

**ECOLOGICAL IMPACT
ASSESSMENT REPORT**

at
**Land off Highmoor Lane
Cleckheaton
West Yorkshire
BD19 6LW**

**Client:
Thirteen Group**

**Client Address:
2 Hudson Quay
Windward Way
Middlesbrough
TS2 1QG**

**Client Contact:
01414251133 (Tel)**

**JCA Ref:
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Quality Assurance

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							01/05/25	Alex Donovan
Revision 1: New Site Plan					14/11/25	James Foster	14/11/25	Adam West

This report has been prepared and provided in accordance with the *British Standard 42020: Biodiversity – Code of practice for planning and development 2018* and the *CIEEM’s Code of Professional Conduct*.



Summary

JCA Limited has been commissioned by **Thirteen Group** to undertake an **Ecological Impact Assessment (EclA)** of a site located at **Land off Highmoor Lane, Cleakheaton**. The site is located at Ordnance Survey (OS) National Grid Reference SE 17055 24660 with nearby postcode BD19 6LW.

A desk study and field survey were undertaken in order to assess the potential of the site to support protected habitats and species and species of conservation concern. Recommendations for further survey, avoidance, mitigation, and enhancement – where appropriate - have been made and are summarised in **Table 1** on the following page and are detailed in full in **Chapter 6** of this report.

Additionally, the site was assessed to determine the baseline biodiversity value of the Site and to assess if there are sufficient biodiversity enhancement opportunities available within the Site boundary to compensate for any residual biodiversity losses as a result of the Proposed Development.

To fulfil the brief, the Statutory Biodiversity Metric (February 2024) was used to calculate the baseline biodiversity value of all existing habitats onsite. The metric was then used to provide a comparative measure of any habitat creation and enhancements associated with the Client's Proposed Development. The resulting balance determines the extent of Biodiversity Units (BU) generated through the proposed habitats post development.

The baseline values of the habitats on site are 13.80 BU and 1.42 BU for hedgerows. It was identified that the Proposed Development would have a net loss of -9.45 habitat BU, equivalent to a net loss of -68.47% and a net loss of -0.41 for hedgerows, equivalent to a net loss of -29.00%.

Additionally, the Proposed Development does not satisfy Trading Rules. Due to the loss of medium distinctiveness habitats (2.88 BU for grassland, 1.52 BU for scrub, 4.56 BU for individual trees and 1.29 BU for woodland) and the loss of low distinctiveness hedgerows; line of trees (0.41 BU).

The unit deficit is 10.83 BU for habitats and 0.55 BU for hedgerows.

As such, the client should seek to undertake one or a combination of the following recommendations to achieve an overall biodiversity net gain in habitat BU and hedgerow BU, whilst meeting the Trading Rules:

- Incorporate further on-site habitat creation/enhancement to compensate for the loss of low and medium distinctiveness habitat to achieve a minimum of 10% net gain whilst satisfying the Trading Rules.



- If on-site habitat creation/enhancement is not possible, then off-site habitat creation/enhancement will be required. This can be achieved by the purchase of additional land designated as a compensatory biodiversity offset site to compensate for onsite losses, reach 10% net gain, and satisfy the Trading Rules, or through using a habitat bank off-site mitigation provider.
- If neither on-site nor off-site compensation is possible, statutory biodiversity credits will need to be purchased as a last resort. Guidance can be found at <https://www.gov.uk/guidance/statutory-biodiversity-credits>.

To achieve a 10% gain on this site and satisfy the trading rules the following BU will be required for each habitat type.

- At least 2.88 BU of other neutral grassland or a grassland habitat of the same distinctiveness (medium) or a habitat of higher distinctiveness.
- At least 1.52 BU of bramble scrub or a scrub habitat of the same distinctiveness (medium) or a habitat of higher distinctiveness.
- At least 4.56 BU of individual trees (medium distinctiveness) or a habitat of higher distinctiveness.
- At least 1.29 BU of other woodland; broadleaved or a woodland habitat of the same distinctiveness (medium) or a habitat of higher distinctiveness.
- At least 0.41 BU of line of trees or a hedgerow of the same distinctiveness (low) or a hedgerow of higher distinctiveness.
- In addition, another 0.58 BU for habitats will be required to achieve a 10% net gain for habitats. This can be a habitat of low, medium, high, or very high distinctiveness.
- In addition, another 0.14 BU for hedgerows will be required to achieve a 10% net gain for hedgerows. This can be a hedgerow of low, medium, high, or very high distinctiveness.

This executive summary is intended as a summary of the assessment of the Site based on information received by the client at the time of production. This executive summary should be read in conjunction with the full Report.



Table 1: summary of ecological receptors at the site and recommended mitigation.

Receptor	Potential Risk to Project if No Action Taken	Cause of Impact Description of Effect	Further Survey Required	Mitigation Required	Survey Results
Designated sites					
Statutorily protected	None	None	No	None	N/A
Non-statutorily protected	None	None	No	None	N/A
S41 habitat	None	None	No	None	N/A
Other habitats	None	None	No	None	N/A
Protected species					
Flora (WCA Sch 8, CHSR Sch 5)	None	None	No	None	N/A
Invertebrates	Low	Removal of habitat containing flowering plants and other food sources for invertebrates.	None	Native grass and wildflower planting is recommended to compensate for any loss which should be included in a Biodiversity Enhancement Plan (BEP)	N/A
White-clawed crayfish	None	None	No	None	N/A
Fish	None	None	No	None	N/A
Amphibians	Moderate	Potential breach of legislation from killing, injury, or disturbance during works.	None	A precautionary approach should be adopted to include an Ecological Clerk of Works (ECoW) being present during any removal of vegetation and brash piles.	N/A
Reptiles	Moderate	Potential breach of legislation from killing, injury, or disturbance during works.	None	A precautionary approach should be adopted to include an Ecological Clerk of Works (ECoW) being present during any removal of vegetation and brash piles.	N/A
Birds	Moderate	Potential breach of legislation from destruction of nests or disturbance of nesting birds	Dependent on timing of works – nesting bird survey if works occur within the nesting bird	A preconstruction site walkover is required prior to any vegetation removal or building commencing during the nesting bird season. If	N/A



			season (1 st Feb-31 st Aug).	removal occurs outside of the breeding bird period and nesting birds are found, the removal must cease immediately, and a suitably competent ecologist contacted.	
Bats	Moderate	The site offers 'Low' potential for commuting and foraging bats. Any disturbance to bats or a bat roost would result in a breach of legislation.	A bat activity survey is recommended, which requires one survey visit per season (spring – April/May, summer – June/July/August, autumn September/October) in appropriate (or best available) weather conditions for bats and at least 3 weeks between survey visits.	Dependent on the results of the surveys. A precautionary approach to felling should be adopted, and any felled trees should be left where they fall for a minimum of 24 hours to allow any bats to vacate. For artificial lighting within the development, guidance from Institute of Lighting Professionals (08/23) should be followed.	A bat activity survey was conducted between April and October 2025 (ref: 22182b/JF). The numbers of individual bats occurring across the site is not considered to be high and the populations of these species present within the majority of the site boundary are assessed as valuable at the local level Common pipistrelle, soprano pipistrelle, noctule and <i>myotis</i> species were recorded and are relatively common and widespread species within the county. The loss of habitat proposed by this scheme is not anticipated to have a negative impact on the favourable conservation status of these species.
Badgers	Low	Potential to disturb any badgers which may be utilising the site.	A badger survey is required.	Dependent on the results of the surveys.	A badger survey was conducted between September and October 2025.



				Any excavation of the site should be covered overnight, or if not possible, a safe exit route provided for badgers to leave the site, such as an artificial ramp to aid their exit.	Please refer to the Badger Survey & Report (ref: 22182a/AWe) for the results of the survey.
Otters	None	None	No	None	N/A
Water voles	None	None	No	None	N/A
Other Species e.g. S41 species	Moderate	The scrub and grassland provide potential foraging and resting areas for hedgehogs. Potential to disturb any foraging or resting/hibernating hedgehogs which may be utilising the site.	No	A precautionary approach should be adopted to include an Ecological Clerk of Works (ECoW) being present. Scrub to be removed should be hand searched by a suitably qualified and experienced ecologist prior to removal, to ensure no hedgehogs are resting or hibernating in the vegetation. Any excavation of the site should be covered overnight, or if not possible, a safe exit route provided for hedgehogs to leave the site, such as an artificial ramp to aid their exit. Any open pipes must be capped.	N/A
Invasive Species (WCA Sch 9) Injurious Weeds (Weeds Act, 1959)					
N/A: No Invasive species were identified on site.	None	None	No	None	N/A
Key: S41 habitat/species – habitats and species listed as priority for conservation importance under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. WCA Sch – Wildlife and Countryside Act 1981 (as amended) Schedule CHSR Sch – Conservation of Habitats and Species Regulations 2017 Schedule					



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1. Introduction

1.1 Background

1.1.1 In July 2024, JCA Limited was instructed by **Thirteen Group** to undertake an Ecological Impact Assessment (EclA) of a site located at **Land off Highmoor Lane**, hereafter referred to as 'the site'. The purpose of the survey is to establish a baseline of ecological information and assess whether the proposed works, hereafter referred to as 'the scheme', have the potential to adversely affect any protected or notable habitats or species.

1.2 Terms of Reference

1.2.1 The following reports and plans have been used and should be read in conjunction with this report:

- Detailed Landscape Proposals – (Drawing no. 4153/1-H).

1.3 Scheme Description and Location

1.3.1 The site is located at Ordnance Survey (OS) National Grid Reference SE 17055 24660, with nearby postcode BD19 6LW. The site is bordered to the north by the A649 Halifax Road, residential properties and arable grasslands with hedgerows and lines of trees. To the east by residential properties, vegetated gardens with arable grassland and lines of trees further afield. To the south by a cricket club and to the west by lines of trees, the M62 motorway and a golf club.

1.3.2 The scheme is the construction of 40 residential properties which are a mixture of two story detached and semi-detached houses and apartments.

1.4 Aims and Objectives

1.4.1 The purpose of the survey is to establish a baseline of ecological information and assess whether the proposed development activities have the potential to adversely affect any protected or notable habitats or species. The following tasks have been undertaken:



- Desktop study – a review of environmental records for the surrounding area to obtain existing information on statutory and non-statutory designated sites of nature conservation interest, and the presence of protected and notable habitats and species within the site and its environs.
- Field surveys – a UKHab Habitat survey involving a site visit to record habitat types and dominant vegetation, including any invasive species. During this survey evidence of protected or notable fauna and habitats or habitat capable of supporting protected or notable fauna was recorded.
- Ecological report – an assessment of the potential ecological constraints to the proposed works at the site and recommendations for, avoidance, mitigation, and enhancement where appropriate. Locations of any features constituting ecological constraints or of other ecological interest and vegetation recorded on and around the development are included in an accompanying UKHab Baseline Habitat Map (**Appendix 1**). This report and the maps are supported by photographs (**Appendix 4**) and information regarding current legislation (**Appendix 7**).
- Biodiversity Metric Baseline Assessment – condition scoring the habitats onsite and assigning each habitat a numerical value to determine the level of overall residual biodiversity gains or losses associated with the Proposed Development. This calculation is done in an excel worksheet (see accompanying spreadsheet: Statutory Biodiversity Calculation Tool).
- Assess if there are sufficient biodiversity enhancement and/or creation opportunities available within the Site boundary to compensate for any residual biodiversity losses as a result of the Proposed Development.



2. Methodology

2.1 Desktop Study

2.1.1 The desktop study involved conducting database searches for statutory and non-statutory designated sites and European Protected Species (EPS) licensing applications within a 2km radius of the site. The baseline conditions are based on a review of existing available information including:

- MAGIC (Multi-Agency Geographical Information for the Countryside) website (to identify statutory designated sites and EPS licences).
- Ordnance Survey mapping (to identify potentially notable habitats including ponds).
- Aerial photography (to identify potentially notable habitats).
- Data search for records of protected/notable species on and within 2km of the site within the last ten years (exempting bat roosts, of which all records are included) obtained from West Yorkshire Ecological Services (WYES), the local environmental records centre for West Yorkshire, along with information for non-statutory wildlife sites.

2.1.2 The records were checked against species listed as priority species under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, the Kirklees Local Biodiversity Action Plan (KBAP), and the West Yorkshire Biodiversity Action Plan (WYBAP) to assess national and regional habitat and species status.

2.2 Field Survey

2.2.1 A UKHab survey of the site was conducted on 01/10/2024. All areas of the site were investigated and areas around the site where access permitted.

2.2.2 The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified for a Vegetation and Habitat Survey (The UK Habitat Classification, Habitat Definitions Version 2.01, UKHab, 2023). Dominant and abundant plant species were recorded for each habitat present.

2.2.3 The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under Schedules 2



and 5 of the Conservation of Habitats and Species Regulations (CHSR) 2017 (retained under UK law by CHSR (Amendment) (EU Exit) 2019), the Wildlife & Countryside Act (WCA) 1981 (as amended), including those given a higher level of legal protection under the NERC Act 2006 and Countryside & Rights of Way (CRoW) Act 2000, and those listed on the Local Biodiversity Action Plan. The following species were considered:

- Invertebrates (including white-clawed crayfish *Austropotamobius pallipes*).
- Great crested newt *Triturus cristatus* freshwater habitat potential within 500m of the site.
- Reptile habitat within the site.
- Nesting and foraging habitat for birds within the site.
- Bat roost potential and foraging habitat within the site.
- Badger *Meles meles* setts within 30m of the site, where accessible.
- Otters *Lutra lutra* and suitable habitat within 30m of the site, where accessible.
- Water vole *Arvicola amphibius* habitat within 20m of the site, where accessible.
- Other notable species.
- Invasive species.

2.3 Survey Constraints

2.3.1 To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, the survey undertaken focused on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to the National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2024), especially those given protection under UK wildlife legislation.

2.3.2 The optimum time of year for completing the UKHab habitat survey is between April and September, as many plant species have a seasonal expression in spring and summer only. The survey was undertaken on 01/10/24, which is just outside the optimum time. However, the flora species were still in leaf or in flower allowing for accurate identification, therefore, the timing of the survey is not considered a constraint.

2.3.3 The weather on the day of the survey was wet, cloudy with a calm wind and scattered showers of rain (see Table 2). The days leading up to the



survey had similar conditions. The weather could be considered a constraint to the survey due to the deterioration of possible field signs such as droppings tracks and hair. However, field signs were identified on site, the weather, therefore, is not considered to be a constraint on the survey.

Table 2: Weather Conditions during the surveys.

Temperature (°C)	Humidity (%)	Wind Speed (mph)	Cloud Cover (%)	Precipitation
11	94	19 North	100	Light rain

2.3.4 The details of this report will remain valid for a period of 18 months. If works have not commenced within this period or land use on site changes, it is recommended that a new review of the ecological conditions is undertaken.



