Biodiversity Enhancement Strategy

Document reference	AR178 – Warren Lodge.BES
Site	Warren Lodge, Storrington, RH20 4DD
Client	Mr S. Bates
Author	Alex Rosenfeld Ecologist (QCIEEM)
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The assessment and appraisal are considered relevant for a maximum of 18 months due to the possibility of changes in the habitats on-site and scope of proposals. Should alterations to the proposals or site occur, the ecologist should be consulted to confirm that the appraisal is still valid.

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1.0 Introduction

1.1 Mr S Bates has commissioned a Biodiversity Enhancement Strategy for land at Warren Lodge, Storrington, RH20 4DD (*grid refence: TQ09611419, hereafter referred to as 'the site'*). A site walkover was undertaken on 14th January 2024 in suitable conditions (6^{0}C, overcast with a light westerly breeze).

1.2 The proposals are for the erection of a single storey side extension to the existing dwelling.

1.3 This Biodiversity Enhancement Statement has been produced with the intention of satisfying Condition 4 of the Horsham District Council planning decision reference: DC/24/1046.

1.4 The report will address the following points:

- 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 (where relevant);
- Persons responsible for implementing the enhancement measures; and
- Details of initial aftercare and long-term maintenance (where relevant).

The report produced on 18th January 2025 is based on the following reports:

- Phase 1 Bat Survey Report (Batscan LTD, 21st May 2024)
- Tree Survey and Arboricultural Impact Assessment (Arbotech Consultancy, June 2024. Report Ref: WaLo/ATRep/010624)
- Proposed Site Plan (Drawing Ref: Bates. WL RH20 4DD)

2.0 Ecological Context of Site

Site Baseline

2.1 The western half of the site comprises well-tended lawn with scattered trees and a hedgerow lining the northern, western and southern boundaries. The eastern half of the site is primarily of introduced shrub and scattered trees. In the centre of the site lies a house with garage to the north surrounded by patio. A driveway along the northern boundary leads to the house.

2.2 The adjacent woodland to the east is designated as Priority Habitat – Deciduous Woodland and Sullington Warren SSSI.

Surrounding Landscape

2.3 The site is located on the eastern edge of Storrington, West Sussex. The site lies 0.6km north of the South Downs National Park at its closest point.

2.4 Surrounding land outside of Storrington is primarily rural, with fields of arable and pasture divided by hedgerows and patches of woodland. The village of Heath Common lies 0.7km northeast.

Proposals

2.5 The proposals are for the erection of a single storey side extension to the existing dwelling.

3.0 Baseline Conditions

3.1 The following section outlines the ecological state of the site and its context against designated sites within a 2.0km radius.

3.2 Within 2.0km radius of the site lies 3no. statutory designated sites:

- Sullington Warren SSSI (adjacent to the east of the site)
- Chantry Hill SSSI (0.2km south)
- Amberley Mount to Sullington Warren Hill SSSI (1.7km south)

Baseline Ecological Site Conditions

3.3 The existing site is dominated by modified grassland, shrubs, scattered trees with hardstanding and buildings.

3.4 The modified grassland and shrubs are of 'low' value. The scattered trees and hedgerow are of 'moderate' value. The works shall only affect hardstanding areas and not impact soft ground areas or trees.

3.5 The site offers foraging and roosting / nesting opportunities for bats / birds and foraging invertebrates.

4.0 Aims and Objectives

Aims

4.1 The aim of the BES is to;

- To maximise biodiversity value of the scheme.
- To ensure sensitive management of new and existing features to maximise their biodiversity value.
- To ensure that proposed enhancement measures are appropriately managed into the future.
- To provide a long-term management plan of the site;

Objectives of the Proposals

4.2 The below objectives have been identified, which, when implemented, shall ensure the aims of the BES are achieved:

- To identify areas of suitable soft landscaping for use within the site.
- To provide ecological enhancements which provides shelter and foraging opportunities for a range of species. This is achieved through the provision of species which offer a known wildlife value, such as those listed on 'RHS Plants for Pollinators'.
- To create habitat areas at the optimal time of year for their successful establishment.
- To manage these areas to maximise their value.
- To provide additional habitat opportunities for birds, bats, reptiles and invertebrates through the provision of suitable boxes.

5.0 Compensation and Enhancement Measures

5.1 The below features are proposed as enhancement and compensation measures. The plan in Appendix … shows approximate locations of enhancements.

5.2 The following enhancements shall provision active nesting, roosting and hibernating opportunities for a range of species.

