

DAVID CLEMENTS ECOLOGY LTD

**GLASIER ROAD, MERTHYR TYDFIL
PRELIMINARY ECOLOGICAL ASSESSMENT**

August 2024

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SUMMARY

- The site lies within a semi-rural area within the southern section of the town of Merthyr Tydfil. The habitats present include dense scrub, semi-improved neutral grassland, scattered small broadleaved trees and a hedgerow with trees. There is also a short dry ditch and underground culvert.
- The site does not contain or lie adjacent to any statutory sites of biodiversity interest, such as SSSIs, NNRs or LNRs etc. The nearest such site of Cwm Glo a Glyndyrys SSSI is located 735m to the west.
- The site does not contain or lie immediately adjacent to any non-statutory sites of nature conservation interest such as SINCs, WTRs or RIGS. There are four SINCs within 1km of the site, the nearest of which is 280m to the west.
- The site is proposed for the clearance of the current scrub habitats, and the creation of a wetland area including a pond.
- The hedgerow qualifies under ‘Section 7’ of the Environment (Wales) Act 2016 as one of the ‘habitats of principal importance’ for biodiversity conservation in Wales. The scrub habitats, hedgerow and all the trees of the site also provide suitable habitat for common nesting birds.
- No specially protected, ‘Section 7’ (i.e. ‘Priority’) or nationally rare or scarce plant species are recorded on the site to date.
- Resident fauna species with various levels of protection are likely to comprise nesting bird species, and potentially common reptiles. Hedgehog is likely to occasionally commute and forage across the site, and may utilise the dense scrub areas for hibernation.

Evaluation

- The hedgerow of the site is considered to be Section 7 habitat. Therefore, it is considered to be of High Local value.
- All other remaining habitats are assessed as being of no greater than Local value for wildlife

Implications of the Development Proposals

- The main impact of site clearance would be the potential disturbance of any nesting birds present, if left unmitigated. Hibernating hedgehog could also be affected.
- However, the loss of the habitats likely to be affected by site clearance, are of no greater than Local value, and therefore the impacts are unlikely to have significance beyond the local context. These impacts would therefore be of low significance.
- Any artificial lighting within the site, which can adversely affect activity by a variety of fauna, particularly foraging bats, nesting birds and invertebrates, should be in accordance with the current Bat Conservation Trust (BCT 2023) guidance.
- Appropriate mitigation measures are recommended along with additional opportunities for the enhancement of the site for wildlife.
- Provided adequate mitigation measures are implemented to avoid or minimise impacts to the identified protected species and features of interest, it is considered on current evidence that the proposed site clearance and habitat creation of this site would not be unacceptably constrained by biodiversity and nature conservation issues.

1.0 INTRODUCTION

Report prepared by:

1.1 David Clements Ecology Ltd (DCE), Glamorgan

On behalf of:

1.2 Merthyr CBC

Instructed via:

1.3 Hannah Collis

Site Name

1.4 Glasier Road, Merthyr Tydfil

OS Grid Reference

1.5 Centre of site: SO 05505 05469

Elevation & Aspect

1.6 The site lies at approximately 190-195m ASL.

Location & Extent

See Plan 1

1.7 The site is approximately 0.37ha in extent and lies within the town of Merthyr Tydfil, South Wales.

Brief Description of Site

1.8 The site comprises a relatively small area of dense vegetative habitats, including dense scrub, semi-improved neutral grassland and a hedgerow with trees. Immediately adjacent to the site is a small area of woodland to the northwest, a footpath and managed public grasslands to the northeast, a small disused area of hardstanding to the southwest, and metal fencing followed by Glasier Road to the southeast.

Site Context

1.9 The site lies within the southern section of the town of Merthyr Tydfil, in a relatively small area of scrub, grasslands and woodland habitats, which is mainly encompassed by residential areas. Glasier Road is adjacent to the southeast boundary of the site, with an area of managed grassland and a children's park directly across the road.

Designated Wildlife Sites in the Vicinity

See Appendix 1

Statutory Sites

Data from South East Wales Biodiversity Records Centre (SEWBRc)

1.10 The site does not contain or lie immediately adjacent to any statutory sites of biodiversity interest, such as Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) or Local Nature Reserves (LNRs) etc. However, Cwm Glo a Glyndyrys SSSI is located 735m to the west of the site. There are no other statutory sites within 2km.

Non-statutory Sites

- 1.11 The site does not contain or lie immediately adjacent to any non-statutory sites of nature conservation interest such as Sites of Importance for Nature Conservation (SINC), Wildlife Trust Reserves (WTRs) or Regionally Important Geological Sites (RIGS). Several SINCs lie within 1km, their approximate distances are as follows:

- Afon Taf SINC, 280m west
- Rhydycar West SINC, 725m southwest
- Glynmil SINC, 810m east
- Cwm Glo SINC, 930m west

There are also 22 parcels of ancient semi-natural woodland and two restored ancient woodland sites within 2km of the site.

Site Development Proposals

See Fig 1

- 1.12 The site is proposed for the clearance of the current scrub habitats, and the creation of a wetland area including a pond.

Purpose of Surveys

- 1.13 The present survey comprises a baseline Extended Phase 1 ecological assessment (also known as a Preliminary Ecological Appraisal or PEA) carried out in order to establish the present ecological interests of the site and an assessment of the likely ecological impacts of the proposed site clearance and habitat creation on the site. Recommendations are made regarding suitable mitigation and compensation measures, together with any requirements for further, additional survey where necessary.

Existing Records

Data from South East Wales Biodiversity Records Centre (SEWBRcC)

- 1.14 In addition to original survey, a data trawl was carried out with the local environmental records centre (LERC) in order to obtain access to any existing ecological information or records from the site. Data was provided via Aderyn, which is the main repository for biodiversity and wildlife records in the region. Relevant records are referred to in the descriptive text; (LERC Ref: 0245-320).

Survey Methods

See Appendix 2

- 1.15 The site was subject to an Extended Phase 1 ecological survey suitable weather conditions on 24th July 2024, carried out in accordance with the recommendations of the Chartered Institute of Ecology and Environmental Management (CIEEM 2017) and based on a custom modification of the Phase 1 Habitat Survey methodology developed by the former Nature Conservancy Council (JNCC 2010).

The habitats and features of the site were assessed against the criteria set out at Appendix 2.

Survey Constraints

- 1.16 The scrub of the entire site was very dense, so following nesting bird checks, small paths were created through the vegetation in order to assess the site. In order to minimise disturbance, these paths were purposefully limited in number, width and length.

2.0 SURVEY RESULTS

A Habitats & Vegetation

See Plan 2

A2.1 Lists of the plant species recorded are given at Appendix 3.

Priority & Notable Habitats

See Appendix 1

A2.2 The hedgerow of the site is considered under Section 7 of the Environment (Wales) Act 2016 (EWA) as one of the ‘habitats of principal importance for conservation in Wales (also referred to as ‘priority habitats’; see WBP 2016a).

Protected, Priority & Notable Plant Species

See Appendix 1

A2.3 No protected, ‘priority’ (i.e. ‘species of principal importance for the conservation of biodiversity in Wales’, as listed under Section 7 of the EWA 2016 (see WBP 2016b) or nationally rare or scarce plant species have been recorded from the site to date.

Invasive Non-native Plant Species

See Appendix 1

A2.4 Japanese knotweed (*Fallopia japonica*), cotoneaster (*Cotoneaster* sp.), montbretia (*Crocsmia x crocosmiiflora*) and rhododendron (*Rhododendron ponticum*) have all recently been recorded less than 1.3km from the site. Japanese knotweed in particular has been recorded extensively around the site, with three records surrounding the site between 47-68m away.

Japanese knotweed was noted 38m away from the site to the east during the present survey. Although none was noted on the site itself, due to the extremely dense vegetative nature of the site, and the close proximity of known records and observations, it’s possible that such a species may be present within the extremely dense inaccessible parts of the site.

All such species are listed on Schedule 9 of the Wildlife & Countryside Act 1981, and it is an offence to allow the spread of these species into the wild, whether accidentally or deliberately. However, none such species have been recorded on site to date.