3. Biodiversity Accounting Assessment

3.1 Background

3.1.1 Biodiversity is complex and so it is impossible to measure in its entirety. Therefore metrics, which incorporate measures of different biodiversity attributes, are used to provide surrogate measures of overall biodiversity. This report uses the 'Statutory Biodiversity Metric', which was designed by Defra (2024) to define the biodiversity impacts and compensation requirements associated with development proposals. The metric works by providing a comparative measure of each habitat onsite in biodiversity units (BU) by multiplying its area (hectares), distinctiveness (habitat type) and current condition (quality). The relative impacts (habitat loss) of the development, taking into account any additional onsite habitat creation or enhancement, can then be calculated to determine if a measurable biodiversity net gain will be achieved onsite. If a measurable net gain is unable to be achieved onsite, then the process of biodiversity offsetting must be undertaken.

3.1.2 Biodiversity offsets are conservation activities designed to deliver biodiversity benefits in compensation for residual losses, in a measurable way. Biodiversity offsetting is distinguished from other forms of compensation by the requirement for measurable outcomes. This is achieved by quantifying net biodiversity impacts caused by development; using the same metric to assess direct and indirect negative impacts to habitats and the value of any onsite compensation, to set the framework of offsite compensation (offset) requirements and the biodiversity net gain generated by these offsets. Biodiversity offsetting ensures that offsite compensation proposed is both proportionate to the development concerned and that a measurable net gain for biodiversity can be achieved.

3.1.3 Biodiversity offsetting, like other forms of compensation, is the last step of the mitigation hierarchy (first avoid, then reduce, and finally, compensate) and is applied as a last resort to otherwise policy-compliant development proposals. 'Offsetting' – i.e. creating or restoring new wildlife habitat in a measurable way and in a different place to where it was lost.

3.1.4 In addition to providing a mechanism for quantifiable compensation and net gain, biodiversity offsets provide reliable biodiversity outcomes as



they are long-term (30 years), monitored and enforceable with adaptable management plans for optimised success.

3.2 Biodiversity Net Gain Principles

3.2.1 Biodiversity Net Gain: Good Practice Principles for Development published by CIEEM et. al (2016) states that delivering biodiversity net gain goes beyond balancing relative gains and losses. It also involves doing everything to avoid biodiversity losses in the first instance. The application of the Defra metric detailed in this report supports developments to adopt this approach by:

- a) Providing a habitat balance sheet which can be used to identify those habitats with the greatest value and subsequently those with the greatest impacts if lost;
- b) Supporting and incentivising the mitigation hierarchy by quantifying the benefits of avoiding and mitigating impacts on high value features;
- c) Promoting the value of biodiversity enhancements and demonstrating the potential for additionality on retained habitats;
- d) Providing a balance of losses, enhancements or onsite compensation to determine if a measure net gain contribution can be achieved;
- e) Providing transparent, robust and credible evidence to help inform the best possible site options for biodiversity; and,
- f) Ensuring that any residual offsite compensation required (e.g. through biodiversity offsetting) is proportionate to the impacts and can secure a measurable net gain contribution for biodiversity overall.

3.3 Biodiversity Offsetting Standards

3.3.1 Good practice standards for biodiversity offsetting are set out by the Business and Biodiversity Offsets Programme (BBOP, 2012). These standards inform the approach for selection and development of suitable Offset Sites and projects. Of these standards, the following provide the most relevant UK framework for the preliminary offset site search:

- The proposed offset site should be identified as suitable for the creation and/or enhancement of a target habitat within the vicinity of where the impact occurs;



- The site must be available and managed for a minimum specified term (typically 30 years).
- The landowner must agree to an enforceable delivery mechanism to secure the long-term management.
- The site must be available for monitoring to ensure appropriate management is being undertaken and to report biodiversity progress back to the local planning authority.

3.3.2 Further standards, with regards to offset site surveys and ensuring that appropriate target habitats and units can be achieved, will form part of the detailed site search that will precede the preliminary site search.

3.3.3 In addition to biodiversity net gains achieved onsite, offsite enhancements can also achieve positive outcomes for nature in the local area.

3.4 National Policy and Guidance

3.4.1 Specific habitats and species of relevance to the Site receive legal protection in the United Kingdom under various pieces of policy and legislation, including:

- The Environment Act 2021 mandates that all planning applications will be required to demonstrate how a development will enhance biodiversity and protect habitats from February 2024. This is to be achieved through a measurable 10% Biodiversity Net Gain (BNG), in association with development through the use of the most up to date Defra Metric (currently Statutory Biodiversity Metric);
- National Planning Policy Framework (NPPF, as revised 2024) sets out how planning policies and decisions should contribute to and enhance the natural and local environment through amongst other things, ensuring BNG through development and protect ecological important sites and networks;
- The Conservation of Habitats and Species Regulations 2017 (as amended) (retained in UK law by CHSR (Amendment) (EU Exit) 2019) details the regulations for the protection of European Protected Habitat and Species. Such European Protected Species (EPS) of animals (Schedule 2) and plants (Schedule 5) include all species of bats, great crested newt *Triturus cristatus*, dormouse *Muscardinus avellanarius*, and European otter *Lutra lutra*, amongst others;



- The Wildlife and Countryside Act (WCA) 1981 (as amended) covers the legislation for endangered species in England and the framework for the designation of Sites of Special Scientific Interest (SSSIs);
- The Countryside and Rights of Way (CRoW) Act 2000 reinforces the wildlife legislation listed in the WCA and places a duty of government departments to consider biodiversity, and provides governmental department powers for the protection and maintenance of SSSIs;
- The Natural Environment and Rural Communities Act (NERC) 2006 places a duty upon local authorities to promote and enhance biodiversity in all their functions. Specifically, habitats and species of principal importance to the conservation of biodiversity in regards to the planning process;
- The Management of Hedgerows (England) Regulations 2024 provides protection by prohibiting the destruction or damage to important countryside hedges; and
- The Protection of Badgers Act 1992 includes the protected of badgers under the act and that it is unlawful to wilfully kill, injure, take, possess or cruelly ill-treat badgers or attempt to do so

3.4.2 Where relevant, this appraisal takes account of the legislative protection afforded to specific habitats and species.

3.5 Regional Policy and Guidance

3.5.1 Kirklees Biodiversity Action Plan (KBAP)

The Kirklees BAP concentrates on species and habitats that had national action plans produced or are of local conservation concern.

The habitats listed within the Kirklees Metropolitan Council BAP are:

- Arable field margins
- Blanket bog
- Hedgerow
- Inland rock outcrop and scree habitats
- Lowland dry acid grassland
- Lowland heathland
- Hay meadows
- Lowland mixed deciduous woodland
- Open mosaic habitats on previously developed land
- Other semi-natural grassland



- Ponds
- Reedbeds
- Rivers and riverine
- Scrub
- Traditional orchards
- Upland flushes, fens and swamps
- Upland heathland
- Upland mixed ashwoods
- Upland oak woodland
- Wet woodland
- Wood-pasture and parkland

The species listed within the Kirklees Metropolitan Council BAP are:

- Common bullfinch *Pyrrhula pyrrhula subsp. Pileata*
- Common grasshopper warbler *Locustella naevia*
- Linnet *Linaria cannabina*
- Starling *Sturnus vulgaris*
- Corn bunting *Miliaria calandra*
- Curlew *Numenius Arquata*
- Tree sparrow *Passer montanus*
- Turtle dove *Streptopelia turtur*
- Red grouse *Lagopus lagopus*
- Reed bunting *Emberiza schoeniclus*
- Ring ouzel *Turdus torquatus*
- Skylark *Alauda arvensis*
- Song thrush *Turdus philomelos*
- Spotted flycatcher *Muscicapa striata*
- Tree pipit *Anthus trivialis*
- Twite *Carduelis flavirostris*
- Grey partridge *Perdix perdix*
- Hawfinch *Coccothraustes coccothraustes*
- Dunnock *Prunella modularis*
- House sparrow *Passer domesticus*
- Lapwing *Vanellus vanellus*
- Willow tit *Parus montanus*
- Wood warbler *Phylloscopus sibilatrix*
- Yellow wagtail *Motacilla flava*
- Yellowhammer *Emberiza citronella*
- Atlantic salmon *Salmo salar*
- European eel *Anguilla Anguilla*
- Common lizard *Lacerta vivipara*
- Common toad *Bufo bufo*



- Great crested newt *Triturus cristatus*
- Brown hare *Lepus europaeus*
- Brown long-eared bat *Plecotus auratus*
- Mountain hare *Lepus timidus*
- Noctule *Nyctalus noctule*
- Otter *Lutra lutra*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Water vole *Arvicola amphibius*
- Hedgehog *Erinaceus europaeus*
- Northern wood ant *Formica lugubris*

3.6 Local Policy and Guidance

3.6.1 Kirklees Local Plan 2013 - 2031 (Kirklees Council, 2019), adopted February 2019.

Kirklees Local Plan 2013 - 2031 sets out the council's policies and proposals for land use within the district to 2031. Policy LP30 – Biodiversity and Geodiversity of the Plan is therefore relevant to the Proposed Development.

Policy LP30: Biodiversity and Geodiversity states that proposals the council will support proposals that seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network. that protect and enhance features of ecological and geological interest and provide net gains in biodiversity will be supported.

Proposals will be required to:

- i. result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;
- ii. minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;
- iii. safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;



- iv. establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and
- v. incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.

3.7 Baseline Data

3.7.1 Biodiversity accounting of existing and post-development habitats and linear features onsite was carried out using the Statutory Biodiversity Metric Calculation Tool, following guidance set out in the metric user guide (Defra 2024).

3.7.2 A baseline analysis of the existing habitats onsite was carried out from the information gathered during the site's ecological assessment visit carried out by James Foster (Assistant Ecologist, JCA Ltd) on 01/10/24.

3.7.3 To undertake the Statutory Biodiversity Metric calculations, the following information was recorded for each habitat parcel and/or linear feature:

- Habitat type;
- Area/Length (ha/km);
- Habitat condition;
- Strategic significance; and
- Whether that habitat will be lost, retained, enhanced, succeeded and/or created, and at what scale.

3.7.4 The habitat map for the site was digitised and interpreted using QGIS Version 3.32.3-Lima to calculate habitat area. **Appendix 1** shows the baseline habitats, and **Appendix 2** shows the proposed habitats.

3.8 Impact Assessment

3.2.1 The existing baseline habitat plan for the site was overlain with the Proposed Site Layout Plans of the Proposed Development (Dwg No: 4153/1-H) using GIS software to provide an area (ha) of temporary and permanent habitat loss.

3.8.1 The area of any retained/enhanced or created habitats proposed as part of the development was also mapped to provide an area (ha) (or length (km) for linear features) of the onsite compensation proposals being provided. An estimate of future condition, time until establishment and the



likelihood of success was then calculated using landscaping data provided by the client and professional judgement

3.9 Habitat Creation and Enhancement

- 3.9.1 The area of any retained/enhanced or created habitats proposed onsite as part of the Proposed Development was mapped using the Existing & Proposed Site Layout Plans of the final development, to provide an area (ha) (or length (km) for linear features) estimate of onsite compensation provided. This includes areas of developed land, which are assigned a very low (or null) value, notably, areas of buildings and/or roads.
- 3.9.2 Condition and strategic significance for each habitat or linear feature were projected using available ecological data or professional opinion about the likely value.

3.10 Residual Effects

- 3.10.1 The residual effects of the Proposed Development scheme were calculated using the Statutory Biodiversity Metric Calculation Tool. This subtracts the pre-development baseline values from that of the post-development values to determine the change in overall habitat value for the site, taking into account any habitat trading.
- 3.10.2 Habitat trading is where the loss of a habitat must be compensated for through the creation or restoration of areas of equivalent or greater distinctiveness value. Guidance by Defra is that the loss of high distinctiveness areas, such as Habitats of Principal Importance (HPI, NERC Act, S41), require compensation in a like-for like manner (creation or restoration of habitat of the same habitat classification as that impacted). Within the Biodiversity Metric 'trading up' (where compensation through creation of a higher distinctiveness habitat) can occur, however, 'trading down' (compensation through creation of lower distinctiveness habitats) is not permitted. Therefore, if present, despite gains in lower distinctiveness habitats, these will not reduce the net gain requirement for the development. This also applies to the different habitat features i.e. habitats, hedgerows and rivers and streams. Hedgerow creation gains will not reduce net gain requirements for either rivers and streams or habitats.



3.10.3 Where the resulting biodiversity balance is negative, a residual net loss of biodiversity is recorded. Where the balance is positive a residual net gain of biodiversity is recorded



4. Baseline Ecological Conditions

4.1 Statutory Designated Sites

- 4.1.1 The MAGIC website revealed no internationally designated sites within 2km of the site.
- 4.1.2 The MAGIC website revealed no nationally designated site within 2km of the site.
- 4.1.3 The MAGIC website revealed that the site does not lie within the Special Site of Special Scientific Interest (SSSI) Impact Risk Zone.

4.2 Non-statutory Designated Sites

- 4.2.1 Records received from WYES revealed no non-statutory designated sites within 2km of the site.
- 4.2.2 The site is not included within the Local Wildlife Habitat Network.

4.3 Habitats

- 4.3.1 The MAGIC website revealed no priority habitats on or adjacent to the site, and the following within 500m of the site:
- Deciduous woodland – 160m northwest (closest to site).
- 4.3.2 g3c – Other neutral grassland: 10 – Scattered scrub, 32 – Scattered trees, 33 – Line of trees, 81 – Ruderal or ephemeral, 202 – Young self-set trees, 521 – Unmanaged.

Other neutral grassland dominates the east of the site and there is a smaller section on the northwest of the site. The grassland is not managed and there are areas of scattered scrub from the adjacent bramble scrub habitat, scattered trees, a line of trees which is present on the northeastern and southeastern boundary of the site, tall ruderal species and self-set young trees (**see Appendix 1 and Appendix 4 photos 1 - 4**).

Species identified include sycamore *Acer pseudoplatanus*, horse chestnut *Aesculus hippocastanum*, lesser burdock *Arctium minus*, false oat-grass *Arrhenatherum elatius*, Darwin's barberry *Berberis darwinii*, silver birch *Betula pendula*, pendulous sedge *Carex pendula*, drooping sedge *Carex pendula*, red



valerian *Centranthus ruber*, creeping thistle *Cirsium arvense*, dogwood *Cornus sanguinea*, hawthorn *Crataegus monogyna*, cock's-foot *Dactylus glomerata*, foxglove *Digitalis purpurea*, teasel *Dipsacus fullonum*, hairy willowherb *Epilobium hirsutum*, ash *Fraxinus excelsior*, cleavers *Galium aparine*, shining crane's-bill *Geranium lucidum*, herb Robert *Geranium robertianum*, ivy *Hedera helix*, common hogweed *Heracleum sphondylium*, Yorkshire fog *Holcus lanatus*, iris species *Iris* sp., eastern red cedar *Juniperus virginiana*, bay laurel *Laurus nobilis*, perennial ryegrass *Lolium perenne*, coltsfoot species *Petasites* sp., fox-and-cubs *Pilosella aurantiaca*, ribwort plantain *Plantago lanceolata*, annual meadow grass *Poa annua*, creeping cinquefoil *Potentilla reptans*, wild cherry *Prunus avium*, scarlet firethorn *Pyracantha coccinea*, oak *Quercus robur*, meadow buttercup *Ranunculus acris*, creeping buttercup *Ranunculus repens*, dog rose *Rosa canina*, bramble *Rubus fruticosus*, broad-leaved dock *Rumex obtusifolius*, weeping willow *Salix babylonica*, goat willow *Salix caprea*, elder *Sambucus nigra*, narrow-leaved ragwort *Senecio inaequidens*, snowberry species *Symphoricarpos* sp., dandelion *Taraxacum officinale*, common lime *Tilia × europaea*, red clover *Trifolium pratense*, white clover *Trifolium repens*, stinging nettle *Urtica dioica*, common vetch *Vicia sativa* and bush vetch *Vicia sepium*.

