



PROPOSED DEVELOPMENT:

WERN FIELD, CAERWERN, YNYSFACH, MERTHYR TYDFIL

ECOLOGICAL ASSESSMENT

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Wern Field, Caerwern, Ynysfach, Merthyr Tydfil

Proposed Development: Wern Field, Ynysfach

Ecological Assessment

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NON-TECHNICAL SUMMARY

An ecological assessment was undertaken of land at Wern Field, Caewern, Ynysfach, Merthyr Tydfil, South Wales in support of a planning application to create a new access road, parking and extension to Pitch 2.

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 hard standing, amenity grassland, tall ruderal and spoil heaps.

The site is fenced with mature scrub that will eventually become woodland beyond.

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 tall ruderal present on the site is not suitable for nesting birds due to its low height and sparseness. There is no habitat suitable for ground nesting species due to the site being overlooked and highly disturbed.

The site provides reptiles with some limited potential habitat for foraging, basking, and sheltering purposes. The spoil heaps are wet and sticky, the only real potential is the interface between the tall ruderal and amenity grassland. The site is of limited potential only.

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 tall ruderal 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 encloses an area of approximately 0.97 hectares at is located at The Wern Playing Fields, Caerwern, Ynysfach, Merthyr Tydfil, South Wales.

The majority of the site comprises of hard standing and amenity grassland. The western boundary of the site has tall ruderal present. There are spoil heaps present around the southern and south western corner of the site. The site is enclosed by palisade fencing on all boundaries excluding the north where it is adjacent to another pitch.

Beyond the palisade fencing to the west is the A470 embankment. The embankment is heavily scrubbed. There is an area of scrubland to the south. The A470 is present to the west with the village of Ynysfach to the north and east. There is good connectivity to the wider landscape.

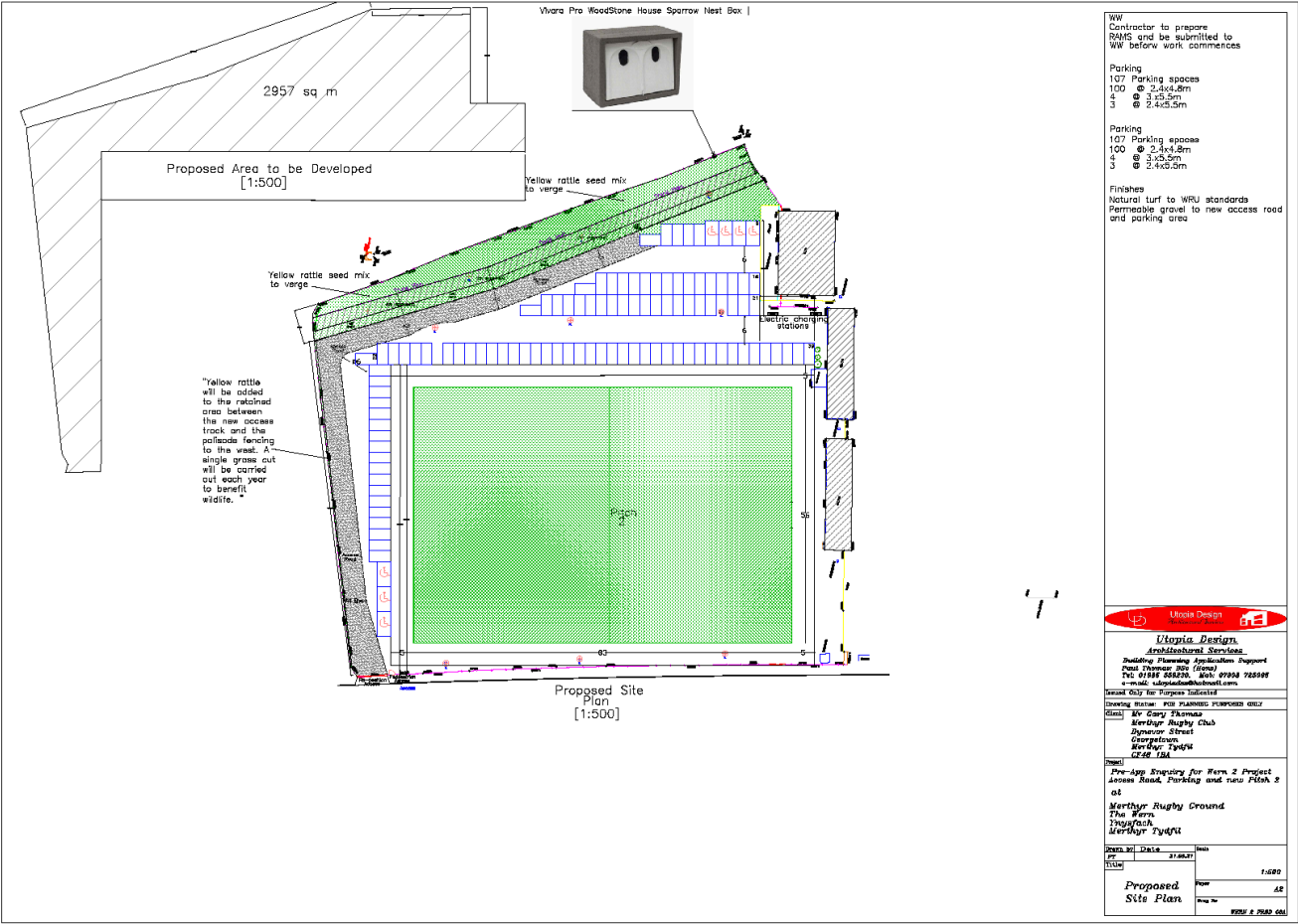
Figure 1 – Detailed view of the site (approximate boundary boxed red)



