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Preliminary Ecological Assessment Report Land at Ty Du Uchaf

Proposed Solar Generation Facility

10th August 2023



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Client: B & P Parry, Glanllynnau, Chwilog, Pwllheli, LL53 6SJ

Planning

Authority: Gwynedd Council

Grid

Reference: SH 3651 3991 (Approximate site centre)

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Preliminary Ecological Assessment Report Land at Ty Du Uchaf

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1. Summary

A preliminary ecological assessment, (PEA) was carried out by Cambrian Ecology Ltd on the location of a proposed solar generation facility and associated infrastructure at Ty Du Uchaf.

The survey revealed that the only habitat which will be impacted by the proposals is heavily managed, improved grassland of minimal ecological or Biodiversity value. There will also be minimal loss of habitat as the improved grassland grazing under the pannels is to be retained.

The tree lines around the site perimeter are to be retained, as are the ditches within the site boudary. Recommendations have been made for the ongoing management of these ditches in order to preserve their ecological value, see Section 9.1.3 which also includes precationary measures for pollution prevention.

The survey for protected species revealed the presence of a badger; (*Meles meles*) sett and although this sett appeared disused at the time of the survey, a licence will be required from Natural resources Wales to carry out any works within 30m of the sett.

Although there is the potential for bats to be commuting around the site perimeter, and to be potentially roosting in crevices in the trees on the site boundaries, the trees are all to be retained and there will be no artificial lighting on the site and therefore no inhibition of bat movements. Precautionary measures have however been recommended to ensure no damage occurs to tree root plates, see Section 9.1.2.

No other protected species were recorded on the site.

A biological records search was carried out as recommended in the guidance for PEAs by the Chartered Institute of Ecology & Environmental Management (CIEEM). This enables the potential impact of a development to be assessed in the context of the wider landscape and enables the 'zone of influence' to be taken into account.

The biological records search, which was carried out with the Local Records Centre, (LRC) 'Cofnod' revealed that there are no statutory designated sites within the 10km radius search area which relate to bats but there are a total of 26 non-statutory Wildlife Sites within a 2km radius. There will however be no negative impact on any of these sites as a result of the proposals.

The data search also identified a number of other protected species to be present within the search area including otter; (*Lutra lutra*), hare; (*Lepus europaeus*), and water vole; (*Arvicola aquaticus*) along with five bats species and six herpetofauna species (amphibians & reptiles). Where appropriate, precautionary measures have been recommended to ensure no negative impact on these species, see Section 9.2.

No invasive plant species classified as 'Invasive Non-Native Species, (INNS) under the Wildlife & Countryside Act were recorded on the site.

Under Chapter 6 of Planning Policy Wales 11, Planning Authorities must seek to maintain and enhance Biodiversity in the exercise of their functions. In this case Biodiversity enhancements will be achieved through the planting of trees, see Section 10.

Key Messages:

- 1. There will be no negative impact on biodiversity as a result of habitat loss in relation to improved grassland.
- 2. Due to the presence of a badger sett, a licence will be required for works carried out within 30m of the location of the sett, see Section 5.2.1.
- 3. Mitigation measures that will be required under the terms of the licence will include a site induction of construction personnel and a level of supervision, see Section 9.2.1.
- 4. If any excavations are to take place in the vicinity of any of the mature tree lines, professional advice must be sought to avoid damage to root plates, see Section 9.1.2.
- 5. Precautionary measures for working near water are recommended in Section 9.1.3 to minimise the potential for a pollution incident to occur during the construction phase.
- 6. Biodiversity enhancements will be achieved through the planting of native trees, see Section 10.

2. Introduction

A PEA was carried out by Cambrian Ecology Ltd on the location of a proposed solar generation facility and associated infrastructure at Ty Du Uchaf.

The relevant Planning Authority is Gwynedd Council which requires ecological survey reports to be submitted as an integral part of the planning application.

The proposed works are to be locted at Grid Reference SH 3651 3991 (Approximate site centre)

3. Methodologies

The surveys were conducted on 21st July 2023 by ecologist Chris Hall (Bat Licence No S092195/1 & Otter Licence No S092195/1). Chris has been working as an independent ecologist for 17 years and

has held a bat license from Countryside Council for Wales, now Natural Resources Wales (CCW/NRW) for 27 years and an otter licence for 23 years. He is an associate member of CIEEM.

3.1 Desk Study

The desktop study aims to collate existing information about priority species, habitats and designated sites. This information has relevance to the likelihood of priority species being present within the survey area, as well as giving context to any species and habitat records from the actual site.

A biological records search was carried out with Cofnod for all priority species, habitats and designated sites as recommended in the guidance from CIEEM. This enables the proposed development site to be assessed in a wider context and a potential wider 'zone of influence' of the development to be taken into account. The search parameters were 2km from the survey site area for species and all protected sites and 10km for designated sites with bats as a qualifying feature.

3.2 <u>Habitats</u>

The survey took the form of an extended Phase I survey, which identified baseline ecological conditions, as well as any important or notable habitats. All habitats within the proposed development site were classified, species lists were drawn up for each habitat type identified and the habitat condition was assessed. In the context of this report, *important or notable habitats* are considered to be those which are of a sustainable size, and which meet any of the following criteria:

- Habitats which have a high intrinsic ecological value, i.e. they support a diverse range of vascular plant and/or faunal species;
- Mature or semi-natural habitats in built-up areas;
- Environment Wales Act priority habitats;
- Habitats considered as having a significant extent and/or ecological interest;
- Invasive Non-Native Species, (INNS)

All habitats considered as having the potential to support rare, protected or otherwise notable species of flora and fauna were noted, as were any direct signs of these species. Where possible, habitats were cross-referenced to any relevant UK/Wales priority habitats.

3.3 <u>Badgers</u>

A survey for a minimum of 30m radius from the proposed construction zone was carried out for any evidence of the presence of badgers, including setts, latrines, evidence of foraging, (snuffle holes) and hairs caught on wire or vegetation where animals were breaching field boundaries. The status and activity of any recorded sett was determined in accordance with the standard published descriptions and criteria, (Cresswell, Harris and Jeffries, 1989).

3.4 <u>Bats</u>

All trees were inspected from ground level using binoculars to survey for the presence of potential roosts in defects such as rot holes and other crevices.

The importance of the site in relation to habitat connectivity for bats with the wider landscape was also assessed.

3.5 <u>Otters</u>

The watercourses within and adjacent to the proposed scheme was methodically searched for signs of otter presence. These field signs included spraints, (droppings), footprints, prey remains and otter tracks leading to and from watercourses.

The habitat was also searched for the presence of actual and potential holts and assessed for its potential to conceal otters.

3.6 <u>Water Voles</u>

The survey involved a thorough search of all water courses for field signs of water voles, including latrine sites, feeding remains, burrows, runways, footprints and sightings of the animals themselves.

Only latrines and sightings were to be used as definitive evidence of the presence of the species, but all signs will be marked on maps.

Water vole populations increase through the spring and summer breeding season, with a resulting increase in territorial behaviour. This means that latrine sites, often the most visible signs of water vole presence, become both more frequent and easier to find during summer and autumn.

3.7 Other Protected Species

The site was assessed on its potential to support any other protected or important species. During this survey, a search was made for field signs of protected or notable species and assessments made of the potential of habitats to support these species. In the context of this report important or notable species are considered to be those that meet any of the following criteria:

- Species protected by British or international law;
- Environment Wales Act priority species;
- Nationally rare or scarce species;
- Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber lists)

4 Survey Limitations

Protected Species

Field signs for protected and important species are often difficult to find or absent from a site. For this reason, the site and its habitats are assessed on their potential to support these species.

Badgers

Badgers are territorial animals and the death or debilitation of the dominant boar could feasibly lead to a change in territorial boundaries and new sites becoming occupied. An assessment of the suitability of a site to support badgers is therefore important in determining the likelihood of this occurring. The results presented in this report were accurate at the time of survey.

Otters

While spraint surveys are the recognised method of establishing the presence of otters, it is not possible to assess the number of animals present (Kruuk & Conroy, 1987).

Otters are known to occupy extensive territories of up to 30 - 40 kilometres, (Green et al 1984), in which they pursue a semi-nomadic existence, moving from one holt to another to exploit seasonally available food sources when they are present in sufficient biomass for hunting to be efficient. It is therefore possible that on any given site that the site will be used by otters but not visited for some considerable time. In this case there is a possibility of no field signs being present when the survey is carried out.

Water Voles

Due to the metapopulation dynamics of the water vole, there is always a possibility of the animal being absent at the time of the survey due to localised extinction events, only for the site to become colonised later in the year as young from other colonies disperse. An assessment of the potential of the habitat to support water voles is therefore important to establish the potential for colonisation in the future.

5 Results

5.1 Desk Study

5.1.1 <u>Protected Sites</u>

The data search revealed no statutory protected sites within the 2km search radius and no statutory protected sites relating to bats within the 10km radius search area.

There are however a total of 26 non-statutory Wildlife Sites, 23 of which are only at the 'Candidate' phase.

