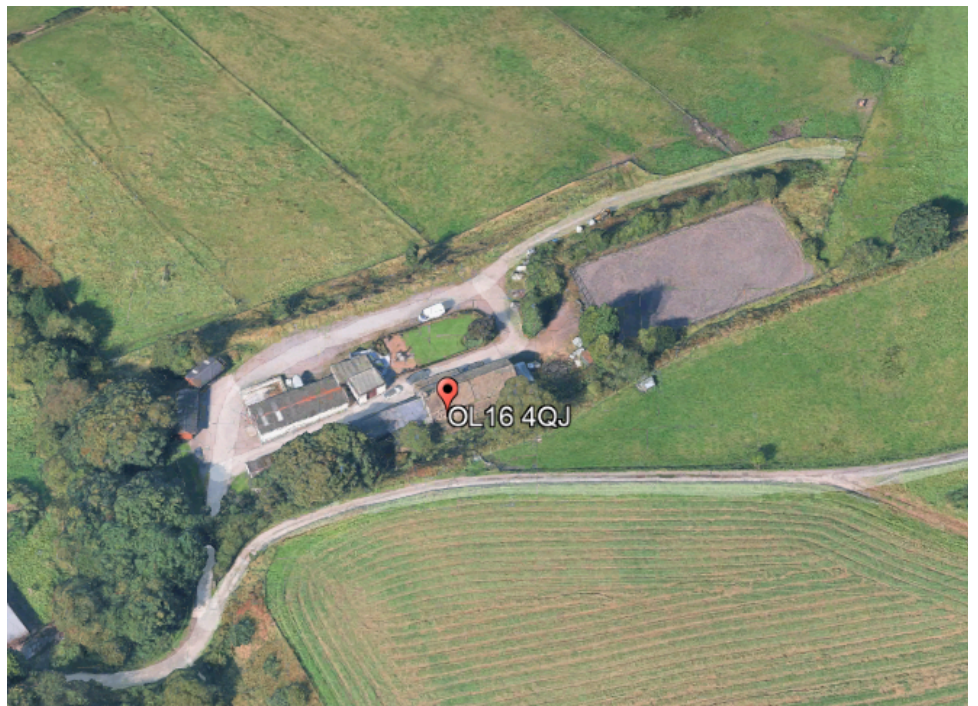




**January
2026**

Preliminary Ecological Appraisal

Knott Booth Farm, off Broad Lane, Burnedge

Report Ref. F180 / Final



PRELIMINARY ECOLOGICAL APPRAISAL

Knott Booth Farm, off Broad Lane, Burnedge, Rochdale, OL16 4QJ.

Client: Mr P Curren

Report status: Final

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NON-TECHNICAL EXECUTIVE SUMMARY

Fieldology Works Ltd were appointed to complete the Preliminary Ecological Appraisal of land and buildings at Knott Booth Farm, off Broad Lane, Burnedge, Rochdale, OL16 4QJ “the site”. The objectives of the assessment were to identify habitats on site and determine the suitability for any ‘protected and/or notable’ species that may occur on site. Ecological mitigation recommendations have been provided to aim to minimise potential impacts on ecology, due to the proposed development. Following the survey work, the key recommendations are summarised in the following table.

Proposed Development	Phased development project to include: Phase 1 – Construction of a residential lodge on land to the northeast of the Site. Phase 2 – Demolition of Buildings A-1, A-2, A-3 and subsequent construction of residential annex with associated car parking. Phase 3 – Potential demolition of Building B. Locations of each phased development are identified in the Habitat Map (Appendix 2).
Current Site Use and Adjacent Site Use.	The Site is set within the equestrian complex of Knott Booth Farm and accessed via a small trackway (off Broad Lane). The Site comprises several urban habitats including developed land - sealed surface, buildings and artificial unsealed, unvegetated surface. Parcels of modified grassland are also present, alongside trees and young trees - self-set. Linear belts of Broadleaved woodland are positioned within proximity, supporting a drainage ditch to the south and Stanney Brook to the west. Modified grassland, surrounding pasture land and woodland belts within proximity may provide connectivity and/or habitat corridors for wildlife, facilitating access into the wider surrounding landscape. Surrounding the Site to the North is semi-improved grassland which leads to Dig Gate farm and woodlands, beyond this the M62 forms a physical barrier with industrial units to the north. To the east is improved permanent grassland which leads to a wooded embankment, Meadow North of Moss gate (SBI) and Cedar Farm, this leads to the River Beal and the residential area of New Hey. To the south there are further improved permanent grassland fields leading to Mossgate and Lower Rushcroft neighbourhoods with Rochdale Road to the south and the conurbation of Shaw. Finally, to the west are residential properties, farms which lead to Rochdale Road beyond which are further grassland fields and the wooded cough and streams of Sudden Brook (West & East) SBI which

	leads to the Summit residential area, further west are improved permanent pastures leading to the M62.
Potential Impacts on Designated Sites	There is 1 historic designated site is Ellenroad Ring Mill Scheduled Monument, positioned at its closest point, approx. 1.03km northeast of the Site, 7 non-statutory Sites of Biological Interest (SBI) and 66 records of priority habitat inventory sites, are within 2km of the proposed development Site. There is no expectant impact on designated sites due to their sufficient distance away from the development footprint and due to the proposal being relatively small-scale.
Habitats	The site (and immediately surrounding landscape) comprises u1b Developed land - sealed surface, u1b5 Buildings (A-1, A-2, A3 and B), u1c Artificial unvegetated, unsealed surface, g4 Modified grassland, g200 Trees, w202 Young trees self-set, w1g Other broadleaved woodland, plus r2b Other rivers and streams and w50 Ditch.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: Phase 1 – Construction of a residential lodge on land to the northeast of the Site. Phase 2 – Demolition of Buildings A-1, A-2, A-3 and subsequent construction of residential annex with associated car parking. Phase 3 – Potential demolition of Building B. It is considered that the proposed changes to the Site, as laid out in the planning application(s), can commence with minimal risk to the habitats, plus protected flora and fauna (including GCN, bats and nesting birds), subject to the following surveys and mitigation measures being adhered to. MAGIC Maps identifies the closest statutory designated Site as Ellenroad Ring Mill Scheduled Monument, positioned at its closest point, approx. 1.03km northeast of the proposed development Site. GMEU data search identifies the presence of seven non-statutory sites within a 2km radius of the proposed development Site: The closest SBI is Meadow North of Moss Gate: 1.9 ha, positioned at its closest point, approx. 0.63km east of the proposed development Site. Qualifying features: Gr2 – Semi-Natural Grasslands. Within the Site there are no irreplaceable habitats, and no habitats listed under the Priority Habitat Inventory. Notably the Manchester Local Nature Recovery Strategy notes w1g (deciduous Woodland) and Stanney Brook habitat priorities which are in proximity to the Site. There are 66 Priority Habitat Inventory sites, the closest Deciduous woodland PHI (42 records) is positioned at approx.0.24km north of

	the Site at its closest point. There are 2 no. ponds within a 250m radius of the Site - positioned approx. 0.093 km west and with no major barrier of separation. There are 10 no. ponds within a 500m radius and a total of 21 no. ponds within a 1000m radius, excluding the ponds to the north of the major physical barrier (M62 Motorway), and southwest of the minor physical barrier (B6194) The data search presents no active or historic record of notable plants within the proposed development footprint. Cheshire Ecological data search has returned 6 records of notable plant species, within a 2km radius of the Site. The closest records is: • Bluebell (<i>Hyacinthoides non-scripta</i>). Notably, Bluebell (<i>Hyacinthoides non-scripta</i>) is listed under Schedule 8 of the WCA (as amended). The closest of these records is positioned approx. 0.96km south, in 2017 (Big Bluebell Watch 2017). Collectively data search presents no active or historic record of invertebrates within the proposed development footprint. The data search has identified 29 records of invertebrates within a 2km radius of the Site, to include 5 species of moth, 3 species, 1 species of Mollusc, 1 of Damselfly and 1 of Dragonfly . The closest records is: • Mollusc species as recorded by GMEU include: Mud Snail (<i>Potamopyrgus</i> sp.). The closest record is positioned at approx. 0.45km northwest, in 2004. A more recent record however was sighted at approx. 0.40km northwest at Marsh near Turf Hill SBI, in 2019. Collectively, the data search presents no active or historic record of amphibians within the proposed development footprint. The data search provides 31 records of amphibians within a 2km radius of the Site, to include Common Toad (<i>Bufo Bufo</i>), Common frog (<i>Rana temporaria</i>) and Great Crested Newt [GCN] (<i>Triturus cristatus</i>). Great crested newt [GCN] (<i>Triturus cristatus</i>), 18 records, with the closest 1.82km northeast in 2013, located near Universal Works, Buckley Hill Road, Milnrow, Rochdale. All records for GCN are separated by a major barrier (M62 Motorway) with the majority of records located in close proximity to each other. The data search has identified 22,121 records of protectable or notable birds within a 2km radius of the Site. MAGIC Maps identifies the entire Site as a Countryside Stewardship Target Area for Lapwing (<i>Vanellus vanellus</i>), Curlew (<i>Numenius arquata</i>), Redshank (<i>Tringa totanus</i>) and Snipe (<i>Gallinago gallinago</i>). The GMEU data search holds 132 records of of Lapwing (<i>Vanellus vanellus</i>), 4 records of Curlew (<i>Numenius arquata</i>) and no records
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for Redshank (*Tringa totanus*) and Snipe (*Gallinago gallinago*) within a 2km radius of the Site.

Collectively, the data search holds no record of bats within the proposed development footprint.

The GMEU data search provides 119 records of bats (7 species) within a 2km radius of the Site to include: Bat sp (Chiroptera), Common Pipistrelle (*Pipistrellus pipistrellus*), Pipistrelle sp (*Pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Nathusius's Pipistrelle (*Pipistrellus nathusii*) and Noctule Bat (*Nyctalus noctula*).

Common Pipistrelle (*Pipistrellus pipistrellus*), 68 records in total. A majority of these records are clustered to the southeast of the Site, located at High Crompton and Crompton residential areas separated by no major barriers. However, a number of the records also show a cluster around Balderstone and Lower Place, northwest of the Site, though these sites are separated by a major barrier (M62 Motorway). The closest record is at approx. >0.37km southwest at Moorgate East, in 2021.

The GMEU data search provides 8 records of Water vole (*Arvicola amphibius*) within a 2km radius of the Site. The closest record of Water vole (*Arvicola amphibius*) is positioned approx. 1.38km northwest, located in marsh near Turf Hill, in 2019. Notably, all records are located to the northwest of the Site and in close proximity to each other, separated by a major barrier (M62 Motorway).

The GMEU data search provides 1 record of Otter (*Lutra lutra*) within a 2km radius of the Site. The closest record of Otter (*Lutra lutra*) is positioned approx. 1.85km northeast, located on the River Beal, Newhey, Rochdale, in 2020.

Collectively, the data search provides 116 records (6 species) of other mammals within a 2km radius of the Site to include: Brown Hare (*Lepus europaeus*), West European Hedgehog (*Erinaceus europaeus*), Pole Cat (*Mustela putorius*), Mole (*Talpa europaea*), Red Fox (*Vulpes vulpes*), Roe Deer (*Capreolus capreolus*) and Stoat (*Mustela erminea*).

The data search has identified presence of 16 INN flora records (2 species) as listed in Part 2, Schedule 9 of WCA 1981, within a 2km radius of the Site to include: Himalayan Balsam (*Impatiens glandulifera*) and Japanese Rose (*Rosa rugosa*). Both are listed on

	Schedule 9 of WCA, 1981 as invasive non-native flora species. The closest of these records is Himalayan Balsam (<i>Impatiens glandulifera</i>), (x2 records), positioned approx. 0.96km northeast of the proposed development Site in 2025. With Himalayan Balsam also recorded on Site.
Recommended Ecological Mitigation	The following mitigation measures are recommended to minimise potential impacts due to the proposed development and are to be placed as planning permission conditions: • A protective buffer zone needs to be established to protect the w1g woodlands, ditch and Stanley Brook. • Building BB - there were the remains of a wall/further building structure that has been demolished, this has left a gap in the double skinned wall. Should this structure be proposed for demolition a demolition methodology is recommended to mitigate against the potential risk to roosting bats. • During the survey, evidence was found to suggest that parts of Buildings BA 2 are being and have been used historically by nesting birds. When the project removes the buildings given the current and historic evidence of birds occupying Building A2 an appropriate RAMS must be carried out. • It is recommended that a Non-Native Invasive Species Methodology Statement is produced. • As with the adjacent woodlands 'buffer zones, should be used to protect the woodlands and areas of potential colonisation with Bluebell (<i>Hyacinthoides non-scripta</i>) will then be protected from accidental destruction via temporary fencing. • The protection of Stanney Brook from material and dust during construction is required via suitable buffer zones, to protect the habitat for invertebrates. • It is recommended that works to the individual trees, groups of trees and surrounding woodland should be left to a minimum, to encourage future bird nesting, and to maintain navigation, foraging and commuting routes for bats, and to obtain further net gains in biodiversity. • Piles of brash and/or deadwood should be moved to areas of retained habitat, perhaps at the margins of the woodland. • It is recommended that Reasonable Avoidance Measures (RAMs) are to be followed during project development to protect amphibian species, Badgers and other mammals. • Any building and tree works impacting areas suitable for birds should be carried out outside of the breeding season (March to August, inclusive). • It is recommended that work should start as soon as possible after this survey, and that if any roof sheeting or boarding over buildings is used in the development, these should be carefully removed by hand, as these features are

	the ones most likely to harbour potential for the support of roosting bats. ● It is recommended that if building work is delayed until more than 12 months between these surveys and any commencement of any building work, then the bat survey may need to be repeated, and these need to be carried out under weather conditions suitable for normal bat activity, (May to September), and must include both a daytime evidence and opportunity bat survey and assessment, and potentially at least one evening nocturnal bat activity and emergence survey (should the project NOT be completed). ● It is recommended that the re-development scheme for this site incorporates biodiversity enhancement measures, and an appropriate measure will be the installation of some Schwegler 1FD bat and bird boxes. ● It is recommended that any construction lighting is positioned away from such boundary features, enabling undisturbed, continued use by foraging and commuting bat species, plus other nocturnal fauna. ● It is recommended that any future lighting is positioned away from such boundary features, enabling undisturbed, continued use by foraging and commuting bat species, plus other nocturnal fauna (refer to 'Bats and Lighting' below). ● Should reptile species occur within terrestrial habitat on Site, precautionary working methods (detailed in Section 4.4.2) will help to avoid harm to this species group. ● Given the small scale of proposed development, implementation of Reasonable Avoidance Measures (RAMs) will minimise construction impacts and prevent harm or injury to Amphibians, Badgers and other mammals. ● It is recommended that a Non-Native Invasive Species Methodology Statement is produced.
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Recommended Further Surveys and Reports

Feature	Bat Suitability	Surveys required
Building BA1, BA2	Low bat roosting and foraging suitability (PRF – 1)	1 minimum dusk emergence and activity visit required to provide confidence with the PRF - 1 conclusion. Between May - August
Building BA3	Negligible/Low roosting and foraging suitability (PRF – 1)	1 minimum dusk emergence and activity visit required to provide confidence with the PRF - 1 conclusion. Between May - August
Woodlands (w1g)	Category 2 (of Moderate value for roosting bats)	Trees proposed to be retained during the scheme. To establish bat activity 1 minimum survey required. Between May - August
G200 Trees	Category 3 (of Negligible/Low value for roosting bats)	None
Building Complex, Trees, and hedgerows.	Moderate suitability for foraging bats, primarily pipistrelle species	None

Recommended Ecological Enhancements

BNG and ecological enhancement recommendations for the site include the following:

- The planting of individual rural trees in lieu of the g200 trees proposed for removal at a ratio of 1:3;
- Bat and bird boxes could be placed in the Knott Booth Farm complex. A plan to show the locations of these boxes and specifications should be produced by a suitably qualified ecologist once the layout is finalised.
- Management of the existing w1g woodlands, will enable longevity of these features to promote greater invertebrate, bird and bat use of the Site.
- Brash and/or deadwood piles could be included within the retained habitats to provide refuge and hibernating opportunities for small mammals, amphibians, reptiles and invertebrates.
- It is clear from the illustrative Site Layout provided (**Appendix 4**) that the suggested mitigation measures and ecological enhancements can be accommodated.

