



FUTURESECOLOGY

Yorkshire Choice Homes

115 Westfield Lane, Wyke

ECOLOGICAL IMPACT ASSESSMENT

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Futures Ecology Ltd

Carrwood Park, Swillington Common Farm, Selby Rd, Leeds LS15 4LG

Company Number: 12125083

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REV	Issue Status	Author or Reviewer	Name & Qualifications	Position	Date
-	Draft 1	Author	Annina Eales BSc (Hons)	Principal Ecologist	15.02.23
		Author	Maya Baker BSc (Hons), MSc, ACIEEM	Ecologist	20.02.23
		Reviewer	J. Eales Bsc	Managing Director	15.02.23

CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	2
3.0	ASSESSMENT METHODOLOGY	3
4.0	LEGISLATION, PLANNING POLICY AND GUIDANCE.....	11
5.0	BASELINE ECOLOGICAL CONDITIONS	13
6.0	IMPACT ASSESSMENT	28
7.0	RESIDUAL EFFECTS.....	32
8.0	CUMULATIVE EFFECTS.....	32
9.0	MONITORING.....	32
10.0	BIODIVERSITY ENHANCEMENTS	32

TABLES

Table 1 - Bat Roost Potential Classification Buildings & Trees

Table 2 – Summary of Relevant Protected Species Records

Table 3 – Waterbodies identified within 500m of application site

Table 4 – Summary of Relevant Features & Further Assessment Requirements

PHOTOGRAPHS

Photograph 1 - Areas which were previously introduced shrub in the north of the site.

Photograph 2 – Overgrown introduced shrub beds to the south of building B1

Photograph 3 – Cherry laurel and garden privet in the south western corner of the Site

Photograph 4 – Poor semi-improved grassland to the south of the site, viewed from the north-west.

Photograph 5 – A large residential building (B1) in the centre of the site, viewed from the south.

Photograph 6 – A garage (B2) in the east of the site, viewed from the east.

Photograph 7 – A garden shed (B3) within poor semi-improved grassland, viewed from the north.

Photograph 8 – A derelict, hardstanding tennis court had become vegetation in the west of the Site.

Photograph 9 – Mixed scrub in the north-eastern corner of the site.

Photograph 10 – Bramble scrub present along the western boundary.

Photograph 11 – Recently felled mixed plantation woodland was present along the eastern and southern Site boundary.

Photograph 12 – A Leyland cypress hedge had been removed from the western Site boundary, viewed from the north.

Photograph 13 – Tire tracks creating bare ground within the poor semi-improved grassland.

Photograph 14 – Showing the northern elevation of B1

Photograph 15 – Showing the eastern elevation of B1

Photograph 16 – Showing the southern elevation of B1

Photograph 17 – Showing a section of the southern and western elevations of B1

Photograph 18 – Showing a section of roof void of B1

Photograph 19 – Showing a section of roof void of B1

Photograph 20 – Showing a section of roof void of B1

Photograph 21 – Showing a section of roof void of B1

APPENDICES

Appendix A: Botanical Species List

FIGURES

Figure 1: Site Location & Desk Study Results

Figure 2: Phase 1 Habitat Plan

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 proposals. The assessment draws from a desk study and field surveys of the site and surrounding area.
- 1.2 Development proposals include the demolition of all built structures on site with subsequent vegetation clearance and construction of circa 15 no. residential properties with associated gardens (as per drawing no. 2023-018-001 Rev C by DK Designs).
- 1.3 The assessment identified the following ecological features which could be affected by proposals or warrant consideration due to the legal protection afforded them:
 - West Yorkshire Wildlife Habitat Network (WHN);
 - Mixed woodland and scattered trees;
 - Schedule 9 / non-native invasive plants;
 - Generalist bat species;
 - Roosting bats;
 - Breeding birds; and
 - Hedgehog.
- 1.4 The site comprises approximately 0.69ha in extent. The site comprised an empty residential building with ancillary structures, poor semi improved grassland which had until recently been a well managed amenity lawn and recently cleared areas. Recent vegetation clearance works were undertaken in areas which were previously ornamental planting and areas of mixed scattered trees with the exception of TPO trees.
- 1.5 The West Yorkshire Wildlife Habitat Network (WHN) is not located within the Site, at the nearest point it is located c. 810m to the south-east. No impacts are anticipated on the WHN as a result of the proposals.
- 1.6 Proposals will result in permanent losses of habitats under the footprint of the development. The majority of the mature trees covered under Tree Preservation Orders TPO along the northern eastern and southern boundaries are to be retained.
- 1.7 Impacts will be further minimised through careful control of construction activities through an industry best practice Construction Environment Management Plan (CEMP): Biodiversity. This also reduces the impacts on important faunal species that may utilise these habitats, such as hedgehogs, breeding birds, foraging and commuting bats. As a result, all other predicted effects on important ecological features are not anticipated to be significant.
- 1.8 A separate Biodiversity Impact Assessment has been undertaken and should be read in conjunction with this report.

2.0 INTRODUCTION

- 2.1 The following report has been prepared by Futures Ecology Ltd. on behalf of Yorkshire Choice Properties to support a Reserved Matters application for a proposed residential development. It presents the findings of ecology surveys undertaken between 2019 and 2021 as well as update surveys undertaken in February 2023.
- 2.2 The purpose of this report is to provide updated information for the discharge of conditions in relation to an outline planning application (ref: 2020/60/90436/E). This report should be read in conjunction with the following reports:
- Biodiversity Impact Assessment, Futures Ecology, February 2023,
 - Bat Report Addendum, Futures Ecology (to be produced on completion of nocturnal assessments undertaken in May and June, 2023).

SITE LOCATION AND CONTEXT

- 2.3 The site is located off Westfield Lane, Wyke in West Yorkshire (central grid reference SE16018 26234) and is approximately 0.69ha in extent. The site comprised buildings, poor semi-improved grassland, recently cleared areas of vegetation and scattered broadleaved trees associated with an existing residential property and garden.
- 2.4 The landscape beyond the site is predominantly residential to the north, east and south-east with open countryside to the west and south-west.

BACKGROUND

- 2.5 An initial Phase 1 Habitat Assessment and Preliminary Protected Species Survey was undertaken by Futures Ecology on the 11th October 2019, with a Preliminary Ecological Appraisal (PEA) Report produced in February 2020.
- 2.6 Nocturnal bat surveys of building B1 and building B2 were conducted by Arbtech on the 7th (dusk) and 25th (dawn) of May 2020. These surveys confirmed the likely absence of roosting bats within the property at that time.

DEVELOPMENT PROPOSALS

- 2.7 Development proposals include the demolition of the existing property on site and vegetation clearance of some tree and shrubs within the garden. The clearance works will facilitate the construction of 15 residential properties with associated gardens (as per drawing no. 2023-018-001 Rev C by DK Designs).
- 2.8 Trees that are subject to Tree Preservation Orders along the northern and eastern boundary are to be retained and incorporated into new residential gardens. The remaining vegetation will be cleared to facilitate the development.

OBJECTIVES

- 2.9 This report has been prepared with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM) Ecological Impact Assessment Guidelines (CIEEM, 2018) .

2.10 The key objectives of Ecological Impact Assessments (EclA) 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 this to inform the development design process;
- Assess the likely significant impacts of the proposals on the Important Ecological Features;
- Identify mitigation measures likely to be required;
- Identify the opportunities offered by the proposed project to deliver ecological enhancement; and

3.0 **ASSESSMENT METHODOLOGY**

SCOPE OF THE ASSESSMENT

3.1 The scope of this assessment is to consider the likely effects of the proposed scheme upon ecological features identified during the baseline survey and data collection. During this process, pathways are identified that will result in a likely impact. This may be either directly or indirectly that would result in a potential effect on a habitat and/or species. Ecological features may be located within the redline boundary of the Site or within areas identified from the initial survey which is referred to as the zone of influence (Zol).

