

Preliminary Ecological Appraisal

for

Land adjacent to 22 Heol Twrch,
Lower Cwmtwrch

(Planning Application number: P/2018/0293)



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1 Summary

1.1 Site Assessment

1.1.1 A Preliminary Ecological Appraisal (PEA) – including a desk study, Phase 1 Habitat survey and assessment for protected/notable species potential – has been completed across the Site in relation to planning application P/2018/0293.

1.1.2 A number of habitats and species (potential ecological receptors) have been identified within 1km of the Site. These include the following:

1. One Site of Importance for Nature Conservation (Pentwyn Grasslands) and one Wildlife Trust Reserve (Cae Lyndon).
2. Woodland with mature and semi-mature trees immediately adjacent to the Site, which may be used by foraging/roosting bats/birds.
3. Habitat on the Site that may have some suitability for low numbers of common reptile species.
4. Suitable habitat for foraging/commuting badgers/hedgehogs/amphibians.
5. Japanese knotweed is present on the Site.

1.2 Recommendations

1.2.1 Site clearance will be completed in accordance with the methods described in this report, in order to further reduce potential impacts on common amphibian and reptile species, hedgehogs, birds and badgers. An appropriate Japanese knotweed management plan will also be put into place prior to works commencing.

1.2.2 Simple enhancements for bats and breeding birds in the form of roost/nest boxes will be installed.

1.2.3 Repeat surveys are recommended if a period of more than two years elapses between the date of these surveys and commencement of the works.

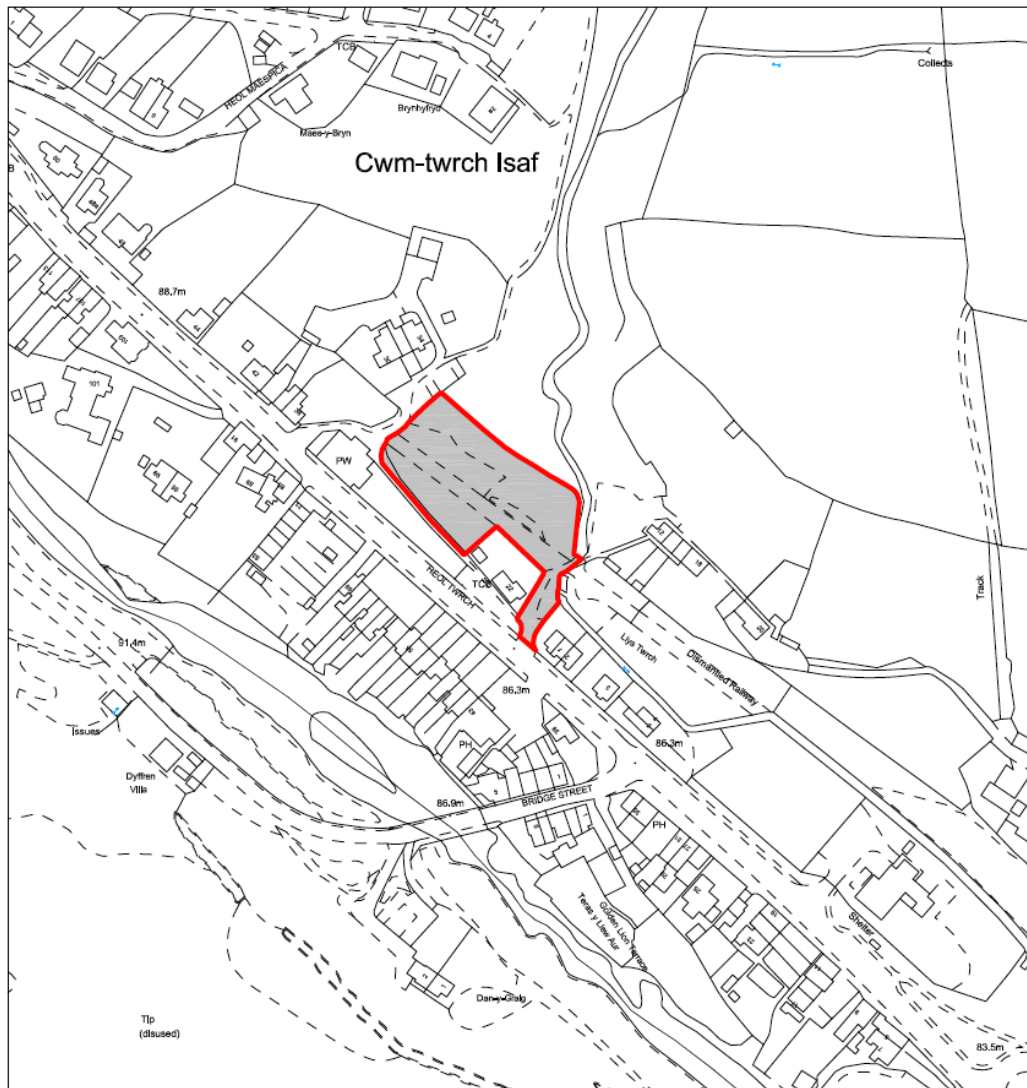
2 Introduction

2.1 The Proposed Development

2.1.1 Koru Ecology Associates was commissioned in May 2018 by V Rees (“the Applicant”) to complete a Preliminary Ecological Appraisal at a site located on Land Adjacent to 22 Heol Twrch, Lower Cwmtwrch, Ystradgynlais (“the Site”).

