



FUTURESECOLOGY

Den Architecture

Upper Langley Farm, Scissett, Huddersfield

PRELIMINARY ECOLOGICAL APPRAISAL REPORT

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1.0 **EXECUTIVE SUMMARY**

- 1.1 The site comprised bare ground, buildings, improved grassland, tall ruderal vegetation, woodland, scattered scrub / trees, stone / wood / soil piles, hedgerows, a tree line and a stone wall. Hedgerows and the broadleaved woodland are Habitats of Principal Importance (HPI) under the NERC Act 2006. These are fully retained within the development. A sensitive lighting design and appropriate working methods must be employed in accordance with an arboricultural method statement to prevent impacts to these habitats.
- 1.2 The site falls within the Kirklees Wildlife Habitat Network, a Strategic Green Infrastructure Zone, Biodiversity Opportunity Zone and Greenbelt. Habitats of the greatest importance within the site and to KWHN etc. are the woodland and hedgerows, all of which are retained thus maintaining the connective linkages of the KWHN etc. There is not considered to be a significant alteration to the current usage of the site from the development proposal. Measures to prevent lighting impacts are outlined within this report. The development also provides the opportunity to create a new connective linkage and improve the hedgerow connections within the KWHN.
- 1.3 The desk study highlighted Indian balsam *Impatiens glandulifera* along the eastern boundary of the site. None was identified within the site. It is likely that this record is from Park Gate Dike. As a precaution immediately prior to commencement of the development a check of the site will be undertaken (between April – September) by a suitably qualified ecologist or invasive plant species specialist to ensure that the species is not present prior to works.
- 1.4 Five trees were identified within the site with bat roosting potential. These trees are all retained and are to be unaffected by the development. Habitats of greatest value to bats are all retained. Minimal and temporary habitat losses of low / negligible ecological value habitats are expected to result in a negligible effect to the local bat population. No further surveys for bats are considered to be necessary.
- 1.5 A medium population of GCN are known within 500m of the site. A Risk Assessment (outlined within this report) has concluded that there is highly unlikely to be an offence committed against GCN as a result of this development providing that risk avoidance measures described under a non-licensable method statement is adhered to (see Appendix D). Nor will the development result in any significant impacts on the local GCN population. No further surveys for GCN are required.
- 1.6 The proposal requires the removal of some habitats with limited potential for nesting birds. These works should be undertaken (where possible) outside the bird nesting season or appropriate ecologist checks to be undertaken prior to vegetation clearance.
- 1.7 Park Gate Dike runs beneath a bridge on the access track and along the northern boundary of the site. The Dike is considered to be suitable for a range of species. Works should be undertaken in accordance with current best practice pollution prevention guidance. If works are to affect the channel / banks of the Dike a further assessment / survey would be required.
- 1.8 A number of potential ecological enhancements are provided within Section 5.

2.0 INTRODUCTION

- 2.1 The following report has been prepared by Futures Ecology Limited on behalf of Den Architecture. It provides the results of an extended phase 1 habitat survey and preliminary protected species survey at Upper Langley Farm, Scissett, Huddersfield.
- 2.2 The key objectives of the Preliminary Ecological Appraisal Report (PEAR) 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 mitigation measures likely to be required.
 - identify the opportunities offered by the potential project to deliver ecological enhancement.

SITE LOCATION AND CONTEXT

- 2.3 The site is located north west of Clayton West, north of Scissett, centred on grid reference: SE 25215 11240. The site comprised 2ha in extent of bare ground, improved grassland, broadleaved woodland, piles of wood / stone / soil / scrap, portable buildings, hedgerows, a tree line and small areas of scattered trees, tall ruderal vegetation and scattered scrub.
- 2.4 The landscape surrounding the site comprised Kirklees Light Railway corridor to the south with residential housing beyond. To the north lies Park Gate Dike and arable fields. To the east and west are pasture fields.

DEVELOPMENT PROPOSALS

- 2.5 The development proposal is for the construction of an agricultural dwelling, associated outbuildings and permanent access track. It is not currently known if the bridge crossing Park Gate Dike will require reinforcing. It is anticipated that further testing will be undertaken to determine this at a later stage.

3.0 METHODOLOGY

DESK STUDY

- 3.1 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 site and surrounding areas.

¹ www.google.com/maps

² www.magic.defra.gov.uk

- 3.2 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).
 - The West Yorkshire Bat Group (WYBG).
 - Natural England's Open Dataset³.
- 3.3 Relevant data requested included records of protected or notable species and sites designated for nature conservation interest.
- 3.4 The search area for designated sites and protected species is determined by the likely Zone of Influence⁴ 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 Act (NERC) 2006 and local Biodiversity Action Plan (LBAP) species within 1km.

FIELD SURVEY – HABITATS

Extended Phase 1 Survey

- 3.5 The survey was undertaken on 7th February 2020 during weather conditions that were calm and dry. Survey methodology followed guidance from Joint Nature Conservation Committee (JNCC) 2016⁵ comprising a walkover of the site mapping (using JNCC standard habitat codes) and broadly describing and classifying the principal habitat types and identifying the dominant plant species present within each habitat type, noting any features of interest. Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.
- 3.6 Habitats were also assessed for their potential to support protected or notable species including any incidental sightings of birds recorded during the walkover. Where

³ <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>

⁴ 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.

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

potentially suitable habitats were observed during the scope of this assessment, detailed protected species surveys were undertaken using methodology detailed below.

- 3.7 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.

Hedgerows

- 3.8 Any hedgerows present within the application site were assessed against the Wildlife and Landscape criteria contained within the Statutory Instrument No: 1160 – The Hedgerow Regulations 1997⁶ to determine whether they qualified as an ‘Important Hedgerow’ under the regulations. It should be noted that hedgerows may also qualify as ‘Important Hedgerows’ under the Archaeology and History criteria of this Act, which is outside the scope of this assessment.
- 3.9 In addition, any hedgerows present were also surveyed using the Hedgerow Evaluation and Grading System (HEGS)⁷. This method assesses the hedgerows by recording canopy species composition, ground flora and climber species. Measurements are taken regarding, the structure of the hedgerows, which include height, width and gaps present, as well as associated features such as the number and species of tree standards, banks, ditches and grass verges.
- 3.10 Each hedgerow is given a grade using the HEGS system with the suffixes ‘+’ and ‘-’, which represent the upper and lower limit of each grade. The grade represents a continuum on a scale from 1+ (the highest score and also hedges of the greatest nature conservation priority) as follows;

Table 1: Nature Conservation Value of Hedgerows

Grade	Value of Hedgerow
-1, 1, 1+	High to Very High
-2, 2, 2+	Moderately High to High
-3, 3, 3+	Moderate
-4, 4, 4+	Low

Hedgerows - Habitat of Principal Importance under Section 41 of the NERC Act 2006

- 3.11 All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are Habitats of Principal Importance (as described by the UK Biodiversity Action Plan (BAP) Hedgerow Habitat Action Plan (HAP)), where each UK country can define the list of woody species native to their respective country. Therefore, the percentage abundance of woody species contained within the hedgerows was recorded.

⁶ DEFRA (1997) The Hedgerow Regulations 1997: A Guide to the Law and Good Practice, London HMSO.

⁷ Clements, D.K. & Tofts, R.J. (1992) Hedgerow Evaluation and Grading System (HEGS): A methodology for the ecological survey evaluation and grading of hedgerows.

FIELD SURVEY – FAUNA

- 3.13 The status and level of activity associated with a sett are categorised using the following information;
- Main sett: usually continuously used with significant signs of activity, including a large number of holes and spoil mounds.
 - Annexe sett: usually found close to a main sett and connected to it by well used paths. These setts are not continuously occupied.
 - Subsidiary: lesser-used setts usually comprising a few holes and without associated well-used paths.
 - Outlier: one or two holes without well-worn paths, with very sporadic use.
- 3.14 The level of activity is determined by the following parameters.
- Active: clear of debris, trampled spoil mounds and obviously active e.g. presence of prints, hair and bedding.
 - Disused: partially or completely blocked or collapsed.

Bats**Internal & External Building Visual Inspection**

- 3.15 All buildings within the site boundary were assessed for their potential to support roosting bats using statutory guidance (Natural England, 2019)¹⁰ and best practice survey methodology (Collins, 2016¹¹ and Mitchell-Jones, A.J. and McLeish, A.P. (eds), 2004)¹². The survey was undertaken by an ecologist with a Natural England level 2 class licence to survey for bats (reference number: 2015-16150-CLS-CLS).
- 3.16 The building was 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

⁸ <https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects#survey-methods> (accessed December 2019)

⁹ Harris, S., Creswell, P., & Jefferies, D. 1991. *Surveying Badgers*. The Mammal Society.

¹⁰ Bats: surveys and mitigation for development projects: <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects> (accessed 12/11/2019)

¹¹ 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

¹² Mitchell-Jones, A.J. and McLeish, A.P. (eds) (2004) *Bat Workers' Manual (3rd edn)*. JNCC, Peterborough.

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.

- 3.17 Where accessible, 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.
- 3.18 An assessment was made on the level of bat roosting potential offered by the structures, based on the presence of the features detailed above. Table 2 below broadly classifies the potential categories and discusses the relevance of such features, where present.

Ground Based Tree Assessment

- 3.19 All trees to be affected by the proposals within the site boundary were assessed for their potential to support roosting bats using statutory guidance (Natural England, 2019)¹³ and best practice survey methodology (Collins, 2016¹⁴ and Mitchell-Jones, A.J. and McLeish, A.P. (eds), 2004)¹⁵. The survey was undertaken on the 7th and 13th November 2019 by an ecologist with a Natural England level 2 class licence to survey for bats (reference number: 2015-16150-CLS-CLS).
- 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, holes / cavities, loose bark, cracks / splits, occluded bark and gaps behind ivy stems (please note that this list is not exhaustive) were sought (Based on P16, *British Standard 8596:2015*¹⁶). Other factors such as orientation of the feature, its height from the ground, the direct 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.
- 3.21 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 2 below broadly classifies the potential categories and discusses the relevance of such features, where present. The British Standard Document¹⁷ groups trees with moderate and high potential, within Table 2 below these have been separated.

