ECOLOGICAL MANAGEMENT PLAN

WITCHER WELL
DUNSOP BRIDGE

RSC-19-01
OCTOBER 2021

Naturally Wild Consultants Limited
3 Halegrove Court
Cygnet Drive
Bowesfield
Stockton-on-Tees
TS18 3DB

Email: hello@naturallywild.co.uk

ECOLOGICAL MANAGEMENT PLAN

WITCHER WELL
DUNSOP BRIDGE
RIBBLE VALLEY
BB7 3AZ

FOR
JOHN IBISON

Quality Assurance

Version	Prepared by	Date	Checked by	Date	Approved by	Date
R1	Matthew Buxton	01/10/2021	Draft version.			
R2	Matthew Buxton	05/10/2021	Aaron McFarland	06/10/2021	Matthew Buxton	07/10/2021
R3	Matthew Buxton	22/10/2021	Updated planting plan added.			

CONTENTS

ECOLOGICAL MANAGEMENT PLAN: WITCHER WELL, DUNSOP BRIDGE

1 INTRODUCTION

Naturally Wild have been instructed to produce an Ecological Management Plan (EcMP) for the proposed re-development at the above site. The purpose of this EcMP is to assist with discharging a planning condition, outlining the habitats to be created on site (and subsequently managed) post-development in order to maintain and enhance the site's overall ecological value in the long term.

Naturally Wild have undertaken an ecological assessment of the site between 2019 and 2021 in relation to the planning application for the proposed re-development. This included completion of an Ecological Impact Assessment and production of a shadow Habitats Regulations Assessment (HRA). Although the site was assessed to be of overall low ecological value, there were habitats present that were considered to provide some value for wildlife at a site level, and a bat roost has been confirmed to be present within the existing salmon hatchery building. An opportunity is considered to be available to enhance the ecological value of the site through the implementation of appropriate mitigation, compensation and enhancement measures as part of the re-development.

This EcMP document has been produced to allow for the discharge of Condition 16 attached to planning permission (Ribble Valley Borough Council, ref: 3/2020/0667), which states:

Notwithstanding the submitted details, no development, including any site preparation, demolition, scrub/hedgerow clearance or tree works/removal shall commence or be undertaken on site until a landscape and ecological management plan, including management responsibilities and maintenance schedules for all landscaped areas has been submitted to and approved in writing by the Local Planning Authority.

For the avoidance of doubt the details shall also indicate that the landscaping proposals shall be maintained for a period of not less than 10 years to the satisfaction of the Local Planning Authority. This maintenance shall include the replacement of any tree or shrub which is removed, or dies, or is seriously damaged, or becomes seriously diseased, by a species of similar size to those originally planted.

The landscape management of the site shall thereafter be carried out in strict accordance with the approved details.

REASON: In order to ensure that the landscaping hereby approved is adequately and appropriately managed.

It should be noted that, despite the wording of the condition, a separate Landscape Management and Maintenance Plan (LMMP) is being produced in conjunction with this EcMP.

In addition, whilst not strictly related to the below condition, the EcMP has also been produced with regard to the requirements of Condition 18, which states:

The development hereby approved shall be completed and operated in strict accordance with the mitigation and enhancement measures contained in the Bat Risk Assessment and Bat Survey Report (RSC-19-01, October 2020), Ecological Impact Assessment and Habitats Regulation Assessment (RSC-19-01, January 2021) and Habitats Regulations Assessment Report (RSC-19-01, March 2021).

The artificial nesting/roosting features shall be incorporated into the building during the conversion works before the building is first brought into use and retained thereafter.

REASON: In the interests of biodiversity and to ensure there is no adverse effect on the integrity of Bowland Fells Special Protection Area (SPA) and Bowland Fells Site of Special Scientific Interest (SSSI).

The proposals are to convert an on-site building, with previous use as a salmon hatchery, into three separate self-contained holiday apartments, with the creation of a car parking area directly to the north of the building and replacement of a corrugated metal roof with a green roof on another small structure on site to the west of the main building. Work will involve vegetation clearance for car park creation, and works to the roofs of both mentioned buildings, as well as considerable internal works to the salmon hatchery. Extensive soft landscaping will also be undertaken.

