

Land West of Hook Norton Road, Sibford Ferris,  
Oxfordshire

## **Landscape and Ecological Management Plan (LEMP)**

(to address the requirements of Condition 9 of  
planning consent ref: 18/1894/OUT)

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Quality Management	
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# 1 Introduction

## 1.1 Background and Proposals

1.1.1 Aspect Ecology has been commissioned by Gade Homes Ltd to produce a Landscape and Ecological Management Plan (LEMP) in respect of development of Land West of Hook Norton Road, Sibford Ferris, Oxfordshire (centred at grid reference SP 3544 3706), hereafter referred to as the 'site'.

1.1.2 Outline planning permission with all matters reserved (ref: 18/1894/OUT) was granted upon appeal (ref: APP/C3105/W/19/3229631) in December 2019 for development of the site, to provide up to 25 residential dwellings with associated open space, parking and sustainable drainage.

1.1.3 The planning consent is subject to a number of conditions, of which Condition 9 is relevant to ecology and states that:

*'Prior to the commencement of the development hereby approved, a landscape and ecology management plan (LEMP) showing how all habitats will be created managed and funded and to include details of a bat and birdbox scheme shall be submitted to and approved in writing by the local planning authority. Thereafter, the development shall not be carried out other than in strict accordance with the approved LEMP.'*

1.1.4 It is understood that Gade Homes Ltd. is seeking to commence development at the site and accordingly, Aspect Ecology has been commissioned to prepare a Landscape and Ecological Management Plan (LEMP) to address Condition 9.

## 1.2 Purpose of the Report

1.2.1 This report sets out the details of a Landscape and Ecological Management Plan in order to address the requirements of Condition 9 of the planning consent for the site.

1.2.2 The management plan sets out measures to ensure the successful establishment of new habitats, in addition to ongoing management schedules for use by an appointed management contractor to maximise the biodiversity value of open spaces.

1.2.3 The management plan has been produced in accordance with the British Standard for Biodiversity<sup>1</sup> as set out below:

*"In order to provide clarity and certainty over what is being provided, and to enable adequate resources to be identified and allocated, plans for the long-term management of habitats, species and other biodiversity features should include the following.*

- a) *Description and evaluation of features to be managed.*
- b) *Ecological trends and constraints on site that could influence management.*
- c) *Aims and objectives of management.*
- d) *Appropriate management options for achieving aims and objectives.*
- e) *Prescriptions for management actions.*

<sup>1</sup> BS 42020:2013 Biodiversity: Code of Practice for Planning and Development



- f) Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five year period).*
- g) Body or organization personnel responsible for implementation of the plan.*
- h) Monitoring and remedial measures*
- i) Funding resources and mechanisms to ensure sustainable long-term delivery of the proposed management.*

*... The level of detail required for any given site should be that which is necessary to ensure the effective management of the biodiversity features present."*

- 1.2.4 As such, this LEMP follows the above outline, in addition to specific relevant items listed within the condition wording to fully address the requirements of Condition 9 of the planning consent.

## 2 Description and Evaluation of Features to be Managed

### 2.1 Extent of Management Areas

2.1.1 This Landscape and Ecological Management Plan applies to areas of open space, outside of private curtilages (e.g. gardens, driveways and associated ornamental areas), subject to managed works carried out by the appointed management company within the development.

### 2.2 Existing Habitat Features

2.2.1 During the ecological surveys undertaken at the site to date, the site has been recorded to be dominated by arable land, with areas of rough grassland, located along the northern, eastern and western boundaries. The site is bound by hedgerows to the north, east and west whilst no boundary features are present at the south.

2.2.2 The majority of habitats within the site are to be removed under the approved development with the exception of the majority of the boundary hedgerows, which are to be retained and will be subject to ongoing management.

### 2.3 New Habitat Features

2.3.1 In addition to the above, the consented development will provide a variety of new habitats, as set out within the submitted planting proposals plan. Habitats to be created that will also be subject to ongoing management activities are identified below:

- Native trees and shrubs;
- Native Hedgerows;
- Wildflower Grassland;
- Flowering Lawn;
- Orchard;
- Attenuation Feature (with associated marginal and bankside vegetation); and
- Ornamental Planting.

### 2.4 New Faunal Features

2.4.1 In addition to the habitats detailed above, a number of faunal specific features will be provided within the development comprising bat boxes, bird boxes, log piles and garden fence cut-outs. These features are described below and will be subject to ongoing management where appropriate.

#### Bats

2.4.2 **Bat Boxes.** A total of three integrated bat roost boxes (comprising Ibstock Enclosed Bat Box 'C' or similar) are to be incorporated within the development (see Plan 6126/LEMP1 for locations and Appendix 6126/1 for specifications). The provision of such features will provide new roosting opportunities for bats in the area. When siting the bat boxes, it is important to ensure they are situated away from lighting in order to maximise any potential for use, with dark corridors maintained between roosting opportunities and retained

foraging / commuting habitats and links with offsite areas. Care should be taken when siting the integrated bat boxes to ensure they are not be situated above windows or doors.

- 2.4.3 Additionally, a single Schwegler 2FN bat box (or similar) will be incorporated within the development. So as to maximise its potential use, the bat box will be situated on a suitable retained tree, erected between 3-5m above ground level and sited in a sheltered, wind-free area that is exposed to the sun for part of the day, facing a south-easterly or south-westerly direction (see Plan 6126/LEMP1 for the location and Appendix 6126/1 for specifications).

### Birds

- 2.4.4 **Bird Boxes.** A total of, 26 integrated bird boxes (comprising 10 pairs of Vivara Pro Cambridge Brick Face Swift nest boxes, two pairs of PRO UK Rendered Build-In Swift boxes, and one pair of Manthorpe Swift boxes) will be incorporated within the development (see Plan 6126/LEMP1 for locations and Appendix 6126/2 for specifications). These will serve to increase nesting opportunities for birds at the site and will be sited within the external fabric of the buildings, as high up as possible, facing a north, north-easterly or north-westerly direction. Care should be taken when siting the integrated bird boxes to ensure they are not situated above windows or doors.
- 2.4.5 Additionally, a single Schwegler 1B nest box (or similar) will be incorporated within the development (see Plan 6126/LEMP1 for the location and Appendix 6126/2 for specifications). This will be sited on a suitable retained tree as high up as possible, facing a north, north-easterly or north-westerly direction.

### Hedgehogs

- 2.4.6 **Garden Fence Cut-outs.** Small cut-outs points (measuring approximately 15cm x 15cm) will be provided across the site within the base of adjoining garden fences in order to maintain the permeability of the site for the UK Priority Species Hedgehog and other small mammals in the long-term (see Plan 6126/LEMP1 for locations and Appendix 6126/3 for specifications). Commercially available gravel boards with readymade cut outs for Hedgehogs can be sourced from a number of suppliers<sup>2</sup> or alternatively these can simply be provided by cutting a section of fencing. To encourage their retention in the long-term, small signs will be placed above the cut-outs to identify their benefit to Hedgehog and can be sourced from a number of suppliers<sup>3</sup>. The provision of access points will also ensure permeability is maintained for other small mammals, reptiles and amphibians.

### Reptiles and Amphibians

- 2.4.7 **Log Piles.** A total of nine log piles will be created within the development in order to provide hibernation and shelter habitat for reptiles and amphibians (as shown on Plan 6126/LEMP1, see Appendix 6126/4 for specifications).

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<sup>2</sup> An example: <https://www.jacksons-fencing.co.uk/News/outdoor-living/new-hedgehog-friendly-gravel-boards-winter-news-topical-treats-and-more-6511.aspx>

<sup>3</sup> An example: <https://shop.ptes.org/product/wildlife-friendly-gardens/hedgehog-highway-signs-pack-of-two/>

## 3 Ecological Trends and Constraints On-site that may Influence Management

### 3.1 Habitat Trends and Constraints

3.1.1 The site is currently dominated by arable land, with areas of rough grassland and a number of boundary hedgerows. The habitats and species present are not considered to represent any significant ecological constraint and are not likely to be subject to any ecological trend that will materially influence the habitat management in perpetuity of the scheme.

