



CSM
ECOLOGY

Preliminary Ecological
Assessment

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MR ANDREW HARRIS

**PRELIMINARY
ECOLOGICAL ASSESSMENT**

PENCOED CAE FARM

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Executive Summary

In September 2021, CSM Ecology was commissioned by Mr Andrew Harris to undertake a Preliminary Ecological Assessment (PEA) of land at Pencoed Cae Farm, Merthyr Tydfil, CF48 4AJ. The assessment was to inform a planning application to build a single detached residential dwelling in the footprint of a previously demolished house. The Aderyn unique reference for the biological data search for the site is 0212-731.

The report comprises the results of the PEA undertaken, including a data search and results of records held on protected species and statutory and non-statutory site designations pertaining to the site and its immediate surroundings.

- The site is in a rural location off the A 4060 on the southern outskirts of Merthyr Tydfil.
- The development proposal is to build a single residential dwelling in the footprint of a previously demolished house.
- It is not anticipated that the proposed development will have an impact upon any of the statutory or non-statutory sites marginally outside the 2km buffer nor the protected species within 2km of the site boundary.
- Given the lack of habitats of conservation concern on site it is not considered a Habitat Regulations Assessment or further ecological surveys are required for this development proposal.

1. Introduction

1.1. CSM Ecology was commissioned by Mr Andrew Harris to undertake PEA of land at Pencoed Cae, Merthyr Tydfil, CF48 4AJ (hereafter referred to as “site”). The survey was undertaken on 20/09/2021.

1.2. CSM Ecology attended the site to undertake the PEA. This report details the results of the PEA including the results of a data and records held on protected species, and statutory and non-statutory site designations pertaining to the site and its immediate surroundings. The Aderyn unique reference for the biological data search for the site is 0212-731.

1.3. The purpose of the PEA was to:

- Identify the major habitats present.
- Identify potential for legally protected species to be present.
- Recommend additional ecological surveys likely to be required.

1.4. The PEA included a desktop review, consultations and a site visit. The results of this investigation were used to assess the nature conservation importance of the site. The potential for each habitat to support protected species was also noted. A PEA does not constitute a full survey for protected species to standard survey methodologies but is used as a tool to recommend which surveys are required for protected species (or other species of significant nature conservation interest). If required, recommendations for further ecological surveys are made at the end of the report.

2. Site description

2.1. The site lies on the southern outskirts of Merthyr Tydfil (approximate NGR SO 06387 05668 Figure 1).

2.2. There are no natural habitat features within the development site; surrounding countryside of the site has the following habitat features include:

- Improved grassland.
- Common ruderal vegetation.
- Woodland ecotones.
- Field boundary mature trees
- Unmanaged hedgerow

The Site is located 1.5km south-east of the centre of Merthyr Tydfil in the Mountain Hare region of the town. The Site is located within a semi-rural setting on the westerly facing slopes of the Taff Valley at the former Pencoed Cae Farm which is currently occupied by agricultural buildings which it is understood are to be retained under the current proposals.

Fig 1. Site location indicated as Point B on the figure 1



Fig 2. Site and surrounding area.

