



PROPOSED DEVELOPMENT:

S & G, MERTHYR TYDFIL

ECOLOGICAL ASSESSMENT

DECEMBER 2021

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Proposed Development: S & G Merthyr Tydfil

Ecological Assessment

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NON-TECHNICAL SUMMARY

An ecological assessment was undertaken of land at S & G Merthyr Tydfil, in support of a planning application to extend the premises.

The work involved a phase 1 habitat survey to categorise the habitats present, an assessment of the site's ability to provide suitable habitats for protected species and recommendations for further survey and actions if considered necessary.

The habitats on and adjacent to the site comprise of semi-improved poor grassland, hedgerow and scattered trees.

There were no waterbodies on or immediately adjacent to the site which could be suitable for use by breeding great crested newts (or other amphibians).

There is no suitable dormouse habitat within the site boundary.

No evidence of badger activity was recorded within or immediately adjacent to the site boundary. It is unlikely that badgers will use the site due to managed and disturbed nature of it.

The hedgerows and trees provide nesting birds with suitable habitat.

The site provides reptiles with some limited potential habitat for foraging, basking, and sheltering purposes. The site is well managed and disturbed and is only likely to provide a small number of reptiles with suitable habitat.

All site clearance works should be undertaken in accordance with a method statement and ecological supervision to ensure that reptiles are not harmed at any stage of the project.

The habitat is likely to support common and widespread species of invertebrate.

Mitigation will be required and is outlined within the various habitat and species sections contained herein.

1 INTRODUCTION

1.1 OBJECTIVE

The objectives of this report are to:

- identify the habitats present on the site;
- identify the potential for protected species to be present on site;
- using the information gathered to determine whether there may be any impacts (both positive and negative) on protected species present;
- provide recommendations for further survey as necessary; and
- suggest outline mitigation and enhancement ideas and principles

1.2 METHODOLOGY

To achieve the objectives set out above, the following actions were taken:

- Field based assessments in respect of
 1. Habitats;
 2. Protected species, primarily:
 - i. Bats;
 - ii. Dormice;
 - iii. Otters;
 - iv. Amphibians (particularly great crested newt);
 - v. Badgers
 - vi. Reptiles; and
 - vii. Breeding birds

The impact assessment has been undertaken by ecological feature rather than by section i.e. each subject is discussed and assessed separately and summarised in conjunction with the others.

