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Habitat Enhancement Plan

Reading Golf Club, 17 Kidmore End Road, Reading, RG4 8SQ

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Report Summary

1. The Ecology Co-operation was commissioned by Vistry Group to produce a Habitat Enhancement Plan detailing habitat creation, enhancement and management measures for a proposed residential development (comprising 223 plots) at Reading Golf Club.

2. The development will see the provision of the following new habitat:

On-site

- **0.42ha of sustainable urban drainage feature (SUDS)**
- **1.92ha of other neutral grassland**
- **0.1ha of mixed scrub**
- **138 individual trees (urban trees)**
- **0.21km of native species-rich hedgerow**
- **0.49km of native hedgerow**

3. The development will seek to enhance:

On-site

- **0.3ha of modified grassland**

4. Species-specific enhancements to be incorporated within the development site include:

- **installation of twenty new bat boxes on trees**
- **integration of twenty new bat roosting features within new buildings**
- **installation of twenty new bird boxes on trees**
- **integration of ten swift boxes and ten house sparrow boxes within new buildings**
- **creation of five large log piles within suitable habitat**
- **installation of ten new hedgehog houses within gardens**
- **creation of 'hedgehog highways' throughout the development**

CONTENTS PAGE

1 INTRODUCTION 5

1.1 Purpose of the Report 5
1.2 Background 5
1.3 Policy & Legislation 8
1.4 Management Plan Strategic Vision 8

2 HABITAT CREATION 8

2.1 On-site 9
2.1.1 Wet Grassland 9
2.1.2 Species-Rich Grassland 10
2.2 Mixed Scrub Creation 12
2.3 Tree Planting 13
2.4 Hedgerow Planting 14

3 HABITAT ENHANCEMENT 15

4 SPECIES-SPECIFIC ENHANCEMENTS 15

4.1 Bats 16
4.2 Nesting Birds 19
4.3 Invertebrates 23
4.4 Hedgehogs 24

5 POST CONSTRUCTION MANAGEMENT 25

5.1 On-site 25
5.1.1 Grassland (SUDS, Species-rich Neutral Grassland & Modified Grassland) 25
5.1.2 Hedgerows 26
5.1.3 Retained Trees 27
5.1.4 Mixed Scrub 27
5.1.5 Other 27

6 WORK SCHEDULE 28

7 TIME FRAME AND IMPLEMENTATION 28

8 MONITORING AND REVIEW 28

9 COMPETENCIES, STANDARD AND SPECIFICATIONS OF WORKS 29

1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op was commissioned by Vistry Group to provide details regarding habitat creation/enhancement and management plans for a residential development at Reading Golf Club, Reading. This document has been written to demonstrate how the development of up to 223 new dwellings will provide targeted enhancement measures through habitat creation and the management of these habitats over a 10-year period.

The prescribed enhancement measures described within this document will be issued to relevant works contractors to ensure that they are carried out in full. Implementation of this will be overseen by a suitable ecological consultancy, and the works contractor will be given contact details for an ecologist so that any issues can be resolved promptly.

1.2 Background

The site is located at Reading Golf Club, 17 Kidmore End Road, Emmer Green, Reading RG4 8SQ. The central grid reference for the site is SU 7150 7689. The location of the site is shown in Figure 1.

The application site covers approximately 12ha (the entire course covers approximately 43.5ha) and operated as an active golf course up until 2020, containing: fairways, greens, tree belts. The clubhouse building and an adjacent dwelling, located at the south-eastern corner of the site, are included within the current assessment.

The proposed development includes construction of 223 residential plots along with associated soft and hard landscaping (see Figure 2).