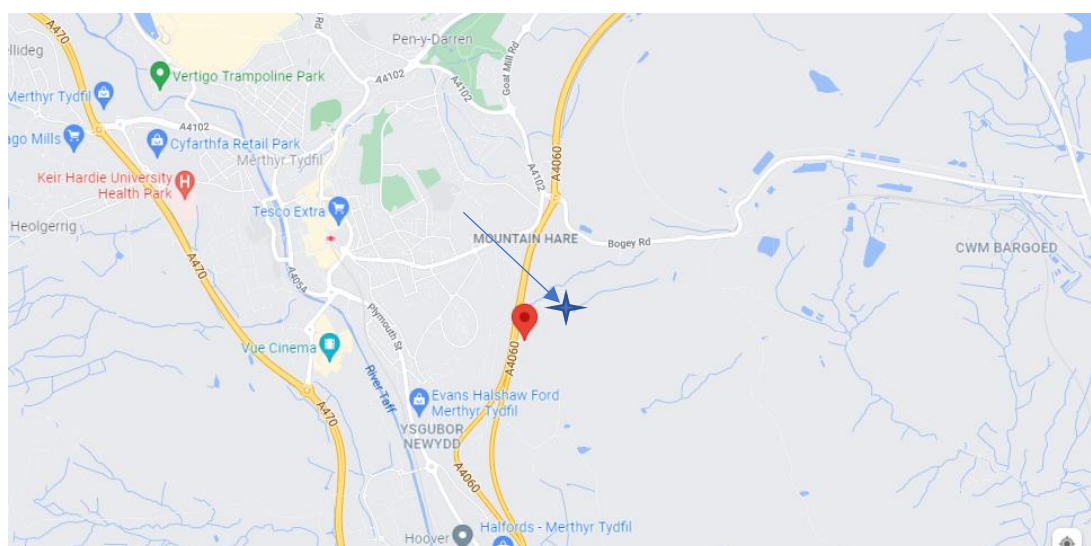
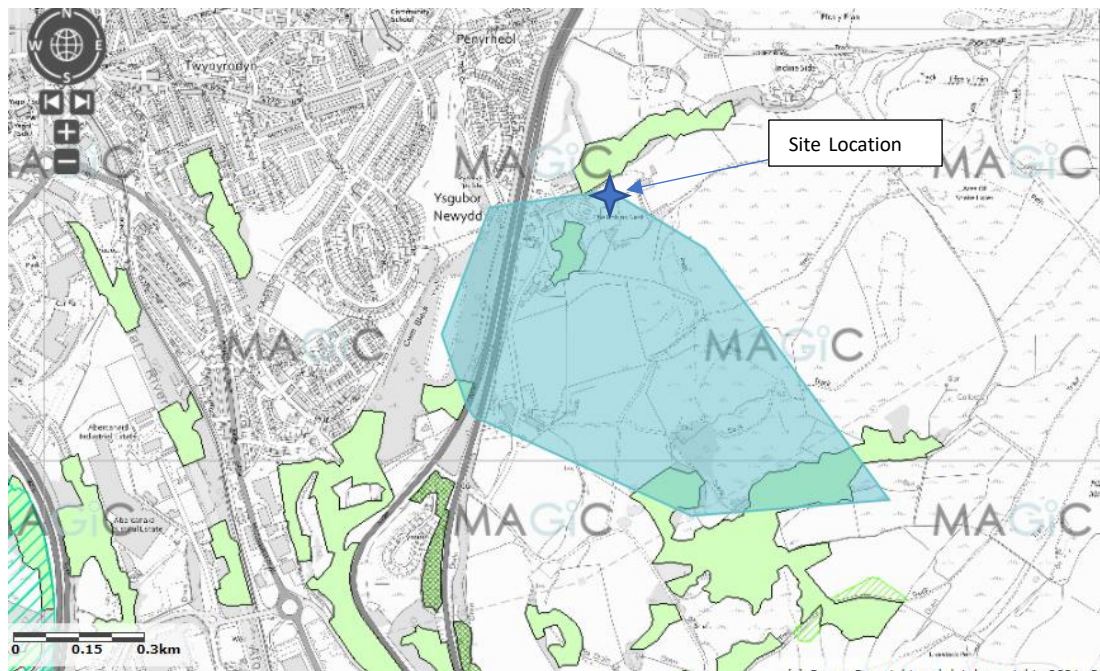


Fig 3. Site showing main habitats present in surrounding area.



Key:

- Priority Habitat Inventory - Deciduous Woodland
- Lowland meadow
- Broadleaved woodland
- Priority Habitat Inventory – Ancient and Semi-Natural Woodland
- Quality semi-improved grassland

Note: Creating detailed habitat maps (e.g. to NVC, Phase 1 Habitat Survey standard) of the site is inappropriate given the negligible ecological value of the habitats present within the development footprint. The site comprises improved grassland peripheral scattered trees, hard standing and buildings. Therefore, listing NVC communities or a detailed Phase 1 habitat survey map is not considered necessary due to the lack of natural habitats.

Fig. 5. Existing site showing surrounding habitat and proposed development area.



Fig 7. Existing site plan



Survey Methodology

2.4. The desktop study involved conducting database searches for statutory designated site and non-statutory designated sites, legally protected species and features of interest within and immediately surrounding the site in a 2km search radius, which was centred on the site (i.e. NGR: SO 06387 05668). The baseline conditions were based on a review of existing available information including:

- MAGIC (Multi-Agency Geographical Information for the Countryside);
- Ordnance Survey mapping (to identify potentially notable habitats);
- Aerial photography (e.g. Google mapping);
- MTCB Nature Recovery Action Plan;
- UK Biodiversity Action Plan (UKBAP);
- SEWBRcC

3.3 Planning context and legislation – Planning policies protect non-statutory sites of wildlife importance designated by Local Planning Authorities from development that would damage their nature conservation importance. Planning policies also consider species protected by legislation and proper provision is required to safeguard either the species or their habitat, or both, using appropriate planning conditions and/or legal agreements. Natural features including trees, hedgerows and streams, particularly those acting as wildlife corridors, and target species and habitats identified in Biodiversity Action Plans (BAP's). They are also afforded different levels of protection by planning policies, which require replacement for any losses in development proposals. Habitat enhancements for wildlife also require consideration, including target species and habitats identified in the BAP Glamorgan.

