Landscape & Ecological Management Plan (LEMP)

Residential Development

Land rear of 74 Old Shoreham Road, New Monks Farm, Lancing BN15 0QZ

30th April 2025

ENVIRONMENTAL AND
SUSTAINABILITY CONSULTANTS

encon associates

Report Reference A6656

Document Control

Date of first Issue	Revision	Date of Revision	Issued By	Checked by
30th April 2025	-	-	MJB	LB

Contents

Executive Summary

This Landscape & Ecological Management Plan has been produced as part of the planning application for the construction of new residential dwellings on land rear of 74 Old Shoreham Road, Lancing BN15 0QZ.

The document corresponds directly to the landscaping scheme as detailed on the drawing reference A6656-01 prepared by Encon Associates (see separate drawing).

This document should be read in conjunction with the Great Crested Newt eDNA Survey (Arbtech 02/08/2023) and Biodiversity Net Gain Assessment (Arbtech 30/07/2023). In particular, the Great Crested New Survey details recommendations on site clearance and the construction phase.

The development involves the demolition of an existing bungalow and the construction of 9 new residential dwellings with associated access road and parking.

The landscaping scheme incudes the planting of new specimen trees, a new native hedgerow, and private grassed lawns. Other new habitats will be created to encourage biodiversity including grassland wildflower meadows in public open space and nectar rich shrub planting within front gardens to provide a food source and habitat for a variety of pollinator species. The area of existing scrub will be retained and enhanced and amphibian refugia and hibernacula will be created using debris from the site clearance.

The aim of this report is to provide appropriate prescriptive management and recommendations to achieve the objective of enhanced biodiversity on site and on-going maintenance.

This includes management actions and an annual work schedule to be rolled over for a 5 year period, as per local authority requirements.

1 Introduction

1.1 This management plan has been prepared as part of the planning application for the development of a new residential dwellings on land rear of 74 Old Shoreham Road, Lancing BN15 0QZ.

1.2 This Landscape & Ecological Management Plan ('Plan') corresponds directly to the landscaping scheme as detailed on drawing A6656-01 (see separate drawing).

1.3 The Plan should be read in conjunction with the Great Crested Newt eDNA Survey (Arbtech 02/08/2023) and Biodiversity Net Gain Assessment (Arbtech 30/07/2023). In particular, the Great Crested New Survey details recommendations for site clearance and the construction phase.

1.4 The Plan is in accordance with BS8545:2014 Trees: from nursery to independence in the landscape – Recommendations. This British Standard gives recommendations for transplanting young trees successfully from the nursery, through to achieving their eventual independence in the landscape, specifically covering the issues of planning, design, production, planting and management. This British Standard applies to trees where a distinct crown has been prepared in the nursery. It does not apply to whips, transplants and seedlings or to other woody material.

1.5 **Principles of the Management Plan**

This plan sets out the principles and quality standards required for the installation of planting and ecological enhancement for the long term management operations.

It includes:

- Design Intentions
- Aims of the management plan
- Detailed installation specification
- Management objectives
- Detailed maintenance specification
- Annual schedule of operations

1.6 This Plan should be read alongside the approved landscaping scheme and used by the maintenance team to produce a detailed priced programme of work for the client. It

should also form the basis for annual reviews and evaluation of maintenance works to ensure they continue to meet the needs of the site.

1.7 Long Term Landscape Design Objective

The site comprises an existing bungalow with private garden and driveway and an additional area of undeveloped grassland with outbuildings of little ecological value.

One of the primary aims for the landscaping is to improve on the ecological value of the site by introducing various enhancements to the biodiversity. This decision is based on the need to deliver a landscape setting suitable for a residential development and grasp the opportunity to make an improvement to the low ecological value of the existing site. The overall design is obviously driven by the need to logically layout the access for vehicles and pedestrians and provide car parking and access for deliveries and refuse collections.

1.8 Aims of the Landscape Proposals

Along with ecological enhancement as a key consideration for the landscaping, the need to provide a welcoming external environment to cater for walking, cycling and vehicular access in a controlled, safe manner has obviously been high up in the design process. The landscape proposals include the provision of a soft landscape scheme which aims to enhance the species and bio-diversity of the site. The proposals will include a new native hedgerow new specimen trees and nectar rich shrub planting. Areas of grass meadow will also be introduced, along with amphibian refugia and hibernacula to encourage ecological enhancement and an increase in the site bio-diversity.