### 3.2 Faunal Trends and Constraints

3.2.1 **Nesting Birds.** Given that all wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed, this species group will need to be given consideration when carrying out management activities within the nesting bird season. The proposals present an opportunity to provide additional nest sites for cavity-nesting birds in particular, such as through the provision of bird nest boxes in perpetuity of the scheme.

## 4 Aims and Objectives of Management

- 4.1 The consented development provides opportunities to enhance retained habitats, and create new habitats.
- 4.2 The LEMP aims to prescribe effective habitat management at the site for the benefit of biodiversity and landscape amenity. These benefits will primarily be achieved through the planting of new native trees and shrubs, native hedgerows, wildflower grassland, flowering lawn, an orchard, the creation of an attenuation feature with associated marginal and bankside vegetation, ornamental planting in addition to long-term management of these newly created habitats. Where possible, the existing hedgerows have been incorporated into the layout and will also be subject to positive ecological management.
- 4.3 To achieve these aims, the key overarching objectives of the plan are as follows:
- Retain and enhance the existing features of greatest ecological and landscape value within the site;
  - Introduce and establish new habitats to benefit biodiversity and landscape amenity;
  - Contribute to local and national objectives, i.e. create and improve the condition of Priority Habitats and provide opportunities for local Priority Species; and
  - Introduce long-term management to achieve ongoing biodiversity and landscape benefits under the completed development.

## 5 Management Options for Achieving Aims and Objectives

5.1 In practice, the management options are dictated by the end goals and objectives for each individual feature. The following sections set out the management options considered.

### 5.2 Formal Landscape Planting Areas

5.2.1 With respect to the areas of proposed ornamental planting, proposed flowering lawn and proposed amenity areas associated with the new residential dwellings, management will be of a regular, formal nature designed to ensure a tidy and kempt appearance in keeping with their function as amenity areas, whilst also ensuring that new planting thrives and develops into quality specimens.

### 5.3 Informal / Ecological Areas

5.3.1 With regard to areas that are to be retained or created to achieve biodiversity benefits, these include habitat features such as the retained hedgerows, proposed native trees and shrubs, proposed native hedgerows, proposed wildflower grassland, proposed orchard, proposed attenuation feature (with associated marginal and bankside vegetation) and a variety of proposed faunal features, including bat boxes, bird boxes, fence cut-outs and log piles.

5.3.2 Formal management of the retained and proposed habitat features would not be appropriate, as this would not allow the biodiversity benefits arising from these features to be maximised. Similarly, a 'do nothing' approach to management would not be appropriate for the habitat features because over time the value of the features would diminish. As such, a proactive, low intensity, ecologically-sympathetic approach is the most appropriate option for managing the retained and proposed habitat features.

5.3.3 With respect to the new wildflower grassland, a low maintenance, rotational cutting regime approach is the most suitable management option to meet the objective of developing a tussocky sward that will provide shelter for wildlife, as described in the next chapter. A more intensive cutting regime would not achieve this objective and grazing is not an option. With respect to the proposed faunal features, these will require minimal management, as set out in the next chapter.

## 6 Prescriptions for Management Actions

6.1 Prescriptions for the management actions are set out below, with management activity sheets for use by the appointed contractor provided at Appendix 6126/5, along with a timetable detailing optimal months for management at Appendix 6126/6.

6.2 Details regarding the target habitat type and condition are set out to ensure these can be assessed in line with the Department for Environment Food and Rural Affairs (DEFRA) Habitat Condition Assessment Sheets that accompany the Biodiversity Metric during long-term ecological monitoring (see Chapter 8).

6.3 With regard to the parcel illustrated as 'ecological area' on Plan 6126/LEMP1, public access within this parcel of land is to be restricted, albeit the management of the habitats that fall within this area will be undertaken in line with the actions set out below for the relevant habitat type.

### 6.4 Retained Hedgerows

6.4.1 **Ongoing management.** Management of retained boundary hedgerows will be undertaken either by Cherwell District Council or a management company in accordance with ecological principles. Minimal clipping will be undertaken with the aim that the hedgerows retain their current stature and continue to provide a potential corridor for wildlife movement, whilst allowing the structure of hedgerows to improve and preventing encroachment into adjacent habitats.

6.4.2 Hedgerow management will depend on the existing condition of the hedgerow. For hedgerows which have recently been managed, these will be trimmed to a height of 2m on a 2-3 year rotation, leaving approximately a third of the hedgerow un-trimmed during individual cuts to maintain opportunities for wildlife at all times. Only recent growth will be trimmed, with ideally a short section of the previous year's growth left to avoid damaging the same wood each year.

6.4.3 For hedgerows which have not been subject to any recent management and are tall and overgrown, these will be maintained at their existing height, with trimming focused on maintaining the width to prevent the hedgerow encroaching into the adjacent habitats / building footprint.

6.4.4 Retained trees within hedgerows will be subject to management on an 'as needed' basis and will aim to maintain their existing height. This may include thinning out or pruning of species to enhance habitat structure or reduce shading, or coppicing on rotation.

6.4.5 Arisings from any management works will be used to re-stock log piles, with excess material disposed of as appropriate through chipping or removal from the site.

6.4.6 **Nesting Birds.** The occupied nests of breeding birds are protected under the *Wildlife and Countryside Act 1981* (as amended). All wild birds receive protection under Section 1 of the *Wildlife & Countryside Act 1981* (as amended) such that, with certain exceptions, it is an offence to intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird whilst in use or being built;
- Take or destroy an egg of any wild bird.

6.4.7 Accordingly, to avoid a potential offence under the relevant legislation, no heavy pruning, felling of trees within the hedgerows or clearance should be undertaken during the bird-nesting season (1st March to 31st August inclusive). If this is not practicable, any potential nesting habitat to be removed should first be checked by a competent ecologist in order to determine the location of any active nests. Any active nests identified would then need to be cordoned off (minimum 5m buffer) and protected until the end of the nesting season or until the birds have fledged. These checking surveys would need to be carried out no more than three days in advance of the management works.

6.4.8 **Target Habitat and Condition.** Following the implementation of ongoing management, the retained hedgerows are targeted to achieve a 'moderate' condition when assessed against the DEFRA condition assessment criteria for 'native hedgerow'.

## 6.5 Native Trees and Shrubs

6.5.1 **Creation / Initial Management.** New native tree and shrub planting will be subject to weed control to promote its growth, though the application of mulch in early summer (April), the use of mulch mats around the base, or use of herbicides in a 1m diameter around the base.

6.5.2 Tree guards or shelters will be used to protect new trees from potential grazing damage (e.g. Rabbits) and weed control and watering will be undertaken during the initial management phase to ensure rapid establishment.

6.5.3 New planting growth will be monitored every six months during the first year following planting and annually thereafter, with weed control, watering, replacement of tree guards and replanting of failed specimens undertaken as required.

6.5.4 **Ongoing Management.** New native tree and shrub planting will generally only be subject to management on an 'as needed' basis, informed by checks which will be undertaken every 3 years by a suitably experienced ecologist, arboriculturalist or landscape contractor. This may include thinning out or pruning of tree / shrub species to enhance habitat structure or reduce shading, coppicing on rotation and removal of non-native species. Newly planted areas in particular will not be subject to any substantial works in the short-term to allow establishment. Once established, tree shelters will be removed and stakes provided if required. Ongoing management will ensure the planting does not encroach into adjacent habitats. Following the update surveys the management plan will be updated if required.

6.5.5 A proportion of arisings from management works will be used to restock log piles, with excess material disposed of as appropriate through chipping or removal from the site. As set out above, no substantial works to woody vegetation (other than trimming of minor growth) will take place between 1st March to 31st August inclusive, in order to safeguard nesting birds.

6.5.6 **Target Habitat and Condition.** Following the implementation of the creation, initial and ongoing management, the native trees and shrubs are targeted to achieve a 'moderate' condition when assessed against the DEFRA condition assessment criteria for 'urban trees' and 'heathland and scrub - mixed scrub'.

## 6.6 Native Hedgerows

6.6.1 **Creation / Initial Management.** New native hedgerows will be planted in a double staggered row, with approximately 40cm in between each line of planting at a minimum density of three plants per linear metre. Tree guards or shelters will be used to prevent



potential grazing damage (e.g. Rabbits) and watering will be undertaken during the initial management phase to ensure rapid establishment.