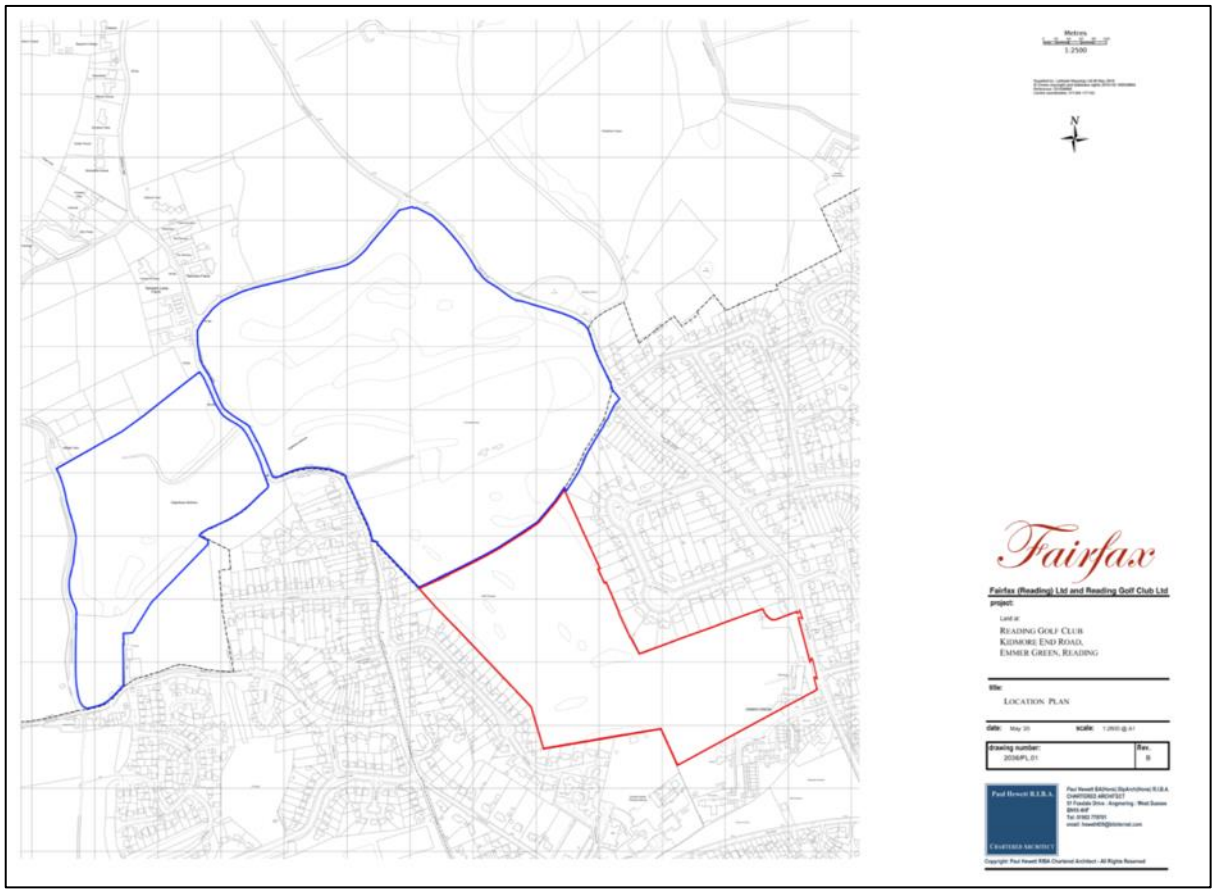

Figure 1. A plan showing the extent of the application site (outlined in bold red) within the wider landholding of Reading Golf Club (outlined in blue). Drawing Number 2036/PL.04 Rev B. Plan provided by Paul Hewett.

Figure 2. Proposed scheme layout for the development at Reading Golf Club, reproduced from ECE Architecture (Drawing No. PL-054 Rev C) (Dated 09.06.22).

Outline planning consent for the scheme was granted in March 2022. Condition 19 of planning consent reference 211843 states:

"No development shall commence on site (including demolition or preparatory works) until details of a habitat enhancement scheme have been submitted to and approved in writing by the Local Planning Authority. The scheme is to include a programme for implementation and ongoing maintenance of the habitat enhancement measures and shall include specific measures to ensure the ensure the green links across the site are retained. The habitat enhancement scheme shall thereafter be implemented and adhered to in accordance with the agreed programme.

REASON: Details are required prior to commencement as insufficient information was submitted with the application and in order to avoid harm to habitats and species whilst securing biodiversity enhancement in the long term. This accords with Paragraph 175 of the NPPF (2019), Policy EN12 of the Reading Borough Local Plan 2019, the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017."

This report serves to allow for the discharge of condition 19.

1.3 Policy & Legislation

The National Planning Policy Framework (NPPF) sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regards to the operation of the planning system.

Paragraph 174b, states that council policies should;

- "promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

Paragraph 175d, states that when determining planning applications, authorities should:

- Refuse permission "if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for"
- Encourage "opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity."

Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system[1].

In accordance with the NPPF, it is important that developments should contribute to local policies that enhance the natural environment by:

- minimising impacts on existing biodiversity and habitats and designated features,
- establishing coherent ecological networks that are more resilient to current and future pressures
- providing net gains in biodiversity and habitats, wherever possible.