The closest of these is the Ty Du Uchaf Wildlife Site (Candidate) which lies 400m away and if designated would be so for its broadleaved woodland habitat.

The proposed solar generation facility also lies 1.9km from the B Lines Cymru area, which is part of a national initiative to improve habitat connectivity for invertebrates which will then benefit a range of other taxa.



Figure 2: The location of Wildlife Sites in relation to the proposed development.



Cambrian Ecology Ltd/PEA Report/Ty Du Uchaf Solar Generation Facility/10.08.2023

Figure 3: location of the B Lines Cymru area.

5.1.2 Protected Species

There are a number of protected mammal species records within the data set, including five bat species.

Also present within the search area are badger, otter, hare, and water vole.

There is also a small number of herpetofauna records but the nearest of these are 1.5km away.

A summary of the protected species present within the data search radius are presented in Table 1 below.

Common Name	Zoological Name	N ^o of Records
Bat (Unknown)	Chiroptera	4
Brown long eared bat	Plecotus auritus	2
Pipistrelle	Pipistrellus spp	3
Pipistrelle (common)	P. pipistrellus	2
Noctule bat	Nyctalus noctula	1
Badger	Meles meles	2
Otter	Lutra lutra	5
Hare	Lepus europaeus	3
Water vole	Arvicola aquaticus	2

Table 1: Protected mammal species within the 2km radius search area

There is also a small number of herpetofauna within the 2km radius protected species search radius.

Common Name	Zoological Name	Nº of Records
Adder	Vipera berus	2
Common frog	Rana temporaria	3
Common lizard	Zootoca vivipara	1
Common toad	Bufo bufo	1
Palmate newt	Lissotriton helveticus	1
Slow worm	Anguis fragilis	2

Table 2: Herpetofauna species with the 2km radius search area.



Figure 4: Location of herpetofauna records

Habitat

The data search also revealed that during the National Phase 1 Habitat Survey carried out by Countryside Council for Wales, (CCW) now NRW, the proposed solar farm site was recorded as improved grassland, indicating a long-term management regime of this habitat.



Figure 5: Results of the original CCW survey showing the site as improved grassland.

5.2 <u>Habitat</u>

The proposed development site is dominated by heavily managed, improved grassland which is grazed by sheep for much of the year. Grazing is however removed in early summer to allow a silage crop to develop.

Also present are a number of ditches, both within and just outside the application boundary, and tree lines on some boundaries.

5.2.1 Improved Grassland

This habitat is very heavily managed and, as a result, there is an impoverished assemblage of species which are capable of surviving this harsh regime.

The species present and their relative abundance are shown below in Table 3.

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

	Common Name	Botanical Name
D	Perennial rye-grass	Lolium perenne
Α	Creeping buttercup	Ranunculus repens
	White clover	Trifolium repens
F	Yorkshire fog	Holcus lanatus
	Common bent	Agrostis capillaris
	Ribwort plantain	Plantago lanceolata
	Dandelion	Taraxacum officinale
0	Broadleaved dock	Rumex obtusifolius
	Nettle	Urtica dioica
	Chickweed	Stellaria media
R	Sweet vernal grass	Anthoxanthum odoratum,
	Crested dog's tail	Cynosurus cristatus
	Meadow buttercup	Ranunculus acris

There is a small area in the north-west corner of the site where a silage crop has not been taken due to the presence of a dry ditch which makes machinery access difficult, see Target Note 1 on the Phase 1 Habitat Map in the appendix. As a result, the grasses have been allowed to seed in this location creating the impression of a very different habitat. The species assemblage is however the same as the remainder of the field, but this area clearly demonstrates the dominance of grasses in the sward.

5.2.2 <u>Watercourses & Associated Tree Lines</u>

The location of the watercourses is shown on the Phase 1 Habitat Map in Appendix II

<u>Ditch 1</u>

Ditch 1 lies outside the eastern site boundary and will be unaffected by the proposals.

The southern end of this watercourse is heavily shaded by dense tree growth with alder; (*Alnus glutinosa*), willow; (*Salix spp*) and hawthorn; (*Crataegus monogyna*) all present.

Trees are however less prevalent at the northern end of the watercourse and in this location, bramble; (*Rubus fruticosus*), meadowsweet; (*Fillipendula ulmaria*), creeping thistle; (*Cirsium arvense*) lesser spearwort; (*Ranunculus flammula*), cock's foot; (*Dactylis glomerata*) and Yorkshire fog; (*Holcus lanatus*) are all present.

The west bank of the ditch is separated from the site by a stock-proof fence but the eastern bank is grazed by cattle and as a result, poaching is present in places. The majority of the watercourse is very heavily vegetated with very little open water and a muddy substrate.

