

## **DOWSETTMAYHEW PLANNING PARTNERSHIP**

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**Longacre, Maypole Lane, Yapton**

- Landscape and Ecological Management Plan

### **Planning Issue**

|                    |                     |
|--------------------|---------------------|
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## 1.0 INTRODUCTION

- 1.1 Lizard Landscape Design and Ecology has been commissioned by DowsettMayhew Planning Partnership to provide a Landscape and Ecological Management Plan (*LEMP*) for the proposed development of land at Longacre, Maypole Lane, Yapton, West Sussex.
- 1.2 This LEMP has been prepared based upon the following information:
- *Detailed Plant Schedule and Specification (LLD1537-LAN-SCH-001)*
  - *Hard and Soft Landscape General Arrangement (LLD1537-LAN-DWG-100)*
  - *Ecological Appraisal (PJC, March 2015)*
- 1.3 This report has been based on data from these previous protected species surveys and reports. This report has been undertaken and prepared by Catherine O'Reilly (*MCIEEM, Senior Ecologist, Lizard Landscape Design & Ecology*).
- 1.4 This plan has been formulated to maximise the landscape and ecological amenity of the site, maintain healthy plant growth, keep planting beds free from weeds / litter and ensure plant stock remains free from disease. This plan deals with the maintenance of the following areas:
- *Amenity Grassland;*
  - *Wildflower Grassland;*
  - *Native Hedgerow;*
  - *Native Tree Planting;*
  - *Native Understorey Shrub;*
  - *Bird and Bat Boxes.*
- 1.5 This plan covers the first 5 years of maintenance after which the plan should be reviewed in consultation with any relevant stakeholders. It is anticipated that the first 12 months planting maintenance will be the responsibility of the landscape sub-contractor as appointed by the developer. Long-term management responsibilities will lie with the chosen maintenance contractor as appointed by the owners of the site.

## 2.0 SITE CONTEXT

### ***Site Description***

- 2.1 The development site is located due south of the railway line; to the north west of the residential areas of Yapton and North End. The site is approximately 7.00 metres above sea level and measures 13.0 hectares. The site is composed of arable farmland with narrow improved grassland margins. The site is bordered by a mixture of hedge and treeline and wire fencing.

### ***Surrounding Landscape***

- 2.2 The immediate surrounding landscape is agricultural and predominantly arable with a high percentage of the land being utilised as commercial nurseries. The eastern edge of Barnham is located 750.00 metres west of the site while Yapton is located 600.00 south-east of the site. The land is open with very little woodland although fields are delineated by hedgerows.

### ***Development Proposals***

- 2.3 The development proposals include the construction of a new glasshouse, with associated reservoir.

## 3.0 BASELINE ECOLOGICAL CONDITIONS

- 3.1 The ecological survey conducted during March 2015 identified habitats of arable and improved grassland; with scattered trees and scrub adjacent the site boundaries. The site is comprised in large part (*circa. 90%*) by recently ploughed arable farmland edged by narrow field margins. The area was on the whole of low ecological value.
- 3.2 A number of trees which offer some bat roost potential were identified during the ecological walkover of the site; these are being retained and protected as part of the proposals.
- 3.2 No GCN were found within any of the surrounding ponds during surveys conducted in 2016.

## 4.0 AIMS AND OBJECTIVES

4.1 The aim of the LEMP has been to;

- *To achieve a net gain in ecological value from the sites previous state;*
- *To maximise the landscape amenity of the site, maintain healthy plant growth, keep planting beds free from weeds / litter and ensure plant stock remains free from disease;*

4.2 The landscape scheme has been designed to allow areas of amenity space while also maximising the ecological value of the site for invertebrates, reptiles, amphibians, hedgehogs, bats and birds.

### 4.3 Objectives of the Proposals

4.3.1 The main aims and objectives of the proposed landscape scheme are detailed below:

#### *Amenity Lawn*

4.3.2 The aim is to establish permanent areas of low maintenance grassland which provides amenity space. The sward shall be of even grade, uniformly coloured and contain a maximum of 10% herb species and no scrub.

#### *Wildflower Grassland*

4.3.3 The aim is to establish permanent areas of grass and herb species with a species composition and diversity capable of being maintained by an average of one cut per year, or that through appropriate management will be encouraged to naturally develop biodiversity interest over time, including valuable habitat for invertebrates.

