

BIODIVERSITY ENHANCEMENT & MANAGEMENT PLAN

**at
Land off Moor Lane
Cleckheaton
West Yorkshire
BD19 4LF**

**Client:
PPJ Developments**

**Client Address:
Flat 93
1 Dock Street
Leeds
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**JCA Ref:
23091/RPS**

**Date of Report:
10/09/2025**



Quality Assurance

JCA ref.	Version	Report Completed		Checked	
		Date	Name	Date	Name
23091/RPS	001	21/08/2025	Rebecca Petch-Smith	26/08/25	Alex Donovan

This report has been prepared and provided in accordance with the *British Standard 42020: Biodiversity – Code of practice for planning and development* and the *CIEEM's Code of Professional Conduct*.

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1. Introduction

1.1 Purpose and Scope of the Report

In August 2025, JCA Ltd were commissioned by **PPJ Developments** to produce a **Biodiversity Enhancement & Management Plan (BEMP)** for the construction of 10 residential dwellings at **Land off Moor Lane, Cleckheaton, West Yorkshire, BD19 4LF** hereafter referred to as 'the site'.

This BEMP will aim to fulfil the planning conditions set by the local council, with the aim of enhancing the site's value to wildlife, through the retention of any existing features of value to wildlife, the creation of new habitats and enhancement of existing habitats.

1.2 Terms of Reference

The following reports and plans have been used in the production of the BEMP and should be read in conjunction with this report:

- Brooks Ecological – Preliminary Ecological Appraisal (PEA), Mar 2022 (Reference: ER-5754-01).
- Brooks Ecological –Biodiversity Net Gain Assessment, Jun 2022 (Reference: ER-5754-02).
- AHJ Architects – Proposed site plan, Aug 2025 (Dwg number: 2539 D 20 002).

1.3 Site Description and Baseline Site Use

The site is centred at Ordnance Survey ('OS') grid reference **SE 20782 26788**.

The site is located approximately 6 km southeast of Bradford town centre. The site consists of mixed scrub and scattered trees.

1.4 Proposed Site Use

The proposed development will involve the construction of 10 residential dwellings with associated gardens, access and parking.

1.5 Roles and Responsibilities

1.5.1 Ecologist Responsible for BEMP

JCA Ltd. are the organisation responsible for the production of this BEMP. JCA Ltd. report on both ecological and arboricultural issues throughout the UK. All surveys and reports are undertaken and compiled in accordance with CIEEM's Professional Code of Conduct and the relevant survey guidance.

1.5.2 **Management Organisation(s)**

PPJ Developments is responsible for the implementation of the BEMP during works and construction. Responsibility for ongoing management will be passed on to a management company funded by resident contributions.

1.5.3 **Local Planning Authority (LPA)**

Kirklees Council is the LPA responsible for reviewing and auditing the BEMP. They are also the body responsible for reviewing Monitoring Reports.

1.5.4 **Monitoring**

PPJ Developments is responsible for instructing a suitably qualified ecologist to carry out monitoring of the site in years 1-5 post-development, and providing the Monitoring Reports to Kirklees Council.

2. Baseline and Environmental Information

2.1 Baseline Habitat Surveys

The PEA details the habitats and species that are present or may potentially be on site that are vulnerable to adverse impacts, either directly or indirectly, by the proposed works and provides a discussion of the ecology on site.

2.2.1 Habitats

A summary of the habitats and features present onsite can be seen below. The PEA classified habitats using the current UKHab Version 2.0 classification system.

- Bramble scrub (UKHab primary code h3d – bramble scrub)
- Scattered trees (UKHab secondary code 32 – scattered trees)

2.2.2 Species

The PEA identified the site's potential to support the following species and groups of species:

- Bats – foraging, commuting
- Nesting birds
- Hedgehogs

3. Habitat Retention and Loss

3.1 Retention and Loss of Habitats

The proposed development will involve the partial loss of bramble scrub and trees on site.

3.2 Protection of Retained Features

Protective Heras fencing, at least 1.8m in height, is to be installed around the development perimeter and around areas of retained trees. Fencing around retained trees are to create a Construction Exclusion Zone (CEZ) to prevent damage to trees during the construction phase. Barriers around retained trees are to enclose the entire Root Protection Area (RPA) of the trees, where possible. The CEZ is to be considered a restricted area; no pedestrians, vehicles, equipment or machinery are allowed within the CEZ, and the storage of materials is not permitted.

This fence is to be retained for the duration of the works to prevent species such as badgers, foxes, and domestic pets from commuting on-site and to prevent construction works causing any damage to surrounding habitats and retained habitats close to construction. The fence should be inspected regularly and repaired as necessary for the duration of the works.

Lighting should not fall onto surrounding habitats close to construction.

If plant operations are unavoidably close to surrounding habitats and retained habitats close to construction, they should only be done with light machinery to avoid pollution, excessive noise and vibration spilling into the surrounding environment. The use of dust suppression equipment is also recommended.

To prevent any possible chemicals from entering surrounding habitats and retained habitats close to construction, use on site must be limited where possible. If chemical use and refuelling is unavoidable, the appropriate preventative measures must be in place to prevent any possible spills, this includes a plan to quickly combat any chemical or fuel spill that may occur.

The use of herbicides should also be limited where possible. For vegetation removal, manual removal should be adopted. This is to limit possible herbicide runoff into the surrounding habitats and retained habitats close to construction.

4. Habitat Creation and Enhancement

4.1 Summary of Habitat Creation

Habitat creation in the form of vegetated garden across the site and introduced shrub around the south of the site is to be incorporated into the scheme.

Gardens can support a surprising and diverse array of wildlife (Owen 1991). There are number of practices that can maximise biodiversity in back gardens and are particularly relevant to this proposed development. This can be achieved by minimizing practices such as pesticides, planting flowers and trees, creating wildlife features such as ponds piles of logs and providing artificial nesting and roosting sites.

The site can be of benefit to local wildlife through incorporating one or more of the following:

- Planting of patches of wildflower-rich grassland,
- Planting of native shrubs/hedgerows,
- Planting of individual trees,
- Inclusion of faunal boxes to target priority species of local importance, namely, bat, bird, hedgehogs, and invertebrate species.

It is recommended that consultation with a landscape architect is conducted to prepare a planting plan to improve the habitats present and create new habitats, including incorporating plant species beneficial to biodiversity.

It is recommended that a planting plan should include night-scented flowers that will attract night-flying insects, particularly moths, which in turn are likely to attract bats. Such plants include honeysuckles *Lonicera* spp, jasmines *Jasminum* spp, evening primrose *Oenothera biennis*, and sweet rocket *Hesperis matronalis*. Further advice on bat-friendly plants and gardening can found in [Encouraging Bats](#) from the Bat Conservation Trust (BCT).

4.2 Habitat Enhancement

No habitat enhancements are due to occur within the scheme.

5. Management Prescriptions

5.1 Scrub Planting

5.1.1 Description

Scrub planting in accordance with landscape details are to be incorporated into the scheme.

Incorporating an area of scrub planting will benefit a range of species by providing additional habitats for invertebrates, nesting opportunities for birds, and resting/commuting opportunities for hedgehogs.

5.1.2 Target Habitat Summary

Scrub Planting

Introduced shrub dos does not require a condition assessment but should meet the UKHab habitat description for u1, 847 - introduced shrub.

Definition

Non-native tall phanerophytes, mid phanerophytes or low phanerophytes planted in a garden or park setting.

5.1.3 Species Selection and Specification

All shrubs will be procured and planted in accordance with British Standards BS 8545:2014. The species have been selected for their hardiness, amenity value and their value to local wildlife, either in the form of flowers, berries, seeds or shelter. Species that are poisonous such as Spindle have been avoided. Shrubs will be planted at 2m x 2m spacing for scrub planting and in double-staggered rows for hedgerow planting. The following tables details the specification for the newly planted scrub.

Table 1: Recommended species to enhance scrub planting (additional to planting of non-native ornamentals shrubs).

Botanical Name	Common Name	Size at purchase
<i>Cornus sanguinea</i>	Dogwood	Bare Root
<i>Corylus avellana</i>	Hazel	Bare Root
<i>Crataegus monogyna</i>	Hawthorn	Bare Root
<i>Ilex aquafolium</i>	Holly	Bare Root
<i>Malus sylvestris</i>	Crab apple	Bare Root
<i>Rosa canina</i>	Dog-Rose	Bare Root
<i>Sambucus nigra</i>	Elder	Bare Root
<i>Viburnum opulus</i>	Guelder Rose	Bare Root

5.1.4 Implementation of Introduced Shrub

It is recommended that scrub planting is implemented after the completion of the development. This will avoid damage to scrub from construction hazards such as re-grading of soils near roots and mechanical damage to tree crowns. Care should be taken during development to ensure that soils surrounding the scrub are not contaminated with cement or any other building materials.

Shrub planting should take place between November and March. Before planting, loosen the soil to eliminate compaction and improve drainage. If the existing topsoil is of poor quality, a fertile, freely draining soil with neutral or slightly acidic pH should be imported.

The shrubs should be planted at 2m x 2m spacing. A planting hole will be excavated by hand and will be twice the diameter of the root ball and of equal depth. The sides and bottom of the hole should be roughened with the spade or fork. The new shrub should be offered into the hole and backfilled using the original soil material. Before planting, loosen the soil to eliminate compaction and improve drainage. Soil amendments such as compost should not be added as this has been shown to be detrimental to successful establishment. All newly planted shrub are to be thoroughly watered immediately after planting.

Staking will be required to secure the shrub and prevent losses within the first years of establishment. It may be necessary to angle the stakes to avoid damaging the root ball.

Woodchip mulch should be applied around the base of each shrub to a depth of no more than 75mm. This will conserve water close to the soil surface and inhibit weed growth.

5.1.5 First Year Management of Shrub

Newly planted shrubs are to receive 50 litres of water per week between the months of April and August for the first three years.

New bark mulch should be applied around the base of each shrub to a depth of no more than 75mm, each year for at least the first three years. This will conserve water close to the soil surface and inhibit weed growth.

Any weeds found growing around the newly planted shrubs should be removed annually in subsequent years after planting. This will ensure the uptake of valuable resources such as water, nutrients, and light. This should be done manually without the use of herbicides.

5.1.6 Management Once Established

Remove tree stakes, guards, and ties when they are no longer needed. The scrub is to be split into coups and coppiced on rotation every 7 to 15 years depending on growth rate of shrubs. The best time to cut scrub is during late winter.

After completing any future works such as pruning or felling, all deadwood should be retained on Site and created into log piles in suitable and sheltered positions. This will then provide habitat for flora and fauna such as fungus, invertebrates, and

amphibians.

5.1.7 **Monitoring**

Monitoring is not required as introduced shrub does not require a condition assessment after establishment.

The site should be continually monitored for the introduction and spread of invasive and undesirably non-native plant species, including but not limited to Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Fallopia japonica*, rhododendron *Rhododendron ponticum*, and cherry laurel *Prunus laurocerasus*. If any invasive species are identified, then an appropriately licensed specialist must be contacted who can eradicate and safely dispose of the invasive species.

5.1.8 **Scrub planting Implementation, Management and Monitoring Schedule**

Table 2: Prescriptions for the implementation, management, and monitoring of scrub planting.

	Year(s)	Action	Prescriptions	Time of year
Implementation	0	Scrub planting	The scrub should be planted at 2m x 2m spacing. All newly planted trees and shrub are to be thoroughly watered immediately after planting. Woodchip mulch should be applied around the base of each shrub to a depth of no more than 75mm. This will conserve water close to the soil surface and inhibit weed growth.	Nov - Mar
Management of Newly Planted Scrub	1 - 3	Watering	Newly planted shrubs to receive 50 litres of water per week for the first three years.	Apr - Aug
	1 - 3	Weeding	Any weeds found growing around the newly planted trees should be removed annually in subsequent years after planting. This should be done by manually without the use of herbicides.	Aug - Sep
	1 - 3	Mulching	New bark mulch should be applied around the base of each tree to a depth of no more than 75mm	Mar - Apr
	1 - 5	Replacement of dead shrubs	Replace dead shrubs, as necessary.	Nov - Mar
	2 - 3	Remove stakes & ties	Remove stakes, guards and ties when they are no longer needed.	All year
Management Once Established	10, 20 & 30	Coppicing	Coppice scrub on rotation every 7-15 years. This is to be undertaken outside of bird nesting season (February to September).	Nov - Jan

6. Faunal Enhancements

6.1 Summary

- 6.1.1 In total, **10** bat boxes on trees, **10** mounted bird boxes on trees, **2** insect towers, and **2** hedgehog shelters have been recommended.

