Land at Victoria Street Pontycymer Bridgend CF32 8NW

A Preliminary Ecological Appraisal By:

Just MAMMALS Limited

On Behalf Of:

KYLE SPILLER LIMITED

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1 Executive Summary

1.1 Land adjacent Victoria Street is a 0.75-hectare site located at a former coal mine in Pontycymer village of Bridgend County Borough. Kyle Spiller Ltd are currently exploring options for developing the land for tourism or residential use, although formal plans had been agreed at the time of writing this report.

1.2 Just Mammals Limited were commissioned to complete a Preliminary Ecological Appraisal (PEA) as part of the scheme's ongoing feasibility study. This included an extended Phase-1 habitat survey of the site in January 2021. This comprised an assessment of habitats and their suitability for protected species. Although this PEA may be submitted to third parties as part of ongoing consultations, it must be considered a 'preliminary' document rather than a finalised ecological assessment and is not intended to accompany a full or outline planning application.

1.3 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 the site consists of early successional overgrown scrub with hardstanding and fragmented areas of coarse grassland. None of these on-site habitats represent notable or Section-7 habitats, and are all locally common and nationally widespread. None of these habitats therefore represent a significant constraint to any future on-site development.

1.4 The steep-sloping area of semi-natural broadleaved woodland to the immediate west of the site, as well as the area of marshy grassland to the south, are possibly Section 7 habitats. These habitats are more ecologically valuable than any of the on-site habitats and represent a more important constraint to development because of their sensitivity to indirect impacts. Typical construction-phase impacts must be avoided by the design and implementation of a robust Construction and Environmental Management Plan (CEMP).

1.5 Notwithstanding their limited botanical value, some of the on-site habitats nonetheless provide suitable habitat for several protected animal species. The site's most notable characteristic is its suitability for nesting birds. Since any future development is likely to remove this habitat, precautionary mitigation must be put in place to ensure that no nesting birds are disturbed during the work and there is no net loss of nesting sites.

1.6 The large retaining wall along the eastern boundary has, at least, a 'medium' level of suitability for day-roosting bats in accordance best practice guidelines. However, since no follow-up night-time surveys have been completed, the presence of any bat roosts is currently unknown. However, if the wall can be retained, protected and safeguarded throughout the construction and operation phases of a future development, then further survey work may not be necessary. Recommendations are provided regarding how a future layout may avoid direct and indirect impacts completely.

1.7 The site also provides some suitability for basking and hibernating reptiles. Again, the presence of such protected species is unknown at this stage and it is recommended that further survey work is carried out to establish presence or reasonably demonstrate absence.

2 Introduction

2.1 Land adjacent Victoria Street is a brownfield site located at a former coal mine. The site is approximately 0.75 hectares (ha) in size and heavily overgrown with scrub. It is situated near the centre of Pontycymer village, in the Garw Valley area of Bridgend County Borough. A site location plan and aerial photograph are displayed in Figures 1 and 2 (Appendix I) respectively. The site's centre has a National Grid Reference (NGR) of SS 90300 91743, and lies at an altitude of approximately 161m Above Ordnance Datum (AOD).

2.2 Kyle Spiller Ltd are currently exploring options for developing the land for tourism or residential use. Bridgend County Borough provided a pre-application consultation in December 2020 in response to a concept layout for 22 holiday chalets with associated parking and turning facilities. However, other options are also being considered and no formal plans have been agreed at the time of writing this report.

2.3 Just Mammals Limited were commissioned to complete a Preliminary Ecological Appraisal (PEA) as part of the scheme's ongoing feasibility study. This included an extended Phase-1 habitat survey of the site during the daytime on 8th January 2021 in accordance with current guidelines

(CIEEM 2017). This comprised an assessment of habitats and their suitability for protected species.

2.4 The primary objective of this report is to highlight, as far as reasonably possible, potential impacts or enhancement opportunities that proposals may present to biodiversity. More specific objectives of the assessment include the following:

- To present the results of a formal desk study to assess the ecological value of the surrounding area and zone of influence (Section 7);
- to report the presence of any notable habitats within or directly adjacent the development footprint (Section 8);
- to assess the suitability of the site for protected and notable species (Section 8);
- identify any possible adverse effects that developing the site may present to biodiversity (Section 9); and
- use preliminary findings to highlight requirements for further survey effort or appropriate avoidance/mitigation measures for safeguarding biodiversity (Section 10).

2.5 Note that this PEA report is a 'preliminary' document for guiding and informing the feasibility study and design of future development proposals. Although it may be submitted to third parties as part of ongoing consultations, it does not represent a finalised ecological assessment and is not intended to accompany a full or outline planning application.

3 Survey Team Experience

3.1 Andrew Ross (MCIEEM) completed the PEA and is the author of this report. Andrew has over ten years of experience working as an ecological consultant with considerable experience working to safeguard biodiversity at a range of development projects. As well as being a Full member of the Chartered Institute of Ecology and Environmental Management, Andrew also holds licences to survey bats, dormice, and great crested newts in England and Wales. Andrew is a Senior Ecologist with Just Mammals Limited.

4 Survey Methodology

4.1 Sites of nature conservation interest in proximity to Land at Victoria Street were identified using the web–based MAGIC database (www.MAGIC.gov.uk). These included sites with statutory designations of international importance within 10km including: Special Areas of Conservation (SACs); Special Protected Areas (SPAs); and Ramsar sites. Sites of national importance within 2km were also investigated, including Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).

4.2 South East Wales Biodiversity Records Centre (SEWBREC) was consulted for records of Protected and Priority species within 1km of the site. The records centre also provided details of any Local Wildlife and SINC sites within 1km, as well as any listed on the Ancient Woodland Inventory.