3.2 Ecological features that are to be included within this assessment comprise:

- Designated habitats or sites,
- Protected and notable species,
- Species and Habitats (SPI) and (HPI).

3.3 Baseline information and potential impacts have been quantified as far as practical to inform the assessment, supported by professional judgment and experience as appropriate.

3.4 The main sources of information for the assessment comprise:

- Biological records obtained from the relevant Local Records office and local interest groups,
- Online sources of Ecological Data,
- Review of legislation and land-use policies,
- Review of nearby by planning applications to determine any nearby ecological features,

- Field surveys.

DESK STUDY

- 3.5 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 Maps¹; and the Multi Agency Geographic Information for the Countryside (MAGIC)² to assess the landscape context of the survey area and surrounding areas.
- 3.6 To support the field survey and compile the baseline information of relevance to the site, ecological information was sought from third party organisations:
- West Yorkshire Ecology (WYE),
 - West Yorkshire Bat Group,
 - Natural England's Open Dataset³,
 - Kirklees Planning Portal⁴.
- 3.7 The search area for designated sites and protected species is determined by the likely Zone of Influence (Zoi) 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 bats and GCN within 2km,
 - Natural England Environmental DNA surveys and Habitat Suitability Assessments of Ponds for great crested newt in support of District Level mitigation Licensing.

BASELINE SURVEYS

Personnel

- 3.8 The updated habitat and bat surveys were undertaken by A. Eales BSc (Hons) and Maya Baker who both extensive experience in undertaking these surveys. A. Eales is registered

¹ www.google.com/maps

² www.magic.defra.gov.uk

³ <https://naturalengland-defra.opendata.arcgis.com/datasets/great-crested-newts-edna-pond-surveys-for-district-level-licensing-england/explore?location=52.627247%2C-0.857662%2C6.58>

⁴ <https://www.kirklees.gov.uk/beta/planning-applications/search-for-planning-applications/default.aspx>

to use a Natural England Class Licence Level 2 to survey for bats (CL20: 2021-52518-CLS-CLS) and great crested newts (2016-22825-CLS-CLS).

Habitat Appraisal

- 3.9 The initial phase 1 habitat survey was undertaken on 11th October, 2019 following guidance from Joint Nature Conservation Committee (JNCC) (2016)⁵ which comprised a walkover of the survey area mapping habitats present using the JNCC standard habitat codes, broadly describing and classifying the principal habitat types as well as 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.
- 3.10 On 24th February, 2023 an update walkover survey was undertaken to update the baseline and inform the Biodiversity Net Gain assessment. The habitat types were also described and evaluated in accordance with the UK Habitat Classification System (UKHab, 2020)⁶.
- 3.11 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.
- 3.12 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.

⁵ JNCC (2016) Handbook for Phase1 Habitat Survey – a technique for environmental audit. ISBN 0 86139 636 7

⁶ UKHab (2020) The UK Habitat Classifications – Habitat Definitions Version 1.1

⁷ ⁷Natural England (2015) Badger Surveys and Mitigation accessed May 2021 <https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects#survey-methods> (accessed February 2023)

⁸ Harris, S., Creswell, P., & Jefferies, D. (1989). *Surveying Badgers*. The Mammal Society.

⁹ Creswell, P., Harris, S., & Jefferies, D.J. (1990) *The history, distribution, status, and habitat requirements of the badger in Britain*. Nature Conservancy Council.

24th February, 2023 with planned nocturnal surveys to commence May and June, 2023. The results of which will be provided in an addendum report to this EclA.

Foraging / Commuting Habitat

- 3.16 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.

Roosting Habitat – Trees & Buildings

- 3.17 All buildings and trees within the site boundary were assessed for their potential to support roosting bats using statutory guidance (Natural England, 2019) and best practice survey methodology (Collins, 2016¹⁰ and Mitchell-Jones & McLeish, 2004¹¹).
- 3.18 The buildings were inspected externally using close focussing binoculars, a high-powered torch and endoscope where appropriate. Features such as small gaps around or under barge/soffit/fascia boards, windows, lintels, flashing, external pipework and or raised or missing roof/ridge tiles or gaps at gable ends, which have the potential for use as access points, were noted. Evidence that bats actively used such features included: staining within and around the gaps or bat droppings / urine staining under gaps. The presence of cobwebs and or general detritus within and around potential access points was used as an indicator that bats had not recently used the area to access the building.
- 3.19 Where accessible and safe to do so, the interiors of the building including roof voids and cellars were assessed for evidence of bat activity and for the potential to be used by roosting bats. Evidence of a roost would be determined by the presence of live or dead bat(s), concentrated piles or scattered bat droppings, feeding remains such as insect wing fragments as well as scratch marks and or staining from mammalian fur oil/ urine.
- 3.20 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 as, holes / cavities, loose bark, cracks / splits, occluded bark and gaps behind ivy stems (please note that this list is not exhaustive) (British Standard 8596:2015¹²). Other factors such as orientation of the 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.
- 3.21 An assessment was made on the level of bat roosting potential offered by the structures and 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.

¹⁰ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London. ISBN-13-978-1-878745-96-1

¹¹ Mitchell-Jones, A.J. and McLeish, A.P. (eds) (2004) *Bat Workers' Manual* (3rd edn). JNCC, Peterborough.

¹² British Standard (2015) BS 8596:2015 *Surveying for bats in trees and woodland – Guide*, October 2015.

Table 1 – Bat Roost Potential Classification Buildings & 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 either buildings or trees	Likely Further Survey Work
Negligible	Negligible or no habitat features likely to be used by roosting bats.	None.
Low	A structure 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, upward facing holes, small gaps beneath a soffit board.	Buildings Nocturnal presence / absence surveys are likely to be required to give confidence in a negative result. At least one dusk emergence or dawn re-entry survey during the appropriate survey period. Further roost characterisation surveys would be required should a roost be confirmed that will be affected by development proposals. Trees 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 structure with one or more potential roost sites or features that could be used by bats due 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).	Buildings 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. Trees An aerial assessment by roped access bat workers and / or nocturnal surveys (as above). Following an aerial assessment, a tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the roost is affected by proposals a licence from Natural England will be required. After completion of survey work and presence of roost discounted a precautionary working method statement may still be appropriate.
High	A structure 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.	Buildings 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. Trees An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys (as above). Following an aerial assessment, a tree may be upgraded or downgraded based on findings. 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.

Classification / Suitability	Description of Roosting Habitat within either buildings or trees	Likely Further Survey Work
Confirmed Roost	Evidence of roosting bats in the form of live or dead bats, droppings, urine staining, mammalian fur oil staining etc.	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. Trees An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys (as above). 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.
Negligible	Negligible or no habitat features likely to	None.

Aquatic Habitats

- 3.22 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 (2015)¹³.

Terrestrial Habitats

- 3.23 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; habitat that could provide suitable hibernation sites such as rubble piles, tussock grassland and compost heaps; and habitat which could be used for foraging or commuting through the landscape including tussock / rough grassland, scrub, woodland and hedgerows.

Reptiles

- 3.24 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)¹⁴, and Froglife Advice Sheet 10 – Reptile Survey (Froglife 1999)¹⁵.

¹³ Natural England: Standing Advice Sheet: Great Crested Newts Paragraph 4: 4.1

¹⁴ Gent, A.H., & Gibson, S.D., eds 1998. Herpetofauna Workers' Manual. Peterborough, joint Nature Conservation Committee.

¹⁵ Froglife 1999. Froglife Advice Sheet 10: Reptile Survey. Froglife, London

Other Protected / Notable Species

- 3.25 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.

