

Preliminary Ecological Appraisal

for

Afan Argoed Country Park, Cymmer



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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 at Afan Argoed Country Park in relation to the proposed construction of a new bike facility.

1.1.2 A number of potential ecological receptors have been identified in relation to the development proposals, and include the following:

1. Two Sites of Importance for Nature Conservation, together with several SINC-designated watercourses.
2. Woodland and trees within and immediately adjacent to the Site.
3. Habitat with some suitability for reptiles and amphibians, together with small mammals including hedgehogs and dormice.
4. Habitat with suitability for foraging/commuting bats, and potential for roosting bats.
5. Habitat with suitability for foraging and breeding birds.
6. Himalayan balsam is present on the Site.

1.2 Recommendations

1.2.1 A number of recommendations are given in the report in order to keep potential impacts on habitat and species receptors to a minimum and ensure no net loss of habitat. Recommendations are also given in relation to Himalayan balsam management, as well as enhancements to ensure some biodiversity net benefit is achieved.

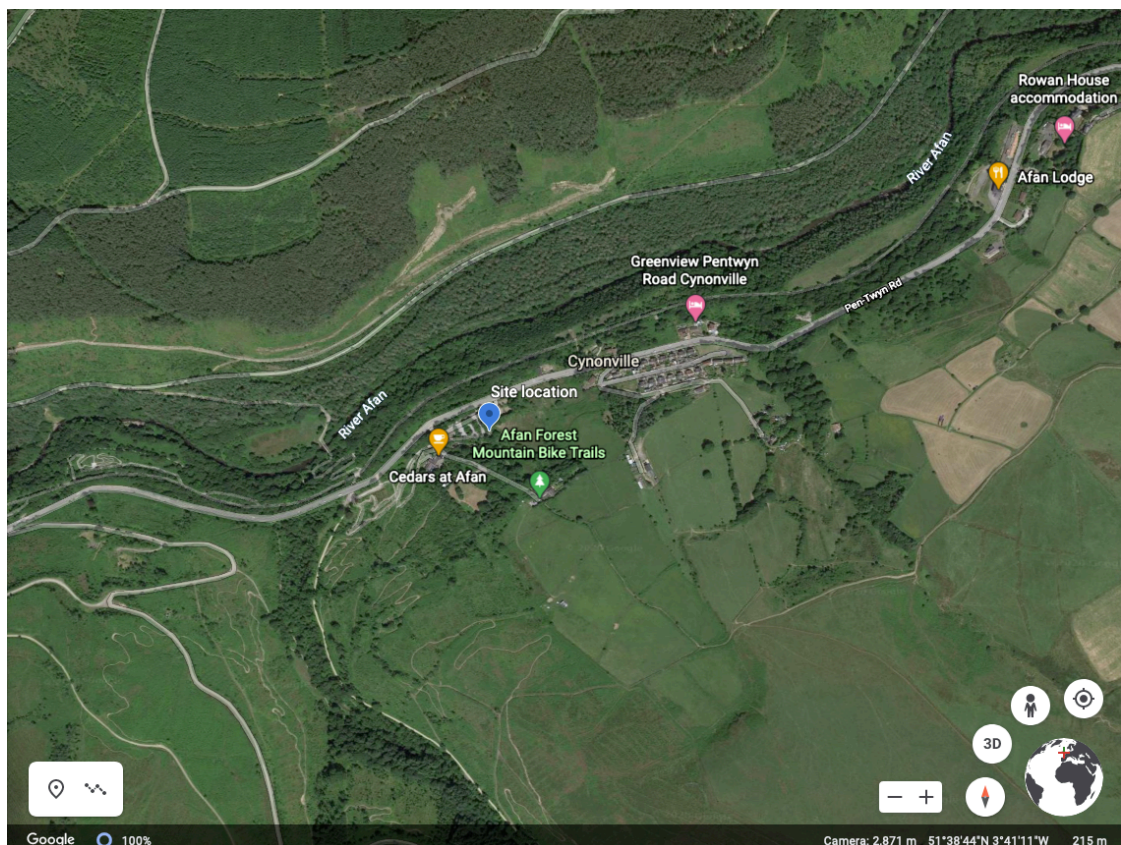
1.2.2 Repeat surveys are recommended if a period of more than two years elapses between the date of this survey and commencement of the works.

2 Introduction

2.1 The Proposed Development

- 2.1.1 Koru Ecology Associates was commissioned in October 2020 by B Threfall (“the Applicant”) to complete a Preliminary Ecological Appraisal (PEA) of land at Afan Argoed Country Park near Cynonville, Cymmer, in Neath Port Talbot (“the Site”).
- 2.1.2 The Site is centred on approximate National Grid Reference SS 82202 95104, and its location is shown in Figure 1 below.

Figure 1. Site location (blue pin).



- 2.1.3 This report has been prepared to support a planning application to Neath Port Talbot Council (NPTC) for the construction of a new detached building, which will incorporate a bike hire and retail facility, together with an office, toilet, workshop and classroom space. A Preliminary Ecological Appraisal of the Site is required by the local planning authority.

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 survey, 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, as well as result in net benefit to biodiversity (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 October 2020 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 and/or assessment of potential for protected/otherwise notable flora and fauna that may require **further species-specific surveys**, together with identification of any requirements for mitigation or potential mitigation.
4. Identification of **opportunities for ecological enhancement**.

3.1.2 A more detailed description of tasks 1 – 3 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), and Koru Ecology Associates is a CIEEM Registered Practice.

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, however it should be noted that the site survey was conducted at a time of year when some plant species are dormant and not visible above the ground. The species list provided should therefore be considered indicative rather than exhaustive. However, due to the general nature of the Site and development proposed, this is not considered to be a significant constraint and the assessment of the Site is still considered to be robust. Where other minor constraints occurred, these are described within the relevant methodology and/or results sections of this report.