4.3 As part of the PEA, an Extended Phase-1 Habitat Survey was completed on the 8th January 2021 by an experienced ecologist. The red line boundary was appraised according to the standard methodology detailed in the 'Handbook for Phase 1 habitat survey' (JNCC 2010). Habitat types were mapped, described and photographed. Accompanying species lists and features of nature conservation interest were also recorded. The assessment was extended to account for priority habitats listed under Section 7 of the Environment (Wales) Act. A digitised Phase 1 habitat map can be found in Figure 4 (see Appendix II) with photos in Appendix III. Hedgerows were surveyed for their native species richness and the degree to which they were classified as 'important' under the Hedgerow Regulations (1997). Surveyors also assessed the site for the presence of veteran trees in accordance with 'Veteran Trees: A Guide to Good Management' (Reed, 2000).

4.4 Surveyors appraised the site's suitability for Protected species. These included badger (*Meles meles*), bats, otter (*Lutra lutra*), dormice (*Muscardinus avellanarius*), water vole (*Arvicola amphibius*), birds, reptiles, amphibians, plants and bryophytes. Where present, field signs or the animals themselves were also recorded. For great crested newts (*Triturus cristatus*), ponds within 500m of the site were identified using Ordnance Survey maps, aerial imagery and assessed *in-situ* during the survey where access was available. Other priority species listed under Section 7 of the Environment (Wales) Act were also considered, such as brown hare (*Lepus europaeus*), west European hedgehog (*Erinaceus europaeus*), and harvest mouse (*Micromys minutus*).

4.5 Invasive species, such as Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*), were also recorded where present.

4.6 As part of the PRA, surveyors assessed the suitability of any built structures on site for roosting bats and nesting birds. A ground-level inspection of any trees likely to be removed or indirectly affected was also completed using close focussing binoculars and a powerful torch to record any evidence of roosting. Potential Roosting Features (PRFs) such as cracks, cavities, decaying limbs, loose bark and dense ivy were recorded and inspected where possible.

5 Site Description

5.1 Land adjacent Victoria Street is situated near the centre of Pontycymer village, in the Garw Valley area of Bridgend County Borough. The site itself 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 0.75 ha area comprises extensive overgrown scrub with a smaller area of hardstanding at its northern entrance off Victoria Street.

5.2 The southern and western boundaries of the site are defined by steeply sloping embankments, which separate the site from an extensive area of grassland, formerly part of the main colliery workings, which has been the subject of a land reclamation scheme. A rugby club and doctor's surgery are located immediately to the north of the site. The eastern boundary of the site is defined by a large retaining stone wall beneath Victoria Street itself, which is primarily residential. Apart from the village of Pontycymer, the site is located in a highly rural location surrounded by grassy valley slopes, watercourses and forests.

6 Survey Constraints

6.1 No major constraints were encountered during the Phase 1 survey and all habitats on site were broadly identified and categorised with confidence. It must be noted that this PEA assessment is not intended to confirm the presence or absence of all plant species on site. This would require a more detailed botanical assessment between April and September over multiple site visits. However, it does provide a comprehensive ecological assessment of habitat types and dominant species at the time of the survey and highlights areas where further survey effort would be required.

7 Desktop Study

7.1 Three protected wildlife sites were identified from the desk study within the search radii. These are summarised in Table 1 below.

Table 1: Designated Wildlife Sites*

Site and Designation (In Order of Distance)	Distance and Direction to Site	Primary Reasons for Designation
Ffroch Wen Mosaic SINC	526m (east)	Extensive area of farmland supporting a mosaic of semi-improved acid grassland, marshy grassland, heath, bracken, over-mature hedgerows and scrub.
Blackmill Woodlands SAC	5.8km (south-east)	Primarily designated for its Old Sessile Oak Woodlands as an Annex I habitat type.
Cefn Cribwr Grasslands SAC	8.7km (south-west)	Primarily designated for being a major stronghold of Molinia fen meadow as an Annex I habitat. The marsh fritillary butterfly (*Eurodryas Hypodryas*) as an Annex II species is also listed as a qualifying feature.

*Internationally designated sites (SACs, SPAs, Ramsar) within 10km, SSSIs and NNRs within 2km, and Local wildlife sites within 1km)

7.2 SEWBREC's record search (unique reference 0201-607) reported 415 species records within 1km of the site. These are briefly summarised in the bullet list below.

- Land mammals – excluding bats – accounted for 5 records (i.e. 1.2% of all species records). These included hedgehog, badger and otter records over 800m from the site.
- Bats accounted for 11 (i.e. 2.7%) of species records, including some unconfirmed local roosts (unknown species) and flight records for common pipistrelle (*Pipistrellus pygmaeus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared bat (*Plecotus auritus*).
- Reptiles accounted for 21 records (5%), including grass snake (*Natrix natrix*), slow-worm (*Anguis fragilis*) and common lizard (Zootoca vivipara). The closest record was 60m to the west of the site, and is discussed more fully below.

- Amphibians accounted for 7 records (1.7%), including common frog (*Rana temporaria*), common toad (*Bufo bufo*) and smooth newt (*Lissotriton vulgaris*). The closest record was 60m to the west of the site, and is discussed more fully below.
- Birds accounted for 206 (i.e. 50%) of species records. As well as the Schedule 1 species like barn owl (*Tyto alba*) and kingfisher (*Alcedo atthis*), the data search also reported several Section 7 species including song thrush (Turdus philomelos), nightjar (*Caprimulgus europaeus*) and skylark (Alauda arvensis).
- Vascular plants accounted for 101 records (24%), including species such as bluebell (*Hyacinthoides non-scripta*) and devil's-bit scabious (*Succisa pratensis*). These also included several invasive species over 100m from the site, including Japanese knotweed, Indian balsam, and *Rhododendron ponticum*.
- Lichens and bryophytes accounted for 2 records (0.1%).
- Invertebrates accounted for 60 records (14%), including several records of the cinnabar moth (Tyria jacobaeae) and various species of butterfly and dragonfly within 1km.
- Fish accounted for 2 (i.e. 0.1%) of the records.

