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marches ecology

**Unit 23, The Malthouse Business Centre,
Regent Street, Llangollen, Denbighshire, LL20 8HS
01978 860889**

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Quality Assurance**Survey/ Assessment Work Schedule**

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Ecological background data search	Max Ellison	September 2018

Review Schedule

Issue	Date	Author	Reviewed by	Approved by
1.0	22/10/18	Max Ellison	Tom Knight	Tom Knight

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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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Figure 1 – Extended Phase 1 Habitat Survey

1 INTRODUCTION

1.1 Project Background

1.1.1 Marches Ecology was commissioned by Mr P. Jones to undertake an Ecological Appraisal of land at Llwyneinion, Wrexham (approximate OS Grid Ref. SJ 288 471). This comprised an Extended Phase 1 Habitat Survey and an ecological background data search. This report is provided as supporting information to an outline planning application for residential development.

1.1.2 This report has three key aims:

- to provide an initial appraisal of the ecological value of the site and local ecological resource and thereby identify ecological constraints relevant to the proposal;
- to identify further surveys that may be required; and
- to identify 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).

1.2 Report Author

1.2.1 This report was produced by Max Ellson of Marches Ecology. Max Ellson is an ecologist with over eighteen 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).
- MSc Vegetation Survey and Assessment.
- BSc (Hons) Environmental Biology.

1.3 Site Description and Context

1.3.1 The survey site extends to approximately 0.48 hectares of land and is located at Llwyneinion, to the north of Rhosllanerchrugog, Wrexham. It is located on the edge of open countryside, with existing housing located to the east/ south. It includes part of a larger field unit which lies to the south of Llwyneinion Road. On the opposite side of the road is an area of secondary woodland with a large waterbody known as the Llwyneinion acid tar lagoon. Further woodland (Llwyneinion Wood) is located to the north/ west of the survey site. To the west the landscape is characterised by large agricultural grassland fields associated with Llanerchrugog Hall.

1.3.2 The survey site/ wider field unit is dominated by agriculturally managed semi-improved neutral grassland. Some scrub clearance/ other works appear to have been undertaken in the recent past. The topography is variable with a short but steep bank at one location.

1.4 The Proposal

- 1.4.1 The proposal concerns an outline planning application for 5 No. detached four-bedroom houses with associated attached single garages, gardens and private driveways/ parking. A proposed access road will pass from Llwyneinion Road to the proposed plot in the south of the survey site; this will in turn connect with an existing access road off Hall Lane. The access road will include two vehicle-turning areas, a vehicle-passing area and a pedestrian footpath.
- 1.4.2 Several plans and design and access information has been submitted to WCBC to support the application; these are dated 16th September 2018. No further detailed information regarding the proposed development has been provided.

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 2016). Chapter 5 is of particular relevance and is entitled 'Conserving and Improving Natural Heritage and the Coast'. With specific reference to development proposals the following key statements are made:
- *'Biodiversity and landscape considerations must be taken into account in determining individual applications and contributing to the implementation of specific projects. The effect of a development proposal on the wildlife or landscape of any area can be a material consideration'.*
 - *'When considering any development proposal... local planning authorities should consider environmental impact, so as to avoid, wherever possible, adverse effects on the environment'.*
- 1.5.3 Chapter 5 further covers statutory designations, protected species and specific habitats/ areas. National policy statements are listed at the end of the Chapter and cross-referenced to paragraphs.

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 2.2.1¹);*
- *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 (currently scheduled for adoption in 2018) 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 industry and quarrying, and associated noise, odour or vibration arising from development.*

¹ References to the relevant part of PPW.

- *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 A further LPG entitled 'Great Crested Newt Mitigation Requirements – Johnstown Newt Site SAC and the Wider Countryside' has also recently been adopted (summer 2018). This provides further advice in relation to UDP policy EC6 and LPG 32.
- 1.5.10 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 proposal. 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 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, 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, Natural Resources Wales (NRW) and the Wrexham County Borough Council (WCBC) Ecology and Biodiversity Officer². 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*).

2.2 Field Survey

Extended Phase 1 Habitat Survey

2.2.1 The Extended Phase 1 Habitat Survey was carried out on 19th September 2018 by Max Ellson of Marches Ecology. The Extended Phase 1 Habitat plan is provided as *Figure 1*. The survey focussed on land within the site boundary (henceforth referred to as 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 initially 95% fast moving grey cloud which cleared to 100% blue sky in the afternoon. It was very windy but dry.

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). September 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

² WCBC Ecology and Biodiversity Officer confirmed all data held by Cofnod. At the time of this report no response has been received from NRW.

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).
- 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 (2004).

2.3 Survey Limitations

2.3.1 The following may be considered survey limitations:

- Access permission was not provided to private land beyond the survey site boundary.
- The grassland resource which dominates the survey site appeared to have been recently cut with arisings left in situ. This may have obscured some evidence of protected (animal) species as well as removing evidence of some plant species.
- Some parts of the site appeared to have been subject to clearance works in the recent past. This may have obscured some evidence of protected species.
- As the Extended Phase 1 Habitat Survey was undertaken in September some early flowering plants would not have been evident.

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 (2016). 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 Stryt Las a'r Hafod Site of Special Scientific Interest (SSSI) – part of the Johnstown Newt Sites Special Area of Conservation (SAC) which is located approximately 1.2 km to the southeast at its closest point. The SSSI/ SAC is divided into three main component parts. No *Annex I* habitats are given as a primary reason for selection of the site as an SAC or as a qualifying feature. Great Crested Newt (*Triturus cristatus*) is the *Annex II* species that is the primary reason for selection of the site as an SAC. No *Annex II* species are given as a qualifying feature. The following description is reproduced from the SAC citation:

'This site lies near to Wrexham in north-east Wales and is composed of two post-industrial sites where coal and clay have been extracted. The population of Great Crested Newts Triturus cristatus is one of the largest known in Great Britain and has been the focus of much conservation management over the last few years. Breeding sites are provided in part by a mining subsidence pool, and natural water-filled hollows on clay, whilst other ponds have been created as part of nature conservation management. Terrestrial habitat varies from marshy grassland, grazed farmland and swamp through to scrub and broad-leaved woodland. Good populations of the widespread amphibian species are also present'.

- 3.1.2 Stryt Las a'r Hafod SSSI extends to 69.4 hectares and the boundary largely corresponds with the SAC. The citation states that *'the water bodies at Stryt Las and Hafod support one of the largest known breeding populations of the Great Crested Newt in Britain'*. It also notes the presence of *'significant populations'* of the four common amphibian species.

Non-statutory

- 3.1.3 There are no non-statutory designated sites within 1 km of the survey site. Cofnod provided details of six areas of Ancient Semi-natural Woodland (ASNW) within 1 km of the survey site, three of which are categorised as 'Restored'. The closest of these to the survey site is associated with Llwyneinion Wood, which is located approximately 40/ 45 m to the north/ west.

3.2 Habitats and Flora

Introduction

- 3.2.1 The Extended Phase 1 Habitat map is provided as *Figure 1*. The Target Notes (numbered 3, 5, 6 and 9-17 for the survey site, and 1, 2, 4, 7 and 8 for immediately adjacent land) are provided in *Section 6* and shown on *Figure 1*.

Scrub

- 3.2.2 There is occasional largely scattered/ low growing scrub along the eastern boundary of the survey site (at *Target Notes 5, 6, 9, 10 and 13*) and also at the top of a short/ steep slope at *Target Note 16*. Much of this resource appears to have been largely cleared in the recent past, with frequently only low growing *Rubus fruticosus* agg. (Bramble) present.

Grassland

- 3.2.3 Semi-improved neutral grassland dominates the survey site (and extends outside the boundaries). The largest area is at *Target Note 15* where the sward is dominated by grasses which comprise abundant/ locally dominant *Holcus lanatus* (Yorkshire-fog), frequent/ abundant *Dactylis glomerata* (Cock's-foot), occasional/ locally frequent *Lolium perenne* (Perennial Rye-grass), and occasional *Agrostis capillaris* (Common Bent) and *Festuca rubra* (Red Fescue). Associate forbs/ tall-herbs are scattered throughout (largely at low levels of abundance) including: frequent/ locally abundant *Rumex acetosa* (Common Sorrel), frequent *Plantago lanceolata* (Ribwort Plantain), occasional *Rumex obtusifolius* (Broad-leaved Dock), *Ranunculus repens* (Creeping Buttercup), *Taraxacum* sect. *Ruderalia* (Common Dandelion), *Cerastium fontanum* (Common Mouse-ear), *Centaurea nigra* (Common Knapweed), *Urtica dioica* (Common Nettle), *Achillea millefolium* (Yarrow), *Heracleum sphondylium* (Hogweed), *Potentilla reptans* (Creeping Cinquefoil), *Cirsium arvense* (Creeping Thistle), *Lathyrus pratensis* (Meadow Vetchling) and *Veronica chamaedrys* (Germander Speedwell), and a small number of other species including *Cardamine pratense* (Cuckooflower), *Hypericum perforatum* (Perforate St. John's-wort) and *Stellaria graminea* (Lesser Stitchwort).
- 3.2.4 The majority of this resource has been cut in the recent past and it is understood (Mr P. Jones *pers. comm.*) that the grassland is managed occasionally as such for agricultural purposes. It is deemed to be semi-improved due to several factors such as the grass dominated character of the sward, likely agricultural improvement, the (infrequent) agricultural management and the relatively low species diversity.



The semi-improved neutral grassland sward at *Target Note 15*. Photo taken from approximately *Target Note 14* looking north.

- 3.2.5 Similar grassland characterises the survey site at *Target Note 17*. In proximity to *Target Notes 6/ 8* and *9* the grassland occupies a narrow trackway – here the sward is largely

dominated by Perennial Rye-grass with few associated forbs; it could be mapped as improved grassland although it is too small to do so effectively on *Figure 1*.

- 3.2.6 At *Target Note 5* the grassland resource within the survey site forms a narrow corridor within a larger field unit; it appears to have been significantly disturbed and the grassland is patchy in a mosaic with bare ground (too small to map).

Other Habitat

- 3.2.7 Other habitat in the survey site is restricted to the following:

- Bare ground and ephemeral/ short perennial vegetation at *Target Note 3* (associated with an entrance way off Llwyneinion Road/ associated short length of track which appears to have been cleared in the recent past).



Bare ground and ephemeral/ short perennial vegetation at *Target Note 3*. Photo taken from adjacent to Llwyneinion Road.

- Ephemeral/ short perennial vegetation at *Target Note 11* which characterises an area of land which appears to have been cleared in the recent past.
- Various piles of debris (rocks, wood, brash etc.) at *Target Notes 12, 14 and 16*.



The brash pile at *Target Note 16* is on the mid-right of the photo and the semi-improved neutral grassland to the front is that at *Target Note 17*. In the background is the scrub-woodland located outside the survey site at *Target Note 7*.

- 3.2.8 None of the plant records provided by Cofnod are from within the survey site. Several species of plant listed in *Schedule 9* to the *Wildlife and Countryside Act 1981* have been recorded from within 1 km of the survey site.

