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Landscape Design and Ecology

LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN AND BIODIVERSITY NET GAIN STATEMENT

The Scout Hut, Victoria Road, Worthing

On behalf of: Adur and Worthing Councils

Client:	Adur and Worthing Councils			
Project:	The Scout Hut, Victoria Road, Worthing			
Reference:	LLD2650-ECO-REP-003-02-LEMP			
Revision:	**Date:**	**Author**	**Proof**	**Approved**
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Validity:

This report is valid for 18 months from the date of the final survey visit. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, to inform whether surveys should be updated.

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1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology has been commissioned to provide a Biodiversity Net Gain Statement for works at The Scout Hut, Victoria Road, Worthing.

1.2 A baseline habitat assessment in accordance with the UK Habitats Classification Manual (UKHabs Ltd., 2023) was undertaken on the 29th of April 2022 by Hayley Swann (Consultant Ecologist). No habitat degradation had taken place prior to the survey and the baseline data is considered to be an accurate reflection of the ecological value of the site. Full details of the habitats present is contained within the Preliminary Ecological Appraisal (*LLD2650-ECO-REP-001-00-PEA*) and summarised herein.

1.3 The Biodiversity Net Gain calculations contained in this report were undertaken using The Defra Statutory Biodiversity Metric (released 29th November 2023), to provide a quantitative analysis of the existing and proposed biodiversity value of the site in regard to recently mandated policy within the Environment Act, 2021. The development does not qualify under any exemption and will therefore be subject to the standard Biodiversity Gain condition.

Site Information

1.4 The survey area lies adjacent to Victoria Road. The site was previously used as a Scout hut and sits within the residential area of Worthing.

1.5 No site clearance was evident, and the baseline information gathered is considered to be a true presentation of the on-site habitats.

Surrounding Landscape

1.6 The surrounding landscape it that of a residential area, built up of residential properties, shops and schools. To the north is Worthing train station, the east the A24, to the south is the A259 and further south the coast, and to the west lies Victoria Park.

Proposals

1.7 The proposals involve redevelopment of the entire site, which includes demolition of the current 2no. buildings and the construction of a 3-storey residential block with car parking to the north-eastern section of the site, and lawn to the east.

2.0 METHODOLOGY

2.1 Biodiversity Net Gain Assessment

2.1.1 The existing baseline value of the site was assessed during the site visit, where all area and linear habitats on site were mapped.

2.1.2 The distinctiveness of habitats was assessed using the *UK Habitat Classification system* (UKHabs Ltd., 2023) and the condition of habitats assessed in accordance with *The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology* (DEFRA, 2023).

2.1.3 The habitats, their condition and strategic importance were input into the Statutory Biodiversity Metric Calculation Tool (DEFRA, 2023). The area of habitats which would be retained or enhanced based upon the current proposals was also added to the calculator. This allowed the existing baseline value and loss of biodiversity units to be established.

2.1.4 The following drawings and reports were used when calculating the baseline and proposed habitat creation on site, which should be viewed alongside this report:

- Preliminary Ecological Appraisal (LLD2650-ECO-REP-001-00-PEA)
- Baseline Site Habitat Plan (LLD2650-ECO-FIG-001)
- Proposed Site Habitat Plan (LLD2650-ECO-FIG-002)
- Landscape General Arrangement (Ramsey and Co., October 2024)

2.1.5 The proposed habitats areas and linear habitat lengths was calculated, and target condition determined based upon the existing and proposed management regimes of the site, in consideration with what could realistically be expected to be achieved. Once input into The Biodiversity Metric Calculation, the overall change in value of the site could then be determined.

2.2 Evaluation and Assessment

2.2.1 This report has been written with due regard to best practice guidance for ecological report writing (CIEEM, 2017) and the Biodiversity Net Gain: Good Practice Principles for Development (CIEEM, 2019).

2.3 Survey Constraints / Considerations

2.3.1 Due to imprecisions associated with mapping the extent of existing and proposed habitats using aerial imagery and mapping based on desktop study, the Biodiversity Net Gain (BNG) assessment cannot conclusively ensure that the extent of habitats is precisely quantified, although due care and attention has been given to ensure that the accuracy of the assessment is not misleading and is appropriate for the objectives proposed.

2.3.2 The Biodiversity Net Gain calculation does not take into account the provision of wildlife boxes, such as bat, bird and insect boxes, or log piles.

3.0 EXISTING BASELINE ASSESSMENT

3.1 Habitats

Site Habitat Baseline

3.1.1 The site is a former Scout hut formed of habitats which include a large area of hard standing, 2no. buildings, patches of modified grassland and a line of trees, which act as screening to the front of the site.

3.1.2 1no. very large tree is present along the southern boundary of the site, with a further 5no. trees proposed to be planted as part of the landscape scheme. There is also an area of bramble scrub to the north of the site.

3.1.3 The Biodiversity Net Gain (BNG) assessment concluded that the existing baseline biodiversity value of the site was **0.69** Habitat Units, consisting of:

- 0.025ha of modified grassland in poor condition providing 0.05 habitat units.

- 0.082ha of developed land, sealed surface providing 0 habitat units (condition assessment N/A).
- 0.009ha of bramble scrub providing 0.04 habitat units (condition assessment N/A).
- 0.076 of urban tree providing 0.61 habitat units (condition assessment N/A).

3.2 Hedges

Site Hedge Baseline

3.2.1 Linear habitats on site are limited to a short native hedgerow running along the north-western boundary of the site and line of trees along the western boundary of the site.

3.2.2 The Biodiversity Net Gain (BNG) assessment concluded that the existing baseline biodiversity value of the site is **0.13** Hedgerow Units, consisting of:

- 0.023km of line of trees in moderate condition providing 0.09 hedgerow units.
- 0.01 of native hedgerow in moderate condition providing 0.04 hedgerow units.

4.0 BIODIVERSITY NET GAIN ASSESSMENT

4.1 Overview / Considerations

4.1.1 The area in which the building is proposed is currently formed of 2no. buildings and developed land, sealed surface. Small areas of modified grassland also exist on site, along with a small area of bramble scrub to the north. Habitat creation will take place on site in the form of introduced shrub (to include species of a known wildlife value) around the proposed building, a ground based green wall along the northern section of the eastern wall, areas of wildflower lawn which will provide other neutral grassland, areas of mixed scrub to the north and south-east and urban tree planting to the north and along the eastern boundary of the site.

4.1.2 Due to the lack of LNRS within Sussex, strategic significance has been assessed as per the User Guide. The site is not within any ecological designation, such as a *Biodiversity Opportunity Area* or *Nature Improvement Area*. No existing or proposed habitats have been identified as Sussex Priority Habitats and as such all habitats on site are of low strategic importance.

4.2 Baseline Inputs

A-1 Site Habitat Baseline

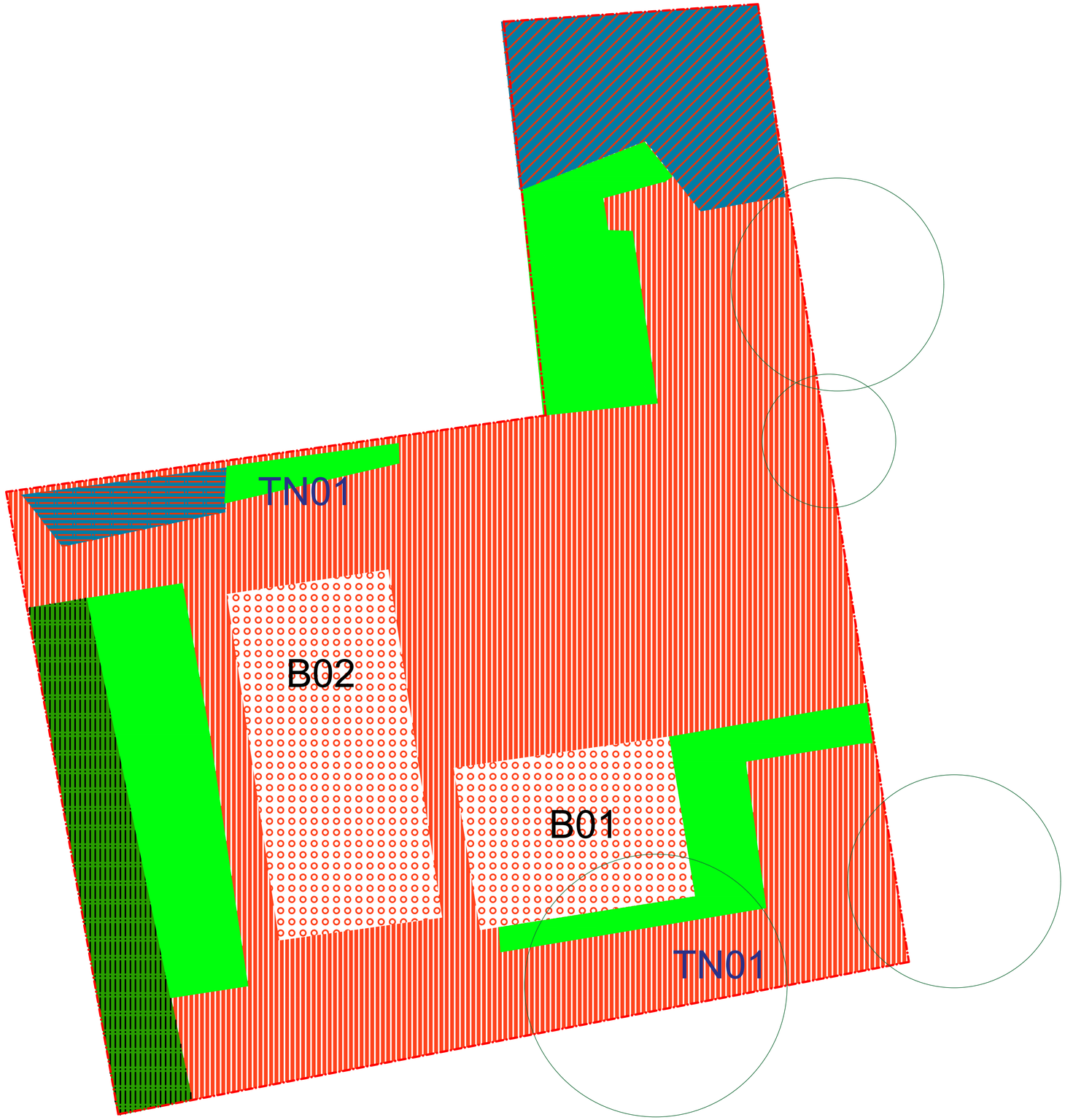
4.2.1 The existing habitat variables identified in section 3 of this report were inputted into the metric which calculated the ecological baseline. Total Habitat Units on site were **0.69**.

4.2.2 All habitat on site has been classified as lost for the purpose of this assessment.

B-1 Site Hedge Baseline

4.2.3 The existing hedge variables identified in section 3 of this report were inputted into the metric which calculated the ecological baseline. Total Hedgerow Units on site were **0.13.**

4.2.4 0.023km of the line of trees are to be retained in its current condition, ensuring the retention of 0.09 hedgerow units.



N

0 1 2.5 5 m

Scale 1:100

Figure No.1- Site Habitat Plan
The Scout Hut, Victoria Road, Worthing

Legend

- Site Boundary.
- Modified Grassland
- Buildings
- Developed Land. Sealed Surface
- Line of Trees
- Other Hedgerows
- Bramble Scrub
- TN01 — Target Note
- Scattered Trees

Notes: *The original of this drawing was produced in colour - a monochrome copy should not be relied upon.*

Habitat areas are indicative and for information only - please do not scale from this drawing.

Planning Issue

Rev	Description	Date	Initials
00	Planning Issue	19.05.22	HS

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Project Title and Location
The Scout Hut, Victoria Road, Worthing

Drawing Title
Figure No.1 - Site Habitat Plan

Scale	*Drawn*	*Approved*	*Date*
1:100@A1	HS	GS	19.05.22

Drawing No LLD2650-ECO-FIG-001

Revision 00

4.3 Proposed Habitats and Ecological Enhancements

A-2 Site Habitat Creation

4.3.1 Proposals are to result in the creation of new habitat on site including:

- 0.084ha of developed land, sealed surface which includes the proposed building and areas of hard standing.
- 0.008ha of mixed scrub to the north and south-east of the site.
- 0.028ha of other neutral grassland to the east and west of the site.
- 0.02ha of individual tree (1 no. to the north and 4 no. to the east).
- 0.004ha of introduced shrub around some of the building boundaries.
- 0.004ha of ground based green wall along the northern section of the eastern boundary wall.

4.3.2 Condition assessment of the proposed developed land, sealed surface and introduced shrub is not applicable, and a standard score has been applied to these habitats.

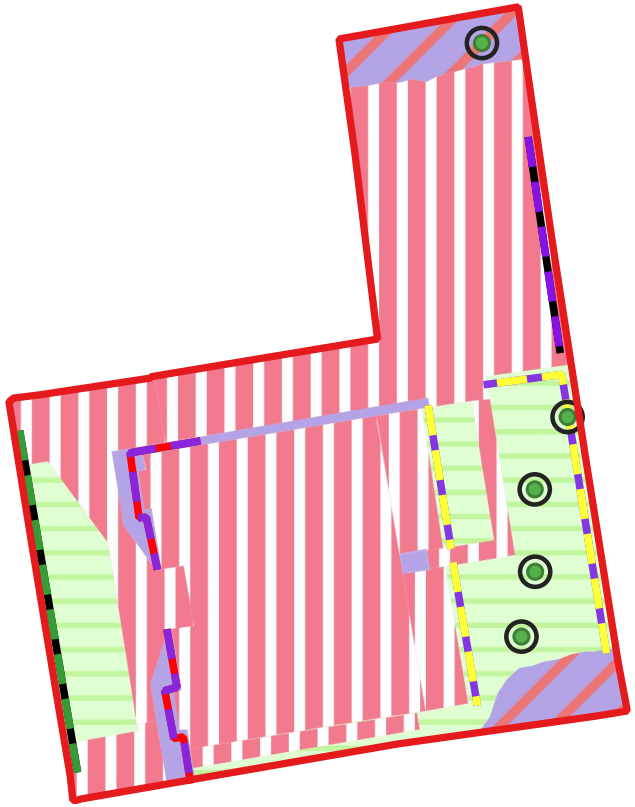
4.3.3 The other neutral grassland and the mixed scrub to the north of the site have been assigned a target condition of ‘poor’ and the individual trees, ground based green wall and mixed scrub to the south-east of the site have been assigned a target condition of ‘moderate’ which is considered to be most achievable and realistic within the context of the site.

4.3.4 Proposed habitats would deliver **0.14** habitat units.

4.4 Proposed Hedgerows

B-2 Site Hedge Creation

4.4.1 Proposals are to result in a total of 0.041km of native hedgerow within the east of the site and 0.024km of non-native hedge within the west of the site. A target condition of ‘poor’ is considered to be the most realistic outcome for the proposed native hedgerow, resulting in the delivery of **0.06** hedgerow units.



Legend

- Red Line Boundary
- Proposed Small Tree
- Non-native and ornamental hedgerow
- Retained Line of trees
- Native hedgerow
- Ground based green wall
- Developed land; sealed surface
- Introduced shrub
- Mixed scrub
- Other neutral grassland

25 50 m

1:500

Figure No. 02 - Proposed Habitat Plan

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Drawn by	Approved by	Rev	Date
HS	CO	01	14/10/24

4.5 Trading Summary

4.5.1 All trading rules for habitats and hedgerows have been satisfied.

4.6 Overall BNG Results

4.6.1 Once all retention, enhancement and habitat creation measures are taken into the account, the scheme shall result in **0.83** habitat units, resulting in a net increase of **0.14** units and a **20.03% Biodiversity Net Gain** in **Habitat Units** across the site with all trading rules satisfied.

4.6.2 Once all retention and hedge creation measures are taken into the account, the scheme shall result in **0.19** hedge units, resulting in a net increase of **0.06** units and a **47.19% Biodiversity Net Gain** in **Hedgerow Units** across the site with all trading rules satisfied.

4.7 Non-metric Enhancements

4.7.1 The scheme shall include the installation of 1no. general purpose bird box to the norther aspect of the on-site trees, as well as integration of 1no. bird box such as S-brick or similar to the northern aspect of the dwelling.

4.7.2 Enhancements for bats shall be provided through the installation of 1no. crevice bat box, such as Greenwoods Ecohabitat small single crevice box or similar, to the southern aspect of the on-site tree. Proposed planting of wildflower lawn, trees and shrubs within the site shall provide further enhancements for foraging bats.

4.7.3 1no. log pile (1x1x1m shall also be installed within the area of mixed scrub to the south-eastern corner of the site to provide additional habitat for invertebrates.



Figure No. 03 – Location of Ecological Enhancements

5.0 LANDSCAPE MANAGEMENT PLAN

5.1 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.

5.2 Wildflower Meadows / Lawn

5.2.1 For the most successful results, careful implementation will be required (*as described in the following sections*). The first and second year's management is critical to the success of wildflower seeding.

Sowing

5.2.2 The ground shall be cleared of all weeds and vegetation and cultivated to a fine tilth prior to sowing. Where time allows, the seed bed should be left for 14 days to allow seeds within the seed bank to germinate, prior to them being removed before wildflower seed is sown. This process reduces the weed burden and should reduce the need for on-going weed removal during establishment.

5.2.3 Seeds require warmth and moisture in order to germinate and therefore shall be sown during the autumn of 2025. The seed shall be sown at a rate of 4 grams / m^2. Seeds should be rolled into the soil and the seed bed kept moist at all times during germination.

Cutting – Year 1

5.2.4 Mow newly sown flowering lawns regularly (every 7 -10 days during growing season) throughout the first year of establishment. Cut to a height of 40-60mm, removing cuttings if dense. This will gradually develop a good sward structure, help maintain balance between faster growing grasses and slower developing wildflowers, and control annual weeds. Dig out any residual perennial weeds such as docks.

Cutting – Year 2 Onwards

5.2.5 Mow regularly as a lawn but not too short (25-40mm). Mowing should cease between mid-June and mid-August to allow the wildflower to flower. Mowing may be suspended earlier in the year to allow cowslips to flower. All arising are to be collected and removed from site. A 1-metre-wide strip must be uncut to provide a gradual ecotone between the scrub to the south-east of the site and the lawn.

Weeding and Seeding– Year 2 onwards

5.2.6 Undesirable weeds to be pulled by hand or spot sprayed with a selective herbicide. Fertiliser use is to be avoided as it encourages grasses which outcompete wildflower species.

Rectification of Defects

5.2.7 Any bare patches are to be prepared and reseeded with seed mix in optimal weather to ensure germination (e.g. during spring or autumn) as and when needed.

5.3 Ornamental Shrubs / Herbaceous Planting

Planting

5.3.1 Planting pits shall be excavated to a depth and size that contains the plant's root system and allows the collar of the plant (*the mark on the tree where it has been growing above ground*) to be level with the top of the soil. The soil shall be carefully backfilled in layers, ensuring the plant is held upright, and each layer should be carefully firmed down.

Watering

5.3.2 New planting is to be watered for the first year following planting: April - September / twice per month / Trees: 20 ltr per visit / Shrubs: 10ltr per m^2. All plants shall be watered as may be required after this period to maintain healthy growth. Watering to commence following 5 consecutive days of no rainfall, during the months of April - September. Any failures due to drought shall be replaced during the next optimal planting season.

Top Dressing

5.3.3 All planted areas shall be given an application of an approved top dressing at the rate of 40 gm per sq. metre in May. This should be in slow-release form and should be worked lightly into the soil, without disturbing the roots. Unless specific nutritional deficiencies are identified, no fertilizer shall be applied to newly planted areas in the first season. If visual inspection points to nutrient deficiency further investigation of causes will be necessary. Remedial action may, in addition to fertilizer application, include pH testing, assessment of organic content and levels of compaction.

Pruning

5.3.4 Shrubs should be checked bi-annually for shape, form and size, and pruned accordingly whilst they are still in leaf. Once established, any support canes shall be removed from the shrubs. Trailing and climbing material shall be assisted in its growth by securing growing leaders where necessary.

Mulch

5.3.5 The bark mulch should be maintained at an even spread, 75mm deep, to ensure that it is effective as a weed suppressant and moisture conserver. Following any maintenance operations and on a bi-annual basis, the mulch shall be supplemented to allow for any material which may have been lost. All compost, mulches and soil conditioners to be peat free.

5.4 Native Trees, Shrubs and Hedges

Planting and Establishment

5.4.1 Planting pits shall be excavated to a depth and size that contains the plant's root system and allows the collar of the plant (*the mark on the tree where it has been growing above ground*) to be level with the top of the soil. The soil shall be carefully backfilled in layers, ensuring the plant is held upright. Plants are to be supported by stakes and ties as appropriate. All tree ties are to be checked twice yearly or following bad weather for their soundness and effectiveness. Any defective ties or stakes are to be removed and replaced as appropriate.

Watering

5.4.2 New planting is to be watered for the first year following planting: April - September / twice per month / Trees: 20 ltr per visit / Shrubs: 10ltr per m². All plants shall be watered as may be required after this period to maintain healthy growth. Watering to commence following 5 consecutive days of no rainfall, during the months of April - September. Any failures due to drought shall be replaced during the next optimal planting season.

Pruning / Trimming – Ongoing

5.4.3 Pruning and trimming of trees and hedgerows should be carried out outside of the bird breeding season (*nesting season: March – August inclusive).* Trees and shrubs should be checked bi-annually for shape, form and size, and pruned accordingly. Hedges should be cut in alternate years if possible to allow species to flower and fruit on the previous year's growth. Pruning of hedgerows should be carried out in such a way to achieve a dense hedgerow.

Weeding

5.4.4 Areas around the new plants should 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 should be removed as soon as it is found.

Fertiliser

5.4.5 Slow-release 11:22:9 NPK fertiliser at a rate of 50g / tree to be applied annually to the base of each tree. Fertiliser is to be applied in spring.

Mulch

5.4.6 The bark mulch should be maintained at an even spread, 75mm deep, to ensure that it is effective as a weed suppressant and moisture conserver. Mulch to be maintained for at least 2 years following planting to aid establishment. Following any maintenance operations and on a bi-annual basis, the mulch shall be supplemented to allow for any material which may have been lost. All compost, mulches and soil conditioners to be peat free.

5.5 Climbing Plants

Species Selection

5.5.1 Plant species shall be chosen to provide benefits for wildlife by providing nectar sources for a range of invertebrates at different times of year.

Installation

5.5.2 The wire trellis is to be installed by approved contractors with experience of installation of the chosen system.

Planting and Establishment

5.5.3 Planting pits shall be excavated to a depth and size that contains the plant's root system and allows the collar of the plant (*the mark on the tree where it has been growing above ground*) to be level with the top of the soil. The soil shall be carefully backfilled in layers, ensuring the plant is held upright.

5.5.4 Plants are to be supported by stakes and ties as appropriate to ensure they affix to the wire framework. Ties are to be checked every 6 months to ensure correct growth along the framework.

Watering

5.5.5 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. Watering to commence following 5 consecutive days of no rainfall, during the months of April to October.

Fertiliser

5.5.6 A suitable slow-release fertiliser is to be applied annually in spring.

Rectification of Defects

5.5.7 All failures of any individual plants are to be replaced on a like for like basis during the next suitable planting season. Maintenance shall aim to ensure 95% coverage of healthy plants at all times.

Thinning, Dividing, and Plant Replacement

5.5.8 Plants should be checked bi-annually for shape, form, and size, and pruned accordingly whilst they are still in leaf. On a 5 year cycle areas of planting should be reviewed for size and spacing and any requirement for removal and thinning should be assessed. Herbaceous plant material should be divided and managed on a routine basis in order to maintain vigour. Any leggy, failed, or defective plant material should be replaced within the soft landscape planting scheme. A review of the soft landscape scheme should be undertaken in years 1-3, 5, 7, 10 and each 5 years thereafter to advise of any removal or replacements required.

5.6 Log Piles

Maintenance

5.6.1 Log piles are to be checked annually and topped up as necessary. Wire securing piles should be checked for safely and remedial measures taken as and when required.

5.7 Bat Boxes

Maintenance

5.7.1 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 and securely affixed to the trees.

5.8 Bird Boxes

Maintenance

5.8.1 No maintenance necessary. A visual inspection should be carried out annually to ensure the boxes remain in good condition and securely affixed to the trees, and that access points remain open.

6.0 CONCLUSION

6.1 Metric calculations have identified that the proposed scheme would result in over +20% Biodiversity Net Gain, complying with the current Local Planning policy, subsequent to the provision of legal agreement / conservation covenant, to ensure that the proposed habitats are delivered for at least 30 years.

6.2 Ecological enhancements such as bird and bat boxes, native planting and log piles shall provide suitable habitat for a range of species.

6.3 The above management prescriptions for new habitat areas including aspects such as mowing regimes, shall ensure the target conditions are achieved, and that the biodiversity of the scheme is maximised.

7.0 REFERENCES

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