1.0 INTRODUCTION

1.1 BACKGROUND TO THE SCHEME

Fieldology Works Ltd was commissioned by Mr Paul Curren to undertake a Preliminary Ecological Appraisal (PEA) of land and buildings at Knott Booth Farm, off Broad Lane, Burnedge, Rochdale, OL16 4QJ (thereafter referred to as 'the Site'). The proposed development is understood to include the following planning phases:

- Phase 1 – Construction of a residential lodge on land to the northeast of the Site.
- Phase 2 – Demolition of Buildings A-1, A-2, A-3 and subsequent construction of residential annex with associated car parking.
- Phase 3 – Potential demolition of Building B.

Locations of each phased development are identified in the Habitat Map (Appendix 2).

The authors of the report are Julie Wickington a Qualifying Member of CIEEM, BSc (Hons) Human Ecology and MSc Countryside Management and Gemma Coar BSc (Hons) and MSc Conservation Management. Combined, the authors have several years' experience in project development and ecological consulting for a range of schemes including residential, environmental enhancements and agriculture.

Mike Fisher has supported the surveying of the site in respect of bats (Bat Survey Licence Level 2 Class Survey Licence WML CL18 and Bat Roost Level 1 Class Survey Licence WML CL15).

1.2 SITE CONTEXT

As shown in Figure 1 below, the Site is located at Knott Booth Farm, off Broad Lane, Burnedge, Rochdale, OL16 4QJ and centred on National Grid Reference SD 92270 10720. The development (red-line) zone spans three phased (planning) stages, totalling an area of approx. 0.22ha.

The proposed development Site is positioned approx. 730m east of Burnedge hamlet, a residential suburb of Manchester City. The ward of Shaw is positioned approx. 2.1km southeast.

The Site is set within the equestrian complex of Knott Booth Farm and accessed via a small trackway (off Broad Lane). The Site comprises several urban habitats including developed land - sealed surface, buildings and artificial unsealed, unvegetated surface. Parcels of modified grassland are also present, alongside trees and young trees - self-set. Linear belts of Broadleaved woodland are positioned within proximity, supporting a drainage ditch to the south and Stanney Brook to the west.

1.3 PURPOSE OF THIS REPORT

As part of the process to obtain planning permission to develop the Site, a preliminary ecological appraisal (PEA) was commissioned/undertaken.

The purpose of this PEA is to provide evidence on habitats, and protected/notable species, present within the site boundaries, as part of the Local Development Framework and Core Strategy Policies.

The aims of this preliminary ecological assessment are:

- To provide clear advice to the client and the Local Planning Authority on the ecological value of the development Site, and surrounding area.
- To assess the Site for the presence, or potential presence, of bats and other protected species: Undertaking detailed inspection of any structures (both internally and externally), trees and other roost features, plus assessing ponds, watercourses and any other notable habitats that would support protected fauna.
- To enable the client to comply with legislation afforded to protected sites and species.
- To highlight the presence of any habitats or species of ecological importance, including Habitats and Species of Principal Importance (NERC Act, 2006).
- To identify any ecological constraints on future development.
- To establish the need for any further surveys and assessments.
- To suggest opportunities for enhancement on Site.

2.0 METHODS

The PEA assessment and report follows the good practice methodology as detailed within the guidelines for Preliminary Ecological Appraisal (CIEEM, 2019).

2.1 DESK STUDY

2.1.1 Online resources and Local Records Centre

Due to the size and low impact of the proposed development and being located within the semi-rural area of Burnedge, Rochdale, a 2km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence. Sources of information used in the desk study are presented in Table 1.

References being made to NBN ATLAS (as recommended as part of a thorough desktop search (CIEEM)) is used only as an illustration of the likelihood of there being notifiable species present. In the event of notable species being observed, full reference of this data source using NBN Atlas including the licence and data partner is made.

Table 1: Desk study sources of information

Source	Date Consulted	Information Sought
MAGIC website (www.magic.gov.uk)	20/10/2025	Locations of statutory designated sites within 2km of the site boundary. Locations of the designated sites within the National Site Network (Ramsar, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) within 2km of the site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 2 km.
Natural England (https://designatedsites.naturalengland.org.uk/)	20/10/2025	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/)	20/10/2025	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
Lancashire Environment Record Network (Greater Manchester)	20/10/2025	Locally designated wildlife sites within 2 km of the site boundary. Records of protected and notable species within 2km of the site boundary.
Greater Manchester Biodiversity and Nature Conservation Supplementary Planning Document	20/10/2025	Species and habitats which are given special conservation status at the local level.
NBN Atlas https://nbnatlas.org	20/10/2025	Species biodiversity records.

2.2 FIELD SURVEY

2.2.1 Vegetation

The Site was subject to an initial field survey and daylight appraisal on 23rd July 2025 by Ecologist Julie Wickington, Qualifying member of CIEEM, BSc (Hons), MSc, Gemma Coar BSc (Hons), MSc and Mike Fisher (Bat licence Level 2 & Bat Roost Visitor Level 1). The weather conditions were overcast, with light rain and a moderate (Beaufort Scale 4), with an air temperature of 18 degrees Celsius.

A second Site visit was conducted on 15th August 2025 for completion of a dusk bat survey. The weather conditions during this second visit were dry and clear with a light breeze (5 mph, Beaufort Scale 2), with an air temperature of 22 degrees Celsius.

The methods were based on the standard methodology as detailed by JNCC Handbook for Phase 1 Habitat Survey (JNCC, 2010). A Phase 1 Habitat Plan has been produced to demonstrate habitats within the proposed development and the surrounding area. The mapping techniques are based on the Phase 1 Habitat Survey (JNCC, 2010) guidance. Habitat Condition Assessments were also carried out using the standard methodology as detailed by UK HAB Methodology to assess the condition of the habitats present.

2.2.2 Fauna

A site search for field signs of protected and notable fauna was undertaken, and incidental sightings are detailed. Searches completed were as follows:

- Suitability of any ponds and watercourses that may support notable and protected amphibians, plus suitability of the Site's terrestrial habitat to support amphibians.
- Suitability of any ponds and watercourses that may support protected fish species and White-clawed crayfish (*Austropotamobius pallipes*).
- Suitability of any watercourses to support Water vole (*Arvicola amphibius*) and Otter (*Lutra lutra*), with search for burrows/holts, droppings, footprints, foraging signs and resting places.
- Suitability of the Site's terrestrial habitat for support of reptiles.
- Suitability of the Site to support bats.
- Suitability of the Site to support notable bird species, with search for nests.
- Suitability of the Site to support notable invertebrate species.
- Suitability of the Site to support other protected mammals, including Badger (*Meles meles*), with search for setts, latrines, snuffle holes and runs.
- Suitability of the Site to support other notable terrestrial mammals including Harvest Mouse (*Micromys minutus*), Hazel Dormice (*Muscardinus avellanarius*), Brown hare (*Lepus europaeus*) and Hedgehog (*Erinaceus europaeus*).
- Search of the Site for any invasive species.

2.3 BAT ASSESSMENTS

2.3.1 Preliminary Evidence and Opportunity Assessment

A number of factors are used for the survey methodology, which include:

- Knowledge of bat species relevant to the site location, and geographical range.
- Nature of the immediate and surrounding habitat, in relation to foraging opportunity.
- Presence/absence of roost potential.
- Value of roost potential - if present.
- Condition of nearby trees, groups of trees, woodland and water bodies.

This current survey was undertaken in accordance with the standard methods

described in the 'Bat Worker's Manual' (JNCC 2004) and Bat Surveys - Good Practice Guidelines' (BCT 2023). In order to assess the site to determine its suitability for bats.

It comprised a Daytime Bat Walkover (BDW), including a daylight evidence and opportunity survey and assessment of buildings and trees: These were searched for evidence of bat occupation (including recent and historic use), looking for either bats themselves, bat droppings, urine stains, remains of any invertebrate prey, or any grease marks from repeated contact, or passage by bats through narrow roost accesses, or any signs of bat occupation.

The optimum time to investigate for evidence of a bat roost is between May and September, however, this can be earlier or later in the year, and is weather and temperature dependent. However, preliminary evidence and opportunity assessment may be conducted outside of this time and can often provide conclusive results, which can save expense and time for Planning Applicants.

Trees and woodland belts within proximity were also assessed for suitability of use by commuting and foraging bats. The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 4th edition (Collins, 2023). The categorisation within this report is based on that set out in Table 2a & b and 3, which is used as a basis for determining the requirement for further surveys.

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute). b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance. c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten <i>et al.</i>, 2016 and Jansen <i>et al.</i>, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.		

Table 2a: Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of features within the landscape, to be applied using professional judgement (Collins 4th edition (2023)).

Table 7.1. Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result). To be used in tandem with Table 7.2.

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures) No further surveys required (trees)	May to September ^a , with at least one of surveys between May and August ^b	May to September ^a , with at least two of surveys between May and August ^b
a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time, but may pick up mating roosts. b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more. Survey timings should consider the prevailing conditions in the year of survey, which will vary geographically. In years with a cold spring, the surveys should not be started in early May or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the optimum coverage includes the pre-parturition, post-parturition and mating periods.		

Table 7.2. Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey ^a (structures). No further surveys required (trees).	Two separate dusk emergence survey visits ^b .	Three separate dusk emergence survey visits ^b .
a Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see para 5.2.44). In some cases, more than one survey may be needed, particularly where there are several buildings in this category. b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more.		

Table 2b: Suitability of Buildings and Trees for roosting Bats (Collins, 2024)

To assess a tree's value for roosting bats, Table 3 below was used. Criteria for Assessment of Trees in accordance with Category 1 - 3 as defined in Table 8.4 of 'Bat Surveys: Good Practice Guidelines 2nd Edition (Hundt, L. 2012).

CATEGORY	DESCRIPTION	CRITERIA
Known or Confirmed	Confirmed roost	Confirmed roost Evidence found that indicates tree/tree features are being used by bats. Droppings found at the base of the tree, below a cavity. Bats heard 'chattering' inside a feature on a warm day or at dusk Bat(s) observed flying from or to a feature.
1*	Very high value	Trees with multiple, highly suitable features capable of supporting larger roosts. Features of particular significance, suitable for high priority roosts such as maternity roosts, used by large numbers of bats, offering conditions that are uncommon or rare in the local area. Features such as large cavities, extensive branch or trunk splits, also including multiple features in the same tree that offer a diversity of opportunities. Features may also include dense ivy.
1	High value	Trees with definite bat potential supporting fewer suitable features than category 1* trees or with potential for use by single bats. Features which provide a more secure form of roost for small groups of bats and individuals, but may still be quite common types of feature, such as small cavities, minor splits or sparse ivy cover.
2	Moderate value	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats. A tree which on close inspection the potential roost positions are in some way not ideal. They could be upward facing or holes very low down or cluttered by adjacent branches.
3	Low/Negligible value	Trees that have no features which could be used by bats for roosting (Usually young trees).

Table 3: Criteria for assessing Trees/Woodlands

Collectively across the site the commuting and foraging value of the site will be appraised, see the assessment methodology is set out in Table 4, which is used as a basis for determining the requirement for further surveys.

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.		
Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute). b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance. c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten <i>et al.</i>, 2016 and Jansen <i>et al.</i>, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.		

Table 4: Suitability of Site for Foraging and Commuting Bats (adapted from Collins J. (ed 2024)

2.3.2 Equipment

Equipment used during the survey consisted of close-focus binoculars, SLR cameras, industrial endoscope camera, ladders, powerful hand-held torches, and a separate Darkbeam LED ultraviolet flashlight.

2.4 AMPHIBIANS – GREAT CRESTED NEWT ASSESSMENT

Following current best practice considering the partial roll out of District Level Licencing (DLL) across England and based on likely effects, a proportionate assessment of the water bodies, has been undertaken in a search area extended up to 500m or more.

The GCN Habitat Suitability Index (HSI) is a quantitative measure of habitat quality evaluating the suitability of habitat for GCN. The HSI outputs a result of between 0 and 1, derived from an assessment of ten habitat variables known to influence the presence of newts, with a result of 1 being optimal habitat (high probability of occurrence), while an HSI of 0 is very poor habitat (minimal probability of occurrence). The HSI is calculated on a single pond basis but takes into account surrounding terrestrial habitat and local pond density. The tool is particularly useful in survey and mitigation; one benefit is that it can be undertaken in a single field visit (with supporting desk work) and at any time of the year (though some variables are more easily measured during spring and summer).