- 6.6.2 New planting growth will be monitored every six months during the first year following planting and annually thereafter, with weed control, watering, replacement of tree guards and replanting of failed specimens undertaken as required.
- 6.6.3 **Ongoing management.** Native hedgerows will be regularly trimmed on a rotational basis every two or three years, leaving approximately a third of the hedgerow un-trimmed during individual cuts to maintain opportunities for wildlife at all times and allow the hedgerow to incrementally increase in height. Only recent growth will be trimmed, with ideally a short section of the previous year's growth left to avoid damaging the same wood each year. Any gaps will be re-planted with native species. The hedgerows will not be cut to a height of less than 2m. This should provide dense, well-structured and diverse hedgerows.
- 6.6.4 Once established, tree guards or shelters will be removed and stakes provided if required. As set out above, no substantial works to woody vegetation (other than trimming of minor growth) will take place between 1st March to 31st August inclusive, in order to safeguard nesting birds.
- 6.6.5 **Target Habitat and Condition.** Following the implementation of the creation, initial and ongoing management, the native hedgerows are targeted to achieve a 'moderate' condition when assessed against the DEFRA condition assessment criteria for 'native hedgerow'.

## 6.7 Wildflower Grassland

- 6.7.1 **Creation / Initial Management.** New areas of wildflower grassland will be created within the development upon completion of groundworks, in order for this planting to establish over the 2022-23 planting season. These will be seeded with Emorsgate EM4 'Meadow Mixture for Clay Soils' to ensure a diverse sward is provided to benefit a wide range of faunal species.
- 6.7.2 Prior to seeding, these areas will be treated with a non-selective, non-persistent herbicide (such as Glyphosate) if required to reduce any colonising plants or scrub regrowth. Any surface vegetation will then be dug in using a rotavator, followed by harrowing or raking to produce a medium tilth, and rolling or treading to produce a firm surface.
- 6.7.3 These areas will then be seeded with Emorsgate EM4. The seed will be surface sown and can be applied by machine or broadcast by hand at the rate specified by the supplier. The seed will be firmed in following sowing with a roller or by treading to give good soil / seed contact. Sowing will not be carried out during periods when the ground is dry, waterlogged or frozen and is ideally undertaken in autumn or spring.
- 6.7.4 Depending on weather conditions, regular watering of the wildflower grassland will be undertaken for the first two weeks. Following this, watering will be undertaken during any prolonged dry spells.
- 6.7.5 **Ongoing management.** Once established, the wildflower grassland to be provided requires minimal maintenance. Nevertheless, rotational cutting will be undertaken comprising dividing the wildflower grassland into three areas and cutting the first area in the first year, the second in the second year and the third in the third year. This will then be repeated for subsequent years to create a structurally diverse sward. Cutting will also serve to prevent encroaching scrub from dominating the grassland, albeit small areas of scrub can be left undisturbed to provide additional opportunities for wildlife.

- 6.7.6 To demarcate routes across the accessible areas of wildflower grassland, paths will be maintained through regular mowing along these routes to a height of 25-40mm to maintain a short sward as illustrated on Plan 6126/LEMP1.
- 6.7.7 Arisings from cutting of grassland areas will be removed from the sward (subject to cuts being taken after seed-set has finished and seeds likely to have dropped) to prevent the build-up of nutrients and smothering of new growth, thereby helping to promote a species-rich sward. Piles of grass cuttings can be created at the site margins to form additional wildlife opportunities, albeit these should be limited in number to ensure they do not suppress large areas of grassland habitat.
- 6.7.8 The diversity of the sward will be monitored, and overseeding will be undertaken with an appropriate seed mix, as required.
- 6.7.9 No fertilisers or herbicides shall be applied to the wildflower area, except to specifically spot treat unwanted ruderal or pernicious weed species within the sward.
- 6.7.10 **Target Habitat and Condition.** Following the implementation of the creation, initial and ongoing management, the wildflower grassland is targeted to achieve a 'moderate' condition when assessed against the DEFRA condition assessment criteria for 'grassland – other neutral grassland'.

## 6.8 Flowering Lawn

- 6.8.1 **Creation / Initial Management.** New areas of flowering lawn will be created within the development upon completion of construction works. These will be seeded with Emorsgate EL1 'Flowering Lawn Mixture' to ensure a diverse sward is provided to benefit a wide range of faunal species, whilst ensuring a short sward height is maintained to encourage local residents to make use of the space as an amenity area.
- 6.8.2 Prior to seeding, these areas will be treated with a non-selective, non-persistent herbicide (such as Glyphosate) if required to reduce any colonising plants or scrub regrowth. Any surface vegetation will then be dug in using a rotavator, followed by harrowing or raking to produce a medium tilth, and rolling or treading to produce a firm surface.
- 6.8.3 These areas will then be seeded with Emorsgate EL1. The seed will be surface sown and can be applied by machine or broadcast by hand at the rate specified by the supplier. The seed will be firmed in following sowing with a roller or by treading to give good soil / seed contact. Sowing will not be carried out during periods when the ground is dry, waterlogged or frozen and is ideally undertaken in the autumn or spring.
- 6.8.4 Depending on weather conditions, regular watering of the wildflower grassland will be undertaken for the first two weeks. Following this, watering will be undertaken during any prolonged dry spells.
- 6.8.5 **First Year Management.** The initial weed growth in the first spring following seeding is likely to be high. As such, it will be necessary to undertake regular mowing / cutting in the first year, between spring and autumn, to control weeds. This would involve cutting the sward regularly or as required to maintain a sward height of 40-60mm for the first growing season. Arisings from the cutting will be removed from the grassland immediately to keep nutrient levels low and avoid smothering new growth. Regular pulling or spot treatment with herbicide may also be necessary.

- 6.8.6 **Ongoing management.** Once established, the flowering lawn will be subject to regular mowing to a height of 25-40mm to maintain a short sward and encourage local residents to make use of the space as an amenity area. To permit flowering, mowing can be relaxed from late June. Mowing may be suspended earlier in the year to allow species such as Cowslip *Primula veris* to flower. Heavy quantities of cuttings should be collected and removed from site.
- 6.8.7 **Target Habitat and Condition.** Following the implementation of the creation, initial and ongoing management, the flowering lawn is targeted to achieve a 'poor' condition when assessed against the DEFRA condition assessment criteria for 'grassland – modified grassland' due to being managed primarily for its amenity value.

## 6.9 Orchard

- 6.9.1 Areas of wildflower grassland created below the orchard will be subject to initial and ongoing management in line with Section 6.6, whilst initial and ongoing management of the fruit tree planting within the orchard are detailed below.

### 6.9.2 Creation / Initial Management

#### *New tree planting*

- 6.9.3 New fruit tree planting, will be subject to weed control to promote their growth, through the application of mulch in early summer (April), the use of mulch mats around the base, or use of herbicides in a 1m diameter around the base.
- 6.9.4 Tree guards or shelters will be used to protect new tree planting from potential grazing damage (e.g. Rabbits) and weed control and watering will be undertaken during the initial management phase to ensure rapid establishment.
- 6.9.5 New planting will be monitored every six months during the first year following planting and annually thereafter, with weed control, watering, replacement of tree guards and replanting of failed specimens undertaken as required.

#### *Formative pruning*

- 6.9.6 Newly planted fruit trees will be subject to formative pruning as part of the initial management in order to help develop a balanced shape going forward.
- 6.9.7 Formative pruning works involves cutting back young growth with the aim of encouraging the tree to grow in the desired direction, helps develop thick branches with a strong, evenly spaced and open basic branch structure and ensures a healthy tree develops that will crop well in the future.
- 6.9.8 When carrying out formative pruning, consideration will be given to the height of the lowest branches to ensure they are formed high enough to allow access for machinery (i.e. to cut grass) going forward. Formative pruning broadly comprises three stages comprising forming the trunk, forming the first framework branches and forming the subsequent framework branches, with the whole process taking 8 to 10 years.
- 6.9.9 **Ongoing Management.** Tree guards will be removed as required when trees are established. Ongoing management will comprise maintenance pruning to achieve a balance between fruiting wood and vegetative growth. The aim of such pruning will be to:

- Prevent branch rubbing;
- Restrict tree size and maintain a balanced shape;
- Help form a strong framework of branches;
- Allow air and light into the tree;
- Induce flower and fruit bud formation; and
- Stimulate shoot growth to produce young healthy wood.

