Brooks Ecological

Grounded advice

Biodiversity Management Plan

Halifax Road, Thurgoland

R-4643-01a

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Report Reference:	Biodiversity Management Plan Halifax Road, Thurgoland
Report Reference:	R-4643-01a
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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 Management Plan (The Plan) is produced for Arncliffe Homes to show how biodiversity has been designed into their proposed development at Halifax Road, Thurgoland.

The Plan is produced in accordance with Chapter 11 of British Standard 42020.

Reports which set out how wildlife interests will be enhanced, restored and maintained go under a variety of names, generated by the planning case officer or their internal consultant. As these names refer to the same output we standardise the name of our reports regardless of what appears in a planning condition as 'Biodiversity Management Plans' (BMPs), a term is referenced in BS42020 Clause D.4.5.

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

- Preliminary Ecological Appraisal Report R-3112-01 - Brooks Ecological - December 2017
- Bat Emergence Survey Report R-3112-02 - Brooks Ecological - August 2018
- Proposed Housing Layout 5148-90(02)-A1-C16 - Pearce Bottomley LLP - June 2019
- Hedgerow Regulations Assessment Report ER-4643-02 - Brooks Ecological - October 2020

A Landscape Management Plan is being produced for the Site by a third party.

Aims of the Plan

To provide biodiversity on site, mitigation/enhancement is provided in respect of:

- Installation of bird and bat boxes
- Provision of access routes for hedgehogs
- Boundary hedgerows and trees

As raised in pre-application discussions with Barnsley Metropolitan Borough Council (MBC) (reference 2018/0028).

Proposed Site Layout (drawing reference 5148-PBA-90(02)-A1-C16



Delivering the Plan

Arncliffe Homes is responsible for the creation and establishment works for a five-year period.

Arncliffe Homes 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 Local Planning Authority (LPA).

After year five, this plan will be the responsibility of a Site Management Company.

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

Arncliffe Homes will award a contract appointing either a SEMC or a suitable company working under the direction of an ECoW to implement this plan to year five, 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 it is itemised and budgeted into any tenants' Management Company subscription.

Opportunities and Themes

Faunal habitat

Situated within a village location, the Site is located in close proximity to areas of woodland within the rural landscape. These habitats will support common species of birds and bats.

Homes for declining bats and birds

There are opportunities to support bats and birds by providing habitat boxes offering shelter and breeding places. A wide range of designs are now available on the market which can be integrated into buildings or affixed to retained trees.





Food and cover for birds

Birds are attracted to dense cover where they can shelter from predators, nest and feed. Landscaping can include areas which will allow for the creation and long term maintenance of areas of shrub and hedge. If hedges are cut in late February they hold on to their berries through winter, which can be critical for birds' survival in harsh winters.



Managing hedges for wildlife

Trees and hedgerows around the sites boundaries will provide food and nesting resources for birds and other wildlife.

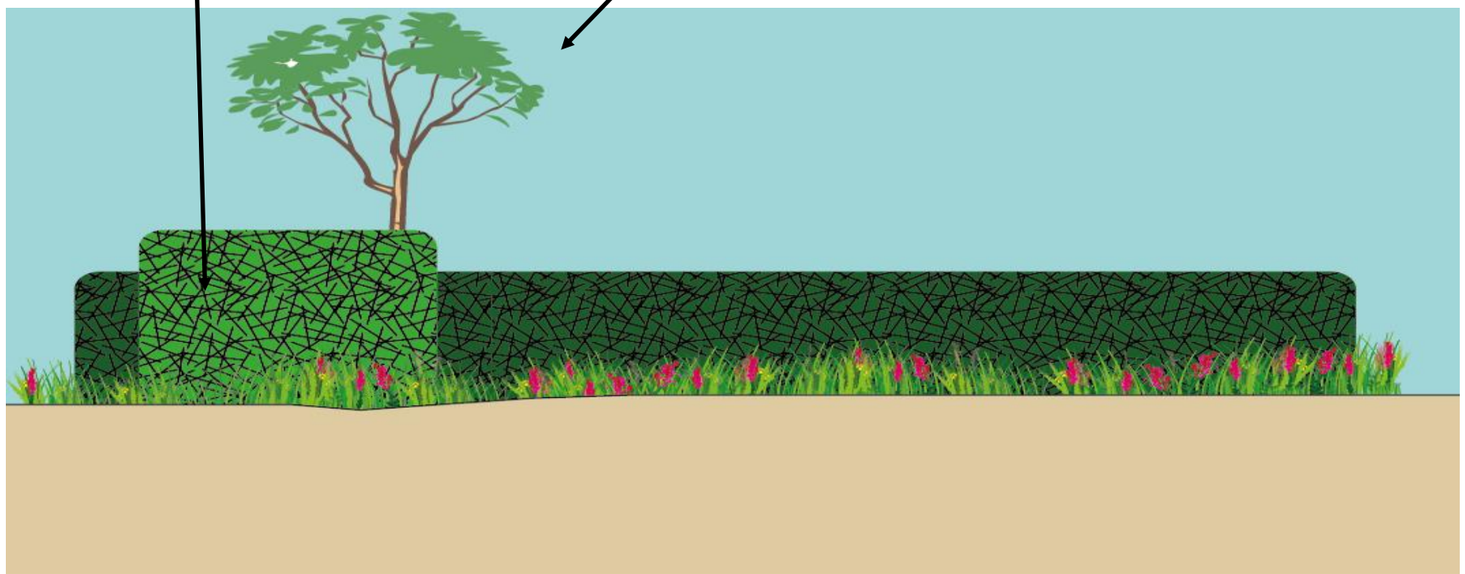
Planting up native hedges is a good start, but how they are managed makes a real difference to wildlife. If they are cut too often they won't flower well, or produce the berries wildlife can depend on.

