

# Ecological Impact Assessment



Project: Hillcrest, Merthyr Tydfil

Instructed by: Merthyr Tydfil Housing Association

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## **Contents**

### **1. Introduction**

- 1.1 Site Description
- 1.2 Surveyor Experience

### **2. Legislation & Planning Policy**

- 2.1 Habitat Legislation
- 2.2 Species Legislation
- 2.3 Planning Policy

### **3. Preliminary Ecological Assessment**

- 3.1 Desktop Survey
- 3.2 Previous Ecological Survey Work
- 3.3 Likely Significant Effects

### **4. Impact Assessment**

- 4.1 Ecological Feature - Bats
- 4.2 Ecological Feature - Nesting Birds
- 4.3 Ecological Feature – Herptiles
- 4.4 Ecological Feature – Mammals
- 4.5 Ecological Feature – Habitat Loss

### **5. Enhancement Measures**

- 5.1 Provision of Bird Nesting Opportunities
- 5.2 Provision of Bat Roosting Opportunities
- 5.3 Soft Landscaping
- 5.4 Reptile Hibernacula

Appendix

**Habitat Map (2024)**

**Areas of Retained Habitat**

**Fencing Locations & Directional Cutting**

**Reptile Hibernacula**

## 1. Introduction

The applicant is seeking permission to create 47 residential dwellings within a parcel of land at Hillcrest, Merthyr Tydfil. The site is located within Merthyr and centred at NGR SO 05776 08008. The development proposals are focused on the south western portion of the overall site boundary and retain a strip of undeveloped land to the north, east and south west of the site.

An initial Preliminary Ecological Assessment (PEA) of the development site was undertaken by Ecological Services Ltd in January 2021. The survey found the site to contain semi improved grassland, tall ruderal vegetation, stands of bramble, woody and gorse scrub, scattered scrub, scattered trees and a small number of garage buildings. A reptile refugia survey of the site was undertaken by Ecological Services Ltd in 2022. Whilst the reptile survey was constrained due to refugia disturbance, it still confirmed the presence of at least three slow worm (*Anguis fragilis*) within the site boundary.

An updated site visit was undertaken by Ecological Services Ltd on the 20th May 2024. In general the habitats within the site boundary were found to be broadly the same as the 2021 visit.

In order to undertake a full appraisal of the proposed development and the potential impacts and significance of impacts upon the habitats and species within the development site and adjacent habitats, an Ecological Impact Assessment (EclA) has been undertaken. An EclA helps provide a clear and methodical way to identify, quantify and evaluate the potential significant effects of a proposed plan or project.

### 1.1 Site Description

The site is largely sloping from its highest point in the west to its lowest in the southeast. Pavement and road borders the site on the west and southern sides of the site. A set of steps, a line of houses and garages line the northern boundary of the site and garden fencing runs along the eastern boundary. The area is surrounded on all sides by residential development with areas of associated infrastructure and garden landscaping, there is little to no continuous connectivity with other vegetated habitat in the local area.

The wider landscape largely comprises areas of residential development. The green open space of Ifor Park lies approximately 190 m northeast at its closest point. An area of woodland is present adjacent to the A465 road and Ifor Park to the north. A pond has been created within Ifor Park, associated with the A465 road works approximately 350 m northeast of the site. Galon Uchaf Park is located approximately 450 m southwest.

## 1.2 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 NRW licenced bat, Great crested newt and dormouse ecologist with a wide variety of experience undertaking ecological surveys.

Beth Lewis is an associate member of Chartered Institute of Ecology and Environmental Management (CIEEM). Beth is an ecologist with 6 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).

## 2. Legislation & Planning Policy

### 2.1 Habitat Legislation

The **Habitats Directive (Directive 92/43/EEC)** aims to '*contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States*'. The Directive requires the establishment and conservation of a network of sites within each member state which protect the rarest flora and fauna found across Europe. A number of species and habitats are listed in Annex 2 of the directive for which areas can be designated as a SAC. The aims of the Habitats Directive are transposed into British Law through the **Conservation of Habitats and Species Regulations 2017**.

The **Wildlife and Countryside Act (1981)** as amended provide the legislation framework and protection for SSSI. A SSSI is designated by a statutory nature conservation body such as Natural Resources Wales (NRW) for its make up of flora, fauna, geological and / or physiographical features. Each SSSI should have a citation which describes the site and its special features.

The **Environment (Wales) Act 2016** is a wide reaching piece of legislation which seeks help to improve the management of Wales' natural resources into the future. The Act sets out a Wales wide approach to planning and managing its natural resources at a national and local level in a sustainable manner. One main requirement for all public bodies, such as local councils, is to maintain and enhance biodiversity where possible within their duties.

### 2.2 Species Legislation

#### Great Crested Newt

Great crested newts (*Triturus cristatus*) are a European protected species and are protected under the Conservation of Habitats and Species Regulation 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 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 great crested newt.

### Bats

All British bats are a European protected species and are protected under the Conservation of Habitats and Species Regulation 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, beechstein, 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.

### Otter

The common 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.

### Nesting 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.

### Reptiles

Reptile 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. In Wales sand lizard, smooth snake, adder, grass snake, slow worm and common lizard are listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

### Dormice

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 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 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.

### 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.

### 2.3 Planning Policy

Planning Policy Wales (PPW), Edition 12 published February 2024 provides national policy relating to Sustainability and Ecology. PPW sets out the land use planning policies of the Welsh Government and is supplemented by a series of Technical Advice Notes (TANs).

Chapter 6 of PPW contains the following policies relating to ecology and biodiversity:

- 6.2 Green Infrastructure;
- 6.4 Biodiversity and Ecological Networks.