1.9 For the purposes of management and maintenance of the landscape and biodiversity there are the following main areas:

1) Grass Lawns
2) Scrub
3) Shrubs
4) Hedges
5) Trees
6) Wildflower Meadow Areas
7) Hibernacula

2 Landscape Management Objectives

2.1 The Maintenance Period

Maintenance is required to run for a minimum of 5 years including the initial 12 months defects liability period which should be built into the implementation contract to cover post-installation maintenance requirements for the whole of the landscape works. During the initial 12 month period the contractor is responsible for all horticultural maintenance operations, including the replacing of planting which has failed to flourish. At the end of the initial 12 month aftercare period any defects in soft landscape materials due to materials or workmanship will be rectified and future responsibility will be handed over to the landlord/managing agent/resident occupiers for a further 4 years thereafter and any trees or plants which, within the period of five years from first use of the site, die, are removed or become seriously damaged or diseased, shall be replaced in the next planting season with others, of similar size and species.

2.2 Management Responsibility

The developer is responsible for the funding and implementation of the proposed landscaping and ecological mitigation and enhancements. The long term maintenance of the public open spaces will be managed by the landlord/managing agent. The maintenance of the private gardens will be the responsibility of the resident occupiers.

2.3 Access

For landscape maintenance purposes, vehicular access will be from the access road into the development, accessed from Old Shoreham Road (A27).

2.4 Facilities

The grounds contractor shall liaise with the site manager/managing agent/landlord/occupiers directly regarding permissions for parking, storage, use of water and any other resources when implementing the proposed landscaping and maintaining the public open spaces.

2.5 Management Objectives for Soft Landscape

- apply good horticultural and ecological practice to all operations
- promote healthy growth and establishment of all plants and trees
- regularly cut grass areas to maintain a neat, short sward

- allow species rich grassed areas to establish and mow less frequently
- ensure consistent control of invasive weeds
- promote optimum display and flowering periods and stem colour
- ensure development of optimum plant form, shape, and planting density provide protection against pests and diseases
- promote wildlife value and species diversity where appropriate
- ensure long term commitment to replacement of defective plant material
- review opportunities for introduction of new species or replacement of exhausted species where appropriate, in line with original design intentions.

3 Components with Specific Management Objectives

3.1 Grassed Areas: Private Lawns

- Species rich grass established for increased biodiversity
- Ensure sward is maintained so as to create an optimum functional surface
- Establish an annual programme of aeration and feeding
- Review requirements for whole or part sward refurbishment
- Employ cultural techniques which use organic fertilisers and minimize the use of chemicals wherever possible.

3.2 Wildflower Meadow Areas: Grass verges and public open space

- Species rich turf established for increased biodiversity
- Grassland/wildflower areas are to be mown less frequently to enable the flowers to establish and produce seeds before being cut
- Employ cultural techniques which use organic fertilisers and minimize the use of chemicals wherever possible.

3.3 Shrub Planting: Ornamental, evergreen and flowering shrubs planted in front gardens

Refer to drawing A6656-01 (see separate drawing) for full species list to determine correct management approach to create functioning habitats, for example dense blocks of ground cover species will not require pruning.

- Species selected for ecological enhancement including colourful, flowering groundcover to attract bees and invertebrates.
- Ensure that good horticultural practice is employed to encourage long term health and vitality of all shrub planted areas to ensure they establish
- Allow shrubs to establish to provide a dense block of groundcover with a variety of species and various heights for biodiversity

3.4 Hedge Planting: Native, deciduous tree and shrub planting to form a dense hedge line

- Species selected to provide a range of native trees and shrubs of local provenance
- The native hedge should be managed for its wildlife interest with only 50% cut annually on rotation, to allow fruits and shelter for birds and insects through the winter.

