BELLWAY HOMES LTD

ECOLOGYSOLUTIONS

Part of the ES Group

revised

LAND AT DUCKMOOR, EAST OF BILLINGHURST

Discharge of Condition 7

Ecological Mitigation and Enhancement Strategy (EMES)

August 2024
12039.EMES.vf1

ecology solutions for planners and developers

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1. INTRODUCTION

1.1 This Ecological Mitigation and Enhancement Strategy (EMES) has been prepared by Ecology Solutions Ltd on behalf of Bellway Homes in respect of the proposed development formerly known as Duckmoor, East of Billinghurst hereafter referred to as the 'Site'.

1.2 A suite of survey work was undertaken at the Site in 2019 and 2020 by Ecology Solutions with an Ecological Assessment completed in 2022. This information was submitted as part of the planning application for the Site. An update site visit was completed by Ecology Solutions in March 2024 to determine whether any significant changes had occurred.

1.3 Planning permission for the site was granted by appeal on 18th January 2023 (Reference: APP/Z3825/W/21/3283823). This includes condition 7, which relates to ecology. This condition is reproduced below:

"No development approved within the reserved matters applications pursuant to the outline planning application hereby permitted shall commence until an Ecological Mitigation and Enhancement Strategy has been submitted to and approved in writing by the local planning authority, to be guided by appropriate surveys and good practice guidance. The Ecological Mitigation and Enhancement Strategy shall include the following:

A) Purpose and conservation objectives for the proposed works;
b) Review of site potential and constraints with reference to any necessary Protected Species Licenses;
c) Detailed design(s) and/or working method(s) to achieve stated objectives;
d) Extent and location/area of proposed works on appropriate scale maps and plans;
e) Type and source of materials to be used where appropriate, e.g. native species of local provenance;
f) Timetable for implementation demonstrating that works are aligned with the proposed phasing of development;
g) Persons responsible for implementing the works;
h) Details of initial aftercare and long-term maintenance of the habitats;
i) Details for monitoring and remedial measures;
j) Details for disposal of any wastes arising from works;
k) Details of proposed external lighting scheme."

1.4 This EMES gives consideration to the known ecological constraints onsite, how these might be affected by the development proposals and what mitigation and management measures are to be delivered to optimise and ultimately increase biodiversity and opportunities for protected species.

1.5 This report also includes consideration of the maintenance / management measures associated with onsite ecological networks and features to the retained, created and enhanced as part of the proposals.

1.6 As such, this document sets out the key mitigation and enhancement strategies proposed, such that Horsham District Council may be satisfied that the proposed development will deliver in significant beneficial ecological effects at the Site.

1.7 This EMES is set out as follows:

- Summary ecological baseline and evaluation of important features within the Site that are to be retained and enhanced.
- Review of management objectives with detail on the mitigation / enhancement strategy to avoid significant adverse impacts on features due to be retained within the Site; and
- Maintenance / Management prescriptions in order to achieve specific objectives.

1.8 This EMES has been written with reference to published guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) and in accordance with Natural England guidelines for protected species. In addition, this strategy has been developed with regard had to the British Standard code of practice for planning and development for biodiversity (BS 42020:2013).

2. ECOLOGICAL BASELINE AND EVALUATION

2.1 A suite of ecological surveys has been undertaken at the Site by Ecology Solutions during the period 2019 and 2020. The findings of these surveys provide the basis of the management prescriptions as set out within this EMES.

2.2 Ecology Solutions habitat surveys were based on extended Phase 1 survey technique. The habitats and dominant plant species were recorded together with conspicuous faunal activity and evidence of the presence, or potential presence, of protected species.

2.3 Specific surveys were also carried out for bats, badgers, reptiles, birds, great crested newt (GCN) and dormice.

2.4 The results of these surveys are provided within this EMES where necessary, full details on findings of these surveys can be found in the Ecological Assessment (8745.EcoAss.vf3, dated April 2022) as well as the most recent BNG Metric assessments undertaken to inform the proposals.

Existing Ecological Features and Wildlife Use of the Site

2.5 The existing conditions onsite are described below based on recent update surveys undertaken in respect of habitats and protected species. No significant changes were noted to have occurred during the update site walkover undertaken in March 2024 and July 2024.

Habitats

2.6 The Site primarily comprises three semi-improved grassland fields (F1 to F3) which appear to managed regularly.

2.7 Fields F1 and F2 support a dense hay sward dominated by a modest range of coarse grass species, while Field F3 shows relatively fewer coarse grass species and increased forb distribution. Grass species present in Fields F1 and F2 include Perennial Ryegrass, Cock's-foot, Yorkshire Fog, Common Bent, and others. Forb species are limited, including Meadow Buttercup, Bird's-foot Trefoil, and Creeping Thistle. Field F3 supports grass species such as Sweet Vernal Grass, Couch Grass, and False Oat-grass, along with forb species like Ragwort, Black Knapweed, and Ox-eye Daisy.