#### Technical Advice Note (TAN) 5

TAN 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should:

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;

- Ensure that appropriate weight is attached to designated sites of international, national and local importance;
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;
- Ensure that the range and population of protected species is sustained;
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered.

### **3. Preliminary Ecological Assessment**

To inform the PEA survey conducted at site, an updated data search was conducted in 2024. A 2km buffer zone was searched via Aderyn for the proposed development site and surrounding area (ref: 0245-110). A summary of the findings are provided within this report.

#### **3.1 Desktop Survey**

##### **Statutory Protected Sites**

There is one Statutory Protected Site within 2 km of the site boundary. Cwm Taf Fechan Woodlands Site of Special Scientific Interest (SSSI) is located approximately 1.7 km northwest of the site. This is an expanse of woodland and is designated for its interesting plant communities and luxuriant growths of bryophytes along the Taf Fechan River. This is also designated as a Local Nature Reserve (LNR).

##### **Non-Statutory Protected Sites**

Part of the Taf Fechan River is designated as a Wildlife Trust Reserve approximately 1.7km northwest of the site.

There are nine Sites of Interest for Nature Conservation (SINCs) within 2 km of the site boundary. The closest being Bryniau SINC approximately 500 m north of the site. This is a mosaic habitat within a disused quarry with habitats including woodland, neutral grassland, ponds and reedbeds.

The remaining SINCs within 2 km of the site are listed below with an approximate distance from the development site:

- Morlais Hill - approximately 1.1 km north.
- Gurnos Wood - approximately 1.2 km west.
- Cyfarthfa Park - approximately 1.3 km southwest.
- Blaenmorlais - approximately 1.5 km northeast.
- Y Graig - approximately 1.7 km west.
- Cwm Taf Fechan - approximately 1.7 km west.
- Afon Taf - approximately 1.8 km southwest.
- Merthyr Common North - approximately 1.9 km southwest.

There are eight areas areas of Ancient Semi Natural Woodland (ASNW) within 2 km of the site boundary. The closest being approximately 1.2 km northwest 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 four areas of Restored Ancient Woodland within 2 km of the site boundary. The closest being approximately 1.4 km southwest 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 is one Ancient Woodland Site of Unknown Category within 2 km of the site. It is located approximately 1.8 km 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.

The site lies within a B-Lines area. B-Lines are non-statutory protected sites which aim to restore and create wildflower habitats forming stepping stones that link existing wildlife areas together creating a network of habitats across the landscape benefiting not only pollinators but a host of other wildlife.

There are no Tree Preservation Orders (TPOs) within the site boundary.

### Protected Species

Protected species records of note returned within 500m of the site include:

- Slow-worm - Closest record being approximately 430 m north of the site.
- Three records of West European hedgehog (*Erinaceus europaeus*)- Closest record being approximately 50 m east of the site.
- Nine records of Japanese knotweed (*Fallopia japonica*)- Closest record being approximately 80 m east of the site.
- Nine records of invertebrates were returned within within 500 m of the site for species including: Azure damselfly (*Coenagrion puella*), Blue-tailed damselfly (*Ischnura elegans*), Cinnabar (*Tyria jacobaeae*), Common carder bee (*Bombus pascuorum*), Golden-ringed dragonfly (*Cordulegaster boltonii*), Large red damselfly (*Pyrrosoma nymphula*), Small heath (*Coenonympha pamphilus*), Wall moth (*Lasiommata megera*). The closest record being the Common carder bee approximately 100 m east of the site.

- Three records of bat foraging and commuting activity were returned within 500 m of the site for species including: Pipistrelle bat species (*Pipistrellus sp.*), Serotine (*Eptesicus serotinus*) and an unknown bat species. The closest record being an unknown bat species approximately 220 m south of the site.
- Bird species listed under Section 7 of the Environment (Wales) Act 2016 (EWA 2016) include – House sparrow (*Passer domesticus*), Skylark (*Alauda arvensis*), Reed bunting (*Emberiza schoeniclus*), Dunnock (*Prunella modularis*), Kestrel (*Falco tinnunculus*), Herring gull (*Larus argentatus*) and Tree pipit (*Anthus trivialis*).
- Bird species listed under Schedule 1 of the Wildlife & Countryside Act 1981 (WCA1.1) include – Red kite (*Milvus milvus*), Greenshank (*Tringa nebularia*), Little ringed plover (*Charadrius dubius*), Whimbrel (*Numenius phaeopus*), Goldeneye (*Bucephala clangula*) and Peregrine (*Falco peregrinus*).

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

- Three records of Common lizard (*Zootoca vivipara*).
- Slow worm.
- 16 records of Common frog (*Rana temporaria*).
- 27 records of Common toad (*Bufo bufo*).
- 11 records of Great crested newt (*Triturus cristatus*).
- 13 records of Palmate newt (*Lissotriton helveticus*).
- Eurasian red squirrel (*Sciurus vulgaris*).
- European water vole (*Arvicola amphibius*).
- Two records of Eurasian badger (*Meles meles*).
- 21 records of Eurasian otter (*Lutra lutra*).
- 391 records of invertebrates were returned within the rest of the buffer zone for 141 different species. The 20 closest records were for species including: Small heath (*Coenonympha pamphilus*), Broom moth (*Ceramica pisi*), Wall (*Lasiommata megera*), Cinnabar (*Tyria jacobaeae*), Dingy skipper (*Erynnis tages*), Grayling (*Hipparchia semele*), Shimmering ruby-tail (*Chrysis fulgida*), Blood-vein (*Timandra comae*), Brindled beauty (*Lycia hirtaria*), Buff ermine (*Spilosoma lutea*), Dark-barred twin-spot carpet (*Xanthorhoe ferrugata*), Dot moth (*Melanchra persicariae*), Dusky thorn (*Ennomos fuscantaria*), Garden tiger (*Arctia caja*), Grass rivulet (*Perizoma albulata*), Green-brindled crescent

(*Allophyes oxyacanthae*), Rustic (*Hoplodrina blanda*), Sallow (*Cirrhia icteritia*), Shoulder-striped wainscot (*Leucania comma*), Small phoenix (*Ecliptopera silaceata*).