4.3.3 w1g – Other woodland, broadleaved: 10 – Scattered scrub, 30 – Semi-natural, 202 – Young self-set trees.

A small pocket of woodland is present on the southwest of the site and is dominated by broadleaf species. The woodland is mostly composed of native species but non-native species such as sycamore are present. The understorey is mostly made up of bramble scrub and self-set young trees (**see Appendix 1 and Appendix 4 photos 5 & 6**).

Species identified here include field maple *Acer campestre*, sycamore *Acer pseudoplatanus*, horse chestnut *Aesculus hippocastanum*, Darwin's barberry *Berberis darwinii*, silver birch *Betula pendula*, buddleja *Buddleja davidii*, drooping sedge *Carex pendula*, elephant ears species *Colocasia* sp., hawthorn *Crataegus monogyna*, fringed willowherb *Epilobium ciliatum*, hairy willowherb *Epilobium hirsutum*, beech *Fagus sylvatica*, ash *Fraxinus excelsior*, wood avens *Geum urbanum*, ivy *Hedera helix*, oval-leaved privet *Ligustrum ovalifolium*, aspen *Populus tremula*, wild cherry *Prunus avium*, cherry laurel *Prunus laurocerasus*, oak *Quercus robur*, buckthorn *Rhamnus cathartica*, bramble *Rubus fruticosus*, goat willow *Salix caprea*, coast redwood *Sequoia sempervirens*, rowan *Sorbus aucuparia*, lilac *Syringa vulgaris*, large-leaved lime *Tilia platyphyllos* and stinging nettle *Urtica dioica*.



4.3.4 h3d – Bramble scrub: 33 – Line of trees, 81 – Ruderal or ephemeral, 202 – Young self-set trees, 521 – Unmanaged, 532 – Scattered grass.

Bramble scrub dominates the northwest and centre of the site. Bramble is the most dominate species. The scrub is unmanaged and also contained tall ruderal species, self-set young trees and scattered grass (see **Appendix 1 and Appendix 4 photos 7 - 10**).

Species identified include false oat-grass *Arrhenatherum elatius*, creeping thistle *Cirsium arvense*, hawthorn *Crataegus monogyna*, cock's-foot *Dactylus glomerata*, hairy willowherb *Epilobium hirsutum*, common hogweed *Heracleum sphondylium*, perennial ryegrass *Lolium perenne*, poplar species *Populus* sp., meadow buttercup *Ranunculus acris*, bramble *Rubus fruticosus*, narrow-leaved ragwort *Senecio inaequidens*, red clover *Trifolium pratense*, white clover *Trifolium repens* and stinging nettle *Urtica dioica*.

4.3.5 u1b – Developed land; sealed surface

There are small areas of developed land; sealed surface on the northeast and centre of the site composed of tarmac access and parking from the previous development (see **Appendix 1 and Appendix 4 photos 13 - 14**).

4.3.6 u1f – Sparsely vegetated urban land: 202 – Young self-set trees, 510 – Bare ground, 532 – Scattered grass.

There is a small area of sparsely vegetated urban land, which is mostly composed of bare ground with small areas containing scattered grass and self-set young trees (see **Appendix 1 and Appendix 4 photos 11 & 12**).

Species identified include horse chestnut *Aesculus hippocastanum*, fringed willowherb *Epilobium ciliatum*, hairy willowherb *Epilobium hirsutum*, perennial ryegrass *Lolium perenne* and common liverwort *Marchantia polymorpha*.

4.4 Protected and Notable Species

4.4.1 European Protected Species (EPS) Licence Applications

The MAGIC website revealed five EPS licence application within 2km of the site:

- a licence granted on 17/04/2012 and ending on 30/09/2014 to allow for the destruction of a resting site used by common pipistrelle. Licence reference: EPSM2012-4277.



- a licence granted on 02/05/2016 and ending on 01/05/2021 to allow for the destruction of a resting site used by common pipistrelle. Licence reference: 2016-20721-EPS-MIT.
- a licence granted on 05/10/2017 and ending on 31/12/2022 to allow for the destruction of a resting site and impact on a breeding site used by common pipistrelle. Licence reference: 2016-20721-EPS-MIT-2.
- a licence granted on 22/11/2016 and ending on 22/11/2016 to allow for the destruction of a resting site used by common pipistrelle. Licence reference: 2016-20721-EPS-MIT-1.
- a licence granted on 08/01/2018 and ending on 30/04/2023 to allow for the destruction of a resting site and impact to a breeding site used by common pipistrelle. Licence reference: 2016-20721-EPS-MIT-3.

4.4.2 Flora

No records of protected or notable flora species within 2km of the site were returned by WYES. No protected or notable floral species were identified during the survey and the flora species identified were common and widespread. Flora, therefore, will not be mentioned further in this report.

4.4.3 Invertebrates (including white-clawed crayfish)

No records of protected or notable invertebrate species within 2km of the site were returned by WYES. No protected or notable invertebrates were identified on site; however, the weather on the day of the survey was unsuitable for invertebrate activity. There is potentially suitable habitat to support notable invertebrate species. The other neutral grassland, bramble scrub and other broadleaved woodland all have the potential to support foraging invertebrate species. Additionally, ragwort was identified on the site which is the sole food plant of cinnabar moth caterpillars, which are designated as a NERC S41 species. Other flowering species on site may support other notable pollinating insect species.

No records of white-clawed crayfish within 2km of the site were returned by WYES. There is no potentially suitable habitat for white-clawed crayfish on or adjacent to the site. White-clawed crayfish, therefore, will not be mentioned further in this report.



4.4.4 Fish

No records of protected or notable fish species within 2km of the site were returned by WYES. There is no potentially suitable habitat for fish on or adjacent to the site. Fish, therefore, will not be mentioned further in this report.

4.4.5 Amphibians

The following amphibian records were returned from WYES:

Table 3: Amphibian records received from WYES.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
<i>Bufo bufo</i>	Common toad	WCA* S41 KBAP WYBAP	2022	12	1004
<i>Rana temporaria</i>	Common frog	WCA* WYBAP	2022	14	1008
<i>Triturus cristatus</i>	Great crested newt	EPS WCA S41 KBAP WYBAP	2020	29	922

Key:

EPS: European Protected Species: Species listed under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

WCA: Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

* In respect to Section 9(5) only - offence to buy, sell, advertise, transport or be in possession

S41: Section 41 of the NERC Act 2006.

KBAP: Kirklees Biodiversity Action Plan.

WYBAP: West Yorkshire Biodiversity Action Plan.

55 records of three protected or notable amphibian species (including 29 records of great crested newt) within 2km of the site were returned by WYES. No amphibians were identified on the site. There is potentially suitable habitat on site to support amphibians. The bramble scrub on site has the potential to support hibernating amphibians and the other neutral grassland has the potential to support resting amphibians. There is no potentially suitable habitat for breeding amphibians within 500m of the site. The closest water body is 610m southwest of the site.

4.4.6 Reptiles

No records of reptiles within 2km of the site were returned by WYES. There is potentially suitable habitat on site to support reptiles. The bramble scrub on site has the potential to support hibernating reptiles, the other neutral grassland has



the potential to support resting reptiles and the edges of these habitats and clearings within them offer basking opportunities.

4.4.7 Birds

The following bird records were returned by WYES:

Table 4: Bird Records Received from WYES.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
<i>Alauda arvensis</i>	Skylark	S41 KBAP WYBAP	2022	10	1216
<i>Emberiza citrinella</i>	Yellowhammer	S41 KBAP	2015	1	1445
<i>Emberiza schoeniclus</i>	Reed bunting	S41 KBAP WYBAP	2017	1	1922
<i>Hirundo rustica</i>	Swallow	WYBAP	2021	1	1926
<i>Linaria cannabina</i>	Linnet	S41 KBAP	2017	1	1445
<i>Numenius arquata</i>	Curlew	S41 KBAP WYBAP	2022	6	1196
<i>Passer montanus</i>	Tree sparrow	S41 WYBAP	2021	7	1183
<i>Passer domesticus</i>	House sparrow	S41 KBAP WYBAP	2021	3	1922
<i>Perdix perdix</i>	Grey partridge	S41 KBAP WYBAP	2021	2	1543
<i>Prunella modularis</i>	Dunnock	S41 WYBAP	2021	1	1049
<i>Pyrrhula pyrrhula</i>	Bullfinch	S41 KBAP WYBAP	2021	2	1962
<i>Pluvialis apricaria</i>	Golden plover	WYBAP	2018	1	1525
<i>Sturnus vulgaris</i>	Starling	S41 KBAP WYBAP	2021	3	1525
<i>Turdus iliacus</i>	Redwing	WCA	2018	2	1049
<i>Turdus philomelos</i>	Song thrush	S41 KBAP WYBAP	2022	3	1926
<i>Turdus pilaris</i>	Fieldfare	WCA	2018	2	1049
<i>Tyto alba</i>	Barn owl	WCA WYBAP	2022	14	1067
<i>Vanellus vanellus</i>	Lapwing	S41 KBAP WYBAP	2021	5	1315

Key:



WCA: Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)
 S41: Section 41 of the NERC Act 2006
 KBAP: Kirklees Biodiversity Action Plan
 WYBAP: West Yorkshire Biodiversity Action Plan

65 records of 18 protected or notable bird species, including 18 records of three Schedule 1 WCA (as amended) designated species, within 2km of the site were returned by WYES. No notable or protected bird species were identified on the site. There is potentially suitable habitat on the site to support nesting birds. The other neutral grassland, woodland, bramble scrub, scattered trees and line of trees on-site have the potential to support a wide range of nesting birds (including ground nesting birds).

4.4.8 Bats

The following bat records were returned by WYES:

Table 5: Bat Records Received from WYES.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
<i>Myotis</i> sp.	Unidentified <i>Myotis</i> bat	EPS WCA	2019	2	1883
<i>Nyctalus noctula</i>	Noctule	EPS WCA S41 KBAP WYBAP	2020	15	368
<i>Nyctalus</i> sp.	Unidentified <i>Nyctalus</i> bat	EPS WCA	2019	9	1056
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	EPS WCA WYBAP	2023	87	368
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle	EPS WCA S41 KBAP WYBAP	2019	3	368
<i>Pipistrellus</i> sp.	Unidentified <i>Pipistrellus</i> bat	EPS WCA	2014	2	1312
<i>Plecotus auritus</i>	Brown long-eared bat	EPS WCA S41 KBAP WYBAP	2014	1	368

Key:

EPS: European Protected Species: Species listed under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

WCA: Schedule 5 and 6 of the Wildlife & Countryside Act 1981 (as amended)

S41: Section 41 of the NERC Act 2006

KBAP: Kirklees Biodiversity Action Plan

WYBAP: West Yorkshire Biodiversity Action Plan



The following bat roost records were received from WYES:

Table 6: Bat Roost Records Received from WYES.

Scientific Name	Common Name	Roost type	Date	Distance from Site (m)
<i>Nyctalus leisleri</i>	Leisler's bat	Unspecified	2006	1223
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified	2022	1718
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified	2007	1005
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified	2013	1268
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified	2013	1275
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified	2015	1275
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified	2017	1004
<i>Vespertilionidae</i>	Unidentified bat	Unspecified: 1 individual	2004	396
<i>Vespertilionidae</i>	Unidentified bat	Unspecified	2008	1598
<i>Vespertilionidae</i>	Unidentified bat	Unspecified: 6 individuals	2003	1330

119 field records of 4 confirmed species and 10 roost records of two confirmed species, within 2km of the site were returned by WYES. There is potentially suitable habitat on site to support commuting, foraging and roosting bats. The other neutral grassland, woodland, bramble scrub, scattered trees and line of trees on site have the potential to support commuting and foraging bats and Tree 1 (see **Appendix 1 and Appendix 4 photo 15**) contains potential roosting features in the form of a cavity from a fallen branch.

4.4.9 Badgers

Records of badger *Meles meles*, were returned by WYES and the site falls inside the area of increased probability of badger activity. There is potentially suitable habitat on site to support badgers. The other neutral grassland offers foraging opportunities. The woodland and bramble scrub offers additional foraging opportunities and potentially suitable habitat for sett creation. Badgers are also a highly mobile species and could be utilising the site for dispersal.



4.4.10 Otters

No records of otter *Lutra lutra* an EPS, WCA, S41, WYBAP and KBAP designated species within 2km were returned by WYES. There is no potentially suitable habitat for otters on or adjacent to the site and limited to no potentially suitable habitat connectivity between the site and potentially suitable habitats further afield. Otters, therefore, will not be mentioned further in this report.

4.4.11 Water Voles

No records of water voles within 2km of the site were returned by WYES. No field signs of water vole or water vole burrows were identified during the survey. There is no potentially suitable habitat on or adjacent to the site to support water vole and limited to no potentially suitable habitat connectivity between the site and potentially suitable habitats further afield. Water vole, therefore, will not be mentioned further in this report.

4.4.12 Beaver

No records of beaver within 2km of the site were returned by WYES. No field signs of beaver were identified during the survey. There is no potentially suitable habitat on or adjacent to the site to support beaver and limited to no potentially suitable habitat connectivity between the site and potentially suitable habitats further afield. Beaver, therefore, will not be mentioned further in this report.

4.4.13 Other Notable Species

The following notable species records were returned from WYES:

Table 7: Other notable species records received from WYES.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
<i>Erinaceus europaeus</i>	Hedgehog	WCA S41 KBAP WYBAP	2017	2	1922
<i>Lepus europaeus</i>	Brown hare	S41 KBAP WYBAP	2022	3	1514

Key:

WCA: Schedule 6 of the Wildlife & Countryside Act 1981 (as amended)

S41: Section 41 of the NERC Act 2006

KBAP: Kirklees Biodiversity Action Plan

WYBAP: West Yorkshire Biodiversity Action Plan

Two records of hedgehog, a WCA (as amended), S41, KBAP, and WYBAP designated species within 2km of the site were returned by WYES. There is



potentially suitable habitat on site to support hedgehogs. The other neutral grassland habitat offers foraging opportunities. The woodland and bramble scrub offers additional foraging opportunities and potentially suitable habitat for breeding, resting and hibernating hedgehogs. Hedgehogs are also a mobile species and could be utilising the site for dispersal.