Description of the Habitats & Vegetation

See Plan 2

Dense Scrub

A2.5 The site is dominated by dense scrub, with the majority of the site made up entirely of 1.5 - 2m high bramble (*Rubus fruticosus* agg.). Visible grown flora in amongst the bramble include common nettle (*Urtica dioica*) and rosebay willowherb (*Chamerion angustifolium*). In other parts of the dense scrub are small trees including hazel (*Corylus avellana*), rowan (*Sorbus aucuparia*), hornbeam (*Carpinus betulus*), sessile oak (*Quercus petraea*), aspen (*Populus tremula*), holly (*Ilex aquifolium*), hawthorn (*Crataegus monogyna*), alder (*Alnus glutinosa*) and willow (*Salix* sp.). The majority of these trees are grouped together towards the north of the site.

Semi-improved Neutral Grassland

In the centre-north of the site is an area of grassland with some scattered scrub, where the bramble thins out and numerous other species are present. Bramble is still abundant as is rose (*Rosa* sp.), but there is frequent common ragwort (*Jacobaea vulgaris*), creeping thistle (*Cirsium arvense*), upright hedge-parsley (*Torilis japonica*), meadow vetchling

(*Lathyrus pratensis*), self heal (*Prunella vulgaris*), Yorkshire fog (*Holcus lanatus*), false oat-grass (*Arrhenatherum elatius*) and creeping cinquefoil (*Potentilla reptans*), with occasional common knapweed (*Centaurea nigra*) and common bent (*Agrostis capillaris*). A small crab apple tree (*Malus sylvestris*) is also present here.

A few black and yellow meadow ant hills were noted in this grassland area.

Hedgerow with Trees

- A2.6 To the southeast of the site lies a thick hedgerow containing plentiful semi-mature trees. Tree species include white poplar (*Populus alba*), aspen, willow and a cherry species (*Prunus* sp.). Smaller trees and scrub within the hedgerow include rose, hawthorn, bramble, with occasional cleavers (*Galium aparine*) and a small amount of bracken (*Pteridium aquilinum*), as well as some ivy (*Hedera helix*).

Dry Ditch and Culvert

- A2.7 In the north of the site is a small dry ditch, between the dense scrub and the immediately adjacent gravel path all along the northern boundary. This small area includes numerous species, including charlock (*Sinapis arvensis*), hairy tare (*Vicia hirsuta*), common ragwort, great willowherb (*Epilobium hirsutum*), creeping thistle, zigzag clover (*Trifolium medium*), dock (*Rumex* sp.), creeping buttercup (*Ranunculus repens*), lesser swine-cress (*Coronopus didymus*), prickly sow-thistle (*Sonchus asper*) as well as bramble.

In the north of the site there is a horizontal metal grate covering an underground culvert (see Target Note, Plan 2).

B Fauna

- B2.1 Fauna species recorded from the site are listed at Appendix 3.

Protected, Priority & Notable Fauna Species

See Appendix 1

- B2.2 No protected species are currently recorded from the site. There is, however, plentiful suitable habitat for nesting birds, including very dense areas of scrub in the majority of the site, where an old bird's nest was seen during the present survey. There are also numerous semi-mature trees in the hedgerow in the southeast of the site, which also provide suitable habitats for nesting birds.

No resident 'priority species', i.e. those listed on Section 7 of the Environment (Wales) Act 2016 as being of 'principal importance for the conservation of biodiversity in Wales', are recorded from the site to date. It is, however, possible that species such as or common reptiles and amphibians may occur on occasion.

No nationally rare or scarce fauna species are recorded from the site to date.

Description of the Fauna

Bats

- B2.3 All species of bat and their roosting sites are protected under the Conservation of Habitats & Species Regulations 2017 (the 'Habitats Regulations' – See Appendix 1). The roosting

places used by bats are also protected against unauthorised disturbance or obstruction under the amended Wildlife & Countryside Act 1981. Several bats are listed as priorities for conservation under Section 7 of the Environment (Wales) Act 2016.

There are plentiful records of bats from within a 2km radius of the site, the closest record being that of an older bat roost record from 2005, of an unspecified species, 80m away from the site. Other records for roosts include common pipistrelle 280m away, and a lesser horseshoe roost 1.16km away from the site. There are other but older records for bat roosts including a long-eared bat species and a pipistrelle species in the former but now demolished buildings of St Tydfil's Hospital, 980m away from the site. The closest commuting and foraging records include common and soprano pipistrelle 170m from the site, with other species such as brown long-eared bat, noctule, myotis species and greater horseshoe bat recorded within 2km of the site.

It is likely that the site is used by common commuting and foraging bat species, particularly along the hedgerow and small woodland area adjacent to the site. The semi-mature trees in the hedgerow in the southeast of the site could offer roosting potential for bats. It is currently unknown if these trees are to be affected by the habitat clearance of the site.

Otter

- B2.4 Otter is also a 'Habitats Regulations species' afforded legal protection which is similar to that of bats (see above). It is also a 'Section 7' listed species.

There are few records for otter from within 2km of the site, with most of them being over 14 years old. These records are generally all associated with the River Taff, which is situated closest at approximately 340m away. There are multiple residential areas and an active railway line in between the site and the River Taff. However, there is also a single recent record for a dead otter 1.9km from the site.

There is a lack of suitable aquatic habitat or suitable habitat for otter resting places within the site itself, as well as the surrounding areas. To the immediate northeast of the site are multiple public footpaths and managed grasslands; to the southeast and southwest are metal railings and fences that could not be passed by otter. Combined with the lack of records and the levels of disturbance, it is considered unlikely that this species would occur within the site.

Dormouse

- B2.5 Dormouse is also a 'Habitats Regulations species' afforded legal protection which is similar to that of bats (see above). It is also a 'Section 7' listed species.

There are no records for dormouse within 2km of the site. Although the hedgerows and dense scrub of the site offer connected habitat to other areas, these areas are relatively small and surrounded by dense residential areas. There is also a lack of a range of suitable food species present for dormouse. Therefore it is considered unlikely that this species would occur within the site.

Badger

- B2.6 Badger is fully protected in the UK under the terms of the Protection of Badgers Act 1992, which includes its nesting sites (see Appendix 1). Current interpretation of the Act also infers a degree of protection to areas which are of key significance to foraging badgers.

There are three records for badger between 1.67 - 2km from the site, all relating to road casualties.

No evidence of badger was found within the site during the present survey. This species could possibly enter the site adventitiously while foraging or commuting, although there is no evidence to date that it does so, therefore the probability of such occurrence is considered to be low.

Other 'Section 7' Listed Mammals

- B2.7 Hedgehog is recorded in multiple locations within 2km, the closest record being 375m away. This species could possibly occur on the site itself while foraging or commuting, and the dense scrub of the site may provide suitable habitat for hibernating individuals.

Polecat has been recorded 1.7km from the site. Although the site provides some suitable habitat and food sources, the levels of disturbance may deter this species from entering the site.

Other Mammals

- B2.8 A range of common and ubiquitous mammals is likely to occur on the site. These are likely to comprise a mixture of resident synanthropic species such as brown rat and house mouse, and visitor species such as fox, grey squirrel, rabbit and mole etc.

Birds

- B2.9 Nearly all bird species are protected against killing or injury as individuals, and this protection extends to their nests, eggs and young. A number of especially rare species are subject to enhanced protection and may not be disturbed whilst nesting without authorisation ('Schedule 1 species' - see Appendix 1). Many bird species are listed as being of 'red list' (i.e. high) or 'amber list' (i.e. medium) conservation status either in Wales and/or in the wider UK (RSPB 2021; 2022), with several of these also being listed as being of 'principal importance' for conservation in Wales.

There do not appear to be any bird records to date from the site itself, however there are a wide range of bird species recorded from within a 2km radius of the site. Many of these records are likely to be associated with the woodlands and open countryside within the local vicinity of the site, but also include a range of common species from within the surrounding residential areas.

There are multiple records for Schedule 1 species within 2km of the site, the nearest record pertaining to kingfisher over the River Taff, roughly 390m from the site. There are also multiple records for Section 7 species with 2km, including herring gull, house sparrow, lesser redpoll, song thrush, dunnoek, starling, bullfinch etc. Some of these species are likely to be nesting within or nearby the site.

During the present survey, a wren was spotted on a small tree within the dense scrub habitats of the site, and robin, blue tit, great tit, magpie, chiffchaff and goldcrest were heard singing in/very near the site. A small old nest was also noted within the dense bramble scrub of the site. All of the habitats of the site provide suitable habitat for nesting birds, and they are likely to support a wide range of common species.

