

# LAND OFF BERRY HILL ROAD ADDERBURY BANBURY

# ECOLOGICAL ENHANCEMENT STRATEGY



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### 1.0 INTRODUCTION

1.1 This Strategy has been prepared pursuant to the outline planning consent for up to 40 dwellings at land off Berry Hill Road in Adderbury (application ref: 19/00963/OUT). This Strategy supports a reserved matters application and responds to the requirements of Condition 13 as attached to the outline consent. Condition 13 states:

"No site clearance or development works shall take place until there shall have been submitted to and approved in writing by the local planning authority an ecological enhancement scheme, which shall include implementation timing. The scheme shall be carried out as approved."

- 1.2 This Ecological Enhancement Strategy (EES) has been produced by ACD Environmental Ltd on behalf of Hayfield Homes Ltd to address the ecological considerations associated with the Berry Hill development, which is hereafter referred to as 'The Site'. This includes the following information:
  - Update of the existing ecological baseline;
  - Detailed working methods to be implemented to protect biodiversity during works;
  - Set out the extent and location of proposed works (including enhancements to the built environment);
  - Persons responsible for implementing the works; and
  - Details of initial aftercare and long-term maintenance.
- 1.3 This EES will address these requirements by providing specifications for detailed biodiversity enhancements to flora and fauna in the The Site. A detailed management plan has been incorporated, which will ensure that the proposed enhancements are maintained in the long-term.

### 2.0 BASELINE ECOLOGICAL CONDITIONS

- 2.1 An Extended Phase 1 Habitat Survey was undertaken of the The Site in July 2017 by REC LTD as a part of the broader context of the development. In 2019, an updated Extended Phase 1 Survey was carried out by e3p LTD that had broadly similar findings.
- 2.2 An updated site walkover was undertaken on the 3rd of February by Katie Crawford, Hannah Yetman and Jennifer Lackie of ACD Environmental LTD. This was to update baseline conditions and assess if any changes to protected species occupation had occurred in the interim.
- 2.3 The findings of the update survey in 2022 taking into account these previous reports are summarised below.

### **Designated Sites**

2.4 There are no statutory designations located within or adjacent to The Site. The nearest statutory designation is Adderbury Lakes Local Nature Reserve (LNR), located approximately 750m north-east of The Site. This is designated for its diversity of plant and insect species, with some trees present dating back to the 1800s. The Slade LNR is located approximately 4.5km west and comprises wetland meadow, broadleaved woodland a railway embankment and also streams. Therefore, impacts on designated sites have been ruled out due to spatial separation.

### **Habitats**

### Improved Grassland

2.5 The majority of the The Site is composed of improved species- poor grassland, with varying sward height as a result of mixed use for grazing animals. Species included in this grassland were perennial rye grass Lolium perenne, cocks foot Dactylis glomerata, annual meadow grass Poa annua, creeping buttercup Ranunculus repens, mouse ear Cerastium fontanum, field speedwell Veronica persica and white clover Trifolium repens.

### **Hedgerows and Trees**

- 2.6 Hedgerows are present spanning the southern, northern and eastern boundaries of The Site. The hedgerows are species-rich with standard trees and appears mature. Species within the hedgerows comprise hazel *Corylus avellana*, oak *Quercus robur*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna* and bramble *Rubus fruticosus* agg.
- 2.7 A dry ditch is present on the road facing side of the southern hedgerow, not within The Site.

### Bare ground

2.8 Small patches of bare ground are present within The Site, these were not noted in previous reports. This contained typical species of disturbed ground including dandelion *Taraxacum officinale*, thistle *Cirsium vulgare*, ribwort plantain *Plantago lanceolata* and broadleaved dock *Rumex obtusifolius* and was likely the result of livestock presence on The Site.

### **Species**

### **Amphibians**

- 2.9 The Site supports some habitat with potential to support great crested newts *Triturus cristatus* and other small amphibians, namely the hedgerows and hedgerow margins, though the slightly longer sward height nearing The Site boundaries would offer some sub-optimal cover. The survey undertaken in 2017 identified three offsite ponds, one was dry and therefore considered an historic pond of negligible value. The other two ponds returned a Habitat Suitability Index (HSI) value of 0.57 and 0.46 indicating below average and poor suitability for great crested newts.
- 2.10 The onsite habitat is considered to be sub optimal for amphibian species due to a lack of waterbodies, however some amphibians may be using the hedgerows and grassland within The Site for overwintering purposes. These boundary hedgerows are to be retained and as such only grassland mitigation measures are considered necessary for amphibians.