2 SITE DESCRIPTION AND EVALUATION

2.1 Overview

The proposed re-development site (highlighted on Figure 1, below) covers an area of approximately 0.38 ha, located approximately 2 km north-west of Dunsop Bridge. The site comprised several buildings surrounded by a mosaic of species-rich semi-improved grassland, marshy grassland/neutral flush and stands of bracken (*Pteridium aquilinum*). A summary of the ecological value of each of the habitats on site, including their suitability to support protected or notable species, is provided further below.

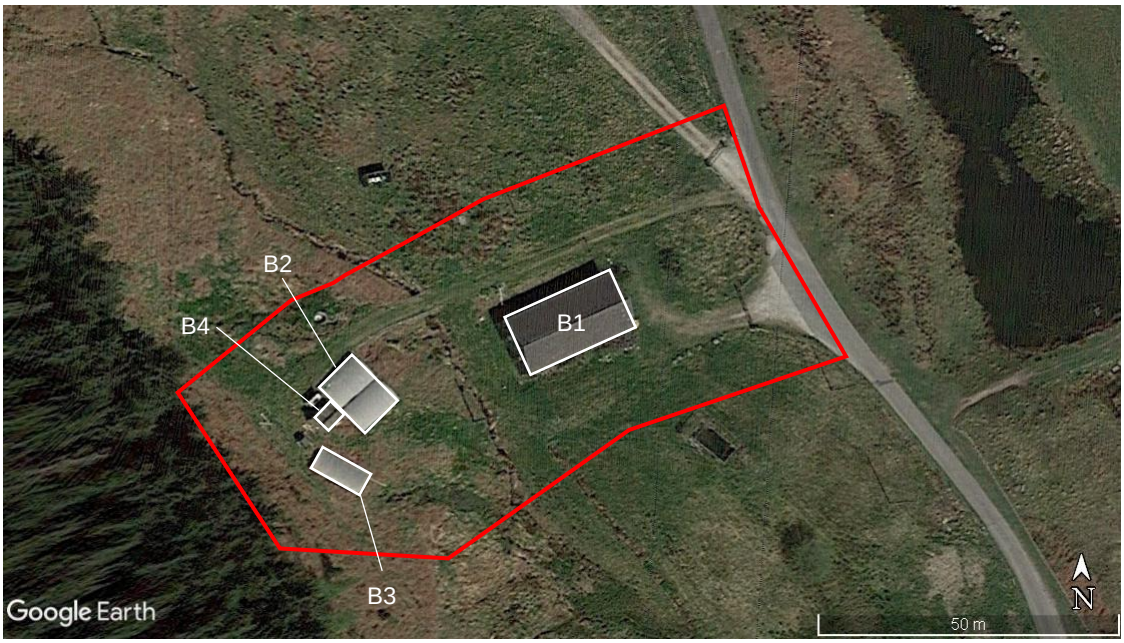


Figure 1. Aerial view of the site. The application boundary is shown by the red line. The location of each building on site is highlighted, with building references provided.

(Image taken from Google Earth Pro: ©2021 Map Data Google)

2.2 Designated Sites

There are no statutory designated sites on or directly adjacent to the proposed re-development. The nearest statutory designated site is the Bowland Fells Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). The Bowland Fells designation is situated 0.36 km to the west of the site at its closest point. The site supports a range of nationally scarce plants and provides suitable habitat for a diverse upland breeding bird community. The shadow HRA completed by Naturally Wild concluded that no direct impacts are expected to be incurred to the SPA/SSSI as a result of the proposed re-development due to the small scale and localised nature of the proposed works, and no indirect adverse effects are expected, providing that appropriate mitigation measures (mentioned in Section 3.3) are implemented.

The site is situated within the Valley of the River Dunsop Biological Heritage Site (BHS), which is a local non-statutory designation. This designated area supports a rich mosaic of habitats such as mire, heathland, species-rich grassland, marshy grassland, species-rich flushes and stands of gorse (*Ulex europaeus*) and bracken; however, due to its limited footprint, relatively low impact design (including installation of a green roof with a suitable seed mix) and future site management expected to be of benefit to the BHS, primarily through the management of bracken to maintain the species richness of the grassland and flushes on site (as well as habitats to be created as part of the re-development), it is expected that the Valley of the River Dunsop BHS will not be significantly impacted by the proposed works.

In addition to the BHS designation, above, the area surrounding the site is classed as upland flush, fen and swamp priority habitat, designated under the Natural Environmental and Rural Communities Act 2006. Again, despite the location of this designation within and immediately adjacent to the site boundary, due to the reasons already mentioned above, it is expected that any significant impacts to the integrity of this designation will be avoided.