Immediately Adjacent Land

- 3.2.9 Habitats that characterise immediately adjacent land include the following:
- An area of (apparently) largely disturbed rough grass/ tall-herb vegetation (dominated by *Urtica dioica* (Common Nettle)) with incipient low Bramble at *Target Note 2*.
 - A field unit supporting largely unmanaged neutral/ rough grassland with patches of Bramble and mature *Salix* sp. (Willow) scrub at *Target Note 4*.
 - *Target Note 7*: a zone of mature scrub-woodland.
 - An apparently recently cleared area of land comprising largely bare earth with a new/ partly installed concrete drainage feature and several rubble piles (*Target Note 8*).
 - Grassland similar to the survey site resource continues on immediately adjacent land – for example *Target Notes 5, 15* and *17*.

3.3 Species/ Species Groups

Badgers

- 3.3.1 No setts or other Badger evidence were recorded within the survey site. Opportunities for sett excavation within the survey site are limited/ negligible but are provided by the field edges (especially the eastern edge)/ sloping ground (for example that at *Target Note 16*). However, the site appears frequently managed/ disturbed, including by general agricultural

management, which may reduce the likelihood of setts being created. Immediately adjacent habitat to the east of the survey site in particular (for example the scrub-woodland at *Target Note 7*) provides habitat of much greater potential (for sett construction).

3.3.2 Although no evidence of Badger was recorded the grassland habitat which dominates the survey site (along with the wider field unit) is of moderate to high potential value for foraging.

3.3.3 Cofnod provided one Badger record for an adjacent 1 km square to which the survey site is located (dated 2001). As part of an unrelated project in 2009/10, Marches Ecology recorded a Badger sett located approximately 140 m to the northeast of the survey site at its closest point.

Bats

3.3.4 There are no built structures within/ immediately adjacent to the survey site. There are no trees within/ immediately adjacent to the survey site which provide any potential for roosting bats (for example refer to *Target Notes 1* and *7*).

3.3.5 The grassland habitat which dominates the survey site appears to be subject to occasional agriculturally management (cutting). Taking this into account, the likelihood of an associated restricted invertebrate fauna, and the lack of structural habitat diversity, it is deemed unlikely to be of any particular value for foraging/ commuting bats. However, the eastern margin of the site immediately abuts either unmanaged grassland or scrub-woodland: this provides a sheltered linear feature which is likely to be of greater value especially as it connects housing (with roosting potential) to the south, with woodland/ the Llwyneinion acid tar pit to the north.

3.3.6 Cofnod provided seven records for four species of bat within the 1 km search area: Common Pipistrelle (*Pipistrellus pipistrellus*), 'Pipistrellus Bat Species', Whiskered bat (*Myotis mystacinus*), and 'Unknown bat'. Two of these (public) records are from the same 1 km grid square as the survey site: Whiskered bat and 'Unknown bat'.

Great Crested Newts

3.3.7 There are no waterbodies in/ immediately adjacent to the survey site.

3.3.8 An initial review of the OS map 1:25, 000 scale and relevant internet-based mapping including aerial photography³ indicates that there may be two waterbodies within approximately 250 m of the survey site. A detailed pond scoping exercise has not been undertaken to confirm the presence/ absence of these waterbodies. However, as part of an unrelated project in 2009/10, Marches Ecology confirmed the presence of both these waterbodies.

- SJ28854735. Llwyneinion acid tar lagoon. Located approximately 90 m to the north of the survey site at its closest point. Subject to two torch survey visits by Marches Ecology in 2010 (data used with kind permission of WCBC Land Contamination team) which recorded a medium breeding population (*i.e.* between 11-100 individuals as English Nature (2001)) of Great Crested Newts. However, an accompanying unpublished survey note provided the following conclusion: '*It is however arguable that due to the limited access the results could be quite justifiably extrapolated to indicate that a large population is present (i.e. over 100 individuals)*'. A large population of

³ <https://www.google.co.uk/maps/place/Llwyneinion,+Rhostyllen,+Wrexham+LL14+1TL/@53.0172305,-3.0633998,1013m/data=!3m1!1e3!4m5!3m4!1s0x487ac80ee79473a1:0x8e8040ed9ff63f2!8m2!3d53.019987!4d-3.066417>

Palmate Newt (*Lissotriton helveticus*) was also recorded and small numbers of both Common Frog (*Rana temporaria*) and Common Toad (*Bufo bufo*).

- SJ29034693. Located approximately 250 m to the southeast of the survey site at its closest point. A small pond within the grounds of a school. No survey data available.

3.3.9 A further two waterbodies (excluding drains etc.) may be located within 250 - 500 m, one of which has previously been confirmed by Marches Ecology.

- SJ28654742. Located in Llwyneinion Wood approximately 285 m to the northwest of the survey site. Provided an HSI⁴ of 'average' (in terms of its suitability to support breeding Great Crested Newts) further a pond scoping exercise by Marches Ecology in 2010.
- SJ28254705. Located approximately 500 m to the west of the survey site. A small pond next to Llanerchrugog Hall. No survey data available.

3.3.10 The survey site is largely characterised by semi-improved neutral grassland which is managed occasionally (by cutting) for agricultural purposes. Taking into account this occasional agricultural management, the grassland is of moderate/ high potential value for Great Crested Newts (depending on the height/ structure of the grassland at any given time). The limited areas of scrub on the site provide additional habitat structure: along with various piles of logs/ rocks and brash that have been created (for example at *Target Notes* (2), 12, 14 and 16), these provide potential refugia/ hibernacula that could be utilised by Great Crested Newts (there are additional features located immediately adjacent to the survey site for example at *Target Note* 8).



Large brash pile at Target Note 16.

3.3.11 Cofnod provided one record for Great Crested Newt from the 1 km search area: a 1992 record from the pond located in Llwyneinion Wood (as detailed above). A Smooth Newt (*Lissotriton vulgaris*) record was also provided.

Reptiles

3.3.12 Potential habitats for reptiles within the survey site are largely restricted to edge features/ ecotones such as are present along the eastern boundary; however in their limited extent/ disturbed condition they provide no more than limited potential value to this species group.

⁴ HSI: Habitat Suitability Index as per NARRS, available at <http://narrs.org.uk/documents/HSI%20guidance.pdf>.

Brash/ rock and log piles provide potential refugia. The wider occasionally managed grassland is also of limited potential value.

- 3.3.13 As part of an unrelated project in 2009/10, Marches Ecology undertook reasonable avoidance measures for reptiles on land assessed as being of moderate potential value associated with the Llwyneinion acid tar lagoon; no reptiles were located.

- 3.3.14 Cofnod did not provide any reptile records for the 1 km search area.

Birds

- 3.3.15 The survey site provides negligible/ limited nesting opportunities for species of bird associated with scrub; there are only small fragments of potentially suitable scrub on the site at the current time. It is possible that ground nesting birds/ hunting Barn Owl (*Tyto alba*) could use this site if/ when the grassland structure is suitable (and/ or if/ when there is sufficient small mammal prey for Barn Owl) however it is not considered likely to be of any particular value for either purpose.

- 3.3.16 Cofnod provided a large number of bird records from within 1 km of the survey site (though none from within it) largely with four-figure grid references.

Other Species

- 3.3.17 Cofnod provided four records for Hedgehog (*Erinaceus europaeus*), including one for Llwyneinion Wood (dated 2014). Hedgehog could utilise the site and for example the large brash pile at *Target Note 16* for hibernation. There is also a record for both Hare (*Lepus europaeus*) and Polecat (*Mustela putorius*) from an adjacent 1 km grid square.

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 designated sites, habitats and flora, and specific species groups in the section below. Potential impacts have been considered with reference to the plans provided only.

4.2 Evaluation, Assessment and Recommendations

Designated Sites

4.2.1 No statutory or non-statutory designated sites would be directly or indirectly impacted by the proposed development [the proposed development site is outside the buffer associated with the Johnstown Newt Sites SAC, as illustrated in WCBC (2018)]. No ASNW would be directly or indirectly impacted [assuming the successful implementation of actions detailed in *paragraphs 4.2.8 and 4.2.9* below].

Habitat

4.2.2 The proposed development site includes the following habitat resources/ features:

- Semi-improved neutral grassland (this resource extends outside the site boundary within the wider field unit);
- Scattered/ low-growing scrub;
- Ephemeral/ short-perennial vegetation;
- Various brash/ rock and wood piles; and
- Hard-standing.

4.2.3 'Lowland Meadows' is a priority habitat listed on *Section 7 of the Environment (Wales) Act 2016*. Arguably the semi-improved neutral grassland at *Target Notes 5, 15 and 17* does conform to this priority habitat type. However the priority habitat is generally deemed to include unimproved communities only, and the surveyed resource is considered to be semi-improved (very locally improved, refer to *Target Note 17*) and is managed (albeit occasionally) for agricultural purposes. No locally notable plants were recorded and it has a relatively low species diversity. As such the grassland is likely to be of local value⁵ at most. This resource continues outside of the proposed development site.

4.2.4 Due to the size, quality and geographical location of the remainder of the habitat resources listed above they are considered to be of no more than site value.

4.2.5 No further survey of the habitat resource is considered necessary at this time.

4.2.6 All the semi-improved neutral grassland within the proposed development site will be lost; however due to the retention of the grassland resource within the remainder of the field unit

⁵ In accordance with CIEEM (2016).

this is not considered to be a significant adverse effect at a local level. Some of this resource will also be included within a Great Crested Newt mitigation area (refer below) which will be managed appropriately in the long-term. This will provide a positive enhancement (which will be in line with Technical Advice Note 5 (TAN 5) (Welsh Assembly Government 2009) which seeks development to achieve net biodiversity gain).

- 4.2.7 The loss of the small areas of the other habitat resources would not give rise to a significant impact.
- 4.2.8 To avoid any possible inadvertent impacts on adjacent/ retained habitats, prior to the start of any preparatory or construction work, temporary protective fencing (e.g. heras) will be installed along the boundaries of the proposed development site. This fence 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. The alignment of this protective fence will be discussed with, and confirmed by, a suitably qualified ecologist.
- 4.2.9 General best practice measures will 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, contractors' compounds, vehicle parking, etc, will be located within the survey site boundary. 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.
 - PPG6: Working at Construction and Demolition Sites.
 - PPG7: The Safe Operation of Refuelling Facilities.

Flora

- 4.2.10 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 proposed development site. No plants listed in *Schedule 9* of the *Wildlife and Countryside Act 1981* (as amended) were recorded. As such no particular mitigation measures are deemed necessary other than those detailed above under 'habitat'.

