



Preliminary Ecological Assessment



Project: Land off Graig Road, Gellinudd, Rhos

Instructed by: Abi Jones & Ian Temblett

Reported by: Ecological Services Ltd
10 Mount Pleasant, Llanelly Hill, Abergavenny, Monmouth NP7 0NT
Reported by

Author	Checked By	Date	Version
Ash Harris	Beth Lewis	July 2024	V1.0

T: 07305143857

E: ash@ecologicalservices.wales

W: www.ecologicalservices.wales

Contents

1. Introduction
2. Desk Top Study
3. Phase 1 Survey
4. Recommendations and Mitigation
5. Biodiversity Enhancements & Green Infrastructure Considerations

Appendix

1. Plant Species Recorded
2. Site Photographs
3. Habitat Map
4. Aerial View of Site
5. Invertebrate Habitat Potential Assessment
6. Reptile Hibernacula

1. Introduction

The applicant is seeking planning permission to create a single dwelling within the development site boundary. The development proposals are in the very early stages and detailed designs are not available. The land within the clients ownership extends from the A474 southwards. However, the development proposals will be focused on the northern portion of the site directly adjacent to the A474, in line with properties to the west and east. The proposed development site is centred at SN7357304149.

This report will assess the potential of the land within the site boundary to support habitats and species and the implications that any future development proposals could have on them.

1.1 Site Description

The site is located on the eastern outskirts of the village of Gellinudd. It sits to the south of the A474 and between two adjacent residential properties to the east and west. The site and wider land to the south is relatively flat. It appears a small stream or ditch runs along the western boundary of the site. Aerial images indicate a spring is present approximately 60m to the south of the wider land ownership boundary. The spring appears to feed a stream which passes northwards through the site to the Nant Gellinedd approximately 170m away.

The development site is considered to sit in a semi rural location. Open fields, small pockets of woodland and tree lines are present to the south, north and west. The residential area of Gellinudd extends to the east, spreading north and southwards in the wider landscape. The town of Pontardawe is present approximately 230m to the west. The River Tawe flows approximately 570m to the west at its closest point to the development site. The Swansea Canal is present approximately 900m away to the north west.

1.2 Survey Constraints

The site visit was completed during July which is an optimal time of year to undertake habitat assessments. It was possible to draw broad conclusions on habitat types within the site boundary.

The absence of desk study records cannot be relied upon to determine absence of particular species/habitat. Often, the absence of records is a result of under-recording within the given search area.

The optimal time period to carry out ground-based visual assessments of trees for bat roosting potential is between December to March inclusive, when broadleaved trees are devoid of leaves and features are more readily visible. It should be noted that ground based

assessments are inherently constrained and potential roosting features present upon the skyward facing surfaces of limbs and branches will most likely be missed.

1.3 Surveyor Experience

Aislinn Harris is a full member of Chartered Institute of Ecology and Environmental Management (CIEEM). Aislinn is an ecologist with 14 years experience undertaking a wide range of flora and fauna surveys. All survey work is undertaken following JNCC Phase 1 Survey Guidelines and CIEEM Guidelines for Preliminary Ecological Appraisal (2nd Ed 2017). Aislinn is a licensed bat, great crested newt and dormouse ecologist with a wide variety of experience undertaking ecological surveys.

2. Desktop Study

A data search was undertaken via Aderyn for the proposed development site and surrounding area (ref: 0245-286). A 2km buffer zone was searched and records returned within 500 m of site are noted below:

- Hedgehog (*Erinaceus europaeus*) - closest record adjacent to the development site, along the eastern boundary,
- Unidentified bat roost - approximately 220m to the north west,
- Common Pipistrelle (*Pipistrellus pipistrellus*) and Brown Long-eared Bat (*Plecotus auritus*) - bat droppings in loft approximately 260m to the west,
- Insect records including Dingy Skipper (*Erynnis tages*), Blood-vein (*Timandra comae*), and Cinnabar (*Tyria jacobaea*),
- Badger (*Meles meles*) – closest record approximately 380m east,
- Grass Snake (*Natrix helvetica*) - closest record approximately 380m south east,
- Bird species listed under Section 7 of the Environment (Wales) Act 2016 (EWA 2016) recorded within 500m of the site include – Wood Warbler (*Phylloscopus sibilatrix*), Song Thrush (*Turdus philomelos*), Dunnock (*Prunella modularis*), House Sparrow (*Passer domesticus*) and Bullfinch (*Pyrrhula pyrrhula*),
- Bird species listed under Schedule 1 of the Wildlife & Countryside Act 1981 (WCA1.1) recorded within 500 m of the site include – Red kite (*Milvus milvus*) and Redwing (*Turdus iliacus*).

Records of note returned for the rest of the 2km buffer zone are detailed below:

- Smooth Newt (*Lissotriton vulgaris*),
- Otter (*Lutra lutra*),
- Common Lizard (*Zootoca vivipara*),
- Barn Owl (*Tyto alba*),
- Invertebrate records including Grayling (*Hipparchia semele*), Small Heath (*Coenonympha pamphilus*) and Small Blue (*Cupido minimus*),
- Common Frog (*Rana temporaria*),
- Soprano Pipistrelle (*Pipistrellus pygmaeus*),

- Bird species listed under Section 7 of the Environment (Wales) Act 2016 (EWA 2016) returned within the rest of the buffer zone include – Starling (*Sturnus vulgaris*),
- Bird species listed under Schedule 1 of the Wildlife & Countryside Act 1981 (WCA1.1) returned within the rest of the buffer zone include – Peregrine (*Falco peregrinus*).

2.1 Protected Sites

The search also considered statutory and non-statutory protected sites within 2km of the site boundary.

Statutory Protected Sites

There are four statutory protected sites within 2km of the development site. The Cilybebyll Site of Special Scientific Interest (SSSI) is located approximately 1.4km away to the north east. The Fforest Goch Bog SSSI is located approximately 1.6km to the south.

The Cwm Du Glen & Glanrhyd Plantation Local Nature Reserve (LNR) is located approximately 1.5km away to the west of site at its closest point. The Swansea Canal LNR is located approximately 1.7km away to the north.