4.3.4 Emorsgate EM5 – Meadow Mixture for Loamy soil is proposed to the majority of the site, with Boston Seeds BS78 - Hedgerow & Light Shade Wildflower Seeds proposed beneath new and existing hedgerow and trees.

### *Native Hedgerow*

- 4.3.5 Existing defunct hedgerows will be reinforced to create biodiversity enhancing hedgerows trimmed and shaped to a constant height and width appropriate for future growth, and which maximise foraging and breeding resources for birds, bats and invertebrates. Proposed species include:

- Field Maple (*Acer campestre*);
- Dogwood (*Cornus sanguinea*);
- Hawthorn (*Crataegus monogyna*);
- Hazel (*Corylus avellana*);
- Dog-Rose (*Rosa canina*);
- Blackthorn (*Prunus spinosa*);
- Honeysuckle (*Lonicera periclymenum*);
- Holly (*Ilex aquifolium*).

### *Native Trees*

- 4.3.6 The aim is to establish individual trees appropriate to their location. Individual feature trees should be maintained to ensure regular form and formal appearance and to enhance key features such as leaf colour, flowers or fruits. Proposed varieties include:

- Field Maple (*Acer camptestres*);
- Hornbeam (*Carpinus betulus*);
- Oak (*Quercus robur*);
- Bird Cherry (*Prunus padus*);
- Whitebeam (*Sorbus aria* 'Lutescens');
- Large-leaf Lime (*Tilia platyphyllos*);

- 4.3.7 Individual trees which help to make up tree lines should be monitored to ensure growth does not impede other trees whilst encouraging canopies to thicken and help provide screening, shelter and habitat for the foraging and breeding of birds, bats and invertebrates.

### *Native Shrubs*

- 4.3.8 The aim is to establish dense native shrub cover to provide adequate enclosure and shelter, visual interest and provide habitat for the foraging and breeding of birds, bats and invertebrates. Proposed species include:

- Guelder Rose (*Viburnum opulus*);
- Blackthorn (*Prunus spinosa*);
- Dogwood (*Cornus sanguinea*);
- Dog Rose (*Rosa canina*);
- Spindle (*Euonymus europeaus*);
- Buckthorn (*Rhamnus cathartica*);
- Elder (*Sambucas nigra*);
- Elm (*Ulmus glabra*);
- Ivy (*Hedera helix*).

### *Log/Compost Piles*

- 4.3.9 Log and compost piles will provide a source of decaying material to provide an important foraging and breeding resource for invertebrates and reptiles. These areas will also provide hibernation opportunities for reptiles and amphibians.

### *Bat Boxes*

- 4.3.10 1x Improved Crevice Bat Box (Double Crevice) as supplied by The Nestbox Company and 1x 2FN Schwegler Bat Box will be installed to the mature trees to the western boundary of the site. These areas will provide additional roosting opportunity for bat species and will be kept well-maintained and securely affixed.

### *Bird Boxes*

- 4.3.11 Bird boxes to suit a variety of species are proposed to include Vivara Pro Seville 32mm Woodstone Nest Box, Eco Open-fronted Nest Box and Vivara Pro Woodstone Starling Nest Box. These areas will provide additional nesting opportunity for bird species and will be kept well-maintained and securely affixed.

## 5.0 MANAGEMENT PRESCRIPTIONS

- 5.1 In order to ensure the long-term viability of the ecological mitigation and enhancement measures outlined above, detailed prescriptions for initial maintenance requirements and long-term management are provided within this section.

### 5.2 Amenity Lawn

#### *Sowing*

- 5.2.1 Areas of bare earth are to be sown with a suitable grass mix or laid with appropriate turf. Following initial seeding/turfing, provide appropriate signage to discourage entrance for a minimum of 6 weeks or until the grass sward is suitably established to withstand footfall.

#### *Cutting*

- 5.2.2 All debris, litter and large stones over 25mm diameter to be removed prior to cutting. Allow turf sward or amenity seeded areas to establish to a minimum height of 35mm before first cut. Once established, grass shall be cut during the growing season (*generally April-October*) using a suitable mower to a height of 25mm-40mm. Grass will be cut at intervals of not more than 10-14 days depending on growing conditions. Arisings shall be collected and removed from the area.