2.1.2 The Site is centred on approximate National Grid Reference SN767102, and its location is shown in Figure 1 below.

Figure 1. Site Location.



2.1.3 This report has been prepared to support a planning application to Powys County Council for erection of a three bedroom detached dwelling and all associated works.

2.2 Study Aims

2.2.1 This report considers the potential impacts of the proposed development on ecological features identified within the Site, and/or its surroundings. The report details the methodology (Section 3) and results (Section 4) of the surveys, describing features of ecological value found to be present, and impacts that may occur (Section 5). The report also gives recommendations for actions that should be undertaken by the Applicant to help minimise development impacts (Section 6).

2.2.2 Assuming the Applicant follows these recommendations, the proposed development should comply with all relevant planning policy and environmental legislation.

3 Methodology

3.1 Study Scope

3.1.1 Koru Ecology Associates was commissioned by the Applicant in May 2018 to complete a PEA of the Site, based on standard methods set out by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017). This included the following:

1. **Desk-based study.** Written consultation with consultees, together with interrogation of online databases, to identify statutory and non-statutory designated sites of nature conservation importance, as well as records of protected and/or notable species.
2. **Phase 1 Habitat Survey.** To record the nature and extent of vegetation and habitats within and immediately adjacent to the Site; and
3. Identification of any **further requirements for species-specific surveys** for protected and/or notable flora and fauna.

3.1.2 A more detailed description of each survey method used is provided in Sections 3.4 – 3.6 below.

3.2 Surveyor Qualifications and Experience

3.2.1 Diana Clark MSc MCIEEM led all survey work and wrote this report. Diana has worked as a consultant ecologist since 2003 and holds two degrees in related disciplines. She is also a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

3.2.2 This report has been subject to technical review by Steve Hancock CEnv MCIEEM. Steve has worked as a consultant ecologist since 2009 and holds two degrees in related disciplines. Steve is a Chartered Environmentalist and a full member of CIEEM.

3.3 Study Limitations

3.3.1 Every effort was made during the field visit to complete a comprehensive survey and produce a detailed description of the Site. However, no investigation can ensure the

complete characterisation and prediction of the environment 100% of the time. Natural and semi-natural habitats change over time, and thus results given in this report may become less reliable in the future. Repeat surveys are usually recommended if a significant period of time elapses between when surveys were completed and when works commence. Further details are given in Section 6 of this report.

- 3.3.2 No significant constraints were noted in relation to this project. Where minor constraints occurred, these are described within the relevant methodology and/or results sections of this report.

3.4 Desk Study

- 3.4.1 The Biodiversity Information Service (BIS) for Powys and the Brecon Beacons was contacted in May 2018 and asked to supply records of protected and/or otherwise notable species and designated sites within 1km of the Site.

- 3.4.2 Further details in relation to any designated sites identified were sought via the Joint Nature Conservancy Council (JNCC) website (www.jncc.defra.gov.uk) and the Natural Resources Wales (NRW) website (www.naturalresourceswales.gov.uk).

3.5 Phase 1 Habitat Survey

- 3.5.1 Diana Clark MSc MCIEEM conducted a Phase 1 Habitat Survey of the Site on the 16th May 2018. Vegetation types and habitats present were described and mapped during a walkover of the Site, based on standard published guidelines for Phase 1 Habitat Survey (JNCC, 2010). Features of particular interest were recorded as Target Notes (TNs). For the purposes of this survey, all land within the land ownership boundary (within the red line in Figure 1 above) was included, and therefore comprises 'the Site'.

3.6 Assessment of Protected/Notable Species Potential

- 3.6.1 In addition, the habitats within the Site were appraised for their suitability to support protected or notable species, or assemblages that could be sensitive to the proposed development, in accordance with 'Guidelines for Baseline Ecological Assessment' (IEA, 1995).

- 3.6.2 The protected and notable habitats and species referred to above include those listed under the Wildlife and Countryside Act 1981 (as amended); The Conservation of Habitats and Species Regulations 2010; and Species and Habitats of Principal Importance in England/Wales – currently listed under the Natural Environment and Rural Communities (NERC) Act 2006 but also endorsed by the Environment (Wales) Act 2016 (see Section 5 for more information).
- 3.6.3 During the survey, consideration was given to features such as potential breeding bird habitat, bat roosting locations, reptile habitat and the suitability of water features for amphibians and riparian mammals. Exotic and invasive species (e.g. Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*) were noted by the surveyor, if present.
- 3.6.4 The survey approach taken is designed to identify broad habitat types and the potential of these habitats to support notable/protected species, thereby providing an overview of the ecological interest at a site. It is the most widely used and professionally recognised method for initial ecological site appraisal.

4 Results

4.1 Designated Sites

- 4.1.1 No internationally or nationally designated sites were highlighted within 1km of the Site.
- 4.1.2 Two locally designated sites, including one Site of Importance for Nature Conservation (SINC) (Pentwyn Grasslands) and one Wildlife Trust Reserve (Cae Lyndon), are located within 1km of the Site, approximately 100m and 800m away respectively.