- The hedge should be cut to form an A-frame shape to avoid it becoming leggy and diminishing its biodiversity value.
- Hedges should be pruned in late winter (February) to prevent destroying berries and seeds vital food for birds, as well as the eggs of overwintering insects.
- Cutting should not take place during the bird nesting season (March to August).
- Good horticultural practice should be employed to encourage long term health and vitality of all hedge planting
- Allow shrubs to establish to provide a dense hedge line maintained at a height of 1.5m.

3.5 Specimen Tree Planting: Planted as individual specimens in communal space and private gardens

- Species selected to provide a range of native trees and shrubs of local provenance.
- Ensure that good horticultural practice is employed to encourage long term health and vitality of all trees
- Ensure well-balanced crowns and natural shape
- Remove rubber ties and supporting stakes once the trees are well established enough to support themselves

3.6 Native Mixed Scrub: Existing native scrub to retained and enhanced

- Scrub is an important wildlife habitat, including isolated shrubs, young trees, dense thickets and grassland and forms an important component of the landscape.
- Well-managed scrub and its margins will support a range of wildlife and provide nectar, seeds, fruits, shelter and nest sites for invertebrates, birds and mammals and a suitable habitat for many flowering plants.
- If left unmanaged, scrub will eventually develop into mature woodland and therefore requires periodic maintenance to retain its character and value to wildlife.

The aim is to create and enhance the following:

- sunny, sheltered edges, which offer a hot microclimate that is important for insects
- scalloped edges that increase the length of edge and provide shelter

- rides through scrub that provide sheltered edges but avoid openings that face the prevailing wind
- patchworks of scrub and glades that provide a lot of edges
- encourage bramble, which is valuable for nesting and feeding birds and for nectar-feeding insects
- dead wood – which is valuable to fungi and invertebrates – leave dead trees or shrubs standing and retain small stacks of cut wood in dappled shade to rot slowly
- bare ground – which is valuable for insects and scarce plants

3.7 Hibernacula: Constructed using debris and brash from site clearance.

- Install and maintain 2 amphibian hibernacula to offer refuge and hibernation opportunities

4 Maintenance Specification

4.1 Maintenance Details

4.2 The following specification items are to be addressed within the long term landscape maintenance contract for communal spaces. Included are performance specifications, quality standards and some detailed operational descriptions. The landscape maintenance contractor will be required to apply their expertise in relating these to the Management Objectives above in producing annual programmes of work. Maintenance work associated with pruning of trees and shrubs is to be carried out outside of the bird nesting season, approximately March to September.

4.3 Establishment Phase Maintenance

Maintenance during the initial establishment phase is highlighted within the following maintenance details and as per schedules in Clause 5.

4.4 Maintenance to accord with requirements of BS 7370-1:1991

- Duration: Carry out the operations in the following clauses from completion of planting for a minimum of 5 years
- Frequency of maintenance visits: Monthly during growing season and as per the schedules in Clause 5
- Frequency of watering visits: Weekly during any periods of spring drought and through the summer months

4.5 Grass Lawns

Specification:

- Front and back garden lawns to be laid with turf, Rolawn Medallion (or similar approved) containing a mix of red fescue and ryegrass species
- A minimum of 100mm depth of good quality top soil, free of vegetation
- Rake and bring to given levels, remove all stones and debris over 500mm
- Lay turf in stretcher bond, firm turves using wooden turf beater
- Lawns to be maintained by residents

Watering and Feeding:

- Newly laid turf for grass areas to be well watered at time of laying/seeding and regular watering thereafter during the first 2 growing seasons to ensure healthy establishment of the grass
- Ensure sufficient water is applied to maintain healthy growth; taking into account published meteorological data on rainfall for any given period, in particular in periods of summer drought (June, July & August)
- Slow release fertiliser to be spread over grass areas in accordance with manufacturer's instructions
- Carry out a single application between March and May for the first 3 years after laying

Weed control:

- All grass to be kept clear of weed growth for the first 3 growing seasons during the establishment period
- Achieve by a combination of herbicide applications and hand-weeding
- Ensure that the methods used will cause a minimum of damage

Mowing:

- All grass areas to be regularly mown to maintain the sward to create an optimum functional surface
- Grass verges are to be cut a minimum of 15 times during the growing season usually between March and October, depending on weather conditions
- Cut grass should be removed from paved areas at the time the grass is cut
- Strimming around obstacles such as trees or furniture to be carried out early in the growing season and then herbicide applied around the base of trees and obstacles in April/May and again in September/October to prevent weed or grass growth

4.6 Tree Planting: Planted as individual specimens

Specification for Specimen Tree Planting:

- Trees to be planted in communal spaces and in front gardens
- Refer to the landscaping drawings A6656-01 (see separate drawing) for species and planting locations.