Survey Limitations

- 3.26 The Phase 1 habitat surveys conducted in 2019 and 2023 were undertaken in October and February respectively which is outside the optimal survey period for botanical identification. However, given the nature of the site, it is considered that sufficient information was gathered to enable the accurate determination of the habitats present. Furthermore, it is not considered likely that significant habitats or botanical species will have been missed.
- 3.27 Access was not possible to inspect all roof void areas of building B1. The main void which could not be accessed was in association with the western extent of the property. This void was, however, connected to the remainder of the building so if bats were roosting regularly in association with this void, it is likely that evidence of bat occupation would have been observed in accessible areas.
- 3.28 The void of B2 was not accessible. B2 was, however, well-sealed externally, with no observed potential access points. B2 was considered unlikely to represent potential bat roosting habitat.

IMPACT 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)¹⁶.

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 (Wyke)

¹⁶ CIEEM (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..

- 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)¹⁷.

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).

¹⁷ 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.

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 This section details the legislative and planning policy context which are applicable to the proposed scheme. There are several national, regional and local planning policies and guidance documents that seek to protect nature conservation and ecology and as such are relevant when considering the effects of the proposed development.

LEGISLATIVE FRAMEWORK

- 4.2 The following legislation and European Directives afford protection to wildlife and have been used to inform this assessment.
- The Environmental Act 2021¹⁸
 - The Conservation of Habitats & Species Regulations 2017 (as amended)¹⁹;
 - The EC Habitats Directive (Directive 92/43/EEC)²⁰ as translated into UK law by The Conservation of Habitat and Species Regulations 2017 (as amended);
 - The EC Birds Directive (Directive 79/409/EEC)²¹; as translated into UK law by The Conservation of Habitat and Species Regulations 2017 (as amended);
 - Wildlife and Countryside Act 1981 (as amended) (WCA)²²;
 - Natural Environment and Rural Communities Act 2006 (NERC)²³.
 - The Protection of Badgers Act 1992²⁴.
 - The Hedgerow Regulations Act 1997²⁵.

PLANNING POLICY

- 4.3 This assessment has been guided by the requirements of the latest NPPF, local policy and other guidance by ensuring that the determining authority is in receipt of adequate information to be able to make an informed appraisal of the proposed scheme against National and local planning policies regarding biodiversity.

¹⁸ <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

¹⁹ HMSO. The Conservation of Habitats and Species Regulations 2017 (as amended) - No.1012

²⁰ EC (1992) Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (The EC Habitats Directive).

²¹ EC (1979), Council Directive 79/409/EEC on the Conservation of wild birds (EC Birds Directive).

²² HMSO. The Wildlife and Countryside Act 1981 (as amended).

²³ HMSO. (2006), Natural Environment and Rural Communities Act.

²⁴ HMSO. The Protection of Badgers Act 1992 (as amended).

²⁵ HMSO. The Hedgerow Regulations Act 1997

National Planning Policy Framework

- 4.4 The Government published the latest National Policy Framework (NPPF, 2021)²⁶ which sets out three objectives for sustainable development which include the economy, social and environmental. It provides a framework by which local councils may 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.
- 4.5 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.
- 4.6 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 Framework²⁷ and Biodiversity 2020²⁸.

Local Planning Policy

- 4.7 Within Kirklees all planning decisions are expected to be based on the Kirklees Local Plan: Strategy and Policies which was adopted in February 2019²⁹. Key policies concerning ecology and biodiversity include which are of relevance to this scheme:
- Policy LP30: Biodiversity & Geodiversity.

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 concern (BoCC 5, 2021)³⁰.
- 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.

²⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

²⁷ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. July 2012.

²⁸ DEFRA (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services.

²⁹ Kirklees Council (2019) The Kirklees Local Plan: Strategy and Policies Adopted 27th February, 2019 (accessed February, 2023) <https://www.kirklees.gov.uk/beta/planning-policy/pdf/local-plan-strategy-and-policies.pdf>

³⁰ Stanbury et al (2021), *Birds of Conservation Concern 5: the population status of birds in the UK, Channel Islands and Isle of Man*. British Birds 108, 708-746. <https://britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf>

5.0 **BASELINE ECOLOGICAL CONDITIONS**

- 5.1 The baseline conditions have been established through desk-based assessments and field surveys. The results of the most up to date site assessment are presented below.

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 There are no internationally, nationally or locally designated sites with a statutory designation within the relevant zone of interest of the site boundary.

Non-Statutory Designated Sites

- 5.3 There are no sites of local importance with a non-statutory designation within 1km of the site boundary.

West Yorkshire Wildlife Habitat Network (WHN)

- 5.4 The West Yorkshire Wildlife Habitat Network (WHN) identifies continuous stretches of permeable habitat that can be utilised over time by species moving between core areas. At the nearest point the Site is located c.810m from the WHN to the south east.
- 5.5 The WHN is considered an Important Ecological Feature (IEF) of **County** importance.

Protected / Notable Species Records

- 5.6 Records of protected and notable species provided by desk study consultees are provided in Table 2 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 2 - Summary of Relevant Protected Species Records

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from Site boundary (m)	Grid ref. accuracy of nearest record
Bat species					
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Regs (Sch2), WCA (Sch5), WYBAP, LBAP	Roost: 12 Field Record: 16 Total: 28	Roost: 949 Field record: 1,562	Roost: 1m Field record: 10m
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Regs (Sch2), NERC (SPI), WCA (Sch5), WYBAP	Roost: 0 Field Record: 1 Total: 1	Roost:N/A Field record: 1,791	Roost:N/A Field record: 1m

Pipistrelle bat species	<i>Pipistrellus</i> spp.	Regs (Sch2), WCA (Sch5), WYBAP, LBAP	Roost: 2 Field Record: 6 Total: 5	Roost:1,057 Field record: 1,836	Roost: 1m Field record: 100m
Noctule bat	<i>Nyctalus noctula</i>	Regs (Sch2), NERC (SPI), WCA (Sch5), WYBAP	Roost: 0 Field Record: 4 Total: 4	Roost: N/A Field record: 1,096	Roost: N/A Field record: 10m
Brown long-eared bat	<i>Plecotus auritus</i>	Regs (Sch2), NERC (SPI), WCA (Sch5), WYBAP	Roost: 0 Field Record: 1 Total: 0	Roost: N/A Field record: 1,562	Roost: N/A Field record: 10m
Vesper bat	Vespertilionid ae	Regs (Sch2), WCA (Sch5), WYBAP, LBAP	Roost: 0 Field Record: 3 Total: 3	Roost: N/A Field record: 620	Roost: N/A Field record: 1m
Bird species					
Wren	<i>Troglodytes troglodytes</i>	BoCC (Amber), WYBAP, WCA (S1ch5),	1	122	100m
Wood pigeon	<i>Columba palumbus</i>	BoCC (Amber), WYBAP, WCA (S1ch5),	1	122	100m
Amphibian species					
Smooth newt	<i>Bufo bufo</i>	WCA (S1ch5), NERC (SPI), WYBAP	18	920	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. WYBAP – West Yorkshire Biodiversity Action Plan. LBAP – Leeds Biodiversity Action Plan

5.7 A search of the MAGIC online resource revealed there are four European Protected Species Licences (EPSL) relating to bats within 2km of the Site boundary.

- 2016-20721-EPS-MIT. Start date: 02/05/2016 End Date: 01/05/2021
- 2016-20721-EPS-MIT-1 Start date: 22/11/2016 End Date: 22/11/2016
- 2016-20721-EPS-MIT-2 Start date: 05/10/2017 End Date: 31/12/2022
- 2016-20721-EPS-MIT-3 Start date: 08/01/2018 End Date: 30/04/2023

5.8 There are 10 EPSL's relating to GCN located within 1km:

- OS Grid Ref SE164259 - 14/05/2015 & 09/07/2015
- OS Grid Ref SE165254 - 15/09/2016, 26/07/2016 & 15/05/2017
- OS Grid Ref SE166255 - 13/04/2015 & SE166255
- OS Grid Ref SE166254 - 17/03/2016, 17/03/2016 & 17/03/2016

- 5.9 There were no records of GCN surveys from Natural England's Open Dataset within 1km of the Site boundary.