Non- Statutory Protected Sites

There are 11 Sites of Interest for Nature Conservation (SINCs) within 2km of the site. The closest such site is NPT Ancient Semi Natural Woodland SINC located approximately 160m away to the west at its closest point. The remaining SINC sites along with an approximate distance from site are listed below:

- RHOS BENDS BOG (310m)
- PEN YR ALLTWEN (520m)
- RIVERSIDE INDUSTRIAL ESTATE (640m)
- FFERM ALLTWENGANOL (740m)
- NPT Watercourses (810m)
- SWANSEA CANAL (830m)
- CWM DU GLEN & GLANRHYD PLANTATION (1.5km)
- YNYSMEUDWY MOLINIA MEADOW (1.6km)
- PANDY FARM (1.8km)

Craig Cilhendre Woods Wildlife Trust Reserve (WTR) is located approximately 1.8km to the south of the development site.

There are 43 areas of Ancient Semi Natural Woodland (ASNW) within 2km of the site boundary. The closest areas are approximately 160m west of the site. These are broadleaf woodlands comprising mainly native tree and shrub species which are believed to have been in existence for over 400 years. The ground vegetation will reflect the naturalness of these woodlands and will frequently feature species which provide clear indication of long and continued woodland cover. They will have been woodland for centuries and contribute substantially to our natural and cultural heritage.

There are 17 areas of Restored Ancient Woodland within 2km of the site boundary. The closest area is approximately 1km north west of the site. These woodlands are predominately broadleaved now and are believed to have been continually wooded for over 400 years. They will have gone through a phase where canopy cover will have been more than 50% non-native conifer tree species and now have a canopy of more than 50% broadleaf.

There are two Plantation on Ancient Woodland Sites within 2km of the site boundary. The closest area is approximately 1.2km north east of the site. These are also designated natural resources Wales (NRW) Priority woodland areas (PAWS). These are sites which are believed to have been continuously wooded for over 400 years. They have been replanted with native or non-native species, most commonly with conifers. They currently have a canopy cover of more than 50% non-native conifer tree species.

There are two Ancient Woodland Sites of Unknown Category within 2km of the site. This is approximately 1.1km northwest of the site. These are woodlands which may be ASNW, RAWS or PAWS. These areas are predominantly in transition where the existing tree cover is described as shrubs, young trees, felled or ground prepared for planting. This woodland is also designated as a NRW (Natural Resources Wales) Priority Woodland Area. These Priority woodland habitat areas are large scale areas which were prioritised for targeted conservation work, based on factors including the habitats within them.

2.2 Potential Impacts to Protected Sites

Given the localised nature of the development proposes, there is unlikely to be any impact to protected sites within the local area.

3. Phase 1 Survey

3.1 Habitats

A walkover survey of the site was completed on the **12th July 2024**. A species list can be found in Appendix 1, photographs of the site can be found in Appendix 2 and a map of the habitats found within the site is provided in Appendix 3. There is no clear boundary between the development site and land further south, outside of the development site but within the clients ownership.

Red Line Boundary - Development Site

The development site comprises mainly **short perennial vegetation**. It is evident that the site has been cleared of vegetation in the recent past. However, vegetation is starting to recolonise the site. Species noted include: hedge bindweed, nettle, broad-leaved dock, hemp agrimony, redshank, scentless mayweed, smooth sow thistle, greater willow herb, hogweed, Shepards purse, herb robert, Yorkshire fog, common mouse ear, false oat grass, hoary willow herb, field horsetail, a species of sedge thought to be hairy sedge, bird's-foot trefoil, cleavers, toad rush, spear thistle and black medick.

Brash piles are present to the rear (southern end) of the site indicating young trees or woody scrub was likely present within the site boundary previously. A breeze block wall is present along the northern boundary. A heras fence line forms the eastern boundary with an adjacent property.

A **ditch** is present along the western boundary. The **ditch** is choked with **tall ruderal vegetation** and bramble making it difficult to see the extent of the feature. The **tall ruderal vegetation** is dominated by higher vegetation with nettle, hoary willowherb and rosebay willowherb present. The ditch leads into a small culvert which flows underneath the A474 to the north. The ditch also extends further southwards, outside of the development site boundary.

A small extent of **tree line** is present to the south western corner of the site. The tree line extends south wards, outside of the development site boundary. Species noted within the tree line include holly, hazel, alder and ivy.

Blue Line Boundary

The land to the south of the development site was very wet underfoot. The vegetation within this portion of the site has also been recently cleared with large **brash piles** dotted across the site. The brash piles are overgrown with hedge bindweed, bramble and bracken. Overhead power lines are present along the eastern edge of the site.

The majority of the land within this area is considered to be **marshy grassland** due to the dominance of toad rush and wet nature of the ground. The vegetation was dominated by toad rush, redshank, lesser spearwort, creeping buttercup, red dead nettle, Shepards purse, marsh bedstraw and occasional compact rush. This habitat is clearly in a transitional stage and likely to progress very quickly to tall ruderal vegetation and possibly wet woodland in the future.

Tall ruderal vegetation is present around the periphery of the site. Species noted in this area include hogweed, nettle, hoary willowherb and rosebay willowherb.

Scattered scrub is present across the land. Small stands of a willow species of tree are present. Small stands of **Japanese knotweed** are scattered in the centre and southern end of the site. An occasional mature tree is present across the centre of the site with species noted including sessile oak and sycamore.



Japanese knotweed stand



Scattered tree fairly central to site

A **tree line** is present along the western and southern boundary of the site. Species noted within the tree line include hazel, holly, birch and sycamore. Along the edge of the tree line a **ditch** is present. The ditch is shallow being approximately 30cm deep and 50cm wide. The **ditch** is mostly dry and bare earth with no vegetation present.



Ditch line along southern boundary



Ditch line along western boundary

3.2 Great Crested Newts (GCN)

Great crested newts (*Triturus cristatus*) are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Deliberate taking or destroying of eggs,
- Damage or destruction of a breeding site or resting place.

Great crested newts (GCN) are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a GCN. GCN and Common toad are listed in section 7 of the Environment (Wales) Act 2016 which makes them key species to sustain and improve biodiversity.