### Badger

2.11 An update appraisal was undertaken in 2019 during which a search for badger setts and other evidence of badger activity was undertaken. No new evidence of badger was identified on or around The Site. The subsequent update walkover undertaken by ACD Environmental LTD in 2022 had the same findings, although they are assumed to be in the woodland adjacent to the northern boundary of The Site and may therefore use the land for foraging purposes.

### **Bats**

### Roosting

- 2.12 The hedgerows adjacent to The Site boundaries support a range of mature trees that may support roosting bats. Trees and hedgerows are present within the north, east and south of The Site and comprise oaks with various areas of rot, wounds and flaking bark forming Potential Roosting Features (PRF's). Some of these trees have moderate and high potential to support roosting bats. These trees and the remaining length of the onsite hedgerow will be fully retained and protected within the development proposals in accordance with an approved Tree Protection Plan¹, thereby ensuring any bat roosts associated with these trees are likewise retained. A sensitive lighting scheme will be implemented along this length of hedgerow to retain the value of any roosts located in these trees.
- 2.13 None of the trees assessed as having potential are anticipated to be removed, however if this changes all trees to be felled must be subject to inspection with an endoscope by a suitably qualified ecologist to look for bats or evidence of recent or historic roosting. If a roost is present a European Protected Species (EPS) licence will be required prior to felling.
- 2.14 A single hawthorn tree is being removed to facilitate access to The Site and this was assessed as having negligible potential for roosting bats.

Foraging and Commuting

2.15 The hedgerow is likely to form a commuting corridor and foraging habitats, particularly given the high potential for bat roosts associated with the standard trees adjacent to the northern and eastern boundaries of The Site. As noted above, this

<sup>&</sup>lt;sup>1</sup> ACD Environmental Ltd. (2022) Tree Protection Plan.

hedgerow will be retained, however measures are detailed to ensure their value is retained throughout the development.

### **Birds**

- 2.16 During the update walkover a few birds were observed on The Site such as great tit *Parus major*, blue tit *Cyanistes caeruleus*, robin *Erithacus rubecula*, jay *Garrulus glandarius*, blackbird *Turdus merula* and magpie *Pica pica*. Notably, both swallows *Hirundo rustica* and swifts *Apus apus* are known to be nesting within the stable on The Site, although this was being taken down at the time of survey. At the time of survey, it was midwinter and not a suitable time to observe either of these species nesting as they are summer migrants. Therefore, they are considered absent from The Site due to removal of suitable nesting habitat.
- 2.17 A red kite *Milvus milvus* was briefly seen over The Site though it is not considered to be a significant foraging resource for this species.

### **Reptiles**

2.18 The grassland habitat on The Site is unsuitable for most British reptiles given its superficial ground cover, though some suitability remains in the hedgerow margin.

### Other Wildlife

- 2.19 Common and widespread mammal species are likely to utilise The Site.
- 2.20 Evidence of rabbit Oryctolagus cuniculus digging along with droppings and runs was present in the northern and western extent of the hedgerow, though this remains within the RPZ of the hedgerow and is unlikely to be affected by development proposals.
- 2.21 There is also potential for other UK BAP species such as hedgehog *Erinaceus* europaeus within The Site.

### 3.0 ROLES AND RESPONSIBILITIES

- 3.1 The implementation of this EES is the collective responsibility of the appointed Project Manager, and the developer, Hayfield Homes. This collective will ensure that all appointed contractors are aware of the ecological constraints of The Site and will distribute the EES to relevant parties.
- 3.2 An Ecological Clerk of Works (ECoW) may be required for some of the works to safely proceed. The appointed Site Manager is responsible for ensuring that a suitably qualified ecologist is present during these works. This report details when an ECoW is likely to be required.
- 3.3 The appointed Site Manager will be responsible for the day to day implementation of the EES and ensuring that the site staff and contractors adhere to the measures set out in the EES.
- 3.4 Once the construction phase is complete, the ongoing maintenance and management of the habitats on The Site will be the responsibility of the Management Entity.