2.8 The Site also supports a number of treelines/hedgerows bordering the grassland fields and Site boundaries. Treelines/hedgerows are dominated by Oaks, with some associated with shallow, dry depressions. Various species are recorded within these features including Field Maple, Blackthorn, Bramble, Elm, Dog-rose, and Hawthorn.

2.9 The site hosts areas of dense scrub, primarily composed of bramble, occasionally encroaching into the grassland fields. Other species found in the scrub habitat include Dog-rose, Elm, Hazel, Blackthorn, and Hawthorn.

2.10 A single waterbody is present within the site boundary, this is a shallow depression occasionally holding water, surrounded by dense vegetation and leaf litter. At the time of survey in June 2019 this feature was holding a small amount of water. However, surveys in June 2020 found this feature to be totally dry. This feature is therefore only considered to hold water on occasion (i.e. in times of heavy rainfall).

Dormice

2.11 Nest tube surveys conducted within the Site aimed to assess the potential presence of Dormice, given the well-connected hedgerows to off-site woodland habitats. These surveys, carried out between October 2019 and October 2020 (excluding May), resulted in the identification of thirteen nests attributable to Hazel Dormouse within the site. Specifically, two nests were found in the northeast area within T1, five nests in the southwest corner of F2 within T8, and six nests along the northern boundary of F2 within H2. Consequently, it is concluded that Dormice inhabit suitable habitats within the Site.

Reptiles

2.12 Refugia surveys conducted in 2019 and 2020 aimed to determine the presence of reptile species within grassland areas of the Site, particularly field margins. The surveys recorded various reptile sightings including Slow-worms and Grass Snakes. Specifically, sightings occurred on multiple dates with varying weather conditions, indicating the presence of these reptiles within the site. The survey conducted between September and October utilized 166 tins over an area of approximately six hectares, supporting the conclusion that the Site hosts low populations of both Slow-worm and Grass Snake.

Bats

2.13 During the specific surveys undertaken three trees were observed to provide potential opportunities for roosting bats, in the form of cracks, splits and woodpecker holes. The Site also offers potential foraging and commuting opportunities in the form of hedgerows along field boundaries.

2.14 Activity surveys and automated detector surveys undertaken at the Site between June and October 2020 identified limited bat activity, comprising mostly common and widespread species. Data recorded as part of the static monitoring surveys is considered to represent low levels when averaged across each monitoring period. The results are detailed in the Ecological Assessment produced in April 2022 (8745.EcoAss.vf3, dated April 2022).

2.15 The activity surveys conducted on the Site indicate that it is primarily utilized by a low number of common and widespread species, with the most frequent registrations attributed to the Common Pipistrelle and Soprano Pipistrelle. Bat activity across the Site was generally evenly distributed, although relatively higher amounts were recorded in the northeast of the Site. Static monitoring surveys revealed consistent

patterns, with Common Pipistrelle being the most frequently recorded species across various locations and survey periods. Although some other species such as Myotis sp. and Brown Long-eared Bat were also registered, their numbers were comparatively lower. Notable species like Barbastelle were rarely recorded, indicating the dominance of common bat species within the Site.

Birds

2.16 The Site provides some nesting opportunities for birds, particularly within hedgerows, treelines, and scrub habitats within the site, similar opportunities exist in the surrounding area.

2.17 A desk study returned bird records from the local area, including three Nightingales *Luscinia megarhynchos* recorded on the northeastern and western edges of the Site in 2012. Special attention was given to Nightingales during surveys, resulting in the observation of two individuals within the Site in April 2020, utilizing hedgerow and scrub habitat along the northeastern boundary. This species was not recorded during other site visits in 2019 or 2020. Additionally, various other bird species were recorded during surveys, including Greenfinch *Carduelis chloris*, Wren *Troglodytes troglodytes*, Buzzard *Buteo buteo*, Kestrel *Falco tinnunculus*, Blue Tit *Cyanistes caeruleus*, Great Tit *Parus major*, Blackbird *Turdus merula*, and Magpie *Pica pica*.

Badgers

2.18 Survey work undertaken in both 2019 and 2020 recorded no Badger setts within the Site. Furthermore, no other evidence indicating the presence of Badgers (such as latrines, footprints, hairs or foraging signs) was recorded within the Site. In addition to this information received from the SxBRC returned no records for Badger within the local area.

2.19 Given the above, it is not considered the Site is of any significant value to this species and Badgers have therefore been given no further consideration within this Ecological Mitigation and Enhancement Strategy, although proposed measures including species-rich grassland creation will improve opportunities for this species should they be present in the local area in the future.

Great Crested Newt (GCN)

2.20 In order to ascertain the presence or absence of GCN, environmental DNA (eDNA) sample surveys were undertaken in June 2020, based on methodology set out by Freshwater Habitats Trust, which is endorsed by NE. The eDNA returned negative result for the presence of GCN and no further consideration is given to this species within this report.

