

Brooks

Ecological

Grounded advice

Biodiversity Enhancement Management Plan

Mount Vernon Road, Barnsley

Orion Homes



ER-3716-03A
June 2021

Report Reference:	Biodiversity Enhancement Management Plan Mount Vernon Road Barnsley
Report Reference:	ER-3716-03A
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The information which we have prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report does not constitute legal advice.

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Introduction

This Biodiversity Enhancement Management Plan (BEMP) is produced to show how biodiversity has been designed into the proposed residential development by Orion Homes Ltd. at Mount Vernon Road, Barnsley.

The BEMP is produced in accordance with Chapter 11 of British Standard 42020. This BEMP is the equivalent of a 'Biodiversity Management Plans' (BMPs), a term referenced in BS42020 Clause D.4.5., which sets out how wildlife interests will be enhanced, restored and maintained.

In producing this plan, the following information sources are referred to:

- **Preliminary Ecological Appraisal Report, Brooks Ecological R-3716-02 April 2019**
- **Arboricultural Impact Assessment AR-3716-01.03, September 2019—revised February 2020**
- **Landscape Proposals. Landscape Planning Partnership Drawing H2 181003.1C**
- **Woodland and Greenspace Management Plan. JCA Ltd. JCA Ref: 17016/EW**

The BEMP is submitted in order to discharge Condition 20 of the approved planning application as reproduced below:

Condition 20

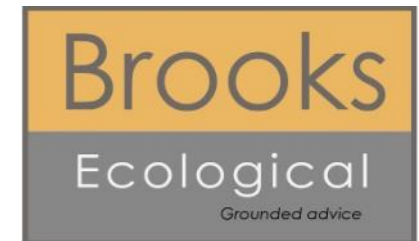
On commencement of the development, a detailed scheme of ecological mitigation, enhancement and maintenance shall be submitted for approval in writing. The scheme shall broadly follow the measures set out in the Preliminary Ecological Appraisal on pages 18 and 19 by Brooks Ecological. The scheme shall identify a timetable for implementation and maintenance for 5 years. The scheme shall be accompanied by a plan which clearly identifies what ecological features are proposed to be retained, mitigated and enhanced.

Scope of Plan

This BEMP relates to development of the land shown within the red line development boundary in Figure 1 excluding the woodland area to the south west which is under the separate woodland Management Plan



Figure 1 Development proposal .



Delivering the Plan

Orion Homes, (the Developer) is responsible for the creation and establishment works. The Developer will appoint either a Specialist Ecological Management Company (SEMC) or a company working under the direction of an Ecological Clerk of Works (ECoW) to oversee the delivery of this plan prior to any work commencing on site.

The ECoW would be a qualified Ecologist and member of the Chartered Institute of Ecology and Environmental Management, or be otherwise approved by the LPA.

After year five, a review of the Biodiversity Management Plan will be carried out and updated to set out aims and objectives for the subsequent 5 year period, and every 5 years in perpetuity.

This plan and the use of an ECoW or SEMC will be included in the terms of reference of the Site Management Company and incorporated in their long-term Management Plan.

Legal and Funding Mechanisms

The Developer will award a contract appointing either a Specialist Ecological Management Company or a suitable company working under the direction of an Ecological Clerk of Works (ECoW) to implement this plan to year 5, prior to commencement of any works. In-perpetuity management will be secured from the Site Management Company's management fund.

Funds needed to manage the site in perpetuity will be set by the Developer before the Site Management Company is instructed so that management prescriptions are itemised and budgeted for.

Description and evaluation of features

The PEA provides a summary of habitats and protected species within the proposed development area based on a search of ecological records and site survey. In summary the PEA concluded:

The majority of the Site is of low ecological value comprising buildings and landscaped grounds associated with the former hospital.

Woodland to the south-west of the Site offers higher value habitat and should be retained, as indicated in the proposed design.

Existing habitats mapped from the PEA survey are shown in Figure 2.

Protected or designated habitats:

Highstone Plantation is an area of broadleaf woodland to the south western boundary of the Site. This woodland is recorded in the National Woodland Inventory and subject to a group Tree Preservation Order (TPO).

Protected/ notable species relevant to the Site:

- Bats
- Breeding Birds
- Hedgehog

Potential constraints and enhancements for species are summarised in the following sections.



Figure 2 Baseline habitats as identified in the Preliminary Ecological Appraisal



Opportunities and Themes

Species-rich native hedgerows and trees

New hedgerows, planted up with a variety of native species, will provide shelter and a food resources for a wide variety of local wildlife including nesting birds, small mammals and invertebrates. These also provide connectivity between habitats for many species including bats.



