



FUTURESECOLOGY

Homes by Honey

Penistone Road / Rowley Lane, Fenay Bridge

ECOLOGICAL IMPACT ASSESSMENT (EcIA)

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1.0 **EXECUTIVE SUMMARY**

- 1.1 An Ecological Impact Assessment (EclA) was undertaken following published guidelines on the likely effects upon biodiversity as a result of the proposals. The assessment draws from a desk study and field surveys of the Site and surrounding area.
- 1.2 The Site proposals are for the development of 67 dwellings with associated infrastructure and landscaping.
- 1.3 The assessment identified the following important ecological features which could be affected by proposals or warrant consideration due to the legal protection afforded them:
- Denby Grange Colliery Ponds SAC (8km east);
 - Local Wildlife Sites (LWS, within 1km);
 - Kirklees Wildlife Habitat Network (KWHN, off-site);
 - Habitats of Principal Importance (HPI, off-site);
 - Ancient woodland (off-site);
 - Off-site trees (immediately south and east);
 - Broadleaved trees (Tree T1 and treeline TL1);
 - Badger *Meles meles*;
 - Generalist bat species;
 - Nesting Birds; and
 - Hedgehog *Erinaceus europaeus*.
- 1.4 No impacts to Denby Grange Colliery Ponds SAC are expected as a result of the proposed development.
- 1.5 The creation of alternative areas of publicly accessible green space, namely along the western boundary of the development, to allow for activities such as dog walking, exercise and recreation will help to reduce the increased recreational pressure on designated sites (Lepton Great Wood LWS, areas of ancient woodland) to a nugatory level.
- 1.6 Impacts during construction to important offsite habitats and designated sites (trees, KWHN, HPIs) will be minimised through careful control of construction activities through an industry best practice Construction Environmental Management Plan (CEMP). This is expected to be conditioned as part of any planning consent.
- 1.7 Mitigation is required to avoid impacts from lighting during the construction and operational phase of the development.
- 1.8 An updated badger survey will be required pre-commencement to ensure continued compliance with the Protection of Badgers Act 1992, along with good practice methods to be set out in the CEMP.

- 1.9 To comply with relevant legislation, any removal of vegetation should be timed to avoid the nesting season where possible (March to August inclusive, although dates do vary depending on the species and weather conditions).
- 1.10 Additional tree planting will help to compensate for the losses of tree T1 and treeline TL1.
- 1.11 The inclusion of biodiversity enhancements is provided within Section 7 of this report to maximise the biodiversity value of the Site. Creation and management of habitats would be outlined within a Biodiversity Enhancement and Management Plan (BEMP), which would be secured for a minimum of 30 years. This is expected to be conditioned as part of any planning consent.
- 1.12 This report should be read in conjunction with the Biodiversity Impact Assessment Report (BIA01, Futures Ecology Ltd, October 2023).

2.0 INTRODUCTION

- 2.1 The following report has been prepared by Futures Ecology Ltd. on behalf of Homes by Honey. It provides the results of an extended Phase 1 habitat survey and preliminary protected species survey undertaken on land at Penistone Road / Rowley Lane, Fenay Bridge, West Yorkshire (central grid reference: SE 18736 14504).
- 2.2 This document has been prepared with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM) Ecological Impact Assessment (EcIA) Guidelines¹. The key objectives of the Ecological Impact Assessment Report are to:
 - Gain an understanding of the baseline ecology of the Site and immediate surrounding area;
 - Determine whether the Site supports or has the potential to support protected species;
 - Identify any likely ecological constraints and use to inform future layouts (if necessary);
 - Assess the likely significant impacts of the proposed Masterplan on the Important Ecological Features;
 - Identify mitigation measures likely to be required;
 - Identify the opportunities offered by the potential project to deliver ecological enhancement.
- 2.3 This report should be read in conjunction with the Biodiversity Impact Assessment Report (BIA01, Futures Ecology Ltd, October 2023).

¹CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

SITE LOCATION AND CONTEXT

- 2.4 The Site comprised approximately 2.44ha of arable land and hardstanding, with a line of broadleaved trees in the north (TL1), along Rowley Lane, part of which falls within the Site boundary. An individual tree (T1) was present in the south-east corner of the Site.

DEVELOPMENT PROPOSALS

- 2.5 The Site proposals are for the development of 67 dwellings with associated infrastructure and landscaping according to the Site Layout Plan (Parker Peel, Drawing Ref: 2307-SI-02).

BACKGROUND

- 2.6 A Preliminary Ecological Appraisal (PEA) of a wider survey area was produced in March 2017 by JCA (Report ref. 13383/DB). An updated PEA and Bat Scoping Report was produced by JCA in April 2020 (15933a/AmB) and results of subsequent bat surveys were presented in a report produced July 2020. Within this report a common pipistrelle *Pipistrellus pipistrellus* bat was observed roosting within tree T1.

3.0 METHODOLOGY

PERSONNEL

- 3.1 The initial extended Phase 1 Survey and protected species survey assessment was conducted by M. Baker BSc (Hons), MSc, ACIEEM. M. Baker has 5 years' experience in ecological consultancy, including habitat surveys and site assessments for protected species. M. Baker is appropriately qualified for the surveys based on the CIEEM competencies for species surveys and is registered to use a GCN licence (2020-49701-CLS-CLS).

DESK STUDY

- 3.2 Prior to the field survey, aerial photographs and mapping tools were reviewed using online mapping resources at a minimum scale of 1:25,000; Google Maps²; and the Multi Agency Geographic Information for the Countryside (MAGIC)³ to assess the landscape context of the survey area and surrounding areas.
- 3.3 The MAGIC website was used to obtain information about:
- Statutory designated sites of international, national and local importance
 - Impact Risk Zones (IRZs) for Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites;
 - Approved European Protected Species Mitigation (EPSM) licences, and

² www.google.com/maps

³ www.magic.defra.gov.uk

- Natural England Environmental DNA surveys and Habitat Suitability Assessments of Ponds for great crested newt in support of District Level mitigation Licensing.
- 3.4 To support the field survey and compile baseline information of relevance to the Site, ecological information was sought from third party organisations:
- West Yorkshire Ecology (WYE);
 - West Yorkshire Bat Group (WYBG); and
 - Natural England's Open Dataset⁴.
- 3.5 Relevant data requested included records of protected or notable species and sites designated for nature conservation interest.
- 3.6 The search area for designated sites and protected species is determined by the likely Zone of Influence⁵ and the likely significant affect. The search areas for the various levels of site designation and for protected / notable species is detailed below:
- Sites of international statutory designation such as Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Sites are searched for within a 10km radius around the application Site.
 - Sites of national or regional importance with a statutory designation of Site of Special Scientific Importance (SSSI) or National Nature Reserve (NNR) within 2km.
 - Sites of local importance with statutory designation of Local Nature Reserve (LNR), or non-statutory designation of Site of Importance for Nature Conservation (SINC) or the equivalent Local Wildlife Site (LWS) within 1km; and
 - Records of notable / protected species (i.e., including Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and local Biodiversity Action Plan (LBAP) species within 1km and bats within 2km.
 - EPSM licences relating to GCN within 1km and bats within 2km.

FIELD SURVEY – HABITATS

Extended Phase 1 Survey

- 3.7 The survey was undertaken on 17th July 2023. Survey methodology followed guidance from Joint Nature Conservation Committee (JNCC) 2016⁶ comprising a walkover of the survey area mapping (using JNCC standard habitat codes) and broadly describing and classifying the principal habitat types and other features of interest. The frequencies at which plant species occurred were noted using the DAFOR method. Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.

⁴<https://data.gov.uk/dataset/8643f1b9-b419-4ee8-8e9c-18200e0edc31/great-crested-newt-edna-habitat-suitability-index-pond-surveys-for-district-level-licensing-2017-2018-2019>

⁵ The Zone of Influence (ZOI) is defined by CIEEM as being the "area over which ecological features may be affected by biophysical changes as a result of a proposed project and associated activities" CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Marine.

⁶ JNCC (2016) *Handbook for Phase 1 Habitat Survey – a technique for environmental audit*. ISBN 0 86139 636 7

- 3.8 Habitats were also assessed for their potential to support protected or notable species including any incidental sightings of birds recorded during the walkover. Where potentially suitable habitats were observed during the scope of this assessment, detailed protected species surveys were undertaken using methodology detailed below.
- 3.9 The distribution and extent of any invasive species listed on Schedule 9, Section 14 of the Wildlife and Countryside Act 1981 (*as amended*) were also noted during the survey.

UK Hab

- 3.10 A summary of the habitats present on-site is provided within the report including UK Hab equivalent habitats (from the UK Habitats Classification methodology⁷) for the purpose of the Biodiversity Impact Assessment (BIA).

FIELD SURVEY – FAUNA

Badger *Meles meles*

- 3.11 A badger survey was undertaken on the 17th July 2023, within the application Site and 30m beyond the boundary where possible and undertaken by an ecologist with over 5 years' experience of undertaking field surveys. The survey followed standard methodology as outlined by Natural England (2015)⁸ and Harris *et al* (1989)⁹, Creswell *et al.* (1990)¹⁰. Field signs searched for include: setts, earth mounds, bedding material, mammal paths, latrines, snuffle holes, prints, hairs, scratching posts etc. The identification of some signs on their own does not necessarily provide conclusive evidence of the presence of badgers.

Bats

Roost Habitat – Trees

- 3.12 Trees within the survey area were assessed on the 17th July 2023 for their potential to support roosting bats using statutory guidance (Natural England, 2019)¹¹ and best practice survey methodology (Collins, 2016¹² and Mitchell-Jones & McLeish, 2004)¹³.
- 3.13 The trees were inspected from the ground using close focussing binoculars, a high-powered torch, and an endoscope where appropriate. Potential Roosting Features (PRF) for bats such, holes / cavities, loose bark, cracks / splits, occluded bark, and gaps behind ivy stems (please note that this list is not exhaustive) were sought (British Standard 8596:2015¹⁴). Other factors such as orientation of the feature, its height from the ground,

⁷ <https://ukhab.org/ukhab-documentation/>

⁸ Natural England (2015) Badger Surveys and Mitigation accessed May 2021 <https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects#survey-methods> (accessed December 2019)

⁹ Harris, S., Creswell, P., & Jefferies, D. (1989). *Surveying Badgers*. The Mammal Society.