HABITATS

- 5.10 The habitats present within the site and recorded during the Phase 1 survey with their relevant UKHab classification in brackets are outlined below. The results of the Biodiversity Impact Assessment is in a separate report (BIA Summary Report, Futures Ecology, March 2023). The location of the habitats recorded and any relevant target notes are presented in Figure 2.

- 5.11 The botanical species recorded in association with each of the following on-site habitats are listed in Appendix A:

- Buildings and hardstanding;
- Ephemeral / short perennial vegetation;
- Introduced shrub (recently cleared);
- Poor semi-improved grassland;
- Dense / continuous scrub;
- Mixed woodland – recently felled and broadleaved trees;
- Line of coniferous trees – recently felled; and
- Walls and fencing.

Buildings and hardstanding (Developed land; sealed surface)

- 5.12 A large residential building (B1) and garage (B2) with associated hardstanding and disused tennis court were present on-site. A shed (B3) was present within the poor semi-improved grassland. The buildings are discussed in more detail in the Bat section below (refer to Photographs 5 to 8).
- 5.13 Hardstanding comprised of an access road, paths and patio paving.

Poor semi-improved grassland (Modified grassland)

- 5.14 Much of the southern section of the Site comprised of an outgrown lawn (Photograph 4). Lack of regular management was evident resulting in a tall sward. Perennial rye-grass *Lolium perenne* was dominant alongside abundant red fescue *Festuca rubra*, cock's foot *Dactylis glomerata*, meadow grass *Poa* spp., and creeping thistle *Cirsium arvense*.
- 5.15 This habitat was considered to have **negligible** value to nature conservation due to a lack of diversity within the sward. As such, this habitat is not considered to represent an Important Ecological Feature (IEF) and will not be taken further in this assessment.



Photograph 1: Areas which were previously introduced shrub in the north of the Site.



Photograph 2: Overgrown introduced shrub beds to the south of building B1.



Photograph 3: Cherry laurel and garden privet in the south-western corner of the Site.



Photograph 4: Poor semi-improved grassland to the south of the Site, viewed from the north-west.

Ephemeral / short perennial vegetation (Sparsely vegetated Land; ruderal ephemeral)

- 5.16 A derelict tennis court had become partially vegetated with moss and ephemeral / short-perennial vegetation (Photograph 8).
- 5.17 This habitat was considered to have **negligible** value to nature conservation due to the limited species diversity present. As such, this habitat is not considered to be an IEF and will not be subject to a detailed assessment.



Photograph 5: A large residential building (B1) in the centre of the Site, viewed from the south.



Photograph 6: A garage (B2) in the east of the Site, viewed from the east.



Photograph 7: A garden shed (B3) within the poor semi-improved grassland, viewed from the north.



Photograph 8: A derelict hardstanding tennis court had become vegetated in the west of the Site.

Introduced shrub (Heathland and scrub; introduced shrub)

- 5.18 Large herbaceous beds were present in the northern extent of the site as well as areas surrounding the poor semi-improved grassland. The beds were largely composed of predominantly ornamental shrubs of largely non-native varieties with occasional broadleaved trees. A number of coniferous trees and cherry laurel had recently been removed from the northern section of the Site, exposing bare ground and moss. The southern areas had become overgrown through lack of management (refer to photograph 1 to 3).
- 5.19 Woody species composition largely comprised cherry laurel *Prunus laurocerasus*, snowberry *Symphoricarpos albus*, dogwood *Cornus sanguinea* and holly *Ilex aquilifolium*.
- 5.20 Herbaceous species predominantly of cultivated varieties were present within ornamental beds, particularly in the southern section of the Site. Ruderal species such as common nettle *Urtica dioica* and bramble *Rubus fruticosus* agg. had also begun to colonise due to lack of management.

- 5.21 Cotoneaster and montbretia *Crocsmia* sp. were recorded within the area of introduced shrub. See the Target Notes below for more information on their locations.
- 5.22 A block of cherry laurel and garden privet was present in the south-western corner of the Site.
- 5.23 This habitat was considered to have **negligible** value to nature conservation due to the large number of ornamental and non-native species present. As such, this habitat is not considered to be an IEF and will not be subject to a detailed assessment.

Dense / continuous scrub (Heathland and scrub; mixed scrub)

- 5.24 A small area of mixed scrub with bramble, elder *Sambucus nigra* and snowberry *Symphoricarpos albus* was present within the north-eastern corner of the site (Photograph 9). Ground flora included cock's foot, common ragwort *Jacobaea vulgaris* and creeping buttercup *Ranunculus repens*.
- 5.25 Bramble scrub was also found along the western Site boundary (Photograph 10). Other species present in these areas included elder and hawthorn *Crataegus monogyna*.
- 5.26 This habitat was considered to have **negligible** value to nature conservation due to its limited extent and the presence of non-native species. As such, this habitat is not considered to represent an IEF and will not be taken further in this assessment.

Mixed woodland (recently felled) and broadleaved trees (Urban trees)

- 5.27 Along the eastern and southern boundaries was an area of mixed tree planting of both native and non-native species which had recently undergone management including the removal of trees and understorey species (Photograph 11).
- 5.28 Prior to management the specimens ranged from young to semi-mature individuals of horse chestnut *Aesculus hippocastanum*, ash, wild cherry *Prunus avium*, purple sycamore *Acer purpurem*, common lime *Tilia x europaea*, Norway maple *Acer platanoides* with holly and cherry laurel also frequently occurring amongst the trees. A total of 20 trees comprising ash *Fraxinus excelsior*, sycamore and lime trees covered by Tree Protection Orders (TPOs) remain.
- 5.29 The understorey and ground flora largely comprised introduced shrub, including *Rhododendron*, poor semi-improved grassland and areas of bare ground. Ground flora species such as wood avens *Geum urbanum*, foxglove *Digitalis purpurea*, cow parsley *Anthriscus sylvestris*, nettle and bramble were present in this area amongst areas of bare ground.
- 5.30 The remaining trees would be considered of importance at a **Local** level, for their value to local wildlife.

Line of coniferous trees – recently felled

- 5.31 A high Leyland cypress *Cupressus x leylandii* hedge (approximately 5m high) had recently been removed from the southern half of the western boundary (Photograph 12).



Photograph 9: Mixed scrub in the north-eastern corner of the Site, viewed from the south.



Photograph 10: Bramble scrub present along the western Site boundary.



Photograph 11: Recently felled mixed plantation woodland was present along the eastern and southern Site boundary.



Photograph 12: A Leyland cypress hedge had been removed from the western Site boundary, viewed from the north.

Walls and fences

- 5.32 A range of stone walls and wooden fencing were present along the Site boundary. Metal palisade fencing separated the garden area with the public footpath running along the eastern Site boundary.

Target Notes

- 5.33 Features recorded as target notes on Figure 2 include:
- TN1 - Tyre tracks creating bare ground within grassland (Photograph 13)
 - TN2 - Approximate location of Montbretia *Crocasmia* sp.



Photograph 13: Tire tracks creating bare ground within the poor semi-improved grassland.

Invasive Non-native Species (Schedule 9 INNS)

- 5.34 Under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to plant or otherwise cause these species to grow in the wild. Both cotoneaster and rhododendron were recorded on site during the survey whilst a variety of montbretia, was also scattered in the ornamental beds. Four species of cotoneaster, *rhododendron ponticum* and montbretia *Crocasmia x crocosmiiflora* are included within Schedule 9. In order to ensure compliance with the legislation, any future development of the site will need to be guided by a management plan for the control and eradication of these species.
- 5.35 Although these species are not considered to be important ecological features in the context of this assessment, Schedule 9 species will be subject to further consideration due to the legal implications of them spreading as a result of development operations.