Fauna

Badgers

- 4.2.11 No setts were recorded within the proposed development site and opportunities for sett excavation are negligible/ limited. However immediately adjacent habitat (particularly the scrub-woodland to the east of the survey site) provides habitat of much greater potential. Although no evidence of Badger activity was recorded the grassland habitat which dominates the survey site is of moderate to high potential value for foraging. Although this resource will be lost the remaining grassland within the field unit will be retained and as such the scheme is unlikely to give rise to a significant impact on the available foraging resource. It is also unlikely that the proposal would interrupt any routes currently used by Badger. Due to the scale and extent of the proposal these impacts are unlikely to be significant.
- 4.2.12 Due to the potential for setts to be located in adjacent habitats, as a precautionary approach a pre-construction Badger check will be completed of all potentially suitable habitats within at

least 30 m of the proposed development site boundary (including any mitigation land, refer below, if potentially licensable operations are to be undertaken). This check should be completed in sufficient time in advance of the construction scheme to allow for licensing should it subsequently be required. It will be necessary to design and implement appropriate mitigation based on the results of this check.

- 4.2.13 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.

Bats

- 4.2.14 There are no buildings or trees that could provide potential roosting features located within/ immediately adjacent to the proposed development site. As such no impacts on roosting bats are anticipated.
- 4.2.15 The grassland habitat which will be lost is unlikely to be of any particular value for foraging/ commuting bats and as such this loss would not give rise to a significant impact (particularly considering that the proposed development site comprises a small part of the wider field unit which also supports grassland). Although the eastern margin of the site (which immediately abuts either unmanaged grassland or scrub-woodland) provides a sheltered linear feature, this will not be directly impacted by the proposals. No further bat survey is deemed necessary.
- 4.2.16 The scheme as indicated on the submitted plans provides for 5 No. houses, four of which are set back from the eastern boundary. The location/ footprint of the 5th house will be realigned whereby it will be located further back from the eastern boundary. External lighting has the potential to adversely impact bat foraging/ commuting resources; no information is currently available on external lighting with regards the proposed development. However the potential impact of lighting (both during construction and occupation of the houses) on bats that may use the survey site/ adjacent habitat will be considered. Lighting will follow guidance provided by The Bat Conservation Trust (2018) and Institution of Lighting Engineers (2011). Lighting that reduces vertical and horizontal light spillage will be used. All adjacent/ retained habitats will be kept as dark as possible. Measures to avoid/ minimise light spillage will be adopted. The lighting design will be approved by a suitably qualified ecologist.
- 4.2.17 Assuming that a sympathetic lighting arrangement is installed, no significant impact on potential foraging/ commuting resources close to the proposed development site is anticipated.
- 4.2.18 A small number of bat boxes/ features are to be provided as an enhancement (in line with TAN 5). The number/ type of boxes to be installed will be discussed/ agreed with the WCBC Ecology and Biodiversity Officer. They will either be provided as integral or external elements to the new houses. They will be installed under the direction of a suitably qualified ecologist.

Great Crested Newts

- 4.2.19 There is no aquatic habitat within/ immediately adjacent to the proposed development/ survey site. The terrestrial habitat within the proposed development site is largely (occasionally managed grassland) of moderate/ high potential value for Great Crested Newts.
- 4.2.20 The potential presence of Great Crested Newts in terrestrial habitat is governed more by the proximity of a suitable breeding waterbody than by the quality of the terrestrial habitat. There are two waterbodies within approximately 250 m of the survey site with the closest to the proposed development site being approximately 90 m away to the north at its closest point (and 200 m from the main footprint of the proposed housing): known as the Llwyneinion acid tar lagoon. A medium/ possibly large breeding population of Great Crested Newts has previously been recorded from this waterbody.
- 4.2.21 Although the terrestrial habitat in the immediate locality of the acid tar lagoon is of high quality value (woodland) which is likely to result in much of the population utilising this resource, the proposed development site does provide intermediate terrestrial habitat (50-250 m from a breeding waterbody as per English Nature (2001)) as well as distant habitat (more than 250 m) of moderate/ high potential value. The proposed development site does not however form part of any obvious dispersal corridor (e.g. between breeding waterbodies). However due to the size of the Great Crested Newt population at the Llwyneinion acid tar lagoon it is reasonable to assume that individuals could be found more-or-less anywhere within the proposed development site.
- 4.2.22 As there is therefore a risk of disturbing/ killing individual Great Crested Newts during the proposed development of the site, a 'development' licence would be required from NRW in order for the scheme to legally proceed. The associated licence application will need to consider in detail maintenance of the Favourable Conservation Status (FCS) of the species in this area both during and after the construction phase. It is expected that the details of the licence application will also be included within an Ecological Mitigation Method Statement.
- 4.2.23 Subject to granting of the NRW licence; translocation of Great Crested Newts from the development site footprint ahead of any preparatory or construction works would be required. This is likely to require fencing of the development site (and any associated storage areas/ access routes, etc) with temporary amphibian exclusion fencing and an associated trapping programme (the minimum period of which should be discussed and agreed with NRW as part of the licence application process). All amphibians would be translocated to a suitable receptor site.
- 4.2.24 WCBC (2018) outlines that 'minor developments' (up to 10 dwellings) located '*Adjacent to and up to 250m from known GCN breeding ponds*' require '[mitigation] *for loss of habitat type on a like for like basis*'. It further notes that '*The local planning authority will assess proposals using a sequential methodology....The preferred options, in order of preference are: Onsite provision, A combination of onsite and offsite provision; Offsite provision but this must be close to the site; and A financial contribution towards strategic GCN mitigation/ compensation in lieu of direct provision*'. Taking this into account the scheme will provide an area of offsite land to be used as a mitigation (and receptor) site in close proximity to the proposed development site. An indicative area is illustrated on the plans as submitted to WCBC to support the outline planning application. It is proposed that this will provide land on a like-for-like basis. It will be largely managed for the benefit of Great Crested Newts (although some areas of grassland will be managed specifically to enhance this habitat);

habitat creation works to include (for example) scrub planting and hibernacula construction will form part of the proposals as deemed necessary further to consultation with NRW. Any such work may also need to be informed by a walkover survey to ensure that valued existing habitats are retained/ enhanced. The mitigation site will be protected from development in perpetuity. Arrangements for long-term site security will also need to be established. The location/ design and detail of the mitigation site will need to be discussed and agreed further with NRW as part of the licence application process. This proposal will provide enhancements in line with TAN 5.

- 4.2.25 Given the granting and appropriate implementation of the 'development' licence no significant impact on Great Crested Newts or their habitat is anticipated.
- 4.2.26 For the purposes of the outline planning application it has been agreed with the WCBC Ecology and Biodiversity Officer that the 2010 survey data from Llwyneinion acid tar lagoon can be utilised and that no further survey is considered necessary to assess potential impacts. This situation will be confirmed with NRW with regards the licence application; should additional survey of the Llwyneinion acid tar lagoon and/ or other waterbodies within 250/ 500 m be required this would need to be undertaken in Spring 2019.

Reptiles

- 4.2.27 Potential habitats for reptiles within the survey site are largely restricted to edge features/ ecotones such as are present along the eastern boundary these being of no more than limited potential value. Brash/ rock and log piles provide potential refugia. No recent records of any species of reptile have been obtained. No further survey of this species group is deemed to be warranted.
- 4.2.28 The risk that individual reptiles may be found on the proposed development site is considered to be negligible/ low. It is therefore deemed appropriate for reptiles RAMs to be included for within the Great Crested Newt trapping programme, whereby any reptiles that are found during this programme can be moved to the receptor/ mitigation site.
- 4.2.29 Given the appropriate implementation of RAMs no significant impact on reptiles or their habitat is anticipated.

Birds

- 4.2.30 The breeding bird assemblage supported by the survey site is likely to be of no more than site value. The proposed development site provides negligible/ low potential opportunities for nesting birds only.
- 4.2.31 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).
- 4.2.32 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 shrubs/ tall vegetation and grassland) 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.

- 4.2.33 If it is not possible to clear vegetation outside the nesting season all such areas will 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.
- 4.2.34 As proposed above adjacent/ retained habitat would be protected during the construction phase by a temporary fence. On the assumption that this protective fencing is installed and maintained no significant impact on local bird populations is anticipated.
- 4.2.35 As a potential enhancement (and therefore a positive impact and in line with TAN 5) the installation of a small number of nest-boxes will be undertaken. The number/ type of nest-boxes to be installed will be discussed/ agreed with the WCBC Ecology and Biodiversity Officer. They will either be provided as integral or external elements to the new houses. They will be installed under the direction of a suitably qualified ecologist.

Other species

- 4.2.36 Any clearance of potential Hedgehog refuge areas (for example the large brash pile at *Target Note 16*) should be undertaken with care/ by hand in order to avoid harm to any Hedgehogs which may be present. Where possible such actions should be timed to avoid the winter months when hedgehogs may be hibernating.

5 SUMMARY CONCLUSIONS

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

- No designated sites or ASNW would be directly or indirectly impacted by the proposed development.
- Part of a wider field supporting semi-improved neutral grassland of local value (at most) would be lost due to the proposed development. Other habitat resources to be lost (such as scattered/ low-growing scrub, ephemeral/ short perennial vegetation and various brash/ rock and wood piles) are of site value only.
- No locally notable plants or any listed in *Schedule 9 of the Wildlife and Countryside Act 1981* (as amended) were recorded.
- No Badger setts/ signs of activity were recorded from the survey site. Very limited opportunities for sett construction are present, with adjacent habitat providing greater potential. The grassland habitat resource within the proposed development site is of high/ moderate potential value for foraging.
- There are no buildings or trees that could provide potential roosting features for bats within/ immediately adjacent to the proposed development site. The grassland habitat within the proposed development site is unlikely to be of any particular value for foraging/ commuting bats: this loss would not give rise to a significant impact. The eastern margin of the site provides a sheltered linear feature, although this will not be directly impacted by the proposals.
- There is no aquatic habitat of potential value for Great Crested Newts within/ immediately adjacent to the proposed development site. The terrestrial habitat is largely of moderate/ high potential value for Great Crested Newts. There are two waterbodies within 250 m of the proposed development site and a medium/ possibly large breeding population of Great Crested Newts has been recorded from one of these (Llwyneinion acid tar lagoon). Individuals could be found more-or-less anywhere within the proposed development site.
- The habitat within the proposed development site is of limited potential value for reptiles. No recent records of any reptile species have been obtained.
- Features that provide potential nesting opportunities for birds are negligible/ limited within the proposed development site. Hunting Barn Owl could use this site however it is not considered likely to be of any particular value.
- The habitat resource within the proposed development site may be of value to other species such as Hedgehog.

5.1.2 This report recommends the following avoidance/ mitigation measures:

- Retention/ appropriate management of areas of semi-improved neutral grassland within a Great Crested Newt mitigation area.
- Temporary protective fencing is to be installed around the boundaries of the construction site.
- General best practice measures should be implemented during the construction phase to avoid any indirect impacts on adjacent habitat.
- Completion of a pre-construction Badger check, as well as implementation of best practice during the construction phase to avoid any potential impacts on Badgers.