#### *Weed Removal*

- 5.2.3 The sward shall be maintained weed free by an annual application of a suitable herbicide.

#### *Strimming*

- 5.2.4 Grassed edges to planted areas to be trimmed to maintain a clear smooth edge to planted beds; strim edges elsewhere but not against trees.

#### *Spiking*

- 5.2.5 The area should be scarified annually in the autumn to remove the build-up of dead grass. Following annual scarification, the area should be thoroughly spiked to aerate soil and improve drainage.

*Fertiliser / Herbicide*

- 5.2.6 All amenity grassed areas should receive an application of a proprietary granular slow-release fertiliser twice yearly in the spring and the autumn (refer to schedules). A selective herbicide should be used in order to suppress any emerging perennial weeds.

*Rectification of Defects*

- 5.2.7 Should bare patches of grass develop, area is to be cultivated to 150mm and then seeded with amenity grass seed. To be cross-sown in two directions at right angles to each other, (half the seed being used in each direction) at the rate of 35 gm per square meter and the ground lightly raked over on a still dry day when the top 25mm of soil is dry.

**5.3 Wildflower Meadows**

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

*Sowing – Year 1*

- 5.3.2 the ground shall be cleared of all weeds and vegetation and cultivated to a fine tilth prior to sowing. Care must be taken along the north east boundary not to disturb the exiting vegetation which exists as suitable reptile habitat. In this location, the seedbed shall be created outside of the existing field margin.
- 5.3.3 Seeds require warmth and moisture in order to germinate and therefore late August – October and March – April are generally the best times to sow. The seed shall be sown at a rate of 2 – 4 grams / m<sup>2</sup> (as specified by the manufacturer). Seeds should be rolled into the soil and the seed bed kept moist at all times.

*Cutting – Year 1*

- 5.3.4 The sward should be cut to 100mm in mid-June and late-August during the first season to develop a dense sward. A final cut should take place at the end of the season. All arisings to be collected and removed. Weeds are to be controlled by pulling or spot spraying.

*Cutting – Year 2 Onwards*

- 5.3.5 Wildflower meadow areas shall be cut at the end of the season once the flowers have dropped seed and the arisings collected and removed after any cut to avoid nutrient enrichment. An early-spring cut should be implemented if the sward begins to appear 'leggy'. Sward to be cut to 100mm. Any bare patches to be reseeded as and when needed.

*Weeding – Year 2 onwards*

- 5.3.6 Undesirable weeds to be pulled by hand or spot sprayed with a selective herbicide. Fertiliser use is to be avoided.

*Additional Yellow Rattle*

- 5.3.7 Yellow rattle (*Rhinanthus minor*) is a root hemiparasite which parasitises the roots of meadows plants such as grasses and legumes, thereby impeding their growth. The additional sowing of yellow rattle can be used after the final cut to suppress any vigorous grass growth.

**5.4 Native Trees, Shrubs and Hedges***Planting*

- 5.4.1 Planting pits shall be excavated to a depth and size that contains the plant's root system and allows the collar of the plant (*the mark on the tree where it has been growing above ground*) to be level with the top of the soil. The soil shall be carefully backfilled in layers, ensuring the plant is held upright. New trees, hedges and shrubs to be supported by staking or tree guards as appropriate.

### *Watering*

- 5.4.2 All plants shall be watered as may be required to maintain healthy growth following planting, during the maintenance period and subsequently in cases of extreme drought (Trees – 5Ltr's per tree, Shrubs 1Ltr each, Grass 5Ltr's/m<sup>2</sup>). Watering to commence following 10 consecutive days of no rainfall, during the months of June to August.

### *Pruning / Trimming – Ongoing*

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

### *Weeding*

- 5.4.4 Areas around the new plants should be kept clear of weeds to allow the plants to establish by weeding twice a year in the Spring and Autumn. Any litter or debris should be removed as soon as it is found.

### *Fertiliser*

- 5.4.5 Hedges to be fertilised annually. Apply a single dose of evenly spread, 11:22:9 NPK slow release fertiliser at a rate of 60g per m<sup>2</sup>, from March - April.