Ditch 2

Ditch 2 lies outside the northern boundary of the site and will remain unaffected by the proposals.

The watercourse is separated from the site by a row of mature trees which is dominated by oak; (*Quercus petraea*) with ash; (*Fraxinus excelsior*) and willow also present as relatively minor components.

The banks are very steep and there is no aquatic or emergent vegetation.

Ditch 3

Ditch 3 is located in the centre of the site but will remain unaffected by the proposed works.

The watercourse appears to have not been maintained for some time and is now clogged with vegetation, some of which is aquatic/emergent in nature and some is simply spreading from the banks. The only open water is either side of the central culvert where the track will cross the ditch and at the intersection of the ditches.

The species present on the banks include perennial ryegrass, creeping buttercup, meadow buttercup, lesser spearwort, meadowsweet, soft rush; (*Juncus effusus*), marsh bird's foot trefoil; (*Lotus pedunculatus*) and sneezewort; (*Achillea ptarmica*).

Species more associated with the watercourse include fool's watercress; (*Apium nodiflorum*) which is by far the most dominant species, water forget-me-not; (*Myosotis scorpioides*), water mint; (*Mentha aquatica*), water pepper; (*Persicaria hydropiper*) and branched bur-reed; (*Sparganium erectum*).

This watercourse is unfenced, the banks have a very shallow gradient and have been subjected to significant poaching by livestock.

Ditch 4

Ditch 4 runs around a large proportion of the site perimeter and was largely dry at the time of the survey and much of this ditch appears to not have held water for some considerable time. For most of its length it is little more than a shallow depression with no specific vegetation associations other than that of the adjacent improved grassland habitat.

On the western site boundary there is an adjacent clawdd vegetated in places with gorse; (*Ulex europaeus*) and bramble at the northern end which gives way to trees at the southern end including oak and willow.



Figure 6: Aerial photograph of the proposed development site

5.3 Protected Species

5.3.1 <u>Badgers</u>

A badger sett was located near the northern boundary of the site where the animals had burrowed into the bank of the dry ditch in a southerly direction. This is a two-entrance sett which appeared disused at the time of the survey with cobwebs inside both entrances and no fresh spoil or bedding.

This is however an 'outlier sett' and due to the distance from the main sett, these structures do tend to be only occupied sporadically. A licence will therefore be required from NRW to carry out the proposed works within 30m of the sett, see Section 9.2.1.

There was no evidence of badgers accessing the proposed development site and no evidence of foraging.

5.3.2 <u>Bats</u>

Potential Roosts

There is the potential for bat roosts to be present in mature trees on the site boundary, all of which will be unaffected by the proposed works.

Habitat Connectivity

There is the potential for the tree lines on the site boundaries to be used as flight path by bats. Linear landscape features such as this provide connectivity with habitats in the wider landscape.

5.3.3 <u>Hares</u>

No sightings of hares were made during the survey and the habitat is considered largely unsuitable due to the long-term, ongoing management regime on the site. While there is some minimal potential of marginal habitats on the site to be utilised by this species, these are all to be retained.

5.3.4 *Herpetofauna*

The assessment of the habitat to support herpetofauna concluded that the potential for these taxa to be present is minimal due to the heavy grazing and silage cropping on the site.

There is however some potential within the marginal habitats and areas around the internal ditch system. These habitats will however be retained intact and not directly impacted by the proposals.

5.3.5 <u>Nesting Birds</u>

There is minimal potential for nesting birds to be present within the scope of the proposals. The improved grassland habitat offers no potential concealment for nesting although the denser habitat in the central ditch could feasibly provide sufficient cover for ground nesting species to be present Some precautionary measures have therefore been recommended, see Section 9.2.5.

5.3.6 <u>Otters</u>

There was no evidence of otter presence during the survey.

While there is the potential for this species to utilise the internal ditch system for hunting amphibians at the appropriate time of year during the spawning season, the ditches are to be retained.

5.3.7 <u>Water Voles</u>

There was no evidence of water vole presence on any of the watercourses within the survey area.

The lack of any old burrows and water-side runways suggests that this species has not been present for some considerable time.

5.3.8 Other Protected Species

There was no evidence of any other protected species during the surveys and due to the nature of the habitat it is considered that there is negligible potential for any other protected species to be present.

6 Habitat Evaluation & Impact Assessment

6.1 *Improved Grassland*

The Improved grassland shows an impoverished species assemblage, partly due to the long-term management regime as indicated by the results of the original CCW National Survey.

There will therefore be no negative impact on Biodiversity at any level as a result of the loss of this habitat.

