

BIODIVERSITY ENHANCEMENT STRATEGY

The Old Chalk Pit, Gypsy Lane, Petersfinger, Wiltshire, SP5 3DA

A REPORT FOR HC PLANNING

This report has been compiled to guide all construction activities to facilitate development at the site

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Assessment completed in 2023

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Table 0.1 - Document and Version Control

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V1	Giles Coe MCIEEM	Giles Coe	08/01/2024

Copyright and guidance

This report has been written to provide an objective assessment of the ecological constraints and opportunities that were considered to be present at the site at the time the survey/s were conducted and, should be used solely for the purpose for which it was designed. The copyright must be considered to rest with Co-ecology Ltd whilst use of the report is for the commissioning party and their client only, unless with the express and written consent of Co-ecology Ltd.

The surveys and assessment have been drafted to be in accordance with; Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition), British Standard for Biodiversity BS42020:2013, Biodiversity - Code for planning and development and; the Code of Professional Conduct published by the Chartered Institute of Ecology and Environmental management.

N.B. It must be noted that investigations of this sort provide only a snapshot in time of the ecological conditions of a site, are limited in extent and cannot capture the full picture of the biodiversity interests at the given location.

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1 Introduction

Overview of the commission and the proposals

1.1. Co-Ecology Limited was commissioned by HC Planning to compile a Biodiversity Enhancement Scheme in relation to the proposed development at The Old Chalk Pit, Gypsy Lane, Petersfinger, Wiltshire, SP5 3DA. This document was conditioned as part of the decision for planning permission (Planning Application Reference: PL/2021/11645) for the proposed change of land use for the positioning of two touring caravans, one dayroom, one barn, and associated services.

1.2. This enhancement strategy document has been written to ensure compliance with Condition 12 set by the Wiltshire Council planning office (November 2022) relating to development within the site.

1.3. *"……a Wildlife Protection and Biodiversity Enhancement Scheme shall be submitted to and approved in writing by the Local Planning Authority.*

1.4. *The details for Biodiversity Enhancement measures shall be provided on a plan and a written scheme in line with the submitted Biodiversity Net Gain Assessment Summary by Co-Ecology 2022 including:*

- *The removal of Japanese Knotweed, Winter heliotrope and dense stands of nettles;*
- *Scraping back of nutrient-rich substrate to expose the underlaying chalk;*
- *Seeding exposed areas with a calcareous mix of local provenance;*
- *Gap planting for the stretch of trees that form the site's eastern boundary;*
- *Selected understorey woodland planting and;*
- *The installation of bird and bat boxes on mature trees surrounding the site;*

1.5. *Full details and locations of all plant species, supply, planting sizes and planting densities shall be provided. All planting will be planted in accordance with the approved details in the first planting season."*

1.6. This document deals solely with the post planning enhancement works on site as a retrospective report and therefore does not address the measures taken during the construction phase of the works. Following standards set out in BS42020, the content of the Biodiversity Enhancement Scheme shall include the following:

- Purpose and conservation objectives for the proposed enhancement measures;
- Detailed designs or product descriptions to achieve stated objectives;
- Locations, orientations, and heights of proposed enhancement measures by appropriate maps and plans;
- Timetable for implementation demonstrating that works are aligned with the proposed phasing of development;
- Persons responsible for implementing the enhancement measures;
- Details of initial aftercare and long-term maintenance (where relevant);

Background

1.7. To appropriately inform the proposals, the following survey/assessment work was produced:

- Preliminary Ecological Appraisal (Co-Ecology Ltd, 2022a)
- Biodiversity Net Gain Assessment (Co-Ecology Ltd 2022b).

Site Context

1.8. The site is centred on OS grid reference SU 1629 2937 situated in a rural edge location in the Petersfinger area on the far south-east of Salisbury, Wiltshire. It is accessed via a part made track which runs to the west of the site from below the main railway line to the south heading north to Milford and Laverstock. There are large arable fields to the north, east and west with intervening strips of woodland, lines of trees and hedgerows and an area of open grassland adjacent to the east boundary. A main railway corridor forms the southern boundary of the site with the Petersfinger conurbation and the A36 to the south of that.

1.9. The wider landscape is dominated by arable fields and pasture to the north and east with the urban sprawl of Salisbury to the west and parkland to the south.

1.10. The habitats present on site include:

- g3 Neutral grassland;
- g3c Other neutral grassland;
- u1b5 Buildings;
- u1c Artificial unvegetated, unsealed surface;
- c1f horticulture;
- w1g Other woodland, broadleaved;
- w1g6 Line of trees; and
- u1e Built linear feature.