- The location/ footprint of the 5th house will be realigned whereby it will be located further back from the eastern boundary (to maintain the integrity of the sheltered linear feature 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. The lighting design will be approved by a suitably qualified ecologist.
- A Natural Resources Wales (NRW) Great Crested Newt 'development' licence will be applied for and subsequently implemented. The details of the licence application will also be included within an Ecological Mitigation Method Statement. NRW will be consulted as part of the licence application process.
- An area of offsite land will be used as a Great Crested Newt mitigation (and receptor) site. An indicative area is illustrated on the plans as submitted to WCBC to support the outline planning application. The location/ design and detail of the mitigation site will be discussed and agreed further with NRW as part of the licence application process.
- Reptile Reasonable Avoidance Measures (RAMs) will be included for within the Great Crested Newt trapping programme, whereby any reptiles that are found during this programme can be moved to the receptor/ mitigation site
- Site clearance works 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.
- Clearance of potential Hedgehog refuge areas should be undertaken with care/ by hand (and avoiding the winter months).

5.1.3 This report recommends the following enhancement measures:

- Enhancement of the proposed Great Crested Newt mitigation site. This will be largely managed for the benefit of Great Crested Newts (although some areas of grassland will be managed specifically to enhance this habitat). Habitat creation works to include (for example) scrub planting and hibernacula construction will be discussed and agreed with NRW.
- A small number of bird nest-boxes and bat-boxes/ features will be provided as integral or external elements to the new houses. The number/ types to be installed will be discussed/ agreed with the WCBC Ecology and Biodiversity Officer.

6 TARGET NOTES

Target Note 1. [Outside the survey site]. Two young trees (1 No. *Acer pseudoplatanus* (Sycamore) and 1 No. *Fraxinus excelsior* (Ash)). No bat roost potential.

Target Note 2. [Outside the survey site]. An area of (apparently) largely disturbed rough grass/ tall-herb vegetation (dominated by *Urtica dioica* (Common Nettle)) with incipient low *Rubus fruticosus* agg. (Bramble), in/ on the low banks of a slight hollow. A narrow zone of this vegetation may be within the survey site boundary although it is difficult to determine: there are piles of slatey debris on the edge which may be associated with the creation of the bare ground at *Target Note 3*: these areas may provide refugia for amphibians. The grassland vegetation comprises grasses such as *Arrhenatherum elatius* (False Oat-grass), *Agrostis capillaris* (Common Bent), *Dactylis glomerata* (Cock's-foot), *Holcus lanatus* (Yorkshire-fog) and *Elytrigia repens* (Common Couch), with associates including *Achillea millefolium* (Yarrow), *Centaurea nigra* (Common Knapweed), *Rumex acetosa* (Common Sorrel) and *Heracleum sphondylium* (Hogweed); this resource appears largely un-/ in-frequently managed (although the wider field unit appears recently cut).

Target Note 3. An entrance way off Llwyneinion Road/ associated short length of track appears to have been cleared in the recent past: it comprises either bare ground or sparse ephemeral/ short-perennial vegetation. There is a partly-installed field gate adjacent to the road. The sparse ephemeral/ short-perennial vegetation is characterised by, for example, young grasses, *Reseda luteola* (Weld), *Senecio jacobaea* (Common Ragwort) and *Galium aparine* (Cleavers), with incipient young Bramble.

Target Note 4. [Outside the survey site]. A field unit supporting largely unmanaged neutral/ rough grassland with patches of Bramble (especially along the edge of the fence with the survey site) and mature *Salix* sp. (Willow) scrub. Mown paths are present.

Target Note 5. Semi-improved neutral grassland. This characterises a narrow corridor within the survey site as well as the wider field unit [outside the survey site]. It appears to have been largely cut in the recent past; arisings have been left in situ. Within the survey site boundary the resource appears to have been significantly disturbed and the grassland is patchy in a mosaic with bare ground (too small to map). Remnants of Bramble and *Ulex europaeus* (Gorse) scrub is present, especially adjacent to the fence line. The grassland is variously dominated by *Festuca rubra* (Red Fescue), False Oat-grass, Yorkshire-fog and/ or Common Bent; other grasses present include Cock's-foot and *Lolium perenne* (Perennial Rye-grass). Associates are similar to that described at *Target Note 2*, although with the addition of *Lathyrus pratensis* (Meadow Vetchling), *Potentilla reptans* (Creeping Cinquefoil), *Veronica chamaedrys* (Germander Speedwell), *Plantago lanceolata* (Ribwort Plantain), Common Ragwort, *Ranunculus repens* (Creeping Buttercup), and *Taraxacum* sect. *Ruderalia* (Common Dandelion).

Target Note 6. A small area of mature *Salix* sp. (Willow) scrub which appears to have been locally cleared/ disturbed in the recent past. It is located in a small hollow adjacent to the survey site boundary. There is a mosaic of young Bramble/ unmanaged grassland on the edges.

Target Note 7. [Outside the survey site]. A zone of mature scrub-woodland located immediately adjacent to the survey site. It appears to comprise of largely *Salix caprea* (Goat Willow) with young Ash, Sycamore and *Crataegus monogyna* (Hawthorn). Occasional open grass dominated areas were noted. No trees with bat roost potential were observed from the survey site boundary.

Target Note 8. [Outside the survey site]. An apparently recently cleared area of land comprising largely bare earth with a new/ partly installed concrete drainage feature and several rubble piles (potential amphibian refugia/ hibernacula).

Target Note 9. A narrow band of low scrub along the edge of the field comprising of Bramble with very occasional Hawthorn. There are locally abundant tall-herbs and a ground layer of *Hedera helix* (Ivy). Towards *Target Note 10* this resource appears to have been largely cleared in the recent past. Mature shrubs frequently overhang the survey site boundary from the resource at *Target Note 7*.

Target Note 10. A small area of low Bramble scrub located on a steep slope – it appears to have been locally disturbed in the recent past. The scrub is thin/ incipient with frequent bare patches. Associates include Common Knapweed, Gorse, *Equisetum arvense* (Field Horsetail) and various grasses.

Target Note 11. An area of land which appears to have been cleared in the recent past. It now supports sparse ephemeral/ short-perennial vegetation, comprising (for example) Common Dandelion, young Common Knapweed, Common Ragwort, Common Nettle, *Cirsium arvense* (Creeping Thistle), *Cirsium vulgare* (Spear Thistle), *Rumex obtusifolius* (Broad-leaved Dock), Ribwort Plantain, and young/ incipient Bramble.

Target Note 12. The approximate location of a small rock pile – a potential amphibian refugia/ hibernacula.

Target Note 13. A narrow zone of young Bramble scrub along a fence line. This appears to be the remnant of a wider width of scrub apparently cleared in the recent past.

Target Note 14. There are several potential amphibian refugia/ hibernacula at this location, including a pile of cut wood, an earth/ rock pile and a pile of fencing posts.

Target Note 15. Semi-improved neutral grassland; this resource continues outside the survey site. It appears to have been cut in the recent past; arisings have been left in situ. The sward is largely between 0.1 and 0.2 m in height. The sward is dominated by grasses which comprise abundant/ locally dominant Yorkshire-fog, frequent/ abundant Cock's-foot, occasional/ locally frequent Perennial Rye-grass, and occasional Common Bent and Red Fescue. Associate forbs/ tall-herbs are scattered throughout (largely at low levels of abundance) including: frequent/ locally abundant Common Sorrel, frequent Ribwort Plantain, occasional Broad-leaved Dock, Creeping Buttercup, Common Dandelion, *Cerastium fontanum* (Common Mouse-ear), Common Knapweed, Common Nettle, Yarrow, Hogweed, Creeping Cinquefoil, Creeping Thistle, Meadow Vetchling and Germander Speedwell, and less amounts of *Cardamine pratense* (Cuckooflower), *Anthriscus sylvestris* (Cow Parsley), *Hypericum perforatum* (Perforate St. John's-wort), *Stellaria graminea* (Lesser Stitchwort), *Trifolium pratense* (Red Clover) and *Trifolium repens* (White Clover). It is deemed to be semi-improved due to several factors such as the grass dominated character of the sward, likely agricultural improvement/ management and the relatively low species diversity.

Target Note 16. A large brash pile/ located at the base of a slope, with associated areas of bare ground and low Bramble scrub. To the immediate south of the Bramble scrub/ at the top of the slope there is a narrow fringe of uncut grassland, similar to the wider resource recorded at **Target Note 15**.

Target Note 17. Semi-improved neutral grassland; this resource continues outside the survey site. This resource is largely similar to that recorded at **Target Note 15**. In proximity to **Target Notes 6/ 8** and **9** the grassland occupies a narrow trackway – here the sward is largely dominated by Perennial Rye-grass with few associated forbs. This could be mapped as improved grassland although it is too small to do so effectively on **Figure 1**.

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8 DATA

Table 1 – Vascular plant species recorded within the survey site

Plant Species	<i>Holcus lanatus</i> (Yorkshire-fog)
<i>Crataegus monogyna</i> (Hawthorn)	<i>Hypericum perforatum</i> (Perforate St. John's-wort)
<i>Fraxinus excelsior</i> (Ash)	<i>Hypochaeris radicata</i> (Cat's-ear)
<i>Rosa canina</i> agg. (Dog-rose)	<i>Lapsana communis</i> (Nipplewort)
<i>Salix caprea</i> (Goat Willow)	<i>Lathyrus pratensis</i> (Meadow Vetchling)
<i>Sambucus nigra</i> (Elder)	<i>Lepidium didymum</i> (Lesser Swine-cress)
<i>Taxus baccata</i> (Yew)	<i>Lolium perenne</i> (Perennial Rye-grass)
<i>Ulex europaea</i> (Gorse)	<i>Plantago lanceolata</i> (Ribwort Plantain)
	<i>Poa annua</i> (Annual Meadow-grass)
<i>Achillea millefolium</i> (Yarrow)	<i>Polygonum aviculare</i> (Knotgrass)
<i>Agrostis capillaris</i> (Common Bent)	<i>Potentilla anserina</i> (Silverweed)
<i>Agrostis stolonifera</i> (Creeping Bent)	<i>Potentilla reptans</i> (Creeping Cinquefoil)
<i>Anagallis arvensis</i> (Scarlet Pimpernel)	<i>Ranunculus repens</i> (Creeping Buttercup)
<i>Anthriscus sylvestris</i> (Cow Parsley)	<i>Reseda luteola</i> (Weld)
<i>Arrhenatherum elatius</i> (False Oat-grass)	<i>Rubus fruticosus</i> agg. (Bramble)
<i>Calystegia sepium</i> (Hedge Bindweed)	<i>Rumex acetosa</i> (Common Sorrel)
<i>Cardamine pratensis</i> (Cuckoo-flower)	<i>Rumex obtusifolius</i> (Broad-leaved Dock)
<i>Capsella bursa-pastoris</i> (Shepherd's-purse)	<i>Senecio jacobaea</i> (Common Ragwort)
<i>Carex nigra</i> (Common Sedge)	<i>Senecio vulgaris</i> (Groundsel)
<i>Centaurea nigra</i> (Common Knapweed)	<i>Sisymbrium officinale</i> (Hedge Mustard)
<i>Cerastium fontanum</i> (Common Mouse-ear)	<i>Sonchus oleraceus</i> (Smooth Sowthistle)
<i>Chamerion angustifolium</i> (Rosebay Willowherb)	<i>Stachys sylvatica</i> (Hedge Woundwort)
<i>Cirsium arvense</i> (Creeping Thistle)	<i>Stellaria graminea</i> (Lesser Stitchwort)
<i>Cirsium vulgare</i> (Spear Thistle)	<i>Stellaria media</i> (Common Chickweed)
<i>Crepis capillaris</i> (Smooth Hawk's beard)	<i>Taraxacum</i> sect. <i>Ruderalia</i> (Common Dandelion)
<i>Dactylis glomerata</i> (Cock's-foot)	<i>Trifolium pratense</i> (Red Clover)
<i>Dryopteris filix-mas</i> (Male-fern)	<i>Trifolium repens</i> (White Clover)
<i>Elytrigia repens</i> (Common Couch)	<i>Tripleurospermum inodorum</i> (Scentless Mayweed)
<i>Epilobium hirsutum</i> (Great Willowherb)	<i>Urtica dioica</i> (Common Nettle)
<i>Equisetum arvense</i> (Field Horsetail)	<i>Veronica chamaedrys</i> (Germander Speedwell)
<i>Festuca rubra</i> (Red Fescue)	<i>Vicia sativa</i> (Common Vetch)
<i>Galium aparine</i> (Cleavers)	
<i>Geranium molle</i> (Round-leaved Crane's-bill)	
<i>Geranium robertianum</i> (Herb-robert)	
<i>Hedera helix</i> agg. (Ivy)	
<i>Heracleum sphondylium</i> (Hogweed)	

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 Great Crested Newt

- 9.4.1 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.