1.4 Management Plan Strategic Vision

The aims and objectives for the landscape and biodiversity at this site are as follows:

- creation of new green assets; wildflower meadows, boundary planting, hedgerows and wildlife-friendly gardens
- enhancement of the site for bats, birds, invertebrates and hedgehogs.

2 HABITAT CREATION

The following new habitats will be created during the construction phase of this project: species-rich grassland, Sustainable Urban Drainage Systems (SUDS), hedgerow, trees and tree groups and

[1] HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf.

structured edge planting. The methods proposed for the creation of each habitat type are described in detail below.

2.1 On-site

2.1.1 Wet Grassland

Areas of SUDS to be created within the site will create wetland habitat through provision of ephemeral waterbodies and wet grassland within the site (see Figure 4). These areas of attenuation will be sown with a wet grassland seed mix which will cover 0.42ha. The species included must all be of native British origin (an example seed mixture is EM8 – 'Meadow mixture for wetlands', available from Emorsgate seeds - www.wildseed.co.uk). Seed will be sown between late August and the end of September during mild and wet weather or between mid-March to mid-May, when the ground has sufficient moisture and there is very little risk of frosts, to ensure the best conditions for seedling establishment.

Table 1. Composition of EM8 – Meadow mixture for wetlands' available from Emorsgate seeds (www.wildseed.co.uk).

Wildflowers		
%	Latin name	Common name
0.5	*Achillea millefolium*	Yarrow
1	*Betonica officinalis - (Stachys officinalis)*	Betony
3	*Centaurea nigra*	Common knapweed
0.4	*Filipendula ulmaria*	Meadowsweet
3	*Galium verum*	Lady's bedstraw
0.5	*Geranium pratense*	Meadow crane's-bill
0.5	*Leontodon hispidus*	Rough hawkbit
1.8	*Leucanthemum vulgare*	Oxeye daisy
0.2	*Lotus pedunculatus*	Greater birdsfoot trefoil
1	*Plantago lanceolata*	Ribwort plantain
0.5	*Primula veris*	Cowslip
0.4	*Prunella vulgaris*	Selfheal
0.8	*Ranunculus acris*	Meadow buttercup
0.8	*Rhinanthus minor*	Yellow rattle
1.4	*Rumex acetosa*	Common sorrel
0.1	*Sanguisorba officinalis*	Great burnet
0.3	*Silaum silaus*	Pepper saxifrage
1.7	*Silene flos-cuculi - (Lychnis flos-cuculi)*	Ragged robin
0.3	*Succisa pratensis*	Devil's-bit scabious
0.6	*Taraxacum officinale*	Dandelion
0.8	*Vicia cracca*	Tufted vetch
Grasses		
10	*Agrostis capillaris*	Common bent
3	*Alopecurus pratensis*	Meadow foxtail
3	*Anthoxanthum odoratum*	Sweet vernal-grass
3	*Briza media*	Quaking grass
24	*Cynosurus cristatus*	Crested dogstail
2	*Deschampsia cespitosa*	Tufted hair-grass

32	*Festuca rubra*	Slender-creeping red-fescue
3	*Hordeum secalinum*	Meadow barley

Marginal wetland plants will be planted within the SUDS at a density of three plugs per square metre of suitable marginal habitat. The species-mix will incorporate but not be limited to:

- purple loosestrife *Lythrum salicaria*
- yellow loosestrife *Lysimachia vulgaris*
- sharp flowering rush *Juncus acutiflorus*
- carnation sedge *Carex panicea*
- water avens *Geun rivale*

The plants listed above are available in early autumn and spring, dependent upon species, and should be planted as soon as possible following the creation of the SUDS.

Figure 3. The extent of new areas of wet grassland and ditch habitat to be created within the development's Sustainable Urban Drainage Systems (SuDS) at Reading Golf Club. Produced using QGIS software.

2.1.2 Species-Rich Grassland

A total area of 1.92ha of species-rich grassland will be created within areas of public open space within the developed site (Figure 4).