3. MITIGATION STRATEGY

3.1 The mitigation and management strategy proposed is based around the ecological baseline as recorded through a series of specific ecological surveys that informed the Ecological Assessment prepared by Ecology Solutions in April 2022 (8745.EcoAss.vf3, dated April 2022) and the latest BNG Metric prepared for the proposals. The strategy set out below accords with current legislative requirements and relevance guidance.

3.2 It should be noted that in certain instances licences are required from Natural England. These instances will be outlined below as required by relevant for point B of condition 7.

Designated sites

3.3 There are no statutory designated sites of nature conservation interest within or immediately adjacent to the Site. The nearest is Upper Arun SSSI, situated approximately 2.5km west, recognized for its diverse riverine fauna and flora. Further west, approximately 5.6km away, lies The Mens SAC/SSSI, notable for its extensive Wealden Woodland and rich fungal and lichen floras.

3.4 Regarding potential impacts and mitigation, Upper Arun SSSI is not likely to be directly affected by the proposed development due to its considerable distance from the site, with no anticipated adverse effects.

3.5 For The Mens SAC/SSSI, although the Site falls within the sustenance zone for Barbastelle bats, it is well-isolated by open countryside and existing development. Mitigation strategies include enhancing hedgerows, implementing sympathetic lighting, and introducing habitat enhancements such as native scrub planting. Post-mitigation, the development is expected to support rather than contradict conservation objectives, particularly by improving foraging and commuting areas for Barbastelle bats.

3.6 The nearest non-statutory designated site is Wilden's Meadow Local Wildlife Site (LWS), located approximately 0.3km to the south of the Site at its closest point.

3.7 No adverse effects are considered to arise on this non-stautory site or any others as a result of the development proposals.

Habitats

3.8 The habitats within the Site are considered to hold limited ecological value, with the majority of the Site comprising regularly managed semi-improved grassland fields. These fields appear to be rotationally managed, with the majority of grassland dominated by coarse grasses.

Mitigation Measures

3.9 A range of measures are set out below to avoid impacts during construction phases of development and promote ecological enhancements across the Site.

3.10 Site personnel will be made aware of the sites sensitive habitats and adopted emergency procedures in the unlikely event of a pollution incident. Spill kits will be provided on-site. Any waste produced arising from the works will be disposed of appropriately off site. This element is directly relevant to point J of condition 7.

3.11 Wheel washes and damping down techniques to be employed to prevent dust contamination where required.

3.12 Protective (e.g. herras) fencing will be installed along the boundary of retained features of ecological value to prevent encroachment of machinery if necessary.

3.13 Any machinery used within this area should keep to existing tracks wherever possible. Any new tracking over habitats will be pre-planned and designed to minimise trampling effects to established habitat.

3.14 Planting will contain native species that are suitable for the existing ground conditions. As detailed within the Stage One Landscaping Strategy, a range of native species have been selected to ensure that diversity and resilience are provided upfront. This relates to point E of condition 7.

3.15 Further to point E of condition 7, wherever possible, existing features that are to be lost to Proposed Development will be reutilised within the retained parts of the Site. Such examples are the use of existing grasslands as a donor source of seed, with green hays collected and distributed across grasslands to be enhanced.

3.16 All retained trees will have root protection zones implemented, with fencing used wherever appropriate to prevent encroachment by machinery. Retained hedgerows will also be fenced (post and marker tape) where required.

Fauna

3.17 Mitigation and management measures associated with the Proposed Development are set out below and in relation to points B, C, H, and I of condition 7.

<u>Bats</u>

3.18 The Site contains three trees with potential roost features, alongside hedgerows offering potential foraging and commuting opportunities.

Mitigation *All trees with roosting bat potential will be retained under the development proposals and will not be impacted. However, should any of these trees require any form or arboricultural works (removal or*

otherwise), further detailed survey work may be required. Should any evidence of roosting bats be found, a licence will be sought from NE prior to removal.

It is considered that boundary hedgerows and treelines within the Site are of some value for foraging and commuting bat species. These features will be retained (with only minor losses to facilitate access) and brought under a biodiversity led regime, ensuring continued opportunities for commuting and foraging bats in the long-term.

To ensure existing dark corridors are retained for commuting and foraging bat species, a sensitive lighting regime will be implemented. The lighting scheme for the proposed development will ensure the new areas of open space on the Site will be retained as dark corridors where possible, with minimal lighting proposed within these areas for reasons of public safety only. Where lighting is proposed for adjacent boundary features, this will be kept to as low as possible (recommended <0.5 lux), with luminaires comprising warm white LED lighting (<3000K) in order to minimise impacts on bats (and their prey species). The siting of individual street lighting columns (to comprise LED lighting with no UV content) will be done so as to avoid light-spill onto semi-natural habitats where possible. Additionally, accessories (such as baffles, hoods or louvres) will be utilised to further minimise light spillage and direct light below the horizontal plane to where it is required (limiting light to an angle of 70 degrees or below wherever possible). The element described here is relevant to point K of condition 7.