6.9.10 Pruning will vary both in degree and method, depending on the age and variety of the tree. Pruning should take account of the individual trees characteristics, forms and growth patterns in previous years. Of the three main types of annual maintenance pruning available, 'regulated pruning' is considered to be the most appropriate to the site and is the most common management approach within traditional orchards.

6.9.11 Regulated pruning is a relatively quick, does not require a high level of skill or knowledge of orchard management and maximises wildlife benefit. The tree is considered as a whole with entire sections of branches or limbs removed (with coronet cuts used where appropriate) but no detailed pruning undertaken. As a general rule, up to 20% of wood should be removed each year to maintain a balanced tree with branches selected for removal if they are:

- Diseased and damaged;
- Weak and unproductive;
- Crossing;
- Congested; or
- Growing back to the centre of the tree.

6.9.12 The fruit trees will be pruned in late winter when the tree is dormant. This reduces the risk of fungal infection, does less damage to the tree and enables new growth to follow shortly after. Pruning should however be avoided during periods of heavy frost or unseasonably warm periods.

6.9.13 Deadwood arising from pruning should be kept on site to provide faunal habitats, particularly for deadwood invertebrates.

6.9.14 Non-fruit trees will be subject to minimal intervention, with pruning only undertaken where required for health and safety, or to prolong the life of the tree.

6.9.15 **Target Habitat and Condition.** Following the implementation of the creation, initial and ongoing management, the orchard is targeted to achieve a 'moderate' condition when assessed against the DEFRA condition assessment criteria for 'orchard'.

## 6.10 Attenuation Feature with Associated Marginal and Bankside Vegetation

6.10.1 **Creation / Initial Management.** The attenuation feature will primarily be managed for drainage, however management works will also seek to provide opportunities for wildlife. These areas will be planted with a range of marginal and bankside vegetation, comprising a high proportion of native species, as shown on the submitted planting proposals plan. The surface water feature will be seeded with Emorsgate EM8 'Meadow Mixture for Wetlands',

which contains wildflowers and grasses suitable for sowing within attenuation features which are seasonally wet.

6.10.2 During the early years following creation, whilst the vegetation is establishing, the possibility of colonisation by invasive / alien plant species is high. As such, a watching brief will be maintained for the presence of invasive exotic species such as:

- New Zealand Pigmyweed;
- Parrot's-feather;
- Floating Pennywort;
- Water Primrose; and
- Water Fern.

6.10.3 If found to be present, early intervention / removal of such species will help to control their spread, which if left unmanaged may outcompete native flora. Native species such as Reedmace *Typha latifolia* or Common Reed *Phragmites australis*, which can rapidly dominate areas of shallow water, will also be monitored during this initial establishment phase.

6.10.4 To ensure the scrub species present within the bankside vegetation do not encroach the attenuation basin or impact the required functional properties for flood drainage, any scrub colonisation or encroachment will be closely monitored and controlled where necessary, particularly during the initial establishment.

6.10.5 **Ongoing management.** Ongoing management of the attenuation feature will be required in order to maximise their long-term ecological value. As such, management will be undertaken in line with the following measures:

- Cutting of vegetation will be undertaken as required on a rotational basis with no more than 50% of the marginal vegetation being cut in a single year, to retain some habitat and cover for wildlife;
- Scrub and tall emergent vegetation colonisation will be monitored and controlled to prevent encroachment or dominance by any single species; and
- Control or removal of any invasive / alien plant species, if required.

6.10.6 Generally, all vegetation cutting will be undertaken during the autumn and winter months (September to February). All vegetation removed from wetland areas will be left on the bankside for at least 24 hours to enable trapped aquatic fauna to return to the wetland areas prior to removal from site.

6.10.7 The use of pesticides and fertilisers will be avoided wherever possible throughout the open space areas, but in particular within the vicinity of the attenuation feature and associated habitats.

6.10.8 **Target Habitat and Condition.** Following the implementation of the creation, initial and ongoing management, the attenuation feature is targeted to achieve a 'moderate' condition when assessed against the DEFRA condition assessment criteria for 'urban – sustainable urban drainage feature'.

## 6.11 Ornamental Planting

- 6.11.1 Ornamental planting located outside of individual plots will be managed in the long term by the management company, whilst management of those areas sold as part of plots will be the responsibility of the home owners.
- 6.11.2 **Creation / Initial Management.** Ornamental planting will be provided in the form of new trees, hedgerows and shrubs, which will add to the diversity of semi-natural habitats at the site. Ornamental planting be subject to weed control to promote its growth, though the application of mulch in early summer (April), the use of mulch mats around the base, or use of herbicides in a 1m diameter around the base.
- 6.11.3 Tree guards or shelters will be used to protect new tree, hedgerow and shrub planting from potential grazing damage (e.g. Rabbits) and weed control and watering will be undertaken during the initial management phase to ensure rapid establishment.
- 6.11.4 New planting growth will be monitored every six months during the first year following planting and annually thereafter, with weed control, watering, replacement of tree guards and replanting of failed specimens undertaken as required.
- 6.11.5 **Ongoing Management.** Ornamental planting will generally only be subject to management on an 'as needed' basis, informed by update surveys which will be undertaken every 3 years by a suitably experienced arboriculturalist or landscape contractor. This may include thinning out or pruning of tree / shrub / hedgerow species to enhance habitat structure or reduce shading, coppicing on rotation and removal of unwanted species. Newly planted areas in particular will not be subject to any substantial works in the short-term to allow them to establish. Once established, tree shelters will be removed and stakes provided if required. Ongoing management will ensure the planting does not encroach into adjacent habitats. Following the update surveys the management plan will be updated if required.
- 6.11.6 Internal ornamental hedgerows, including those bordering residential properties and areas of formal open space, will serve a primary function as amenity features. As such, these hedgerows will require regular cutting to around 1 to 1.5m in height to maintain this function, albeit ecologically sensitive management will be encouraged wherever possible.
- 6.11.7 As set out above, no substantial works to woody vegetation (other than trimming of minor growth) will take place between 1st March to 31st August inclusive, in order to safeguard nesting birds.
- 6.11.8 **Target Habitat and Condition.** As this habitat will be created for its amenity value, guidance detailed within the DEFRA condition assessment criteria states that undertaking a condition assessment is not appropriate.

## 6.12 Faunal Enhancements

### Bat and Bird Boxes

- 6.12.1 The bat and bird boxes proposed are rot proof, extremely long lasting and require no specific maintenance. Nonetheless, an annual inspection of bat and bird boxes that fall within areas of public open space will be undertaken to ensure boxes remain secured. These inspections can be conducted at any time of year, however any adjustments to the bat boxes (e.g. repositioning) should be undertaken in spring or autumn months when bats are less likely to be significantly disturbed and any adjustments to bird boxes (e.g. re-

positioning) should be undertaken in the winter months (i.e. outside 1st March to 31st August inclusive) when they are least likely to be in use. Any damaged boxes will be replaced.

#### Garden Fence Cut-outs

- 6.12.2 As the garden fence cut-outs fall within private gardens, no ongoing maintenance is required. Nevertheless, as detailed at Section 2.4.6 small signs will be placed above the cut-outs to encourage their retention in the long-term.

#### Log Piles

- 6.12.3 Log piles are long lasting in nature and their gradual decay is important to ensure they continue to provide benefits to a range of faunal species. As such, they should not require ongoing maintenance. Nonetheless, arisings from ongoing management within the site can be used to restock these.

### 6.13 General Maintenance

- 6.13.1 All landscape maintenance operations, where they do not conflict with ecology operations, will be in accordance with BS 4428:1989 'Code of practice for general landscape operations'. Ongoing landscape maintenance operations are to be in accordance with sound ecological principles, and where relevant to be in accordance with BS 7370-4:1993 'Grounds Maintenance Recommendations for maintenance of soft landscape'.

