

Site Assessment Survey

PROJECT TITLE: Proposed Housing Development

SITE ADDRESS: Hirwaun Road, Penywaun, Aberdare, Rhondda Cynon Taf.

DATE: 14th March 2024

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The applicant is seeking planning permission to create a residential development within the site. Initial plans are to create a mixture of houses and flats within the site, centred at Grid Reference SN 97494 04568. The proposals indicate that the majority of vegetation within the site will be cleared, a hardstanding access road formed off Hirwaun road, housing and hardstanding driveways created with a new planting scheme and gabion basket walls provided.

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.

Previous Survey Work Summary

Wildwood Ecology (2014)

The site was subject to an ecological assessment by Wildwood Ecology in 2014, which encompasses the same development footprint. Habitats within the site during the 2014 survey included semi improved grassland, scrub, tall ruderal vegetation, a species poor hedgerow and areas of hardstanding and bare ground.

The site was considered suitable for use by nesting birds and common reptile species. Reptile surveys were recommended and signs of badger activity were seen. A small stand of Devil's-bit Scabious, the larval food plant of the European Protected Species Marsh fritillary, was also observed. Additional surveys for Marsh Fritillary butterfly were not recommended as the habitats on site were considered to be broadly unsuitable by Wildwood Ecology.

Ecological Services (2022)

A walkover survey of the site was completed on the 21st March 2022 by Ecological Services Ltd. Habitats within the site during the 2022 survey included semi improved

grassland which dominated the site, hardstanding, scrub, areas of bramble/ruderal mosaic habitat and gorse scrub.

The site was considered suitable for foraging bats. Two badger dung piles were found during the 2022 survey across the site, with access points noted along the northern boundary. One panel of the metal fencing along the northern boundary was damaged and lifted. The scrub was suitable for nesting birds. A precautionary approach to vegetation and scrub clearance was recommended. The site was noted as being suitable for reptiles and refugia surveys were recommended by Ecological Services.

A full suite of refugia surveys were undertaken by Ecological Services in April 2022 and the results are outlined in the Preliminary Ecological Assessment (PEA) report from 2022. 30 reptile refugia were laid across the site on 24th March 2022. Surveys were undertaken between 10th April 2022 and 28th April 2022. No reptiles were found during the site visits.

Site Location

The proposed development site is roughly rectangular in shape and is relatively flat, measures approximately 1.4 acres in size. The site is location within Aberdare, just north of Hirwaun Road. The site consist of a main, roughly rectangular area of land, with a smaller south western arm. Grassland and scrub habitat appear to dominate with bare ground and hardstanding present.

Immediately adjacent to the southern boundary is Hirwaun Road and further to the south there is a large field, which first has a small area of scrub and young trees, but then appears to be made up of scrub habitat dominated by gorse species. Immediately to the west of the site are residential houses and gardens of Penywaun. To the north, there are further areas of scrub habitat and trees, a tarmaced sports pitch and playing field and then more residential housing and gardens. To the east of the site there are a small number of commercial units and then more houses and gardens of Penywaun, which wrap around the site on three sides.

In the wider environment to the north, running along the northern boundary of Penywaun, is the Avon Cynon (approximately 500 m from the site) and beyond this, further to the north, there are areas dominated by woodland together with farmers' fields separated by hedgerows. To the west is the village of Hirwaun and to the east the village of Llwydcoed with Cwmdare, Trecynon and Aberdare to the south east. Further south of the site are more large areas of scrub habitat dominated by gorse species.