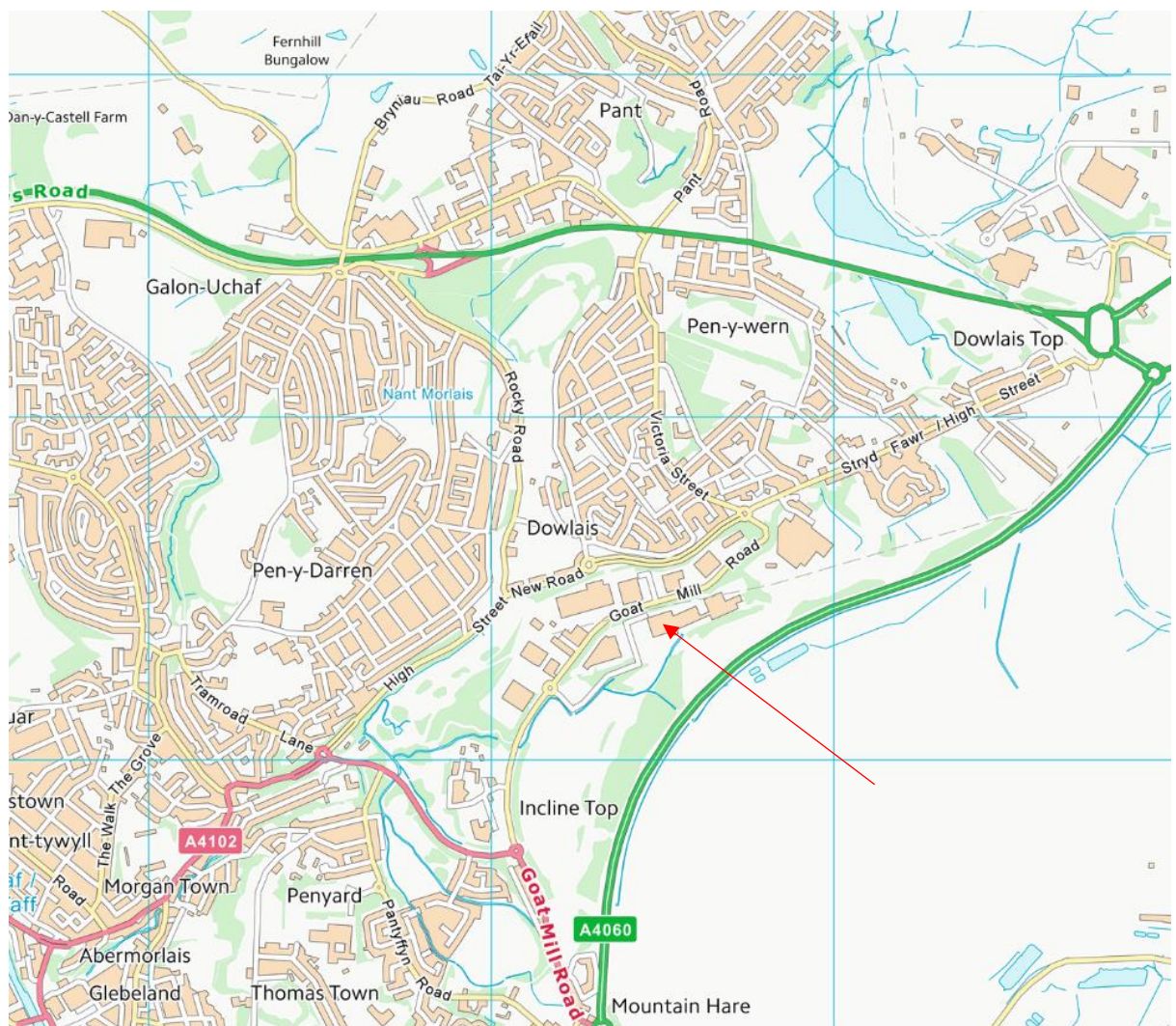
1.3 SITE DESCRIPTION

The red line development site boundary is located at S & G, Merthyr Tydfil, South Wales.

The majority of the site comprises of semi improved poor grassland. The south western and north western boundaries comprise of hedgerows with a number of scattered trees to the east and south.

The eastern boundary of the site is adjacent to the S & G warehouse, this is the building the new extension will adjoin.

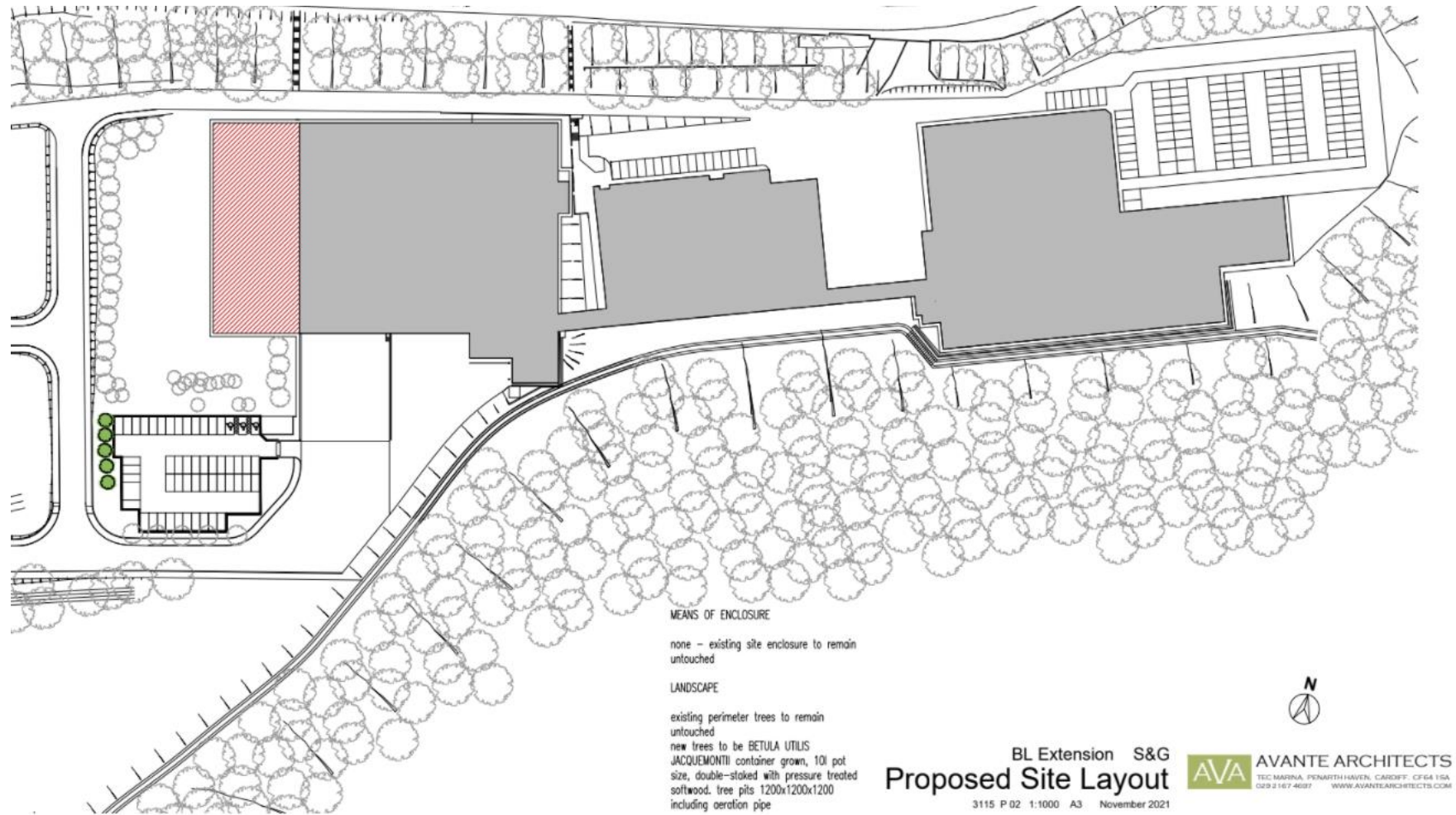
The site is well managed and relatively isolated from any connected habitat by roads and car parks. The sider landscape comprises of roads, housing and associated infrastructure and small patches of greenspace and broad-leaved woodland.



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Figure 1: General location of site (arrowed red) Contains Ordnance Survey data © Crown copyright and database right 2021

1.4 PROPOSED DEVELOPMENT



1.5 STUDY AREA

The field survey looked at the red line development area itself and up to 20m from the site boundaries wherever possible.