Three records of brown hare, a S41, KBAP, and WYBAP designated species within 2km of the site were returned by WYES. There is potentially suitable habitat on site to support brown hare. The other neutral grassland on site offers resting and breeding opportunities. Brown hare are also a mobile species and could be utilising the site for dispersal.

4.4.14 Invasive Species

One record of floating pennywort *Hydrocotyle ranunculoides*, a Schedule 9 WCA (as amended) invasive non-native species, within 2km of the site were returned by WYES. The record was made in 2015 and is located 1384m from the site. No invasive species were identified on site. Invasive species, therefore, will not be mentioned further in this report.

4.4.15 Summary

Table 8 below summarises all important or legally protected ecological features identified within their respective zones of influence, along with their geographic context of importance and/or protection status:

Table 8: Summary of important ecological features and their geographic/legal context

Ecological Feature	Geographic Context of Importance and/or Protection Status
SAC, SPA	International – none present within 2km
LNR	National – one present within 2km
LWS / LGS	County – seven present within 2km of the site.
Invertebrates	White-clawed crayfish is a Protected Species (The Wildlife and Countryside Act 1981 (as amended)). Cinnabar moth and other notable species are included in the Species of principle important under the NERC act (S41).
Fish	Brown trout and other species are included in the Species of principle important under the NERC act (S41).
Great crested newt	Protected Species (The Wildlife and Countryside Act 1981 (as amended); The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
Reptiles	Protected Species (The Wildlife and Countryside Act 1981 (as amended); sand lizard and smooth snake receive additional protection under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
Birds	Protected Species (The Wildlife and Countryside Act 1981 (as amended); The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
Bats	Protected Species (The Wildlife and Countryside Act 1981 (as



	amended); The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
Badgers	Protected Species (Protection of Badgers Act 1992); Protected Species (The Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act 1992.
Otters	Protected Species (The Wildlife and Countryside Act 1981 (as amended); The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
Water voles	Protected Species (The Wildlife and Countryside Act 1981 (as amended).
Hedgehogs and Brown hare	Wild Mammals Protection Act (1996); Species of principle important under the NERC act (S41); (The Wildlife and Countryside Act 1981 (as amended).

4.5 Biodiversity Metric Calculation

4.5.1 The assessment was carried out by JCA Ltd using the ecological data gathered during the site’s ecological assessment survey carried out on 01/10/24.

4.6 Strategic significance

4.6.1 The site is not included or adjacent to any ecologically valuable designated sites. The habitats and hedgerows on site have therefore been judged to be of low strategic significance (Area/compensation not in local strategy/ no local strategy).

4.7 Existing Site Value

4.7.1 The existing biodiversity value for each habitat, together with the cumulative value of all habitats is provided in Table 9. Existing onsite habitats can be found in **Appendix 1**.

Table 9: Baseline habitats onsite as categorised by the Statutory Biodiversity Metric Calculation Tool.

Biodiversity Metric Reference Number	Habitat Type	Total Area on Site (Ha)	Distinctiveness	Condition	Strategic Significance	Ecological Baseline Habitat Unit
1	Other neutral grassland	0.5357	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	4.29
2	Other neutral grassland	0.0593	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.47
3	Bramble scrub	0.4525	Medium	N/A	Area/compensation not in local strategy/ no local strategy	1.81



Biodiversity Metric Reference Number	Habitat Type	Total Area on Site (Ha)	Distinctiveness	Condition	Strategic Significance	Ecological Baseline Habitat Unit
4	Bramble scrub	0.0135	Medium	N/A	Area/compensation not in local strategy/ no local strategy	0.05
5	Bare ground	0.0402	Low	Poor	Area/compensation not in local strategy/ no local strategy	0.08
6	Developed land; sealed surface	0.1401	V.Low	N/A	Area/compensation not in local strategy/ no local strategy	0.00
7	Other woodland; broadleaved	0.1812	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	1.45
8	Other woodland; broadleaved	0.0539	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.43
9	Urban trees	0.5478	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	4.38
10	Urban trees	0.0692	Medium	Good	Area/compensation not in local strategy/ no local strategy	0.83
	Total (area excl. trees)	1.48	-	-	-	13.80

4.7.2 The other neutral grassland on site was judged to be of moderate condition, as the habitat failed the following condition assessment criteria.

- Criteria C: Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.
- Criteria F (for non-acid grassland only): There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type. Note - this criterion is essential for achieving Good condition for non-acid grassland types only.

4.7.3 The bare ground on site was judged to be of poor condition, as the habitat failed the following condition assessment criteria.

- Criteria A: Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.
- Criteria B: The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.



4.7.4 The other woodland; broadleaved on site was judged to be of moderate condition, as the habitat scored 28. Including scores of poor (1) or moderate (2) on the following condition assessment criteria.

- Criteria A: Age distribution of trees: 2
- Criteria E: Cover of native tree and shrub species: 2
- Criteria G: Woodland regeneration: 2
- Criteria I: Vegetation and ground flora: 1
- Criteria J: Woodland vertical structure: 2
- Criteria K: Veteran trees: 1
- Criteria L: Amount of deadwood: 1
- Criteria M: Woodland disturbance: 2

4.7.5 The individual trees on site (Ref: 9) were judged to be of moderate condition, as the habitat failed the following condition assessment criteria.

- Criteria A: The tree is a native species (or at least 70% within the block are native species). Failed by three trees/tree groups.
- Criteria C: The tree is mature (or more than 50% within the block are mature). Failed by three trees/tree groups.
- Criteria E: Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark. Failed by seven trees/treelines/tree groups. Failed by five trees/tree groups.

4.7.6 The individual trees on site (Ref: 10) were judged to be of good condition, as the habitat failed the following condition assessment criteria.

- Criteria A: The tree is a native species (or at least 70% within the block are native species). Failed by one tree.
- Criteria E: Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark. Failed by one tree.



4.7.7 The existing biodiversity value for each hedgerow, together with the cumulative value of all hedgerows is provided in Table 10. Existing onsite habitats shown in **Appendix 1**.

Table 10: Baseline hedgerows onsite as categorised by the Statutory Biodiversity Metric Calculation Tool.

Biodiversity Metric Reference Number	Habitat Type	Total length on Site (km)	Distinctiveness	Condition	Strategic Significance	Ecological Baseline Habitat Unit
1	Line of trees	0.314	Low	Moderate	Area/compensation not in local strategy/ no local strategy	1.26
2	Native hedgerow	0.034	Low	Moderate	Area/compensation not in local strategy/ no local strategy	0.14
3	Non-native and ornamental hedgerow	0.03	V. Low	Poor	Area/compensation not in local strategy/ no local strategy	0.03
	Total (area excl. trees)	0.38	-	-	-	1.42

4.7.8 The line of trees on site were judged to be of moderate condition as it failed the following condition assessment criteria.

- Criteria A: The tree is a native species (or at least 70% within the block are native species). Failed by two treelines.
- Criteria B: The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion). Failed by three treelines.
- Criteria C: The tree is mature (or more than 50% within the block are mature). Failed by one treelines.
- Criteria E: Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark. Failed by three treelines.

4.7.9 The native hedgerow was classified as moderate as it as it failed the following condition assessment criteria.

- Criteria A2: Width >1.5 m average along length: The average width of woody growth estimated at the widest point of the canopy, excluding



gaps and isolated trees. Outgrowths (such as blackthorn *Prunus spinosa* suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).

- Criteria C1: Undisturbed ground and perennial vegetation: >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and is present on one side of the hedgerow (at least).
- Criteria C2: Nutrient-enriched perennial vegetation: Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground. The indicator species used are nettles *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* sp. Their presence, either singly or together, does not exceed the 20% cover threshold.
- Criteria D2: Current damage: >90% of the hedgerow or undisturbed ground is free of damage caused by human activities. This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).

4.7.10 Non-native and ornamental hedgerows are automatically classed as poor condition by the calculation tool.

4.7.11 Hedgerows are listed in the Kirklees Biodiversity Action Plan and is therefore listed as 'Formally identified in local strategy' within the strategic significance section.

4.7.12 The line of trees are not included within the Local Wildlife Habitat Network, the Local Biodiversity Action Plan or priority habitats (under S41 NERC) and are therefore listed as 'Area/compensation not in local strategy/ no local strategy' within the strategic significance section.

4.7.13 To ensure a 10% net gain in biodiversity is achieved as part of the Proposed Development the following measures can be employed:

- Habitat retention; and/or
- Habitat enhancement; and/or
- Habitat creation.



5. Proposed Development Impact Assessment

5.1 Description of the Proposed Development

- 5.1.1 The Proposed Development involves the construction of 40 residential properties which are a mixture of two story detached and semi-detached houses and apartments.
- 5.1.2 The Proposed Development will see the loss of the majority of onsite habitats and the retention of areas of other neutral grassland and two urban trees. The areas unaffected by the development will be used for habitat creation and enhancement. Areas of existing other neutral grasslands, bramble scrub and other woodland; broadleaved will be enhanced.
- 5.1.3 The results of the metric calculation indicates that a total of 11.97 habitat units lost as a result of the development, with 0.87 habitat units retained and 0.96 baseline units enhanced (Table 11).

Table 11: Summary of baseline habitat biodiversity value through retention and enhancement.

Biodiversity Metric Reference Number	Statutory Biodiversity Metric Habitat Type	Retained		Enhanced		Lost	
		Area (ha)	Unit	Area (ha)	Unit	Area (ha)	Unit
1	Other neutral grassland	0.0675	0.54	0.00	0.00	0.47	3.75
2	Other neutral grassland	0.00	0.00	0.0593	0.47	0.00	0.00
3	Bramble scrub	0.00	0.00	0.00	0.00	0.45	1.81
4	Bramble scrub	0.00	0.00	0.0135	0.05	0.00	0.00
5	Bare ground	0.00	0.00	0.00	0.00	0.04	0.08
6	Developed land; sealed surface	0.0846	0.00	0.00	0.00	0.06	0.00
7	Other woodland; broadleaved	0.00	0.00	0.00	0.00	0.18	1.45
8	Other woodland; broadleaved	0.00	0.00	0.0539	0.43	0.00	0.00
9	Urban trees	0.0407	0.33	0.00	0.00	0.51	4.06
10	Urban trees	0.00	0.00	0.00	0.00	0.07	0.83
	Total (area excl. trees)	0.15	0.87	0.13	0.96	1.20	11.97



5.1.4 The Proposed Development will see the partial loss of the line of trees on site.

5.1.5 The results of the metric calculation indicates that a total of 0.64 hedgerow units lost as a result of the development, with 0.78 habitat units retained and 0.00 units enhanced (Table 12).

Table 12: Summary of baseline hedgerow biodiversity value through retention and enhancement.

Biodiversity Metric Reference Number	Statutory Biodiversity Metric Habitat Type	Retained		Enhanced		Lost	
		Length (km)	Unit	Length (km)	Unit	Length (km)	Unit
1	Line of trees	0.153	0.61	0.00	0.00	0.16	0.64
2	Native hedgerow	0.034	0.14	0.00	0.00	0.00	0.00
3	Non-native and ornamental hedgerow	0.03	0.03	0.00	0.00	0.00	0.00
	Total	0.22	0.78	0.00	0.00	0.16	0.64

5.2 Habitats to be Retained

5.2.1 Any development should apply the Mitigation Hierarchy (British Standards Institution (BSI), 2013; shown below in **Figure 1**).

5.2.2 Development proposals should first seek to **avoid** impacts by retaining habitats. Second, development proposals should look to **minimise** the impact by producing plans that are designed to limit habitat disturbance, damage, and loss, thereby mitigating against any unavoidable impacts. Third, proposals should look to **restore** any damaged or degraded habitats. Then, only as a last resort should proposals **compensate** for unavoidable residual impacts to damaged or lost habitats that remain after avoidance and mitigation measures.



Figure 1: The mitigation hierarchy (BSI, 2013)



5.2.3 The Proposed Development will see the retention of a two individual urban trees and the partial retention of other neutral grasslands on-site.

5.2.4 The Proposed Development will see the retention of the native hedgerow and the non-native ornamental hedgerow and the partial retention of lines of trees on site to facilitate the development.

5.3 Habitats to be Enhanced

5.3.1 The Proposed Development will see the enhancement of habitats unaffected by the proposed development. The enhancement of the habitats on-site will deliver a total of 1.32 BU.

5.3.2 0.0593 ha of moderate condition other neutral grassland will be enhanced into good condition other neutral grassland, delivering 0.64 BU. To achieve this target condition at least five of the condition assessment criteria must be passed. It is advised to target criteria A, B, D, E and F (essential for good condition). See section 5.5.5 for relevant condition assessment criteria. This target condition will require 10 species per m². Intensive seeding and planting will be required.

5.3.3 0.0135 ha of bramble scrub will be enhanced into moderate condition mixed scrub, delivering 0.10 BU. It is advised to target criteria A, C and E. See section 5.5.6 for relevant condition assessment criteria.

5.3.4 0.0539 ha of moderate condition other woodland; broadleaved will be enhanced into good condition other woodland; broadleaved delivering 0.58 BU. To achieve this target condition a score of 33 must be



achieved. It is advised to increase the scores on the following criteria: which will achieve a total score of 34.

- Criteria E: Cover of native tree and shrub species. Target score 3.
- Criteria G: Woodland regeneration. Target score 3.
- Criteria I: Vegetation and ground flora. Target score 2.
- Criteria L: Amount of deadwood. Target score 3.
- Criteria M: Woodland disturbance. Target score 3.

5.3.5 The Proposed Development will not see the enhancement of hedgerows.

5.4 Habitats to be Lost

5.4.1 The Proposed Development will see the loss of the following habitats:

- Other neutral grassland, medium distinctiveness, moderate condition. This loss is considered to be major.
- Bramble scrub, medium distinctiveness, (equivalent to) poor condition.
- Bare ground, low distinctiveness, poor condition.
- Other woodland; broadleaved, medium distinctiveness, moderate condition.
- Urban trees, medium distinctiveness, moderate condition.
- Urban trees, medium distinctiveness, good condition.

5.4.2 The Proposed Development will see the partial loss of the line of trees onsite to facilitate the development. This will see the loss of a low distinctiveness habitat of moderate condition.

5.5 Proposed Habitat Creation

5.5.1 It is proposed that the following habitats be created as part of the Proposed Development:



- Modified grassland of moderate condition.
- Other neutral grassland of moderate condition.
- Mixed scrub of moderate condition.
- Bare ground of moderate condition.
- Developed land, sealed surface.
- Vegetated garden.
- Other woodland; broadleaved of moderate condition
- 26 small urban trees of moderate condition.
- Native hedgerow of poor condition.

5.5.2 The proposed habitats onsite can be found within **Appendix 2**.

5.5.3 Table 13 below summarises the value of all habitats that are to be created as part of the Proposed Development. In total, 2.16 BU for habitats are to be created within the Proposed Development.

Table 13: Summary value of onsite habitat proposals.

