

UPDATE PRELIMINARY ECOLOGICAL APPRAISAL & REPTILE SURVEY REPORT

Land at Victoria Street

Pontycymer
Bridgend
CF32 8NW

ON BEHALF OF:

Amity Planning Consultants



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1 Executive Summary

- 1.1 Amity Planning Consultants are exploring the feasibility of developing a brownfield site within Pontycymer village. To inform this development Just Mammals Limited were commissioned to conduct a Preliminary Ecological Appraisal (PEA) of the site in January 2021, followed by further surveys for reptiles between March and April 2021. Following the expiry of the original PEA, an update assessment was conducted in August 2024, in addition to a refresher reptile survey between September and October 2024. The site covers an area of approximately 0.75ha, and comprises dense scrub, interspersed with areas of exposed rubble, hardstanding and small areas of grassland and woodland.
- 1.2 Treatment must be undertaken to eradicate the invasive species present on site, in order to prevent their wider dispersal. Control methods for the eradication of invasive rhododendron, cotoneaster, Himalayan balsam and montbretia are included within this report.
- 1.3 To safeguard the Afon Garw from pollution during construction a Construction Ecological Management Plan (CEMP) must be put together, and the works carried out under its provision. Such a plan must set out appropriate precautionary measures for ensuring pollution does not impact this river system.
- 1.4 As habitat on site has been assessed as suitable for nesting birds, vegetation clearance must be scheduled to be undertaken outside of the bird nesting season where possible, which runs from March to August. If any vegetation requires removal within the bird nesting season, these must first be checked by a suitably qualified ecologist. If during any vegetation removal an active nest is discovered, all works within a minimum 2m radius of the nest must be immediately stopped, and not recommenced until all chicks have fledged.
- 1.5 Mature trees are present across the site. If development requires the removal of any trees this will need to be preceded by a ground level tree assessment for bats, utilising an endoscope and ladder as required, and undertaken by an appropriately qualified ecologist. Further survey utilising a ladder and endoscope will also be required along the retaining wall, if this structure is likely to be impacted by the development, for example through light pollution, or if the structure is to be physically altered or destroyed. Ground level assessments can be undertaken at any time of year, but are recommended to be carried out during the winter months when vegetation is less likely to obscure potential roost features.
- 1.6 A robust reptile survey effort was carried out, and across the survey one hundred and twenty two slow-worm observations were recorded, in addition to ten common lizards and five grass snakes. The regularity with which reptiles were found on site suggests a small population of common lizards and grass snakes, in addition to a good population of slow worms. The legal protection afforded to reptiles means that every effort must be made to ensure that they are not harmed during the development and their populations on site maintained. Consequently, an area of the site must be retained to provide suitable reptile habitat, with a proposed area to be retained noted in Figure 4 (see Appendix I). Prior to any development works occurring, a relocation effort must be carried out where reptiles will be captured and moved from other parts of the site and into the area of the retained suitable habitat. An Ecological Method Statement (EMS) must be provided, which will set out the various processes including a timetable for works.
- 1.7 In order to comply with current Planning Policy Wales (PPW) 12, it will be necessary to provide enhancements for biodiversity. Proposals for measures to promote wildlife and nature conservation, geared specifically towards reptiles, amphibians and pollinating invertebrates, are contained in this report.

2 Introduction

- 2.1 Amity Planning Consultants are exploring the feasibility of developing a brownfield site near the centre of Pontycymer village, in the Garw Valley of Bridgend County Borough. Proposals to date have included the construction of either holiday lodges or dwellings on the site. To inform this development Just Mammals Limited were commissioned to conduct a Preliminary Ecological Appraisal (PEA) of the site in January 2021. This was followed by further dedicated survey for reptiles, which was undertaken between March and April 2021. Following the expiry of the original PEA, an update assessment was conducted in August 2024, in addition to a refresher reptile survey between September and October 2024. This report sets out the findings of this survey and makes appropriate recommendations.

- 2.2 Located at the site of a former coal mine, the site covers an area of approximately 0.75ha, and is centred on National Grid Reference (NGR) SS 90300 91743, at an altitude of approximately 161m Above Ordnance Datum (AOD). The majority of the site comprises dense scrub, interspersed with areas of exposed rubble, hardstanding and small areas of grassland and woodland.
- 2.3 This report makes recommendations concerning the ecological value of the site, as well as the need for further survey work as appropriate, in addition to detailing the findings of the reptile survey. The different types of habitat were assessed, and the potential presence of protected species, such as badger (*Meles meles*), otter (*Lutra lutra*), dormouse (*Muscardinus avellanarius*), and amphibians, as well as bats and nesting birds were considered.

3 Survey Team Experience

- 3.1 Lead surveyor and author of this report is Daniel White. Following qualification with distinction from the University of South Wales with an MSc in Wildlife and Conservation Management in 2021, Daniel joined Just Mammals Limited and is currently employed as an ecologist. As an enthusiastic herpetologist, Daniel has experience surveying for all widespread amphibian and reptile species in Britain, in addition to protected great crested newts and sand lizards. Beyond herpetofauna, Daniel has several field seasons experience surveying for bats and badgers, in addition to undertaking various botanical surveys.
- 3.2 Contributing to the survey effort was Grace Dooley. Grace holds an MSc in Conservation and Ecology and has over ten years' practical experience with ecological surveys and impact assessments for bats, great crested newts, badgers, birds, reptiles and botanical communities for projects ranging in size from small-scale householder development projects to large, multi-faceted Developments of National Significance (DNS). Grace holds survey licences for bats and great crested newts in Wales and England. She is a Principal Ecologist with Just Mammals Limited and is an Associate Member of the Chartered Institute of Ecology and Environmental Management (ACIEEM).

4 Survey Methodology

PEA

- 4.1 A refresher Preliminary Ecological Appraisal (PEA) was conducted on Monday 19th August 2024. Details of the survey activities and weather conditions are provided in Table 1.
- 4.2 Prior to the site visit, a desktop study was undertaken, which involved a standard search area of a 1km radius from the site (using a central grid reference), using the MAGIC website. Details of statutory sites designated for nature conservation were obtained. A record search was also commissioned from the local biological records centre, the South East Wales Biodiversity Records Centre (SEWBRc).
- 4.3 The assessment comprised a survey employing the Phase 1 habitat survey methodology. This is a standardised technique for classifying and mapping British habitats. All areas within the site were inspected and assessed for indicators of ecological value, including the presence and/or field signs of any protected or rare habitats and species. The site was walked over, recording all plant species and features onto a custom-made recording sheet. Habitats and notes were drawn onto a map of the survey site and photographs were taken. A coloured Phase 1 habitat map was produced (see Figure 2).
- 4.4 Assessment for the presence or potential absence of other protected species, including hazel dormouse, badger, reptiles and amphibians, was undertaken by considering the features of the site. Such features include grassland and dense vegetation. The potential suitability of the site for nesting birds was also considered.

Reptile survey

- 4.5 In order to ascertain reptile presence, or likely absence, fifteen artificial cover objects (ACO's), were set out on site on the 19th of August 2024. ACO's comprised corrugated metal sheeting (also known as tins) and corrugated onduline sheets, which were distributed around the site in areas of suitable habitat, complying with national guidelines (Froglife Advice Sheet 10). ACO's varied in size between 0.5m x 0.75m – 1.0m x 0.75m. All ACO's were numbered, and all were mapped on a site plan (see Figure 3).

- 4.6 After placement, ACO's were left in-situ for 14 days without disturbance, in order to give reptiles the opportunity to find them. Following this bedding-in period, seven monitoring visits were undertaken throughout September and October 2024. These were, where possible, undertaken between 8:30 hours and 11:00 hours, and between 16:00 hours and 18:30 hours, as well as at temperatures between 9°C and 18°C. Where the two parameters could not be achieved at the same time, preference was given to survey being undertaken at the right temperatures.
- 4.7 During each survey visit, each ACO was carefully lifted to check specifically for the presence of reptiles. A scan of the site in general was also undertaken where the surveyor would walk quietly around the site, visually searching for reptiles in suitable basking places. Natural refugia and discarded debris were all searched where possible. Photographs and notes were taken of any reptiles found. Any other animals found under the ACO's was also noted in a field notebook.