2.3 Habitat and Species Summary

Buildings: Four buildings are present on site, which include the former salmon hatchery building due to be converted (B1), an outbuilding containing a water tank (B2), which is due to be re-roofed, and two further outbuildings (B3 and B4). B2 – B4 were considered to be of negligible suitability for roosting bats and no evidence of bats was found during the survey visits completed; however, two bat droppings, indicative of pipistrelle (*Pipistrellus sp.*) bats, were found inside B1, and this building was later found to support a day roost for a single soprano pipistrelle (*Pipistrellus pygmaeus*) bat.

B1 was considered to be of low suitability for nesting birds, but no evidence of nesting has been recorded on site.

Semi-improved Grassland: Where regular cutting or mowing has taken place around B1, species-rich semi-improved grassland was present. Dominant species included perennial rye-grass (*Lolium perenne*), crested dog's-tail (*Cynosurus cristatus*), purple moor-grass (*Molinia caerulea*), ribwort plantain (*Plantago lanceolata*), yarrow (*Achillea millefolium*), shepherd's-purse (*Capsella bursa-pastoris*), self-heal (*Prunella vulgaris*), creeping buttercup (*Ranuculus repens*), white clover (*Trifolium repens*), hairy vetch (*Vicia hirsuta*), purple loosestrife (*Lythrum salicaria*), black medick (*Medicago lupulina*), red sorrel (*Rumex acetosella*), mixed dock species (*Rumex spp.)*, mixed thistle species (*Cirsium spp.*), common nettle (*Urtica dioica*) and foxglove (*Digitalis purpurea*). Some pathways were present around the site and take on a more improved grassland character, dominated by creeping bent (*Agrostis stolonifera*) and clover (*Trifolium sp.*). In addition, some recently planted shrubs were also present immediately around the building.

These areas of grassland were considered to offer some suitable habitat for badgers (*Meles meles*), reptiles, common amphibians, and ground-nesting birds; however, no evidence of such has been recorded on site. The areas of grassland further away from B1 were considered to be of high value at a site level, but the areas of grassland immediately surrounding B1 were noted to be managed during site visits in 2020, increasing disturbance and, therefore, reducing their ecological value, considered to be low at a site level.

Marshy Grassland/Flush: The small flush would be classified as neutral, supporting a bryophytic carpet of largely *Sphagnum sp*. mosses, with overlying rushes (*Juncus spp.*), although some areas expressed a more marshy grassland character, where moss coverage is replaced by peaty soil, with rush and sedge (*Carex sp.*) species dominating ground coverage. This habitat may offer some suitable habitat for common amphibian species, but, again, no evidence of such has been recorded on site.

Bracken: Areas in the west of the site, dominated by bracken, are considered to offer relatively low ecological value due to the bracken's dominance resulting in low plant diversity for foraging wildlife. The habitat also offers limited overall suitable shelter.

2.4 Protected and Notable Species Summary

The only evidence of protected or notable species recorded during the assessment completed by Naturally Wild was a single soprano pipistrelle roosting in B1.

No flora or fauna listed as invasive, non-natives on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were found on site.

3 HABITAT PRESCRIPTIONS

3.1 Overview

Due to the site being assessed to be of overall low ecological value, there is considered to be the potential to enhance the ecological value of the site through implementation of suitable enhancement measures and appropriate management during and post-works.

Detailed landscaping proposals for the site have been produced by Rural Solutions Consulting and are reproduced in the Appendix of this document to provide an indication of the proposed layout of soft landscaping areas. For full details of proposed landscaping and management thereof, this EcMP should be read in conjunction with the original plans produced by Rural Solutions, and the accompanying LMMP.

For ease of reference, the site has been separated into five different management compartments, representing the habitats that will be present on-site post-development, in accordance with proposed landscaping plans. A number of general management prescriptions have been outlined in Section 3.2, a series of site-specific mitigation measures to be followed provided in Section 3.3, prescriptions for the individual compartments provided in section 3.4, and a series of further enhancement measures outlined in Section 3.5.