4.2 Notable Species Records

- 4.2.1 Due to confidentiality requirements of the biological records centre, a copy of the full desk study report is not included here. However, relevant records found within the search area are summarised at Appendices 1 and 2.
- 4.2.2 Extensive records of invertebrates were also highlighted by the desk study, including 5 species of butterfly, 1 species of dragonfly and 75 species of moth.

4.3 Site Context

- 4.3.1 The Site is located in a rural setting in Powys, close to the town of Ystradgynlais and approximately 17km north of the town of Neath, in the Afon Twrch valley. Figure 2 below shows the site location within the local context; the red pin indicates the approximate centre of the Site.
- 4.3.2 The Site is located in the village of Cwm-Twrch, on the eastern side of Heol Twrch (A4068) which roughly runs in a south-east / north west orientation. A chapel, together with an associated graveyard, is located almost adjacent to the south western edge of the site, on the far side of a public footpath. To the north west and south west of the site, scattered groups of houses and light industrial units line the main road. To the east, the Site is bordered by woodland, beyond which are grassland fields.

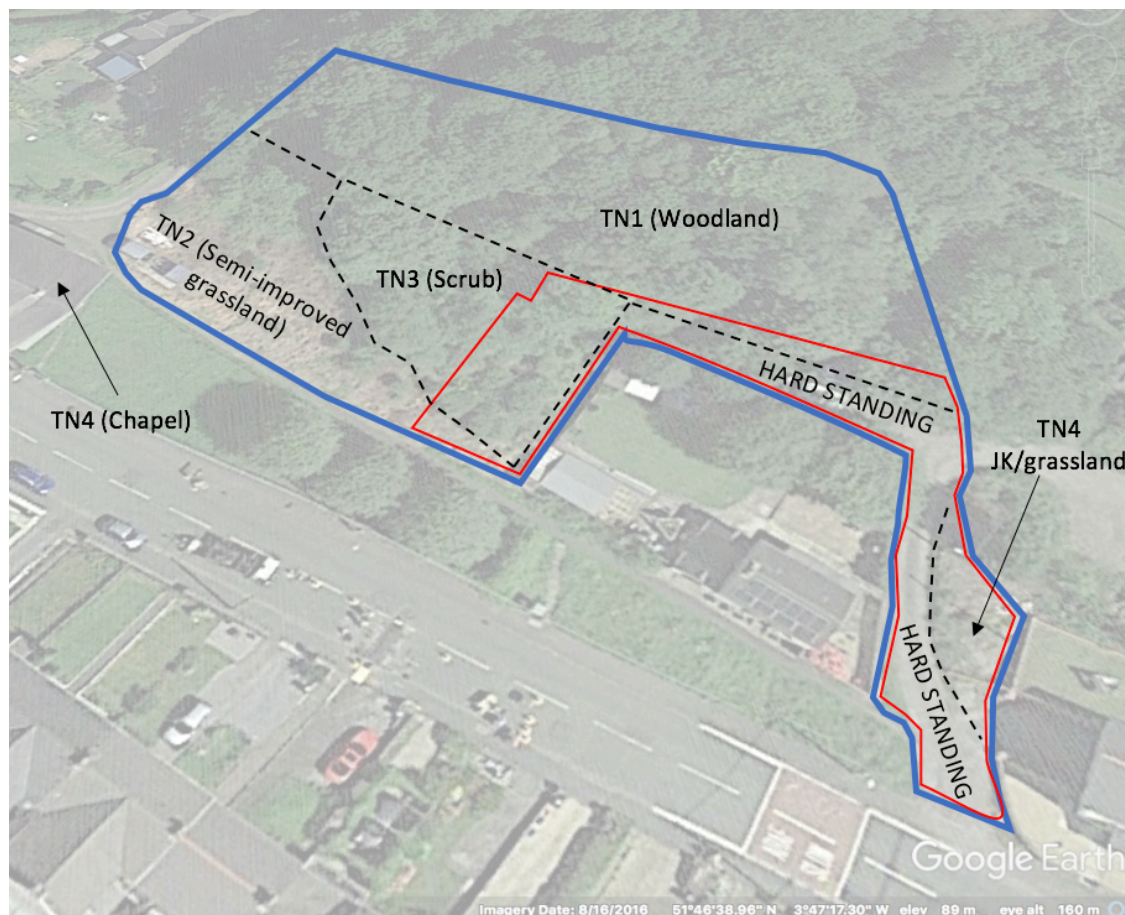
Figure 2. Site Location in Local Context.



4.4 Habitats

- 4.4.1 The habitat types recorded during the Phase 1 Habitat Survey of the Site itself are described within the following paragraphs and sketched in Figure 3 below. Scientific names are given after the first mention of a species; thereafter, common names are used. Nomenclature follows Stace (2010) for vascular plant species. Target Notes (TNs) are referred to within the text below.
- 4.4.2 The Site comprises three main habitats, including woodland (TN 1), semi-improved/improved grassland (TN 2) and scrub (TN 3). Other areas of the Site comprise gravel/hard standing (i.e. the access track from the main road) and a small area of semi-improved grassland / Japanese knotweed near the entrance to the Site (TN4). A small stream is present on the eastern boundary of the Site, which flows through a small culvert under the access track and then is canalised downstream to the south east.
- 4.4.3 The woodland area is dominated by oak and silver birch (*Betula pendula*), with some beech (*Fagus sylvatica*) also present (see Figure 5). Grey willow (*Salix cinerea* agg.) scrub is present at the bottom of the main slope in the middle of the site, and along the access track.