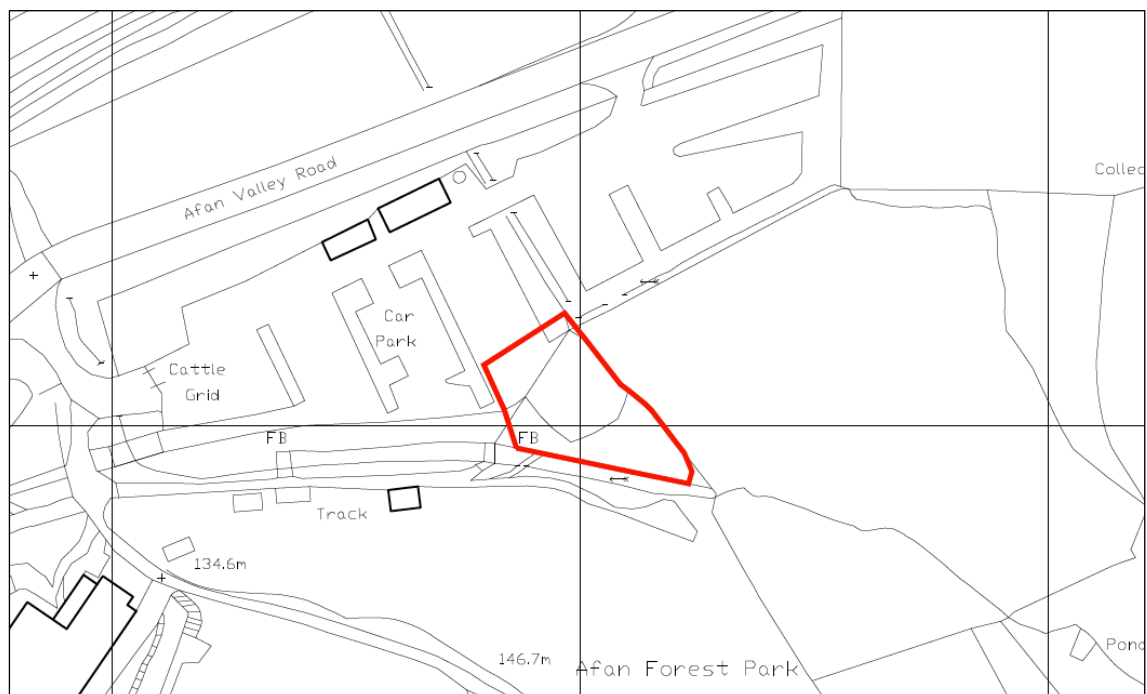
3.4 Desk Study

- 3.4.1 Due to the size (less than 1ha) and nature of the development, a suitable search area for desk study data was considered to be 500m. West Wales Biodiversity Information Centre (WWBIC) was therefore contacted in November 2020 and asked to supply records of locally designated sites and protected and/or otherwise notable species within this search area. Records of Ancient Woodland were also requested at the same time.
- 3.4.2 The MAGIC website (<http://magic.defra.gov.uk>) was searched for details of nationally and internationally designated sites within the search area. 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 28th October 2020. 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 current planning application boundary was included, and therefore comprises ‘the Site’ (see Figure 2 below).

Figure 2. Planning application boundary at time of survey.



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 2017; 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).

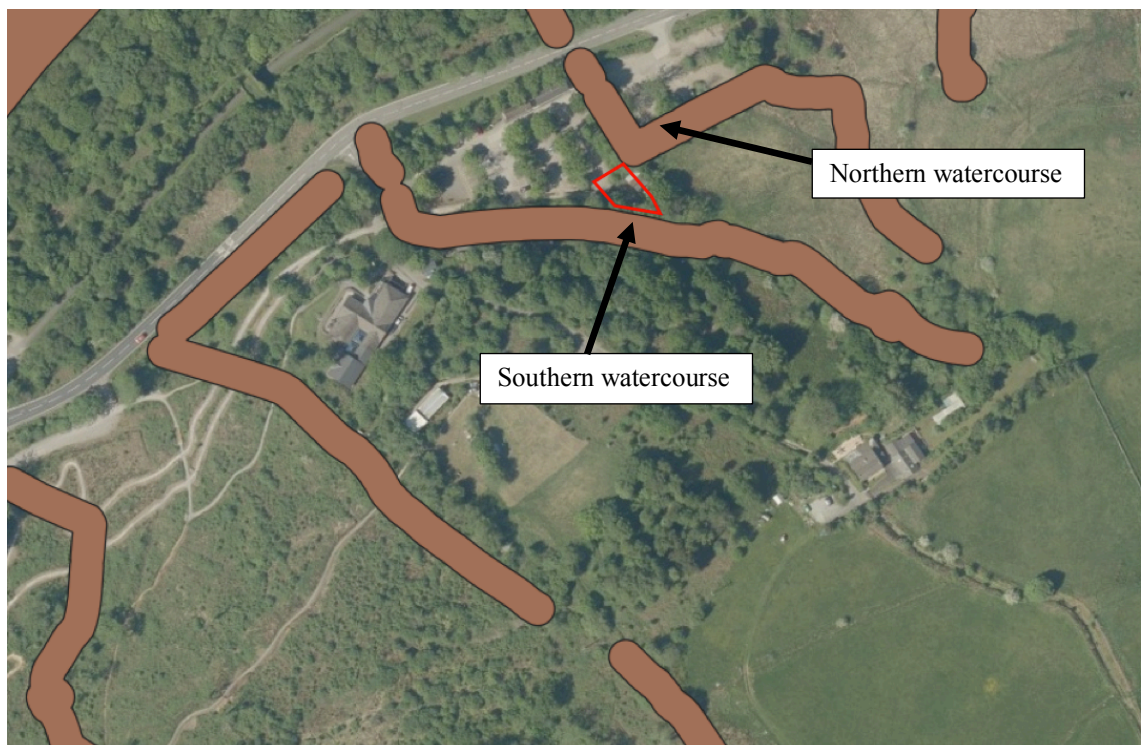
- 3.6.3 During the survey, consideration was given to features such as potential breeding bird habitat, bat roosting locations (a ground-based inspection of all trees, with the aid of binoculars, was completed) reptile habitat and the suitability of other features for protected/otherwise notable species. Exotic and invasive species (e.g. Japanese knotweed (*Reynoutria 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 are located within 500m of the Site.
- 4.1.2 Two locally designated Sites of importance for Nature Conservation (SINCs) were identified within 500m of the Site, including Afan Mineral Railway (within 50m of the Site) and Dan-y-Coed (approximately 450m away). Afan Mineral Railway is designated for its native woodland, open mosaic habitats on previously developed land and for its invertebrate assemblage. Dan-y-Coed is designated for its native woodland, which is semi-natural with a mixed deciduous component, and has five ancient woodland indicator species.
- 4.1.3 A number of watercourses – blanket-designated as SINCs – are located within the vicinity of the Site, as per Figure 3 below.