## **7 Responsibilities for Implementation of the Plan and Funding Mechanism**

- 7.1** Gade Homes Ltd will be responsible for the funding and implementation of any safeguarding and mitigation measures during construction and initial habitat creation and maintenance. Following completion, Gade Homes Ltd will hand over the management of the site to either Cherwell District Council or a management company, who will implement ongoing management prescriptions.
- 7.2** If ongoing management is passed over to a management company, then this will be financed through an annual service charge paid by the residents of the new development. The charge would be set by the directors of the management company and all dwellings would pay a relevant proportion of the annual costs.



## 8 Monitoring and Remedial Measures

- 8.1 Long-term monitoring of the newly established habitats will be undertaken following establishment, to evaluate progress and to ensure appropriate management is being implemented at the site. Regular / routine monitoring of these areas will be undertaken at least annually by the head gardener or appointed contractor, to ensure the habitats are developing as expected. The management company will carry out required remediation measures as appropriate.
- 8.2 In addition to the ongoing site monitoring by the contractor, ecological monitoring surveys will be undertaken at years 3, 5, 10 and 15 by a suitably qualified ecologist.
- 8.3 These surveys will comprise a botanical and condition assessment survey of the created habitats utilising the most up to date condition assessment criteria set out by the DEFRA Biodiversity Metric against the targeted habitat type and conditions specified in Chapter 6. Where necessary, these surveys will inform the need for any changes to the management regime, to ensure the successful development of the habitat creation areas.
- 8.4 In addition, a suitably qualified ecologist will be contacted for further advice where necessary, for example if works could potentially affect protected species.

## 9 Conclusions

- 9.1 This report sets out a landscape and ecological management plan to satisfy the requirements of Condition 9 of the granted planning consent (ref: 18/1894/OUT) for the site.
- 9.2 Management of the site presents an opportunity to enhance its ecological value, whilst safeguarding any existing ecological interest where possible, and providing landscape benefits.
- 9.3 Management prescriptions are set out for retained habitats, new native trees and shrubs, native hedgerows, wildflower grassland, flowering lawn, an orchard, an attenuation feature with associated marginal and bankside vegetation, and ornamental planting. Management activity sheets for use by the appointed management personnel are provided at Appendix 6126/5, whilst a timetable is provided at Appendix 6126/6.
- 9.4 The implementation of the measures set out within this report will maximise biodiversity and landscape benefits at the site in the long-term.

## **Plan 6126/LEMP1:**

Management Areas and Ecological Enhancements

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- Key:**
- Site Boundary
  - Native Trees and Shrubs
  - Wildflower Grassland
  - Wildflower Grassland - Mown Path
  - Flowering Lawn
  - Orchard
  - Attenuation Feature
  - Marginal and Bankside Vegetation
  - Ornamental Planting
  - Ecological Area
  - Retained Hedgerow
  - Native Hedgerow
  - Integrated bat box (Ibstock Enclosed Bat Box 'C' or similar)
  - Tree-mounted Bat Box (Schwegler 2FN or similar)
  - Pair of Manthorpe Swift Bricks (or similar)\*
  - Pair of PRO UK Rendered Build-In Swift Boxes (or similar)\*
  - Pair of Vivara Pro Cambridge Brick Face Swift Nest Boxes (or similar)\*
  - Tree-mounted Bird Nest Box (Schwegler 1B or similar)
  - Hedgehog Garden Fence Cut-outs
  - Log Piles

\*Pairs of Swift nesting boxes / bricks will be situated at the eaves, at a minimum height of 4m, and at least 1m apart from each other.



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Land West of Hook Norton Road, Sibford Ferris, Oxfordshire Management Areas and Ecological Enhancements	PROJECT TITLE DRAWING NO. REV DATE
6126/LEMP1	D/CG September 2022



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## **Appendix 6126/1:**

Bat Box Specifications

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# Bat Boxes

## Ibstock Bat Box

Designed with the Pipistrelle Bat in mind. Available in all brick types and various sizes. A discrete home for bats with several roosting zones created inside the box. Ideal for new build and conservation work. Maintenance free as the entrance is at the bottom.

*Dimensions 215 x 215 or 215 x 290mm.*



# Bat Boxes

Schwegler bat boxes are made from 'woodcrete' and have the highest rates of occupation of all types of box.

The 75% wood sawdust, clay and concrete mixture is ideal, being durable whilst allowing natural respiration and temperature stability. These boxes are rot and predator proof and extremely long lasting.

Boxes can be hung from a branch near the tree trunk or fixed using 'tree-friendly' aluminum nails.



## 2FN Bat Box

A large bat box featuring a wide access slit at the base as well as an access hole on the underside. Particularly successful in attracting Noctule and Bechstein's bats.

*Woodcrete construction, 16cm diameter, height 36cm.*

## 1FF Bat Box

The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or in sites such as bridges, though it may also be used on trees. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats.

*Woodcrete (75% wood sawdust, concrete and clay mixture)*

*Width: 27cm*

*Height: 43cm*

*Weight: 7.3kg*



## **Appendix 6126/2:**

Bird Box Specifications

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# Vivara Pro Cambridge Brick Face Swift Nest Box

## **Vivara Pro Cambridge Brick Face Swift Nest Box**

The Cambridge Swift Nest Box provides a long-term nesting solution for Swifts. There are two parts, a concrete nesting chamber that is designed to go into a cavity and a half brick facing to blend into an external wall with a choice of either red or buff facing bricks.

*Nesting Block Dimensions: 215H x 440W x 250D mm.*

*Facing Brick: 65H x 215W x 55D mm.*

*Combined Weight 12.6kg*



# PRO UK Rendered Build-In Swift Boxes

## **PRO UK Rendered Build-In Swift Boxes**

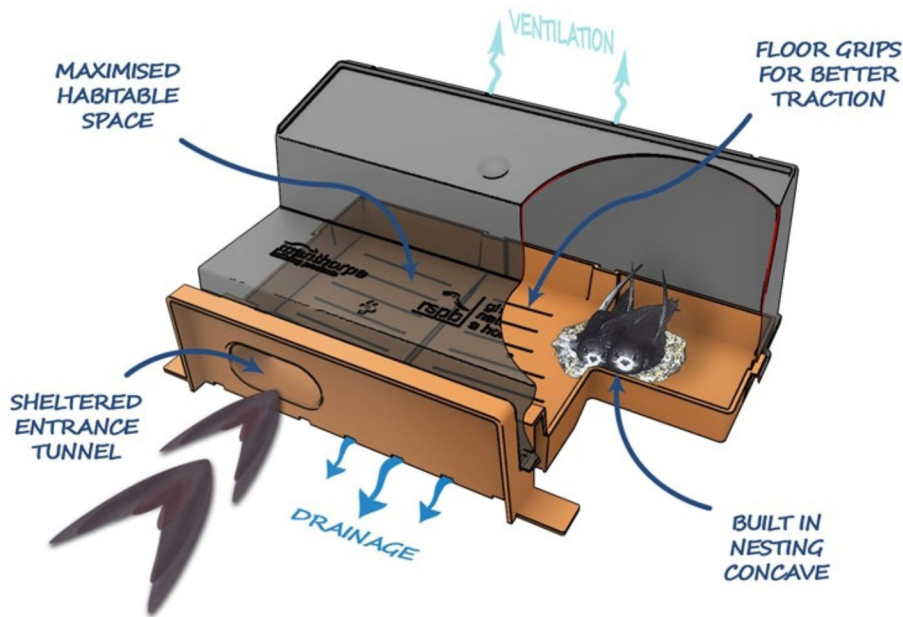
This build-in nest box is designed to be integrated into the cavity of a building, constructed from long-lasting WoodStone and built to match standard UK brick dimensions. This box is designed to be rendered over, so only the small raised section around the entrance is visible.

*Dimensions: 140H x 440W x 150D mm. Material: WoodStone*



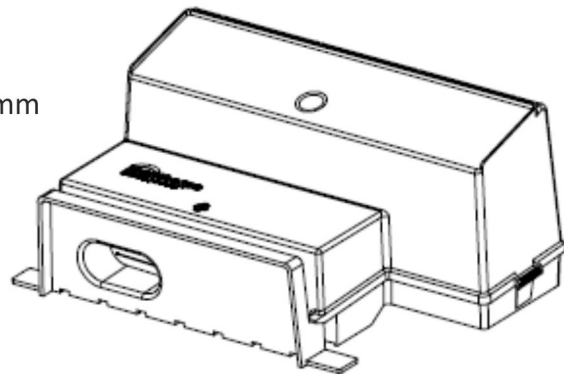
# Manthorpe Swift Nest Brick

The Manthorpe Swift Brick has been developed in conjunction with major house builders and conservation experts to provide a safe, spacious and habitable area to allow swifts to nest within the well built construction of modern houses.