Biodiversity Metric Reference Number	Statutory Biodiversity Metric Target Habitat Type	Total Area on Site (Ha)	Distinctiveness	Target Condition	Strategic Significance	Biodiversity Unit Value
1	Modified grassland	0.0426	Low	Moderate	Area/compensation not in local strategy/ no local strategy	0.15
2	Other neutral grassland	0.1041	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.70
3	Mixed scrub	0.0364	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.24
4	Bare ground	0.0418	Low	Moderate	Area/compensation not in local strategy/ no local strategy	0.15
5	Developed land, sealed surface	0.6648	V.Low	N/A	Area/compensation not in local strategy/ no local strategy	0.00
6	Vegetated garden	0.3058	Low	N/A	Area/compensation not in local strategy/ no local	0.59



Biodiversity Metric Reference Number	Statutory Biodiversity Metric Target Habitat Type	Total Area on Site (Ha)	Distinctiveness	Target Condition	Strategic Significance	Biodiversity Unit Value
					strategy	
7	Other woodland; broadleaved	0.0021	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.01
8	Urban trees	0.1059	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.32
	Total (area excl. trees)	1.20	-	-	-	2.16

5.5.4 The modified grassland to be created on site has a target condition of moderate. To achieve this target condition at least four of the following condition assessment criteria must be passed. It is advised to target criteria A (essential for moderate or good condition), C, F, & G.

- Criteria A: There are 6-8 vascular plant species per m² present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition.
- Criteria B: Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.
- Criteria C: Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present).
- Criteria D: Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.
- Criteria E: Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).
- Criteria F: Cover of bracken *Pteridium aquilinum* is less than 20%.
- Criteria G: There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).



5.5.5 The other neutral grassland to be created on site has a target condition of moderate. To achieve this target condition at least three of the following condition assessment criteria must be passed. It is advised to target criteria A, B, D, or E.

- Criteria A: The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type. **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**
- Criteria B: Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
- Criteria C: Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.
- Criteria D: Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus agg.*) is less than 5%.
- Criteria E: Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species⁴ (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.
- Criteria F (for non-acid grassland only): There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type. **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**

5.5.6 The mixed scrub to be created on site has a target condition of moderate. To achieve this target condition at least three of the following condition assessment criteria must be passed. It is advised to target criteria A, C and E.

- Criteria A: The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). At least 80% of scrub



is native, there are at least three native woody species and no single species comprises more than 75% of the cover (except hazel *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* or box *Buxus sempervirens*, which can be up to 100% cover).

- Criteria B: Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.
- Criteria C: There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.
- Criteria D: The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.
- Criteria E: There are clearings, glades or rides present within the scrub, providing sheltered edges.

5.5.7 The bare ground to be created on site has a target condition of moderate. To achieve this target condition at least two of the following condition assessment criteria must be passed. It is advised to target criteria B and C.

- Criteria A: Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.
- Criteria B: The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.
- Criteria C: Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).

5.5.8 The other woodland; broadleaved to be created on site have a target condition of moderate. To achieve this target condition a score of at



least 26 of possible 39 of the following condition assessment criteria must be achieved.

- Criteria A: Age distribution of trees. Target score 2.
- Criteria B: Wild, domestic and feral herbivore damage. Target score 3.
- Criteria C: Invasive plant species. Target score 3.
- Criteria D: Number of native tree species. Target score 3.
- Criteria E: Cover of native tree and shrub species. Target score 3.
- Criteria F: Open space within woodland. Target score 3.
- Criteria G: Woodland regeneration. Target score 2 – 3.
- Criteria H: Tree health. Target score 2 – 3.
- Criteria I: Vegetation and ground flora. Target score 1 – 2.
- Criteria J: Woodland vertical structure. Target score 1 – 2.
- Criteria K: Veteran trees. Target score 1.
- Criteria L: Amount of deadwood. Target score 1 – 2.
- Criteria M: Woodland disturbance. Target score 3.

5.5.9 The urban trees to be planted on site have a target condition of moderate. To achieve this target condition at least three of the following condition assessment criteria must be passed. It is advised to target criteria A, B and D.

- Criteria A: The tree is a native species (or at least 70% within the block are native species).
- Criteria B: The tree canopy is predominantly continuous, with gaps in canopy cover making gap <10% of total area and no individual gap being >5m wide.
- Criteria C: The tree is mature (or more than 50% within the block are mature).



- Criteria D: There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide, or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.
- Criteria E: Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy, or loose bark.
- Criteria F: More than 20% of the tree canopy area is oversailing vegetation beneath.

5.5.10 Table 14 below summarises the value of all hedgerows that are to be created as part of the Proposed Development. In total, 0.23 BU for hedgerows are to be created within the Proposed Development.

Table 14: Summary value of onsite hedgerow proposals.

Biodiversity Metric Reference Number	Statutory Biodiversity Metric Target Habitat Type	Total Length on Site (km)	Distinctiveness	Target Condition	Strategic Significance	Biodiversity Unit Value
1	Native hedgerow	0.12	Low	Poor	Area/compensation not in local strategy/ no local strategy	0.23

4.4.1 The hedgerow to be created on site has a target condition of poor. No condition assessment criteria are needed to achieve this condition. However, the hedgerow must meet its definition as listed by the UKHab Habitat classification system (2023).

“A hedgerow with >80% canopy cover of UK native species or archaeophyte woody species”

5.6 Proposed Development Summary of Net Impacts

4.4.2 Tables 15 and 16 below summarise the habitat and hedgerow BU value of the Proposed Development together with the unit value of any biodiversity impacts or onsite habitat creation/enhancement proposals.

4.4.3 This shows that on balance, the Proposed Development would result in net loss of -9.45 habitat BU, equivalent to a net loss of -68.47% and a net loss of -0.41 for hedgerows, equivalent to a net loss of -29.00%.



4.4.4 Additionally, the Proposed Development does not satisfy Trading Rules. Due to the loss of medium distinctiveness habitats (2.88 BU for grassland, 1.52 BU for scrub, 4.56 BU for individual trees and 1.29 BU for woodland) and the loss of low distinctiveness hedgerows; line of trees (0.41 BU).

4.4.5 The unit deficit is 10.83 BU for habitats and 0.55 BU for hedgerows.

Table 15: Summary of Biodiversity Metric results for habitats

Biodiversity Units (BU)	
Existing Site habitat biodiversity value	13.80
Value of gross habitat biodiversity loss	11.97
Value of retained and proposed onsite habitat creation and enhancement	4.35
Onsite net change	-9.45 (-68.47%)

Table 16: Summary of Biodiversity Metric results for hedgerows

Biodiversity Units (BU)	
Existing Site hedgerows biodiversity value	1.42
Value of gross hedgerows biodiversity loss	0.64
Value of retained and proposed onsite hedgerows creation and enhancement	1.01
Onsite net change	-0.41 (-29.00%)



6. Assessment of Effects

6.1 Statutory Designated Sites

- 6.1.1 The MAGIC website revealed no internationally designated sites within 2km of the site.
- 6.1.2 The MAGIC website revealed no nationally designated site within 2km of the site.
- 6.1.3 The MAGIC website revealed that the site does not lie within the Special Site of Special Scientific Interest (SSSI) Impact Risk Zone.

6.2 Non-statutory Designated Sites

- 6.2.1 Records received from WYES revealed no non-statutory designated sites within 2km of the site.
- 6.2.2 The site is not included within the Local Wildlife Habitat Network.

6.3 Habitats

- 6.3.1 g3c – Other neutral grassland: 10 – Scattered scrub, 32 – Scattered trees, 33 – Line of trees, 81 – Ruderal or ephemeral, 202 – Young self-set trees, 521 – Unmanaged.

The majority of the other neutral grassland habitat is to be lost, and the remaining other neutral grassland habitat is to be enhanced.

- 6.3.2 w1g – Other woodland, broadleaved: 10 – Scattered scrub, 30 – Semi-natural, 202 – Young self-set trees.

The majority of the other woodland; broadleaved habitat is to be lost and the remaining other woodland' broadleaved habitat is to be enhanced or retained.

- 6.3.3 h3d – Bramble scrub: 33 – Line of trees, 81 – Ruderal or ephemeral, 202 – Young self-set trees, 521 – Unmanaged, 532 – Scattered grass.

The bramble scrub habitat is to be lost under the scheme.

- 6.3.4 u1f – Sparsely vegetated urban land: 510 – Bare ground, 202 – Young self-set trees, 532 – Scattered grass.



The sparsely vegetated urban land habitat is to be lost under the scheme.

6.4 Protected and Notable Species

6.4.1 Invertebrates

No records of protected or notable invertebrate species were returned by WYES. The other neutral grassland, bramble scrub and other broadleaved woodland all have the potential to support notable invertebrate species. Under current proposals the majority of the habitats on the site are to be lost. Invertebrates, therefore, may be negatively impacted by the proposed development. Further recommendations are therefore provided in **Section 7.1.2**.

6.4.2 Amphibians

55 records of three protected or notable amphibian species (including 29 records of great crested newt) were returned by WYES. No amphibians were identified on the site. The bramble scrub on site has the potential to support hibernating amphibians and the other neutral grassland has the potential to support resting amphibians. There is no potentially suitable habitat for breeding amphibians within 500m of the site. The closest water body is 610m southwest of the site. However, there is habitat connectivity between the site and potentially suitable habitats further afield. However, dispersal is restricted by the M62 to the west of the site and the A649 to the north of the site. Under current proposals the majority of the habitats on the site are to be lost. Amphibians, therefore, may be negatively impacted by the proposed development. Further recommendations are therefore provided in **Section 7.1.3**.

6.4.3 Reptiles

No records of reptiles were returned by WYES. The bramble scrub on site has the potential to support hibernating reptiles, the other neutral grassland has the potential to support resting reptiles and the edges of these habitats and clearings within them offer basking opportunities. There is habitat connectivity between the site and potentially suitable habitats further afield. However, dispersal is restricted by the M62 to the west of the site and the A649 to the north of the site. Under current proposals the majority of the habitats on the site are to be lost. Reptiles, therefore, may be negatively impacted by the proposed development. Further recommendations are therefore provided in **Section 7.1.4**.

6.4.4 Birds



65 records of 18 protected or notable bird species, including 18 records of three Schedule 1 WCA (as amended) designated species were returned by WYES. No notable or protected bird species were identified on the site. The other neutral grassland, woodland, bramble scrub, scattered trees and line of trees on site have the potential to support a wide range of nesting birds (including ground nesting birds). Under current proposals the majority of the habitats on the site are to be lost. Nesting birds, therefore, may be negatively impacted by the proposed development. Further recommendations are therefore provided in **Section 7.1.5**.

6.4.5 Bats

119 field records of 4 confirmed species and 10 roost records of two confirmed species were returned by WYES. The other neutral grassland, woodland, bramble scrub, scattered trees and line of trees on site have the potential to support commuting and foraging bats and was judged to be of 'Low' potential to support commuting and foraging bats. However, similar habitats and the foraging opportunities the site offers are scarce in the local vicinity. Tree 1 contains potential roosting features in the form of a cavity from a fallen branch and was judged to be of PRF-I potential to support roosting bats. Under current proposals the majority of the habitats on the site are to be lost. Bats, therefore, may be negatively impacted by the proposed development. Further recommendations are therefore provided in **Section 7.1.6**.

6.4.6 Badgers

Records of badger were returned by WYES and the site falls inside the area of increased probability of badger activity. There is potentially suitable habitat on site to support badgers. The other neutral grassland offers foraging opportunities. The woodland and bramble scrub offers additional foraging opportunities and potentially suitable habitat for sett creation. Badgers are also a highly mobile species and could be utilising the site for dispersal. Badgers, therefore, may be negatively impacted by the proposed development. Further recommendations are therefore provided in **Section 7.1.7**.

6.4.7 Other Notable Species

Two records of hedgehog were returned by WYES. The other neutral grassland habitat offers foraging opportunities. The woodland and bramble scrub offers additional foraging opportunities and potentially suitable habitat for breeding, resting and hibernating hedgehogs. Hedgehogs are also a mobile species and could be utilising the site for dispersal. Under current proposals the majority of the habitats on the site are to be lost. Hedgehog, therefore, may be negatively



impacted by the proposed development. Further recommendations are therefore provided in **Section 7.1.8**.



7. Recommendations

7.1.1 Biodiversity Net Gain

In accordance with the NPPF, where a biodiversity impact cannot be avoided or mitigated then compensation measures must be provided. If this cannot be achieved onsite through further avoidance, mitigation or compensatory habitat creation or enhancement measures, then **offsite compensation** measures will be required.

It was identified that the Proposed Development would have a net loss of -9.45 habitat BU, equivalent to a net loss of -68.47% and a net loss of -0.41 for hedgerows, equivalent to a net loss of -29.00%.

Additionally, the Proposed Development does not satisfy Trading Rules. Due to the loss of medium distinctiveness habitats (2.88 BU for grassland, 1.52 BU for scrub, 4.56 BU for individual trees and 1.29 BU for woodland) and the loss of low distinctiveness hedgerows; line of trees (0.41 BU).

The unit deficit is 10.83 BU for habitats and 0.55 BU for hedgerows.

As such, the client should seek to undertake one or a combination of the following recommendations to achieve an overall biodiversity net gain in habitat BU and hedgerow BU, whilst meeting the Trading Rules:

- Incorporate further on-site habitat creation/enhancement to compensate for the loss of low and medium distinctiveness habitat to achieve a minimum of 10% net gain whilst satisfying the Trading Rules.
- If on-site habitat creation/enhancement is not possible, then off-site habitat creation/enhancement will be required. This can be achieved by the purchase of additional land designated as a compensatory biodiversity offset site to compensate for onsite losses, reach 10% net gain, and satisfy the Trading Rules, or through using a habitat bank off-site mitigation provider.
- If neither on-site nor off-site compensation is possible, statutory biodiversity credits will need to be purchased as a last resort. Guidance can be found at <https://www.gov.uk/guidance/statutory-biodiversity-credits>.

To achieve a 10% gain on this site and satisfy the trading rules the following BU will be required for each habitat type.



- At least 2.88 BU of other neutral grassland or a grassland habitat of the same distinctiveness (medium) or a habitat of higher distinctiveness.
- At least 1.52 BU of bramble scrub or a scrub habitat of the same distinctiveness (medium) or a habitat of higher distinctiveness.
- At least 4.56 BU of individual trees (medium distinctiveness) or a habitat of higher distinctiveness.
- At least 1.29 BU of other woodland; broadleaved or a woodland habitat of the same distinctiveness (medium) or a habitat of higher distinctiveness.
- At least 0.41 BU of line of trees or a hedgerow of the same distinctiveness (low) or a hedgerow of higher distinctiveness.
- In addition, another 0.58 BU for habitats will be required to achieve a 10% net gain for habitats. This can be a habitat of low, medium, high, or very high distinctiveness.
- In addition, another 0.14 BU for hedgerows will be required to achieve a 10% net gain for hedgerows. This can be a hedgerow of low, medium, high, or very high distinctiveness.

Further details of the Statutory Biodiversity Metric calculations and associated condition assessments can be found within the Statutory Biodiversity Metric Calculator Tool excel spreadsheet and the Statutory Biodiversity Metric Habitat Condition Assessment Sheets accompanying this report.