- For trees in closer proximity to adjacent paving where the risk of damage caused by future root growth could be an issue, the trees should be planted within a "root deflection" system to be utilised to divert roots downwards to a level where they can safely establish without surface damage.
- All trees to be supplied in accordance with Section 8.4 "Root system development and management" within BS8545:2014 Trees: from nursery to independence in the landscape – Recommendations
- Specimen trees to be pit planted in accordance with Section 10 "Planting" within BS8545:2014 Trees: from nursery to independence in the landscape - Recommendations.
- All specimen trees to be "Extra Heavy Standard" 14-16cm girth, 4.5m high with 1.75-2.0m clear stem (supplied by Barcham Trees or similar approved)

4.7 Shrub Planting:

Specification for Shrub Beds:

- Front gardens to be planted with shrubs
- Refer to the landscaping drawings A6656-01 (see separate drawing) for species and planting locations.
- Cultivate and grade soil, bring top 150mm to a fine tilth prior to planting including 75mm depth of bark mulch spread between plants.
- Excavate planting pit, fork over bottom of pit, plant shrub with roots well spread out backfill with excavated material mixed with compost.
- Shrubs to be pit planted at 3per m^2
- All plants to be 5 litre pot grown stock, planted in random groups of 5, 7 or 9 plants of the same species throughout the planting bed

4.8 Hedge Planting:

Specification for Hedge:

- Refer to the landscaping drawings A6656-01 (see separate drawing) for species and planting locations.
- Hedging bed to consist of 300mm topsoil cultivated by incorporating green compost into upper 200mm of topsoil layer.
- Remove all stones and debris over 50mm, planting holes to be 300x300x300 deep and backfilled with excavated material
- Trees and Shrubs to be pit planted at 5 per metre in a double staggered row.

- Plants to be 125-150cm barefoot nursery stock, reduced by 30-50% immediately after planting
- Spiral rabbit guard to be fitted to each tree supported by a cane

4.9 Tree, Hedge & Shrub Maintenance:

- Trees and hedges in communal spaces to be maintained by the landlord/managing agent/ landscape contractor appointed by the developer in accordance with Section 11 "Post-planting management and maintenance" within BS8545:2014 Trees: from nursery to independence in the landscape - Recommendations.
- Trees and shrubs in private gardens to be maintained by the resident occupiers.

Watering:

- The timing and frequency of irrigation should take into account the prevailing weather conditions, soil moisture release characteristics and the response of the tree species to water deficits or periods of prolonged soil saturation.
- Ensure sufficient water is applied to maintain healthy growth; taking into account published meteorological data on rainfall for any given period, in particular in periods of spring and summer drought (April to August)

Quantity:

- Standard trees: a general guide would be10 gallons per tree per application. However, the frequency of irrigation is more important than the volume of water given at any one time
- Shrubs: Wet soil to full rooting depth
- Monitoring should take place if there are 10 consecutive days during the growing season at >25^{0}C

Weed control:

- All planting areas shall be kept clear of weed growth for the first 3 growing seasons during the establishment period
- After 3 years, a herb layer can be allowed to return to all planting except the ornamental planting which should be kept weed free
- Achieve by a combination of herbicide applications and hand-weeding/hoeing

- Ensure that the methods used will cause a minimum of damage to adjacent planted areas

Tree and plant stems:

- Do not allow nylon filament rotary cutters or other mechanical tools closer than 200mm to the stem of any tree or plant
- Maintain a grass & weed-free area around the base of each tree, min diameter 500mm during the first 3 growing seasons during the establishment period
- Carry out operations close to stems using hand tools

Herbicide application:

- A foliar acting translocated or contact herbicide shall be applied to emergent weeds

Hand weeding:

- Hoe and loosen the soil throughout the planting areas, taking care to avoid disturbance of roots of planted material
- Remove weeds entirely, including roots
- Remove the minimum of soil and minimise disturbance to plants, bulbs and mulched surfaces
- On completion, rake areas to a neat condition

Mulch:

- All mulches should be replenished to their original depth of 75mm
- The mulched area around the tree should be enlarged, if practicable, as the tree develops to the canopy drip line
- Mulch spill on adjacent surfaces to be removed to avoid a build up of mulch around the root flare and the base of the stem
- Any weeds and debris to be taken out of the spilled mulch before returning to planted areas
- Melcourt 'Forest BioMulch' or similar approved to be used
- After 5 years any compost created on site should be used if possible

Re-firming, check/tidy:

- Trees and shrubs shall be maintained in a firm position in the ground and all stakes and ties shall be checked regularly, particularly after strong winds, frost heave and other disturbances
- The soil around newly planted trees should be regularly inspected for soil capping or compaction.
- All trees should be checked on a regular basis for mammal, human and other external damage
- All trees should be checked on a regular basis for pests and diseases
- Any significant failures should be reported and remedial action should be taken as necessary

Tree stakes and ties:

- Inspect all trees twice a year to ensure that the root system remains stable and firm in the ground and that ties are still effective and not causing damage
- Adjust fixing to suit stem growth and provide correct and uniform tension. Any stakes and ties that are found to be not fit for purpose should be adjusted, replaced or removed.
- If growth is sufficient for tree to be self-supporting, remove fixing and fill holes with lightly compacted soil
- Check stakes for looseness, breaks and decay and replace as necessary
- Remove stakes and ties once tree has established sufficiently to support itself or after 3 years establishment whichever is the sooner

Hedge Pruning:

- Generally to be carried out in accordance with good horticultural and arboricultural practice
- In accordance with BS 7370.4, clauses 3.6.3 to 3.6.5
- Before starting work, agree which shrubs and hedges are to be pruned.
- 50% of hedges are to be cut annually on a rotational basis, ie 50% cut in year 1, 50% left uncut and then alternated for year 2 and all subsequent years.
- Hedges to be cut to an A-frame shape at a height of 1.5m
- Trim individual plant appropriate to species, location and season to leave a well-balanced natural shape

- All cutting to be done with appropriate clean sharp tools
- Clean cuts back to sound wood
- Do not use growth retardants, fungicides or sealant unless instructed

Pruning of trees:

- In accordance with BS 3998 and Forestry and Arboriculture
- During pruning protect adjacent structures, plants or trees
- Trees to be maintained with a well-balanced natural appearance
- Remove any suckers or basal growth
- Cut back level with source stem or root
- For any chain saw work, operatives must hold a certificate of competence

Timing:

- Prune between leaf fall and mid winter
- After 3 years full growing seasons, selectively thin, re-space and crown raise trees

Pruning of shrubs:

- At the end of the growing season, check all shrubs and remove all dead foliage, dead wood and broken/damaged branches and stems
- Prunings to be retained on site and either composted or woodier prunings to be utilised in the creation of habitat piles in un-obtrusive areas if possible
- Unless otherwise specified or instructed, prune shrubs flowering between March and July immediately after the flowering period and shrubs flowering between July and October back to old wood in winter;

Reinstatement:

- Remove dead plants as soon as possible and replace in the next scheduled round of replacement planting during the dormant season

Maintaining a safe, clean and secure environment:

- Litter and dog waste to be collected as necessary to maintain a clean, litter-free environment
- Include clear signage against dog fouling and litter at entrances

- Report fly tipping

4.10 Wildflower Meadow Areas:

Specification for Wildflower Meadow in Public Open Spaces and Verges:

- Areas to be turfed with species rich Wildflower Turf (WFT-26) supplied by wildfowerturf.co.uk (or similar approved)
- Mix contains species that are characteristic of the local area, composed of 20% native wild flowers and 80% slow growing grasses
- All areas of landscaping to have the existing topsoil and subsoil decompacted by hand digging or rotorvator
- Planting should take place during the dormant planting season ie October to March and seeding between late summer to mid-autumn

Watering

- Grassland and wildflowers thrive in impoverished conditions and therefore no watering is required unless seeding is done during a prolonged dry spell in which case initial watering should be carried out to ensure sufficient moisture content of the soil to enable germination to take place.