6.2 <u>Tree Lines</u>

The tree lines are to be retained intact in their current locations as they will not result in the shading of the solar panels. There will therefore be no negative impact on these linear landscape features.

There is however the potential for damage to root plates if the dry ditches on the site boundary are to be reinstated. This could result in the death of damaged trees, or instability due to root damage and the consequent felling of the trees to protect the integrity of the solar panels.

This could result in a negative impact on this habitat feature at a local level and could also have a negative impact on protected species, particularly bats by causing habitat fragmentation. If this habitat fragmentation caused an impact on a maternity colony, this negative impact could extend to a regional level.

6.3 <u>Watercourses</u>

The watercourses within the site boundary are to be retained as part of the proposed scheme and will be unaffected. There will therefore be no negative impact on this habitat at any level as a result of the scheme.

There is however the potential for a positive impact if the proposed management in Section 9.1.3 is carried out.

There is also the potential for the watercourses to act as a transmission vector for any pollution incident during the construction phase which could extend the 'zone of influence' of the proposed scheme far beyond the site boundary which could cause a negative impact at a regional level.

The proposed works are however considered to be a 'Low' risk due to the lack of any significant excavations combine with the lack of any potential pollution during the operational phase of the

scheme. The implementation of the precautionary measures in Section 9.1.3 should ensure that any risk is further minimised.

7 Species Evaluation & Impact Assessment

7.1 <u>Badgers</u>

There are a number of potential impacts on badgers as a result of developments. These are primarily:

- Loss of foraging habitat
- Damage/ disturbance of setts
- Development phase impacts

Loss of Foraging Habitat.

The badger, in a normal rural situation relies heavily on earthworms as its primary food source, (Neal, E 1986), these are found in the greatest biomass in grazed, improved pasture. This grassland within the proposed application boundary therefore represents optimal foraging habitat for badgers. There is however no evidence that badgers are foraging on the site. Improved grassland is also a very widespread habitat in this locality and the improved grassland on the site is to be largely retained as part of the proposals and will still be grazed by sheep. There will be some minor loss of habitat as a result of battery storage, sub-station etc but this will be limited in extent.

No negative impact on badgers as a result of loss of foraging habitat is therefore anticipated.

Disturbance/Damage to Setts

There is the potential for damage/disturbance to the badger sett as a result of the installation of solar panels within 30m of the sett.

The tunnels of the sett head towards the field as they are excavated into the south bank of the dry ditch on the northern boundary.

Due to the fact that this is an outlier sett, and therefore only sporadically occupied and not used for breeding, any impact would be expected to be minimal.

A licence will however still be required from NRW and the conditions of this licence will ensure that any risk is minimised, see Section 9.2.1.

Development Phase Impacts

Development sites can be hazardous places for badgers with the potential for animals to become trapped in open excavations for footings etc, and on larger developments, exposed pipe systems such as storm drains, sewage pipes etc can potentially lead to the entrapment of animals.

In this case, there will be no significant excavations which could represent a hazard and there will therefore be no potential impacts as a result of the development phase.

7.2 <u>Bats</u>

Roost Loss/Disturbance

There is the potential for roosts to be lost/disturbed if any tree root plates are damaged as a result of excavations in the vicinity of mature tree lines. Precautionary measures have therefore been recommended in Section 9.2.2.

Habitat Connectivity/Exterior Lighting

Habitat fragmentation can have a negative impact on bats, particularly species which are heavily reliant on linear landscape features such as the woodland/garden edge on the northern boundary of the proposed development site.

Any interruption/severing of flight paths, either physical or due to inappropriate lighting, can not only result in the bats being unable to access foraging areas but also cause the abandonment of roosts as a result (BCT 2018). The impact is primarily on the slower flying *Rhinolophus*, as well as *Myotis* and *Plecotus* species. Even species such as pipistrelles can be inhibited from flying across very open, illuminated areas.

There will however be no illumination on the site and provided the recommendations with regards to avoiding damage to tree root plates are adhered to, any negative impacts will be avoided, see Section 9.2.2.

7.3 <u>Hares</u>

There will be no loss of habitat for this very mobile species and the improved, grazed grassland is considered unsuitable for breeding. No negative impact at any level is therefore anticipated.

7.4 <u>Herpetofauna</u>

No impact on herpetofauna is anticipated as a result of the proposal.

The majority of the habitat on the site is considered sub-optimal, comprising of grazed improved grassland from which a silage crop is taken on an annual basis. While the ditch and perimeter habitats may have some potential, these are all to be retained. There are also very few records of herpetofauna within the 2km radius biological records search area.