2.5. **Quality Assurance** – CSM Ecology carried out an ecological survey of the site in September 2021 led by Karl Dentith BSc, Principal Ecologist. Karl has over twenty years' experience in environmental management and ecology and extensive training and experience of Preliminary Ecological Surveys and Extended Phase 1 Habitat Surveys and holds a wide range of protected species licences. Karl regularly co-ordinates and project manages a full range of habitat and protected species surveys.

2.6. **Weather conditions during survey** – Overcast and dry.

2.7. **Field survey** – The field survey comprised a walkover inspection of the land and habitats present. The survey broadly followed the 'Extended Phase 1' methodology as set out in 'Guidelines for Baseline Ecological Assessment' (Institute of Environmental Assessment, 1995), which is a development of the method described in the 'Handbook for Phase 1 Habitat Survey – a technique for environmental audit' (Joint Nature Conservation Committee, 2007). The Extended Phase 1 Habitat Survey provides information on the habitats in the survey area and identifies actual or potential presence of legally protected or otherwise notable species/habitats in or immediately adjacent to the site. Target notes (which give a more detailed description of an area in terms of habitat and species composition or means of highlighting a feature of ecological interest), are given in Appendix A, with associated photographs where possible.

2.8. **Plant names** – Plant names follow 'New Flora of the British Isles' (Stace, 1997). The common and scientific name of each botanical species is provided when first mentioned in the text, but only the common name is stated thereafter.

2.9. **Further surveys** – In addition to establishing the baseline ecological potential of the site, the survey is intended to identify any areas which may need further surveys regarding any potential development, during the appropriate season. Habitats with the potential for supporting legally protected or national/local BAP (Biodiversity Action Plan) species, including, but not limited to, bats, breeding birds, botanical plants, amphibians and reptiles, were noted.

2.10. **Limitations** – Ecological surveys are limited by factors that affect presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in September 2021 and limited to the time of year and climatic conditions of the day.

3. Baseline Conditions

3.1. Satellite imagery and ordnance survey maps

From the aerial photography and study of OS maps there are no standing waterbodies in close proximity to the site with the exception of a stream fed swale used for cattle. The nearest pond to the site is located 507m N, this was known to host great-crested newt (GCN). However, the development proposal will not affect this or any other water feature associated European Protected Species.

3.2. Statutory and non-statutory designated sites

Aderyn lists the following statutory and non-statutory designated sites within 1km of the site.

3.3. No Statutory designated sites were identified within 2km of the site.

- 3.4. There are four non- statutory sites according to the Aderyn data search, which include an ancient and semi natural woodland and a restored ancient woodland both adjoining and found directly to the north of the site. Aderyn also lists two SINCS (adopted), Glynmil found 97m to the south and Merthyr Common South 495m to the south of the site.

National Planning Policy

Planning Policy Wales (PPW Edition 11) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, MTANs and policy clarification letters comprise national planning policy

The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties such as the Socio-economic Duty. A well-functioning planning system is fundamental for sustainable development and achieving sustainable places.

PPW promotes action at all levels of the planning process which is conducive to maximising its contribution to the well-being of Wales and its communities. It encourages a wider, sustainable and problem-solving outlook which focuses on integrating and addressing multiple issues rather than on an approach which is fragmented, un-coordinated and deals with issues in isolation. It provides an opportunity to remove any actual or perceived problems in current approaches and stimulate and support innovative and creative ideas as well as high standards of evidence and assessment to underpin the preparation of development plans and strategies and individual proposals. Monitoring and learning from development outcomes so as to drive sustainable improvements in planning practice is also important.

Local, Regional and National Planning Policy

The Act requires the Welsh Ministers to publish a National Natural Resources Policy outlining their policies on how our natural resources can be sustainably managed. The National Natural Resources Policy will be informed by the best available evidence as provided in the State of Natural Resources Report. It will also take account of other sources of information, such as the Future Trends Report and evidence from our progress towards the Well-being goals contained within the Well-being of Future Generations (Wales) Act 2015. Through the National Natural Resources Policy the Welsh Ministers will set the priorities, risks and opportunities for the sustainable management of natural resources in Wales. It will set the high level direction of travel including where sustainable management of natural resources can help to optimise economic, social, cultural and environmental opportunities for now and the long term. This will also include actions that the Welsh Ministers will take in relation to climate change and biodiversity. This will promote a joined-up approach to the policies that the Welsh Government develops, as well as supporting the achievement of the well-being goals in the Well-being of Future Generations (Wales) Act 2015 and the National Development Framework in the Planning (Wales) Act 2015. The National Natural Resources Policy will also set the context for area statements produced by Natural Resources Wales, ensuring that the national priorities for sustainable management of our natural resources inform our approach to local delivery.