- 280 records of bat foraging and commuting activity were returned within the rest of the buffer zone for species including: Brown long-eared (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's (*Myotis daubentonii*), Greater horseshoe (*Rhinolophus ferrumequinum*), Lesser horseshoe (*Rhinolophus hipposideros*), Natterer's (*Myotis nattereri*), Noctule (*Nyctalus noctula*), Serotine and Soprano pipistrelle (*Pipistrellus pygmaeus*).
- 41 records of bat roosts were returned within the rest of the buffer zone for species including: Brown long-eared, Common pipistrelle, Daubenton's, Lesser horseshoe, Natterer's, Pipistrelle bat species, Soprano pipistrelle and an unknown bat species.
- Bird species listed under Section 7 of the Environment (Wales) Act 2016 (EWA 2016) include – Black-headed gull (*Chroicocephalus ridibundus*), Common scoter (*Melanitta nigra*), Grey partridge (*Perdix perdix*), Wood warbler (*Phylloscopus sibilatrix*), Woodlark (*Lullula arborea*), Pied flycatcher (*Ficedula hypoleuca*), Lesser redpoll (*Acanthis cabaret*), Ring ouzel (*Turdus torquatus*), Marsh tit (*Poecile palustris*), Hen harrier (*Circus cyaneus*), Tundra swan (*Cygnus columbianus*), Spotted flycatcher (*Muscicapa striata*), Ringed plover (*Charadrius hiaticula*).
- Bird species listed under Schedule 1 of the Wildlife & Countryside Act 1981 (WCA1.1) include –Common scoter (*Melanitta nigra*), Osprey (*Pandion haliaetus*), Woodlark (*Lullula arborea*), Barn owl (*Tyto alba*), Snow bunting (*Plectrophenax nivalis*), Corncrake (*Crex crex*), Kingfisher (*Alcedo atthis*), Redwing (*Turdus iliacus*), Fieldfare (*Turdus pilaris*), Hobby (*Falco subbuteo*), Whooper swan (*Cygnus cygnus*), Goshawk (*Accipiter gentilis*), Green sandpiper (*Tringa ochropus*), Merlin (*Falco columbarius*), Avocet (*Recurvirostra avosetta*), Hoopoe (*Upupa epops*)

### 3.2 Previous Ecological Survey Work

A Preliminary Ecological Assessment of the development site was undertaken in January 2021. The survey found the site to contain semi improved grassland, tall ruderal vegetation, stands of bramble, woody and gorse scrub, scattered scrub, scattered trees and a small number of garage buildings. A habitat map is provided within Appendix 1.

A reptile refugia survey was undertaken on the site in 2022 by Ecological Services Ltd. Full details of the survey methodology and findings can be found in the report 'Reptile Survey Report; Haydn Terrace, Penydarren' V1.0 dated 18th May by Ecological Services Ltd. 37 reptile refugia placed on site on 23rd March 2022 in areas with reptile suitability. A

maximum count of 3 slow worm (*Anguis fragilis*) were recorded. The refugia laid out on site were unfortunately tampered with and removed during the survey effort. Detailed development plans were not available at the time the reptile survey report was issued. The report recommends that ideally measures will need to be implemented to ensure the reptile population can be retained on site during any future development work.

An updated site visit was undertaken by Ecological Services Ltd on the 20th May 2024 by Beth Lewis. Full details of the survey methodology and findings can be found in the separate survey report. In summary, the site visit found the site to contain a small area of hardstanding, semi improved grassland, tall ruderal vegetation, scattered trees, gorse scrub, bramble scrub and scattered scrub across the site. The PEA survey work included a block of garages to the north east of site. However these garages are not included within the current development site boundary.

Recommendations included within the report required:

- A reptile mitigation to inform the development proposals.
- A pre-inspection check of all scrub habitat to check for signs of mammal presence
- Tree or scrub removal be undertaken outside of nesting bird season.
- A sensitive lighting scheme be implemented to avoid light spill onto habitats suitable for bats, birds and nocturnal animals.
- Mammal passes to be included in any boundary fencing.
- The creation of habitat corridors around the periphery of the site along with sensitive long term management of any habitat corridors to benefit wildlife
- Invasive Non Native Species will be treated and eradicated from within the site boundary
- The provision of bat and bird boxes within any new buildings on site
- The provision of at least one reptile hibernacula within the site boundary
- The provision of a butterfly bank within the site boundary

### 3.3 Likely Significant Effects

#### Bats

283 records of bat foraging and commuting activity were returned within 2 km of the site for species including: Brown long-eared, Common pipistrelle, Daubenton's, Greater horseshoe,

Lesser horseshoe, Natterer's, Noctule, Serotine and Soprano pipistrelle. The closest record being an unknown bat species approximately 220 m south of the site.

41 records of bat roosts were returned within 2 km of the site for species including: Brown long-eared, Common pipistrelle, Daubenton's, Lesser horseshoe, Natterer's, Pipistrelle bat species, Soprano pipistrelle and an unknown bat species. The closest records being Brown long-eared, Daubenton's and Lesser horseshoe hibernation roots approximately 1.2 km northeast of the site. Two Common Pipstrelle bats was also found roosting

**Mitigation measures to reduce the potential impacts of lighting on commuting and foraging bat species will be implemented as part of the development works. Site design must demonstrate habitat connectivity around the periphery of the site. These are detailed in section 4 of this report.**

### Great Crested Newt

There were 11 records returned in the data search for GCN within 2 km of the site. Seven of these are considered to be historic records from before 2007. The closest, recent record from 2022 is approximately 2 km northwest of the site.