Reptiles

- B2.10 Four native reptile species occur in South Wales, comprising common lizard, slow-worm, adder and grass snake. These four species are all afforded so-called 'partial protection'

under the amended Wildlife & Countryside Act 1981, which prohibits the deliberate killing or injury of individuals. However, there is no direct protection extended to the habitats which support these species. All four common reptiles are listed as ‘Section 7’ species in Wales.

Slow-worm has been recorded 800m from the site, whilst common lizard and grass snake have been recorded 1.07km and 1.4km of the site respectively.

The dense habitat edges at the boundaries of the site could provide suitable commuting habitat for common reptiles, as well as offer shelter or hibernation opportunities. There are multiple grassland areas directly adjacent to the site to the northeast, and small numbers of reptiles such as slow-worm are likely to occur here. However, due to the high levels of disturbance and multiple paths intersecting the grasslands and the site boundaries, combined with the very dense habitats of the site itself, it is not considered likely to support a significant population of reptiles.

Amphibians

- B2.11 Five native amphibian species occur in South Wales, comprising common frog, common toad, smooth newt, palmate newt and great crested newt (GCN). The latter species is a nationally rare and declining ‘Habitats Regulations’ species afforded full protection under UK legislation, which also extends to the habitats which support it. The other four species are not afforded any direct statutory protection, other than with respect to trade. Common toad is listed as a ‘Section 7’ species in Wales (see Appendix 1).

Great crested newt, common toad, common frog and palmate newt have all been recently recorded within 2km of the site. The closest record relates to the specially protected GCN that has been recorded 1.12km from the site.

The adults of these species could potentially occur on the site in less disturbed and shaded locations, such as the habitat edges of the site. There are no obvious aquatic habitats suitable for breeding use by any amphibian species within the site itself, however, it was noted that the site has a relatively steep incline and there may be more suitable wetter areas to the southwest of the site. Whilst such species may occur on site, the occurrence of the specially protected GCN on the site as a casual visitor is considered unlikely.

Invertebrates

- B2.12 Upwards of 37,000 species of terrestrial and freshwater invertebrates are recorded in Britain, including around 29,000 insect species, occurring in every available habitat. About 40 invertebrate species are afforded full statutory protection in the UK, and many other species are accorded varying levels of conservation significance (see Appendix 1).

There are a number of existing invertebrate records for the area around the site. These include numerous rare, scarce and declining species, some of which are considered to be of ‘principal importance’ for conservation in Wales. There do not appear to be any records of such species to date from the site itself, however.

Common wasp as well as a few black and yellow meadow ant hills were noted during the present survey. There is no reason to expect any rare or notable species to occur, however.

3.0 ECOLOGICAL ASSESSMENT OF THE SITE

See Plan 3

- 3.1 There is currently no nationally accepted system for the categorising of sites or features of biodiversity significance below the level of national value, criteria for which are set out by the former Nature Conservancy Council (1989, as amended by JNCC 2019 *et seq.*). However, guidance for the identification of non-statutory sites of county significance (i.e. SINC's) is available in this instance (WBP 2008).

For the purposes of this study the habitats and features of the site have therefore been evaluated and graded in accordance with the categories set out in Appendix 2.

High Local Value

- 3.2 The hedgerow of the site is considered to be a Section 7 habitat, therefore it is considered to be of High Local value.

Local Value

- 3.3 All other habitats are currently assessed as being of no greater than Local value for wildlife.

4.0 IMPACTS OF DEVELOPMENT

Development Proposals

- 4.1 The site is proposed for the clearance of the current scrub habitats, and the creation of a wetland area including a pond.

Potential Impacts of Development

- 4.2 The main impact of site clearance would be the potential disturbance of any nesting birds present. Nesting birds could be impacted, all species of which are afforded statutory protection, if any dense scrub, trees or hedgerows are accidentally or deliberately disturbed during nesting bird season. Unauthorised, reckless harm, damage or disturbance to either individual birds, their nests, eggs or chicks, would be an offence under current legislation.

Occasional mammal visitors such as commuting/ foraging hedgehog could be harmed by the works, if left unmitigated. The dense scrub of the site also provides suitable hibernating habitat for hedgehog. Appropriate site clearance timings, as well as suitable fencing/ escape measures, e.g. a gently sloped plank in any trenches to provide an escape ramp, will need to be installed to ensure that no such fauna will be able to enter, or are not prevented from escaping the site while the pond creation is being carried out.

Common reptiles such as slow-worm are likely to be present or frequent the habitats directly adjacent to the site, albeit in small numbers. Site clearance could cause deliberate killing or injury of these species present, if left unmitigated.

Any retained habitats around the development site periphery are likely to be subject to temporarily increased levels of disturbance during site clearance and works, such as noise, lighting and increased vehicle/ human traffic. However, any negative impacts can be reduced through mitigation.

Significance of Development Impacts

- 4.3 Any clearance works affecting the scrub, hedgerow or trees on site could adversely affect nesting birds if unmitigated. The hedgerow is considered a Section 7 habitat, therefore it should be retained and protected during site clearance and works.

The dense scrub and hedgerow present also provide suitable habitat for commuting and foraging bats, as well as commuting and/ or hibernating hedgehog. The dense scrub northern boundary also provides limited suitable habitat for common reptiles. The scrub habitats likely to be directly affected by the site clearance and habitat creation are considered to be of no greater than Local value, however, and therefore the impacts are unlikely to have significance beyond the local context. These impacts would therefore be of low significance.

Mitigation & Compensation Measures

- 4.4 The hedgerow is a Section 7 habitat, and as such is assessed as having High Local value. If the removal of the habitat is required as part of the site clearance, then additional mitigation and compensation measures will also be required, i.e., the creation of a new hedgerow.

Mitigation measures for nesting birds and hedgehog and will be required as part of this site clearance and habitat creation. These mitigation measures should be achievable as part of the site works, through a combination of appropriate programming and/or adequate pre-inspection at the time of the works.

There are also additional opportunities for enhancement of the site for wildlife. For example, bat-boxes and bird-boxes could be installed on nearby trees including within the site's hedgerow, for use by roosting bats and nesting birds. Any new grasslands of the site could be managed in a wildlife-friendly way, so as to encourage the development of a taller, more species-rich sward which would benefit many fauna species such as pollinators and other invertebrates. Tree planting to compensate for the loss of any small trees, should also be provided on a 3-to-1 basis as a minimum.

Other specific ecological enhancements in addition to the habitat creation on the site, should be included to incorporate green infrastructure which seeks to deliver a net benefit for biodiversity. In addition, the site design should address ecosystem resilience by maintaining or improving habitat connectivity of the site with the wider environs. For example, maintaining the hedgerow around the site will facilitate habitat connectivity.

Any use of temporary or permanent artificial lighting should be designed in accordance with the guidance provided by the Bat Conservation Trust¹.

Summary: Acceptability of Development Proposals

- 4.5 Provided adequate mitigation measures are implemented to avoid or minimise impacts to the identified protected species and features of interest and to mitigate for the loss of priority habitats, it is considered on current evidence that the proposed site clearance and habitat creation would not be unacceptably constrained by biodiversity and nature conservation issues.

¹ See <https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting>

5.0 RECOMMENDATIONS

Statutory Obligations

- 5.1 Any development must seek to avoid causing adverse impacts to protected species which might possibly occur on the site, such as:

- Nesting birds
- Hedgehog
- Common reptiles

Nesting Birds: Any clearance works affecting the any dense scrub/ trees/or grassland on site should avoid the main bird-nesting season which runs approximately from March to August inclusive. If works must be carried out during this period, they must be preceded by a nesting bird survey. If nesting birds are found to be present, the nest and immediate area, should be protected until the young have fledged. Any scrub, small trees or bramble must be cleared to approximately 200mm height during the winter period, ie between November to February inclusive, with the arisings being removed from the site for disposal elsewhere. These methods should act to deter any tree or scrub-nesting species from attempting to nest during the spring.

Hedgehog: The potential presence of hibernating hedgehog must be considered if clearing dense scrub from November to March, dense vegetation should be reduced to a minimum of 200mm during this period. Consideration for the potential presence of hedgehogs must also be taken from March to October when clearing suitable nesting habitat such as piles of deadwood and dense vegetation (PTES 2019).

Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each workday to prevent hedgehogs and other small mammals entering/becoming trapped. In addition, any trenches >0.5m in depth will either be covered at night or will be left with a gently sloped plank (or similar) running from the bottom to the surface to act as an escape ramp for any fauna which may fall in.