Desktop Study

An updated data search was undertaken via Aderyn (LERC Reference: 0234-910) for the proposed development site and surrounding area. A 1 km buffer zone was searched and records returned within 500 m of site are noted below:

- Bluebell (*Hyacinthoides non-scripta*)— closest record being approximately 480 m north.
- Hedgehog (*Erinaceus europaeus*) - closest record being approximately 70 m south.
- Badger (*Meles meles*) - closest record being a scat record within the site boundary in 2014.
- An unknown bat species roost of over 50 individuals was recorded approximately 380 m north of the site.
- Nine records of invertebrates within 500 m of the site. Species include: Small Blue (*Cupido minimus*), Double-line (*Mythimna turca*), Holly Blue (*Celastrina argiolus*), Cinnabar (*Tyria jacobaeae*), Small Phoenix (*Ecliptopera silaceata*), Garden Tiger (*Arctia caja*), *Cheilosia chrysocoma*, *Cheilosia nebulosa* and *Dicranomyia ornata*.
- Three records of invasive Non-Native Plant Species (INNS) were recorded within 500 m of the site including Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed (*Fallopia japonica*) and Montbretia (*Crocsmia pottsii x aurea* = *C. x crocosmiiflora*) - all being approximately 480 m north.
- Bird species listed under Section 7 (S7) of the Environment (Wales) Act 2016 (EWA 2016) include – Dunnock (*Prunella modularis*), House Sparrow (*Passer domesticus*), Reed Bunting (*Emberiza schoeniclus*), Skylark (*Alauda arvensis*), Cuckoo (*Cuculus canorus*), Kestrel (*Falco tinnunculus*).
- Bird species listed under Schedule 1 of the Wildlife & Countryside Act 1981 (WCA1.1) include – Redwing (*Turdus iliacus*), Osprey (*Pandion haliaetus*), Black Redstart (*Phoenicurus ochruros*), Red Kite (*Milvus milvus*).

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

- Common Lizard (*Zootoca vivipara*) - approximately 870 m north.
- Common Toad (*Bufo bufo*)- approximately 870 m north.
- Common Frog (*Rana temporaria*) - approximately 1 km south.
- Otter (*Lutra lutra*) - approximately 1 km north.
- Polecat (*Mustela putorius*) - approximately 580 m east.

- Bat roost records were returned for species including Lesser horseshoe (*Rhinolophus hipposideros*), Pipstrelle sp. (*Pipistrellus sp.*) And unknown bat species.
- 84 species of invertebrates were returned within the rest of the buffer zone, the closest records being: *Chrysolina brunsvicensis*, Chimney Sweep (*Odezia atrata*), Banded General (*Stratiomys potamida*), Beautiful Demoiselle (*Calopteryx virgo*), Broad-bodied Chaser (*Libellula depressa*), Common Darter (*Sympetrum striolatum*), Four-spotted Chaser (*Libellula quadrimaculata*), Gyrinus aeratus, Dot Moth (*Melanchra persicariae*), Dusky Brocade (*Apamea remissa*), Feathered Gothic (*Tholera decimalis*), Gold Spangle (*Autographa bractea*), Oblique Carpet (*Orthonama vittata*), Sallow (*Cirrhia icteritia*), Shoulder-striped Wainscot (*Leucania comma*) and Spectacle (*Abrostola tripartita*).
- Bird species listed under Section 7 (S7) of the Environment (Wales) Act 2016 (EWA 2016) include – Tree Pipit (*Anthus trivialis*), Spotted Flycatcher (*Muscicapa striata*), Ring Ouzel (*Turdus torquatus*), Pied Flycatcher (*Ficedula hypoleuca*), Lesser Redpoll (*Acanthis cabaret*), Hen Harrier (*Circus cyaneus*), Herring Gull (*Larus argentatus*), Grasshopper Warbler (*Locustella naevia*) and Cuckoo (*Cuculus canorus*).
- Birds: Species listed under Schedule 1 of the Wildlife & Countryside Act 1981 (WCA1.1) include – Barn Owl (*Tyto alba*), Fieldfare (*Turdus pilaris*), Goshawk (*Accipiter gentilis*), Kingfisher (*Alcedo atthis*), Merlin (*Falco columbarius*) and Peregrine (*Falco peregrinus*).

Protected Sites

The data search also considered statutory and non-statutory protected sites within proximity to the development site.

Statutory Protected Sites

A single statutory protected site is present within 1km of the development site. The Tir Mawr a Dderi Hir, Llwydcoed Site of Special Scientific Interest (SSSI) lies approximately 660 m north of the site.