6.2 Bat Roosting Opportunities

- 6.2.1 All British bat species are protected by UK legislation. This is in response to the declines experienced by many bat species over the past century. The cause of the decline could be linked to a number of factors, including habitat loss, pesticide over-use, habitat fragmentation, loss of roost sites and roost disturbance.
- 6.2.2 All bat species are European Protected Species (EPS) under **Schedule 2** of the **Conservation of Habitats and Species Regulations (CHSR) 2017** (retained in UK law by **CHSR (Amendment) (EU Exit) 2019**), with additional protections under **Schedules 5 and 6** of the **Wildlife & Countryside Act (WCA) 1981 (as amended)**. Additionally, six species (including soprano pipistrelles and noctules) are priority species under **Section 41 (S41)** of the **Natural Environment & Rural Communities (NERC) Act 2006**, designating them as species of principal importance for the purpose of conserving biodiversity.
- 6.2.3 Pipistrelles typically roost within structures, but also use tree holes and crevices, whereas noctules are primarily tree roosting species. Therefore, the types of bat boxes recommended for the Proposed Development will provide roosting opportunities for a range of bat species.
- 6.2.4 Box Selection & Positioning: There is a wide range of different bat boxes available, including both internal and external designs. External designs include the traditional wooden and woodcrete boxes. Internal designs include boxes that can be built into the walls, with a front that mimics the brickwork of the building, essentially becoming invisible. Other roost opportunities include cutting slots into soffit boxes, using bat bricks that lead into cavity walls and using lifted tiles to allow access into the loft.
- 6.2.5 **Bat Boxes** (on trees) should be positioned at least 5m high, with their front facing **south**. The selected boxes should be constructed of woodcrete or similar in order to increase their life expectancy. A range of different designs should be selected in order to increase the likelihood of bats roosting within the site.
- 6.2.6
- 6.2.7 The specifications of all bat bricks/boxes recommended to be installed onsite post-development are detailed below in the table below.

Table 3: Bat roosting opportunities to be installed as part of the Proposed Development.

Bat Brick/Box	Number to be Installed	Description	Details
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1FD Schwegler Bat Box (or a comparable design) 	10 (on trees)	The Schwegler 1FD has been developed specifically for smaller bats as both the interior and the type and size of the entrance hole match the requirements of smaller species. It features a special layout inside, such as a domed roof, an increased interior height and two grooved internal wooden front panels with precise spacing between them. This model has proved highly effective as a nursing area. The front panel can be removed for cleaning and inspection. This box is designed to be sited on trees using the galvanised steel hanger and aluminium nail provided. Schwegler bat boxes are backed by conservation organisations, government agencies and forestry experts and have the highest occupation rates of all nest boxes. They are carefully designed to mimic natural roost sites and to provide a stable environment.	Dimensions Height: 360mm Diameter: 160mm Weight: 4.8kg
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6.3 Bird Boxes

6.3.1 In the UK there are approximately 600 species of bird, each occupying a different habitat and present in a different region of the country. Many birds regularly visit gardens and will quickly adopt to new nest boxes, but only when the right box design is selected and situated correctly. Each species prefers a specific nest box design, with different dimensions and hole sizes.

6.3.2 The specifications of all bird boxes recommended to be installed onsite post-development are detailed below in the table below.

Table 4: Bird nesting opportunities to be installed as part of the Proposed Development.