Table 2 - 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).

¹³ Bats: surveys and mitigation for development projects: <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects> (accessed 12/11/2019)

¹⁴ 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

¹⁵ Mitchell-Jones, A.J. and McLeish, A.P. (eds) (2004) *Bat Workers' Manual* (3rd edn). JNCC, Peterborough.

¹⁶ British Standard (2015) BS 8596:2015 *Surveying for bats in trees and woodland – Guide*, October 2015.

¹⁷ British Standard, (2015), BS 8596:2015 *Surveying for bats in trees and woodland – Guide*, October 2015.

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 of 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.
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.

Foraging / Commuting Habitat

- 3.22 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.

Habitat Suitability Index (HSI) Assessment

- 3.24 All ponds within the application site and where accessible within 500m of the site were evaluated using the HSI scoring system development by Oldham *et al* (2000)¹⁹.
- 3.25 The scoring system produces a value of habitat suitability calculated from scores achieved under a variety of categories which include; the location within the UK, pond area, frequency of drying out, water quality, percentage shade, presence of water fowl, presence of fish, number of other ponds within 1km, quality of surrounding terrestrial habitat, percentage coverage by macrophytes.

Pond suitability is then determined using the scale shown below in Table 3.

Table 3 – HSI Scores as a Measure of Pond Suitability

HSI Score	Pond Suitability
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

GCN Terrestrial Habitats

- 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

¹⁸ Natural England: *Standing Advice Sheet: Great Crested Newts* Paragraph 4: 4.1

¹⁹ Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M (2000) Evaluating the suitability of habitat for the great crested newt *Triturus cristatus*. *Herpetological Journal* 10(4), 143-155pp.

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)²⁰, and the Froglife Advice Sheet 10 – Reptile Survey (Froglife 1999)²¹.

Otter

- 3.28 This survey was conducted on 7th February 2020. The survey was undertaken on Park Gate Dike that runs beneath the access track, and north of the site boundary, including a 100m stretch east and west of the site boundary. The survey was carried out by suitably experienced ecologist.
- 3.29 Survey methodology attempted to determine the status of otters along the stretch of Park Gate Dike adjacent the proposed site. The methodology followed that of the full survey detailed in the New Rivers and Wildlife Handbook²².
- 3.30 Due to the unlikely event of actual observation, the survey concentrated on locating field signs indicating otter presence or use. Such field signs include:
- Spraints – characteristic sweet-smelling, black tar-like (where fresh/relatively recent i.e. within a few weeks) or grey crumbly (when old) faecal deposits usually containing fish scales, bones and occasionally invertebrate exoskeleton and bird feathers.
 - Footprints – In good substrate typically asymmetrical and showing five toes arched around a large pad and, depending on substrate, webbing and claw marks. Poorer, generally coarser substrates do not often enable the identification of otter footprints.
 - Additional signs of otter presence may occur, although without additional evidence are usually not conclusive proof of current otter presence:
 - Feeding remains – Remains of fish and aquatic invertebrates
 - Slides/haul-outs – Routes into and out of the water, which are usually associated with terrestrial routes such as short cuts around meanders or along traditionally, used otter paths/routes.
 - Couches/hovers – above ground resting place. Usually associated with cover such as dense scrub, rushes or reed, flood debris or fallen trees. Many couches are rarely used whilst other more so. Difficult to prove use without radio tracking.
 - Holts – below ground resting site usually associated with sprainting. Sometimes used with greater frequency than couches and can be important for breeding (natal holts).

²⁰ Gent, A.H., & Gibson, S.D., eds 1998. *Herpetofauna Workers' Manual*. Peterborough, joint Nature Conservation Committee.

²¹ Froglife 1999. *Froglife Advice Sheet 10: Reptile Survey*. Froglife, London

²² Nigel Holmes, D Ward, P Jose (1994). *The New Rivers and Wildlife Handbook*. Published by Royal Society for the Protection of Birds.

Water Vole

- 3.31 This survey was conducted on 7th February 2020. The survey was undertaken on Park Gate Dike that runs beneath the access track, and north of the site boundary, including a 100m stretch east and west of the site boundary. The survey was carried out by suitably experienced ecologist. Standard methodology outlined within The Water Vole Mitigation Handbook²³ was used which involved searching the banks/margins of the drains and ditches for evidence of:
- Latrines - distinct piles of water vole droppings found near nest sites, at the ranges of territorial boundaries and where the animals enter and leave the water.
 - Burrows - burrow entrances are typically wider than high with a diameter between 4-8cm. Generally, these burrow entrances are located at the water's edge.
 - Feeding Stations - areas with distinct neat piles of chewed lengths of vegetation cut at 45 degrees along pathways or haul out platforms along the water's edge.
 - Footprints - identifiable prints in soft margins of the watercourse.
 - Runways - low tunnels that are pushed through the vegetation and often leading to burrows or feeding stations.
- 3.32 Descriptions of the watercourse were also made to aid any enhancement or mitigation recommendations required.

White Clawed-Crayfish

- 3.33 Park Gate Dike was assessed for its suitability for white clawed-crayfish on the 7th February 2020. This includes consideration of:
- suitable in-channel habitat for refuges.
 - food supply.
 - Flow of the water.
 - suitable water quality.

Other

- 3.34 Any sightings, evidence of or suitable habitats for other protected fauna, local BAP or otherwise notable species including breeding birds, reptiles and invertebrates were recorded during the site visit.

Survey Limitations

- 3.35 The phase 1 habitat survey was undertaken in February which is outside the optimal survey period (April – September) for botanical identification. It is therefore possible that some species of herb / invasive plant species were not visible. However, given the nature of the habitat, species present and the proposed works which will not impact on

²³Dean, M. et al (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. Eds Fiona Matthews and Paul Chanin. The Mammal Society, London.

the surrounding habitats it is considered that sufficient information was gathered to enable the accurate determination of the habitats present and thus enable a robust assessment of the nature conservation value of the site.

- 3.36 Waterbodies which were assessed using the HSI methodology were undertaken outside of the optimum season. The data is therefore considered to be used as a guide.
- 3.37 The water vole survey was undertaken outside of the main survey season mid-April to September. However, if works are to affect the Dike an updated survey is required immediately prior to commencing works.
- 3.38 Not all aspects of Park Gate Dike are accessible to survey due to dense vegetation which limits the view of certain sections of the Dike. Works are at most likely to affect the crossing point of Park Gate Dike, access to undertake suitable assessments and water vole / otter surveys 100m either side this crossing was possible and as such the access is not considered to be a constraint on the overall assessment.

4.0 **RESULTS**

DESK STUDY

Statutory Designated Sites

- 4.1 No designated sites of international nature conservation importance are located within the survey area. One SAC, Denby Grange Colliery Ponds is located c.3.9km north east of the site boundary. The SAC is designated for its large population of GCN.
- 4.2 No nationally or regionally designated sites are located within the survey area or within 2km of the survey area.

Non-Statutory Designated Sites

- 4.3 No non-statutory designated sites of local nature conservation importance are located within the survey area. Three LWS, one LGS and several Habitat of Principal Importance are located within 1km of the survey boundary, see Table 4 below for further details and Figure 1.

Table 4 –Non-Statutory Designated Sites within 1km of the Survey Boundary

Site Name	Designation	Proximity to site (approximate)	Description
Riding Wood	LWS	710m south	Ancient semi-natural woodland & native bluebell <i>Hyacinthoides non-scripta</i> cover
Park Gate Dyke	LWS	675m west	MG5 grassland, public footpath across part of the site
Cliffie Woods Park Quarry	LGS	79-m south east	Lower Coal Measures (Langsettian) and are of Upper Carboniferous age
Blacker Wood	LWS	930m west	Ancient woodland

Site Name	Designation	Proximity to site (approximate)	Description
Deciduous Woodland	HPI	All aspects closest is 10m south of the site	N/A
Ancient Woodland	HPI	975m north west	N/A

Kirklees Wildlife Habitat Network

- 4.4 The majority of the site lies within the Kirklees Wildlife Habitat Network (KWHN). The KWHN has been identified by West Yorkshire Ecology (WYE) as areas connecting “designated sites of biodiversity and geological importance and notable habitat links. It is intended to protect and strengthen ecological links in the district and to adjoining authorities”²⁴.
- 4.5 The site is also identified upon the Kirklees interactive Policy map²⁵ as within the strategic Green Infrastructure zone, Biodiversity Opportunity Zones (Pennine Foothills) and GreenBelt.

Protected / Notable Species

- 4.6 Records of protected and notable species provided by desk study consultees are provided in Table 5 below. The species records have been filtered to comprise protected and / or notable species within 1km of the survey area from the last 20 years. The locations are shown on Figure 1.

Table 5: Summary of Relevant Protected Species Records

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from site centroid (m)
American mink	<i>Mustela vison</i>	WCA Sch9_part1, Invasive and Non-Native Species (INNS)	1	718
Barn owl	<i>Tyto alba</i>	Sch1_part1 Sch9_part1; WYBAP, Kirklees BAP	1	447
Bat species	<i>Chiroptera</i> species	Regs; WCA	7	376
Brown long-eared bat	<i>Plecotus auritus</i>	Regs; WCA; NERC; WYBAP, Kirklees BAP	5	138
Brown / sea trout	<i>Salmo trutta</i>	SFF, NERC, IUCN – Least concern NERC; WYBAP, Kirklees BAP	21	326
Common frog	<i>Rana temporaria</i>	WCA-Sch5_sect9.5a, HabDir-A5, WYBAP	19	311

²⁴ Kirklees Local Plan – Strategy & Policies. Adopted 27 Feb 2019.

