

Trevethick Bungalow
Rock Lane
Troedyrhiw
Merthyr Tudful
CF48 4NL

A Scheme for
Biodiversity Enhancement
(Revision 2)

For

Mr Jonathan Mathias

May 2024

Morgan Ecology

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A Introduction and background

Permission has been granted for the creation of a first-floor office, and external balcony, above an existing garden store at the property known as Trevethick Bungalow, on Rock Lane, Troedyrhiw. The Consent (P/24/001), was granted by the local planning authority, Merthyr Tudful County Borough Council, on the 26th of February 2024, and includes a Condition (3), requiring that the owner provide a Scheme for Biodiversity Enhancements prior to the commencement of work.

The request for the Scheme is to comply with Future Wales, and Planning Policy Wales 12, which requires that all developments maintain and enhance biodiversity, in accordance with Policy EnW1, of the Merthyr Tydfil Replacement Local Development Plan. In addition to the condition for a Scheme for Biodiversity Enhancement, two informative notes were also included in the planning consent, with respect to bats and nesting birds.

Presently, the property comprises of a detached dormer bungalow, with adjacent detached garage, to which has been added a single storey storeroom. It is intended to extend this storeroom upwards, to provide a first-floor home office for the use of the owner. The property is within a mature established garden, sandwiched between Rock Lane, and Cardiff Road, and the surrounding area to the south-west is relatively level, with the railway line between Cardiff and Merthyr and the Afon Taf being the most obvious features.

This Scheme for Biodiversity Enhancements is prepared to comply with Condition 3: it takes into consideration the likely presence of species in the vicinity, and the desire of the owner to contribute to encouraging wildlife in the community of Troedyrhiw.

B Existing value for biodiversity

As noted above, Trevethick Bungalow stands within a mature garden accessed off Rock Lane. The garden, which slopes to the south-west, is dominated by managed lawn, but there are also mature trees, and the owner has made efforts to plant hedges around the boundaries, which will benefit wildlife. An apple tree has also been planted in the garden, which will have value to bees, and other insects. It is intended that all trees, on the north-western boundary, will be retained.

Surrounding land use largely comprises ribbon development of domestic dwellings along Cardiff Road, to the north. The land to the east rises relatively steeply to Mynydd Cilfach yr encil, which is predominantly open common land, and which is gradually, being colonised by scrub woodland. Further along Cardiff Road, to the south, is Coed St Tydfil, a woodland managed by Natural Resources Wales (NRW), and which rises steeply to the open common above. The railway line parallels Cardiff Road at this point, as does the Afon Taf. Land use to the west is mainly wooded, with some playing fields/recreational ground, and the A470(T) trunk road, beyond that.

There are no sites designated for nature conservation nearby, in the form of Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Area (SPA), Ramsar sites, or National Nature Reserves (NNR). The property is not designated in respect to its nature conservation value.

Presence of the Afon Taf, less than 250m away to the south-west, and the scrub woodland on the neighbouring hillside, just 50m to the north-east, means that the property lies between two habitats of value for wildlife. Although Cardiff Road, and the railway will limit the ability of wildlife to pass between these habitats, there are no insurmountable features to prevent animals moving between the two.

No dedicated record search has been undertaken in the provision of this document, but species known to be present nearby include west European hedgehog (*Erinaceus europaeus*), and Eurasian otter (*Lutra lutra*), along the Afon Taf.

Much of the Merthyr Tudful Council area lies within a B-line route. These are routes originally proposed by Buglife, as locations where particular efforts must be made to provide food plants for bees and other insect species. The presence of the property within such a route was therefore taken into account when considering the recommendations made in this document. In common with the situation nationally, insects are very under-recorded in the area.

C Timescale

The owner plans to commence the development in the spring of 2024, and it is likely that the work will be fully completed by the late summer/early autumn 2024. Many of the proposals made in this Scheme for Biodiversity Enhancements cannot readily be delivered to such a tight timescale, and it is therefore proposed that each enhancement will be delivered over a period of twelve months, with some components being put in place immediately following the discharge of Condition 3, and the rest being provided to the timeframe set out in Table 3 (below).

D Biodiversity enhancements

Enhancements will comprise of a mixture of habitat improvements, and the provision of specific measures for targeted species/species groups.

Habitat improvements

It is proposed that a minimum of two native trees/shrubs will be planted in the garden. These trees/shrubs must be bought from a local supplier, and be of native stock, to avoid the risk of plant diseases, which can be introduced with imported stock. Ideally these trees/shrubs will be planted near to existing trees/hedges, to enhance these features. A list of suitable garden trees is included in Table 1 below.

Table 1: Small garden tree and shrub species

Plant	Biodiversity benefits
Alder	Nectar for bees, and seeds for birds
Blackthorn	Nectar for bees, and seeds for birds
Bird cherry*	Nectar for insects, and seeds for birds
Crab apple*	Nectar for insects, seeds for birds and small mammals
Dog rose	Nectar for insects, seeds for birds
Dogwood*	Good for moths and caterpillars, birds
Elder	Nectar for insects, food for birds and small mammals
Field maple*	Food for insects, birds and mammals
Goat willow	Good for insects
Hawthorn	Food for insects, birds and mammals
Hazel	Food plant for small mammals
Holly*	Food plant for insects and birds
Rowan (Mountain ash)*	Food plant for insects and birds
Silver birch*	Seeds and invertebrates for birds

* Tree species which would be appropriate at Trevethick Bungalow

Of the species listed above, in Table 1, the planting of a crab apple (*Malus sylvestris*) tree is particularly recommended as it will be beneficial for wildlife, particularly for pollinating insects.