FAUNA

Bats

- 5.39 Fourteen records relating to known bat roosts were received from the local records office. The species comprised common pipistrelle and an unknown pipistrelle species, the nearest recorded roost being c.950m away from the application site.

Foraging / Commuting Habitat

- 5.40 Boundary habitats such as the scrub and mature trees on the boundaries provide a suitable resource for the local bat population for foraging and commuting purposes, albeit in limited extent, as well as connectivity to the surrounding landscape.
- 5.41 During the nocturnal surveys undertaken in 2020 a small number of common pipistrelle were observed foraging amongst the trees in the eastern extent of the site and along the boundary.
- 5.42 Given that the sites' boundary habitats likely provide some resource to local foraging and commuting bats. Foraging and commuting bats represent an IEF and are considered important at a **Local** level.

Roosts – Trees & Building

- 5.43 Three buildings are present on site, shown in Figure 2. An internal inspection was undertaken within accessible areas of B1a, with access not possible into the roof spaces of B1b and B2.

Trees

- 5.44 All trees within the application site were assessed for their potential to provide suitable roosting habitat for bat species. All specimens were between semi-mature to mature and in very good condition. None of the trees offered any suitable roosting features for bats and as such are all classified as having **negligible** bat roosting potential.

Building B1

- 5.45 Refer to Figure 2 for information regarding the building layout and approximate location of interest features.
- 5.46 Building B1 was a two to three storey, stone and brick-built dormer bungalow dating from the late 1800s. The building also included a lower ground storey comprising of storage / garages. For ease of description, the building has been subdivided into four sections:
- B1a - the original house;
 - B1b - an extension to the main house;
 - B1c - a conservatory; and
 - B1d - lower ground storage / garages.
- 5.47 The main roof of building sections B1a and B1b comprised both gable and hipped sections which were covered with slate tiles with stone parapet sections associated with the dormer gables. Other external features of note included fascia and soffit boxes as well as lead flashing around external pipework, chimneys, dormers and roof valleys.
- 5.48 Building section B1c comprised an entirely glazed conservatory which offered no bat roosting potential nor offered any potential bat access points.
- 5.49 Building section B1d (lower ground garages) were located beneath B1b and B1c. The exteriors were also of stone construction, with metal doors and uPVC windows.

- 5.50 Externally the building was generally well maintained however a small number of potential access points that could provide a route for bats into features that could provide suitable roosting habitat for bats were noted in association with sections B1a, B1b and B1d, these comprised:
- Small gap in mortar beneath ridge tile on northern elevation of B1a,
 - Gaps between soffit boards and stonework on northern elevation of B1b and southern elevation of B1a,
 - Small number of slightly raised and dislodged roof tiles on the southern elevation of B1a,
 - A 50cm gap under the ridge tiles (missing mortar) on the northern elevation of B1b,
 - Gap over uPVC window in B1d.
- 5.51 The roof structure of B1a was divided into four accessible void sections in B1a whilst access into the void in section B1b was not possible. The roof construction was of a traditional rafter and purlin arrangement with machined timbers. The height to ridge ranged between 2.5 to 3m and insulation was present throughout the floor of the voids. No sarking (felt or timber) was present in any of the surveyed voids with roof tiles placed directly onto the battens. Much of the roof was mortared (torching) on the underside of the tiles.
- 5.52 Internally the roof voids generally had little / no light ingress and, as such were draft-free. Accumulations of cobwebs / detritus were noted around the majority of roof timbers, although a small number of locations were noticeably free from such detritus.
- 5.53 Potential access to B1a, from under lifted roof tiles, was noted from the voids in a small number of areas. Two old bat droppings were found in two separate locations in the voids. The droppings were both old and beneath roof timbers that had large accumulations of detritus; suggesting a single bat had not recently been resting there but more likely flown around the space on one or two occasions.
- 5.54 B1c had no roof void and offered neither potential access points or roosting habitat.
- 5.55 B1d offered negligible potential for roosting bats. The southern section (under B1c) was very light due to the presence of windows along the southern elevation. No evidence was observed in this section. The northern areas (under B1b) were very well sealed externally, and no evidence was observed internally.
- 5.56 Overall building B1 did offer potential roosting habitat within the roof structure and other concealed areas such as the wall plate, between ridge timbers and ridge tiles and soffit boxes. The large accumulations of detritus within the voids suggested that bats had not recently roosted inside the surveyed voids however, it was not possible to inspect the void above B1b and other concealed areas.
- 5.57 In conclusion the building was considered to still offer **moderate** bat roosting potential.

Building B2 and B3

- 5.58 B2 comprised a large single storey, stone-built garage connected to B1b. The structure was of a similar construction to B1 with a slate covered gable roof. A concealed roof void

was present however, so an inspection of this area could not be undertaken. The building was a much newer construction than the main bungalow. It was well maintained with mortar being well pointed and roof tiles well sealed. The building offered no visible potential access points into the structure or potential roosting habitat.

- 5.59 B3 was a timber summer house; the structure offered no potential roosting habitat for bat species.
- 5.60 In conclusion both B2 and B3 remain classified as having **negligible** bat roosting potential.



Photograph 14: Showing the northern elevation of B1



Photograph 15: Showing the eastern elevation of B1



Photograph 16: Showing the southern elevation of B1



Photograph 17: Showing a section of the southern and western elevations of B1



Photograph 18: Showing a section of roof void of B1



Photograph 19 Showing a section of roof void of B1



Photograph 20: Showing a section of roof void of B1



Photograph 21: Showing a section of roof void of B1

Nocturnal Surveys

- 5.61 Nocturnal surveys undertaken in May 2020 confirmed a likely absence of bat roosts from B1. These surveys are to be updated again in May and June 2023 to further confirm the presence / likely absence of roosting bats and inform appropriate mitigation where necessary. The results of these surveys will be provided in an addendum report in June 2023.

Birds

- 5.62 The desk study returned very few records of bird species within a 1km search area, those that were returned were of moderate conservation concern.
- 5.63 Mature trees, introduced shrub and scrub habitats provide suitable nesting and foraging habitat for a range of urban fringe bird species.
- 5.64 Species recorded during the walkover in 2019 comprised blue tit *Cyanistes caeruleus*, long-tailed tit *Aegithalos caudatus*, chaffinch *Fringilla coelebs*, wren *Troglodytes troglodytes* and magpie *Pica pica*. A number of vacant nests were observed within the trees and dense shrub planting during the survey.
- 5.65 Breeding birds are therefore considered an IEF and will be considered further in the assessment with importance at **Local** level.

Aquatic Habitats

- 5.69 No ponds were identified within the application site. Reference to 1:25,000 ordnance survey maps, and other publicly available information revealed three residential ponds within 500m of the Site. An assessment has been made to determine whether any offsite ponds have connectivity to the Site and whether they would then constitute an IEF with regards to GCN. Further details regarding the ponds, the assessment, their location and any background information is detailed below in Table 3.

Table 3 – Waterbodies identified within 500m of application site (refer to Figure 1)

Pond Ref.	Locality	Straight Line Distance / Direction. Distance via Optimal Connective Habitat in (m)	OS Grid Reference	Connectivity to Application Site
P1	Residential property, off Brookfields Rd.	Straight line distance: 85m E Connective Distance: >95m	SE161261	Garden pond with residential garden. No potential connective habitat. Further residential properties and minor road providing a barrier to dispersal. No Likely Potential Constraint.
P2	Residential property, off Westfield Ln	Straight line distance: 246 SE Connective Distance: >320m	SE162261	Garden pond with residential garden. Further residential properties, road and garden allotments providing a barrier to dispersal. The distance is also beyond the upper limit of routine migratory range (250m). No Likely Potential Constraint.
P3	Residential property, off Rooks Cl	Straight line distance: 180 N Connective Distance: >300m	SE159264	Garden pond with residential garden. Further residential properties, road and garden allotments providing a barrier to dispersal. The distance is also beyond the upper limit of routine migratory range (250m). No Likely Potential Constraint.