1.11. Stands of Japanese Knotweed *Fallopia japonica* and small patches of ephemeral vegetation dominated by winter heliotrope *Petasites fragrans* were present within patches of the Poor condition other neutral grassland habitat.

Proposed Works

1.12. The proposals comprise the change of use to one Gypsy pitch including two touring caravans, one dayroom, one barn, and associated works, this is part retrospective as the client is currently residing on the land.

Relevant Legislation and Planning Policy

1.13. The following key pieces of nature conservation legislation are relevant to this CEMP:

- The Environment Act (2021)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities Act 2006;
- Protection of Badgers Act 1992;
- The National Planning Policy Framework 2021;
- Biodiversity and geological conservation: circular 06/2005; and
- Wild Mammals (Protection) Act 1996.

1.14. The National Planning Policy Framework (Department of Communities and Local Government, 2021) requires local authorities to avoid and minimise impacts on biodiversity and to provide net gains in biodiversity when making planning decisions.

1.1. The following local policies are extracted from Wiltshire District Council Core Strategy.

- Core Policy CP50 – Biodiversity and Geodiversity

1.2. An extract of the key relevant sections of this policy is provided below.

1.3. *6.74 'All effects upon the natural environment should be addressed sequentially in accordance with the principle of the 'mitigation hierarchy':*

- *Avoid e.g. site location, buffers*
- *Reduce, moderate, minimise*
- *Rescue e.g. translocation*
- *Repair, reinstate, restore*
- *Compensate or offset.*

1.4. *6.75 'Compensation is a last resort, but will be necessary in some instances where other approaches cannot guarantee 'no net loss' of biodiversity and any unavoidable losses are outweighed by other sustainability considerations. Such measures should be delivered within the development site where possible; however, where this is not feasible, it may be more appropriate to deliver offsite measures through legal agreements and landscape scale projects. Appropriate compensatory measures should demonstrate no net loss of the relevant local biodiversity resource in the short and long-term, and be delivered as close to the development site as possible to avoid the degradation of local ecological networks or 'ecosystem services'. Additional guidance is available to help clarify appropriate ecological avoidance, mitigation and compensation measures to demonstrate compliance with Core Policy 50, which should be proportionate to the scale of any predicted impact'.*

2 Baseline ecological/biodiversity features

2.1. A preliminary ecological appraisal was conducted in 2022 by Co-Ecology (2022a) which formed the basis of Biodiversity Net Gain assessment (Co-ecology, 2022b). The survey and assessment identified habitats of varying conditions with suitability to support breeding birds, foraging bats, and reptiles. No targeted further surveys were necessary to inform the application and none were undertaken.

2.2. The site is located within 10km of the River Avon Special Area of Conservation (SAC), Salisbury Plain SAC, Great Yews SAC as well as Porton Down Special Protection Area (SPA) and within 5km of nine designated Sites of Special Scientific Interest (SSSI).

2.3. Following the recommendations made the reports, a series of measures are described in this document to protect ecological features identified at the site and within the wider landscape during the operational phase of the development, including:

- Reptiles - the site supports areas of grassland which may provide potentially suitable habitat for use by widespread reptiles;
- Bats – suitable foraging and commuting habitat is present on-site and immediately adjacent to the site; and
- Birds - general nesting opportunities are supported within the site for a range of widespread bird species.

3 Site enhancement measures

3.1. The proposed enhancement measures are illustrated within Figure 1 of this report and comprise;

- Removal of Japanese knotweed and winter heliotrope;
- Removal of dense stands of nettle;
- Scraping back base rich substrate to expose the underlaying chalk;
- Seeding exposed areas with a calcareous mix of local provenance;
- The gap planting of a stretch of the Line of Trees that form the site's eastern boundary;
- Selected understorey woodland planting.

Invasive non-native species

Japanese Knotweed removal

3.2. To ensure Japanese Knotweed does not spread beyond the site boundary or cause issues within the site, a five year management programme to remove the species from site will be progressed. This will comply with the Environment Agency regulatory position statement (RPS) 178 and Gov guidance note[1].

3.3. Each spring for four – five years successively, the new plant growth will be treated using a glyphosate-based weedkiller in high concentrations. These will be applied directly to the root and stem of the plants taking care not to damage and cause the plant to spread.

3.4. Following herbicide treatment, dead materials will be dried and collected before being burnt on site within a contained area thus ensuring no unintentional spread of the species beyond the site boundary. This will comply with the Environment Agency D7 waste exemption[2].