Homes for declining birds & bats.

A wide range of designs faunal boxes are now available which can either be integrated into built structures or positioned in optimal habitat locations



Aims of management

The creation of wildflower habitats in areas of public open space and the protection and enhancement of retained woodland and addressed in the Woodland and Greenspace Management Plan. JCA Ltd.

Following recommendations in the Preliminary Ecological Appraisal the overall aims of this management plan are:

- the management and improvement of hedgerows along the northern boundary,
- the provision of hedgehog access routes through boundary fencing,
- the provision of bird and bat boxes to provide new nest/roost opportunities,
- the compensatory replacement of any trees/hedgerows lost as a result of the development.

Objectives for each management prescription are given in the relevant plan sections which follow.

Maintaining connectivity for hedgehogs

Hedgehogs have seen significant declines over the last few decades, with one of the major factors being habitat loss and fragmentation. Gardens provide excellent hedgehog habitat and by simply providing a means of access into these, new gardens can very quickly once again become home to this enigmatic species.



Tree planting

Rationale

Soft landscaping throughout the development provides an opportunity to compensate for the loss of some trees and support local biodiversity through introduced species which provides support for native wildlife.

Use of native species can provide much greater foraging opportunities to native wildlife as they are adapted to make use of these species.

Trees and shrubs in public spaces ensure the long term continuity of provision and management of these resources.

Objectives

1. Trees for borders and public spaces selected to favour native species and shrubs that maximise forage and shelter potential;
2. Landscape maintenance to ensure continued success and diversity of selected species.

Specification

Native tree and shrub species selected with composition as shown in the Landscape Plan.

Management

Maintenance of planted public space to be specified and carried out by the appointed management company

Monitoring

Year 2

Ecologist survey to record relative cover values according to objective 1 and 2. Percentage of native species to be maintained in proportions appropriate to the areas specified.

Output: ECoW report

Tree species schedule from Landscape Plan

Proposed Trees

Nr	Code	Plant Name	Form	Ht(cm)	Girth(cm)	CStm(cm)	Root
3	Ac	Acer campestre	Standard (Selected)	300-350	10-12	175-200	RB
4	AcE	Acer campestre 'Elsrijk'	Standard (Selected)	300-350	10-12	175-200	RB
2	AcS	Acer campestre 'Streetwise'	Standard (Selected)	300-350	10-12	175-200	RB
3	Ap	Acer platanoides	Standard (Selected)	300-350	10-12	175-200	RB
5	Bp	Betula pendula	Standard (Selected)	300-350	10-12	175-200	RB
7	MJD	Malus 'John Downie'	Standard (Selected)	300-350	10-12	175-200	RB
3	PaP	Prunus avium 'Plena'	Standard (Selected)	300-350	10-12	175-200	RB
2	Sar	Sorbus aria	Standard (Selected)	300-350	10-12	175-200	RB
1	Sau	Sorbus aucuparia	Standard (Selected)	300-350	10-12	175-200	RB
12	SaCR	Sorbus aucuparia 'Cardinal Royal'	Standard (Selected)	300-350	10-12	175-200	RB
1	Si	Sorbus intermedia	Standard (Selected)	300-350	10-12	175-200	RB



Native hedgerow

Rationale

New native hedge planting will extend the existing hedge at the Northern boundary to Coach House Lane. This will be managed to maximise its value to fauna - both as source of food and shelter and dispersal corridor.

Objectives

1. Protect and enhance diversity of existing boundary hedge;
2. Extend hedgerow structure and function through supplementary planting of new hedge section.

Specification

Existing hedge protection

Fencing to protect hedges throughout construction will be specified in the CEMP

Existing hedge enhancement

Gap replanting with mixed native shrubs according to Schedule 1.

New native hedges

Mixed native shrubs according to Schedule 1.

Management of Hedgerows

Year 1:

Plant up new hedge and gap up existing with selected stock in late autumn / early spring.

Spot treat perennial weeds such as dock and thistle

Year two onwards:

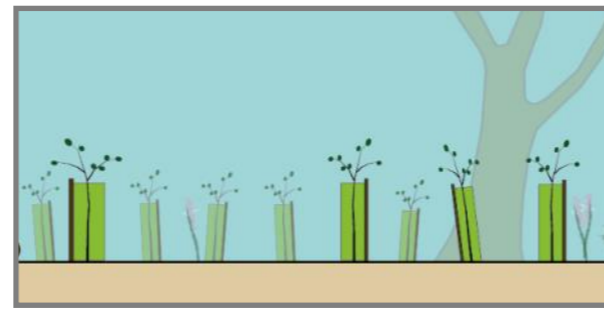
Hedge trimming if required should be done between October and February in a rotational schedule that leaves some flowering and berry producing growth in every year.