Non-Statutory Protected Sites

There are no Sites of Importance for Nature Conservation (SINCs) within 1 km of the site.

The Ty Rhos Craggs Regionally Important Geological Site (RIGS) lies approximately 1 km south of the site.

A Natural Resources Wales (NRW) Priority Area (Heathland and Grassland) lies approximately 370 m north of the site.

The site is located within a B-Lines area that stretches through Aberdare to Merthyr Tydfil. B-Lines are a series of 'insect pathways' running through the countryside and towns, along which bugle organisations are aiming to restore and create a series of wildflower-rich habitat stepping stones that link existing wildlife areas together, creating a network across the UK landscape.

Several Ancient Woodland sites lie within 1 km, the nearest of which is situated approximately 370 m north of the site along the Avon Cynon. Ancient Semi Natural Woodlands area 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.

Survey Constraints

The site visit was completed during March which is a sub optimal time of year to undertake habitat assessments. However, it was still possible to draw broad conclusions on habitat types within the site boundary.

Site Visit

A walkover survey of the site was completed on the **7th March 2024**. All areas of the site were accessible. Photographs of the site are provided in Appendix 2 of this report.

The site is surrounded by a tall metal fence on all elevations. Small gaps are present under the fencing in many areas around the site. The site is rectangular in shape with a smaller rectangle area extending along the southwestern corner. An area of **bare ground** is present in the centre and south west of the site that grades into **ephemeral short perennial grassland** patches to the east with species including: Ribwort plantain, Creeping cinquefoil, Knapweed, Common Mouse ear, bird's foot trefoil, Clover sp., Common chickweed, Yarrow, Square stalked willow herb, Broadleaved dock, Purple dead nettle, Common dandelion, Spear thistle.

Semi-improved grassland fills the eastern side of the site. Grassland species include: Bramble, Ribwort plantain, Creeping cinquefoil, Knapweed, Crested dog's tail, Common Mouse ear, Yorkshire fog, bird's foot trefoil, Clover sp., Greater plantain, Common chickweed, Ragwort, Ground ivy, Herb Robert, Sorrel, Cock's foot, Fescue sp., Lesser celandine, Lesser stitchwort, Yarrow, Perforate St John's wort, Brassica, Square stalked willow herb, rosebay willow herb, Soft rush, Pendulous sedge, Glaucous sedge, Hogweed sp., Broadleaved dock, Colt's foot, Purple dead nettle, Common dandelion and Spear

thistle. An area of **gorse scrub** is located in the northern section of the site. Three rubble **piles** made up of stone, rubbish and earth are located southwest of the **gorse scrub** and are adjacent to an area of **scattered woody scrub** made up of small immature willow trees and butterfly bush with **semi-improved grassland** as understory.

Bramble scrub is present along the southeastern fence within the site. **Dense bramble scrub** is present along the western area of the site as the bank slopes down to residential garden fences. Species in this scrub include: Hawthorn, Goat willow, Willow sp., Ivy, Bramble, Rose sp., Hazel, Dog rose, Butterfly bush and Rosebay willow herb. The site slopes down to a lower area in the south west corner. This area is dominated by a large rectangular section of **hardstanding**. A line of **scattered woody scrub** made up of small immature willow trees runs along the northern fence line of this section. **Bramble scrub** lines the south fence. The site has a mosaic structure of habitats.

Potential Development Impacts

It is expected that the majority of the site will need to be cleared of vegetation to allow for the building of 15 residential properties and associated hardstandings. The habitats on site are broadly similar to those found in the 2022 survey by Ecological Services Ltd. Scrub habitat has expanded slightly in all areas and short perennial vegetation cover has increased in areas of hardstanding.

