000656-BGBW2009-16443782-106437676; H Activity	D1852/002/01, D0062/001/01	Bern, WBA, LBAP[CON]	4
Regulus regulus (Goldcrest / Dryw Eurben)	SJ3249	5 records, between 10/01/2016 and 26/12/2016	Recorder Name Withheld	1		Wrexham, Felin Puleston		D1297/021/01	Bern, WBA, LBAP[CON]	4
Regulus regulus (Goldcrest / Dryw Eurben)	SJ3247	25/12/2007	Recorder Name Withheld	4		Wrexham, Erddig, Hafod Wood		D0062/001/01	Bern, WBA, LBAP[CON]	3
Regulus regulus (Goldcrest / Dryw Eurben)	SJ3049	04/07/2009	Recorder Name Withheld	1		Wrexham, Bersham Woods	S Activity	D0062/001/01	Bern, WBA, LBAP[CON]	3
Riparia riparia (Sand Martin / Gwennol y Glennydd)	SJ3049	2009	Recorder Name Withheld					D1779/001/01	Bern, WBA, LBAP[CON, DEN, FLI, GWY]	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Scolopax rusticola (Woodcock / Cyffylog)	SJ3249	26/12/2010	Recorder Name Withheld	1		Wrexham, Felin Puleston		D0062/003/01	BDir2.1, UKBR, WBA, LBAP[CON, DEN, FLI, GWY]	3
Scolopax rusticola (Woodcock / Cyffylog)	SJ3247	15/02/2007	Recorder Name Withheld	1		Wrexham, Erddig, Hafod Wood		D0062/001/01	BDir2.1, UKBR, WBA, LBAP[CON, DEN, FLI, GWY]	3
Sturnus vulgaris (Starling / Drudwen)	SJ3248	20/01/2016	Recorder Name Withheld	200+		Wrexham Erddig, Park		D1297/021/01	BDir2.2, Bern, S7, UKBR, WBR, LBAP[CON, FLI, GWY]	4
Sturnus vulgaris (Starling / Drudwen)	SJ3149	2 records, between 26/01/2008 and 24/01/2009	Recorder Name Withheld			Wrexham, Denbighshire	Occurrence ID: NBN-GA000567-BGBW2008-22135769-139258767; Occurrence ID: NBN-GA000656-BGBW2009-16443852-106878494	D1852/001/01, D1852/002/01	BDir2.2, Bern, S7, UKBR, WBR, LBAP[CON, FLI, GWY]	4
Sturnus vulgaris (Starling / Drudwen)	SJ3249	5 records, between 26/01/2008 and 26/12/2016	Recorder Name Withheld	1; 2+		Wrexham, Felin Puleston	S Activity; Breeding code: FF; Occurrence ID: NBN-GA000656-BGBW2009-16444696-106878480; Occurrence ID: NBN-GA000567-BGBW2008-22135777-139432956	D0062/001/01, D0062/003/01, D1297/021/01, D1852/002/01, D1852/001/01	BDir2.2, Bern, S7, UKBR, WBR, LBAP[CON, FLI, GWY]	3
Sturnus vulgaris (Starling / Drudwen)	SJ3247	24/04/2016	Recorder Name Withheld			Sontley lodge farm		D1297/021/01	BDir2.2, Bern, S7, UKBR, WBR, LBAP[CON, FLI, GWY]	4
Sylvia borin (Garden Warbler / Telor yr Ardd)	SJ3248	3 records, between 23/05/2004 and 07/05/2008	Recorder Name Withheld	1		Wrexham, Erddig, Park	Singing; Singing and heard till at least the 13/5/08	D0062/001/01	WBA, LBAP[CON]	3
Sylvia borin (Garden Warbler / Telor yr Ardd)	SJ3247	27/06/2009	Recorder Name Withheld	1		Wrexham, Erddig, Hafod Wood	A Activity	D0062/001/01	WBA, LBAP[CON]	3
Sylvia communis (Whitethroat / Llwydfron)	SJ3147	3 records, all on 27/06/2009	Recorder Name Withheld	1 Female; 1 Male; 2+ Juvenile		Wrexham, Rhostyllen, S	FF Activity; FL Activity	D0062/001/01	WBA, LBAP[CON]	3
Sylvia communis (Whitethroat / Llwydfron)	SJ3048	04/07/2009	Recorder Name Withheld	1		Rhostyllen, W	S Activity	D0062/001/01	WBA, LBAP[CON]	3
Turdus iliacus (Redwing / Coch Dan Adain)	SJ3248	3 records, between 20/01/2016 and 27/11/2016	Recorder Name Withheld	200+; 40+; 20+		Wrexham Erddig, Park	Feeding on newly sprayed fields	D1297/021/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	4
Turdus iliacus (Redwing / Coch Dan Adain)	SJ3147	24/02/2010	Recorder Name Withheld	75+		Wrexham, Rhostyllen, S		D0062/003/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	3
Turdus iliacus (Redwing / Coch Dan Adain)	SJ3048	10/12/2008	Recorder Name Withheld	100		Rhostyllen, W		D0062/001/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	3