Figure 2 - aerial overview of the site (arrowed red)



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 1000m 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. A buffer of 1000m was applied to locally designated sites. The data search buffer was set at 1000m rather than 2000m due to the presence of the A470 providing a barrier to ecological movement, the urban environment to the east and north and due to the fact the habitats to be affected are of very little value ecologically. Anything of higher value will be retained and protected.

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 107m away (the other side of the A470).

There is a single SSSI and four SINC's within 1000m 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 (SEWBRc) was consulted in order to provide biological information on the presence of species and sites on or adjacent to the site (0201-784).

A 1000m 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 1000m of the development site.

3.5.1.2 United Kingdom designated sites

There is a single United Kingdom Designated Sites within 1000m of the development site.

Table 3 - Statutorily designated sites within 1km of the proposed development site:

Site	Designation	Grid reference	Area (ha)	Distance from site
Cwm Glo Y Glyndrys	SSSI	SO065115	181.3	120m

Cwm Glo a Glyndrys is of special interest for its extensive areas of marshy grassland, species-rich neutral grassland and acid grassland, and for the association of these habitats with others including woodland and heath. It is also of special interest for its outstandingly diverse assemblage of grassland fungi, including 32 species of waxcap *Hygrocybe* spp, making it one of the best sites in Britain

There are no ecological links between the development site and the SSSIs. There are no features present on the development site that the SSSIs are designated for. The sites are isolated by roads and other infrastructure. As a result it is unlikely that the sites will be affected and they will therefore not be considered further in this report.

3.5.2 Non-statutory designations

There are four SINCS within 1000m of the development site.

Afon Taf (304m)

Cwm Glo (130m)

Blaen-canaid (902m)

Rhydyar West (309m)

All of the SINCs excluding Afon Taf are located to the west of the development site and are separated by the presence of the A470. It is likely that this road acts as a barrier between the site and any SINC and therefore, there is unlikely to be any impact upon these SINCs. The Afon Taf Sinc is again separated from the site by roads, houses and infrastructure. In addition to the above, there is very little suitable habitat within the red line boundary of the site to support the species and habitats that the SINCs are designated for. As such it is unlikely that the development will affect these sites and they will not be mentioned further within this report.

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 1000m of the site. A summary of the species found in the data search buffer and their legislative status is at **Appendix B**.