²⁵ <https://www.kirklees.gov.uk/beta/planning-policy/local-plan.aspx>

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from site centroid (m)
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Regs; WCA; NERC; WYBAP, LeedsBAP, Kirklees BAP	32	436
Common toad	<i>Bufo bufo</i>	Sch5_sec9.5b; NERC; WYBAP, Kirklees BAP	3	311
Eel	<i>Anguilla anguilla</i>	NERC, IUCN 2001 (Global Red List) - Critically endangered, Kirklees BAP	2	434
Fresh water crayfish	<i>Austropotamobius pallipe</i>	BoCC: Amber; UKBAP; WYBAP	1	610
Grass snake	<i>Natrix helvetica</i>	Sch5_sect9.1 (part) & 9.5; UKBAP; WYBAP; Kirklees BAP	1	314
House sparrow	<i>Passer domesticus</i>	BoCC: Red; UKBAP; WYBAP, Kirklees BAP	1	450
Indian Balsam	<i>Impatiens glandulifera</i>	WCA_Sch 9 INNS	23	111
Kingfisher	<i>Alcedo atthis</i>	Sch1_part1; BoCC: Amber	1	161
Myotis species	<i>Myotis species</i>	Regs; WCA	1	1223
Natterer's bat	<i>Myotis nattereri</i>	WCA Sch5; WYBAP, Kirklees BAP	3	1204
Noctule	<i>Nyctalus noctula</i>	Regs; WCA; NERC; WYBAP, Kirklees BAP	11	138
Otter	<i>Lutra lutra</i>	WCVA Sch5; NERC; WYBAP, Kirklees BAP	3	125
Pipistrelle species	<i>Pipistrellus species</i>	WCA Sch5; NERC, WYBAP	26	138
Smooth newt	<i>Triturus vulgaris</i>	WCA Sch5_sec9.5b; WYBAP	18	255
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Regs; WCA; NERC; WYBAP, Kirklees BAP	6	1204

Species	Latin	Conservation Status	Total No. of Records	Location / Minimum distance of records from site centroid (m)
Willow warbler	<i>Phylloscopus trochilus</i>	BoCC: Amber	1	937

Status Key: HabDir-A2 Habitats Directive Annex 2. HabDir-A3 – Habitats Directive Annex 3. HabDir-A5 - Habitats Directive Annex 5. Regs - The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. WCA – The Wildlife and Countryside Act 1981 (*as amended*). Sch5 – Schedule 5. Sch8 – Schedule 8. Sch9_part1- Schedule 1, Part 1. NERC = England Natural Environment and Rural Communities Act (2006) Section 41. WYBAP – West Yorkshire Biodiversity Action Plan. LeedsBAP -Leeds Biodiversity Action Plan. Kirklees BAP – Kirklees Biodiversity Action Plan BoCC -Birds of Conservation Concern. Bird_RedList_GB_post2001-NT_NonBreeding - IUCN 2001 (GB Bird Red List) - Near threatened non-breeding. RDB: post2001: EN – Red Data Book Endangered.

- 4.7 A search of the MAGIC online resource for European Protected Species Licences (EPSL) issued revealed four EPSL's as outlined within the table below.

Table 6: Summary of EPSL's within 1km of the Site

Species	Location (approximate)	EPSL Reference Number	Years Active
Common pipistrelle	240m south west	2016-21936-EPS-MIT 2016-21936-EPS-MIT-1	2016 to 2021
Common pipistrelle	900m south east	EPSM2009-761	2009 to 2010
		IT	

- 4.8 The entire survey area falls within an area highlighted upon the Leeds City Council Bat Alert Layer on the Natural Environment Map²⁶, this resource indicating area with an increased likelihood of a bat roost being present due to the close proximity to habitat features suitable for bats.

- 4.10 No data is located within 2km of the site from the NE Open Dataset²⁷.

HABITATS

- 4.11 Habitats within the application site are shown on Figure 2. The site predominantly comprised bare ground due to continual usage by vehicles (see Photograph 1).

Improved Grassland

²⁶ <https://leedsc.maps.arcgis.com/apps/webappviewer/index.html?id=8de441b78a354b99aa31f565ef27586d>

²⁷ <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>

- 4.12 A small area to the east of the field comprised improved grassland. This area is heavily grazed by cattle which has resulted in heavy poaching (see Photograph 2 below). Improved grassland also occurs throughout the site with a short sward. The grassland is dominated by perennial rye-grass *Lolium perenne* with abundant creeping buttercup *Ranunculus repens* with locally frequent common mouse-ear *Cerastium fontanum*. Occasional species include moss *Bryophyte* species, common nettle *Urtica dioica*, Yorkshire-fog *Holcus lanatus*. Rare species comprised creeping thistle *Holcus lanatus*, daisy *Bellis perennis*, ragwort *Senecio jacobaea*, thistle *Cirsium* species, ribwort plantain *Plantago lanceolata*, herb-Robert *Geranium robertianum* and dandelion *Taraxacum officinale* agg.. Within the cattle grazed field, white clover *Trifolium repens* was abundant whilst across the rest of the site it was rarely found.



Photograph 1: Bare ground, short improved grassland, spoil mound (north west corner of the site).



Photograph 2: Improved grassland heavily grazed / poached

Bare Ground and Improved / Tall Ruderal Vegetation Patches (Tracks)

- 4.13 The track running northwards from the site comprises bare ground with strips of improved grassland (Photograph 3). Perennial rye-grass is the dominant species present with abundant Yorkshire-fog. Common nettle is locally dominant in small patches. Occasional white clover, cow parsley *Anthriscus sylvestris*, cleavers *Galium aparine* with more rarely found couch grass *Elytrigia* species, creeping buttercup are also present. The track running eastwards comprises bare ground (see Photograph 4). A further track runs along the northern edge of the site boundary this also comprises bare ground (see Photograph 5).



Photograph 3: Track running north



Photograph 4: Track running east



Photograph 5: Track along the northern boundary of the site



Photograph 6: Semi-natural broadleaved woodland

Other

- 4.14 Within the main site areas comprised large piles of wood, stone and soil, whilst numerous other areas were scattered with scrap, old vehicles, caravans and metal containers. It was noted that the stone and wood piles are to be utilised for the construction of the residential dwelling.
- 4.15 Two buildings are also present, these are discussed further within the Bat section below.

Tall Ruderal Vegetation

- 4.16 Two small area of tall ruderal vegetation are also present within the site. A small strip runs along the western boundary of the site. This is dominated by common nettle interspersed with bramble *Rubus fruticosus* agg. Occasional cleavers and rarely found hawthorn *Crataegus monogyna* is also present.

Scattered Scrub / Scattered Trees

- 4.17 Scattered scrub and trees occur infrequently throughout the site. Species include oak *Quercus robur*, beech *Fagus sylvatica*, bramble, hawthorn, ash *Fraxinus excelsior* and silver birch *Betula pendula*.

Tree Line

- 4.18 A small tree line is present in the centre of the site dominated by silver birch with rarely found cherry *Prunus* species, hawthorn and elder *Sambucus nigra*.

Broadleaved Woodland

- 4.19 An area of semi-natural broadleaved woodland is present in the south of the site, on a steep sided bank of Kirklees Light Railway (see Photograph 6). The woodland was dominated by oak. Silver birch is locally dominant with occasional hawthorn and rarely

found ash, field maple *Acer campestre* and holly *Ilex aquifolium*. Bramble dominated the understorey with rarely found bracken *Pteridium aquilinum*, willowherb *Chamerion* species and cow parsley.

Watercourse

- 4.20 Park Gate Dike is a fast-flowing (from west to east) watercourse that runs north of the main site boundary. The track running north and east crosses this watercourse at two points. The watercourse is fairly shallow with deeper pockets occurring at meanders. The width ranges from 1-5m. The base of the watercourse appeared to comprise sediment and rocks. The bank sides varied throughout with shallow stoney / sediment beaches to steep sided vertical bank sides. No aquatic vegetation was noted within the watercourse.



Photograph 7: Park Gate Dike running beneath the access track (looking west)



Photograph 8: Park Gate Dike running beneath the access track (looking east)

Hedgerows

- 4.21 Six hedgerows (H1 to H6) were present within the survey area. Hedgerow H1, H2 and H3 form the northern boundary of the site whilst H4, H5 and H6 form the boundaries of access roads / tracks.

Table 7 – Hedgerow Survey Summary

Hedge	Length (m)	HEGS Grade	Woody Species Present	Other Species	Important Under Hedgerow Regulations	>80% Native Species
H1	45	-2	Hazel <i>Corylus avellana</i> , holly, hawthorn, bramble, bracken	Common nettle, cleaver	No	Yes
H2	30	-2	Silver birch, elder, holly, hazel, dog-rose, crack willow <i>Salix fragilis</i> , hawthorn, bramble	Cleavers	No	Yes
H3	65	3	Hawthorn, ivy <i>Helix hedera</i> , oak, field maple, lime <i>Tilia</i> species, dog rose <i>Rosa</i>	Herb-Robert,	No	Yes

Hedge	Length (m)	HEGS Grade	Woody Species Present	Other Species	Important Under Hedgerow Regulations	>80% Native Species
			<i>canina</i> , hazel, bramble, elder	cleavers, Yorkshire-fog, common nettle		
H4	185	3	Hazel, elder, holly, hawthorn	N/A	Yes, 4 woody species, adjacent Prow with less than 10% gaps & parallel hedge within 15m	Yes
H5	205	+3	Hawthorn, bramble	N/A	No	Yes
H6	100	3	Hawthorn, oak, bramble, ivy	Cleavers, ground ivy <i>Glechoma hederacea</i> , Yorkshire-fog, dandelion, broadleaved dock, bracken, thistle	No	Ye

Invasive Plant Species

- 4.22 From the desk study, Indian balsam was noted to be present along the eastern boundary of the site and along Park Gate Dike which runs along the northern boundary of the site. During the survey this species was not noted. However, it is unlikely that this species would be noted outside of the plant growing season (April – September).