¹⁰ Creswell, P., Harris, S., & Jefferies, D.J. (1990) *The history, distribution, status, and habitat requirements of the badger in Britain*. Nature Conservancy Council.

¹¹ Bats: surveys and mitigation for development projects: <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects> (accessed 12/11/2019)

¹² Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

¹³ Mitchell-Jones, A.J. and McLeish, A.P. (eds) (2004) *Bat Workers' Manual* (3rd edn). JNCC, Peterborough.

¹⁴ British Standard (2015) BS 8596:2015 *Surveying for bats in trees and woodland – Guide*, October 2015.

the surroundings and its location in respect to other features may enhance or reduce the potential value of the PRF. Signs indicating possible use by bats were also recorded such as bat droppings, odour, scratches, staining and audible sounds.

- 3.14 An assessment was made on the level of bat roosting potential offered by the trees, based on the presence of the features detailed above. Table 1 below broadly classifies the potential categories and discusses the relevance of such features, where present. The British Standard Document¹⁴ groups trees with moderate and high potential, within Table 1 below these have been separated.

Table 1: Bat Roost Potential Classification of Trees - Based on Table 4.1 and Table 7.3 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

Classification / Suitability	Description of Roosting Habitat within trees	Likely Further Survey Work
Negligible	Negligible or no habitat features likely to be used by roosting bats.	None.
Low	A tree with one or more potential roost sites or features (PRF) that could be used opportunistically by small numbers or individual bats. These features do not provide enough space, shelter, suitable conditions and or surrounding suitable habitat to be used on a more regular basis or by larger numbers of bats. The feature is unlikely to be suitable for hibernation or maternity roosts. Examples on include (but are not limited to); loose/lifted bark, shallow splits exposed to elements, and upward facing holes.	No further survey required but a precautionary working method statement may be appropriate. Further nocturnal surveys may be required should there be a significant lapse in time between the initial surveys and proposed works.
Moderate	A tree with one or more potential roost sites or features 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 (in respect to roost type only and not species conservation status).	An aerial assessment by roped access bat workers and / or nocturnal surveys. Following an aerial assessment, a tree may be upgraded or downgraded based on findings. At least two nocturnal presence / absence required to give confidence in a negative result. One dusk emergence and a separate dawn re-entry survey during the appropriate period. Should a roost be confirmed further roost characterisation surveys be required. Surveys should be evenly spread throughout the season with a minimum of at least 2 weeks apart. If roost sites are confirmed and the roost is affected by proposals a licence from Natural England will be required.

Classification / Suitability	Description of Roosting Habitat within trees	Likely Further Survey Work
		After completion of survey work and presence of roost discounted a precautionary working method statement may still be appropriate.
High	A tree with one or more potential roost sites that are obviously suitable for use by large numbers or bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys. Following an aerial assessment, a tree may be upgraded or downgraded based on findings. At least three nocturnal presence / absence surveys required to give confidence in a negative result. At least one dusk emergence and a separate dawn re-entry survey. The third survey could be either a dusk or dawn nocturnal survey. If roost sites are confirmed and the roost is affected by proposals a licence from Natural England will be required. After completion of surveys work and presence of roost discounted a precautionary working method statement may still be appropriate.
Confirmed Roost	Evidence of roosting bats in the form of live or dead bats, droppings, urine staining, mammalian fur oil staining etc.	An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys. At least three nocturnal surveys to ascertain the status of the roost during appropriate survey period. At least one dusk emergence and a separate dawn re-entry survey. The third survey could be either a dusk or dawn nocturnal survey. A Natural England licence application will be required if the roost site will be affected by the proposed works. A precautionary good practice method statement may still be required if the roost is unaffected directly by the proposed works.

Foraging / Commuting Habitat

- 3.15 The potential for the Site and immediate surrounds to support foraging and commuting bats was also assessed, with particular regard being given to the presence of continuous treelines providing good connectivity in the landscape, and the presence of varied habitat such as scrub, woodland, grassland and open water in the vicinity.

Nocturnal Surveys – Tree T1

- 3.16 One tree on-site (T1) contained several PRFs which meant it had moderate roosting potential. Following nocturnal surveys in 2020 a roost was confirmed to be present (JCA, Ref. 15933d/Amb, July 2020). A common pipistrelle *Pipistrellus pipistrellus* bat was observed roosting on one survey occasion.
- 3.17 Given the record of a roosting bat in 2020, three nocturnal surveys were undertaken between July and September 2023.
- 3.18 Nocturnal surveys were undertaken to identify any roosting bats emerging or entering tree T1. The surveys were undertaken at dusk and in accordance with the guidance detailed above. Two surveyors were positioned either side of the tree (Figures 4 - 6). Wildlife Acoustics Inc. Echo Meter Touch® bat detectors in conjunction with the Echo Meter Touch® app for the Apple Inc iPad® and Android® were used during the surveys.
- 3.19 Cameras were used on some surveys to aid visual confirmation of bat contacts. Equipment included infra-red cameras (Canon XA10 or XA11) and 850nm infra-red lights (IRL) (Night fox or 20-LED Irl Emitter).
- 3.20 The dusk emergence surveys were undertaken approximately 15 minutes prior to sunset and for a duration of between 90 and 120 minutes.
- 3.21 Data collected, namely recorded bat calls, were analysed using Kaleidoscope© version 12 (Wildlife Acoustics Inc) software package where necessary, by taking measurements of the peak frequency, inter-pulse interval, call duration and end frequency. This method was used to confirm the species of bat recorded during the survey.

Survey Conditions, Dates and Personnel

- 3.22 The surveys were undertaken during suitable weather conditions, when the ambient air temperature exceeded 10°C and there was little or no rain or wind (no higher than Beaufort 3 or 5.5m/s).
- 3.23 Table 2 below provides a summary of the dates and survey conditions.

Table 2: Bat Survey Conditions and Personnel Summary

Survey Date	Personnel	Sunset	Start Temp. (°C)	Wind (BF)	Rain	Cloud Cover (%)
20.07.2023	R. Hill-Harmsworth (Ecology Director, 2015-119005-CLS-CLS) C. Harwood (Assistant Ecologist)	21:23	15	1 - 2	0	60
07.08.2023	T. Stratton (Assistant Ecologist) C. Harwood (Assistant Ecologist)	20:53	16	0	2	10
04.09.2023	J. Harries (Assistant Ecologist) S. Harries (Assistant Ecologist)	19:50	23	0	0	10

Foraging / Commuting Habitat

- 3.24 The potential for the Site and immediate surrounds to support foraging and commuting bats was also assessed, with particular regard being given to the presence of continuous treelines providing good connectivity in the landscape, and the presence of varied habitat such as scrub, woodland, grassland and open water in the vicinity.

Great Crested Newt (GCN) *Triturus cristatus***Aquatic habitat**

- 3.25 OS mapping and online aerial imagery were analysed for the presence of on and off-site water bodies within 500m of the application Site in accordance with Natural England guidance¹⁵.

Terrestrial habitat

- 3.26 An assessment of the suitability of the terrestrial habitats within the Site to support GCN was completed within the subject Site. Suitable terrestrial habitat includes shelter habitat such as scrub and rank vegetation and habitat that could provide suitable hibernation sites such as rubble piles, tussock grassland and compost heaps.

Reptiles

- 3.27 An assessment of the suitability of the habitats present to support common reptile species was completed at the time of the habitat survey. This involved a review of habitats and habitat structure suitable for the shelter of reptiles such as areas of scrub and woodpiles, grassland with well developed, varied structure; and also, the appropriate juxtaposition of areas suitable for basking shelter and forage/hunting. This assessment was based on the methodology detailed in the Herpetofauna Workers Manual (Gent and Gibson, 1998)¹⁶, and Froglife Advice Sheet 10 – Reptile Survey (Froglife 1999)¹⁷.

Other

- 3.28 Any sightings, evidence of or suitable habitats for other protected fauna, local Biodiversity Action Plan (BAP) species or otherwise notable species was recorded during the survey.

ASSESSMENT**Importance**

- 4.25 Ecological features are those that are considered to be important and potentially affected by the project. Importance may relate, for example, to the quality or extent of designated sites or habitats, to habitat/species rarity, to the extent to which they are threatened throughout their range, or to their rate of decline (CIEEM 2018).

¹⁵ Natural England: Standing Advice Sheet: Great Crested Newts Paragraph 4: 4.1

¹⁶ Gent, A.H., & Gibson, S.D., eds 1998. *Herpetofauna Workers' Manual*. Peterborough, joint Nature Conservation Committee.

¹⁷ Froglife 1999. *Froglife Advice Sheet 10: Reptile Survey*. Froglife, London

Geographical Context

- 4.26 The importance of an ecological feature is considered within a defined geographical context. For the purposes of the assessment this is:
- International (European)
 - National (United Kingdom)
 - Regional (North England)
 - County (West Yorkshire)
 - District (Kirklees)
 - Local (Fenay Bridge)
- 4.27 The assessment of the importance of the ecological features and the potential likelihood of an effect of the development will identify which ecological features could be significantly affected by the proposal. Only these features will be taken forward for further assessment.
- 4.28 Where further surveys are required to determine whether an effect would be significant, the precautionary principle would be applied, and a significant effect assumed.

Further Assessment**Significance**

- 4.29 In order to assess the significance of effects, Important Ecological Features that could potentially be affected by the development have been identified and described and the potential effects quantified using a range of characteristics:
- Positive / negative
 - Extent
 - Magnitude
 - Duration
 - Frequency / timing
 - Reversibility
- 4.30 For the purposes of this assessment, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g., for a designated site) or broad (e.g., national / local nature conservation policy) or more wide-ranging (enhancement of biodiversity)¹⁸.

¹⁸ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

Mitigation, Compensation and Enhancement

- 4.31 Where significant effects have been identified, the mitigation hierarchy has been considered: avoiding significant effects where possible, applying mitigation measures to minimise unavoidable significant effects and compensating for any remaining significant effects.
- 4.32 The assessment will include mitigation, compensation and enhancements which are proposed.