### *Rectification of Defects*

- 5.4.6 Regularly check for plants which have been loosened by wind or frost and re-firm any loose plants back into the ground. Monitor and replace failed planting with new equivalent plants between October and March

## 5.5 Compost Heaps and Log Piles

### *Creation and Maintenance*

- 5.5.1 A log pile can be of any size and constructed from piling logs up horizontally. Log piles can be created using any type of wood, although it would be advantageous to utilise any pruning matter on an ongoing basis. Compost heaps can also be of any size and constructed from organic matter including grass cuttings. Once established, these can be maintained using cuttings from wildflower areas.

## 5.6 Bird and Bat Boxes

### *Siting*

- 5.6.1 Bird boxes should be installed at a minimum height of 2.0 m on either the north, east or western aspects of mature trees.
- 5.6.2 Bat boxes should be installed at a height of between 3.0 – 6.0 m. They should be installed with a south or south-eastern aspect to ensure maximum solar gain. The boxes should be situated on an area of the tree which allows clear flight lines in / out of the boxes.

### *Maintenance – Long Term*

- 5.6.3 The bat specified above do not require any cleaning. A visual inspection should be carried out annually to ensure the boxes are secure. If required, bird boxes can be cleared of old nesting material at the end of the nesting season (*September – October*) and any parasites removed using boiling water; the use of any detergents etc should be avoided. Once occupied, bat boxes can only be checked or disturbed by a licensed bat worker.

## 6.0 IMPLEMENTATION SCHEDULE

**Table No. 01 – Annual Maintenance Summary**

|                                           | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
| <b>AMENITY GRASS</b>                      |     |     |     |     |     |     |     |     |      |     |     |     |
| Mowing                                    |     |     |     | X   | X   | X   | X   | X   | X    | X   |     |     |
| Strimming                                 |     |     |     |     |     |     |     |     |      |     |     |     |
| Weed Control                              |     |     |     |     | X   |     |     |     |      | X   |     |     |
| Fertiliser                                |     |     |     | X   |     |     |     |     |      |     |     |     |
| Spiking                                   |     |     |     |     |     |     |     |     |      | X   |     |     |
| <b>WILDFLOWER MEADOW</b>                  |     |     |     |     |     |     |     |     |      |     |     |     |
| Mowing (Year 1)                           |     |     |     |     |     | X   |     | X   |      |     | X   |     |
| Weed Control                              |     |     | X   |     |     | X   |     |     | X    |     |     |     |
| Mowing (Year 2+)                          |     |     | X   |     |     |     |     |     |      | X   |     |     |
| <b>NATIVE TREES, SHRUBS &amp; HEDGING</b> |     |     |     |     |     |     |     |     |      |     |     |     |
| Watering (as required)                    |     |     |     | X   | X   | X   | X   | X   | X    | X   |     |     |
| Pruning (Biannually for hedges)           |     |     | X   |     |     |     |     |     |      |     |     |     |
| Check Ties / Stakes (1st yr.)             |     |     |     | X   |     |     |     |     |      | X   |     |     |
| Replace Losses                            |     |     |     |     |     |     |     |     |      |     | X   |     |
| Maintain 500mm dia. clear base            |     |     |     | X   |     | X   |     | X   |      |     |     |     |
| Weeding                                   |     |     |     |     | X   |     |     |     | X    |     |     |     |
| Fertiliser (Hedges)                       |     |     | X   |     |     |     |     |     |      |     |     |     |
| <b>BIRD AND BAT BOXES</b>                 |     |     |     |     |     |     |     |     |      |     |     |     |
| Cleaning (bird boxes)                     |     |     |     |     |     |     |     |     |      | X   |     |     |
| Check condition                           |     |     |     |     |     |     |     |     |      |     | X   |     |
| <b>LOG PILES</b>                          |     |     |     |     |     |     |     |     |      |     |     |     |
| Check Integrity                           |     |     | X   |     |     |     |     |     |      | X   |     |     |
| Re-stock if needed                        |     |     | X   |     |     |     |     |     |      | X   |     |     |
| <b>COMPOST</b>                            |     |     |     |     |     |     |     |     |      |     |     |     |
| Check Integrity                           |     |     | X   |     |     |     |     |     |      | X   |     |     |