Figure 3. Watercourses designated as SINCs.



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, a summary of the most relevant records is given in Table 1 below.

Table 1. Summary of Notable Species Records.

Common name	Scientific name	Conservation status*
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	EPS
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	EPS
Noctule bat	<i>Nyctalus noctula</i>	EPS
Daubenton's bat	<i>Myotis daubentonii</i>	EPS
Brown long-eared bat	<i>Plecotus auritus</i>	EPS
Hedgehog	<i>Erinaceus europaeus</i>	S7
Hare	<i>Lepus europaeus</i>	S7
Otter	<i>Lutra lutra</i>	EPS
Pine martin	<i>Martes martes</i>	WCA5
Common toad	<i>Bufo bufo</i>	WCA5
Common frog	<i>Rana temporaria</i>	WCA5
Slow-worm	<i>Anguis fragilis</i>	WCA1
Adder	<i>Vipera berus</i>	WCA1
Common lizard	<i>Zootoca vivipara</i>	WCA1
Barn owl	<i>Tyto alba</i>	WCA1
Nightjar	<i>Caprimulgus europaeus</i>	WCA1
Peregrine	<i>Falco peregrinus</i>	WCA1
Merlin	<i>Falco columbarius</i>	WCA1
Leach's Petrel	<i>Oceanodroma leucorhoa</i>	WCA1
Honey-buzzard	<i>Pernis apivorus</i>	WCA1
Red Kite	<i>Milvus milvus</i>	WCA1
Fieldfare	<i>Turdus pilaris</i>	WCA1
Common Crossbill	<i>Loxia curvirostra</i>	WCA1
Brambling	<i>Fringilla montifringilla</i>	WCA1
Goshawk	<i>Accipiter gentilis</i>	WCA1
Kestrel	<i>Falco tinnunculus</i>	S7
Tree pipit	<i>Anthus trivialis</i>	S7
Dunnock	<i>Prunella modularis</i>	S7
Linnet	<i>Linaria cannabina</i>	S7
Spotted flycatcher	<i>Muscicapa striata</i>	S7
Marsh tit	<i>Poecile palustris</i>	S7
Bullfinch	<i>Pyrrhula pyrrhula</i>	S7
Cuckoo	<i>Cuculus canorus</i>	S7
Wood warbler	<i>Phylloscopus sibilatrix</i>	S7

Lesser redpoll	<i>Acanthis cabaret</i>	S7
Song thrush	<i>Turdus philomelos</i>	S7
Grey dagger	<i>Acronicta psi</i>	S7
Dusky brocade	<i>Apamea remissa</i>	S7
Broom moth	<i>Ceramica pisi</i>	S7
Small phoenix	<i>Ecliptopera silaceata</i>	S7
Ghost moth	<i>Hepialus humuli</i>	S7
Brindled beauty	<i>Lycia hirtaria</i>	S7
White ermine	<i>Spilosoma lubricipeda</i>	S7
Buff ermine	<i>Spilosoma lutea</i>	S7
Cinnabar	<i>Tyria jacobaeae</i>	S7
Dark-barred twin-spot carpet	<i>Xanthorhoe ferrugata</i>	S7
Small pearl-bordered fritillary	<i>Boloria selene</i>	S7
Small heath	<i>Coenonympha pamphilus</i>	S7
Wall	<i>Lasiommata megera</i>	S7
Grayling	<i>Hipparchia semele</i>	S7

Key:

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

WCA1 = Bird listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

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 and covered by The Environment (Wales) Act 2016.

- 4.2.2 In addition, records of 31 further notable bird species, 25 notable invertebrate species, 100 vascular plants and 37 non-vascular plants were highlighted.
- 4.2.3 Of the notable vascular plants, eight are classified as Invasive Non-Native Species (INNS) and include four species listed on Schedule 9 of the Wildlife and Countryside Act (Wall Cotoneaster *Cotoneaster horizontalis*, Himalayan Cotoneaster *Cotoneaster simonsii*, Himalayan Balsam *Impatiens glandulifera* and Rhododendron *Rhododendron ponticum*). In addition, one species is listed on Schedule 8 of the Wildlife and Countryside Act (bluebell *Hyacinthoides non-scripta*) and one species is listed as a Species of Principle Importance by the Environment Wales Act (red hemp-nettle *Galeopsis angustifolia*).
- 4.2.4 The non-vascular plants include one hornwort species, one lichen species, thirteen liverwort species and twenty four moss species. Two fungi species were also recorded.