3.5. Merthyr Tydfil Nature Recovery Action Plan

3.6. The Environment (Wales) Act 2016 (Section 6, Subsection 1) introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of their functions in relation to Wales. The S6 duty – public authorities must seek to maintain and enhance biodiversity wherever possible within the proper exercise of their functions and in doing so, seek to promote the resilience of ecosystems. Public authorities must prepare and publish a plan showing how the S6 duty will be fulfilled (the S6 plan).

3.7. This Merthyr Tydfil Nature Recovery Action Plan (MTNRAP) document prepared by Merthyr Tydfil County Borough Council (MTCBC), replaces the previous Merthyr Tydfil Biodiversity Action Plan (MTBAP) 2014-2019, and represents the S6 plan for Merthyr Tydfil County Borough, in accordance with Welsh Government Guidance: Environment (Wales) Act 2016 Part 1: Guidance for Section 6 – The Biodiversity and Resilience of Ecosystems Duty. The MTNRAP, in line with this guidance, sets out the measures undertaken by MTCBC to comply with the S6 duty. The MTNRAP (S6 plan) setting out what MTCBC has done to comply with the duty must be published by the end of 2019. Every three years after this date, an update to the MTNRAP (S6 plan) will need to be published, with the next document available by the end of 2022. The MTNRAP will be a dynamic document and will be updated and amended when relevant information becomes available, for example, the Area Statements due from Natural Resources Wales.

The National Planning Policy Framework (NPPF) published in 2012 provides guidance for local planning authorities on the content of their Local Plans but is also a material consideration in determining planning applications. The NPPF has replaced much existing planning policy guidance.

4. UK and local biodiversity action plans

A review of the National Biodiversity Action Plan and the MTCBC Nature Recovery Action Plan highlights the habitats and species that are relevant to the proposed development site; shown in Tables 1 and 2.

Table 1. Local Nature Recovery Action Plan Habitats

LBAP HABITATS	UKBAP HABITATS
Urban	No Equivalent
Enclosed Farmland	Arable Field Margins and Grassland Habitats
Semi-Natural Grassland	Arable Field Margins and Grassland Habitats
Native Woodland	Covered by several arboreal habitats
Ffritid	No Equivalent
Forestry	No Equivalent
Heath	Upland or Lowland Heathland
Green Urban	No Equivalent
Wetland	Covered under several habitats
Mineral Habitat	Covered under several habitats
Inland Rock	Inland Rock and Scree
Rivers and Streams	Rivers and streams

Table 2. Local Nature Recovery Action Plan Species

LBAP Species	UKBAP (Yes / No)
Bats	Yes
Dormouse	Yes
Great Crested Newt	Yes
Water Voles	Yes
Otter	Yes

4.1. Protected species and legislation

The legislation relating to the species in Table 2 is included in Appendix B. The following information summarises the protected species data.

4.1.1. Badger *Meles meles* – During the site survey no active badger setts were identified in the proximity of the site. There is suitable foraging and breeding habitat for badgers in the surrounding the area. Aderyn holds none records within 1km of the site.

4.1.2. Bats – The site periphery offers foraging habitat for bat species along the woodland edge and open fields and roosting potential within mature trees and structures within the locality of the site. Aderyn holds several records for bats within 1km of the site.

4.1.3. Amphibians – Aderyn holds one record for Great Crested-Newt (*Triturus cristatus*) 507m to the north.

4.1.4. Reptiles – During the site survey no reptiles were identified. The site is generally considered unsuitable as it lacks any natural features that are associated with breeding reptile populations. Aderyn holds no records for reptiles within 1km of the site

4.1.5. Terrestrial invertebrates – During the site survey no protected or notable terrestrial invertebrates were identified. Aderyn holds records of important invertebrates although associated with different habitats to those found at the site.

4.1.6. Birds – Apart from the improved grassland field and trees surrounding the site access track there are no habitats that can be utilised by breeding and foraging birds within the development footprint. *Hirundines* (swallows swifts and martins) frequent the area although no old or current nests were located in the old buildings. The buildings at the site were also considered unsuitable for breeding barn owls either due to access, openness or lack of a suitable nesting platform.

The field boundary will attract woodland and garden bird species and the surrounding trees will provide nesting habitat for a range of species. Aderyn holds records for a number of important bird species. Birds that are listed on Schedule 1 of the Wildlife and Countryside Act 1981 are fully protected by law. The British Trust for Ornithology has identified Species of Conservation Concern (SoCC) which have suffered population declines. The “red” listed birds are:

- Globally threatened;
- Historical population decline in UK during 1800-1995;
- Rapid decline (>50%) in UK breeding population in last 25 years; and
- Rapid contraction (>50%) of UK breeding range over last 25 years.