Its main uses are:

- In surveys, to assess habitat quality in a repeatable, objective manner. In particular, the HSI allows individual factors that influence newt presence to be easily identified. These factors could help explain a very high or very low count. A high HSI can justify employing additional survey effort or methods if no newts are found initially.
- In impact assessments, to allow a measure of how damaging a development could be. HSI might also be used as a screening tool to select no impact or minimal impact options.
- In risk assessments, helping to decide whether an offence might be committed, and therefore whether a licence should be applied for. If a pond has a very low HSI score (say <0.5) then there would typically be a minimal chance of GCN presence. Hence, with due care and in limited circumstances the HSI might be used in the absence of newt surveys to help conclude that an offence is highly unlikely and therefore work could proceed in that area without a licence. This application of the HSI should only be used where the predicted impacts - were newts to be present - would be low (e.g. development at least 100m from pond, permanent habitat loss <0.5ha or temporary habitat loss <5ha).
- The developer should be aware that there would still be a risk of committing an offence, but it would typically be so low as to be negligible. Obviously, note

that if HSI >0.5, this is not confirmation of newt presence; a newt presence/absence survey would be required to confirm this.

- In habitat enhancement, HSI could be used to identify the low-scoring factors in an existing pond that need addressing to improve its quality for newts.
- In post-development monitoring, to allow an assessment of habitat condition.

GCN HSI Limitations:

The GCN HSI is not a substitute for undertaking newt surveys; it indicates but cannot confirm presence or absence of GCN. A licence application that infers GCN presence solely from HSI data (i.e. no newt survey data presented) will be rejected.

Very low HSI scores may be used along with scheme details to infer a minimal chance of committing an offence in low impact situations. This is on a risk assessment basis and developers should be aware of the potential hazards of this approach. Care should be taken when interpreting low HSI scores; for example, a low scoring pond close to an occupied newt pond may still support newts.

The site and surrounding habitats should also be assessed relative to their potential to offer suitability for wider, generalist amphibians, in addition to GCN, for example Common toad (*Bufo bufo*) and Common frog (*Rana temporaria*).

During the desk study MAGIC Maps identified no priority ponds within the Site (of proposed development) or within a 2km radius of the Site.

There are two Great Crested Newt (GCN) Class Survey Licences returned. The closest is recorded in 2016 with GCN present, positioned at approx. 1.72km north of the Site, separated by a major barrier (M62 Motorway). No GCN Pond Surveys have been returned.

MAGIC Maps further identifies the proposed development footprint within a GCN Strategic Opportunity Area – Core 1.

Notably, there are 2 no. ponds within a 250m radius of the Site - The closest is positioned approx. 93m west (with no major physical barrier of separation).

Further, a drainage ditch is positioned to the south (spanning west to east), at approx. 2.5m distance from the red-line boundary. Stanney Brook is also positioned to the west (spanning north to south), at approx. 15.3m distance from the red-line boundary.

There are 10 no. ponds within a 500m radius, the majority are clustered around Dig Gate Farm, north of the Site, with no physical barriers. Stanney Brook continues south to north through Dig Gate farm. This series of ponds may be fed by drainage that comes from Garside Farm. A further 13 no. ponds exist within a 500-1000m radius. The River Beal flows around the Bentgate residential area northeast of the Site. Southwest of the Site there is a further water body flow identified as Sudden

Brook West SBI and Sudden Brook East SBI running south of Pit Lane, flowing south to north, separated by a minor barrier of Broad Lane/Rochdale Road (B6194).

A total no. of 25 ponds exist within a 1km radius of the Site. At approx. 1.1km north of the Site, north of the M62, located at Stanney Brook Park SBI, there are a number of water bodies fed by issues and streams to include Stanney Brook.

Taking into consideration, and excluding the ponds, north of the major physical barrier (M62 Motorway), and southwest of the minor physical barrier (B6194), there are approx. 21 no. ponds within a 1km radius with no physical barrier of separation (**refer to Figure 2**).

2.5 CONSTRAINTS TO THE SURVEY

Whilst every effort has been made to provide a comprehensive description of the Site, no investigation could ensure the complete characterization or prediction of the natural environment.

This PEA does not constitute a full botanical survey. The protected species assessment provides a view of the likelihood of protected species occurring on the Site based on the known distribution of species in the local area and the suitability of the habitat(s).

July is not considered to be a significant constraint with regards to the general Phase 1 Habitat Survey results as the habitats remained consistent with previous surveys, and due to the size and location of the Site, and limited extent of the habitats, it is considered very unlikely that any rare or priority plant species were missed. It should not, however, be taken as providing a full and definitive survey of any protected species group. Where a lack of records is found during the desk search for a defined geographical area, it does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

The conclusions and recommendations detailed in this report are based upon the Site red-line boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the Site red-line boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document. Sample grid references provided by the record centre (detailed in Section 3.1.3) in some circumstances returned a wide area in which the record was located (such as grid reference SD 3930. With these records, an accurate distance of the species cannot be fully ascertained, and records have been labelled 'within 2km' where appropriate.

2.6 LIFESPAN OF THE REPORT

In accordance with CIEEM's Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), the details of this report will remain valid for a period of 18 months from the date of the survey (i.e. until 23.01.2027 18 months from date of the survey). After this date, this assessment should be reviewed to determine whether any updated surveys are required.

2.7 DEFINITIONS

For the purposes of this report, the term 'protected and notable species' relates to:

- Species included on Schedules 2 and 4 of The Conservation of Habitats and Species Regulations 2017.
- Species included on Schedules 1, 5 and 8 of The Wildlife and Countryside Act 1981 (as amended), excluding species that are only protected in relation to their sale (see section 9 [5] and 13 [2]).
- Invasive non-native species included on Schedule 9 of The Wildlife and Countryside Act 1981 (as amended).
- Species of principal importance for the conservation of/maintaining and enhancing biodiversity as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (England), Section 7 of the Environment (Wales) Act 2016, Section 2 [4] of The Nature Conservation (Scotland) Act 2004.
- Local species of importance as identified within various local biodiversity action plans.
- Badgers, which are protected under the Protection of Badgers Act 1992.

3.0 BASELINE ECOLOGICAL CONDITIONS

3.1 DESK SURVEY

3.1.1 Site Location

The Site is set within the equestrian complex of Knott Booth Farm, comprising a residential property, equine facilities (including stable blocks), a former cattery and additional storage buildings. The yard primarily consists of developed land (concrete), plus interconnecting trackways of artificial unsealed, unvegetated surface. Parcels of modified grassland are also present, alongside trees and young trees - self-set. Linear belts of Broadleaved woodland are positioned within proximity, supporting a drainage ditch to the south and Stanney Brook to the west.

The immediately surrounding area is semi-rural and comprises pasture land with scattered ponds, farms, equine facilities and former farms now converted to residential dwellings. A major barrier, the M62 motorway is positioned approx. 510m northwest of the Site.

The site is accessed via a small trackway (off Broad Lane), which links to Rochdale Road (B6194) providing access into the dense urban complexes of Lower Rushcroft and High Crompton, at approx. 865m south of the Site.

Notably, modified grassland, immediately surrounding pasture land and woodland belts within proximity may provide connectivity and/or habitat corridors for wildlife, facilitating access into the wider surrounding landscape.

The closest non-priority pond is positioned approx. 93m west, with no major physical barrier of separation.

The closest statutory **historic** designated site is Ellenroad Ring Mill Scheduled Monument, positioned at its closest point, approx. 1.03km northeast of the proposed development Site.

The closest designated Site is Rochdale Canal Site of Special Scientific Interest (SSSI), positioned at its closest point, approx. 2.06km northwest of the proposed development Site and separated by a major barrier (M62 Motorway).

The closest non-statutory designated Site of Biological Interest (SBI) is Meadow North of Moss Gate: 1.9 ha, positioned at its closest point, approx. 0.63km east of the proposed development Site. Qualifying features: Gr2 – Semi-Natural Grasslands.

Overall, it is anticipated that surrounding habitats (and designated sites, as outlined within Section 3.1.2) will provide suitable foraging, resting and commuting resources within the local area for a variety of wildlife; this could include species such as birds, bats, fish, plus other aquatic and terrestrial mammals.

3.1.2 Designated and Non-Designated Sites

MAGIC Maps identifies one **historic** statutory designated Site within a 2km radius of the development Site: Ellenroad Ring Mill Scheduled Monument, is positioned at its closest point, approx. 1.03km northeast of the proposed development Site.

The next closest statutory designated Site is Rochdale Canal Site of Special Scientific Interest (SSSI), positioned at its closest point, approx. 2.06km northwest of the proposed development Site and separated by a major barrier (M62 Motorway).

The Rochdale Local Plan Policies Map identifies the entire Site as a 'Greenbelt' area.

Notably, the Site is positioned within a SSSI impact zone for Rochdale Canal SSSI, however as aforementioned, this SSSI is positioned at its closest point, approx. 2.06km northwest of the proposed development Site and separated by a major barrier (M62 Motorway).

The GMEU data search identifies 7 Sites of Biological Interest (SBI) within a 2km radius of the development Site:

1. The closest SBI is Meadow North of Moss Gate: 1.9 ha, positioned at its closest point, approx. 0.63km east of the proposed development Site. Qualifying features: Gr2 – Semi-Natural Grasslands.
2. Sudden Brook (East) SBI: 1.0 ha, is positioned at its closest point, approx. 0.72km southwest of the proposed development Site. Qualifying features: Semi-Natural Grassland. Supplementary Features: Wd3 – Scrub Habitat.
3. Sudden Brook (West) SBI: 7.4 ha, is positioned at its closest point, approx. 1.0km southwest of the proposed development Site. Qualifying features: Gr2 – Semi-Natural Grasslands, Supplementary Features: Wd3 – Scrub Habitat.
4. Stanney Brook SBI: 9.6 ha, is positioned at its closest point, approx. 1.1km north of the proposed development Site. Qualifying features: Gr2 – Semi-natural grassland and GSG – General Species – Mud snail. Supplementary Features: Fw4 – Running Water Habitats, Br5 - Birds – UK Priority Species and Intrinsic Appeal – Accessibility & Usage.
5. Marsh near Turf Hill SBI: 1.7 ha, is positioned at its closest point, approx. 1.3km northwest of the proposed development Site. Qualifying features: Gr2 – Semi-natural Grassland. GSG – General Species Guideline - Mud Pond Snail (*Omphiscola glabra*). Supplementary Features: Birds – UK Priority Species
6. Newhey Lodge SBI: 0.8 ha, is positioned at its closest point, approx. 1.7km northeast of the proposed development Site. Qualifying features: Fw2 – Ponds & Small Lodges and Mm1 - Bats.
7. Ponds at Cowlshaw Farm SBI: 1.4 ha, is positioned at its closest point,

approx. 1.9km southeast of the proposed development Site. Qualifying features: Fw2 – Ponds & Small Lodges and Fw1 – Reedbed, Swamp & Fen.

Priority Habitats

Within the proposed development Site, there are no irreplaceable habitats, and **no habitats** listed under the Priority Habitat Inventory.

The Greater Manchester Local Nature Recovery Strategy notes these habitat priorities which are in proximity to the Site:

- w1g (southern and western boundary): Woodland 1.2 Enhance existing woodlands, scrub and hedgerows through positive management, diversify them and increase their resilience to pests, disease and climate change.
- Stanney Brook - Rivers (3.2) Enhance and maintain existing habitats within our waterbodies and adjacent grassland, wetland and woodland habitats to increase species richness

MAGIC Maps identifies 7 habitats (66 records) as listed under the Priority Habitat Inventory (PHI) within a 2km radius of the Site:

1. National Habitat Network All Habitats Combined PHI (8 records) one is positioned within the development footprint. *The Network Expansion Zone: is land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape i.e. conditions such as soils are potentially suitable for habitat creation for the specific habitat in addition to Enhancement Zone 1.*
2. **Deciduous woodland PHI (42 records) is positioned at approx. 0.24km north of the Site at its closest point.**
3. No main habitat but additional habitats present PHI (3 records) is positioned at approx. 0.41km north of the Site at its closest point.
4. Lowland fens PHI (5 records) is positioned at approx. 0.63km east of the Site at its closest point, at Meadow North of Moss Gate SBI.
5. Good quality semi-improved grassland PHI (Non Priority) (2 records) is positioned at approx. 0.72km southwest of the Site at its closest point, at Sudden Brook (East) SBI.
6. Open Mosaic Habitats on Previously Developed Land PHI (5 records) is positioned at approx. 1.48km northeast of the Site at its closest point.
7. Common Pheasant and Red-legged Partridge releases – European sites and 500m buffer zones as at 31 May 2021 PHI (1 record) is positioned at approx. 1.57km northwest of the Site at its closest point.

During the desk study MAGIC Maps identified no priority ponds within the Site (of proposed development) or within a 2km radius of the Site.

There are two Great Crested Newt (GCN) Class Survey Licences returned. The closest is recorded in 2016 with GCN present, positioned at approx. 1.72km north of the Site, separated by a major barrier (M62 Motorway). No GCN Pond Surveys have been returned.

MAGIC Maps further identifies the proposed development footprint within a GCN Strategic Opportunity Area – Core 1.

There are 2 no. ponds within a 250m radius of the Site - The closest is positioned approx. 93m west (with no major physical barrier of separation). **Further, a drainage ditch is positioned to the south (spanning west to east), at approx. 2.5m distance from the red-line boundary. Stanney Brook is also positioned to the west (spanning north to south), at approx. 15.3m distance from the red-line boundary.**

There are 10 no. ponds within a 500m radius, the majority are clustered around Dig Gate Farm, north of the Site, with no physical barriers. Stanney Brook continues south to north through Dig Gate farm. This series of ponds may be fed by drainage that comes from Garside Farm. A further 13 no. ponds exist within a 500-1000m radius. The river Beal flows around Bentgate residential area northeast of the Site. Southwest of the Site there is a further water body flow identified as Sudden Brook West SBI and Sudden Brook East SBI running south of Pit Lane, flowing south to north, separated by a minor barrier of Broad Lane/Rochdale Road (B6194).

A total no. of 25 ponds exist within a 1km radius of the Site. At approx. 1.1km north of the Site, north of the M62, located at Stanney Brook Park SBI, there are a number of water bodies fed by issues and streams to include Stanney Brook.

Taking into consideration, and excluding the ponds, north of the major physical barrier (M62 Motorway), and southwest of the minor physical barrier (B6194), there are approx. 21 no. ponds within a 1km radius with no physical barrier of separation (refer to Figure 2).