### 4.0 EXISTING VEGETATION

- 4.1 All works must be undertaken in accordance with the British Standard BS3998:2010 Tree Work Recommendations, by recognised tree contracting companies from the Arboricultural Association's list of registered contractors. Proof of experience and insurance provision will be required. Once completed, all work shall be undertaken at the appropriate time and with the consent of the Management Entity. All retained trees are to be protected in accordance with BS 5837 Trees in Relation to design, demolition and construction.
- 4.2 Existing hedgerows and trees to be retained will be protected using Heras fencing or similar in line with an appropriate Tree Protection Plan. Hedgerows will be provided with a buffer of retained habitat which construction materials and machinery will be excluded from.
- 4.3 No trees to be retained shall be used for anchorage or winching purposes.
- 4.4 The trees should be checked annually for signs of deterioration or distress and the appropriate actions taken where a potential safety hazard is identified. Where any wood is to be pruned, an ecologist must survey the tree prior to work taking place to ensure no impacts on fauna, particularly roosting bats and nesting birds.
- 4.5 All diseased wood, pruning's and rubbish should be removed from site and the site left clean and tidy.
- 4.6 Heavy ivy infestation is not recommended in development situations, where wind risk may be a concern. The form of the tree can also be affected and it is therefore proposed to remove any dense infestation of ivy if evident on site or during the maintenance period.
- 4.7 Existing retained hedgerows will be managed rotationally in a two or three-year cycle at a minimum height of 1.8m.

### **5.0 HEDGEROWS AND TREES**

5.1 In accordance with the approved Parameter Plan, the reserved matters proposals seek to retain the vast majority of onsite hedgerows, with the exception of facilitating the vehicular site access and the new pedestrian access off Berry Hill Road.

### Hedgerow and Tree Planting

- 5.2 The retained hedgerows will be protected as part of the construction of the development using Heras fencing or similar in accordance with an approved Tree Protection Plan. A sensitive lighting scheme will be implemented at across the length of this hedgerow.
- 5.3 Additional trees and shrubs are to be planted across The Site including an area of tree planting planting and shrub planting in areas of public open space.
- 5.4 Tree planting will include species such as dogwood (*Cornus sanguinea*), hazel *Corylus avellana*, rowan *Sorbus aucuparia* and wild cherry *Prunus avium*. Including native fruit bearing specimens will increase foraging opportunities for birds and mammals such as badger within the site.
- 5.5 Further planting to be seeded with EH1 Hedgerow Mixture as supplied by Emorsgate or similar and sown at 4 grams per msq will enhance the cover opportunities of hedgerow for a range of species and will include plants such as wild teasel *Dipsacus fullonum* and hogweed *Heracleum sphondylium*.

### Management

- 5.6 Upon completion of the development, the Management Entity will maintain all shrubs and trees beyond the boundaries of domestic ownership in perpetuity.
- 5.7 Any planting failures that occur prior to the completion of the development are to be replaced by the management company.
- 5.8 Post-planting management and maintenance of trees will be undertaken in accordance with BS8545:2014 section 11 'Trees: from nursery to independence'.
- 5.9 A formal assessment of young tree health and development will be undertaken annually. This assessment will include foliar appearance, leaf size and leaf canopy

density, extension growth and incremental girth development. Trees will also be assessed continually throughout the year on an ad hoc basis. Wherever practicable the performance of young trees shall be assessed by testing leaf fluorescence and leaf chlorophyll content.

- 5.10 Formative tree pruning is to be undertaken until a permanent structurally sound scaffold system of branches typical of the species and appropriate to the site circumstances is produced. Minor pruning of dead or damaged wood will be carried out annually.
- 5.11 If the young trees are not thriving or are in poor condition, then growing conditions should be amended as necessary. If the specimen does not recover the tree will be replaced in the next available planting season.
- 5.12 All stakes and ties will be removed as soon as the developing root system is strong enough to support the tree, usually after five full growing seasons.

### Woodland and Understory Planting

- 5.13 Native woodland and thicket planting is proposed along the western boundary and the northwestern portion of the development, this includes species such as field maple *Acer campestre*, hornbeam *Carpinus betulus*, dog rose *Rosa canina* and guelder rose *Viburnum opulus* (for full details of species, please refer to the soft landscaping plan<sup>2</sup>).
- 5.14 Tree works should be carried out outside the nesting bird season.

### Management

- 5.15 Any pruning work specified should be in accordance with the British Standard 'Tree Work' BS3998:2010.
- 5.16 Any trees with cracks, splits, hollows and climbing plants on the stem and/or in the crown that require pruning or felling should be inspected by a licensed bat ecologist for roosting bats before works are carried out.
- 5.17 Where possible retain all tree debris on site, habitat stack log piles and recycle

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<sup>&</sup>lt;sup>2</sup> ACD Environmental (2022) Soft Landscape Plan

mulch into woodland or onto existing internal paths.