5 Site Description

- 5.1 The site is located adjacent to Victoria Street, near the centre of Pontycymer, in the Garw Valley. The site is a disused brownfield site, but was formerly occupied by a number of buildings associated with the workings of the Ffaldau Colliery. Most of its 0.75ha area comprises dense scrub, with discrete areas of bare rubble and grassland. The site is fringed by woodland along the majority of its boundary, with small areas of woodland developing along the northern and eastern site boundaries. The eastern boundary of the site is defined by a large retaining stone wall beneath Victoria Street
- 5.2 The sites southern and western boundaries consist of steeply sloping embankments, which separate the site from an area of grassland, formerly part of the main colliery workings; which in turn has been the subject of a land reclamation scheme. Blaengarw rugby club and Cwm Garw doctor's surgery are located immediately to the north of the site, with the residential area of Pontycymer village located immediately east. The Afon Garw/ Garw River is located less than 40m from the sites western boundary, beyond which can be found extensive areas of grassland, woodland and plantation forestry.

6 Survey Constraints

- 6.1 Much of the central region of the site is covered by dense, impenetrable scrub, preventing access to surveyors and potentially obscuring evidence of the presence of protected species, notably badger setts, otter holts or the discarded nut cases of hazel dormice. Despite this, the classification of habitats in accessible areas of the site can be extended over these inaccessible areas through the aid of satellite imagery. Additionally, the likely presence of protected species can be gleaned through survey within the accessible areas of the site, meaning a thorough assessment of presence or potential presence can be undertaken without access to the entire site. No other constraints were encountered during the assessment.

7 Desktop Study

- 7.1 Sites of nature conservation interest within a 2km radius of the site were identified using the web-based MAGIC database (www.MAGIC.gov.uk). These included sites with statutory designations of international importance (Special Areas of Conservation: SACs, Special Protected Areas: SPAs and Ramsar sites) and sites of national importance (Sites of Special Scientific Interest: SSSIs and National Nature Reserves: NNRs). No part of the site is within a statutory designated site of conservation value, and there are no protected sites within the 2km radius.
- 7.2 Excluding statutory protected sites, sites of ecological importance within 1km include Ffroch Wen Mosaic Wildlife Site/ SINC. This site is located approximately 450 south east, and has been designated due to its mix of grasslands, semi-natural woodlands, wet and dry dwarf shrub heath, modified bogs, and acid neutral flush. Three areas of ancient semi-natural woodland, three areas of plantation on ancient woodland, one area of ancient woodland of unknown category and three NRW priority woodland areas can be found within 1km, the majority being located across the Afon Garw, south-west of the survey site. The site also lies within a National B-Line, designated for the protection of British pollinators.
- 7.3 A record search was commissioned from SEWBRReC, unique reference code (0245-437), to ascertain whether protected species have been recorded at or close to the site. The search revealed one species record for the site itself, with a swift (*Apus apus*) recorded along the western site boundary. Previous surveys undertaken by Just Mammals on site revealed the presence of a low population of

slow worms (*Anguis fragilis*), in addition to invasive non-native Rhododendron (*ponticum*) in addition to numerous common and widespread native plant species.

7.4 The data set revealed a total of 482 species records within 1km of the survey site, including 223 priority species, 137 species of conservation concern, 89 locally important species and 33 invasive non-native species. These are briefly summarised below:

- Mammals accounted for 18 records, including west European hedgehog (*Erinaceus europaeus*), badger, invasive non-native grey squirrel (*Sciurus carolinensis*) and European Protected Species such as otter, noctule (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared bat (*Plecotus auritus*). The closest record of a protected mammal is of an unidentified species of bat roosting within the loft of a property approximately 250m south-west of the site;
- Birds accounted for 332 species records, including schedule 1 species such as brambling, snow bunting (*Plectrophenax nivalis*), crossbill (*Loxia curvirostra*), fire crest (*Regulus ignicapilla*), goshawk (*Accipiter gentilis*), hen harrier (*Circus cyaneus*), red kite (*Milvus milvus*), merlin (*Falco columbarius*), osprey (*Pandion haliaetus*), barn owl (*Tyto alba*), peregrine (*Falco peregrinus*) and redwing (*Turdus iliacus*). The closest record of a protected bird is of a red kite less than 200m south of the survey site;
- Amphibians accounted for 9 records, including most widespread species of amphibian in Britain, common toad (*Bufo bufo*), common frog (*Rana temporaria*), palmate newt (*Lissotriton helveticus*) and smooth newt (*Lissotriton vulgaris*). The closest record of an amphibian is of a common frog, over 250m south-west of the site;
- Reptiles accounted for 30 records, including common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*) and grass snake (*Natrix helvetica*). The closest record is of a slow worm, immediately west of the survey site;
- Invertebrates accounted for 59 species records, including priority 1 species such as the cinnabar moth (*Tyria jacobaeae*), small heath (*Coenonympha pamphilus*), small square spot (*Diarsia rubi*), buff ermine (*Spilosoma lutea*), dusky brocade (*Apamea remissa*), blood-vein (*Timandra comae*), dark-barred twin-spot carpet (*Xanthorhoe ferrugata*), powdered quaker (*Orthosia gracilis*), dot moth (*Melanchra persicariae*), and shoulder-striped wainscot (*Leucania comma*), amongst others. The closest record of a protected invertebrate is of cinnabar moth immediately west of the survey site.
- Vascular plants accounted for 34 species records, including priority species such as native bluebell (*Hyacinthoides non-scripta*) and non-native invasive species such as Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed (*Fallopia japonica*), Rhododendron (*ponticum*) and cotoneaster. The closest record of a notable plant species is of invasive non-native Canadian pondweed (*Elodea canadensis*) less than 50m north of the survey site.

8 Survey Results

PEA

8.1 Details of the conditions under which survey was conducted are given in Table 1. Wind speeds given employ the Beaufort scale.

Table 1: Summary of Survey Activity and Weather Conditions

| Survey Type and Location | Dates | Timing | Weather Conditions |
|--|-------------------------------------|--|---|
| Day time visual inspection, botanical survey and habitat assessment, including protected species assessment AR | 08/01/2021 | 10.00 – 12.00 hours Greenwich Mean Time (GMT) | Air temperature: 2°C Cloud cover: 7/8 oktas Wind speed: F2, light breeze Conditions: Dry |
| Update day time visual inspection, botanical survey and habitat assessment, including protected species assessment DW | 19/08/2024 | 12.30 – 15.15 hours British Summer Time (BST) | Air temperature: 15°C Cloud cover: 8/8 oktas Wind speed: F1, light air Conditions: Dry |
| Surveyors | Daniel White (DW), Andrew Ross (AR) | | |

8.2 The site was divided into seven different types of habitat for recording purposes. Table 2 below provides details of the various habitats and the species within each of them.

