

Landscape and Ecological Management Plan

For Planning Purposes

Construction of a single dwelling with associated external works

2 Carn Gwilym Goch, Merthyr Tydfil



Prepared
by
Mackley Davies Associates Ltd

V1 July 2023

V2 October 2023 – to incorporate comments from MCBC Ecologist para 3.8-3.10

October 3, 2023

INDEX

- 1.0 PLANNING BACKGROUND & SITE DESCRIPTION**
- 2.0 ECOLOGICAL MITIGATION**
- 3.0 AIMS AND OBJECTIVES**
- 4.0 PRESCRIPTIONS FOR MANAGEMENT ACTIONS**
- 5.0 RESPONSIBILITY FOR IMPLEMENTATION**
- 6.0 IMPLEMENTATION PROGRAMME**
- 7.0 MONITORING AND REMEDIAL MEASURES**

LIST OF PLANS

Appendix 1 PLANTING PLAN 23/934/01

1.0 PLANNING BACKGROUND AND SITE DESCRIPTION

1.1 This Plan is provided to meet Condition 11 of approved planning application P/21/0388 to Merthyr Tydfil County Borough Council for construction of one self-build dwelling with associated external works at 2 Carn Gwilym Goch, Merthyr.

11 **No development shall take place** until a Landscape and Ecological Management Plan has been submitted to and approved in writing by the local planning authority. The development shall be undertaken, managed and maintained thereafter in accordance with the approved Landscape and Ecological Management Plan.

1.2 The site is one of a group of four self-build sites on former rough pasture with scrub encroachment. The rectangular site is already partly developed, including floor slab, block walls, gabion baskets, and north boundary retaining wall.

1.3 Access is shared with 1 Carn Gwilym Goch to the west and set back from the A4054 to the south. Plot 2 is to the east awaiting development. To the north of all four plots is a drystone wall outside the site with rough pasture (ffridd habitat) part of the Cilsanws Common South Site of Importance for Nature Conservation (SINC). The boundary to the west with 1 Carn Gwilym Goch is defined by a regularly pruned hawthorn hedge.



Access verge



View down onto access verge from site



West boundary hawthorn hedge looking north



West boundary hawthorn hedge looking south

October 3, 2023



1.4 The dwelling will have limited amenity space which will all be hard surfaced along with a steep private access drive with turning area. The steep slope requires a number of retaining walls through the site and along the east and north boundaries, in addition to a row of gabion baskets to the south.

1.5 Although the dwelling is elevated, the site is largely screened by a tree group on a steep bank at the south boundary. The tree group is to around 8-10m in height and includes larch, pine, birch. The group will be retained, enhanced with new native hedge planting, and positively managed.

2.0 ECOLOGICAL MITIGATION

2.1 Mitigation measures from BE Ecological Limited 'Ecological Assessment' May 2021 are shown below. Note that some are pre-commencement, some apply to the construction phase, whereas this LEMP focusses on mitigation measures post construction.

4.1.1.4 Cilsanws Common South - mitigation measures

- The sites north eastern boundary will be fenced off prior to the development commencing
- All site boundaries will remain unlit at all times. Site lighting must face downwards and be set on timers
- There will be no tipping of builders waste or garden waste to the north of the site at any time
- The species and habitat mitigation outlined in the various sections of this report will be carried out in full

October 3, 2023

5.6.1.4 Scrub - mitigation measures

Mitigation is required although the scrub on the site is a quick growing common "nuisance" habitat. Measures will include:

- Scrub should either be allowed to re-grow wherever possible; OR
- Where natural regeneration is not possible, scrub should be replanted as part of a post development landscaping scheme;
- Planting should use native species of as local a provenance as possible to replace those species lost or utilise species that will be able to provide a dense vegetated habitat;

6.1.6 Bats - mitigation measures

Mitigation will be required

Protection and mitigation measures will include:

- Retention of the flight lines along all boundaries as unlit dark corridors;
- The hedgerow to the north west will remain in darkness
- There will be a new hedgerow/planting strip to the north of the site along the SINC boundary. This area will remain dark.

The following will need to be included within the development:

- Provision of pole mounted bat boxes or boxes on houses;
- Sympathetic landscape planting to provide bats with foraging habitat.