3.2 General Prescriptions

- Dog waste can present problems for health and safety and add unwanted nutrients to the local environment, resulting in unwanted changes in habitat composition; therefore, if dogs are to be present on site with visitors, suitable waste bins should be provided and regularly emptied.
- Littering on the site should be strongly discouraged. Littering conveys a lack of respect for the local environment and the presence of litter can encourage further casual disposal of rubbish. In addition, litter can present a health and safety risk and can be highly detrimental to wildlife. Appropriate signage and waste bins should be provided to reinforce the responsibilities of visitors to maintain a clean and healthy local environment and allow them to do so. Any littering that is found to occur should be cleared on a regular basis.
- Pesticides, herbicides, fertilisers, or any use of chemicals should be avoided on site as far as feasible. By their very nature, all such chemicals are potentially damaging to the environment to a greater or lesser extent, can lead to impoverishment of habitats and may be a danger to the public. Use of these chemicals as part of site management should be avoided as far as feasible, being restricted to essential tasks when other management methods are inappropriate or have failed. Application of chemicals must be undertaken by staff or contractors with current certification of competence.

3.3 Site-specific Mitigation Measures

- Although no herpetofauna (reptiles and amphibians) have been found on site at any stage, due to the presence of suitable habitat on and surrounding the site, as well as records of reptiles in the area, Reasonable Avoidance Measures (RAMs) will be adopted during site clearance to avoid significantly impacting any herpetofauna.

- This precautionary approach will involve initial vegetation management, whereby the existing vegetation is strimmed to lower the sward height, reducing the habitat suitability for herpetofauna and encouraging any animals present to move off via the disturbance, in the unlikely event that they are present at the time of the works.
- Following initial vegetation management, subsequent groundworks would be carried out following the destructive search methodology, whereby the turf layer is scraped away using an excavator with a ditching bucket attached.
- A suitably qualified and experienced ecologist would be present to oversee these works and carry out a careful inspection to check for any herpetofauna present.
- No hibernacula to provide shelter have been found in the areas to be affected, and there are therefore not considered to be any significant timing constraints in relation to disturbing hibernating herpetofauna; however, any groundworks must be carried out in suitable conditions (air temperature of at least 5°C) in order to avoid encountering any animals in a state of torpor (inactivity).
- Any amphibians or reptiles encountered during these works would be safely captured and moved to suitable habitat off site.
- In the event of any common species of amphibian or reptile being found in small numbers, they will be caught by the on-site ecologist and moved to a safe area away from the works; however, in the unlikely event that large numbers of reptiles or any great crested newts are encountered, it will be necessary to stop work and contact the County Ecologist and/or Natural England to agree appropriate action.
- During the construction phase, any materials to be stored on site that could act as temporary resting places are to be raised off the ground, on pallets or similar, to avoid herpetofauna sheltering underneath them and subsequent movement of the materials causing disturbance.

- As the semi-improved grassland provides suitable habitat for some ground-nesting bird species, site clearance works and works to the buildings are to be timed to commence outside of the bird nesting season (March – August inclusive). If this later becomes unfeasible for any reason, a pre-start nesting bird survey must be carried out by a suitably qualified ecologist shortly prior to the start of works to ensure no active nests are present.
    - If any nests are encountered prior to or at any time during the works, all works in the area around the nest would cease and an ecologist contacted to check the status of the nest.
    - If an active nest is confirmed, a suitable buffer (minimum of 5 m) would be kept around the nest until it can be confirmed as no longer active, after which time works in the area can continue.
- Any surrounding vegetation to be retained is to be adequately protected during any clearance works using Heras fencing or similar in order to avoid unnecessary trampling or tracking of machinery and consequently minimise habitat degradation and maintain the integrity of the surrounding BHS designation and priority habitat present in the area.

- Although bat activity on site has been found to be relatively low overall, adjacent habitats have been found to be of some value for commuting and foraging activity, and a roost is present in B1. A sensitive lighting scheme will be implemented post-works, which will include low-level timber bollard lighting (LED; 5 watts max.) and downward-facing wall-mounted lights (LED; 6.5 watts max.). This will help to avoid unnecessary light spill and consequent indirect disturbance to foraging and commuting bats (and other wildlife) that may be using the woodland to the west and River Dunsop present to the east.
- Although considered unlikely to be present in the immediate area, to reduce the impact to badger and other wildlife that may use the site, it is recommended that any trenches or voids are dug and filled within the same working day. Should this not be possible, an adequate means of escape will be provided and/or the excavations will be securely covered overnight. An adequate means of escape would comprise a ramp with adequate grip, at least 30 cm wide and set at an angle of no greater 45°.
- To ensure that potential impacts relating to human disturbance to SPA-designated bird species are avoided during the operational phase of the development, an informative document will be produced and displayed/available to guests to explain the nature and location of the SPA and the designated species, advising guests of breeding season and how to avoid disturbance to ground-nesting birds and other wildlife within the SPA during their visit, such as keeping to footpaths and keeping dogs on leads.