Bird Box	Number to be Installed	Description	Details
Vivara Pro Seville 32mm WoodStone Nest Box (or comparable design) 	10 (on retained trees or wooden posts)	Unlike a traditional wooden nest box, these boxes will not rot away or deteriorate and are guaranteed for 10 years. This robust material safeguards against attacks from predators such as woodpeckers, cats and squirrels, whilst also providing a well-insulated interior with a consistent internal temperature (important for breeding). These 32mm hole nest boxes are suitable for blue tits, tree sparrows, house sparrows, great tits, blue tits, nuthatches, coal tits and pied flycatchers and they are available in brown, green or grey to complement both natural woodland and garden settings.	Dimensions Height: 310mm Width: 200mm Length: 200mm Weight: 6.9kg Entrance hole diameter: 32mm

6.3.3 Bird boxes on **trees** should be installed facing in a **northerly** to **easterly** direction, thus avoiding strong sunlight and wet winds. Boxes should be installed as to ensure birds have a clear flight path to the bird box without any clutter directly in front of the entrance.

6.3.4 The installation of all bird boxes is to be undertaken immediately after the completion of the Proposed Development.

6.4 Insect Boxes

6.4.1 Insects are the primary food source for many of the rare or protected animals that regularly visit gardens. Thus, encouraging insects into a site will then attract other species, such as birds and bats.

6.4.2 To ensure the Site maintains its' value for other invertebrate species, **two** insect towers should be placed attached to a suitable fence, post, or other structure. A suitable Insect Tower design by CJ Wildlife can be seen below in **Figure 1**. This particular model provides a variety of habitats for various insects, including butterflies, lacewings, and ladybirds.



Figure 1: Example of an Insect Tower by CJ Wildlife.

6.5 Hedgehog Shelters

6.5.1 Hedgehog numbers have declined by 90% over the past 50 years due to a number of factors including habitat loss, fragmentation and parasites. Providing shelter and a

means of dispersal in gardens will encourage hedgehogs to visit the site and utilise the natural space.

6.5.2 Hedgehog shelters are simple to construct. Situate in a quiet corner of a garden, preferably under vegetation. Dried leaves or hay are placed inside for bedding (Bunnell, 2014).

6.5.3 Access to gardens has become increasingly limited for hedgehogs, as fences and walls block their dispersal. A simple solution is to create a 13x13cm access hole at ground level into fences in each garden to allow hedgehogs to freely move between green spaces (Bunnell 2014). These 'hedgehog highways' (PTES, 2018) should have appropriate signage installed to indicate their purpose and stipulate that they should remain open.

6.5.4 Providing shelter for hedgehogs within green spaces will encourage this species to visit the Site and utilise the natural space. Therefore, **two** hedgehog shelters should be placed in a sheltered position.

6.5.5 Hedgehog shelters are simple to construct and should be situated in a sheltered, undisturbed area preferably under vegetation with dried leaves or hay placed inside for bedding (Bunnell, 2014). An example of a hedgehog shelter is shown below in **Figure 2**.



Figure 2: Example of hedgehog shelter *in-situ*.

7. Ecological Recommendations

7.1 Ecological Monitoring

Annual Monitoring Reports are to be commissioned and produced by a suitably qualified ecologist for year each of the first 5 years post-development to update on the progress on habitat creation and faunal enhancement.

Table 5 sets out contingency measures in the event that management prescriptions do not deliver as expected.

Table 5: Summary of adaptive management approaches.

Habitat	Risk Factor	Adaptive Management
Introduced shrub	Shrubs fail to establish, or are impacted by human activities (e.g. vandalism).	Newly planted shrubs to be monitored closely and dead or severely damaged shrubs to be replaced.
	Presence of Schedule 9 invasive non-native species (INNS)	A survey is to be undertaken to map the extent of the INNS and a method statement to be produced for its safe removal and management.
	Poorly developed edge habitats between scrub adjacent habitats	Coppice shrubs along the edge of the scrub to create a well-developed edge habitat. Review coppicing regime.
	Lack of structural diversity with a lack of clearings and rides	Addition of shrub planting to created more a diversity, if necessary.
	INNS are present within the hedgerow and damaged by human activities	A survey is to be undertaken to map the extent of the INNS and a method statement to be produced for its safe removal and management. Replace any damaged shrubs and consider installing protection whilst the hedgerow establishes.
Faunal enhancements	Faunal enhancements become damaged or lost	Replace any faunal enhancements as necessary.