Table 2: Summary of Phase 1 Habitat Notes

| Habitat | Phase 1 Classification | Description of Area and Typical Species |
|---------|---|---|
| Type 1 | A1.1.1 Broadleaf woodland, semi-natural | <p>Strips of this habitat are present along the north-eastern and south-eastern site boundary. Mature trees appeared concentrated in the northern section of this habitat, with other areas consisting of immature, secondary woodland.</p> <p>Present species include Sessile oak (<i>Quercus petraea</i>), ash (<i>Fraxinus excelsior</i>), common lime (<i>Tilia x europaea</i>), goat willow (<i>Salix caprea</i>), holly (<i>Ilex aquifolium</i>), silver birch (<i>Betula pendula</i>), rowan (<i>Sorbus aucuparia</i>), ornamental cherry (<i>Prunus serrulata</i>), sycamore (<i>Acer pseudoplatanus</i>), hawthorn (<i>Crataegus monogyna</i>), lilac (<i>Syringa vulgaris</i>), dogwood (<i>Cornus sanguinea</i>), bramble (<i>Rubus fruticosus</i>), hemp-agrimony (<i>Eupatorium cannabinum</i>), fireweed (<i>Chamaenerion angustifolium</i>), wild strawberry (<i>Fragaria vesca</i>), tutsan (<i>Hypericum androsaemum</i>) and polypody (<i>Polypodium vulgare</i>).</p> <p>Note: Invasive non-native rhododendron (<i>ponticum</i>), cherry laurel (<i>Prunus laurocerasus</i>), montbretia (<i>Crocsmia x crocosmiflora</i>), butterfly bush (<i>Buddleia davidii</i>) and cotoneaster have been recorded in this habitat</p> |
| Type 2 | A2.1 Scrub dense/continuous | <p>This is the largest habitat, occurring over much of the centre of the site.</p> <p>Present species include pine (<i>Pinus sp.</i>), grey willow (<i>Salix cinerea</i>), goat willow, bramble, dogwood, guelder rose (<i>Viburnum opulus</i>), dog rose (<i>Rosa canina</i>), hemp-agrimony, ash, wild cherry (<i>Prunus avium</i>), silver birch, creeping thistle (<i>Cirsium arvense</i>), rowan, greater willow-herb (<i>Epilobium hirsutum</i>), nettle (<i>Urtica dioica</i>), bracken (<i>Pteridium aquilinum</i>) and blackthorn (<i>Prunus spinosa</i>).</p> <p>Note: Invasive non-native rhododendron, butterfly bush and Himalayan balsam (<i>Impatiens glandulifera</i>) have been recorded in this habitat</p> |
| Type 3 | B2.2 Neutral grassland, semi-improved | <p>Two small patches of this habitat occur in the northern area of the site, in addition to a large strip running on a north to south axis along most of the sites length, and a small area toward the southern site boundary.</p> <p>Present species include false oat grass (<i>Arrhenatherum elatius</i>), Yorkshire fog (<i>Holcus lanatus</i>), false brome (<i>Brachypodium sylvaticum</i>), black medic (<i>Medicago lupulina</i>), willowherb (<i>Epilobium sp.</i>), creeping cinquefoil (<i>Potentilla reptans</i>), oxeye daisy (<i>Leucanthemum vulgare</i>), bramble, herb-robert, common ragwort (<i>Jacobaea vulgaris</i>), hemp-agrimony, dogwood, columbine (<i>Aquilegia vulgaris</i>), brassica, teasel (<i>Dipsacus fullonum</i>), tufted vetch (<i>Vicia cracca</i>), meadow vetchling (<i>Lathyrus pratensis</i>), hogweed (<i>Heracleum sphondylium</i>), ribwort plantain (<i>Plantago lanceolata</i>), red clover (<i>Trifolium pratense</i>), eyebright (<i>Euphrasia sp.</i>), silver weed (<i>Potentilla anserina</i>), self-heal (<i>Prunella vulgaris</i>), fleabane (<i>Pulicaria dysenterica</i>), cocks foot (<i>Dactylis glomerata</i>), common gorse (<i>Ulex europaeus</i>), St John's wort (<i>Hypericum perforatum</i>), mugwort (<i>Artemisia vulgaris</i>), timothy (<i>Phleum pratense</i>) and birds-foot-trefoil (<i>Lotus corniculatus</i>)</p> <p>Note: Invasive non-native Himalayan balsam and cotoneaster have been recorded in this habitat</p> |
| Type 4 | J2.4 Fence | A fence is present along the northern, western and southern site boundary |
| Type 5 | J2.5 Wall | A retaining wall is present along the eastern site boundary |
| Type 6 | J4 Bare ground - rubble | <p>Sizable areas of rubble are present in the centre and northern areas of the site, with smaller areas that have been engulfed within the dense scrub habitat.</p> <p>Present species include harts tongue fern (<i>Asplenium scolopendrium</i>), bramble, wild strawberry, grey willow, ash, sessile oak, herb-robert, mullein (<i>Verbascum thapsus</i>), maidenhair spleenwort (<i>Asplenium trichomanes</i>), and evening primrose (<i>Oenothera biennis</i>).</p> <p>Note: Invasive non-native butterfly bush has been recorded in this habitat</p> |
| Type 7 | J5 Other habitat - hardstanding | A large area of hardstanding is present along the northern site boundary, |

- 8.3 A coloured Phase 1 habitat map was produced (see Figure 2, Appendix I). The update survey carried out in 2024 revealed the site is largely the same as surveys noted during 2021, with dense scrub dominating over much of the site. Notable changes include the succession of scrub to woodland along some of the eastern site boundary, and the encroachment of scrub into areas of rubble and grassland. Invasive non-native rhododendron, cherry laurel and butterfly bush, which have previously

- been recorded on site, remains present, in addition to Himalayan balsam, cotoneaster and montbretia, which appear to be more recent additions to the sites flora.
- 8.4 Mature trees and scrub on site provide suitable habitat for nesting birds, although no nests were observed during the survey. Recommendations regarding nesting birds are included within this report.
- 8.5 Ecological assessment included identification of the potential for protected and priority species to be present on site. Mature trees were recorded as present on site, which are large enough to contain potential roost features (PRF's) for bats. The retaining wall was also noted to contain numerous holes, that may also provide resting places for bats. Recommendations regarding roosting bats are included within this report.
- 8.6 Rabbit (*Oryctolagus cuniculus*) droppings were noted as occurring across the site, evidencing the presence of this species. Additionally, two fox (*Vulpes vulpes*) scats were noted. No evidence was found to confirm the presence of protected terrestrial mammals on site, with no field signs including setts, nest, holts, worn tracks, spraints, latrines/dung pits, hair or nut cases recorded, which may have indicated that species such as badgers, otters, or dormice were utilising the site. However, many protected mammals are secretive and mobile, meaning a lack of direct evidence of their presence on site does not necessarily signify absence.
- 8.7 No great crested newts (*Triturus cristatus*) were found during the preliminary assessment. Habitat on site appears suitable for great crested newts during their terrestrial phase, however no standing water was observed on site or within the sites immediate vicinity for breeding.
- 8.8 No priority invertebrate species were recorded during the assessment, however an elephant hawk moth caterpillar (*Deilephila elpenor*) was recorded on site during the reptile survey. A diverse variety of flowering plants was present on site that could be utilised by pollinating invertebrates.

Reptile survey

- 8.9 During the survey several slow-worms, common lizards and grass snakes were encountered. No other reptile species were seen on site. Details of the conditions under which the surveys were conducted are given in Table 3 below.

Table 3: Summary of Reptile Survey Activity and Weather Conditions

| Date | Survey Type | Timing | Weather Conditions |
|------------------|---|---|---|
| 19/08/2024 | Installation of reptile ACO's (DW) | 12.30 – 13.30 hours British Summer Time (BST) | Air temperature: 15°C Cloud cover: 8/8 oktas Wind speed: F1, light air Conditions: Rain |
| 04/09/2024 | Monitoring of reptile ACO's (DW) | 16:20 - 17:05 hours BST | Air temperature: 16°C Cloud cover: 7/8 oktas Wind speed: F3, gentle breeze Conditions: Dry |
| 09/09/2024 | Monitoring of reptile ACO's (DW) | 09:30 – 10:15 hours BST | Air temperature: 13°C Cloud cover: 5/8 oktas Wind speed: F2, light breeze Conditions: Dry |
| 13/09/2024 | Monitoring of reptile ACO's (DW) | 17:00 – 17:35 hours BST | Air temperature: 15°C Cloud cover: 4/8 oktas Wind speed: F2, light breeze Conditions: Dry |
| 16/09/2024 | Monitoring of reptile ACO's (DW) | 11:30 – 12:15 hours BST | Air temperature: 17°C Cloud cover: 1/8 oktas Wind speed: F1, light air Conditions: Dry |
| 18/09/2024 | Monitoring of reptile ACO's (DW) | 11:30 – 12:15 hours BST | Air temperature: 18°C Cloud cover: 0/8 oktas Wind speed: F1, light air Conditions: Dry |
| 24/09/2024 | Monitoring of reptile ACO's (DW) | 10.15 – 10:50 hours BST | Air temperature: 13°C Cloud cover: 4/8 oktas Wind speed: F2, light breeze Conditions: Dry |
| | Monitoring and collection of reptile ACO's (GD) | 00:00-00:00 hours BST | Air temperature: °C Cloud cover: /8 oktas Wind speed: F, Conditions: |
| Surveyors | Daniel White (DW), Grace Dooley (GD) | | |

- 8.10 A total number of one hundred and twenty two slow-worm observations were recorded over the survey period, in addition to ten common lizards and five grass snakes. Grass snakes and common lizards observed were exclusively either male or juveniles, whereas for slow worms both sexes were observed, including juveniles and gravid females.
- 8.11 The maximum count for slow worms and grass snakes on site was made on the 4th of September 2024, with thirty five slow worms and three grass snakes recorded in a single visit. If juveniles are excluded, the maximum count is lowered to nineteen slow worms and two grass snakes for the same date. The maximum count for common lizards was noted as four juveniles on the 13th of September 2024. Excluding juveniles moves the date of the maximum count to the 16th of September 2024, where two adult male common lizards were recorded, in addition to one juvenile. Full results are shown in Table 4 below.