There is a single record for the presence of GCN returned within 2km of the site boundary. A live sighting of a GCN has been recorded approximately 1km south of the development site.

The development site is considered to have low potential for use by GCN. No ponds were visible within the development site. A review of aerial imagery and OS maps also did not indicate the presence of any ponds within 500m of the site. However, ponds within woodland or residential gardens not visible on maps could be present within the area.

The short perennial vegetation does not provide cover suitable for GCN use during their terrestrial life stages. The tall ruderal vegetation and brash piles provide a greater degree of cover. The brash piles could be used for overwintering purposes as well.

The lack of records within close proximity to the site and lack of a waterbody network within or adjacent the site makes it unlikely that GCN will be utilising the site itself for breeding. GCN could commute through the site, although this is unlikely as there is no complex of ponds within the locale. GCN are considered unlikely be present within the site. **No further survey recommendations are made for this species.**

3.3 Dormouse

The dormouse (*Muscardinus avellanarius*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,

- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Dormouse is listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a native dormouse. Dormouse is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

Only two records for dormouse were returned as part of the data search. The closest record for the presence of dormouse is approximately 1.3km away to the north west of site, separated from site by the River Tawe.

The majority of the development site is considered unsuitable for use by dormouse. Short perennial and tall ruderal vegetation does not provide cover from predation or good quality foraging habitat for such species. The tree line to the south west of the site does have some habitat connectivity to areas of woodland in the wider landscape.

The suitable habitat within the development area itself is limited in extent when considered in the context of the site. The Dormouse Conservation Handbook estimates that 2.2ha of suitable habitat are required to support a pair of dormouse. When reviewing aerial images of the site and considering habitat connectivity, there is good connectivity to suitable habitat in the wider landscape such as woodland and scrub areas, and there is continuous aerial connectivity to other suitable habitat.

Given the limited suitable habitat within the site boundary and lack of local records for this species, dormouse are not considered present. **No further survey recommendations are made for this species.**

3.4 Bats

All British bats are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Schedule 5 of The Wildlife and Countryside Act (1981) also protects all species of British bat and their roosting locations. British bats are protected from intentional or reckless disturbance and or obstruction of their roosting places. Barbastelle, Bechstein, Noctule, Brown long-eared, Common pipistrelle, Soprano pipistrelle, Greater horseshoe and Lesser

horseshoe are also listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

Four bat roost records were returned within 1km of the site for Common pipistrelle and an unknown bat species with the closest being approximately 420m south of the site. 31 commuting and foraging bat records were returned within 1km of the site for species including Common pipistrelle, Soprano pipistrelle, Noctule and an unknown bat species.

Tree Assessment

Trees within the site were subject to a cursory ground level assessment for the potential presence for roosting bats. The optimum time for such surveys is during the winter months when trees have lost their foliage. Should any tree be considered likely to have above low potential for roosting bat use, further detailed survey work will be recommended following the ground based visual assessment methodology provided in the BCT Survey Guidelines 2023 (4th Ed).

The trees within the tree line, present to the south west of the site, appeared to be of an age where one would expect occasional suitable features for bat roosting use. One mature hazel appeared to be weather damaged and had a good covering of ivy. The presence of brash and dense foliage made a detailed assessment of the trees difficult.

In the first instance all tree removal should be avoided where possible and a precautionary approach to any new lighting and increased noise disturbance should be adopted. **Detailed survey work for the potential roosting use by bats may be required depending on the final designs and plans for site and if tree removal cannot be avoided.**



Ivy clad Hazel tree

Habitat Assessment

The habitat within the site is considered to have **LOW** suitability for use by commuting and foraging bats. The development site itself is relatively small in size and bordered by a road to the north and residential properties to the east and west. There is good habitat connectivity to the south and west of site and some connectivity to the north west. The site is considered suitable for individual numbers of local bat species to use for foraging and commuting purposes, at least on occasion.

Providing a wildlife lighting strategy, that minimises light spill onto adjacent retained habitat and suitable site layout which provided commuting corridors around the site can be provided, bat transect survey work is unlikely to be required. **A wildlife friendly lighting strategy will be required as part of the development proposals.** It will be important to design the scheme to prevent light spill onto retained vegetation and adjacent habitat.

3.5 Otters

The Otter (*Lutra lutra*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Otter are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale an otter. Otter is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There are a number of otter records returned as part of the data search results. The closest such record is approximately 550m away to the north west and for field signs. The majority of the records available are associated with the River Tawe and tributaries.

Otters tend to prefer secluded locations for their holts to help prevent them being disturbed by other animals. It is accepted that otters can travel long distances from river corridors to find acceptable holt sites.

A ditch line is present along the western boundary of the site. When reviewing OS maps it appears that the ditch originates from a spring approximately 180m away to the south of the development site boundary. The ditch runs northwards towards the Nant Gellinudd but has to travel via a culvert under the A474. Otter may, on occasion, use the ditch for commuting purposes but the presence of a culvert makes it less likely that they will follow the watercourse upstream. Otter may pass over the A474 but there are no further watercourse southwards so it is considered to be unlikely.

The vast majority of the site is considered to be unsuitable for otter holt creation as much of the site is dominated by short perennial vegetation. There may have been greater potential for otter use prior to vegetation clearance works. The brash piles could possibly be used by otter but there was no evidence of large mammal movement through the site.

The presence of otter within the development site and wider site boundary is considered unlikely. Providing a wildlife friendly lighting strategy can be provided which avoids light spill onto retained habitat, there is unlikely to be any impact on otter in the local area.

Whilst no further surveys are recommended for otter in this instance, a site design which demonstrates habitat connectivity and a wildlife sensitive lighting strategy is recommended. Pollution incidents must be contained and managed appropriately on site to reduce contamination of the adjacent ditch and Nant Gellinedd further downstream.

3.6 Badger

Badgers (*Meles meles*) are protected under the Protection of Badgers Act 1992. In summary they are protected from:

- Taking, killing or injuring;
- Cruelty;
- Interfering with a badger sett;
- The selling and possession of badgers;
- Marking or ringing.

Badgers are also listed on schedule 6 of the Wildlife and Countryside Act 1981 as amended.