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:

;

- Bare ground;
- Tall ruderal vegetation
- Amenity grassland
- Spoil heap

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

- Bats;
- Badgers;
- Dormice
- Breeding birds;
- Reptiles
- Otters
- 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 26th January 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 January 2021 using the Phase 1 habitat survey technique. Nomenclature follows Stace (1997)¹. The survey was carried out by Beth Evans and Hugh Dixon. Licences include Bats, dormouse and great

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

crested newt. Both Hugh and Beth have numerous years' experience in habitat and protected species surveys from both small consultancy and multi-disciplinary level.

A full species list is at **Appendix D**.

4.4 CONSTRAINTS

There were no constraints.

4.5 RESULTS

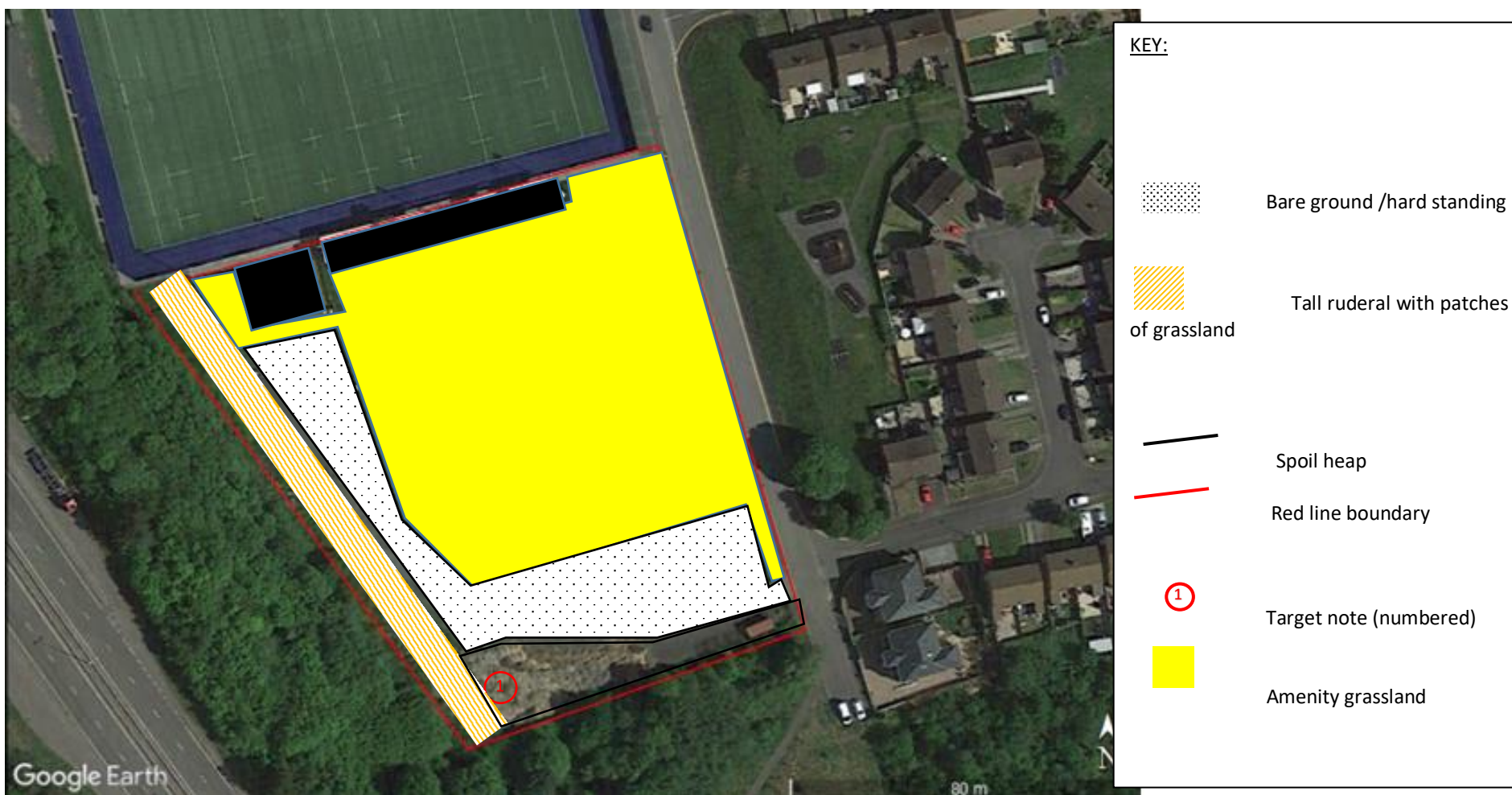
4.5.1 Habitats

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

- Bare ground;
- Tall ruderal vegetation
- Amenity grassland
- Spoil heap

Photos are located at **Appendix A**.

Figure 3 – habitat survey results



4.5.1.1 *Amenity grassland*

This habitat is found on the football pitch itself and in small amounts around the peripheries 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.

4.5.1.2 *Bare ground*

This habitat is found across a large portion of the site. The habitat is made of road planings, soil and tarmac. This habitat is of no real ecological value and will not be mentioned further in this report.

4.5.1.3 *Spoil heap*

There is a large amount of material being stored on site (soil, stone and tarmac). The surface of these spoil heaps are beginning to colonise with ruderal species. The heaps are compact sticky and are of low ecological value only. This habitat will only be mentioned further in this report in relation to reptiles.

4.5.1.4 *Tall ruderal with patches of grassland*

This habitat is found on the western boundary of the site. The habitat is relatively new and does not form a dense habitat. The maximum height of this habitat is approximately 1m. This habitat is fast colonising and comprises of common and widespread species, it does however provide habitat for invertebrates and reptiles and as a result will be mentioned further in this report.

The tall ruderal is interspersed with grassland. Species include cocksfoot, common bent and perennial ryegrass. There may be other species present, however, these may not be apparent due to the time of year the survey was undertaken.

The area of grassland and tall ruderal along the western boundary will be kept in situ. The tall ruderal on top of the spoil heap to the south will be removed.