Table 4: Reptile Survey Results Table

| ACO | Marker | 04/09/2024 | 09/09/2024 | 13/09/2024 | 16/09/2024 | 18/09/2024 | 24/09/2024 | |
|-----|----------------|---|-------------------------------------|--|---|--------------------------------------|---|---|
| 1 | 9 | Slow worm juvenile | - | Slow worm female | - | - | - | - |
| - | Natural debris | Grass snake male | - | - | - | - | - | - |
| - | Log | - | - | - | - | Common lizard juvenile | - | - |
| 2 | 50 | Slow worms x5 1 male 1 female 3 juvenile | - | - | Slow worm female | - | - | - |
| 3 | 21 | Slow worms 2 female Grass snake juvenile | Slow worm female | Grass snake Juvenile Slow worm male | Slow worm 1 male 1 female | Slow worm female | Slow worm female | - |
| 4 | 58 | Palmate newt juvenile | - | - | - | - | - | - |
| 5 | 5 | Slow worm female | Slow worm female | - | Slow worm 1 male 1 female | Slow worm female | - | - |
| 6 | 143 | Slow worms 1 male 1 female 2 juvenile | Slow worm male | Slow worm 3 female 1 juvenile | Slow worm 4 female Common lizard Male Palmate newt | Slow worm 3 female | 3 Slow worm | - |
| 7 | 46 | Slow worm female | - | Slow worm female | Slow worm female | Slow worm female | Palmate newt | - |
| - | Natural debris | Slow worm female | Slow worm female | - | - | - | - | - |
| 8 | 37 | Slow worm 2 female | Slow worm female | Slow worm female | Slow worm 2 female Common lizard male | Slow worm female Grass snake male | Slow worm 2 female | - |
| - | Natural debris | - | - | - | Common lizard juvenile | Common lizard | - | - |
| 9 | F2 | Slow worm 1 male 3 female | Slow worm 2 female | - | Slow worm 2 female | Slow worm 5 female | Slow worm 2 female | - |
| 10 | 24 | Slow worms 5 juvenile Grass snake male | - | 2 Slow worm | Slow worm female | Slow worm 2 female | Slow worm female | - |
| 11 | F6 | - | - | - | Slow worm juvenile | Slow worm juvenile | - | - |
| 12 | 44 | Slow worm juvenile | Slow worm 1 male 1 juvenile | - | - | - | - | - |
| 13 | F8 | Slow worm female | Slow worm female | Slow worm 1 female 1 juvenile Common lizard 3 juvenile | Slow worm juvenile | Slow worm 1 female 1 juvenile | Slow worm 1 female 1 juvenile Common lizard juvenile | - |
| 14 | 31 | Slow worm 1 male 1 female 5 juvenile | Slow worm 1 female 3 juvenile | Slow worm 3 female 2 juvenile Common lizard juvenile | Slow worm male | Slow worm female | Slow worm 2 female 1 juvenile | - |
| 15 | F7 | Wood mouse | Wood mouse | - | Common toad juvenile | - | Common toad juvenile | - |

- 8.12 In addition to the reptiles mentioned above, two amphibian species were recorded on site, palmate newt and common toad, in addition to two observations of wood mice (*Apodemus sylvaticus*).

9 Discussion and Conclusions

- 9.1 Conclusions made following refresher survey in 2024 are broadly consistent with those made following the survey in 2021, and the site is still considered to be of moderate ecological value.

PEA

- 9.2 For the Garw Valley Floor and Lower Slopes region, the Bridgend County Borough Local Biodiversity Action Plan 2014 (LBAP) emphasises the biodiversity value of broadleaf woodland, asserting this habitat provides the highest biodiversity resource in addition to a carbon store. While woodland present on site has been classified as semi-natural, this is mostly a consequence of what appears to be a predominantly self-sown understory. Many of the more mature tree specimens in this habitat, such as common lime and ornamental cherry, are undoubtedly planted and do not form part of the natural woodlands of this region. Additionally, much of the woodland along the central and southern site boundary is immature, secondary woodland. While the species composition means it is difficult to assign onsite woodland a category, in order to determine whether it is a priority habitat under section 7 of the Environment (Wales) Act 2016, the LBAP does not distinguish between different broadleaf woodland types, with broadleaf woodlands in general valued for the biodiversity value. Within the northern area of the Garw Valley region, semi-improved grassland are also valued for the contribution to biodiversity and in regulating run-off. Semi-improved grasslands are present on site, if only in limited areas. Recommendations for ensuring development on site does not conflict with the aims of the LBAP are included below.
- 9.3 The impacts of current proposals are expected to be localised in nature, however considering the close proximity of the Afon Garw to the development precautions must be taken to ensure any construction on site does not inadvertently lead to pollution of this water course. Recommendations regarding pollution are made below.
- 9.4 Invasive plant species were considered as part of the site appraisal. Four invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were found on site during the appraisal, rhododendron, cotoneaster, montbretia and Himalayan balsam. It is an offence to 'plant or cause to grow in the wild any [plant] species named on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)'. A programme of eradication will need to be devised for each of these species on site, with recommendations made below.
- 9.5 No evidence of nesting birds was found within the survey site, however the presence of scrub and tall trees means suitable nesting habitat is present on site and birds will be expected to use the site for nesting between March and August. All nesting birds, their chicks, eggs, and nests, whilst in use or being built, are protected under the Wildlife and Countryside Act 1981 (as amended). Suitable provision for nesting birds must be considered within the proposals. Recommendations for such provision, as well as best practice regarding birds, are made below.
- 9.6 Mature trees are present across the site that may contain features suitable for roosting bats. This is in addition to the retaining wall, which was noted as containing numerous crevices, however no in-depth inspection of on-site trees or the retaining wall has been undertaken at this stage. All species of bats in Britain, and their places of rest (roosts) are protected under the provisions of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit). Given the potential suitability of onsite trees, and the retaining wall, to support roosting bats, further targeted survey will be required if trees are to be removed, or if the wall is to be removed or impacted by the proposals, such as through repair work. Recommendations for survey, or roosting provision are made below.
- 9.7 The presence of scrub and mature trees on site represents suitable habitat for hazel dormice, with known food plants including bramble and oak recorded. Hazel dormice are Schedule 2 listed European protected species, under the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit), and are protected by the Wildlife and Countryside Act 1981 (as amended), from disturbance at sites used for shelter or protection. Despite the presence of suitable habitat, hazel, the preferred foodplant of hazel dormice, is absent on site and there are no records for hazel dormice in the surrounding area. The absence of records for this species in the landscape surrounding the survey site suggests the species is unlikely to be present. Consequently, no further surveys are recommended for this species.

- 9.8 Otters have been recorded within the Afon Garw, which runs less than 40m from the boundary of the survey site. No streams or areas of standing water were recorded on site that would provide foraging habitat for this species, and no signs indicating that otters are currently using the site for resting were found during the assessment. No evidence for the presence of other protected mammal species was found near the site, including badger or hedgehogs. Both species have been recorded within the landscape surrounding the survey site, and dense scrub, woodland and grassland on site is suitable foraging habitat for both species. While no further survey is recommended for any of these species, the potential for each of these species to use the site for commuting, and in the case of the later species for foraging, means proposals must consider a lighting scheme sympathetic to nocturnal wildlife and facilitate the movement of these species through the site.
- 9.9 Additionally: as much of the dense scrub on site could not be thoroughly searched due to its inaccessibility, which may have obscured the presence of a badger sett or otter holts on site, any destructive search on site must be alert to the potential presence of these species. Otters are Schedule 2 listed European protected species, under the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit), and are protected by the Wildlife and Countryside Act 1981 (as amended), from disturbance at sites used for shelter or protection. Additionally, the Protection of Badgers Act 1992 makes it an offence to kill, persecute or trap badgers and protects their setts from damage, destruction, or obstruction. Recommendations regarding badgers and otters are made below.
- 9.10 Habitat on site has suitability to be utilised by great crested newts during their terrestrial life stage. Great crested newts are a European Protected Species (EPS) and are protected under the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit). Despite the presence of suitable terrestrial habitat, satellite imagery shows that there are no water bodies within 500m that appear suitable to support breeding populations for this species. Additionally, no records for this species were returned for within 1km of the survey site. Therefore, despite the presence of usable terrestrial habitat, it is considered unlikely that great crested newts are present on site.
- 9.11 No priority invertebrate species were recorded during the assessment, and no priority invertebrates have previously been recorded within the site boundary. Consequently, no further survey for invertebrates is recommended for the site. However the survey site is within a National B-line, designated for the protection of British pollinators, and as such recommendations are made in this report to ensure the site continues to support pollinating invertebrates following development.