3.4 Compartment Prescriptions

3.4.1 Tree Planting

Tree planting will be carried out across the site, with the greatest density present around the converted building and the site entrance. A number of trees will also be planted off site immediately to the south. A range of species appropriate to the existing habitats are to be used. Once established, the trees will offer aesthetic value on site and in the surrounding area, fulfil a screening purpose against the development for the wider surrounding area, and offer nesting habitat for birds and foraging habitat for bats and other wildlife.

Species to be planted include Scots pine (*Pinus sylvestris*), alder (*Alnus glutinosa*), silver birch (*Betula pendula*), and goat willow (*Salix caprea*).

3.4.2 Shrub Planting

Shrub planting will be undertaken across the majority of the site, but again with a focus around the building and towards the front of the site. Much of the shrub planting will be combined with the tree planting, above. Establishment of this habitat will offer significant aesthetic value and a screening function whilst providing robust habitat for nesting birds and shelter and foraging habitat for a range of other species.

Shrub species to be planted will include blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), gorse (*Ulex europaeus*), and holly (*Ilex aquifolium*), with foxglove and soft rush (*Juncus effusus*) in the ground layer.

3.4.3 Species-rich Grassland

Existing on-site habitats at ground level are to be replaced with a species-rich wildflower mix across much of the site, with the most extensive area being present in the western half of the site. Establishment of this grassland will again provide aesthetic value, and with appropriate management will provide and maintain a species-rich habitat with appropriate structure that will offer shelter and foraging opportunities for a range of wildlife, including herpetofauna, small mammals, and a range of pollen and nectar-dependent insects.

Emorsgate EM7 –Meadow Mixture for Sandy Soils has been specified for the seeding to provide a suitable seed mix for the ground conditions on site and offer a species-rich sward of vegetation, once established:

Wildflowers (20%)	
Kidney vetch	*Anthyllis vulneraria*
Betony	*Betonica officinalis*
Common knapweed	*Centaurea nigra*
Houndstongue	*Cynoglossum officinale*
Lady's bedstraw	*Galium verum*
Field scabious	*Knautia arvensis*
Rough hawkbit	*Leontodon hispidus*
Oxeye daisy	*Leucanthemum vulgare*
Bird's-foot trefoil	*Lotus corniculatus*
Black medick	*Medicago lupulina*
Ribwort plantain	*Plantago lanceolata*
Salad burnet	*Poterium sanguisorba*
Selfheal	*Prunella vulgaris*
Meadow buttercup	*Ranunculus acris*
Weld	*Reseda luteola*
Yellow rattle	*Rhinanthus minor*
Sheep's sorrel	*Rumex acetosella*
White campion	*Silene latifolia*
Bladder campion	*Silene vulgaris*
Wood sage	*Teucrium scorodonia*
Great mullein	*Verbascum thapsus*

Grasses (80%)	
Common bent	*Agrostis capillaris*
Brown bent	*Agrostis vinealis*
Sweet vernal-grass	*Anthoxanthum odoratum*
Crested dog's-tail	*Cynosurus cristatus*
Sheep's fescue	*Festuca ovina*
Red fescue	*Festuca rubra*
Crested hair-grass	*Koeleria macrantha*

Sowing rate: 4 g/m^2

3.4.4 Habitat Bunds

An earth bund is to be created around the new car parking area immediately north of B1, and extending south-east along the access road into the site. The bund will be created using arisings from excavation works on site and seeded with Emorsgate EM7 seed mix, which will allow for the establishment of a species-rich sward of vegetation. The creation of the bund (the majority of the area of which will be south-facing) and subsequent establishment of grassland vegetation will benefit a range of insect species, which will, in turn, benefit birds, bats and herpetofauna.

In addition to the above, a series of smaller habitat bunds will be created around the site, again using excess material from site excavations, and will be capped with a low-nutrient chalky rubble, allowing for the establishment of a species-rich sward of vegetation, where appropriate. The bunds will again be of benefit to a range of invertebrate species and, in turn, other wildlife. Information on appropriate design and management of these bunds has been produced by Buglife and is provided in the Appendix.