Residual Effects

- 4.33 Upon completion of the above, residual significant effects will then be identified. It is then only necessary to assess and report significant residual effects (those that remain after mitigation measures have been considered).

Cumulative Effects

- 4.34 Consideration is given to the effects that may arise cumulatively from the development proposed in combination with other plans and projects proposed/consented but not yet built and operational.

4.0 LEGISLATION, PLANNING POLICY AND GUIDANCE

- 4.1 The policy and guidance framework for nature conservation is provided by various national, regional, and local planning policies as outlined below, with further details, as necessary, within relevant subsequent sections.

Legislative Framework

- 4.2 The following legislation and European Directives afford protection to wildlife and have been used to inform this assessment.
- The Environment Act 2021¹⁹
 - The Conservation of Habitats & Species Regulations 2017 (as amended)²⁰;
 - The EC Habitats Directive (Directive 92/43/EEC)²¹ as translated into UK law by The Conservation of Habitat and Species Regulations 2017 (as amended);
 - The EC Birds Directive (Directive 79/409/EEC)²²; as translated into UK law by The Conservation of Habitat and Species Regulations 2017 (as amended);
 - Wildlife and Countryside Act 1981 (as amended) (WCA)²³;

¹⁹ <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

²⁰ HMSO. The Conservation of Habitats and Species Regulations 2017 (as amended) - No.1012

²¹ EC (1992) Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (The EC Habitats Directive).

²² EC (1979), Council Directive 79/409/EEC on the Conservation of wild birds (EC Birds Directive).

²³ HMSO. The Wildlife and Countryside Act 1981 (as amended).

- Natural Environment and Rural Communities Act 2006 (NERC)²⁴.
- The Protection of Badgers Act 1992²⁵.
- The Hedgerow Regulations Act 1997²⁶.

National Planning Policy

- 4.3 The latest National Planning Policy Framework (NPPF)²⁷ sets out the Government's planning policies for England and how these are expected to be applied within the planning system. It provides a framework for local councils to produce local plans and determine planning applications in order to achieve more sustainable developments. In relation to ecology and biodiversity, Chapter 15: Conserving and enhancing the natural environment, is of relevance to this report.
- 4.4 The Government Circular, Biodiversity and geological conservation: circular 06/2005, defines statutory nature conservation sites and protected species as a material consideration in the planning process.
- 4.5 The former UK Biodiversity Action Plan (BAP) has been used to compile the statutory lists of priority species and habitats as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (also referred to as Habitats and Species of Principal Importance). These lists continue to be regarded as conservation priorities under the NPPF, although the UK Biodiversity Action Plan (BAP) has now been superseded by the UK Post-2010 Biodiversity Framework²⁸ and Biodiversity 2020²⁹.

Local Planning Policy

- 4.6 Within Kirklees all planning decisions are based on the Kirklees Local Plan, which was adopted in February 2019³⁰. The key local policy concerned with ecology is Policy LP30 which states;

Development proposals will be required to:-

- *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;*
- *minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;*
- *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;*

²⁴ HMSO. (2006), Natural Environment and Rural Communities Act.

²⁵ HMSO. The Protection of Badgers Act 1992 (as amended).

²⁶ HMSO. The Hedgerow Regulations Act 1997

²⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1182995/NPPF_Sept_23.pdf

²⁸ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. July 2012.

²⁹ DEFRA (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services.

³⁰ <https://www.kirklees.gov.uk/beta/planning-policy/pdf/local-plan-strategy-and-policies.pdf>

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

Local Biodiversity Action Plan

- 4.7 Local BAPs are a key element for securing the requirements of the NPPF at a local level, consequently this assessment has taken due consideration of the priority habitats and species within the Kirklees Biodiversity Action Plan³¹.

Other guidance

Birds of Conservation Concern

- 4.8 Leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of 245 bird species regularly found in Britain and, using standardised criteria, have assessed and assigned all bird species onto lists of conservation concern³².
- 4.9 Birds are placed into one of three lists - Red, Amber or Green and although these listings offer no further legal protection, they are meant to guide conservation action for the individual species. The listings reflect an individual species' global and European conservation status as well as that within the UK and additionally measure the importance of the UK population in international terms.

5.0 RESULTS (BASELINE)

DESK STUDY

- 5.1 A summary of relevant information provided by third party consultees is provided below. The original data has not been included in this report and a summary of the relevant findings is provided upon Figure 1.

Statutory Designated Sites

- 5.2 One internationally statutory designated site was present within 10km of the Site.
- 5.3 Denby Grange Colliery Ponds SAC was present 8km east of the Site boundary, designated for its high population of great crested newt. The pond is surrounded by wooded slopes, with adjacent anthropogenic habitat associated with the previous mining activities. A

³¹ <https://www.naturalkirklees.org/resources/kirklees-biodiversity-action-plan/>

³² Stanbury *et al* (2021), The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114, 723-747. https://britishbirds.co.uk/sites/default/files/BB_Dec21-BoCC5-IUCN2.pdf

large new pond was created recently to help support the population, which was previously reliant on a single breeding site.

- 5.4 As such, Denby Grange Colliery Ponds SAC would be considered important at an **International** level.
- 5.5 The Site falls within an Impact Risk Zone (IRZ) for one or more designated sites, but the proposed development type is not listed as a potential risk:
- *Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m².*
 - *General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.*
- 5.6 No national, regional or local statutory designated sites were present within 2km of the Site boundary.

Non-Statutory Designated Sites

- 5.7 Three non-statutory designated sites of local importance were present within 1km of the Site boundary. Further details regarding these sites are provided in Table 3.

Table 3: Non-Statutory Designated Sites

Site Name	Designation	Proximity to application Site (approximate)	Description
Lepton Great Wood	LWS	455m east	Lepton Great Wood is an ancient woodland site to the south-east of Lepton which meets the qualifying criteria for ancient semi-natural woodland (Wd1), species rich acid woodland (Wd3) and native bluebell cover (Wd5).
Carr Wood	LWS	830m west	Carr Wood is located to the west of Kirkburton and meets the qualifying criteria for species rich acid woodland (Wd3) and native bluebell cover (Wd5).
Almondbury Common	LWS	910m west	Almondbury common is located to the south-east of Almondbury and meets the qualifying criteria for ancient and semi-natural woodland.

Kirklees Wildlife Habitat Network (WHN)

- 5.8 The Wildlife Habitat Network provides a landscape scale approach to the creation, protection, enhancement and management of networks of biodiversity and green infrastructure. The Site does not fall within Kirklees WHN, which is located at its closest point c. 15m east and c. 125m west and south of the Site boundary. Given the proximity of the LHN to the Site, it would be considered to be important at a **Local** level.

Habitats of Principal Importance

- 5.9 The nearest HPI is classified as Deciduous Woodland, present c. 15m east of the Site boundary (Figure 1). Several blocks of Deciduous Woodland, Good Quality Semi-Improved Grassland and parcels with No Main Habitat are located within 1km of the Site boundary. These HPIs would be considered of importance at a **Local** level.

Ancient Woodland

- 5.10 Various blocks of woodland within 1km of Site are classified as Ancient Semi-Natural Woodland and Planted Ancient Woodland. Many of these woodland parcels are already located within LWSs and are considered to be of value at a **Local** scale.

Protected / Notable Species Records

- 5.11 Records of protected and notable species provided by desk study consultees are provided in Table 4 below. The species records have been filtered to comprise relevant protected and / or notable species within 1km (and bats within 2km) of the survey area from the last 20 years. The locations are shown on Figure 1.

Table 4: Summary of Relevant Protected Species Records

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from Site boundary (m)	Grid reference accuracy
Bat species					
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	WCA (Sch5), Regs (Sch2), LBAP, WYBAP	Field record: 25 Roost: 5 Total: 30	355m north 403m south	1m 1m
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	WCA (Sch5), NERC (SPI), Regs (Sch2), LBAP, WYBAP	Field record: 4 Roost: 0 Total: 4	436m south-east -	100m -
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	WCA (Sch5), Regs (Sch2), LBAP, WYBAP	Field record: 1 Roost: 0 Total: 1	371m north-east -	100m -

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from Site boundary (m)	Grid reference accuracy
Pipistrelle bat species	<i>Pipistrellus</i> sp.	WCA (Sch5), NERC (SPI), Regs (Sch2), LBAP, WYBAP	Field record: 0 Roost: 1 Total: 1	- 1.2km south	- 1m
Noctule bat	<i>Nyctalus noctula</i>	WCA (Sch5), NERC (SPI), Regs (Sch2), LBAP, WYBAP	Field record: 7 Roost: 0 Total: 7	416m east -	100m -
Leisler's bat	<i>Nyctalus leisleri</i>	WCA (Sch5), Regs (Sch2), LBAP, WYBAP	Field record: 3 Roost: 0 Total: 3	622m south-east -	10m -
Whiskered bat	<i>Myotis mystacinus</i>	WCA (Sch5), Regs (Sch2), LBAP, WYBAP	Field record: 0 Roost: 1 Total: 1	- 938m south-west	- 1m
Brandt's bat	<i>Myotis brandtii</i>	WCA (Sch5), Regs (Sch2), LBAP, WYBAP	Field record: 0 Roost: 1 Total: 1	- 938m south-east	- 1m
Myotis bat species	<i>Myotis</i> sp.	WCA (Sch5), Regs (Sch2), LBAP, WYBAP	Field record: 5 Roost: 0 Total: 5	350m south-east -	100m -
Brown long-eared bat	<i>Plecotus auritus</i>	WCA (Sch5), NERC (SPI), Regs (Sch2), LBAP, WYBAP	Field record: 5 Roost: 4 Total: 9	416m east 414m south-east	100m 100m

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from Site boundary (m)	Grid reference accuracy
Unidentified bat species	Vespertilionidae	WCA (Sch5), NERC (SPI), Regs (Sch2), LBAP, WYBAP	Field record: 6 Roost: 2 Total: 8	1.1km north-west 498m north	100m 1m
Other mammal species					
European water vole	<i>Arvicola amphibius</i>	WCA (Sch5), NERC (SPI), LBAP	1	520m south-east	1m
European otter	<i>Lutra lutra</i>	WCA (Sch5), NERC (SPI), Regs (Sch2), LBAP, WYBAP	3	355m south	1m
West European hedgehog	<i>Erinaceus europaeus</i>	NERC (SPI), LBAP, WYBAP	1	397m east	100m
Bird species					
Yellowhammer	<i>Emberiza citrinella</i>	BoCC (Red), NERC (SPI), WYBAP	1	496m east	1m
House sparrow	<i>Passer domesticus</i>	BoCC (Red), NERC (SPI), LBAP, WYBAP	10	177m E	1m
Starling	<i>Sturnus vulgaris</i>	BoCC (Red), NERC (SPI), LBAP, WYBAP	1	189m east	1m
Linnet	<i>Linaria cannabina</i>	BoCC (Red), NERC (SPI), LBAP	2	414m east	1m
Mistle thrush	<i>Turdus viscivorus</i>	BoCC (Red)	1	488m east	1m
Swift	<i>Apus apus</i>	BoCC (Red), WYBAP	2	236m east	1m
Dunnock	<i>Prunella modularis</i>	BoCC (Amber), NERC (SPI), LBAP, WYBAP	13	181m east	1m
Grey wagtail	<i>Motacilla cinerea</i>	BoCC (Amber)	1	376m south-east	1m
Kestrel	<i>Falco tinnunculus</i>	BoCC (Amber), LBAP, WYBAP	1	362m east	1m
Kingfisher	<i>Alcedo atthis</i>	BoCC (Amber), WCA (Sch1_part1)	1	320m south-east	1m
Mallard	<i>Anas platyrhynchos</i>	BoCC (Amber)	4	328m south-east	1m

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from Site boundary (m)	Grid reference accuracy
Stock dove	<i>Columba oenas</i>	BoCC (Amber), LBAP	1	504m south-east	1m
Willow warbler	<i>Phylloscopus trochilus</i>	BoCC (Amber)	1	236m south-east	1m
Song thrush	<i>Turdus philomelos</i>	BoCC (Amber), NERC (SPI), LBAP, WYBAP	6	333m south-east	1m
Woodpigeon	<i>Columba palumbus</i>	BoCC (Amber)	23	181m east	1m
Moorhen	<i>Gallinula chloropus</i>	BoCC (Amber)	1	642m south	100m
Sparrowhawk	<i>Accipiter nisus</i>	BoCC (Amber)	2	469m south-east	1m
Wren	<i>Troglodytes troglodytes</i>	BoCC (Amber)	21	253m south-east	1m
Swallow	<i>Hirundo rustica</i>	LBAP, WYBAP	3	327m east	1m
Goldfinch	<i>Carduelis carduelis</i>	LBAP	10	236m east	1m
Amphibian species					
Common toad	<i>Bufo bufo</i>	WCA (Sch5), NERC (SPI), LBAP, WYBAP	1	359m south-east	1m
Common frog	<i>Rana temporaria</i>	WCA (Sch5), WYBAP	2	160m south-east	1m

Status Key: Regs - The Conservation of Habitats and Species Regulations 2017 (as amended). WCA - The Wildlife and Countryside Act 1981 (as amended). Sch 1 - Schedule 1. Sch 2 – Schedule 2. Sch5 - Schedule 5. Sch8 - Schedule 8. Sch9 - Schedule 9. NERC - England Natural Environment and Rural Communities Act (2006) Section 41. SPI - Species of Principal Importance. BoCC - Birds of Conservation Concern. INNS – Invasive Non-Native Species. PBA – Protection of Badgers Act 1992. LBAP – Kirklees Biodiversity Action Plan. WYBAP – West Yorkshire Biodiversity Action Plan.

5.12 A single European Protected Species Licence (EPSL) for bats was present within 2km of the Site boundary:

- 900m south-west (2019-42580-EPS-MIT, Brandt's bat, common pipistrelle, whiskered bat, 10/09/2019 - 30/11/2024)

5.13 No EPSLs relating to GCN were present within 1km of the Site boundary.

HABITATS

5.14 The habitats recorded within the application Site during the Phase 1 survey included:

- Hardstanding
- Arable

- Tall ruderal vegetation
- Broadleaved trees

5.15 The location of the habitats recorded are presented on Figure 2 and described below. The botanical species recorded in association with each habitat are listed in Appendix A.

Hardstanding

5.16 Part of the existing Rowley Lane falls within the northern part of Site.

Arable

5.17 The majority of the Site comprised an arable field compartment which was seeded with barley *Hordeum vulgare* at the time of the survey (Photograph 1) and had no field margins.

5.18 Due to the low botanical diversity / limited extent of this habitat it would not be considered an IEF in the context of this assessment.



Photograph 1: The arable field, viewed from the north.

Tall ruderal vegetation

5.19 A small area in the north-eastern corner of the Site was dominated by common nettle *Urtica dioica* and ivy *Hedera helix* (Photograph 2).

5.20 Due to the low botanical diversity / limited extent of this habitat it would not be considered an IEF in the context of this assessment.

Broadleaved trees

5.21 A mature oak *Quercus robur* was present in the south-eastern section of the arable field which had bat roosting potential (Photograph 2). More details can be found in Appendix B.



Photograph 2: A mature oak tree in the south-eastern section of the Site, viewed from the north.

- 5.22 A mature line of broadleaved trees was present on banking along the northern edge of the arable field, to the south of Rowley Lane (TL1, Photograph 3). Species present included ash, oak, hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, sycamore *Acer pseudoplatanus*, elder, cherry *Prunus* sp., field maple *Acer campestre* and elm *Ulmus* sp. Ground flora largely comprised ivy, bramble *Rubus fruticosus* agg. and fern with self-seeded saplings.



Photograph 3: Treeline TL1 running along the northern boundary of the arable field to the south of Rowley Lane.

- 5.23 Tree T1 and treeline TL1 would be considered to be of importance at a **Local** scale.

Immediately off-site habitats

- 5.24 Mature treelines rooted off-site were present along the eastern and southern Site boundaries. Species present included ash, rowan *Sorbus aucuparia*, sycamore, hawthorn, aspen *Populus tremuloides*, field maple, hazel, elder, rose *Rosa* sp., cherry, and elm. Mature trees within these treelines had features offering potential for roosting bats (broken branches, dense ivy). These habitats would be of importance at a **Local** scale.

FAUNA**Badger**

- 5.25 No records of badger *Meles meles* within 1km of the Site were returned from the desk study from the last 20 years. Additionally, the Site falls outside the area of increased probability of badger activity according to the West Yorkshire Ecology Service.
- 5.26 From a review of badger survey data for an adjacent development site (Badger Bait Marking Survey Report, SLR, Ref. 424.03336.00009, September 2019) badgers are known to be present in the wider landscape. However, no territories were confirmed within the redline boundary. A badger latrine had previously been noted in the arable field boundary (south of the current redline boundary) during previous surveys conducted by JCA in 2020³³.
- 5.27 The badger survey undertaken on the 17th July 2023 did not identify any definitive badger signs within the site or wider field compartment, however given the highly mobile nature of this species, and their known presence in the wider landscape to the south, setts could become established in the future.
- 5.28 Badgers are relatively common and widespread in England and whilst legally protected, the emphasis of The Protection of Badgers Act 1992 is focused on protection from persecution, rather than on conservation. As such, badgers would be considered an important ecological feature, but as they are not of conservation concern, no scale of geographical significance would be applied.

Bats

- 5.29 From the desk study eleven bat species were identified within 2km of the Site (common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, pipistrelle bat species, noctule bat, Leisler's bat, whiskered bat, Brandt's bat, *Myotis* bat species, brown long-eared bat, and an unidentified bat species)

Roosts – Trees

- 5.30 One tree on-site (T1) contained several PRFs and was considered to provide moderate roosting potential. Following nocturnal surveys in 2020 a roost was confirmed to be present (JCA, Ref. 15933d/AmB, July 2020). A common pipistrelle bat was observed roosting on one survey occasion.

³³ JCA Limited, Preliminary Ecological Appraisal and Bat Scoping Report at Land Eat of Peniston Road, Fenay Bridge, Huddersfield, West Yorkshire, HU8 0JS. JCA Ref: 15933A/AmB

- 5.31 No potential roosting features were noted in association with the trees within treeline TL1. The trees were ivy clad, however the ivy was not considered dense enough at the stem to support a potential bat roost.
- 5.32 Further details regarding potential roost features (PRFs) can be found in Appendix B.

Nocturnal Surveys – Tree T1

- 5.33 Given the previous record of a roosting common pipistrelle bat in 2020, three nocturnal surveys were conducted between July and September 2023.

Dusk emergence survey (20.07.2023, Figure 4)

- 5.34 The survey started at 21:08 and continued until 22:53, with sunset at 21:23. Several common pipistrelle, *Myotis* sp. and a *Nyctalus* species were recorded commuting / foraging during the survey. No bats were recorded emerging from tree T1 during the survey. A barn owl was also observed within the field.

Dusk emergence survey (07.08.2023, Figure 5)

- 5.35 The survey started at 20:38 and continued until 22:23, with sunset at 20:53. Several common pipistrelle and a *Nyctalus* species were recorded commuting / foraging during the survey. No bats were recorded emerging from tree T1 during the survey.

Dusk emergence survey (04.09.2023, Figure 6)

- 5.36 The survey started at 19:35 and continued until 21:50, with sunset at 19:50. Several common pipistrelle, *Myotis* sp. and a *Nyctalus* species were recorded commuting / foraging during the survey. No bats were recorded emerging from tree T1 during the survey.

Summary

- 5.37 No bat roosts were observed associated with tree T1 during either survey. It is therefore considered that the common pipistrelle bat roost identified in 2020 has been abandoned. The tree no longer constitutes as a roost and as such, roosting bats associated with tree T1 would not be considered an IEF in the context of this assessment.

Foraging / Commuting Habitat

- 5.38 The optimal foraging and commuting habitat for bats was generally limited to the treeline in the north of the Site. It is expected that generalist bat species use the site for foraging and commuting purposes, so generalist bat species have been scoped into the assessment, with importance at a Local level.

Great Crested Newts (GCN)

- 5.39 From the desk study no records of GCN were present within 1km of the Site. There were also no EPSL's relating to GCN located within 1km and no records of GCN surveys from Natural England's Open Dataset.