Should the Proposed Development be subject to future change, the conclusions and recommendations in this report will need to be revised. This is to be undertaken via the recalculation of the impact assessment element through the most up-to-date biodiversity metric.

7.1.2 Invertebrates

Native grass and wildflower planting is recommended to mitigate for the loss of habitat and floral variety which will affect many invertebrate species on site, and species which may forage on invertebrates, such as bats and birds, which should be included in a **Biodiversity Enhancement Plan (BEP)**.

7.1.3 Amphibians

It is advised that a precautionary approach is adopted to include an **Ecological Clerk of Works (ECoW)** being present prior to works commencing. The **ECoW**



would give a toolbox talk to onsite contractors in order to relate applicable legislation, what signs to look for, and what to do should amphibians be encountered on site. Should an amphibian be found during site clearance, the advising ecologist would move it to a place of safety. If a great crested newt is found during site works, all work must halt immediately and advise from a suitably competent and licensed and ecologist must be sought.

7.1.4 Reptiles

It is advised that a precautionary approach is adopted to include an **ECoW** being present prior to works commencing. The **ECoW** would give a toolbox talk to onsite contractors in order to relate applicable legislation, what signs to look for, and what to do should reptiles be encountered on site. Should a reptile be found during site clearance, the advising ecologist would move it to a place of safety.

7.1.5 Birds

Any site clearance must take place between September and January (inclusive) to avoid destruction of bird nests or disturbing active bird nests. If site clearance cannot take place in this period, a nesting bird survey must take place no more than 24 hours before clearance works. Any active nests must remain in situ, surrounded by a buffer of undisturbed vegetation, until any young have fledged.

7.1.6 Bats

The site offers 'Low' potential for commuting and foraging bats. A bat activity survey is recommended, which requires one survey visit per season (spring – April/May, summer – June/July/August, autumn September/October). Further surveys may be required if these visits, or the results of the static detector surveys, reveal activity of interest that requires more observation of the site. Data to be collected for a minimum of five consecutive nights per season (spring – April/May, summer – June/July/August, autumn September/October) in appropriate (or best available) weather conditions for bats.

Tree 1 contains a potential roosting feature and was judged to be of PRF-I. A emergence survey is not required. Tree 1 should be soft felled and be left *in situ* for at least **24 hours** after felling to allow any bats potentially using them the chance to escape during their active hours.

The scheme has the potential to disturb foraging and commuting bats through increased light levels during the construction phase. All lighting must consider wildlife and be in accordance with the ILP Guidance GN01 and GN09 (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.

Lighting Scheme: The development will likely increase lighting levels. All lighting must consider wildlife and be in accordance with the ILP Guidance GN01 and GN09. 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.

Artificial light is known to deter bats from entering lit areas. The development must incorporate a wildlife sensitive lighting scheme. In particular, obtrusive light is to be prevented from reaching potential foraging and commuting routes, both from new exterior and interior lights. Guidance published by the Institution of Lighting Professionals (2023) is to be followed when designing the lighting scheme for the development.

It is important to avoid:

- Uniform levels of luminance across the site.
- Metal halide and florescent lighting.
- Upward tilting lighting that increases skyline luminance.

Instead, the following should be installed:

- Dark buffer zones.
- Screening in the form of vegetation, fences and structures.
- Appropriately designated darkened areas.
- Luminaries absent of UV elements.
- LED luminaries with a sharp cut-off, low intensity and good rendition.
- A warm white spectrum (<2700 kelvin) to reduce blue light.
- Peak luminaire wavelength at a minimum of 550nm.
- Downward directional luminaires with upward light ratios of 0%.
- Lower light columns to limit light spill.
- Recessed internal light fixtures.
- Window glazing treatments or automated blind systems.

7.1.7 Badgers

Badger activity surveys are recommended. Camera traps are to be deployed and left on site for three weeks, to ascertain to presence/absence of badgers. Badger surveys can take place throughout the year, but tall vegetation can obscure field signs during the summer.



Any excavations created during the development stage must be covered at night or appropriate escape routes implemented to prevent badgers or any other species becoming trapped. Planks or similar are to be placed at a 45-degree angle for hedgehogs to escape safely. Any open pipes must also be capped if left open overnight. A preconstruction walkover to check the site for badger setts is recommended.

7.1.8 Other Notable Species

The areas of scrub on site provides ideal nesting habitat for hedgehogs, which are legally protected during hibernation and while raising their young. Vegetation clearance must be carried out under the supervision of an **ECoW**. The **ECoW** will hand search any area where hedgehogs might be present before they are cleared. They will be relocated to a shelter within suitable habitat.

Any excavations created during the development stage must be covered at night or appropriate escape routes implemented to prevent hedgehogs or any other species becoming trapped. Planks or similar are to be placed at a 45-degree angle for hedgehogs to escape safely. Any open pipes must also be capped if left open overnight. Any open pipes must also be capped.

The construction of any walls or fences included within the proposed development will reduce the movements of hedgehogs locally, creating localised habitat fragmentation for the species. Hedgehog holes measuring a minimum of 13cm x 13cm must be installed within any newly created walls or fences. Hedgerows permitting hedgehog commuting can be used alternatively to artificial barriers within the development.

7.1.9 Summary of Impacts

Table 17 below summarises the assessment of effects, including any mitigation and subsequent residual effects.

Table 17: Summary of important ecological features and their geographic/legal context

Receptor	Likely Significant Effect and/or Legal Implication	Avoidance and Mitigation Measures	Residual Impacts After Mitigation
Statutory designated sites	No significant effects	N/A	No significant effects
Non-statutory designated sites	No significant effects	N/A	No significant effects
Invertebrates	Moderate adverse impact at the local level.	Planting of native grasses and flowering species, included in a BEP report	No significant effects
Amphibians	Potential breach of legislation from killing and injury of amphibians.	Precautionary working methods under ecological supervision.	No significant effects



Reptiles	Potential breach of legislation from killing and injury of reptiles.	Precautionary working methods under ecological supervision.	No significant effects
Birds	Potential breach of legislation from destruction of nests or disturbance of nesting birds	Nesting bird survey. Precautionary working methods under ecological supervision.	No significant effects
Bats	Low adverse impact at the local level.	Bat activity surveys, within May-September and at least 3 weeks apart. Works to be carried out via appropriate lighting schemes as per Institute of Lighting Professionals' guidance (ILP, 08/23).	Dependent on the results of the surveys.
Badgers	Potential harm to individuals during works.	Badger activity survey. Cover any excavations or pipes at night to prevent any individuals getting stuck.	Dependent on the results of the surveys.
Other Notable Species	Potential breach of legislation from killing and injury of individual hedgehogs. Potential harm to individuals during works.	Precautionary working methods under ecological supervision. Cover any excavations or pipes at night to prevent any individuals getting stuck.	No significant effects

In the absence of any mitigation measures, the proposed development would be anticipated to have adverse significant impacts at the Local level. However, with the implementation of the mitigation and precautionary measures as specified above, the proposed development is not anticipated to result in any significant adverse residual effects to important ecological features.



8. Survey Results

8.1.1 Bat Activity Survey

A bat activity survey was conducted between April and October 2025 (ref: 22182g/AWe).

The activity surveys have revealed a total of four species commuting and foraging across the site. The majority of these are common species: common and soprano pipistrelle; and noctule. Calls from bats of the rarer genus *Myotis* were also recorded but could not be identified to species level. Common pipistrelle was the most frequently recorded species.

The numbers of individual bats occurring across the site is not considered to be high and the populations of these species present within the majority of the site boundary are assessed as valuable at the local level.

The automated surveys (see section 3.2 for full results) showed that Location 1 experienced the highest level of bat passes in total. Location 1 recorded a higher number of passes in each month for which data were collected. Both locations are on a woodland edge, a preferred foraging habitat for many bat species.

Common pipistrelle, soprano pipistrelle and noctule are relatively common and widespread species within the county. The loss of habitat proposed by this scheme is not anticipated to have a negative impact on the favourable conservation status of these species.

Myotis species are rarer than those named above but have been shown to use the site only infrequently. Consequently, the loss of habitat proposed by this scheme is not anticipated to have a negative impact on the favourable conservation status of *Myotis* species.

8.1.2 Badger Survey

A badger survey was conducted between September and October 2025.

Please refer to the Badger Survey & Report (ref: 22182a/AWe) for the results of the survey.



9. References

Guidelines for surveys and report writing:

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

Chartered Institute of Ecology and Environmental Management (CIEEM), (2015) *Guidelines for Ecological Report Writing*. Winchester.

UK Hab Version 2.01 (2023) The UK Habitat Classification System. Available at: ukhab.org

Websites:

Advice on protected species is consolidated at:

Environmental management: Wildlife and habitat conservation - GOV.UK (2016) *Gov.uk*. Available at: <https://www.gov.uk/topic/environmental-management/wildlife-habitat-conservation>

Magic Map Application (2016) *Magic.defra.gov.uk*. Available at: <http://magic.defra.gov.uk/MagicMap.aspx>

The RSPB (2016). Available at: <http://www.rspb.org.uk/>

Surveys and mitigation plans: protected species - Detailed guidance (2015) *Gov.uk*. Available at: <https://www.gov.uk/guidance/surveys-and-mitigation-plans-protected-species>

Within this detailed guidance on surveys and mitigation information is available on the following protected species:

- Bats
- Natterjack toads
- Otters
- Reptiles
- Water voles
- White-clawed crayfish
- Wild birds
- Hazel dormice
- Great crested newts
- Badgers

Wildlife licences: when you need to apply - Detailed guidance (2014) *Gov.uk*. Available at: <https://www.gov.uk/guidance/wildlife-licences>

Within this detailed guidance on licensing information is available on licences for the following protected species:

- Bats
- Natterjack toads
- Otters
- Reptiles
- Water voles
- White-clawed crayfish
- Wild birds
- Hazel dormice
- Great crested newts
- Badgers

As well as:

- Non-native Bumblebee species
- Deer
- Freshwater fish
- Invertebrates
- Mink, coypu, muskrat and grey squirrel
- Plants

Species Specific Information:

Badgers:

Natural England, (2007) Badgers and Development: A Guide to Best Practice and Licensing.

Competencies for Species Survey: Badger, Chartered Institute of Ecology and Environmental Management CIEEM, 2013



Bats:

Bat Conservation Trust, (2007) *Bats, Development & Planning in England*. London.

Bat Conservation Trust and Institute of Lighting Professionals (2023) *Guidance Note 08/23: Bats and artificial lighting in the UK*. ILP, Rugby

Collins, J. (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th edition. Bat Conservation Trust, London.

Mitchell-Jones, A.J. & McLeish, A.P. (2012) *The Bat Workers' Manual*. Pelagic Publishing, Exeter.

Bats: surveys and mitigation for development projects, <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects> Accessed 2018-06-21

Dormice:

Bright, P., Morris, P. and Mitchell-Jones, A. (1996) *The dormouse conservation handbook*. Peterborough: English Nature.

Great Crested Newts:

Langton, T., Beckett, C. and Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Halesworth: Froglife. pdf

Advice note 4 (revised) - *Amphibian Disease Precautions, A Guide for UK Fieldworkers, Amphibian and Reptile Conservation trust*, 2017. Accessed 2018-06-21

Otters: Natural England, (2007) *Species Information Note SIN006, Otter: European protected species*.

Reptiles and Amphibians:

Baker, J., Beebee, T., Buckley, J., Gent, T. and Orchard, D. (2011) *Amphibian Habitat Management Handbook*. 1st ed. Bournemouth: Amphibian and Reptile Conservation.

Edgar, P., Foster, J. and Baker, J. (2010) *Reptile Habitat Management Handbook*. 1st ed. Bournemouth: Amphibian and Reptile Conservation.

English Nature, (2004). *Reptiles: guidelines for developers*. Peterborough.

Gent, T. and Gibson, S. (ed.) (2003) *Herpetofauna Workers Manual*. Bournemouth: JNCC.

Water Voles:

Natural England, (2008) *Water voles - the law in practice. Guidance for planners and developers*.

Water Vole Conservation and Management: Lessons From Four Case Studies, Jemma Louise Gaskin, 2016

Stoddart, D.M. (1970), *Individual range, dispersal in a population of water voles (Arvicola terrestris (L.))*. *Journal of Animal Ecology* 39, 403-425.

Strachan, R. (2009), *Populations and Persistence – Developing a Strategy for Conserving Water Voles in the UK*, Presentation to Warwickshire Wildlife Trust, 2nd April 2009, Environment Agency, Wales

Strachan, R. and Holmes-Ling, P (2003), *Restoring water voles and other biodiversity to the wider countryside*. Wildlife Conservation Research Unit, Oxford.

Strachan, R., Moorehouse, T. and Gelling, M. (2011), *Water Vole Conservation Handbook*, 3rd Edn, WILDCRU



White-clawed Crayfish:

Peay, S. (2002) *Guidance on Habitat for White-clawed Crayfish and its Restoration*. Kendal: English Nature

Biodiversity Metric Guidance:

STEPHEN PANKS^A, NICK WHITE^A, AMANDA NEWSOME^A, MUNGO NASH^A, JACK POTTER^A, MATT HEYDON^A, EDWARD MAYHEW^A, MARIA ALVAREZ^A, TRUDY RUSSELL^A, CLARE CASHON^A, FINN GODDARD^A, SARAH J. SCOTT^B, MAX HEAVER^C, SARAH H. SCOTT^C, JO TREWEEK^D, BILL BUTCHER^E and DAVE STONE^A (2022) *Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide*.

Natural England. A – Natural England, B – Environment Agency, C – Department for Environment, Food and Rural Affairs, D – Treweek Environmental Consultants Ltd, E – eCountability Ltd

Relevant Legislation:

Wildlife and Countryside Act 1981

- <http://jncc.defra.gov.uk/page-3614>
- <https://www.legislation.gov.uk/ukpga/1981/69/contents>

The Conservation of Habitats and Regulations 2017.