Figure 3. Phase I Habitat Sketch.



- 4.4.4 The semi-improved grassland area is dominated by grasses including cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*) and false oat-grass (*Arrhenatherum elatius*). Forb species include hogweed (*Heracleum sphondylium*), ribwort plantain (*Plantago lanceolata*), dandelion (*Taraxacum officinale* agg.), ragwort (*Senecio jacobaea*) red clover (*Trifolium pratense*) and creeping buttercup (*Ranunculus repens*). Herb Robert (*Geranium robertianum*) is present in areas closer to the woodland edge, along with rosebay willowherb (*Chamerion angustifolium*), meadowsweet (*Filipendula ulmaria*) and foxglove (*Digitalis purpurea*). Figure 6 gives a view of the semi-improved grassland.
- 4.4.5 The scrub area is dominated by bramble (*Rubus fruticosus* agg.) and with some recently cut willow, including grey willow (Figure 7).
- 4.4.6 The small area of grassland close to the entrance to the Site is largely dominated by cock's-foot, together with a stand of Japanese knotweed (Figure 4).

4.4.7 Japanese knotweed is present in a number of areas on the Site, in some places forming dense patches and in others just showing a few young stems in the middle of grassland (see Figures 8 and 9).

<p>Figure 4. Japanese knotweed and rough grassland by Site entrance. Canalised stream in background.</p>	<p>Figure 5. Woodland on slope at rear of site. Note bramble/willow scrub also, together with arisings.</p>
	
<p>Figure 6. Semi-improved grassland from the west, woodland on slope to the north. Footpath running along the site of the site.</p>	<p>Figure 7. Bramble scrub.</p>
	

Figure 8. Japanese knotweed.	Figure 9. Scattered stems of Japanese knotweed.
	

4.5 Protected/Notable Species

- 4.5.1 There is potential for several protected / notable species / species groups to be present on the Site or close by, these are summarised in Table 2 below.
- 4.5.2 A more detailed assessment of the potential for each species and / or species group to be present is given in Section 5 of this report, together with an assessment of likely impacts of the development proposals.

Table 2. Protected/Notable Species Summary.

Species	Notes
Bats	Records of common pipistrelle, soprano pipistrelle, <i>Myotis</i> sp, brown long-eared, Daubenton's bat and whiskered bat were highlighted by the desk study. Good quality foraging habitat is present across the Site, in relation to the adjacent woodland and the surrounding area.
Otter	A single record of otter was highlighted by the desk study. The Afon Twrch is located approximately 50m to the south west of the Site. A small stream and an area of woodland is located adjacent to the Site, along and through which otters may travel.
Water vole	A single record of water vole was highlighted by the desk study. The small stream adjacent to the Site is not considered suitable for water voles due to a) being very shaded by trees where it passes through adjacent woodland, and b) being canalised close to the access track and further downstream to the east. This species is not considered further here.
Dormice	A single record of dormice was highlighted by the desk study and there is suitable potential habitat for this species in the surrounding woodland.
Amphibians	No records of amphibians were highlighted by the desk study, however there is some suitable terrestrial habitat on the Site with potential for common amphibian species such as frogs and toads. The presence of great crested newts is considered unlikely, due to the Site being located in an area of the country ' <i>with a very low probability of occurrence</i> ' (Oldham <i>et al</i> , 2000).
Reptiles	A single record of grass snake was highlighted by the desk study, and there is some limited suitable habitat on the Site.
Breeding birds	A number of records of bird species were highlighted by the desk study. There is suitable habitat for breeding and foraging birds in the adjacent woodland, and some limited nesting habitat on the Site itself, in relation to some areas of willow and bramble scrub that have not been removed.
Badger	A single record of badger was highlighted by the desk study and suitable foraging habitat is present on the Site and nearby.
Hedgehog	A single record of hedgehog was highlighted by the desk study, and suitable foraging habitat is present on the Site and nearby.

5 Assessment

5.1 Planning Policy Context

5.1.1 Planning Policy Wales ('PPW') (9th Edition, November 2016) is the national planning document setting out the devolved planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes ('TANs') and Circulars. Of particular importance is TAN 5, which provides national policy guidance in respect of nature conservation and planning.

5.1.2 PPW, the TANs and Circulars should all be taken into account by local planning authorities in Wales when preparing development plans and assessing planning applications. Those of most relevance are discussed further below.

Planning Policy Wales

5.1.3 The Welsh Government's objectives for the conservation and improvement of the natural heritage as stated within PPW (paragraph 5.1.2) include the following:

1. Promote the conservation of landscape and biodiversity, in particular the conservation of native wildlife and habitats;
2. Ensure that action in Wales contributes to meeting international responsibilities and obligations for the natural environment;
3. Ensure that statutorily designated sites are properly protected and managed;
4. Safeguard protected species; and
5. Promote the functions and benefits of soils, and in particular their function as a carbon store.