Good ground preparation by rotavating the soil is essential to the success of establishing a wildflower meadow habitat, followed by sowing a suitable seed mix between late August and the end of September

during mild and wet weather or between mid-March to mid-May, when the ground has sufficient moisture and there is very little risk of frosts, to ensure the best conditions for seedling establishment. The rotavating process is intended to create an area of largely bare ground to allow the wildflower seed mix to establish. A suitable seed mixture for neutral soils, containing not less than 18 wildflower and grass species should be sown across the ground at a density of four grams per square metre. The species included must all be of native British origin (an example seed mixture is Emorsgate EM2 – Standard General Purpose Meadow Mixture', available from Emorsgate seeds (www.wildseed.co.uk). Table 1 details the composition of this mixture. In addition, to help ensure grasses do not suppress the growth of wildflowers, the introduction of no less than 100 grams of yellow rattle *Rhinanthus minor* will be included per 0.1ha of new wildflower habitat.

Table 2. Composition of Emorsgate EM2 – Standard General Purpose Meadow Mixture available from Emorsgate seeds (www.wildseed.co.uk).

Wildflowers		
%	Latin name	Common name
1	*Betonica officinalis - (Stachys officinalis)*	Betony
3.5	*Centaurea nigra*	Common Knapweed
0.1	*Daucus carota*	Wild Carrot
1	*Filipendula ulmaria*	Meadowsweet
0.3	*Galium verum*	Lady's Bedstraw
0.5	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
0.9	*Lotus corniculatus*	Birdsfoot Trefoil
1	*Malva moschata*	Musk Mallow
2	*Plantago lanceolata*	Ribwort Plantain
0.1	*Primula veris*	Cowslip
0.1	*Prunella vulgaris*	Selfheal
1	*Ranunculus acris*	Meadow Buttercup
3.5	*Vicia cracca*	Tufted Vetch
Grasses		
8.5	*Agrostis capillaris*	Common Bent
34	*Cynosurus cristatus*	Crested Dogstail
25.5	*Festuca rubra*	Red Fescue
17	*Poa pratensis*	Smooth-stalked Meadow-grass

Figure 4. The extent of new areas of species-rich grassland habitat to be created within the development at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

2.2 Mixed Scrub Creation

0.1ha of mixed scrub is to be created within and around the areas of SUDS, (Figure 5). This will provide good nesting bird habitat and foraging opportunities for a variety of species. The species listed below can be planted in small sections to provide landscaping.

- dog rose *Rosa canina*;
- blackthorn *Prunus spinosa*;
- hawthorn *Crataegus monogynya*;
- grey willow *Salix cinerea;*
- goat willow *Salix caprea;*
- common broom *Cytisus scoparius*;
- gorse *Ulex europaeus*;
- guelder rose *Viburnum opulus*; and
- common dogwood *Cornus sanguinea*.

Figure 5. The extent of scattered scrub habitat and associated wet grassland (SUDS) to be created within the development at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

2.3 Tree Planting

A minimum of 138 new trees will be planted within the development. The landscaping plan will incorporate a variety of trees with most species to be UK natives and all to be sourced from UK stock only. This will create greater habitat for a variety of birds and invertebrates. Given the arrival of ash dieback, it is not recommended that ash *Fraxinus excelsior* saplings are planted anywhere on the site. All trees will be planted with biodegradable tree guards to prevent damage resulting from browsing by deer. Tree species to be planted within the site are:

- silver birch *Betula pendula*
- beech *Fagus sylvatica*
- pedunculate oak *Quercus robur*
- wild service tree *Sorbus torminalis*
- field maple *Acer campestre*
- alder *Alnus glutinosa*
- midland hawthorn *Crataegus laevigata*
- crab apple *Malus sylvestris*
- wild cherry *Prunus avium*
- common whitebeam *Sorbus aria*
- rowan *Sorbus aucuparia*

2.4 Hedgerow Planting

A minimum of 210m of new species-rich native hedgerow habitat is to be planted along the northern boundary of the development providing increased foraging and commuting habitat for bats plus nesting areas for birds, sheltering/foraging habitat for hedgehogs and an enhancement for a variety of invertebrates. Figure 6 shows the locations of new hedgerow habitat.

This new species-rich hedgerows must use only native species from UK stock and include at least 6 species, with at least 50% of the new hedgerow comprising blackthorn *Prunus spinosa* or hawthorn *Crategous monogyna* to remain consistent with a traditional hedge and provide a good hedge structure. The following species are recommended in addition to the hawthorn or blackthorn which will make up 50% of the hedging:

- field maple
- wild privet *Ligustrum vulgare*
- dogwood
- hazel Corylus avellana
- guelder rose
- purging buckthorn *Rhamnus cathartica*
- spindle *Euonymus europaea*
- Wayfaring tree *Viburnum lantana*

New hedgerows should be planted with five plants per linear meter as a minimum and it is best to plant the trees as bare root stock whilst they are dormant between November and March in the absence of heavy frost. Biodegradable guards to protect these hedge trees from rabbits and deer may be necessary.