7.2 Lighting

Lighting Scheme: The development will likely increase lighting levels. All lighting must consider wildlife and be in accordance with the Institution of Lighting Professionals (ILP) Guidance Notice GN01 (2021) and GN08 (2023). A key point is the avoidance of internal and external light spill. Where possible, lighting should be timed, or on sensors and avoid the hours between sunset and sunrise, when bats are out foraging.

All lighting installed as part of the development will be in line with Guidance Note 08/23 Bats and Artificial Lighting at night. The following will be required:
LED lighting will be used and light levels will be kept as low as possible. Metal halide, fluorescent sources will not be used.

Lighting will be directed to where it is required.

Only luminaires with no light output above 90 degrees and/or an upward light ratio of 0% and with good optical control will be used, luminaires will always be mounted on the horizontal, i.e. no upward tilt.

Any external security lighting will be set on motion-sensors and short (1min) timers.

Internal lighting within the new rooms will be recessed where installed in proximity to windows to reduce glare and light spill.

Light sources will emit minimal ultra-violet light, peak higher than 550nm and be of a warm white spectrum (ideally <2700 Kelvin).

The use of bollard or low-level downward directional luminaires is strongly discouraged.

Providing the Lighting Strategy is adhered to, there will be an insignificant effect on the bat assemblage from lighting during the operational phase.

7.3 Vegetation removal and excavations

All wild birds are protected under the WCA whilst nesting. Any vegetation removal should ideally take place outside of the bird nesting season (1st Mar-31st Aug). If works occur within this time, a preconstruction site walkover by a suitably competent ecologist should occur no more than **24 hours** prior to any vegetation removal and works is required. The ecologist will inspect any trees/vegetation to be removed or adjacent to any construction for evidence of nesting birds.

The site has the potential to support nesting birds and hedgehogs. Hedgehogs are protected under WCA Schedule 6, with additional protection during hibernation and while raising their young. Clearance of the site must take place under the supervision of an **Ecological Clerk of Works (ECoW)**. The **ECoW** will conduct a fingertip search of the areas to be cleared and, should any hedgehogs be found, they will move the animal to a safe place containing suitable habitat for the species.

To permit the migration and safe passage of these species through the site, any excavations created during the development stage must be covered at night or appropriate escape routes implemented. A plank of wood (or similar) is to be placed at a 45-degree angle to prevent an animal getting trapped. Any pipes left open overnight must also be capped.

8. References

Reports:

Brooks Ecological – Preliminary Ecological Appraisal (PEA), Mar 2022 (Reference: ER-5754-01).

Brooks Ecological –Biodiversity Net Gain Assessment, Jun 2022 (Reference: ER-5754-02).

JD-G – Proposed residential development at land off Moor Lane, May 2022 (Dwg number: (21942)1_Indicative Site Layout).

Guidance:

Ausden, M. (2007) *Habitat management for conservation: A handbook of techniques*. Oxford, United Kingdom: Oxford University Press, USA.

Baker, J. & Beatty, B. (2016) Biodiversity Net Gain: Good Practice Principles for Development.

Baker, J., Hoskin., & Butterworth, T. (2019). Biodiversity Net Gain. Good Practice Principles for Development – A Practical Guide.

British Standards Institute (BSI), (2013) *BS 42020:2013, Biodiversity - Code of practice for planning and development*. London.

CIEEM (2017) *Guidelines for Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.

DEFRA (2024). *The Statutory Biodiversity Metric Calculations Tool*.

DEFRA (2024). *The Statutory Biodiversity Metric Condition Assessments*.

DEFRA (2024). *The Statutory Biodiversity Metric: User Guide*.

Emorsgate Seeds (2023). Available at <https://wildseed.co.uk/>

UKHab Ltd (2023) *UK Habitat Classification Version 2.01*. Available at <https://www.ukhab.org>.