- The proposed development will likely result in the loss of an area of; short ephemeral perennial vegetation, scrub habitat and semi improved grassland. The habitats within the site are considered to be of local value for biodiversity.
- The habitats within the site namely short ephemeral perennial vegetation, semi improved grassland and scrub are suitable for use by common reptile and amphibian species. The vegetation is likely to be used during the summer months for basking and foraging. Scrub areas and rubble piles are likely to be used for hibernation purposes during the winter. There are no known suitable waterbodies within 500 m of the site and so the likelihood of amphibians utilising the site is low.
- Reptile surveys were completed in 2022 which found no evidence of the presence of reptiles. The habitats within the site are still considered to be suitable for use by common reptile species. The habitats within the site are suitable for reptile commuting and foraging and also over wintering. The tussocky grassland, bare ground, rubble piles and some scrub areas create a suitable mosaic habitat. Although previous reptile refugia surveys in 2022 did not have any reptile findings it is possible that reptiles could utilise the site. A common lizard record was returned in the data search approximately 870 m north of the site. A Suite of reptile refugia surveys are recommended for the site and a precautionary approach to removal of any suitable habitat.

- No evidence of well used mammal paths through the site were noted during the 2024 site visit. No evidence of the presence of badger were noted within the site such as latrines, mammal paths or snagged hair. However, there is suitable access for badger into site and historic records of their presence. The presence of a sett within or adjacent to the site is considered highly unlikely, however badger are likely to use the site for foraging purposes at least on occasion throughout the year.
- There are no mature trees or buildings located within the site and therefore no bat roosting suitability. The habitat within the site boundary is not overly suitable for bat foraging use being open and exposed however small numbers of bats may use the area throughout the year. Bat activities surveys are not recommended, however a wildlife friendly landscaping and lighting scheme will be required to maintain habitat connectivity across the site.
- The scrub within the site is a suitable habitat for nesting birds. A nest was identified during the March 2024 survey visit within a Dog rose tree on the western banking of the site. 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.
- Hedgehog is considered likely to be present within the site at least on an infrequent basis for foraging and overwintering. The rubble and earth piles and grass vegetation on site provide suitable habitat for hedgehog to frequent. 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.
- Based on the Invertebrate Habitat Potential Assessment (IHPA) the site, in its current state, is considered to have unsuitable habitats to support species of invertebrate and the IHP does not meet the threshold for 'further action' based on the outcomes outlined in the table in Appendix 4. A summary of the site assessment can be found in Appendix 4 of this report. No further survey recommendations are made for invertebrates on site, although, enhancements on site should be made to encourage invertebrate populations as the site is situated within a B-Lines habitat area.
- 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 and invertebrates. 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.

Legislation

Amphibian and Reptiles

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 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.

Badger

Badgers 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.

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

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.

Other Mammals

Other notable mammal species listed under S7 of the Environment (Wales) Act 2016 which returned records within 1 km include Hedgehog (approximately 70 m south) and Polecat (approximately 580 m east)

Conclusions and Recommendations

Broad recommendations are made below to help inform the design process. Our general recommendations are:

- Reptile refugia surveys are recommended on site. A standard approach to presence/absence refugia surveys is to complete a minimum of seven site visits in suitable weather conditions and check artificial reptile refugia spread out across the survey site during the correct survey period. Survey refugia for reptiles can be made from a variety of materials but the most common material used is roofing felt cut into squares measuring at least 0.75 m by 0.5 m. The refugia mats should be given a minimum of 10 days to bed in before the first checks take place.
- The rubble piles, scrub and tussocky areas of the semi-improved grassland within the site boundary are considered suitable for use by common reptile species. **A reptile mitigation strategy is required** to support any development works. The reptile mitigation strategy must include, but not be limited to:
 - o Sensitive timings of works
 - o A phased cut of suitable vegetation to naturally encourage reptiles to move away
 - o Supervised destructive searching where necessary
 - o Enhancement measures within any development plans to allow reptiles to recolonise the site.
- The scrub habitats on site have the potential for use by nesting birds. Any tree or scrub removal must be completed outside of nesting bird season (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 nests prior to removal works beginning. If an active nest is identified a buffer zone of at least 5 m around the nest must be observed until chicks have fledged. Only then can 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.
- A pre inspection check of all scrub habitat is recommended immediately prior to vegetation clearance works. Whilst the presence of badger within the site boundary is considered unlikely it cannot be completely ruled out. A pre inspection check of vegetation immediately prior to clearance work will check for any large mammal signs.