3.1.3 Flora and Fauna

The following section summarised protected and/or notable species records that have been recorded within 2km of the site.

Vascular Plants

Collectively, the data search presents no active or historic record of notable plants within the proposed development footprint.

The Woodland Trust Veteran Ancient Tree Inventory Map identifies one notable tree within a 2km radius of the Site: A veteran, Common Hawthorn (*Crataegus monogyna*), positioned at >1.7km northeast. This notable veteran tree displays a girth of 1.2m. The data search has returned no records of notable species within a 2km radius of the Site.

Notably, NBN Atlas holds a singular record of notable plants as listed within Section 41 of the NERC Act 2006 for Cornflower (*Centaurea cyanus*), positioned approx. 1.44km southwest of the Site, recorded in 2019.

NBN Atlas has additionally identified 5 records of the notable vascular plant species, Bluebell (*Hyacinthoides non-scripta*). Notably, Bluebell (*Hyacinthoides non-scripta*) is listed under Schedule 8 of the WCA (as amended). The closest of these records is positioned approx. 0.96km south, in 2017 (Big Bluebell Watch 2017).

Invertebrates

Collectively, the data search presents no active or historic record of invertebrates within the proposed development footprint. The data search has identified 29 records (11 species) of invertebrates within a 2km radius of the Site to include: 5 species of moth, 3 species of butterfly, 1 species of Mollusc, 1 species of Damselfly and 1 species of Dragonfly.

- Moth species as recorded by GMEU include: Buff Ermine (*Spilarctia luteum*), Cinnabar (*Tyria jacobaeae*), Grey Dagger (*Acronicta psi*), Small Phoenix (*Ecliptopera silaceata*) and Small Square-spot (*Diarsia rubi*). The closest GMEU recorded moth species is: Cinnabar (*Tyria jacobaeae*), positioned at approx. 1.3km southwest, in 2013.
- Butterfly species as recorded by GMEU include: Small Heath (*Coenonympha pamphilus*), Wall (*Lasiommata megera*), and White-letter Hairstreak (*Satyrus w-album*). The closest GMEU recorded butterfly species is: Small Heath (*Coenonympha pamphilus*), positioned at approx. 0.90km southeast (in open fields, north of High Crompton residential area), in 2014.
- **Mollusc species as recorded by GMEU include: Mud Snail (*Potamopyrgus* sp.). The closest record is positioned at approx. 0.45km northwest, in 2004. A more recent record however was sighted at approx. 0.40km northwest at Marsh near Turf Hill SBI, in 2019.**
- Damselfly and Dragonfly species include: Common Blue Damselfly (*Enallagma cyathigerum*) and Emperor Dragonfly (*Anax imperator*). Both records are positioned at approx. 1.0km north, sighted in a woodland clough area near Stanney Brook SBI, in 2022.

Notably, Buff Ermine (*Spilarctia luteum*), Cinnabar (*Tyria jacobaeae*), Grey Dagger (*Acronicta psi*), Small Square-spot (*Diarsia rubi*), Small Heath (*Coenonympha pamphilus*), Wall (*Lasiommata megera*), White-letter Hairstreak (*Satyrus w-album*) and Mud Snail (*Potamopyrgus* sp.), are all listed as Greater Manchester BAP species and are afforded protection under Section 41 of the NERC Act 2006.

NBN Atlas provides additional records of invertebrates identified as Greater Manchester BAP species including: Common Blue (*Polyommatus icarus*) and Small Copper (*Lycaena phlaeas*). Both species are positioned at approx. 0.61km northeast, recorded in 2014.

Amphibians

Collectively, the data search presents no active or historic record of amphibians within the proposed development footprint.

The data search has identified 31 records of amphibians (3 species) between 2013 - 2023, within a 2km radius of the Site to include: Common Frog (*Rana temporaria*), Common Toad (*Bufo Bufo*) and Great Crested Newt [GCN] (*Triturus cristatus*).

Common Frog (*Rana temporaria*), Common Toad and Great Crested Newt [GCN] (*Triturus cristatus*) are all afforded protection under the WCA 1981 and are listed as Lancashire BAP priority species. Great Crested Newt [GCN] (*Triturus cristatus*) is further protected under Section 41 of the NERC Act 2006.

The closest records for amphibians are:

- Common frog (*Rana temporaria*), 5 records, with the closest (x3) positioned approx. **1.19km southeast in 2013**, sighted at High Crompton residential area, located off Cotswold Avenue.
- Common Toad (*Bufo Bufo*) 8 records, with the closest positioned approx. **0.84km northeast in 2023**, sighted near a non priority pond located within a 500-1000m radius of the Site.
- **Great crested newt [GCN] (*Triturus cristatus*), 18 records, with the closest positioned approx. 1.82km northeast in 2013, located near Universal Works, Buckley Hill Road, Milnrow, Rochdale. All records for GCN are separated by a major barrier (M62 Motorway) with the majority of records located in close proximity to each other.**

During the desk study MAGIC Maps identified no priority ponds within the Site (of proposed development) or within a 2km radius of the Site, (**refer to Section 3.1.2 Priority Habitats and Figure 2**).

Reptiles

The data search provides no record of reptiles within the development footprint or within a 2km radius of the Site.

It is important to note, that a lack of recent data records does not discount presence/occurrence of reptiles within the local area; it simply highlights a 'data gap' for the district.

Fish

The data search provides 1 record of 'bony fish' within a 2km radius of the Site for Brown Trout (*Salmo trutta*), at 1.02km northeast, in 2011.

Notably, Brown Trout (*Salmo trutta*), is listed as a Greater Manchester BAP specimen and is afforded protection under Section 41 of the NERC Act 2006.

It is important to note, that a lack of recent data records does not discount presence/occurrence of fish within the local area; it simply highlights a ‘data gap’ for the district.

Birds

Collectively, the data search has identified **22,121** records (for 127 species) of protectable or notable birds within a 2km radius of the Site. All species are listed in Table 5 with prescribed legal protection and nesting preference.

Table 5: Data results of bird species within a 2km radius of the development Site

Common Name:	Full Recommended Taxon	GMEU Records	NBN Records	Date Range	Distance:	Direction:	Habitat Prefer	Conservation Status
Barn Owl	Tyto alba	1		2017	1.59km	ne	BP	Green, 1981
Bittern	Botaurus stellaris		2	2004-2009	1.79km	ne	W, GN, OW	Amber, 1981, P 2010
Black Redstart	Phoenicurus ochruros		1	2005	1.79km	ne	P	Amber, 1981
Blackbird	Turdus merula		842	1966-2023	0.28km	se	P	Green, 1981
Blackcap	Sylvia atricapilla		14	1996-2023	0.75km	ne	GN	Green
Black-headed Gull	Chroicocephalus ridibundus		134	1953-2023	0.28km	se	DB, GN, OW	Amber
Black-tailed Godwit	Limosa limosa	4	1	2010-2018	1.79km	ne	GN, W, OW, PB	Red, 1981, NT (Red list), P 2010
Blue Tit	Cyanistes caeruleus		860	1989-2023	0.28km	se	P	Green
Brambling	Fringilla montifringilla		7	1989-2021	0.28km	se	P, OW	
Bullfinch	Pyrrhula pyrrhula	149	85	1992-2023	0.67km	ne	P	Amber, WCA (III), NERC (41)
Canada Goose	Branta canadensis		40	1993-2025	0.67km	ne	WF, GN, OW, PB	WCA 1981 (II, IX)
Carion Crow	Corvus corone		401	1998-2023	0.28km	se	P	
Chaffinch	Fringilla coelebs		432	1989-2023	0.28km	se	P, PB	Green
Chiffchaff	Phylloscopus collybita		9	2009-2023	1.19km	se	GN, OW, PB	Green
Coal Tit	Periparus ater		466	1990-2023	0.28km	se	P	Green
Collared Dove	Streptopelia decaocto		629	1988-2023	0.28km	se	P	Green
Common Gull	Larus canus		80	1988-2023	0.67km	ne	SB, GN, OW, PB	
Coot	Fulica atra		13	2008-2021	0.67km	ne	WF, GN, OW, PB	Green
Cormorant	Phalacrocorax carbo		3	2008-2017	0.67km	ne	SB, OW, PB	Green
Cuckoo	Cuculus canorus	1	1	1992-2016	1.39km	sw	P, PB	Red, NERC (41)
Curlew	Numenius arquata	4	4	1989-2017	1.39km	sw	GN, W, OW	Red, P 2010, NT (Red list)
Dark-bellied Brent Goose	Branta bernicla bernicla		1	2009	1.94km	nw	WF, GN, OW	Amber
Dipper	Cinclus cinclus		1	2007	1.79km	ne	WB, GN	Amber
Dunlin	Calidris alpina		2	2009-2013	0.67km	ne	P, W, OW, PB / PC	Red
Duncock	Prunella modularis	428	670	1974-2023	0.28km	se	P	Amber, WCA (III)
Fieldfare	Turdus pilaris		84	1988-2023	0.28km	se	P/GN, OW	Red, WCA (I,IV)
Garganey	Spatula querquedula		1	2014	1.79km	ne	WF, GN, OW, PB	Amber, WCA (I)
Glossy Ibis	Plegadis falcinellus		1	2023	1.79km	ne	W, GN, PB	
Goldcrest	Regulus regulus		83	1989-2023	0.28km	se	P, OW, PB	Green
Golden Plover	Pluvialis apricaria		5	1989-1994	1.39km	sw	W, GN, OW, PB	Green, WCA (II,III)
Goldfinch	Carduelis carduelis		388	1989-2023	0.28km	se	P	Green, WCA (III)
Grasshopper Warbler	Locustella naevia	49	2	2011-2021	1.94km	nw	P, PB	Red, NERC (41)
Great Black-backed Gull	Larus marinus		4	1990-2009	1.39km	sw	SB, GN, OW, PB	Red
Great Crested Grebe	Podiceps cristatus		1	2008	0.67km	ne	DB, GN, OW, PB /	Green
Great Spotted Woodpecker	Dendrocopos major		68	1989-2023	0.28km	se	P	Green
Great tit	Parus major newtoni		786	1989-2023	0.28km	se	P	Green
Green Woodpecker	Picus viridis		1	2021	1.79km	ne	P, OW	Green
Greenfinch	Chloris chloris		359	1965-2023	0.28km	se	P	Red, WCA (III)
Grey heron	Ardea cinerea	1	73	1989-2023	0.67km	ne	W, P, OW, PB	Green
Grey Partridge	Perdix perdix		43	1989-2008	0.67km	ne	GN	Red, NERC (41)
Grey Wagtail	Motacilla cinerea		8	1991-2009	0.67km	ne	P/GN, OW	Amber
Grey-headed Wagtail	Motacilla flava thunbergi	1		2012	1.49km	nw	P/GN, PB	
Herring Gull	Larus argentatus	50	12	2010-2024	0.67km	ne	SB, P, OW / DBS	Red, NERC (41)
Hobby	Falco subbuteo	1		2012	1.49km	nw	BP	Green, WCA (I,IV)
House Martin	Delichon urbicum		45	1989-2023	0.67km	ne	P	Red
House Sparrow	Passer domesticus	454	674	1995-2024	0.28km	se	P, OW	Red, NERC (41)
Jack Snipe	Lymnocyrtus minimus		14	1989-2009	0.67km	ne	W, GN, OW, PB	Green
Jackdaw	Coloeus monedula		289	1988-2023	0.28km	se	P, OW	Green, WCA (III)
Jay	Garrulus glandarius		58	1993-2023	0.74km	ne	P	Green, WCA (III)
Kestrel	Falco tinnunculus		109	1987-2021	0.67km	ne	BP	Amber
Kingfisher	Alcedo atthis	9	4	2008-2022	0.67km	ne	WB, GN	Green, WCA (I)
Lapwing	Vanellus vanellus	132	111	1988-2024	0.52km	se	GN, PB / PCs W	Red, Near threatened
Lesser Black-backed Gull	Larus fuscus		38	1990-2023	1.79km	ne	SB, GN, OW, PB	Amber
Lesser Redpoll	Acanthis cabaret	13	1	1989-2019	1.39km	sw	P, OW, PB	Red, WCA (I)
Linnet	Linaria cannabina	60	91	1973-2022	0.42km	se	P, OW	Red, WCA (III)
Little Grebe	Tachybaptus ruficollis		1	2008	0.67km	ne	DB, GN, OW	Green
Little Owl	Athene noctua		29	1989-1994	1.39km	sw	BP	
Little Ringed Plover	Charadrius dubius	60	8	1986-2022	1.49km	nw	W, GN, PB	Green, WCA (1)
Little Stint	Calidris minuta		1	2009	0.67km	ne	W, GN, PB	Green
Long-eared Owl	Asio otus		5	2003-2004	1.79km	ne	BP	Green
Long-tailed Tit	Aegithalos caudatus		327	1992-2023	0.28km	se	P, OW	Green
Magpie	Pica pica		900	1988-2023	0.28km	se	P, OW	Green, WCA (III)
Mallard	Anas platyrhynchos		79	1989-2021	0.67km	ne	WF/SD, GN, OW, PB	Amber, WCA (II,III)
Mandarin Duck	Aix galericulata		1	2008	0.67km	ne	SD, P, OW	WCA (IX)
Marsh Tit	Poecile palustris	1	1	1989-2019	1.39km	sw	P, OW	Red, NERC (41)
Meadow Pipit	Anthus pratensis		55	1989-2016	0.67km	ne	GN, OW, PB	Amber
Mediterranean Gull	Ichthyophaga melanocephalus		6	2016-2022	1.79km	ne	SB, GN, OW, PB	Amber, WCA (I)
Merlin	Falco columbarius aesalon		12	1929-2022	1.79km	ne	BP	Red, Vulnerable, WCA (I,IV)
Mistle Thrush	Turdus viscivorus		253	1989-2023	0.28km	se	P, OW	Red
Moorhen	Gallinula chloropus		50	1990-2021	0.67km	ne	WF, GN, OW	Amber, WCA (II)
Mute Swan	Cygnus olor		7	1993-2019	0.67km	ne	WF, GN, OW	Green