Badgers tend to have a variety of setts with different uses and functions within the territory for the family unit. In general there is usually a main sett which the family will use the most. There are then annex, subsidiary and or outlier setts which depending on family structures and environmental pressures may be used at different times of the year. As female badgers tend to have their cubs over winter the disturbance and damage of badger setts is prohibited between December and June inclusive. NRW are the licensing body for any actions which may contravene the above legislation.

Badgers favour a dry sloping site for digging their setts preferably within woodland or even under a large hedgerow bank. Badgers are creatures of habit and tend to follow regular pathways between their setts and foraging grounds.

There are a number of records for the presence of badger returned as part of the data search results. The closest record is approximately 360m away to the south west and for a road traffic collision. All remaining records are given to the north and west of site, separated from site by the River Tawe.

The vast majority of the development site is considered to be unsuitable for badger as much of the site is dominated short perennial vegetation. The short open vegetation provides no

cover and shelter for sett creation. No mammal runs or field signs for badger were identified within the development site or wider land within the clients ownership. Given the habitat connectivity between the development site and wider landscape it is presumed that badger could utilise the proposed development site, on occasion, for commuting and foraging purposes.

The presence of badger within the development site and wider site boundary is considered unlikely. Providing a wildlife friendly lighting strategy can be adopted which avoids light spill onto retained habitat, there is unlikely to be any impact on badger in the local area.

Whilst no further surveys are recommended for badger in this instance, a site design which demonstrates habitat connectivity and a wildlife sensitive lighting strategy will be required and precautionary working methods should be adopted to avoid harm or potential disturbance to this species.

3.7 Birds

All breeding birds are protected under schedule 1 of the Wildlife and Countryside Act (1981) as amended. Under this Act it is an offence to:

- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.

Enhanced protection is afforded to species listed on Schedule 1 of the Act, this additional protection makes it an offence to:

- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

The majority of the site is considered to be unsuitable for nesting use by bird species as the short perennial vegetation provides no cover from predation. Nesting opportunities occur in the tree line and brash piles around the periphery of the site. The vegetation within the development site is considered suitable for foraging and commuting use by local bird species.

A precautionary approach to the removal of habitat with bird nesting potential will be required. Compensation measures for the loss of bird foraging and nesting habitat will be required.

3.8 Reptiles and Amphibians

Reptiles such as the Slow-worm, Common lizard, Adder and Grass snake are protected under the Wildlife and Countryside Act 1981 (as amended). They are protected from killing, injuring and sale. They are protected from killing, injuring and sale. They are also listed in section 6 of The Environment (Wales) Act 2016.

The four widespread species of amphibian i.e. the Smooth and Palmate newts, Common frog and Common toad, are protected under the Wildlife and Countryside Act 1981 (as amended) by Section 9(5) of the Wildlife and Countryside Act 1981. This section prohibits sale of these species. Common toad is listed in section 6 of The Environment (Wales) Act 2016.

A number of records have been returned for amphibians and reptiles in the local area. The closest reptile record is for Grass snake approximately 390m to the south of site. The closest amphibian record is for Smooth newt approximately 510m away to the west.

Reptiles prefer a mosaic of habitats with diverse vegetation structure creating open areas and nearby cover to provide protection from predators and the elements. Common amphibian species require still pools of water for breeding purposes and damp conditions with foraging habitat during their terrestrial life stages.

There are no waterbodies within the site itself but along the western boundary of the site is a dry ditch. This may on occasion hold water but is likely to be running water which isn't suitable for breeding use. Whilst the site is considered unsuitable for breeding use by amphibians it does contain suitable terrestrial habitat and is likely damp throughout the year.

The development site is considered to be suitable for use by reptiles and amphibians during their terrestrial life stages. The short perennial vegetation is patchy in places but does provide cover. The brash piles and tall ruderal vegetation are likely to be used by reptiles and amphibians for shelter. The site appears to be fairly wet during the summer and likely to be wetter during the winter months. The periodic flooding of the site is likely to reduce the potential for hibernation use by reptile species.

Consideration has been given to the need to undertake reptile surveys to support any future planning application for the site. The development proposals are likely to result in the loss of the majority of the habitats within the development site boundary. The land to the south of the site, in wider client ownership, will remain undeveloped. The development site is considered to be suitable for a small number of common reptile species to use during the summer months. Given the adjacent, suitable habitat for reptiles to use, in this instance, reptile surveys are not recommended. Instead, **a reptile mitigation strategy will be used to naturally encourage reptiles out of the development site.** Enhancement features for

reptiles can be incorporated within the development proposals to allow reptiles to recolonise the development site after completion.

3.9 Other Mammals

Other notable mammal species listed under Section 7 of the Environment (Wales) Act 2016 which had records returned during the data search include hedgehog, Polecat and Brown hare.

Hedgehog - closest record being along the eastern boundary of the development site. This species is considered likely to be present within the site at least on an occasional basis for foraging and overwintering with the adjacent woodland and tall ruderal vegetation providing a variety of suitable areas for hedgehogs to reside and forage. Hedgehog is considered to be a species of principal importance, for the purpose of maintaining and enhancing biodiversity in relation to Wales. As such consideration must be given to this species in any plans proposed for the site.

Polecat - closest record approximately 1.1km away to the south east. The development site may have been used by this species for occasional foraging and commuting behaviour.

Brown hare - closest record approximately 1.2km to the south. Brown hare is considered unlikely to be present within the development site. Given there is more suitable habitats within the local area such as woodland and open farmland and regular disturbance due to surrounding residential properties, the site is deemed likely to be unsuitable for this species.

3.10 Invertebrates

Notable invertebrate species records, those species that are listed under Section 7 of the Environment (Wales) Act 2016, returned from the data search within a 2km buffer of the site include: Dingy skipper, Blood-vein, Cinnabar, Grayling, Small heath and Small blue.

The development site comprises of mainly short perennial vegetation with tall ruderal vegetation and a small amount of brash piles. Mosaic habitats are important for invertebrates as many require two or more habitats to complete their lifecycle. The variety of habitats present therefore allows the site to support a wide range of invertebrate groups.