7.3 In terms of great crested newts, aerial photography and OS maps of the local area revealed no ponds within 500 m of the survey area, and no such species records were revealed by the paid data search. Furthermore, no dormouse records were identified from the search.

7.4 The data search has reported a relatively good number of reptile records adjacent, or close to, the survey area (Figure 3). These include several slow-worm and common lizard record directly adjacent the site to the west, which may have been observed from the nearby public footpath and cycle route.

8 Survey Results

8.1 Table 2 below summarises dates, times and weather conditions when survey work took place, with wind speeds recorded using the Beaufort scale.

Table 2: Summary of Survey Activity and Weather Conditions

Date	Survey Type	Timing	Weather Conditions
08/01/2021	Phase-1 Habitat Survey (AR)	10.00 – 12.00 hours Greenwich Mean Time (GMT)	Air temperature: 2.0°C Cloud cover: 7/8 oktas Wind speed: F2, light breeze Conditions: Dry
Surveyors	Andrew Ross (AR)		

8.1 For recording purposes, the site was divided into seven different habitat types and mapped following the codes and conventions described in the Phase 1 Habitat Survey Handbook (JNCC 2010). Table 3 below describes the on-site habitats and the most abundant plant species. Phase 1 maps showing the habitats present within the study area are displayed in Figure 4. Photographs of the various habitats are provided in Appendix III.

Table 3: Summary of Phase 1 Habitat Notes

Phase 1 Habitat Classifications	Habitat Descriptions and Typical Species
A1.1.1 – Broadleaved woodland	Small cluster of more mature woody vegetation on a steep west-facing bank at the north-east corner of the site. Trees include ash (*Fraxinus excelsior*), lime (*Tilia europaea*), pedunculate oak (*Quercus robur*), holly (*Ilex aquifolium*), wild cherry (*Prunus avium*) and willow (Salix sp). Overgrown with cherry laurel (*Prunus laurocerasus*) and Rhododendron. Where not overgrown, ground flora includes hart's tongue (*Phyllitis scolopendrium*) Also includes a thin strip of semi-natural broadleaved woodland along the western periphery on the other side of the security fence. This is essentially a narrow footpath at the top of a steep west-facing slope of woody vegetation. Woody vegetation includes: ash; silver birch (*Betula pendula*); alder (*Alnus glutinosa*); rowan (*Sorbus aucuparia*); goat willow (*Salix caprea*); blackthorn (*Prunus spinosa*); alder (*Sambucus nigra*) and hawthorn (*Crataegus monogyna*).
A2.2 – Scrub	Extensive overgrown scrub. Dominated by bramble (*Rubus fruticosus* agg) (90% coverage) with smaller densities of butterfly bush (*Buddleia davidii*), dogwood (*Cornus* sp), dog rose (*Rosa canina*), hawthorn, holly (*Ilex aquifolium*), Prunus sp, willow and oak (*Quercus* sp) saplings. Ground layer mostly overshaded with scrub, but does include bracken (*Pteridium aquilinum*), creeping ivy (*Hedera helix*) and male ferns (*Dryopteris filix-mas*).
B6 – Species-poor semi-Improved grassland	Includes more open area of coarse/un-managed grassland with rubble piles. Typical grass species include cock's-foot (*Dactylis glomerata*), common bent (*Agrostis capillaris*) and wavy hair-grass (*Deschampsia flexuosa*).
J2.3.4 – Fences	Includes wire-mesh security fence around the site perimeter. Frequently vegetated with ivy and overgrown bramble.
J2.3.5 – Walls	Large stone wall up to 5m high.
J3.6 – Rubble	Some extensive stone and rubble piles.
J4 – Hardstanding	Includes vehicle access off Victoria street; parking area at the northern end of the site; and access route along the western periphery of the site.

8.2 The vast majority of the site consists of overgrown scrub. None of the on-site habitats, including the small cluster of trees at the north-eastern corner, are considered Priority Habitats as listed under Section 7 of the Environment (Wales) Act. However, immediately adjacent the southern boundary is an area of marshy grassland, dominated by purple moor-grass (*Molinia caerulea*) with tufted hair-grass (*Deschampsia cespitosa*), hard rush (*Juncus inflexus*) and marsh thistle (*Cirsium palustre*). Woody species include scattered alder, ash, hazel (*Corylus avellana*) and immature oak (*Quercus* sp). Although not confirmed during survey, this may represent a very small area of 'purple moor-grass and rush pasture' as a Section 7 habitat. Despite having Tree Protection Orders (TPOs), none of the more mature trees in the north-eastern corner are veteran.

8.3 Overgrown Rhododendron was recorded in the small wooded area at the north-east corner of the site. Since this is highly unlikely to have been planted, it is reasonable to assume that this represents the invasive *Rhododendron ponticum*. No other invasive plant species were recorded.

8.4 In terms of protected species, the site provides suitability for nesting birds; roosting bats; and reptiles. Although only small parts of the site provide any suitability for basking reptiles, the data search reported a good number of reptile records directly adjacent to the west and south-west. Likewise, the surrounding grassland to the south of the site, and between there and the cycle route, is highly suitable for reptiles and the site itself provides many opportunities for hibernating animals within the extensive rock and rubble piles.

8.5 In terms of bats, none of the trees on site, or directly adjacent to it, feature any notable suitability for roosting. However, the large stone retaining wall along the eastern boundary provides numerous crevices and cavities suitable for day-roosting Vesperilidae bats (not lesser horseshoes). Depending on their size and extent, they may also provide suitability for hibernation, torpor or breeding.

8.6 All trees and shrubs on site provide suitable habitat for nesting birds to some extent, and this vegetation is likely to be occupied by several nesting garden or woodland species during the spring and summer months.

8.7 No badger sets or signs of badger were recorded on site or the adjacent areas, and the ground is likely to be too hard for sett-building. Likewise, no dormouse nests or characteristically gnawed hazel nuts were recorded during the survey. Due to the absence of any watercourses, the site is wholly unsuitable for otter or water vole. Although terrestrial habitat on site is technically suitable for great crested newts, the absence of any ponds within 500m, or records within 1km, indicates that this species is not reasonably likely to be present.

9 Discussion and Conclusions

9.1 Most of the site consists of early successional overgrown scrub with hardstanding and fragmented areas of coarse grassland. None of these on-site habitats represent notable or Section-7 habitats, and are all locally common and nationally widespread. None of these habitats therefore represent a significant constraint to any future on-site development.

9.2 Some of the mature trees in the north-east corner provide some ecological value to the site, although ash represents most of the larger and more mature specimens and these therefore have limited lifespans. Although not representing any significant ecological constraints, retaining some of these trees for landscape purposes would be advantageous and some of the trees also have TPOs. Such specimens must be prioritised for retention if feasible (See Recommendations).

9.3 The steep-sloping area of semi-natural broadleaved woodland to the immediate west of the site, as well as the area of marshy grassland to the south, are possibly Section 7 habitats. These habitats are more ecologically valuable than any of the on-site habitats and represent a more important constraint to development because of their sensitivity to indirect impacts. Typical construction-phase impacts may include accidental physical damage by plant vehicles, site run-off or accidental pollution events. Such impacts must be avoided by the design and implementation of a robust Construction and Environmental Management Plan (CEMP) (See Recommendations).

9.4 The north-east corner features some rhododendron and cherry laurel growth. Although small in extent and not representing a significant constraint, *R. ponticum* is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), so it is an offence to plant or cause this species to grow in the wild. It is therefore recommended that all specimens are removed as part of any future development or landscape plan (See Recommendations).

9.5 Notwithstanding their limited botanical value, some of the on-site habitats nonetheless provide suitable habitat for several protected animal species. The site's most notable characteristic is its suitability for nesting birds and possibly insect pollinators. Although local mature trees and the adjacent woodland strip to the east represents a much higher quality habitat for nesting birds, the on-site scrub is still likely to be used by several species during the spring and summer months. Since any future development is likely to remove this habitat, precautionary mitigation must be put in place to ensure that no nesting birds are disturbed during the work and there is no net loss of nesting sites (see Recommendations). In particular, all nesting birds are protected under the provisions of the Wildlife and Countryside Act 1981 (as amended), and active bird nests cannot legally be disturbed or removed.

9.6 The large retaining wall along the eastern boundary has, at least, a 'medium' level of suitability for day-roosting bats in accordance with BCT's Bat Surveys Good Practice Guidelines (Collins 2016). However, since no follow-up night-time surveys have been completed, the presence of any bat roosts is currently unknown. All British bats and their roosts receive statutory protection under current wildlife legislation (see Appendix V). Therefore, any re-pointing, other repair work or removal of this wall presents a risk to bats and their roosts. Such work must therefore only be completed after the presence of bat roosts has been more clearly established by follow-up night-time surveys. However, if the wall can be retained, protected and safeguarded throughout the construction and operation phases of a future development, then further survey work may not be necessary. However, it is important that roosting bats are not subjected to indirect impacts that may 'disturb' them from completing their life cycle. Such impacts may include the following:

- noise, vibration and general disturbance by construction activities;
- increased levels of artificial lighting during operation;
- removal or fragmentation of flight-lines; and
- incidental mortality by increased numbers of domestic cats.

9.7 If roosting bats are found to be present, or their presence is not demonstrated to be reasonably 'absent' by further survey effort, then all direct and indirect impacts during construction and operation must be avoided. This is best achieved by carefully integrating the eastern wall and associated buffer strip into the scheme's design in close collaboration with an experienced ecologist (see Recommendations).

9.8 The site also provides some suitability for basking and hibernating reptiles. Again, the presence of such protected species is unknown at this stage until follow-up surveys have confirmed their presence or absence. These animals are protected from killing and injury under the Wildlife and

Countryside Act 1981 (as amended). If present, their status as legally protected species therefore presents a risk to certain activities associated with any future development. These are most likely to be as follows:

- risk of killing/injury to reptiles during site clearance and ground-work;
- permanent removal of hibernation habitat associated with rock and rubble piles;
- permanent removal of limited amount of basking habitat associated with the discrete areas of coarse grassland; and
- incidental mortality of reptiles during future management operations.

9.9 If reptiles are present on site, then some level of capture-and-removal and careful destructive searching Is likely to be required in order to prevent killing and injury (See Recommendations). Some level of habitat replacement and enhancement would also be required to ensure there is no net-loss or degradation of local reptile population(s).