Nuthatch	Sitta europaea			20	2017-2023	0.74km	ne	P, OW	Green
Oystercatcher	Haematopus ostralegus			9	1990-2021	0.67km	ne	W, GN, OW, PB	Amber, Vulnerable, Near threatened
Peregrine	Falco peregrinus	18		1	2010-2022	1.34km	ne	BP	Green, WCA (I,IV)
Pheasant	Phasianus colchicus			7	2008-2009	1.69km	nw	GN, OW	
Pied Wagtail	Motacilla alba			78	2004-2022	0.28km	se	P, OW	Green
Pied Wagtail	Motacilla alba yarrellii			23	1989-2015	0.67km	ne	P, OW	Green
Pink-footed Goose	Anser brachyrhynchus			3	1990-1992	0.80km	sw	WF, GN, OW / PCs	Amber, WCA (II) P 2010
Pintail	Anas acuta			9	1997-2021	1.79km	ne	SD, GN, OW, PB /	Amber, Vulnerable, WCA (I,II,III)
Pochard	Aythya ferina			37	1994-2023	1.79km	ne	SD, GN, OW, PB	Red, Vulnerable, WCA (II,III)
Red Grouse	Lagopus lagopus	1			2022	0.55km	sw		
Red-legged Partridge	Alectoris rufa			1	1989	1.39km	sw	GN	Near threatened
Redshank	Tringa totanus			5	2008-2016	0.67km	ne	W, GN, OW, PB	Amber, Vulnerable
Redstart	Phoenicurus phoenicurus			9	1990-2006	1.79km	ne	P, PB	Amber
Redwing	Turdus iliacus			94	1973-2022	0.28km	se	P, OW, PB	Amber, WCA (I,IV)
Reed Bunting	Emberiza schoeniclus	170		101	1989-2023	0.67km	ne	P, OW, PB	Amber, WCA (III)
Ringed Plover	Charadrius hiaticula			7	2008-2012	0.67km	ne	W, GN, OW, PB / F	Red
Robin	Erithacus rubecula			791	1989-2023	0.28km	se	P, OW	Green
Rock Dove	Columba livia			324	1996-2023	0.28km	se	P	Green
Rook	Corvus frugilegus			19	1989-2021	0.67km	ne	P, OW	Amber, Vulnerable
Ruff	Calidris pugnax			2	1986-2012	1.79km	ne	W, GN, OW, PB	Red, Near threatened, WCA (I)
Sand Martin	Riparia riparia			2	1990-1991	1.39km	sw	P, PB	Green
Sanderling	Calidris alba			1	2009	1.94km	nw	W, GN, PB / PCs S	Amber
Sedge Warbler	Acrocephalus schoenobaenus			1	2011	0.67km	ne	GN, PB	Amber
Short-eared Owl	Asio flammeus			6	2001-2009	1.79km	ne	BP	Amber
Shoveler	Spatula clypeata			43	1993-2023	1.79km	ne	SD, GN, OW, PB	Amber, WCA (I,III)
Siskin	Spinus spinus			22	1991-2023	0.28km	se	P, OW, PB	Green, WCA (III)
Skylark	Alauda arvensis	65		91	2010-2021	0.67km	ne	GN	Red, NERC (41)
Snipe	Gallinago gallinago			37	1988-2016	1.39km	sw	W, GN	Amber, Vulnerable, WCA (II,III)
Song Thrush	Turdus philomelos	102		62	1993-2023	0.28km	se	P, OW, PB	Amber, WCA (III), P 2010
Spotted Flycatcher	Muscicapa striata			6	1989-1994	1.39km	sw	P, PB	Red
Starling	Sturnus vulgaris	470		616	1987-2024	0.28km	se	P, OW	Red, WCA (III)
Stock Dove	Columba oenas			3	1993-2009	0.67km	ne	P	Amber
Stonechat	Saxicola rubicola			3	2009-2023	0.80km	sw		
Swallow	Hirundo rustica			119	1989-2023	0.67km	ne	P, PB	Green
Swift	Apus apus			73	1989-2023	0.67km	ne	P, PB	Red, Near threatened
Tawny Owl	Strix aluco			8	1991-2022	0.78km	ne	BP	Amber
Teal	Anas crecca			12	1992-2015	0.67km	ne	SD, GN, OW, PB /	Amber, WCA (II,III)
Tree Pipit	Anthus trivialis	1		1	1992-2013	0.54km	sw	P, PB	Red, NERC (41)
Tree Sparrow	Passer montanus			3	1989-1992	1.39km	sw	P, OW	Red, NERC (41)
Treecreeper	Certhia familiaris			3	2022	0.78km	ne	P	Green
Tufted Duck	Aythya fuligula			1	2008	0.67km	ne	SD, DB, GN, OW, F	Green, WCA (II,III)
Twite	Linaria flavirostris			218	1933-2017	1.79km	ne	GN, OW, PB	Red, WCA (III)
Water Rail	Rallus aquaticus			2	2010	0.67km	ne	WB, GN, OW	Green
Waxwing	Bombycilla garrulus			3	1989-2013	1.39km	sw	P, OW	Green
Wheatear	Oenanthe oenanthe			16	1989-1995	1.39km	sw	GN, PB	Amber
Whinchat	Saxicola rubetra			7	1990-1995	1.39km	sw	GN, PB	Red
Whitethroat	Curruca communis			11	1991-2021	0.67km	ne	P, PB	Amber
Wigeon	Mareca penelope			106	1996-2023	1.79km	ne	WF, GN, OW	Amber, WCA (II,III)
Willow Tit	Poecile montanus			1	2015	1.39km	sw	P, OW	Red, P 2010, NERC (41)
Willow Warbler	Phylloscopus trochilus			51	1989-2021	0.67km	ne	P, PB	Amber
Woodcock	Scolopax rusticola			6	1991-2023	0.78km	ne	W, GN, OW, PB	Red, WCA (II,III)
Woodpigeon	Columba palumbus			649	1989-2023	0.28km	se	P, OW, PB	Amber, WCA (III)
Wren	Troglodytes troglodytes			478	1988-2023	0.28km	se	P	Amber
Yellow Wagtail	Motacilla flava	11		17	1989-2022	1.39km	sw	GN, PB	Red, NERC (41)
Yellowhammer	Emberiza citrinella			5	1989-1992	1.39km	sw	P, OW	Red, WCA (III)
Yellow-legged Gull	Larus michahellis			9	2009-2021	1.79km	ne	SB, GN, OW	Amber

Habitat Pref Key:

Passerine - **P**

Birds of Prey - **BOP**

Over Wintering: **OW**

Wading: **W**

Ground Nesting: **GN**

Passage Birds: **PB**

During breeding season **DBS**

Peak Counts - Spring/Autumn **PCs SA**

Peak Counts Autumn / Winter **PCs AW**

Peek Counts Winter **PCs W**

The closest data records (NBN Atlas) are all circa 0.28km surrounding the Site, recorded between 1966 - 2024 there are 29 species recorded. Within this range:

- The most frequently recorded species are: Magpie (Pica pica) - 900 records; followed by: Blue Tit (Cyanistes caeruleus) 860 records, Blackbird (Turdus merula) 842 records, Robin (Erithacus rubecula) 791 records and Great tit (Parus major newtoni) 786 records.
- The most vulnerable species in this group is : House Sparrow (Passer domesticus) with 674 records. This is Red NERC (41) listed.
- The least recorded birds observed in this proximity are: Brambling (Fringilla montifringilla) 7 records; Siskin (Spinus spinus) 22 records, and Song Thrush (Turdus philomelos) 6 records.

MAGIC Maps identifies the entire Site as a Countryside Stewardship Target Area for Lapwing (*Vanellus vanellus*) within the proposed development footprint and Countryside Stewardship Target Areas for Curlew (*Numenius arquata*), Redshank (*Tringa totanus*) and Snipe (*Gallinago gallinago*), positioned approx. 0.25km west of the Site.

The GMEU data search provides 132 records of Lapwing (*Vanellus vanellus*), 4 records of Curlew (*Numenius arquata*) and no records for Redshank (*Tringa totanus*) and Snipe (*Gallinago gallinago*) within a 2km radius of the Site.

The closest GMEU record for Lapwing (*Vanellus vanellus*) is positioned approx. 0.52km southeast. The closest GMEU record for Curlew (*Numenius arquata*), is positioned approx. 1.48km northwest of the Site.

Referring to these priority species, NBN Atlas records show:

- Lapwing (*Vanellus vanellus*), 111 records, The closest record (10 sightings) positioned at approx. 0.67km northeast, in 2008-2009.
- Curlew (*Numenius arquata*), 4 records, the closest record (4 sightings) positioned at approx. 1.39km southwest, in 1989-1990.
- Redshank (*Tringa totanus*), 5 records, the closest record (3 sightings) positioned at approx. 0.67km, in 2008-2009.
- Snipe (*Gallinago gallinago*), 37 records, the closest record (10 sightings) positioned at approx. 1.39km southwest, in 1989-1992.

Bats

Collectively, the data search holds no record of bats within the proposed development footprint.

The GMEU data search provides 119 records of bats (7 species) within a 2km radius of the Site to include: Bat sp (*Chiroptera*), Common Pipistrelle (*Pipistrellus pipistrellus*), Pipistrelle sp (*Pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Nathusius's Pipistrelle (*Pipistrellus nathusii*) and Noctule Bat (*Nyctalus noctula*).

The closest records for each bat species are:

- Bat sp (*Chiroptera*), 8 records in total. The closest x2 records are at approx. >1.22km southeast of the Site, in a small woodland area near Mendip Close, Shaw, (a residential area) in 1991 and 1994. There is a more recent record, at approx. 1.88km northeast of the Site, in 2021, at Dane Mill, Milnrow, where several of these species have been sighted over an 8 year period.
- Common Pipistrelle (*Pipistrellus pipistrellus*), 68 records in total. **A majority of these records are clustered to the southeast of the Site, located at High Crompton and Crompton residential areas separated by no major barriers.** However, a number of the records also show a cluster around Balderstone and Lower Place, northwest of the Site, though these sites are separated by a major barrier (M62 Motorway). **The closest record is at**

approx. >0.37km southwest at Moorgate East, in 2021.

- Daubenton's Bat (*Myotis daubentonii*), 2 records, in close proximity to each other, the closest is recorded at approx. >1.83km northeast on Water Lane, Milnrow, separated by a major barrier (M62 Motorway). Both records were recorded in 2005.
- Lesser Noctule (*Nyctalus leisleri*), 2 records, the closest record is recorded (via aural bat detector) at approx. >1.28km northwest of the Site, rear of work units off George Stephenson Ave, Sir Isaac Newton Way, near Stanney Brook SBI in Milnrow, separated by a major barrier (M62 Motorway), in 2019.
- Nathusius's Pipistrelle (*Pipistrellus nathusii*), 2 records, are recorded (via aural bat detector) at approx. >1.28km northwest of the Site, rear of work units off George Stephenson Ave, Sir Isaac Newton Way, near Stanney Brook SBI in Milnrow, separated by a major barrier (M62 Motorway), in 2018.
- Noctule Bat (*Nyctalus noctula*), 4 records are recorded (via aural bat detector) at approx. >1.28km northwest of the Site, rear of work units off George Stephenson Ave, Sir Isaac Newton Way, near Stanney Brook SBI in Milnrow, separated by a major barrier (M62 Motorway), between 2018-2021.
- Pipistrelle sp (*Pipistrellus*), 33 records, the closest record is positioned at approx. >0.71km southeast, on Greenhill Avenue, Shaw, in 2007. **The majority of records are located in residential areas distributed in an arc around the site.**

Additionally, NBN Atlas presents an additional 3 records of bats within a 2km radius of the Site for Common Pipistrelle (*Pipistrellus pipistrellus*), the closest record being at approx. >0.96km northeast, on Bealbank Close, in 2017.

Notably, Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Nathusius' pipistrelle (*Pipistrellus nathusii*) and Noctule (*Nyctalus noctule*) are listed as Greater Manchester BAP species. Further, all bat species are afforded protection under WCA 1981.

Badger

Collectively, the data search provides no record of Badger (*Meles meles*) within the proposed development footprint.

Notably, Badger (*Meles meles*) is listed as Greater Manchester BAP priority species and afforded protection under Section 41 of the NERC Act 2006. This species is additionally protected via the WCA 1981 and the 'Protection of Badgers Act 1992'.

It is important to note, that a lack of recent data records does not discount presence/occurrence of Badger (*Meles meles*) within the local area; it simply highlights a 'data gap' for the district.

Water vole & Otter

Collectively, the data search provides no record of Water vole (*Arvicola amphibius*) and Otter (*Lutra lutra*) within the proposed development footprint.

The GMEU data search provides 8 records of Water vole (*Arvicola amphibius*) within a 2km radius of the Site. The closest record of Water vole (*Arvicola amphibius*) is positioned approx. 1.38km northwest, located in marsh near Turf Hill, in 2019. Notably, all records are located to the northwest of the Site and in close proximity to each other, separated by a major barrier (M62 Motorway).

The GMEU data search provides 1 record of Otter (*Lutra lutra*) within a 2km radius of the Site. The closest record of Otter (*Lutra lutra*) is positioned approx. 1.85km northeast, located on the River Beal, Newhey, Rochdale, in 2020.

It is important to note, that a lack of recent data records does not discount presence/occurrence of Water vole (*Arvicola amphibius*) and Otter (*Lutra lutra*) within the local area; it simply highlights a 'data gap' for the district.

Notably, both Water vole (*Arvicola amphibius*) and Otter (*Lutra lutra*) are listed as Greater Manchester BAP Priority Species and afforded protection under Section 41 of the NERC Act 2006 and the WCA 1981. Additionally, European Otter (*Lutra lutra*) is listed under CITES Appendix 1 – this global treaty offers the highest level of protection from international trade under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Other Mammals

Collectively, the data search provides 116 records (6 species) of other mammals within a 2km radius of the Site to include: Brown Hare (*Lepus europaeus*), West European Hedgehog (*Erinaceus europaeus*), Pole Cat (*Mustela putorius*), Mole (*Talpa europaea*), Red Fox (*Vulpes vulpes*), Roe Deer (*Capreolus capreolus*) and Stoat (*Mustela erminea*).

The closest records for each 'other mammal' species are:

- **West European Hedgehog (*Erinaceus europaeus*), 96 records, the closest positioned approx. 0.35km northeast, located in a field parcel, in 2017.**
- Brown Hare (*Lepus europaeus*), 7 records, the closest positioned approx. 0.86km southwest, at Beet farm, Broad lane, Burnedge, in 2011.