Table 3. Notable bird records from within 2km of the site

Common name	Latin name	Protected Status
Starling	<i>Sturnus vulgaris</i>	UKBAP, Red
Barn owl	<i>Tyto alba</i>	Shedule 1
Bullfinch	<i>Pyrrhula pyrrhula</i>	UKBAP, Amber
Song Thrush	<i>Turdus philomelos</i>	UKBAP, Red list
Dunnock	<i>Prunella modularis</i>	UKBAP
Fieldfare	<i>Turdus pilaris</i>	RDB
Redwing	<i>Turdus iliacus</i>	RDB

4.2. **Water vole** *Arvicola terrestris*

No evidence of water vole was identified during the site survey as there are no suitable wetland habitats on site. Aderyn has no records of water vole within 1km of the site.

4.3. **Otter** *Lutra lutra*

No evidence of otter was identified during the site survey and the site is considered unsuitable as are the small watercourses in proximity to the site. Aderyn holds no records of otter within 1km of the site.

4.4. **Dormouse** *Muscardinus avellanarius*

No evidence of Dormouse was identified during the site survey (e.g. old nests in bramble scrub etc.). The woodlands bordering the north of the site are suitable for Dormouse. Aderyn holds no records for dormouse within 1km of the site.

4.5. **Flora**

The intended development area of the site is defined and lies solely within the footprint of previous structure and has no suitable habitat to host any of the protected plant species and is generally floristically poor.

5.7 **Invasive species**

During the site survey no invasive species were identified on or adjacent to the site.

5. **Conclusions and recommendations**

5.1. **Overview**

It is not anticipated that the proposed development will result in any negative impacts on statutory or non-statutory sites on or within 2km of the site or result in the loss or affect habitats of principle importance. It is understood that the development proposals are to be confined to an area with little conservation importance. The site is presently in need of development; the buildings have little conservation value. The primary consideration is the proximity to the adjacent woodland and its potential as a foraging corridor and roosting habitat for bat species. There is however ample room between the proposed building and the woodland ecotones for any bats to forage unhindered and it is not anticipated that the proposed dwelling will impact on the bats or the woodland and its associated species as long as appropriate lighting is considered within the proposals.

5.2. **Recommendations for species**

5.2.1. Bats

The wider site has potential to support foraging bats, but it is unlikely that the proposals will impact on local populations as long as any increase in lux levels is negligible and lighting levels are considered in the proposals and are line with

current best practice. There must be no lighting of the woodland habitat to the north. A dark corridor must be maintained. It is understood that the proposed internal and external lighting schemes will be provided by the architect within the building proposal and will conform Elevation with current best practice for bats.<https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>. It is further understood that the proposed buildings plans will be to assess any impacts of internal lights on the nearby woodland. And that above mitigation will be conditioned for the final design. Further mitigation for bats should include 2x Schwegler FR2, 2x Schwedler FDT bat boxes and 2x generic wooden roost boxes to be attached to trees and structures at the site and be positioned by a qualified ecologist and annotated on a plan to be provided if planning permission is granted.

5.2.2. Birds

The preliminary survey has confirmed that the site has the potential to support a range of bird species associated with gardens and woodland edge habitats. Any work near the surrounding trees, or if any trees and shrubs are to be removed, then it is considered prudent that a breeding bird survey be undertaken if the proposed works are to take place within the breeding bird season (March – September inclusively). Any clearance works will be carried out outside of the breeding season unless supervised by an ecologist, if active nests are found a suitable buffer would need to be adhered to until the young have fledged the nest. Species including wren, robin, redstart and spotted flycatchers will readily breed in old buildings. Mitigation for birds should include to open fronted and to closed fronted multi purposed bird boxes to be positioned by a qualified ecologist at the site which will be annotated on a plan to be provided if planning permission is granted

5.2.3. Mammals

No mammals were identified during the survey and the site is considered unsuitable for protected mammals with the exception of the access road hedgerow which it is understood will not be disturbed under the current proposals. Mitigation for mammals to include 2x hedgehog boxes to be placed in hedgerow bases at the site and to be positioned by a qualified ecologist.

5.2.4. Insects

Mitigation for insects should include 2x insect houses to be placed in close proximity to the development which will be annotated on a plan to be provided if planning permission is granted.

5.3. **Ecological surveys**

The site is of low conservation value due to the lack of habitats of principal importance and the scarcity of suitable features to support protected species. If the development proposals were to significantly change then further surveys would be required. Table 5 provides information on the range of ecological surveys.