The habitats of the site and immediately adjacent habitats were assessed for their potential to support invertebrates using the Invertebrate Habitat Potential Assessment (IHPA) as found in CIEEM in practice Issue 112, June 2021. See Table 1 for results. The IHPA protocol has been produced to allow ecologists without specialised entomological expertise to identify key habitats and features likely to support important invertebrate assemblages. Full details of habitat types can be found in Appendix 5.

Table 1. Invertebrate Habitat Potential

Habitat Element	Grade
Decaying Wood – H1	D - Minor
Rotational Management – H2	E - Negligible/Absent
Nectar Resources – H3	D - Minor
Wet Substrates – H4	D - Minor
Other Water Habitats – H5	D - Minor
Structural Patchwork – H6	D - Minor
Still Air (S) – H7	D - Minor
Still Air (H) – H8	D - Minor
Connectivity – H9	C - Moderate
Ecoclines – H10	C - Moderate
Bare Earth – H11	D - Minor

Based on the Invertebrate Habitat Potential Assessment (IHPA) the site, in its current state, is considered to have potential to support common and widespread species of invertebrate. **No further survey work is recommended for invertebrates** but steps should be incorporated into the new site design to create and enhance habitats that encourage invertebrate populations.

4. Recommendations and Mitigation

The applicant is seeking planning permission to create a single dwelling within the development site boundary. The development proposals are in the very early stages and detailed designs are not available. The majority of habitats within the site boundary are likely to be lost as part of the development proposals.

Broad recommendations are made below to help inform the design process. **Once the development proposals are progressed and finalised and the considerations to development within the site are addressed, further ecological input may be required.** Our recommendations are:

- A root protection zone (RPZ) must be implemented around any retained trees which lie adjacent to or within the boundary of the proposed development site. British Standard BS 5837, *Trees in relation to design, demolition and construction - Recommendations* will be followed. Measures will include clear marking of the RPZ to guarantee no machinery is used or digging carried out in that area. This will ensure that there is no detrimental impact to the trees and the flora or fauna it supports.
- Pollution control measures must be put in place to avoid any impacts to the ditch that runs along the western boundary of the site. All machinery used during any on site works must be stored in an agreed location away from the west of the site. Spill kits must be kept on site at all times to deal with any fuel, oil or material spills. All machinery will be kept in a bunded water tight storage compound to prevent spills. The storage compound must be at least 10m away from any surrounding watercourse.
- The optimal survey window for bat tree assessment work is the winter when leaves are not on the trees. **The large, ivy-clad hazel tree within the southwest corner of the site has been identified as having a level of bat roost suitability.** A ground based visual assessment of the tree during the winter months will be required if development proposals impact the tree.
- A reptile mitigation strategy will be required to inform the development. **Vegetation clearance must be undertaken in two stages as below and during the summer months of April to September inclusive to ensure reptiles are active.** The reptile mitigation strategy should include but not be limited to:
 - First Stage Cut - All vegetation including scrub, grasses and flowers are to be cut no shorter than 150mm. Once the cuttings have been collected and removed from site the site must then be left for 24 hours.
 - Second Stage Cut - Once all steps within the first stage cut have been undertaken the remaining vegetation can be cut to 50mm high or shorter. Cutting will look to

push any resident reptiles south into adjacent habitats beyond the site boundary.
All cuttings must be collected and removed from site.

- The machinery to be used for cutting vegetation depends on the ground conditions and contractors. Owing to the small scale of the site ideally hand held strimmers and/or brush cutters may be suitable and the tailings hand raked and removed from site.
- Enhancement measures will be required within any future development proposals. Measures can include the creation of habitat connectivity, reptile hibernacula and compost areas. An indicative reptile hibernacula design can be found in appendix 6.
- The trees and brash piles within the development site have the potential for use by **nesting birds**. Any vegetation removal must be completed outside of the bird nesting season of March to August inclusive. If this is not achievable an ecologist must inspect any vegetation with the potential for birds to be present for active birds' nests prior to removal works beginning. If an active nest is identified a buffer zone of at least 5m around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed. Greater buffer zones around nests may be required depending on the species and habitat the nest is within.
- Ideally all excavations within the site will be securely covered over if left unattended. Any excavations that have a depth in excess of 0.5m and that are left open overnight will have a means of escape let for any mammals (e.g. hedgehog) that may fall into them. A wooden board or equivalent will be left from the bottom to the top of the hole at an angle no steeper than 45°. This will allow any mammal to escape and avoid increased stress from being trapped.
- **Careful consideration must be given to the use of lighting within the development site**, as this can adversely affect the activity of a variety of fauna, particularly foraging bats, nesting birds, badger, otter and dormice. Light spillage into adjacent semi-natural habitats must be avoided and brightness kept to the lowest permissible level in the areas adjacent to such habitats. All lighting must meet recommendations in the BCT Guidance Note 08/23 Bats and Artificial Lighting at Night. <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>.
- No night time working will be permitted to prevent incidental light spillage onto retained vegetation and habitats where nocturnal species may use at night. No work between the hours of 7 pm and 7 am which requires the use of artificial lighting will be allowed.

5. Biodiversity Enhancements & Green Infrastructure

The Environment Act (Wales) 2016 places a duty on competent authorities and councils including Neath Port Talbot County Borough Council to conserve and enhance biodiversity. Chapter 6 of Planning Policy Wales (version 12), paragraph 6.2.5 requires Green Infrastructure considerations to be included with all planning applications. Development proposals must detail how green infrastructure considerations which are proportionate to the scale and nature of the plans are being provided.

Green infrastructure currently within the site takes the form of a tree line and ditch along the western boundary of the site. These features are thought to have the highest biodiversity value within the development site, providing habitat connectivity into the wider landscape. The short perennial vegetation and tall ruderal habitat have value for local wildlife.