Leave hedge bottoms uncut in most years. Control bramble or other perennial weeds as required.

Monitoring

Output: ECoW report

Remedial actions: Localised weed control or over sowing with seed under the instructions of the ECoW.



Schedule 1

Native Hedge Species selected from:

- Acer campestre
- Corylus avellana
- Crataegus monogyna
- Ilex aquifolium
- Prunus spinosa
- Sambucus nigra
- Viburnum opulus
- Rosa arvensis



Hedgehog access

Rationale

Hedgehogs have seen significant declines over the last few decades, with one of the major factors being loss of habitat. This species is listed under Section 41 of the NERC Act (2006) as a 'Species of Principle Importance'. New gardens provide excellent hedgehog habitat and whereas previously, these gardens were accessible to this species by virtue of hedgerow planting, a shift in industry practice to hard borders (fences and walls) has inadvertently excluded hedgehogs from this extensive foraging resource. Simply providing a means of access into and between these new gardens can very easily and cheaply increase the amount of habitat available to hedgehogs.

Specification

These will be either purpose made panels such as those supplied by Jackson Fencing or be cut into standard fences, by contractors, during installation. All holes will be simply labelled 'Hedgehog Highway' (see photos) so home owners know why they are there. This will reduce the risk of holes being sealed.

Location Notes

As indicated in the figure opposite to provide access in the areas shown..

Installation

At least one hedgehog access hole (measuring at least 13cm x 13cm) will be installed in each new rear garden fence line. This will be done by contractors during the fence's installation.

When erected?

Following installation of garden fenced prior to occupation.



Bird Boxes

Woodstone starling box →



← Manthorpe Swift Brick

Rationale

The Site can be enhanced with nesting opportunities for birds. The following scheme favours species that are in decline and is simple to integrate to ensure the best chances of it being adopted correctly.

Two types of bird box, aimed at attracting declining garden bird species (swift, house sparrow and starling in particular), have been selected. The integral swift box may be used by a number of species.

Specification	No.	Siting
Manthorpe Swift Box*	20	Building - integral in 3s
Woodstone starling box.	8	Tree mounted

* Although aimed primarily at swift, this box also provides nesting opportunities for House Sparrow and other small garden birds, such as blue & great tit.

Location Notes

As shown in the figure opposite integrated bird boxes will be positioned as high up on buildings as possible, ideally directly below the eaves or verges. Boxes will not be installed directly above doors, windows or main footpaths.

Swift bricks will be installed in threes as this will also favour use by sparrows.

Installation

As per supplier instructions

When erected?

Integral - during construction

Tree / wall mounted - prior to sale of first unit



Bat Boxes

Rationale

Modern developments often fail to provide features suitable for use by roosting bats. To this end, a single type of integral bat box has been specified to provide suitable features in the long term. Boxes such as this are cheap and easy to install and can be custom faced on Site to blend seamlessly into the host building. Furthermore, they require no maintenance and create no conflict with home owners.

Specification

	No.	Siting
Habibat Box 003 or Ibstock C	8	Building - integral
Kent Eco Bat box	12	Tree mounted in 3s

Location Notes

As shown indicatively in the figure opposite.

Integral boxes will be positioned as high up on buildings as possible, ideally directly below the eaves or verges on south facing elevations where possible.

Boxes will not be installed directly above doors, windows or main footpaths.

Installation

Integral boxes—As per supplier instructions. Installed in pairs as indicated in the figure right. ECoW to advise on siting.

When erected?

During construction

Kent Eco Bat box

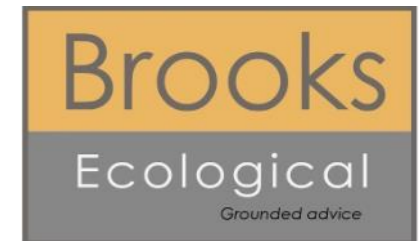


Habibat Box 003



Ibstock C





Work Schedule

The work schedule covers the 5-year establishment period (Developer's responsibility) and the in-perpetuity period [6+] (Site Management Company's responsibility).

'Year 1' is triggered as soon as any works commence on site. The following actions will be carried out by the site's landscape maintenance company.

Task	Year 1	Year 2	Year 3	Year 4	Year 5	6+
Ground forming and soil cultivation	yes					
Tree and hedge planting	November-February	November-February				
Manage trees and hedges			November-February	November-February	November-February	November-February
Erect bird and bat boxes	Any time	Any time				
Planting defects maintenance		yes	yes	yes	yes	