Table 5. Species/Genera specific ecological surveys

Species/ Feature	Location	Recommended survey	Potential impact/ mitigation required	Survey timing
Badger		Badger survey.	Mitigation may be required.	All year.
Bats	Woodland, scattered trees and buildings	Internal and external inspections. Emergence and re-entry surveys. Activity survey.	Mitigation may be required.	May to September. May to September
Great Crested Newts	Water bodies	Presence/ absence survey plus follow up population estimate survey if required.	Mitigation may be required.	Mid-March – mid-June (with at least 2 visits taking place between mid-April and mid-May)

Species/ Feature	Location	Recommended survey	Potential impact/ mitigation required	Survey timing
Terrestrial Invertebrates	Bare ground, woodland, scrub and grassland.	Invertebrate scoping survey.	Mitigation may be required.	May to August
Aquatic Invertebrates	Waterbodies	Aquatic invertebrate scoping survey.	Mitigation may be required.	Mid-July to September
Notable Flora	Woodland and marginal/emergent.	Botanical survey.	Mitigation may be required.	June to August

Appendices

Appendix A: Target notes and images of site.

Target Note (TN)	Description	Image
TN1	Over view of site for the intended development with concrete building. See Phase 1 Habitat Map Appendix E	 A wide-angle photograph of a muddy, unpaved area with puddles. In the background, there are several buildings, including a large concrete structure and a smaller building with a corrugated metal roof. A yellow excavator is visible on the left side of the site.
TN2	View of the area of bare ground which is the location for the intended dwelling. See Phase 1 Habitat Map Appendix E	 A photograph showing a grassy area with a patch of bare, dark soil in the foreground. In the background, there are several buildings, including a large concrete structure and a smaller building with a corrugated metal roof. A yellow excavator is visible on the right side of the site.

TN3	Open cattle shed found at the site. See Phase 1 Habitat Map Appendix E	
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Target Note (TN)	Description	Image
TN4	View across the farm with its associated agricultural buildings.	

TN5	Concrete structure found at the site. See Phase 1 Habitat Map Appendix E	
TN6	The interior of the concrete storage building at the site.	

Appendix B: Legislation (Wales)

Legislative Framework

The Conservation of Habitats and Species 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended) underpin nature legislation in Wales.

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the 2017 Regulations so that they operate effectively. Most of these changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The Wildlife and Countryside Act 1981 (as amended) makes it an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Environment Act (Wales) 2016

Section 6 of the Environment Act places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'.

Section 7 of the Environment Act requires The Welsh Ministers to publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales. This is known as the S7 list

Species

Badgers

Badgers and their setts are protected under the Protection of Badgers Act (1992), which consolidated and added to previous legislation. It is illegal to wilfully kill or injure a badger or to interfere with a sett, unless a license is granted. A license may be granted by Natural Resources Wales for the purpose of development (among other reasons) as defined in Section 55 (1) of the Town and Country Planning Act 1990.

Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and The Conservation of Habitats and Species 2017 (as amended). They are protected by law against all, but not limited to, the following:

- Intentional or reckless killing, injuring, taking;
- Damage to, destruction of, obstruction of access, to any structure or place used by a scheduled animal for shelter or protection; and
- Disturbance of animal occupying such a structure or place.

Great crested newt

Great crested newt and their habitats, both aquatic and terrestrial, are protected under the Wildlife & Countryside Act 1981 (as amended) and The Conservation of Habitats and Species 2017 (as amended). For any development that affects great crested newts it must be first demonstrated that:

- There are no alternatives;
- There are over-riding reasons of public interest or safety;
- It will not adversely affect the conservation status of the species.

Any works affecting the breeding or foraging habitat of the species is subject to a license from Natural Resources Wales. A license is only granted where compliance with these tests is demonstrated.

Breeding Birds

Under the Wildlife & Countryside Act (1981), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- Intentionally take or destroy the egg of any wild bird;
- Have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- Have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- Use traps or similar items to kill, injure or take wild birds;
- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations; or
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs of young, or disturb the dependent young of such a bird.

Rare species listed in Schedule 1 Part 1 are given further protection, including special increased penalties under Subsection 1 (5) as amended by the Countryside and Rights of Way Act 2000. If any person intentionally or recklessly disturbs any wild bird

included in Schedule 1 while it is building a nest, or is in or near the nest, containing eggs or young.