FAUNA

Bats**Buildings**

- 4.24 Two buildings were present on site (see Figure 2 and Appendix B). Building B1 comprised a single storey residential cabin with a pitched bitumen covered roof. Building B2 comprised a site office with a flat metal roof. No roof void was present in either building. No internal or external evidence of roosting bats was identified in association with B1 or B2. The buildings were considered to have negligible potential for roosting bats.

Trees

- 4.25 Five trees were identified within the site boundary with bat roosting potential, see Figure 2. These are outlined within the table below.

Table 8 – Ground Based Bat Tree Assessments

Tree Ref.	Species	PRF's	Evidence	Assessment	Recommendations
T1	Oak	E: Deadwood, crack in branch c.6m W: horizontal crack in branch c.5m Dense ivy	None	Low	Cut ivy at the base prior to removal, allow to die back & removal by hand if required.
T2	Oak	E: broken limbs Dense ivy	None	Low	Cut ivy at the base prior to removal, allow to die back & removal by hand if required.
T3	Field Maple	W: knot hole c.4m, cavity in trunk c.4m, loose bark E: knot hole x2 at c.3 and 4m	Staining at knot hole c.4m E & W	High	Further survey if affected by the development.
T4	Elder	N: Branch cavity x2 upward facing open to rain	None	Negligible	None
T5	Ash	N: knot hole c.4m E: cavity at end of branch c.3m	None	Low	Soft felling of PRF's if required.
T6	Alder	E: knot holes x 3 at c.2m & 4m N: knot hole c.4m	None	High	Further survey if affected by the development.

Bat Foraging / Commuting Habitat

- 4.26 Suitable habitats for bat foraging and commuting occur mainly along the boundaries of the site. This includes the northern boundary hedgerows H1 to H4, tree line, hedgerow H5 / H6 along the eastern track and woodland on the southern boundary.
- 4.27 Areas of improved grassland, tall ruderal vegetation, scrub and scattered trees provide only limited value to foraging bats within the site due to their small size, poor species diversity and structure. The remainder of the site does not provide any value for bats.

GCN

- 4.28 No water bodies are present within the site boundary. The desk study identified numerous records for GCN within 1km of the site. Fifteen waterbodies (P1 to P15, Figure 3) have been identified towards the south and south west of the site within 500m of the site boundary. North of the site no waterbodies other than Park Gate Dike and the River Dearne have been identified within 500m, these form barriers to GCN dispersal.
- 4.29 It is known that one GCN EPSL is still active until 2026 located c.400m south of the site. This is for the Redrow Homes development with planning permission from Kirklees Council (reference number: 2014/91699). Following collaboration with the ecologist from this project and the Countryside Officer from Denby Dale Parish Council background information of the ponds has been established and is presented below along with an updated HSI of accessible ponds within 500m. For full details of the HSI and images of the waterbodies see Appendix C.
- 4.30 Ponds P1, P3 to P7 south of the Kirklees Light Railway Line were constructed between 2010 and 2011 by the Ten Villages Conservation Group who undertake work on conservation projects approximately once a month within Denby Dale Parish²⁸.

Table 9 – Waterbody & GCN Summary

Waterbody Reference	Approximate Distance from the Site Boundary	2012 Aquatic Survey Data ²⁹	2015 Aquatic Survey Data ³⁰	2015 HSI Assessment	Updated HSI 2020*	Notes
P1	195m	GCN Absent	GCN Absent	0.42 Poor	0.62 Average	Constructed 2010 / 2011
P2	180m	Not present in 2012	Pond Not Present in 2015	N/A	0.48 Poor	Newley created pond under the EPSL currently unavailable to GCN as it is within the GCN exclusion area
P3	340m	Peak count 1GCN	Peak count 1 GCN	0.61 Average	0.62 Average	Constructed 2010 / 2011

²⁸ Redrow Homes Ltd & Portman Land Ltd (2012). *Proposed Development of Land to the North of Pilling Lane, Scissett (Scheme A). Environmental Impact Assessment. Volume 1: Environmental Statement.*

²⁹ Redrow Homes Ltd & Portman Land Ltd (2012). *Proposed Development of Land to the North of Pilling Lane, Scissett (Scheme A). Environmental Impact Assessment. Volume 1: Environmental Statement.*

³⁰ SLR (2015). *Appendix C4.2 Land off Pilling Lane, Scissett, Results of 2015 great crested newt surveys.* Ref.424.03336.00003

Waterbody Reference	Approximate Distance from the Site Boundary	2012 Aquatic Survey Data ²⁹	2015 Aquatic Survey Data ³⁰	2015 HSI Assessment	Updated HSI 2020*	Notes
P4	345m	GCN Absent	Peak count 9 GCN, eggs	0.65 Average	0.61 Average	Constructed 2010 / 2011
P5	410m	GCN Absent	GCN Absent	0.41 Poor	0.69 Good	Constructed 2010 / 2011
P6	455m	GCN Absent	GCN Absent	0.41 Poor	0.61 Average	Constructed 2010 / 2011
P7	480m	Peak count 1GCN	Peak count 6 GCN, eggs	0.62 Average	0.52 Below Average	Constructed 2010 / 2011
P8	420m	N/A	Pond not Present in 2015	N/A	No Access / Not Visible	If present pond is within GCN exclusion zone and thus currently unavailable to GCN
P9	250m	N/A	Pond not Present in 2015	N/A	Not Yet Built	
P10	260m	N/A	Access not granted, no GCN previously found (160 Pilling Lane)	N/A	No Access / Not Visible	
P11	340m	N/A	Access not granted, no GCN previously found (130 Pilling Lane)	N/A	No Access / Not Visible	
P12	305m	N/A	Access not granted, pond reported to contain GCN previously (142 Pilling Lane)	N/A	No Access / Not Visible	Desk study reports peak count 1 GCN in 2006 and 12 in 1999
P13	325m	N/A	Access not granted, pond reported to contain GCN previously (140 Pilling Lane)	N/A	No Access / Not Visible	Desk study reports peak count 2 GCN in 2006

Waterbody Reference	Approximate Distance from the Site Boundary	2012 Aquatic Survey Data ²⁹	2015 Aquatic Survey Data ³⁰	2015 HSI Assessment	Updated HSI 2020*	Notes
			Lane)			
P14	380m	N/A	GCN Absent (71 Sunnymead)	0.37 Poor	No Access / Not Visible	N/A
P15	390m	N/A	GCN Absent (71 Sunnymead)	0.32 Poor	No Access / Not Visible	N/A
P16	360m	N/A	GCN Absent (73 Sunnymead)	0.37 Poor	No Access / Not Visible	N/A
P17	380m	N/A	GCN Absent (73 Sunnymead)	0.59 Below Average	No Access / Not Visible	N/A

*Please note that the HSI has been undertaken outside the optimum survey season.

- 4.31 From a review of the GCN EPSL the mitigation strategy will create three additional new ponds which are not currently present, these are PA to PC, see Figure 3³¹.
- 4.32 From the above review GCN are known to be present within P3, P4 and P7 with presence assumed within P12 and P13. It is also therefore reasonable to assume that in the interim period since 2015 GCN could be present within P1 as its suitability score for GCN has improved from poor to average. As such, the assessment present below is using the precautionary approach to GCN presence within P1 and that there is an overall medium population of GCN present.

Terrestrial Habitats

- 4.33 Old caravans / cars and buildings present throughout the site do not provide any suitable GCN habitats.
- 4.34 Areas of bare ground, tall ruderal vegetation and short grazed / intensively managed / disturbed improved grassland do not provide any areas of shelter for GCN though could be utilised for at most commuting / very limited foraging within the tall ruderal vegetation and improved grassland. However, this is considered unlikely due to:
- The absence of ponds to the north / east of the site, thus a GCN is unlikely to commute across the site.
 - The areas of tall ruderal vegetation on site are minimal.
 - The presence of more optimal foraging habitat within 0-50m of the GCN ponds which will reduce the likelihood of a GCN foraging at greater distances, especially to poor quality areas of improved grassland with no shelter.

³¹ SLR (2014). Great Crested Newt Strategy Drawing 4.

- 4.35 Scattered scrub, stone walls, wood / stone piles and scattered trees could provide areas of shelter for GCN. Hedgerows and the woodland belt could provide potential commuting, foraging and areas of shelter for GCN.

Risk Assessment

- 4.36 The total area of the site is c.2ha. Of this, 0.4ha falls within the 100-250m impact zone and 1.6ha falls within the 250-500m impact zone of the GCN population, see Table below.

Table 10–GCN Habitat Risk Assessment

Habitat	GCN Suitability	100-250m (0.4ha)	250-500m (1.6ha)	Total Area of Habitat	Affected by Development
Buildings/ old caravans / cars / Hardstanding	Negligible	0.01	0.01	0.02	Lost
Bare Ground	Limited to dispersal	0.2	0.6	0.8	Lost
Improved grassland	Low - Limited to dispersal / foraging	0.06	0.6	0.66	0.2ha lost 0.46 retained
Tall ruderal vegetation	Low - foraging	0*	0.01	0.01	Lost
Scattered scrub /trees	Low - shelter	0*	0*	0*	Lost
Stone Wall	High - shelter	52m	135m	187m	Retained
Stone / Wood / Soil Piles	High - shelter	0.01	0.08	0.09	Lost
Hedgerows	High – commuting, foraging, shelter	34m H3 42m H4	H1 – 45m H2 -30m H3 -31m H4 - 143 H5 - 205 H6 - 100	630m	Retained
Woodland	High – commuting, foraging, shelter	0.12	0.3	0.42	Retained

*These habitats are present within the survey area but comprise an area of less than 0.01ha (i.e. they do not constitute an area up to 2 decimal places).