Appendices

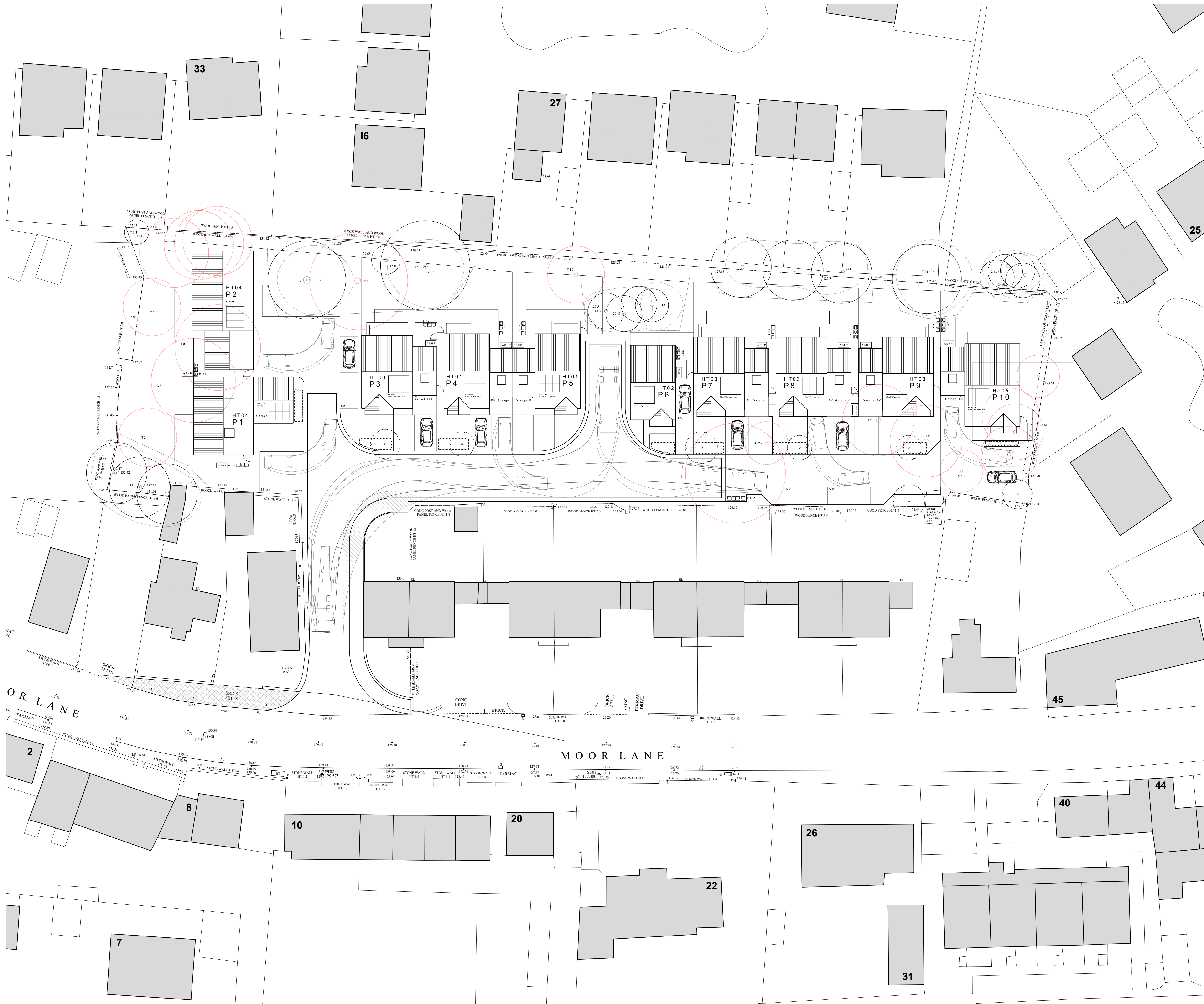
Appendix 1: UKHab Habitat Map

Taken from the Preliminary Ecological Appraisal (PEA) by Brooks Ecological, Mar 2022 (ER-5754-01).

