

Reptile Survey Report



Project: Land of Hirwaun Road, Pen Y Waun

Instructed by: Newydd Housing Association

Reported by: Ecological Services Ltd
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1. Introduction

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.

The Preliminary Ecological Assessment site visit was completed in March 2024 by Ecological Services Ltd. The visit highlighted that the site had potential for use by common reptile species based on the habitat observed within and adjacent to the site. A refugia survey of the development site was recommended to establish the presence or likely absence of reptiles from within the site boundary.

1.1 Site Description

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. Grassland and scrub habitat 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. 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 tarmac 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.

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 and has a mosaic habitat structure. An area of **bare ground** is present and grades into **ephemeral short perennial grassland** patches and

tussocky **semi improved grassland** around the majority of the site. An area of **gorse scrub** and three rubble **piles** made up of stone, rubbish and earth are located in the north of the site. **Bramble scrub** is present along the south fence and **dense bramble scrub** is present along the western area of the site as the bank slopes down to residential garden fences. The site slopes down to a lower area in the south west corner which is dominated by a large rectangular section of **hardstanding** with **scattered woody scrub** around the periphery.

1.2 Previous Survey Work

A summary of the previous survey work undertaken on site is below. For full details of methodology and findings please refer to the survey reports.

Wildwood Ecology Preliminary Ecological Appraisal (October 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.

Ecological Services Ltd - Preliminary Ecological Appraisal (May 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.

A precautionary approach to vegetation and scrub clearance was recommended. The site was noted as being suitable for reptiles and refugia surveys were recommended.

Ecological Services Ltd - Reptile Refugia Surveys 2022

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 in suitable weather conditions. No reptiles were found during the site visits.

Ecological Services Ltd - Preliminary Ecological Appraisal (March 2024)

The site was considered suitable for reptiles with the site being in similar condition to the previous Ecological Services Ltd PEA survey visit in 2022. Bare ground, ephemeral short perennial grassland and semi improved grassland were present across much of the site with gorse and scattered woody scrub also on site. The data search returned no records of reptiles within 500 m of the site boundary. The closest records were for Common lizard (*Zootoca vivipara*) approximately 870 m north, Common toad (*Bufo bufo*) approximately 870 m north and for Common frog (*Rana temporaria*) approximately 1 km south.

1.2 Survey Constraints

Access was gained across all areas of the proposed development site. The reptile survey was carried out between late April and mid May which is within the optimum time frame for such surveys. The weather during April has been particularly wet and cold. Each survey visit was completed during suitable weather temperatures of above 10°C and favourable weather conditions when it was expected that reptiles would be present. Although the weather conditions were suitable, the survey period between 2nd April 2024 and Wednesday 1st May 2024 consisted of rain and cooler temperatures that, only on occasion, reached above 10°C.

One reptile refugia mat (refugia 8) was not present during reptile refugia check visit 6. This had been presumably moved by previous strong winds. This was replaced in its original location during visit 6 but could not be checked during this visit for any reptiles. This is not deemed as a significant limitation as all other mats were able to be checked on all visits during the optimal survey season and weather conditions.

1.3 Surveyor Experience

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).

All survey work is undertaken following guidelines in the Froglife Advice Sheet 10.

2. Reptile Survey

2.1 Legislation

Reptiles such as 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.

2.2 Survey Methodology

A standard approach to presence/absence reptile 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. 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.

Suitable weather conditions for reptile surveys are dry and cloudy or just after a period of rain. The weather conditions during these times must be between 9°C and 19°C which is optimal for reptiles to use refugia as reptiles bask to gather heat from the sun and surrounding habitat or direct sun. Once animals are sufficiently warm they become very active and more difficult to observe during reptile surveys. Reptile surveys should ideally be completed in the early morning or late afternoon in Spring or Autumn.

30 reptile mats were laid out across the proposed development site on the 19th March 2024. The refugia were placed across the site in areas thought suitable for use by reptiles such as the edge of different habitat types. The approximate location of the reptile mats can be found in Appendix 1.