The site lies within a 'B-line', route, and as many of our insects, including pollinating bees, are struggling to cope with modern land use, and the consequences of climate change, the development offers an opportunity to benefit bees and other insects. Parts of the garden are suitable for cultivating flowering plants, either in borders or in pots/planters. An arrangement of at least 6 new perennial plants must be purchased and planted with appropriate soil preparation and aftercare. Even small corners can be used, to provide enhancements for insects.

Plants which can be included in this small-scale planting, and which will benefit insects at different times of year are listed in Table 2 below. Although tansy is included in the list, this can repel certain insects, but is good next to vegetable plots when it is desirable to discourage pest insect species.

Table 2: Plants for insects

Plant	Planting locations	Benefitting insects
Bugle (<i>Ajuga reptans</i>)	Garden edges, borders with shade	Native wildflower
Cornflower (<i>Centaurea cyanus</i>)	Garden edges, borders	Native wildflower
Foxglove (<i>Digitalis purpurea</i>)	Garden edges, borders	Native variety beneficial for bumblebees
Heather (<i>Calluna vulgaris</i>)	Garden edges, borders and rockery	Native wildflower
Meadow cranesbill (<i>Geranium pratense</i>)	Garden edges, borders	Native wildflower
Meadow scabious (<i>Knautia arvensis</i>)	Garden edges, borders	Native wildflower
Oxeye daisy (<i>Leucanthemum vulgare</i>)	Garden edges, borders with full sun	Native wildflower
Tansy (<i>Tanacetum vulgare</i>)	Garden edges, borders	Native wildflower, but can repel certain insects
Teasel (<i>Dipsacus fullonum</i>)	Garden edges, borders	Native wildflower beneficial for finches
Thymes (<i>Thymus drucei</i>)	Garden edges, borders	Native variety beneficial for insects
Toadflax (<i>Linaria vulgaris</i>)	Garden edges, borders	Native variety beneficial for insects
White campion (<i>Silene alba</i>)	Garden edges, borders, and walls	Native wildflower

Species specific measures

Given the south-westerly aspect of the garden, opportunities for nesting birds are limited. Nonetheless, a nest box must be put up on the mature tree near the existing garage, facing north so that it does not sit in direct sunlight, or suffer from an ingress of rainwater (the predominant weather in the area generally coming from the south-west. A suitable box, given the nearby scrub/woodland is a small diameter hole box made of woodcrete, for good longevity (see Plate 1). These boxes can be obtained from a variety of suppliers, but it is essential that whichever design box is obtained, that it is put at a height where it cannot be reached by a cat.

Many of our native insect species are struggling to find sufficient homes and food sources. In addition to the bird box, a bug hotel must be installed at the property: it can provide food for some invertebrates, and shelter for others, helping them survive and thrive. Having more of these beneficial insects in our gardens may also help in managing unwanted garden pests that wreak havoc on our plants and vegetable patches. Again, many different designs are available, but it is worth spending more money, and purchasing a better type because the cheaper boxes provide less protection for the insects using them. A suitable design is shown below (see Plate 2), and one must be placed in a sunny location, ideally facing towards the morning sun. Bug hotels can be mounted on buildings or trees, but the sunny location is a vital component in successful use of the box. Alternatively, a bug hotel can be built using odds and ends (often left over from constructing a building), and the Woodland Trust offer on-line advice on a suitable design (see Plate 3).

Given the likely presence of hedgehogs in the vicinity, a hedgehog house must be provided in the garden. Hedgehogs have declined massively since the 1950's, when it was estimated that there were 56 million in Britain. Today, census data indicates that there may be less than 1 million in the country, so a house can make a positive contribution to their conservation. A quiet and sheltered location is desirable under an existing hedge or near the existing mature trees. A suitable design is shown below (see Plate 4), but again, there are many commercial designs available which can be purchased.

Table 3: Timeframe for enhancement provision

Provided measure	Timeframe and deadline by which measures must be in place
Tree and shrub planting	Planting in late autumn/early winter 2024
Flowering plants	Planting in spring/summer 2024
Small diameter bird box	Spring 2024
Bug hotel	Spring/summer 2024
Hedgehog house	Summer/autumn 2024

It is important that all measures are in place before the end of 2024. Planting of trees and shrubs is focussed on the autumn/winter period, when plants are generally dormant, but will get plenty of rainwater during that time of the year. Other measures must be in place as soon as possible, although watering is likely to be important with any flowering plants introduced in summer. Any losses of the enhancement features within a 5-year period (until end of 2029) must be replaced.

E Site location plan

Figure 1: Site location plan (Trevethick Bungalow outlined in red)



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F Site enhancement measures

Plate 1: Suitable woodcrete 'Seville' small diameter nest box



Plate 2: Commercially available bug hotel



Plate 3: Woodland Trust bug hotel design



Plate 4: Hedgehog house



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Morgan Ecology provides ecological services with respect to bats and terrestrial mammals, and is based in Mid-Wales. It specialises in providing affordable, and expert services on protected species, for a wide range of clients.

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