General considerations to green infrastructure to be considered as part for the development include:

- Paragraph 6.4.42 of Planning Policy Wales (version 12) requires that **at least 3 trees of a similar type and compensatory size are planted for every tree lost**. The site layout should avoid tree loss where possible. If loss is unavoidable, space within the site boundary to allow a suitable amount of compensatory planting is required, this should also be outlined in any development plans.
- The development plans should seek to retain the ditch and tree line along the western boundary of the site. The ditch is currently overgrown with tall ruderal vegetation and brash. By opening up the ditch and keeping the feature clear of dense vegetation through low intensity mowing, it will help to create connectivity across the site, into the wider landscape.
- Wildlife friendly lighting that avoids light spill onto retained habitat ie the ditch and tree line to the west will be required. By reducing light spill onto vegetated features wildlife are more likely to commute and forage across a development site.

The below bullet points are some simple measures that could be achieved to enhance the biodiversity of the site:

- **An invasive non-native species management strategy to eradicate Japanese knotweed** from the land to the south of the development site would be welcome. The knotweed stands at present are young and should be fairly easy to treat. If left unchecked the knotweed is highly likely to spread reducing habitat diversity.

- The use of native species within the soft landscaping works on the site. The use of native species of plants that are not aggressive or spreading and benefit pollinators would help improve habitat diversity within the site once construction works are completed.
- **The provision of at least one integrated bird boxes within the new building** created on site. The exact type of box used can depend on the finish of the building but it is advised that boxes are built into the building walls and at least 2m from ground level. Bird boxes ideally would not be placed on the south facing elevation of the building.
- **The provision of at least one integrated bat box within the new building** created on site. The exact type of box used can depend on the finish of the building but it is advised that boxes are built into the building walls and placed no lower than eaves level. Bat boxes must be located at least 2m away from any windows or external light fixtures.
- **All fencing across the site must be hedgehog friendly in design.** A friendly design is considered to allow passage of small animals across the site. Close board or mesh fencing should provide either a continuous gap between the bottom of the fence and ground of approximately 13cm or 13cm by 13cm gaps cut every 3m along fencing.

Appendix 1 – Plant Species Recorded

Species	Common Name	Species	Common Name
Trees & Shrub		<i>Lamium purpureum</i>	Red dead nettle
<i>Rubus fruticosus</i>	Bramble	<i>Eupatorium cannabinum</i>	Hemp agrimony
<i>Quercus petraea</i>	Sessile oak	<i>Tripleurospermum inodorum</i>	Scentless mayweed
<i>Salix sp</i>	Willow sp	<i>Chamerion angustifolium</i>	Rosebay willowherb
<i>Ilex aquifolium</i>	Holly	<i>Epilobium hirsutum</i>	Greater willowherb
<i>Acer pseudoplatanus</i>	Sycamore	<i>Galium aparine</i>	Cleavers
<i>Corylus avellana</i>	Hazel	<i>Juncus bufonius</i>	Toadrush
<i>Betula pendula</i>	Pendulous birch	<i>Fallopia japonica</i>	Japanese knotweed
Herbaceous Plants, Rushes and Ferns		<i>Juncus conglomeratus</i>	Compact Rush
<i>Bellis perennis</i>	Daisy	<i>Ranunculus flammula</i>	Lesser spearwort
<i>Plantago lanceolata</i>	Ribwort plantain	<i>Galium palustre</i>	Marsh bedstraw
<i>Prunella vulgaris</i>	Selfheal	<i>Geranium robertianum</i>	Herb robert
<i>Urtica dioica</i>	Nettle	<i>Cerastium fontanum</i>	Common mouse ear
<i>Calystegia sepium</i>	Hedge bindweed	<i>Capsella bursa-pastoris</i>	Shepards purse
<i>Presidium aquilinum</i>	Bracken	<i>Heracles sphondylium</i>	Hogweed
<i>Rumex obtusifolius</i>	Broad-leaved dock	<i>Care Hirta</i>	Hairy sedge
<i>Trifolium campestre</i>	Hop trefoil	<i>Equisetum arvense</i>	Field horsetail
<i>Lotus corniculatus</i>	Birds foot trefoil	<i>Persicaria maculosa</i>	Redshank
<i>Ranunculus repens</i>	Creeping buttercup	Grasses	
<i>Potentilla anserina</i>	Silverweed	<i>Arrhenatherum elatius</i>	False oat grass
<i>Taraxacum sp</i>	Dandelion	<i>Holcus lanatus</i>	Yorkshire fog
<i>Sonchus oleraceus</i>	Smooth sow thistle	<i>Dactylis glomerata</i>	Cock's foot