GCN generally like to have a necklace of suitable waterbodies for breeding purposes within a local area. There were no ponds or waterbodies present on the site at the time of surveying. When reviewing aerial maps, there appears to be a single waterbody present within 500 m of the site, including: a pond recently created during the A465 road works, within Ifor Park, approximately 350 m northeast of the site. Other ponds maybe present within residential gardens or wooded areas but are not visible on aerial images. Connectivity between Ifor Park and the site are limited due to the housing of Marshall Crescent and Rocky Road preventing suitable GCN commuting pathways. The ponds has been recently created and is likely to be disturbed by the adjacent road works.

The site is isolated from areas of natural habitat by surrounding roads and residential housing resulting on very limited habitat connectivity. Given the lack of local records and poor habitat connectivity within the local area, GCN are considered highly unlikely to be present within the site boundary. **No further recommendations are made for this species.**

### Dormouse

There were no records of Dormouse returned within 2 km of the site boundary.

A large portion of the land within the development area is semi-improved grassland, tall ruderal grassland and hardstanding which are considered to be unsuitable for use by Dormouse as they provide no cover from predation or foraging habitat. The central area of trees is also sub optimal dormouse habitat as the understory is bare ground and grassland.

The areas of scrub around the site are suitable for dormouse use although the area is fairly limited in extent when considered in the context of the site. The Dormouse Conservation Handbook estimates that 2.2 ha of suitable habitat are required to support a pair of Dormouse. When reviewing aerial images of the site and considering habitat connectivity, there is no connectivity to suitable habitat in the wider landscape. The closest area of woodland appears to be to the north of site adjacent to Ifor Park, separated by housing and roads.

Given the lack of local records, limited habitat connectivity and the limited suitability of habitats within the site boundary it is considered highly unlikely that Dormouse are present.

**No further survey recommendations are made for Dormouse.**

### Otter

21 records of Otter were returned within 2 km of the buffer zone. The closest record for otter is for a road traffic collision approximately 1.4 km away from the site. There is little connectivity between the site and any suitable running waterbodies for otter within the wider landscape with a lot of the records being within the Taff Fechan River that runs to the west of the site, 1.8 km away at its closest.

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. The site has limited habitat connectivity as it is surrounded by roads and housing. The majority of the site is open and exposed to weather and disturbance by predators. The scrub and tree lines within the site could possibly provide cover for use by otter. However given the proximity of residential housing and roads and likely high levels of on site disturbance by members of the public its thought highly unlikely otter would use the site. **No further survey recommendations are made for otter.**

### Badger

Two records of badger were returned within 2km of the site. One being road traffic collision on the A465 approximately 1.2 km northwest of the site, the other being on the A4060 road approximately 1.2 km southeast of the site.

There is no connectivity to other suitable habitat within the wider landscape, although, badgers can commute at night time through built up areas. The north and western scrub area of the site could not be accessed due to dense vegetation. However, no evidence of mammal movement through the dense vegetation was noted when assessing the perimeter of this area and from a vantage point. The site is also likely to be frequently disturbed by members of the public passing through.

No evidence of the presence of badger, such as setts, latrine or digging, were noted within the proposed development site. As such it is considered unlikely badger are present within the site. However, they may commute or forage within the site boundary on occasion.

**Precautionary measures should be taken during the construction phase of works to ensure badger are not harmed.** Precautionary measures for badger will also benefit a range of smaller mammal species such as hedgehog.

### Birds

A variety of bird records were returned within 2 km of the site boundary with 91 different species records returned.

The majority of the site is considered to be unsuitable for nesting use by bird species. Due to the dominant, open grassland areas on site. Nesting opportunities occur in the scrub and trees within the site, although no nests were identified during the site visits. All habitats within the site boundary are likely to be used by local bird species for foraging and commuting purposes. **A precautionary approach to any removal of habitat with bird nesting potential will be required. Lighting should not spill onto suitable nesting bird habitat.**

### Reptiles and Amphibians

Five records of reptiles and 67 records of amphibians were returned in the data search within 2 km of the site for species including: Common frog, Common lizard, Common toad, Slow worm and Palmate newt. The closest records being for Slow worm approximately 430 m north of the site. All other records returned were over 700 m away from the site.

A maximum of three slow-worms were identified during one survey visit on site during the 2022 reptile refugia surveys undertaken by Ecological Services Ltd. During the reptile survey visits, many of the refugia mats were removed from site by members of the public, reducing the robustness of survey results. Given the continued presence of small numbers of slow worm within the site boundary during the 2022 refugia survey it was concluded a small population of slow worm are present. Mitigation and compensation recommendations were made for the development to protect slow worm during any future development.

Reptiles prefer a mosaic of habitats with diverse vegetation structure creating open areas and nearby cover to provide protection from predators and the elements. The habitats currently within the site boundary all work together to provide areas for reptiles to forage, commute and bask. **Precautionary measures in respect of reptiles are recommended, to include timing constraints for site clearance, and a two-stage cut of vegetation.**

### Habitat Protection

The development proposals will focus on the south western portion of the site. This will result in the permanent loss off semi improved grassland, scrub, tall ruderal vegetation and a small amount of scattered scrub and trees. Green space will be retained to the north and along the eastern boundary of the site.