- Pole Cat (*Mustela putorius*), 2 records, the closest positioned approx. 0.96km southeast, off Mossgate Road in 2015.
- Mole (*Talpa europaea*), 6 records, the closest positioned approx. 0.24km southwest, on the track off Broad Lane leading to the Site, in 2025.
- Red Fox (*Vulpes vulpes*), 3 records, the closest positioned approx. 1.0km northwest, near Strawberry Close, separated by a major barrier (M62 Motorway). in 2020.
- Roe Deer (*Capreolus capreolus*), 1 record, the closest positioned approx. the closest positioned approx. 1.0km northwest, near Strawberry Close, separated by a major barrier (M62 Motorway), in 2023.
- Stoat (*Mustela erminea*), 1 record, the closest positioned approx. 1.54km southwest, at Narrow Gate Brow, in 2018.

Notably, Brown hare (*Lepus europaeus*) and West European hedgehog (*Erinaceus europaeus*) are listed as Greater Manchester BAP Priority Species and afforded protection under Section 41 of the NERC Act 2006. Additionally, West European hedgehog (*Erinaceus europaeus*) is listed under the IUCN Red List as "Near Threatened" reflecting a decline in the population over the past decade.

Invasive Non-Native Species

Flora

The data search has identified presence of 16 INN flora records (2 species) as listed in **Part 2, Schedule 9 of WCA 1981**, within a 2km radius of the Site to include: Himalayan Balsam (*Impatiens glandulifera*) and Japanese Rose (*Rosa rugosa*). Both are listed on Schedule 9 of WCA, 1981 as invasive non-native flora species.

The closest of these records is Himalayan Balsam (*Impatiens glandulifera*), (x2 records), positioned approx. 0.96km northeast of the proposed development Site in 2025.

Fauna

The data search has identified presence of 50 INN fauna records (5 species) as listed in Part 1, Schedule 9 of WCA 1981, within a 2km radius of the Site to include: Canada Goose (*Branta canadensis*), Mandarin Duck (*Aix galericulata*), Barn Owl, (*Tyto alba*), Common Pheasant, (*Phasianus colchicus*) and Grey squirrel (*Sciurus carolinensis*). All are listed on Schedule 9 of WCA, 1981 as invasive non-native fauna species.

The closest of these records is Canada Goose (*Branta canadensis*) and Mandarin Duck, (*Aix galericulata*), positioned approx. 0.67km northeast of the proposed development Site in 2008-2009.

The data search returned no record of INN White-clawed crayfish (*Austropotamobius pallipes*) within a 2km radius of the Site.

Fauna - No records Returned

The data search returned no records for:

Hazel Dormice (*Muscardinus avellanarius*)

White-clawed crayfish (*Austropotamobius pallipes*).

3.2 FIELD SURVEY

The site habitats and accompanying Target Notes are presented in the Phase 1 Habitat Map in **Appendix 2**. Habitats are also illustrated within Photographs 1 - 6. (below).

3.2.1 u1b Developed land - sealed surface

As shown in Photograph 1 (below), u1b Developed land - sealed surface covers a large portion of the Site to the west. This habitat comprises a sealed, impervious concrete surface with no vegetation cover.



Photograph 1 - u1b Developed land - sealed surface (concrete yard)

This habitat is utilized as a yard, providing durable hardstanding for adjacent equine facilities and vehicular access into Knott Booth Farm.

3.2.2 u1c Artificial unvegetated, unsealed surface

This habitat extends from west to east, across the Site: A surface of crushed stone and compacted soil creates an access trackway throughout the Site, and surrounds

the curtilage of (some) existing buildings within the farmstead.

As shown in Photograph 2 (below), this habitat supports very low cover of vegetation due to continued human activity and disturbance. Specimens colonised (at <10% cover) include Perennial rye grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), Pineapple weed (*Matricaria discoidea*), Common mouse-ear (*Cerastium fontanum*) and Bryophyte spp.



Photograph 2 - u1c Artificial unvegetated, unsealed surface

3.2.3 u1b5 Buildings

Building A-1

A single storey, brick built stable block, utilized for equine housing. The roof comprises corrugated metal sheets with skylights; condensation and damp is prevalent throughout the internal roof structure. At the time of survey, no cobwebs were present at roof height.

Corrugated steel work overlaps brick masonry, and some gaps are present between the corrugated metal roof sheets and wall tops.

At the time of survey, windows were open to facilitate ventilation, and cobwebs were present amongst open windows and cills.

A wooden roller shutter door presents a gap to the base as the door cannot be sealed to ground level.

At the time of survey, there was no evidence of bats - no faeces were detected and

no grease marks were identified against the white walls. Additionally, there was no evidence of birds, with no nests, faeces and/or feathers.

Building A-2

A breezeblock built, hay store with rendered exterior and attached to the northeastern gable end of Building A-1.

The roof comprises fibre cement / asbestos sheets and internal wooden beams. **Along the third and fourth beams, a total of 3 no. Swallow nests are present: 2 no. of these nests were occupied at the time of survey and 1 no. was damaged.**

An additional bird nest is positioned on the second breeze block pillar: It is unclear if/what birds are utilizing this nest.

3 no. windows are positioned to the northwestern elevation and 1 no. window is positioned to the rear: At the time of survey, all windows were continuously open with no glass/plastic to seal.

Notably, the cellar is accessible at ground level.

Building A-3

A single storey, brick built storage facility with rendered exterior and attached to the southeastern elevation of Building A-2. There is no brick cavity and externally metal fascia boards are securely fitted.

Building A-3 is largely sealed via a roller shutter door, though access to bats and birds is permitted via an open window within/leading to Building A-1.

Wooden roof beams display some water ingress, but the building is mostly dry inside.

At the time of survey, 2 no. Swallow nests were detected internally.

At the time of survey, there was no evidence of bats - no faeces were detected and no grease marks were identified against the walls.

Building B

A single storey, brick built storage building, formerly utilized as a cattery. The low roof comprises fibre cement / asbestos sheets, with perspex sky lights throughout and no insulation.

Internally, Building B is divided into 8 bays with sealed windows positioned at both gable ends. A wooden shutter door presents a small gap at ground level. Wooden beams, windows, the roller shutter door and all components are heavily cobwebbed internally and overall, the building appears to be dry with little evidence of damp and/or water ingress.

At the time of survey, there was no evidence of bats - no faeces were detected and no grease marks were identified against the white walls. Additionally, there was no evidence of birds, with no nests, faeces and/or feathers.

3.2.3 u1e Built linear features - fences & gates

Boundary stock fencing comprising wooden posts and wire, plus incorporated access gates, are installed throughout the Site: Such boundary features are positioned to separate paddocks (within wider ownership land) and ensure the safety of grazing animals.

Such stock fencing is installed to eastern, southern and western boundaries of g4 Habitat Parcel 1 (as discussed within Section 3.2.4 below).

3.2.4 g4 Modified grassland

g4 Habitat Parcel 1:

g4, 10, 16, 521, 524 Modified grassland with scattered scrub, tall forbs, unmanaged and invasive non-native species.

Habitat Parcel 1 is positioned to the far east of the Site, forming an unmanaged, triangular shaped paddock: Gramineae specimens include frequent Yorkshire fog (*Holcus lanatus*), plus occasional Perennial ryegrass (*Lolium perenne*) and Timothy (*Phleum pratense*). Scattered Bramble (*Rubus fruticosus* agg.) scrub and tall forbs (listed below) are largely colonised to the paddock periphery. Wild rose (*Rosa acicularis*) shrubs and Trees 1-4 are also established at the western boundary (as described within Section 3.2.5 below).

As shown in Photograph 3 (below), tall forbs are also established at the northwestern zone, colonised upon a mound of historically tipped spoil: Specimens include Broad-leaved dock (*Rumex obtusifolius*), Common nettle (*Urtica dioica*), Creeping thistle (*Cirsium arvense*), Spear thistle (*Cirsium vulgare*) and Broad-leaved willowherb (*Epilobium montanum*).



Photograph 3 - g4 Habitat Parcel 1 - (16) tall forb vegetation to the northwestern zone

Notably, there is no physical boundary between this habitat parcel and the adjacent trackway (of u1c Artificial unvegetated, unsealed surface) to the north, promoting regular access and anthropogenic disturbance: Areas of bare soil are colonised by specimens including Pineapple weed (*Matricaria discoidea*), Common sow thistle (*Sonchus oleraceus*) and Common mouse-ear (*Cerastium fontanum*).

As shown in Photograph 4 (below), anthropogenic disturbance is also evident via storage of (w207) forest brash / wood within IBC containers, positioned centrally within the paddock.



Photograph 4 - g4 Habitat Parcel 1 - storage of (w207) forest brash/wood within IBC containers

Notably, Invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981] is abundant and spreading throughout g4 Habitat Parcel 1.

g4 Habitat Parcel 2:

g4, 10, 16, 202, 521 Modified grassland with scattered scrub, tall forbs, young trees - self set and unmanaged.

Habitat Parcel 2 is positioned to the north, spanning west to east and entirely outside of the red-line (proposed development) boundary: Habitat Parcel 2 has been described for the context of immediately surrounding landscape features.

The sward is unmanaged and established upon a sloping verge. Gramineae and tall forb specimens are comparable to those identified within g4 Habitat Parcel 1. Scattered Bramble (*Rubus fruticosus* agg.) scrub is established throughout, alongside Young self-set trees including Hawthorn (*Crataegus monogyna*) and Willow sp. (*Salix* sp.).

Notably, there is no physical boundary between this habitat parcel and the adjacent trackway (of u1c Artificial unvegetated, unsealed surface) to the south, promoting regular access and anthropogenic disturbance.

At the time of survey, invasive non-native flora species were not recorded within Habitat Parcel 2. However, prevalence and spread of invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981] within other zones of the Site, likely means colonisation within the near future.

g4 Habitat Parcel 3:

g4, 517, 524 Modified grassland with recent management and invasive non-native species.

Habitat Parcel 3 is a small area of grassland, positioned south of the Site and adjacent to the farm entrance (u1b developed land - sealed surface).

As shown in Photograph 5 (below), the sward is not being actively managed now, but there is evidence of recent management by cutting/mowing. Graminea specimens are comparable to those identified within g4 Habitat Parcels 1 and 2, with accompanying herbaceous specimens of Creeping buttercup (*Ranunculus repens*) and Common mouse-ear (*Cerastium fontanum*).



Photograph 5 - g4 Habitat Parcel 3

Although there is no physical boundary to separate g4 Habitat Parcel 3 from adjacent habitats, at the time of survey there was minimal evidence of anthropogenic disturbance and no exposure of bare soil.

Notably, at the time of survey, invasive non-native flora species were not recorded within Habitat Parcel 2. However, prevalence and spread of invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981] within immediately adjacent woodland (w1g), likely means colonisation within the near future.

3.2.5 g200 Tree

All (g200) Trees listed below are rooted at the western boundary of g4 Habitat Parcel 1, alongside shrubs of Wild rose (*Rosa acicularis*). All specimens have been subject to damage via historically harsh pruning; anthropogenic disturbance is further evident at the root zones, via exposure of bare soil/earth and close storage of (w207) forest brash/wood within IBC containers. Despite such factors, all appear to be in good health, with no signs of disease.

As shown in Photograph 6 (below), all specimens are young, likely self-set, and have not yet reached semi-maturity: There is no evidence of ecological niches (such as loose bark, crevices and rot holes).

Bramble (*Rubus fruticosus* agg.) and **invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981] is abundant and spreading at the base of all trees.**

Tree 1: 1 no. small Hazel (*Corylus avellana*)

Tree 2: 3 no. small Crack willow (*Salix × fragilis*)

Tree 3: 1 no. small Hawthorn (*Crataegus monogyna*)

Tree 4: 1 no. small Alder (*Alnus glutinosa*)



Photograph 6 - Wild rose (*Rosa acicularis*) shrubs, plus g200 Trees - 1-2

It is assumed that these shrubs and trees will be removed as part of the project and should this be the case onsite compensation will be required (see below).

3.2.6 w1g Other broadleaved woodland

w1g Other broadleaved woodland is established to southern and western aspects, as linear belts. All woodland is positioned outside of the red-line (proposed development) boundary, but within proximity. It is described for the context of surrounding landscape features: **Broadleaved woodland is classified as UK and Greater Manchester BAP Priority Habitat, comprising high-value ecological niches, plus crucial for habitat connectivity and biodiversity conservation.**

Notably, southern and western belts of broadleaved woodland are only separated via an access trackway, leading into Knott Booth Farm: This trackway / separation spans approx. 5m only, and is not a major barrier for the passage of fauna. Additionally, as discussed within Section 3.2.7 (below), watercourses flow through the centre of both woodland belts, to the base of steeply sloping banks.

Throughout, broadleaved trees are small to medium in size (with approx. 80% of specimens classified as medium), presenting one age-class. Tree specimens include Sycamore (*Acer pseudoplatanus*), Oak (*Quercus robur*), Horse chestnut (*Aesculus hippocastanum*), Alder (*Alnus glutinosa*), Hazel (*Corylus avellana*) and Hawthorn (*Crataegus monogyna*). Notably, Sycamore and Horse chesnut are not native to the UK and there is limited shrub understorey throughout.

Tree mortality is low, with no evidence of pests, diseases and/or crown dieback. Additionally, there is no significant grazing pressure and/or herbivore impact throughout.

Small open areas are present where tree canopies are less dense: These areas are not representative of 'traditional open glades' but via light penetration, do promote

woodland regeneration via young, self set tree sapling growth.

There is no recognisable woodland NVC plant community at ground level, likely due to **dominant coverage and vast spread of invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981]**.

Collectively, there is less than 25% deadwood, both standing and fallen in the form of large branches, stems and stumps. Further, along the immediate boundaries, no veteran trees or ecological niches (such as rot holes, crevices and lifting bark) are identified.

Notably, anthropogenic disturbance is evident via some tipped waste within the western woodland belt.

3.2.7 r2b Other rivers and streams & w50 Ditch

Notably, all watercourse habitat(s) will remain unaffected by the proposed development and are discussed for the context of surrounding landscape features.