Aquatic habitat

- 5.40 No waterbodies are present on-site. Two waterbodies were present between 250m and 500m of the Site (Figure 3). Further details can be found within Table 5.

Table 5: Waterbodies Identified Within 500m of the Application Site

Pond Ref.	Straight Line Distance / Direction. Distance via Optimal Connective Habitat in (m)	OS Grid Reference	Connectivity to Application Site
P1	Straight line distance: 355m SE Connective Distance: 392m	SE19131420	Although there is suitable connectivity from P1 to the application Site via woodland and treelines, the commuting distance is over 250m, which is considered to be the maximum routine migratory range for GCN ³⁴ , thus GCN if present within P1 would be unlikely to commute to utilise the suboptimal terrestrial habitats within the Site. No Likely Potential Constraint.
P2	Straight line distance: 393m SW Connective Distance: N/A	SE18531402	The pond is over 250m from the application Site and is separated from the Site by Woodsome and Fenay Beck as well as Penistone Road. No Likely Potential Constraint.

Terrestrial Habitat

- 5.41 The majority of the Site was arable and hardstanding which represents sub-optimal habitat for GCN as it provides little in the way of shelter, foraging or commuting habitat. The Site included only limited suitable terrestrial habitat for GCN with mature treelines in the north and along the eastern boundary. However, this was of limited extent.

Summary

- 5.1 Although two waterbodies were present within 500m of the Site boundary, given the absence of a waterbody on-site, sub-optimal terrestrial habitats present on-site, presence of barriers to dispersal (such as flowing water and roads) and the presence of optimal terrestrial habitat within much closer proximity of some waterbodies it is unlikely that GCN (if present within any of the waterbodies within 500m of the Site) would commute onto Site to utilise the poor quality terrestrial habitats. Therefore, no further survey work is recommended in relation to this species and GCN are not considered to be an IEF in the context of this assessment.

Reptiles

- 5.2 No records of reptile species were present within 1km of the Site boundary.

³⁴ Kovar, R., Brabec, M., Vita, R. and Bocek, R. (2009) Spring migration distances of some central European amphibian species. Amphibia-Reptilia, 30: 367-378 and <http://publications.naturalengland.org.uk/publication/134002>

- 5.3 The majority of the Site (arable and hardstanding) was not considered suitable for reptiles and the Site generally lacked the varied ecotones this species group requires.
- 5.4 Given the above, reptiles are likely to be absent from the Site and are therefore not considered IEFs in the context of this assessment.

Birds

- 5.5 From the desk study a range of farmland and urban edge bird species were present within 1km of the Site boundary.
- 5.6 Given the site's limited extent and the habitats present, it was not considered likely to support an important assemblage of breeding birds, although tree T1 and the mature treeline TL1 in the north of the Site provides suitable nesting habitat for a range of bird species. The offsite trees located immediately south and east of the site, also have the potential to support nesting birds. Nesting birds will be considered further within the impact assessment due to the protection relating to all wild birds while nesting, but a geographic scale of importance will not be applied.
- 5.7 A barn owl was observed on-site during the bat emergence survey of tree T1 on the 20th July 2023. No other observations of barn owl were recorded during the two emergence surveys undertaken in August and September. It is likely that Site forms part of the owl's home range, however the Site is not considered a significant resource for this species. No potential roosting or nesting sites were noted in association with on-site trees. Barn owl are therefore not considered to be an IEF in the context of this assessment.

Other

- 5.8 The on-site habitats (tall ruderal vegetation, treeline) have the potential to support hedgehog *Erinaceus europaeus*. This species is a Species of Principle Importance (SPI) and would be considered of importance at a **Local** level.
- 5.9 Other faunal species flagged within the desk study have been scoped out of further assessment due to the lack of suitable habitat onsite. This includes common frog, common toad, water vole and otter.

Summary of Ecological Features & Further Assessment Requirements

- 5.10 The table below provides a summary of the ecological features, their importance, geographical significance and impacts based on the current proposals Site Layout Plan (Parker Peel, Drawing Ref: 2307-SI-02). For ecological features on which further assessment is required please see Table 6.

Table 6: Summary of Important Ecological Features (IEFs)

Important Ecological Feature	Geographical Context
Denby Grange Colliery Ponds SAC (8km east)	International
Local Wildlife Sites (LWS, within 1km)	Local
Kirklees Wildlife Habitat Network (KWHN, off-site)	Local
Habitats of Principal Importance (HPI, off-site)	Local

Important Ecological Feature	Geographical Context
Ancient woodland (off-site)	Local
Off-site trees (immediately south and east)	Local
Broadleaved trees (on-site tree T1 and treeline TL1)	Local
Badger	N/A
Generalist bat species	Local
Nesting Birds	N/A
Hedgehog	Local

6.0 **IMPACT ASSESSMENT**

DENBY GRANGE COLLIERY PONDS SAC (8KM EAST)

Potential impacts

- 6.1 Denby Grange Colliery Ponds SAC (designated for its population of GCN) is within the Calder Lower Operational Catchment, whilst the Site lies within the Fenay Beck from Source to River Colne Water Body Catchment³⁵. As such, no hydrological impacts on the SAC are expected as a result of the proposals.
- 6.2 Given the distance from the Site (over 350m³⁶) no impacts during construction (including dust pollution) are anticipated.
- 6.3 The intervening distance (8km) would also mean that an increase in recreational pressure during the operational phase of the scheme would be nugatory.

Mitigation measures

- 6.4 No mitigation measures are required.

Significance of residual effects

- 6.5 The significance of residual effects is considered to be **Neutral**.

LOCAL WILDLIFE SITES (LWS, WITHIN 1KM)

Potential impacts

- 6.6 Three non-statutory designated sites of local importance were present within 1km of the Site boundary: Lepton Great Wood LWS located 455m east, Carr Wood LWS located 830m west, and Almondbury Common LWS 910m west.

³⁵ <https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3308>

³⁶ <https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>

Construction phase

- 6.7 Given the distance from the Site (over 350m³⁷) no impacts during construction (including dust pollution) are anticipated on any of the LWS.

Operational phase

- 6.8 Given the residential nature of the proposed development, it is acknowledged that there could be a greater number of people utilising the LWSs for walking and recreation during the operational phase where they are publicly accessible.
- 6.9 The closest LWS to the Site, which could have the largest increase in visitors, is Lepton Great Wood LWS located 455m east as the crow flies. Pedestrian access is available from the Site via the public footpath through Rowley Hill. This could result in a temporary reduction in value, in localised areas, due to increased footfall, which would be **not-significant adverse** at a **Local** level, prior to mitigation.
- 6.1 As there are a number of alternative public footpaths in close proximity to the Site, it is thought to limit the impact of increased visitors on Carr Wood LWS and Almondbury Common LWS to an imperceptible level.

Mitigation measures

- 6.2 The creation of alternative areas of publicly accessible green space within the development, to allow for activities such as dog walking, exercise and recreation will be provided within the scheme along the western extent. This will assist in reducing the increased recreational pressure on Lepton Great Wood LWS to a nugatory level.

Significance of residual effects

- 6.3 The significance of residual effects is considered to be **Neutral**.

KIRKLEES WILDLIFE HABITAT NETWORK (KWHN, OFF-SITE)**Potential impacts**

- 6.4 The Kirklees WHN is located at its closest point c. 15m east and c. 125m west and south of the Site boundary.

Construction phase

- 6.5 Potential damage to the LHN habitats via physical damage, dust or pollution event during construction phase could occur. This could lead to a temporary reduction in value, permanent effect if this leads to further habitat loss. This could cause a temporary, **significant adverse** effect at a **Local** level.
- 6.6 Direct lighting of the LHN habitats during construction could also lead to fragmentation of the LHN result in in crepuscular / nocturnal species avoiding the habitats within the

³⁷ <https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>

LHN is habitat, for example bats foraging or commuting. This could have a **not significant** temporary adverse effect at **Local** level, prior to mitigation.

Operational phase

- 6.7 Direct lighting of the LHN and the associated habitats could also lead to the permanent fragmentation of the LHN and result in crepuscular / nocturnal species avoiding this habitat. This could have a permanent **not significant adverse** effect at **Local** level, prior to mitigation.

Mitigation measures

- 6.8 Fencing, buffers and pollution prevention measures (including lighting) during construction are required and must be implemented through a Construction Environmental Management Plan (CEMP). This will protect the LHN and its associated habitats during the construction phase.
- 6.9 The implementation of a sensitive lighting design in accordance with BCT Guidance³⁸, with particular avoidance upon LHN habitats to maintain dark areas.

Significance of residual effects

- 6.10 The significance of residual effects is considered to be **Neutral**.

Compensation / Enhancements

- 6.11 Landscaping along the southern boundary, including a wildflower meadow, a native species rich hedgerow and trees will connect to the offsite habitats mapped within the KWHN. The landscaping then extends around the western extent of the site. This will help to buffer and strengthen the KWHN in the mid-to-long term once these habitats have established.

HABITATS OF PRINCIPAL IMPORTANCE (HPI, OFF-SITE)

- 6.12 The nearest HPI is classified as Deciduous Woodland, present c. 15m east of the Site boundary. Several blocks of Deciduous Woodland, Good Quality Semi-Improved Grassland and parcels with No Main Habitat are located within 1km of the Site boundary.
- 6.13 The vast majority of the HPI habitats within 1km of the Site fall within other designated areas (LWS and KWHN), which have been discussed above. Potential impacts, mitigation and significance of residual effects are expected to be the same for all HPIs within 1km. Please refer to the sections above.

ANCIENT WOODLAND (OFF-SITE)

- 6.14 Various areas of woodland in the surrounding area are classified as Ancient Semi-Natural Woodland and Planted Ancient Woodland. The parcels of ancient woodland present within 1km of the Site also fall within other designated areas (LWS and KWHN), which

³⁸ BCT & Institution of Lighting Professionals (2023) Guidance Note GN08/23 Bats and Artificial Lighting At Night.

have been discussed above. Potential impacts, mitigation and significance of residual effects for this IEF are therefore expected to be the same. Please refer to the sections above.

OFF-SITE TREES (IMMEDIATELY SOUTH AND EAST)

Potential impacts

- 6.1 Mature treelines rooted off-site were present along the eastern and southern Site boundaries which do not fall under any other designations.