- 4.37 The nature of the majority of habitat types within the site are not suitable for GCN (see table above) and the majority of the optimal habitat areas (woodland / hedgerows) are retained / unaffected by the development. Stone / wood and spoil heaps will be lost, these limited areas potentially provide shelter for GCN. However, there is considered to be an overall low risk of the development resulting in an offence in relation to GCN.

- 4.38 To assess whether the development would be likely to result in an offence under the Conservation of Habitats and Species Regulations 2017 (as amended) in relation to GCN, Natural England's **rapid risk assessment** as provided in their mitigation licence Method Statement document³² has been used.
- 4.39 This tool requires the input of development impacts (in the absence of licensable mitigation measures but taking account of non-licensable risk avoidance mitigation measures) within specific distance zones from any affected GCN pond. The tool then provides an assessment of the likelihood of an offence being committed. The results of the rapid risk assessment are provided below which has determined that, given the habitats to be affected within the development, this would result in 'GREEN: OFFENCE HIGHLY UNLIKELY'.

Table 11: GCN Rapid Risk Assessment

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding	1 - 5 ha lost or damaged	
Maximum:		0.1
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

- 4.40 Based on the above, and subject to the strict adherence to the following Non-Licensable Precautionary Working Method Statement, it is considered that the development can progress without the need for a Natural England EPSL (see Appendix D and E).

REPTILES

- 4.41 One record of a grass snake was noted from the desk study c.314m from the site. Habitat suitable for reptiles on site is limited. Tree lines / hedgerows and the broadleaved woodland potentially provide corridors of movement for common reptile species though habitats within the site (which are highly disturbed from human activity) are of little or no suitability.
- 4.42 Piles of wood / stone and soil offer at most places for reptiles to shelter / hibernate but are considered unlikely to be utilised due to their poor connectivity to other types of habitat resource. For example, the stone piles lie within an area of bare ground which a reptile is less likely to cross to utilise. It is more likely that the stone wall along the southern boundary of the site, within the connective woodland habitat would be used. Therefore, the development area is not considered to be suitable to support a population of common reptile species.

³² Template for Method Statement to support application for licence under Regulation 55(2)e of The Conservation of Habitats and Species Regulations 2017 (as amended) in respect of great crested newts *Triturus cristatus*. Form WML-A14-2 (Version March 2019)

Birds

- 4.43 Woodland, trees, scrub, wood piles / old caravans / cars and hedgerows within the site could provide nesting habitat for local bird species such as house sparrow (which was noted in the desk study). No suitable nesting locations were noted within the site for barn owl, a Schedule 1 species known to be present within 1km of the site.
- 4.44 Blue tit *Cyanistes caeruleus*, robin *Erithacus rubecula* and wren *Troglodytes troglodytes* were noted within the site during the survey.

Otter

- 4.45 Park Gate Dike and the associated bank sides provide potential habitats to support otter. From the desk study a record of an otter spraint was located along Park Gate Dike to the east c. 125m from the site boundary. In addition, two sightings of an otter were recorded in 2006 and 2007 c.220m south east of the site boundary within the site now being developed by Redrow Homes. No evidence of otter was noted during the survey.

Water vole

- 4.46 From the desk study no records of water vole were identified though one record of an American mink was noted c.600m north east from the site along the River Dearne which connects to Park Gate Dike.
- 4.47 Park Gate Dike and the associated bank sides are suitable for water vole burrows. However, there is an absence of aquatic vegetation which water vole would require for foraging. No evidence of water vole was noted during the survey. The Dike is considered potentially suitable for commuting water vole.

White Clawed-Crayfish

- 4.48 From the desk study no records of crayfish have been identified. Park Gate Dike exhibits some favourable and unfavourable conditions for white clawed-crayfish. Favourable conditions include the presence of boulders, woody debris, tree roots in the banks, bank sides which provide suitable refuges, pooled / slow flowing sections of the Dike.
- 4.49 Unfavourable conditions within the Dike include the fast flow of the water and presence of soft silt / bare sand which is deposited in deeper pockets and / or along the banks though these areas could potentially provide foraging / mating habitat.
- 4.50 Overall the Dike is considered to potentially provide suitable habitats for this species.

Kingfisher

- 4.51 From the desk study one record of a kingfisher (from 2003) was noted c.100m south of the site boundary in an area currently being developed by Redrow Homes. Park Gate Dike provides suitable habitat for this species for foraging and potential nesting within the bank sides.

Other

- 4.52 Areas of improved grassland and the woodland within the site provide suitable foraging habitat for hedgehog. Wood piles also provide potential areas of shelter / hibernation for this species. Hedgehog are a Kirklees BAP species.
- 4.53 Brown / sea trout and eel (a Kirklees BAP species) are recorded within the River Dearne which connects to Park Gate Dike thus there is potential for both species to be present within the watercourse.
- 4.55 None of the other species noted within the desk study are considered likely to be affected by, or in the case of invasive animal species affect, the development. As such, no further consideration of these species is made in this report.

5.0 **DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS**

PROPOSALS

- 5.1 The development proposal is for the construction of an agricultural dwelling, associated outbuildings and permanent access track. It is not currently known if the bridge crossing Park Gate Dike will require reinforcing. It is anticipated that further testing will be undertaken to determine this at a later stage.

Statutory Sites

- 5.2 No designated sites of international nature conservation importance are located within the site boundary. One SAC, Denby Grange Colliery Ponds (designated for its large population of GCN) is located c.3.9km north east of the site boundary. The site falls within the 3-5km Impact Risk Zone (IRZ³³) for Denby Grange Colliery SSSI. This states likely impacts within this zone include: *“Air pollution -Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t).”*
- 5.3 The development is of a small scale. Two storage sheds, a vehicle maintenance shed, and a residential dwelling will be created along with three small areas for grazing cattle (a process which already takes place on the eastern half of the site). It is not anticipated that this development will be a large-scale industrial process. Therefore, it is considered unlikely that there will be a significant increase in air pollution on the scales which could affect the integrity of the SAC. As such it is considered that there will be no likely significant effect on the SAC.

³³ www.magic.defra.gov.uk

- 5.4 No nationally or regionally designated sites are located within the survey area or within 2km of the survey area.

Non-Statutory Sites

- 5.5 Local sites are not protected by law but do receive consideration in both national and local planning policy. Local sites have a role in meeting overall national biodiversity targets and appropriate weight should be attached to designated sites in making planning decisions.
- 5.6 No non-statutory designated sites of local nature conservation importance sites are located within the site boundary. Three LWS, one LGS and several HPI's occur within 1km of the site, the closest of which is the deciduous woodland c. 10m to the south of the site. This habitat is present on the southern side of the Kirklees Light Railway. No impacts are expected to arise upon the HPI from the development (this includes lighting due to the fact that the woodland is at a much higher aspect than the site and on a downward facing slope to the south of the railway).
- 5.7 The remaining non-statutory designated sites are not directly connected to the proposed development site. As such, these non-statutory sites and HPI's are considered to be at a sufficient distance from the site that no construction or operational impacts on these habitats are likely to arise.

Kirklees Wildlife Habitat Network

- 5.8 The site falls within the Kirklees Wildlife Habitat Network, a Strategic Green Infrastructure Zone, Biodiversity Opportunity Zone and Greenbelt.
- 5.9 The Kirklees Wildlife Habitat Network was created to protect the connectivity between designated sites of biodiversity and geological importance and notable habitat links. It intends to protect and strengthen ecological links within the district and adjoining authorities. The KWHN aims to meet the requirements of Paragraph 114 of the National Planning Policy Framework (NPPF) for Conserving and enhancing the natural environment in relation to a strategic approach for positive planning for the *"creation, protection, enhancement and management of networks of biodiversity and green infrastructure."*
- 5.10 Furthermore, Kirklees Biodiversity & Geodiversity Policy LP31 states:
- "The council will seek to protect and enhance the biodiversity and geodiversity value of the range of international, national and locally designated wildlife and geological sites, the Wildlife Habitat Network, Habitats and Species of Principal Importance in Kirklees."*
- "Proposals will be required to protect the Wildlife Habitat Network, Habitats of Principal Importance, Species of Principal Importance unless:*
- a) the benefits of the development clearly outweigh the importance of the biodiversity interest; and*
 - b) the loss of the site and its functional role within the Wildlife Habitat Network can be fully maintained or compensated for in the long term; and*

b) compensatory measures will be secured through the establishment of a legally binding agreement.

All new development shall be designed to incorporate and enhance biodiversity and geodiversity interest where relevant to these interests. Proposals shall safeguard, enhance and develop a robust and functional Wildlife Habitat Network at a local and wider landscape scale. Biodiversity enhancement measures shall be designed to reflect the priority habitats and species listed for the relevant Biodiversity Opportunity Zone."

5.11 Policy LP30 Biodiversity & Geodiversity states:

"The council will seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network."

"Biodiversity and Development

Development proposals will be required to: -

(i) result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement.

(ii) minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist.

(iii) safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term.

(iv) establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and

(iv) incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone."

Policy LP31 Strategic Green Infrastructure Network states

"Within the Strategic Green Infrastructure Network identified on the Policies Map, priority will be given to safeguarding and enhancing green infrastructure networks, green infrastructure assets and the range of functions they provide.

Development proposals within and adjacent to the Strategic Green Infrastructure Network should ensure: -

(i) the function and connectivity of green infrastructure networks and assets are retained or replaced.

(ii) new or enhanced green infrastructure is designed and integrated into the development scheme where appropriate, including natural greenspace, woodland and street trees.