Winter Heliotrope removal

3.5. Winter heliotrope growth on site will be controlled through targeted cutting and digging up of specimens in year one before being burned in a controlled area of site. The areas cleared of heliotrope will then be scraped back and sown with shade tolerant hedgerow/woodland seed mixtures to fill the space and make it difficult for winter heliotrope to re-establish.

3.6. The areas treated for winter heliotrope will be monitored in years two and three. Any re-growth of the species will be removed by hand and burned on site.

Habitat creation measures

Other neutral grassland

3.7. The current *Poor condition Other Neutral Grassland* will be enhancement to a *Good condition* through the physical removal of nutrient rich top soils dominated by nettle and tall herb/ruderal vegetation to expose the natural chalk base layer of the site. These base-rich areas will be prepared and sown with a specific meadow seed mixture with chalk loving wildflower and grass species as described in able 3.1. Native species of local provenance were chosen in keeping with the local landscape.

[1] RPS178: Treatment and disposal of INNS

[2] D7 waste exemption

3.8. The chalk grassland seed mix will be obtained from the supplier: Habitat Aid[3] which have a Wiltshire specific calcareous seed mix collected from a farm in Woodford.

3.9. The small patches of *Other Neutral Grassland* currently in *Good Condition* will be retained and protected.

Hedgerow

3.10. The line of trees along the eastern boundary of the site was reported to be in *Poor Condition.* This habitat will be enhanced to a *Good Condition* achieved through selective tree works to improve existing tree health as well as in-fill gap planting.

3.11. The hedgerow seed mixture will be obtained from supplier: Emorsgate Seeds which are collected from sites in lowland southern England. Specific species and amounts are listed within Table 3.1

3.12. A total of 20 bareroot whips and 5 standards will be planted within the hedgerow on the east and north east corner of the site. Native species were chosen to include native nectar and berry bearing species, the specific composition and species selected are detailed within the planting schedule in Table 3.2.

Woodland

3.13. A small area of *Other Woodland Broadleaved* located within the south east corner of the site was in *Poor Condition* with bare ground and no shrub layer present under the canopy. Enhancing this habitat to a *Moderate Condition* will be achieved through understorey planting with appropriate scrub species such as hazel, hawthorn, holly and elder. A specific woodland wildflower seed mix will be used to encourage a greater diversity of ground flora.

3.14. The woodland seed mixtures will be obtained from supplier: Emorsgate Seeds which are collected from sites in lowland southern England. Specific species and amounts are listed within Table 3.1

3.15. A total of 15 bareroot whips and 5 standard specimens will be planted within the woodland in the south east corner of the site and will be protected from damage by using either a Cactus[4] tree guard or home built timber guard 1m x 1m square. The composition and species selected are detailed within the planting schedule in Table 3.2.

3.16. All planted saplings within the line of trees and woodland, as well as the newly seeded grassland areas will be checked once a year for prosperity. Any unwanted successional plants with high nutrient properties such as nettle and docks will be removed by hand and disposed of to maintain condition. Any failed whips or young trees will be replaced. Tree works on the existing trees will be kept to a minimum to ensure health and safety but will aim to retain features with value for biodiversity within the trees such as woodpecker and rot holes, climbers such as ivy and loose bark.

Seed mixtures

3.17. The calcareous specific grassland meadow mixture will cover 2,995m^2. A hedgerow seed mixture will be sown along boundaries of the hedgerows and woodland focusing along the north east areas associated with the in-fill sapling planting. The woodland seed mixture will be sown under the canopy of the broadleaved woodland, equating to 190m^2.

[3] Habitat Aid: Wiltshire Wildflower Meadow Seed Mix - Calcareous

[4] https://cactustreeguards.co.uk/

3.18. Prior to seed mixtures being sown, the ground will be suitably prepared by first removing weeds through physical removal and repeated cultivation. Surface vegetation will be dug in then the bed, harrowed or raked to produce a medium tilth, and roll, or tread, to produce a firm surface.

3.19. Annual unwanted plants such as nettles will be cut back and removed the first mid to late summer following sowing. The young meadow can be kept short by grazing or mowing through to the end of March of the following year. Dig out any residual perennial weeds such as docks.

3.20. In the second and subsequent years the grassland can be managed depending on soil fertility. On poor shallow soils only one or two cuts at the end of the summer, or occasional light grazing, will be required to maintain diversity. Deeper soils would require traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring mowing or grazing.

3.21. Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower.

