

BIODIVERSITY ENHANCEMENT PLAN

Cefn Isaf Flats
Cefn Coed y Cymmer

Merthyr Tydfil
SO 03259 07698

ON BEHALF OF:

Merthyr Valleys Homes



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Report Author	Phoebe Williams	Ecologist
Report Reviewer	Carola Hoskins	Principal Ecologist



Directors Carola Hoskins BA (Hons) MSc ACIEEM
 Robert Morgan
 Phoebe Williams BSc (Hons) MSc
Registered Office Suite 131 -136, Plas y Ffynnon, Cambrian Way, Brecon LD3 7TG
Website www.justmammals.co.uk
E-mail Phoebe@justmammals.co.uk
Telephone 01874 623616
Registered in Wales
Registration Number 13099914
VAT No. 821 6376 35

1 Introduction

Cefn Isaf Flats are situated in the community of Cefn Coed y Cymmer, on the northern edge of Merthyr Tydfil. The flats are divided into two sections, the Upper north, and the Lower south, both of which are connected via external raised walkways. The flats are sited on land that slopes to the south, the area of which forms the site subject to assessment. It is centred on National Grid Reference SO 03259 07698, and it stands at an altitude of approximately 210m Above Ordnance Datum.

Proposals include the demolition of the existing flats, in order to redevelop the site for new housing. In order to comply with the Environment (Wales) Act 2016, a Biodiversity Enhancement Plan must be submitted and approved by the local planning authority. Just Mammals Limited has been commissioned to prepare the plan for Merthyr Valleys Homes, which is set out in this document.

No part of the site contains, or is within, any statutory sites of nature conservation interest, such as a Site of Special Scientific Interest (SSSI), Special Areas of Concern (SAC), National Nature Reserve (NNR) or Local Nature Reserves (LNR) etc. There are three sites of conservation interest within 2km of the site; Cwm Taf Fechan Woodland SSSI, approximately 320m north-east of the site, Cwm Glo a Glyndyrys SSSI, some 1.8km south of the site, and Penmoelallt SSSI, roughly 2km to the north-west.

2 Background Details and Site Assessment

Previous survey of the site includes a Preliminary Ecological Appraisal (PEA) conducted in October 2023, a Preliminary Roost Assessment (PRA) and subsequent dusk observation surveys initially undertaken in 2021, and refresher survey in 2022. Dusk observation surveys revealed the presence of a small number of pipistrelle bats roosting on an occasional basis. Overall, the site was considered to be of moderate ecological significance. On site habitat includes grassland, scrub, bare ground and hardstanding surrounding the flats. Currently, the site is bounded by Heras security fencing, in an attempt to reduce anti-social behaviour. Details of previous surveys at the site are provided in separate reports by Just Mammals Limited (2021, 2022 and 2023).

3 Enhancements for Biodiversity

Development proposals include the demolition of the flats, and redevelopment of the site to build new flats for local housing needs.

Welsh Government policy, to deliver improvements for biodiversity, takes an approach to consider diversity, extent, condition, connectivity, and aspects of ecosystem resilience. This framework, known as DECCA is a qualitative based process, rather than a metric or quantity system, which has been introduced to England. The elements for enhancement at Cefn Isaf include provision for bats, birds and invertebrates. Landscaping also includes the planting of native hedgerow and the creation of wildflower areas. A green roof is proposed, to greatly enhance biodiversity at the site.

3.1 Bats

Due to the presence of roosting bats at the site, mitigation will be required as part of the licence process and includes short term and long term mitigation suitable for crevice dwelling species.

Short term mitigation will form part of the licenced works, and will in turn provide enhancement to the site after the works. Due to the absence of suitable trees on site, two pole mounted bat boxes are recommended, such as the Eco Rocket Bat Box (or similar agreed). Bat boxes must be positioned prior to the start of any demolition/development activity, and will remain in situ following the completion of the works. The boxes must be accessed with a Mobile Elevated Work Platform (MEWP), so that any bats found during the demolition works can be safely relocated to the bat boxes. A southern, south-eastern or south-western elevation with exposure to the sun for part of the day must be chosen. Boxes must be positioned away from artificial light sources. It is recommended that boxes are positioned at the south-east/eastern corner of the site, within the designated dark zone (as proposed below).

Long term mitigation will be provided within the exterior of the new buildings, and will form part of the European Protected Species Licence required for the works once planning permission has been granted. Long term mitigation will likely include the provision of two integrated bat boxes, such as the Ibstock Enclosed Bat Box (or similar). Integrated bat boxes must be positioned as high as

possible, in a sheltered, sunny location. It is recommended that these boxes are positioned at the south/ south/east and eastern side of the new built. Boxes must be away from artificial light sources.