10 Recommendations

Nesting birds

10.1 Since all overgrown vegetation on site is suitable for nesting birds to some extent, precautions must be made during any clearance activities. This includes any vegetation removal required to complete topographical surveys. Once a bird nest is established, birds must have access to it at all times until the young have fledged and the nest is no longer active. The only effective way to prevent this issue is to remove on-site vegetation before the nesting bird season of any given year. This runs from mid-February to mid-August for most UK species. Therefore, on-site vegetation must be removed between September and mid-February. If this is not possible, then an experienced ecologist must attend site to ensure that no active nests are present before clearance. If an active nest is found, a cordon must be established to mark a safe working zone to prevent the nesting site from being disturbed. The cordon must remain in place until an ecologist confirms that any chicks have fledged.

Further surveys

10.2 Several discrete parts of the site, as well as the council-owned area of grassland to the south, are suitable for protected reptiles. Several records of common lizard and slow worm have also been recorded directly adjacent to the site. Therefore, a formal reptile assessment is recommended to fully assess the potential impacts caused by a future development proposal. Such an assessment would also inform the layout and landscape design.

10.3 Reptile survey work is seasonally restricted to March to June and September to October. It involves the deployment and subsequent inspection of artificial refugia (pieces of corrugated metal or roofing felt). Seven survey visits are then undertaken in accordance with industry standard guidelines. After a two week 'bedding-in' period, reptile surveys generally take approximately three weeks to complete. All survey visits must take place on days and time periods when temperatures are between 8°C and 18°C. Since such temperatures rarely occur during the daytime in July and August (even early in the morning), these months generally need to be avoided except during unusually cool periods.

10.4 The large retaining wall along the eastern boundary has is suitable for roosting bats. If a development's layout, design and CEMP cannot avoid impacts on bats (see below), then night-time emergence surveys are recommended to fully assess impacts. These can be carried out from early May onwards under suitably warm weather conditions. Considering the wall's 'moderate' level of suitability, two surveys using an appropriate number of surveyors would be necessary.

Layout and design

10.5 Unless follow-up night-time surveys can demonstrate that bat roosts reasonably likely to be absent, then any future proposal must ensure that this wall is integrated into the layout. In particular, a permanent buffer of at least 5m must be retained along its length that will be free of built structures, although it may be used for landscaping or as an unlit footpath/cycle route. This 'wildlife corridor' adjacent the wall must remain dark and unlit (see below).

10.6 Since bats themselves must be protected from disturbance, there would also need to be some working restrictions during initial construction and site clearance. Therefore, a working buffer of least 5m must be integrated along this eastern wall where site work will be limited. This will require signage and protective fencing similar to most tree protection methods. Furthermore, the noisiest

site activities must be carried out away from this buffer to prevent roosting bats from being disturbed. If required, such restrictions must be detailed within the site's CEMP (see below). However, should further surveys demonstrate that no bats roosts are likely to be present along the length of the wall, then such restrictions may not be necessary. Similarly, if further surveys can demonstrate that bats are only using a small proportion of the wall, then such restrictions could be streamlined.

Landscape and Ecology

10.7 During the design of any soft-landscaping for future developments, all Rhododendron ponticum must be removed in order to prevent this invasive plant from spreading on site or growing in the wild. Although this PEA has not specifically recommended the retention of any particular trees, it is recommended that specimens removed are compensated with new tree planting. Depending on the nature of any future development or presence of other ecological features identified by future reptile or bat survey work, any layout would benefit from new tree and shrub planting. Such planting could either reinforce or replace existing vegetation or replace current vegetation.

10.8 Any such planting scheme must prioritise native tree and shrub species that are fruiting/flowering and non-coniferous. Ideal shrubs would include species such as hazel (*Corylus avellana*), hawthorn, blackthorn, native dogwood (*Cornus sanguinea*), holly or dog-rose. All such species are present on or surrounding the site already and would maximize the site's ecological value to a range of fauna, including invertebrates and nesting birds. Likewise, it is recommended that any small planted trees are also native fruiting / flowering species such as: crab apple (*Malus Sylvestris*); field maple (*Acer campestre*); silver birch; rowan (*Sorbus aucuparia*); goat willow or wild cherry (*Prunus avium*). It is important that any such planting is appropriately buffered by at least 2m to allow access for long-term maintenance.

10.9 If reptiles are recorded on site, or survey work has not been able to demonstrate their absence, then at least 450 square metres of tussock/type grassland would need to be integrated into the layout. This would represent a 1:1 compensation ration for the extent of suitable basking habitat present on site during baseline conditions. Although this could either be a linear feature along the site's periphery or a stand-alone area, it must be continuous with the adjacent area of marshy grassland to the south. This would go some way to compensate for any reptile habitat removed on site. Mixes of tussock-type grassland such as Emorsgate EM10 seed mix are able to recreate reptile basking with minimal management and aftercare. The numerous rubble piles on site would also need to be used to create hibernation features. If this type of reptile compensation is required, this is likely to be a higher priority than the native tree and shrub landscape features described above.

10.10 The layout must be able to incorporate a sufficient number of artificial nest boxes for birds to compensate for the temporary removal of nesting provisions. For a site of this size, at least ten boxes would be appropriate. Depending on the nature of the development, these could either be mounted on trees, buildings or fences.

Sensitive lighting strategy

10.11 As discussed above, introducing artificial lighting in proximity to bat roosts has the potential to sever locally important dispersal routes or dissuade them from using their roosts in the future. Notwithstanding any pre-existing light-levels, unless bats have been demonstrated to be 'reasonably absent' from the eastern wall then it is important that any future proposal aims to avoid contributing any additional artificial lighting. It is therefore recommended that artificial lighting is avoided altogether unless it confirmed by Bridgend council that statutory wildlife protection is superseded by health-and-safety or security. If it Is confirmed as essential, then it is recommended that artificial lighting is informed by ecological input. It may be necessary to appoint a suitably experienced and competent lighting professional to help design a sensitive lighting strategy. It is important that such any strategy considers light-spill from security lights and windows as well as driveway or footpath lighting. The Institution of Lighting Professionals and Bat Conservation Trust have published 'Bats and Artificial Lighting in the UK: Guidance Note 08/18' (Anon 2018). This document presents many options for bat-sensitive lighting and may be used to inform such a strategy. Consideration must be given to use of infra-red lighting and security systems which are less intrusive to wildlife.