3.4.5 Green Roof

The existing corrugated metal sheet roof on B2 is to be removed and replaced with an extensive green roof, which will be low maintenance in nature. The roof will be seeded with Emorsgate ER1 – Turf Roof Mixture to provide a species-rich sward of vegetation, once established.

Wildflowers (20%)	
Kidney vetch	*Anthyllis vulneraria*
Common knapweed	*Centaurea nigra*
Crosswort	*Cruciata laevipes*
Dropwort	*Filipendula vulgaris*
Lady's bedstraw	*Galium verum*
Horseshoe vetch	*Hippocrepis comosa*
Rough hawkbit	*Leontodon hispidus*
Oxeye daisy	*Leucanthemum vulgare*
Bird's-foot trefoil	*Lotus corniculatus*
Black medick	*Medicago lupulina*
Wild marjoram	*Origanum vulgare*
Ribwort plantain	*Plantago lanceolata*
Hoary plantain	*Plantago media*
Salad burnet	*Poterium sanguisorba*
Cowslip	*Primula veris*
Selfheal	*Prunella vulgaris*
Bulbous buttercup	*Ranunculus bulbosus*
Yellow rattle	*Rhinanthus minor*
Sheep's sorrel	*Rumex acetosella*
Bladder campion	*Silene vulgaris*

Grasses (80%)	
Quaking grass	*Briza media*
Glaucous sedge	*Carex flacca*
Crested dog's-tail	*Cynosurus cristatus*
Sheep's fescue	*Festuca ovina*
Red fescue	*Festuca rubra*
Crested hair-grass	*Koeleria macrantha*
Yellow oat-grass	*Trisetum flavescens*

Sowing rate: 4 g/m^2

3.5 Other Enhancement Measures

- Due to the confirmed presence of a bat roost in B1, an enhancement in available bat roosting habitat will be implemented post-works to meet the requirements of a European Protected Species mitigation licence to be obtained to permit works affecting the roost. Installation of a Schwegler 2FE wall-mounted bat shelter, fitted to the western elevation of the building which opens out towards the adjacent woodland area, will provide enhanced roosting habitat for bats on site post-works.
- Where possible, logs and brash arising from vegetation clearance or will be retained in suitable locations on site to create hibernacula in order to provide shelter for a range of wildlife, including invertebrates and herpetofauna.
- As some guests to the holiday lets may be keen birdwatchers, a guest book could be kept within each holiday let to allow recordings of sightings and could potentially be used to provide data for species within the area, to be provided to the local environmental records centre to aid conservation efforts and management of the SPA/SSSI.
- In addition to the soft landscaping measures outlined above, sections of the existing flush will be managed, through the clearance of encroaching bracken, and will be sensitively landscaped to help created a more naturalised channel and help promote the restoration of bog mosses and offer suitable habitat to a range of invertebrate species.

3.6 Responsibilities and Reporting

The landowner will be responsible for undertaking the annual management tasks, or appointing a suitable landscape contractor to carry them out on their behalf. A brief report should be produced annually to confirm the required tasks have been carried out.