Common reptiles: As with nesting birds, the contractors should remain vigilant to the possibility of their occurrence and should check carefully beneath any potential sheltering areas which may be affected prior to carrying out their removal. Certain ground works including the removal of rubble piles and other habitats that could be used by reptiles for shelter and/ or hibernation must be take place outside of the reptile hibernation period (normally October/ November – March/ April inclusive).

Other Recommendations

- 5.2 A Wildlife Protection Plan (WPP) should be drawn up for the site clearance and construction stages, setting out detailed measures to ensure that the identified interests, potential interests and statutory obligations etc are appropriately treated, and identify the individuals who will be responsible for ensuring that the ecological mitigation requirements are met. The WPP should be agreed in advance by the Local Planning Authority Ecologist, with responsibility for its implementation assigned to an appropriately qualified and/or experienced member of the development team who would act as an 'Ecological Clerk of Works'.

The hedgerow of the site is considered a Section 7 habitat, and as such is assessed as having High Local value. It is not currently known if this hedgerow will be affected by the site works. The removal of such hedgerows as part of the site clearance and habitat creation should be replaced on a 3-to-1 basis as a minimum to compensate, with native

species which are indigenous to the region, and from stock which is of local (or at least UK) provenance (see Appendix 4 for example species).

Any retained habitats should be securely fenced off with appropriate temporary fencing (eg ‘Heras’ fencing) at the start of site clearance work to prevent access and incidental damage by site vehicles, equipment and personnel.

Contractors should be provided with a ‘toolbox talk’ at the outset of site clearance and construction works setting out the known and possible habitat and species constraints, and the mitigation measures which are required. The toolbox talk should also set out procedures to be followed in the event that there are unexpected encounters with protected species etc. All contractors carrying out dense bramble scrub or tree clearance works (if appropriate), should be warned of the possible presence of nesting birds, roosting bats, common reptiles and of their protected status. It should be clearly understood that in the event of any being found during works, all works should cease in the affected area until appropriate expert advice has been sought.

Building compounds and storage areas should not be sited on areas of habitat which are to be retained and should be suitably fenced and bunded where they stand adjacent to semi-natural habitats. Similarly, no equipment, machinery or materials should be brought into the retained areas, or stored under retained tree canopies, or ground levels altered within these clearly demarcated zones of protection.

A pollution prevention plan must be put in place to avoid the release of polluting substances into the surrounding habitats or any other retained habitats.

Careful consideration will be given to the use of artificial lighting within the site, as this can adversely affect activity by a variety of fauna, particularly foraging bats, nesting birds and invertebrates. Where some external lighting is required for health & safety purposes, downward directed LED lighting will be used, following current Bat Conservation Trust (BCT 2023) guidance.

Green Infrastructure Statement, Ecological Mitigation & Biodiversity Enhancement

5.3 In accordance with current planning policies in Wales, all developments must provide a Green Infrastructure Statement, in order to demonstrate that the development avoids and then minimises impact on relevant biodiversity and ecosystems, as well as provide opportunities for habitat creation and enhancement, thus providing a net benefit for biodiversity. These measures also consider the maintenance of habitat connectivity of the site with the wider environs to contribute towards improving ecosystem resilience.

The creation of a pond and wetland area would represent a significant biodiversity enhancement. Following the creation of the new habitats, a long-term management plan should be put in place to ensure the site is kept in an optimal condition.

Consideration could also be given to the installation of bat or bird-boxes in suitable locations within and around the site. These should be located on suitable trees and sited in such a manner that unauthorised persons and predators such as cats cannot access them. Bat-boxes should be at least 4m (preferably 4-5m) and bird-boxes at least 2m (preferably 2-3) above ground-level. The entrances to bat-boxes should not be illuminated at night, nor obscured by overhanging boughs or canopy vegetation etc. Bat and bird-boxes should preferably be of ‘woodcrete’ or similar long-lasting construction rather than timber, since these are much more robust and longer-lived than traditional wooden boxes and require less after-maintenance. Suitable examples are shown at Appendix 5.

Any new plantings of trees or hedgerows will be primarily of native species which are indigenous to the location and that are beneficial to pollinators and other wildlife (see Appendix 4 for example species). Any new grassland areas should seek to reproduce those which would naturally occur in the vicinity and should comprise at least 15-20% of appropriate native broadleaved herbs sown within a matrix of non-competitive, fine-leaved native grass species. All native planting or seed stock should be of Welsh, or at least UK, provenance.

General Provisions

- 5.4 Any trees to be retained should be treated in accordance with BS5837 (2012) *Guidance on the Treatment of Trees in Relation to Design, Demolition & Construction*, with the appropriate designation and fencing of Root Protection Zones (RPZs) etc.

The services of an appropriately qualified and licensed ecologist should be available on an 'on-call' basis throughout the entire site works period in order to deal promptly with any protected species or other ecological matters which may arise during the clearance and construction works.

Further Surveys

- 5.5 If they are to be affected by the habitat clearance of the site, further tree surveys for bat roosting potential will be required on the trees within the hedgerow in the southeast of the site. Beyond this, no further surveys are currently considered necessary.

6.0 REFERENCES

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- British Standard BS5837 (2012)** *Guidance for the Treatment of Trees in Relation to Construction - Recommendations*. BSI Standards Publication.
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- Joint Nature Conservation Committee (JNCC 2019)** *Guidelines for the Selection of Biological SSSIs*, Parts 1 & 2 (online). JNCC, Peterborough (<https://jncc.gov.uk/our-work/guidelines-for-selection-of-sssis/>).
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- People's Trust for Endangered Species (PTES 2019)** *Hedgehogs and Development*. <https://www.britishhedgehogs.org.uk/wp-content/uploads/2019/05/developers-1.pdf>
- Royal Society for the Protection of Birds (RSPB 2021)** *Birds of Conservation Concern 5: The Population Status of Birds in the United Kingdom, Channel Islands & the Isle of Man*. RSPB, Sandy, Beds.
- Royal Society for the Protection of Birds (RSPB 2022)** *Birds of Conservation Concern: The Population Status of Birds in Wales*, 4th Edition. RSPB, Sandy, Beds.
- Wales Biodiversity Partnership (WBP 2008)** *Criteria for the Selection of Sites of Importance for Nature Conservation in the County Boroughs of Blaenau Gwent, Caerphilly, Merthyr Tydfil & Rhondda Cynon Taff (The 'Mid-Valleys Area')*. Wales Biodiversity Partnership/Welsh Assembly Government.
- Wales Biodiversity Partnership (WBP 2016a)** *Section 7: List of the Habitats of Principal Importance for the Purpose of Maintaining and Enhancing Biodiversity in Wales (Interim)*. Wales Biodiversity Partnership/ Welsh Government.
- Wales Biodiversity Partnership (WBP 2016b)** *Section 7: List of the Living Organisms of Principal Importance for the Purpose of Maintaining and Enhancing Biodiversity in Wales (Interim)*. Wales Biodiversity Partnership/ Welsh Government.

APPENDIX 1: STATUTORY & POLICY FRAMEWORK FOR BIODIVERSITY

The following sets out a brief review of the key legal and key policy elements affecting wildlife species in Wales. It is not intended to be comprehensive and only the most recent and relevant articles are mentioned.

The review sets out our interpretation and understanding of key elements of the legislation and policy insofar as they apply to typical planning and development operations, based on our experience. The interpretations given below are for guidance only, however, and do not constitute legal advice. In all cases the reader is advised to consult the original legal and policy documents for the definitive wordings, and where necessary to obtain qualified legal advice.

The Conservation of Habitats & Species Regulations 2017 ('Habitats Regulations')

The Habitats Regulations were originally enacted to implement the obligations of *EU Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora & Fauna* (the 'EU Habitats Directive') into British law, and in so doing created the highest tier of legal protection for wildlife species in UK, the so-called 'European Protected Species' (EPS). These species include, *inter alia*:

- All species of bats
- Hazel dormouse ('dormouse')
- Eurasian Otter ('otter')
- Great crested newt
- Natterjack toad
- Sand lizard
- Smooth snake

The Regulations also cover a small number of very rare plant species such as lady's-slipper orchid.

The requirements of the Habitats Regulations were given continuance following the UK's withdrawal from the EU ('Brexit') in 2019 by the ***Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019***, and therefore continue to apply unchanged at the time of writing. EPSs are hereafter referred to as 'Habitats Regulations Species' (HRS) to reflect this change in the legislative framework.