Turdus philomelos (Song Thrush / Bronfraith)	SJ3248	12 records, between 18/02/2007 and 27/11/2016	Recorder Name Withheld	1; 2; 3		Wrexham, Erddig, Park		D1297/002/01, D1297/021/01	BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	4
Turdus philomelos (Song Thrush / Bronfraith)	SJ3149	3 records, between 10/12/2008 and 27/06/2009	Recorder Name Withheld	1		Wrexham, Bersham, E	S Activity; Occurrence ID: NBN-GA000656-BGBW2009-16443782-106817305	D0062/001/01, D1852/002/01	BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
Turdus philomelos (Song Thrush / Bronfraith)	SJ3147	27/06/2009	Recorder Name Withheld	1		Wrexham, Rhostyllen, S	H Activity	D0062/001/01	BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Turdus philomelos (Song Thrush / Bronfraith)	SJ3048	3 records, between 10/12/2008 and 04/07/2009	Recorder Name Withheld	1			S Activity	D1779/001/01, D0062/001/01	BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
Turdus philomelos (Song Thrush / Bronfraith)	SJ3249	4 records, between 24/01/2009 and 23/07/2016	Recorder Name Withheld	1		Wrexham, Felin Puleston	S Activity; Occurrence ID: NBN-GA000656-BGBW2009-16444227-106817477	D0062/001/01, D1297/021/01, D1852/002/01	BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
Turdus philomelos (Song Thrush / Bronfraith)	SJ3049	2 records, between 2009 and 23/05/2009	Recorder Name Withheld	1		Wrexham, Bersham Woods	S Activity	D0062/001/01, D1779/001/01	BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
Turdus pilaris (Fieldfare / Socan Eira)	SJ3248	2 records, between 14/10/2013 and 20/01/2016	Recorder Name Withheld	200+; 20+		Wrexham Erddig, Park	Feeding on newly sprayed fields	D1297/021/01, D0062/005/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	4
Turdus pilaris (Fieldfare / Socan Eira)	SJ3149	10/12/2008	Recorder Name Withheld	1		Wrexham, Bersham, E		D0062/001/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	3
Turdus pilaris (Fieldfare / Socan Eira)	SJ3048	10/12/2008	Recorder Name Withheld	3		Rhostyllen, W		D0062/001/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	3
Tyto alba **(Barn Owl / Tylluan Wen)**	SJ34	**06/07/2010**	**Recorder Name Withheld**	**2 Juvenile**		**Site Name Withheld**	**Comments Withheld**	D0062/003/01	**Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]**	**3**
Tyto alba **(Barn Owl / Tylluan Wen)**	SJ34	**12/12/2014**	**Recorder Name Withheld**	**1**		**Site Name Withheld**	**Comments Withheld**	D0062/005/01	**Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]**	**3**
Tyto alba **(Barn Owl / Tylluan Wen)**	SJ34	**01/07/2008**	**Recorder Name Withheld**	**1**		**Site Name Withheld**	**Comments Withheld**	D0062/001/01	**Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]**	**3**
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ3148	28/02/2006	Recorder Name Withheld	90		Wrexham, Rhostyllen	Moving S, after snowfall	D0062/001/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ3149	24/01/2009 - 25/01/2009	Recorder Name Withheld				Occurrence ID: NBN-GA000656-BGBW2009-16443782-106608988	D1852/002/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	4
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ3048	4 records, between 08/02/2007 and 11/07/2009	Recorder Name Withheld	1; 3			T Activity	D1779/001/01, D0062/001/01, D1297/002/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ3049	2009	Recorder Name Withheld					D1779/001/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ3047	2 records, between 29/12/2007 and 23/02/2010	Recorder Name Withheld	80; 2000		Wrexham, Pentrebychan		D0062/003/01, D0062/001/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3