A designated dark corridor must be retained/ created at the site, to ensure light sensitive species can continue to use the site for commuting purposes. During the bat surveys carried out at the site, a small number of lesser horseshoe (*Rhinolophus hipposideros*) bats were seen using the dark central section of the site to commute across the landscape. As such, a suitable lighting plan with a designated dark zone must be incorporated into the plans and proposals. This area is recommended at the eastern end of the site, where no pathways are proposed. The lighting plan must be drawn up with reference to Bats and Artificial Lighting in the UK: Guidance Note 08/23. Consideration to internal lighting and how this limits light spill must be included. No external lighting must be provided in this area of the site.

3.2 Birds

Two bird boxes including a single woodcrete bird box with a small 32mm diameter hole (Woodstone Seville 32mm Oval Hole Nest or similar), and an open fronted woodcrete bird box (Vivara Pro Barcelona WoodStone Open Nest Box or similar) must be installed at the site. Suitable locations for nest boxes must avoid predatory cats and full sunlight. Bird boxes can be attached to new buildings or posts. Boxes must be situated approximately 3m from the ground and angled to face horizontally or downwards to ensure rainwater does not accumulate in the boxes. Boxes must be positioned between a northern and eastern axis, avoiding strong sunlight and prevailing wind/rain. Boxes must not be positioned too close together.

Four swift bricks must be incorporated into the exterior of the buildings. Swift bricks must be positioned at least 5m above the ground, and out of constant sunlight. These should not be placed near windows. They are proposed to be sited at the north and or/north eastern elevations of the new builds.

3.3 Landscaping

Proposals must include the planting of hedgerow along site boundaries. This must ensure connectivity across the site, and will enhance biodiversity by increasing the floral diversity on site, thereby increasing the diversity and abundance of invertebrates and their predators. Species used must be native, with a mix of at least five different species. Native tree planting is also proposed at the site and must be incorporated into plans. A list of suitable species which can be planted as part of the landscaping proposals includes; aspen (*Populus tremula*), beech (*Fagus sylvatica*), bird cherry (*Prunus padus*), blackthorn (*Prunus spinosa*), common barberry (*Berberis vulgaris*), crab apple (*Malus sylvestris*), dogwood (*Cornus sanguinea*), eared willow (*Salix aurita*), elder (*Sambucus nigra*), field maple (*Acer campestre*), goat willow (*Salix caprea*), grey willow (*Salix cinerea*), guelder rose (*Viburnum opulus*), common hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), holly (*Ilex aquifolium*), pedunculate oak (*Quercus robur*), purging buckthorn (*Rhamnus cathartica*), rowan (*Sorbus aucuparia*), sessile oak (*Quercus petraea*), silver birch (*Betula pendula*), spindle (*Euonymus europaeus*), wild cherry (*Prunus avium*), wild privet (*Ligustrum vulgare*) and yew (*Taxus baccata*). It is essential that such plants are sourced locally in order to reduce likelihood of importing diseases.

To increase plant diversity across the site, wildflower areas must be created, for which the use of Emorsgate EM2 Standard General purpose is proposed. This will require good preparation of the ground (details of such advice can be found at Emorsgate Seeds website). Wildflower areas must be left to grow naturally, in order to create an environment with different levels of vegetation, which will help encourage a greater diversity of fauna. Regular mowing to maintain a short sward must be avoided. Following establishment, a maximum of two cuts per year is advocated, a single cut is the preferred option at the end of summer, followed by a second cut in early spring if required. An early cut may be needed to control dominant grasses, which will otherwise compete and crowd out wildflowers. Cuttings should be raked off into discrete habitat piles, or completely removed and placed into a single pile elsewhere on site to provide additional habitat for wildlife.

It will be beneficial to create water habitats on site following the works. This can be done through creating sustainable drainage systems, for example swales, or through the provision of small wildlife ponds. The ponds must not be stocked with fish. The perimeter of the pond must be seeded with Emorsgate Pond Edge Mixture.

3.4 Bee Bricks

At least four bee bricks must be installed within the exterior of the new buildings. It is recommended that these bee bricks are positioned at the upper limit of the building, just below the green roof. The

bricks must, however be at least 1m high, with no upward limit, and must be positioned on southern elevations, in a sunny location.