Construction and Environmental Management Plan (CEMP)

10.12 The steep-sloping area of semi-natural broadleaved woodland to the immediate west of the site, as well as the area of marshy grassland to the south, must be safeguarded from adverse impacts during site clearance and construction. Similarly, any retained trees will also require adequate protection to ensure their long-term survival. Depending on the final layout and outcome of any survey work, there may be other working restrictions relating to the eastern wall, Rhododendron removal and reptile mitigation. It is standard practice for Construction and Environmental Management Plans (CEMP's), or more specific task-based Construction Method Statements (CMS), to guide this kind of work to ensure it is carried out responsibly.

Reptile capture and removal

10.13 If reptiles are present on site, then some level of capture-and-removal and careful destructive searching Is likely to be required in order to prevent killing and injury. This typically involves the installation of reptile-proof fencing around part of the site and working areas. The extent and duration of any translocation exercise very much depends on the agreed layout and outcome of reptile survey work, although detailed advice and guidance is available from Just Mammals Limited on request. However, it would be important that a local 'donor' site is available to receive any reptiles removed from the working area. It is suggested that the area of marshy grassland to the south would be ideal if formal consent can be agreed. Once reptiles have been removed from working areas, an ecologist would supervise a destructive search of suitable working areas, particularly the extensive rubble piles on site.

11 References

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Appendix I: Site Plans

Figure 1: Site Location Plan

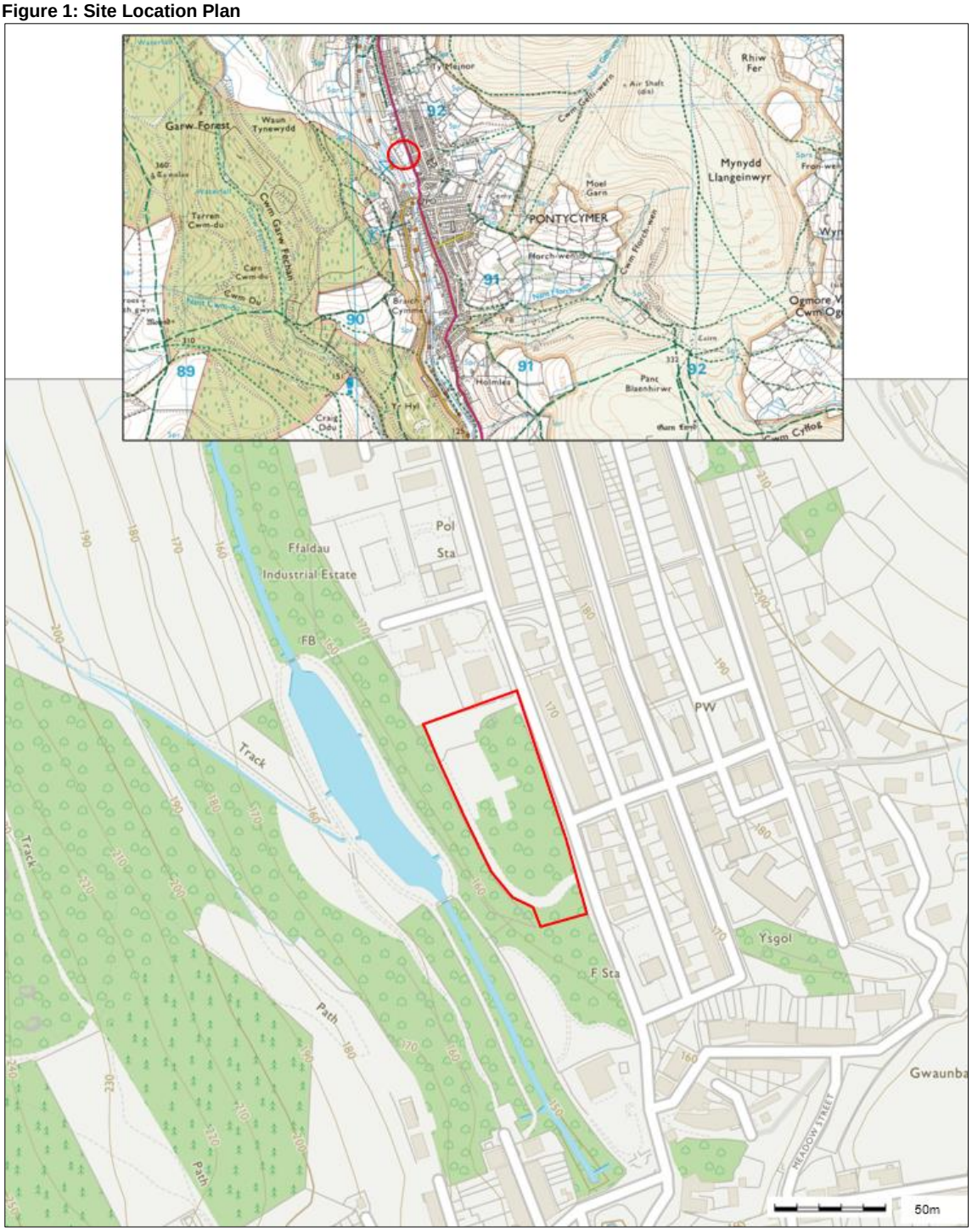


Figure 2: Aerial Photograph

(Source: Google Satellite Imaging 2021

Appendix II: Results

Figure 3: Reptile records in proximity to site

Figure 4: Phase-1 Habitat Map

Appendix III: Site Photographs

Plate 1: Dense scrub comprises approx. 90% of site

Plate 2: Extensive brick and rubble piles scattered throughout site

Plate 3: Less shaded area of coarse grassland with rubble piles at the southern end of the site

