Biodiversity Management Plan

Proposed Development at:
Hart Road
Thundersley
Essex

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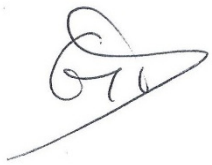
Open Spaces
Landscape Architects
LANDSCAPE ARCHITECTURE – TREES – ECOLOGY

Biodiversity Management Plan

For
Proposed Development at:

Land at Hart Road
Thundersley
Essex

Written by:	
Signature:	
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1.0 Introduction

1.1 This Biodiversity Management Plan (**BMP**) has been prepared to inform an appropriate assessment for the competent authority, which is Castle Point District Council in relation to an application to construct houses and associated infrastructure at Hart Road, Thundersley (**the Site**).

1.2 On approval of the proposed development, the implementation of this plan will be carried out as part of the site-wide construction works and landscape management procedures thereafter.

1.3 Should additional information be required; this can be provided as part of a planning condition.

2.0 Aims & Objectives

2.1 The aims and objectives of this BMP are:

- To identify ecological features to be managed
- To identify ecological enhancements to be incorporated as part of the consented proposals
- To identify appropriate management techniques to be employed on site and
- To ensure that recommendations, suggested enhancements and ongoing management are appropriate and in context with the predominant land use of the site.

3.0 Summary of Features

3.1 i) The features considered as part of this management plan can be broadly divided into three elements. The first element comprises of the existing area made up of mostly degraded habitat associated with an urban/paddock landscape. This includes modified grassland, bramble scrub, ditches, ruderal/ephemeral vegetation, vegetated garden areas and hedgerows with trees.

ii) The second element comprises of the existing features which are to be retained, such as, ditches and hedgerows with trees.

iii) The third element comprises of items installed and included on-site as part of the consented proposal. These include the landscape scheme, ecological enhancements installed as part of the proposals, appropriate management/aftercare techniques to be employed as set out within this report.

4.0 Existing Ecological Features Across the Site

4.1 Preliminary Ecological Appraisal (PEA)

i) The grassland area within the central and southern part of the site falls within a Local Wildlife Site (LWS).

ii) The PEA carried out across the site during November 2020 by, Brooks Ecology, described the site vegetation as:

'*The Site supports a range of mostly degraded habitat associated with an urban/paddock landscape.'*

- **Grassland areas across the site:**
  '*A highly degraded species poor grassland of low value unlikely to support any notable or otherwise important plant species.'*

  'Neutral grassland on clay soils that is dominated by sown grasses such as perennial rye- grass (Lolium perenne) meadow grasses (Poa spp.) and bents (Agrostis spp.). Heavily compacted and damaged by horses leading to poor drainage and locally wet areas following rainfall. Forbs are very poorly represented with the handful noted being daisy (Bellis perennis) and dandelion (Taraxacum agg.)'.

- **Ditches:**
  '*Though not species rich or appearing to support any notable species this is the most important habitat on site. However, its value its potential value reduced by current management and presence of invasive plants. Higher strategic significance for being in a LWS and being connected to other offsite habitats.'*

- **Artificial unvegetated unsealed surface:**
  '*Man-made habitats of negligible value'.*

- **Vegetated garden**
  '*Man-made disturbed habitats of very low value'*

- **Native hedgerow with trees – west side:**
  '*Gappy unmanaged hedge species poor, subject to ongoing damage. Not a clear habitat link'.*

- **Native hedgerow with trees – east side:**
  '*Unmanaged hedge/line of trees, not species rich but structurally diverse. Strategically valuable by association with connected woodland blocks and ditch in LWS.'*

- **Native hedgerow with trees associated with bank or ditch:**
  '*Unmanaged hedge but moderately species rich and structurally diverse. Strategically valuable by association with ditch and in LWS. Affected by presence of Invasives'.*

iii) The PEA, as part of its conclusions, identified that no further detailed surveys were required to evaluate the site baseline.

iv) The PEA recommended the following – refer to Paragraph 113 of the PEA for a full list of recommendations.

- Produce a layout which minimises loss of biodiversity
- Produce an ecological impact assessment
- Produce a CEMP

v) The PEA recommended the following ecological opportunities – refer to Paragraph 107-112 of the PEA for a full list of opportunities. Refer also to Page 27 – Figure 19 of the PEA.