The mats were allowed to bed in for a minimum of 10 days. Seven survey visits were completed at site during suitable times of day when it is expected that reptiles would be present and also in favourable weather conditions. The survey started on the 2nd April 2024 and were completed on Wednesday 1st May 2024.

2.3 Survey Results

Full details of each survey visit and results are provided in table 1 below. **No reptiles were detected on site.** One Common toad was identified at Mat refugia location 6 (See appendix 1 for refugia locations, see appendix 2, photograph 6).

Table 1. Reptile Survey Results

			time of check		weather conditions					
survey number	date	results	start	end	wind (mph)	rain	humidity	cloud cover	temp	comment
deployment	19.03.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
check 1	02.04.24	none	9:40	10:10	15	none	86%	80%	10°C	previous day rain. dry overcast
check 2	04.04.24	none	12:30	13:00	10	none	90%	50%	11°C	rain during the night. sunny
check 3	08.04.24	none	14:00	14:30	20	none	98%	80%	10°C	rain during night and forecast for rest of day. breezy.
check 4	12.04.24	none	13.15	13.45	17	none	85%	30%	12°C	rain night before but warm and sunny during visit
check 5	16.04.24	none	13:00	13:30	34	none	65%	30%	10°C	bright sunny day with cool, strong breeze
check 6	24.04.24	1x adult common toad (mat 6), mat 8 was blown by wind so check 6 not completed for this mat. Mat replaced after visit.	14:30	15:00	5	none	60%	60%	11°C	bright and sunny but with cool breeze
check 7	01.05.24	None, mat 7 was not present so check 7 not completed for this mat.	13:45	14:15	5	none	96%	90%	10°C	Cloudy. Recent rain.

3. Recommendations and Mitigation Measures

No evidence of reptile presence was found during the reptile survey work. No evidence of the presence of reptiles was found during the reptile survey work completed in 2022 either.

The habitats within the site are still considered to be suitable for use by common reptile species. The tussocky grassland, bare ground, rubble piles and scrub areas create a suitable mosaic habitat. The site has good habitat connectivity to the wider landscape and surrounding suitable habitat. It is possible that reptiles are present in low numbers and some precautionary measures are recommended to ensure reptiles are not harmed during work. The below recommendations with respect to reptiles are made:

The hibernation season runs from **November to February inclusive** but depends on temperatures at the time of year. **No ground disturbance works will take place during the core reptile hibernation period** of November to February.

Vegetation clearance of the scrub and grassland habitats on site must be undertaken in two stages as below and during the summer months of April to September inclusive to ensure reptiles are active. The first stage cut of vegetation with nesting bird potential may need to be undertaken between the months of October to February inclusive with the second stage cut being delayed depending on weather conditions at the time.

- **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 24hrs.
- **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 into adjacent habitats beyond the site boundary. All cuttings must be collected and removed from site.

The below enhancement features will be incorporated into the development to enhance the development site for reptiles and other wildlife post construction completion.