Appendix 2 – Site Photographs

Red Line Boundary - Development Site



Site looking southwards



Looking east across northern edge of site



Western boundary of site



Tree line to south west of site



Eastern boundary of site looking southwards

Blue Line Boundary



Example view of marshy grassland



Brash pile to north east



Southern portion of land, looking south



View of land looking northwards



Tree line along western boundary

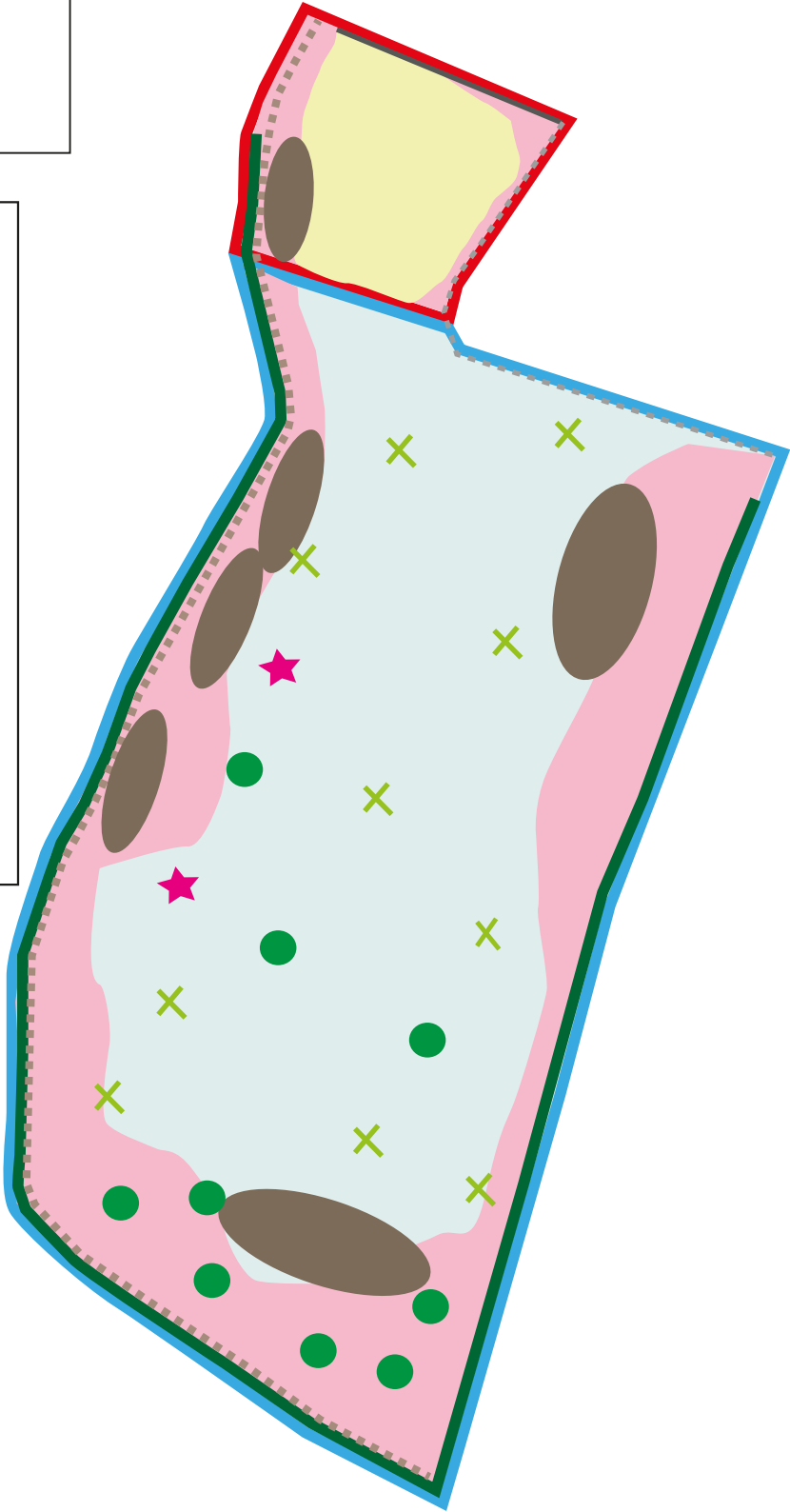
Appendix 3– Site Habitat Map

LAND OFF GRAIG ROAD, GELLINUDD,
RHOS

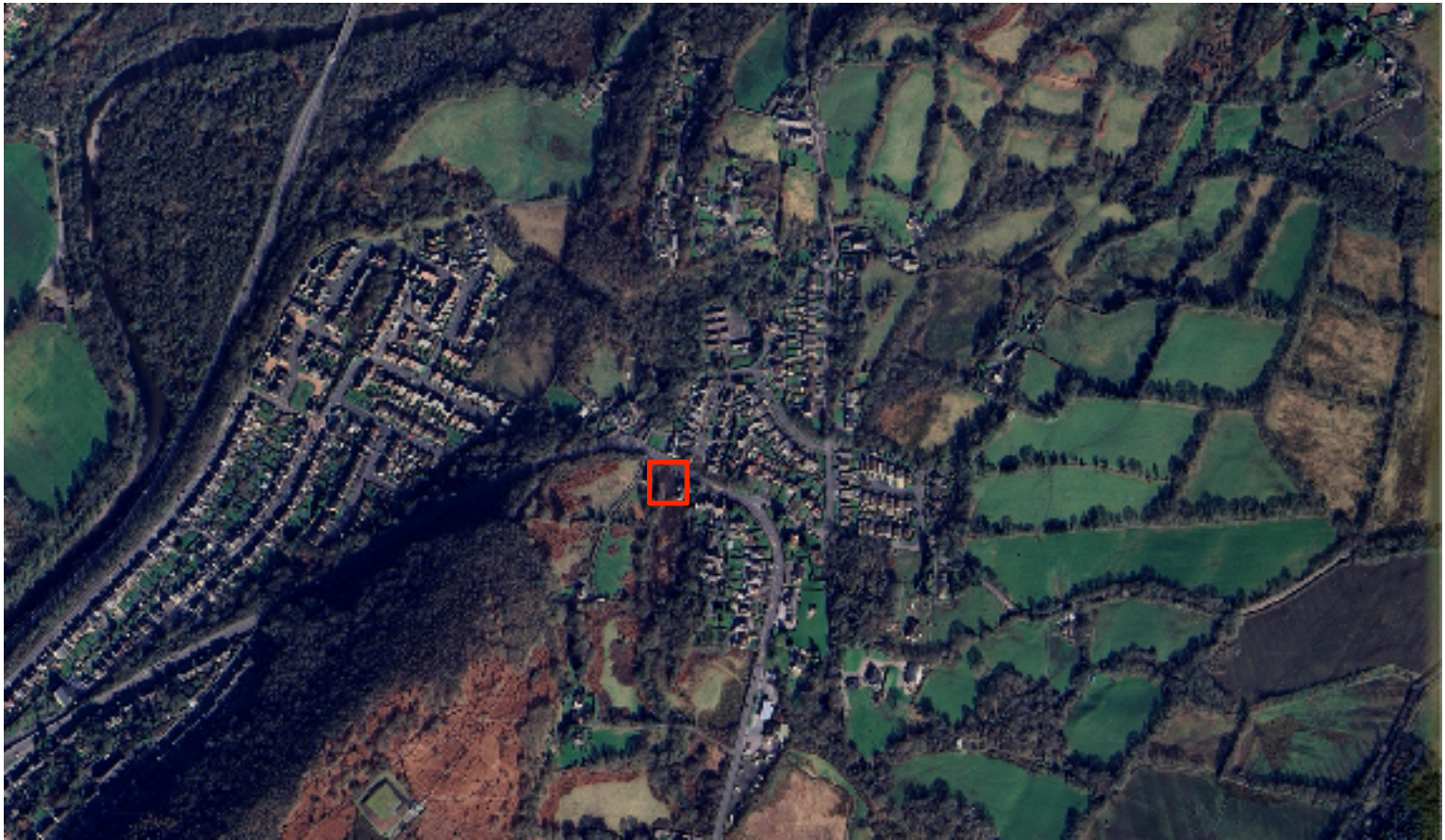
Habitat Map

July 2024

- Scattered Tree
- Short Perennial Vegetation
- Tall Ruderal Vegetation
- Marshy Grassland
- Japanese Knotweed
- Scattered Scrub
- Brash Pile
- Tree Line
- Ditch Line
- Development Site Boundary
- Wider Ownership Boundary
- Heras Fence Line
- Breeze Block Wall