Reptile survey

- 9.12 A robust reptile survey effort was undertaken, and across the survey one hundred and twenty two slow-worm observations were recorded, in addition to ten common lizards and five grass snakes. A presence/likely absence survey is only ever designed to ascertain whether reptiles are present on site, and which species. While reptiles are elusive, and only a small proportion of reptiles are identified in surveys of this type, an evaluation following the Froglife survey guidance assesses the site to have a low population of common lizards and grass snakes, and a good population of slow worms, bordering on exceptional. This is a count based on the number of adult animals seen by observer or under ACO's in one day, with a maximum count of nineteen adult slow worms, two adult grass snakes and two adult common lizards recorded during the first and fourth monitoring sessions, respectively. At least five adult animals must be observed during a single visit for the population to be considered 'good', and greater than 20 animals for the population to be considered 'exceptional'. The presence of three reptile species also qualifies the site as a Key Reptile Site, in accordance with Froglife guidelines.
- 9.13 The reptile survey was conducted in accordance with Froglife survey guidelines, with more than a suitable density of ACO's for the size of the site. All but one of the survey visits were undertaken during the September, within the optimum period for conducting reptile surveys, and all visits were conducted during suitable weather parameters. Cold mornings experienced during mid-September necessitated conducting surveys closer to mid-day, which is outside of the recommended time of day to undertake surveys, however they were still conducted during suitable weather parameters, which was considered priority.
- 9.14 The proposed development will result in ground disturbance and the loss of suitable reptile habitat. All reptile species are protected under British legislation, in particular the Wildlife and Countryside Act 1981 (as amended) and Environment (Wales) Act 2016. The legal protection afforded to these species makes it an offence to kill, injure or sell the animals, and as priority species authorities must ensure populations are maintained and enhanced. Measures are recommended below to avoid an offence occurring and killing or harming reptiles, and to ensure development does not threaten the

maintenance of the reptile populations on site. Advice is given to retain important features and also provide enhancements.

10 Recommendations

- 10.1 Proposals for the site have included the construction of holiday lodges or residential dwellings at Victoria Street, Pontycymer. As development will include the clearance of existing habitats on site, further surveys have been undertaken for reptiles. The following recommendations are divided into sections concerning invasive species control, further survey work, mitigation and enhancements.

Invasive species control

- 10.2 Treatment must be undertaken to eradicate the invasive species present on site, in order to prevent their wider dispersal. Himalayan balsam can be removed by pulling plants out of the ground, and carefully composting them before they have an opportunity to set seed. Himalayan balsam can also be eradicated by strimming, provided this is undertaken regularly to prevent the plants from setting seed. Care must be taken to avoid inadvertently spreading this invasive species during construction work, and waste material containing Himalayan balsam must be properly disposed of as controlled waste. Further guidance on the eradication of this invasive species can be accessed through the Welsh government public information leaflets referenced (Jones, 2020).
- 10.3 Control methods for cotoneaster and rhododendron include treating exposed stumps with an appropriate herbicide during the growing season, mid-March to the end of October. Small clumps of montbretia can be removed by hand, however care must be taken to leave no plant material behind as new plants can regrow from any remaining corms or bulbs. All cut material and other waste containing cotoneaster, montbretia and rhododendron must be either taken to a disposal centre that deals with non-native species or safely burnt on site. Advice on the application and choice of herbicide can be attained from a BASIS qualified agronomist. Further guidance on cotoneaster management can be found on the Plantlife Meadows' Hub, while rhododendron management can be found within a practice guidance document published by Forest Research.

Further survey

- 10.4 As habitat on site has been assessed as suitable for nesting birds, vegetation clearance must be scheduled to be undertaken outside of the bird nesting season where possible, which runs from March to August. If any vegetation requires removal within the bird nesting season, these must first be checked by a suitably qualified ecologist. If during any vegetation removal an active nest is discovered, all works within a minimum 2m radius of the nest must be immediately stopped, and not recommenced until all chicks have fledged.
- 10.5 Mature trees are present across the site. If development requires the removal of any trees this will need to be preceded by a ground level tree assessment for bats, utilising an endoscope and ladder as required, and undertaken by an appropriately qualified ecologist. Further survey utilising a ladder and endoscope will also be required along the retaining wall, if this structure is likely to be impacted by the development, for example through light pollution, or if the structure is to be physically altered or destroyed. Ground level assessments can be undertaken at any time of year, but are recommended to be carried out during the winter months when vegetation is less likely to obscure potential roost features.
- 10.6 No evidence that would indicate the presence of hazel dormice, otters, badgers or great crested newts was uncovered during the survey effort, and it is considered unlikely that these protected species reside on site. If destructive works undertaken do uncover evidence of the presence of any of these species, all works must cease immediately and an appropriately qualified ecologist consulted for further guidance.

Mitigation

- 10.7 To minimise conflict with the LBAP, broadleaf woodland on site is recommended for retention. If areas of broadleaf woodland require removal as part of the development, priority must be given to retaining more mature broadleaf woodland in the northern area of the site. Considering the scattered nature of the small parcels of semi-improved grassland on site, it is likely much of this habitat will be lost as part of the development. Consequently, recommendations are made below for the creation of new areas of this habitat in the south of the site.
- 10.8 To replace the ecosystem services and ecological value of trees and shrubs lost as part of the developments, landscaping designs must incorporate the planting of trees and shrubs native to this

region of South Wales. Taking into account the conditions present on site, Table 5 below includes a list of suitable native tree and hedgerow species, which can be planted as part of the landscaping process. It is essential that such plants are sourced locally, in order to reduce likelihood of importing diseases. Guidance on the selection of trees and establishment for landscape planting can also be taken from the Woodland Trust: Tree Species Handbook.

Table 5: List of Recommended Plants and Shrubs

| Common Name | Scientific Name |
|-------------------|---------------------------|
| Alder | <i>Alnus glutinosa</i> |
| Alder buckthorn | <i>Frangula alnus</i> |
| Aspen | <i>Populus tremula</i> |
| Barberry, common | <i>Berberis vulgaris</i> |
| Beech | <i>Fagus sylvatica</i> |
| Bird cherry | <i>Prunus padus</i> |
| Black poplar | <i>Populus nigra</i> |
| Blackthorn | <i>Prunus spinosa</i> |
| Crab apple | <i>Malus sylvestris</i> |
| Dogwood | <i>Cornus sanguinea</i> |
| Downy birch | <i>Betula pubescens</i> |
| Eared willow | <i>Salix aurita</i> |
| Elder | <i>Sambucus nigra</i> |
| Field maple | <i>Acer campestre</i> |
| Goat willow | <i>Salix caprea</i> |
| Grey willow | <i>Salix cinerea</i> |
| Guelder rose | <i>Viburnum opulus</i> |
| Hawthorn, common | <i>Crataegus monogyna</i> |
| Hazel | <i>Corylus avellana</i> |
| Holly | <i>Ilex aquifolium</i> |
| Pedunculate oak | <i>Quercus robur</i> |
| Purging buckthorn | <i>Rhamnus cathartica</i> |
| Purple willow | <i>Salix purpurea</i> |
| Rowan | <i>Sorbus aucuparia</i> |
| Sessile oak | <i>Quercus petraea</i> |
| Silver birch | <i>Betula pendula</i> |
| Small-leaved lime | <i>Tilia cordata</i> |
| Wild cherry | <i>Prunus avium</i> |
| Wild pear | <i>Pyrus communis</i> |
| Wild privet | <i>Ligustrum vulgare</i> |
| Wild service tree | <i>Sorbus torminalis</i> |
| Yew | <i>Taxus baccata</i> |