Construction phase

- 6.2 Given the close proximity of the trees to the proposed development Site, there are potential construction phase impacts from noise, light, dust and/or accidental pollution events. This could have a localised, **not-significant adverse** effect at a **Local** scale prior to mitigation.

Operational phase

- 6.3 Direct lighting of the HPI woodland during the operational phase of the development could also lead to crepuscular / nocturnal species avoiding this habitat, such as foraging, roosting, or commuting bats. This could lead to a **not-significant adverse** effect at a **Local** level, prior to mitigation.

Mitigation measures

- 6.4 Construction will follow industry best practice guidelines to reduce dust, noise, light and pollution, therefore no indirect impacts to habitats mapped as HPIs are expected during the construction phase. These measures must be outlined within a Construction and Environmental Management Plan (CEMP).
- 6.5 The implementation of a sensitive lighting design in accordance with BCT Guidance⁴¹, with particular avoidance of light spill upon retained boundary habitats will be adopted during both the construction and operational phases of the development.

Significance of residual effects

- 6.1 The significance of residual effects is considered to be **Neutral**.

BROADLEAVED TREES (ON-SITE TREE T1 AND TREELINE TL1)

Potential impacts

- 6.2 Both tree T1 and treeline TL1 (c.147m) are to be lost to facilitate the development.
- 6.3 These losses are considered to be **significant adverse** at a **Site** level but **not-significant adverse** at a **Local** level, prior to compensation measures.

⁴¹ BCT & Institution of Lighting Professionals (2023) Guidance Note GN08/23 Bats and Artificial Lighting At Night.

Mitigation measures

- 6.4 The tree losses will be permanent and cannot be mitigated.

Significance of residual effects

- 6.5 The residual effect due to tree losses are considered to be **not-significant adverse** at a **Local** level, prior to compensation measures.

Compensation / Enhancements

- 6.6 The landscaping scheme has sought to optimise tree planting within the design, with 26 trees proposed with area of Public Open Space (POS) and a further 24 trees proposed within private gardens. A new species-rich hedgerow will also be planted to the south, which will provide an alternative linear feature. In the long-term this will help to compensate for the initial losses, once they have had time to mature and fill out. Further offsite tree planting will be facilitated through a monetary contribution in order to secure a 10% net gain in biodiversity units and satisfy the metric trading rules (Biodiversity Impact Assessment, Futures Ecology Ltd., October 2023, Ref: FE305/BIA01). Following the offsite tree planting, this will result in a **not-significant positive** effect at a **Local** level.

BADGER**Potential impacts**

- 6.7 Although no setts were identified within the Site, badgers can dig new setts in a relatively short period of time and badgers are known to be present in the wider landscape. Thus, construction works could kill or injury of badgers, as well as resulting in the destruction or disturbance of any new active setts, would result in a breach of the Badger Protection Act 1992 legislation.

Mitigation measures

- 6.8 It is recommended that an updated badger survey is carried out prior to works commencing on-site. If any active setts are identified within 30m of the working areas, these must be buffered from impacts and or closed under a licence from Natural England.
- 6.9 During any excavations, an access ramp (or sloping gradient at one end of the excavation) must be provided overnight to allow any potentially trapped animals an escape route. Chemicals should be stored in secure compounds and open pipes should be temporarily capped at the end of each working day to prevent any animals gaining access. These precautions will protect wildlife such as badgers from harm during works. The above must be outlined within the CEMP.

Significance of residual effects

- 6.10 With the implementation of the above mitigation the significance of residual effects upon badger is considered to be **neutral**.

GENERALIST BAT SPECIES

Potential impacts

- 6.11 Tree T1 and treeline TL1 will be lost to facilitate the proposals. This loss of foraging and commuting habitat would have a **not-significant adverse** effect on generalist bat species at a **Local** level.
- 6.12 Direct lighting of offsite habitats (trees, HPI woodland) during the construction and operational phases of the development could also lead to bat species avoiding this habitat. This could lead to a **not-significant adverse** effect at a **Local** level, prior to mitigation.

Mitigation measures

- 6.1 The loss of tree T1 and treeline TL1 cannot be mitigated for as they will be permanently lost.
- 6.2 The implementation of a sensitive lighting design in accordance with BCT Guidance⁴³, with particular avoidance of light spill upon retained boundary habitats will be adopted during both the construction and operational phases of the development.

Significance of residual effects

- 6.3 The loss of tree T1 and treeline TL1 cannot be mitigated for as they will be permanently lost. This will result in a **not-significant adverse** effect on generalist bat species at a **Local** level, prior to compensation measures.
- 6.4 The significance of residual effects due to lighting are considered to be **Neutral** following the implementation of the above mitigation.

Compensation / Enhancements

- 6.5 A variety of bat boxes will be incorporated into the scheme to increase the opportunities for roosting bats. This would result in a **not significant positive** effect for roosting bats at a **Local** scale.
- 6.6 The landscaping scheme includes the provision of wildflower grassland, tree planting and the creation of a native species-rich hedgerow along the southern boundary. The new areas of habitat creation will not be subject to direct lighting to ensure that they provide a good foraging / commuting resource for the local bat population. This will have a **not significant positive** effect for bats at a **Local** scale in the mid-to-long term once these habitats have established.

⁴³ BCT & Institution of Lighting Professionals (2023) Guidance Note GN08/23 Bats and Artificial Lighting At Night.

NESTING BIRDS

Potential impacts

Construction phase

- 6.7 All wild bird species are protected while nesting by the Wildlife and Countryside Act (WCA) 1981 (as amended). This legislation protects wild birds, their nests, and eggs from intentional harm, and makes it illegal to intentionally kill, injure or take any wild birds; take, damage, or destroy the nest of a wild bird while the nest is in use or being built or take / destroy an egg of a wild bird.
- 6.8 Construction operations and vegetation removal have the potential to disturb breeding bird species which could result in a **breach of legislation** in relation to nesting birds.
- 6.9 Damage to retained off-site habitats via accidental direct damage, soil compaction, as well as dust and/or a pollution event could occur during the construction phase. In the absence of mitigation this could have a **temporary or permanent not significant adverse effect** at a **Local** level.

Operational phase

- 6.10 In addition, direct lighting of off-site or newly created habitats during construction and the operational phase could lead to species avoidance of the habitats. In the absence of mitigation this could have a **not significant adverse effect** at a **Local** level.

Mitigation measures

- 6.11 To comply with relevant legislation, the removal of vegetation which may support nesting birds should take place outside of the bird nesting period (March to September, inclusive). This includes, tree T1 and treeline TL1, which provide suitable locations for nesting birds. Precautionary working methods should be applied, and no works undertaken during the bird nesting season (March – August inclusive). Should the removal be required during the bird nesting period, a nesting bird check must be carried out by an appropriately qualified ecologist.
- 6.12 Should any active nest be identified a minimum 5m buffer/exclusion zone will be applied around the nest site. Protection of 'active' nests is a statutory requirement under the WCA 1981 (as amended), as wild nesting birds, their nest, eggs, chicks, and fledglings are protected by law. It will be necessary to undertake further site visits to check the status of the nests. The buffer/exclusion zone will be maintained until it is confirmed that the nest is no longer active and/or any young have fledged.
- 6.13 During the construction phase, fencing and buffers will be implemented to protect off-site habitats from direct damage and soil compaction. Pollution prevention measures during construction through the implementation of a CEMP will protect retained habitats during construction.

- 6.14 The implementation of a sensitive lighting design in accordance with BCT Guidance⁴⁴, with particular avoidance of off-site and newly created habitats, will ensure that the value of these habitats to wildlife is maintained. This must be outlined within the CEMP.

Significance of residual effects

- 6.1 With the implementation of the above mitigation, it is considered that the residual impact on nesting birds protected under the Wildlife and Countryside Act 1981 *as amended* would be **Neutral**.
- 6.2 With the implementation of a CEMP to prevent damage to retained habitats, the residual effect would be **Neutral**.
- 6.3 With the implementation of a sensitive lighting design to prevent species avoidance of retained and newly created habitats, the residual effect would be **Neutral**.

Compensation / Enhancements

- 6.4 Wherever possible, bird nest boxes will be included within the construction of new buildings within the Site. Outlined below are recommended bird nest boxes for consideration:
- 28mm entrance closed nest boxes to provide nesting opportunities for blue tit *Cyanistes caeruleus* and great tit *Parus major*.
 - Open-fronted nest boxes to provide nesting opportunities for blackbird *Turdus merula*, wren *Troglodytes troglodytes*, and robin *Erithacus rubecula*.
 - Species specific nest boxes, including 45mm entrance closed nest boxes suitable for starling *Sturnus vulgaris*, terrace boxes suitable for house sparrows *Passer domesticus* and integrated swift *Apus apus* bricks.
- 6.5 The landscaping scheme includes the provision of wildflower grassland, tree planting and the creation of a native species-rich hedgerow along the southern boundary.
- 6.6 The above measures will have a **not significant positive** effect for nesting birds at a **Local** scale.

HEDGEHOG

Potential impacts

- 6.7 The development could result in the killing / injury of individuals and disturbance of hedgehogs within potential nesting habitat. The development will also result in the loss of foraging habitat for this species. This is thought to have a **not significant** adverse effect at **Local** level.

Mitigation measures

- 6.8 In order to minimise risk, it is recommended that vegetation removal is undertaken in a precautionary manner. This should comprise a visual check of long vegetation areas prior

⁴⁴ BCT & Institution of Lighting Professionals (2023) Guidance Note GN08/23 Bats and Artificial Lighting At Night.

to removal followed by the cutting of woody vegetation to 150mm above ground level in the first instance with all cut vegetation removed by hand from the working area. The cleared vegetation should then be left for 24 hours prior to clearing vegetation to ground level and grubbing out of roots to allow hedgehogs or other fauna to disperse from the working area.

- 6.9 During any excavations, an access ramp must be provided overnight (or excavations covered) to allow trapped animals an escape route. Chemicals should be stored in secure compounds and open pipes should be temporarily capped at the end of each working day to prevent any animals gaining access. These precautions will protect wildlife such as hedgehog from harm during works. This must be outlined within the CEMP.
- 6.10 Fencing and buffers will be implemented to protect the retained hedgerow and trees, along with pollution prevention measures to prevent damage to these habitats during construction. These must be outlined within the CEMP.