Feeding:

- Grassland and wildflowers thrive in impoverished conditions and therefore no fertiliser should be applied.

Weed control:

- The grassland and wildflower seed mix contains a certain amount of plants which ordinarily would be considered as “weeds”, however those plants form an important part of the overall mix and should be left to establish. Therefore, no weed control is necessary in the grassland areas, unless any invasive species are identified during inspection.
- Regular inspections for any non-native invasive species and notifiable native weeds such as ragwort to be carried out and removed where identified.
- Any invasive species and notifiable weeds identified are to be removed by hand digging and disposal off site at a licenced receptor site and/or chemical weed killing, depending on which is the most appropriate for the type of invasive species.

Mowing:

- The mix contains plants that are either low growing or can be cut low
- Mown to a height of approximately 100mm from the ground throughout the mowing season with all arisings removed.
- Area should be left to grow and flower between July and August

4.11 Scrubland Planting

Specification for Scrub:

- Area of existing scrub to be retained and enhanced

On-going Maintenance:

- Coppicing or laying will be used to manage areas of scrub that become gappy or have areas of sparse branch cover.
- Damaged sections will be cleared and additional scrub planting will be implemented.
- After 3-5 years pruning will take place every 6 months to encourage an even and healthy growth pattern and develop a dense understorey for wildlife use.

Cutting scrub

- Cutting most species of scrub encourages re-growth, and is an important par of the maintenance process
- Cut areas of scrub in a rotation, aiming to retain all ages. Scrub typically matures in 15 years, so cut 1/15th every year or 3/15ths every third year
- Cutting small patches will diversify scrub structure. Avoid cutting adjacent patches sequentially, as this reduces the foliage available for invertebrates to feed on.
- Cut between September and February, to avoid the bird breeding season.
- Leave berry-bearing scrub cutting until after Christmas so birds and mammals can eat the berries.
- Use tools according to the size of the task and access/resource limitations. Suitable tools range from hand tools – such as bow saws, mattocks, chainsaws and brush cutters – to tractor-mounted flails.
- Do not burn any cut material on site.

Edge management by mowing or flailing:

- Occasional mowing or flailing will maintain rides, glades and scrub edges.
- Annual mowing will keep the grassy scrub edges open and encourage flowering herbs.
- Avoid destroying seeding herbs by mowing once in late summer/autumn.

Stump removal:

- Stumps are important for wildlife, so should be retained where possible.
- Stump removal prevents the regeneration of most shrub species and as a general rule, should be avoided, however, removal may be necessary during ride or glade creation to allow access for mowing.

4.12 Hibernacula (2 no.)

Specification:

- The hibernacula should be constructed from materials such as wood, trees, rubble or mulch from site clearnace. These should be mixed up in a natural way, creating nooks and crannies and avoiding being too tidy.

- Turf or vegetation should be put on top of the mound to create tussocks of vegetation, rather than a grassy mound. Planting or relocating suitable scrub on the north side of the hibernacula will provide extra cover and shade.

- Any areas compacted during the work should be loosened

General maintenance:

- Areas around the hibernacula should be strimmed rather than using grass cutting machinery to avoid compacting vegetation and crushing animals

5 Programme of Implementation, Maintenance, Management & Responsibilities

5.1 Implementation Timetable

The planting of trees and shrubs should ideally be implemented during the dormant season, ie October to March with grass and wildflower sowing from late summer to mid-autumn being the optimum period. The soil is warm and damp from rain which is perfect for seeds to germinate.

5.2 If the completion date does not allow implementation during these periods, there is a risk to the establishment of the landscaping due to lack of moisture and therefore the contractor must make special arrangements to ensure all new tree and shrub planting is well watered to ensure they receive sufficient water to prevent dying out.

5.3 Seeding may alternatively take place in mid-spring, however watering is essential to prevent the ground from drying out and a strict watering regime must therefore be in place if seeding is scheduled from April onwards.