6.3.10 Breeding birds - mitigation measures

Mitigation will be required and should include (but not be limited to) the following measures:

- All vegetation and brash removal should be undertaken outwith the breeding season i.e. between mid-August / September and April inclusive;
- Any clearance close to the start and end of this period should only be undertaken following an assessment by a suitably experienced ecologist as the breeding season is not fixed and is subject to annual variation;
- Where clearance is required during the breeding season, all areas should be subject to an assessment no more than 48 hours in advance to check for the presence of breeding birds;
- Should evidence of breeding birds, in particular nests, be recorded, no clearance may be undertaken within 15m of any nest site until such time as the nest is vacated naturally; and
- Any post-development landscaping plan should include the provision of scrub &/or shrub habitats that can be utilised by breeding birds.

Consideration should be given to including measures to benefit birds within the housing development e.g. installation of bird boxes on new buildings.

Bird boxes will be erected on the houses on completion of the builds.

6.4.9 Reptiles - mitigation measures

As long as reptile presence is assumed and site clearance is undertaken in accordance with an appropriate method statement, it is considered that a full trapping and translocation exercise is not required, and that habitat manipulation and denial is an appropriate method of ensuring that reptiles are not harmed during the site clearance.

Therefore, the following mitigation will be adopted:

- Clearance will be conducted in accordance with a Method Statement (**Appendix B**) to ensure that should reptiles be found in the course of site clearance or any other development activity, they will not be harmed and can be adequately cared for;
- Clearance will only be undertaken during the reptile active season (April-October, inclusive) unless it is determined that some areas of the site are not suitable for hibernation, unless the ground is too wet for hibernation or temperatures are consistently above 12 for seven consecutive days;
- Clearance outwith this period is possible, but depends on weather and temperatures being suitable to ensure that reptiles are likely to be active;
- There will be no clearance of hibernation habitat outwith the active season unless temperatures allow;
- Reptiles will be excluded from entering or re-entering the site during clearance/operational phase of works by ensuring that the site is kept as bare ground i.e. clear of any vegetation or other shelter
- The habitat will be cleared from south to north in order to push reptiles into retained habitats.

6.5.10 Invertebrates - mitigation measures

It is suggested the following measures are implemented as far as possible.

- Clearance is to be preferentially undertaken during the autumn and winter months
- Topsoil will be stripped, screened and stored ready for reuse in the landscaping areas
- Storage bunds will be no more than 1.8 high and firmed down well

Hedgehogs

13cm x13cm gaps (one gap every 15-20m) will be created at the bases of fences at the site boundaries to allow passage of hedgehogs across the site. Cautious working will be undertaken when clearing the site to prevent killing or injury to this species.

Corridors

There will be no lighting of retained habitats, dark corridors will need to be implemented throughout the development to allow light intolerant species to continue using the site should they wish.

A buffer area will be planted on the site's northern boundary between the site and the SINC. The area will be left free from the development. Access to the buffer zone will be prevented with a fence.

2.2 In addition to the above, comments from the Council ecological consultee states that only native species are to be used, that the north boundary buffer onto the SINC is to be reseeded with Emorsgate EM3 seedmix to include Devils bit scabious to provide stepping stone habitat for Marsh Fritillary butterfly.

2.3 The landscape planting and post construction phase ecological mitigation proposals are shown on the attached Planting Plan 23/934/01. Planting aims to mitigate for any vegetation losses, to enhance existing ecosystems and habitat connectivity, to deliver ecological assessment mitigation and ecological consultee comments.

2.4 Site Constraints

There are no known site easements which would particularly be a constraint to tree planting.

3.0 AIMS AND OBJECTIVES

3.1 The purpose of this document is to provide sufficiently detailed information to guide the management of existing and mitigation landscape and ecological areas for 5 years post construction.

The long term aims are to:

1. Improve ecological connectivity.
2. Conserve the SINC interest by providing a buffer zone.
3. Provide enclosure and partial screening to the site.
4. Provide an attractive sense of place for residents.

3.2 Plan showing proposed planting is shown in Appendix 2 'Planting Plan 23/934/01'. Proposals are quantified below:

Habitat type	Area/length/number
Existing residential hawthorn boundary retained	40 lin m
Existing tree group retained	55 sqm
New mixed native hedgerows seeded with hedgerow mix	43 linm
New native trees	4no
Fenced off SINC buffer zone Seeded with Emorsgate EM3 seedmix to include Devils bit scabious	35 sqm
Species rich grass kept close mown to site frontage	60 sqm
Bat boxes	1no
Bird boxes	1no

3.3 Further details on the specific aims and objectives are presented below relevant to each existing or proposed habitat at the site.