Terrestrial Habitats

- 5.70 Habitats on site such as introduced shrub, poor semi-improved grassland, scrub, trees provide some structural diversity to provide shelter and foraging habitat for GCN. Although there are suitable habitats present on-site, no waterbodies were present within 500m that were potentially commutable by GCN. Furthermore, there are potential dispersal barriers such as roads and residential development present between the Site and the GCN record.
- 5.71 A maximum routine migratory range has been estimated at approximately 250m from a breeding pond (Franklin, 1993³¹; Oldham and Nicholson, 1986³²; Jehle, 2000³³). Further research from Kovar *et al.* (2009)³⁴ concluded that of populations sampled GCN were found the farthest away at 249m from water. Published research from Natural England

³¹ Franklin, P.S (1993) The migratory ecology and terrestrial habitat preferences of the great crested newt *Triturus cristatus* at Little Wittenham Nature Reserve. M.Phil Thesis. De Montfort University. Dept of Applied Biology and Biotechnology.

³² Oldham, R.S and Nicholson, M (1986) Status and Ecology of the warty newt *Triturus cristatus*. Final Report. Leicester Polytechnic under contract to Nature Conservancy Council.

³³ Jehle, R (2000) The Terrestrial Summer Habitat of Radio-tracked Great Crested Newts *Triturus cristatus* and Marbled Newts *Triturus marmoratus*. *Herpetological Journal* 10 (4) 137-142.

³⁴ Kovar, R; Brabe, M; Vita, R and Bocek, R (2009) Spring migration distances of some Central European amphibian species. *Amphibia-Reptilia* 30(3) 367-378.

(2004)³⁵ have also concluded that although GCN can use terrestrial habitat up to 500m of a breeding pond, they more commonly move between ponds that are within 250m of each other.

- 5.72 In conclusion GCN are considered unlikely to be present within the Site during their breeding or terrestrial phase and as such do not represent an IEF and will not be subject to further assessment.

Reptiles

- 5.73 No reptiles were identified within the 1km search area.
- 5.74 Introduced shrub, trees and poor semi-improved grassland provided some limited structural diversity that may provide a resource for this species group. Wood chip and other brash piles could also provide potential refuge resource. However, these features are of a limited extent and anticipated to be a temporary feature. Beyond the site the surrounding habitats are also considered suboptimal for this species group.
- 5.75 In conclusion reptiles are considered unlikely to be present within the site and therefore do not represent an IEF.

Other Protected / Notable Species

- 5.76 Habitats within the survey area have the potential to support hedgehog *Erinaceus europaeus*. The hedgehog population in Britain has rapidly declined in recent years with a third thought to be lost since 2020³⁶. Hedgehogs are listed as a Species of Principal Importance under NERC Act (2006) and as such are a material consideration during the planning process.
- 5.77 As such, this species would be considered important at a **Local** level and, therefore, has been included within the impact assessment.

Summary of Ecological Features & Further Assessment Requirements

The table below provides a summary of the ecological features, their importance, geographical significance and impacts based on the current Site Layout Plan 2023-018-001 Rev C by DK Designs. For ecological features on which further assessment is required please see Table 4 below.

³⁵ English Nature (2004) English Nature Research Reports 576 *An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus*.

³⁶ Wilson E & Wembridge, D (2018) *The State of Britain's Hedgehogs 2018*. British Hedgehog Preservation Society and Peoples Trust for Endangered Species.

Table 4 - Summary of Relevant Features & Further Assessment Requirements

Ecological Feature	Geographical Context	Important Ecological Feature IEF	Justification of impacts	Further Consideration
West Yorkshire Habitat Network (WHN)	District	Yes	Site outside WHN. At closest point c.810m south-east.	Yes
Poor semi-improved Grassland	N/A	No	Habitat loss. Common and species poor.	No
Ephemeral / Short Perennial Vegetation	N/A	No	Habitat loss. Common and species poor.	No
Introduced Shrub	N/A	No	Habitat loss. Dominated by non-native species.	No
Dense / Continuous Scrub	N/A	No	Habitat loss. Dominated by non-native species.	No
Mixed Woodland	Local	Yes	Some loss. Mature trees with TPOs (20 in total) to be retained.	Yes
INNS	N/A	N/A	Potential spread from development.	Yes
Generalist Bat Species	Local	Yes	Habitat removal and potential light impacts on commuting and foraging bats.	Yes
GCN	N/A	No	Limited suitable terrestrial habitats. No aquatic habitats on site. One record but potential barriers to dispersal. GCN considered unlikely to be present.	No
Reptiles	N/A	No	Reptiles are unlikely to be present.	No
Breeding Birds	Local	Yes	Loss of potential breeding habitat.	Yes
Hedgehog	Local	Yes	Potential harm and loss of habitat.	Yes

6.0 IMPACT ASSESSMENT

PROPOSALS

- 6.1 The proposals comprise the demolition of the existing structures on site and clearance of scrub and poor semi-improved grassland habitats to facilitate the construction of 15 new residential dwellings.

WEST YORKSHIRE WILDLIFE HABITAT NETWORK (WHN)

Potential Impacts

- 6.2 Given the distance between the Site and the West Yorkshire WHN, no impacts are expected upon the WHN as a result of the proposals.

Mitigation Measures

- 6.3 None required.

Residual Effect

- 6.4 As no negative impacts are anticipated, the residual effect upon the network would be **Neutral**.

MIXED WOODLAND

Potential Impacts

- 6.5 A number of young and semi-mature trees have been felled to facilitate the development. Twenty trees covered under a TPO have been retained along the eastern and southern boundary. This would be a **not-significant adverse** effect at a **Local** level
- 6.6 Construction activity may lead to impacts to retained specimens through accidental damage, roost compaction or dust deposition. In severe cases this could lead to tree losses. In the absence of mitigation this would be a **not-significant adverse** effect at a **Local** level.
- 6.7 Direct lighting of retained trees at the boundaries of the site could also lead to nocturnal species avoiding this habitat. This could lead to a **not-significant adverse** effect at a **Local** level.

Mitigation Measures

- 6.8 Root protection areas will be implemented to protect the retained trees in line with document BS5837 (British Standard, 2012)³⁷ and pollution prevention measures will also be implemented during construction, through the adherence of best practice working methods. These measures will protect the retained trees during the construction phase.

³⁷ British Standard (2012) Trees in relation to Design, Demolition and Construction <https://www.rbkc.gov.uk/idxWAM/doc/Other-1592559.pdf?extension=.pdf&id=1592559&location=Volume2&contentType=application/pdf&pageCount=1>

- 6.9 A sympathetic lighting scheme will be implemented in accordance with BCT guidance (2018)³⁸, with particular avoidance of light spill upon boundary habitats.
- 6.10 The above must be outlined within a Construction and Environment Management Plan: Biodiversity (CEMP).

Residual Effects

- 6.11 The impacts to the retained trees would be **Neutral** following the mitigation outlined above, however the permanent loss of trees onsite would result in a **not-significant adverse effect** at a **Local** level.

Compensation / Enhancements

- 6.12 New tree planting is proposed throughout the site primarily in association with new residential gardens. Small areas of native scrub planting are proposed for areas outside of residential garden boundaries (refer to Landscape Masterplan R/2679/1 March 2023 by fda landscape). Compensation measures would help offset some of the losses on site however the overall effect is still likely to be **not significant adverse effect** at a **Local** level.