4.3 Site Context

- 4.3.1 The Site is located in a rural setting within the Afan Valley in the county of Neath Port Talbot, approximately 300m to the west of the small settlement of Cynonville. The Site forms part of Afan Argoed Country Park, and is bordered to the north by a gravel carpark, to the south and west by woodland, and to the east by marshy grassland fields. A small stream is present immediately adjacent to the southern boundary of the Site, and a further small watercourse falls close to the north corner of the Site.
- 4.3.2 Further afield, to the south, west and east, the landscape gives way to more fields and open hill country. To the north on the far side of the carpark is the A4107, beyond which is the Afon Afan. Farther afield to the north, there are extensive forestry plantations.

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. Scientific names are given after the first mention of a species; thereafter, common names are used. Nomenclature follows Stace (2019) for vascular plant species.
- 4.4.2 Due to the small scale nature of the Site and the fact that the topographical survey and tree survey already show almost all features of interest for ecology, a Phase 1 Habitat map has not been produced, or target notes given. Instead, tree numbers and other features shown in Figure 4 below are referred to, together with a number of photographs.
- 4.4.3 The Site can be divided into two parts, the first of which comprises the gravel carpark serving Afan Forest Park (labelled as 'chippings' in Figure 4 and shown in Figure 5, both below), which is segregated from the rest of the Site by a wooden fence with a gated entrance. The remainder of this second half of the Site is surrounded by a metal palisade fence and effectively forms a secure compound area that is used for storage.
- 4.4.4 The compound area contains a number of metal storage containers (see Figure 6 below), and there are several log piles and stone piles present (see Figures 7 and 8 below). A number of mature and semi-mature trees are present within the compound and just outside, including specimens of oak *Quercus robur*, field maple *Acer campestre*, ash *Fraxinus excelsior* and grey alder *Alnus incana*.

[illegible]

A photograph of a row of green metal storage containers in an autumn setting. The containers are weathered and have some signs on them. A large tree with orange and yellow leaves is in the background, and the ground is covered with fallen leaves.

4.4.6 Ground flora noted during the survey visit was rather limited, with forb species including rosebay willowherb *Chamaenerion angustifolium*, colt's-foot *Tussilago farfara*, common ivy *Hedera helix*, greater plantain *Plantago major*, common nettle *Urtica dioica*, herb-Robert *Geranium robertianum*, selfheal *Prunella vulgaris*, common mouse-ear *Cerastium fontanum*, creeping buttercup *Ranunculus repens* and bracken *Pteridium aquilinum* all present. Grasses and rushes are also sparse and include Yorkshire-fog *Holcus lanatus*, false brome *Brachypodium sylvaticum*, hard rush *Juncus inflexus* and jointed rush *J. articulatus*. Horsetails *Equisetum* sp. are present in the damper areas, and young Himalayan balsam *Impatiens glandulifera* is scattered sparsely across the compound area.



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 1 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 <i>Pipistrellus pipistrellus</i>, soprano pipistrelle <i>P. pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Daubenton's <i>Myotis daubentonii</i> and brown long-eared <i>Plecotus auritus</i> were highlighted by the desk study. The Site forms a small part of a wider landscape of good quality foraging habitat for bats, in particular relating to the woodland and the nearby Afon Afan. Two trees on the Site have potential suitability for roosting bats. None of the structures (mainly shipping containers) on the Site have potential for roosting bats.
Otter	Otters have been recorded associated with the Afon Afan and it is possible that otters may travel through and /or close to the Site.
Dormice	No records of dormice were highlighted by the desk study. There is some limited suitability for dormice on the Site and within the wider Afan Argoed Forest Park and surrounding woodland.
Water vole	No records of water voles were highlighted by the desk study. Habitat on the Site itself is unsuitable for this species, and the adjacent stream is unlikely to be suitable due to its small size and the presence of significant shading by woodland. This species is likely to be absent from the Site and is not considered further here.
Amphibians	Records of common frog <i>Rana temporaria</i> and common toad <i>Bufo bufo</i> were highlighted by the desk study. There is suitable terrestrial habitat on the Site for amphibian species.
Reptiles	Records of slow-worm, common lizard and adder were highlighted by the desk study. The habitat associated with the Site is generally of low suitability for reptiles due to heavy shading from surrounding trees. However, the presence of log and stone piles on the Site may provide potential hibernation opportunities for common reptile species. The presence of water courses and an adjacent marshy grassland field may also provide potential for grass snakes nearby.
Breeding birds	There is suitable habitat for breeding and foraging birds associated with the trees on the Site.
Badger	No records of badgers were highlighted by the desk study and no signs indicating the presence of badgers were noted on the Site. However, the site is suitable for foraging and commuting badgers.
Hedgehog	Records of hedgehogs were identified by the desk study and suitable foraging habitat is present on the Site, together with potential hibernating opportunities within log piles.
Hare	A single record of hare (road kill in the Afan Corrwg Valley in 2005) was identified by the desk study. Hares live in grassland habitats and at woodland edges, however whilst the woodland habitat on the Site provides some potential habitat for hares, the proposed works in this small area are unlikely to negatively impact on this mobile species. Hares are therefore not considered further here.