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Butterflies and Moths										
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Lasiommata megera (Wall / Gweirlöyn y Cloddiau)	SJ	23/07/2014	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D1643/001/01	RD1(UK)NT, S7, LBAP[GWY]	3
Satyrium w-album (White-letter Hairstreak / Brithribin W Wen)	SJ34	1976	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D1161/001/01	RD1(UK)EN, S7, WCA5, LBAP[FLI]	3
Satyrium w-album (White-letter Hairstreak / Brithribin W Wen)	SJ3247	1976	Recorder Name Withheld	6		Site Name Withheld	Comments Withheld	D0217/001/03	RD1(UK)EN, S7, WCA5, LBAP[FLI]	3
Spilosoma lutea (Buff Ermine)	SJ32614826 *(Selected from Interactive Map)*	2 records, between 16/07/2014 and 23/07/2014	Recorder Name Withheld	1 Adult		Erddig National trust, Gardens	Moth Trap record	D1117/001/01	S7, LBAP[GWY]	4
Timandra comae (Blood-vein / Gwyfyn Gwythïen Goch)	SJ31304887	03/07/2006	Recorder Name Withheld	1		Poplar Road, Rhostyllen	Single individual settled on emergent pond plants	D1117/001/01	S7	4

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Fungi, Lichen and Slime Moulds									
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Hericium erinaceus (Bearded Tooth)	SJ3248 *(Estimated (Centroid of Site))*	12/10/2003	Recorder Name Withheld			Erddig Park	Association: Fagus. Ecosystem: woodland. Substratum: rotten trunk	D1728/003/01	S7, WCA8	3
Xanthoria polycarpa	SJ325486	12/02/1996	Recorder Name Withheld	Rare		Erddig	Rare to occasional. Substrate: Corticolous	D1577/001/02	RD1(Wales)LC, S7	3
Xanthoria ucrainica	SJ322481	12/02/1996	Recorder Name Withheld			Erddig	On tree bases, once on a branch. Substrate: Corticolous	D1577/001/02	RD2(UK)S	3