Moreover, a significant amount of new, ecologically valuable habitat will be provided alongside existing features, including wetland features, species rich shrub planting and wildflower grassland, all of which will help increase foraging and commuting opportunities for bats over the existing situation.

As a further enhancement, 10 bat boxes will be installed on suitably mature trees. It is recommended that a model which can readily accommodate the bat species recorded within the Site is used such as Schwegler 1FF, of these 10, two will comprise Vincent Pro bat boxes which are of a slotted design and are suitable for Barbastelle. Indicative locations for bat boxes can be found at PlanECO1.

Bat boxes will be checked annually and repaired / replaced if damaged or missing. If a bat box appears

to be repeatedly damaged or disturbed then it will be moved to an alternative suitable location following advice from a suitably experienced ecologist. This is relevant to point I of condition 7.

Site personnel, including the site foreman and relevant managers will be made fully aware of the presence of all roost sites such that no works are programmed which would cause an offence to be committed (damage / disturbance to a roost).

Birds

3.19 There are some opportunities for nesting birds in the hedgerows, trees and scrub within the Site. Of note is the presence of Nightingale, recorded to be utilising the northern boundary of the Site.

Mitigation *any minor clearance of hedgerows or scrub is undertaken outside the main breeding season (between March and the end of August), or alternatively that checks be made for nesting birds by an ecologist immediately prior to any vegetation removal. Any active nest found will be subject to a minimum 5m buffer until the young have fledged and the nest is no longer active.*

Due to the potential presence of Nightingale on site suitable scrub habitat will be retained. Moreover, adverse impacts on Nightingale have been designed out of the proposals through a range of species-specific measures (including scrub habitat in the north to be retained and enhanced for Nightingale). New areas of wide, dense mixed scrub planting which supports dense thickets of Blackthorn, will be provided within the eastern part of the Site. This will increase existing breeding and foraging opportunities for Nightingale. As such it is considered that any minor losses to existing Nightingale habitat are more than off-set through the comprehensive, ecology-led masterplan.

Through the retention of existing vegetation, it is considered the development proposals will maintain the value of the Site for nesting and foraging birds. Moreover, extensive new areas of meadow, wetland and woodland planting, which will include a range of new native berry bearing species, will provide improved foraging opportunities for this group.

In order to provide new breeding opportunities 15 bird boxes will be provided, including Schwegler 1B, 2M and 1N (or similar). All nest boxes will be situated out

of direct sunlight and out of the reach of predators, particularly cats.

Bird boxes will be checked annually and repaired / replaced if damaged or missing. If a bird box appears to be repeatedly damaged or disturbed then it will be moved to an alternative suitable location following advice from a suitably experienced ecologist. This is relevant to point I of condition 7.

Reptiles

3.20 Low populations of Slow Worm and Grass Snake were recorded within the Site. The vast majority of reptiles were recorded on the northern and western boundaries of the Site.

3.21 The proposals will result in some direct impacts upon reptile habitat during Site clearance and construction operations. However, given that reptiles were recorded in very low numbers, it considered any losses to these habitats would be of little significance to the local reptile population.

Mitigation *Given reptiles have only been recorded adjacent to existing hedgerows, it is considered that sensitive removal of grassland will be sufficient to avoid adverse impacts to the local reptile population. Hedgerows across the Site are being retained and protected during the development phase and, with them, the associated grassland margins - thus providing continued opportunities during and post development.*

Any clearance of suitable habitat will be cleared under a precautionary staged and directional cut methodology, with an initial cut no lower than 150mm, followed by a second cut to ground level. These areas will then be managed as unsuitable throughout the construction stage to ensure no reptiles are harmed / killed.

Enhancements for reptiles over the existing situation include new species-rich meadow grassland and wetland habitats, in addition to new eco-tone habitats associated with new scrub and woodland provision. The management regimes of these new species-rich habitats will also be designed with reptiles in mind, with areas of longer grassland encouraged, thus offering a variety of foraging and basking opportunities.

Moreover, the proposals will includenew hibernation and basking opportunities for reptiles in the form of two log piles within areas of open space.

Subject to the above measures being implemented, it

is considered the proposals will deliver a significant enhancement for reptiles, with new opportunities likely to encourage further colonisation of the Site.

Once works have been completed monitoring will take place. Any damage or disturbance to reptile habitat will be remedied such as reseeding meadow grassland as needed. This is relevant to point I of condition 7.

Hazel Dormouse

3.22 Hazel Dormouse were recorded within the Site during specific surveys. Thirteen nests considered attributable to Hazel Dormouse were record within the Site. Two were located in the north-east of the Site within T1. A further five nests were located in the south-west corner of F2 within T8. Six nests were located along the northern boundary of F2 within H2.

3.23 Given the presence of Dormice within the Site, a NE licence will be required for the removal of any significant sections of hedgerow. Detailed mitigation would be agreed with NE as part of the method statement of such a licence application. However, likely mitigation and enhancements measures are provided below.