Plate 4: Area of marshy grassland to the south of the site

Plate 5: Extensive retaining wall along most of the eastern boundary

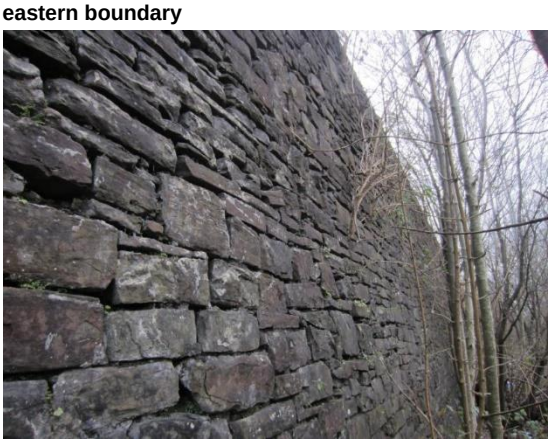
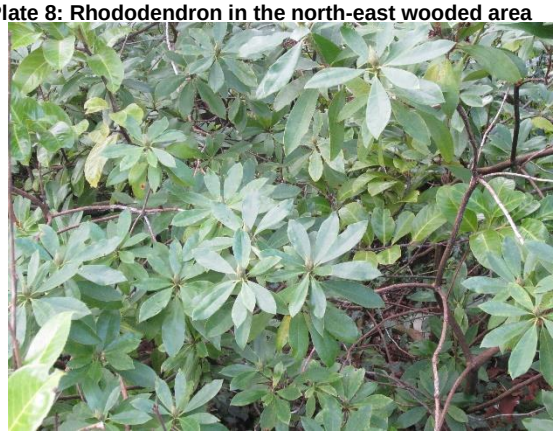


Plate 6: Wall contains numerous cavities suitable for roosting bats

Plate 7: Main entrance at the north of the site

Plate 8: Rhododendron in the north-east wooded area



Appendix IV: Ecology of British Bats

There are at least 18 species of bats breeding in Britain. Most of them are regarded as threatened due to a variety of factors including habitat loss, intolerance and disturbance/damage or loss of roosts. Of these species a number regularly use buildings at certain times of year in order to find safe secure roost sites. Often several different species can use a building over the course of the year, and not all species are present at the same time, making assessment of their presence complex.

Bats are highly mobile flying mammals, which in Britain, feed entirely on insects. They have evolved over seventy million years and have developed sophisticated mechanisms to allow them to effectively 'see' in the dark by using sound waves. This system is called echo-location which enables them to track and hunt down small moving insects whilst in flight, rather like radar does in a modern military fighter aircraft. It is possible to record this sound, and because each species of bat echo-locates in a different way, determine what the species is without actually handling the animal which made the call.

In winter, when their prey is scarce, British bats hibernate or enter torpor, in cool parts of caves, buildings (cavity walls), and tree cavities. They may wake occasionally and will feed if evening temperatures are greater than 7°C, when flying insects can be active. Generally however, activity during cold winters is very limited and bats only become fully active in spring, with late March and early April being a critical time for animals desperately trying to save energy whilst gaining weight. Disturbance during these months can therefore be more devastating to bats than at other times of year.

By late spring female bats will gather together in maternity roosts in order to give birth and rear their single baby in June. Such maternity roosts are often near to important foraging areas in order to save energy as flight requires vast energy resources. Flight routes to and from such roosts can therefore also be important and some bats are extremely light averse preferring dark locations without street or security lamps which can force them to take complex routes to reach foraging areas. Such lighting can also badly degrade foraging areas where they occur close to buildings and hedgerows and tree lines can be particularly important areas for bat foraging to take place particularly when close to the roost building.

Whilst females form maternity colonies, usually in warmer roofs or trees, male bats tend to seek out cooler sites which may not be so close to the foraging areas. Males are often solitary and do not exhibit the social behaviour that marks out females during the birthing period. Non-breeding females will also roost in this way, when they have no need to spend energy on raising a single baby.

Several British bat species are known to rely heavily on buildings to roost. Of these species, the most likely are the soprano pipistrelle bat and the common pipistrelle. Other bat species regularly found in buildings are the brown long-eared bat; Natterer's bat; Brandt's bats and whiskered bat. Pipistrelle species and the small myotid or mouse-eared species (Brandt's, whiskered etc) often favour locations at the ridge or around the exterior shell of the structure. Brown long-eared and Natterer's tend to prefer living within the roof area of a building – large lofts being popular.

Other species that are known to use the internal areas of built structures such as barns include the two horseshoe species, the greater horseshoe bat (*Rhinolophus ferrumequinum*), and lesser horseshoe bat (*Rhinolophus hipposideros*), as well as Western barbastelle bat (*Barbastella barbastellus*).

Appendix V: Ecology of Reptiles

Reptiles are scaled animals that live on land. They 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 cold blooded, vertebrate animals, and therefore have back bones, but also require some time to get warm. They therefore like to bask in sunlight in order to help them raise their body temperature to a level where they can become active. They tend to practice a foraging strategy of sitting and waiting for a prey item, when they can then strike and kill, rather than actively move around seeking food. Their skins are dry to the touch, although because the skin comprises scales, it often appears 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 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.