In summary, and *inter alia*, all HRS animal species are protected as individuals against deliberate killing, injury, capture or disturbance, at all stages of their lives, and in addition, the places used for breeding or resting by these species may not be damaged or destroyed. Breeding and resting places are also afforded protection against deliberate disturbance, or the blocking of access, under the amended ***Wildlife & Countryside Act 1981*** (see below). HRS plant species may not be picked (in any part), collected, uprooted or destroyed at any point in their life cycle.

The main exceptions to these provisions are either that the activities were authorised by the relevant statutory body (in this case, Natural Resources Wales – NRW) and, where required, were carried out under a licence ('derogation') obtained in advance. Offences which occur as an incidental result of some other otherwise lawful activity (ie 'accidental' or 'unintentional' offences) are not exempt under the Regulations but may be viewed more leniently where (a) they could not reasonably have been foreseen, (b) the activity causing the offence ceased as soon as the presence of HRS, or their habitats, became apparent, and (c) NRW were informed immediately and appropriate expert advice sought to evaluate and remediate the situation.

Bats

The legal protection covers any place or feature which is used for resting during the day ('day roosts') and also any places which are used for hibernation in winter. Places which are used for short periods of resting at night ('night roosts'), or as customary stations for the handling and processing of food ('feeding perches'), are not usually accorded the same level of importance as day roosts and hibernation sites, although they are in fact still subject to the Regulations and in some cases may be deemed important enough to be accorded full protection.

Dormouse

Protection is usually considered to extend to any habitat, such as woodland, scrub, hedgerows and bramble stands etc, where dormouse occurs and where nests may therefore be present. The continuity of the habitats occupied by dormouse with other areas of similar connecting habitat may also be a matter for statutory consideration under the Regulations.

Otter

Protection is usually considered to extend to any watercourse or waterbody which is used by otter, and which may therefore contain nests or resting places ('holts'). It also extends to any areas of terrestrial habitat away from watercourses and waterbodies where these also contain holts, and the connectivity of such places with the occupied aquatic habitats may also be a matter for statutory consideration under the Regulations.

Great crested newt

Protection is usually considered to extend to any watercourse or waterbody which is occupied by great crested newt (GCN), and which may therefore be used for breeding. It also extends to any terrestrial habitats used by GCN during its non-aquatic phases, especially those places which are used for hibernation in winter or sheltering during adverse weather conditions. Typically the latter will be physically connected to a breeding pond (or ponds) but may lie anything up to

2km away. At minimum, a terrestrial hinterland of 10m width around the edges of a breeding pond will be considered to be protected where this contains habitats which are suitable for terrestrial use by GCN.

Protected Sites

The Habitats Regulations also set out to protect certain rare and valuable habitat types, such as ancient semi-natural woodland, heathland, bogs and species-rich grasslands etc. This is done through the identification and designation of specifically protected sites known as Special Areas of Conservation (SACs). SACs are subject to the highest level of legal protection against damage, destruction, degradation or harmful uses or activities which is available in the UK. All such sites are also designated as Sites of Special Scientific Interest (SSSIs) under the Wildlife & Countryside Act 1981 (see below).

The Wildlife & Countryside Act 1981 (WCA)

This much amended and complex piece of legislation is the means by which protection is afforded at the next tier of species below the HRSs and is the primary source of protection in respect of birds. Species afforded protection under the WCA include, *inter alia*:

- All species of birds
- Water vole
- Red squirrel
- Common reptiles (ie slow-worm, common lizard, grass snake, adder)
- Marsh fritillary butterfly
- Pearl mussel
- Various plants, ferns, mosses, liverworts, lichens & fungi

Birds

In summary, all wild birds are protected against deliberate killing, injury or capture, and this protection extends to their eggs and young. It is also illegal to destroy, damage or remove the nest of any bird either while it is in use or being built. For certain rare species which are listed on Schedule 1 of the Act the protections go even further: it is illegal to disturb any Schedule 1 bird species, either deliberately or unintentionally ('recklessly'), while it is building a nest or actually nesting, or to disturb the dependant young of any such bird. Exceptions to these general principles affect some specific game, food or pest species, but only under certain specified and defined conditions and usually in accordance with a licence issued in advance by NRW.

Actions which cause an adverse impact to birds or their nests which arise as an incidental result of some otherwise lawful activity, such as the trimming or removal of hedges, trees or scrub for example, would not constitute an offence provided that the activity could not have reasonably been avoided. As a general result of the provisions of the WCA therefore, the deliberate destruction, removal or clearance of habitats containing nesting birds would almost invariably constitute an offence because the impacts to birds could reasonably have been foreseen and avoided, for example by carrying out the clearance activities at a time when birds are not nesting.

Except under certain specified conditions, the clearance or removal of nests or nesting habitats is generally not illegal if it is carried out at a time of year when no birds are nesting or if it can otherwise be shown that no nesting birds are present at the time (eg by means of advance survey).

Activities which might adversely affect Schedule 1 birds such as barn owl, kingfisher or birds of prey can be undertaken provided a licence has been obtained in advance from NRW and appropriate mitigation measures are put in place.

Animals Other than Birds

Animals other than birds, such as water vole, red squirrel, marsh fritillary and pearl mussel for example, are listed on Schedule 5 of the Act, and are afforded protection which is generally similar to that of HRSs. The individual animals may not be deliberately killed, injured or captured, in any of their life stages, and it is also illegal to destroy or damage any places which these animals use for shelter or protection, or to disturb an animal using such a place or obstruct access to it, whether deliberately or unintentionally.

As with birds, impacts to Schedule 5 animals which arise as an incidental result of an otherwise lawful activity do not constitute an offence provided those impacts could not have reasonably been foreseen and avoided.

Water Vole & Red Squirrel

In the case of nest-making animals such as water vole and red squirrel, protection will normally be taken to extend to the entirety of any suitable, or potentially suitable, nesting or sheltering habitats which are occupied by a residential population of the species concerned. The connectivity of these habitats with other similar habitats in the wider vicinity may also be a matter for statutory consideration.

Marsh Fritillary Butterfly & Pearl Mussel

For species which do not make nests, protection will normally be taken to extend to the entirety of any habitats which are suitable, or potentially suitable, for breeding or sheltering and which are occupied by a residential population of the species concerned. The connectivity of these habitats with other similar habitats in the wider vicinity may also be a matter for statutory consideration.

Common Reptiles

Slow-worm, common lizard, grass snake and adder are afforded so-called ‘partial protection’ under the WCA. The animals themselves may not be deliberately killed or injured, but they may be captured and the habitats which support them are not afforded any direct protection in themselves.

As with other Schedule 5 animals, adverse impacts which arise as an incidental result of an otherwise lawful activity do not necessarily constitute an offence provided those impacts could not reasonably have been foreseen and avoided. Under current interpretation this is taken to mean that the destruction or clearance of habitats which are known to support common reptiles, or where such reptiles could reasonably be expected to occur, without the implementation of measures to minimise or avoid causing incidental death or injury to reptiles, would be likely to constitute an offence.

Protected Plants

About 180 species of plants, ferns, mosses, liverworts, lichens and fungi are afforded protection under Schedule 8 the WCA. These may not be intentionally picked (in any part), uprooted or destroyed, unless authorised under licence. As with Schedule 5 animals, adverse impacts which arise as an incidental result of an otherwise lawful activity do not necessarily constitute an offence provided those impacts could not reasonably have been foreseen and avoided.

Protected Sites

The WCA also sets out mechanisms for the protection and conservation of habitats and features of high biodiversity value through the identification and designation of specifically protected sites. These include Sites of Special Scientific Interest (SSSIs), National and Local Nature Reserves (NNRs/LNRs) and National Parks etc. Such sites are subject to wide-ranging legal protection against damage, destruction, degradation, exploitation or other harmful activities or uses.

The Protection of Badgers Act 1992 (PBA)

Badger is protected primarily in relation to animal welfare and cruelty, as a result of illegal persecution. Badgers are protected against intentional killing, injury, ‘cruel ill-treatment’ or capture in all of their life stages. Their nesting burrows (‘setts’) may not be destroyed, damaged, dug into or obstructed and it is illegal to disturb a badger while occupying a sett, either deliberately or ‘recklessly’ (ie unintentionally as a result of failure to take due care). The PBA is also taken to confer a degree of protection to foraging areas which are critical to the support of a badger family-group (‘clan’) where the loss of this would otherwise result in their starvation. As with other protected species, adverse actions which arise as a result of an otherwise lawful activity do not constitute an offence provided those impacts could not reasonably have been foreseen and avoided. A number of specified exemptions are provided in connection with certain legal farming and fox-hunting activities which may impact badgers.