Figure 6. The extent of new species-rich hedgerow and native ornamental hedgerow habitat to be created within the development at Reading golf Club. Produced using QGIS Software (Version 3.16 Hannover).

3 HABITAT ENHANCEMENT

The development will see the enhancement of 0.34ha of retained modified grassland within the development site (Figure 4).

The proposed scheme will see the condition of the grassland raised from its existing 'poor' condition to 'good' condition post-intervention[2]. In order to achieve this, the grassland will be seeded with Emorsgate EM2 – Standard General Purpose Meadow Mixture with the addition of yellow rattle and will subsequently be managed (see section 5) to maximise its biodiversity value.

The ground will be prepared through mechanical disturbance of 40-50% of the existing grass to create areas of exposed soil. Seed can then be sown by surface broadcasting in Autumn to prevent fast-growing grasses outcompeting the newly sown wildflower mix.

4 SPECIES-SPECIFIC ENHANCEMENTS

The following sections outline the enhancement measures proposed to specifically benefit: bats, nesting birds, notable invertebrates and hedgehogs.

[2] The Ecology Co-op (2022) *Reading Golf Club – Biodiversity Impact Calculation Rev 1.1*

4.1 Bats

To enhance the site for roosting bats, twenty new bat boxes will be installed on retained trees within the development site. It is recommended that a combination of different bat box designs are used (Figure 7).

Figure 7. Left to right – 2F Schwegler bat box, 1 FD Schwegler bat box, 2FN Schwegler bat box, Vivara Pro Woodstone bat box, Eco Kent bat box and Improved Cavity bat box

Figure 8 shows proposed approximate positions for the bat boxes. The boxes would be hung by a suitably qualified ecologist to ensure that this positioning is most suitable, but generally locations above 3.5 metres in the most south easterly facing aspect of a tree is best.

Figure 8. Proposed locations of bat boxes to be installed on retained trees within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

As a measure to further enhance roosting opportunities for bats 'built in' roosting features will be incorporated into the dwellings. Twenty 1FR Schwegler bat tubes (Figure 9) will be integrated into the walls (primarily at the southern elevations), no less than 4 metres above ground level, but as close to the apex of a gable wall where possible, as demonstrated in Figure 11. Figure 10 shows proposed locations of these bat roosting features. The bat tubes will be installed within the following plot numbers of the development:

- 1
- 13
- 17
- 24
- 48
- 49
- 63-64
- 75
- 86
- 96
- 100
- 105
- 129
- 148

- 154
- 162-173
- 176
- 181
- 215
- 223

Figure 9. Left – A bat tube integrated into a brick wall. Right – a cross section diagram of a bat tube.

Figure 10. Proposed locations of bat tubes to be integrated into new buildings within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

4.2 Nesting Birds

In order to enhance the site for nesting birds twenty nesting bird boxes, incorporating a variety of designs (Figure 11), will be installed on retained trees across the site. Proposed locations for the boxes are shown in Figure 12.

Figure 11. Left to right – Vivara Pro Seville 28mm Woodstone Nest Box, Vivara Pro Barcelona Woodstone Open Nest Box, Vivara Pro Tawny Owl Nest Box, FSC Treecreeper Nest Box, 2GR Schwegler Nest Box and a Traditional Wooden Nest Box.

Figure 12. Proposed locations of bird boxes to be installed on retained trees within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

As a further enhancement to nesting birds, a total of 20 swift nest boxes and 10 integrated house sparrow nest boxes (Figure 13) will be integrated into the new buildings within the site. Swift boxes will be installed as high as possible below the eaves, whereas sparrow boxes will be installed at least 3m above ground in close proximity to areas of shrubs within new gardens. Boxes will be integrated into the northern or eastern elevations of buildings; proposed locations of integrated bird boxes are shown in Figure 14.

Figure 13. Left – Woodstone Build-in Swift Box B. Right – Vivara Pro Woodstone House Sparrow Nest Box.

Two integrated swift boxes will be installed together within each of the following plot numbers of the development:

- 3
- 145
- 151
- 159
- 108
- 111
- 115
- 180
- 214
- 215

The integrated house sparrow boxes will be installed within the garage buildings of the following plot numbers of the development:

- 25
- 32
- 42
- 90
- 97
- 108
- 180
- 200
- 203
- 210

Figure 14. Proposed locations of bird boxes to be integrated into new buildings within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

4.3 Invertebrates

In addition to the creation of new species-rich grassland and new woodland within the wider landholding of Reading Golf Club, new deadwood habitat will be incorporated within these new habitats as well as amongst areas of open space within the development site itself. These areas of deadwood will provide an enhancement for a variety of saproxylic invertebrates including stag beetles *Lucanus cervus*.