5.18 Carry out an inspection of woodland trees every 2 years to check for signs of ash dieback. If ash dieback is found or suspected, report to the Forestry Commission and take appropriate action and advice.

Environmental damage and littering

- 5.19 Carry out an inspection of the woodland a minimum of once per year to check for environmental threats including pollution, fire, anti-social behaviour and littering. Take appropriate action if required.
- 5.20 The appointed Management entity shall be responsible for keeping the woodland free from all kinds of litter which shall be removed from the site in a safe manner. This should be carried out on a monthly basis.

### Ornamental Hedgerow Planting

- 5.21 New ornamental hedgerows shall be provided in association with new residential properties, marking plot boundaries. Ornamental hedgerows will be comprised of Japanese holly *Ilex crenata*
- 5.22 Ornamental hedgerows will be planted between the end of October to the end of March when the weather is not freezing and the ground is not waterlogged (preferably before January). In the circumstance that planting occurs outside of this period, regular watering is required and plantings checked monthly for signs of wilting.

### Management

- 5.23 During the first 3 years of the new hedgerow planting, new hedgerows within public realm will be cut annually to ensure the development of bushy growth low down in the hedgerow. Dead plants should also be replaced in autumn, over the first few years.
- 5.24 Once mature, the ornamental hedgerow is to be managed at a height of 1m.

### 6.0 WILDFLOWER GRASSLAND

### **Grassland**

6.1 Under current proposals there is expected to be a net loss of improved grassland as a result of the development. The grassland to be cleared to facilitate the development is of **site value** only.

### Wildflower Meadow and Tussocky Grassland

- 6.2 To compensate for the anticipated loss of the improved grassland, areas of high value planting will be incorporated into the design of the development. Wildflower grasslands will be planted bordering the retained hedgerows, and in the public open space throughout the development. These areas are to be seeded with EM2 wildflower mix. This is considered to be of higher ecological value due to the increased species diversity associated with them. Where regular mowing is anticipated a flowering lawn mix is recommended- this mix will be EG22 strong lawn mix.
- 6.3 The wildflower planting will be located adjacent to the hedgerow to be retained. An area of public open space at the north of the development site will also be seeded with the wildflower mix. This will be created using seed mix EM2 Flowering Meadow Mix. This seed mix is dominated by wildflowers, which are of value in their own right and because they attract and support invertebrates. This seed mix comprises: common knapweed *Centaurea nigra*, yarrow *Achillea millefolium*, wild carrot *Daucus carota*, tufted vetch *Viccia cracca*, bladder campion *Silene vulgaris*, common sorrel *Rumex acetosa* and field scabious *Knautia arvensis*.
- 6.4 To successfully establish the species rich grassland, it is essential that ground preparation and management is appropriate. To prepare a seed bed, weeds should be removed through repeated cultivation. The area should then be ploughed or dug to bury the surface vegetation, harrowed or raked to produce a medium tilth, and rolled to produce a firm surface.
- 6.5 Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown either by machine or hand.

### First year management

- 6.6 The area should be cut regularly throughout the first year of establishment to a height of 40-60mm, removing cuttings if dense. This will control annual weeds and help maintain a balance between faster growing grasses and slower developing wild flowers. Any residual perennial weeds such as docks *Rumex* spp. should be dug out.
- 6.7 Going forward, the grassland should not be cut from spring through to late July/August to give the sown species an opportunity to flower.

### Tussocky Grassland

- 6.8 Tussocky Grassland will be comprised of EG10 mix, this includes species such as cocks foot *Dactylis glomerata*, crested dogs tail *Cynosurus cristatus*, quaking grass *Briza media* and red fescue *Festuca rubra*. This mix will provide cover and food for invertebrates, birds, amphibians, reptiles and small mammals. This mix will be concentrated near the northern section of The Site to improve habitat diversity and quality for these species.
- 6.9 Mow all plant growth (sown grasses and weeds) regularly to 40-60mm throughout the first growing season to prevent weeds smothering the slower-growing grasses. Remove cuttings if dense, more frequent and regular topping will minimise the amount of toppings produced each time so they can be left to disperse.