5.1.4 PPW also addresses development management in relation to biodiversity within Section 5.5 and outlines requirements of local planning authorities in relation to assessing impact of any development proposals on nature conservation.

TAN5: Nature Conservation and Planning

- 5.1.5 TAN 5 Nature Conservation and Planning sets out the manner in which planning authorities should comply with their duty to “...have a regard, so far as is consistent with the proper exercise of [their] functions, to the purpose of conserving biodiversity”, as required by the NERC Act.
- 5.1.6 The key principles of positive planning for nature conservation in TAN 5 are:
1. Work to achieve nature conservation objectives through a partnership between local planning authorities, Countryside Council for Wales ('CCW'), the Environment Agency ('EA') Wales (CCW and EA Wales now Natural Resources Wales ('NRW')), voluntary organisations, developers, landowners and other key stakeholders;
 2. Integrate nature conservation into all planning decisions looking for development to deliver social, economic and environmental objectives together over time.
 3. Ensure that the United Kingdom's ('UK') international and national obligations for site, species and habitat protection are fully met in all planning decisions;
 4. Look for development to provide net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally;
 5. Help to ensure that development does not damage, or restrict access to, or the study of, geological sites and features or impede the evolution of natural processes and systems especially on rivers and the coast;
 6. Forge and strengthen links between the town and country planning system and biodiversity action planning particularly through policies in local development plans and the preparation of supplementary planning guidance that adds value to Local Biodiversity Action Plans ('LBAP') by highlighting the ways in which the planning system can help to deliver the objectives of LBAPs in practical ways;
 7. Plan to accommodate and reduce the effects of climate change by encouraging development that will reduce damaging emissions and energy consumption and that helps habitats and species to adapt to climate change.

Local Policy Context

5.1.7 A number of local planning policies within the Powys Local Development Plan are relevant to biodiversity and nature conservation, these include the following:

1. **Local Development Plan Objective 11 (Natural Heritage):** To conserve and protect Powys' land, air and water resources important for environmental quality, geodiversity and biodiversity and where possible to ensure development enhances them.
2. **Strategic Policy SP7 (Safeguarding of Strategic Resources and Assets):** To safeguard strategic resources and assets in the County, development proposals must not have an unacceptable adverse impact on the resource or asset and its operation.
3. **Policy DM2 (The Natural Environment):** Development proposals shall demonstrate how they protect, positively manage and enhance biodiversity and geodiversity interests including improving the resilience of biodiversity through the enhanced connectivity of habitats within, and beyond the site. Development proposals which would impact on the following natural environment assets will only be permitted where they do not unacceptably adversely affect:
 - a) The important site designations, habitats and species afforded the highest levels of protection through European legislation including European Sites (Special protection Areas, Special Areas of Conservation and Ramsar), and European Protected Species afforded strict protection by the Conservation of Habitats and Species Regulations 2017 (Habitats Directive Annex IV Species).
 - b) The important site designations, habitats and species afforded levels of protection in line with national policy and legislation including National Nature Reserves and Sites of Special Scientific Interest, Protected Species including those listed in Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act 1992; Habitats and Species of principal importance for the purpose of maintaining and enhancing biodiversity conservation in Wales as listed in Section 7 of the Environment (Wales) Act 2016; and National Biodiversity Action Plan Habitats and Species.
 - c) The locally important site designations, habitats and species including: Local Nature Reserves; Local Biodiversity Action Plan Habitats and Species; and

Regionally Important Geodiversity Sites and Geological Conservation Review Sites.

- d) The achievement of the Water Framework Directive's overarching objectives.
 - e) Trees, woodlands and hedgerows of significant public amenity, natural or cultural heritage.
4. **Policy DM7 (Dark Skies and External Lighting):** Development proposals involving external lighting will only be permitted when a lighting scheme has been provided that demonstrates that the lighting will not individually or cumulatively cause: a) Unacceptable levels of light pollution especially in the countryside, 2) An unacceptable adverse effect on the visibility of the night sky, c) A nuisance or hazard to highway users including pedestrians, and local residents and d) An unacceptable disturbance to protected species.

The Environment (Wales) Act 2016

- 5.1.8 The Environment Act (Wales) 2016 requires public authorities to seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales. In complying with this duty, public authorities must have regard to a list of living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This list must be prepared and published by the Welsh Ministers under Section 7 (1) of the same Act. Until this list has been published, the list of Habitats and Species of Principal Importance previously published under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006, should be used.

5.2 Impacts on Designated Sites

- 5.2.1 Pentwyn Grasslands SINC is designated for its Local Biodiversity Action Plan priority grassland habitat, and Cae Lyndon Wildlife Trust Reserve is designated for its wet tussocky grassland known as Rhos pasture. It is also home to the rare marsh fritillary butterfly. Since these designated sites are located 100m and 800m away from the Site respectively, i.e. outside what is likely to be the '*zone of influence*', impacts on these two designated sites are considered unlikely.