October 3, 2023

3.4 New mixed native hedgerow boundaries

- New hedge planting to link green corridors and further soften views into the site
- Seed hedge base with Emorsgate EH1 at 4g/sqm

3.5 Trees

- Creation of new habitat through the site with the planting of 4no standard trees [1no bird cherry, 1no wild cherry, 2no rowan]
- Small to medium sized native trees suitable for the location to allow trees to grow on to mature size without causing issues
- Provision of partial screen to soften views onto building
- Provision of on-site shade and seasonal interest

3.6 SINC buffer zone seeding

- seeded with Emorsgate EM3 seedmix [Special General Purpose Meadow Mixture] sown at 4g/sqm and to include Devils bit scabious

3.7 Species rich grass to site frontage

- the mix can be managed as mown grass or with a more relaxed regime than a standard grass mix eg Germinal WFG20 Eco Species Rich Lawn 10g/sqm

3.8 Bat boxes

Provision of 1no 'Green & Blue Bat Block' integrated into the dwelling south-east elevation, set a minimum 4m above ground level in line with suppliers advice.



3.9 Bird boxes

Provision of 1no 'Vivaro Pro WoodStone House Sparrow Nest Box' integrated into dwelling north-west elevation, set a minimum 2m above ground level in line with suppliers advice.

October 3, 2023



3.10 Bat habitat

- There will be a dark route to and from the integrated bat box.
- There will be no lighting of any of the site boundaries or the existing tree habitat to the south of the building.
- Any proposed on site lighting (internal or external) will confirm to the guidelines in Bat Conservation Trust 2023 Guidance Note 8 'Bats and Artificial Lighting'.
- Implementation of the Planting Plan will diversify tree, hedgerow, and grass cover which will benefit a range of species, including bats by increasing the connectivity of the tree and hedgerow network in the long-term and providing additional foraging and commuting resources to bats in the urban landscape.

3.11 Hedgehog highways

Any fences or free standing walls to incorporate hedgehog gaps of 13x13cm every 15-20 linear meters.

4.0 PRESCRIPTIONS FOR MANAGEMENT ACTIONS

4.1 Protected species

The Client is aware of the potential presence of protected species and the need for suitable protection measures in terms of works methods and timings when undertaking management actions.

Nesting birds

Potentially suitable habitat for nesting birds in mature trees, woodland, hedgerows and within establishing landscape planting. The Wildlife and Countryside Act 1981 (as amended) protects all wild birds against killing or injury and their nests against damage or destruction whilst they are being built or contain eggs/dependent young.

In order to maintain legal compliance, any vegetation clearance works will be completed outside the breeding bird season as far as practicable (Mar-Aug inclusive).

October 3, 2023

Where this is not possible clearance works will be preceded by a nesting bird check of all areas of suitable nesting habitat present by a suitably qualified ecologist. This check will be undertaken a maximum of 48 hrs prior to works. Where it is not possible to site works away from active nest sites and damage or destruction is considered likely construction works will be delayed until post fledging.

Reptiles

The Wildlife and Countryside Act 1981 (as amended) protects all reptiles against killing or injury. The habitat present may be suitable for active, commuting and foraging reptiles although no significant potential hibernacula features have been noted. Reptiles are considered likely to be active between Feb/Mar and October in any given year and to hibernate from Nov-Jan/Feb.

In order to maintain legal compliance during any vegetation clearance works, such works will be completed outside the reptile active period as far as practicable (Feb/Mar- Oct inclusive). Where this is not possible, any additional vegetation clearance works will be preceded by a hand search of suitable habitat by a suitably qualified ecologist immediately prior to works. Any reptiles found will be captured and moved to suitable alternative habitat on site.

Bats

As all bat species in the UK are protected under the both domestic and international legislation, it is a criminal offence to:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

In order to maintain legal compliance during management works, any work to mature trees will undergo bat survey work to determine the likely presence/ absence of roosting bats. These works will follow standard BCT (2016) bat survey guidance.

4.2 Existing Trees

- The site frontage tree group will require regular inspection on a **3 year cycle by qualified arborist**. All inspections results to be recorded.
- Any tree removal required will be replaced on a like for like basis where practicable.

4.3 New planting and seeding areas

Undertake maintenance visits in April, May, July, and September.