A total of five large log piles will be created in shaded areas within the development site. Alternatively, larger logs can be sunk vertically into the ground with holes drilled into the wood to create opportunities for saproxylic invertebrates. A further ten large log piles will be created off-site within the newly created species-rich grassland and existing/newly created woodland.

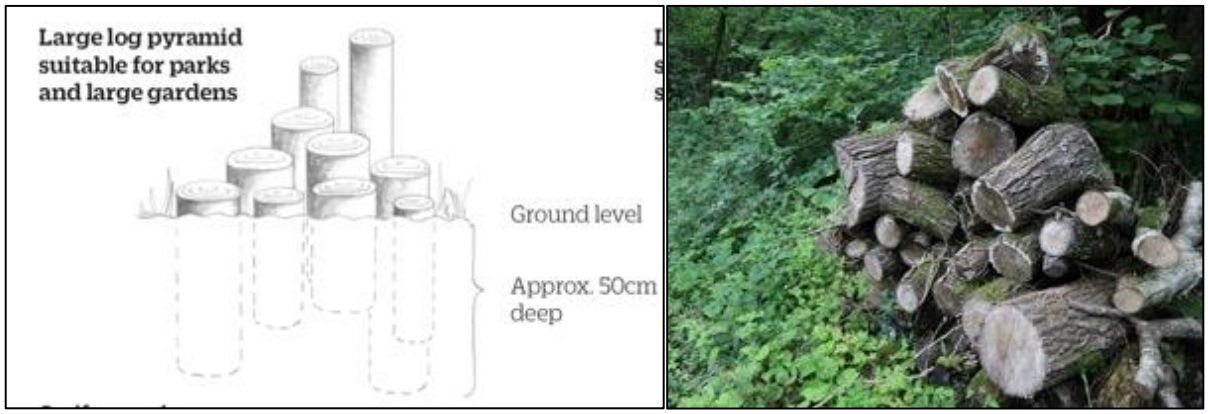

Figure 15. Left – a diagram of a vertical log pile designed specifically for stag beetles (*Source: Peoples Trust for Endangered Species)*. Right – A traditional horizontal laid log pile.

4.4 Hedgehogs

All new garden fencing should contain accessible gaps (10cm x 15cm) at their base to allow movement of hedgehogs between garden plots. A total of ten hedgehog houses will be installed within gardens of the new development. The locations of hedgehog houses and extent of the 'hedgehog highways' created by gaps in garden fencing are shown in Figure 17.

Figure 16. Left – a hole at the base of garden fencing to allow hedgehog movement. Right – an Igloo Hedgehog Home.