Log Piles

5.3 2no. log pile of a minimum 0.5m^3 are to be created within the hedgerows and northern boundary which shall provide shelter and hibernation and foraging opportunities for invertebrates, reptiles and amphibians.

Bat and Bird Boxes and Invertebrate Features

5.4 2no. bat boxes such as Beaumaris supplied by Wildcare or similar shall be installed to the southern aspect of existing mature trees.

5.5 2no. bird boxes such as the Vivipara Pro Woodstone Open Nest Box supplied by NHBS or similar shall be installed to the northern aspect of existing mature trees.

5.6 2no. 'Bug Hotel' or invertebrate boxes as supplied by NHBS or similar shall be installed in a sunny position within an undisturbed corner of the site.

Flowering Lawn

5.7 A small area on the southern boundary and a larger area to the east of the existing dwelling are to be sown with a low flowering lawn seed mix such as those provided by Wildflower Lawns and Meadows. The composition would include species such as:

- Birds-foot-trefoil - Lotus corniculatus
- Bulbous Buttercup - Ranunculus bulbosus
- Common Knapweed - Centaurea nigra
- Common Spotted Orchid - Dactylorhiza fuchsii
- Cowslip - Primula veris
- Creeping buttercup - Ranunculus repens
- Eyebright - Euphrasia officinalis
- Germander Speedwell - Veronica chamaedrys
- Greater Birds-foot-trefoil - Lotus pedunculatus
- Kidney Vetch - Anthyllis vulneraria
- Lady's bedstraw - Galium verum
- Lawn Chamomile - Anthemis noblis
- Lawn Daisy - Bellis perennis

- Meadow Vetchling - Lathyrus pratensis
- Oxeye Daisy - Leucanthemum vulgare
- Ragged Robin - Silene flos-cuculi
- Red Clover - Trifolium pratense
- Ribwort Plantain - Plantago lanceolata
- Salad Burnet - Poterium sanguisorba
- Selfheal - Prunella vulgaris
- Sorrel - Rumex acetosa
- Sheep's Sorrel - Rumex acetosella
- White Clover - Trifolium repens
- Wild Marjoram - Origanum vulgare
- Wild Thyme - Thymus polytrichus
- Yarrow - Achillea millefolium

Deadwood Feature

5.8 Trees shall be selected which would offer more value to wildlife as a deadwood feature than in their current state. A suitably qualified tree surgeon shall create deadwood features such as coronating and create bat roosting features.

Fruit Trees

5.9 Since applying for planning permission, several fruit trees (apple *Malus* sp.) have been planted within the western lawn, which will ensure they area established by the time proposals are enacted.

Implementation Schedule

5.10 The construction works are scheduled to begin from late spring / early summer 2025. The planting of wildflower lawn shall be undertaken in March / April 2025. The other wildlife features can be implemented at any time.

6.0 Management Prescriptions

6.1 In order to ensure the long-term viability and maximum ecological value of the scheme, detailed prescriptions for initial establishment and long-term management are provided within this section.

Flowering Lawns

Sowing

6.2 The area of flowering lawn on the southern boundary is to be sown with an appropriate seed mix (such as that described in paragraph 5.7) during the spring 2025. Before sowing, the top layer of turf and soil (100mm) is to be removed, to reveal bare soil. The ground shall be prepared by spreading a thin layer (1cm thick) of multi-purpose, peat-free compost. When sowing, the seeds shall be broadcast lightly at a

rate of 3 grams per square meter. Once sown, the areas shall be fenced or protected with rabbit proof netting.

Plug Planting

6.3 The area of flowering lawn to the east of the dwelling is to be planted with pre-grown plug plants which shall be transferred to the proposed area during the spring 2025. The plants shall be surrounded by a peat-free compost in the immediate vicinity to facilitate establishment.

6.4 Cutting

6.5 During summer months, both areas shall be cut every 3 weeks to a height of no shorter than 5cm. Alternately, half the lawn can be cut on rotation every 10 days to maximise flowering potential.

6.6 The final cut of the season shall take place in late summer. All arisings shall be removed with each cut. This will ensure the lawn will flower in the next year of growth. This also avoids excess nutrients re-entering the soil and promoting unwanted excess grass growth.

Weed Removal

6.7 The sward shall be maintained free of unwanted species during establishment by hand pulling or use of a selective spot herbicide where necessary. Once established, the requirement for weed removal shall be minimal.