5.4 Monitoring

To protect the investment in the quality of soft and hard landscape works, the long term maintenance contractor must provide a high standard of maintenance in public open spaces. The long term success of the scheme is dependent on its maintenance regime. The management plan and maintenance operations included herewith will be reviewed on letting of the long term maintenance contract following the end of the initial contract works defects period and from then on a four yearly basis thereafter.

5.5 Schedule of Maintenance

The following is an indicative annual schedule of maintenance visits applicable for the first 5 years of establishment. This provides a reasonable frequency of the more common operations, and a good indication of the required level of intensity of management required but is not intended to be fully comprehensive or restrictive. The landscape contractor is required to construct a schedule of operations specifying operations and frequency using their own experience and horticultural knowledge. The ongoing programme of maintenance work will also include proposed frequency of visits and operations detailed in the specification, i.e. pruning. It shall also include scheduled dates for:

- Infrequent operations such as re-spacing of plants, pruning, topping up of mulch, replacement of plants/restocking of beds etc
- Planting review and refurbishment
- Monitoring and review; the effectiveness of the management operations is to be closely and continually monitored and reviewed annually against the LEMP, with any resulting changes incorporated into the subsequent years' programme.

5.6 **Maintenance Responsibilities**

The maintenance and management of the public open spaces will be the responsibility of the managing agent/landlord.

5.7 Management plans and maintenance for the remainder of the site are also included, although those areas will be the responsibility of the occupiers of the private residential dwellings.

Maintenance of the landscaping is required to run for a minimum of 5 years including the initial 12 months defects liability period which should be built into the implementation contract to cover post-installation maintenance requirements for the whole of the landscape works. During the initial 12-month post completion period the Contractor is responsible for all horticultural maintenance operations, including the replacing of planting which has failed to flourish.

5.8 At the end of the initial one-year aftercare period any defects in soft landscape materials due to materials or workmanship will be rectified by the Contractor and future maintenance responsibility will be handed over to the occupiers grounds maintenance team for a further 4 years thereafter. Any trees or plants which, within the period of five years from first use of the site, die, are removed or become seriously damaged or diseased, shall be replaced in the next planting season with others, of similar size and species.

5.9 All future maintenance beyond the 5th year post completion will remain the responsibility of the site occupier including grass cutting, hedge pruning, weeding, fence repairs etc. During this period the new hedgerows will have become established and it will be necessary to remove the rabbit guards from the plants. The new tree planting will also be established and removal of any supporting stakes and rubber ties will be the responsibility of the site's grounds maintenance team.

5.10 Schedule of Annual Maintenance Operations

The following schedules list the timings for key annual operations for the soft landscape areas as shown on the proposed landscaping plan:

Schedule 1: General Maintenance

Month	Litter pick	Remove fall leaves
January	1 visit	
February	1 visit	
March	1 visit	
April	1 visit	
May	1 visit	
June	1 visit	
July	1 visit	
August	1 visit	
September	1 visit	
October	1 visit	1 visit
November	1 visit	
December	1 visit	1 visit

Schedule 2: Specimen Trees & Hedgerows – Establishment Phase (first 3 years)

Month	Tree inspection	Replace dead	Weed control	Watering	Hedge cutting
January					
February					1 visit
March					
April			2 visits	2 visits	
May				4 visits	
June				4 visits	
July	1 visit		2 visits	4 visits	
August				4 visits	
September				4 visits	
October			2 visits	2 visits	
November					
December		1 visit			

Schedule 3: Specimen Trees & Hedgerow – Continuing Maintenance after 3 years

Month	Tree inspection	Replace dead	Weed control	Watering	Hedge cutting
January					
February					1 visit
March					
April			1 visit	2 visits	
May				2 visits	
June				2 visits	
July	1 visit		1 visit	2 visits	
August				2 visits	
September				2 visits	
October			1 visit	2 visits	
November					
December		1 visit			

Schedule 4: Shrubs - Establishment Phase (first 3 years)