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Mammals									
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Arvicola amphibius (Water Vole / Llygoden Bengron y Dwr)	SJ32474800	1981	Recorder Name Withheld			River Clwedog		D1118/013/01	S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	1
***Chiroptera* (Unknown Bat / Ystlum Anhysbys)**	SJ3148	**08/07/1983**	**Recorder Name Withheld**	**5-8**		**Site Name Withheld**	**Comments Withheld**	D1486/001/01	**EPS, S7, WCA5, LBAP[ANG, DEN, FLI, SNP]**	**3**
***Chiroptera* (Unknown Bat / Ystlum Anhysbys)**	SJ3148	**03/07/1986**	**Recorder Name Withheld**			**Site Name Withheld**	**Comments Withheld**	D1486/001/01	**EPS, S7, WCA5, LBAP[ANG, DEN, FLI, SNP]**	**3**
***Chiroptera* (Unknown Bat / Ystlum Anhysbys)**	SJ3248	**2 records, between 31/05/1996 and 28/07/1999**	**Recorder Name Withheld**			**Site Name Withheld**	**Comments Withheld**	D1486/001/01	**EPS, S7, WCA5, LBAP[ANG, DEN, FLI, SNP]**	**3**
Erinaceus europaeus (Hedgehog / Draenog)	SJ314490	2 records, between 01/06/2013 and 2014	Recorder Name Withheld	3	Live Sighting			D1596/001/02, D1574/001/03	Bern, S7, LBAP[ANG, CON, FLI, GWY]	3
Erinaceus europaeus (Hedgehog / Draenog)	SJ31484907	01/06/2013	Recorder Name Withheld					D1638/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	3
Erinaceus europaeus (Hedgehog / Draenog)	SJ310490	2018	Recorder Name Withheld		Live Sighting			D1688/002/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	3
Erinaceus europaeus (Hedgehog / Draenog)	SJ309490 *(Selected from Interactive Map)*	03/09/2014	Recorder Name Withheld	1 Adult	Dead on road	A483	Habitat: Roadside	D1383/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	4
Erinaceus europaeus (Hedgehog / Draenog)	SJ3148	3 records, between 30/09/2012 and 13/08/2013	Recorder Name Withheld			Rhostyllen	Brought into Wrexham hedgehog rescue centre.; baby brought in to Wrexham HH rescue.	D1638/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	3
Erinaceus europaeus (Hedgehog / Draenog)	SJ3048 *(Selected from Interactive Map)*	26/05/2012	Recorder Name Withheld	2	Dead on road	A483 Rhostyllen Junction	2 hedgehogs dead on road a 100m or so apart S bound.	D1383/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	4
Lepus europaeus (Hare / Ysgyfarnog)	SJ322478	25/01/2005	Recorder Name Withheld	1		Wrexham	Alive. Seen regularly = No. Pasture	D0108/001/03	S7, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	4
***Lutra lutra* (Otter / Dyfrgi)**	SJ3148 ***(Selected from Interactive Map)***	**August 2009**	**Recorder Name Withheld**	**1 Droppings**		**Site Name Withheld**	**Comments Withheld**	D1117/001/01	**Bern, CITES, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]**	**4**
***Lutra lutra* (Otter / Dyfrgi)**	SJ3249 ***(Selected from Interactive Map)***	**09/07/2013**	**Recorder Name Withheld**	**1 Droppings**	**Dung/Droppings/ Frass/Pellet, etc.**	**Site Name Withheld**	**Comments Withheld**	D1331/004/01	**Bern, CITES, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]**	**4**
***Meles meles* (Badger / Mochyn Daear)**	SJ3148	**10/04/1998**	**Recorder Name Withheld**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/02	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**3**
***Meles meles* (Badger / Mochyn Daear)**	SJ3248	**21/04/2010**	**Recorder Name Withheld**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/02	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**3**
***Meles meles* (Badger / Mochyn Daear)**	SJ3148	**10/04/1998**	**Recorder Name Withheld**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/02	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**3**
***Meles meles* (Badger / Mochyn Daear)**	SJ3148	**21/02/1998**	**Recorder Name Withheld**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/02	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**3**
***Meles meles* (Badger / Mochyn Daear)**	SJ3248	**28/12/2002**	**Recorder Name Withheld**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/02	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**3**

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Meles meles **(Badger / Mochyn Daear)**	SJ3248	**2 records, both on 28/12/2002**	**Recorder Name Withheld**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/02	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**3**
Meles meles **(Badger / Mochyn Daear)**	SJ3248	**21/04/2010**	**Recorder Name Withheld**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/02	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**3**
Meles meles **(Badger / Mochyn Daear)**	SJ3048 ***(Selected from Interactive Map)***	**17/09/2018**	**Recorder Name Withheld**	**1 Sub-adult**	**Dead on road**	**Site Name Withheld**	**Comments Withheld**	D1117/001/01	**Bern, PBA, LBAP[CON, DEN, FLI, WRE]**	**4**
Mustela putorius (Polecat / Ffwlbart)	SJ325483	12/12/2015	Recorder Name Withheld		Live Sighting	Wrexham	Ran into a hole. Classification: Unverified	D1544/002/01	Bern, HDir, RD2(UK), S7, LBAP[CON, FLI, GWY, SNP]	1
Mustela putorius (Polecat / Ffwlbart)	SJ312476	2 records, both on 19/04/2014	Recorder Name Withheld	1 Adult Male	Dead on road	Rhostyllen	A large male. Photo seen on Cofnod but not saved. Classification: True polecat; Carcass being sent to Vincent Trust.	D1544/002/01, D1544/001/01	Bern, HDir, RD2(UK), S7, LBAP[CON, FLI, GWY, SNP]	1
Mustela putorius (Polecat / Ffwlbart)	SJ3149	2012	Recorder Name Withheld	1	Dead on road	At side of A483 between A525 and A5152 turn-offs	Seen whilst driving past. Dark brown fur with paler area under chin. Larger than stoat, more like size of ferret.	D1117/001/01	Bern, HDir, RD2(UK), S7, LBAP[CON, FLI, GWY, SNP]	4
Mustela putorius (Polecat / Ffwlbart)	SJ3048	June 1975	Recorder Name Withheld			Rhostyllen		D1072/001/02	Bern, HDir, RD2(UK), S7, LBAP[CON, FLI, GWY, SNP]	3
Neovison vison (American Mink / Minc)	SJ3047	08/07/2015	Recorder Name Withheld	1		Pentre Bychan, Johnstown	In stream	D0967/009/01	INNS, WCA9	1
Pipistrellus pipistrellus **(Common Pipistrelle / Ystlum Lleiaf Cyffredin)**	SJ3148	**26/06/1989**	**Recorder Name Withheld**			**Site Name Withheld**	**Comments Withheld**	D1486/001/01	**Bern, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]**	**3**
Pipistrellus pipistrellus **(Common Pipistrelle / Ystlum Lleiaf Cyffredin)**	SJ3148	**20/07/1988**	**Recorder Name Withheld**			**Site Name Withheld**	**Comments Withheld**	D1486/001/01	**Bern, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]**	**3**
Pipistrellus pipistrellus agg. **(Pipistrelle agg. / Ystlum Lleiaf)**	SJ3248	1987	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D1072/001/02	Bern, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Plecotus **(Long-eared Bat Species)**	SJ3149	21/08/1987	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D1072/001/02	Bern, EPS, HDir, S7, WCA5, LBAP[ANG, DEN, FLI, SNP]	3
Plecotus **(Long-eared Bat Species)**	SJ3248	1987	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D1072/001/02	Bern, EPS, HDir, S7, WCA5, LBAP[ANG, DEN, FLI, SNP]	3
Plecotus **(Long-eared Bat Species)**	SJ3149	1987	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D1072/001/02	Bern, EPS, HDir, S7, WCA5, LBAP[ANG, DEN, FLI, SNP]	3
Plecotus auritus **(Brown Long-eared Bat / Ystlum Hirglust)**	SJ3149	21/08/1987	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D1486/001/01	Bern, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Plecotus auritus **(Brown Long-eared Bat / Ystlum Hirglust)**	SJ3147	01/08/1989	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D1486/001/01	Bern, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3