3.5 Green Roof

The provision of a biodiverse green roof will enhance the existing ecological value of the site by providing food sources and habitat for invertebrates, which in turn will benefit other wildlife including bats and birds. The green roof must be seeded/plugged with locally sourced, native seeds/plants. A green roof will be created above both of the separate flat blocks. Species must include common bird's-foot trefoil (*Lotus corniculatus*), thyme (*Thymus polytrichus*), wild marjoram (*Origanum vulgare*), selfheal (*Prunella vulgaris*), cowslip (*Primula veris*), ox-eye daisy (*Leucanthemum vulgare*), yarrow (*Achillea millefolium*), hawkbits (*Leontodon spp*), and wild strawberry (*Fragaria vesca*). The inclusion of sedum must comprise no more than 30% of the species composition of the green roof, with the remainder made up of wildflowers, as sedum based systems are considered to be less diverse.

The green roof must feature variation in substrate depth, to create a biodiverse roof. Thin areas of substrate will provide bare areas for invertebrates, in addition to deeper layers this will create structurally diverse vegetation for a variety of invertebrates. Areas made up of spoil materials must be provided. These sparsely vegetated areas of crushed stone, brick, rocks or gravel will warm up quickly and provide ideal conditions for basking invertebrates. Any spoil material used must be appropriately screened and load implications considered. Unscreened materials can lead to problems with unwanted species.

In order to maximise biodiversity, additional features must be included within the green roof, such as log piles/ deadwood to provide shelter/nesting sites for invertebrates, and small waterbodies created by undulations or use of shallow containers on the roof to retain water.

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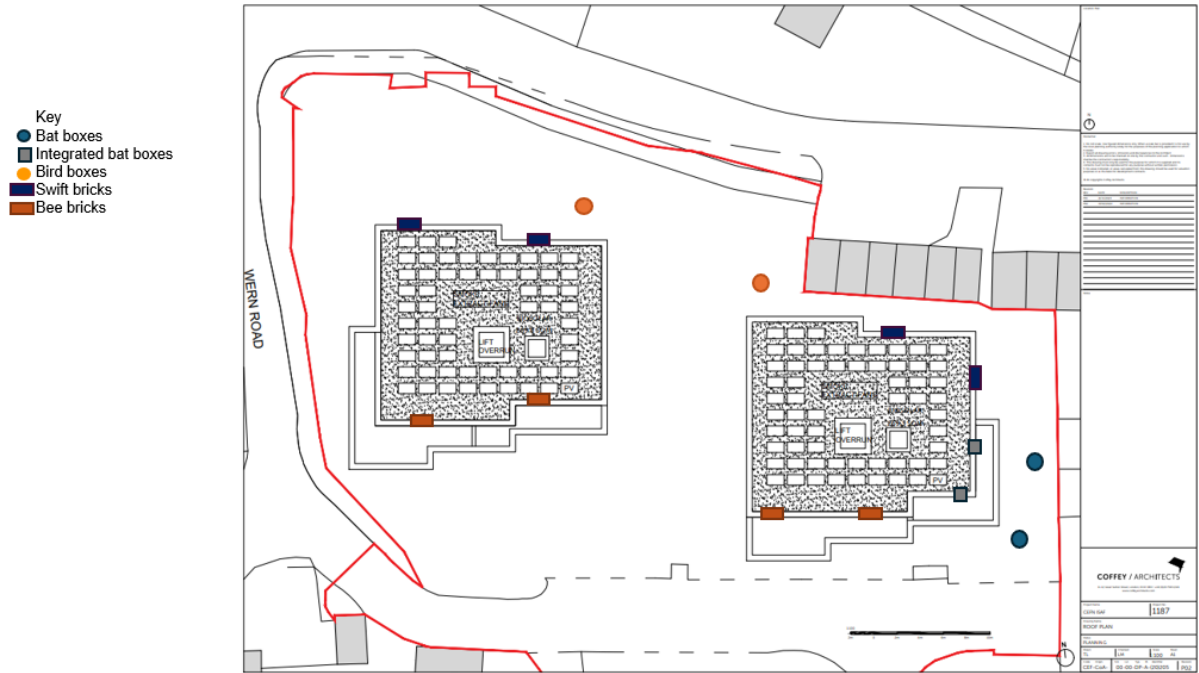
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Appendix I Biodiversity Enhancements

Figure 1: Plan showing proposed location of biodiversity enhancements



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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.



Natural Problem Solvers
Just Mammals Limited, Suite 131-136, Plas y Ffynnon, Cambrian Way,
Brecon LD3 7HP Tel: 01874 623616