

# Biodiversity Enhancement & Management Plan



17/10/2025

*This Biodiversity Enhancement & Management Plan (BEMP) sets out long-term measures to improve the ecological value of Crown House, Huddersfield, following its conversion to student accommodation. The plan details the removal of invasive vegetation, enhancement of grassland and shrub habitats, integration of solitary bee features, and installation of a peregrine falcon nesting box. Management prescriptions extend over a 30-year period, with regular ecological monitoring to ensure sustained biodiversity gains within the urban environment.*

## Document Control Sheet

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## 1. Introduction

This Biodiversity Enhancement & Management Plan (BEMP) has been prepared by Hewitt & Carr Services (HCS) on behalf of Abode to set out the long-term ecological enhancement and management strategy associated with the conversion of Crown House, Huddersfield, into student accommodation.

The plan complements the approved Construction Environmental Management Plan (Biodiversity) by translating its mitigation and enhancement measures into long-term deliverables. It provides detailed prescriptions for habitat establishment, maintenance, and monitoring across a 30-year management period, ensuring measurable biodiversity improvements consistent with national policy and local objectives.

This document fulfils the expectations of BS 42020:2013 – Biodiversity: Code of Practice for Planning and Development, the Environment Act 2021, and the Kirklees Local Plan (2019) which require the protection, enhancement, and sustained management of biodiversity features in urban developments.

## 2. Baseline Summary

The site comprises a multi-storey urban block surrounded by narrow vegetated strips and hardstanding. Existing vegetation includes:

- **Western boundary:** shrub bed dominated by buddleia (*Buddleja davidii*), cotoneaster (*Cotoneaster* sp.), and bindweed (*Calystegia sepium*).
- **Northern boundary:** moderately shaded grassed bank supporting two hornbeam (*Carpinus betulus*) and one rowan (*Sorbus aucuparia*).
- **Roof:** accessible flat roof with potential for bird nesting opportunities.

Previous surveys found no evidence of bat roosting and confirmed successful pigeon exclusion. The primary biodiversity opportunities relate to vegetation enhancement, provision of pollinator resources, and installation of nesting features suited to an urban context.

### 3. Objectives

1. Eradicate invasive and dominating vegetation to restore ecological function to planted borders.
2. Enhance existing grassland beneath trees using a UK-native wildflower mix suited to moderate shade and sloping topography.
3. Reconstruct the western shrub bed using a diverse native species assemblage that provides nectar, pollen, and berries across the year.
4. Integrate solitary-bee nesting features into the building façade near foraging sources.
5. Install a peregrine falcon nesting box on the roof to promote breeding of this regionally significant species.
6. Establish a 30-year management regime ensuring the habitats remain resilient, attractive, and ecologically valuable despite urban pressures such as litter and trampling.

### 4. Legislative & Policy Context

The plan adheres to the following key instruments and guidance:

- Wildlife and Countryside Act 1981 (as amended)
- Conservation of Habitats and Species Regulations 2017 (as amended)
- Natural Environment and Rural Communities (NERC) Act 2006 – Section 40 Duty to Conserve Biodiversity
- Environment Act 2021 – Biodiversity Net Gain (30-year management requirement)
- BS 42020:2013 – Biodiversity: Code of Practice for Planning and Development
- CIEEM (2019) Guidelines for Ecological Impact Assessment
- Kirklees Local Plan (2019) – Policies LP30 (Biodiversity and Geodiversity) and LP31 (Strategic Green Infrastructure Network)

## 5. Enhancement Measures and Design Rationale

### 5.1 Invasive Species Control

All invasive or non-native shrub species will be removed prior to reinstatement works. Roots of buddleia, cotoneaster, and bindweed will be excavated to a depth of at least 300 mm, and regrowth treated through targeted application of a glyphosate-based herbicide by a competent operative. Waste material will be disposed of at a licensed green-waste facility under *Environment Agency RPS 178*.

Follow-up inspections will be carried out quarterly in Year 1 and annually thereafter. Success will be declared once <5 % regrowth is observed.

### 5.2 Northern Border Wildflower Enhancement

The shaded, sloping northern border beneath the two hornbeam and one rowan trees will be enhanced to a species-rich, semi-natural grassland.

- **Ground preparation:** remove coarse grasses and moss by light scarification and topsoil scraping to expose mineral soil.
- **Seed mix:** sow a UK-native, shade-tolerant wildflower mix (e.g. Emorsgate EH1 or Scotia Seeds Woodland Edge) at 4 g/m<sup>2</sup> in early autumn.
- **Composition target:** at least 15 native forbs (including red campion *Silene dioica*, self-heal *Prunella vulgaris*, foxglove *Digitalis purpurea*, yarrow *Achillea millefolium*).
- **Ecosystem function:** supports bees, hoverflies, and butterflies; provides structure and soil stabilisation on the slope.

### 5.3 Western Shrub Border Reconstruction

After soil stripping (300 mm) to remove bindweed seedbank, replace with clean topsoil blended with 25 % compost.