Uncut sections

Where appropriate, there are real advantages to allowing the hedge to grow for two years. This allows species which flower and fruit in the second year to do so.

Standard Trees

Allowing some specimens (e.g. rowan and hazel) to develop into free standing specimens can increase the range of niches available to fauna and strengthen the hedgerows value as a wildlife corridor.



Accessibility for Hedgehogs

Planting of hedgerows around the site boundaries will facilitate the movement of hedgehogs across the Site. In addition, where levels allow, hedgehog access holes will be installed into garden fences to increase the amount of habitat available to them, whilst directing their movement away from roads.



Native Hedgerow Planting

Overview

Sections of hedgerow along the eastern (H1) and southern (H2) boundaries will be removed to facilitate construction, provide access roads and for drainage easement.
Where possible, hedgerow will be retained and enhanced through an appropriate management regimen (as detailed overleaf). Undesirable species such as sycamore will be removed, and gaps infilled with diverse native species (from Schedule 1 below).
Lost hedgerow along the eastern boundary will be replanted as native species rich hedgerow with trees (from Schedule 2), Native planting will be extended along the eastern and southern boundaries, and around the area of open green space to the south-west corner.
Dividing hedgerows within the housing development will utilize native species such as beech, hornbeam or yew.

Objectives

1. To mitigate the loss of hedgerows and trees, and extend existing habitats.
2. New planting allowed to grow and flourish.
3. Standard trees allowed to develop fruiting spurs.
4. Increase the extent of linear features.
5. Increase biodiversity value of hedgerows on-site by a minimum of 10%.

Specification

As per schedules (below and right). Planting into weed free ground with woodchip mulch behind rabbit proof fencing. Replacement hedge will be double staggered rows at 0.5m centers.
To include standard trees at minimum of 1 per 30m length and fenced to protect from cutting.

Management

Standard landscape establishment and maintenance as per Landscape Management Document.

Monitoring

Landscape Architect standard monitoring visits for landscape planting.
Output
Not required
Remedial Actions
As Landscape Management Document

Summarising hedgerow impacts and replanting across the Site.



Schedule 1 - Native Hedgerow Planting (Boundaries)

Scientific	English	%	Stock	Groupings	Centres
Corylus avellana	Hazel	20	1+1 BR	groups 3-5	2m
Sambucus nigra	Elder	10	1+1 BR	groups 3-5	2m
Acer campestre	Field maple	10	1+1 BR	groups 3-5	2m
Crataegus monogyna	Hawthorn	30	1+1 BR	groups 3-8	2m
Rosa canina	Dog Rose	10	1+1 BR	groups 3-8	2m
Malus sylvestris	Crab apple	5	1+1 BR	groups 3-5	2m
Viburnum opulus	Guelder Rose	5	1+1 BR	groups 3-5	2m
Ilex aquifolium	Holly	10	1+1 BR	groups 3-5	2m

Schedule 2 - Standard Trees

Scientific	English	Stock
Quercus robur	Pedunculate oak	Standard
Tilia x cordata	Lime	Standard
Sorbus aucuparia	Rowan	Standard
Carpinus betulus	European hornbeam	Standard
Acer campestre	Field maple	Standard

Native Hedgerow Management

Rationale

Post development, new and retained boundary hedges will be managed to maximise their value to fauna - both as a source of food and shelter, and as dispersal corridors.

Objectives

1. All hedgerows remain continuous and unbroken.
2. Berries, or berry bearing spurs, remain on trees until the end of winter.
3. A margin no less than 1m of uncut grass around at least one side of the hedge (excludes hedging dividing housing plots).

Specification

Planting as per Schedule 1 and 2 on previous page. Ensure standard trees are clearly visible within the hedgerow (ie. with additional fencing) to avoid accidentally cutting during hedgerow management; allow trees to grow out.

Management

Year 1 –3 Standard hedgerow establishment as per landscape plan.

Year 4 onwards - Cut no more than 80% of hedgerow in February, spread chippings under the hedge. Leave remaining sections to grow for one further year. Vary the location of sections which are left each year.

Monitoring

Year 3 and 5—Ecologist to record according to objective 1- 3.