- <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

- <https://www.legislation.gov.uk/uksi/2019/579/contents/made>

Protection of Badgers Act 1992

- <https://www.legislation.gov.uk/ukpga/1992/51/contents>

Countryside and Rights of Way Act 2000

- <https://www.legislation.gov.uk/ukpga/2000/37/contents>

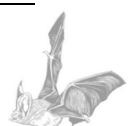
The Management of Hedgerows (England) Regulations 2024

- <https://www.legislation.gov.uk/ukdsi/2024/9780348260472/regulation/6>



Appendices

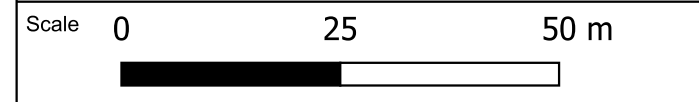
Appendix 1: Baseline UKHab Habitat Map





Site name & address
**Land off Highmoor Lane,
 Cleakheaton, BD19 6LW**

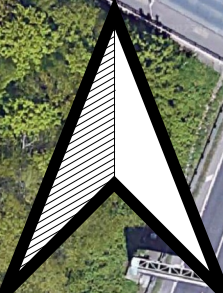
- Key**
- Red Line Boundary
 - Individual tree Baseline
 - Existing Very Large Urban Tree
 - Existing Large Urban Tree
 - Existing Medium Urban Tree
 - Existing Small Urban Tree
 - Hedgerow Baseline
 - Non-native and ornamental hedgerow
 - Line of trees
 - Native hedgerow
 - To be created
 - Habitats Baseline
 - h3d – Bramble scrub
 - u1b – Developed land; sealed surface
 - g3c – Other neutral grassland
 - w1g – Other woodland, broadleave
 - u1f – Sparsely vegetated urban land/Bare ground
 - Secondary Codes
 - 10 – Scattered scrub
 - 30 – Semi-natural
 - 32 – Scattered trees
 - 33 – Line of trees
 - 81 – Ruderal or ephemeral
 - 202 – Young self-set trees
 - 510 – Bare ground
 - 521 – Unmanaged
 - 532 – Scattered grass



Site Land off Highmoor Lane	Client Thirteen Group
Project Ecological Impact Assessment	Author JF
Plan ref 22182/JF	Revision 0

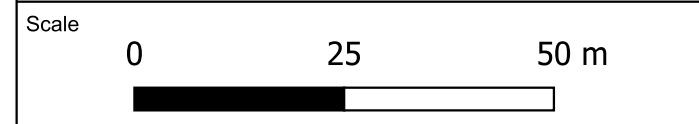
Appendix 2: Proposed UKHab Habitat Map





Site name & address
**Land off Highmoor Lane,
 Cleckheaton BD19 6LW**

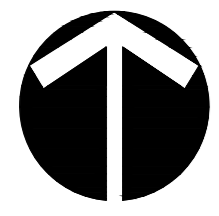
- Key**
- Red Line Boundary
 - Individual tree Proposed
 - ◆ Proposed Small Urban Tree
 - ◇ Retained Large Urban Tree
 - ◇ Retained Small Urban Tree
 - Lost Tree
 - Hedgerows Proposed
 - Non-native and ornamental hedgerow
 - Line of trees
 - Native hedgerow
 - Habitats Proposed
 - Developed land; sealed surface
 - Mixed scrub
 - Modified grassland
 - Other neutral grassland
 - Other woodland; broadleaved
 - Vegetated garden
 - Bare ground



Site Land off Highmoor Lane	Client Thirteen Group
Project Ecological Impact Assessment	Author JF
Plan ref 22182/JF R1	Revision 1

Appendix 3: Proposed Development Plan





This drawing is the copyright of Rosetta Landscape Design and cannot be reproduced in any form without the express consent of the company. Written and scaled dimensions to be checked on site, any discrepancies reported prior to work commencing. If in doubt please ask.

This drawing has been prepared for the purpose of planning approval.

Planting Notes
 Topsoil shall be a minimum of 400mm depth over planting beds and graded to fall. Imported topsoil must be BS3882:2015 compliant and existing topsoil must be cultivated in accordance with BS3882:2015. No cultivation should take place in wet/waterlogged conditions.
 Herbicide and cultivation: Topsoil to be treated with two applications of herbicide prior to planting, where necessary, strictly in accordance with the Control of Pesticides Regulations 1986 (as amended 1997) or otherwise.
 Planting: All planting must be in accordance with BS3396 1992: Nursery Stock and BS 8545 2014: Trees from Nursery to Independence.
 Trees: All tree planting should conform to BS8545:2014. Standard trees to be planted in pits 600x400x450mm or dimensions of rootball, whichever is greater. Heavy and Extra Heavy Standard trees to be planted in pits 1000x1000x600mm or dimensions of rootball, whichever is greater. Align soil improver and 150g Emag (or equivalent) to be incorporated into the soil of all new tree pits. Trees to be planted centrally within a tree pit. Tree stakes shall be of metal, chestnut or other approved timber. They shall be round, rough sawn, straight, free from projections, large or edge knots and other defects and be pointed at the lower end. They shall be strong enough not to split when driven into the ground and when tied are nailed to them (both initially and when adjusted). For Feathered trees use 20x stakes (1.4m by 50mm) to be driven into ground 800mm, leaving 600mm above ground. For Selected Standard Trees 20x stakes (1.7m by 100mm) and cross bars are required; stakes to be driven 900mm below ground leaving 800mm above ground. For Heavy/Extra Heavy trees use 20x stakes (2.2m x 100mm) with a 400x100x15mm cross bar. Stakes to be driven into ground 1m leaving 1.2m above ground.
 Tree ties: All tree ties to be Green-Tech Holidfast Natural Tree Ties. Natural tree tie is made entirely of natural fibres and is fully biodegradable. A spacer formed using the Natural Tree Tie itself. It will not strangle the tree and will biodegrade as the tree establishes itself.
 Native Woodland / Shrub areas: Soil depth shall consist of 300mm topsoil and 600mm subsoil (in accordance with BS3882:2015).
 Container grown shrubs, transplants and whips: Shrubs and transplants shall be planted in pits 300x300x400mm (depth) and the backfill shall include 3 litres of peat-free tree and shrub compost. Where two or more shrub species are indicated within a single bed each species shall be randomly mixed throughout the bed in groups of 3/5.
 Herbicide: Spot treat with herbicide throughout the maintenance period in accordance with the manufacturer's instructions.
 Mulch: Planting beds to receive 75mm depth mulched ornamental bark mulch. Native woodland / shrub / hedgerow plants to be planted with Green-Tech Mulch Mat - Type 11. Mulch Mats are 100% biodegradable with an approximate three year lifespan. Mulch Spats are ready-cut for individual plant production with a centre hole for plant protection. Mats pinned to soil.
 Plant position: Final position of trees and shrubs subject to confirmation of service location and approval of statutory undertakers.
 Protection to planting: Native hedgerow plants, trees and shrubs within mires to be protected by Green-tech Bio-Earth Tree Shelter. The Bio-Earth Tree Shelter is made from a special water-proof FSC-approved cardboard which is 100% biodegradable, recyclable, and compostable. Lifespan is typically 3 years. Once the tree / shrub has established enough to no longer need it, the Bio-Earth Tree Shelter can be left to safely biodegrade.
 Ornamental hedging: Hedges to comprise a single row of plants. 400mm wide trench excavated to take plants and topsoil cultivated to 400mm depth prior to application of fertiliser.
 Grass: All turf-laid areas to be cultivated and levelled as required removing any stones, rubble, subsoil, general construction waste.
 Planting Season: Bare-root shrubs to be planted between mid-November and mid-March dependent upon the planting season.

LEGEND

- Site boundary
- Existing vegetation to be retained
- Existing vegetation to be removed
- Proposed tree Heavy (Standard)
- Proposed tree Selected (Standard)
- Proposed Native Hedge Mix
- Proposed hedge
- Proposed Native Shrub Mix
- Proposed shrub bed
- Proposed grass
- Proposed Emorgate EL1 Flowering Lawn Mixture Sown @ 4g/m² www.wildseed.co.uk
- Proposed Emorgate EW1 Woodland Mixture Sown @ 4g/m² www.wildseed.co.uk
- Proposed Grassroad - Plastic Graded Paving System to allow access for cricket net maintenance. www.grasscrete.com
- Existing wild grassland enhanced into a good condition wildflower meadow

Rev H: Revised to Ecologist comments - 13Nov25 (BP)
 Rev G: Revised to show maintenance access - 13Nov25 (BP)
 Rev F: Revised to Client comments - 29Oct25 (BP)
 Rev E: Revised to IDP Proposed Site Layout' N81-3165-1002-P5 - 07Oct25 (BP)
 Rev D: Revised to IDP Proposed Site Layout' N81-3165-1002-P2 - 20May25 (BP)
 Rev C: Revised to Client comments - 09May25 (BP)
 Rev B: Revised to IDP Proposed Site Layout' 101-P1 - 29Apr25 (BP)
 Rev A: Revised to IDP Proposed Site Layout' 101-D11 - 28Mar25 (BP)
 Base: IDP Proposed Site Layout' 101-D9 received 08Jan25

PROJECT Highmoor Land, Cleckheaton
 TITLE Detailed Landscape Proposals
 CLIENT Michael Dyson Associates
 DATE 10 Jan 25 SCALE 1 : 250 SHEET A0
 DRAWN BP DRAWING NO 4153/1
 CHECKED BP REVISION H

ROSETTA LANDSCAPE DESIGN
 Landscape Architects
 Swallow's Nest, Main Street
 Akeham Road, York, YO23 3PT
 Telephone +44 (0)1904 500410
 Email design@rosettalandscape.co.uk
 Web www.rosettalandscape.co.uk



Planting Schedule

Nr	Code	Tree Name	Specification	Grth	Height
1-	Ac	Acer campestre	Selected Standard - Clear Stem 175-200 RB	10-12cm	300-350cm
2-	AcS	Acer campestre 'Streetwise'	Selected Standard - Clear Stem 175-200 RB	10-12cm	300-350cm
2-	Al	Amelanchier lamarckii	Selected Standard - Clear Stem 175-200 RB	10-12cm	300-350cm
3-	Bp	Betula pendula	Selected Standard - Clear Stem 175-200 RB	10-12cm	300-350cm
1-	Cb	Carpinus betulus	Heavy Standard - Clear Stem 175-200 C	12-14cm	350-425cm
12-	Pa	Prunus avium	Heavy Standard - Clear Stem 175-200 RB	10-12cm	300-350cm
1-	PaP	Prunus avium 'Plena'	Heavy Standard - Clear Stem 175-200 C	12-14cm	350-425cm
1-	Qr	Quercus robur	Heavy Standard - Clear Stem 175-200 C	12-14cm	350-425cm
8-	Sar	Sorbus aria	Selected Standard - Clear Stem 175-200 RB	10-12cm	300-350cm
2-	Sau	Sorbus aucuparia	Selected Standard - Clear Stem 175-200 RB	10-12cm	300-350cm
2-	Tc	Tilia cordata	Heavy Standard - Clear Stem 175-200 C	12-14cm	350-400cm

Proposed Grasses

Nr	Code	Plant Name	Root	Height	Cntr (l)	Nrim2
67-	DoGo	Deschampsia caespitosa 'Goldtau'	3L	4m²		
40-	Pvl	Pennisetum villosum	3L	4m²		
22-	St	Stipa tenuissima	3L	4m²		
Total :129-						

Native Hedge Mix (5m)

Nr	Code	Plant Name	Root	Height	%
13-	Ac	Acer campestre	BR	80-100cm	5%
48-	Cav	Corylus avellana	BR	80-100cm	20%
71-	Cr	Crataegus monogyna	BR	80-100cm	30%
24-	la	Ilex aquifolium	BR	80-100cm	10%
48-	Ps	Prunus spinosa	BR	80-100cm	20%
24-	Sc	Salix caprea	BR	80-100cm	10%
13-	Vo	Viburnum opulus	BR	80-100cm	5%
Total :241-					

Native Shrub Mix (0.5m2)

Nr	Code	Plant Name	Root	Height	%
99-	Cav	Corylus avellana	BR	80-100cm	30%
66-	Cr	Crataegus monogyna	BR	80-100cm	20%
34-	la	Ilex aquifolium	BR	80-100cm	10%
66-	Ps	Prunus spinosa	BR	80-100cm	20%
34-	Sc	Salix caprea	BR	80-100cm	10%
34-	Vo	Viburnum opulus	BR	80-100cm	10%
Total :333-					

Proposed Hedges (4m)

Nr	Code	Tree Name	Specification	Height
499-	Fs	Fagus sylvatica	C	60-80cm
344-	Gl	Griselinia littoralis	C	60-80cm
56-	Pl	Prunus laurocerasus	C	60-80cm
79-	Tb	Taxus baccata	C	60-80cm
Total :978-				

Proposed Shrubs

Nr	Code	Plant Name	Height	Cntr (l)	Nrim2
7-	CBM	Ceanothus 'Blue Mound'	30-40cm	SL	3m²
6-	Ct	Choisya ternata	30-40cm	SL	3m²
12-	EIEG	Euonymus fortunei 'Emerald 'n' Gold'	30-40cm	SL	4m²
40-	HMW	Hebe 'Mrs Winder'	20-30cm	2L	4m²
51-	HRE	Hebe 'Red Edge'	20-30cm	2L	4m²
79-	LaH	Lavandula angustifolia 'Hidcot'	30-40cm	SL	4m²
30-	LrMG	Lonicera nidula 'May Green'	30-40cm	SL	3m²
20-	PE	Potentilla fruticosa 'Elzabeth'	20-30cm	2L	4m²
42-	PhRR	Photinia fraseri 'Red Robin'	40-60cm	SL	3m²
26-	PIDL	Prunus laurocerasus 'Otto Luyken'	40-60cm	SL	3m²
51-	Vd	Viburnum davidii	30-40cm	SL	4m²
75-	Vmi	Vinca minor	20-30cm	2L	4m²
Total :439-					

Appendix 4: Photographic Evidence



Photo 1: Other neutral grassland, line of trees and scattered scrub on the northeast of the site, viewed from the northwest.



Photo 2: Other neutral grassland, line of trees and scattered scrub on the northwest of the site, viewed from the southeast.



Photo 3: Other neutral grassland, scattered scrub and scattered trees on the east of the site, viewed from the north.



Photo 4: Other neutral grassland, line of trees and scattered trees on the southeast of the site, viewed from the north



Photo 5: Other woodland; broadleaved interior on the west of the site.



Photo 6: Eastern section of the other woodland; broadleaved with scrub on the west of the site, viewed from the east.





Photo 7: Bramble scrub on the west of the site, viewed from the north.



Photo 8: Bramble scrub on the east of the site, viewed from the north.



Photo 9: Bramble scrub and scattered trees on the centre of the site, viewed from the northwest.



Photo 10: Bramble scrub and line of trees on the west of the site, viewed from the south.



Photo 11: Sparsely vegetated urban land on the southwest of the site, viewed from the west.



Photo 12: Sparsely vegetated urban land on the southwest of the site, viewed from the east.





Photo 13: Developed land; sealed surface on the east of the site, viewed from the west.



Photo 14: Developed land; sealed surface on the centre of the site, viewed from the south.



Photo 15: Tree 1 with potential roosting features.



Appendix 5: Bat Survey Guidelines

Figure 1: Guidelines used for assessing the bat roosting suitability of a site (taken from Collins, 2023, Tables 4.1, 4.2, 6.2)

Roosting Suitability	Potential Roosting Features (PRFs) Present
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e., a complete absence of crevices/suitable shelter at all ground/underground levels). Trees: Either no PRFs in the tree or highly unlikely to be any.
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roosting opportunities that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitats, to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats). Trees: PRF-I (Individual) – PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity or classic cool/stable hibernation site. Trees: PRF-M (Multiple) – PRF is suitable for multiple bats may therefore be used by a maternity colony.

Figure 2: Recommended minimum number of survey visits for presence/likely absence surveys (taken from Collins, 2023, Tables 7.1 and 7.2).