- Artificial lighting has the potential to affect a wide range of nocturnal species. All lighting must meet recommendations in the BCT Guidance Note 08/23 Bats and Artificial Lighting at Night in the UK document <https://www.bats.org.uk/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance-note-update-released>.

Biodiversity Enhancements & Green Infrastructure

The Environment Act (Wales) 2016 places a duty on competent authorities and councils 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 grassland and scrub. There is some habitat connectivity between the site and adjacent areas of tree space to the north, north east and south of the site. Although Hirwaun Road could be considered a partial sever to direct habitat connectivity southwards. General considerations to green infrastructure to be considered as part for the development include:

- A sensitive landscape plan that focuses on habitat connectivity through and around the site would be welcomed. The use of hedgerow planting instead of boundary fencing would improve habitat connectivity.
- Sensitive lighting to prevent light spill into adjacent natural habitat. Light spill could affect how wildlife move through habitat within the site and also the habitats adjacent to the site.
- Wildlife friendly long term habitat management of green spaces and SuDs features would help to create diverse habitat within the site boundary. For example the low intensity cut and collection of vegetation from SuDs features would create a varied sward and reduce soil enrichment allowing slower growing plant species time to establish.

The Environment Act (Wales) 2016 places a duty on competent authorities such as Rhondda Cynon Taff County Borough Council to conserve and enhance biodiversity. The below bullet points are some simple measures that could be achieved to enhance the biodiversity of the site:

- The provision of integrated bird boxes within any new buildings created on site. At least 25% of new structures should include nesting provision for birds. A variety of bird boxes should be used but all boxes must be placed at least 2m high from ground floor.

- The provision of integrated bat boxes within any new buildings created on site. At least 25% of new structures should include roosting provision for bats. Integrated boxes are welcome but consideration to the creation of roosting provision with a roof should also be given. For example garage roof spaces can be lined with a bitumen based roofing felt and suitable bat access points included to the space between the roofing felt and roof tiles.
- The use of native species within the soft landscaping works on the site. Suitable long term management of soft landscaping also helps ensure spaces are useful to wildlife. Consideration to management of grassland within the site to create a diverse native sward would be welcomed. Ideally cutting two times per year I.e. April and September with all cuttings removed would help improve diversity.
- 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.
- A reptile hibernacula can be created within the grounds of the development site using rubble and brash from on site clearance works. The hibernacula must at least measure 0.5m in depth, 2m wide and 2m long each. It will be made by creating layers of wood, brash, rubble and soil. The hibernacula will create a mound approximately 0.3m above ground level which will be covered over with soil and seeded using a native seed mix. A diagram of a Reptile Hibernacula is located in the appendix for reference.
- The creation of a butterfly bank within the site boundary could be created to encourage invertebrate populations.

Best Wishes

Beth Lewis
Ecologist
Ecological Services Ltd

Signed: Beth Lewis Date: March 2024

Reference List

- Wildwood Ecology Ltd (03/09/2014) '*Hirwaun Road, Penywaun; Preliminary Ecological Appraisal Report*'
- Ecological Services Ltd (11/05/2022) '*Preliminary Ecological Assessment; Hirwaun Road, Penywaun*' V.1