Pine martin	Two records of pine martin were identified by the desk study, both of live sightings in 2001 and 2008. The woodland associated with the Site provides potential foraging/ commuting habitat for pine martins, however due to the minimal extent of the trees to be lost, impacts on this species are likely to be negligible. This species is therefore not considered further here.
Invertebrates	Records of a number of notable invertebrate species were highlighted by the desk study exercise. A reasonable range of invertebrates is likely to be associated with site.
Plants	Records of bluebell, red hemp-nettle and Himalayan balsam were highlighted by the desk study. It is possible that bluebells are present on the Site; signs can be absent later in the year when the flowering season is over and any standing dead seed heads have decomposed. However, it should be noted that bluebells are protected against sale only, and even if they are present in the absence of mitigation no offence would be committed. This species is therefore not considered further here. Red hemp-nettle is an arable weed and is unlikely to be present on the Site. This species is therefore not considered further here. Himalayan balsam was recorded on the Site during the Phase 1 survey visit. No other INNS were noted.

5 Assessment

5.1 Planning Policy Context

5.1.1 Planning Policy Wales (PPW) (10th Edition, December 2018) 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 Key Planning Principles are set out within PPW and include the following:

1. Growing our economy in a sustainable manner.
2. Making best use of resources.
3. Facilitating accessible and healthy environments.
4. Creating & sustaining communities.
5. Maximising environmental protection and limiting environmental impact.

5.1.4 PPW also addresses the Sustainable Management of Natural Resources (SMNR). The key features of the SMNR approach to which the planning system can contribute are:

1. Improving the resilience of ecosystems and ecological networks.
2. Halting and reversing the loss of biodiversity.
3. Maintaining and enhancing green infrastructure based on seeking multiple ecosystem benefits and solutions.
4. Ensuring resilient locational choices for infrastructure and built development, taking into account water supplies, water quality and reducing, wherever possible, air and noise pollution and environmental risks, such as those posed by flood risk, coastal change, land contamination and instability.
5. Taking actions to move towards a more circular economy in Wales.

6. Facilitating the move towards de-carbonisation of the economy.

5.1.5 With regards to biodiversity and ecological networks, development plan strategies, policies and development proposals must consider the need to:

1. Support the conservation of biodiversity, in particular the conservation of wildlife and habitats.
2. Ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats.
3. Ensure statutorily and non-statutorily designated sites are properly protected and managed.
4. Safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat.
5. Secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

TAN5: Nature Conservation and Planning

5.1.6 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.

5.1.7 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 are now collectively 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

5.1.8 A number of local planning policies within the Neath Port Talbot Local Development Plan (NPTCBC, 2016) are relevant to biodiversity and nature conservation, these include the following:

1. **Strategic Policy 15 (Biodiversity and Geodiversity).** This relates to the protection, conservation, enhancement and management of important habitats, species and sites of geological interest through recognition of SACs, Ramsar sites, SSSIs and NNRs, as well as via identification and protection of sites of regional and local importance. Important natural heritage features will also be protected.
2. **Policy EN6 (Important Biodiversity and Geodiversity Sites).** The policy states *“Development proposals that would affect Regionally Important Geodiversity Sites (RIGS), Local Nature Reserves (LNRs), Sites of Interest for Nature Conservation (SINC)s, sites meeting SINC criteria or sites supporting Local Biodiversity Action Plan (LBAP) or S42 habitats or species will only be permitted where a) they conserve and where possible enhance the natural heritage importance of the site; or b) the development could not reasonably be located elsewhere, and the benefits of the development outweigh the natural heritage importance of the site. Mitigation and/or compensation measures will need to be agreed where adverse effects are unavoidable”*.

3. **Policy EN7 (Important Natural Features):** The policy states *“Development proposals that would adversely affect ecologically or visually important natural features such as trees, woodlands, hedgerows / field boundaries, watercourses or ponds will only be permitted where a) full account has been taken of the relevant features in the design of the development, with measures put in place to ensure that they are retained and protected wherever possible; or b) the biodiversity value and role of the relevant feature has been taken into account and where removal is unavoidable, mitigation measures are agreed”*.

- 5.1.9 Consideration should also be given to Neath Port Talbot’s Biodiversity and Geodiversity Supplementary Planning Guidance (NPTCBC, 2018).

The Environment (Wales) Act 2016

- 5.1.10 Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions (Biodiversity and Resilience of Ecosystems Duty, or Section 6 Duty). This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. In doing so planning authorities must also take account of and promote the resilience of ecosystems, in particular the following aspects:

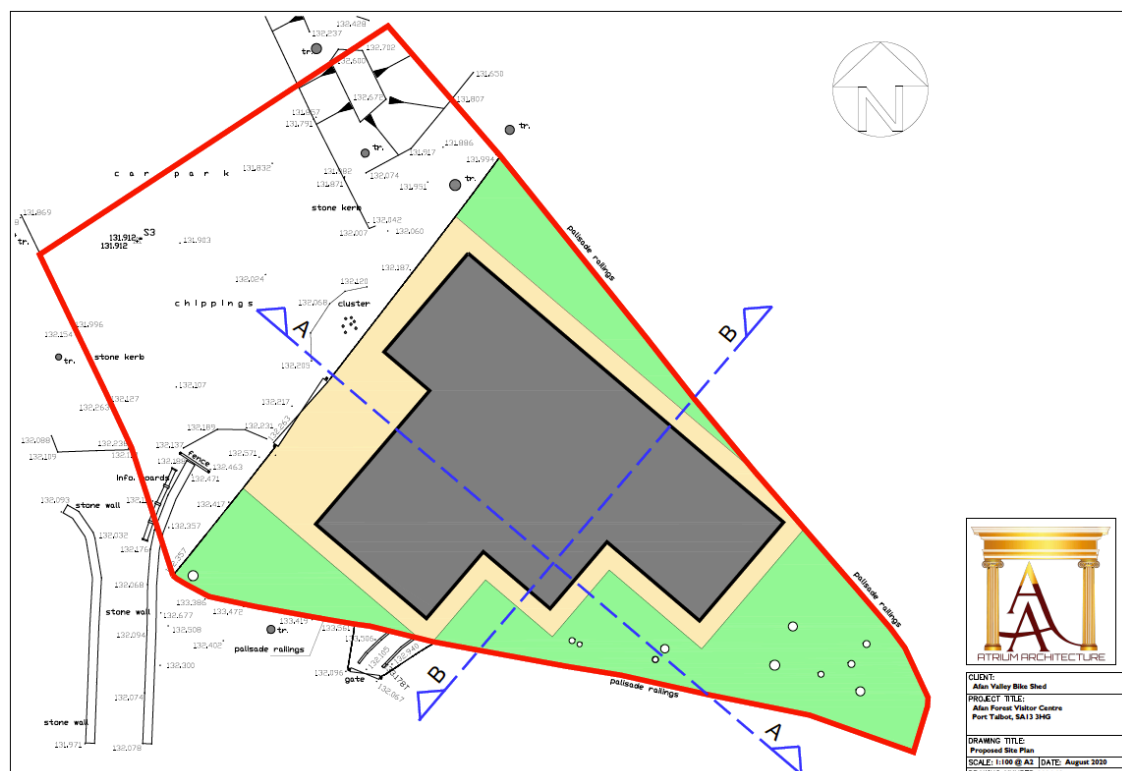
1. Diversity between and within ecosystems
2. The connections between and within ecosystems;
3. the scale of ecosystems;
4. the condition of ecosystems including their structure and functioning; and
5. the adaptability of ecosystems.

