

Reptile mitigation strategy June 2021 Former Troedyrhiw library

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SITE DESCRIPTION

The former library is situated within the village of Troedyrhiw which is to the south-east of the town Merthyr Tydfil. The former library is within a suburban area with residential properties to the north-west, west, south and south-east but to the north-east and east it is bordered by a woodland and grassland area with the wooded river corridor of the Afon Taf within 1km to the west.

1: INTRODUCTION

A reptile mitigation strategy has been prepared for the land associated with the Former Troedyrhiw library, Tyntaldwyn road, Merthyr Tydfil CF484NG

A small number of slow worms were found on site after the installation of a driveway onto the property. The site consists of a driveway to the left of the front of the property, and an overgrown alleyway to the left of the front of the property. There is also an area of unused land to the rear of the building, which was all grassland when the property was purchased in 2014, but had subsequently been left to overgrow with tall grass and brambles. (See fig 1) The tall grass and brambles were cut down to around 150mm in December 2019 in an attempt to keep the overgrowth under control. An area directly outside the rear wall of the building was levelled and hardcore spread in a three-tiered fashion going downhill, in order to provide a hard standing at the back of the property and a path to provide access around the whole building. Inert waste from inside the building has been dumped in two piles outside the rear of the property (See fig 2) The area between these piles has been compacted due to works already completed and as such has remained free of vegetation to this date. Our potted plants now occupy that area. (See fig 3)

The driveway area was also cleared in December 2019 and two ash trees removed from the old wall adjacent to the pavement. The old wall was dismantled and the driveway area levelled with a digger. A retaining sleeper wall was installed next to the pre existing path next to the house and a fence and gate erected at the end of the driveway. The slowworms were discovered while excavating the soil next to the manhole cover the other side of the fence at the rear of the driveway. Two worms were found hibernating under the soil and were relocated to a site at the rear of the garden that was not going to be disturbed. No destructive work had been done to the land surrounding the property since the discovery of the slow worms.

With regard to the mounds of unwanted earth and bricks are outside the rear of the building, the pile adjacent to the driveway is to be removed and the pile adjacent to the sub station will be used to level the slope down to the boundary wall with the property downhill from the site (the bunkhouse).

The next phase of proposed works to the garden will involve extending the driveway 500cm by moving the existing fence back by that distance. Following this a outbuilding is planned adjacent to the extended driveway.

Any work considered beyond this plan will be undertaken by hand. (see garden design fig 4)

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2. REPTILE ECOLOGY

2.1 There are six species of reptile native to Britain , the Adder (*Vipera berus*), the Grass Snake (*Natrix natrix*), the Smooth Snake (*Coronella austriaca*), the Sand Lizard (*Lacerta agilis*), Viviparous Lizard (*Lacerta vivipara*) and the Slow-worm (*Anguis fragilis*). All are in decline and two (Smooth Snake and Sand Lizard) seriously threatened.

2.2 Reptiles are ectothermic and must be able to warm themselves to maintain their body temperature and those that lay eggs must have heat to hatch them. In winter, British reptiles become torpid and hibernate in holes etc safe from severe frost. Cold reptiles move slowly, if at all and are easily killed by predators such as birds and cats.

2.3 The need to control body temperature governs much of the day to day activity of reptiles. Typically they aim to maintain body temperatures between 20 and 30°C.

Habitats need to provide a structure that allows reptiles to bask or otherwise warm up using the suns energy, but also avoid extremes of heat and cold.

2.4 Ideal reptile habitat consists of open areas and vegetative cover in close proximity to each other. Varied topography especially south facing slopes are favoured, with diverse vegetation type and structure. Microhabitats provide a range of basking opportunities, shelter from predators and wind, an abundance of prey and opportunities to cool down in humid, deeper vegetation when the weather is hot and dry.

2.5 Reptiles are only able to disperse over relatively short distances. They are dependent on large areas of continuous habitat or is most often the case, closely spaced patches linked by corridors of habitat. Habitat connectivity corridors play an essential role by maintaining population size and viability avoiding inbreeding whilst also reducing the risk of populations becoming extinct due to locally catastrophic events such as fire.

2.6 Hibernation sites or hibernacula must be frost free, humid, and safe from flooding and predators. Typical sites includes burrows dug by other species such as rabbits, rotted tree stumps and root holes, large grass tussocks, ant hills, old walls and building foundations, piles of rubble and under large logs and fallen trees. Hibernation sites almost always have a south facing aspect and are normally in full or partial sun. Reptiles may hibernate singly or communally. Communal hibernacula are critical for some reptiles.

2.7 The Smooth Snake is not found in Wales and Sand Lizard is restricted to recent reintroduction sites. Grass Snakes are most commonly associated with wet habitats and frequently feed on aquatic animals such as frogs. The Adder and Slow-worm are typically associated with drier, heathland habitat and most types of grassland, and the Viviparous Lizard is found in a wide range of habitats.