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Other Invertebrates									
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Chalcosyrphus eunotus	SJ326486	2 records, between 22/05/1992 and 27/04/1993	Recorder Name Withheld	1 Male		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)S	3
Ctesias serra (Cobweb Beetle)	SJ326482	23/06/1993	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Ctesias serra (Cobweb Beetle)	SJ3248	14/07/1994 - 04/08/1994	Recorder Name Withheld	larva		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Ctesias serra (Cobweb Beetle)	SJ3247	26/04/1994	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Dicraeus raptus	SJ326486	26/07/1976	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)N	3
Dorcatoma flavicornis	SJ3248	14/07/1994 - 04/08/1994	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Eledona agricola	SJ3248	14/07/1994 - 04/08/1994	Recorder Name Withheld	Dead		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Elodes minuta	SJ326486	30/07/1980	Recorder Name Withheld	2		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)S	3
Ernoporicus fagi	SJ3247	26/04/1994	Recorder Name Withheld	1 Adult		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NA	3
Geophilus osquidatum	SJ3248	09/04/2010	Recorder Name Withheld			Erdigg Greenhouse NT	Method: Casual/turnover	D1743/001/01	RD2(UK)S	3
Harmonia axyridis (Harlequin Ladybird)	SJ3260248894	18/10/2014	Recorder Name Withheld	468 Adult		Erddig Isaf	Minimum qty - Mixed colonies in house. House and Garden within National Trust Park (decidous woods and pasture) and Farmland (grazing by sheep occasionally cattle occasional arable).	D1638/001/01	INNS	3
Harmonia axyridis (Harlequin Ladybird)	SJ326483 *(Supplied by Original Recorder)*	10/09/2015	Recorder Name Withheld	1		Erddig Hall and Park	Long Herbaceous Border	D1652/001/01	INNS	1
Harmonia axyridis (Harlequin Ladybird)	SJ3049	09/11/2009	Recorder Name Withheld	c10 Adult		Bersham, Wrexham	Habitat: Outdoors on building	D1097/002/02	INNS	3
Ischnomera sanguinicollis	SJ324480	17/05/2011	Recorder Name Withheld	1 Adult		Below Erddig Hall	Habitat: Woodland A1. Method: Beating tray	D1650/002/01	RD2(UK)NB, RD2(UK)S	1
Lipsothrix nervosa (Southern Yellow Splinter)	SJ3247	4 records, between 30/07/1980 and 24/05/1994	Recorder Name Withheld	1; 1 Male		Hafod Wood	Occurrence ID: 128357; Near stream. Occurrence ID: 45910; Occurrence ID: 121134	D1078/001/02, D0217/001/03	S7	3
Malthinus frontalis	SJ326482	2 records, both on 23/06/1993	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03, D1084/001/02	RD2(UK)S	3
Megatoma undata	SJ3248	14/07/1994 - 04/08/1994	Recorder Name Withheld	larva		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Mycetophagus piceus	SJ3248	14/07/1994 - 04/08/1994	Recorder Name Withheld	Dead		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Oulimnius troglodytes	SJ309492	1975 - 1979	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)S	3
Parhelophilus consimilis	SJ324480	16/05/1998	Recorder Name Withheld	2 Female		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)S	3
Planaria torva	SJ309492	1975 - 1979	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	INNS	3
Platycheirus discimanus	SJ326486	14/04/1993	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)N, RD2(UK)S	3
Prionychus ater	SJ326482	23/06/1993	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Prionychus ater	SJ3248	2 records, both on 14/07/1994	Recorder Name Withheld	Dead; larva		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Ptinomorphus imperialis (Hedobia imperialis)	SJ3247	22/05/1977	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3

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Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Pyrochroa coccinea (Black-headed Cardinal Beetle)	SJ324480	16/05/1998	Recorder Name Withheld	20 Adult		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Pyrochroa coccinea (Black-headed Cardinal Beetle)	SJ3248	14/07/1994 - 04/08/1994	Recorder Name Withheld	larva		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Pyrochroa coccinea (Black-headed Cardinal Beetle)	SJ3247	1976	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Quedius truncicola	SJ326482	23/06/1993	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NB	3
Scenopinus niger (Forest Windowfly)	SJ326486	24/06/1993	Recorder Name Withheld	1 Adult		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)N	3
Tetratoma desmarestii	SJ326482	23/06/1993	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)NA, RD2(UK)S	3
Vanoyia tenuicornis (Long-horned Soldier)	SJ326486	2 records, both on 24/06/1993	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)N	3
Vanoyia tenuicornis (Long-horned Soldier)	SJ326482	23/06/1993	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)N	3
Xylota xanthocnema	SJ326486	2 records, between 15/06/1992 and 15/06/1993	Recorder Name Withheld	1; 1 Male		Site Name Withheld	Comments Withheld	D0217/001/03	RD2(UK)N, RD2(UK)S	3

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Plants										
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
Cardamine bulbifera (Coralroot / Deintwraidd)	SJ3049	15/05/1962	Recorder Name Withheld			Bersham	Bersham wood	D1169/004/02	RD2(UK)S	3
Cicuta virosa (Cowbane / Buladd)	SJ3248	2 records, both in 1989	Recorder Name Withheld			Erddig Country Park	Erddig.	D1169/004/02, D0216/001/03	RD2(UK)S, LBAP[CON, FLI], LI[VC51]	3
Cotoneaster horizontalis (Wall Cotoneaster / Cotoneaster Asgwrn Pysgodyn)	SJ3249	22/10/2016	Recorder Name Withheld			Rhostyllen		D1169/004/02	INNS, WCA9	3
Euphorbia amygdaloides (Wood Spurge / Llaethlys y Coed)	SJ322477	28/06/2006	Recorder Name Withheld			Plas Grono	Hafod Wood N end. Planted?	D1169/004/02	LI[VC50, VC51]	3
Glebionis segetum (Corn Marigold / Melyn yr Yd)	SJ3249	1988	Recorder Name Withheld			Rhostyllen	1st for 10 km sq	D1169/004/02	RD1(UK)VU, LBAP[GWY], LI[VC48, VC49, VC50, VC52]	3
Hyacinthoides non-scripta (Bluebell / Clychau'r Gog)	SJ3049	03/04/2015	Recorder Name Withheld			Bersham		D1169/004/02	WCA8, LBAP[ANG, CON, FLI, SNP]	3
Impatiens glandulifera (Himalayan Balsam / Jac y Neidiwr)	SJ312491	10/10/2012 approx	Recorder Name Withheld			River Clywedog		D1330/001/01	INNS, WCA9	4
Impatiens glandulifera (Himalayan Balsam / Jac y Neidiwr)	SJ325483	05/09/2014	Recorder Name Withheld			Erddig Country Park	Hall & Gardens	D1169/004/02	INNS, WCA9	3
Impatiens glandulifera (Himalayan Balsam / Jac y Neidiwr)	SJ3249	22/10/2016	Recorder Name Withheld			Rhostyllen		D1169/004/02	INNS, WCA9	3
Meconopsis cambrica (Welsh Poppy / Pabi Cymreig)	SJ3249	22/10/2016	Recorder Name Withheld			Rhostyllen		D1169/004/02	RD2(UK)S, LBAP[CON, DEN], LI[VC48, VC49]	3
Narcissus pseudonarcissus (Daffodil)	SJ3049	07/04/2012	Recorder Name Withheld			Bersham		D1169/004/02	LI[VC50]	3
Prunus laurocerasus (Cherry Laurel / Coeden Lawrgeirios)	SJ3049	07/04/2012	Recorder Name Withheld			Bersham		D1169/004/02	INNS	3
Ranunculus lingua (Greater Spearwort / Llafnlys Mawr)	SJ3247	21/07/2005	Recorder Name Withheld			Plas Grono	SJ321465 approx. Middle Sontley fish-pools	D1169/004/02	LI[VC48, VC50, VC51]	3
Rhododendron ponticum	SJ325483	13/08/2014	Recorder Name Withheld			Erddig Country Park	Hall & Gardens	D1169/004/02	INNS, WCA9	3
Rhododendron ponticum	SJ3049	2 records, between 07/04/2012 and 03/04/2015	Recorder Name Withheld			Bersham		D1169/004/02	INNS, WCA9	3