Mitigation

Any Losses to Dormouse habitat will be fully offset through the provision of new species-rich habitats, including new scrub and woodland planting. These newly provided habitats will provide significantly improved foraging, nesting and dispersal opportunities for Dormouse over the existing situation.

Retained hedgerows on the northern boundary of the Site, and newly provided scrub will be managed specifically for the benefit of Dormice.

Existing hedgerows will only be trimmed every three years and will be maintained at a height of at least 3 to 4 metres. The hedgerows will be managed with a thick structure, and should the hedgerows become gappy or with sparse growth at their bases, will be subject to coppicing/laying to improve their structure. Hedgerow trimming will be carried out outside the bird nesting season and Dormouse breeding season, i.e. will be carried out between November and February (inclusive). This is relevant to point I of condition 7.

New native understorey planting will bolster existing treelines, using a range of shrub species known to be of value to dormice, including Hazel, Blackthorn, Wayfaring Tree Viburnum lantana and Yew Taxus baccata, in addition to Honeysuckle Lonicera periclymenum.

New areas of dense scrub will also use a similar species mix planted in a way which increases green connectivity, and managed long-term to ensure a thick structure.

Stands of Hazel will be provided within the eastern part of the Site and, once established, subject to rotational coppicing to provide yet another valuable habitat.

New woodland planting will also utilise tree species of value to Dormouse, such as Hornbeam Carpinus betulus and Sweet Chestnut Castanea sativa.

As a further enhancement, 10 new Dormouse boxes will be installed within the retained hedgerows/treelines, to provide new breeding opportunities for Dormice. Precise details regarding location of nest boxes will be dealt with at the licencing stage.

Once works have been completed monitoring will take place. Any damage or disturbance will be analysed by a trained ecologist and damages such as missing / damaged Dormouse boxes will be replaced / repaired. If a Dormouse box appears to be repeatedly damaged then it will be moved to an alternative suitable habitat. This is relevant to point I of condition 7.

4. MANAGEMENT OBJECTIVES

4.1 The aims and objectives of the management plan set out within this EMES has been developed in light of the aims and objectives outlined in condition 7.

4.2 The overall aim for the Site is to maintain and enhance features of ecological interest retained within the Site in addition to conserving populations of protected species, while providing for biodiversity enhancements wherever possible.

4.3 Management of the Site ahead of future development also aims to ensure that the development parcels can be retained in a state which is unsuitable for protected species. This will avoid the possibility of an offence being later committed or delays being incurred.

4.4 The following objectives have been identified:

- Objective 1: Maintain and enhance retained and newly created habitats within the Site;
- Objective 2: Maintain populations of protected species identified within the Site;
- Objective 3: Increase biodiversity by maximising opportunities for flora and fauna in retained habitats; and
- Objective 4: Biological recording to monitor efficacy of the Management Plan.

5. MANAGEMENT OF ECOLOGICAL NETWORKS AND FEATURES

5.1 The delivery of mitigation and management will be delivered in a staged basis relating to progression of development. This management strategy includes details relevant to wider Proposed Development.

5.2 Management prescriptions and monitoring requirements, covering points A and F of condition 7, have been described below.

Objective 1: Maintain and Enhance Retained and Created Habitats

5.3 New planting has been proposed throughout as part of the landscaping strategy. This will strengthen existing tree groupings and provide green structure, improving connectivity between created and established green infrastructure. Supplementary planting will be undertaken within the Site during the course of the development.

Habitats

5.4 Retained and created habitats of ecological value within protection and management proposals are detailed below.

Retained tree lines and planted trees

5.5 Where mature trees are to be retained, these will be subject to appropriate arboriculture management where necessary, to help prolong their life but also make them safe in light of the proximity of future development and public open space. The condition of the mature trees within the Site will be monitored every two years, for the life of this EMES.

5.6 All tree protection measures, such as fencing associated with root protection zones will be maintained in good working order until such time as it is not required. Parts of the Site that are operational will not require such fencing, whilst other areas still within the construction phase will retain such protections.

5.7 Supplementary planting will be undertaken within the Site during the course of the development. New planting has been proposed throughout the Site as part of the Stage 1 landscaping strategy. This will strengthen existing tree groupings and provide green structure, improving connectivity between created and established green infrastructure, it will also enhance tree groups by adding new native species to the site. Existing retained treelines will be enhanced with new native understory planting using a range of shrub species known to be of value to dormice, including Hazel, Blackthorn, Wayfaring Tree *Viburnum lantana* and Yew *Taxus baccata*, in addition to Honeysuckle *Lonicera periclymenum*.

5.8 On going management of trees and tree groups will be determined through findings of monitoring effort. Monitoring should be undertaken annually by a suitably qualified arboricultural consultant. Trees will be subject to regular health checks to assess impacts of severe weather for

example. Subject to these health checks, retained trees should be allowed to develop naturally.