The protection of setts only applies to those which are in ‘current use’ and not to those which are abandoned. However, many badger setts are occupied only intermittently throughout the year and therefore ‘current use’ should not be taken to imply *continuous* use.

Actions to remove badger setts on development sites may be undertaken under a licence issued by NRW and in accordance with agreed mitigation measures, and licences may also be issued to allow the removal or exclusion of badgers from sites. Such operations may not occur during the breeding (‘close’) season, however, which is usually taken to be between December to June inclusive, due to the risk of trapping lactating females and young below ground.

Environment (Wales) Act 2016 (EWA)

Section 7 of the EWA contains the most recent lists of species and habitats which are considered to be of ‘principal importance for the conservation of biodiversity in Wales’. These lists replaced those which were previously given under s.42 of the **Natural Environment & Rural Communities Act 2006**, which in turn replaced the ‘Priority Species’ listed under the UK Biodiversity Action Plan of 1995 and its Welsh equivalent. Species listed under s.7 of the EWA include many of those afforded protection under the articles described above, including otter, dormouse, water vole, nesting birds, common reptiles and great crested newt, for example, as well as additional species such as:

- | | | |
|-------------------------------------|------------------------------|---------------------|
| • W. European hedgehog (‘hedgehog’) | • Atlantic salmon (‘salmon’) | • Hornet robberfly |
| • Brown hare | • Brown & sea trout | • Shrill carder bee |
| • Harvest mouse | • Garden tiger moth | • Flat sedge |
| • Polecat | • Cinnabar moth | • Wild chamomile |
| • European eel (‘eel’) | • Small heath butterfly | • Common toad |

and many other plant and animal species which are not otherwise specifically afforded statutory protection for wildlife conservation reasons (although they may in some cases be afforded some element of protection for other reasons, such as animal welfare or cruelty).

Section 7 of the EWA also identifies a number of habitat-types which are of ‘principal value for conservation in Wales’. These include:

- Lowland mixed deciduous woodland
- Hedgerows
- Lowland meadows
- Upland flushes, fens & swamps

- Purple moor-grass & rush-pastures (in Wales, often referred to as ‘rhos pastures’)
- Reedbeds
- Blanket bog
- Sand dunes
- Rivers & ponds

Although not protected as such, the EWA requires statutory authorities to take such ‘Section 7’ species and habitats into account when considering the management and development of sites in Wales, and to take “*all reasonable steps*” to maintain and enhance their populations. The presence of such species and habitats is a ‘material consideration’ on sites where planning permission is sought for development. **Planning Policy Wales (2021)** (PPW, 11th Edition) requires Local Planning Authorities (LPAs) to have regard to the presence of ‘Section 7’ species and habitats and to avoid adverse impacts as a result of development wherever possible. Developments which are considered essential in the public interest must seek to minimise adverse impacts and incorporate appropriate mitigation/compensation measures where adverse impacts cannot be avoided.

Sites of Importance for Nature Conservation (SINCs)

SINCs comprise so-called ‘third-tier’ sites which have been identified as having biodiversity conservation value at the sub-national (ie regional, county, county-borough or local) level. They are usually identified by the LPA, often in collaboration with other local conservation bodies such as the county Wildlife Trust and may appear under range of different names (eg ‘Wildlife Site’, ‘County Wildlife Site’ etc). Such sites are not specifically protected in law (ie they are ‘non-statutory’) but they are recognised as a ‘material consideration’ on sites where planning permission is sought for development. As with ‘Section 7’ habitats, PPW (2021) requires LPAs to avoid adverse impacts as a result of development wherever possible, and developments which are considered essential in the public interest must incorporate appropriate mitigation/compensation measures where adverse impacts cannot be avoided.

Invasive Non-native Species

Schedule 9 of the **Wildlife & Countryside Act (1981)** sets out lists of plant and fauna species which are subject to statutory regulation in Britain. These currently include plants such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and wall cotoneaster (*Cotoneaster horizontalis*), and animals such as signal crayfish, aquarium terrapin, Asian hornet and copyu. The lists are updated regularly.

The import, sale, transport, cultivation and keeping of these species is generally forbidden except under a specially issued licence, and it is illegal to allow these species to escape or spread into the wild, either deliberately or by accident. This includes any part and all life-stages of the species concerned. Earthworks which might accidentally result in the transfer of Schedule 9 plant material to another location or which encourages it to spread either within or off the site, for example, is forbidden. Any works on a site which might involve contamination by, and potential spread of, any of the listed species must be carried out under an approved method statement designed to prevent them being accidentally dispersed off of or within the site, and which preferably results in their complete elimination wherever this is possible.

APPENDIX 2: DEFINITIONS OF SITE VALUE

International Value

Site carrying an internationally recognised designation such as Ramsar Site, World Heritage Site, Special Protection Area, Special Area of Conservation, Biosphere Reserve or Biogenetic Reserve, or:

Habitats: site supporting nationally significant areas of habitats of defined international community interest.

Species: site supporting nationally significant populations of species of defined international community interest.

National Value

Site meeting published Site of Special Scientific Interest (SSSI) designation criteria (NCC 1989; JNCC 2019 *et seq*), whether so designated or not.

Habitats: site supporting nationally significant areas of habitats of defined national rarity or interest.

Species: site supporting nationally significant populations or communities of UK Red Data Book, Nationally Notable or protected species (other than badger).

County Value

Site identified as a County Wildlife Site (CWS), Site of Importance to Nature Conservation (SINC) or similar at the county level (ie greater than district, borough or city level); meeting published CWS designation criteria (where these exist), but falling short of SSSI designation criteria, whether designated as a CWS or not.

Habitats: site supporting good examples of nationally threatened habitats, or extensive areas of habitats which are rare or unique in the county.

Species: site supporting large or strong populations or communities of nationally rare or protected species (other than badger), or of species which are rare in the county and uncommon nationally.

District Value

Sites failing to meet County Value criteria, but nevertheless supporting habitats, species or communities which appreciably enrich the ecological resource of the county, especially by virtue of their size or extent.

Habitats: sites supporting habitats uncommon in the county, small but unmodified fragments of nationally threatened habitats, or comprising extensive areas or systems of semi-natural habitats.

Species: sites supporting nationally rare species, or strong populations or communities of regionally uncommon species, which would not otherwise be present (ie they are critically dependant on the site characteristics).

Local Value

Habitats which fail to meet District Value criteria, but which appreciably enrich the ecological resource of the locality. This category can be further divided into:

- **High Local Value:** just failing to meet District Value Criteria; supporting species which are notable or uncommon in the county; or species which are uncommon, local or habitat-restricted nationally, and which might not otherwise be present in the area.
- **Local Value:** sites which are of ecological value only in the context of their immediate surroundings. Rare or uncommon species may occur but are not restricted to the site or critically dependent upon it for their survival in the area.

Sites failing to meet any of the above can be considered as being of '**Negligible**' ecological value.

APPENDIX 3: SPECIES RECORDED FROM THE SITE

Plant Species

All species recorded by DCE 2024, unless otherwise indicated:

Species	Common Name	Contributing Species for SINC designation						Other comments
		W	NG	CG	AG	MG	PIL	
Trees & Scrub								
<i>Alnus glutinosa</i>	alder							
<i>Carpinus betulus</i>	hornbeam							
<i>Cornus sanguinea</i>	dogwood							
<i>Corylus avellana</i>	hazel							
<i>Crataegus monogyna</i>	hawthorn							
<i>Fraxinus excelsior</i>	ash							
<i>Ilex aquifolium</i>	holly							
<i>Malus sylvestris</i>	crab apple	W						
<i>Populus alba</i>	white poplar							
<i>Populus tremula</i>	aspen	W						
<i>Quercus petraea</i>	sessile oak	W						
<i>Prunus</i> sp.	cherry species							
<i>Rubus fruticosus</i> agg.	bramble							
<i>Salix</i> sp.	willow species							
<i>Sorbus aucuparia</i>	rowan							
Herbaceous Plants								
<i>Agrostis capillaris</i>	common bent							
<i>Arrhenatherum elatius</i>	false oat-grass							
<i>Centaurea nigra</i>	common knapweed		NG	CG				
<i>Chamerion angustifolium</i>	rosebay willowherb							
<i>Cirsium arvense</i>	creeping thistle							
<i>Coronopus didymus</i>	lesser swine-cress							
<i>Dactylis glomerata</i>	cock's-foot							
<i>Epilobium hirsutum</i>	great willowherb							
<i>Galium aparine</i>	cleavers							
<i>Geranium pratense</i>	meadow crane's-bill		NG					CS
<i>Hedera helix</i>	ivy							
<i>Holcus lanatus</i>	Yorkshire fog							
<i>Jacobaea vulgaris</i>	common ragwort							
<i>Lathyrus pratensis</i>	meadow vetchling		NG					
<i>Papaver rhoeas</i>	common poppy							
<i>Plantago lanceolata</i>	ribwort plantain							
<i>Plantago major</i>	greater plantain							
<i>Potentilla anserina</i>	silverweed							
<i>Potentilla reptans</i>	creeping cinquefoil							
<i>Prunella vulgaris</i>	self heal							
<i>Pteridium aquilinum</i>	bracken							
<i>Ranunculus repens</i>	creeping buttercup							
<i>Rosa</i> sp.	rose species							
<i>Rumex</i> sp.	dock species							
<i>Sinapis arvensis</i>	charlock							
<i>Sonchus asper</i>	prickly sow-thistle							
<i>Taraxacum officinalis</i> agg	dandelion							
<i>Torilis japonica</i>	upright hedge-parsley							

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<i>Trifolium medium</i>	zigzag clover		NG					
<i>Urtica dioica</i>	common nettle							
<i>Vicia hirsuta</i>	hairy tare							
Contributing Species for SINC designation		W	NG	CG	AG	MG	PIL	QS = 0
Totals recorded on site		3	4	1	0	0	0	CS = 1

(**Bold**) = SINC Qualifying species

SINC Indicator Species

AM = arable field margin, NG = neutral grassland, AG = acid grassland, CC = calcareous grassland, MG = marshy grassland, W = woodland, PIL = Post-industrial land/Disturbed ground.

QS = 'Qualifying Species'

CS = 'Contributory Species'

Fauna Species

All records DCE 2024, unless otherwise indicated:

Birds	SOCC Lists		S7	SINC value	Notes
	UK	Wales			
blue tit					Heard within/near site
chiffchaff					Heard within/near site
goldfinch					Spotted landing on multiple small trees within the site
great tit					Heard within/near site
magpie		Amber			Heard within/near site
robin					Heard within/near site
wren	Amber				Spotted on a small tree within the dense scrub in the north of the site

(**Bold**) = Schedule 1 – Specially protected

Red List = High conservation significance in UK/Wales (RSPB 2021; 2022)

Amber List – Moderate conservation significance in UK/Wales (RSPB 2021; 2022)

S7 = 'Species of Principal Conservation Concern in Wales (EWA 2016)

SINC Indicator Species

Breeding Birds:

BQS = 'Qualifying species'

BCS = 'Contributory species'

Wintering/Passage Birds:

WQS = 'Qualifying species'

WCS = 'Contributory species'

APPENDIX 4: SUITABLE SPECIES FOR PLANTING

Semi-natural Woodlands

Canopy Species		Percentage
<i>Quercus robur</i>	Pedunculate oak	40
<i>Quercus petraea</i>	Sessile oak	40
<i>Acer campestre</i>	Field maple	20
Understorey		
<i>Corylus avellana</i>	Hazel	30
<i>Crataegus monogyna</i>	Common hawthorn	30
<i>Betula pendula</i>	Silver birch	)
<i>Cornus sanguinea</i>	Dog wood	)
<i>Ilex aquifolium</i>	Holly	)
<i>Malus sylvestris</i>	Crab apple	)
<i>Prunus avium</i>	Wild cherry	) 40
<i>Prunus spinosa</i>	Blackthorn	)
<i>Rosa canina</i>	Common dog-rose	)
<i>Sorbus aucuparia</i>	Rowan	)
<i>Taxus baccata</i>	Yew	)
<i>Viburnum opulus</i>	Guelder rose	)

Planting should be carried out using 600mm bare-rooted transplants in spiral plastic guards (rabbit/vole protection) where appropriate. Standard tree aftercare should be applied.

Hedgerows

Canopy Species		Percentage
<i>Crataegus monogyna</i>	Common hawthorn	30
<i>Prunus spinosa</i>	Blackthorn	10
<i>Corylus avellana</i>	Hazel	20
<i>Acer campestre</i>	Field maple	)
<i>Cornus sanguinea</i>	Dogwood	)
<i>Euonymus europaeus</i>	Spindle	)
<i>Ilex aquifolium</i>	Holly	) 40
<i>Prunus avium</i>	Wild cherry	)
<i>Quercus robur</i>	Pedunculate oak	)
<i>Rosa canina</i>	Common dog-rose	)
<i>Sambucus nigra</i>	Elder	)
<i>Sorbus aucuparia</i>	Rowan	)
<i>Viburnum opulus</i>	Guelder rose	)

Climbers

<i>Clematis vitalba</i>	Traveller's-joy	) Alternate at 3m intervals
<i>Lonicera periclymenum</i>	Honeysuckle	)
<i>Solanum dulcamara</i>	Bittersweet	)
<i>Tamus communis</i>	Black bryony	)

Ideally plant in late autumn, after mid-November, although anytime between October and March is appropriate if the ground is not frozen. Plant 60-125mm high whips in trenches (300mm depth x 600mm width) in two lines 300mm apart to form a staggered, double row. Whips in each line should be 450mm apart, giving a total of five plants per running metre. Use a spiral guard to protect the whip from rabbits with a cane to support them. Back fill with a mixture of the topsoil excavated from the pit, mixed with organic matter.

Newly planted hedges are vulnerable to damage by wind, drought and severe weather for the first 2-3 years. Keep moist and mulch with a 50-75mm layer of composted bark to stop weed growth and retain moisture in the soil.

Neutral Grasslands

New or existing low-fertility topsoil should be lightly harrowed and raked to create a moderately fine tilth. No fertiliser should be added to any of these areas. Areas should be seeded either by hand (broadcasting) or by using a light tractor-mounted spinner or drill with drills at 5cm centres, 5mm maximum depth, immediately after preparation which should ideally occur in late summer (ie Aug-Sep). The seed rate should be 4g/m² (ie 40kg/ha). The seed mixture in new soil areas should comprise an 80:20 mix of native grass to native wildflower seed. A minimum of any six broadleaved species should be included, in equal quantities, up to a maximum of 15 species. Legumes should be supplied as low fertility non-fodder strains only.

All seed material should be of Welsh, or at least UK, native origin. Seed suppliers should be signatories to the *Flora Locale* Code of Practice for collectors, growers and suppliers of native plants and seed.

Grasses

<i>Agrostis capillaris</i>	Common bent	Low fertility strains only, eg 'Arletta', 'Tracenta'
<i>Alopecurus pratensis</i>	Meadow foxtail	≤5% of mixture
<i>Anthoxanthum odoratum</i>	Sweet vernal-grass	≤5% of mixture
<i>Cynosurus cristatus</i>	Crested dog's-tail	
<i>Festuca rubra</i> ssp <i>rubra</i>	Red-fescue	Low fertility strains only, eg 'Boreal', 'Franklin'
<i>F. rubra</i> ssp <i>commutata</i>	Chewing's fescue	Low fertility strains only, eg 'Agram', 'Banner', 'Koket', 'Wintergreen', 'Lifalla', 'Raymond', 'Wilma'
<i>F. rubra</i> ssp <i>littoralis</i>	Slender red fescue	Low fertility strains only, eg 'Dawson', 'Logro', 'Merlin', 'Oriflame', 'Lovisa', 'Bornado', 'Garance'
<i>Phleum bertolonii</i>	Small cat's-tail	≤5% of mixture