- The key ecological opportunity here would be to provide a valuable strip of wildflower grassland and enhanced scrub to buffer the southern ditch. This will also help maintain and enhance connectivity between separated parts of the Local Wildlife Site.
- Boundary hedges can be enhanced though additional panting and management. ~this will be especially valued on the western hedge which is in poor condition and needs 'gapping up'. Hedgerow standard trees should be included here to increase structural value.
- Creating greenspace and gardens on a site that is currently largely devoid of valuable vegetation will be beneficial for wildlife.
- Use of native plants and plants with proven benefit to wildlife in the sites landscaping should be considered.
- Installing roosting, nesting or hibernation features for fauna will also be beneficial.
- Garden fences should be permeable so that hedgehogs can have access through the Site.

4.2 Arboricultural Report

i) A BS 5837(2012) compliant arboricultural report was carried out on all individual trees, tree groups and hedgerows growing within the site or within neighbouring land where they may be impacted by the proposed development. Refer to Open Spaces Arboricultural Impact Assessment.

ii) A Tree Protection Plan in accordance with BS 5837(2012) was produced to ensure that all retained trees and hedgerows growing both within the site and those growing within neighbouring land but which may be impacted by the development are protected throughout the duration of the site works.

5.0 Existing Ecological Features to Retain

i) Refer to the Arboricultural Impact Assessment and Tree Protection Plan to identify retained trees and trees to be removed.

ii) It is proposed to retain the following hedgerows and hedgerow trees:

- G3, T3 – T6 to the western site boundary. This native hedgerow will be faced up to a maximum of 2.0 metre width from the boundary line and reduced in height to create a uniform hedgerow.
- G4 – G8 situated along the southern boundary to both sides of the ditch but mainly to the southern side of the ditch within neighbouring land.
- G9 - G12, T13 – T21 situated along the eastern boundary
- The ditch running along the southern site edge will be retained.

6.0 Proposed landscape and ecological features across the site

i) Refer to the Planting Plan and associated Planting Schedule for numbers, species, sizes and locations of all proposed trees, shrubs and grass areas. All trees will be native and/or have high biodiversity value. Tree species have been chosen to ensure that they will grow to a suitable size and not outgrow their location. This will ensure that mature trees which support the greatest biodiversity is retained permanently. Shrub and hedgerow species will also be chosen for their biodiversity value,

ii) It is proposed to plant a “Tiny Forest” to the south-eastern corner of the site. This high ecological valued feature will support a number of species types including birds (roosting, nesting and feeding), invertebrates, foraging bats, small mammals etc. The Tiny Forest will also be a feature in its own right and will encourage conversation between local residents as to the importance and value of ecology and biodiversity.

iii) Wild-flower meadow areas will be implemented throughout the site and will support invertebrates and small mammals as well as birds and foraging bats.

iv) The boundary vegetation to the western edge of the site will be faced up to create a hedgerow with a maximum width of 2.0 metres from the boundary line. The height of the vegetation will also be reduced to approximately 2.0 metres along the hedge line with emerging trees allowed to grow to mature height. This hedgerow will also be incorporated into communal land and therefore subject to an on-going management regime. Where space allows, hedgerow infill planting using trees with a minimum girth of 12-14 cm, will take place with the planting of Field maple (*Acer campestre*) and Hornbeam (*Carpinus betulus*) species

v) Private garden areas will be included to both the front and rear of properties.

vi) It is proposed that all garden fences will have a small hole cut into them to allow for the unimpeded passage of hedgehogs. Each hole will be situated at ground level and

reinforced around its opening with batten wood to each side. The size of each hole to be approximately 200mm wide and 120mm high.

vii) Communal landscape areas will be included across the site and which will be managed for the benefit of biodiversity across the site as a whole. Within these communal areas will include the existing trees, hedgerows and ditches and also proposed trees, shrubs, hedgerows, flower meadow, "Tiny Forest" and long grass meadow areas will be included.

viii) It is proposed to incorporate 10 No. Bat boxes fixed to houses situated across the site, The bat boxes will be fixed to the houses at just below eaves level.

ix) It is proposed to incorporate 10 No. Bird boxes fixed to houses situated across the site, The bird boxes will be fixed to the houses at just below eaves level.

7.0 Management Schedules

7.1 Management responsibilities

The agreed Management Company will be responsible for ensuring that the management requirements as identified within this report is strictly adhered to. The management requirements refer to all communal soft landscape areas.