5.9 Where necessary, tree groups will be thinned once every 5 to 8 years in order to allow for development of an understorey and ground flora. Suitable woodland seed mix will be utilised in areas to promote the establishment of species rich ground flora. Areas of dense pernicious species such as Common Nettle and Bramble will be cleared (either by hand tools or by herbicide application, dependent on the pernicious species prevalence) prior to any application of seed mixes and controlled as necessary thereafter.

5.10 Any arboricultural management e.g. pruning / lopping will be carried outside the bird nesting season (March – August inclusive) to avoid any potential offence, or after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present. Where possible any dead wood produced will be retained as an ecological feature, either as standing deadwood or as log piles, offering new habitat for saproxylic invertebrates.

5.11 Management of habitats will be developed with specific reference to the conditions set within the BNG Metric and the details provided therein to ensure that target conditions are met. This will include ensuring unbroken canopy layers, appropriate semi-natural habitats within the ground layers, control of injurious weeds and ensuring appropriate densities of hedge and tree species within lengths of linear habitat.

Hedgerows

5.12 Hedgerows are mostly being retained across the site. The existing hedgerows will only be trimmed every three years and will be maintained at a height of at least 3 to 4 metres. The hedgerows will be managed with a thick structure, and should the hedgerows become gappy or with sparse growth at their bases, will be subject to coppicing/laying to improve their structure. Hedgerow trimming will be carried out outside the bird nesting season and Dormouse breeding season, i.e. will be carried out between November and February (inclusive).

5.13 Management of habitats will be developed with specific reference to the conditions set within the BNG Metric and the details provided therein to ensure that target conditions are met. This will include ensuring functional group criteria are meet such as height and widths of the features, appropriate undamaged semi-natural habitats within the ground layers, control of injurious weeds and ensuring appropriate densities of hedge and tree species within lengths of linear habitat.

Waterbody

5.14 Areas within the waterbody will be planted and sown with an appropriate seed mix (Emorsgate EM8 or similar) prior to the completion of the development during either the autumn or spring to ensure best results.

5.15 The grassland will be managed with a more intensive mowing regime in the first year to aid initial establishment of the wildflower species. Once established the grassland will then only be cut to 150mm every year on rotation with no more than 1/2 of the vegetation managed each year. This grassland will be cut between August and September.

5.16 Aquatic vegetation will be subject to partial removal if the waterbody becomes overgrown. This vegetation will be removed in the autumn and left adjacent to the ponds for a day to ensure no pond life is present within the vegetation before the vegetation is removed.

5.17 The pond will be monitored on a yearly basis to ensure no invasive species colonise the ponds (including Duckweed). Should invasive species be noted, these will be treated appropriately and with due consideration to the wildlife present within the pond.

5.18 Where leaf litter is noted to be negatively affecting the waterbody, this will be removed preferably during the winter months.

5.19 Marginal vegetation will consist of native species and be managed if it becomes overgrown. This vegetation will be cut in the autumn and left adjacent to the pond for a day to ensure no amphibians are present within the vegetation before the vegetation is removed.

5.20 Management of habitats will be developed with specific reference to the conditions set within the BNG Metric and the details provided therein to ensure that target conditions are met. This will include ensuring low pollution and turbidity within the water, suitable planting surrounds the pond, duckweed is controlled. No obvious dam, pumps or pipes will be installed and no stocking of fish will be permitted.

Species-rich Grassland

5.21 New planting consists of native species of local provenance or species of known value to wildlife wherever possible. The new landscape planting will provide additional habitats for species such as invertebrates, Dormouse and birds.

5.22 Meadow grassland within the Site will be established and maintained in line with the supplier's recommendation, although cutting will be undertaken on a rotational basis to enhance the variation and diversity of meadow habitats. Cuttings should be left on site to dry for approximately seven days prior to removal in order to allow for seeds to disperse.

5.23 Areas of newly created wet grassland will be subject to a more irregular mowing regime, with management undertaken on a twice-yearly basis where necessary. However, management requirements associated with the successful functioning of the SuDS may dictate more regular management in some circumstances.

5.24 Whilst amenity grassland habitats will generally be subject to an intensive cutting regime, where possible areas may be left to grow

longer, allowing herb and grass species to flower and providing biodiversity benefits.

5.25 By complying with the management regimes above, the need for additional management to grassland habitats in the form of weed removal or scrub clearance will be largely alleviated. However, Bramble and other scrub in tussocky grassland areas will be controlled through additional cutting every two to three years between October and February inclusive, with no more than 50% of the area cut in any one year.

5.26 Management of habitats will be developed with specific reference to the conditions set within the BNG Metric and the details provided therein to ensure that target conditions are met. This will include ensuring an appropriate species density within the sward, sward height is varied above and below 7cm, bareground areas are maintained below 5% and invasive species are removed.