- 5.1.11 In fulfilling this duty, the Environment Act (Wales) 2016 requires public authorities to seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales. 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 Due to the nature of the Afan Mineral Railway and Dan-y-Coed SINC's identified during the desk study, together with their distance from the Site and the nature of the development proposals, impacts on these designated sites are considered unlikely.
- 5.2.2 The Site also lies adjacent to two watercourses that are 'blanket designated' by NPT as SINC's. A stand-off distance of 7m between each watercourse and any proposed development is normally required.
- 5.2.3 With regards to the proposals for this site, the stand-off distance between the southern watercourse and the red line boundary is approximately 3m. However, it should be noted that the Site boundary is marked by a palisade fence located on top of a bank, which will be retained *in situ* during both the construction and the operational stage of the project. Within the fence, the proposed site plan indicates that whilst the new building footprint falls close to the fence at the southern corner, in general it will not extend right up to the fence (see Figure 9 below). Areas of new planting will be recreated around the edges of the building footprint, thereby creating further buffering between the watercourse and the new building (see Section 6 of this report).

Figure 9. Proposed site plan.



- 5.2.4 Due to the presence of an earth bank between the development footprint and the watercourse, significant silt runoff from the construction works is considered unlikely. However, the narrow gated slot in the bank may allow runoff into the southern stream to take place, and appropriate precautions should be taken to address this. These are discussed further in Section 6 of this report.
- 5.2.5 The watercourse to the north of the Site will not be directly impacted on by the development proposals, and the building footprint is located 5 – 10m from the watercourse. However, this watercourse is not protected by a bank, and appropriate precautions in relation to potential for silt run-off should also be taken in this area. Again, these are discussed further in Section 6 of this report.
- 5.2.6 It is currently proposed that surface run-off from the development once operational will infiltrate within the ‘chippings’ area of the Site, before being discharged. In addition, hard surfaces around the new building will be made of porous paving to reduce runoff as far as possible. Full details of this strategy will be agreed separately via the SAB process.

5.3 Impacts on Habitats

- 5.3.1 The Phase 1 Habitat survey highlighted the presence of a number of trees on the Site.
- 5.3.2 The tree survey (Webster, 2020) categorised each of these trees as being Category A (trees of high quality with an estimated life expectancy of at least 40 years), Category B (trees of moderate quality with an estimated life expectancy of at least 20 years), Category C (trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm) or Category U (trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years). Trees in categories A, B and C should be considered for retention, whilst trees in Category U are considered unsuitable for retention.
- 5.3.3 A number of these trees will be removed in order to make space for the proposed development. These include Category U trees T5, T6 and T8, Category C trees T3, T4 and T10, and Category B tree T11. All other trees will be retained.
- 5.3.4 The development proposals will therefore result in the loss of some trees, however it should be noted that these are trees of low quality and unlikely to live longer than 10 more years if left untouched. The only exception to this is T11, which is a Category B

tree. The removal of this tree is required in order to facilitate access to the proposed fire escape route and therefore is essential to the development.

5.3.5 Due to the generally poor quality of the trees being lost, the proposed tree removal is not considered to be significant. However, appropriate replacement planting within the Site is proposed in order to balance the loss of these trees. This is discussed further in Section 6 of this report.

5.3.6 The loss of existing log and stone piles, together with effects on species using these habitats is addressed in Section 5.4 below.

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 2017 (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 soprano pipistrelle, common pipistrelle, noctule, Daubenton's and brown long-eared.
- 5.4.5 The Site is suitable for foraging and commuting bats however due to the Site being small in size this is limited to being as part of a wider woodland landscape, as previously described. Whilst a number of trees will be lost as a result of the development proposals, this is unlikely to impact on the quality of the broader landscape used by foraging and commuting bats, and (as previously noted) replacement trees will be planted elsewhere on the wider Afan Forest site.
- 5.4.6 External lighting will be limited; further recommendation details are provided within Section 6 of this report. If followed appropriately, impacts of the proposals on foraging bats are therefore considered likely to be negligible.
- 5.4.7 None of the structures on the Site are suitable for roosting bats, and therefore their removal is unlikely to impact on bats.
- 5.4.8 Two trees on or close to the Site were assessed as potentially having suitable features for roosting bats. These include T2 and T9. T2 is an oak tree with a stem diameter of 350mm and described as early mature in the tree survey report. This tree has some ivy cladding making it difficult to fully check for features offering bat roost potential from the ground. T9 is an ash tree with a stem diameter of 450mm, is described as mature within the tree survey report and has advanced ash dieback disease. Several features including knotholes are present within the main trunk that could not be ruled out for bats from a ground-based inspection alone. None of the other trees on the Site have any features suitable for roosting bats.
- 5.4.9 It should be noted that T2 will be retained within the development, and T9 falls outside the planning application boundary and is not scheduled for felling as part of these development proposals. It is therefore considered that no impacts to potential bat roosts will occur in relation to tree removal. If this changes and T2 and/or T9 need to be removed, appropriate precautions in relation to bats must be taken. These are described in Section 6 of this report.