- 10.9 To safeguard the Afon Garw from pollution during construction a Construction Ecological Management Plan (CEMP) must be put together, and the works carried out under its provision. Such a plan must set out appropriate precautionary measures for ensuring pollution does not impact this river system. The CEMP will also set out a precautionary working statement to protect the retaining wall present on site, including the installation of a 5m working buffer around it's perimeter, to ensure roosting bats are not disturbed. This buffer will be required unless surveys reveal the wall is not utilised by roosting bats.
- 10.10 Hedgehogs, badgers and otters, in addition to other mustelids, may utilise the site on occasion for foraging or commuting, and therefore any trenches dug forming part of any groundworks during construction must be covered overnight or left with a 45° sloping side to prevent any animal from becoming trapped. Similarly, any unconnected pipes must be capped overnight to prevent any animal from becoming stuck. All new fencing installed around the site must also include gaps to facilitate the movement of mammals through the site following completion of the development.
- 10.11 The likely presence of nocturnal animals, such as bats, mustelids and hedgehogs requires considerate design of a sensitive lighting scheme. Any new lighting columns installed must be affixed with cowls, hoods, or shrouds, to minimise upward light spill. Luminosity will be limited to the absolute minimum required by Health and Safety standards and will be timed to be extinguished for as long a period as possible at night. All lights must face downwards, and must not point directly at natural features such as the tree line along the sites eastern boundary. The ILP (2023) guidance notes provide details on lighting requirements for nocturnal animals.
- 10.12 No further survey effort is recommended for reptiles on site at this time. The legal protection afforded to reptiles means that every effort must be made to ensure that they are not harmed during the development. As a 'Key Reptile Site' an area of the site must be retained to provide suitable reptile habitat, with a proposed suitably sized area to be retained noted in Figure 4 as 'grassland habitat for

reptiles' (see Appendix I), hereinafter referred to as the 'wildlife area'. Prior to any development works occurring, a relocation effort must be carried out where reptiles will be captured and moved from other parts of the site and into the wildlife area. An Ecological Method Statement (EMS) must be provided, which will set out the various processes including a timetable for works.

- 10.13 Before development activity commences, a wildlife area must be included in the finalised design proposals (see Figure 4, Appendix 1). Prior to the development, a reptile proof barrier must be erected around the selected retained habitat and maintained through the construction phase. A period of trapping and re-location for reptiles from elsewhere on the site outside the retained reptile area must be conducted according to the details specified with the EMS. A relocation can only be carried out within the active season for reptiles (April to mid-October) and avoiding the months of July and August when ambient temperatures reduce the effectiveness of ACO's used to aid the capture and relocation process. Following development, the fence can be removed and reptiles can re-colonise the rest of the site. Use of close-board fencing must be discouraged or suitable gaps or underpasses be included.
- 10.14 It is important to implement good horticultural practice in any landscaping scheme, including the use of peat-free composts, mulches and soil conditioners. The use of pesticides (i.e. herbicides, insecticides, fungicides, and slug pellets etc.) must be discouraged where possible to prevent cumulative fatal effects to animals via the food chain, particularly invertebrates, birds and/or mammals. Any pesticides used must be non-residual.

Enhancements

- 10.15 Any enhancements make a positive contribution to local biodiversity and promote Net Benefits for Biodiversity targets as laid out in PPW 12, and Section 6 of the Environment (Wales) Act 2016. Reptiles appear to be utilising most, if not all, of the site at present, and consequently it will not be possible to replace habitat lost in the development with an area of equitable size. Biodiversity enhancements to the site will be therefore be required. Enhancements for reptiles must include the installation of at least two hibernation features (hibernacula) and creation of at least one log pile within the onsite wildlife area retained for reptile conservation. These features must be incorporated into the development proposal, and are required to be identified on any finalised site plants. A general design for a hibernacula is shown in Appendix III.
- 10.16 Enhancements must also include a wildlife pond or SuDS feature, with standing water a habitat notable missing from the surrounding landscape. A wildlife pond will benefit the amphibian species already confirmed on site, such as common toads and palmate newts, and potentially permit the colonisation of the site by other amphibian species in the surrounding area, such as common frogs and smooth newts. Each of these species forms part of the diet of grass snakes, and by enhancing the site for amphibians the site will also be greatly enhanced for grass snakes, as well as otters, and bats, which will also utilise this feature for foraging.
- 10.17 The pond must be situated next to the site boundary near semi-natural vegetation to prevent surrounding this features with hardstanding and to permit easy colonisation by onsite amphibians. The feature must be provided with gentle sloping sides so that wildlife can easily access and exit the water, and include the planting of native marginal and aquatic plant species around the margins to provide foraging opportunities and cover for wildlife. Such a feature can double-up as an amenity area and include sowing a wildflower mix. The attenuation feature must include varying depths to provide a variety ecological habitats, with some continuously wet, water-logged and largely dry areas present across the feature. As mentioned before, detailed designs will depend on the nature of the proposed future development of the site, but the above guiding principles must be adhered to. Guidance on the creation of wildlife ponds to be incorporated into the retention ponds design can be found in the 'Creating Garden Ponds for Wildlife' document produced by the Freshwater Habitats Trust.
- 10.18 Finally, for reptiles, enhancements must include the improving the wildlife area and the development of a management plan for the wildlife area to benefit this species group. Enhancements within the wildlife area will include clearing areas of scrub and creating larger areas of grassland, with this strategy also replacing valuable areas of semi-improved grassland lost to the development. In some areas this will require the sowing of a suitable seed mix onto bare soil, in addition to the removal of areas of hardstanding. Emorsgate Seeds provide a tussock meadow wildflower mixture (EM10), which would be suitable for creating the desired habitat. Once the site has been suitably enhanced, a periodic mowing regime must be devised, to prevent the succession of the wildlife area to dense scrub and woodland, which would lower the value of the habitat for reptiles. Mowing and scrub clearance in retained habitat should be undertaken between November and December, to limit the

impact of these activities on reptiles and prevent animals being injured or killed in the process. Grass cuttings must be collected together and piled in discrete locations across the wildlife area, which will then act as additional hibernation areas for reptiles and also as egg laying sites for grass snakes. Piles must not be disturbed between June and September, to avoid disrupting egg laying.

- 10.19 These recommendations will form the basis of the measures to be included in an Ecological Method Statement for the site, in order to protect the reptile population and ensure its future viability.
- 10.20 The location of the site within a National B-Line also means that enhancements must include sowing wildflowers that benefit British pollinators as part of the sites landscaping process. Recent research into species that are used by wild bees (Nichols, Goulson and Holland, 2019) demonstrated that a mix of 18 wildflower species was sufficient to support 100% of bee species observed. Table 6 below includes a list of the 18 wildflowers that were found to support the highest diversity of bee species surveyed. Wildflower seeds and plug plants must where possible be of local provenance, to limit the import of disease and preserve regional genetic variation. Suitable seeds and plugs must be obtained from regional supplies like Celtic Wildflowers, Welsh Organic Wildflowers or similar organisations.

Table 6: Recommended Wildflowers to Support Wild Bees

| Common Name | Scientific Name |
|-----------------------|----------------------------------|
| Kidney vetch | <i>Anthyllis vulneraria</i> |
| Harebell | <i>Campanula rotundifolia</i> |
| Greater knapweed | <i>Centaurea scabiosa</i> |
| Rough chervil | <i>Chaerophyllum temulum</i> |
| Pignut | <i>Conopodium majus</i> |
| Bindweed | <i>Convolvulus arvensis</i> |
| Smooth hawkbeard | <i>Crepis capillaris</i> |
| Wild carrot | <i>Daucus carota</i> |
| Meadow cranesbill | <i>Geranium pratense</i> |
| Hedgerow cranesbill | <i>Geranium pyrenaicum</i> |
| Musk mallow | <i>Malva moschata</i> |
| Wild marjoram | <i>Origanum vulgare</i> |
| Poppy | <i>Papaver rhoeas</i> |
| Primrose | <i>Primula vulgaris</i> |
| Charlock | <i>Sinapsis arvensis</i> |
| Perennial sow-thistle | <i>Sonchus arvensis</i> |
| Dandelion | <i>Taraxacum agg.</i> |
| Scentless mayweed | <i>Tripleurospermum inodorum</i> |

- 10.21 Ideally, as part of this proposal, the opportunity will be taken to develop a full and detailed biodiversity management plan. The plan will be expected to cover monitoring of the enhancement proposals set out above.