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

9.5 Reptiles

9.5.1 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*.

9.5.2 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.

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

9.6 Birds

9.6.1 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*.

9.6.2 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.

9.6.3 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.

9.6.4 *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	E06755
Your Reference	C383
Requested By	Marches Ecology
Data Users	Max Ellson, Partner, Marches Ecology LLP Tom Knight, Partner, Marches Ecology LLP Mr Peter Jones Mr Richard Jones
Search Date	17/09/2018
Expiry Date	17/03/2019
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 (17/03/2019).
- The data was generated on the Search Date (17/09/2018) and is not live.
- The Dataset ID associated with each record can be used to find information about the provenance of the data. See the [Data We Hold](#) page on our website for more information.
- Verification Levels are given for each record. For further information see our Data Quality Policy, available from our [website](#).
- 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.

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.

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, **NWWT** - North Wales Wildlife Trust Reserve, **PBA** - Protection of Badgers Act 1992, **RD1(UK)** - Red Data Book listing for the UK based on IUCN guidelines, **RD1(Wales)** - Red Data Book listing 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, **S42** - Natural Environment and Rural Communities Act 2006 (Section 42), **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), **VC48** - Locally Important within Vice-County 48: Meirionethshire, **VC49** - Locally Important within Vice-County 49: Caernarfonshire, **VC50** - Locally Important within Vice-County 50: Denbighshire, **VC51** - Locally Important within Vice-County 51: Flintshire, **VC52** - Locally Important within Vice-County 52: Anglesey, **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

Contact Us

Cofnod - Gwasanaeth Gwybodaeth Amgylcheddol Gogledd Cymru/North Wales Environmental Information Service
Intec, Ffordd y Parc, Parc Menai, Bangor, Gwynedd. LL57 4FG
Tel: (01248) 672603 Email: contactus@cofnod.org.uk Website: www.cofnod.org.uk Facebook: facebook.com/Cofnod Twitter: twitter.com/Cofnod

Search Location					Grid Reference					
Land off Llwyneinion Road					SJ28784709					
Birds										
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Actitis hypoleucos</i> (Common Sandpiper / Pibydd y Dorlan)	SJ2747	5 records, between 09/04/2005 and 04/05/2016	Recorder Name Withheld	2; 3 Adult; 3; 4		Penycae, Bryn Goleu	Comments Withheld	D0062/001/01 , D0062/003/01 , D1297/021/01	UKBA, WBA	3
<i>Aegithalos caudatus</i> (Long-tailed Tit / Titw Cynffon-Hir)	SJ2747	2 records, between 02/11/2015 and 25/03/2016	Recorder Name Withheld	3		Ty Mawr Reservoir, S		D1297/020/01 , D1297/021/01	WBA	1
<i>Aegithalos caudatus</i> (Long-tailed Tit / Titw Cynffon-Hir)	SJ2746	09/10/2009	Recorder Name Withheld	5		Penycae, Tainant	Comments Withheld	D0062/001/01	WBA	3
<i>Alcedo atthis</i> (Kingfisher / Glas y Dorlan)	SJ24	2 records, between 08/11/2006 and 03/11/2016	Recorder Name Withheld	2; 1		Site Name Withheld	Comments Withheld	D0062/001/01 , D1297/021/01	BDir1, Bern, UKBA, WBA, WCA1.1, LBAP[CON, DEN, FLI, GWY]	3
<i>Anas clypeata</i> (Shoveler / Hwyaden Lydanbig)	SJ2747	02/11/2015	Recorder Name Withheld	3		Ty Mawr Reservoir, S		D1297/020/01	BDir2.1, CITES, UKBA, WBA, LBAP[ANG, CON, GWY]	1
<i>Anas crecca</i> (Teal / Corhwyaden)	SJ2747	15/10/2016	Recorder Name Withheld	8		Ty Mawr Reservoir, S		D1297/021/01	BDir2.1, CITES, UKBA, WBA, LBAP[ANG, CON, DEN, FLI, GWY]	1
<i>Anas platyrhynchos</i> (Mallard / Hwyaden Wyllt)	SJ2747	7 records, between 04/07/2009 and 15/10/2016	Recorder Name Withheld	2; 3; 18; 5; 8; 9		Ty Mawr Reservoir, S	Comments Withheld; Ponds south of reservoir	D1297/020/01 , D0062/001/01 , D1297/012/01 , D1297/021/01	BDir2.1, UKBA, WBA, LBAP[CON, GWY]	1
<i>Anas platyrhynchos</i> (Mallard / Hwyaden Wyllt)	SJ2746	14/03/2015	Recorder Name Withheld	10		Penycae, Tainant		D1297/020/01	BDir2.1, UKBA, WBA, LBAP[CON, GWY]	1
<i>Anthus pratensis</i> (Meadow Pipit / Corhedydd y Waun)	SJ2747	4 records, between 22/04/2011 and 25/03/2016	Recorder Name Withheld	55 Adult; 30 Adult; 10; 5		Penycae, Bryn Goleu	Comments Withheld	D0062/003/01 , D1297/020/01 , D1297/021/01	Bern, UKBA, WBA, LBAP[CON]	3
<i>Anthus pratensis</i> (Meadow Pipit / Corhedydd y Waun)	SJ2948	17/12/2016	Recorder Name Withheld	100		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/006/01	Bern, UKBA, WBA, LBAP[CON]	3
<i>Apus apus</i> (Swift / Gwennol Ddu)	SJ293462	07/05/2013	Recorder Name Withheld	3		Rhosllanerchrugog village		D1297/012/01	UKBA, WBA	1
<i>Apus apus</i> (Swift / Gwennol Ddu)	SJ2946	04/07/2009	Recorder Name Withheld	30		Rhosllanerchrugog	Comments Withheld	D0062/001/01	UKBA, WBA	3
<i>Apus apus</i> (Swift / Gwennol Ddu)	SJ2747	04/05/2016	Recorder Name Withheld	13		Mawr Reservoir, Bronwylfa		D1297/021/01	UKBA, WBA	1
<i>Apus apus</i> (Swift / Gwennol Ddu)	SJ2848	11/07/2009	Recorder Name Withheld	2		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	UKBA, WBA	3
<i>Apus apus</i> (Swift / Gwennol Ddu)	SJ2948	06/05/2014	Recorder Name Withheld	8		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/005/01	UKBA, WBA	3

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Aythya fuligula</i> (Tufted Duck / Hwyaden Gopog)	SJ2747	2 records, between 02/11/2015 and 12/04/2016	Recorder Name Withheld	1; 2		Ty Mawr Reservoir, S		D1297/020/01 , D1297/021/01	BDir2.1, WBA, LBAP[CON]	1
<i>Branta canadensis</i> (Canada Goose / Gwydd Canada)	SJ2747	6 records, between 22/09/2008 and 12/04/2016	Recorder Name Withheld	250; 12; 5; 18; 40; c52		Penycae, Bryn Goleu	Comments Withheld	D0062/001/01 , D1297/012/01 , D1297/020/01 , D1297/021/01	BDir2.1, INNS, WCA9	3
<i>Calidris alpina</i> (Dunlin / Pibydd y Mawn)	SJ24	2 records, between 14/06/2007 and 25/04/2016	Recorder Name Withheld	4; 1		Site Name Withheld	Comments Withheld	D0062/001/01 , D1297/021/01	Bern, UKBA, WBR, LBAP[CON, GWY]	3
<i>Chroicocephalus ridibundus</i> (Black-headed Gull / Gwylan Benddu)	SJ286460	01/11/2012	Recorder Name Withheld	2		North of Stryt-issa, Rhosllanerchrugog, Denbighshire	field record	D0969/001/04	BDir2.2, S7, UKBA, WBR, LBAP[GWY]	1
<i>Chroicocephalus ridibundus</i> (Black-headed Gull / Gwylan Benddu)	SJ2747	2 records, between 14/03/2015 and 02/11/2015	Recorder Name Withheld	1; 10+		Ty Mawr Reservoir, S		D1297/020/01	BDir2.2, S7, UKBA, WBR, LBAP[GWY]	1
<i>Coccothraustes coccothraustes</i> (Hawfinch / Gylfinbraff)	SJ2747	09/10/2011	Recorder Name Withheld	3		Penycae, Bryn Goleu	Comments Withheld	D0062/003/01	Bern, S7, UKBR, WBA, LBAP[CON, DEN, FLI, GWY]	3
<i>Cuculus canorus</i> (Cuckoo / Cog)	SJ2747 (Selected from Interactive Map)	4 records, between 04/05/2014 and 26/05/2016	Recorder Name Withheld	1 Full-Grown; 1		Ty Mawr reservoir	Only heard the calling	D1117/001/01 , D1297/021/01	S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	1
<i>Delichon urbicum</i> (House Martin / Gwennol y Bondo)	SJ2946	04/07/2009	Recorder Name Withheld	15		Rhosllanerchrugog	Comments Withheld	D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
<i>Delichon urbicum</i> (House Martin / Gwennol y Bondo)	SJ2747	01/05/2005	Recorder Name Withheld	1+		Penycae, Bryn Goleu	Comments Withheld	D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
<i>Delichon urbicum</i> (House Martin / Gwennol y Bondo)	SJ2848	11/07/2009	Recorder Name Withheld	6		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	Bern, UKBA, WBA, LBAP[CON]	3
<i>Dendrocopos minor</i> (Lesser Spotted Woodpecker / Cnocell Fraith Leiaf)	SJ2948	13/01/2016	Recorder Name Withheld	1		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/006/01	BAP, Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3
<i>Emberiza schoeniclus</i> (Reed Bunting / Bras y Cyrs)	SJ2747	26/05/2016	Recorder Name Withheld	4		Mawr Reservoir, Bronwylfa		D1297/021/01	Bern, S7, UKBA, WBA, LBAP[CON, DEN, FLI, GWY]	1
<i>Falco columbarius</i> (Merlin / Cudyll Bach)	SJ24	03/04/2005	Recorder Name Withheld	1 Male		Site Name Withheld	Comments Withheld	D0062/001/01	BDir1, Bern, CITES, UKBR, WBA, WCA1.1, LBAP[CON, DEN, FLI, GWY]	3
<i>Falco peregrinus</i> (Peregrine / Hebog Tramor)	SJ24	04/07/2009	Recorder Name Withheld	1 Juvenile		Site Name Withheld	Comments Withheld	D0062/001/01	BDir1, Bern, CITES, WCA1.1, LBAP[ANG, CON, GWY]	3
<i>Falco subbuteo</i> (Hobby / Hebog yr Ehedydd)	SJ24	5 records, between 08/07/2005 and 04/07/2009	Recorder Name Withheld	1 Secondyear; 1; 1 Firstsummer		Site Name Withheld	Comments Withheld	D0062/001/01	Bern, CITES, WBA, WCA1.1, LBAP[CON, GWY]	3
<i>Falco subbuteo</i> (Hobby / Hebog yr Ehedydd)	SJ24	3 records, between 12/05/2006 and 12/08/2010	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0062/003/01 , D0062/001/01	Bern, CITES, WBA, WCA1.1, LBAP[CON, GWY]	3