Broadleaved herbs

<i>Achillea millefolium</i>	Yarrow	<i>Plantago media</i> *	Hoary plantain
<i>Centaurea nigra</i>	Common knapweed	<i>Potentilla anserina</i>	Silverweed
<i>Centaurea scabiosa</i> *	Greater knapweed	<i>Potentilla repens</i>	Creeping cinquefoil
<i>Daucus carota</i>	Wild carrot	<i>Primula veris</i>	Cowslip
<i>Galium mollugo</i>	Hedge bedstraw	<i>Prunella vulgaris</i>	Self-heal
<i>Galium verum</i> *	Lady's bedstraw	<i>Ranunculus acris</i>	Meadow buttercup
<i>Hypericum perforatum</i>	St John's-wort	<i>Rhinanthus minor</i>	Yellow rattle
<i>Hypochaeris radicata</i>	Cat's-ear	<i>Rumex acetosa</i> [†]	Common sorrel
<i>Knautia arvensis</i> *	Field scabious	<i>Sanguisorba minor</i> *	Salad burnet
<i>Lathyrus pratense</i>	Meadow vetchling	<i>Silene dioica</i>	Red campion
<i>Leontodon autumnalis</i>	Autumn hawkbit	<i>Silene vulgaris</i>	Bladder campion
<i>Leontodon hispidus</i>	Rough hawk-bit	<i>Trifolium campestre</i>	Hop trefoil
<i>Leucanthemum vulgare</i>	Ox-eye daisy	<i>Trifolium dubium</i>	Least trefoil
<i>Lotus corniculatus</i> [†]	Bird's-foot trefoil	<i>Trifolium pratense</i> [†]	Red clover
<i>Luzula campestris</i>	Common wood-rush	<i>Veronica chamaedrys</i>	Germander speedwell
<i>Medicago lupulina</i>	Black medick	<i>Vicia cracca</i>	Tufted vetch
<i>Origanum vulgare</i> *	Wild marjoram	<i>Vicia sativa</i> [†]	Common vetch
<i>Plantago lanceolata</i>	Ribwort plantain	<i>Vicia sepium</i> [†]	Bush vetch

* Prefer calcareous soils

[†] Low-fertility non-fodder strains only

For the first year of growth, mowing should take place at 6-8 weeks after sowing, with the cuttings collected and disposed of off-site. This should be repeated at two-monthly intervals, with the last cut being made in October. In the second and subsequent years, the grass should be mown twice each year, with a first cut to 50mm in April and a second cut to 100mm in September. All cuttings should be collected and removed for off-site disposal.

APPENDIX 5:

EXAMPLES OF NON-INTEGRATED BIRD BOXES FOR TREES AND BUILDINGS

Suspended Designs



Schwegler 1B
General box



Schwegler 2H open-front
'robin' box



Schwegler 5
'large owl' box



Schwegler 1CGA
'small owl' box



Schwegler 20
'starling' box



Schwegler 28 'kestrel' box



Schwegler 5KL 'nuthatch' box

Surface-mounted Designs



Schwegler 1MR general box



Vivara Pro open-front
'robin' box



Vivara Pro ova open-front
'robin' box



Vivara Pro 'starling' box



Vivara Pro 28/32mm
general box



Vivara Pro 28/32mm
oval general box

EXAMPLES OF SURFACE-MOUNTED BAT BOXES

Tree-mounted boxes



Schwegler 2F General Box



Schwegler 1FD Nursery Box



Schwegler 1FS Nursery Box (Large)



Schwegler 1FW Winter Box
(Very large box)



Schwegler 2FN
Noctule Box



Schwegler 2F DFP
Daubenton's Bat Box



Miramar General Box

Tree or building-mounted boxes



Schwegler 1FF General Box



Schwegler 1FQ Decorative Box



Schwegler 1FFH General Box



Schwegler 1FE



Vivara Woodstone Low Profile Box



NHBS Cavity Box
(Brown Long-Eared Bat Box)



NHBS Crevice Box



Beaumaris wall box

Photographs of the Site, July 2024



Hedgerow along Glasier Road – north facing view



Hedgerow along Glasier Road – southwest facing view



Path along the northeast of the site - west facing view



Dense bramble with a small ditch and grassland verge covers most of the site – west facing view



Dense bramble covers most of the site – west facing view



Dense bramble covers most of the site – south facing view



Culvert within dense bramble (see Target Note, Plan 2)



Small area of semi-improved neutral grassland with scattered scrub – south facing view

Glasier Road, Merthyr Tydfil: Preliminary
Ecological Assessment

Plan 1 - Site Location & Context

DCE 1268 NTS Aug 2024

Key

 Site Boundary



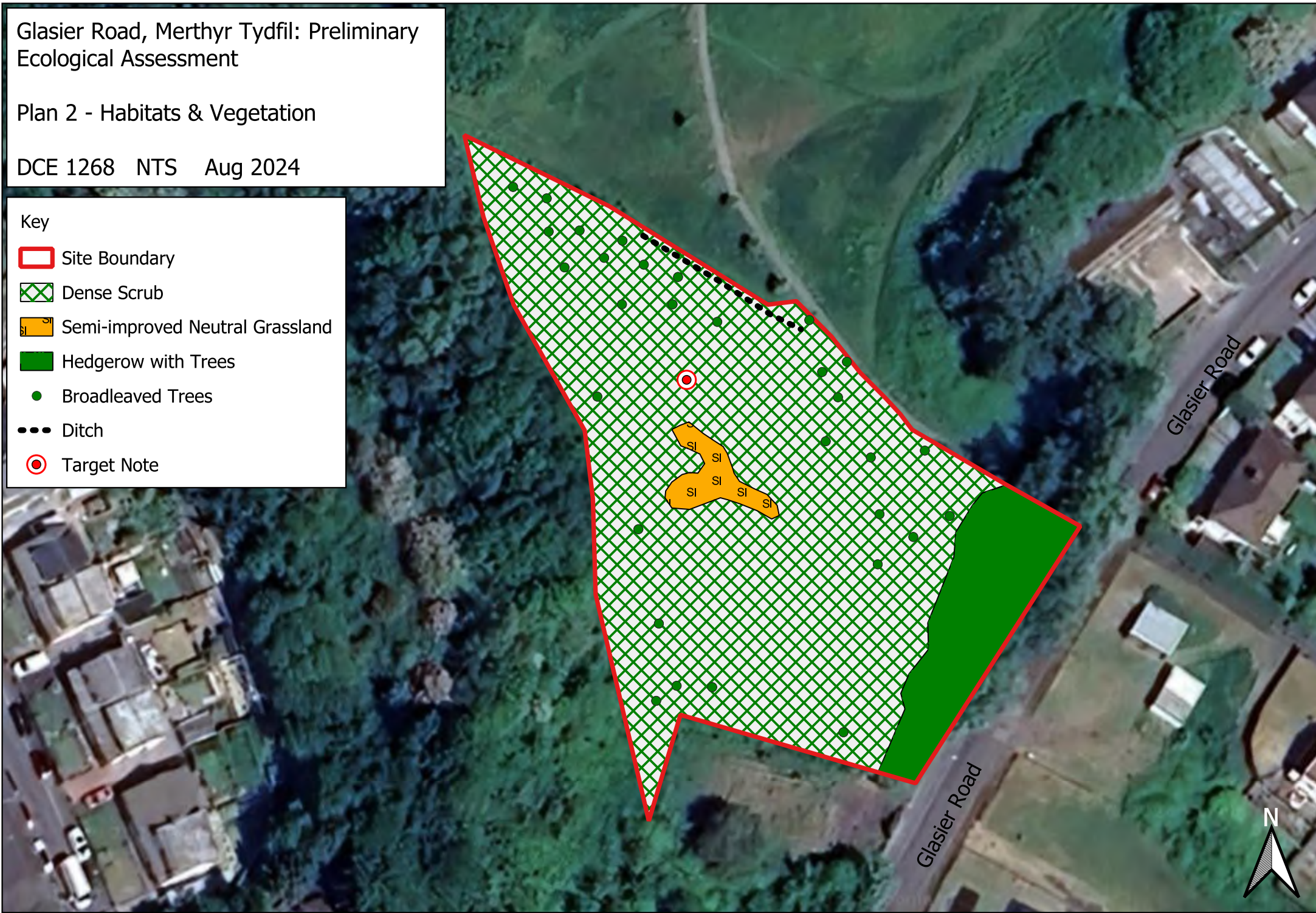
Glasier Road, Merthyr Tydfil: Preliminary Ecological Assessment

Plan 2 - Habitats & Vegetation

DCE 1268 NTS Aug 2024

Key

- Site Boundary
- Dense Scrub
- Semi-improved Neutral Grassland
- Hedgerow with Trees
- Broadleaved Trees
- Ditch
- Target Note



Glasier Road, Merthyr Tydfil: Preliminary
Ecological Assessment

Plan 3 - Ecological Evaluation

DCE 1268 NTS Aug 2024

Key

- Site Boundary
- High Local Value
- Local Value