Amphibians

- 5.4.10 Amphibians, including newts, frogs and toads are protected by various legislation, including the Wildlife and Countryside Act 1981 (as amended) and for great crested newt the Conservation of Habitats and Species Regulations 2017.
- 5.4.11 In addition, great crested newt and common toad are both UK Biodiversity Action Plan species and are listed as a Species of Principal Importance under the provisions of the NERC Act 2006/ Environment (Wales) Act.
- 5.4.12 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), together with the lack of any significant standing waterbodies within 500m. Potential impacts on great crested newts are therefore considered unlikely.
- 5.4.13 Records of common frog and common toad were highlighted by the desk study and suitable terrestrial habitat for these species is present on and close to the Site. This includes areas of woodland and small watercourses nearby, together with the presence of log and stone piles on the Site itself.
- 5.4.14 Appropriate precautionary measures should be taken in relation to log and stone pile removal, 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

- 5.4.15 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.
- 5.4.16 Records of a number of bird species were highlighted by the desk study and the trees on the Site are likely to provide suitable habitat for foraging and breeding birds typically associated with woodland.

- 5.4.17 Appropriate precautions are recommended in relation to the proposed removal of a number of trees on the Site, and are discussed further in Section 6 of this report. Assuming they are followed, impacts of the proposals on this species group are considered likely to be negligible.

Reptiles

- 5.4.18 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).
- 5.4.19 Records of slow worm, adder and common lizard were highlighted by the desk study and there is some potential for these species to use the log and stone piles present on the Site for hibernation. These features will need to be removed as part of the development, however in order to reduce the likelihood of impacts on reptiles appropriate precautions should be taken when relocating them. 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 Records of this species were highlighted by the desk study and there is suitable habitat present on the Site for foraging and hibernating hedgehogs (within log and stone piles). Appropriate precautions should therefore be taken when relocating the stone/log piles and 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 No records of dormice were highlighted by the desk study. Whilst the trees present on the Site have some potential for foraging and commuting dormice, the chances of any individuals being present in this small area of habitat during tree removal is very low due to populations generally living at very low densities. There is potential for dormice to be using the log and wood piles for hibernating purposes, therefore appropriate precautions are recommended during their removal, discussed in Section 6 of this report. Assuming these recommendations are followed, impacts on dormice are considered unlikely.

Otters

5.4.24 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.

5.4.25 Otters are known to be using the Afon Afan river system located approximately 500m to the west of the Site. Whilst it is possible that this species may pass through the Site on occasion, impacts on this species are generally considered unlikely.

Badgers

5.4.26 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.

5.4.27 No records of badger were highlighted by the desk study and 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.

5.4.28 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

5.4.29 A number of invertebrate species records were highlighted by the desk study and a good range of invertebrates is likely to be present on the Site.

5.4.30 In particular, many of these are likely to be associated with the trees – a number of which will be retained on the Site – together with the log pile areas. Appropriate precautions are recommended in relation to the log piles and are discussed further in Section 6 of this report. Appropriate planting is also recommended around the edges of the site and together with small size of the Site, impacts on the invertebrate assemblage of the area are likely to be negligible.

5.5 Invasive Species

- 5.5.1 Himalayan balsam is sparsely scattered across the compound area. Although it is not an offence to have the plant on your land, under the Wildlife and Countryside Act (Section 14 and Part II of Schedule 9) 1981 (as amended), it is an offence for it to be planted in the wild or otherwise cause Himalayan balsam to grow in the wild.
- 5.5.2 The proposed works, in particular activities such relocation of stone and log piles, earthworks such as levelling the Site and digging foundations, plus vehicles tracking in and out of the Site, have the potential to cause the further spread of the species to new areas. Appropriate precautions should therefore be taken to address this, and are discussed in more detail in Section 6 of this report.

5.6 Enhancements

- 5.6.1 Planning Policy Wales 10 states *'planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity'*.
- 5.6.2 A number of suggested enhancements are given in Section 6 of this report.

5.7 Summary Assessment

- 5.7.1 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 Tree removal and protection

- 6.1.1 Tree removal work should be programmed to take place outside of the bird-breeding season, in order to avoid committing an offence under the Wildlife and Countryside Act 1981 (as amended). The bird breeding season is normally taken to be March – August inclusive, with September – February inclusive being the best time for vegetation removal to take place. Where this is not possible, trees should be inspected immediately prior to this by an appropriately competent ecologist and, if breeding birds are found, an exclusion zone should be put into place and tree removal within that should not proceed until the nest is considered to be no longer active.
- 6.1.2 If possible, it is recommended that at least some of the arisings from tree felling (branches, logs, brash) be retained within the Site or within the wider Afan Forest Park site. Arisings could be used to make ‘wildlife-piles’ (or enhance existing ones), or if that is not possible then they could be chipped and used for mulching or footpath maintenance on the wider site. The precise location of any post-felling use of tree arisings should be discussed and agreed with the landowner, i.e. Neath Port Talbot Estates Department, appropriate site management staff and a competent ecological consultant, in order to ensure the location chosen is deliverable and can be maintained in the longer term.
- 6.1.3 Following tree felling works, all remaining trees should be protected using Heras fencing or a similar barrier for the duration of the construction period. As far as possible protection should follow the British Standard for *Trees in Relation to Design, Demolition and Construction* (British Standards Institution, 2012).
- 6.1.4 It is understood that trees T2 and T9 will be retained. However, if this changes, further assessment of each tree in relation to bat roost potential should be carried out. This should include detailed inspections by way of ladders and/or climbing surveys, with activity surveys being employed if these inspections alone cannot rule out bats, or if it is not safe to complete ladder/rope access surveys. If any bat roosts are discovered, a derogation licence from Natural Resources Wales will be required prior to felling the trees, and appropriate mitigation agreed by way of a method statement.