The total area of land within the overall site boundary is approximately 21,959m<sup>2</sup>. To allow the engineering required to create the new development layout, a buffer of 5m around the edge of the development site is required. All land outside of the development site and 5m working buffer will be fenced off and retained as green space. This will equate to 7,937m<sup>2</sup> of habitat retained and used as a receptor site for the reptile population within the site boundary. Appendix 2 helps to indicate the area of retained habitat.

There may be some localised works within the retained habitat areas to ensure Japanese knotweed is treated, install soft landscaping and to facilitate drainage connections. However all work will be short term and undertaken following the methods in section 4 of this report.

**Precautionary measures to protect retained habitat are recommended, to include suitable buffer zones and root protection areas.**

#### **4. Impact Assessment**

The role of a EclA is to address significant effects which the project may have. For the purpose of this assessment significant impacts will be those that affect legally protected sites and species within and directly adjacent to the proposed development site.

The EclA process presents a hierarchy of approaches to ensure a project of plan lowers its potential impacts. The works should seek to

- **AVOID** - Consider options to avoid any potential harm to an ecological feature,
- **MITIGATE** - If negative effects are unavoidable, measures should be implemented to minimise and reduce potential effects,
- **COMPENSATE** - If negative effects are still likely to be experienced despite measures to reduce impacts being implemented appropriate compensatory measures should implemented.
- **ENHANCEMENT** - Works should always seek to provide net benefits for biodiversity to help meet the section 7 requirements of the Environment Act (Wales) 2016.

The scope of the proposed development works has been reviewed and streamlined to ensure only works necessary are to be undertaken. Much discussion has been undertaken within the design team and Local Planning Authority to agree a broad scope of suitable compensation for habitat and species impacts. Section 3.3 of this report details the likely effects to protected species and habitats within the development site. The species or features which could be impacted by the development works are discussed further in this section of the report.

The development proposals have the potential to negatively impact on the below features. However, mitigation and compensation measures have been considered and are included within the development to reduce the impact the development works may have. Features to consider are:

- Bats
- Nesting Birds
- Herptiles
- Mammals
- Habitat

#### 4.1 Ecological Feature – Bats

##### Potential Impacts

- Disturbance to commuting and foraging bats.

##### Measures to be implemented

- It is important to ensure minimal light spill onto the areas of retained habitat to the north and east the development footprint. These areas of the the overall site will be important for habitat connectivity across the site and into the wider area for a range of species including bats.
- All external lighting will be kept to the bare minimum required for health and safety reasons.
- Any external light source will be directional and will only illuminate a doorway or footpath as required. A directional light source can be cowled or recessed back into the casing to prevent light spill.
- All lighting must meet the recommendations in the BCT Guidance Note 08/23 Bats and Artificial Lighting at Night.
- No external light feature will be placed within 2m of any bat box provided within the new building.

#### 4.2 Ecological Feature – Nesting Birds

##### Potential Impacts

- Disturbance of nesting birds.
- Loss of bird nesting and foraging habitat.

##### Measures to be implemented

- Any tree or scrub removal within the site boundary will be completed **outside of the bird nesting season of March to August inclusive**. If this is not achievable an ecologist must inspect any trees or ground vegetation with the potential for birds to be present, for active birds' nests prior to removal works beginning. If an active nest or activity indicating a nest might be present is identified a buffer zone of at least 5m, up to 20m depending on species, around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed.

- Compensatory planting within the proposed development will include native species to provide a food source for local wildlife including bird species.

#### **4.3 Ecological Feature – Herptiles**

##### Potential Impacts

- Damage or injury to commuting/foraging reptiles and amphibians during the year.
- Loss of commuting/foraging habitat for reptiles and amphibians.
- Habitat fragmentation

##### Measures to be implemented

- All areas of retained vegetation will be fenced off during construction works using heras fencing. Signage will be attached to the fencing indicating contractor access is not permitted. Within the contractor induction information on the retained habitat areas and no access will be included.
- All areas of retained habitat will be fenced off prior to any vegetation removal work on site commencing. The fencing will be installed under the direction of the supervising ecologist. Written confirmation that the fencing has been installed in line with Appendix 3 will be provided to the client and site foreman. Only then can wider vegetation clearance works commence.
- All site contractors will be given a toolbox talk which covers the legal protection given to reptiles and amphibians, what they look like, where they may be found, and what to do if herptiles are found on site. Information on reptiles will be included within the site induction pack. They will be made aware of the buffer zone and that access into it is not allowed.
- All vegetation clearance will be supervised by a suitably experienced ecologist.

##### Vegetation Clearance – Grassland / Tall Ruderal Vegetation

- All areas of grassland and tall ruderal vegetation within the site will be cut in stages and undertaken during the months of **April - September inclusive** when herptiles are active and likely to relocate of their own accord. Whilst the presence of hibernating reptiles is considered unlikely, this timing constraint will be implemented as a precaution. Grassland cutting will start along the southern edge of the development site and progress north and eastwards towards the retained the areas of retained habitat as indicated in Appendix 3.

- Vegetation cutting will commence from the south and work north and eastwards, naturally encouraging herptiles into adjacent natural vegetation to the north of the development site.
- **First Stage Cut** - vegetation will be cut, using hand tools or an adjustable height flail, to a height of between 100-150mm. The cut material will be raked and removed from the site to avoid potential future colonisation by reptiles. The cut material must be removed the same day it is cut. Work area must be left for 24hrs once the first stage cut is completed. The supervising ecologist must confirm in writing that the first stage vegetation cut is complete.
- **Second Stage Cut** - vegetation will be cut to ground level (a maximum height of 50mm) and the arisings raked and removed from the site as above. Any reptiles or other fauna will be moved by the supervising ecologist to the retained habitat areas. The supervising ecologist must confirm in writing that the second stage vegetation cut is complete.
- Any herptiles present should naturally move away of their own accord into the retained habitats areas due to the disturbance from cutting.
- However, in the unlikely event that any reptiles or other fauna are encountered during this operation the supervising Ecologist will capture the animal. Reptiles will be carefully collected and moved to the retained habitat areas to the north or east of site.