7.5 <u>Nesting Birds</u>

Nesting birds will potentially be present in habitats on the central ditch. While this will not be directly impacted by the proposed works, any work in the vicinity of the central ditch does have some potential to cause a level of disturbance.

Any disturbance resulting in the failure of the brood could have a negative impact on nesting birds at a local level. All birds, with the exception of some 'pest species' which can be controlled under licence, are protected while nesting.

Recommendations are provided to avoid any undue disturbance, see Section 9.2.5.

7.6 <u>Otters</u>

Although there are records of otters on the database, there is minimal potential for this species to be present on the site. It is not considered that the vegetation on the central ditch is dense enough to provide concealment for this species.

There will therefore be no negative impact on otters at any level as a direct result of the proposals.

There is however the potential for a negative impact on otters as a result of a reduction in prey biomass should a pollution incident on the site be transmitted to watercourses in the wider landscape.

This can be avoided by adopting the precautionary measures recommended in Section 9.1.3.

7.7 <u>Water Voles</u>

Due to the negative results of the survey, combined with the current unsuitability of most of the habitat on the site, no negative impact on water voles at any level is anticipated as a result of the proposed works. Current negative influences on the watercourses, both within the site, and just outside the site boundary include heavy shading by trees, lack of aquatic/emergent vegetation, too much aquatic/emergence vegetation and the heavy poaching of banks by cattle.

There is however some potential for a positive impact on water voles in the future as a result of the proposed ditch maintenance works which will result in more permanent water in ditches which are currently clogged with vegetation leaving no open water as an escape mechanism.

The proposals to restrict grazing on the site to sheep will also reduce current impacts of poaching by cattle.

8 Protected Sites Impact Assessment

The only potential pathway of influence between the proposed development and any designated sites is via the watercourses both within the site and just outside the site boundary.

This can be avoided by adopting the precautionary measures recommended in Section 9.1.3.

9 Mitigation Measures

9.1 <u>Habitats</u>

9.1.1 Improved Grassland

No mitigation measures are required in relation to loss of improved grassland.

9.1.2 <u>Tree Lines</u>

Prior to carrying out any excavations in the vicinity of tree lines, advice must be sought from a professional arboriculturist regarding the protection of tree root plates. This will however only apply to the reinstatement of boundary ditches as the placement of solar panels will not require any significant excavations.

9.1.3 <u>Watercourses</u>

Development Phase

To minimise the risk of a pollution incident occurring during the course of the works, the current guidance for working in proximity to watercourses must be adhered to. This can be found at:

https://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-nearwater.pdf?utm_source=website&utm_medium=social&utm_campaign=GPP5%2027112017

Ongoing Maintenance

The central ditch on the site will eventually be lost due to the lack of maintenance. This watercourse is currently clogged with vegetation for most of its length. If this continues, the terrestrial species will eventually out-compete the aquatic/emergent species.

It is therefore recommended that annual maintenance takes place in early autumn.

It is also recommended that only 50% of the ditch is maintained each year on a rotational basis to ensure that cover for faunal species is preserved at all times.

9.2 Protected Species

9.2.1 <u>Badgers</u>

A licence from NRW to install the solar panels within 30m of the sett will be required prior to works in that area commencing.

The following measures should be included in that licence application:

- Due to the fact that breeding is not taking place on the site, there should be no time restrictions placed on the works.
- Prior to works commencing, the site ecologist must carry out an induction of conduction personnel to ensure that the legal implications of the works are fully understood.
- Any excavation works within 30m of the sett must then be supervised by the site ecologist.

9.2.2 <u>Bats</u>

Prior to carrying out any excavations in the vicinity of tree lines, advice must be sought from a professional arboriculturist regarding the protection of tree root plates to ensure that there is no negative impact on habitat connectivity and no loss of potential tree roosts. This will however only apply to the reinstatement of boundary ditches.

9.2.3 <u>Hares</u>

No mitigation measures for hares are considered necessary.

9.2.4 Herpetofauna

It is not anticipated that there will be any negative impact on these taxa. No mitigation measures are therefore considered necessary.

9.2.5 <u>Nesting Birds</u>

To prevent disturbance to nesting birds, it is recommended that any works in the vicinity of the central, heavily vegetated ditch are carried out outside the bird nesting season, usually recognised as 1^{st} March – 31^{st} August.

If this is not possible, a thorough survey for active nests must be carried out by a suitably experienced ecologist prior to works commencing. If any active nests are found, work must be delayed until such time as the young have fledged.

9.2.6 <u>Otters</u>

Provided that the precautionary pollution control measures given in Section 9.1.3 are adhered to, no additional mitigation measures for otters are required.