Significance of residual effects

- 6.11 The significance of residual effects is considered to be **Neutral**.

Compensation / Enhancements

- 6.12 The landscaping scheme includes the provision of wildflower grassland, tree planting and the creation of a native species-rich hedgerow along the southern boundary.
- 6.13 Installation of hedgehog gaps (c .13cm x 13cm) within boundary treatments to allow access to garden habitats.

7.0 RESIDUAL EFFECTS

- 7.1 The mitigation measures are provided within the Impact Assessment above. With the implementation of these, and the compensation and enhancement measures, **no significant adverse** residual effects are envisaged.

8.0 CUMULATIVE EFFECTS

- 8.1 Kirklees Council interactive planning map⁴⁵ was checked for nearby planning applications.
- 8.2 Several small to medium scale residential developments were present within Fenay Bridge:
- **2020/62/90725/W** - Erection of 68 dwellings with associated access, parking and open space (revised plans);
 - **2002/92094** – Erection Of 250 dwellings at former Elliotts Brickworks;
 - **2022/60/91735/W** - Outline application, with access and layout, for the erection of 80 dwellings and associated work. No significant residual negative impacts anticipated

⁴⁵ <https://mapping.kirklees.gov.uk/connect/analyst/mobile/#/main>

(Ecological Impact Assessment, SLR, Ref. 424.064656.00001, October 2022 and Confidential Badger Bait Marking Survey Report, SLR, Ref. 424.03336.00009, September 2019); and

- **93/62/00242/E6** - Erection of 20 dwellings.

- 8.3 Given the scale and nature of these applications, no significant cumulative effects are expected in relation to any of the above developments.
- 8.4 Additional planning applications found in the area include householder applications for extensions/alterations. As above, no significant cumulative effects are anticipated in relation to these planning applications.

9.0 MONITORING

- 9.1 Monitoring is recommended to ensure that effective mitigation is maintained during construction and operation. This could include quarterly checks during construction and throughout habitat establishment and management. Some stages of the site clearance will require supervision by a suitably qualified ecologist, such as an updated badger survey, precautionary working methods in relation to hedgehogs and nesting bird checks (if clearance is undertaken during bird breeding season).

10.0 BIODIVERSITY IMPACT ASSESSMENT

- 10.1 A separate Biodiversity Impact Assessment (BIA - Futures Ecology, October 2023, Report Ref: FE305/BIA01) has been produced in accordance with NPPF 2023⁴⁶, The Environment Act 2021⁴⁷ as well as the Kirklees Council Biodiversity Net Gain Technical Advice Note (June 2021⁴⁸). This should be read in conjunction with this report.
- 10.2 Creation and management of the habitats would be outlined within a Biodiversity Enhancement and Management Plan (BEMP), which would be secured for a minimum of 30 years.

⁴⁶ Ministry of Housing, Communities and Local Government (July 2021). National Planning Policy Framework. London

⁴⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1182995/NPPF_Sept_23.pdf

⁴⁸ Kirklees Council, Biodiversity Net Gain in Kirklees, Technical advice note on Biodiversity Net Gain requirements for developments within Kirklees; <https://www.kirklees.gov.uk/beta/planning-applications/pdf/biodiversity-net-gain-technical-advice-note.pdf>

APPENDIX A: BOTANICAL SPECIES LIST

The habitat types were mapped within the site and a representative species list for each habitat type recorded. Species lists are not exhaustive of all flora present in each habitat type.

Common Name	Scientific Name	DAFOR
Arable		
False oat-grass	<i>Arrhenatherum elatius</i>	O
Spear thistle	<i>Cirsium vulgare</i>	R
Barley	<i>Hordeum vulgare</i>	D
Broad-leaved dock	<i>Rumex obtusifolius</i>	O
Tall ruderal vegetation		
Common ivy	<i>Hedera helix</i>	F
Common nettle	<i>Urtica dioica</i>	D
Broadleaved trees		
Field maple	<i>Acer campestre</i>	-
Sycamore	<i>Acer pseudoplatanus</i>	-
Hazel	<i>Corylus avellana</i>	-
Hawthorn	<i>Crataegus monogyna</i>	-
Ash	<i>Fraxinus excelsior</i>	-
Cherry	<i>Prunus sp.</i>	-
English oak	<i>Quercus robur</i>	-
Elm	<i>Ulmus sp.</i>	-

DAFOR, D=dominant, A=abundant, F=frequent, O=occasional, R=Rare, L=Locally

APPENDIX B: GROUND BASED TREE ASSESSMENTS SUMMARY

Tree Ref.	Species	Photograph	Potential Roost Features
T1	English oak <i>Quercus robur</i>		Central trunk has rotted section of decay c. 3m high. Knot hole on branch on eastern aspect c. 6m high. Dead bark and broken branches. Moderate potential, roost previously identified in 2020.



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Key

- Site Boundary
- 1km buffer
- 2km buffer
- Local Wildlife Sites (LWS)
- Kirklees Wildlife Habitat Network (KWHN)

Habitats of Principal Importance (HPI)

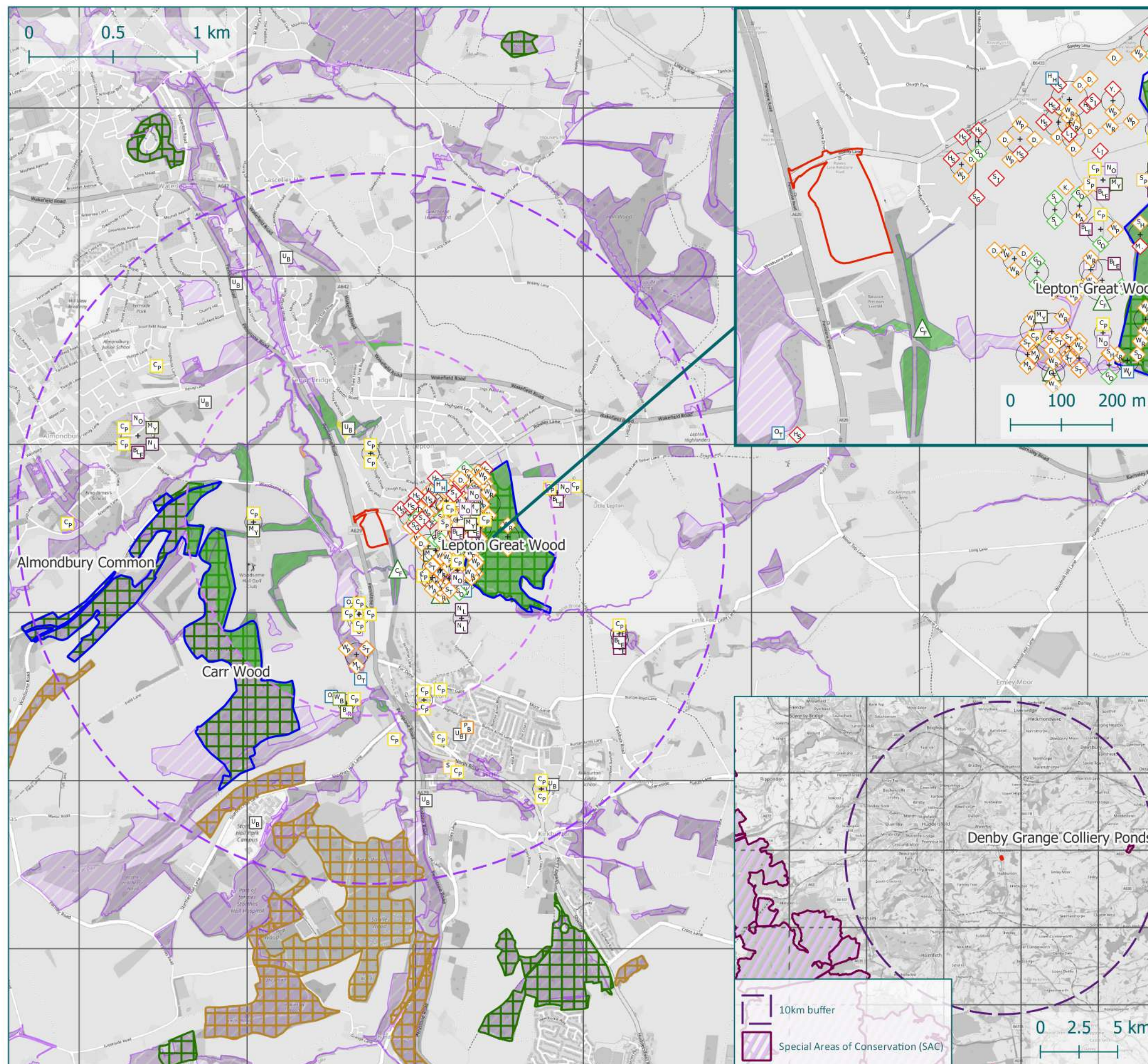
- Deciduous woodland
- Good quality semi-improved grassland
- No main habitat but additional habitats present

Ancient Woodland

- Ancient Semi-Natural Woodland
- Planted Ancient Woodland Sites

Protected and notable species records:

- | | | |
|----------------------------|------------------------|----------------|
| Common pipistrelle bat | European otter | Mallard |
| Soprano pipistrelle bat | West European hedgehog | Stock dove |
| Nathusius' pipistrelle bat | Yellowhammer | Willow warbler |
| Pipistrelle bat species | House sparrow | Song thrush |
| Noctule bat | Starling | Woodpigeon |
| Leisler's bat | Linnet | Moorhen |
| Whiskered bat | Mistle thrush | Sparrowhawk |
| Brandt's bat | Swift | Wren |
| Myotis bat species | Dunnock | Swallow |
| Brown long-eared bat | Grey wagtail | Goldfinch |
| Unidentified bat species | Kestrel | Common toad |
| European water vole | Kingfisher | Common frog |