3.7 Monitoring and Review

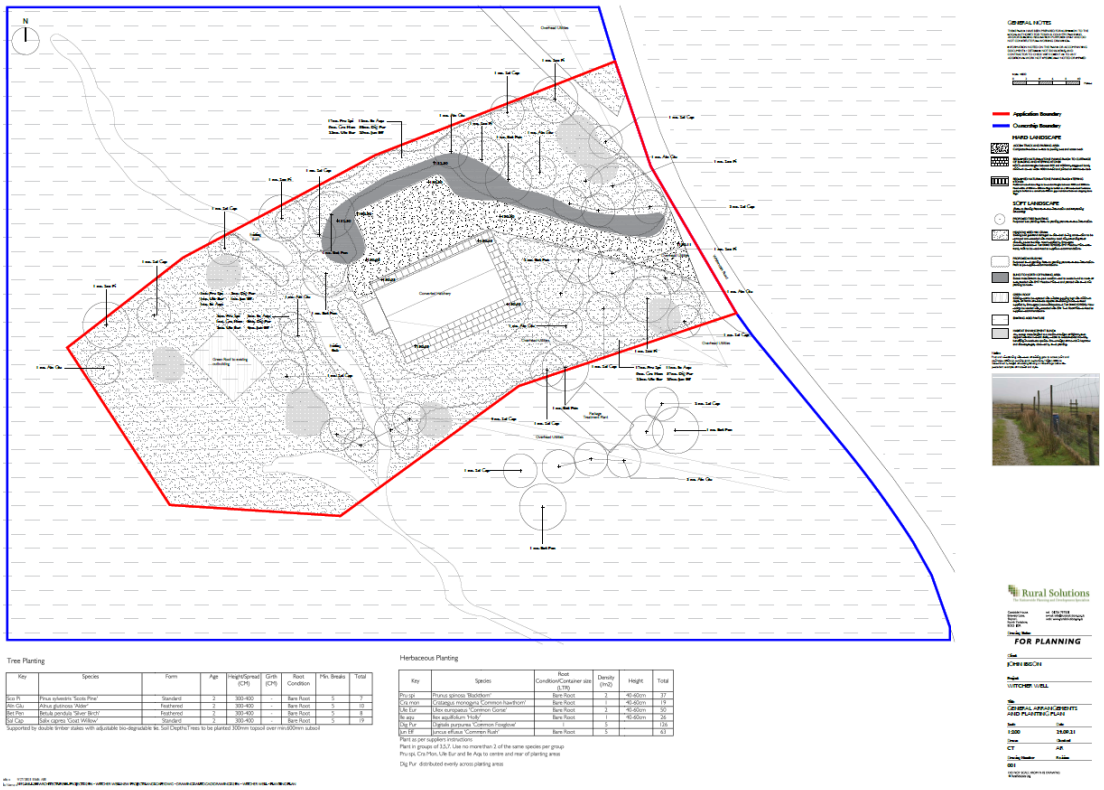
The site will be visited on an annual basis to determine the effectiveness of the management prescriptions and any modifications or additions to the EcMP or LMMP that may be required. Consultation with a suitably qualified ecologist may be required to determine any necessary changes to the management regime.

APPENDIX

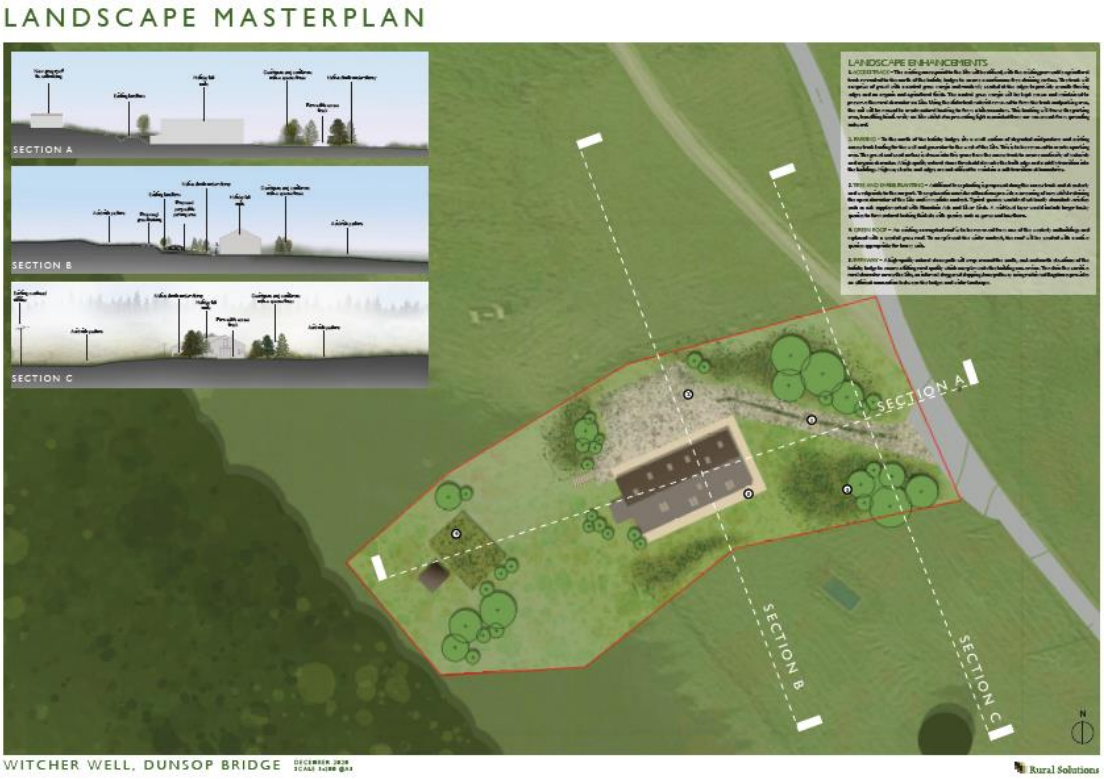
Landscaping Plans

Provided for reference only. For full details, please see the original drawings.