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Appendix I Site Maps and Plans

Figure 1: Aerial view of the site



Figure 2: Phase 1 Habitat Map

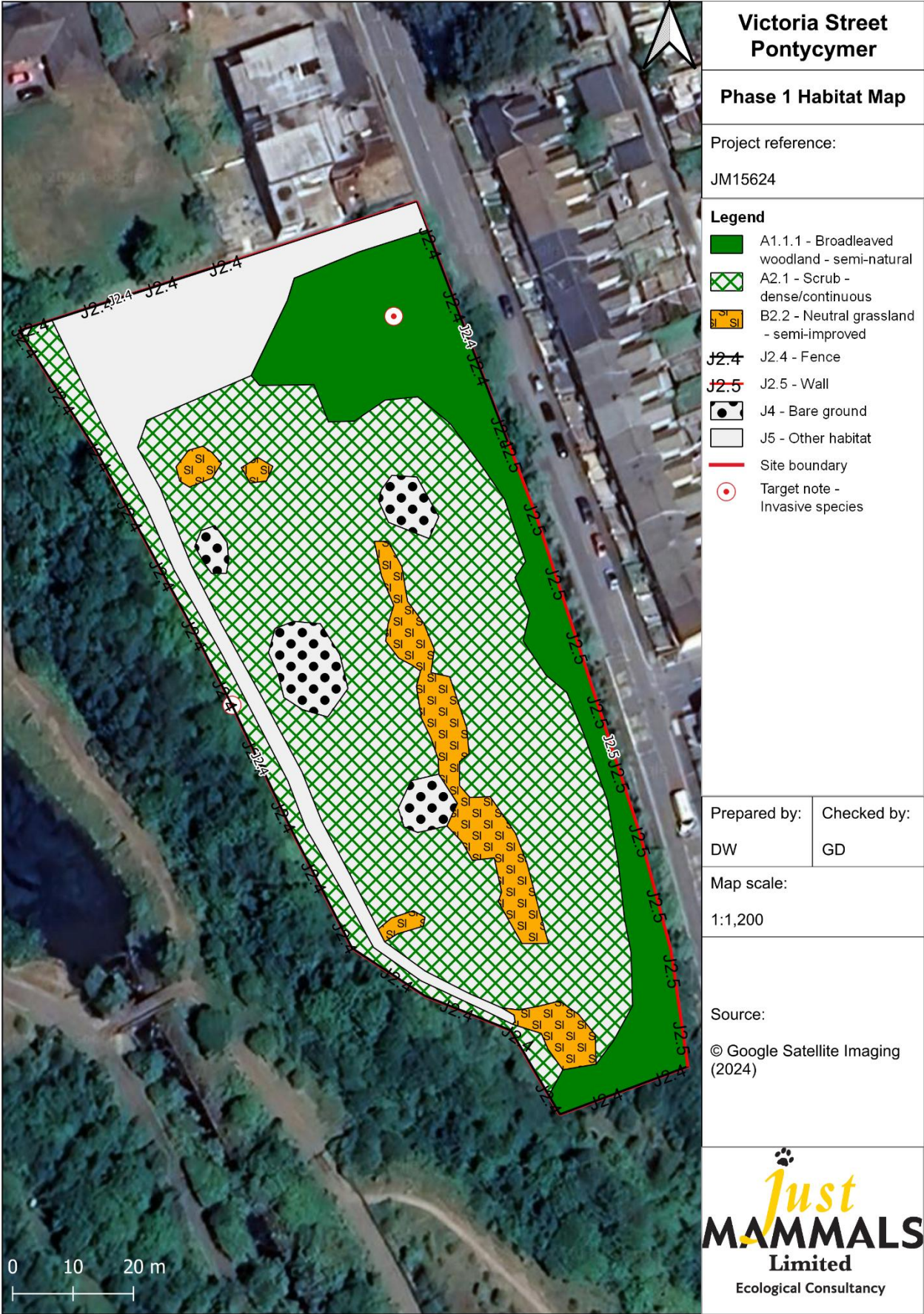


Figure 3: ACO Locations Map

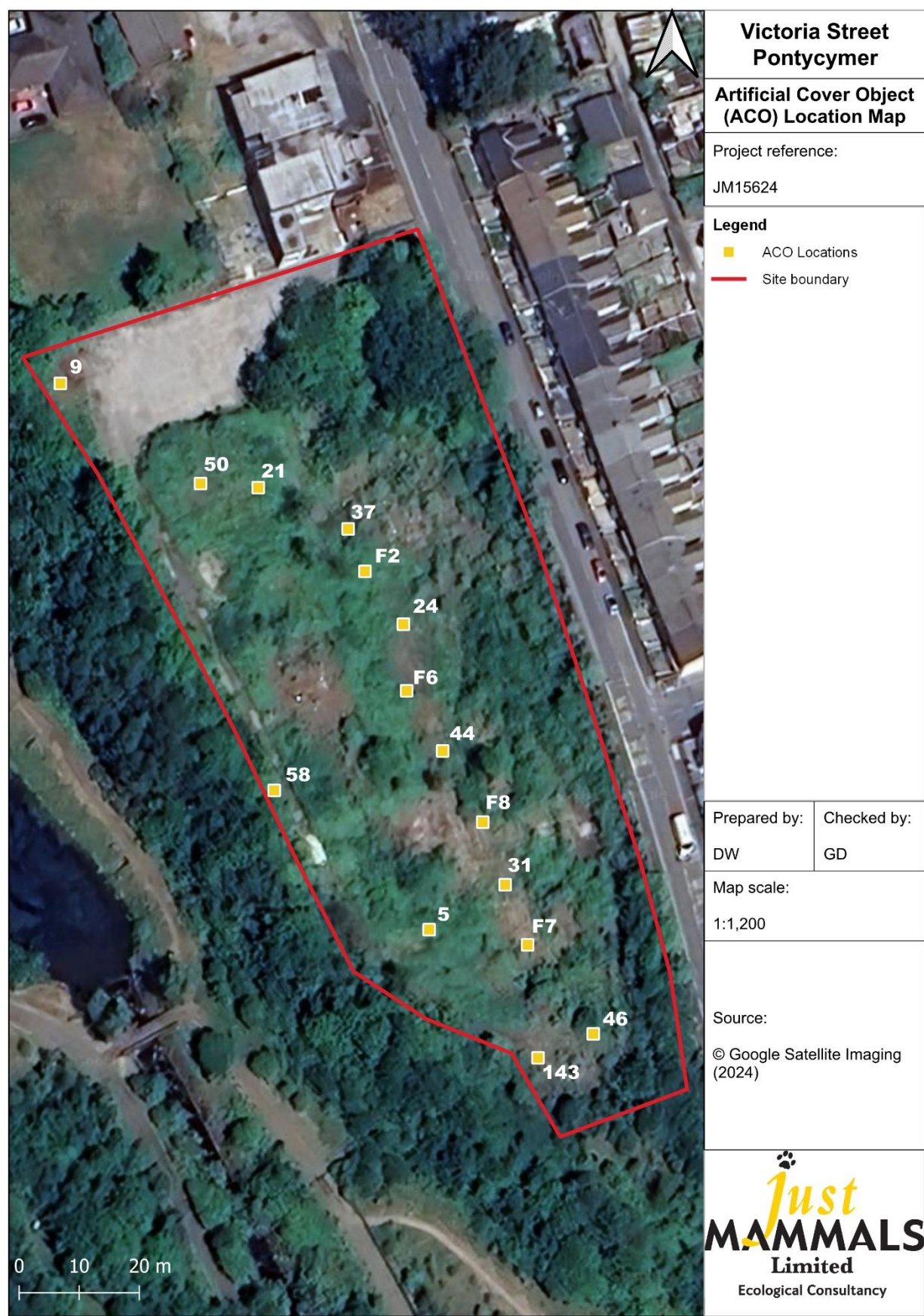
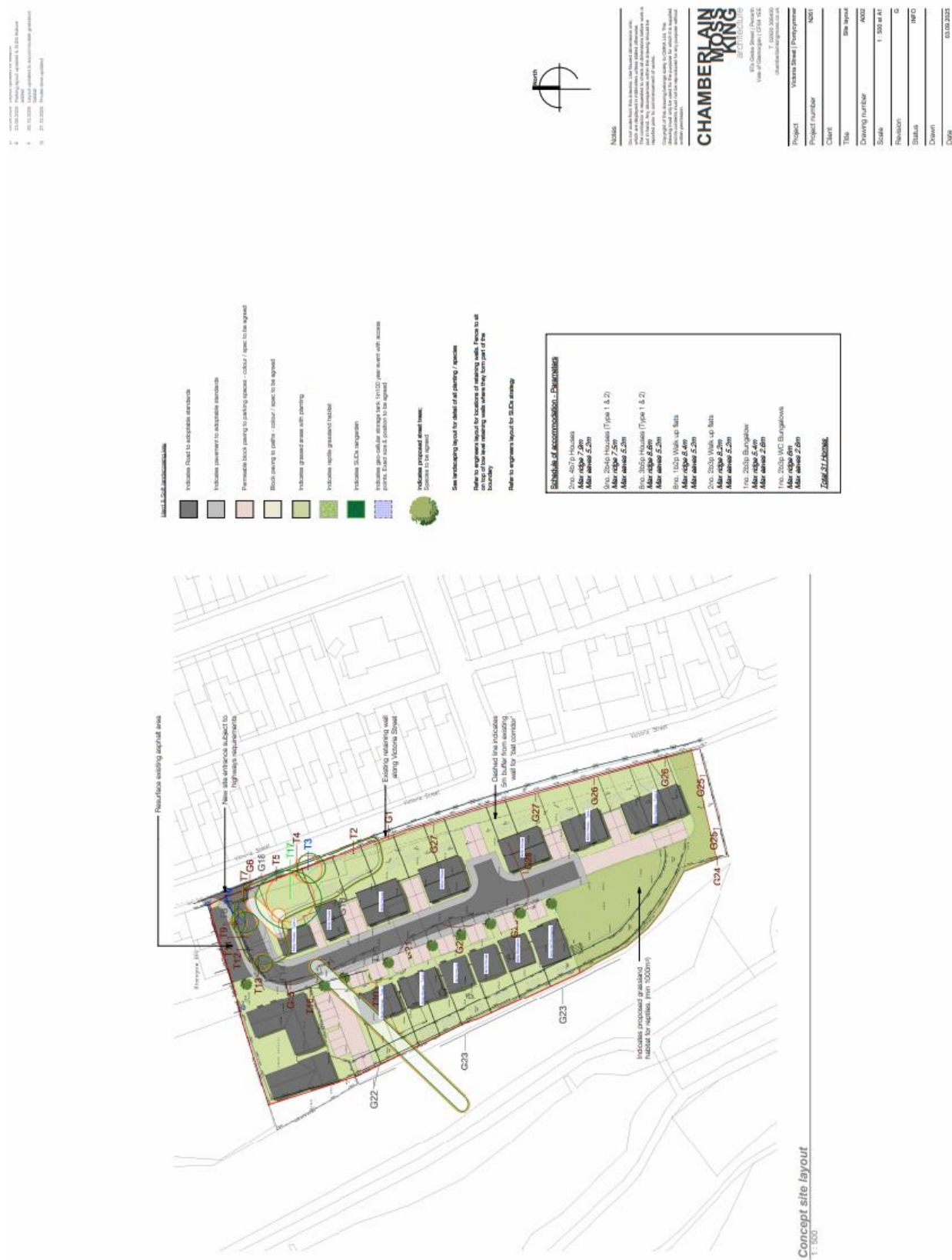