Rectification of defects

6.8 Should bare patches of grass develop, area is to be cultivated to 100mm and then seeded with a seed-mix such as that stated in paragraph 5.7. To be cross-sown in two directions at right angles to each other, (half the seed being used in each direction) at the rate of 3 grams per square meter and the ground lightly raked over on a still, dry day.

Log Piles

Maintenance

6.9 Log piles are to be checked annually and topped up as necessary.

Bat Boxes

Maintenance

6.10 The bat boxes specified above do not require any cleaning. A visual inspection shall be carried out annually to ensure the boxes remain in good condition. shall they require cleaning or opening, this shall be undertaken by an ecologist with an appropriate bat licence.

Bird Boxes

Maintenance

6.11 No maintenance necessary. A visual inspection shall be carried out annually to ensure the boxes remain in good condition.

Invertebrate features

Maintenance

6.12 No maintenance necessary. A visual inspection shall be carried out annually to ensure the box is in good condition.

Deadwood

Maintenance

6.13 Should any areas of the standing deadwood become detached, they shall be added to the log piles.

Fruit Trees

Maintenance

Watering

6.14 All plants shall be watered as may be required to maintain healthy growth following planting, during the maintenance period and subsequently in cases of extreme drought (Trees – 5Ltr's per tree, Shrubs 1Ltr each, Grass 5Ltr's/m2). Watering to commence following 10 consecutive days of no rainfall, during the months of June to August.

Pruning / Trimming – Ongoing

6.15 Pruning and trimming of trees shall be carried out outside of the bird breeding season (nesting season: March – August inclusive). Trees shall be checked bi-annually for shape, form and size, and pruned accordingly.

6.16 Weeding

6.17 Areas around the trees shall be kept clear of weeds to allow the plants to establish by weeding twice a year in the spring and autumn. Any litter or debris shall be removed as soon as it is found.

7.0 Long-Term Management and Monitoring

Flowering Lawn

Rectification of Defects

7.1 The condition of the flowering lawn shall be inspected and monitored on an annual basis. Should bare patches of grass develop during this time, the area is to be cultivated to 100mm and then seeded with the appropriate seed mix (see paragraph 5.7); to be cross sown in two directions at right angles to each other (half the seed being used in each direction) at the rate of 3 gm per square metre and the ground lightly raked over on a still, dry day when the top 25 mm of soil is dry. Should the area drastically die back, it shall be re-seeded / re-turfed in its entirety.

Log Piles, Bird and Bat Boxes and Invertebrate Features

Inspection and replacement

7.2 Log Piles - areas of dead wood shall be created as the logs breakdown and replenished. The condition of log piles shall be checked on an annual basis and replenished where necessary.

7.3 Bird and Bat Boxes - the bat boxes specified above do not require any cleaning. A visual inspection should be carried out annually to ensure the boxes remain in good condition. If the boxes have broken down or disintegrated, they shall be replaced. A visual inspection shall be carried out annually to ensure the boxes remain in good condition. Boxes which have shown no signs of use after 3 years shall be moved to a more appropriate location if considered necessary during the monitoring visits.

7.4 Invertebrate boxes – Inspection annually and replace if significantly degraded.

Deadwood Feature

7.5 A visual inspection shall be undertaken regularly to ensure the deadwood is still standing. Any deadwood which has fallen shall be added to log piles.

Fruit Trees

7.6 Pruning and trimming of trees and hedgerows shall be carried out outside of the bird breeding season (nesting season: March – August inclusive). Trees shall be checked bi-annually for shape, form and size, and pruned as appropriate to the species whilst they are still in leaf.

8.0 Implementation Schedule

Table No 01 – Annual Maintenance Schedule

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flowering Lawn				**X**	**X**	**X**	**X**	**X**	**X**	**X**		
Mowing												
Strimming					**X**					**X**		
Weed Control				**X**								
Top Dressing										**X**		

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Trees												
Watering				**X**	**X**	**X**	**X**	**X**	**X**	**X**		
Check Ties / Stakes (1st yr.)			**X**									
Replace Losses				**X**						**X**		
Maintain 500mm dia. Clear base				**X**		**X**		**X**				
Weeding				**X**						**X**		

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bird and Bat Boxes and Invertebrate Features												
Cleaning (bird boxes)										**X**		
Check Condition											**X**	

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Log Piles												
Restock if needed	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