9.2.7 <u>Water Voles</u>

No mitigation measures for water voles are required.

9.3 <u>Protected/Designated Sites</u>

Provided that the precautionary pollution control measures given in Section 9.1.3 are adhered to, no further mitigation measures for any protected/designated sites are required.

10 Biodiversity Enhancement

Under Chapter 6 of Planning Policy Wales 11, planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This policy addresses the Section 6 Duty of the Environment (Wales) Act 2021 and results in the likelihood of planning applications being refused unless they can show a positive impact on biodiversity.

In this case, it is proposed that two areas of tree planting are carried out as shown below in Figure 7. This has been designed to ensure that no shading of the solar panels occurs as a result of the planting.





Planting Area 1

To ensure that the nearby solar panels are not shaded, it is recommended that ten smaller tree species which bear flowers and fruit are planted in Planting Area 1.

The following species are considered appropriate:

- Crab apple; (Malus sylvestris)
- Bullace; (Prunus domestica subsp insititia var. Nigra)
- Wild pear; (*Pyrus communis*)
- Bird cherry; (*Prunus padus*)
- Rowan; (Sorbus aucuparia)

If the trees begin to grow too tall and threaten to shade the solar panels, coppicing on a rotational basis would be acceptable.

Planting Area 2

It is recomended that a total of ten black poplars; (*Populus nigra*) are planted widely spaced in this area. The native black poplar is a distinctive, large-growing, native tree, which unlike most of our native trees, is present as distinct male and female forms. Once common across lowland flood planes it is now Britain's most threatened native timber tree. While trees have been planted, females have been selected out leaving the vast majority of the surviving population as males. Most trees are veteran males resulting in little or no population recruitment. The trees can regenerate from natural clones as readily shed branches sprout but this is a tree of large naturally functioning flood plane forest.

Figures for the national population have been given as 7,000 at most, only 2,000 of which are found outside the Hertfordshire/Buckinghamshire stronghold. In North Wales around 200 trees have been identified within the old county of Clwyd, with remnant populations in the Dee and Conwy catchments. In 2005, only 10 trees had been identified within the Snowdonia National Park border, 7 of these are close to the Afon Conwy, including 1 near Betws y Coed.

The planting of this species will not only create a valuable habitat, but will contribute to helping to prevent the extinction of a rare and spectacular tree

Various initiatives have been undertaken in North Wales since 2005 to conserve the black poplar, including the 'Conwy Black Poplar' project, managed by the former Environment Agency Wales, now Natural Resources Wales (NRW).

Caution is needed when sourcing stock for planting. Whilst some nurseries are carefully sourcing and propagating native black poplar, others are not. It must be ensured that it is *Populus nigra subsp. betulifolia* that is obtained and not some other hybrid. Black poplars will hybridise with any other poplars that come into flower at the same time and the estimated pollen radius of travel is 16km. There are some sources where the seed has been carefully produced in laboratory conditions.

Establishing the New Planting

Stock-proof fencing will be required to exclude grazing until the trees have reached sufficient size to allow sheep to be reintroduced to the area.

If rabbits are present, rabbit guards will be required.

If rabbit guards are used, these must be a biodegradable product.

Any plant casualties within the first 5 years must be replaced.

To ensure that the new planting does not have to compete with other vigorous plant species, ground preparation must include the eradication of deep-rooted perennial weeds.

It is recommended that small, bare rooted plants are used as these become established more easily.

Bare root planting must take place in autumn/winter when the plants have dropped their leaves.

Watering during dry weather in the first 12 months is recommended as this can significantly reduce the number of casualties.

Ongoing Management

The very wide spacing of the trees has been specifically chosen to allow ease of ongoing management.

There should be enough space to mow between the trees and still take an annual silage crop from the biodiversity enhancement area.

Once the trees have become established and reached a size where they will be resistant to damage, it should then be possible to allow grazing by sheep to continue.

11 References

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Green, J, Green, R & Jefferies, DJ (1984) A radio tracking survey of otters *Lutra lutra* on a Perthshire river system. Lutra 27: 85-145

Kruuk, H & Conroy, JWH (1987). Surveying Otter Populations: A discussion of problems with spraints. Biological Conservation 41: 179-183.

Neal. E. (1986) The Natural History of Badgers, Facts on File Inc. New York

12 Legal Implications

12.1 Badgers

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under this Act it is an offence to damage, destroy or obstruct access to a badger sett, and also to disturb a badger whilst it is occupying a sett.

Undertaking an activity within 30 metres of a badger sett, which could result in damage to the sett, obstructing access to it or disturbance of any occupying badgers, may constitute an offence. This distance may be extended to 100 metres if the activity involves blasting or pile-driving.