#### Vegetation Clearance – Scrub / Trees

- **First Stage Cut** - The first stage cut of scrub / trees will be required outside of the bird nesting season. Dense scrub will be cut to a height of 0.5 m between the months of September to February inclusive. All cuttings will be collected and removed from the site to prevent future colonisation by wildlife. The supervising ecologist must confirm in writing that the first stage vegetation cut is complete.
- **Second Stage Cut** - any woody scrub roots will be grubbed up using a toothed bucket of a JCB or an appropriately sized digger. The roots will be removed under ecological supervision and any reptiles found will be captured and moved to retained habitat areas. The root systems will be removed slowly and gently to allow any reptiles present to escape. All roots will then be removed from the proposed development site. The supervising ecologist must confirm in writing that the second stage vegetation cut is complete.
- Once all suitable vegetation has been cleared from within the site boundary, the construction site footprint must remain in a vegetation free state. This will help to

reduce the likelihood of reptiles using the site while construction works are underway.

#### **4.4 Ecological Feature – Mammals**

##### **Potential Impacts**

- Loss of habitat used for foraging / commuting purposes
- Incidental entrapment in excavations

##### **Measures to be implemented**

- Ideally all excavations within the site will be securely covered over, if left unattended. Any excavations that have a depth in excess of 0.5 m and that are left open overnight will have a means of escape left for any mammals (e.g. hedgehog, otter and badger) 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.
- The minimal amount of external lighting possible will be used within the development site boundary. Lighting specification measures outlined within section 4.1 bats, above, must be followed.
- 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 7pm and 7am which requires the use of artificial lighting will be allowed.
- The site layout has been designed to retain green space along the north and eastern boundary of the site. Once development works have been completed and soft landscaping measures installed, habitat connectivity along the north and eastern edges of the site will be re-instated. The areas of soft landscaping to the north and east of the site will be managed to benefit wildlife as well to ensure cover and suitable habitat for a range of mammal species to use.

#### **4.5 Ecological Feature –Habitat**

##### **Potential Impacts**

- Loss of habitat used by a wide range of local fauna.
- Habitat fragmentation

#### Measures to be implemented

- A parcel of habitat will be fenced off and retained to the north and along the eastern boundary of the site. Appendix 2 indicates the area of habitat to be retained which is approximately 7,937m<sup>2</sup> in size.
- All Japanese knotweed treatment will be undertaken in line with specialist contractor advise. It is assumed a chemical treatment will be used. Should excavation be required, the measures in section 4.3 of this report must be implemented.
- The layout of the development has been designed to ensure habitat connectivity is integrated within the development design. Once construction works are completed and soft landscaping measures installed habitat connectivity will be restored between the garages to the north east (outside of the site boundary) and the development site, linking the retained habitat to the north and east of the site footprint.
- 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 external lighting must be motion activated and set to the lowest time to remain lit that is possible. This will avoid lights being left on over night. All lighting must meet the recommendations in the BCT Guidance Note 08/18 Bats and Artificial Lighting in the UK document <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

## **5. Enhancement Measures**

The Environment Act (Wales) 2016 places a duty on competent authorities to ensure biodiversity is not only conserved but enhanced. The proposed development works create potential features that can be improved for the benefit of biodiversity.

The below measures will be included within the development proposals to help improve the biodiversity value of the site.

### **5.1 Provision of Bird Nesting Opportunities**

**19 integrated bird boxes will be provided within the new buildings created at site.** The bird boxes will be located above eaves level and will be built into the block work of each building wall.

Bird boxes will be installed at site as below:

- 2 x Vivara Pro Build-in Woodstone House Sparrow Nest Box on the rear elevation of Plots 43-47 flats,
- 1 x Pro Rendered Build-in Swift Box on the rear elevation of Plots 43-47 flats,
- 1 x Pro Rendered Build-in Swift Box on the rear elevation of Plot 32
- 1 x Vivara Pro Build-in Woodstone House Sparrow Nest Box on the rear elevation of Plot 34
- 1 x Pro Rendered Build-in Swift Box on the side elevation of Plot 2 and 4
- 1 x Vivara Pro Build-in Woodstone House Sparrow Nest Box on the rear elevation of Plot 1 and 3,
- 1 x Vivara Pro Build-in Woodstone House Sparrow Nest Box on the rear elevation of Plot 31
- 1 x Pro Rendered Build-in Swift Box on the rear elevation of Plots 32, 33, 34, 35, 36
- 1 x Pro Rendered Build-in Swift Box on the side elevation of Plots 6 & 8
- 1 x Vivara Pro Build-in Woodstone House Sparrow Nest Box on the side elevation of Plots 5 and 7,

Photographic evidence of the correctly placed bird boxes will be sent to the Local Planning Authority.

## **5.2 Provision of Bat Roosting Opportunities**

**21 integrated bat boxes will be provided within the new buildings created at site.** The bat boxes will be located above eaves level and will be built into the block work of each building wall. The bat boxes will be fitted as high as possible within the wall and at least 2m away from any external light source.

Bat boxes will be installed as below:

- 2 x Vivara Pro Build-in Woodstone Bat Box on the rear elevation of Plots 43-47 flats,
- 1 x Vivara Pro Build-in Woodstone Bat Box on the side elevation of 6, 8, 5 and 7,
- 2 x Vivara Pro Build-in Woodstone Bat Box on the rear elevation of Plot 31,
- 2 x Vivara Pro Build-in Woodstone Bat Box on the side elevation of Plot 27, 26, 37, 23, 30, 42, 36

Photographic evidence of the correctly placed bat boxes will be sent to the Local Planning Authority.