Stanney Brook is assessed as r2b Other rivers and streams, positioned to the west (spanning north to south) and flowing to the base of a steep valley within w1g Other broadleaved woodland (as described in Section 3.2.6). **At its closest point, Stanney Brook is positioned approx. 15.3m west of the red-line boundary.**

A drainage ditch is assessed as w50, positioned to the south (spanning west to east) and within w1g Other broadleaved woodland (as described in Section 3.2.6). This drainage ditch becomes culverted upon reaching the entrance (trackway) of Knott Booth Farm, and likely flows into Stanney Brook (where it is culverted) at the west. **At its closest point, this drainage ditch is positioned approx. 2.5m south of the red-line boundary - with Building B standing as the closest on-Site feature. Which for Phases 2 and 3 will be a [potential] consideration for BNG as the proposals are within the ditch riparian zone.**

At the time of survey, water within both features was slightly turbid. **Notably, the banks and periphery of both watercourses support dominant and spreading invasive non-native species Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981].**

Importantly, Stanney Brook is classified as UK and Greater Manchester BAP Priority Habitat, comprising unique features, offering vital ecological connectivity and requiring focused conservation efforts.

3.3 SITE SUITABILITY FOR PROTECTED AND NOTABLE SPECIES

3.3.1 Species Discounted from Assessment

The data search and field survey produced no records of reptiles in the 2km search zone, a single record of fish, reptiles >1.5 km from the Site, 8 records of Water Voles and 1 of Otter (*Lutra lutra*) in a 2km radius of the Site. These fauna have been discounted from assessment as there either no typical habitat nor evidence of their presence on the Site.

3.3.2 Invertebrates

The desktop survey identified 29 recent records of invertebrates, in a 2km radius of the development Site: 5 of these species are Moths: Notably Cinnabar (*Tyria jacobaeae*) is listed as Greater Manchester BAP priority species, positioned in the farms fields approx. 1.3km southeast, in 2013.

The Small Heath (*Coenonympha pamphilus*), a priority species under the UK Post 2010 Biodiversity Framework is positioned at 0.90km southeast of the proposed development Site, in 2014 in open fields, north of High Crompton residential area. The small heath is a small, inconspicuous butterfly of heathland, moorland, grassland and coastal habitats. Adults are on the wing from April to September in some places, and appear in two or three broods. They only fly in sunny conditions, always settling close to the ground. Caterpillars feed on a variety of grasses such as fescues and meadow-grasses.

Notably the Mud Snail (*Potamopyrgus* sp.) / Mud Pond Snail (*Omphiscola glabra*), classified as Near threatened by the IUCN, Vulnerable (RDB2) and is a Section 41 Conservation Species, is recorded <0.5km northwest from the Site in proximity to Stanney Brook and its issues to the north. They live in temporary freshwater habitat such as pools and ditches. The temporary nature of their habitat means that they are very dependent on weather conditions, and extremes of either drought or flooding can cause their numbers to fluctuate. They are well adapted to temporary drought, and this is where they have acquired their name as they bury into soft mud becoming inactive until their habitat becomes wet again. The Pond mud snail prefers ponds with low calcium, nutrient poor water on acidic sandy or gravelly soils, especially within unimproved pasture and heathland. The main reasons for the decline of the Pond mud snail are the loss or degradation of temporary ponds through infilling, pollution from agricultural run-off, overgrazing, scrub encroachment, and the enlargement of small ponds to create permanent water bodies.

Overall, the presence of notable invertebrates cannot be discounted due to the adjacent watercourses and surrounding unimproved grassland, which are in proximity of the development footprint. However, it is anticipated that notable invertebrates are unlikely to be present in significant numbers due to limited floral diversity in the Site itself being largely a farmyard and building complex. The Marsh near Turf Hill (SBI) supports areas of marsh and swamp, which is remnant of a larger area of marsh and open water This site supports a good population of Mud Pond Snail and populations of mud snail have also been recorded in the ponds and marshes near Broad Shaw Farm, which notably are in proximity to Stanney Brook

which flows south to north along the western boundary of the Site. **Consequently a protective buffer zone needs to be established to protect the w1g woodlands ditch and Stanley Brook.**

3.3.3 Vascular plants

Referring to the desktop survey and field survey there are no notable vascular plant species colonised on Site. In the surrounding area are 6 records of the notable vascular plant species, these records include Cornflower (*Centaurea cyanus*), positioned approx. 1.44km southwest of the Site, recorded in 2019.

Five records of the notable vascular plant species, Bluebell (*Hyacinthoides non-scripta*). Notably, Bluebell (*Hyacinthoides non-scripta*) is listed under Schedule 8 of the WCA (as amended). The closest of these records is positioned approx. 0.96km south, in 2017 (Big Bluebell Watch 2017).

3.3.4 Amphibians

The desktop survey produced no record of amphibians within the red-line boundary. The data search provided 31 records of amphibians within a 2km radius (to include Common frog (*Rana temporaria*), Common toad (*Bufo bufo*) and Great crested newt [GCN] (*Triturus cristatus*).

For Common Toad (*Bufo Bufo*) 8, with the closest positioned approx. 0.84 km northeast in 2023, sighted a non priority pond. The Common Frog records are found to the southwest of the Site in the conurbation of High Crompton.

Records of GCN are found to the northeast of the Site, with the closest (x18) positioned approx. 1.82km located near the pond at Universal Works, Buckley Hill Road, Milnrow, Rochdale.

Notably, to the north of the Site the M62 at Junction 21 may form an anthropogenic barrier between Milnrow and the Site. However, due to landscape features it is recommended that a 500m survey is completed.

During the desk study MAGIC Maps identified no priority ponds within the Site (of proposed development) or within a 2km radius of the Site.

There are two Great Crested Newt (GCN) Class Survey Licences returned. The closest is recorded in 2016 with GCN present, positioned at approx. 1.72km north of the Site, separated by a major barrier (M62 Motorway). No GCN Pond Surveys have been returned.

MAGIC Maps further identifies the proposed development footprint within a GCN Strategic Opportunity Area – Core 1.

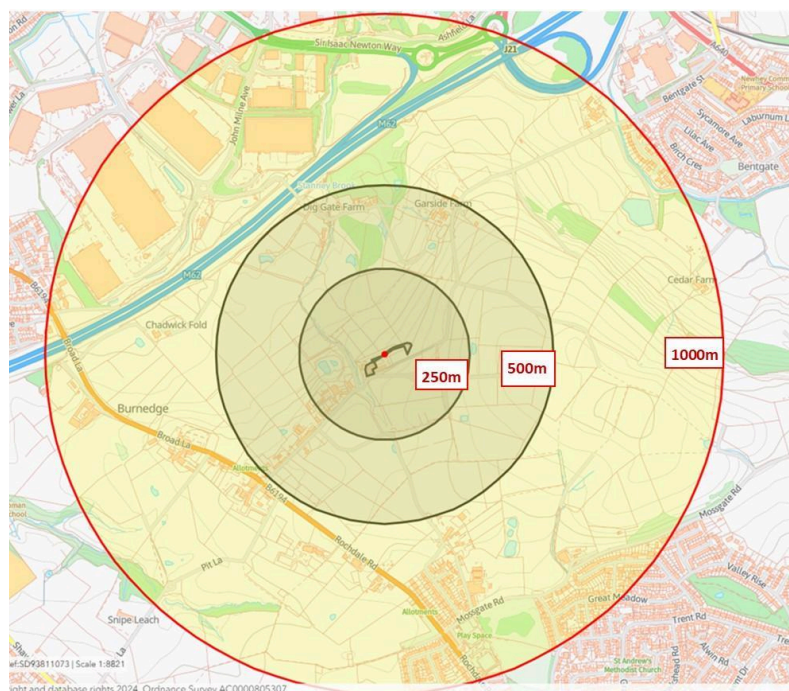
There are 2 no. ponds within a 250m radius of the Site - The closest is positioned approx. 93m west (with no major physical barrier of separation). **Further, a drainage ditch is positioned to the south (spanning west to east), at approx. 2.5m**

distance from the red-line boundary. Stanney Brook is also positioned to the west (spanning north to south), at approx. 15.3m distance from the red-line boundary.

There are 10 no. ponds within a 500m radius, the majority are clustered around Dig Gate Farm, north of the Site, with no physical barriers. Stanney Brook continues south to north through Dig Gate farm. This series of ponds may be fed by drainage that comes from Garside Farm. A further 13 no. ponds exist within a 500-1000m radius. The river Beal flows around Bentgate residential area northeast of the Site. Southwest of the Site there is a further water body flow identified as Sudden Brook West SBI and Sudden Brook East SBI running south of Pit Lane, flowing south to north, separated by a minor barrier of Broad Lane/Rochdale Road (B6194).

A total no. of 25 ponds exist within a 1km radius of the Site. At approx. 1.1km north of the Site, north of the M62, located at Stanney Brook Park SBI, there are a number of water bodies fed by issues and streams to include Stanney Brook.

Taking into consideration, and excluding the ponds, north of the major physical barrier (M62 Motorway), and southwest of the minor physical barrier (B6194), there are approx. 21 no. ponds within 1km radius with no physical barrier of separation.



Ponds within a 1000m radius of the Site:

2 no. ponds within a 250m radius -

The closest is positioned approx. 93m west (with no major physical barrier of separation).

A drainage ditch is positioned to the south (spanning west to east), at approx. 2.5m distance from the red-line boundary.

Stanney Brook is also positioned to the west (spanning north to south), at approx. 15.3m distance from the red-line boundary.

10 no. ponds within a 500m radius, the majority are clustered around Dig Gate Farm, north of the Site, with no physical barriers.

13 no. ponds exist within a 500-1000m radius. The river Beal flows around Bentgate residential area northeast of the Site.

Figure 2: Ponds within a 1000m radius of the Site.

Important elements to consider when assessing likely impacts against GCN includes:

- The scale, nature and magnitude of proposals
- Development footprint proximity to a potential breeding pond and to any additional ponds
- Habitat linkage / barriers between potential breeding ponds and the Site
- Nature and extent of available terrestrial habitat around the pond
- Area and scale of Site habitat loss
- Nature of habitat to be lost and potential value to GCN and other amphibians
- Most up to date Government guidance considering European protected species (EPS).

As aforementioned, desktop results confirmed the presence of GCN and other amphibians within a 2km radius of the proposed project development. Note there are no GCN pond surveys (2017 - 2019) and 2 GCN Class Survey Licences returns in the 2km search area.

GCN thrive where several ponds within an area are connected by suitable habitat. Additionally, most amphibians of any species, including GCN, prefer to breed in pools, ponds or other areas of clean standing water: Records of GCN (NBN Atlas) are found to the north of the Site, with the closest (x18) positioned approx. 1.82km near Universal Works, Buckley Hill Road, Milnrow, Rochdale in 2013.

An open field drain/ditch is positioned to the southern aspect of ownership land. The ditch spans approx. <1m in width (when measured from the water line) with moderate sides, and at the time of survey held water to a depth of approx. 30cm. Stanney Brook is positioned to the west (spanning north to south) and flowing to the base of a steep valley within w1g Other broadleaved woodland 15.3m west of the red-line boundary.

Both water courses appeared to be slightly turbid, with no signs of pollution and/or eutrophication. The bankside vegetation is largely overgrown provided by tree cover with spreading Himalayan balsam (*Impatiens glandulifera*).

Whilst the ditch in close proximity to the Site is considered a low probability to support GCN (GCN prefer fresh, clean, standing or still water with adequate vegetation to lay their eggs). Phase 2 of the project may physically impact the ditch to the south of the Site.

For terrestrial context, GCN spend most of the year feeding on invertebrates within areas such as woodland, hedgerows and tussocky grassland. They hibernate underground, among tree roots and within stone walls (The Wildlife Trusts, accessed 2025): Whilst there is currently no habitat of this type on the Site, there is a low probability that the Site could be used by amphibians for foraging, commuting and hibernating amphibians, including GCN. Therefore, it is recommended that appropriate **mitigation measures and RAM is required.**

For complete assessment, the GCN Habitat Suitability Index (HSI) was applied to Ponds 1 Tables 5.1 and 5.4 below, present detailed HSI results, demonstrating overall suitability of the Ponds within 250m for use by Great crested newt and other

amphibians, in line with current guidance. Note that for this assessment a GCN Habitat Suitability Index (HSI) of the ditch watercourses has not been applied as the desktop and field survey evidence demonstrates a low probability that these habitats will not support newts.

Table 5.1: Pond 1 – description and overall suitability for use by amphibians, with included HIS score

Pond 1 (P1)	
Pond 1 is positioned beyond Stanney Brook of the west of the Site, <100m from the proposed development footprint. The estimated area of Pond 1 is 260m²; it rarely dries and has poor water quality. Shade is 90%, there are waterfowl impacts and small numbers of fish present. There is a pond density of <21 ponds within a 1km radius and moderate habitat opportunities for foraging and shelter as the pond is set in the centre of improved permanent pasture. There are no macrophyte cover at the pond surface (area). Based on the above, the HSI value of the pond has been calculated as pertaining to 0.45 – Poor. See Table 4.2 below for further information on individual HIS category scorings.	

Table 5.2: Pond 1 – HSI quantitative assessment

ARGUK GCN HSI Calculator			
	Pond Name	Example	1
	Grid Ref	SK123456	SD9216 1072
SI No	SI Description	SI Value	SI Value
1	Geographic location	1.00	1
2	Pond area	0.50	0.3
3	Pond permanence	0.90	1
4	Water quality	1.00	0.33
5	Shade	1.00	0.6
6	Water fowl effect	1.00	0.67
7	Fish presence	1.00	0.67
8	Pond Density	0.65	1
9	Terrestrial habitat	1.00	0.67
10	Macrophyte cover	0.90	0.3
HSI Score		0.88	0.59
Pond suitability (see below)		Excellent	Poor
Categorisation of HSI Score by Lee Brady			
HIS Score		Pond Suitability	
< 0.50		Poor	
0.50 - 0.59		Below average	
0.60 - 0.69		Average	
0.70 - 0.79		Good	
> 0.80		Excellent	

Table 5.3: Pond 2 – description and overall suitability for use by amphibians, with included HIS score

Pond 2 (P2)	
Pond 2 is also positioned beyond Stanney Brook of the west of the Site, <100m from the proposed development footprint. The estimated area of Pond 2 is 732m²; it rarely dries and has poor water quality. Shade is 80%, there are waterfowl impacts and small numbers of fish present. There is a pond density of <21 ponds within a 1km radius and moderate habitat opportunities for foraging and shelter as the pond is set in the centre of improved permanent pasture. There are no macrophyte cover at the pond surface (area). Based on the above, the HSI value of the pond has been calculated as pertaining to 0.45 – Poor. See Table 4.2 below for further information on individual HIS category scorings.	