Table 3.1 – Seed mixtures for different areas

Meadow Mixtures		
Habitat Aid – Wiltshire Wildflower Meadow Seed Mix – Calcareous Soils		
Wild Flowers		
%	**Latin Name**	**Common Name**
2.0	*Poterium sanguisorba - (Sanguisorba minor)*	Salad Burnet
2.0	*Plantago lanceolata*	Ribwort Plantain
2.0	*Centaurea nigra*	Common Knapweed
1.8	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
2.0	*Malva moschata*	Musk Mallow
0.8	*Silene vulgaris*	Bladder Campion
0.6	*Achillea millefolium*	Yarrow
0.8	*Knautia arvensis*	Field Scabious
0.4	*Ranunculus acris*	Meadow buttercup
0.4	*Galium verum*	Lady's Bedstraw
1.0	*Centaurea scabiosa*	Greater Knapweed
0.1	*Filipendula vulgaris*	Dropwort
0.8	*Galium album - (Galium mollugo)*	Hedge Bedstraw
0.2	*Primula veris*	Cowslip
0.2	*Hippocrepis comosa*	Horseshoe Vetch
0.2	*Lotus corniculatus*	Birdsfoot Trefoil
0.1	*Linum catharticum*	Fairy Flax
0.6	*Rumex acetosa*	Common Sorrel
1.0	*Plantago media*	Hoary Plantain

Table 3.1 – Seed mixtures for different areas

Meadow Mixtures		
1.4	*Rhinanthus minor*	Yellow Rattle
0.3	*Daucus carota*	Wild Carrot
0.8	*Ranunculus bulbosus*	Bulbous Buttercup
0.5	*Anthyllis vulneraria*	Kidney Vetch
Grasses		
8.0	*Agrostis capillaris*	Common Bent
3.2	*Anthoxanthun odoratum*	Sweet Vernal grass
5.6	*Briza media*	Quaking Grass
4.8	*Bromopsis erecta*	Upright Brome
30.4	*Cynosurus cristatus*	Crested Dogstail
9.6	*Festuca ovina*	Sheep's Fescue
17.6	*Festuca rubra*	Red Fescue
0.8	*Trisetum flavescens*	Yellow Oat-grass
Emorsgate Seeds: EH1 – Hedgerow Mixture		
Wild flowers		
%	**Latin name**	**Common name**
0.1	*Achillea millefolium*	Yarrow
1.0	*Alliaria petiolata*	Garlic Mustard
0.5	Anthriscus sylvestris	Cow Parsley
1.5	Carex divulsa ssp divulsa	Grey Sedge
2.0	*Centaurea nigra*	Common Knapweed
3.0	*Chaerophyllum temulum*	Rough Chervil
2.0	Cruciata laevipes	Crosswort
0.2	*Dipsacus fullonum*	Wild Teasel
0.5	*Galium album - (Galium mollugo)*	Hedge Bedstraw
0.1	*Geranium pratense*	Meadow Crane's-bill
1.0	Geranium pyreniacum	Hedge Crane's-bill
0.3	*Geum urbanum*	Wood Avens
0.2	*Knautia arvensis*	Field Scabious
1	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
1.0	*Malva moschata*	Musk Mallow

Table 3.1 – Seed mixtures for different areas

Meadow Mixtures		
2.0	*Plantago lanceolata*	Ribwort Plantain
3.0	*Silene dioica*	Red Campion
0.5	*Silene flos-cuculi*	Ragged Robin
0.1	*Torilis japonica*	Upright Hedge-parsley
Grasses		
1.0	*Agrostis capillaris*	Common Bent
2.0	*Anthoxanthum odoratum*	Sweet Vernal-grass (w)
1.0	*Brachypodium sylvaticum*	False Brome (w)
50.0	*Cynosurus cristatus*	Crested Dogstail
2.0	*Deschampsia cespitosa*	Tufted Hair-grass (w)
20.0	*Festuca rubra*	Red Fescue
4.0	*Poa nemoralis*	Wood Meadow-grass
Emorsgate Seeds: EW1 – Woodland Mixture		
Wild flowers		
1.0	*Alliaria petiolata*	Garlic Mustard
0.5	*Anthriscus sylvestris*	Cow Parsley
2.0	*Carex divulsa ssp divulsa*	Grey Sedge
0.1	*Carex pendula*	Pendulous Sedge
4.0	*Chaerophyllum temulum*	Rough Chervil
1.0	*Digitalis purpurea*	Foxglove
1.1	*Filipendula ulmaria*	Meadowsweet
1.5	*Galium album - (Galium mollugo)*	Hedge Bedstraw
2.0	*Geranium pyreniacum*	Hedge Crane's-bill
0.8	*Geum urbanum*	Wood Avens
1.0	*Hyacinthoides non-scripta*	Bluebell
5.0	*Silene dioica*	Red Campion
Grasses		
1.0	*Agrostis capillaris*	Common Bent
2.0	*Anthoxanthum odoratum*	Sweet Vernal-grass (w)
1.0	*Brachypodium sylvaticum*	False Brome (w)
50.0	*Cynosurus cristatus*	Crested Dogstail