NRW, the statutory conservation authority, are empowered under the 1992 Act to issue a licence permitting potentially damaging or disturbing activities to be undertaken within 30 metres or 100 metres of a badger depending on the nature of the activity undertaken as part of a local authority consented development.

In other circumstances such as commercial forestry operations and flood defence, licences are granted by the Welsh Government.

There is no current mechanism in place for the licensing of works for public safety. In these circumstances work must be carried out under the guidance of a detailed method statement which must first be approved by NRW.

A licence may also be granted for the exclusion of badgers from a sett and the ultimate destruction of the sett feature. An assessment of the impact of this action and the provision of appropriate mitigation measures are usually a pre-requisite to granting a destruction licence. Licences are normally only granted between 1st July and 30th November of any year.

12.2 <u>Bats</u>

Bats are protected under UK law by the Wildlife and Countryside Act 1981 (as amended) and also under European law by the Habitat and Species Regulations 2021. Under these laws it is an offence to deliberately kill or injure a bat, to disturb a bat or to damage, destroy or block access to a roost. Bat roosts are protected under these laws whether the animals are present at the time of survey or not. NRW are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest.

All British reptiles are protected under 'Schedule 5' of the Wildlife & Countryside Act 1981 (as amended). This legislation protects reptiles from deliberate killing, injury or unlicensed trade.

The slow worm is included in Section 7 of the Environment Wales Act (2016) which places an obligation on all Competent Authorities to consider these species in all of their activities, including planning and development issues.

12.3 Herpetofauna

All British reptiles and amphibians are protected under 'Schedule 5' of the Wildlife & Countryside Act 1981 (as amended). This legislation protects reptiles from deliberate killing, injury or unlicensed trade.

Additional protection is afforded under Section 7 of the Environment Wales Act (2016) which places an obligation on all Competent Authorities to consider these species in all of their activities, including planning and development issues.

12.4 <u>Nesting Birds</u>

Under the Wildlife and Countryside Act 1981, all nesting birds and their nests are protected. Once a bird places a single piece of material then it constitutes a nest. It is then an offence to cause damage to the bird, nest, eggs or chicks and immediate habitat which is likely to result in damage by causing the bird to desert its nest. This covers all bird species, with the exception of a small number of 'pest species' which can be controlled by special license.

In 2000, the Countryside and Rights of Way Act (CROW Act) was made law, strengthening the legal protection for many species and introducing a 'reckless disturbance' offence. Planning Authorities are also obliged to take nesting birds into account in relation to planning decisions following guidance from the Welsh Government detailed in Technical Advice Note (TAN) 5.

12.5 <u>Otters</u>

Otters are protected under UK law by the Wildlife and Countryside Act 1981 (as amended) and also under European law by the Habitat and Species Regulations (2010). Under these laws it is an offence to deliberately kill or injure an otter, to disturb them or to damage, destroy or block access to their place of shelter. Under both laws the Welsh Assembly Government are empowered to issue licences to disturb them, and disturb or destroy their habitat for reasons of overriding public interest.

12.6 <u>Water Voles</u>

In Wales water voles are protected under the Wildlife and Countryside Act 1981 (as amended) through inclusion in Schedule 5. Under the Wildlife and Countryside Act 1981(as amended) (W&CA) it is illegal to:-

- Intentionally kill, injure or take any wild water vole
- Possess or control any live or dead wild water vole or any part of, or anything derived from, such an animal
- Intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which any wild water vole uses for shelter or protection

- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for that purpose
- Sell, offer or expose for sale, or have in possession or transport for the purpose of sale, any live or dead wild water vole, or any part of, or anything derived from, such an animal
- Publish or cause to be published any advertisement likely to be understood as conveying buying or selling, or intention to buy or sell, any of those things

13 Appendices

13.1 Site photographic record



The habitat of the proposed development site



White clover in the improved grassland sward



Much of the sward is heavily dominated by perennial rye grass



The trees on the south eastern boundary which will be unaffected by any works



The southern end of D2 outside the eastern site boundary which is heavily shaded by trees



The northern end of D1 outside the eastern site boudary



The central ditch on the site D3



Northern boundary mature oaks which are to be retained



One of the entrances of the badger sett on the northern boudary



The badger sett appears to be currently disused



The clawdd on the western site boudary



Fools water cress dominates the central ditch D3



The existing access



13.3 Review Table

Name	Task	Date
Chris Hall	Author	10.08.2023
Ben Box	Review	14.08.2023
Chris Hall	Proofreading	14.08.2023