The slow-worm is a lizard, albeit a legless one. They have eyelids, which sets them apart from snakes, and if threatened, can drop their tails in order to make good their escape.

Appendix VI: Relevant Legislation

Bats

All species of bat in Britain, and their places of rest are protected under the provisions of the Wildlife and Countryside Act 1981 (WCA), Section 9(1), 9(4)(a) and 9(4)(b) as amended by Schedule 12 of the Countryside and Rights of Way Act 2000. Further protection is afforded by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019. In relation to structures used by bats for shelter or protection (i.e. roosts), this legislation makes it an offence to either intentionally or recklessly damage, destroy or obstruct access to any site used by bats, whether bats are present at the time or not, or to intentionally or recklessly disturb bats within a roost.

Infringements under this legislation include building demolition, removal of hollow trees, blocking, filling or installing grills over old mines or tunnels, building alteration or maintenance work, re-pointing of stone walls, getting rid of unwanted bat colonies, re-roofing, remedial timber treatment, re-wiring or plumbing in roofs, treatment of wasps, bees or cluster flies (Mitchell-Jones, 1992; Childs, 2001). Greater horseshoe bat, lesser horseshoe bat, Bechstein's bat, greater mouse eared bat and barbastelle are included in Annex II of the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 and hence require special protection.

Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/1991 (i.e. £5000 in April 2001) per roost or bat disturbed or killed, or to both. Bodies corporate and their directors/secretaries are liable for offences under the 2017 Regulations and the WCA. Additionally, where such an offence results in the offender benefitting in a monetary form from the illegal action, confiscation or civil recovery of the proceeds can occur under the Proceeds of Crime Act 2002.

It is sensible to assess as soon as possible if bats are present at potential sites for development – preferable before the land is acquired. In some cases the period required for adequate survey work may span more than one calendar year. If a development, including demolition or change of use, is likely to impact on bats and their roosts then a licence will usually be required. Adequate survey results are a necessary input to any licence application. If bats are not found until late in the development stage this may result in delays while a licence is sought and even in offences being committed.

The law with respect to dwellings and other structures is applied equally. Where disturbance is deemed likely to have a significant effect on bats to survive, breed and rear their young or will affect the local distribution and abundance of the species, a European Protected Species licence issued by Natural Resources Wales. A licence application must demonstrate that the development will not be detrimental to the maintenance and conservation status of the species concerned.

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), the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019, and the Countryside and Rights of Way Act 2000.

Reptiles

Common lizard (*Zootoca vivipara*), slow-worm, adder (*Vipera berus*), and grass snake (*Natrix natrix*) 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. 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.

Wild birds

All wild birds, their eggs and nests are protected by The Wildlife and Countryside Act 1981 (as amended). It is an offence, with certain exceptions, to:

- intentionally kill, injure or take any wild bird;
- 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;
- sell wild birds or put them on display for sale;
- use traps or similar items to kill, injure or take wild birds; and
- 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.

Penalties that can be imposed for criminal offences in respect of a single bird, nest or egg contrary to the Wildlife and Countryside Act 1981 (as amended) is an unlimited fine, up to six months imprisonment or both.

In exceptional cases NRW and Natural England issues licences for specific purposes, so that legitimate work may be undertaken without breaking the law.

Biodiversity planning policy in Wales

The Environment (Wales) Act 2016 places a statutory duty on all public bodies, including the Local Planning Authority, to consider biodiversity as an integral part of all decision making in public authorities. Section 6 of the Act places a general duty on public authorities to, 'seek to maintain and enhance biodiversity in the exercise of functions… and in so doing promote the resilience of ecosystems'. This means development must not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity.

Similarly, the national policy framework for biodiversity is set out in Planning Policy Wales (Edition 10 December 2018) (PPW10) with further detail being provided in Technical Advice Note 5: Nature Conservation and Planning (2009) (TAN 5). These set out the Welsh Government's objectives for biodiversity and the role of the planning process in meeting biodiversity objectives. It emphasises the creation of biodiversity enhancement opportunities and the role of mitigation and compensation where adverse impacts are unavoidable. Chapter 6.4 of PPW10 provides specific guidance on how local planning authorities must comply with the Section 6 duty.

In particular, planning authorities must have regard to:

- designated sites (para 6.4.10);
- protected species (para 6.4.22);
- the list of habitats and species of principal importance for Wales, published under Section 7 of the Environment (Wales) Act 2016 (para 6.4.6);
- trees, woodlands and hedgerows (para 6.4.24); and
- maintaining and enhancing biodiversity (para 6.4.21).

Mandatory Biodiversity Net Gain is a feature of the Welsh planning system. Although the duty does not include specified metrics or a particular target level of enhancement, LPAs must exercise judgement on a case-by-case basis.

We confirm that in preparing this document we have exercised reasonable skill and care, taking into account the project objectives, the agreed scope of the work, prevailing site conditions, the degree of manpower and resources allocated to the project, and in compliance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

This document is valid for a period of two years from March 2021.

Just Mammals Consultancy is an ecological consultancy based in Mid-Wales. Specialising in legally protected mammal, reptile and amphibian species, but providing a wide range of ecological services, it provides appropriate expertise on behalf of a range of clients.

Clients include government departments, local and regional authorities, development agencies, commercial and industrial enterprises as well as statutory nature conservation organisations, wildlife trusts and other charitable bodies.

Please visit our web site www.justmammals.co.uk to see the full range of services we offer and some of the projects we have undertaken in the past.