6.2 Log and stone pile removal/relocation

- 6.2.1 As far as possible the stone and log piles will be retained on the Site itself (see Figure 10 below for proposed location). If this is not possible, they will be relocated to an area outside the Site, but nearby and within the wider Afan Forest park which is under the same ownership as the Site itself.
- 6.2.2 The precise location of log and stone pile placement should be discussed and agreed with the landowner, i.e. Neath Port Talbot Estates Department, appropriate site management staff and a competent ecological consultant, in order to ensure the location chosen is deliverable and can be maintained in the longer term.
- 6.2.3 Any relocation of stone and log piles will take place outside of the hibernation period in order to avoid impacts on potentially hibernating species such as reptiles, amphibians, hedgehogs and dormice. This means that relocation will not take place between November and March inclusive, but will be completed between April and October inclusive.
- 6.2.4 Relocation of log and stone piles will be completed under the supervision of an Ecological Clerk of Works (ECoW), also known as under a 'watching brief' by a suitably competent ecologist. The ECoW will carry out a 'tool-box talk' for all persons assisting with the re-location, explaining why it is required, what might be found and what to do in the unlikely event of that happening.

6.3 Planting

- 6.3.1 In order to replace trees lost as a result of the development, two areas within the Site will be planted with tree species that would typically form understory in woodland and be tolerant of wetter sites and be appropriate to the local area, for example goat willow, holly and hazel. These areas are shown in Figure 10 below.
- 6.3.2 In addition to replacing lost trees, planting will also soften the setting of the Site and provide future nesting opportunities for birds, as well as provide food for this species group and small mammals.
- 6.3.3 All new tree planting will be subject to appropriate aftercare once planted, i.e. vegetation management to ensure saplings are not smothered by other plants, replacement of any failed specimens etc.

6.6 Lighting

- 6.6.1 In order to avoid impacting on foraging bats, lighting will be largely limited to the front elevation of the new building, apart from emergency lighting associated with the rear fire exit. Any required lighting to the front of the building will be low-level and/or passive infra-red (PIR) only.

6.7 Enhancements

- 6.7.1 Due to the size and nature of the Site, there is limited potential for a number of enhancements to be carried out, however the following suggestions would be appropriate for this Site:

1. **Bat and bird box installation.** There is an opportunity to provide nesting and roosting habitats for birds and bats on the Site, in the form of nest/roost boxes. Ideally these will be integrated within the new building, however if that is not possible, retro-fitted boxes would be used. These would include some boxes attached to the new building and some attached to the remaining trees on the Site. Boxes used will be suitable for the bird and bat species likely to be found in the area, for bats this will include two bat boxes suitable for crevice-dwelling species (such as the Beaumaris bat box or similar) and two general purpose boxes (such as the Schwegler 2F or similar). For birds, four general-purposes boxes will be installed, including two with a 35mm hole and two with a 28mm hole.
2. **Hedgehog boxes.** Two hedgehog boxes will be installed on the Site within the re-located log piles to provide additional opportunities for nesting and hibernating for this species.

- 6.7.2 The applicant is committed to addressing the recommendations made within this report, and it is expected that appropriate conditions will form part of the planning consent, if granted.

6.8 Timing of works in relation to ecology

- 6.8.1 A number of the recommendations described above are season-critical, therefore need to be completed (or avoided) at particular times of the year. Table 3 below outlines a possible work schedule that addresses all ecological issues in terms of timing. Note that

this can be adapted to any changes to the works delivery schedule, based on the underlying principles in the second column.

Table 3. Proposed works schedule.

Task	Required principles	Proposed timing
Removal of containers and debris (excluding log and stone piles).	Completed at any time of the year, but from a works schedule point of view this can be the first thing that happens.	Any time of year, but complete first.
Tree felling.	Completed outside the bird nesting season, i.e. completed between September and February inclusive.	February 2021
Installation of bat and bird boxes on retained trees.	Can be completed at any time, but preferable to install as soon as possible in time for the bird nesting season and main bat activity season.	March 2021
Re-location of stone and log piles.	Completed outside the hibernation period, i.e. avoiding November to March and completed during April to October.	April 2021
Protection of retained trees.	Completed prior to main construction works starting, but after trees scheduled for removal are gone. Maintained throughout construction.	From April 2021 onwards, following re-location of log and wood piles.
Install silt barrier at gated entrance slot to protect northern watercourse, and install fencing/silt barrier in the car park to protect southern watercourse.	Must be in place prior to construction starting, in order to prevent silt run-off entering the two watercourses that are designated as SINC.	Prior to construction starting.
Installation of bat and bird boxes on new building.	Building needs to be at a stage at which bat and bird boxes can be attached.	Following construction of the building.
New planting around new building.	Can take place following the majority of construction being completed, as long as these areas will not be disturbed by any outstanding works. Planting is best in the autumn/winter months to encourage strong establishment and avoid the need for watering.	Autumn/winter 2021/22.

6.9 Repeat Surveys

- 6.9.1 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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