Negligible roost suitability	Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
No further survey required	One survey visit. One dusk emergence survey, May to August (structures). No further surveys required (trees).	Two separate dusk emergence survey visits. May to September, with at least one survey between May and August.	Three separate dusk emergence survey visits. May to September, with at least two surveys between May and August
September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season.			



September surveys are likely to miss maternity roosts due to dispersal before this time but may pick up mating roosts.

Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced out at **least three weeks apart**, preferably more. Survey timings **should consider the prevailing conditions in the year of survey, which will vary geographically**. In years with a cold spring, the surveys should not be started in early May, or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the **optimum coverage includes the pre-parturition, post-parturition, and mating periods**.

Structures that have been categorised as low potential can be problematic, and the number of surveys required should be judged on a case-by-case basis. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.

Figure 3: Recommended minimum number of survey visits for activity surveys (taken from Collins, 2023, Tables 8.3).

Survey Type	Low suitability habitat for bats ^a	Moderate suitability habitat for bats	High suitability habitat for bats
NBW	One survey visit ^b per season (spring – April/May, summer – June/July/August, autumn September/October) ^c . Further surveys may be required if these visits, or the results of the static detector surveys, reveal activity of interest that requires more observation of the site.		
Automated/static bat detector surveys ^d The same location should be used for comparative results	Data to be collected for a minimum of five consecutive nights per season (spring – April/May, summer – June/July/August, autumn September/October) ^c in appropriate (or best available) weather conditions for bats.	Data to be collected for a minimum of five consecutive nights per month (April to October) ^c in appropriate (or best available) weather conditions for bats.	
<p>a) If the habitat has been classified as having low suitability for bats, particularly on small sites with few features, an ecologist should make professional judgement on how to proceed based on all of the evidence available. It may or may not be appropriate for bat activity surveys to be carried out in low suitability habitats. However, caution should be exercised in fringe areas (e.g. some areas of Scotland) where ‘low suitability habitat for bats’ may be important to local bat populations due to the relative scarcity of better habitats. In such situations, bats are likely to be more widely dispersed and may use a large number of sites, therefore survey effort may actually need to be increased to detect use on the proposed site in question.</p> <p>b) A survey visit should aim to cover all habitats represented in the survey area that could be impacted by the proposed activities. This may consist of a single walkover carried out on a single night for small sites (e.g. small housing developments) with low habitat diversity, but could range up to multiple walkovers carried out over one or several nights on a larger site (e.g. road schemes) with greater habitat diversity.</p> <p>c) April and October surveys are both weather and location dependent. Conditions may become more unsuitable in these months, particularly in northern England and Scotland. Surveys in the ‘shoulder’ seasons may, however, help to identify activity close to transitional or hibernation roosts or help to understand how bats adapt their behaviour in different weather conditions. Professional judgement should be used on the necessity for surveys during these months.</p> <p>d) Detector locations should be assigned to provide a representative sample of all habitats in the survey area that could be impacted by the proposed activities. This could mean a single detector location at a small site with only one habitat represented but could range up to many detector locations on a</p>			



larger site. Static surveys are also useful when assessing collision risk, e.g. detectors can be placed at crossing points on proposed roads or railways. However, these surveys should generally be complemented by manual surveys where observations of how bats interact with the site can be made. Note: Multiple survey visits should be separated by at least three weeks, preferably longer, to observe temporal changes in activity.

Figure 4: Survey timings calendar (taken from BCT: Bat Surveys for Professional Ecologists: Good Practice Guidelines; 4th Edition).

Survey type	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
Daytime Bat Walkover (DBW)												
PRA – structures ^a												
Emergence survey for maternity or summer roosts ^b												
Emergence survey for transitional/occasional roosts ^b												
Re-entry surveys ^c												
Emergence survey for mating roosts ^b												
Hibernation survey – structures ^a												
GLTA ^d												
PRF inspection survey – trees												
Ground-level bat activity survey – night-time walkover surveys and automated/static												
Pre-, during and post-hibernation – automated/static bat activity survey												
Swarming survey ^e												
Back-tracking survey												
Trapping and radio-tagging survey ^f												

= optimal period
 = sub-optimal period
 = weather or location dependent (i.e. may not be suitable due to spring and autumn conditions in any one year or in more northerly latitudes). Note that October emergence surveys are not acceptable in Scotland.
 = it is not acceptable to trap bats when they are heavily pregnant and have dependent pups. Mothers need to optimise foraging due to the physiological demands of pregnancy and lactation, and pups need to be regularly fed. Interrupting these activities could potentially have an impact on breeding success in the year in question. The timing of birth can vary between years – it may be as early as the end of May or as late as the start of August, therefore caution should be exercised and local information gained on birth dates before trapping activities are carried out during the summer months. Any information gained and decisions made should be kept as a record.



Appendix 6: Glossary

Activity surveys - are used to assess the level of bat activity at a site. This can be done either by using equipment such as an AnaBat device, or manually walking around a site with a heterodyne detector, documenting the number of bat passes and interceptions.

Dawn surveys - begin around 2 hours before and up to sunrise when bats are returning to their roosts from foraging, and swarming behaviour can be seen close to roost entrances.

Dusk surveys - begin around 30 minutes before sunset and up to 2 hours afterwards. These are done in order to see bats emerging from their roost sites at night.

Echolocation – is a system similar to sonar that allows bats to travel and forage even in total darkness. Bats make a call and then listen to the returning echoes in order to build up a map of their surrounding area. This allows bats to gauge the identity and distance of an object by how long the echo takes to return to them.

Habitat - the ecological or environmental area that is inhabited by a particular species of animal, plant or other type of organism.

Hibernation - is a state of inactivity and metabolic depression characterized by lower body temperature, slower breathing, and lower metabolic rate. Hibernating animals conserve energy, especially during winter when food is short, tapping energy reserves, i.e. body fat, at a slow rate.

Hibernacula - typically consist of underground sites, such as caves and cellars, which remain relatively cold and humid. Bats will hibernate to conserve energy over the winter months when falling temperatures cause a drop in the abundance of insects. These will typically be colonised around November to around March.

Insectivorous – is when an organism feeds exclusively on insects.

Nocturnal - a behaviour characterized by being active during the night and sleeping during the day.

Maternity roosts – colonised around late May early June and consist of mature females and their young. These roosts need to be warm and quiet, and are used up until around August, with females typically leaving first and then the young.

Mating roosts – mating begins around late October to November. Males of most species use special mating calls to attract females. These can include purrs, clicks and buzzing.

Roost – a site where bats live during the day, rear young and hibernate. These can be in man-made structures, such as buildings, bridges, tunnels, cellars and mines, or natural features such as mature trees and caves.

Roosts in buildings – many types of buildings will be used by bats. The most likely sites are agricultural buildings (e.g. farmhouses and barns), buildings with exposed wooden beams (greater than 20cm thick), buildings with weather boarding and/or hanging tiles, and buildings close to woodland and/or water.

Roosts in trees – these are typically in mature trees with deep sheltered cracks, under loose sections of bark, or in woodpecker holes.

Species – a group of organisms in which all members can interbreed and produce viable offspring.

Summer roosts (non-breeding) - these are generally occupied by groups of males and immature females during the summer, and are usually only occupied for a short period before the group moves to another location.

Swarming – a behaviour exhibited by bats returning to their roost sites at dawn. Bats can be seen repeatedly flying to and from the roost entrance, making it much easier for consultants to identify where roosts are on a building or structure.

Temporary/Transitory roosts – These are used after hibernation (March – April) before mature females disperse to maternity roosts and male/immature females colonise summer (non-breeding) roosts. Similarly, temporary roosts form before hibernation (August -October).

Underground Roosts – these are typically used during the winter and can be mines, caves, tunnels or cellars.



Appendix 7: Protected Species Information

The following species are fully protected in UK law, under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019:

- All UK bat species
- Dormouse
- Great Crested Newt and Natterjack Toad
- Large Blue Butterfly
- Otter
- Pine Marten
- Polecat
- Scottish Wild Cat
- Smooth Snake and Sand Lizard
- Various aquatic and plant species

These species are afforded the highest protection in the UK. Under this protection it is an offence to; deliberately capture, injure or kill any wild animal of a European protected species; deliberately disturb wild animal of any such species; deliberately take or destroy the eggs of such an animal, or damage or destroy a breeding site or resting place of such an animal.

In addition to this it is an offence to be in possession of, or to control, transport, sell or exchange, or to offer for sale or exchange, a European Protected species.

The following species are protected under UK law, such as the Wildlife and Countryside Act 1981 (as amended):

- Badger
- Nesting birds
- Red Squirrel
- Reptiles (Adder, Common lizard, Grass snake, Slow worm)
- Water Vole
- White Clawed Crayfish
- Various bird species i.e. Barn Owl
- Various plant species

Therefore, under this protection it is an offence to; kill, injure or take any of the above species.

Nesting birds are only protected during the breeding season whilst on their nest. In addition to the adults being protected, the eggs, young and nest itself whilst in use are protected.

The Wildlife and Countryside Act 1981 also contains measures to prevent the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales (e.g. Japanese Knotweed and Himalayan Balsam).

Badgers are protected under The Protection of Badgers Act 1992. Under this legislation it is an offence to; take, injure, kill, or cruelly ill-treat a badger; interfere with a badger sett; sell or possess a live badger; or mark or ring a badger.

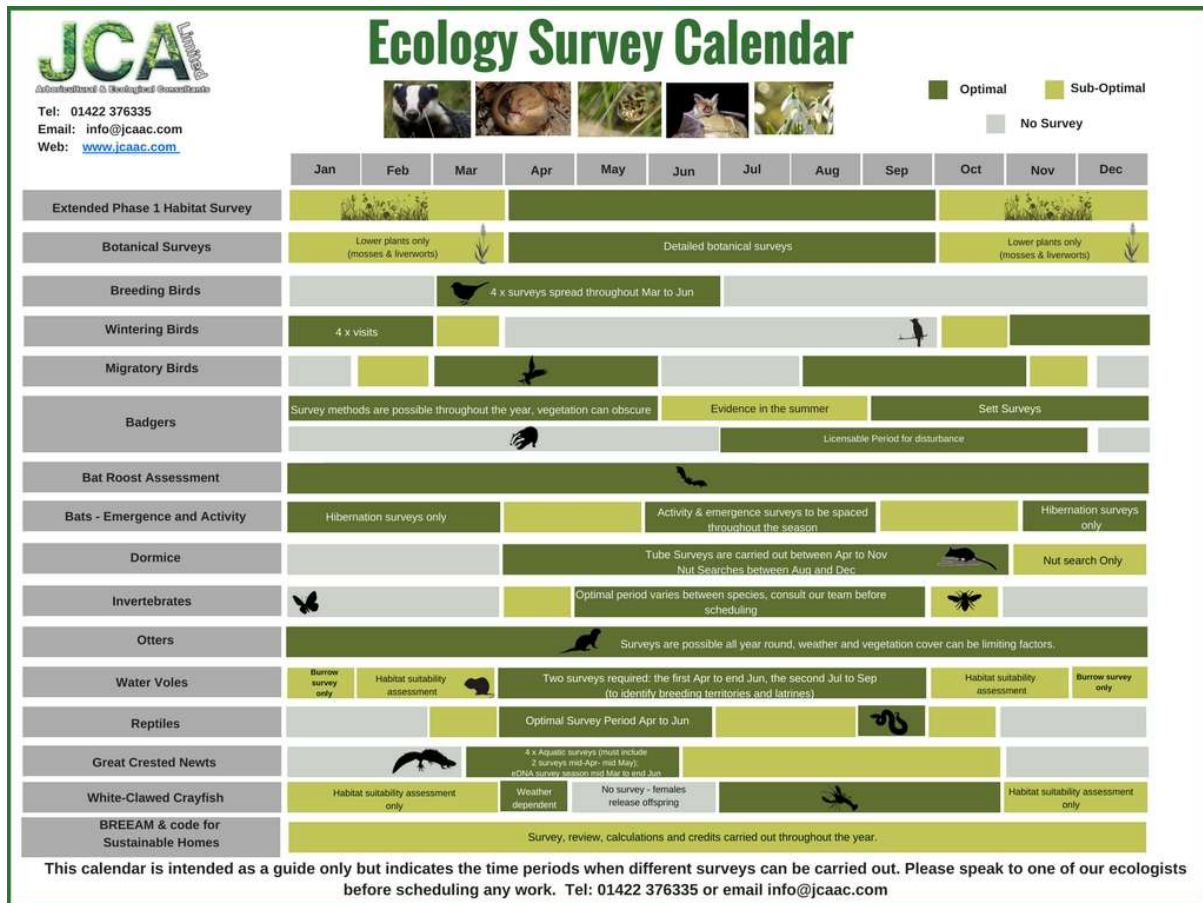
The following habitat types are protected under UK Law:

- Habitats that are used by protected species
- Habitats that fall within designated sites
- Hedgerows
- Individual trees/woods can be protected under Tree Preservation Orders



Appendix 8: Survey Calendar

Survey calendar for protected species and habitat surveys.



Appendix 9: Author Qualifications

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management, ACIEEM.

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 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. As part of his degree programme, Alex spent an industrial placement year working in the Uplands Research Department of the Game and Wildlife Conservation Trust, assisting on various ecological surveys and projects. Alex is a registered Trainee Bird Ringer, licensed through the BTO, and has previously conducted seasonal bat emergence and transect surveys. Alex is currently working towards a level 1 bat licence, level 1 great crested newt licence, and a barn owl survey licence.

James Foster, Assistant Ecologist

BSc (Hons) Biology.

James gained his undergraduate degree in biology in 2012 from University of Leeds. James has plenty of experience in ecology, having worked countless projects of different scales all over the north and midlands. James has 12 years of experience surveying anything from reptiles to hedgerows and holds a Great crested newt licence level 1 and is working towards his bat licence and barn owl licence.

Grace Bramley, Graduate Ecologist

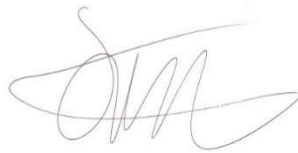
BSc (Hons) Design and Innovation with Environmental Science

Grace joined JCA in 2024 after completing her degree from The Open University with a first-class honour's degree in design and environmental science. Prior to this she spent six years working in the automotive industry followed by three years in the chemical industry. She is conducting Preliminary Ecological Appraisal and Biodiversity Net Gain Assessments and working towards her protected species licenses.



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



.....
James Foster *BSc (Hons)*

30/04/2025

Revision 1: 14/11/2025

Reviewed by



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Name

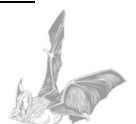
01/05/2025

Approved by



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

01/05/2025



Approved by



.....
Adam West *BSc (Hons), ACIEEM*

14/11/2025

For and on behalf of **JCA Ltd**

Registered Office:

Unit 80

Bowers Mill

Branch Road

Barkisland

Halifax

HX4 OAD

Tel. 01422 376335

Fax. 01422 376232

Email: info@jcaac.com

Web: www.jcaac.com





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

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- 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

Unit 80 Bowers Mill,
Branch Road,
Barkisland
Halifax, HX4 0AD

Company Reg No: 05005041
VAT No: 686 4674 78