7.2 Trees

Location: Throughout landscape areas

Watering:
Year 1-5: 30 litres per tree 2x per week (minimum) during dry periods.
Year 6-10: N/A unless drought occurs.

Weed Control:
Year 1+2: 5x per year.
Year- 5: 3x per year.
Year 6-10: 2x per year.

Pest Disease Control:
Year 1-5: Visual check during each visit during growing season.
Year 6-10: Visual check during each visit during growing season.

Firmness;
Year 1-5: 2x per year (Spring and Autumn)
Year 6-10: As necessary.

Removing/Checking Guying and Ties:
Year 1-3: Check trees 3x per year.
Year 2-3 Remove if tree is stable.
Pruning:
Year 1-5: Check 2x per year and carry out corrective pruning as required (outside of nesting season).

Year 6-10: Check 1x per year and carry out corrective pruning as required (outside of nesting season).

Replacement Planting:
As necessary but only within the planting season within suitably prepared ground.

7.3 Tiny Forest

Location: South-eastern corner of site

Years 1-2
Replace trees which have failed
No further management work required

Years 3-10
No management work required unless for reducing hazards.

7.4 Shrubs and herbaceous

Location: Throughout landscape areas

Years 1-5
General
Weeding – Maintain totally weed free each visit. (5x per year -Years 1-2) (3x per year-Years 3-5).
Watering– Water as necessary during dry periods when plants are in active growth.

Spring:
Litter and arisings – remove as soon as they occur or at maintenance visit.
Re-firm plants as necessary 1x.
Surface cultivation by hand between plants to relieve compaction as necessary.
Fertiliser – Apply organic fertiliser on a bi-annual cycle.

Summer:
Weeding – As Spring
Litter and arisings – As Spring
Surface cultivation – As Spring

Autumn:
Weeding – As Spring
Surface cultivation – As Spring
Litter and arisings – As Spring

Winter:
Litter and arisings – As Spring
Top up with semi-composted mulch as necessary.
Replacement planting like for like. 1x per year – Years 1-3.
Prune any shrub/branch etc. growing over or obscuring any footpath, roadway, light or sign.
Years 6-10
General

Weeding – Maintain totally weed free each visit. (2x per year - Years 6-10)
Watering – as necessary during dry periods.

Spring:
Litter and arisings – remove as soon as they occur or at maintenance visit.
Re-firm plants as necessary 1x.
Surface cultivation by hand between plants to relieve compaction as necessary.
Fertiliser – Apply organic fertiliser on a bi-annual cycle.

Summer:
Weeding – As Spring
Litter and arisings – As Spring
Surface cultivation – As Spring

Autumn:
Weeding – As Spring
Surface cultivation – As Spring
Litter and arisings – As Spring

Winter:
Litter and arisings – As Spring
Thin understory plants and bare rooted whips as required after year 5.
Top up with semi-composted mulch as necessary – years 6-10.
Replace plants as necessary.
Prune any shrub, branch etc. growing over or obscuring any footpath, roadway, light or sign.

7.5 Native hedgerow

Location: Various locations throughout landscape areas

General
Weeding – Maintain totally weed free each visit. (2x per year - Years 6-10).
Watering – as necessary during dry periods.

Spring:
Weeding – Maintain totally weed free each visit.
Litter and arisings – remove as soon as they occur or at maintenance visit.
Replacements – Replace failed or failing plants as necessary.
Surface cultivation by hand at base of plants to relieve compaction Years 1-3.
Fertiliser – Apply organic fertiliser on a bi-annual cycle.
Watering– Water during dry periods when plants are in active growth.
Clipping/pruning – 1x per year – Years 2-10 (outside of nesting season).
Re-firm – as necessary.

Summer:
Weeding – As Spring
Litter and arisings – As Spring
Surface cultivation – As Spring
Watering– As Spring

Autumn:
Weeding – As Spring
Surface cultivation – As Spring
Litter and arisings – As Spring

Winter:
Litter and arisings – As Spring

7.6 Mown grass areas (amenity lawns)

Location: Throughout landscape areas

January:
Remove fallen leaves and other debris.

February:
Remove fallen leaves and other debris.

March:
Remove leaf litter and any other surface debris (only in dry conditions) 1x prior to first cut of the season.
Rolling: if there have been any heavy winter frosts, settle the turf by light rolling 1x, 3 days prior to first season's cut.
Mowing: — First season's cut should be to slightly top the grass sward. Do not close cut. 2x.
Weed control: - Apply a moss killer if necessary 1x or as manufacturer's requirements.
Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x Mid-March.