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Reptiles and Amphibians									
Species Name	**Grid Reference**	**Date**	**Recorder(s)**	**Abundance**	**Record Type**	**Site Name**	**Comments**	**Dataset ID**	**Lists**	**V**
Bufo bufo (Common Toad / Llyffant Dafadennog)	SJ321486 *(Estimated (Centroid of Site))*	08/04/2002	Recorder Name Withheld	+		Erddig	Torch survey	D0026/279/01	Bern, S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY]	4
Natrix helvetica (Grass Snake / Neidr y Gwair)	SJ324492	22/05/1995	Recorder Name Withheld			Felin Puleston		D0035/002/01	Bern, S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	4
Natrix helvetica (Grass Snake / Neidr y Gwair)	SJ321476	22/06/1996	Recorder Name Withheld			Hafod Wood, small lake		D0035/002/01	Bern, S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	4
Natrix helvetica (Grass Snake / Neidr y Gwair)	SJ3048	2 records, both in 1942	Recorder Name Withheld			Bersham, nr Wrexham		D1076/001/02, D0035/002/01	Bern, S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
Rana temporaria (Common Frog / Llyffant Melyn)	SJ31304887	2 records, between 19/07/2006 and 25/07/2006	Recorder Name Withheld	5		Poplar Road, Rhostyllen	5 individuals seen in garden pond; This years froglets in garden pond	D1117/001/01	Bern, HDir, WCA5, LBAP[ANG, CON, FLI]	4
Rana temporaria (Common Frog / Llyffant Melyn)	SJ3248	1966	Recorder Name Withheld			Wrexham, Erddig Park		D1076/001/02	Bern, HDir, WCA5, LBAP[ANG, CON, FLI]	3
Vipera berus (Adder / Gwiber)	SJ324492	2 records, between 1992 and 2011	Recorder Name Withheld			Felin Puleston	Bitten on leg after treading on snake close to Woodland Cottage; Bitten on arm in garden of Woodland Cottage (NT). Hospitalised for treatment.	D0035/002/01	Bern, S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	4