During the 5 year establishment phase carry out maintenance of the planted areas as follows:

For new native mixed hedges:

- Generally maintain to a workable height of 1.8m minimum aiming to provide a food and shelter resource by leaving overwinter berries and cutting in February on a three year rotation for face and top.
- Short section of hedge at access road will require annual cutting and height to be kept to around 1.2m
- Maintain weed free planted areas by use of HAND WEEDING (not by using glyphosate due to the risk of plant damage from herbicide drift onto new and existing vegetation).
- Hand weed to remove any perennial weed growth before they flower and set seed, do not use herbicide.
- The timing and method of weed control is to be kept under review.
- Water as necessary to prevent plants wilting.
- Maintenance operations shall be carried out only during suitable weather conditions.
- Every visit check condition of plants, including for any rabbit damage.
- Re-firm plants as required without compacting topsoil.
- Prune to remove dead or dying and diseased vegetation to promote healthy growth and natural shape and in accordance with good horticultural practice, aiming for a dense base to the hedge and an A shaped profile.
- All operations to be carried out by hand.
- Top up mulch to 50mm to the original specification.

For new tree planting:

- Maintain a weed free area around each tree, minimum diameter 1.0m ideally by use of HAND WEEDING (not by using glyphosate due to the risk of plant damage from herbicide drift).
- Watering trees: for the first growing year allow for watering every week to every fortnight according to weather conditions, from April to October. Water through the irrigation cap AND also use overhead watering for roots above the irrigation system – allow 20L per tree. Watering in year 2 is also likely to be required.
- Top up mulch to maintain full depth of 75mm.
- Every month check condition of stakes, ties. Adjust if necessary to allow for growth and prevent rubbing of bark. Cut back any damaged bark.
- At year 2-3 remove all tree stakes.
- Re-firm new trees as required without compacting topsoil.
- Only prune at appropriate times to remove dead or dying and diseased wood and suckers to promote healthy growth and natural shape and in accordance with good horticultural practice.
- Undertake formative pruning to trees in accordance with BS3998:2010 and ongoing aftercare in accordance with BS 8545:2014. Prune trees to favour a single central leading shoot.

October 3, 2023

For SINC buffer zone seeding

- seeded with Emorsgate EM3 seedmix [Special General Purpose Meadow Mixture] to include Devils bit scabious
- year 1 no cutting until August, remove cuttings, keep young meadow short by mowing or strimming to the end of March the following year. Dig out any residual perennial weeds such as docks.
- Year 2 on, no cutting until late July/August to allow species to flower, after flowering cut back by mowing or strimming to around 50mm height, leave the arisings to dry and shed seed for 1-7 days, then remove. Mow regrowth through to late autumn/winter to around 50mm height and again in early spring if needed.

For species rich mix grass area:

- Germinal WFG20 Eco Species Rich Lawn is a mix of grasses and wildflowers. For first year management, regular mowing of all areas by cutting to a height of 40-60mm and removal of cuttings if dense will gradually help develop a good sward structure, maintaining a balance between faster growing grasses and slower developing wild flowers, and control annual weeds. Perennial residual weeds such as dock should be dug out.
- Once established the mix can either be mown regularly or using a more varied mowing regime with a close mown 2m wide strip to adjoining hard surfaces and remaining areas left to flower and mown 2x per year in late July and October with arisings removed, the regime can be varied annually.

For hedgerow seed mix:

- In year 1, avoid cutting until mid to late summer, ideally August, remove arisings. Cut if needed again before winter, dig out any residual perennial weeds such as docks.
- From year 2 these areas will naturally become rough and “tussocky” in character which can provide useful refuge habitat on corners and margins of a site.
- For the SINC boundary, cut on a rotational basis every 2-3 years between October and February to control scrub and bramble development, leaving at least half the area uncut in any one year as an undisturbed refuge.
- For other hedgerows, as these are within garden amenity space, these can be regularly managed as grassland by strimming or mowing.

For Bat and Bird Boxes:

- No maintenance is required and products should last at least 10 years.
- Boxes should not be disturbed in line with guidance in 4.1 ‘Protected Species’.

5.0 RESPONSIBILITY FOR IMPLEMENTATION

Responsibility will lie with the plot owner.

Soft landscape maintenance will continue in line with the specification in section 4.0 for a minimum period of 5 years in accordance with planning conditions.

October 3, 2023

6.0 IMPLEMENTATION PROGRAMME

6.1 Implementation

Planting will be undertaken in the next planting season following occupation, this is likely to be November 2023 to March 2024 in line with Condition 10.

10 All planting, seeding or turfing comprised in the approved details of landscaping shall be carried out in the first planting and seeding seasons following the occupation of the buildings or the completion of the development, whichever is the sooner; and any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species.

6.2 Bare root planting to be undertaken in the planting season November to March.

6.3 Wildflower seeding should ideally take place in Spring or Autumn (ensuring sufficient development before first frost) but can be sown at other times of the year if there is sufficient warmth and moisture.