April:
Mowing: Maintain a 25-40 mm height 2-3x (Note, height specification shall take precedence over frequency).
Seeding; Over-seed any sparsely growing areas of lawn. – Lightly prepare lawn surface first. 1x.

May:
Watering: Water as necessary during dry periods to fully saturate the ground.
Mowing: Maintain a 25-40 mm height 3-4x (Note, height specification shall take precedence over frequency).
Weed control: If broadleaf weeds are growing, treat with a suitable weed killer 1x. Apply a moss killer if necessary 1x.
Fertiliser: Apply a nitrogen-based lawn fertiliser once lawn is actively growing 1x Mid-April.

June:
Watering: As per May.
Mowing: As per May.
Weed control: As per May.
Spike, lightly top-dress areas subject to heavy wear.
Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

July:
Watering: As per May.
Mowing: As per May.
Weed control: As per May.
Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

August:
Watering: As per May.
Mowing: As per May.
Weed control: As per May.
Fertiliser: Apply a nitrogen-based lawn fertiliser 1x.
Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

September:
Watering: As per May.
Mowing: As per May.
Remove any fallen leaves.
Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

October:
Watering: Only as required if the ground remains dry.
Mowing: Only as required to maintain a 50-75 mm height.
Scarify, spike and top-dress. Over-seed bare patches or areas where grass is growing thinly.
Remove fallen leaves and other debris.

November:
Mowing: Only as required to maintain a 50-75 mm height – Do not mow after heavy frost or if the ground is saturated after rainfall.
Remove fallen leaves.
December:
Remove fallen leaves and other debris.

7.7 Long grass meadow

Location: Eastern edge, western edge, southern edge of site

October
Cut grass once annually

7.8 Wildflower meadow

Location: Throughout landscape areas

General:
All arisings to be removed from site

No fertiliser to be used
The proposed wildflower meadow will be cut in August of each year.

The arisings will be left to dry on the ground for a maximum of two weeks to allow invertebrates and seeds to fall back into the sward.

A second cut will take place in the Autumn, usually October.
Further cuts may take place up to March to reduce the sward.

7.9 Ditches

Location: Southern edge of site

General:
Do not allow ditches to clog up with debris. This includes, leaves, branches, trees, litter etc. Ensure that water can flow at all times.

8.0 Bat and Bird Boxes

Bat Boxes

i) A total of 10 No. Schwegler 2F Bat Boxes as illustrated below will be installed on the walls of the proposed houses, just below the eaves.

Schwegler 2F Bat Box

ii) **Installation**
Attach the bat boxes to two sides of each barn - bats like to move from one box to another during the day and from season to season as temperatures change. In all situations, put the boxes as high as possible above the ground to avoid predators.

- Erect the bat boxes a minimum of 5m above ground level
- Point 5 bat boxes to face south/southeast.

- Point 5 bat boxes to face southwest

iii) **Aftercare**

Bats are a protected species, and any object they utilise for roosting is therefore also protected. Therefore, following installation the bat boxes should not be disturbed, as disturbance may result in an offence under the Wildlife and Countryside Act (1981) as amended by the Countryside and Rights of Way Act (CRoW) 2000. Bat boxes are very robust and will not require maintenance, and therefore are at their most effective if left undisturbed. Should there be any need to inspect, monitor or disturb any bat box following installation, this may only be undertaken by an appropriately qualified ecologist.

Bird Boxes

iv) A total of 10 No. bird boxes would be appropriate, as there are a wealth of mature trees and hedgerows which form natural nesting opportunities within the habitat area. Boxes to be located on houses below the eaves. The boxes installed will have a 32mm opening, which is suitable for a range of common species. The recommended type comprises the Gardman 'Multi-Nest box' (or similar) illustrated below:

Gardman 'Multi-Nest' box

v) **Installation**

The following should be taken into account in consideration during the installation of bird boxes:

- These should be placed on the sides of trees, away from direct sunlight, ideally facing between north and east (not south), and at 2-5m height above ground level.

vi) **Aftercare**

The nesting bird season is generally accepted as between March to September (with some overlap dependant on localised environmental conditions). Recommended maintenance to bird boxes should be undertaken outside of these times.