General Arrangements and Planting Plan, Drawing Number 001, Rural Solutions Consulting, September 2021



Landscape Masterplan, produced by Rural Solutions Consulting, December 2020



Habitat Bund Design

Information produced by Buglife

https://cdn.buglife.org.uk/2020/04/Bee-bank-booklet-4.pdf

How to create a Bee Bank

buglife

Building bee banks is a great way to help pollinators in your local area! A bee bank provides warm, sheltered patches of bare ground where solitary mining bees can nest.

Where can they be made?

Mining bees like it warm, so choose a spot that gets full sunshine and is sheltered from the prevailing wind. Align your bee bank to face south or south-east for maximum sunshine.

Building your bee bank in a crescent shape will help to trap warmth and create a variety of conditions that will benefit many different invertebrates.

Bees also need a nearby source of nectar and pollen so make sure there are lots of wildflowers nearby.

Size doesn't matter!

Bee banks can be any size from a small area in your garden to one extending along an entire field. It just depends on the amount of space available and the man power you have to build it.

In this guide we have some suggestions to create your own, but feel free to add variety when it comes to height, shape and materials to create your bank!

Did you know... By creating a bank you will not only help pollinators such as bees but also a whole range of other invertebrates, birds and reptiles.


buglife
How to make a bee bank
Step 1- Clearing a space
Select your spot and dig up the turf, piling to one side. This dug area needs to be larger than you want to make your bank so that you create some bare ground around it (up to one metre). Try to take 15cm depth of turf so that you get most of the grass roots out.
Step 2-Start building the bank
Dig a trench in the shape you want your bank, around 30cm deep.
We recommend a crescent moon shape which maximises surface area and creates different angles and shapes.
Keep this soil in a second pile - you will need it in stage 3a to help kill off the grass.
Step 3a- Start building the banks core
Pile the removed turf from stage 1 upside-down on the core strip of the bee bank (the trench) and begin to form a crescent by extending blocks of turf out to the south facing corners.
You will need
Spades
Aggregate/stones for capping
Sand for capping
All photos by Jamie Robins
Step 3b-
Put the soil from stage 2 over the bank to complete the core.
It doesn't matter what materials you use to build the core of your bee bank - you can use whatever materials you can find on your site. The materials that you cap your bee bank with are most important.
Step 4- Capping the bank
The capping material must be sufficiently deep for the bees to dig their burrows into - at least 30cm - and also should be low in nutrients. Sand or sub-soil are ideal. We would recommend using builder's sand, as the grains are not uniform in size and help the bank stay together. The capping material can be added at different depths for variety.
Use sand to cover the border around the bee bank to suppress weeds, and provide additional habitat for ground nesting bees to use. Compact the sand using the back of your spade .
More than one bank?
If you are creating more than one bee bank on your site, consider using different types of capping material on each one.
Your completed bee bank
© Peter Kirby
2
1
3
1 - Clifflet
Why not cut in a clifflet to create some vertical nesting space
2 - Vegetation
Maintain sparse vegetation on the bank so bare ground is always visible
3 - Bare ground
Having bare ground around the bank provides additional nesting space

Looking after your bee bank

buglife

Management

To manage your bee bank, clear a section back to bare ground every year. You can weed half of the bank one year and leave the other section, then the following year swap sides - try not to clear the whole bank and try to minimise disturbance.
If you have multiple banks, clear sections on a rotational basis – the best time to do this is around February.

Additional information

On a larger area, a scattered network of banks with wildflowers in between would be an excellent way of creating a multipurpose space suitable for pollinators.

It is best not to plant on the actual bank. This keeps it open, sandy and bare for longer.

Additional nesting

Installing some nesting habitat for hole-nesting bees such as leafcutter and mason bees would also be useful. Dead wood stumps with holes drilled in them (ideally as deep as possible, at least 8cm long and 4-10mm diameter), or bundles of bamboo canes, common reed stems and herbaceous perennial stems for leafcutter and mason bees would be good. Again put these in full sunshine.

Check our other guides on helping pollinators in urban environments here:

www.buglife.org.uk

Garfield Weston | Biffa Award