(iii) the scheme integrates into existing and proposed cycling, bridleway and walking routes, particularly the Core Walking and Cycling Network, by providing new connecting links where opportunities exist.

(iv) the protection and enhancement of biodiversity and ecological links, particularly within and connecting to the Kirklees Wildlife Habitat Network.

The council will support proposals for the creation of new or enhanced green infrastructure provided these do not conflict with other Local Plan policies."

- 5.12 The majority of the site is currently regularly used for cattle grazing and storage. The development proposal to build a residential property, storage sheds, a more formal access road (over the existing regularly used dirt track) along with grazing compartments is not considered to be a significant alteration to the current usage of the site. Habitats of the greatest importance within the site and to KWHN etc. are the woodland in the south and the hedgerows, all of which are retained in the development thus maintaining the connective linkages of the KWHN etc.
- 5.13 Impacts to the KWHN that could potentially arise from the development include:
- Lighting; and
 - Loss of habitats.
- 5.14 The temporary loss of intensively managed improved grassland and losses of minimal areas of scattered scrub / trees and tall ruderal vegetation with a poor species diversity and low ecological value is not significant. Post development three areas of improved grazed grassland will enhance the current habitat on site by replacing the areas of the site such as bare ground with some albeit low ecological value grassland habitat.
- 5.15 Measures to prevent impacts from lighting upon the woodland / hedgerow linkages of the KWHN etc. are discussed in the Habitat section below.
- 5.16 Further consideration should be given to the planting of a native species hedgerow along the eastern boundary of the site. This opportunity will create a new connective linkage from the Kirklees Light Railway corridor towards Park Gate Dike and into the wider area. Consideration should also be given to the gapping up of H1 and H2 with native species to improve these Priority Habitats and linkages.
- 5.17 Overall the development is not considered likely to result in any significant adverse impacts upon the integrity of the KWHN (and other designations) and could result in an overall positive outcome from the proposals in line with the above Policies if the above enhancements are implemented.

Habitats

- 5.18 Habitats receive consideration through the planning system by:
- their inclusion in specific National planning policy: such as consideration in the National Planning Policy Framework (2019) for veteran trees, ancient woodland, non-statutory sites and ecological networks.
 - classification as a Habitat of Principal Importance for the conservation of biodiversity under the Natural Environment and Rural Communities (NERC) Act 2006, from which

are also derived Priority Habitats under local Biodiversity Action Plan (LBAP) and Priority Habitat for England under Biodiversity 2020³⁴.

- 5.19 The site comprised bare ground, buildings, improved grassland, tall ruderal vegetation, woodland, scattered scrub / trees, stone / wood / soil piles, hedgerows, a tree line and a stone wall. Of these habitats, the hedgerows and broadleaved woodland (along the south of the site) are Habitats of Principal Importance (HPI) under the NERC Act 2006.
- 5.20 Six hedgerows are present within or adjacent to the site boundaries. In addition, to being a HPI, hedgerow H4 is an Important hedgerow under the Regs. H1 and H2 are of moderate – high nature conservation value and H3 to H6 are of moderate nature conservation value.
- 5.21 The access track already exists adjacent to the hedgerows and into the development site, albeit comprising bare ground rather than hard standing / gravel as proposed. The development will not result in the removal of any of the woodland or hedgerows. Nor will there be any loss of functionality of the hedgerows / woodland from the development as corridors of movement for wildlife.
- 5.22 A 30m section of the development will be located adjacent to the woodland boundary, in which will be created hard standing and three buildings for storage / vehicle maintenance located at c.8m from the woodland. Construction impacts that could arise to the woodland comprise damage to tree roots. Operational impacts could include impacts from lighting on nocturnal wildlife.
- 5.23 The residential dwelling proposed in the north east of the site will be located c.7m from H1 and a tree line. An area of car parking / hard standing will be located c.3m from H1. Construction impacts that could arise on the hedgerow / trees comprise damage to tree roots. Operational impacts could include impacts from lighting on nocturnal wildlife.
- 5.24 To avoid these impacts:
 - **appropriate working methods must be employed in accordance with an arboricultural method statement** and BS 5837:2012 Trees in relation to design, demolition and construction.
 - **no lighting will be placed upon the eastern / western or southern aspects of the storage sheds / vehicle maintenance sheds, no lighting upon the northern or western aspect of the residential dwelling / car park area and no lighting along the access track adjacent to hedgerows.**
- 5.25 With the above in place this will avoid any significant negative effects and no further mitigation is considered necessary.
- 5.26 Areas of bare ground, buildings, improved grassland, tall ruderal vegetation, scattered scrub / trees are of low / negligible importance due to the limited species diversity, poor structure and managed / grazed nature. Areas of improved grassland will be restored upon completion of the development as areas of grazing. The temporary or permanent loss of these habitats will not result in any significant negative effects and no mitigation is considered necessary.

³⁴ Biodiversity 2020: *A strategy for England's wildlife and ecosystem services*, August 2011, Department for Environment, Food and Rural Affairs.

Invasive Plant Species

- 5.27 From the desk study, Indian balsam was recorded along the eastern boundary of the site. This species was not noted during the site survey though this was undertaken outside of the growing season. However, it is likely that this record is from Park Gate Dike where several other records are noted and where habitat is more suited to this species. As a precaution it is recommended that **immediately prior to commencement of the development a check of the site is undertaken (between April – September) by a suitably qualified ecologist or invasive plant species specialist** to ensure that the species is not present prior to any earth works.

FAUNA

Bats

- 5.31 All species of UK bats and their roosts are listed on the Conservation of Habitats and Species Regulations 2017 making it illegal to deliberately disturb any such animal or damage / destroy a breeding site or roosting place of any such animal. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (*as amended*). Under this legislation it is illegal to recklessly or intentionally kill, injure or take a species of bat or recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection or disturb any animal whilst they are occupying such a place of shelter or protection. Seven bat species, including brown long-eared, noctule and soprano pipistrelle are Species of Principal Importance under the NERC Act 2006. Brown long-eared bats and common pipistrelle are also a Kirklees BAP species.

Roosts

- 5.32 The survey area falls within the Leeds City Council Bat Alert Layer on the Natural Environment Map³⁵ which indicates an increased likelihood of a bat roost being present. No buildings on site were assessed as providing suitable roosting habitat.
- 5.33 Five trees, three with low potential for roosting bats (T1, T2 and T5) and two with high potential for roosting bats (T3 and T6) were identified within the site along hedgerows.
- 5.34 The proposed development retains all of these trees, all of which currently occur on regularly used access tracks. Therefore, there are no constraints to the development in relation to bat roosts within trees. If plans alter to include their removal, arboricultural management works are required or if any impacts from lighting are anticipated, further survey and or precautionary working methods may be required to minimise any possible impacts on bats.

Foraging / Commuting Habitat

- 5.35 From the desk study common pipistrelle, pipistrelle species, soprano pipistrelle, brown long-eared bats, unidentified *Myotis* species, natterer's bat, noctule and bat species were identified within 2km of the site.
- 5.36 Habitats within the site could provide suitable foraging and potential commuting habitat for bats. Hedgerows, the tree line and woodland are likely to be of greater value to bats whilst the improved grassland and minimal areas of tall ruderal vegetation, scattered scrub / trees are unlikely to represent a significant resource for bats.
- 5.37 The loss of the negligible value habitats (buildings, old caravans / cars, bare ground) will not result in any impact to bats. The loss of improved grassland which is of low ecological value to bats will be temporary as three grazed fields are to be created providing (most likely) improved grassland during the operational phase of the development. This will result in no significant effects to the local bat population.
- 5.38 The proposed development will not affect the higher value habitats (woodland, tree line and hedgerows). **Any temporary construction phase lighting during the proposed works should avoid light spill onto these features.**
- 5.39 Given that the features of interest to foraging and commuting bats are to be retained and unaffected, as well as there being minimal and temporary habitat losses, the predicted impacts on foraging / commuting bats are expected to be negligible. Therefore, as per the BCT guidelines (2016), a proportionate approach must be adopted, and no further surveys are considered to be necessary.
- 5.40 Post development **lighting should be avoided on the aspects of the development as outlined within Paragraph 5.24.**

GCN

- 5.41 GCN are afforded legal protection under the Wildlife & Countryside Act 1981 (*as amended*) and the Conservation of Habitats and Species Regulations 2017. This

³⁵ <https://leedscm.maps.arcgis.com/apps/webappviewer/index.html?id=8de441b78a354b99aa31f565ef27586d>

legislation makes it illegal to: deliberately disturb a GCN, damage / destroy a breeding site or resting place of a GCN, recklessly or intentionally kill, injure or take a GCN, recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection, disturb a GCN whilst they are occupying such a place of shelter or protection.

- 5.42 A medium population of GCN are known within 500m of the site, located towards the south west. A Risk Assessment has been included within this report and concluded that there is highly unlikely to be an offence committed against GCN from a result of this development providing that a non-licensable precautionary working method statement is adhered to (Appendix D and E). Nor will the development result in any significant impacts on the local GCN population. It is considered proportional to the scale of works that no further surveys for GCN are required in order to ensure compliance with the Regulations.

Reptiles

- 5.43 All common reptile species are partially protected under Sections 9(1) and 9(5) of Schedule 5 of the Wildlife and Countryside Act (WCA) 1981 (*as amended*) which protects them from intentional killing/injury, possession and transport. Common reptiles are also Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act 2006.
- 5.44 From the desk study grass snake were recorded within 1km of the site. Hedgerows, woodland, tree lines which potentially provide corridors of movement for common reptile species will be unaffected by the development.
- 5.45 Stone / wood piles which will be lost during the development could offer at most places for reptiles to shelter / hibernate but are considered unlikely to be utilised due to their isolation / poor connectivity to other habitat resource types. The remainder of the habitats comprise unsuitable or habitat with little suitability for reptiles. Therefore, the site is not considered to provide an important resource for reptile species, and it is extremely unlikely that they would be present on site. Therefore, no further surveys are recommended.