SCHEDULE 9 / INNS

- 6.13 A variety of cotoneaster, rhododendron, and a variety of montbretia, were found within the Site and are included within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Potential Impacts

- 6.14 Development of the site could potentially lead to the unintentional spread of these species outside the redline boundary. This would be a breach of the Wildlife and Countryside Act 1981 (as amended) as it is an offense to plant or otherwise cause these species to grow in the wild.

Mitigation Measures

- 6.15 In order to ensure compliance with the legislation, the development will be guided by a Construction Environmental Management Plan: Biodiversity (CEMP) for the control and eradication of these species using methods recommended by DEFRA³⁹.

Residual Effect

- 6.16 With the implementation of the above mitigation the residual impact would be **neutral**.

GENERALIST BAT SPECIES

Potential Impacts

³⁸ BCT & Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and artificial lighting in the UK. Bats and the Built Environment series.

³⁹ Department of Food and Rural Affairs, 2013, Guidance: Japanese knotweed, Giant Hogweed and Other Invasive Species available at <https://www.gov.uk/japanese-knotweed-giant-hogweed-and-other-invasive-plants>

- 6.17 Some habitats of value to commuting and foraging bats will be lost to facilitate the development. General foraging and commuting activity recorded during the nocturnal surveys was generally low. As such loss of the trees and scrub is not considered to have a significant effect on the local bat population. This should therefore have a **not significant adverse effect** at a **Local** level.
- 6.18 The mature TPO trees are to be retained on the western edge of the site and will become part of the residential gardens. Potential impacts during the construction phase could result in the degradation of retained trees from physical damage, dust and pollution events. This could result in a temporary reduction in value or even a permanent effect if this leads to habitat loss leading to a **not significant adverse effect** at a **Local** level, prior to mitigation.
- 6.19 Post development impacts could occur from development lighting on retained trees, new planting and bat / bird boxes. This could lead to a temporary or permanent loss of use of these habitats, again resulting in a **not significant adverse effect** at **Local** level, prior to mitigation.

Mitigation Measures

- 6.20 Root protection areas to protect the retained trees and pollution prevention measures during construction through the implementation of a CEMP will protect these habitats during the construction phase.
- 6.21 The implementation of a sensitive lighting design in accordance with BCT Guidance⁴⁰, with particular avoidance upon hedgerows and new / enhanced habitats.

Residual Effect

- 6.22 The significance of residual effects due to loss of vegetation is considered to be **neutral** following mitigation.
- 6.23 The significance of residual effects due to physical damage, dust, pollution or lighting of retained habitats is considered to be **neutral** following mitigation.

Compensation / Enhancements

- 6.24 New residential gardens along with the retained trees will provide foraging and commuting opportunities post development.
- 6.25 Installation of a variety of bat boxes on retained trees and integrated into proposed buildings which are likely to use the habitats created within the site.
- 6.26 These compensation measures would likely result in a **not-significant positive effect** at a **Local** level for generalist bat species.

⁴⁰ BCT & Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and artificial lighting in the UK. Bats and the Built Environment series.

BREEDING BIRDS

Potential Impacts

- 6.27 The proposals will result in the permanent loss of scrub and trees from the site, which is under the footprint of the proposed development. Therefore, the loss of this habitat would have a **not significant adverse effect** at a **Local** level.
- 6.28 There is also a risk of disturbance, killing or injury of nesting birds during construction phase, which would be a breach of legislation.

Mitigation Measures

- 6.29 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). Where it is not feasible, affected areas should be checked for nests in advance by an experienced ecologist. Any active nests identified should be left with a minimum buffer of 5m to be identified by the ecologist, until such time as all birds have fledged.

Residual Effect

- 6.30 The loss of nesting habitat is not possible to mitigate for and will result in a **not significant adverse effect** at a **Local** level.
- 6.31 Impacts from the disturbance, killing or injury of nesting birds are considered to be **neutral** following mitigation measures.

Compensation / Enhancements

- 6.32 The installation of a variety of nest boxes for birds which are likely to use the habitats within the site. This would likely result in a **not-significant positive effect** at a **Local** level for urban edge bird species.

HEDGEHOG

Potential Impacts

- 6.33 The loss of potential foraging habitat and disturbance of nesting habitats to facilitate development. This is thought to have a **not significant adverse effect** at **Local** level.

Mitigation Measures

- 6.34 Vegetation removal has a risk of causing injury or death to this species. 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 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.

- 6.35 Post development garden habitats (i.e., amenity grassland) provide suitable foraging habitat for hedgehog. However, in order for them to remain accessible, hedgehog access gaps should be incorporated into the boundary fences.
- 6.36 Fencing and buffers to protect the retained trees and pollution prevention measures during construction.

Residual Effect

- 6.37 The significance of residual effects is considered to be **neutral**.

7.0 RESIDUAL EFFECTS

- 7.1 Proposals will result in permanent losses of habitats under the footprint of the development. The habitats lost are of low ecological importance. Mitigation through design has been utilised to avoid impacts to valuable, onsite habitats, including the TPO treeline which is largely retained within the scheme.
- 7.2 The mitigation measures are provided above. Impacts will be further minimised through careful control of construction activities through an industry best practice CEMP. This also reduces the impacts on important faunal species that may utilise these habitats, such as foraging and commuting bats. As a result, all other predicted effects on important ecological features are not anticipated to be significant.
- 7.3 With the implementation mitigation measures outline above **not significant negative** residual effects are envisaged.

8.0 CUMULATIVE EFFECTS

- 8.1 The residual effects for the Important Ecological Features identified above did not result in a significant negative residual effect. In addition, due to the lack of other applications in close proximity of the Site, no cumulative effects in association with other developments are anticipated.

9.0 MONITORING

- 9.1 Monitoring is recommended to ensure that effective mitigation is maintained during construction and operation. This could include a check every six months during construction and throughout habitat establishment and management.

10.0 BIODIVERSITY ENHANCEMENTS

- 10.1 In accordance with NPPF (2021), Environment Act (2021) and Kirklees Local Plan Policy LP30, it is specified that a proposed development scheme should seek a net gain in value for wildlife by incorporating ecological enhancements in and around the development.

10.2 In addition to the enhancements already stated thus far, the following could also be included for this site:

- Areas of lawn within the gardens will use a forb-rich mix suitable for the local area or flowering lawn mix as an alternative to a standard rye grass mix.
- A variety bat and bird boxes are to be installed on new buildings or retained trees to increase the availability of roosting and nesting habitat for these species. In line local policy LP30 and Kirklees Housebuilders Design Guide SPD (June, 2021)⁴¹ integral bat boxes and swift bricks should be incorporated into new residential properties.
- Native fruit and flower bearing species are to be included with the detailed planting scheme to enhance and support an invertebrate assemblage that will provide an increased foraging resource for insectivorous species such as bats.
- Where appropriate, an ecological management plan should be produced and adhered to for all retained and created habitats in order for them to maintain existing value and/or increase their value, making sure that the management is appropriate for the development in the long-term.