The biological records search covered a search radius of 2000m from the centre of the development site for protected sites (international, national and local), protected and priority species, other species of conservation concern and locally important species.

2 REGULATORY FRAMEWORK

2.1 INTERNATIONAL

European Union legislation requires that member states designate sites for the protection of habitats and species included in the annexes of both Council Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) and Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). This legislation is implemented in the UK by the Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitat Regulations”). This results in sites being designated as Special Areas of Conservation (SACs) and Special Protection Areas respectively (SPAs).

It should be noted as the UK is no longer a member state, protection enacted under the Conservation of Habitats and Species Regulations 2017 (as amended) will continue to apply in UK law through the Conservation of Habitat and Species (amendment) (EU Exit) Regulations 2019 and the European Withdrawal Act 2018 following the implementation of Brexit.

2.2 NATIONAL (UK)

The Wildlife and Countryside Act 1981 (as amended) allows sites to be designated as Sites of Special Scientific Interest (SSSI) for one or all of the following categories:

- Flora;
- Fauna;
- Habitat; and
- Geological importance.

European designated sites are automatically designated as SSSIs prior to their designation.

Other relevant legislation includes:

- The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act 2000;
- Environment (Wales) Act 2016
- Wild Mammals (Protection) Act 1996;
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

Section 40 of the Natural Environment and Rural Communities Act 2006 (as amended) requires all public bodies to have regard wherever possible to conserving biodiversity. Section 42 of the Act requires that a list of habitats and species of Principle Importance for the Conservation of Biological Diversity in Wales be produced; however, this has been replaced by Section 7 of the Environment (Wales) Act 2016 Priority Habitats and Species lists.

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to “maintain and enhance biodiversity” where it is within the proper exercise of their functions. In doing so, public authorities must also seek to “promote the resilience of ecosystems”.

This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that “Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”.

Other elements of NERC 2006 may still apply.

Biodiversity Action Plans (BAPs) are tools which are used to monitor, manage and enhance those habitats and species which are of significance to an area or organisation, The United Kingdom BAP lists a number of priority habitats and species which are of conservation concern.

2.3 NATIONAL (WALES)

Planning Policy Wales (Welsh Government, 2016) and Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, September 2009) set out the protection given to wildlife (sites, habitats and species) by the planning system operational in Wales.

2.4 LOCAL AND REGIONAL

The proposed development is wholly within the Merthyr Tydfil County Borough Council (MTCBC) area of responsibility. Therefore, all policies adopted by that Planning Authority will apply, including policies which may not be specific to nature conservation or the natural environment but that may apply or be relevant and should be considered during the planning process.

There are a number of habitats and species which are of a high priority to MTCBC. These have been determined following examination of the UK BAP and the Environment (Wales) Act Section 7 list of Priority Species and Habitats and those habitats and species determined to be locally important by the Local Biodiversity Partnership.

2.5 PLANNING FRAMEWORK

The proposed development will be undertaken wholly under the auspices of the Town and Country Planning Act 1990 (as amended).

2.6 PREVIOUS SURVEYS

There are no known previous surveys of this site.

2.7 CONSTRAINTS

There were no constraints to the survey.

3 DESK STUDY

3.1 SUMMARY

There are no records of any priority or protected species, species of local conservation concern or other species of conservation concern from the site or immediately adjacent to it. The closest records are from 106m).

There are 7 SINCS within 2km of the development site.

3.2 BACKGROUND

A desk study provides background information on historical and current biological data which can identify ecological constraints, mitigation, and biodiversity enhancement opportunities.

3.3 METHODOLOGY

The South East Wales Biodiversity Records Centre (SEWBReC) was consulted in order to provide biological information on the presence of species and sites on or adjacent to the site 0212-723.

A 2000m search buffer was applied to priority and protected species, species of local conservation concern and other species of conservation concern, statutorily designated sites (for nature conservation purposes) and 1000m locally designated sites.

The Multi-Agency Geographical Information System (MAGIC) website (www.magic.gov.uk) and the Local Biodiversity Action Plan (LBAP) for MTCBC were also consulted.

3.4 CONSTRAINTS

There were no constraints to the data search

3.5 RESULTS

3.5.1 Statutorily protected sites

3.5.1.1 European designated sites

There are no European Designated Sites within 2000m of the development site.

3.5.1.2 United Kingdom designated sites

There are no United Kingdom Designated Sites within 2000m of the development site.

3.5.2 Non-statutory designations

There are twelve SINCS within 2000m of the development site.

Morlais Hill (1994m)

Bryniau (1456m)

Blaenmorlais (1564m)

Glynmil (1689m)

Cyfarthfa Park (1870m)

Merthyr Common South (1514m)

Merthyr Common North (1898m)

There is no ecological connection between the SINCS and the development site. There are no features present on the development site that the SINC is designated for. The site is heavily managed and those features to be affected are not those that the SINC is designated for. The majority of the site is species poor. It is considered unlikely that the proposed development will affect the integrity of any SINCS.

3.5.3 Species: SEWBreC data search

There are no species records for the proposed development site or its immediate vicinity.

However, there are multiple records for protected species within 2000m of the site, the closest of which is a barn owl and a house sparrow from 106m away from the site.

3.6 PREVIOUS SURVEYS

None known.