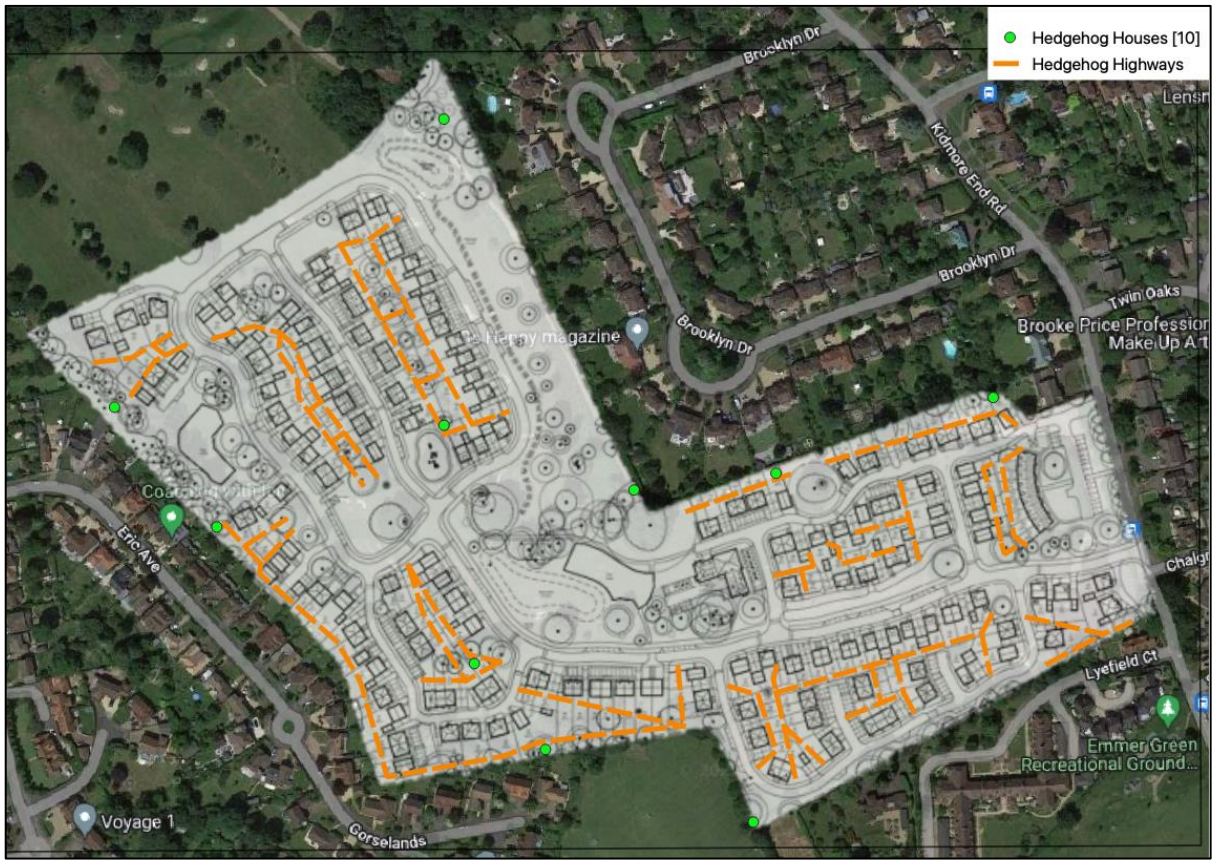

Figure 17. The extent of 'hedgehog highways' created by holes in fencing and proposed locations of hedgehog houses within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

5 POST CONSTRUCTION MANAGEMENT

5.1 On-site

5.1.1 Grassland (SUDS, Species-rich Neutral Grassland & Modified Grassland)

<u>Year 1</u>

Most sown meadow wildflower and grass species are perennial; they will be slow to germinate and grow and will not usually flower in their first growing season. There will often be a flush of annual weeds from the soil in the first growing season which may grow up and obscure the meadow seedlings beneath. This annual weed growth is easily controlled by topping or mowing.

The newly sown meadows will be mown 3-4 times throughout the first year of establishment to a height of 40-60mm, removing cuttings. This will control annual weeds and help maintain balance between faster growing grasses and slower developing wildflowers.

Avoid cutting in the spring and early summer if the mixture has been sown with a nurse cover of cornfield annuals, or is autumn sown and contains yellow rattle. These sown annuals should be allowed to flower, then in mid-summer cut back and the cut vegetation removed. It is important to cut back cornfield annuals before they die back, set seed or collapse: this cut will reveal the developing meadow mixture and give it the space it needs to develop.

Carefully dig out or spot treat any residual perennial weeds such as large docks.

Yearly management

In the second and subsequent years EM8 sowings can be managed in a number of ways which, in association with soil fertility, will determine the character of the grassland. The best results are usually obtained by traditional meadow management based around a main late summer hay cut in combination with autumn and possibly spring mowing or grazing.

Meadow grassland is not cut from spring through to late July/August to give the sown species an opportunity to flower and set seed. After flowering in July or August a 'hay cut' must be made with a scythe, petrol strimmer or tractor mower to c 50mm. The 'hay' must then be left to dry and shed seed for 1-7 days before removal to be appropriately composted. The re-growth through to late autumn/winter can be cut or grazed to 50mm and again in the spring if needed.

Wetland habitats are characteristically quite variable in composition, reflecting local drainage and management. Conditions can vary, for instance, between the highs and lows in ridge and furrow grassland. Localized differences may require a targeted approach. For example, boggy areas which remain waterlogged for much of the year may be best sown with pond edge mixture EP1 (Emorsgate Seeds).

Removal of any litter which has accumulated within attenuation basins may be required between January and March depending on the quantity of leaf-litter present.

Whilst scattered areas of scrub are to be created in and around the areas of SUDS, these areas must be managed annually to prevent the habitat becoming dominated by scrub which would otherwise shade and outcompete the grassland. Selective scrub removal must be undertaken outside of the nesting birds period and will aim to maintain small patches of scrub scattered through the grassland whilst keeping the scrub below 20% of the overall coverage of the SUDS areas.