Month	Inspection for dead plants	Replace dead	Weed control	Watering	Deadhead flowering plants
January					
February					
March			1 visit		
April			1 visit	2 visits	1 visit
May			2 visits	4 visits	1 visit
June			2 visits	4 visits	1 visit
July			2 visits	4 visits	1 visit
August			2 visits	4 visits	1 visit
September	1 visit		1 visit	4 visits	1 visit
October		1 visit	1 visit	2 visits	
November					
December					

Schedule 5: Shrubs - Continuing Maintenance after 3 years

Month	Inspection for dead plants	Replace dead	Weed control	Watering	Deadhead flowering plants
January					
February					
March			1 visit		
April			1 visit	2 visits	1 visit
May			1 visit	2 visits	1 visit
June			1 visit	2 visits	1 visit
July			1 visit	2 visits	1 visit
August			1 visit	2 visits	1 visit
September	1 visit		1 visit	2 visits	1 visit
October		1 visit	1 visit	2 visits	
November					
December					

Schedule 6: Scrubland

Month	Cutting	Mowing	Re-planting
January	1 visit		
February			
March			
April			
May			
June			
July			
August			
September		1 visit	
October			1 visit
November			
December			

Schedule 7: Wildflower Meadow

Month	Invasive weed inspection	Mowing 10cm	Trim edges	Thatch removal
January				
February				
March		1 visit	1 visit	
April		1 visit	1 visit	
May	1 visit	1 visit	1 visit	
June		1 visit	1 visit	
July			1 visit	
August			1 visit	
September		1 visit		1 visit
October				
November				
December				

6 British Standards

6.1 As well as the standards described above the soft landscape works should meet the following British Standards where appropriate:

Topsoil handling, stripping and storage:

- BS EN ISO 15799:2022 Soil quality - guidance on ecotoxicological characterization of soils and soil materials
- BS 3882:2015 Specification for topsoil
- BS 4428:1989 guide of practice for general landscape operations (excluding hard surfaces) AMD 6784

Quality of Trees and Shrubs:

- BS 3936-1:1992 Nursery stock specification for trees and shrubs
- BS 3936-10:1990 nursery stock specification for ground cover plants
- BS 3998:2010 recommendations for tree work and AMD 6549

Horticulture:

- BS EN 12579:2013 Soil improvers and growing media - sampling
- BS EN 13037:2011 Soil improvers and growing media - determination of pH

7 Details of Hibernacula

Hibernacula

A good hibernacula will be a mixture of rubble, wood and soil, and located in a suitable location close to some shrubs on a vegetated headland of a site. This will provide a winter and summer refuge, cover to disappear into if disturbed, and the option to move into the sun or shade at any part of the day (rather than the hibernacula being completely in the open or the shade).

Do not trample down the vegetation where the hibernacula is going to be constructed. Instead, remove the turfs and some soil and put to one side and place it back on top once the hibernacula had been completed. These do not have to fit prefectly, like laying a garden lawn, but in a casual way, creating an uneven turf with a few gaps.

Bare hiberncula that are seeded or left to vegetate naturally can take a long time to mature, especially in a location close to a well used footpath that may be trampled and even trashed. If potential disturbance is a concern, placing thorny brash on the hibernacula can deter this. The idea is to create a good hibernacula with a lot of 'tussocky' vegetation, rather than a hibernacula that looks like a fly-tip, or an ornamental-looking grassy mound.

In creating ’five-star’ hibernacula there are a number of factors to consider.

- Materials: Wood, tree roots, rubble, compost, mulch etc, can all be used.
- Design: Mix up these material in a natural way, avoid being too tidy. Have nooks and crannies and places where material will come through any cover.
- Cover: Put turfs of suitable vegetation on top (ideally from the location since it will contain invertebrates) - a natural grass and bramble mix, a ’wilderness turf’ being ideal.
- Planting or relocating suitable scrub on the north side of the hibernacula also provides extra cover and, crucially, shade.
- Location: The best sites get both sun and shade, often in ’marginal’ habitats between open locations and more overgrown areas.
- If you do remove soil and turfs from the location that is going to be placed back on top, store it on tarpaulin to minimise the impact on surrounding vegetation.
- Loosen up any surrounding areas that were compacted during the work Have the right long term management plan.