4 PHASE 1 HABITAT SURVEY

4.1 SUMMARY

A number of habitats were recorded across and adjacent to the survey area. These included:

;

- Semi-improved grassland (Species poor)
- Scattered trees
- Hedgerow

The potential for a number of protected species was recorded, including habitats suitable for:

- Bats;
- Badgers;
- Dormice
- Breeding birds;
- Reptiles
- Invertebrates

The habitats are shown on **Figure 3** below.

4.2 BACKGROUND

The Phase 1 habitat survey was carried out to assess the existing habitats, identify any protected habitats or species that may be present, determine the impact of the proposed works on them, and identify any mitigation measures that may be necessary. This was done by undertaking both a desk study and field survey.

The survey was undertaken on 10th December 2021.

Phase 1 habitat survey is a way of recording the basic habitat data to form a baseline level of knowledge of the ecology of a site and provide recommendations for future surveys if considered necessary.

4.3 METHODOLOGY

4.3.1 Desk study:

A biological data search was undertaken. Refer to section 3 above.

4.3.2 Field survey:

Experienced surveyors from BE Ecological Ltd carried out a habitat assessment and mapping exercise in December 2021 using the Phase 1 habitat survey technique. Nomenclature follows Stace (1997)¹. The survey was carried out by Beth Evans.

A full species list is at the **Appendix**

¹ Stace, C (1997). *New Flora of the British Isles* (2nd Ed.). Cambridge University Press

4.4 CONSTRAINTS

There were no constraints.

4.5 RESULTS

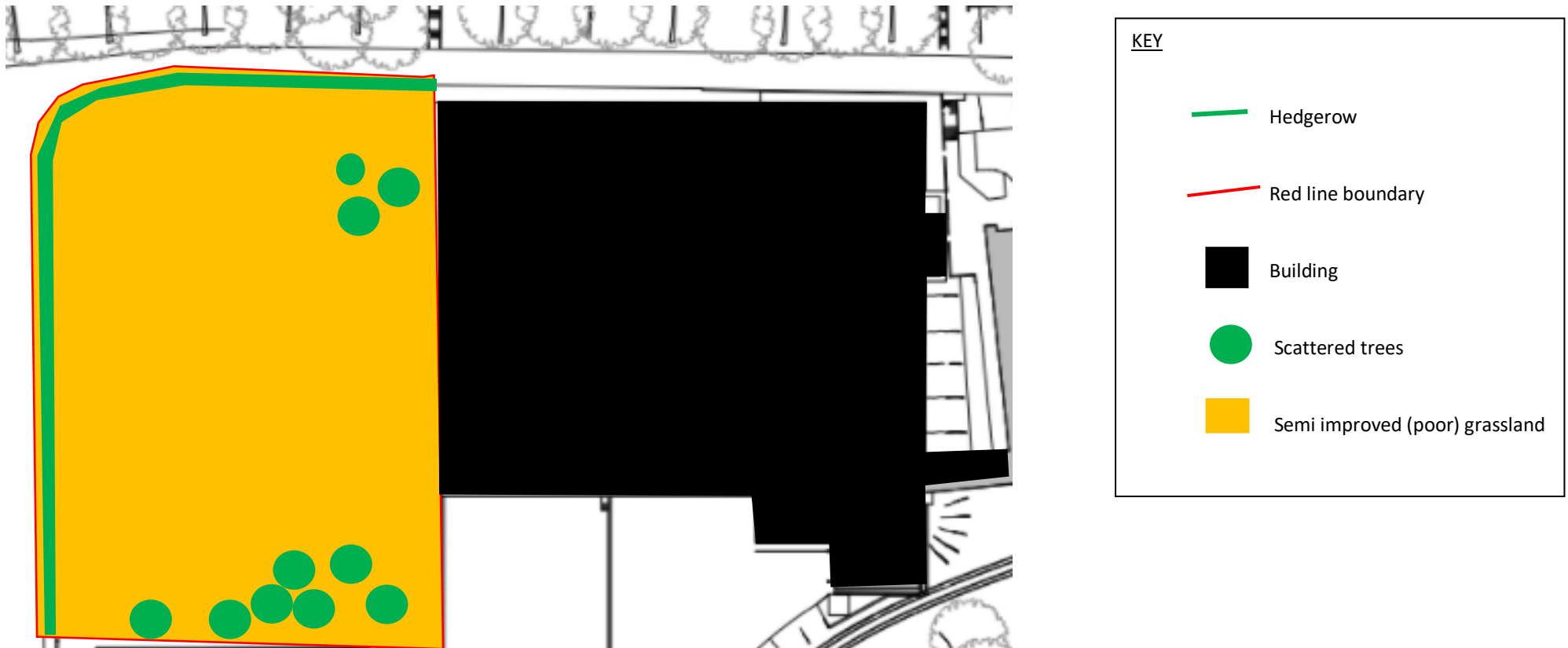
4.5.1 Habitats

The following habitats were found on the site and are mapped on **Figure 3** below:

- Semi-improved grassland (Species poor)
- Scattered trees
- Hedgerow

Photos are located at **Appendix A**.

Figure 3 – habitat survey results



4.5.1.1 *Semi improved poor grassland*

This habitat is found on a large proportion of the site. The habitat is heavily managed and has a short sward. The habitat is of no real ecological value due to the low number of species present. This habitat will not be considered further in this report other than in relation to protected species.

4.5.1.2 *Buildings*

All of the buildings on the site will be retained in their entirety and will therefore not be mentioned further in this report other than in relation to bats.