## Manthorpe Swift Brick

Entrance dimensions: 153mm 347 x 200 mm



The Swift Brick should be located high within the gable wall of the property, ideally at 5 metres high and above and over the level of the insulation zone. Where possible, install in locations that are unlikely to receive large amounts of direct sunlight during the hottest times of the day, ideal places include below the overhang of the verge and barge board.

# Bird Boxes

Schwegler bird boxes have the highest rates of occupation of all types of box.

They are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting.

Boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.



## 1B Bird Box

This is the most popular box for garden birds and appeals to a wide range of species. The box can be hung from a branch or nailed to the trunk of a tree with a 'tree-friendly' aluminium nail.

*Available in four colours and three entrance hole sizes: 26mm for small tits, 32mm standard size, and oval for redstarts.*

## **Appendix 6126/3:**

Garden Fence Cut-out Specifications



# Hedgehog cut-outs



Cut outs will be located at the base of garden fences to enable Hedgehogs to move freely between gardens. Gaps will be a minimum of 15cm high and 15cm wide.



Alternatively, specifically designed gravel boards are available from a variety of suppliers.

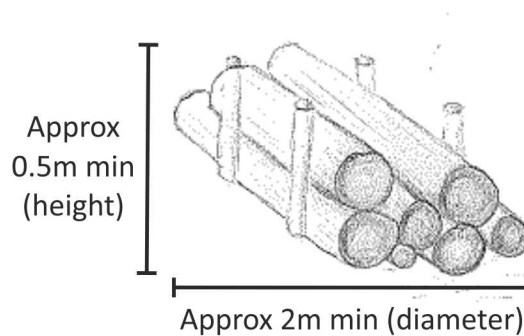


## **Appendix 6126/4:**

Log Pile Specifications

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# Log Pile



Log piles are designed to provide sheltering opportunities for a range of fauna including reptiles, amphibians and invertebrates. Dimensions should measure a minimum of approximately 2m in diameter x 0.5m height. Refugia can be created from wood or brash piles, and should ideally be positioned across a site in areas of suitable terrestrial habitat.

The wood pile illustrated above is created by sinking 4 posts approximately 8-10cm in diameter, at least 20cm into the ground. Logs with bark, of any diameter, should be cut into consistent lengths of 2m and then tightly and nearly stacked into the space between the uprights. The log piles should not be made too high, or the timber may dry out.



## **Appendix 6126/5:**

Management Activity Sheets

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Initial Management				
	Action	Responsibility	Frequency / Timing	Notes
1.	Erection and maintenance of protective fencing (in accordance with British Standard BS5847:2012). 5m buffer to be maintained around hedgerows where the consented masterplan allows.	Gade Homes Ltd / Appointed Landscape Contractor	During construction phase.	-
2.	Planting up of gaps with native woody species to strengthen and enhance hedgerow structure.	Gade Homes Ltd / Appointed Landscape Contractor	As required to ensure dense continuous corridors.	-
Ongoing Management				
3.	For recently managed hedgerows, trimming to 2m height on rotation, leaving approximately one third of the hedgerow un-trimmed during individual cuts to maintain opportunities for wildlife at all times.	Cherwell District Council / Appointed Landscape Contractor	Sections of hedgerows will be trimmed on a 2-3 years rotation. Undertaken during late November to the end of February.	Only recent growth will be trimmed, with ideally a short section of the previous year's growth left to avoid damaging the same wood each year.
4.	Taller hedgerows will be managed from the side to prevent encroachment into adjacent habitats.	Cherwell District Council / Appointed Landscape Contractor	Sections of hedgerows will be trimmed on a 2-3 years rotation. Undertaken during late November to the end of February.	-
5.	Any gaps that may form due to overgrowth etc. will be replanted with additional shrub planting of similar species to those already present.	Cherwell District Council / Appointed Landscape Contractor	As required.	-
6.	Retained trees, including those within hedgerows, will be subject to thinning/pruning/coppicing on rotation to their enhance structure and reduce shading.	Cherwell District Council / Appointed Landscape Contractor	Undertaken during late November to the end of February.	Arisings used to create habitat piles or removed from site.
7.	Use of arisings from works to create further habitat piles, with excess material disposed of as appropriate through chipping or removal from the site.	Cherwell District Council / Appointed Landscape Contractor	As required.	-

Initial Works/Aftercare				
	Action	Responsibility	Frequency/Timing	Notes
1.	Install tree guards or shelters to protect new planting from grazing damage	Gade Homes Ltd / Appointed Landscape Contractor	As required	-
2.	Undertake weed control within 1m diameter around tree bases using mulch applications, mulch mats, hand-weeding or herbicide application.	Gade Homes Ltd / Appointed Landscape Contractor	For 3 years following planting.	Mulch application (if used) to be applied in early summer (April).
3.	Monitor new tree and shrub growth.	Gade Homes Ltd / Appointed Landscape Contractor	Every 6 months during the first year and annually thereafter.	-
4.	Monitor condition of tree guards / shelters and replace or repair as required.	Gade Homes Ltd / Appointed Landscape Contractor	As required	-
5.	Undertake watering of new areas of tree and thicket planting as required during dry periods.	Gade Homes Ltd / Appointed Landscape Contractor	As required	-
6.	Replace any failed planting.	Gade Homes Ltd / Appointed Landscape Contractor	As required. Planting best undertaken November-March.	-
Ongoing Management Activities				
7.	Remove tree guards once trees are established. Provide stakes if required to maintain stability.	Cherwell District Council / Appointed Landscape Contractor	As required once trees are established.	
8.	Undertake cutting back of thicket on an as needed basis.	Cherwell District Council / Appointed Landscape Contractor	As required, carried out in September-February.	Arisings used to re-stock log piles.
9.	Monitor presence of invasive weeds and control if required using spot treatment of herbicides or cutting.	Cherwell District Council / Appointed Landscape Contractor	Monitor throughout year, control as required.	Only control if detrimental to tree / shrub growth or ground flora as weed species may be of benefit to invertebrates.
10.	Use of herbicides and fertilisers to be avoided except to promote tree and shrub establishment.	Cherwell District Council / Appointed Landscape Contractor	-	-

Initial Works/Aftercare				
	Action	Responsibility	Frequency/Timing	Notes
1.	Install tree guards or shelters to protect new planting from grazing damage	Gade Homes Ltd / Appointed Landscape Contractor	As required.	-
3.	Monitor new hedgerow growth.	Gade Homes Ltd / Appointed Landscape Contractor	Every 6 months during the first year and annually thereafter.	-
4.	Monitor condition of tree guards / shelters and replace or repair as required.	Gade Homes Ltd / Appointed Landscape Contractor	As required.	-
5.	Undertake watering as required during dry periods.	Gade Homes Ltd / Appointed Landscape Contractor	As required.	-
6.	Replace any failed planting.	Gade Homes Ltd / Appointed Landscape Contractor	As required to ensure dense continuous corridors.	-
Ongoing Management Activities				
7.	Remove tree guards once trees are established. Provide stakes if required to maintain stability.	Cherwell District Council / Appointed Landscape Contractor	As required once established.	-
8.	Trim on a rotational basis.	Cherwell District Council / Appointed Landscape Contractor	Every 2 – 3 years to allow incremental increase in height. No more than 50% of any one hedgerow to be trimmed in any one year and not cut to a height of less than 2m. As required, carried out from September to the end of February.	Arisings used to re-stock log piles or removed from site.
9.	Re-planted any gaps with native species.	Cherwell District Council / Appointed Landscape Contractor	As required to ensure dense continuous corridors.	-
10.	Use of herbicides, pesticides and fertilisers to be avoided except to promote establishment.	Cherwell District Council / Appointed Landscape Contractor	-	-