5.1.2 Hedgerows

Year 1

Tree guards installed to protect the new saplings from rabbits and deer, to be inspected yearly for first 5 years and then removed if planting well established.

Year 2

All planted hedgerows must only be cut outside the bird nesting season (1st March to 31st August) and where possible hedges shouldn't be cut until February, so that valuable winter food associated with fruiting hedge trees is retained for over-wintering birds. Each hedgerow should not be cut shorter than 1.8m (h) and 1.5 m (w) each year.

Yearly management

Check for signs of disease. If disease is identified, then advice should be sought from an arboriculturalist regarding the appropriate method of treatment.

5.1.3 New Trees

Yearly management

Check for signs of damage and disease. If disease is identified advice should be sought from an arboriculturalist regarding the appropriate method of treatment.

Any trees which fail within the first five years will be replaced.

5.1.4 Mixed Scrub

Optimal habitat

Areas of scrub with fruiting and flowering species, creating shelter and foraging opportunities as well as helping to shape the landscape.

Year 1

Weeding when whips are establishing helps remove competition. Avoid pulling out wildflowers.
Check for signs of damage and disease. If disease is identified advice should be sought from an arboriculturalist regarding the appropriate method of treatment. Any trees which fail within the first two years will be replaced. There should be very minimal pruning of the scrub as it establishes.

Yearly management

To prevent the areas of scrub becoming overgrown and encroaching into the species-rich grasslands or footpaths, it will need to be cut back. This should be done in rotation, keeping some areas long and some short in order to retain breeding bird habitats and foraging opportunities. When cutting, it is best to give the scrub a scalloped edge, which increases the area of scrub available and creates shelter points.

This cutting must only be timed outside the bird nesting season (1st March to 31st August) and where possible shrubs shouldn't be cut until February, so that valuable winter food associated with fruiting shrubs/trees is retained for over-wintering birds. Further detail on scrub management can be found in a guidance document from the Natural England[3].

5.1.5 Other

Bat and bird boxes on trees are to be inspected to check they have not become detached or damaged each year and any damaged boxes are to be replaced like for like up to at least 5 years from the date of the completion of the development.

Old bird nests are to be cleared out from bird boxes in September to reduce parasitic load build up.

[3] Natural England, 2011. *The Scrub Management Handbook*. Available at: http://publications.naturalengland.org.uk/publication/72031.

6 WORK SCHEDULE

Table 3 below provides the timetable for the annual management plan actions for the 10-year management period. The management operations can be continued outside of this proposed 10-year period.

Table 3. Work schedule for the 10-year management period.

Action	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Grassland cutting from year 2								X	X			
Removal of leaf litter from SUDS	X		X									
Inspection of tree guards from year 1	Any time of year, once per year											
Removal of trees guards from year (if required)	Any time of year											
Hedge cutting and cutting back of scrub from year 3		X										
Inspection of all habitats for invasive species						X	X					
Inspection of all retained and new trees for damage and any disease						X	X	X				
Inspection of bat and bird boxes									X	X	X	
Clearance of old bird nests from bird boxes									X	X	X	
Habitat monitoring by suitably qualified ecologist (year 2 and year 5)						X						

7 TIME FRAME AND IMPLEMENTATION

A responsible party (to be confirmed by the applicant) will be responsible for the management actions of the retained and new biodiversity assets over the 10-year time period.

8 MONITORING AND REVIEW

Monitoring of the retained and new biodiversity assets should be undertaken to determine the success or failure of each compartment through a site visit by a suitably qualified ecologist 2 years and 5 years post construction. If necessary, changes to management actions can be prescribed along with additional planting of hedgerows, structural boundary planting and within the pond in the event that

plants or shrubs fail to establish. Furthermore, in the event that invasive species are identified within any of the compartments suitable control methods would be outlined in detail.

An internal inspection is to be undertaken 10 years post construction to assess the progress of habitat development and determine any changes required for future management as the habitats continue to mature.

9 COMPETENCIES, STANDARD AND SPECIFICATIONS OF WORKS

All tree works must be undertaken by a suitably qualified horticulturalist and the instillation of bat and bird boxes must be undertaken or overseen by a suitably qualified ecologist.

A site inspection to review habitat conditions 2 years and 5 years post-construction must be undertaken by a suitably qualified ecologist.