4.5.1.3 *Hedgerow*

This habitat is found on the south western and north western boundary of the site. The hedgerow is a mix of native and non-native species. This habitat will be retained in its entirety.

4.5.1.4 *Scattered trees*

There are a number of scattered trees/woodland edge found on the southern boundary of the site. These will be fully retained. There are a small number of scattered trees on the north eastern corner of the site. The trees are young silver birch, grey willow and alder. The trees will be mentioned further in this report in relation to protected species.

4.5.1.5 *Non native invasive species*

No non-native or invasive species were found to be present on the site.

4.5.2 Protected species assessment

4.5.2.1 Bats

The closest record for members for this group is from approximately 1443m from the centre of the proposed development site. It refers to a pipistrelle bat found in a classroom.

There are no buildings to be removed or trees present on the site that could offer bats with any roosting potential. There are trees within the ownership boundary to the south that could offer bats with roosting potential. The onsite building has negligible potential for roosting bats. Due to the design, there are no points of ingress for roosting bats.

It is likely that bats will use the site and boundaries for foraging and will be able to continue to do so on completion of the development.

This group will not be considered further in this report other than in relation to mitigation for indirect impacts.

4.5.2.2 Amphibians & great crested newt

There are no waterbodies on the development site which could be used by this group for breeding purposes. The site is well managed and regularly mown, despite there being records of great crested newt close by (601m confirmed record), it is considered unlikely that they will make use of the habitats to be affected by the proposed development due to their well managed nature and isolation from other suitable habitat.

It is considered that amphibians are unlikely to pose an ecological constraint to the development and that only common species (frog and toad with the possibility of smooth and / or palmate newts) are likely to be present on the site. Therefore, it is considered that this group can be safely dealt with via a reasonable avoidance method statement to prevent harm to individuals during site clearance. A method statement is attached at [Appendix F](#).

If at any point a great crested newt is found, all works must cease and Natural Resources Wales consulted.

This group will not be considered further in this report.

4.5.2.3 Dormouse

There is no suitable habitat for dormice present on the site other than the hedgerow. The hedgerow is well managed and not connected to the wider landscape. There are no records of dormice within the data search. The hedgerows will be retained in their entirety.

The reptile method statement will also safeguard the unlikely presence of dormice.

This species will not be considered further in this report.

4.5.2.4 Badgers

The closest record of badger is 503m from the site.

There is no suitable habitat on site for badgers, the site is too disturbed for sett building. It is possible but unlikely that badgers will use the site for foraging.

This species will not be considered further in this report.

4.5.2.5 Breeding birds

There is breeding bird habitat on site in the form of the hedgerow and the scattered trees. This group will be considered further in this report.

4.5.2.6 Reptiles

The site offers some limited habitat for this species for foraging, basking and sheltering purposes and it should be assumed that low numbers of slow worm (*Anguis fragilis*) and common lizard (*Lacerta vivipara*) may use the boundaries of the site. It is likely that the population densities of these species are at perhaps lower levels given the amount of disturbance on the site and the managed nature of the habitats.

This group will be considered further in this report.

4.5.2.7 Invertebrates

It is likely that common and widespread invertebrates will utilise the site. There are records of section 7 species within 2km of the site. Due to the low species diversity and habitats present on the site, this group will not be considered further in this report other than in relation to enhancements.

4.5.3 Other features

None.

4.6 REPTILES

4.6.1 Summary

A full trapping and translocation exercise is not considered necessary as long as clearance of the site is undertaken in strict adherence to a method statement designed to prevent harm to any reptiles.

4.6.2 Ecology

Reptiles are ectothermic, meaning they have to rely on external heat sources to warm their blood sufficiently to allow foraging and other activity. During the winter they are in brumation (similar to hibernation), emerging in April (or when the temperatures are consistently warm enough). Males tend to emerge before females, to enable them to prepare for mating. Females emerge a few weeks later and mating takes place. Female reptiles in the UK generally breed every other year to allow them to build up sufficient energy reserves. Grass snakes are the UK's only egg-laying reptile, eggs are laid in summer in warm piles of decomposing vegetation (or similar) and left to develop and hatch on their own. Young reptiles are born/hatch in late summer/early autumn. Brumation (hibernation) starts again as temperatures fall in the autumn.

The four more commonly occurring species of reptile in the UK (adder (*Vipera berus*), grass snake (*Natrix natrix*) slow worm (*Anguis fragilis*) and common lizard (*Lacerta vivipara*) have different preferences for habitat and diet. Adders generally prey on small mammals in drier habitats, grass snakes primarily hunt amphibians in wetter areas and aquatic habitats, slow worms take small, slow-moving invertebrates and inhabit drier areas and common lizards prey on small, faster-moving invertebrates and tolerate both wet and dry habitats.

4.6.3 Legislation

The four common species listed above are protected by the Wildlife and Countryside Act 1981 (as amended) against killing, injury and sale.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are not found in this area, having very specific geographical distribution within Britain, and so will not be referred to in this report despite the higher legislative protection afforded to them.

4.6.4 Methodology

4.6.4.1 Habitat assessment

The habitat assessment looked for features which would be attractive to reptiles such as:

- south facing banks;
- varied profile ground form;
- basking areas;
- vegetation cover;
- structurally diverse vegetation;
- potential hibernation sites; and
- evidence of suitable prey sources.

4.6.5 Results

4.6.5.1 Desk study

There are records of common lizard, slow worm and grass snake within 2km of the site. The closest of which is of a slow worm from within approximately 1376m

4.6.5.2 Habitat assessment

The boundaries of the site are likely to offer some limited value to slow worm and common lizard. There is possibly some limited value within the grassland.