### <u>Management</u>

- 6.10 Once established, tussocky grassland requires minimal maintenance.
- 6.11 Unwanted perennial weeds may need control by occasional spot treatment with a herbicide. To control scrub and bramble development, tussocky areas may need cutting every 2-3 years, between October and February. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.
- 6.12 Areas of tussocky grassland should be maintained along the base of hedgerows within the public spaces, through annual management with a strimmer or mower with a blade height set to at least 15cm. This will benefit invertebrates, birds and

hedgehog.

### 7.0 SPECIES MITIGATION AND ENHANCEMENTS

### **Amphibians**

### **Mitigation**

- 7.1 Precautionary measures have been recommended in regards to amphibians due to the presence of suitable overwintering habitat. Due to the short sward height, clearance can be undertaken in one phase. Strimming must be undertaken directionally towards the boundary hedgerows.
- 7.2 Once all suitable habitat has been cleared, the area will be maintained as level, bare earth prior to the start of building works, which can then take place at any time of year.
- 7.3 All debris, rubble etc. collected during site clearance will be placed directly into skips or removed from the site immediately to avoid it becoming used as refugia by amphibians (and reptiles).
- 7.4 To mitigate for the loss of habitat within The Site wildflower grasslands and tussocky grasslands have been included within the landscape proposals, managed under a low intensity methodology.
- 7.5 In addition, two log piles (see Appendix 1) shall be built within The Site in close proximity to the native hedgerow. Log piles are to be placed in at least partial sun in an area with good connectivity to offsite habitats.

### **Reptiles**

### Mitigation

7.6 The Site was assessed as having habitats suitable for reptiles to be commuting through, however, due to the small area of suitable habitat reptile surveys were not deemed necessary. The development proposals allow for the retention of suitable reptile habitat within The Site and inherent mitigation through increasing and enhancing hedgerow and grassland habitat. However, additional mitigation measures are required to avoid potential direct impacts to reptiles during construction.

7.7 Precautionary clearance methodology, mitigation planting and installation of log piles set out in line to protect amphibians will also safeguard any reptiles if present within The Site.

### **Badger**

### Mitigation

- 7.8 Given the mobile nature of badger and suitable badger foraging habitat, it must be considered that badgers may use The Site for foraging and commuting purposes. It is also possible that new badger setts could become established prior or during construction activities.
- 7.9 A pre-commencement check for new badger activity is to be undertaken by a suitably qualified ecologist no more than three months prior to works commencing on The Site to account for any changes which may have occurred since the previous surveys. If a new badger sett is identified, it is possible that a Natural England Licence will be required for the Approved Development to proceed lawfully.
- 7.10 If a large D-shaped hole is identified at any point during the course of the development, a suitably qualified ecologist is to be contacted for advice in the first instance.
- 7.11 Any temporarily exposed pipes must be capped overnight to prevent any animals gaining entry and later becoming trapped.
- 7.12 During the site preparation and construction phases, any trenches must be covered overnight as badgers and other wildlife are likely to be active. Where this is not possible a means of escape must be provided e.g. a wide roughened plank forming a ramp to the top of the trench. All trenches must be checked each morning for any animals which may have become trapped. In the unlikely event that a badger becomes trapped it must not be handled and an appropriately qualified ecologist contacted immediately.
- 7.13 The storage of topsoil or other 'soft' building materials within the construction site must be given careful consideration. Badgers readily adopt such mounds as setts.
  To avoid the adoption of any mounds by badgers, mounds would be kept to a

minimum and any essential mounds subject to daily inspections by the site manager. An ecologist will be contacted if evidence of new setts in such mounds is identified.

7.14 The storage of any chemicals within the construction site must be contained in such a way that they cannot be accessed or knocked over by any roaming badgers.

### **Bats**

### **Mitigation**

- 7.15 No confirmed bat roosts are present on The Site, however trees have been identified as having the potential to support roosting bats, particularly along the northern parcel.
- 7.16 Trees with bat roosting potential will be fully retained and protected, however if this changes any trees to be felled will be subject to aerial survey and endoscoped as necessary to determine presence/likely absence of bats. An EPS licence will be required to proceed with works if a bat roost is found in any trees that require felling or are likely to be significantly disturbed.
- 7.17 The retained hedgerows will be protected throughout the construction and operational phases of the development through the use of Heras fencing or similar and sensitive lighting.