Initial Management				
	Action	Responsibility	Frequency/Timing	Notes
1.	Use of non-selective, non-persistent herbicide to reduce colonising plants.	Gade Homes Ltd / Appointed Landscape Contractor	As required prior to initial establishment works	-
2.	Digging in and harrowing/raking of surface vegetation to produce medium tilth, followed by rolling/treading to give firm surface.	Gade Homes Ltd / Appointed Landscape Contractor	As required during initial establishment.	-
3.	Surface sowing of EM4 seed by machine/hand, followed by firming in with a roller/treading to give good soil contact.	Gade Homes Ltd / Appointed Landscape Contractor	Sowing ideally undertaken in autumn or spring.	Avoid sowing when the ground is dry, waterlogged or frozen.
4.	Monitor establishment; reseed any substantial failed areas of grassland using an appropriate native wildflower mix.	Gade Homes Ltd / Appointed Landscape Contractor	As required for first year following sowing/turfing.	-
5.	Watering.	Gade Homes Ltd / Appointed Landscape Contractor	During first two weeks. Following this, as required during dry spells.	-
Ongoing Management Activities				
6.	Maintain by cutting/stripping with varied cutting regime on rotational basis, to create flower-rich, structurally diverse sward.	Cherwell District Council / Appointed Landscape Contractor	Thee area will be divided into three areas. Area 1 will be cut in the first year, area 2 in the second year, and area 3 in the third late summer (Aug-Sept) and winter. This will then repeat in subsequent years.	Remove arisings from site, compost on-site or create habitat piles.
7.	Paths within the wildlife grassland will be mown to be maintained at a height of 25-40mm.	Cherwell District Council / Appointed Landscape Contractor	As required.	-
8.	Use of herbicides, fertilisers and pesticides to be avoided where possible, aside from spot treatment of weeds.	Cherwell District Council / Appointed Landscape Contractor	All year.	-
9.	Monitor diversity of sward, and overseed with an appropriate mix if required	Cherwell District Council / Appointed Landscape Contractor	As required.	-

Initial Works/Aftercare				
	Action	Responsibility	Frequency/Timing	Notes
1.	Use of non-selective, non-persistent herbicide to reduce colonising plants.	Gade Homes Ltd / Appointed Landscape Contractor.	As required prior to initial establishment works.	-
2.	Digging in and harrowing / raking of surface vegetation to produce medium tilth, followed by rolling / treading to give firm surface.	Gade Homes Ltd / Appointed Landscape Contractor.	As required during initial establishment.	-
3.	Surface sowing of EL1 seed by machine / hand, followed by firming in with a roller / treading to give good soil contact.	Gade Homes Ltd / Appointed Landscape Contractor.	Ideally carried out in the autumn or spring, but can be sown at other times of year if there is sufficient warmth and moisture.	Avoid sowing when the ground is dry, waterlogged or frozen.
4.	Carry out regular cutting of newly seeded grassland areas to ensure establishment of a healthy sward.	Gade Homes Ltd / Appointed Landscape Contractor.	Regular mowing between spring and autumn.	Sward should be maintained at approximately 40-60mm for the first growing season.
5.	Reseed or overseed any substantial failed areas of grassland using Emorsgate EL1.	Gade Homes Ltd / Appointed Landscape Contractor.	As required for first year following sowing.	-
6.	Monitor presence of invasive weeds and control if required using spot treatment or cutting.	Gade Homes Ltd / Appointed Landscape Contractor.	Monitor throughout year, control as required.	Subject to monitoring visits. Only control if detrimental to general sward as weed species may be of benefit to invertebrates.
7.	Watering.	Gade Homes Ltd / Appointed Landscape Contractor.	During first two weeks. Following this, as required during dry spells.	-
Ongoing Management Activities				
8.	Manage regularly as short-sward grassland for its amenity value.	Cherwell District Council / Appointed Landscape Contractor.	Cut as required to a height of 25-40mm to maintain amenity value.	Mowing may be suspended earlier in the year to allow species such as Cowslip <i>Primula veris</i> to flower. Remove arisings from site.
9.	Use of herbicides, fertilisers and pesticides to be avoided where possible, aside from spot treatment of weeds.	Cherwell District Council / Appointed Landscape Contractor.	Monitor throughout year, control as required.	Subject to monitoring visits. Only control if detrimental to general sward as weed species may be of benefit to invertebrates.

Initial Works/Aftercare				
	Action	Responsibility	Frequency/Timing	Notes
1.	Undertake weed control within 1m diameter around tree bases using mulch applications, mulch mats and hand weeding.	Gade Homes Ltd / Appointed Landscape Contractor	For up to 3 years following planting.	Mulch application (if used) to be applied in early summer (April).
2.	Undertake watering of new areas of tree/scrub planting as required during dry periods <i>if required to aid establishment.</i>	Gade Homes Ltd / Appointed Landscape Contractor	-	-
3.	Monitor condition of tree shelters and replace or repair as required.	Gade Homes Ltd / Appointed Landscape Contractor	Monitor every 6 months during the first year, then annually thereafter.	-
4.	Replace any failed planting.	Gade Homes Ltd / Appointed Landscape Contractor	For duration of contractual obligation. Planting best undertaken November-March.	-
5.	Undertake formative pruning.	Gade Homes Ltd / Appointed Landscape Contractor / Appointed Landscape Contractor	Undertaken during late November to the end of February for up to 8-10 years.	-
Ongoing Management Activities				
6.	Remove tree shelters once trees are established. Provide stakes if required to maintain stability.	Cherwell District Council / Appointed Landscape Contractor	As required once trees are established.	-
7.	Undertake 'regulated' maintenance pruning.	Cherwell District Council / Appointed Landscape Contractor	Prune up to 20% of the wood of fruiting trees annually, targeting limbs which are diseased or damaged, weak and unproductive, crossing, congested or growing back towards the centre of the tree. Undertaken during late November to the end of February	Arisings used to create habitat piles or removed from site.  Avoid pruning during periods of heavy frost or unseasonably warm periods.
8.	Use of herbicides and fertilisers to be avoided	Cherwell District Council / Appointed Landscape Contractor	-	-

<b>Initial Management</b>				
	<b>Action</b>	<b>Responsibility</b>	<b>Frequency/Timing</b>	<b>Notes</b>
1.	Management follows items actions 1-5 of Appendix 5.4 for wildflower grassland, but with EM8 instead of EM4.	Gade Homes Ltd / Appointed Landscape Contractor	See items 1-5 of appendix 5.4 for wildflower grassland.	See items 1-5 for wildflower grassland.
2.	Watching brief for the presence of invasive species and removal of any such species to prevent spread.	Gade Homes Ltd / Appointed Landscape Contractor	As required.	-
3.	Monitoring and control of naturally colonising scrub and tall emergent species to avoid encroachment.	Gade Homes Ltd / Appointed Landscape Contractor	As required.	-
<b>Ongoing Management Activities</b>				
4.	Cutting of vegetation.	Cherwell District Council / Appointed Landscape Contractor	As required on a rotational basis with no more than 50% of marginal vegetation cut in a single year, undertaken between September to February.	Leave cut vegetation from wetland areas on bankside for at least 24 hours to allow trapped aquatic fauna to return to wetland areas.
5.	Monitoring and control of scrub and tall emergent vegetation to prevent encroachment or dominance by a single species.	Cherwell District Council / Appointed Landscape Contractor	As required between September to February.	Leave cut vegetation from wetland areas on bankside for at least 24 hours to allow trapped aquatic fauna to return to wetland areas.
6.	Control / removal of invasive plant species.	Cherwell District Council / Appointed Landscape Contractor	As required.	-
7.	Use of herbicides, fertilisers and pesticides to be avoided where possible.	Cherwell District Council / Appointed Landscape Contractor	All year.	-