Appendix 1 Habitats and Ecological Features



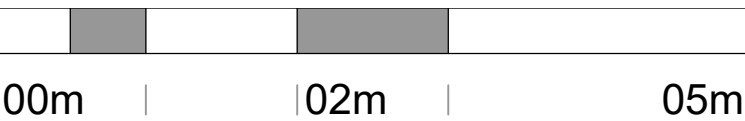
Appendix 2: Landscape Plans



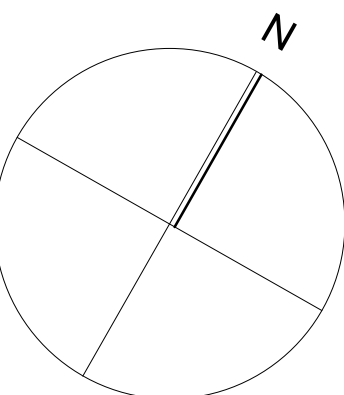
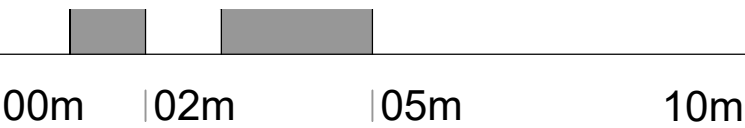
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Issue Purpose: PLANNING APPLICATION

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Client PPU Developments
Project 2539 - Moor Lane - Residential
Title Proposed Site Plan
Drawing Number

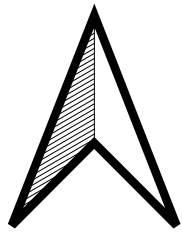
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2539 - D - 20 - 002

Appendix 3: Faunal Enhancement Plan



Site name & address
Land Off Moor Lane
Cleckheaton
West Yorkshire
BD19 4LF

Key

Faunal Boxes -

- ◆ Bird Boxes
- ◆ Bat Boxes
- ◆ Insect Towers
- ◆ Hedgehog Shelters

Scale
0 10 20 m

Site Land Off Moor Lane	Client PPJ Developments
Project 23091 BEMP	Author Rebecca Petch-Smith
Plan ref 23091/RPS	Revision 1

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Appendix 4: Author Qualifications

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management

Adam joined JCA to lead the expanding ecology department. Having returned to education as a mature student, Adam studied Countryside Management for two years before undertaking a Bachelor's degree, for which he was awarded First Class Honours. Adam has many years' experience in ecological consultancy, working on projects ranging from individual planning applications to national infrastructure projects. Adam holds a Natural England Level 1 great crested newt survey class licence, a Natural England Level 2 bat survey class licence (and the Scottish and Welsh equivalents) and a CSCS card.

Alex Donovan, Assistant Ecologist

MBiol BSc (Hons) Biology (Industrial)

Alex joined JCA in 2023 after graduating from the University of Leeds with a First Class Honours Integrated Master's degree in Biology, including an industrial placement year working in the Uplands Research Department of the Game and Wildlife Conservation Trust. Alex is a CIEEM Qualifying Member, and a member of the BTO's Bird Ringing Scheme and Nest Record Scheme. Alex holds a Natural England barn owl survey licence, and is working towards additional survey licences for bats, great crested newts, and white-clawed crayfish.

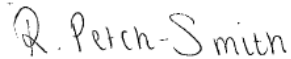
Rebecca Petch-Smith, Graduate Ecologist

MBiol (Hons) Zoology

Rebecca joined JCA in 2025 after spending 18 months in the teaching industry. Prior to this she graduated from the University of Leeds with a 2:1 Honours Integrated Master's degree in Zoology. As part of her degree programme, Rebecca spent time in Kenya conducting surveys on African ungulates. Rebecca began assisting on bat emergence surveys in 2024, after which, she gained employment as a Graduate Ecologist at JCA Ltd. She is currently conducting Preliminary Ecological Appraisals, Bat Scope Surveys and Biodiversity Net Gain Assessments and working towards her protected species licence.

The Information and advice 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 bona fide opinions.

Signed



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Rebecca Petch-Smith *MBiol BSc (Hons)*

21/08/2025

Reviewed by



.....
Alex Donovan *MBiol BSc (Hons)*

26/08/2025

For and on behalf of **JCA Ltd**

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ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes
- Butterfly & Insect Surveys

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)
- Planting Schemes
- Monitoring of bird or bat boxes.

ARBORICULTURAL SERVICES

Guidance for Architects & Developers

- British Standard 5837 Surveys
- Arboricultural Implications Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control



HEAD QUARTERS

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