4.6.6 Reptiles – evaluation

Reptiles are protected by UK legislation and therefore they are of **medium to high national** ecological importance.

No reptiles were found throughout the course of the survey.

Overall the site appears to be generally of **low local (site)** value to reptiles.

4.6.7 Reptiles - impact characterisation

It is likely that only small numbers of reptiles will be present and likely on a non-permanent basis. It is still possible that in the absence of mitigation, reptiles could be killed or injured during the clearance for the site.

4.6.8 Reptiles - impact assessment without mitigation

It is considered that in the absence of mitigation there would be a **probable minor short term adverse** impact at a **local (site)** level.

4.6.9 Reptiles - mitigation measures

As long as reptile presence is assumed and site clearance is undertaken in accordance with an appropriate method statement, it is considered that a full trapping and translocation exercise is not required, and that habitat manipulation and denial is an appropriate method of ensuring that reptiles are not harmed during the site clearance.

Therefore, the following mitigation will be adopted:

- Clearance will be conducted in accordance with a Method Statement (**Appendix B**) to ensure that should reptiles be found in the course of site clearance or any other development activity, they will not be harmed and can be adequately cared for;
- Clearance will only be undertaken during the reptile active season (April-October, inclusive) unless it is determined that some areas of the site are not suitable for hibernation, unless the ground is too wet for hibernation or temperatures are consistently above 12 for seven consecutive days;
- Clearance outwith this period is possible, but depends on weather and temperatures being suitable to ensure that reptiles are likely to be active;
- There will be no clearance of hibernation habitat outwith the active season unless temperatures allow;

- Reptiles will be excluded from entering or re-entering the site during clearance/operational phase of works by ensuring that the site is kept as bare ground i.e. clear of any vegetation or other shelter

4.6.10 Reptiles - impact characterisation with mitigation

It is considered that there will be an **unlikely minor short term adverse** impact at a **local (site)** level as a result of the proposed development.

4.6.11 Reptiles - significance of the impact

Without mitigation

It is considered that the significance of the impact is **slight**.

With mitigation

It is considered that the significance of the impact is **neutral**.

4.7 BREEDING BIRDS

4.7.1 Summary

A full breeding bird survey was not undertaken as it should be assumed that all the areas of hedgerow and trees (both cut and retained) are likely to be used by birds for nesting.

It should be assumed that all hedgerow and tree vegetation on the site is used by birds for breeding purposes during the nesting season.

The areas of grassland are not considered to be suitable for ground nesting species for breeding purposes as they are small, overlooked and subject of regular disturbance.

4.7.2 Ecology

Most British avian species are found breeding during the spring and summer months, between April and August, although some, such as pigeons, and doves will frequently breed at all times of year, as they are not dependent on small, soft-bodied invertebrates to provide food for their chicks. Some other species, such as barn owl (*Tyto alba*) have also been recorded breeding in the winter months, in years when winters have been mild, and small mammal prey plentiful, although such breeding attempts are unusual, with chicks frequently failing to fledge. The breeding season can be extended for most species if the weather is mild, and food plentiful.

Contrary to common belief, whilst some bird species, such as crows and rooks, nest high in trees, often more than 10m high, the majority of British breeding birds will nest within 2m of the ground (or on the ground) within dense scrub or within holes and other natural and manmade cavities in rocks and walls.

Most bird species take considerably less than 60 days from egg-laying to chick fledging, whilst others, such as barn owl, can take more than 90 days. Many, but not all British species will make multiple breeding attempts if environmental conditions and food availability allow.

4.7.3 Legislation

In Britain, all naturally occurring avian species are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). The legislation protects all birds, their nests and eggs, and it is an offence to:

- Intentionally kill, injure or take a wild bird;
- Intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built; and
- Intentionally take or destroy the egg of any wild bird.

In addition, birds listed on Schedule 1 of the Act, such as the Red Kite (*Milvus milvus*), are afforded further protection, and it is an offence to:

- Intentionally or recklessly disturb the bird whilst nest building or while at (or near) a nest with eggs or young; and
- Disturb the dependant young of such a bird.

4.7.4 Methodology

4.7.4.1 Habitat assessment

Signs looked for included:

- Availability of nesting habitat;
- Availability of foraging habitat;
- Territorial displays by birds;
- Courtship displays;
- Territory establishment and holding behaviour;
- Nests;
- Food carrying;

4.7.5 Constraints

There were no constraints to the assessment.

4.7.6 Results

4.7.6.1 Desk study

There were no records of birds from the development site or immediately adjacent land, however, there were multiple records of birds from the data search.

4.7.6.2 Habitat assessment

The trees and hedgerows are considered suitable for nesting birds.

All habitats on the site were suitable for foraging purposes, providing a variety of food sources. It should be assumed that woodland and hedgerow habitats are used for nesting purposes during the breeding season.

It is considered that the site does not provide suitable habitat for ground nesting species as the open areas are small, overlooked by numerous trees and buildings, all of which could be used by avian predators and subject of regular disturbance.

No birds were observed on the site during the survey.

4.7.7 Breeding birds – evaluation

Birds should be considered to be of **high national** importance as a result of the legislation protecting them.

Within the context of the site, there is abundant suitable habitat for the smaller and more common species to utilise for nesting and foraging. It is therefore considered that birds are of a **medium local (site)** ecological importance.