Initial Management				
	Action	Responsibility	Frequency/Timing	Notes
1.	Weed control through application of mulch/ mulch mats or herbicide.	Gade Homes Ltd / Appointed Landscape Contractor	Early Summer (April)	-
2.	Watering, weed control and protection of new tree, hedgerow and shrub planting from grazing using tree guards or shelters.	Gade Homes Ltd / Appointed Landscape Contractor	As required throughout initial establishment.	-
3.	Replacement of tree guards and failed planting, with initial aftercare to ensure successful establishment.	Gade Homes Ltd / Appointed Landscape Contractor	As required. Monitored every 6 months during the first year and annually thereafter. Planting best undertaken November-March.	-
Ongoing Management Activities				
4.	Thinning/pruning to enhance structure /reduce shading, rotational coppicing and removal of non-native species.	Cherwell District Council / Appointed Landscape Contractor	As required (outside of the nesting bird season), informed by update surveys every 3 years.	Where such work is not possible outside of the nesting bird season it will need to be preceded by a nesting bird survey by a suitably qualified ecologist.
5.	Remove tree shelters and provide stakes.	Cherwell District Council / Appointed Landscape Contractor	As required once established.	-
6.	Trimming of internal amenity hedgerows.	Cherwell District Council / Appointed Landscape Contractor	Interior hedgerows will be subject to regular cutting to a height of 1 to 1.5m.	-
7.	Replanting of gaps in hedgerows.	Cherwell District Council / Appointed Landscape Contractor	As required.	Restock with native species similar to those already present.
8.	Use of arisings from works to create further habitat piles, with excess material disposed of as appropriate through chipping or removal from the site.	Cherwell District Council / Appointed Landscape Contractor	As required.	-

## Faunal Enhancements

## Appendix 5.9

Ongoing Management				
	Action	Responsibility	Frequency/Timing	Notes
1.	Monitor condition of bat and bird boxes and re-fix, replace or repair if damaged.	Cherwell District Council / Appointed Landscape Contractor	Monitor throughout year, repair or replace as required.	Adjustments to bat boxes (e.g. repositioning) should be undertaken in spring or autumn months. Any adjustments to bird boxes (e.g. re-positioning) should be undertaken in the winter months (i.e. outside 1st March to 31st August inclusive).
2.	Restock log piles.	Cherwell District Council / Appointed Landscape Contractor	As required.	Use arisings generated from ongoing management activities works.

## General Management Activities

## Appendix 5.10

Ongoing Management Activities				
	Action	Responsibility	Frequency/Timing	Notes
1.	Regular litter inspections and remove and suitably dispose of any litter.	Cherwell District Council / Appointed Landscape Contractor	On occasional basis during routine maintenance visits.	-
2.	Use of herbicides and fertilisers to be avoided across all habitats where possible.	-	-	-

## Monitoring

## Appendix 5.11

Ongoing Monitoring Activities				
	Action	Responsibility	Frequency/Timing	Notes
1.	Routine monitoring to be undertaken annually.	Cherwell District Council / Appointed Landscape Contractor	Annually.	-
2.	Ecological monitoring surveys to be undertaken at years 3, 5, 10 and 15.	Suitably qualified ecologist.	Years 3, 5, 10 and 15.	To include a botanical survey of the created habitats to ensure the aims of the management plan are being achieved.

## **Appendix 6126/6:**

Timetable of Management Works

Habitat / Activity	Initial Management												Ongoing Management											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Retained Hedgerows</b>																								
Planting up of gaps with native woody species to strengthen and enhance hedgerow structure.	■	■	■	■	■	■	■	■	■	■	■	■												
Management of hedgerows on 3 year rotation.													■	■									■	■
Thinning / pruning and rotational coppicing of retained trees as required to reduce shading.													■	■									■	■

Habitat / Activity	Initial Management												Ongoing Management											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Native Trees and Shrubs</b>																								
Undertake weed control within 1m diameter of tree bases, using mulch applications / mats, handweeding or herbicide (if appropriate). Mulch application in April.													NA											
Monitor condition of trees and shelters. Undertake watering as required.													NA											
Replace any failed planting as required.																								
Remove tree shelters once trees are established as required.	NA																							
Thinning/pruning and rotational coppicing as required.	NA																							

Habitat / Activity	Initial Management												Ongoing Management											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Native Hedgerows</b>																								
Install tree guards or shelters as required.													NA											
Monitor condition of trees and shelters.													NA											
Undertake watering as required.																								
Replace any failed planting as required.																								
Remove tree shelters once trees are established as required.																								
Trim on a rotational basis every 2-3 years.																								
Replant any gaps with native species.																								
Use of herbicides, pesticides and fertilisers to be avoided except to promote establishment.																								

Habitat / Activity	Initial Management												Ongoing Management											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Wildflower Grassland</b>																								
Treat ground with non-selective, non-persistent herbicide (such as Glyphosate) if required prior to initial establishment works.																								
Digging in and harrowing / raking of surface vegetation to produce medium tilth, followed by rolling / treading to give firm surface prior to seeding.																								
Surface sowing of Emorsgate EM4 by machine / hand, followed by firming in with a roller / treading to give good soil contact.																								
Carry out regular cutting of newly seeded grassland areas to ensure establishment of a healthy sward.																								
Reseed any substantial failed areas (as required).																								
Monitor presence of invasive weeds and control if required using spot treatment of herbicides or cutting.																								
Manage wildflower grassland areas by cutting / strimming on a rotational basis.																								
Monitor diversity of sward, and overseed with an appropriate mix if required																								

Habitat / Activity	Initial Management												Ongoing Management														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
<b>Flowering Lawn</b>																											
Treat ground with non-selective, non-persistent herbicide (such as Glyphosate) if required prior to initial establishment works.													NA														
Digging in and harrowing / raking of surface vegetation to produce medium tilth, followed by rolling / treading to give firm surface prior to seeding.													NA														
Surface sowing of Emorsgate Emorsgate EL1 by machine / hand, followed by firming in with a roller / treading to give good soil contact.													NA														
Carry out regular cutting of newly seeded grassland areas to ensure establishment of a healthy sward.													NA														
Reseed any substantial failed areas (as required).													NA														
Manage regularly as short-sward grassland for its amenity value. Mowing may be suspended earlier in the year to allow species such as Cowslip to flower. Heavy quantities of cuttings should be collected and removed from site.	NA																										
Monitor presence of invasive weeds and control if required using spot treatment of herbicides or cutting.																											



Habitat / Activity	Initial Management												Ongoing Management												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<b>Orchard</b>																									
Undertake weed control within 1m diameter of tree bases, using mulch applications / mats, handweeding or herbicide. Mulch application in April.				■	■	■	■	■	■																
Monitor condition of trees and shelters. Undertake watering as required.	■	■	■	■	■	■	■	■	■	■	■	■													
Replace any failed planting as required.	■	■	■										■	■	■									■	■
Formative pruning.	■	■	■																						
Remove tree shelters once trees are established.													■	■	■	■	■	■	■	■	■	■	■	■	
Maintenance pruning.													■	■	■										

Habitat / Activity	Initial Management												Ongoing Management											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Attenuation Feature</b>																								
Monitor and control scrub and tall emergent species as required.	■	■							■	■	■	■	■	■							■	■	■	■
Cut/trim grassland and marginal vegetation on rotational basis, to maintain some tall areas all year													■	■							■	■	■	■
Monitor presence of invasive weeds and control if required using spot treatment of herbicides or cutting. Use of herbicides, fertilisers and pesticides to be avoided where practicable.													■	■	■	■	■	■	■	■	■	■	■	■

Habitat / Activity	Initial Management												Ongoing Management											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Ornamental Planting</b>																								
Undertake weed control within 1m diameter of tree bases, using mulch applications / mats, handweeding or herbicide. Mulch application in April.																								
Monitor condition of trees and shelters. Undertake watering as required.																								
Replace any failed planting/replant gaps as required.																								
Remove tree shelters once trees are established.																								
Thinning/pruning and rotational coppicing informed by update surevys every 3 years.																								
Cut interior hedgerows as required to height of 1 to 1.5m.																								

Habitat / Activity	Initial Management												Ongoing Management											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Faunal Enhancements</b>																								
Restock log piles with proportion of brash created by ongoing management activities (as required).																								
Inspect condition of bat and bird boxes.																								
Adjustments to bat boxes (repositioning, as required).																								
Adjustments to bird boxes (repositioning, as required).																								
<b>General Management Activities</b>																								
Regular litter inspections and remove and suitably dispose of any litter.																								
Use of herbicides and fertilisers to be avoided across all habitats where practicable.																								
<b>Monitoring</b>																								
Routine monitoring to be undertaken annually.																								
Ecological monitoring surveys to be undertaken at years 3, 5, 10 and 15.																								

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