2.8 Viviparous Lizards occupy a wide range of habitats, including wet and dry heathland, moorland, mountain scree slopes, most types of grassland (especially chalk grassland and rough grassland with bramble scrub), woodland glades and rides, coastal dunes and cliffs, vegetated shingle and hedgerows. The species avoids structurally uniform vegetation and prefers sites with a greater variation in the height of habitat cover. The highest densities seem to be found in damp or wet areas, especially where abundant grass tussocks are present to provide food, shelter, basking and hibernation sites. They feed on soft-bodied invertebrates.

2.9 Viviparous Lizards are diurnal and spend less time basking as they warm up quickly and can operate at lower temperatures. They can be active from February to November, and movement is normally limited to a few tens of metres. Around four to ten young are born in July (but birth can occur from late June to early September) in a transparent membrane from which the baby lizards rapidly break out.

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3. LEGISLATION

3.1 All British reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). All may not be legally offered for sale without a licence and it is an offence to deliberately kill or injure any native lizard or snake.

3.2 European Protected Species (EPS) are strictly protected species (reptiles: Sand Lizard and Smooth Snake) which are protected by a combination of both the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2010. Protection of these EPS differs from that of the widespread reptiles in that not only are they protected from killing and injury, but also from disturbance and capture. Additionally, the habitat of EPS is legally protected from damage or destruction. The development of a site where EPS occur can therefore commence only if licensed by Natural Resources Wales.

3.3 Biodiversity duty is a legal undertaking given in the Natural Environment and Rural Communities (NERC) Act 2006 which places a duty on public authorities to conserve biodiversity. Section 42 of the Act sets out the list of habitats and species considered by the Secretary of State to be of principal importance for conserving biodiversity in Wales. The following reptile species were highlighted: Sand Lizard, Viviparous Lizard, Slow-worm, Grass Snake and Adder. The new Environment (Wales) Act 2016 strengthens the biodiversity duty in NERC and contain biodiversity lists for Wales under section 7 of the Act. These lists replace the section 42 lists.

3.4 The UK Biodiversity Action Plan (BAP) reviewed the UK's biological resources and developed plans for the protection of a list of priority species and habitats. These include the reptiles Sand Lizard, Viviparous Lizard, Slow-worm, Grass Snake and Adder. National and local action plans for the protection of these species have been developed.

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4. MITIGATION STRATEGY METHODOLOGY

4.1 Areas of the garden will be left as grassland while further work on the garden is undertaken. (See fig 4) This area can be used as a receptor site for reptiles. This mitigation strategy will use passive displacement.

4.2 The methodology requires vegetation to be cut in stages to a minimum height of 50mm using hand tools. This process should encourage any animals on site to move away from the working areas into the surrounding habitat/receptor sites. The turf and topsoil are then carefully stripped and any remaining animals in the soil layers captured by hand and moved to the receptor sites. The development site should be maintained as stripped bare ground until development commences.

4.3 Other areas that could be used by reptiles, such as piles of stones/rubble should be dismantled carefully by hand, and removed from site. If any other materials appear on site between the time of removal and start of development, they must be dismantled by hand and searched for reptiles before being removed from site.

4.4 Certain elements of work to the garden will require a digger to be on site. The proposed extension to the driveway, the removal of the pile of waste adjacent to the driveway and levelling the other pile of inert waste at the bottom of the site. Once the top layer has been sifted through and removed, a digger will be used to scrape through the top layer of soil with a toothed bucket while careful observation for any reptiles, removing any and re-homing in the receptor site. Following this unwanted soil will be removed and placed at the end of the drive ready to be taken away.

4.5 Any areas of the site that will be worked on in future should be retained as bare ground until the development commences to prevent re colonisation from the adjacent areas. If there is a delay and the vegetation grows over 200mm high, then the same procedures should be followed to retain the habitat as unsuitable for reptiles, if the reptiles are still in the active season. If the site has been cleared for reptiles in the summer and development commences in the winter, there will be no need for further reptile mitigation as it will be in the hibernation period.

4.6 All clearance works should be undertaken when reptiles are active (i.e. April to September) but avoid the bird nesting season where possible. Where this is not possible vegetation should be checked for the presence of nesting birds and if found, that area left untouched until the birds have fledged.

4.7 All works must be undertaken in suitable weather, when reptiles are likely to be active.

4.8 Any animals found during clearance works should be recorded, together with species, sex, location, date, time, weather conditions and temperature to enable a complete record to be kept.

5. MONITORING

5.1 It is usual to monitor to see if the mitigation strategy has been successful. However, if no animals are found during clearance and stripping, then it is not necessary to monitor the success of the mitigation. If animals are found, then an occasional check of the receptor site should be undertaken in suitable weather when the animals are active.

Fig 1:



Fig 2:



Fig:3



Fig 4:

