



Bennu Environmental Limited

Aspire LPP

LAND AT LONGLEAZE LANE,
MELKSHAM,
WILTSHIRE

HABITAT MANAGEMENT AND MONITORING PLAN

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APPENDICES

APPENDIX 1	Soft Landscape Plan
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1. INTRODUCTION

- 1.1 The planning application for Land at Longleaze Lane, Melksham, Wiltshire (ref: PL/2023/06725) received consent in August 2024. More recently a Section 73 application has been submitted in order to incorporate minor amendments to the site layout. Bennu Environmental Ltd has been instructed by Aspire LPP to update the Biodiversity Net Gain elements and address the related condition.

- 1.2 This report relates to condition 15 of the above consent which reads as follows:

No development shall commence above ground slab level until a Habitat Management and Monitoring Plan has been submitted to and approved in writing by the Local Planning Authority. The HMMP will include long term BNG objectives and targets, management responsibilities and maintenance schedules for each ecological feature within the development, together with a mechanism for monitoring success of the management prescriptions, incorporating review and necessary adaptive management in order to attain targets.

The HMMP shall also include details of the legal and funding mechanism(s) by which long term implementation of the plan will be secured. The HMMP shall be implemented in full and for the lifetime of the development in accordance with the approved details.

REASON: To ensure the long-term management of landscape and ecological features retained and created by the development, for the benefit of visual amenity and biodiversity for the lifetime of the scheme.

- 1.3 This Habitat Management and Monitoring Plan is intended to set out information regarding how the proposals will avoid a biodiversity net loss and how the habitats to be delivered will be created and managed to optimise their ecological value.
- 1.4 This plan has been written in accordance with the mitigation and enhancements set out in the existing ecological reporting.
- 1.5 The plan is intended to establish a management regime, although it is anticipated that this will be a live strategy, with updates to management measures implemented as required as the habitats and features within the site

become established. Any future amendments to the plan will be dependent on prevailing conditions and the opinion and judgement of land managers on the ground. Nevertheless, the spirit of the plan and its ultimate goal is to provide effective ecological enhancement, to benefit local wildlife interests, and work towards national and local species / habitats of Principal Importance (Priority Species / Habitats) targets.

- 1.6 This plan has been written with reference to published guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM).

2. MANAGEMENT OBJECTIVES

2.1 The aims and objectives of the plan have been guided by the wording of the planning condition and are to ensure the successful delivery of the proposed habitats through appropriate monitoring and management.

2.2 The following objectives have been identified:

- Objective 1: Establish the BNG objectives for the proposals; and
- Objective 2: Ensure successful establishment and maintenance of the habitats proposed.

3. OBJECTIVE 1: BIODIVERSITY NET GAIN OBJECTIVES

- 3.1 It is noted that the application was submitted prior to the engagement of the mandatory 10% biodiversity net gain target. As such the development's requirements are dictated by national and local policy which require that a net loss be avoided.
- 3.2 Minor revisions to the scheme's layout are proposed and as such an updated Biodiversity Net Gain assessment has been undertaken. The results and implications of this are set out in this section, following which the mechanism by which a net gain will be delivered is described.

Biodiversity Baseline

Summary of baseline habitats

- 3.3 The site predominantly comprises species-poor modified grassland along with small areas of bare ground and introduce shrub. The site also includes ornamental hedgerows running along the northern extents of the eastern and western boundaries, a short section of native hedgerow in the southwest of the site, and a line of trees along the site's southern boundary. Full details of the site's ecological features and survey methods can be found in the Ecological Appraisal undertaken by Ecology Solutions in July 2023. Given the purpose of this report, namely to update previous material in response to amended proposals, the habitat categories and conditions previously assigned have been maintained, however given minor amendments to the site boundary these have been remapped to ensure the areas reflect the current proposals.
- 3.4 A biodiversity metric was agreed as part of the application process, and it is this which has been used as the basis for the updated calculations. As established by this metric the site has a baseline value of 2.51 habitat units and 0.34 hedgerows units.

On-site baseline	<i>Habitat units</i>	2.51
	<i>Hedgerow units</i>	0.34
	<i>Watercourse units</i>	0.00

- 3.5 More detail is provided in Table 1 and Table 2 below regarding the composition of habitats and the number of baseline units delivered by each.

Table 1 – Units delivered by baseline habitats

Habitat	Area (Ha)	Condition	Units
Modified grassland	0.6114	Poor	1.22
Introduced shrub	0.0042	No condition assessment required	0.01
Bare ground	0.0027	Poor	0.01
Developed land; sealed surface	0.0296	No condition assessment required	0.00
Urban tree	0.1588	Moderate	1.27
Total units			2.51

Table 2 – Units delivered by baseline hedgerows

Habitat	Length (Km)	Condition	Units
Non-native and ornamental hedgerow	0.102	Poor	0.10
Native hedgerow	0.024	Moderate	0.10
Line of trees	0.069	Poor	0.14
Total habitat units			0.34

- 3.6 By way of confirmation none of the habitats within the site baseline constitute irreplaceable habitats, nor are they identified as habitats of principal importance.

Proposed Habitats

- 3.7 The proposed habitats include those areas of undeveloped land being used to deliver other neutral grassland, mixed scrub, individual trees and native hedgerow. In addition to this there is retention of some habitats on the site

including individual trees, the line of trees and hedgerows. Areas closer to development will be used to deliver ornamental shrub, hedgerows, and a rain garden with additional small area of amenity grassland.

- 3.8 The locations of these habitats are illustrated in the soft landscape plan included at Appendix 1 of this report, and the attributes of these habitats are summarised in Table 3 and Table 4 below:

Table 3 – Proposed area-based habitats

Habitat	Area (Ha)	Condition	Units
Rain Garden	0.01	Poor	0.02
Ornamental Shrub	0.04	No condition assessment required	0.08
Modified grassland	0.03	Poor	0.06
Other neutral grassland	0.11	Moderate	0.74
Mixed scrub	0.11	Moderate	0.74
Retained individual trees	0.1588	Moderate	1.17
Created urban tree	0.0570	Moderate	0.17
Total habitat units			2.97

Table 4 – Proposed linear habitats

Habitat	Length (Km)	Condition	Units
Retained non-native and ornamental hedgerow	0.102	Poor	0.10

Retained native hedgerow	0.024	Moderate	0.10
Retained line of trees	0.069	Poor	0.14
Created native hedgerow	0.049	Moderate	0.16
Total habitat units			0.50

Results

- 3.9 The baseline and proposed habitats set out above were input into the BNG metric. This returned the following results.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	0.47
	<i>Hedgerow units</i>	0.16
	<i>Watercourse units</i>	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	18.64%
	<i>Hedgerow units</i>	48.82%
	<i>Watercourse units</i>	0.00%
Trading rules satisfied?	Yes ✓	

- 3.10 As displayed by the metric results above, the metric returned a net gain of habitat units (0.47) and a net gain in hedgerow units (0.16).
- 3.11 The change in habitat units equates to a net gain of +18.64%, and therefore the proposals are considered to meet the required net gain in respect of this unit category. It should be noted that this situation represents an improvement relative to the BNG position at the time of the application which recorded a +15.76 gain.
- 3.12 The change in hedgerow units delivers a net gain of +48.82%, and therefore the proposals are considered to meet the required net gain in respect of this unit category. As with habitats above the updated proposals deliver a slightly greater net gain than that associated with the contested proposals.

4. OBJECTIVE 2: ESTABLISHMENT AND MAINTENANCE OF PROPOSED HABITATS

OVERVIEW

- 4.1 As part of the site's ecological enhancement and management strategy, a range of semi-natural and natural habitats will be created or enhanced. These measures will contribute to the overall strategy which will ensure that a net loss of biodiversity is avoided. The habitats to be created as part of the ecological enhancement plan for the site include the following:
- Other neutral grassland;
 - Modified grassland;
 - Mixed scrub;
 - Rain garden;
 - Individual trees;
 - Ornamental shrub; and
 - Ornamental hedgerow
- 4.2 The locations of these habitats are set out in detail in the soft landscape plan at Appendix 1 of this report.
- 4.3 The management plan is a live document and sets out to review, monitor and adjust where necessary the landscape objective.
- 4.4 Maintenance of the landscape areas shall be undertaken by a competent Landscape Contractor. For the purposes of this report the appointed landscape contractor is referred to as 'the Contractor'.
- 4.5 In the first instance it is anticipated that maintenance visits shall be undertaken at fortnightly intervals to carry out the most intensive maintenance tasks such as grass cutting, removing litter and inspecting components for defects. Visits may need to be increased at certain times of the year to enable the operations set-out within the report to be properly executed.
- 4.6 A record or log of all maintenance visits should be undertaken by the Contractor and kept as proof that operations are being undertaken and to help inform any changes that may need to be made to respond to site circumstances.

- 4.7 The Contractor shall ensure that any chemical application is undertaken by trained personnel / operatives only, who have the appropriate NPTC certificates and in accordance with the manufacturer's recommendations. The 'Code of Practice for the Safe Use of Pesticides for Non-Agricultural Purposes' will be observed where applicable. The use of any chemicals shall be noted on the record sheets as outlined above.
- 4.8 The Contractor shall programme and vary their agreed time of visits to coincide with appropriate weather conditions for carrying out of operations, with particular regard for the use of chemicals and the mowing of grass. The mowing of grass during excessively wet weather or following periods of extended rain is strictly prohibited.
- 4.9 The Contractor should notify the management company to any significant pest or disease problem affecting the planted stock and shall provide a suitable strategy for treatment to be agreed with the client.
- 4.10 Following expiry of the defects period and the autumn of the 4 subsequent years, the Contractor shall advise the management company of all trees and other plants found to be dead, dying, vandalised or suffering significantly from the current growing conditions. All failed / defective plants identified should be replaced by the contractor at the soonest available planting season to ensure a continued coverage of growth. Replacement plants should be of the same species and specification of the failed specimens identified on the planting plan.
- 4.11 Chipping and shredding are not permitted on site without prior consent.
- 4.12 Proposals for control of vermin should be submitted for approval if they become a problem.
- 4.13 The Contractor should ensure that a suitable water supply is available to carry out the operations detailed in this document. In the event of water restrictions (e.g. drought), the contractor will be responsible for submitting proposals to the management company for an alternative source of water e.g. use of a trailer mounted bowser.

MANAGEMENT OF PROPOSED LANDSCAPE FEATURES

Other neutral grassland (wildflower meadow)

- 4.14 Where wildflower meadow is proposed across the Site within the landscape plan this is classified as other neutral grassland within the BNG metric and has been referred to as such within this document.

Ground Preparation / Creation / Establishment (Years 0 to 1)

- 4.15 The following measures will be undertaken during Year 0 to 1 in order to facilitate the establishment of new grassland habitats.
- Preparation of growing medium via creation / scattering of nutrient poor topsoil within seeding areas. Tilling to break up surface ready for seeding (Year 0/1);
 - Creation of a varied surface topology to ensure the creation of micro-habitats within the grassland;
 - Application of Emorsgate EM2 seed mix (broadcasting and rolling) oversown with Emorsgate EC1. Seeding to occur during first suitable period during Year 0/1 (Autumn seeding is optimal but early Spring is acceptable if the ground conditions are appropriate);
 - Commencement of a care programme (to include weeding, preferably through hand or mechanical means but also chemically using Glyphosate if required) during the establishment period, excessive and quick growing undesirable species will be checked and maintained. More regular cutting during first year to take place for newly created grassland in order to assist with germination and to remove new / opportunistic undesirable growth; and,
 - Completion of regular health checks of planted stock during adverse weather periods.

Medium to long-term management (Years 1+)

- 4.16 Following management during establishment, grasslands should be cut up to two times a year; once in March / April (where required) and again between late August to October (after flowering - late summer 'hay cut'). These cuts should be completed once the sward has reached a height in excess of 200mm, and cutting should be completed to a height of approximately 150mm. Based on the

current site conditions and subject to successful establishment, a third late winter cut can also be undertaken in order to further aid in the gradual removal of excess nutrients.

- 4.17 In drier areas, a proportion of the grassland (20%) should be reduced to a sward height of <5cm, thereby creating basking spots for reptiles (should they colonise in future years) as well as opportunities for solitary insects. It should also be noted that rabbit and deer grazing within the application site will also contribute to areas of shorter, open sward within the areas of the grassland.
- 4.18 Small patches of bare ground will also be created within these drier areas, with a target for this to comprise 5 to 10% of the overall area. Whilst of negligible botanical interest, this habitat type provides important opportunities for solitary invertebrates.
- 4.19 To ensure the retention of areas of longer vegetation, pockets of neutral grassland (20%) will remain uncut in each year. These uncut areas will primarily be in the form of edge habitat adjacent to scrub parcels around the site periphery. Within these areas grasses will be subject to only irregular cuts, with cutting undertaken on a 2-to-3-year rotation such that scrub succession is kept in check and to provide further opportunities for faunal species.
- 4.20 Following the late summer 'hay cut', arisings will be retained on site for a period of 5 days to allow seed to set following which material will be removed.
- 4.21 By undertaking the above prescribed cuts, the need for additional management to meadow grassland habitats in the form of weed removal or scrub clearance will be largely alleviated. Should additional management be required this should be in the form of either manual or mechanical vegetation removal. Where this is not possible Glyphosate based herbicides may be applied to habitats of concern, where necessary.

BNG Target Conditions

- 4.22 Section 3 describes how the grassland to be created will contribute to the delivery of a net gain in biodiversity. Fundamental to the units which will be delivered by this habitat is the target condition which has been set. The table below sets out the condition assessment criteria for this habitat and describes whether the measures set out in this document will be sufficient to meet each criterion.

Criterion	Target description	Management actions
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Through appropriate preparation of the ground, followed by the use of the Emorsgate EM2/EC1 seed mix proposed it can be ensured that a floristically diverse grassland parcel can be delivered with a high proportion of the desired indicator species
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Management can be implemented to ensure that a varied sward height is delivered across the habitat parcel
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Supplementary planting can be implemented to infill any areas of bare ground which develop, and also to respond to pressures such as footfall and ensure protection of the grassland
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Monitoring can ensure that Bracken and scrub are not allowed to become established within the grassland
E	Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	As above, monitoring can ensure that species-indicative of suboptimal condition and non-native species are not permitted to become established. Management can respond to any sources of physical damage and address the source of such disturbance
F	There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type. Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	An appropriate species-rich seed mix as included in the planting plan, coupled with suitable monitoring and management, which will ensure that a diverse sward is maintained with no species becoming overly dominant across the parcel

4.23 As demonstrated, through the implementation of the measures described above it is considered that all target criteria can be met. On a precautionary

basis, however, a target condition of moderate has been assigned within the metric.

Mixed Scrub (proposed native planting)

- 4.24 Where native planting is proposed across the site within the landscape plan this is classified as mixed scrub within the BNG metric and has been referred to as such within this document.
- 4.25 A guiding principle of the new scrub planting and management will be to gradually encourage structural, botanical and age diversity of the created habitats.

Ground Preparation/Creation/Establishment (Years 0-5)

- 4.26 The following measures will be undertaken prior to planting:
- Re-grading, bunding and tilling of soil to create an optimal planting medium;
 - The planting of a bespoke scrub mix with the palette of native species. Specimens should be planted naturalistically (i.e. avoiding a strict grid formation and favouring small monospecific groups in some locations);
 - Installation and maintenance of protective anti-grazing measures / guards to prevent detrimental sapling grazing;
 - Commencement of a care programme during the establishment period; and,
 - Completion of regular health checks of planted stock during adverse weather periods.

Medium to Long Term Management Aims and Principles (Years 5+)

- 4.27 Once the new scrub planting has become well-established, a series of management activities will be undertaken with the objective of realising long term ecological enhancements. It is considered at this stage that the instigation of longer-term management measures is unlikely to be required until Year 5 (post-planting).

4.28 Adopted management activities will include the following and are discussed in further detail below. The principle of this management will be to deliver species-rich and structurally varied scrub parcels

- Small scale felling / thinning of scrub planting;
- Creation / retention of fallen deadwood;
- Encouragement of natural sapling generation / establishment;
- Scrub edge management; and,
- Management to control/remove non-native and overly dominant species;

4.29 Detailed management prescriptions are set out below. It is envisaged management of scrub habitats will be via the use of hand tools (such as chainsaws, bow saws or pole saws) in preference to machinery. Additionally, all management will be undertaken with due regard to the potential presence of protected species such as nesting birds (with appropriate methodologies adopted as required).

4.30 **Small scale felling/thinning of scrub planting.** Thinning is essential management of any scrub/woody vegetation to ensure young specimens have adequate space to grow into natural forms by avoiding overcrowding and forced, spindly upward growth. This should commence once complete coverage of the ground is achieved and developing specimens are no longer compromised by competition from weed growth. Typically, this condition should be achieved within 5 years from planting.

4.31 Small scale felling or thinning works will be undertaken on a rotational basis from Years 5 to 10 (depending on success of establishment). As a guiding principle, thinning should be undertaken at a rate of no more than 10% of scrub every fifth to tenth year, albeit the initial exercise may be more extensive so as to achieve sufficient spacing between specimens.

4.32 **Creation/retention of fallen deadwood.** Whilst opportunities to create deadwood resources will not be as plentiful as in the case of woodland creation, should any fallen deadwood occur, this will be retained where possible and used to create log piles/hibernacula around the periphery of the site.

- 4.33 **Encouragement of natural sapling generation/establishment.** Natural sapling generation will be encouraged as the scrub planting matures. This will be achieved through felling/thinning measures set out above which will provide space for sapling establishment.
- 4.34 **Scrub edge management.** Edge management will be undertaken in order to achieve a gradation in structure from grassland to areas of more developed scrub habitat. This is to occur from Years 5 onwards, and in accordance with that of the felling / thinning regime as set out above.
- 4.35 This edge management should also seek to create a 'scalloped' edge to the scrub parcels, maximising the amount of edge habitat and encouraging a diverse range of microclimatic conditions along the boundary.
- 4.36 **Management to control/remove non-native and overly dominant species.** Areas of scrub planting will be subject to annual monitoring, with works undertaken to remove invasive and aggressive flora where required.
- 4.37 Where feasible, such management should employ hand / mechanical means as opposed to chemical control. In the event chemical controls are required, it is envisaged these will utilise Glyphosate-based products.

BNG Target Conditions

- 4.38 As with the grassland above, the measures described in this document have been informed by the targets set by the condition assessment criteria for mixed scrub. The table below sets these out and expands upon the management actions required for each to be met.

Criterion	Target description	Management actions
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). - At least 80% of scrub is native, - There are at least three native woody species, - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i>, which can be up to 100% cover).	Preparation of the ground prior to habitat creation, followed by the delivery of an appropriate mix of scrub species will ensure the delivery of a diverse native parcel of scrub

B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Management will seek to deliver a wide age range of specimens within the parcel (e.g. through selective cutting of areas to encourage regeneration).
C	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.	Monitoring can ensure that non-native species are not allowed to become established
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	The scrub will be adjacent to species-rich grassland, providing a well-developed interface to another botanically diverse habitat
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Once established, management can deliver structural diversity such as clearings and glades throughout the parcels of scrub

- 4.39 As demonstrated, through the implementation of the measures described above it is considered that all target criteria can be met. On a precautionary basis, however, a target condition of moderate has been assigned within the metric.

Rain Garden

- 4.40 An area of planting in the centre of the proposed car park is to serve as a rain garden. As with the adjacent vegetation the planting in the area will be chosen principally for visual amenity. Subsequently this area will be managed as required to maintain a low height of growth and an appropriate density. As required, undesirable species which self-seed within these areas will be removed.

Ground Preparation/Creation/Establishment (Years 0-2)

- 4.41 The following measures will be undertaken prior to planting:
- Re-grading, bunding and tilling of soil to create an optimal planting medium;
 - The planting of a palette of appropriate specimens;

- Commencement of weeding on a monthly basis to remove self-seeded specimens and allow planted species to establish without competition;
- Commencement of a care programme during the establishment period; and
- Completion of regular health checks of planted stock during adverse weather periods.

Medium to Long Term Management Aims and Principles (Years 3+)

- 4.42 **Maintenance.** For these areas standard horticultural practices in line with those pruning regimes set out above for scrub planting are considered sufficient to ensure successful establishment of the vegetation.
- 4.43 **Management of growth.** Periodic cutting of vegetation should occur to prevent the formation of dense shrubby habitat. A bespoke cutting regiment should be implemented to ensure the habitat meets the required target criteria. Where required trimming should occur in late summer or early autumn whilst dead plants should be removed during winter however, it may be beneficial to local wildlife to leave dead stems and seed heads in situ.
- 4.44 **Invasive or detrimental species management.** Regular monitoring should be implemented throughout the year to ensure no invasive or detrimental species are present. Weeds may be removed by hand whilst taking care to ensure the whole plant is removed, including the roots. As the desired species composition within the Rain Garden matures it will naturally suppress weed growth by covering any open spaces.

BNG Target Conditions

- 4.45 As with the previous habitats mentioned, the measures described in this document have been informed by the targets set by the condition assessment criteria for Urban – Rain Garden. The table below sets these out and expands upon the management actions required for each to be met.

Criterion	Target description	Management actions
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	Regular monitoring checks to ensure succession does not occur and to prevent colonisation by a single habitat type or structure. Pruning will occur where required

B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	As above, regular monitoring checks will be carried out to ensure no species become overly dominant. Selective pruning will occur where required
C	"Invasive non-native plant species (listed on Schedule 9 of WCA1) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover)."	Monitoring and management will ensure that non-native and detrimental species are not allowed to become established across these areas. Regular hand-weeding to occur where required

- 4.46 As demonstrated, through the implementation of the measures described above it is considered that all target criteria could be met, however due to the location of this habitat parcel and conflicting constraints (e.g. drainage, visual amenity etc.) a target condition of poor has been assigned within the metric to more closely accord with the adjacent ornamental shrub.

Individual Trees (proposed tree planting)

- 4.47 Where tree planting is proposed across the Site within the landscape plan this is classified as individual tree(s) within the BNG metric and has been referred to as such within this document

Creation

- 4.48 As a precautionary measure any new tree plantings associated with areas of proposed mixed scrub have been classified as part of that scrub and not counted within the individual trees metric contributions.

Ground Preparation/Creation/Establishment (Years 0-5)

- 4.49 Trees will be planted no later than the first planting season (typically November to March inclusive depending on weather conditions) following completion of the proposed development. An audit trail of the plant stock used for the scheme will be retained for biosecurity reasons.
- 4.50 Selection of nursery stock, planting, and ongoing management will be guided by the recommendations set out in BS 8545:2014 Trees: from nursery to independence in the landscape and BS 4428: 1989 Code of Practice for General Landscape Operations, however by way of summary the following

measures will be undertaken during the construction phase in order to ensure the successful delivery of proposed trees.

- Removal of existing vegetation in areas of proposed planting (e.g. species-not conducive to tree establishment);
- Re-grading and tilling of soil to create an optimal planting medium;
- Surrounding of newly planted specimens with organic mulch (excluding the stem and root flare) to a depth of 50mm – 100mm;
- Installation and maintenance of stakes and protective fencing as required;
- Commencement of a care programme during the establishment period; and
- Completion of regular health checks of planted stock during adverse weather periods.

4.51 Through the establishment period (years 0 – 5) irrigation will be undertaken as a part of a structured watering regime. This will be guided by the Arboricultural Association guidance which recommends 50 litres of water per tree per week through the growing season. This season spans May to August inclusive, but may start in April and continue until September in atypical years.

4.52 Watering should be undertaken in the early morning or evening when ambient temperatures are lower. The quantity of water stated above can be provided either in a single visit or spaced throughout the week. Those trees which are to be planted at a larger size should be accompanied by a watering bag allowing for optimal water supply to each specimen.

4.53 Where possible the water used for irrigation will be sustainably sourced, with harvested rainwater used in preference to potable water. In times of drought when the use of potable water is banned grey water can be used.

4.54 As highlighted by the Arboricultural Association there are a large number of variables which influence a tree's water requirements including species, size, condition, root stock, soil type, location, weather and climatic conditions and therefore the regime implemented at this site will be altered proactively to ensure optimal outcomes. In particular the frequency of irrigation will take into account the prevailing weather conditions, and additional monitoring of the

trees will be undertaken during any periods where temperatures exceed 25°C for a period of ten or more days.

- 4.55 All stakes and ties installed at the time of planting will be checked biannually to ensure that the root system remains stable and firm in the ground. Any stakes and ties that are found to be not fit for purpose should be adjusted, replaced or removed. All stakes and ties will be removed as soon as the developing root system is strong enough to support the tree.

Medium to Long Term Management Aims and Principles (Years 5+)

- 4.56 An assessment of tree health and development will be carried out annually. This assessment will include foliar appearance (i.e. lack of leaf chlorosis and/or necrosis), leaf size and leaf canopy density, extension growth and incremental girth development. Continual assessment on an ad hoc basis will be carried out throughout the year to inform maintenance requirements. It is considered that these assessments can be carried out by the on-site management body, however further advice can be sought from a suitably qualified ecologist as required.
- 4.57 Any trees which die, become diseased, damaged or are removed within 5 years of planting shall be replaced with trees/plants of similar sizes and species or as may otherwise be agreed with the local planning authority in the first available planting season thereafter.
- 4.58 It is considered that following establishment only limited interventions will be required, and the trees will otherwise be allowed to develop naturally, delivering features of high ecological value.

BNG Target Conditions

- 4.59 As above, these measures will seek to meet the condition assessment criteria identified for individual trees. The table below sets these out.

Criterion	Target description	Management actions
A	The tree is a native species (or at least 70% within the block are native species).	A mix of native species will be delivered
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Individual trees are to be created and therefore this criterion is automatically passed

C	The tree is mature (or more than 50% within the block are mature).	Whilst larger specimens will be used in the majority of cases, due to pruning and other constraints it is not considered that it can be guaranteed that maturity will be reached within the timeframe relevant to BNG
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Management will ensure that specimens are protected during establishment, and vigorous growth is encouraged. Should factors impacting tree health be identified then management can be updated to address this
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	As above, vigorous growth will be encouraged, and where possible (i.e. without leading to safety concerns) deadwood will be allowed to develop. This will not be actively encouraged, however, and therefore is not targeted as part of the condition assessment
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	The trees will be planted over grassland and scrub vegetation types

- 4.60 As set out in the table, it is anticipated that four of the target criteria can be passed, equating to a condition of moderate.

Proposed Hedgerow

- 4.61 Where hedge planting is proposed across the site within the landscape plan this is classified as Native hedgerow within the BNG metric in line with the previous metric, and has been referred to as such within this document

Creation

- 4.62 The principles by which the proposed hedgerow will be created closely mirror those for the scrub and trees set out above.

Ground Preparation/Creation/Establishment (Years 0-5)

- 4.63 The following measures will be undertaken during the construction phase in order to ensure the successful delivery of proposed hedgerows.

- Removal of existing vegetation in areas of proposed planting (e.g. species-not conducive to hedgerow establishment);

- Re-grading and tilling of soil to create an optimal planting medium;
- Planting of whips in a double-staggered line with a target density of 6 specimens per linear metre. Species will be interspersed to avoid monospecific areas;
- Surrounding of newly planted specimens with organic mulch (excluding the stem and root flare) to a depth of 50mm – 100mm;
- Installation and maintenance of stakes and protective fencing as required;
- Replacement of dead, dying, or damaged stock with the same species as soon as practical in the first planting season following failure;
- Maintenance of a weed-free condition at the base of the hedge for at least three years to reduce competition from grass and weeds for moisture and nutrients;
- Commencement of a care programme during the establishment period; and
- Completion of regular health checks of planted stock during adverse weather periods.

Medium to Long Term Management Aims and Principles (Years 5+)

4.64 The aim is to deliver a dense hedgerow with a thick base, optimising opportunities for faunal groups such as nesting birds. Ongoing management measures will be undertaken from year 5 onwards. This will include the following.

- Hedgerows cut on a rotational basis once every three years. Cuts will be undertaken in January – February to avoid impacts on wildlife and to encourage high fruit production; and
- Identification of invasive and undesirable species will be achieved through ongoing monitoring, and the removal of these (preferably through hand or mechanical means) will be carried out at the soonest possible opportunity.

4.65 As the hedgerow become established it will be managed to deliver a dense structure where possible.

BNG Target Conditions

4.66 As above, these measures will seek to meet the condition assessment criteria identified for hedgerow. The table below sets these out.

Criterion	Target description		Management actions
A1	Height	>1.5 m average along length	Hedgerows will be managed to deliver a dense structure and suitable height and width where possible, however management will also need to be guided by amenity constraints
A2	Width	>1.5 m average along length	
B1	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	Management will ensure that gaps are not allowed to develop. Should areas of sparse vegetation be identified then supplementary bolster planting will be employed as necessary
B2	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	
C1	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	Hedgerows will be created adjacent to other vegetation (lawn, shrub and meadow planting) and therefore whilst these often form boundary features there will be undisturbed ground on at least one side of the hedgerow. Furthermore, nutrient enrichment will not be used and therefore it is not anticipated that plants indicative of this will develop
C2	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	
D1	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Monitoring and management will ensure that invasive species are not allowed to become established, and that damage is avoided (or in the worst case immediately rectified)
D2	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	

4.67 As described above, whilst natural hedgerows with ecologically favourable attributes will be targeted wherever possible, a number of other constraints are posed by management of the site (e.g. visual amenity, safety etc.) and therefore

on a precautionary basis a target condition of moderate has been assigned for the created features.

Ornamental shrub

- 4.68 Where shrub planting is proposed across the site within the landscape plan this is classified as introduced shrub within the BNG metric and has been referred to as such within this document
- 4.69 Areas of planting immediately adjacent to the proposed development will comprise species chosen primarily for visual amenity. As such a classification of 'introduced shrub' has been assigned within the metric. For these areas standard horticultural practices in line with those set out above for scrub and rain garden planting are considered sufficient to ensure successful establishment of the vegetation.
- 4.70 Subsequently these will be managed principally for visual amenity, including pruning as required to maintain a low height of growth and an appropriate density. As required, undesirable species which self-seed within these areas will be removed.
- 4.71 The BNG metric automatically assigns a condition (equivalent to 'low') to introduced shrub and therefore there are no condition assessment criteria to consider.

5. MANAGEMENT AND MONITORING RESPONSIBILITIES

- 5.1 Once the construction phase has been completed, management of the accessible areas of the site will be transferred to the developer's management company, with funding secured for the ongoing operation of the management company at this stage.
- 5.2 It is this body which will be responsible for overseeing the measures described in this plan, however the day-to-day work will be undertaken by a competent landscape contractor, referred to within this note as 'the Contractor'.
- 5.3 Where necessary they will contact David Archer Associates, Bennu Environmental or another suitably qualified body to provide advice as required. Should remedial measures be deemed necessary the live version of this plan will be updated to reflect revised management prescriptions.

6. CONCLUSION

- 6.1 Following the granting of planning permission for Land at Longleaze Lane, Melksham (PL/2023/06725), minor amendments have been made to the scheme and Bennu Environmental were instructed by Aspire LPP to update the Biodiversity Net Gain elements of the application and support the condition discharge process.
- 6.2 As part of Condition 15 a Habitat Management and Monitoring Plan must be submitted to secure the long-term BNG objectives. Provision of ecologically valuable habitats within the site has been provided through both the retention of existing habitats and creation of new areas of vegetation. The ecological value of these habitats has been calculated using the BNG metric and it has been confirmed that an overall net gain in biodiversity continues to be delivered.
- 6.3 Through the implementation of the measures set out above the proposals will deliver a range of ecologically valuable habitats and features across the site, ensuring that the site's botanical interest, and the opportunities it offers to protected and notable species, are improved and maintained.

Appendix 1

Soft Landscape Plan