The British Trust for Ornithology (BTO) has a list of birds that are Species of Conservation Concern. These birds are not legally protected but where they are found on site, they should be given planning consideration. The criteria for birds listed as amber (medium conservation concern) include:

Historical population decline during 1800 -1995, but recovering: population has more than doubled over last 25 years;

- Moderate (25-49%) decline in UK breeding population over last 25 years;
- Moderate (25-49%) contraction of UK breeding range over last 25 years;
- Moderate (25-49%) decline in UK non-breeding population over last 25 years;
- Species with unfavourable conservation status in Europe (Species of conservation Concern);
- Five year mean of breeding pairs in the UK;
- >50% of UK breeding population in 10 or fewer sites;
- >50% of UK non-breeding population in 10 or fewer sites

Water vole

Under Section 9 of the Wildlife and Countryside Act 1981(as amended) (W and CA) it is illegal to:

- Intentionally kill, injure or take any wild water vole. 9(1)
- Intentionally or recklessly damage or destroy, any structure or place which any wild water vole uses for shelter or protection. 9(4)(a)
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for that purpose. 9(4)(b)
- Intentionally or recklessly obstruct access to any structure or place which any wild water vole uses for shelter or protection. 9(4)(c)

Reptiles

There are six species of native reptile in the UK. Only two species, smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are fully protected under UK and European Legislation. They are listed on Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and The Conservation of Habitats and Species 2017 (as amended). Under these legislations it is unlawful to:

- Deliberately or intentionally kill, injure or take (capture) or disturb sand lizards and smooth snakes;
- Deliberately take or destroy the eggs of sand lizards;
- Damage or destroy a breeding site or resting place, or intentionally damage a place used for shelter and protection;
- Intentionally obstruct access to places used for shelter; and
- Keep, transport, sell or exchange, or offer for sale or advertising.

Otter

Otters are fully protected by their inclusion in Annex II of the Habitats Directive (92/43/EEC) and Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and it is therefore subject to the provisions of Section 9, which makes it an offence to:

- Intentionally kill, injure or take an otter [Section 9 (1)];
- Possess or control any live or dead specimen or anything derived from an otter [Section 9(2)];
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by an otter [Section 9(4) (a)];
- Intentionally or recklessly disturb an otter while it is occupying a structure or place which it uses for that purpose [Section 9 (4)(b)]; or
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell an otter.

A license is required from Natural Resources Wales if the potential to commit an offence exists in order for the development to take place.

Himalayan Balsam

Under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to 'plant or otherwise cause Himalayan balsam to grow' in the wild. This includes spreading of the species or transferring polluted ground material (i.e. seed-bound soil) from one area to another.

Japanese Knotweed

Under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to 'plant or otherwise cause Japanese knotweed to grow' in the wild. This includes spreading of the species or transferring polluted ground material (i.e. any vegetatively reproductive material or seed-bound soil) from one area to another.

Rhododendron

Under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to 'plant or otherwise cause Rhododendron to grow' in the wild. This includes spreading of the species or transferring polluted ground material (i.e. seed-bound soil) from one area to another.

Appendix C: Defining ecological values

Preliminary ecological values and examples of criteria

The examples contained in the table below are only for general guidance and other considerations may apply, e.g. features of low value in isolation but which are subject to cumulative national decline may be afforded higher values in certain circumstances.

Level of ecological value	Examples of criteria
International	An internationally designated site or candidate site (SPA, SPA, SAC, Ramsar site, Biogenetic Reserve)
	A sustainable area of a habitat listed in Annex I of the Habitats Directive, or smaller areas of such habitat that are essential to maintain the viability of a larger whole
	A sustainable population of an internationally important species, e.g. a UK Red Data Book species, species listed under categories 1 or 2 of the UK BAP, or listed under Annex IV of the Habitats Directive
	Sites supporting a breeding population of internationally important species or supplying a critical element of their habitat requirements
National	A nationally designated site (SSSI, ASSI, NNR, MNR) or a discrete area that meets the selection criteria for national designation (e.g. SSSI selection guidelines)
	A sustainable area of a priority habitat identified in the UK BAP, or smaller areas of such habitat that are essential to maintain the viability of a larger whole
	A sustainable population of a nationally important species or a site supporting such a species, i.e. a species listed on Schedules 5 and 8 of the W&CA (as amended) which is a UK Red Data Book species that is not listed as being of unfavourable conservation status in Europe, of uncertain conservation status or of global concern in the UK BAP.
	A Non-Red Data Book species that is listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 of the UK BAP). Also sites supporting a breeding population of such a species or supplying a critical element of their habitat requirements
	A Non-Red Data Book species that is listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 of the UK BAP). Also sites supporting a breeding