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Falco subbuteo</i> (Hobby / Hebog yr Ehedydd)	SJ24	09/08/2010	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0062/003/01	Bern, CITES, WBA, WCA1.1, LBAP[CON, GWY]	3
<i>Ficedula hypoleuca</i> (Pied Flycatcher / Gwybedog Brith)	SJ2746	2 records, between 11/05/2011 and 21/05/2011	Recorder Name Withheld	1 Male		Penycae, Tainant	Comments Withheld	D0062/003/01	S7, UKBR, WBR, LBAP[CON, GWY, SNP]	3
<i>Fringilla montifringilla</i> (Brambling / Pinc y Mynydd)	SJ2747	11/10/2007	Recorder Name Withheld	1+		Penycae, Bryn Goleu	Comments Withheld	D0062/001/01	WCA1.1, LBAP[CON]	3
<i>Haematopus ostralegus</i> (Oystercatcher / Pioden Fôr)	SJ2747	18/04/2010	Recorder Name Withheld	1		Penycae, Bryn Goleu	Comments Withheld	D0062/003/01	BDir2.2, UKBA, WBA, LBAP[CON, GWY]	3
<i>Hirundo rustica</i> (Swallow / Gwennol)	SJ2847	04/07/2009	Recorder Name Withheld	5		Llwyneinion	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
<i>Hirundo rustica</i> (Swallow / Gwennol)	SJ2947	04/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog, N	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
<i>Hirundo rustica</i> (Swallow / Gwennol)	SJ2946	04/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
<i>Hirundo rustica</i> (Swallow / Gwennol)	SJ2747	7 records, between 11/04/2004 and 20/05/2016	Recorder Name Withheld	7+; 5 Juvenile; 1 Adult; 200; 25; 30		Penycae, Bryn Goleu	Comments Withheld	D0062/001/01 , D0062/003/01 , D1297/021/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
<i>Hirundo rustica</i> (Swallow / Gwennol)	SJ2746	11/07/2009	Recorder Name Withheld	1		Penycae, Tainant	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
<i>Hirundo rustica</i> (Swallow / Gwennol)	SJ2848	11/07/2009	Recorder Name Withheld	80		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
<i>Hirundo rustica</i> (Swallow / Gwennol)	SJ2948	2 records, between 01/04/2009 and 04/07/2009	Recorder Name Withheld	1; 20		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[ANG, CON, GWY]	3
<i>Larus argentatus</i> (Herring Gull / Gwylan y Penwaig)	SJ2747	4 records, between 04/07/2009 and 20/03/2015	Recorder Name Withheld	50+; 20+; 1		Ty Mawr Reservoir, S	BTO Breeding Status: X; Comments Withheld	D1297/012/01 , D1297/020/01 , D0062/001/01	BAP, BDir2.2, S7, UKBR, WBR, LBAP[CON, GWY]	1
<i>Larus canus</i> (Common Gull / Gwylan y Gweunydd)	SJ2747	3 records, between 14/03/2015 and 15/10/2016	Recorder Name Withheld	7; 15+; 1		Ty Mawr Reservoir, S		D1297/020/01 , D1297/021/01	BDir2.2, UKBA, WBR	1
<i>Larus fuscus</i> (Lesser Black-backed Gull / Gwylan Gefnddu Leiaf)	SJ2946	04/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog	Comments Withheld	D0062/001/01	BDir2.2, UKBA, WBA, LBAP[CON, GWY, SNP]	3
<i>Larus fuscus</i> (Lesser Black-backed Gull / Gwylan Gefnddu Leiaf)	SJ2747	2 records, between 02/03/2013 and 14/03/2015	Recorder Name Withheld	20+; 10+		Ty Mawr Reservoir, S		D1297/012/01 , D1297/020/01	BDir2.2, UKBA, WBA, LBAP[CON, GWY, SNP]	1
<i>Linaria cannabina</i> (Linnet / Llinos)	SJ2747	3 records, between 23/05/2004 and 29/04/2016	Recorder Name Withheld	2; 1; 3		Penycae, Bryn Goleu	Comments Withheld	D0062/001/01 , D1297/021/01	Bern, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3
<i>Milvus milvus</i> (Red Kite / Barcud)	SJ24	17/03/2011	Recorder Name Withheld	1 Adult		Site Name Withheld	Comments Withheld	D0062/003/01	BDir1, CITES, WBA, WCA1.1, WCA9, LBAP[CON, GWY]	3
<i>Muscicapa striata</i> (Spotted Flycatcher / Gwybedog Mannog)	SJ2746	3 records, between 15/05/2010 and 21/05/2011	Recorder Name Withheld	1 Adult; 1 Male; 3 Male		Penycae, Tainant	Comments Withheld	D0062/003/01	Bern, S7, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Numenius arquata</i> (Curlew / Gylfinir)	SJ2747	10 records, between 03/05/2004 and 20/05/2016	Recorder Name Withheld	40 Adult; 26; 1; 5+; 4; c20; 2; 14		Penycae, Bryn Goleu	Comments Withheld; Marshy field south of reservoir	D0062/003/01 , D1297/020/01 , D0062/001/01 , D1297/021/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
<i>Numenius phaeopus</i> (Whimbrel / Coegylfinir)	SJ24	04/05/2016	Recorder Name Withheld	25		Site Name Withheld	Comments Withheld	D1297/021/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON, GWY]	1
<i>Pandion haliaetus</i> (Osprey / Gwalch y Pysgod)	SJ24	2 records, between 02/04/2004 and 07/09/2008	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0062/001/01	BDir1, CITES, UKBA, WBA, WCA1.1, LBAP[GWY]	3
<i>Passer domesticus</i> (House Sparrow / Aderyn y To)	SJ2846	04/07/2009	Recorder Name Withheld	3		Rhosllanerchrugog, W	Comments Withheld	D0062/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
<i>Passer domesticus</i> (House Sparrow / Aderyn y To)	SJ2947	04/07/2009	Recorder Name Withheld	4		Rhosllanerchrugog, N	Comments Withheld	D0062/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
<i>Passer domesticus</i> (House Sparrow / Aderyn y To)	SJ2946	04/07/2009	Recorder Name Withheld	4		Rhosllanerchrugog	Comments Withheld	D0062/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
<i>Passer domesticus</i> (House Sparrow / Aderyn y To)	SJ2747	6 records, between 04/07/2009 and 15/10/2016	Recorder Name Withheld	2+; 10+; 6; 6+; 2		Ty Mawr Reservoir, S	Comments Withheld	D1297/012/01 , D1297/020/01 , D0062/001/01 , D1297/021/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	1
<i>Passer domesticus</i> (House Sparrow / Aderyn y To)	SJ2746	3 records, between 11/07/2009 and 27/03/2015	Recorder Name Withheld	2; 6; 10		Penycae, Tainant	Comments Withheld	D0062/001/01 , D1297/020/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
<i>Passer domesticus</i> (House Sparrow / Aderyn y To)	SJ2848	04/07/2009	Recorder Name Withheld	2		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
<i>Passer domesticus</i> (House Sparrow / Aderyn y To)	SJ2948	04/07/2009	Recorder Name Withheld	4		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/001/01	S7, UKBR, WBA, LBAP[CON, FLI, GWY]	3
<i>Periparus ater</i> (Coal Tit / Titw Penddu)	SJ2846	04/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog, W	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[CON]	3
<i>Periparus ater</i> (Coal Tit / Titw Penddu)	SJ2747	25/03/2016	Recorder Name Withheld	1		Ty Mawr Reservoir, S		D1297/021/01	Bern, WBA, LBAP[CON]	1
<i>Periparus ater</i> (Coal Tit / Titw Penddu)	SJ2848	04/07/2009	Recorder Name Withheld	2 Juvenile		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[CON]	3
<i>Periparus ater</i> (Coal Tit / Titw Penddu)	SJ2948	04/07/2009	Recorder Name Withheld	2		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[CON]	3
<i>Pernis apivorus</i> (Honey-buzzard / Boda'r Mêl)	SJ	26/05/2016	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D1297/021/01	BDir1, CITES, UKBA, WBA, WCA1.1	4
<i>Phalacrocorax carbo</i> (Cormorant / Mulfran)	SJ2747	7 records, between 14/03/2015 and 09/12/2016	Recorder Name Withheld	1; 4; 2; 3		Ty Mawr Reservoir, S	BTO Breeding Status: X	D1297/020/01 , D1297/021/01	WBA, LBAP[CON, GWY]	1