⁴¹ Kirklees Council (2021) Housebuilders Design Guide SPD June 2021 accessed March 2023 <https://www.kirklees.gov.uk/beta/planning-policy/pdf/housebuilders-design-guide-spd.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
Poor semi-improved grassland	
Cock's foot	<i>Dactylis glomerata</i>
Common groundsel	<i>Senecio vulgaris</i>
Common mallow	<i>Malva sylvestris</i>
Common nettle	<i>Urtica dioica</i>
Common ragwort	<i>Jacobaea vulgaris</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Creeping thistle	<i>Cirsium arvense</i>
Herb robert	<i>Geranium robertianum</i>
Meadow grass	<i>Poa spp.</i>
Perennial rye-grass	<i>Lolium perenne</i>
Red fescue	<i>Festuca rubra</i>
Rose-bay willowherb	<i>Chamerion angustifolium</i>
Spear thistle	<i>Cirsium vulgare</i>
Yorkshire fog	<i>Holcus lanatus</i>
Introduced shrub	
Bramble	<i>Rubus fruticosus</i> agg.
Cherry laurel	<i>Prunus laurocerasus</i>
Common nettle	<i>Urtica dioica</i>
Cotoneaster	<i>Cotoneaster</i> spp.
Dogwood	<i>Cornus sanguinea</i>
Holly	<i>Ilex aquifolium</i>
Montbretia	<i>Crocsmia</i> sp.
Snowberry	<i>Symphoricarpos albus</i>
Raspberry	<i>Rubus</i> sp.
Dense / continuous scrub	
Bramble	<i>Rubus fruticosus</i> agg.
Elder	<i>Sambucus nigra</i>
Snowberry	<i>Symphoricarpos albus</i>
Cock's foot	<i>Dactylis glomerata</i>
Common ragwort	<i>Jacobaea vulgaris</i>
Creeping buttercup	<i>Ranunculus repens</i>
Common hawthorn	<i>Crataegus monogyna</i>
Common nettle	<i>Urtica dioica</i>
Mixed woodland (recently felled) and broadleaved trees	
Ash	<i>Fraxinus excelsior</i>
Sycamore	<i>Acer pseudoplatanus</i>
Lime	<i>Tilia x europaea</i>
Wood avens	<i>Geum urbanum</i>
Foxglove	<i>Digitalis purpurea</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Common nettle	<i>Urtica dioica</i>
Bramble	<i>Rubus fruticosus</i> agg.

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



FUTURES ECOLOGY

Carrwood Park, Swillington Common Farm, Selby Road, Leeds, LS15 4LG
Telephone: 01133 372185

Unit 9, The Tangent Business Hub, Weighbridge Road, Shirebrook,
Mansfield, Derbyshire, NG20 8RX
Telephone: 01623 749709

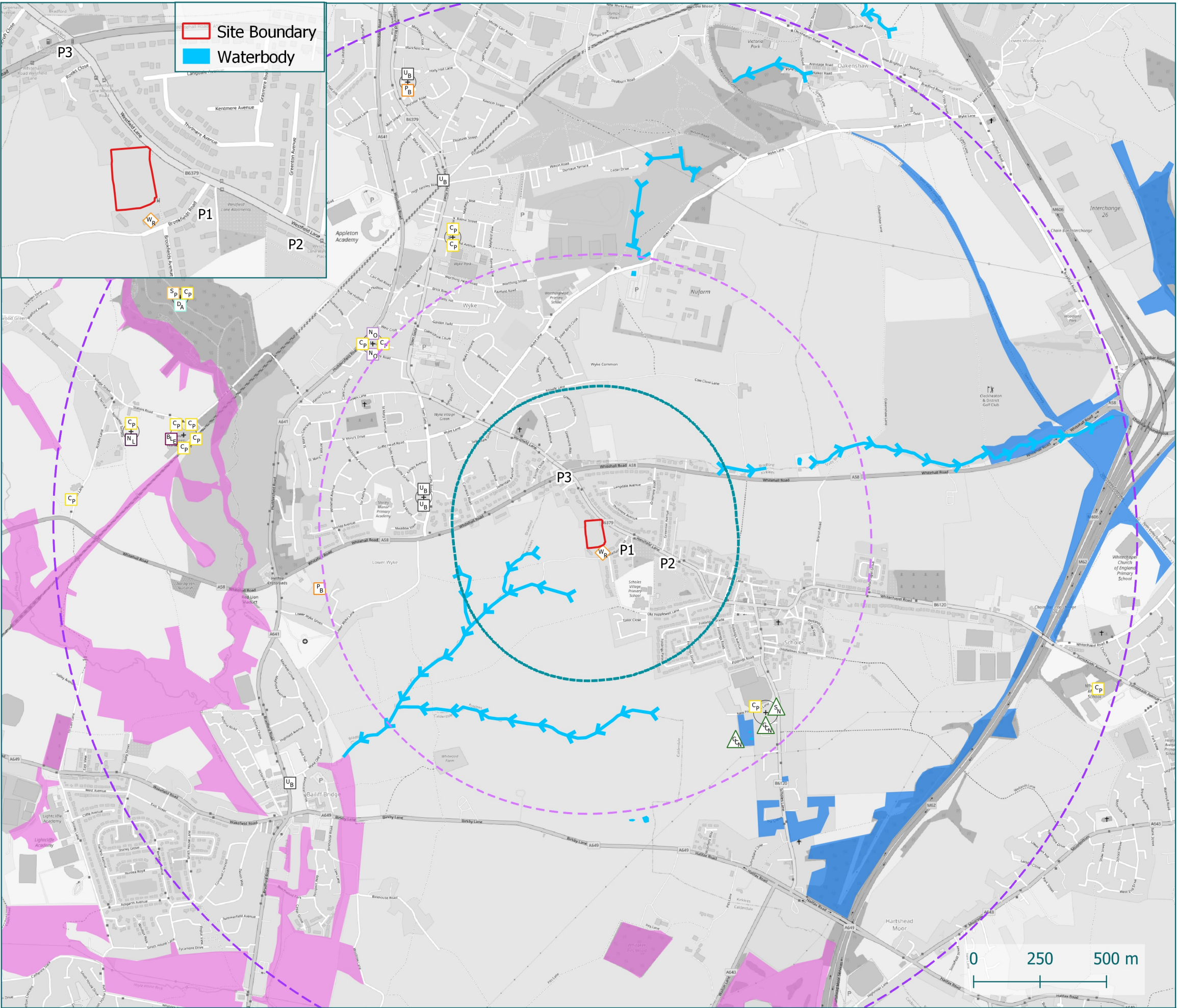
Key

- Site Boundary
- 500m Site Buffer
- 1km Site Buffer
- 2km Site Buffer
- Designated Sites
 - Kirklees Wildlife Habitat Network
 - Calderdale Wildlife Habitat Network
- Waterbodies

Waterbody Line

Notable Species

- Common pipistrelle bat
- Soprano pipistrelle bat
- Pipistrelle bat species
- Pipistrelle bat species
- Noctule bat
- Leisler's bat
- Daubenton's bat
- Brown long-eared bat
- Unidentified bat species
- Wren
- Great crested newt
- Smooth newt



Client: Yorkshire Choice Homes
Project: FE257 Westfield Lane, Wyke
Title: Figure 1 - Site Location & Desk Study Results Plan

Plan Reference: FE257_01
Project Reference: FE257
Report Reference: EcIA01

Author: TS / EP
Date: 16/3/2023
Scale: NTS@A3



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Westfield Lane, Wyke\QGIS\1_Plans\FEXX_Desk Study Plan.qgs
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FUTURES ECOLOGY

Carrwood Park, Swillington Common Farm, Selby Road, Leeds, LS15 4LG

Telephone: 01133 372185

Unit 9, The Tangent Business Hub, Weighbridge Road, Shirebrook, Mansfield, Derbyshire, NG20 8RX

Telephone: 01623 749709

Key

Site Boundary

Phase 1 Habitats

- Buildings
- Hardstanding
- Introduced shrub
- Cultivated/disturbed land - ephemeral/short perennial
- Poor semi-improved grassland
- Scrub - dense/continuous (mixed scrub)
- Scrub - dense/continuous (bramble scrub)
- Mixed woodland - recently felled
- Coniferous trees - recently felled
- Wall
- Dry stone wall
- Fence
- Broadleaved tree
- Target note
 - TN1 - Tyre tracks creating bare ground within grassland
 - TN2 - Approximate location of Montbretia



Client: Yorkshire Choice Homes
Project: 115 Westfield Lane, Wyke
Title: Figure 2 - Phase 1 Habitat Plan

Plan Reference: FE257_02
Project Reference: FE257
Report Reference: EclA01

Author: MB
Date: 27/2/2023
Scale: 1:500



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