## **5.3 Landscaping**

A soft landscaping plan has been designed by TDA Landscape Architects. The landscaping proposals can be found on drawing TDA.3019.01(D) Outline Soft Landscape Proposals. Given the growing conditions and space within the urban developed areas of the soft a range of ornamental planting is proposed. To the north and east of the development footprint the natural habitat will be retained and managed to benefit wildlife.

Directly adjacent to the development footprint banks will be created as part of the engineering works on site. At the top of the bank native species hedgerow will be created. The remainder of the bank will be seeded with Emorsgate EH1 - Hedgerow Mix. A dust surface footpath will be installed along the eastern edge of the development to provide access north and south for the public. Along the route of the footpath scattered native species trees will be planted to create a parkland feel along the route. The remaining habitat will be managed as grassland.

### **Hedgerow**

Native hedgerow habitat must be managed to benefit wildlife once the planting has established. For at least the first 3 years once the planting is installed, the hedgerow will need watering, weeding any the replacement of any failed planting to ensures a continuous vegetated hedgerow is created. Once established, hedgerow habitat will be cut once every 2 years between the months of November and February inclusive. The aim will be to establish a dense 'A' shaped structure 1.5-2m in height.

### Grassland

All areas of sown Emorsgate EH1 - Hedgerow Mix will be cut in August and October in the first year after sowing. All cuttings must be collected and removed from site. Once the seed mix has established the area will be cut twice per year during March and October. All cuttings must be collected and removed from site.

The retained areas of habitat will be managed as grassland with a scrub buffer zone around the periphery of the site. A scrub buffer zone of 2m in width will be created around the northern and eastern edge of the habitat areas. The scrub buffer zone will be cut to a height of 50cm once every 3 years between the months of September and February.

The remaining habitat will be managed as wildflower grassland and cut once per year. The grassland will be cut once in July with all cuttings being collected and removed from site.

The varied management of grassland habitat and creation of a scrub buffer zone around the edge of grassland areas will help to create a mosaic of habitats with longer and shorter vegetation to benefit a wide range of wildlife. By varying the cutting periods there will always be some areas of longer vegetation retained on site to provide cover for small animals.

### **5.4 Reptile Hibernacula**

Two reptile hibernacula will be created as part of the development proposals. The approximate location of each hibernacula is shown on drawing TDA.3019.01(D) Outline Soft Landscape Proposals by TDA, however the exact location will be agreed with the supervising ecologist. Each hibernacula must at least measure 0.5 m in depth, 2 m wide and 2 m long each. It will be made by creating layers of wood, brash, rubble and soil. The hibernacula will create a mound approximately 0.3 m above ground level which will be covered over with soil and seeded using a native seed mix. An illustration of the suggested structure of a reptile hibernacula is provided in Appendix 4.

### **Reference List**

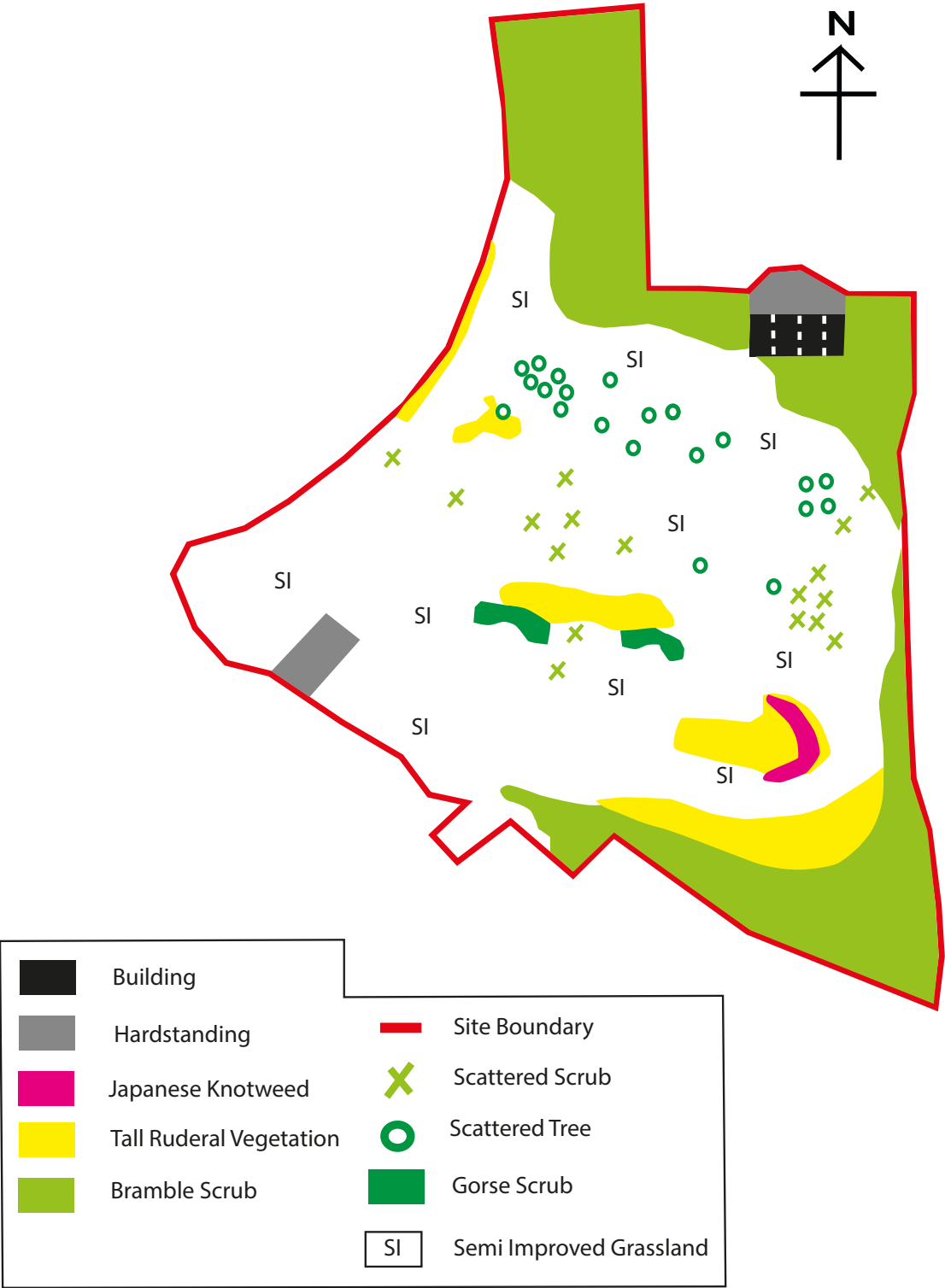
- *'Preliminary Ecological Assessment: Haydn Terrace, Merthyr Tydfil'* dated June 2024 by Ecological Services Ltd