Statutory Sites returned by search	None
Wildlife Sites intersecting 1000m buffer	W317: Erddig Estate (774m)
Ancient Monuments intersecting 1000m buffer	DE199: Bersham Colliery: No 2 Winding Gear (482m), DE152: Wat's Dyke: Section extending from Erddig Park to Middle Sontley (874m), DE017: Erddig Mound & Bailey Castle (938m)
Ancient Woodland sites (if searched)	33396: Ancient Semi Natural Woodland (173m), 33410: Ancient Semi Natural Woodland (546m), 33409: Ancient Semi Natural Woodland (557m), 33411: Ancient Semi Natural Woodland (797m), 37165: Restored Ancient Woodland Site (831m), 37163: Restored Ancient Woodland Site (866m), 30637: Restored Ancient Woodland Site (912m), 33393: Ancient Semi Natural Woodland (953m), 37161: Restored Ancient Woodland Site (985m)
Phase I Habitats intersecting 1000m buffer (Habitat at central point shown in red, if found)	**A.1.1.1:** Semi-natural Broad-leaved Woodland (3.63% / 114,163 sq.m), **A.1.1.2:** Planted Broad-leaved Woodland (0.48% / 15,058 sq.m), **A.1.2.2:** Planted Coniferous Woodland (0.17% / 5,383 sq.m), **A.1.3.2:** Planted Mixed Woodland (0.62% / 19,576 sq.m), **A.2.1:** Dense Scrub (0.37% / 11,764 sq.m), **B.2.2:** Semi-improved Neutral Grassland (0.86% / 27,140 sq.m), **B.4:** Improved Grassland (41.64% / 1,308,154 sq.m), **C.3.1:** Tall Ruderal Herb (0.66% / 20,887 sq.m), **F.1:** Swamp (0.11% / 3,307 sq.m), **G.1:** Standing Water (0.07% / 2,104 sq.m), **G.2:** Running Water (0.41% / 12,734 sq.m), **I.2.2:** Spoil (4.11% / 129,092 sq.m), **J.1.1:** Arable (15.68% / 492,674 sq.m), **J.1.2:** Amenity Grassland (1.21% / 38,120 sq.m), **J.1.3:** Ephemeral/Short Perennial (1.06% / 33,315 sq.m), **J.1.5:** Gardens (0.13% / 4,146 sq.m), **J.3.6:** Buildings (18.3% / 574,892 sq.m), **J.3.7:** Track (0.05% / 1,486 sq.m), **NA:** Not Accessed Land (0.38% / 12,042 sq.m)

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North





Approximate development site survey boundary

Approximate Glan Yr Afon Wood survey boundary

C399 Proposed Residential Housing Development, Manor Farm, Rhostyllen, Wrexham - Preliminary Ecological Appraisal

***Figure 1* - Location Plan & Survey Site Boundaries**

Date: 08/07/2019

marches ecology

www.marchesecology.co.uk

Base mapping supplied by The National Trust. Inset Location Plan: Contains Ordnance Survey data © Crown copyright and database right [2019].

North

10 m 0 60 m
1: 1,250

Dense/ continuous scrub
Hedgerow
Individual broad-leaved tree
Individual coniferous tree
Scattered scrub
Improved grassland
A Amenity grassland
Tall ruderal
Scattered introduced shrub
[with arrow] Running water
Standing water
Building
Hard-standing/ bare ground
Fence
Wall
Badger path
Target Note

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***Figure 2* - Extended Phase 1 Habitat Survey (Sheet 1 of 3 - Development Site)**

Date: 08/07/2019

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Base mapping supplied by The National Trust.

North

10 m 0 60 m
1: 1,250

Dense/ continuous scrub
Hedgerow
Individual broad-leaved tree
Individual coniferous tree
Scattered scrub
Improved grassland
A Amenity grassland
Tall ruderal
Scattered introduced shrub
[with arrow] Running water
Standing water
Building
Hard-standing/ bare ground
Fence
Wall
Badger path
Target Note

C399 Proposed Residential Housing Development, Manor Farm, Rhostyllen, Wrexham - Preliminary Ecological Appraisal

***Figure 2* - Extended Phase 1 Habitat Survey (Sheet 2 of 3 - Development Site)**

Date: 08/07/2019

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Base mapping supplied by The National Trust.

North

26

27

21

22a

22

A

I

25

26

23

24

Path (unfit)

200.0

Drain

25 m 0 50 m

1: 1,300

Base mapping supplied by The National Trust.

Broad-leaved semi-natural woodland

Broad-leaved plantation woodland

I Improved grassland

A Arable

[with arrow] Running water

Badger sett

Badger path

Fence

Target Note

This figure illustrates confidential information relating to Badgers. It should not be released into the public domain.

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***Figure 2* - Extended Phase 1 Habitat Survey (Sheet 3 of 3 - Glan Yr Afon Wood)**

Date: 08/07/2019

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