Mown Grass

5.27 The areas of mown grass paths will be cut on a regular basis. Checks will be made monthly and the grass will be cut when it reaches **100mm** long, back to a length of **35mm**. Mowing will be required more frequently during the spring / summer seasons.

5.28 Management of habitats will be developed with specific reference to the conditions set within the BNG Metric and the details provided therein to ensure that target conditions are met. This will include ensuring an appropriate species density within the sward, sward height is varied above and below 7cm, bareground areas are maintained below 5% and invasive species are removed.

Scrub

5.29 Scrub is getting created and maintained at the Site, the management will initially aim to ensure the successful establishment of this habitat, newly provided scrub will be managed specifically for the benefit of Dormice.

5.30 New areas of dense scrub will use a similar species mix to the retained scrub planted in a way which increases green connectivity, and managed long-term to ensure a thick structure. Stands of Hazel will be provided within the eastern part of the Site and, once established, subject to rotational coppicing to provide yet another valuable habitat.

5.31 Management in the first 5 years will comprise periodic control of ruderal vegetation / long grassland present in close vicinity to newly planted trees and scrub. Whilst some minor trimming may be undertaken at the boundaries dense scrub blocks, it is not envisaged that any specific management would be required within these areas for the first 5 years, beyond monitoring of new planting and replacement where necessary.

5.32 Management of habitats will be developed with specific reference to the conditions set within the BNG Metric and the details provided therein to

ensure that target conditions are met. This will include ensuring that species cover is suitably diverse (less than 75% cover by one species), age diversity is maintained, clearings are maintained, and taller understorey / edge habitat is maintained.

Objective 2: Maintain populations of protected species identified within the Site

5.33 Within the Site, habitat enhancement through the introduction of an appropriate management regime, will provide for a net enhancement in the quality of retained habitat present. This will be of benefit to species / groups such as bats, birds, reptiles and Dormice.

5.34 Management and maintenance of habitats in respect of each of these identified species/groups is discussed below.

Bats

5.35 Any remedial work required to ensure the health and longevity of trees and associated features that may be of value to bats will be undertaken at the earliest possible opportunity. Any such work will be undertaken on the advice of an appropriately experienced ecologist, with consideration given to any licensing requirements.

5.36 All bat boxes erected will be subject to annual condition checks during the winter period when bats would not normally be resident. Any remedial work or replacement of boxes would be undertaken ahead of the next active season for bats (normally from April) and following advice from a suitably qualified ecologist.

Reptiles

5.37 Artificial hibernacula are to be created in the form of log piles within open space. Should any maintenance be required, this will be undertaken as soon as possible and outside the period where reptile may be hibernating (i.e. during late Spring or Summer). This will continue on a long-term basis for the life of the development.

5.38 Further terrestrial habitat will be made available to reptile in the form of new species-rich meadow grassland and wetland habitats, in addition to new eco-tone habitats associated with new scrub and woodland provision. The management regimes of these new species-rich habitats will also be designed with reptiles in mind, with areas of longer grassland encouraged, thus offering a variety of foraging and basking opportunities.

Dormouse

5.39 Areas of retained habitat will be protected throughout construction by the implementation of temporary protective fencing in areas adjacent to construction activities. Once construction is complete, these habitats will be protected through the implementation of a long-term habitat management plan.

5.40 Long-term the retained hedgerows will be managed and maintained specifically for the benefit of Dormice. The existing hedgerows will only be trimmed every three years and will be maintained at a height of at least 3 to 4 metres. The hedgerows will be managed with a thick structure, and should the hedgerows become gappy or with sparse growth at their bases, will be subject to coppicing/laying to improve their structure.

5.41 Hedgerow trimming will be carried out outside the Dormouse breeding season, i.e. will be carried out between November and February (inclusive).

5.42 Dormouse nest boxes will also be placed around the site, increasing and improving opportunities for Dormice.

Birds

5.43 The development proposals will retain the majority of the existing foraging and nesting opportunities for birds within the site. Moreover, the provision of a new shrub and tree planting, as part of the landscape proposals will provide new suitable nesting and foraging opportunities for birds to offset any losses. The provision of new berry/fruit-bearing species will also provide seasonal resources for birds.

5.44 The proposed development will incorporate new opportunities for breeding birds also. A range of bird boxes including Schwegler 1B (or similar) will be erected on suitable retained trees. Old nesting material to be removed from bird boxes in January and thoroughly cleaned to remove remaining parasites. No insecticides to be used when cleaning boxes. These boxes will maximise the species complement attracted to the Site. Any damaged or lost bird boxes will be replaced.

5.45 Management of habitats will be undertaken with due consideration for potential use by birds. Cutting of vegetation, particularly those features that provide important nesting habitats (including hedgerows and trees) and provide foraging resources (such as berries) will be undertaken during the winter months.

Objective 3: Increase Biodiversity by Maximising Opportunities for Flora and Fauna

5.46 All retained grassland will be managed sensitively to increase its biodiversity value.

5.47 Habitats will be managed to retain a diverse habitat mix. This will increase plant species diversity and will provide an important habitat matrix for a range of invertebrate species.