5.3 Impacts on Habitats

- 5.3.1 The majority of habitat present on the Site is generally of low value and includes an area of semi-improved grassland, recently cut scrub and hard standing/gravel tracks. Japanese knotweed is also present in various places across the Site. The loss of this habitat is likely to be insignificant, although appropriate recommendations are given in Section 6 with regards to addressing the presence of Japanese knotweed. If followed correctly, impacts on habitats present on the Site are expected to be minimal.
- 5.3.2 The adjacent woodland habitat is more interesting and contains a variety of woodland flora, some of which can also be seen at the very edges of the Site. None of this woodland is scheduled to be felled as part of the development proposals, however appropriate recommendations are given within Section 6 to ensure that the edge of this habitat is protected during construction. If followed, impacts on the adjacent woodland habitat are expected to be minimal.

5.4 Impacts on Protected/Notable Species

Bats

- 5.4.1 Bats and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended), and by the Conservation of Habitats and Species Regulations 2010 (as amended). Taken together, these make it an offence to:
- a) Deliberately capture, injure or kill a bat;
 - b) Deliberately disturb any bat, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.
 - c) To be in possession or control of any live or dead bat or any part of, or anything derived from a bat.
 - d) Damage or destroy a breeding site or resting place of a bat;
 - e) Intentionally or recklessly obstruct access to any place that bat uses for shelter or protection;
 - f) Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

- 5.4.2 A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. It is important to note that since bats tend to re-use the same roost sites, current legal opinion is that a bat roost is protected whether or not the bats are present at the time.
- 5.4.3 Eight species of bat are listed as Species of Principal Importance under NERC/The Environment Act, including barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, brown long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum* and lesser horseshoe *R. hipposideros*.
- 5.4.4 Records of bats have been highlighted by the desk study, including common pipistrelle soprano pipistrelle, brown long-eared, *Myotis* sp., Daubenton's bat and whiskered bat.
- 5.4.5 There is good potential on the Site for foraging and commuting bats, in particular along the edge of the woodland, which provides linking habitat into the wider countryside to the north east. The Site itself is limited in size for foraging bats, but is likely to form a small part of the wider landscape already described, through which bats may travel. However, no loss of trees on the woodland edge will take place, and no external lighting is proposed anywhere in the development. Impacts of the proposals on foraging bats are therefore considered likely to be negligible.
- 5.4.6 No buildings are present on the Site and no trees are scheduled for removal as part of the development proposals. Impacts of the development on bat roosts are therefore considered to be unlikely.

Amphibians

- 5.4.7 Amphibians, including newts, frogs and toads are protected by various legislation, including the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017.
- 5.4.8 In addition, great crested newt is a UK Biodiversity Action Plan species and is listed as a Species of Principal Importance under the provisions of the NERC Act 2006/Environment (Wales) Act.
- 5.4.9 No records of great crested newts were highlighted by the desk study. This species is considered unlikely to be present, due to the location of the Site in an area of the country 'with a very low probability of occurrence' (Oldham *et al*, 2000), and impacts are therefore not considered further here.

- 5.4.10 No records of other common amphibian species (such as common frog, common toad and palmate newt) were highlighted by the desk study, however suitable terrestrial habitat for these species is present on the Site.
- 5.4.11 During construction works, appropriate precautionary measures should be taken in order to reduce the likelihood of harm to common amphibian species; this is addressed further in Section 6 of this report. Assuming these precautions are followed, impacts on these species are considered likely to be negligible.

Breeding Birds

- 5.4.12 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to intentionally or recklessly disturb them while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.
- 5.4.13 A number of bird records were highlighted by the desk study, including some Schedule 1 species (barn owl *Tyto alba*, red kite *Milvus milvus*), redwing (*Turdus iliacus*) and brambling (*Fringilla montifringilla*). None of these species are considered likely to be nesting on the Site, due to lack of suitable habitat.
- 5.4.14 A number of species that are red-listed and/or listed as Species of Principal Importance were also highlighted by the desk study, and it is possible that some of these may use the Site, for nesting and/or foraging. Other common nesting bird species may also make limited use of the remaining areas of bramble and willow scrub on the Site.
- 5.4.15 The Site contains no trees, although some areas of scrub partially cut down are still present, along with several piles of arisings created from previous vegetation removal. Appropriate precautionary measures should be taken during site clearance to ensure that no nesting birds are harmed as a result. In addition, some simple measures to compensate for the loss of roosting/nesting opportunities should be included within the new development. These recommendations are detailed further within Section 6 of this report. Assuming they are followed, impacts on this species group are considered likely to be negligible.

Reptiles

- 5.4.16 All native British reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). Grass snake, slow worm, common lizard and adder are protected against intentional killing or injury and against sale. In addition, all British reptiles are UK Biodiversity Action Plan species and are listed as Species of Principal Importance under the provisions of the NERC Act 2006 (and therefore the Environment Act).
- 5.4.17 A single record of grass snake was highlighted by the desk study, approximately 1km from the Site.
- 5.4.18 The grassland present on the Site itself is limited in terms of size and connectivity to other suitable habitats nearby, in addition to being recently disturbed by cutting. The likelihood of a significant reptile population being present on the Site is therefore considered to be low, and therefore impacts are considered to be low.
- 5.4.19 However, there is some limited potential for species such as slow-worm and common lizard to be present. In order to further reduce the likelihood of impacts on reptiles, appropriate precautions should be taken when clearing the Site prior to development works taking place. These are discussed further in Section 6 of this report. Assuming these precautions are followed, impacts on this species group are considered likely to be negligible.