9.0 References

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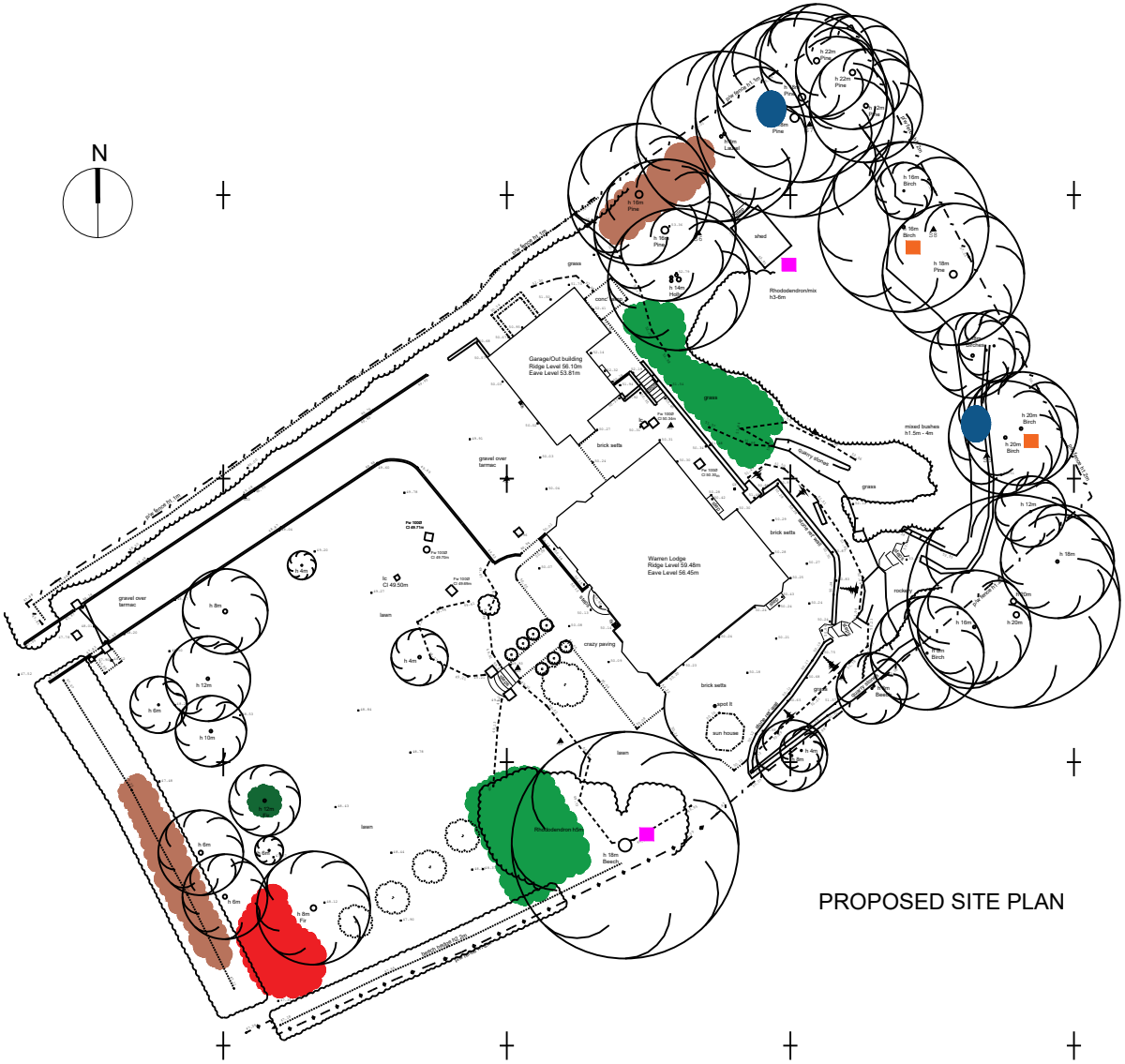
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MAGIC Interactive Map Tool (Accessed 6th January 20205): www.magic.gov.uk

Appendix A – Ecological Enhancement Positions

PROPOSED LEGEND

- Proposed Invertebrate Box
- Proposed Bat Box
- Proposed Bird Box
- Proposed Flowering Lawn
- Proposed Fruit Trees
- Proposed Log Piles
- Proposed Standing Deadwood/Monolith



PROPOSED SITE PLAN

0m 5m 12.5m 25m

Scale 1:500

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client: MR S BATES

project title: WARREN LODGE, STORRINGTON
PROPOSED SIDE EXTENSION

drawing title: PROPOSED ECOLOGICAL SITE PLAN

drawn by: MSA date: JAN '24 scale: 1:500 @ A4

issue status: FOR PLANNING CONDITION DISCHARGE

drawing number: **24548 / P100** revision:

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