Output

ECoW report.

Remedial Actions

ECoW to liaise with contractor to amend cutting regime. Localised infill or replacement planting if necessary, using native species from Schedule 1 as before.



Hedgerows on-site post development.



Tree and Shrub Planting for Wildlife

Overview

Small isolated pockets of scrub comprising hawthorn, holly and elder will be lost from the Site's internal habitats, along with a semi-mature sycamore along the southern boundary.

In addition to enhancing boundary hedgerows, a number of standard trees will be planted in areas of green space. These will complement more traditional ornamental shrub species used in landscape planting within garden spaces.

Objectives

1. To mitigate the loss of scrub and trees from the Site.
2. To provide additional planting to overcompensate for lost trees/scrub.
3. New planting allowed to grow and flourish.
4. Stand alone trees allowed to develop fruiting spurs.

Specification

Standard trees as per schedule below; garden shrubs at discretion of Landscaping Proposal, but to include some varieties attractive to pollinating insects.
Plant trees into weed free ground with woodchip mulch behind rabbit proof fencing.

Management

Standard landscape establishment and maintenance as Landscape Management Document.

Monitoring

Landscape Architect standard monitoring visits for landscape planting.
Output
Not required
Remedial actions
As Landscape Management Document

Summary of tree impacts and replanting:



Schedule 3 - Stand alone trees

Scientific	English	Stock
Quercus robur	Pedunculate oak	Standard
Tilia x cordata	Lime	Standard
Betula pendula	Birch	Standard
Sorbus aucuparia	Rowan	Standard
Carpinus betulus	Hornbeam	Standard
Fagus sylvatica	Beech	Standard
Prunus padus	Cherry	Standard

Bird Boxes

House Sparrow

Terrace boxes suitable to house sparrows will support this declining species, which likes to nest in small communal groups.

Specification

https://www.nhbs.com/1sp-schwegler-sparrow-terrace

or equivalent approved by an Ecologist.

Location Notes

Sited as high as possible under the eaves, with good access to unlit vegetated corridors.

Avoiding a southerly elevation, away from direct sunlight.

Number

5

When erected?

During construction.

Starling

Starlings, now a Red List species, are gregarious and can be loud neighbours.
Nest provision is best sited away from housing in surrounding vegetation.

Specification

https://www.nhbs.com/vivara-pro-woodstone-starling-nest-box

or equivalent approved by an Ecologist.

Location Notes

At least two metres above ground, affixed to mature retained trees.

Position away from low branches or vegetation that might allow access to predators.

Number

2

When erected?

During construction.





Schwegler 1SP sparrow terrace (left) and Vivara Pro woodstone starling box (right).

Bird box proposal:



Bat Boxes

Bat boxes to be integrated into at least 25% of new homes.

Specification

Various models and designs available to suit the finish of the property, offering a discreet option and reducing the risk of interference.

https://www.nhbs.com/ibstock-enclosed-bat-box-c

http://www.habibat.co.uk/category/bat-boxes/habibat-unfaced-bat-box

Or equivalent approved by an Ecologist

Location Notes

Sited as high as possible under the eaves with good access to unlit vegetated corridors, on or close to a southerly elevation.

Number

6

When erected?

During construction.

Bat box proposal:





Ibstock C bat box for new homes (left)

Unfaced Habibat integrated box for rendered walls (right)



Hedgehog Provision

Rationale

Hedgehog have seen significant declines over the last few decades, with one of the major factors being a 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 change in industry practice to hard borders (fences and walls) have inadvertently excluded hedgehog from this extensive foraging resource. Simply providing a means of access into new rear gardens can very easily and cheaply increase the amount of habitat available to hedgehog.

Hedgehog access holes

Specification

At least one hedgehog access hole (measuring at least **13cm by 13cm**) will be installed into new rear garden fence lines, where sited away from roads - as shown on the adjacent plan. These will be either purpose made panels such as those supplied by Jackson Fencing, or be cut into standard fences, by contractors, during installation.

Where concrete gravel boards are used, either purpose built ramps to access holes in the fence panels or underpasses beneath the boards will be made. These holes will be simply labelled so home owners know why they are there.







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Key

Boundary Treatments Model with Hedgehog Access shown



Eastern boundary is assumed to be permeable via existing/new hedgerow and shrub planting. If this boundary is to be fenced, access holes should also be provided.

Areas marked in blue (post and rail fencing) assumed accessible with no specific actions required.

Holes not recommended in the south-west of the site as these would access onto roads, increasing the risk of injury.

Work Schedule

The work schedule below 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 under the direction of the ECoW where required.

Task	ECoW to direct	ECoW to carry out	Prior to any work	Year 1	Year 2	Year 3	Year 4	Year 5	6+
Tree Planting	Yes			November-February					
Hedgerow Planting	Yes			November-February					
Hedgerow Management	Yes						February	February	February
Erect bird boxes	Yes			During Construction					
Erect bat boxes	Yes			During Construction					
Install hedgehog access	Yes			During Construction					