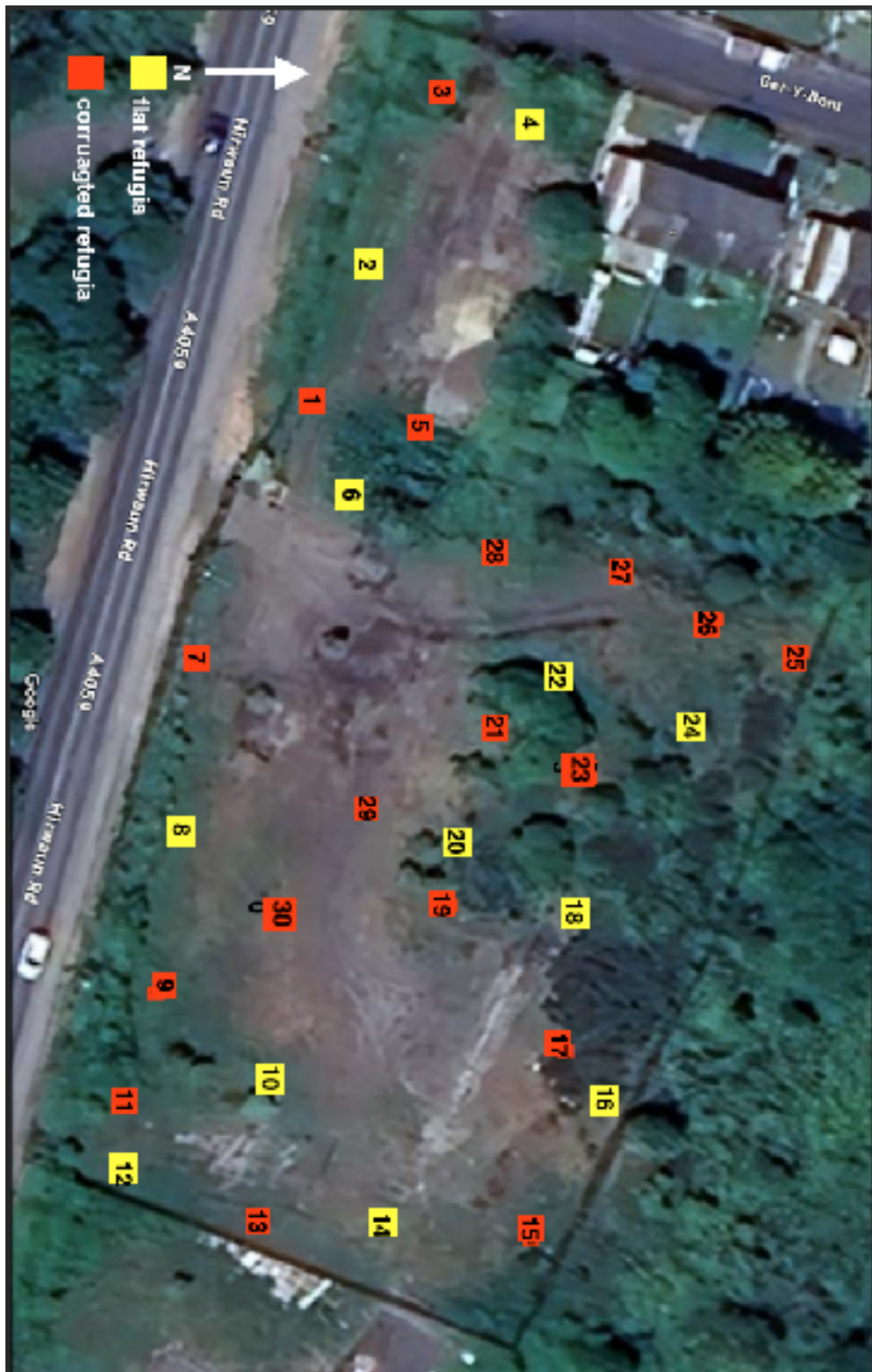
- The use of native species within the soft landscaping works on the site. Suitable long term management of soft landscaping also helps ensure spaces are useful to wildlife. Hedgerow and tree planting help to create habitat for wildlife and an attractive space for people.

- All fencing around the site will be hedgehog friendly in design, this in turn will enable any reptile and amphibian species to move across the site. 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. An indicative design can be found in Appendix 3.

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
- Ecological Services Ltd (14/03/2024) '*Site Assessment Survey; Proposed Housing Development; Hirwaun Road, Penywaun, Aberdare, Rhondda Cynon Taf*' V1

Appendix 1 – Approximate Refugia Locations



Appendix 2 - Site Photographs



Photograph 1: Central view of site looking east. Scattered woody scrub and tussocky semi-improved grassland areas.



Photograph 2: view of site looking northwest. Scattered woody scrub and rubble piles present.



Photograph 3: view looking west. Gorse and woody scrub along the northern area of the site.



Photograph 4: Central view of site looking northeast. Scattered woody scrub and ephemeral short perennial grassland with patches of bare ground.