**Appendix 1 – Habitat Map (2024)**

HAYDN TERRACE, MERTHYR TYDFIL

Habitat Map

2024



## **Appendix 2 – Areas of Retained Habitat**

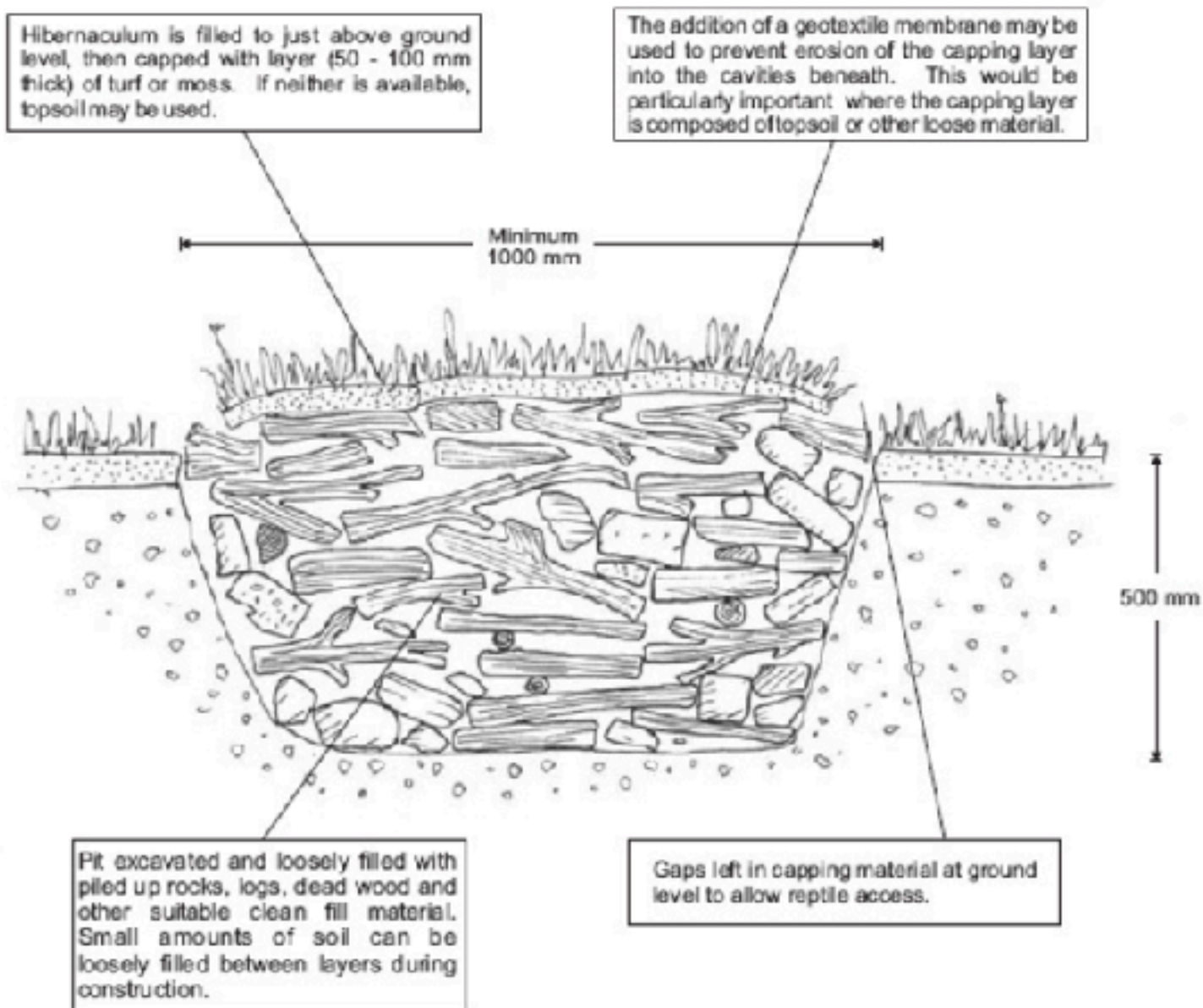


Area of retained habitat (includes 5m offset beyond 'development': 7,666m<sup>2</sup>)

### Appendix 3– Fencing Locations & Directional Cutting



## **Appendix 4 - 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***