Hedgehogs

- 5.4.20 Hedgehogs are listed as a Species of Principal Importance under the NERC/Environment Act.
- 5.4.21 A single record of this species was highlighted by the desk study and there is some suitable habitat present on the Site. Appropriate precautions should therefore be taken when clearing the Site, in order to reduce the changes of harm to this species. These are discussed further in Section 6 of this report. Assuming these precautions are followed, impacts on this species are considered likely to be negligible.

Dormice

- 5.4.22 Dormice and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended), and by the Conservation of Habitats and Species Regulations 2017. Taken together, these make it an offence to:

- g) Deliberately capture, injure or kill a dormouse;
- h) Deliberately disturb any dormouse, in particular any disturbance which is likely to
 - (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate;
 - or (ii) to affect significantly the local distribution or abundance of the species to which they belong.
- i) To be in possession or control of any live or dead dormouse or any part of, or anything derived from a dormouse.
- j) Damage or destroy a breeding site or resting place of a dormouse;
- k) Intentionally or recklessly obstruct access to any place that a dormouse uses for shelter or protection;
- l) Intentionally or recklessly disturb a dormouse while it is occupying a structure or place that it uses for shelter or protection.

5.4.23 A single record of dormouse was highlighted by the desk study, located approximately 2km away.

5.4.24 The habitats present on the Site itself are of limited suitability for dormice. Whilst there are some small areas of scrub still remaining, this is patchy and has recently been disturbed.

5.4.25 The adjacent woodland could potentially provide habitat for dormice, however it is understood that the woodland will be retained as part of the development. Recommendations with regards to protection of the woodland edge during construction are given in Section 6 of this report. Assuming these recommendations are followed, impacts on dormice are not considered likely.

Otters

5.4.26 Otters and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended), and by the Conservation of Habitats and Species Regulations 2017. Taken together, these make it an offence to:

- m) Deliberately capture, injure or kill an otter;
- n) Deliberately disturb any otter, in particular any disturbance which is likely to
 - (i) impair their ability to survive, breed, reproduce or to rear or nurture their young;
 - or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to

affect significantly the local distribution or abundance of the species to which they belong.

- o) To be in possession or control of any live or dead otter or any part of, or anything derived from an otter.
- p) Damage or destroy a breeding site or resting place of an otter;
- q) Intentionally or recklessly obstruct access to any place that an otter uses for shelter or protection;
- r) Intentionally or recklessly disturb an otter while it is occupying a structure or place that it uses for shelter or protection.

5.4.27 A single record of otter was highlighted by the desk study.

5.4.28 The habitats present on the Site itself are of limited value to otters, although it is possible that this species may pass through the Site on occasion, or use the adjacent stream. Impacts on this species are therefore considered likely to be negligible.

Badgers

5.4.29 Badgers are protected under the Badgers Act 1992. This makes it an offence to willfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. Removal of significant areas of badger foraging habitat may also contravene the Act, as it could be regarded as cruelty.

5.4.30 A single record of badger was highlighted by the desk study.

5.4.31 No evidence of badger activity was observed during the survey, however the Site does contain suitable badger foraging habitat and the Site is located within the natural geographic range of this species. Badgers are likely to be present in the local area, and it is therefore possible that the Site is used on occasion by foraging and commuting badgers.

5.4.32 However, due to the presence of extensive alternative foraging habitat nearby, any loss of potential foraging habitat as a result of the development is considered to be minimal, and impacts on badgers are therefore predicted to be negligible.

Invertebrates

- 5.4.33 Extensive records of invertebrates, in particular moth records, were highlighted by the desk study. The habitats present on the Site that may be suitable for invertebrates are limited, and therefore the loss of these habitats is unlikely to have any significant impact on the population of invertebrates nearby, particularly given the rural setting of the Site.

5.5 Summary Assessment

- 5.5.1 This Preliminary Ecological Appraisal has provided baseline ecological information describing the main characteristics of the proposed development site. An assessment of likely impacts has therefore been made for the majority of habitats, species and species groups, subject to a number of recommendations outlined in the following section.

6 Recommendations

6.1 Pre-construction Japanese Knotweed Management

- 6.1.1 A program of Japanese knotweed management is currently in progress and will continue in accordance with a management plan prepared by the applicant.

6.2 Pre-construction Scrub Removal & Birds

- 6.2.1 Trees within the adjacent woodland area will be retained and protected during development by appropriate fencing in order to reduce the risk of disturbance and damage as far as possible. This may include use of Heras fencing (or similar) where practicable, however it should be noted that the woodland slopes steeply upwards from the Site and that the use of Heras fencing may not be achievable in every location. Where fencing of this type is not possible, an alternative method of protection should be used, for example barrier tape and signage.
- 6.2.2 Where small areas of scrub and piles of cut vegetation are to be removed, in order to avoid committing an offence under the Wildlife and Countryside Act 1981 (as amended) this work will be programmed to take place outside the bird-breeding season. The bird breeding season is normally taken to be March – August inclusive, with September – February inclusive being the best time for vegetation clearance. Where this is not possible, any vegetation scheduled for removal will be inspected immediately prior to this by an appropriately experienced ecologist and, if breeding birds are found, an exclusion zone will be put into place and vegetation removal will not proceed until the nest is considered to be no longer active.