Figure 4: Wildlife Area Map



Appendix II Site Photographs

Plate 1: Grassland clearing within scrub



Plate 2: Grassland



Plate 3: Rubble pile and butterfly bush



Plate 4: Large area of hardstanding in northern area



Plate 5: Woodland along site boundary



Plate 6: Cotoneaster within woodland



Plate 7: Montbretia within woodland



Plate 8: Himalayan balsam within scrub



Plate 9: Crevices visible within retaining wall



Plate 10: Rabbit droppings



Plate 11: Onduline ACO



Plate 12: Sheet metal ACO



Plate 13: Male grass snake recorded on site



Plate 14: Female slow worm recorded on site



Plate 15: Male common lizard recorded on site

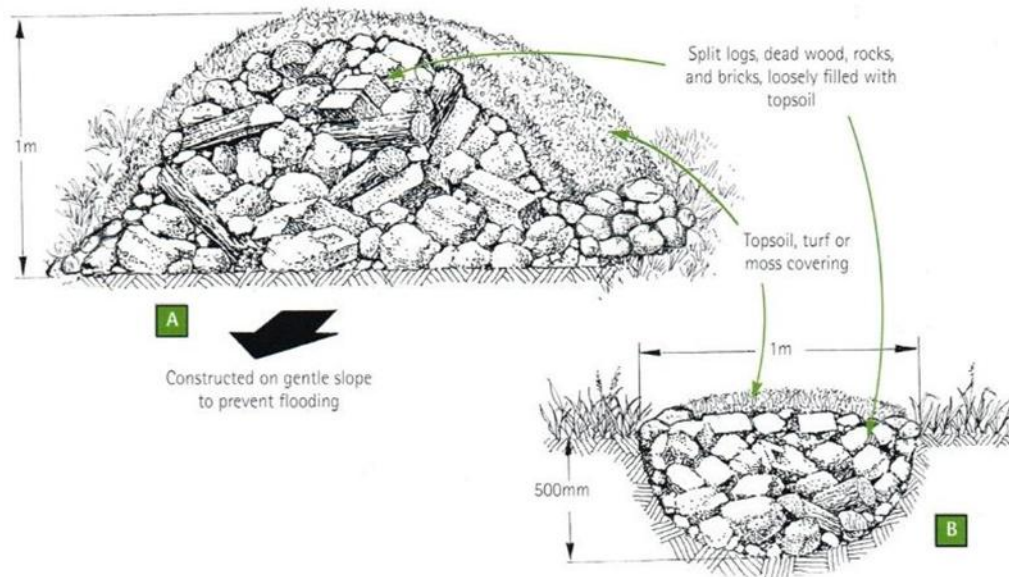


Plate 16: Juvenile common toad recorded on site



Appendix III Hibernacula Construction

Figure 5: General Design of a Reptile Hibernacula



Appendix IV Reptile Ecology

Reptiles are scaled animals which start life as eggs, which are either laid in safe areas and hatch out, or are incubated inside the body, with adults giving birth to live young. Reptiles are secretive, fast moving animals that can be incredibly hard to spot – they prefer quiet and secluded areas but may be seen basking in the sun on paths, rocks and logs.

Both snakes and lizards are reptiles. They are ectothermic, and in the cold British climate require areas to bask in sunlight in order to help raise their body temperature to a level where they can become active. Snakes and lizards practice a variety of foraging strategies, including sitting and waiting for a prey item, which they can then strike and kill, in addition to actively hunting. Their skins are dry to the touch, although because the skin comprises scales, it may appear damp to the eye.

During the past 60 years, reptile populations have been reduced throughout most of Europe due to changes in land use, development, intensified management, persecution, fires and habitat fragmentation. Consequently, in Britain, all six species of reptiles are protected by law. The potential for reptiles to be present must always be taken into consideration when any likely habitats are identified. Planning authorities need to take all protected species into account during the planning process.

Reptiles need plenty of undisturbed ground cover within tall herbs and grasses for refuge, shelter and foraging. They also require open sunny basking areas such as banks, wood piles, stone features, walls and wooden fences. In winter, they seek out hibernacula in compost heaps, stone or wood piles and also dry stone walls. Grass snakes are strongly associated with freshwater habitats especially ponds, lakes, rivers and streams.

Appendix V Relevant Legislation for Reptiles

Common lizard, slow-worm, adder, and grass snake, are all listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and the Countryside Rights of Way Act 2000. These species are protected from intentional killing, injuring and sale. This legislation aims to protect them from persecution and also exploitation in the pet trade. These species are also a UK Biodiversity Action Plan species and included on the Environment (Wales) Act 2016, Section 7.

In addition to the above, sand lizard (*Lacerta agilis*), and smooth snake (*Coronella austriaca*), receive additional protection under Schedule 2 of the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019. In addition, all five species present in Wales (excluding smooth snake) are listed under Section 42 of the Natural Environment and Rural Communities (NERC) Act (2006). This explanation must be regarded only as a guide to the law. For further details, reference must be made to the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way Act 2000.

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