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 480m from the centre of the proposed development site. It refers to a common pipistrelle bat in flight

There are no buildings or trees present on the site that could offer bats with any roosting potential. There is existing lighting at the site and there will be no additional lighting at the site.

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.

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 terrestrial habitat on the site could possibly support amphibians with suitable foraging and sheltering habitat. There are records of great crested newt from approximately 350m away, however, the records are isolated from the site by roads, housing and associated infrastructure.

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. There are no records of dormouse within the data search. It is possible that dormice will use the habitat beyond the palisade fencing surrounding the site, however, this will remain unaffected. There is no additional lighting proposed for the site so there will be no indirect impacts on dormice.

This species will not be considered further in this report.

4.5.2.4 *Otters*

The closest record of otter is from The Afon Taf (approximately 250m from the site).

It is possible that otters will be present within the boundaries of the site, there is a ditch associated with surface water of the A470 outside the site boundary, otters may use this for commuting. Due to the habitats present on site (disturbed/managed), otters lying up on the site is considered extremely unlikely. No evidence of otter was found at the site.

If a holt is discovered on site during supervisory works, all works must cease and NRW will be consulted.

This species will not be considered further in this report.

4.5.2.5 *Badgers*

The closest record of badger is 1037m 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.

4.5.2.6 *Breeding birds*

There is no suitable breeding bird habitat on site. The tall ruderal present is too sparse and too young to support this group. As such breeding birds will not be considered further in this report.

4.5.2.7 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.

4.5.2.8 Invertebrates

It is likely that common and widespread invertebrates will utilise the site. There are records of marsh fritillary approximately 450m from the site, there is no habitat suitable for this species on the site. There are records of small heath and dingy skipper from again approximately 450m from the site. The records and the site are isolated from one another by the A470. Due to the low species diversity and habitats present on the site, this group will not be considered further in this report.