Birds

- 5.46 All wild bird species are protected while nesting by the Wildlife and Countryside Act 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.
- 5.47 Additional protection is afforded to any bird species listed on Schedule 1 of the WCA which also makes it illegal to take, damage or destroy any nest of a Schedule 1 bird species (even when not in use); intentionally or recklessly (a) disturb any Schedule 1 bird species while it is building a nest or is in, on or near a nest containing eggs or young; and (b) disturbs dependent young of a Schedule 1 bird species.

- 5.48 A number of birds were identified in the local area from the desk study some of which are Schedule 9 of the WCA, SPI's and WY / Kirklees BAP species such as house sparrow, barn owl and kingfisher.
- 5.49 The majority of optimal bird foraging / nesting habitat is retained (woodland, hedgerows and tree line). However, the proposal does require the removal of wood piles, old caravans / cars and minimal areas of scattered scrub / trees, which provide some limited potential for foraging / nesting birds. The remaining habitats affected by the development do not provide suitable nesting habitats. To comply with relevant legislation, **any removal of wood piles, old caravans / cars should be timed to avoid the bird nesting season** where possible (March to September, inclusive, although dates vary depending on species and weather conditions). Where this is not feasible, affected areas should be checked for nests in advance by an experienced ecologist. Any active nests identified will be left with a minimum 5m buffer to be identified by the ecologist, until such a time as all birds have fledged.
- 5.50 New buildings such as the storage sheds if they contain open aspects will provide new habitats for nesting birds such as swallows. In addition, as an enhancement installation of nest boxes such as a house sparrow terrace would be beneficial.

Water Vole / Otter / Kingfisher / White Clawed-Crayfish

- 5.51 Otter are afforded legal protection under the Wildlife & Countryside Act 1981 (*as amended*) and the Conservation of Habitats and Species Regulations 2017. This legislation makes it illegal to: deliberately disturb an otter, damage / destroy a breeding site or resting place of an otter, recklessly or intentionally kill, injure or take an otter, recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection, disturb an otter whilst they are occupying such a place of shelter or protection.
- 5.52 Water vole are legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (*as amended*) from intentional capture / killing or injury, intentional or reckless damage / destruction of blocked access to their place of shelter / rest and disturbance whilst in a place of shelter / rest.
- 5.53 White clawed-crayfish are legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (*as amended*) from intentional taking.
- 5.54 Kingfisher are a Schedule 1 species of the WCA (as outlined above).
- 5.55 From the desk study otter were recorded within 1km of the site. White Clawed-Crayfish and water vole were not. The site is considered to be unsuitable for supporting resident water vole, otter and white clawed-crayfish as there is an absence of suitable habitat. However, Park Gate Dike which runs beneath the access track to the site and along the northern site boundary does provide potential suitable habitat for water vole, otter and white clawed-crayfish.
- 5.56 In order to ensure the development does not impact upon the Dike no lighting should be present illuminating the Dike during construction or post development.

- 5.57 In addition, all works should be undertaken in accordance with current best practice, Guidance for Pollution Prevention (GPP) and Pollution Prevention Guidelines (PPG) to prevent impacts arising from pollution within Dike.
- 5.58 Post development if drainage from the development is to be connected into Park Gate Dike it will be treated in accordance with national standards to prevent pollution.
- 5.59 It is not currently known if the access track (bridge) crossing Park Gate Dike will require any reinforcement works. Should works be required within the channel or the banks of the Dike a further detailed assessment would be required to ensure legal compliance in relation to white clawed-crayfish and an updated survey should be undertaken immediately prior to the works for otter and water vole along any bank sections affected by proposed works.

Other Species

- 5.60 Suitable habitat is present on site for hedgehog, a KBAP species. The wood piles will be dismantled in accordance with the method statement outlined within Appendix D. As such, this will also identify any hedgehogs should they be present within the wood piles that can then be relocated to a suitable area within the woodland. Post development the creation of improved grassland will provide foraging habitat for this species.
- 5.61 Park Gate Dike provides potential for brown trout and eel (KBAP species). As outlined above all works should be undertaken in accordance with current best practice, GPP and PPG) to prevent impacts arising from pollution within Dike.
- 5.62 The wood / stone piles will be dismantled in accordance with Appendix D. This will enable the relocation of other species (if present) such as hedgehog (a KBAP species) and amphibians such as common toad (a KBAP species) into a suitable location within the woodland. Post development the creation of improved grassland will provide foraging habitat for hedgehog. As an enhancement any remaining wood could be utilised to create log piles within the base of hedgerows / the woodland suitable for amphibians and hedgehog.

BIODIVERSITY ENHANCEMENTS

- 5.63 In accordance with NPPF (2019) and Policy LP30 Biodiversity & Development of Kirklees Local Plan³⁶ the development scheme will be required to “(iv) *incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.*”
- 5.64 Habitats affected by the development proposal are considered to be of low ecological value with negligible impacts arising from the works. As such, it is considered to be proportional to the scale of works that the inclusion of any further potential biodiversity enhancements above what has already been outlined above would represent a significant benefit. Outlined below are additional measures for consideration:
- Planting of native species to gap up existing hedgerow H2 and H3.
 - Planting of a new native species rich hedgerow on the eastern boundary.

³⁶ *Kirklees Local Plan – Strategy & Policies*. Adopted 27 Feb 2019.

- Any formal lawn areas (within the garden of the residential property) to be seeded with a flowering lawn mix used (such as Emorsgate EL1). The species diversity and flowers will improve the value of the habitat to invertebrates.
- Installation of additional bird boxes such as an owl box, open nest boxes, 28 or 32mm nest boxes.
- Installation of bat boxes within the woodland.

APPENDIX A: PHASE 1 HABITAT SURVEY 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
Ash	<i>Fraxinus excelsior</i>
Beech	<i>Fagus sylvatica</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus</i> agg.
Broad-leaved dock	<i>Rumex obtusifolius</i>
Cherry	<i>Prunus</i> species
Cleavers	<i>Galium aparine</i>
Common dandelion	<i>Taraxacum officinale</i> agg.
Common hawthorn	<i>Crataegus monogyna</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Common nettle	<i>Urtica dioica</i>
Couch grass	<i>Elytrigia</i> species
Cow parsley	<i>Anthriscus sylvestris</i>
Crack willow	<i>Salix fragilis</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping thistle	<i>Cirsium arvense</i>
Daisy	<i>Bellis perennis</i>
Dog rose	<i>Rosa canina</i>
Elder	<i>Sambucus nigra</i>
Field maple	<i>Acer campestre</i>
Ground ivy	<i>Glechoma hederacea</i>
Hazel	<i>Corylus avellana</i>
Herb-Robert	<i>Geranium robertianum</i>
Holly	<i>Ilex aquifolium</i>
Ivy	<i>Hedera helix</i>
Lime	<i>Tilia</i> species
Moss	<i>Bryophyte</i> species
Oak	<i>Quercus robur</i>
Perennial rye- grass	<i>Lolium perenne</i>
Ragwort	<i>Senecio jacobaea</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Silver birch	<i>Betula pendula</i>
Thistle	<i>Cirsium</i> species
White clover	<i>Trifolium repens</i>
Willowherb	<i>Chamerion</i> species
Yorkshire-fog	<i>Holcus lanatus</i>

APPENDIX B: BUILDING ASSESSMENT

Building Reference Number	Building External Description / Potential Access Points / Evidence of Occupation	Building Internal Description / Potential Roost Features / Evidence of Occupation	Roost Potential Classification: Negligible, Low, Moderate, High or Confirmed Roost	Building Photographs
B1	Single storey residential cabin with a pitched bitumen lined roof	No roof void.	Negligible	
B2	Site office with a flat metal roof	No roof void or underlining.	Negligible	

APPENDIX C: HABITAT SUITABILITY INDEX ASSESMENT

^c	SI -1	SI - 2	SI -3	SI -4	SI -5	SI -6	SI -7	SI -8	SI -9	SI -10				
Waterbody Reference	Geographical Location	Pond Area	Pond Drying	Water Quality	Shade	Fowl	Fish	Ponds	Terrestrial Habitat	Macrophytes	HSI score	Pond Suitability	Predicted Presence	Pond Photographs
1	1	0.50	0.5	0.33	1	1	1	1	0.33	0.3	0.62	Average	0.55	

2														
	1	0.05	0.1	1	0.4	1	1	1	1	0.3	0.48	Poor	0.03	
3														
	1	0.05	0.5	1	1	1	1	1	1	0.35	0.62	Average	0.55	
4														
	1	0.05	0.5	1	1	1	1	1	1	0.3	0.61	Average	0.55	
5														
	1	0.05	1	1	1	1	1	1	1	0.5	0.69	Good	0.79	

6															
	1	0.05	0.5	1	1	1	1	1	1	0.3	0.61	Average	0.55		
7	1	0.05	0.1	1	1	1	1	1	1	0.3	0.52	Below Average	0.2	N/A	

APPENDIX D: NON-LICENSABLE PRECAUTIONARY WORKING METHOD STATEMENT

- 5.65 The following section details the working methods for the various work items which must be complied with by all persons undertaking the development works.
- Prior to commencing any works, all contractors must be given a “toolbox talk” from an Ecological Clerk of Works or the site manager who has attended the toolbox talk (Appendix E).
 - Heras fencing will be erected prior to commencement of the development to protect trees / hedgerows/ woodland and the stone wall.
 - For the removal of any scrub / trees this must be undertaken under ecological supervision by the Ecological Clerk of Works who will undertake a fingertip (hand) search followed by a destructive search where necessary.
 - Any woody root removal in the above habitats will be undertaken outside of the GCN hibernation period (Nov-Feb, inclusive).
 - Piles of soil / wood / stone could conceal sheltering amphibians. These must be dismantled by hand under the supervision of the Ecological Clerk of Works outside the hibernation period.
 - Any excavated material arising from the development works may only be placed on bare ground or hard standing and must be compacted. If these areas are left overnight, they must either be (i) raised above ground i.e. on pallets or (ii) a watching brief to be undertaken by an ecologist when dismantling the pile.
 - Any trenches which are excavated and left overnight must have a shallow gradient at one end to allow wildlife including to exit.