### Bats and Lighting

### Construction Phase

- 7.18 Any impacts as a result of the construction phase lighting will be temporary in nature and therefore unlikely to have a significant overall residual effect on bats. However, the following good practice measures will be adopted.
  - All works will be undertaken during normal working daylight hours. Any artificial lighting should not illuminate the eastern and southern boundary and the construction exclusion zone;
  - Light levels should not exceed artificial light levels already present along the eastern and southern boundary;

- Where security lighting is required, it is recommended that these are motionactivated with hooded luminaires and directed away from the western and northern boundaries; and
- No lighting will fall or be directed on to the tree and boundary vegetation.

### Occupational Phase Lighting

- 7.19 Artificial lighting will be minimised within the scheme and lighting will minimise light spill either into the sky or onto boundaries of The Site. Considerations will be given to:
  - Only luminaires with an upward light ratio of 0% will be used, and low-level bollard lighting will be used where feasible to retain darkness above the luminaire;
  - All external luminaires used on site will lack UV elements and will be warmwhite coloured (ideally <2700 Kelvin) to reduce blue-light components;</li>
  - LED luminaries will be used due to their sharp cut-off, lower intensity, good colour retention and dimming capability;
  - Where security lighting is installed this should be motion-activated;
  - No lighting will be placed or directed on the western boundary; and
  - Lights will not be directed at boundary vegetation or onto bat and bird boxes.
     Where required, lights can be fitted with hoods, baffles or louvres to reduce back-spill.

### **Enhancements**

- 7.20 As described in the original ecology report, permanent roosting provision in the form of bat boxes are to be incorporated on retained mature trees or on buildings. Bat boxes should be installed at a minimum height of 4m on a south or west facing elevation with a clear flight path to and from the boxes and of reach from cats. The following box types are to be included in the locations shown in **Appendix 2**:
  - A total of 6x Vivara Pro Build-in Woodstone Bat Tube and;

9x Habibat Bat Boxes- style 001 integrated into buildings.

### **Birds**

### Mitigation

7.21 The retained hedgerows are to be fully protected throughout the construction phase using Heras fencing or similar and retained in the operational phase of the development. This will retain the foraging and nesting value of the hedgerows to most species of bird using The Site.

### **Enhancements**

- 7.22 Nesting boxes are to be incorporated into the development on the retained mature trees and are to be installed at a minimum of 2.5m on a north or east facing elevation to provide permanent nesting opportunities. Swift boxes will be installed by the eaves of houses, situated with no foliage underneath, ideally at a height of 5m or more. Bird boxes are to be incorporated in the locations detailed in **Appendix 2** including;
  - 9x Schwegler Brick Box Type 24,
  - 9x Manthorpe Swift Brick and;
  - 9x Vivara Pro WoodStone House Sparrow Nest Box.

### Other Wildlife

### Mitigation and Enhancement

- 7.23 The Site supports habitat which may be used by hedgehog entering from the agricultural fields to the west. To allow hedgehogs to continue foraging effectively within the development, holes will be installed in the garden fences (Appendix 2). The holes must be a minimum of 13x13cm and will be marked as a hedgehog highway. New residents are to be provided with information sheets explaining the purpose of the holes and ensuring as far as possible that the passes remain unblocked.
- 7.24 Hedgehog highways will facilitate the movement of other species that may be using

The Site, such as amphibians, reptiles, rabbits and small mammals.

7.25 Although hazel dormouse *Muscardinus avellanarius* evidence has not been discovered within The Site, the presence of suitable habitat in the form of intact hedgerow with hazel and hawthorn species indicates there is potential for dormice to be utilising the boundary hedgerow. The precaution taken in the instance of bats (retention of hedgerows, heras fencing and sensitive lighting)will mitigate disturbance of dormice for the duration of the works.

### **8.0 MAINTENENCE AND MANAGEMENT SCHEDULE**

8.1 The management schedule is summarised in **Appendix 4** and as follows:

### Weekly

 All plants shall be watered following 10 days without rain. Then weekly until natural rainfall during June - August.

### **Fortnightly**

- Amenity Grass to be cut every 10-14 days.
- Fortnightly litter pick over the entire site within areas covered by the Management Entity.

### **Monthly**

- Weed control shall be allowed for at monthly intervals. All areas to be weeded by hand.
- All plants/trees shall be inspected monthly for firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and tree ties checked.

### **Bi-Annual/Annual**

- The bark mulch should be topped up bi-annually.
- Grass cutting to wildflower areas.
- Hedgerows to be managed (rotationally).
- After two years, tree stakes and ties are usually ready to be removed.