Appendix 4- Aerial View of Site Location

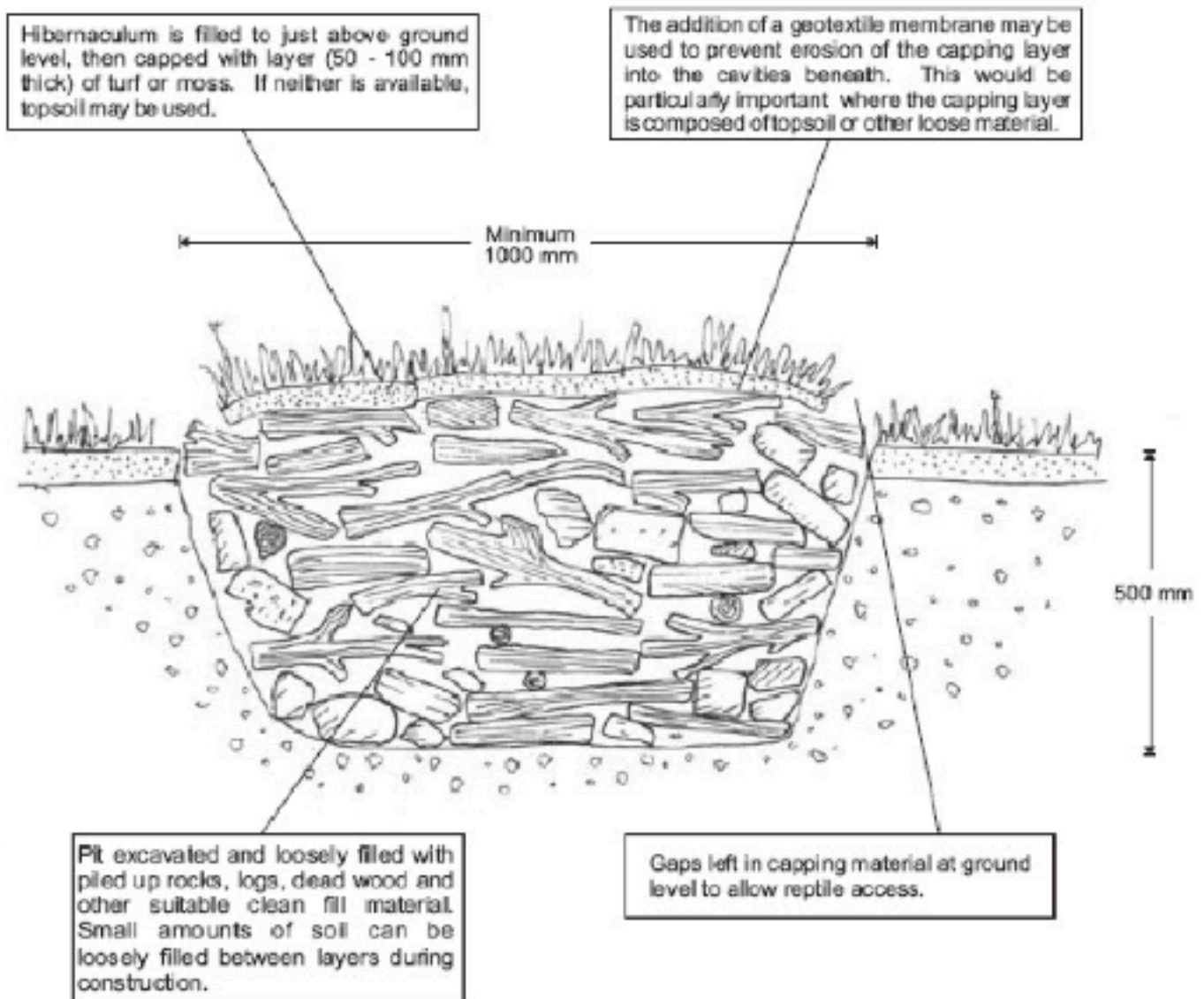


Appendix 5 - Invertebrate Habitat Potential Assessment

Table 1. Summary of the 11 habitat elements assessed by IHP survey.

Habitat element	No.	Comments
Decaying Wood	HE1	In all its forms; from decaying wood on/in large trees to woodland floor debris
Rotational Management	HE2	Planned or serendipitous; and whether for nature conservation or other purposes
Nectar Resources	HE3	As a proxy for nectar- and pollen resources, as assessment of pollen resources is impracticable on a walk-through survey
Wet Substrates	HE4	Including marginal, marshy, muddy and seasonally inundated habitats, as well as flushes
Open Water Habitats	HE5	The open water element of rivers, lakes, ponds, streams, ditches, etc.
Structural Patchwork	HE6	Habitat mosaics, including, but by no means restricted to open mosaic habitats on previously developed land
Still Air (S)	HE7	Suntraps and still-air microclimates in open situations; the term 'still air' is used in preference to 'wind breaks' as many rigid wind breaks are likely to produce turbulent air in their lee
Still Air (H)	HE8	Humid still-air microclimates in sheltered and shaded situations
Connectivity	HE9	Landscape-scale connectivity between the site and external habitats
Ecoclines	HE10	A graded transition between two or more broad habitats
Bare Earth	HE11	Unshaded bare or sparsely vegetated well-drained substrate, regardless of soil type

Appendix 6 - Reptile Hibernacula



Source: Highways Agency (2005) *Design Manual for Roads and Bridges: Volume 10 Section 4 Part 7 – Nature Conservation Advice In Relation to Roads and Reptiles*