Plant a diverse native shrub mix (2 plants/m<sup>2</sup>, 40–60 cm transplants) to maximise seasonal resources:

Species	%	Wildlife Value
Dogwood ( <i>Cornus sanguinea</i> )	20	Nectar for bees, red berries for birds
Hazel ( <i>Corylus avellana</i> )	20	Catkins in spring, nuts for small mammals
Guelder rose ( <i>Viburnum opulus</i> )	20	Berries for thrushes, flowers for pollinators
Wild privet ( <i>Ligustrum vulgare</i> )	20	Fragrant flowers, berries for birds
Field rose ( <i>Rosa arvensis</i> )	20	Nectar and hips for insects and finches

Mulch to 50 mm depth with woodchip; water during establishment year.

A mixed height and density will provide nesting shelter for small passerines (wren, robin, dunnock).

## 5.4 Solitary Bee Features

Install a minimum of four bee bricks or tubular bee blocks integrated within the southern or western façades.

- Mount between 1–3 m above ground, facing south-east.
- Keep within 10 m of flowering vegetation.
- Use kiln-fired clay or FSC timber products with hole diameters 2–10 mm. These will benefit mason bees (*Osmia bicornis*) and leafcutter bees (*Megachile sp.*), increasing urban pollinator activity.

## 5.5 Peregrine Falcon Nest Box

Install one perch-fronted nesting tray (600 × 600 mm minimum) on the upper roof ledge with an open flight path.

- Orientation: east or north-east.
- Filled with coarse gravel substrate.
- Installation under supervision of a licensed ecologist. Internal monitoring will be undertaken annually; liaison with the West Yorkshire Peregrine Partnership will remain an open option should breeding activity be detected.

## 6. Management Prescriptions (Years 1–30)

### 6.1 Habitat Establishment (Years 1–2)

- Complete invasive species removal and replanting.
- Water newly planted shrubs during dry periods.
- Cut wildflower grassland once in late summer (August/September), remove arisings to maintain low fertility.
- Undertake quarterly weeding of borders.

### 6.2 Early Maintenance (Years 3–5)

- Continue annual late-summer cut of wildflower area; additional spring cut if excessive thatch forms.
- Replace any shrub losses >20 % with matching species.
- Inspect bee bricks and clear debris using dry brush only.
- Inspect peregrine box; maintain cleanliness and security.

### 6.3 Long-Term Management (Years 6–30)

- Transition to biennial inspections.
- Continue annual wildflower cut and periodic shrub pruning to maintain structure and prevent dominance by dogwood or hazel.
- Remove litter and debris twice yearly to counter urban impacts.
- Review condition at Years 10, 20, and 30 with photographic comparison and short statement to the Local Planning Authority.

## 7. Monitoring and Reporting Framework

Phase	Frequency	Key Checks	Responsible Party
Years 1–5	Annual visit (Aug–Sep)	Vegetation composition, invasive regrowth, fauna use	HCS Ecologist
Years 6–30	Every 2 years	As above + litter/trampling impacts	HCS Ecologist
Ad-hoc	As required	Bee brick and peregrine box integrity	Site Manager / HCS ECoW

Each monitoring visit will produce a brief written report with photographs, percentage cover estimates, and management recommendations. These reports will be retained by Abode and made available to the Local Planning Authority on request.

## 8. Success Criteria and Remedial Actions

Feature	Target Condition	Trigger for Remedial Action
Invasive control	<5 % regrowth by Year 2	Any regrowth >10 % area → retreat and replant
Wildflower grassland	≥80 % vegetative cover; ≥10 native forbs by Year 3	<50 % cover or dominance of coarse grass → re-seed
Shrub border	≥75 % survival; diverse structure	>25 % loss → infill planting
Bee features	Intact, unblocked, active	Obstruction or water damage → replace
Peregrine box	Secure and undisturbed	Physical damage → repair / relocate
Litter control	<5 items per 10 m <sup>2</sup>	Persistent litter → increase maintenance frequency

## 9. Governance & Responsibilities

- **Implementation:** Landscape Contractor under HCS oversight
- **Maintenance:** Abode or appointed Facilities Management Contractor
- **Ecological Monitoring:** Hewitt & Carr Services (ECoW)
- **Funding:** Abode for initial 5 years; long-term maintenance costs built into management budget
- **Raptor Monitoring:** HCS internal; liaison with West Yorkshire Peregrine Partnership if activity detected

## 10. Review & Adaptive Management

An adaptive approach will be adopted. Where success criteria are not achieved, remedial actions (additional seeding, replanting, fencing, or increased cuts) will be agreed between HCS and the site manager. A full 30-year summary report will be produced in Year 30 documenting the site's ecological performance and lessons learned.

## 11. Conclusion

Implementation of this 30-year Biodiversity Enhancement & Management Plan will transform the limited vegetative margins of Crown House into a mosaic of pollinator-friendly and wildlife-supportive habitats. The plan ensures that enhancements—wildflower grassland, native shrubs, solitary bee bricks, and a peregrine nesting site—are properly maintained and monitored, delivering enduring ecological benefits and aligning with statutory Biodiversity Net Gain principles and local biodiversity strategy objectives