	population of such a species or supplying a critical element of their habitat requirements
Regional	Sustainable areas of key habitat identified in the relevant Regional BAP or smaller areas of such habitat that are essential to maintain the viability of a larger whole
	Sustainable areas of key habitat identified as being of Regional Value in the appropriate Natural Areas profile
	A population of a species listed as being nationally scarce (i.e. occurring in 16 - 100 10km squares in the UK, or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation. Sites supporting a breeding population of such a species or supplying a critical element of their habitat requirements
	Sites, which exceed the County-level designations but fall short of SSSI selection guidelines, where these occur
County/Metropolitan	Semi-natural ancient woodland greater than 0.25 ha
	County/Metropolitan sites and other sites which meet the ecological selection criteria for designation
	A sustainable area of habitat identified in a county BAP
	A population of a species that is listed in a county/metropolitan 'red data book' or BAP on account of its regional rarity or localisation. Also sites supporting a breeding population of such a species or supplying a critical element of their habitat requirements
District/Borough	Semi-natural ancient woodland smaller than 0.25 ha
	Sustainable areas of habitat identified in a sub-county (district/borough) BAP or in the relevant Natural Area profile
	Sites/features that are scarce within the district/borough or which appreciably enrich the district/borough habitat resource
	A diverse and/or ecologically valuable hedgerow network
	A population of a species that is listed in a district/borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation. Also sites supporting a breeding population of such a species or supplying a critical element of their requirements
Parish/Neighbourhood	Areas of habitat considered to appreciably enrich the habitat resource within the context of the Parish or local neighbourhood, e.g. isolated species-rich hedgerows
	Small patches of poor semi-improved grassland, amenity grassland not used by Badgers
	Areas of little current or potential ecological value

Appendix D: An ecological evaluation

Criteria for Evaluation

The criteria for evaluation have been adopted from the widely used set developed by Ratcliffe (1977). These were originally conceived to provide a systematic framework for the selection of Sites of Special Scientific Interest (SSSI) by the Nature Conservancy Council (NCC), but have since been adopted and adapted widely by ecologists, for example in Local Authorities and Wildlife Trusts.

The criteria used in this report are drawn from these widely applied criteria. They are:

Size

In general, larger sites are more highly valued than smaller ones, all else being equal. However, relative size to similar sites and other local sites should be considered. The area of a site is also important in management terms, i.e. whether short-term neglect/disturbance or any small changes would lead to the loss of a site's interest.

Diversity

One of the most important site attributes is the variety of communities and species which is largely dependent on diversity of habitat. Large numbers of species, particularly when represented by large populations, are to be valued. Diversity can also be related to habitat instability that may affect management prescriptions.

Naturalness

Ecosystems least modified by man tend to be rated more highly. However, most sites are influenced by man, the degree and nature of which is important.

Fragility

This reflects the degree of sensitivity of habitats, communities and species to environmental change. Fragile sites often represent ecosystems that are highly fragmented, dwindling or difficult to re-create.

Typicalness

The typical and commonplace within a field of ecological variation are also of value.

Recorded History

The existence of a scientific record of long-standing adds considerably to the value of a site.

Permanence

A site that has been occupied by a semi-natural habitat for a long time is usually more valuable than one that has only recently arisen. This is because they have had time to acquire rich assemblages of plants and animals.

Lack of Modification

Adverse influences from humans, such as inappropriate management regimes and pollution, will reduce the quality of an area.

Rarity

Rarity is concerned with communities and habitats as well as species. The presence of rare species adds to overall ecological value especially when a habitat also ranks highly on other criteria. The habitat type too may also be nationally or regionally rare.

Position in an Ecological Unit

In the event of two sites being of equivalent intrinsic value, the close proximity of one site to a highly rated example of another type increases the value of the site. The presence of other areas of semi-natural habitat adjacent or close to a site enhances the value of both habitats.

Potential Value

Certain sites could, through appropriate management or even natural change, eventually develop a nature conservation interest substantially greater than that existing at present.

Intrinsic Appeal

While science may view all creatures as equal, pragmatism dictates that in nature conservation it is realistic to give more weight to the more popular appeal of some species, groups or habitats than others.

These criteria provide a useful basis against which to evaluate the intrinsic ecological quality of a site, but in an urban area it is also important to consider the value of an area to the local people (GLC 1985). Thus the appeal of a site, its educational and

amenity value, as well as its accessibility as a wildlife area, need to be included in the evaluation.

The survey results were assessed and evaluated using these criteria as a guide.

Legal Protection and Conservation Status of Species Legal protection of species is provided by the Wildlife and Countryside Act 1981 as amended and Conservation (Natural Habitats & c.) Regulations 1994 (as amended 2000). Reference should be made to these acts for full details and definitions of legal protection. What follows here is a brief indicative summary.

Protection and Enhancement of Linear Habitat Networks

Article 10 of the EU Habitats Directive 1992 and Regulation 37 of the Conservation (Natural Habitats, & c) Regulations 1994:

'Member States shall endeavour, where they consider it necessary, in their land use planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild flora and fauna.

Appendix E: Phase 1 Habitat Map