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Phylloscopus trochilus</i> (Willow Warbler / Telor yr Helyg)	SJ2747	5 records, between 12/04/2016 and 26/05/2016	Recorder Name Withheld	2; 3		Mawr Reservoir, Bronwylfa		D1297/021/01	UKBA, WBR, LBAP[CON]	1
<i>Prunella modularis</i> (Dunnock / Llwyd y Gwrych)	SJ2846	04/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog, W	Comments Withheld	D0062/001/01	BAP, Bern, S7, UKBA, LBAP[CON]	3
<i>Prunella modularis</i> (Dunnock / Llwyd y Gwrych)	SJ2947	04/07/2009	Recorder Name Withheld	2		Rhosllanerchrugog, N	Comments Withheld	D0062/001/01	BAP, Bern, S7, UKBA, LBAP[CON]	3
<i>Prunella modularis</i> (Dunnock / Llwyd y Gwrych)	SJ2747	4 records, between 04/07/2009 and 02/11/2015	Recorder Name Withheld	2		Ty Mawr Reservoir, S	BTO Breeding Status: S; Comments Withheld	D1297/020/01 , D0062/001/01	BAP, Bern, S7, UKBA, LBAP[CON]	1
<i>Prunella modularis</i> (Dunnock / Llwyd y Gwrych)	SJ2746	2 records, between 04/07/2009 and 27/03/2015	Recorder Name Withheld	1; 3		Penycae, Tainant	Comments Withheld	D0062/001/01 , D1297/020/01	BAP, Bern, S7, UKBA, LBAP[CON]	3
<i>Prunella modularis</i> (Dunnock / Llwyd y Gwrych)	SJ2848	04/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	BAP, Bern, S7, UKBA, LBAP[CON]	3
<i>Prunella modularis</i> (Dunnock / Llwyd y Gwrych)	SJ2948	04/07/2009	Recorder Name Withheld	1		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/001/01	BAP, Bern, S7, UKBA, LBAP[CON]	3
<i>Pyrhula pyrrhula</i> (Bullfinch / Coch y Berllan)	SJ2848	11/07/2009	Recorder Name Withheld	2		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	BAP, S7, UKBA, WBR, LBAP[CON, DEN, FLI, GWY]	3
<i>Regulus regulus</i> (Goldcrest / Dryw Eurben)	SJ2747	2 records, between 02/11/2015 and 14/06/2016	Recorder Name Withheld	3; 4		Ty Mawr Reservoir, S		D1297/020/01 , D1297/021/01	Bern, WBA, LBAP[CON]	1
<i>Regulus regulus</i> (Goldcrest / Dryw Eurben)	SJ2848	11/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[CON]	3
<i>Regulus regulus</i> (Goldcrest / Dryw Eurben)	SJ2948	04/07/2009	Recorder Name Withheld	1		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/001/01	Bern, WBA, LBAP[CON]	3
<i>Sturnus vulgaris</i> (Starling / Drudwen)	SJ2747	3 records, between 04/07/2007 and 02/11/2015	Recorder Name Withheld	6; 200; 30		Ty Mawr Reservoir, S	Comments Withheld	D1297/020/01 , D0062/001/01	BAP, BDir2.2, Bern, S7, UKBR, WBR, LBAP[CON, FLI, GWY]	1
<i>Sturnus vulgaris</i> (Starling / Drudwen)	SJ2746	2 records, between 17/12/2008 and 21/05/2011	Recorder Name Withheld	102; 3 Fullgrown		Penycae, Tainant	Comments Withheld	D0062/001/01 , D0062/003/01	BAP, BDir2.2, Bern, S7, UKBR, WBR, LBAP[CON, FLI, GWY]	3
<i>Tadorna tadorna</i> (Shelduck / Hwyaden yr Eithin)	SJ2747	07/06/2010	Recorder Name Withheld	1		Penycae, Bryn Goleu	Comments Withheld	D0062/003/01	Bern, UKBA, WBA, LBAP[CON, GWY]	3
<i>Turdus iliacus</i> (Redwing / Coch Dan Adain)	SJ2747	4 records, between 14/03/2015 and 09/12/2016	Recorder Name Withheld	15+; c75; c20		Ty Mawr Reservoir, S		D1297/020/01 , D1297/021/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	1
<i>Turdus iliacus</i> (Redwing / Coch Dan Adain)	SJ2746	17/12/2008	Recorder Name Withheld	8		Penycae, Tainant	Comments Withheld	D0062/001/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	3
<i>Turdus philomelos</i> (Song Thrush / Bronfraith)	SJ2747	3 records, between 14/03/2015 and 04/05/2016	Recorder Name Withheld	1; 2		SJ2747 Penycae Bryn Golau	BTO Breeding Status: S	D1297/020/01 , D1297/021/01	BAP, BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	1
<i>Turdus philomelos</i> (Song Thrush / Bronfraith)	SJ2746	2 records, both on 27/03/2015	Recorder Name Withheld	1; 2		Tai Nant		D1297/020/01	BAP, BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	1
<i>Turdus philomelos</i> (Song Thrush / Bronfraith)	SJ2848	11/07/2009	Recorder Name Withheld	1		Rhosllanerchrugog, Bronwylfa	Comments Withheld	D0062/001/01	BAP, BDir2.2, Bern, S7, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3

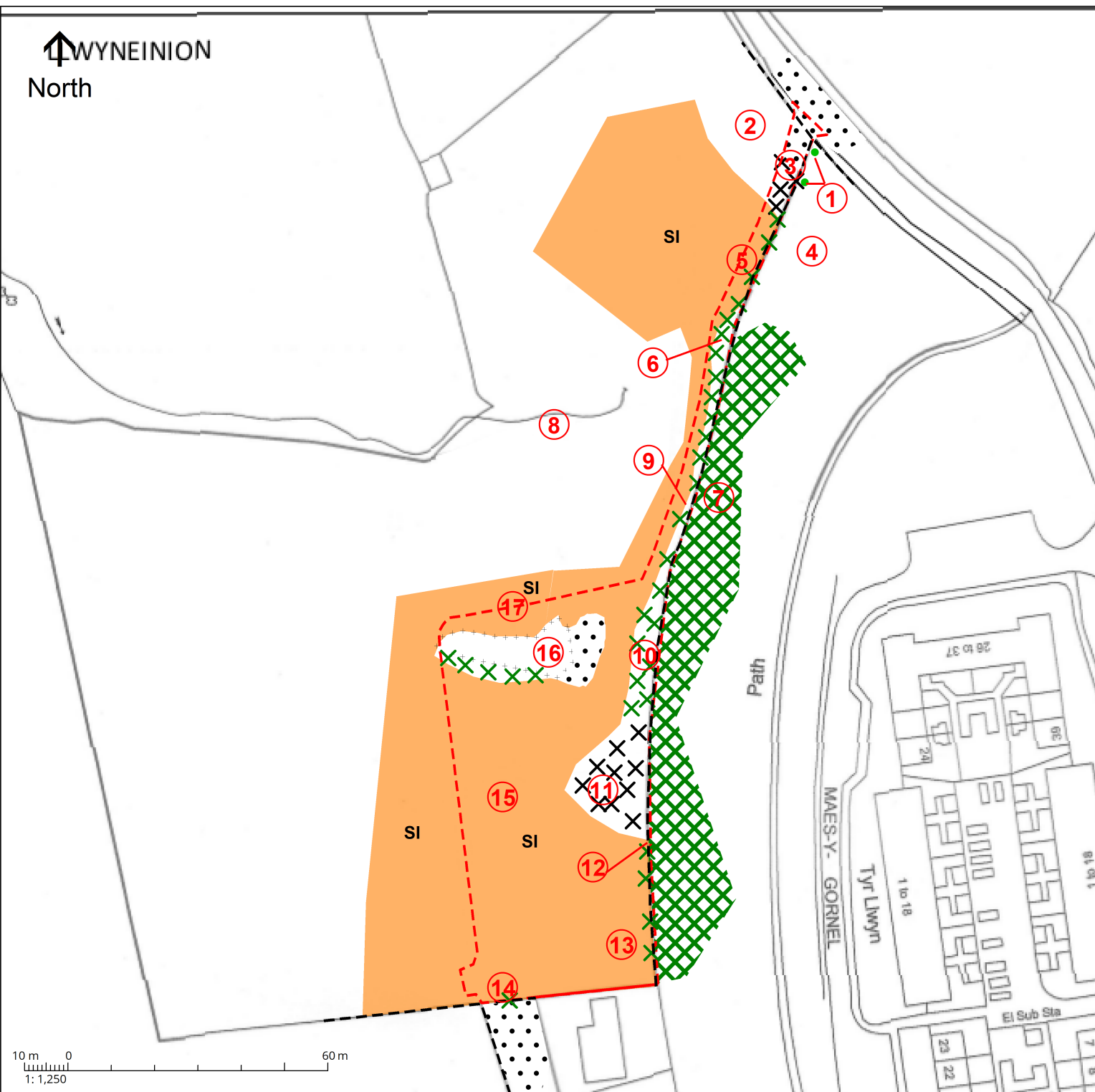
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Turdus pilaris</i> (Fieldfare / Socan Eira)	SJ2747	09/12/2016	Recorder Name Withheld	c50		Mawr Reservoir, Bronwylfa		D1297/021/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	1
<i>Turdus pilaris</i> (Fieldfare / Socan Eira)	SJ2746	2 records, between 17/12/2008 and 09/10/2011	Recorder Name Withheld	18; 6		Penycae, Tainant	Comments Withheld	D0062/001/01 , D0062/003/01	BDir2.2, UKBR, WBA, WCA1.1, LBAP[CON]	3
<i>Tyto alba</i> (Barn Owl / Tylluan Wen)	SJ24	4 records, between 2008 and 2012	Recorder Name Withheld	3 eggs, 3 hatched, 3 fledged	Nest	Site Name Withheld	Comments Withheld	D0036/001/04	Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
<i>Tyto alba</i> (Barn Owl / Tylluan Wen)	SJ24	8 records, between 2005 and 2012	Recorder Name Withheld		Nest	Site Name Withheld	Comments Withheld	D0036/001/04	Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
<i>Tyto alba</i> (Barn Owl / Tylluan Wen)	SJ24	13/08/2008	Recorder Name Withheld	4		Site Name Withheld	Comments Withheld	D0062/001/01	Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
<i>Tyto alba</i> (Barn Owl / Tylluan Wen)	SJ24	3 records, between 27/09/2014 and 16/11/2014	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
<i>Tyto alba</i> (Barn Owl / Tylluan Wen)	SJ24	13/01/2010	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0062/003/01	Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
<i>Tyto alba</i> (Barn Owl / Tylluan Wen)	SJ24	16/10/2010	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0062/003/01	Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
<i>Tyto alba</i> (Barn Owl / Tylluan Wen)	SJ24	4 records, between 16/03/2008 and 08/12/2010	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D0062/001/01 , D0062/003/01	Bern, CITES, WBA, WCA1.1, WCA9, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3
<i>Vanellus vanellus</i> (Lapwing / Cornchwiglen)	SJ28614808 (Selected from Interactive Map)	23/05/2016	Recorder Name Withheld	4 Adult	Live Sighting	Bronwylfa	2 pairs with 3 chicks between them	D1117/001/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	1
<i>Vanellus vanellus</i> (Lapwing / Cornchwiglen)	SJ2747	7 records, between 14/06/2005 and 25/03/2016	Recorder Name Withheld	1; 70+; 100; 50; 95; 3+		Ty Mawr Reservoir, S	BTO Breeding Status: X; Comments Withheld	D1297/020/01 , D0062/001/01 , D1297/021/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	1
<i>Vanellus vanellus</i> (Lapwing / Cornchwiglen)	SJ2746	4 records, between 24/04/2010 and 08/04/2015	Recorder Name Withheld	2 Female; 2 Male; 6; 4		Penycae, Tainant	Comments Withheld; BTO Breeding Status: P	D0062/003/01 , D1297/020/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3
<i>Vanellus vanellus</i> (Lapwing / Cornchwiglen)	SJ2948	3 records, between 28/04/2005 and 03/01/2016	Recorder Name Withheld	1 Female; 1 Male; 450		Wrexham, Pentrebychan, NE	Comments Withheld	D0062/001/01 , D0062/006/01	BDir2.2, S7, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3