4.7.8 Breeding birds - impact characterisation

It is anticipated that a small area of hedgerow will be cleared to facilitate access to the development site.

4.7.9 Breeding birds - impact assessment without mitigation

In the absence of mitigation, the removal of vegetation during the breeding season would result in the likely disturbance and destruction of nests and the disturbance, killing and injuring of birds (both adults

and juveniles). This would constitute a **certain moderate medium term adverse** impact at a **local (site)** level.

4.7.10 Breeding birds - mitigation measures

Mitigation will be required and will include (but not be limited to) the following measures:

- All vegetation removal should be undertaken outwith the breeding season i.e. between mid-August / September and April inclusive;
- Any clearance close to the start and end of this period should only be undertaken following an assessment by a suitably experienced ecologist as the breeding season is not fixed and is subject to annual variation;
- Where clearance is required during the breeding season, all areas should be subject to an assessment no more than 48 hours in advance to check for the presence of breeding birds;
- Should evidence of breeding birds, in particularly nests, be recorded, no clearance may be undertaken within 15m of any nest site until such time as the nest is vacated naturally

Bird boxes will be erected on the house on completion of the build.

4.7.11 Breeding birds - impact characterisation with mitigation

It is considered that there will be a **possible minor short term adverse** impact at a **local (site)** level on breeding birds as a result of the proposed development.

4.7.12 Breeding birds - significance of the impact

Without mitigation

It is considered that the significance of the impact is **slight**.

With mitigation

It is considered that the significance of the impact is **neutral**.

5 CONCLUSION AND RECOMMENDATIONS

Overall the site is of a low ecological value at a local level due to the habitats present, the managed nature and the species that may reside on the site.

Any site lighting will conform to the following guidance to prevent any indirect impacts on foraging bats <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>.

To safeguard the possible presence of reptiles in low numbers, site clearance in respect of reptiles will be undertaken in line with a method statement and ecological supervision as a precautionary approach. This will also benefit other species (e.g. amphibians) which may otherwise be affected by site clearance.

It is considered that no other ecological surveys are required.

Enhancement will then include maintenance and management of a new wildflower area to benefit both reptiles and invertebrates. A cut will be undertaken once or twice a year. Cuttings would be removed and used to create onsite compost areas (to benefit reptiles) and a hibernacula will be introduced into the garden. The grass cutting regime would be designed to allow grasses and wildflowers to seed the area for the following season. These habitats will be cut twice per year using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management. Emorsgate EM2 is the suggested species mix.

A Vivara Pro house sparrow nest box <https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box> will be integrated/bolted on to the western elevation of the new extension.

An improved crevice bat box will be placed on the eastern elevation of the new build https://www.nhbs.com/improved-crevice-bat-box?bkfno=187782&ca_id=1495&adlocale=uk&gclid=Cj0KCQiAqvaNBhDLARIsAH1Pq528M5YyF84v37YUqofCEdmYj6qUymCiqGdIVkePGPV923gvMoTRNEYaAuG4EALw_wcB