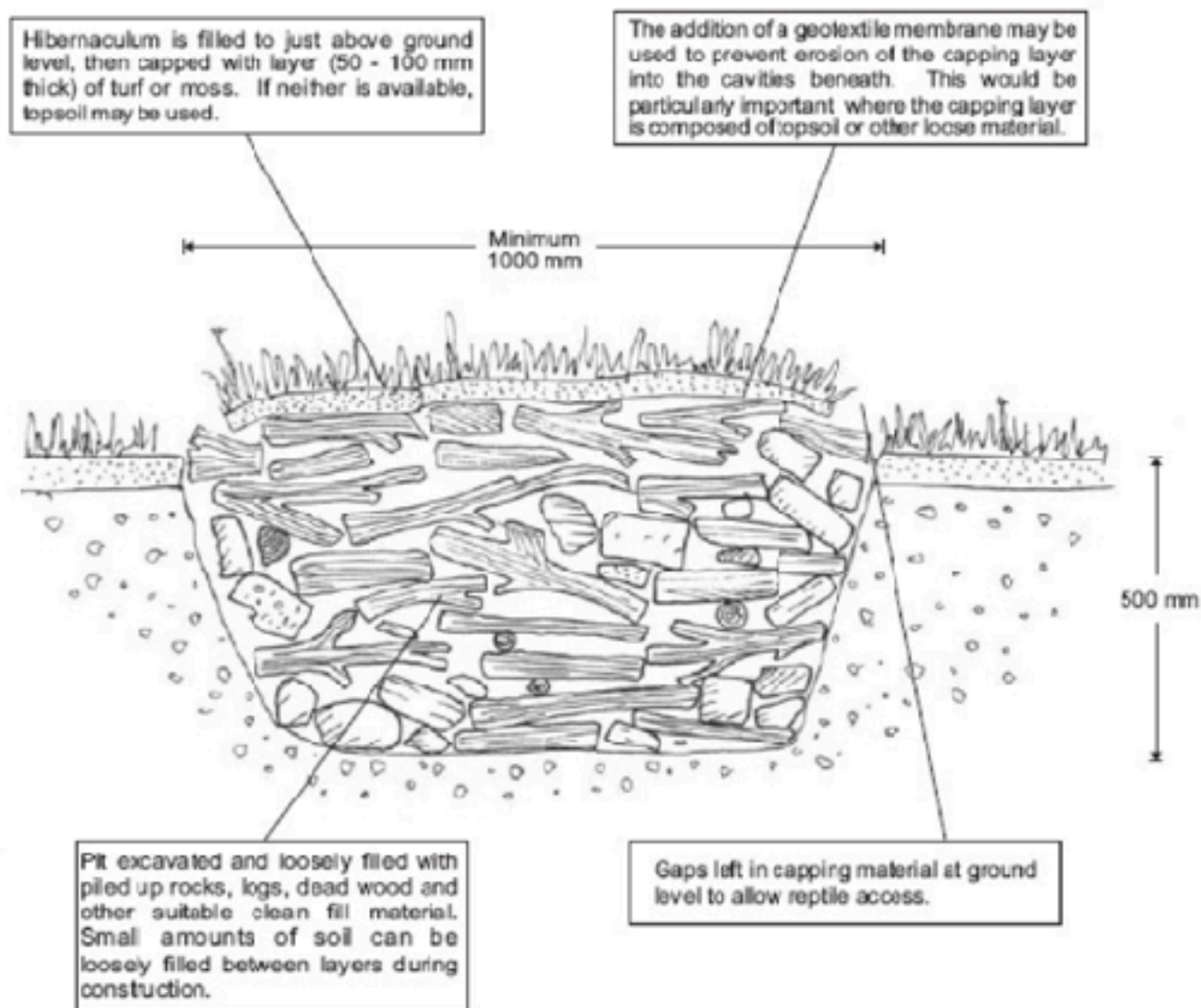


Photograph 5: lower, western area of site with bare ground and scrub around periphery.



Photograph 6: Common Toad found under refugia mat 6 on check visit 6 (24.04.24).

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*