Table 3.1 – Seed mixtures for different areas

Meadow Mixtures		
2.0	*Deschampsia cespitosa*	Tufted Hair-grass (w)
20.0	*Festuca rubra*	Red Fescue
4.0	*Poa nemoralis*	Wood Meadow-grass

Table 3.2 – Planting Schedule for Gypsy Lane

Planting Schedule				
Wild Flower Seed Mixtures				
Area		**Type**		**Rate**
2996m2		Wiltshire Wildflower Meadow Seed Mix – Calcareous Soils		Sow at 3g/m2
300m2		*EH1 – Hedgerow Mixture*		Sow at 4g/m2
200m2		*EW1 – Woodland Seed Mixture*		Sow at 4g/m2
Plant Mixes				
Hedgerow				
Number	*Plant name*	Form	Height	Source
10	hazel *Corylus avellana*	*10 Bare root, whips*	60 – 80cm	Available from English Woodlands tree suppliers
5	Blackthorn *Prunus spinosa*	*Bare root*	60 – 80cm	
5	hawthorn *Crataegus monogyna*	*Bare root*	80 – 100cm	
5	Elder *Sambucus nigra*	*Bare root*	60 – 80cm	
Woodland				
Number	*Plant name*	Form	Height	Available from English Woodlands tree suppliers[5]
10	hazel *Corylus avellana*	*10 Bare root, whips*	60 – 80cm	
5	hawthorn *Crataegus monogyna*	*Bare root*	80 – 100cm	

[5] English Woodlands: Specimen Trees, Hedging, Accessories

Table 3.2 – Planting Schedule for Gypsy Lane

Planting Schedule				
5	Holly *Ilex aquifolium*	*Bare root*	60 – 80cm	

Faunal Measures

3.22. Faunal measures include the installation of bird nest boxes and bat roost boxes on retained mature trees within the north and north east boundary habitats of the site. The aim being to support any bird and bat species currently using the site and encourage future use of the site. It is proposed that three bird and three bat boxes will be installed within the tree line boundaries furthest away from the railway line to reduce potential strikes.

- Nestbox Company – Eco Small Nest Box[6], two required.
- Nestbox Company – Eco Robin Nest Box[7], one required.
- Nestbox Company – Crevice Bat Box[8], two required.
- Nestbox Company – Cavity Bat Box[9], one required.

3.23. Implementation of the enhancement measures of the site will be the responsibility of HC Planning.

3.24. Table 3.2 below shows the schedule of implementation of the management measures included in this proposal.

[6] Eco Small Bird Box
[7] Eco Robin Nest Box
[8] Crevice Bat Box
[9] Cavity Bat Box

Table 3.3. Schedule of site enhancement measures implementation and monitoring

ACTIVITY	Task	Year 1												Year 2												Year 3 – Year 5		
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	March	Aug	Nov
Habitat creation	New Planting			■	■							■	■	■	■	■	■											
Habitat management	Control of Japanese knotweed			■	■											■	■									■		
	Control on Winter Heliotrope			■	■																							
Faunal measures	Installation of bat and bird boxes		■	■	■	■																						
	Site Monitoring																■				■					■	■	


Co-ecology
10
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N
The Old Chalk Pit
Figure 1. Biodiversity Enhancement Scheme
Legend
Site Boundary
Habitat areas
g3 - neutral grassland
g3c - other neutral grassland
g4 - modified grassland
w1g - other woodland-broadleaved
w1g6 - line of trees
u1b5 - buildings
u1c - artificial unvegetated unsealed su
u1e - built linear features
Biodiversity Enhancements
bat
bird
Removal of INNS
Nutrient-rich soil layer removed to exp
Understorey woodland planting
Seeding of exposed base layer with calc
In-fill hedgerow/treeline planting
Google Satellite
Client Name: HC Planning
Survey Date: N/A
Surveyor: N/A
Scale: 1 : 528
Drawn by: GB
Drawing date: 05/01/2024
Drawing Number: CE23152.1

References

British Standards Institution (2012) *BS 5837:2012- Trees in relation to design, demolition and construction*. BSI, London.

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