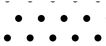
Mammals										
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Chiroptera</i> (Unknown Bat / Ystlum Anhysbys)	SJ2847	14/10/1997	Recorder Name Withheld	15		Site Name Withheld	Comments Withheld	D1486/001/01	EPS, S7, WCA5, LBAP[ANG, DEN, FLI, SNP]	3
<i>Erinaceus europaeus</i> (Hedgehog / Draenog)	SJ295468	3 records, between 2012 and 2015	Recorder Name Withheld	2; 3	Live Sighting			D1574/001/02 , D1688/001/02	Bern, S7, LBAP[ANG, CON, FLI, GWY]	3
<i>Erinaceus europaeus</i> (Hedgehog / Draenog)	SJ28414802 (Selected from Interactive Map)	12/07/2018	Recorder Name Withheld	1 Adult	Dead	Bronwylfa	Found dead in orchard	D1117/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	1
<i>Erinaceus europaeus</i> (Hedgehog / Draenog)	SJ283480	12/08/2013	Recorder Name Withheld			Bronwylfa	young, curled up on drive, attacked by something. took to vets but too badly injured to save.	D1638/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	3
<i>Erinaceus europaeus</i> (Hedgehog / Draenog)	SJ2847 (Selected from Interactive Map)	21/05/2014	Recorder Name Withheld	1 Adult	Live Sighting	Llwyneinion wood	Huge	D1383/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	4
<i>Erinaceus europaeus</i> (Hedgehog / Draenog)	SJ2848	18/10/2012	Recorder Name Withheld	1 Adult	Live Sighting	Tan y Llan		D1383/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	4
<i>Erinaceus europaeus</i> (Hedgehog / Draenog)	SJ2948 (Selected from Interactive Map)	07/05/2013	Recorder Name Withheld	1 Adult	Live Sighting	Legacy area	Road crossing	D1383/001/01	Bern, S7, LBAP[ANG, CON, FLI, GWY]	1
<i>Lepus europaeus</i> (Hare / Ysgyfarnog)	SJ2848 (Selected from Interactive Map)	05/06/2014	Recorder Name Withheld	1 Full-Grown		Bronwylfa	On lane, late evening	D1117/001/01	S7, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	4
<i>Meles meles</i> (Badger / Mochyn Daear)	SJ2746	29/09/2001	Recorder Name Withheld		Badger Sett	Site Name Withheld	Comments Withheld	D0059/001/01	Bern, PBA, LBAP[CON, DEN, FLI, WRE]	3
<i>Meles meles</i> (Badger / Mochyn Daear)	SJ2848	2 records, between 17/07/2001 and 25/02/2003	Recorder Name Withheld		Badger Sett	Site Name Withheld	Comments Withheld	D0059/001/01	Bern, PBA, LBAP[CON, DEN, FLI, WRE]	3
<i>Meles meles</i> (Badger / Mochyn Daear)	SJ2948	25/02/2003	Recorder Name Withheld		Badger Sett	Site Name Withheld	Comments Withheld	D0059/001/01	Bern, PBA, LBAP[CON, DEN, FLI, WRE]	3
<i>Mustela putorius</i> (Polecat / Ffwlbart)	SJ2848 (Selected from Interactive Map)	04/02/2012	Recorder Name Withheld	1 Adult		Bronwylfa, Wrexham	Night. trail camera.	D1117/001/01	Bern, HDir, RD2(UK), S7, LBAP[CON, FLI, GWY, SNP]	4
<i>Myotis mystacinus</i> (Whiskered Bat / Ystlum Barfog)	SJ2847	25/08/2000	Recorder Name Withheld	1		Site Name Withheld	Comments Withheld	D1486/001/01	Bern, EPS, HDir, RD2(UK), WCA5, LBAP[ANG, DEN, FLI, GWY, SNP]	3
<i>Neovison vison</i> (American Mink / Minc)	SJ2947 (Supplied by Original Recorder)	May 2008	Recorder Name Withheld	2		Garden near Pentre Bychan		D0967/003/01	INNS, WCA9	4
<i>Pipistrellus</i> (Pipistrellus Bat Species)	SJ2946 (Estimated (Centroid of Site))	28/07/2004	Recorder Name Withheld		Bat Roost	Site Name Withheld	Comments Withheld	D0026/274/01	EPS, WCA5, LBAP[ANG, DEN, FLI, SNP]	1
<i>Pipistrellus pipistrellus</i> (Common Pipistrelle / Ystlum Lleiaf Cyffredin)	SJ2946	2 records, between 16/05/2017 and 22/06/2017	Recorder Name Withheld	2; 1		Site Name Withheld	Comments Withheld	D1798/002/01	Bern, Bonn, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	1
<i>Pipistrellus pipistrellus</i> (Common Pipistrelle / Ystlum Lleiaf Cyffredin)	SJ2946	05/09/1996	Recorder Name Withheld			Site Name Withheld	Comments Withheld	D1486/001/01	Bern, Bonn, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3

Plants										
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Cotoneaster simonsii</i> (Himalayan Cotoneaster / Cotoneaster Simons)	SJ2847	10/11/2014	Recorder Name Withheld			Llwyneinion	Bird-sown	D1169/004/02	INNS, WCA9	3
<i>Crocospia pottsii x aurea</i> = <i>C. x crocosmiiflora</i> (Montbretia / Crib-y-Ceiliog)	SJ2847	10/11/2014	Recorder Name Withheld			Llwyneinion		D1169/004/02	INNS, WCA9	3
<i>Crocospia pottsii x aurea</i> = <i>C. x crocosmiiflora</i> (Montbretia / Crib-y-Ceiliog)	SJ2946	14/09/2014	Recorder Name Withheld			Rhosllanerchrugog		D1169/004/02	INNS, WCA9	3
<i>Crocospia pottsii x aurea</i> = <i>C. x crocosmiiflora</i> (Montbretia / Crib-y-Ceiliog)	SJ2746	30/07/2015	Recorder Name Withheld			Tainant		D1169/004/02	INNS, WCA9	3
<i>Fallopia japonica</i> (Japanese Knotweed / Clymog Japan)	SJ292465	07/06/2008	Recorder Name Withheld		Reported to recorder	Wrexham County	Back of hairdressers, report to council	D1286/001/02	INNS, WCA9	4
<i>Fallopia japonica</i> (Japanese Knotweed / Clymog Japan)	SJ2947	14/10/2015	Recorder Name Withheld			Talwrn		D1169/004/02	INNS, WCA9	3
<i>Fallopia japonica</i> (Japanese Knotweed / Clymog Japan)	SJ2946	14/10/2015	Recorder Name Withheld			Rhosllanerchrugog		D1169/004/02	INNS, WCA9	3
<i>Lamiastrum galeobdolon</i> <i>subsp. argentatum</i> (Variegated Yellow Archangel)	SJ2746	30/07/2011	Recorder Name Withheld			Tainant	1st for SJ 24?	D1169/004/02	INNS, WCA9	3
<i>Meconopsis cambrica</i> (Welsh Poppy / Pabi Cymreig)	SJ2946	14/10/2015	Recorder Name Withheld			Rhosllanerchrugog		D1169/004/02	RD2(UK)NS, RD2(UK)S, LBAP[CON, DEN], LI[VC48, VC49]	3
<i>Prunus laurocerasus</i> (Cherry Laurel / Coeden Lawrgeirios)	SJ2946	14/10/2015	Recorder Name Withheld			Rhosllanerchrugog		D1169/004/02	INNS	3
<i>Rhododendron ponticum</i>	SJ2946	10/11/2014	Recorder Name Withheld			Rhosllanerchrugog		D1169/004/02	INNS, WCA9	3
<i>Sinapis arvensis</i> (Charlock / Mwstard Gwyllt)	SJ29284738	10/11/2014	Recorder Name Withheld			Talwrn	Several plants on field margin	D1169/004/02	RD1(Wales)VU	3

Reptiles and Amphibians										
Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V
<i>Lissotriton vulgaris</i> (Smooth Newt / Madfall Ddwr Gyffredin)	SJ28564793 (Selected from Interactive Map)	21/05/2016	Recorder Name Withheld	3 Adult		Bronwylfa	Torch survey	D1117/001/01	Bern, WCA5, LBAP[CON, DEN, FLI]	4
<i>Triturus cristatus</i> (Great Crested Newt / Madfall Ddwr Gribog)	SJ28634741 (Supplied by Original Recorder)	2 records, between 1992 and 21/05/1992	Recorder Name Withheld	Present				D1122/001/01 , D0137/001/01	Bern, EPS, HDir, RD2(UK), S7, WCA5, LBAP[ANG, CON, DEN, FLI, SNP, WRE]	3

Statutory Sites intersecting 1000m buffer	None
Wildlife Sites intersecting 1000m buffer	None
NWWT Reserves intersecting 1000m buffer	None
RSPB Reserves intersecting 1000m buffer	None
RIGS intersecting 1000m buffer	None
Ancient Woodland intersecting 1000m buffer	36792: Restored Ancient Woodland Site (54m), 31880: Ancient Semi Natural Woodland (553m), 36794: Restored Ancient Woodland Site (657m), 31881: Ancient Semi Natural Woodland (671m), 36793: Restored Ancient Woodland Site (709m), 31886: Ancient Semi Natural Woodland (995m)
Phase I Habitats intersecting 1000m buffer (Habitat at central point shown in red, if found)	A.1.1.1: Semi-natural Broad-leaved Woodland (5.63% / 176,933 sq.m), A.1.1.2: Planted Broad-leaved Woodland (2.14% / 67,299 sq.m), A.1.2.2: Planted Coniferous Woodland (0.22% / 6,820 sq.m), A.2.1: Dense Scrub (1.22% / 38,460 sq.m), B.2.2: Semi-improved Neutral Grassland (0.57% / 17,993 sq.m), B.4: Improved Grassland (54.44% / 1,710,088 sq.m), C.1.1: Bracken (0.13% / 3,938 sq.m), C.3.1: Tall Ruderal Herb (0.08% / 2,642 sq.m), J.1.1: Arable (1.98% / 62,348 sq.m), J.1.2: Amenity Grassland (4.84% / 152,167 sq.m), J.1.3: Ephemeral/Short Perennial (0.22% / 6,986 sq.m), J.3.6: Buildings (20.55% / 645,655 sq.m), J.3.7: Track (0.03% / 868 sq.m), NA: Not Accessed Land (0.93% / 29,155 sq.m)



-  Dense/ continuous scrub
-  Scattered scrub
-  Individual broad-leaved tree
-  SI Semi-improved neutral grassland
-  Ephemeral/ short perennial
-  Hard-standing/ bare ground
-  Other habitat (brash pile)
-  Wall
-  Fence
-  Survey site boundary
-  Target Note

C383 Proposed Residential Development, land at Llwyneinion, Wrexham - Ecological Appraisal

Figure 1 - Extended Phase 1 Habitat Survey

Date: 03/10/2018

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10 m 0
1: 1,250
60 m