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

No records of reptiles were returned for the development site or immediate vicinity. There are no records of reptiles within 1000m of the development site. This is likely to be a result of under recording as this group are common and widespread.

4.6.5.2 Habitat assessment

The boundaries of the site are likely to offer some limited value to slow worm and common lizard, particularly the spoil heaps and interface between tall ruderal and grassland/hard standing for foraging and basking. It is unlikely that the spoil heaps will provide hibernation habitat as they are waterlogged, compacted and sticky.

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 E**) 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**.

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.

The proposals are minimal at best and there will be no additional lighting to the site leading to indirect impacts.

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 the retained verges to benefit both reptiles and invertebrates, for example with a grass cut once or twice a year. Cuttings would be removed and used to create onsite compost areas (to benefit reptiles) and a hibernacula could be introduced (some of the onsite rubble could be used as part of this). 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. Supplementary planting of wildflower species could be used to enhance the area (yellow rattle would also be a useful addition to reduce the growth of the more vigorous grasses).

Two Vivara Pro house sparrow nest boxes <https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box> will be bolted to the palisade fencing to the west.

6 REFERENCES

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APPENDIX A - PHOTOS

PHASE 1 HABITAT SURVEY PHOTO

Plate 1- View facing east



Plate 2- view facing north west



Plate 3- south eastern corner of the site



Plate 4- western boundary



Plate 5- south western corner



Plate 6- eastern and southern boundary



APPENDIX B- SITE CLEARANCE METHOD STATEMENT (REPTILES)

1. Following a reptile habitat assessment, it was considered that the site has the potential to support a population of slow worm (*Anguis fragilis*), common lizard (*Lacerta vivipara*) and possibly grass snake (*Natrix natrix*). The presence of reptiles should therefore be assumed, hence the need for a Method Statement to ensure that works are carried out in such a way as to avoid harm to reptiles.
2. Vegetation will be cleared from directly affected areas only e.g. areas to be built on, used for storage, be part of the construction site or forming part of any landscaping scheme. Clearance will be carried out in the following direction:



3. Once cleared, the vegetation will be maintained as close to bare ground as possible by ongoing repeated cutting using brush cutters with knife blades to ensure that there is no potential for reptiles to utilise the site after the initial clearance. This is the preferred method as it reduces the potential for killing and injuring of reptiles and other animals when using tractor towed flails and mowers. Reptile fencing will not be required as long as the bare ground / short vegetation habitat is maintained.
4. All arisings will be raked off and spread (creating habitat piles) on unaffected land or removed from site for disposal. The orientation of the cutting will be designed to push reptiles into unaffected areas once the areas for clearance have been identified without having to undertake a full translocation exercise.
5. Trees and scrub will be cleared to ground level using a chainsaw with the stem material saved to be used for the creation of a hibernaculum on unaffected land. Stumps and roots will only be removed by machine (under ecological supervision) once the clearance is complete.

6. Vegetation will be cut in three phases. The first phase will reduce the vegetation height to 75mm; the second will reduce it to ≈ 30 mm; the third phase will reduce the height to as close to ground level as possible. There will be a time delay of 48 hours between the first and second cuts.
7. After clearance, should the vegetation be allowed to regrow above 150mm high, it will be cut and raked as short as possible, ≤ 30 mm wherever possible.
8. Clearance may only take place during the reptile active season.
9. Potential hibernacula will only be cleared 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.
10. 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.
11. Habitat (e.g. hibernation sites for other species especially amphibians) can be identified and avoided by following this method statement.
12. All vegetation and site clearance will be supervised by a suitably experienced ecologist.

APPENDIX C - TARGET NOTES

Target note number	Description
TN 1	Spoil heap (dumped hardcore and soil)

APPENDIX D – SPECIES LIST

Cocksfoot, bramble, primrose, broadleaved dock, rosebay willowherb, chickweed, herb Robert, red fescue, dandelion, white clover, springy turf moss, ragwort, hogweed, creeping cinquefoil, common bent

APPENDIX E-PLAN WITH ENHANCEMENTS (hibernaculum location starred yellow)