APPENDIX E: GCN TOOLBOX TALK

- 5.67 Habitats on this site potentially suitable for GCN comprise woodland, scrub, trees, stone wall, hedgerows, stone / wood / soil piles.

Identification

- 5.69 GCNs are the UK's largest amphibian, reaching approximately 17cm when fully grown. Adult GCNs can be easily distinguished from the other two native newt species, the smooth and palmate newts by size and colouring; these newts only reach 10cm when fully grown. The GCN has a black or dark brown appearance with darker spots, a granular texture and very fine white spots. In contrast the underside is strikingly marked with orange/yellow and black colours. In the breeding season males develop prominent dorsal crests and have silvery tail stripes.
- 5.70 See https://www.waterways.org.uk/wrg/wrg_documents/cperg_amphibian_guide for images for identification.



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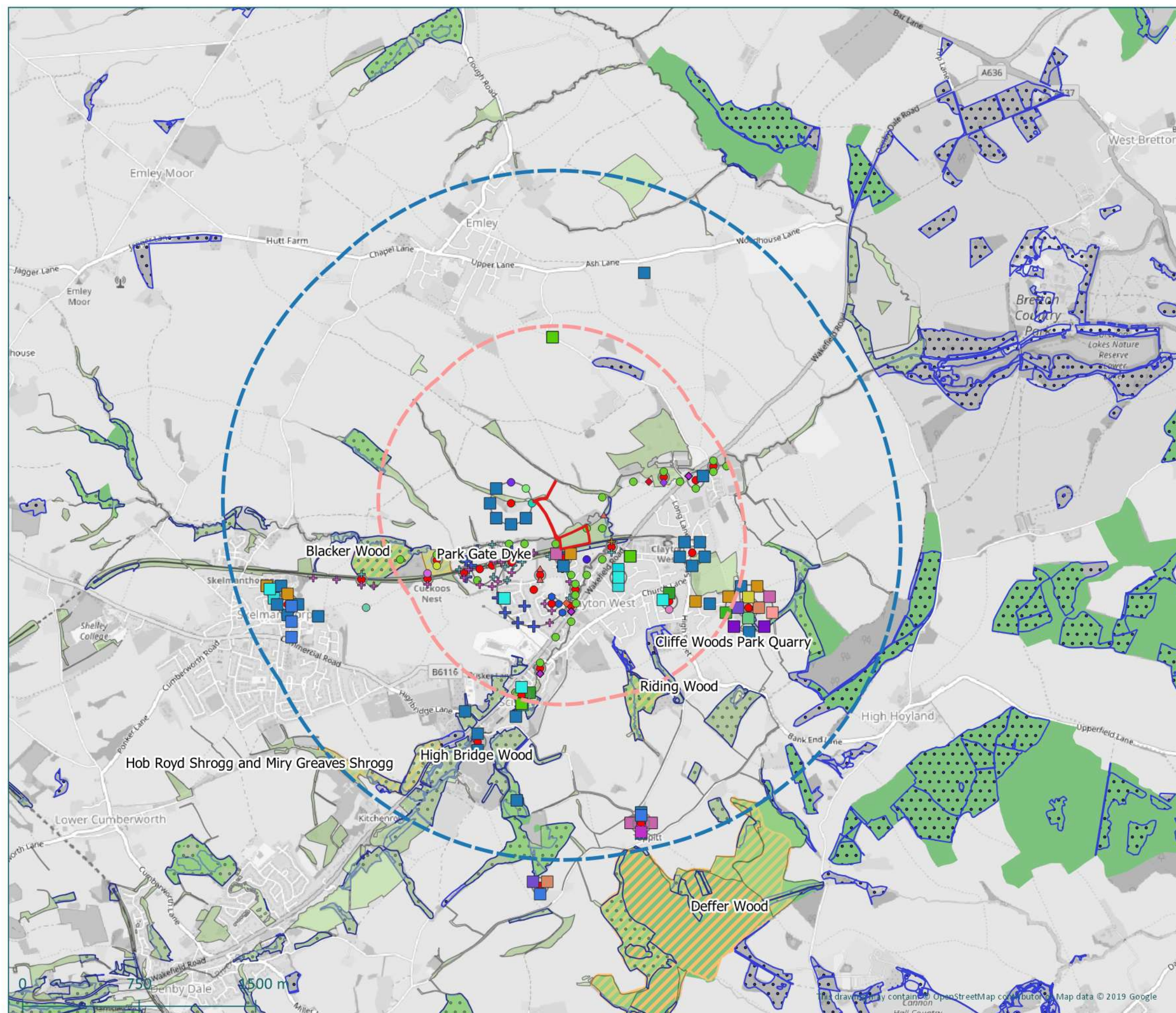
Telephone: 07731993413 or 07730774476

Key

	Site Boundary		Deciduous woodland
	Ancient Woodland		Local Wildlife Sites (LWS)
	Kirklees Habitat Network		Local Geological Sites (LGS)

Protected & Notable Species

	American Mink		Smooth Newt
	Barn Owl		Soprano Pipistrelle
	Bat species		Willow Warbler
	Brown Long-Eared Bat		
	Brown / Sea Trout		
	Common Frog		
	Common Pipistrelle		
	Eel		
	Freshwater Crayfish		
	Great Crested Newt		
	House Sparrow		
	Indian Balsam		
	Kingfisher		
	Myotis Species		
	Natterer's Bat		
	Noctule		
	Otter		
	Palmate Newt		
	Pipistrelle Bat species		



Client: Den Architecture

Project: Upper Langley Farm, Scissett, Huddersfield

Title: Figure 1 - Site Location & Desk Study Results

Plan Reference: FE18_01

Project Reference: FE18

Report Reference: PEA01

Revision:

Author: REH /JSE

Date: 19/2/2020

Scale: 1:25000@A3

Futures Ecology Ltd\Projects\FE18 Upper Langley Farm, Scissett, Huddersfield\QGIS\Figure 1: Site Location & Desk Study

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Key



Site Boundary



Watercourse

Phase 1 Habitats



Bare ground



Broadleaved woodland - semi-natural



Buildings



Improved grassland



Wood Piles



Stone Piles



Containers / Old Cars / Caravans



Other tall herb and fern - ruderal



Spoil



Scrub - scattered



Tree with low bat potential



Tree with high bat potential



Target note



Broadleaved tree



Defunct hedge - native species-rich



Wall



Intact hedge - species-poor



Intact hedge - native species-rich



Hedge with trees - species-poor



Fence



Scrub - scattered line

Futures Ecology Ltd\Projects\FE18 Upper Langley Farm, Scissett, Huddersfield\QGIS\Figure 2: Phase 1 Habitat Plan

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Client: Den Architecture

Project: Upper Langley Farm, Scissett, Huddersfield

Title: Figure 2 - Phase 1 Habitat Plan

Plan Reference: FE12_02

Project Reference: FE12

Report Reference: PEA01

Author: REH /JSE

Date: 19/2/2020

Scale: 1:2500 @A3





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Key

- Site Boundary
- 100m Site Buffer
- 500m Site Buffer
- WatercourseLink

Waterbody

- GCN Absent 2015
- GCN Present 2015 (peak count)
- GCN thought to be present
- New Pond - not accessible to GCN
- No Access
- Pond Not Present
- Proposed New Pond



Client: Den Architecture

Project: Upper Langley Farm, Scissett, Huddersfield

Title: Figure 3 - Waterbody Location Plan

Plan Reference: FE18_03

Project Reference: FE18

Report Reference: PEA01

Author: REH /JSE

Date: 19/2/2020

Scale: 1:2500 @A3

Futures Ecology Ltd\Projects\FE18 Upper Langley Farm, Scissett, Huddersfield\QGIS\Figure 3: Waterbody Location Plan

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Key

Habitats

-  Bare ground
-  Broadleaved woodland - semi-natural
-  Buildings
-  Improved grassland
-  Wood Piles
-  Stone Piles
-  Container / Scrap Cars / Caravans
-  Other tall herb and fern - ruderal
-  Spoil



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Key

-  Site Boundary
-  50m Impact Zone
-  100m Impact Zone
-  250m Impact Zone
-  500m Impact Zone

WatercourseLink

Waterbody

-  GCN Absent 2015
-  GCN Present 2015 (peak count)
-  GCN thought to be present
-  New Pond - not accessible to GCN
-  No Access
-  Pond Not Present
-  Proposed New Pond

Phase 1 Habitats

-  Defunct hedge - native species-rich
-  Wall
-  Intact hedge - species-poor
-  Intact hedge - native species-rich
-  Hedge with trees - species-poor
-  Fence
-  Scrub - scattered
-  Tree with low bat potential
-  Tree with high bat potential
-  Target note
-  Broadleaved tree



Client: Den Architecture

Project: Upper Langley Farm, Scissett, Huddersfield

Title: Figure 4 - GCN Impact Plan

Plan Reference: FE18_04

Project Reference: FE18

Report Reference: PEA01

Author: REH/JSE

Date: 19/2/2020

Scale: 1:2500 @A3

Futures Ecology Ltd\Projects\FE18 Upper Langley Farm, Scissett, Huddersfield\QGIS\Figure 4: GCN Impact Plan

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