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APPENDIX A - PHOTOS

PHASE 1 HABITAT SURVEY PHOTO

Plate 1- existing building



Plate 2- trees to be removed



Plate 3- hedgerow to be retained



Plate 4- hedgerow to be retained

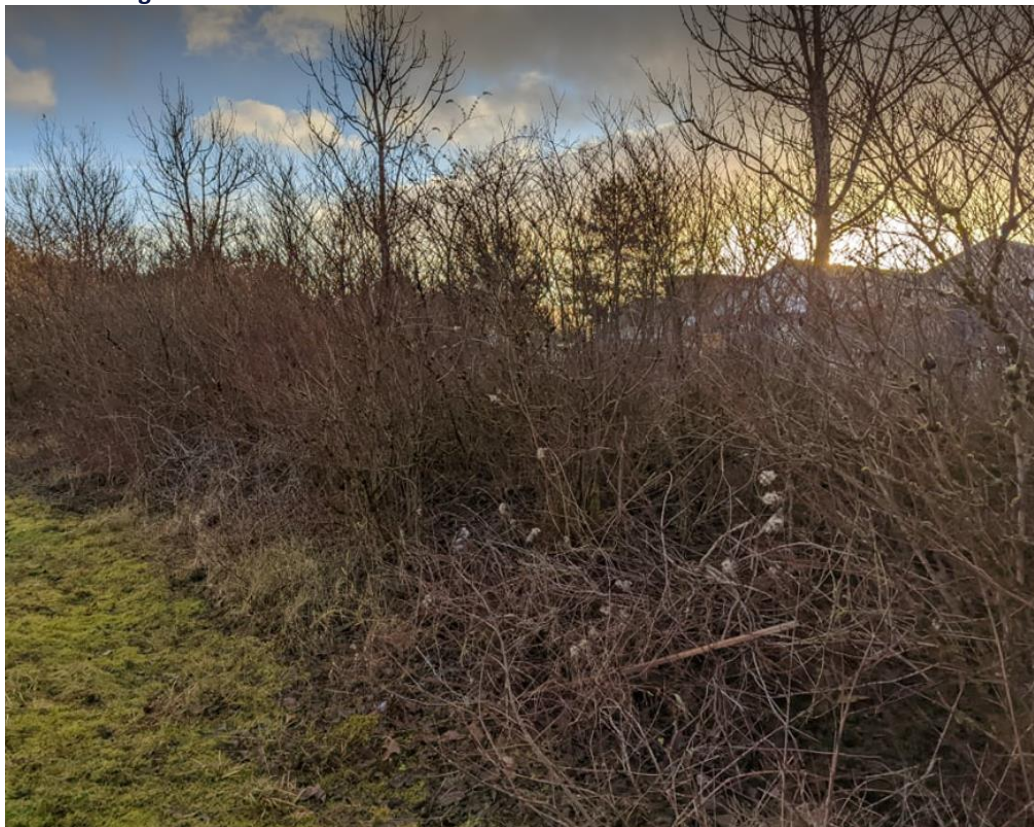


Plate 5- grassland and building



Plate 6- Trees to the south



APPENDIX B – METHOD STATEMENT- SITE CELARANCE

1. All clearance will be supervised by a suitably experienced ecologist until such time as the ecologist states that direct supervision is not necessary.
2. The ecologist will be on call for the duration of clearance works.
3. Vegetation will be cleared from directly affected areas only and the area minimised wherever possible.
4. All vegetation removal will preferentially be undertaken during the winter months i.e. between November and February inclusive.
5. If this is not possible, all areas to be cleared must be subject of a finger-tip search by an ecologist immediately prior to and during any clearance work; the ecologist should also be present while all post hole excavation (or other ground breaking should it be required) is being undertaken.
6. Should evidence of breeding birds, in particularly nests, be recorded, no clearance may be undertaken within 5m of any nest site until such time as the nest is vacated naturally.
7. No spraying of vegetation to be carried out. Vegetation will be maintained close to ground using repeated cutting only. 1x Hibernaculum will be added to an area of the garden remaining unaffected by the development. Materials already onsite (e.g., brash, logs) will be used.
8. Woody vegetation will be cleared (ONLY IF NECESSARY) to ground level using a chainsaw with all arisings stacked in unaffected areas NOT on areas of tall vegetation (over 300mm). Where necessary, stumps and roots will only be removed by machine (under ecological supervision) once the clearance is complete.
9. All woody vegetation will be checked by the ecologist prior to cutting for the presence of bird nests.
10. Vegetation will be cut in three phases. The first phase will reduce the vegetation height to 150mm; the second will reduce it to ≈50mm; the third phase will reduce the height to as close to ground level as possible. All cuts will have a period of 24 hours between each cut.
11. All vegetation cutting will be directional. This ensures that any animals present will be pushed from the site into adjacent retained habitats.
12. After clearance, if the vegetation is allowed to regrow above 150mm high, it will be cut and raked as described above.
- 13. Where necessary, potential hibernacula (, log piles, stumps, roots etc) will only be cleared during the active season (March-October) while day time temperatures are consistently over 12°C for a period of at least seven days prior as otherwise reptiles may be killed or injured as a result of inconsistent (low) temperatures (during the day and night) and/or low prey availability. Potential hibernacula will only be dismantled by hand unless the supervising ecologist gives the approval for machine dismantling.**
14. If a bird's nest is observed on the site, the ecologist will assess it to determine whether or not it is active, the species concerned, the lifecycle state of any occupants and provide advice on next steps.
15. If reptiles are observed within the clearance area during the works, a decision on how to deal with them will be made on site in light of the conditions on site at the time and the state of the animals themselves. There are three options for dealing with them:
 - It may be possible to leave the animals alone to find their own way into cover, depending on where they are seen, what they are doing and their apparent activity levels; or

- Capture, remove from site and take into temporary captivity until such time as they can be released adjacent to the cleared area (a vivarium has been prepared in case it is required); or
- Should conditions allow, capture and translocate the animals to a safe area immediately adjacent to the site.

16. Habitat and the unlikely presence for other species (e.g. dormice, great crested newts & other amphibians etc.) can be identified and avoided by following this method statement.

17. In the event that a European Protected Species such as great crested newt or dormouse is observed during the clearance,, all work will stop, and the ecologist consulted. It will be necessary to consult with Natural Resources Wales; further surveys and a development licence may be required before work can recommence.

If large numbers of reptiles are discovered, an offsite receptor area should be suggested to be agreed by the County Ecologist.

NOTE: should it be required, a Natural Resources Wales development licence for European Protected Species is likely to take up to 30 working days to be issued following submission

Vegetation will be cleared from west to east to ensure reptiles are pushed into retained habitats.

In Summary the works will proceed as follows:

1. Vegetation reduced to 150mm	Any time of year (following an inspection for breeding birds if undertaken during active season)
2. Vegetation reduced to 50mm	24 hours after first cut
3. Vegetation cut to ground level	25 hours after second cut
4. Removal of potential hibernacula (stumps, rubble piles etc) and ground breaking	Preferably March to October or when temperatures have been above 12 degrees for a period of seven days or more
The site will be kept as close to bare ground as possible via repeated cutting to ensure that reptiles do not re-colonise the site.	

APPENDIX C – SPECIES LIST

Grassland

Springy turf moss, timothy, yorkshire fog, tufted hairgrass, meadow buttercup, creeping buttercup, ribwort plantain, creeping bent, rough and smooth meadow grass, dandelion, autumn flowering hawkbit, silverweed, chickweed, perennial ryegrass, soft rush, cut leaved cranesbill, herb robert, common sedge, daisy, broadleaved dock and curled dock

Hedgerow

Silver birch, alder, grey willow, bramble, clematis, ash, common nettle, butterfly bush, wild cherry, poplar and dogwood

Scattered trees

Grey willow, silver birch, alder