### <u>Annual</u>

- Replacement of any failed trees or shrubs will be allowed for annually to ensure that the planting areas are fully stocked at all times.
- Any hollows that appear due to settlement shall be top dressed annually,

early in the growing season.

- Minor pruning of dead or damaged wood shall be allowed for annually.
- All planted areas and trees shall be given an application of an approved top dressing in May. Not in Wildflower areas.
- Shrubs shall be maintained in a balanced shape and prevented from obscuring signs, windows and encroaching on paths.
- Check for invasive species and remove responsibly from site.
- Undertake a formal assessment of young tree health and development.
- Bird nesting box to be emptied of old nesting material and cleaned with hot water (outside of the bird nesting season).

### 9.0 MONITORING AND REVIEW

### Responsibilities

- 9.1 The developer, Hayfield Homes, will be responsible for ensuring that all works described in this EES are carried out accordingly, and that information is made available to the Local Authority if requested.
- 9.2 Following completion of the development, management responsibilities will be transferred to a designated private Management Entity. The Management Entity will also continue management after the five year period.
- 9.3 Once a Management Entity is appointed, their details should be inserted here:

Name:

Company:

Telephone:

### Length of agreement

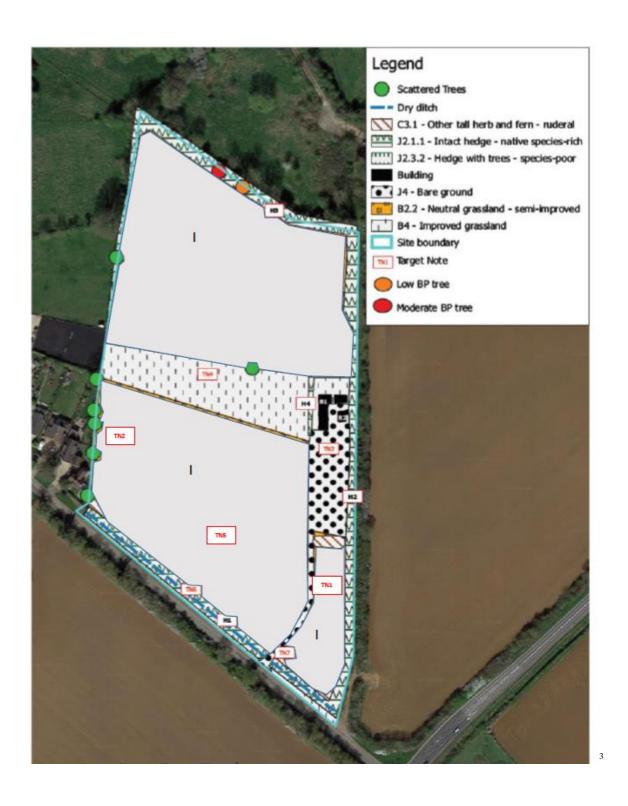
9.4 The length of the initial agreement with the Management Entity will be five years.

This will maintain the safety of habitats and species present in the site for those five years.