5.48 Additional tree planting associated with the development of the Site will comprise a significant proportion of native species, or those of benefit to

Wildlife (berry/nut bearing varieties of shrubs and trees). These will be of benefit to a range of faunal species/groups including birds and invertebrates.

5.49 Tree / woodland management within the Site will increase diversity within these areas, creating a diverse ground flora which will provide benefitsfor faunal species/groups including invertebrates, bats and birds.

5.50 Log piles will be created within areas of open space to provide suitable hibernacula for reptiles.Their condition will be monitored with maintenance undertaken to ensure they continue to provide suitable sheltering habitat.

5.51 New bat and bird roosting / nesting provisions will be maintained to ensure a continued resource for these groups in the medium – long term.

5.52 The Biodiversity Net Gain calculation carried out for this site shows a net gain in excess of 10%.

Objective 4: Biological recording to monitor efficacy of the Management Plan

5.53 Habitat, landscape and protected species will be monitored on an annual basis by a suitably experienced person. In the event of any ecological issues a suitable qualified ecologist will be contacted.

5.54 In the event that the findings of the ongoing monitoring deviate from the objectives set in this EMES, then it will be reviewed, in consultation with the planning authority and Natural England (as appropriate), and will be adapted as appropriate.

6. ARRANGEMENTS FOR MAINTENANCE AND MANAGEMENT

6.1 This section of the EMES outlines the arrangements for the delivery, maintenance and management of the EMES area. This section should be considered in the light of the Section 106 agreement for this planning application, which will be confirmed with the Local Planning Authority as part of the application process.

6.2 The initial capital works shall be implemented and funded by the developer and would be delivered prior to first occupation of development.

6.3 It is expected that the ongoing funding and management of the EMES area would be undertaken by a Management Company appointed by the developer, potentially funded by an ongoing service charge on new properties, with step-in rights for the Council should there be any issues regarding the management of the site or in the unlikely event that the Management Company ceases to exist.

6.4 The details of ongoing management of the EMES would be outlined and secured via an appropriately worded Section 106 legal agreement.

6.5 This EMES will be implemented for a minimum of 30 years are required within relevant BNG legislation.

PLANS

PLAN ECO1

Species Enhancement Measures



Key:

- Reptile log pile

Bird boxes

- Schwegler 1B
- Schwegler 1N
- Schwegler 2M

Bat boxes

- Vincent Pro
- Schwegler 1FF

N

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12039: LAND AT DUCKMOOR, EAST OF BILLINGSHURST

PLAN ECO1: SPECIES ENHANCEMENT MEASURES

MAY 2024
REV: A

QGIS.org (2020). QGIS Geographic Information System. Open Source Geospatial Foundation Project. http://qgis.org -Based upon Detailed Landscape Masterplan Drawing No. LN-LD-01 (Rev A) produced by Stantec.

APPENDICES

APPENDIX 1

Bat Boxes

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 existing external walls at a height of 5-6 metres.



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: 8.3kg

Images and text adapted from manufacturer's website: *https://www.schwegler-natur.de/fledermaus/?lang=en*

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APPENDIX 2

Bird Boxes

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

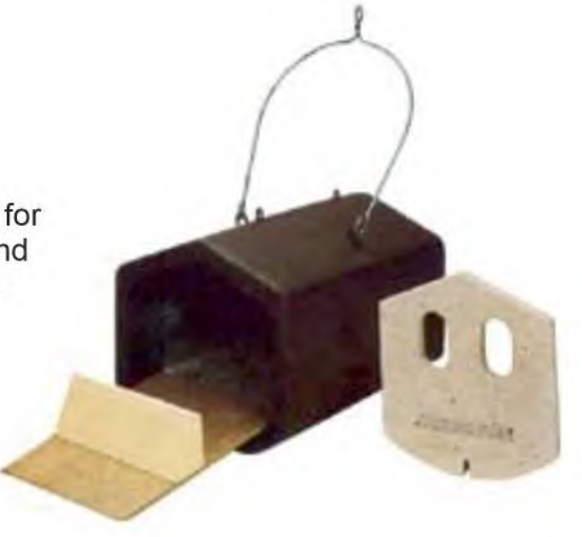
This is the most popular box for garden birds and appeals to a wide range of species. The box can be hung from a branch or nailed to the trunk of a tree with a 'tree-friendly' aluminium nail.

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

1N Deep Nest Box

A deeper than standard nest box which is ideal for robins, spotted flycatchers, pied wagtails, tits and sparrows. Its depth offers protection from cats, magpies, jays and martens.

2 *Entrance holes, 30 x 50mm. Nesting area 15 x 21cm.*





2M Bird Box

A free-hanging box offering greater protection from predators.

Supplied complete with hanger which loops and fastens around a branch.

With standard general-purpose 32mm diameter entrance hole.

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.

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