Appendix 2 – Site Photographs



1. Scrub and hardstanding land adjacent to north of site.



2. Scrub and grassland adjacent to northeast of the site.



3. Rubble and rubbish piles in centre of site. Willow tree stand.



4. Northwest corner of site. Dense scrub on slope.



5. Central and east area of site. Ephemeral short perennial grassland and bare ground.



6. East area of site. Gorse scrub and ephemeral short perennial grassland.



7. West area of site. Dogwood tree with birds nest present.



8. Southwest area of site. Hardstanding, grassland and scrub.



9. Northwest view of grassland.



10. Northeast corner of site. Metal fencing to east and green fencing to north.

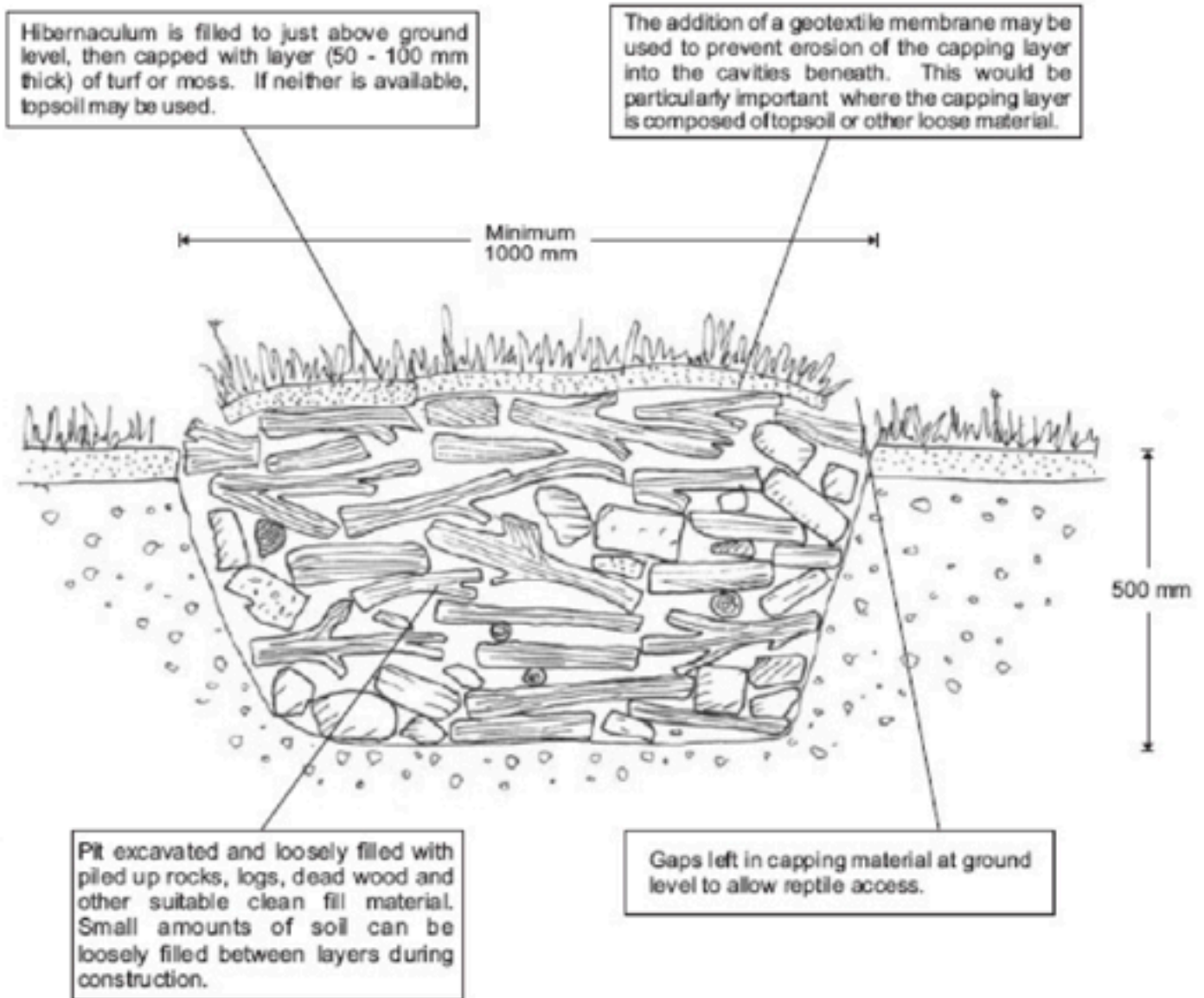


11. Large gap cut in northern boundary fence.



12. Scrub and grassland outside southwest fencing.

Appendix 3 - Reptile Hibernacula Design



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*

Appendix 4 - Invertebrate Habitat Assessment Table

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
Ecotones	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

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

Invertebrate assessment summary of site 7th March 2024.