### Feedback into the Enhancement Strategy

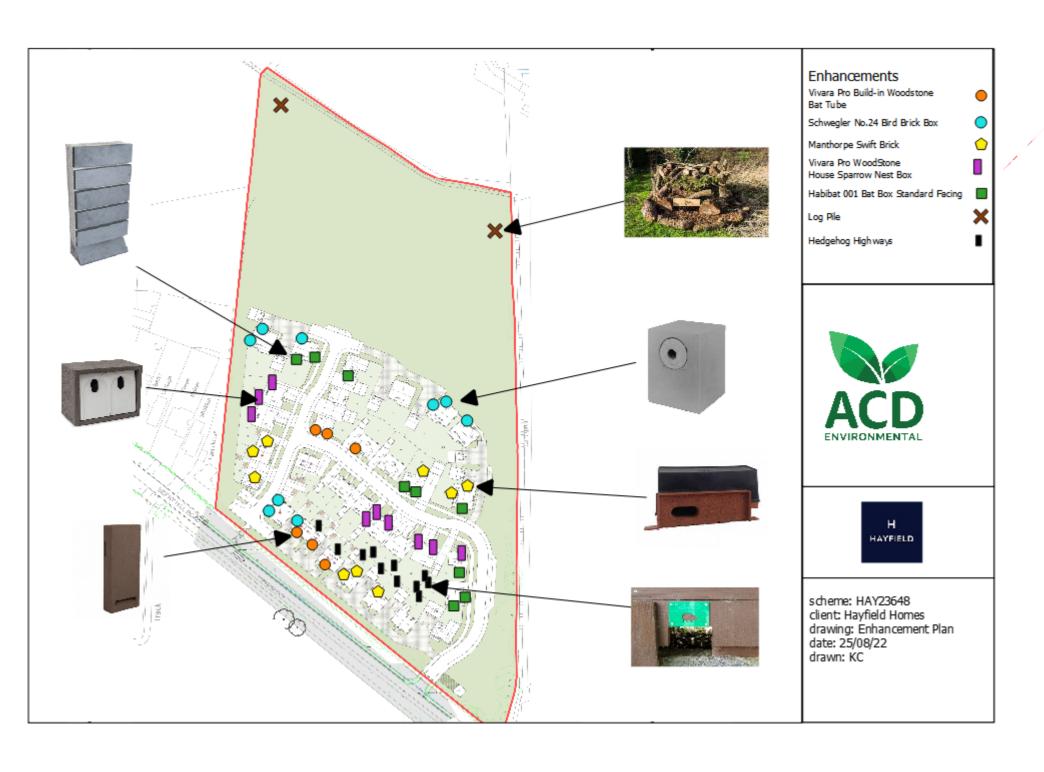
- 9.5 After the completion of the construction phase, the ECoW will attend site to undertake the EES compliance check. Following the site visit, the ECoW will amend the report where necessary.
- 9.6 A second site visit will be undertaken by the ECoW five years later and the EES will be reviewed and amendments to management regime made where deemed necessary. Following this, the site will be monitored annually and management regimes amended as required to meet the management objectives for the foreseeable future.
- 9.7 All materials, workmanship, quality and operations should be in accordance with all relevant British Standards, Codes of Practice and legislation.

# **APPENDIX 1: ECOLOGICAL FEATURES PLAN**



<sup>&</sup>lt;sup>3</sup> REC 2017- Preliminary Ecological Appraisal

# **APPENDIX 2- ECOLOGICAL ENHANCEMENT PLAN**



# **APPENDIX 3- MAINTENANCE SUMMARY**

**Table 1:** Work schedule for management, maintenance and monitoring schedules.

Table 1. Work schedule for management, maintenance and monitoring schedules.												
Action	J	F	M	Α	M	J	J	Α	S	0	N	D
POST COMPLETION - YEAR 1												
Year 1 monitoring survey undertaken. Results used to feedback into EES as required and to rectify any issues.												
Weekly watering of new planting (May to September).												
Regular check of new planting to ensure maturing as expected. Litter and weeds removed. Remedial measures												
undertaken as necessary.												
Annual check of hedgerows and trees to check for signs of damage, deterioration or distress.												
Annual formative pruning undertaken as required on new tree and hedgerow planting (optimal timing may be												
species dependent).												
Regular cuts of new grassland to 5-10cm to prevent weeds colonising.												
Monthly visual inspection of artificial habitats for any signs of damage. Remedial action/replacement undertaken												
as necessary.												
Monthly inspection of woodland for littering/antisocial behaviour and tree health.												
POST COMPLETION - YEAR 2 ONWARDS						_			_			
Monitoring surveys undertaken every three years. Results used to feedback into EES as required and to rectify												
any issues.												
Comprehensive inspection of tree health undertaken at a maximum interval of three years.												
Regularly cut grassland areas to a height of 25-40mm. Reduce cutting in June for 4-8 weeks to allow flowering.												
Cut hedgerows yearly (or as required), ideally between January to February.												
Suitably experienced person to remove bird nesting material from nests as required.												
YEAR 5 - MONITORING												
Five-year review of BES undertaken. Results provided to Local Records Centre and Developer as required. EES												
updated.												
Five-year check of bat boxes undertaken by level 2 licenced bat ecologist.												



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ECOLOGICAL SURVEYS \* PROTECTED SPECIES LICENSING \* MITIGATION \* IMPACT ASSESSMENT ARBORICULTURAL SITE MONITORING AND SUPERVISION \* ARCHAEOLOGY LANDSCAPE & VISUAL IMPACT ASSESSMENT \* LANDSCAPE AUDIT \* PROJECT MANAGEMENT EXPERT WITNESS\* LANDSCAPE DESIGN & PLANNING LANDSCAPE MANAGEMENT