6.3 Pre-construction Site Strip and Precautions in Relation to Reptiles, Amphibians and Hedgehogs

- 6.3.1 The Site has been assessed as having low potential for common reptile species, such as common lizard and slow-worm. The potential presence of hedgehogs and amphibians such as common frog, common toad and palmate newt has also been highlighted.

6.3.2 In order to ensure impacts on these species are as low as possible, a three-stage approach to site clearance will be completed as follows:

1. Inspection of all loose materials (such as wooden planks, pieces of metal, loose stones etc.) on the ground and currently exposed should be completed by a suitably experienced ecologist. Such items should be removed from the Site once checked.
2. Vegetation should then be cut using motorised hand tools to around 20cm in height (if not already done as part of normal grounds maintenance) and a further check for features under which these species may be found should be completed by a suitably experienced ecologist, where appropriate.
3. Once the ecologist is satisfied that there are negligible features left on the site for these species, vegetation can then be cut to ground level and/or removed completely, and retained as such during the development.

6.3.3 All vegetation removal will proceed with caution under the direct supervision of a suitably experienced ecologist. Any individual amphibians, hedgehogs or slow-worm will be carefully removed by the ecologist and placed off-site in nearby suitable habitat, such as rough grassland, scrub or ruderal vegetation.

6.4 Precautions During Construction - Badgers

6.4.1 During construction, badger escape routes (also beneficial to other animals such as hedgehog and amphibians) will be installed into any excavations deeper than around 0.3m that remain uncovered overnight. This may take the form of a sloping plank of wood, or an earth ramp in one area of the excavation.

6.5 Enhancements for Bats and Birds

6.5.1 Enhancements for roosting bats will be included within the scheme. This will be in the form of installing three bat boxes within trees in the adjacent woodland, appropriately suitable for bat species likely to be found in the local area.

6.5.2 Three bird nesting boxes will be installed in suitable locations on or near the Site, for example within woodland adjacent to the Site. The choice of nest box chosen should be

targeted towards species that are of higher concern and that are likely to use the location, and thereby assist with providing some biodiversity gain on the Site.

6.6 Repeat Surveys

- 6.6.1 If the Site remains undeveloped for more than two years from the date of this survey, repeat survey work may be necessary, even if planning permission has already been granted. This is to ensure that no significant changes have taken place to the Site in the meantime, that impacts on protected species/habitats have remained the same, and that mitigation measures are still appropriate for the scheme. Any significant changes that may occur should be addressed appropriately if this happens.

7 References

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Appendix 1

Desk study data summary: mammals, reptiles, amphibians.

Common name	Scientific name	Conservation status (highest)
Brown Long-eared Bat	<i>Plecotus auritus</i>	EPS
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	EPS
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	EPS
Daubenton's Bat	<i>Myotis daubentonii</i>	EPS
Whiskered Bat	<i>Myotis mystacinus</i>	EPS
Noctule Bat	<i>Nyctalus noctula</i>	EPS
Myotis bat	<i>Myotis sp</i>	EPS
European Otter	<i>Lutra lutra</i>	EPS
Hazel Dormouse	<i>Muscardinus avellanarius</i>	EPS
Water Vole	<i>Arvicola amphibius</i>	WCA5
Grass Snake	<i>Natrix helvetica</i>	WCA5
Badger	<i>Meles meles</i>	Protection of Badgers Act
Hedgehog	<i>Erinaceus europaeus</i>	S7

Key:

EPS = European Protected Species (listed in Annex 4 of the EC Habitats Regulations and Schedule 2 of the Habitats Regulations).

WCA5 = Animals listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

WCA8 = Plant listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

S7 = Listed as a Species of Principal Importance in Wales under The Environment (Wales) Act 2016 (currently, the S7 list is the same as that covered by Section 42 of the Natural Environmental and Rural Communities Act 2006).

Appendix 2

Desk study data summary: birds.

Common name	Scientific name	Conservation status
Barn Owl	<i>Tyto alba</i>	WCA1
Red Kite	<i>Milvus milvus</i>	WCA1
Redwing	<i>Turdus iliacus</i>	WCA1
Brambling	<i>Fringilla montifringilla</i>	WCA1
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	S7
Bullfinch	<i>Pyrrhula pyrrhula</i>	S7
Dunnock	<i>Prunella modularis</i>	S7
House Sparrow	<i>Passer domesticus</i>	S7
Linnet	<i>Linaria cannabina</i>	S7
Ring Ouzel	<i>Turdus torquatus</i>	S7
Skylark	<i>Alauda arvensis</i>	S7
Song Thrush	<i>Turdus philomelos</i>	S7
Starling	<i>Sturnus vulgaris</i>	S7
Wood Warbler	<i>Phylloscopus sibilatrix</i>	S7

Key:

BD1 = European Protected Species of bird, listed under Annex 1 of the Birds Directive 2009/147/EC).

WCA1 = Listed as a protected bird under the Wildlife and Countryside Act 1981 (as amended), Sch 1.

S7 = Listed as a Species of Principal Importance in Wales under The Environment (Wales) Act 2016 (currently, the S7 list is the same as that covered by Section 42 of the Natural Environmental and Rural Communities Act 2006).