6.4 Erection of bat and bird boxes can take place year round, but ideally should be installed when there will be no further construction disturbance.

7.0 MONITORING AND REMEDIAL MEASURES

7.1 An annual walkover will be undertaken by the plot owner in October to monitor establishment success, with any plants or areas of seeding that fail to thrive during the **5 year establishment phase** [refer Condition 10] to be replaced in the next suitable planting season. Replacements will match the size of adjacent or nearby plants of the same species or should match the original specification, whichever is the greater.

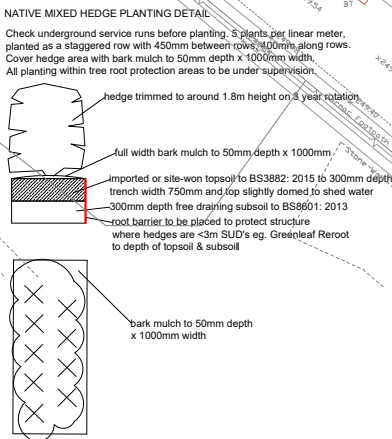
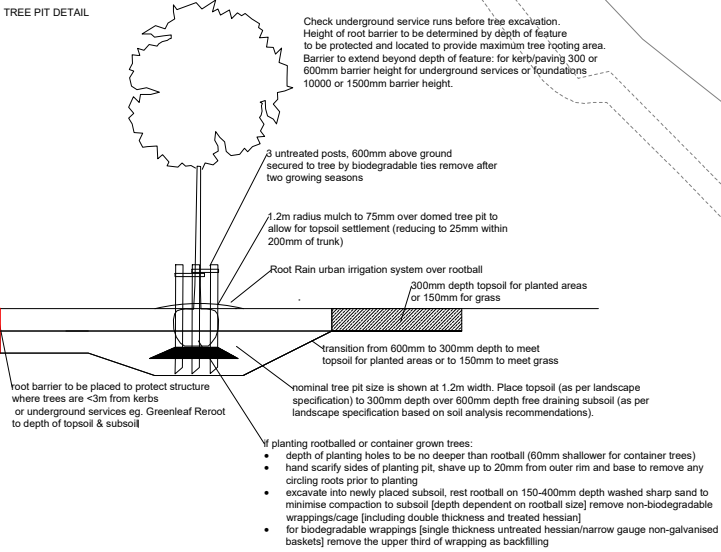


Notes

- proposed standard native trees planting 14-16cmg
- proposed native hedge planting underseeded with eg Emorsgate EH1 Hedgerow mix at 4g/sqm or similar
- proposed Emorsgate species rich seed mixes at 4g/sqm as shown
- trees and hedges within the site to be retained
- trees and hedges to be removed

Tree species	Height (mm)	Description	Spacing	Total (no.)
See plan for tree pit detail. Secured with a triple stake and biodegradable pad and belling. Good branching rather than height is key. 75mm mulch to 1.2 sqm.				
Sorbus aucuparia (rowan)	14-16cmg	Bare root or container or root balled	As per plan	2
Prunus padus (bird cherry)	14-16cmg	Bare root or container or root balled	As per plan	1
Prunus avium (wild cherry)	14-16cmg	Bare root or container or root balled	As per plan	1

Native Mixed hedge - 43 linm Plant a staggered row (450mm between rows, 400mm along rows) at 5 plants/lin m, bare root transplants 1+2, 900-1200mm, 3L for Holly. Mulch hedge width to 50mm depth. Maintained on a 3 year rotational cut of top and sides in February before bird nesting to provide source of nuts and berries, generally to around 1.8m, lower height of 1.2m and more regular cutting at access road frontage.				
Hawthorn [Crataegus monogyna] 40%				95
Holly [Ilex aquifolium] 10%			3L	20
Hazel [Corylus avellana] 20%				40
Cornus sanguinea [Dogwood] 20%				40
Ligustrum vulgare [Privet] 10%				20



All dimensions must be checked on site and not scaled from this drawing.

This drawing is for the purposes of PLANNING. Based on Ordnance Survey and topographic survey data as supplied. OS Licence 100043966

Layout based on site layout by Utopia Design.

Refer to Mackley Davies Soft Landscape Outline specification and planting schedule.

Refer to Mackley Davies LEMP for soft landscape maintenance/management.

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2 Carn Gwilym Goch, Merthyr

CLIENT
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DRAWING TITLE
Planting Plan

SCALE	1:200 @ A1	Job No.	23/934/01
DATE	July 2023	REVISION No.	