Client: Homes by Honey

Project: Penistone Road / Rowley Lane, Fenay Bridge

Title: Figure 1 - Site Location & Desk Study Results Plan

Plan Reference: FE305_01

Project Reference: FE305

Report Reference: EcIA01

Author: MB

Date: 5/9/2023

Scale: NTS @ A3

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Key

 Site Boundary

Phase 1 Habitats

 Hardstanding

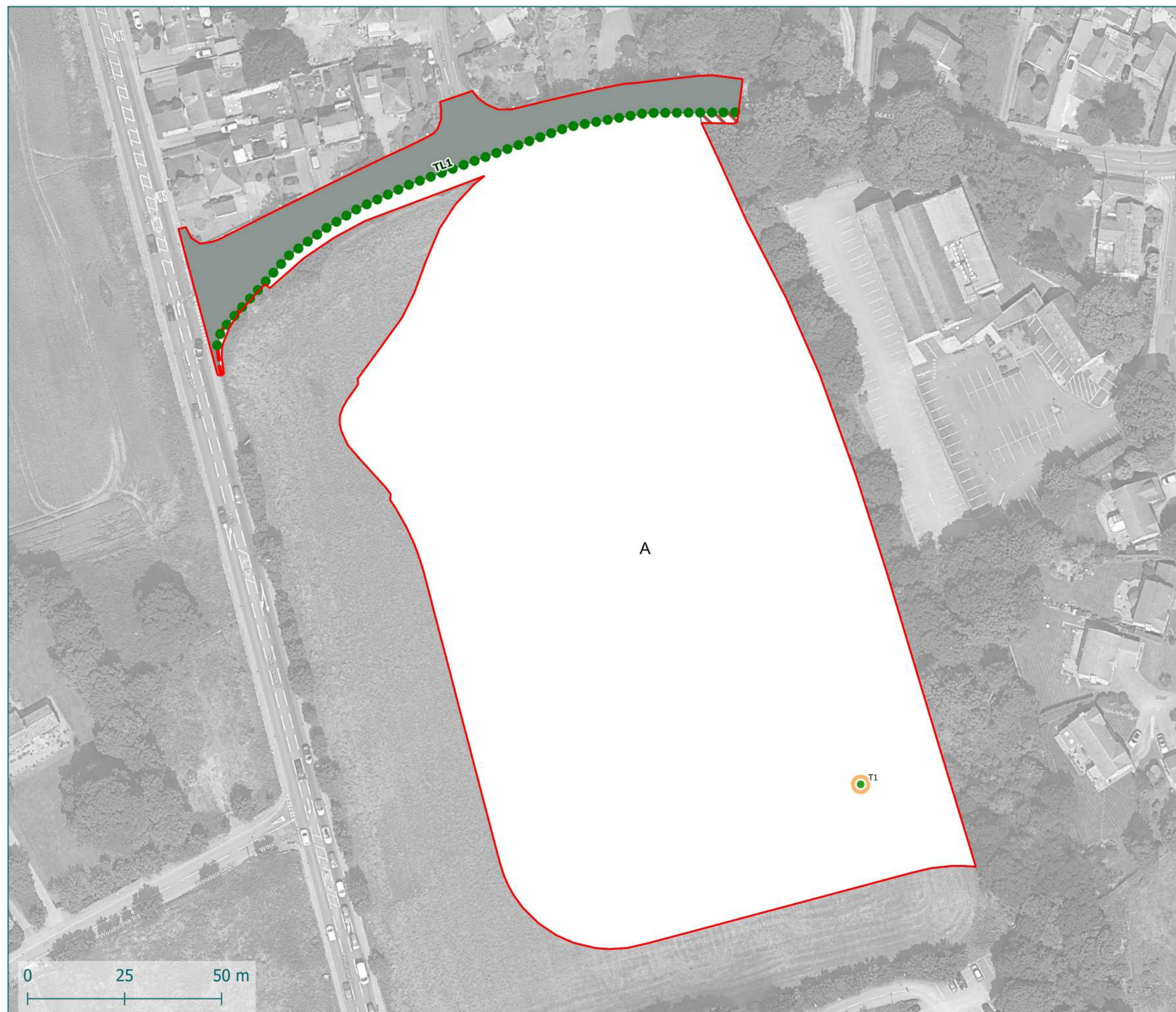
 Cultivated/disturbed land - arable

 Other tall herb and fern - ruderal

 Broadleaved trees

 Dry stone wall

 Tree (moderate bat potential)



Client: Homes by Honey

Project: Penistone Road / Rowley Lane, Fenay Bridge

Title: Figure 2 - Phase 1 Habitat Plan

Plan Reference: FE305_02

Project Reference: FE305

Report Reference: EcIA01

Author: MB

Date: 23/10/2023

Scale: 1:1,000



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Key

-  Site Boundary
-  250m buffer
-  500m buffer
-  Waterbody
-  Watercourses



Client: Homes by Honey

Project: Penistone Road / Rowley Lane, Fenay Bridge

Title: Figure 3 - Waterbody Location Plan

Plan Reference: FE305_03

Project Reference: FE305

Report Reference: EcIA01

Author: MB

Date: 5/9/2023

Scale: NTS @ A3

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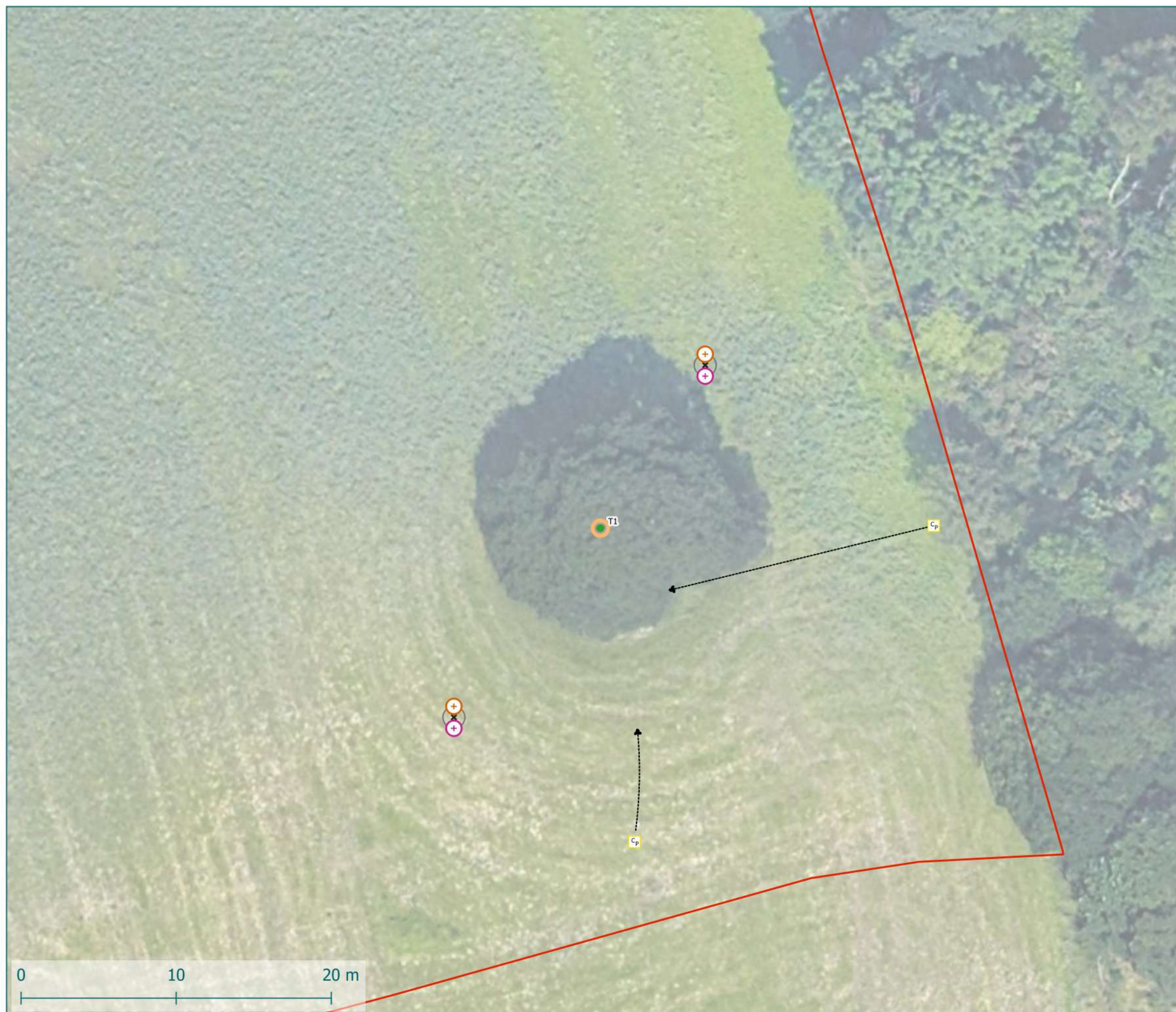
Telephone: 01623 749709

Key

-  Site Boundary
-  Tree T1 (moderate bat potential)
-  Surveyor location
-  Camera location

Bat activity

-  Common pipistrelle bat
-  Bat flight line



Client: Homes by Honey
Project: Penistone Road / Rowley Lane, Fenay Bridge
Title: Figure 4 - Bat Emergence Survey Plan (20.07.2023)

Plan Reference: FE305_04
Project Reference: FE305
Report Reference: EcIA01

Author: MB
Date: 19/9/2023
Scale: 1:250



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Key

-  Site Boundary
-  Tree T1 (moderate bat potential)
-  Surveyor location
-  Camera location

Bat activity

-  Common pipistrelle bat
-  Bat flight line



Client: Homes by Honey
Project: Penistone Road / Rowley Lane, Fenay Bridge
Title: Figure 5 - Bat Emergence Survey Plan (07.08.2023)

Plan Reference: FE305_05
Project Reference: FE305
Report Reference: EcIA01

Author: MB
Date: 19/9/2023
Scale: 1:250



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Key

-  Site Boundary
-  Tree T1 (moderate bat potential)
-  Surveyor location

Bat activity

-  Common pipistrelle bat
-  Noctule bat
-  Myotis bat species
-  Bat flight line



Client: Homes by Honey
Project: Penistone Road / Rowley Lane, Fenay Bridge
Title: Figure 6 - Bat Emergence Survey Plan (04.09.2023)

Plan Reference: FE305_06
Project Reference: FE305
Report Reference: EcIA01

Author: MB
Date: 19/9/2023
Scale: 1:500



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