Table 5.4: Pond 1 – HSI quantitative assessment

ARGUK GCN HSI Calculator			
	Pond Name	Example	2
	Grid Ref	SK123456	SD9212 1071
SI No	SI Description	SI Value	
1	Geographic location	1.00	1
2	Pond area	0.50	1
3	Pond permanence	0.90	1
4	Water quality	1.00	0.33
5	Shade	1.00	0.6
6	Water fowl effect	1.00	0.67
7	Fish presence	1.00	0.67
8	Pond Density	0.65	1
9	Terrestrial habitat	1.00	0.67
10	Macrophyte cover	0.90	0.3
HSI Score		0.88	0.67
Pond suitability (see below)		Excellent	
Categorisation of HSI Score by Lee Brady			
HIS Score		Pond Suitability	
< 0.50		Poor	
0.50 - 0.59		Below average	
0.60 - 0.69		Average	
0.70 - 0.79		Good	
> 0.80		Excellent	

NB: The HSI for GCN is a measure of habitat suitability. It is not a substitute for GCN surveys. In general, ponds with high HSI scores are more likely to support GCN than those with low scores. However, the system is not sufficiently precise to allow the conclusion that any particular pond with a high score will support newts, or that any pond with a low score will not do so. There is a positive correlation between HSI scores and the numbers of GCN observed in ponds. So, in general, high HSI scores are likely to be associated with greater numbers of GCN. However, the relationship is not sufficiently strong to allow predictions to be made about the numbers of newts in any particular pond.

3.3.5 Wider amphibians

Tadpoles and frogspawn whilst they were not present on Site at the time of survey, P1 and P2 have some potential (below average and average HSI) of being used by amphibians for commuting or feeding.

In summary, looking at Figure 2, there are a further 13 ponds in a 1000m radius from the site, positioned north from the Site at Dig Gate Farm, these ponds are set in a wooded area. These water bodies are likely to have average potential to support GCN. Looking at the ecological data the recent records of GCN are further north from 2013, 1.82km south from the Site.

The ditch south of the site is not physically connected to other populations. Finally, when assessing the wider impacts to GCN this project will not directly impact watercourses in the vicinity, public access will not change, pollution is unlikely to occur and there will be no further fragmentation or reduced connectivity with suitable habitat nearby. **It is recommended that there is no need for further surveys of watercourses in proximity for the development to commence.**

3.3.6 Birds

Ground nesting

The data search returned records of ground nesting birds in the local area, such as Blackcap (*Sylvia atricapilla*), Skylark (*Alauda arvensis*), Lapwing (*Vanellus vanellus*) and Yellow Wagtail (*Motacilla flava*). Due to current Site use and level of activity, there is limited value for ground nesting birds due to a lack of suitable habitat. More suitable habitat is present in the fields to the east (Meadow North of Moss Gate (SBI) and to the southwest semi-natural grassland in Sudden Brook East and West.

In summary, the Site has limited potential value to support notable ground nesting birds.

Passerine

Fifty nine species of passerine birds were recorded in the data set within a 2km radius of the Site, to include: Starling (*Sturnus vulgaris*), Reed Bunting (*Emberiza schoeniclus*), Dunnock (*Prunella modularis*) and House Sparrow (*Passer domesticus*).

The woodland to the south of the Site, provides value to passerine birds. During the field survey passerine species observed included Robin (*Erithacus rubecula*), Swift (*Cypselus apus*). These habitats within proximity offer great potential to support notable passerine birds such as Lesser redpoll, Starling, Greenfinch and Mistle Thrush as well as common species recorded in the desk-top survey. The wider surrounding landscape of grasslands, woodland, hedge lines and trees further provide interconnecting shelter, nesting and feeding opportunities for such taxon.

House Sparrow is listed as a Lancashire BAP species, is listed on Section 41 of the NERC Act 2006 and is listed as red on the Bird of Conservation Concern 4 list, BOCC4 (2015). Cheshire Ecological identifies 626 records for Tree Sparrow; the closest record is within 0.35km of the Site. All such records indicate likely use of habitats in the locality and beyond the Site.

Wintering

There are 7646 records of overwintering birds in the data search (GMEU and NBN Atlas). Notable wintering birds in the closest proximity 0.32 0.40km from the Site are: Black-headed Gull (*Chroicocephalus ridibundus*) 134 records, Curlew (*Numenius arquata*) 4 records, Oystercatcher (*Haematopus ostralegus*) 9 records, Pink-Footed goose (*Anser brachyrhynchus*) 3 records and Mute Swan (*Cygnus olor*) 7 records.

MAGIC Maps further identifies the Site as a Countryside Stewardship (CS) targeting area for Lapwing, Curlew, Redshank and Snipe. Lapwings are listed: Red within the 'Birds of Conservation Concern 4' (2015) (BoCC4), on the Convention on Migratory Species (CMS), on the Greater Manchester Biodiversity Action Plan (LBAP) and on Section 41 of the NERC Act 2006.

It is anticipated that the Site offers limited value for notable wintering birds with a limited range of habitats for nesting and feeding. The wider surrounding landscape is likely to contain farmland with limited fresh water. **Utilization of the Site by overwintering bird assemblages is therefore not anticipated within the Site.**

Birds of prey

Nine bird of prey species were returned in the data search, comprising common and notable species Kestrel (*Falco tinnunculus*), Barn Owl (*Tyto alba*), Hobby (*Falco subbuteo*), Little Owl (*Athene noctua*), Tawny owl (*Strix aluco*), Long Eared Owl (*Asio otus*), Merlin (*Falco columbarius*), Peregrine (*Falco peregrinus*) and Short eared Owl (*Asio flammeus*).

Large trees rooted adjacent to the Southern boundary of the Site (individuals and groups) are anticipated to be of value for these species, positioned as viewing platforms over areas of surrounding open countryside. If management of the land

surrounding the Site were to alter over time, the habitat could vary, providing greater shelter and opportunity for small mammal prey.

3.3.7 Bats (Preliminary Evidence and Opportunity Assessment)

Collectively, the data search holds no record of bats within the proposed development footprint.

The GMEU data search presents 119 records of bats within a 2km radius of the Site. Additionally, NBN Atlas presents an additional 3 records of bats within a 2km radius of the Site. Collectively, records include presence of Bat sp (Chiroptera), Common Pipistrelle (*Pipistrellus pipistrellus*), Pipistrelle sp (*Pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Nathusius's Pipistrelle (*Pipistrellus nathusii*) and Noctule Bat (*Nyctalus noctula*).

A PEA for bats was completed for the buildings, the trees on the Site and the wider habitat.

BUILDING BA 1 - STABLE BLOCK EXTERNAL

Building (BA1) is a single storey stable block positioned in a west to east orientation. The building is occupied with stables. It is constructed from redbrick and on the southern, western elevation has been rendered and alongside the northern elevation is an uncovered concrete muck midden. There are roller shutters and an electricity service box on the western gable and to the east there is a part covered annex joining building BA2. The roof is pitched and covered in corrugated sheeting. [Solar panels] are fixed to the roof. On the southern elevation there is no guttering with the roof sheeting over hanging the top of the eave and as such there are small potential access points into the building from the gaps in the box profile sheeting. Single glazed windows are well fitted positioned in the top half of the elevation (**refer to Appendix 1 Photos 1 & 2**). On the eastern gable the roof flashings are folded approx 15cms over the eave and there are several small gaps where the flashing has opened, revealing small gaps which could be accessible (**refer to Appendix 1 Photos 3 & 4**).

Along the southern elevation the mortar in the red brickwork is in reasonable condition with no gaps. There is a series of windows and stable hatches (single glazed wooden windows) which were open at the time of the survey, providing access. As with the northern eave there are small gaps at the top of the eave in the box profile sheeting (**refer to Appendix 1 Photos 7 & 10**).

BUILDING BA 1 - STABLE BLOCK INTERNAL

The stables are used in the morning and evening. Light penetration through gaps in the roof and eaves can not be seen, the roof is uninsulated with wooden roof timbers and purlins. Fluorescent lights are present at the ridge of the ceiling. All internal brickwork is painted in white, there is no cracked mortar on the internal brickwork and cobwebs can be seen on the internal windows, window sills and corners of the roof/walls (**refer to Appendix 1 Photos 13, 14 & 18**). The 8 stables are constructed

from breeze blocks and red brick (there are no boards attached to the walls) arranged down the centre of the building with a narrow passageway in the middle (**refer to Appendix 1 Photos 11 - 21**). The roller shutter doors are securely fitted and no light ingress indicated that there were no gaps in the door. The floor is concreted with a drainage channel in the centre isle. Two of the stable blocks are used to store equipment.

There is no evidence of birds nests or perching on the stabler ledges or wooden beams. The internal wall eaves close to the box profile roof, the tops of the stable ledges, floors and the equipment were searched and no signs of bat activity were found. Close examination in floors near potential entrance points showed no signs of bat activity. Cobwebs on window sills were searched for lepidoptera remains from potentially bats eating, none seen (**refer to Appendix 1 Photo 11 - 29**).

BUILDING BA 2 - STORAGE BARN EXTERNAL

Building BA2 is an annex to the main stable block, used to store hay for the stables and is used on a daily basis. The entrance is via the northern elevation through the covered annex note that there is no door fixed to this entrance point and from the south via the open ginnel between the garage and the stables. This is a single storey structure with underground cellars and built up to the existing garage. Constructed from breeze blocks (which contained water as the bricks were not sealed) and there are two windows on the northern elevation which are not sealed providing access points. The roof is single pitched corrugated steel sheeting, ridge sheeting has been attached to the eave of the building and there are some narrow gaps between the ridge sheeting and the breezeblocks. Guttering and downpipes are securely fitted to the building. Along the eastern elevation an outdoor patio constructed from recycled plastic panels has been constructed as part of the main house's garden and this is constructed flush to building BA2 (**refer to Appendix 1 Photos 31 - 37**). Potential access gaps from the original roof timbers remain along the top of the breezeblock ridge and there are small gaps in the mortar (**refer to Appendix 1 photo 30 - 31**).

BUILDING BA 2 - STORAGE BARN INTERNAL

Built in a similar style to Building BA1, this building does not have an insulated roof or walls. Daylight seen from the open/unglazed windows on the northern elevation. The former roof joist holes as seen on the northern elevation were blocked up internally and no daylight was seen coming through these gaps.

The main section of the building is used to store hay for the stables. The internal walls are partly painted white and there is black damp and cobwebs on all the walls and internal sheeting roof. The internal southern elevation contains a large single glazed window from the garage (Building BA3) one of the small top windows was open providing access to the garage (**refer to Appendix 1 Photos 38 - 52**). Historic birds nests were seen in roof joists (3 number swallow cups).

Two ground storey cellars exist to the southern edge of Building BA2, they are constructed from red brick and the brickwork has been painted white, which is in

poor condition. The floor of these cellars has been concreted and the roof is constructed from concrete sections forming the garage above.

The unlined roof, beams, window sills, floors and empty cellars were carefully inspected and there was no signs of bat activity in the feed storage area nor in the cellars. Upon inspection cobwebs were seen on internal windows and brickwork, no evidence of bat activity seen on these nor the floor and surfaces (**refer to Appendix 1 Photos 38 - 58**)

BUILDING BA 3 GARAGE - EXTERNAL

Building BA3 is a single storey garage with a pitched roof to the southern elevation are roller shutter doors with an external light. All external sides are rendered and painted. The roof is constructed from wooden boards with steel sheets externally and to the south elevation are [recycled plastic] barge and soffits with deep ridge steels fixed to the eaves, these steels are flush and well fixed to the side gables with no gaps between the steel and the rendered wall. To the eastern elevation a power circuit box is fitted to the wall and there is no access to this structure (**refer to Appendix 1 Photos 59 - 63**)

BUILDING BA 3 GARAGE - INTERNAL

The garage is not insulated internally and the inside is in a reasonable/poor condition, 1 fluorescent light tube is fixed to the ceiling. No daylight emerged through the structure highlighting that there are no access points at the buildings eaves or through the steel roller shutter. At the tops of the walls there is a small shelf where the roof purlins are placed, lots of cobwebs were observed on the ceiling. In the rear timber beam there are former joist holes that could provide possible shelter. The internal timbers are damp stained and have white mildew on them. The small window open from Building BA2 has cobwebs across the opening (illustrating that there is probable no recent access) (**refer to Appendix 1 Photo 69**). The timber beams were carefully examined and no signs of bat activity were observed. There are small knot holes which are now open providing limited space opportunities (noting that the gap between the timber planks and the metal roof is <1cm (**refer to Appendix 1 Photo 67**)). The walls of the garage are painted white and there were no gaps in the brick mortar. The garage is used for storage and there is limited clear internal flight space (**refer to Appendix 1 Photos 64 - 73**). All of the surfaces, ledges and floor was carefully inspected; there was no current or historic evidence of bats found.

BUILDING BB - EXTERNAL

Building BB is a single storey building orientated in a west to east direction and positioned against woodland and a ditch. The building has a pitched roof and the roof is made from [cement fibre sheeting] with plastic skylights. The walls are a double brick construction and the external walls are clad and painted. There is a wooden sliding door on the eastern gable with wooden slat surrounds, these are in relatively good condition and fixed well to the building, on this elevation there was also the remains of a wall/further building structure that has been demolished, this has left a gap in the double skinned wall. (**refer to Appendix 1 Photos 74 - 78**).

The roof, rainwater guttering, drain pipes and soffit boards were in relatively good condition. On the western gable an external light is fixed.

BUILDING BB - INTERNAL

This is laid out for use as a cattery and the building is currently used for storage, internally there is no insulation to the walls, there is a concrete floor. Light penetration through gaps in the roof and eaves can not be seen, with the gaps in the concrete sheeting mortared on the inside of the building ((refer to **Appendix 1 Photos 103 - 104**). The roof is uninsulated with wooden roof timbers. Fixings for fluorescent lights are present at the ridge of the ceiling. All internal brickwork is painted in white, there is no cracked mortar on the internal brickwork and a significant amount of cobwebs can be seen on the internal timbers, walls, corners of the roof/walls (refer to **Appendix 1 Photos 81 - 104**). The 14 blocks are constructed from breeze blocks with low wooden doors and red brick (there are no boards attached to the walls) arranged down the centre of the building with a narrow passageway in the middle. The floor is concreted. All of the blocks are used to store equipment, belongings.

There is no evidence of birds nests or perching on the ledges or wooden beams. The tops of the cubicle ledges, floors and the equipment were searched and no signs of bat activity were found. Close examination in floors near potential entrance points showed no signs of bat activity. Cobwebs on window sills were searched for lepidoptera remains from potentially bats eating, none seen (refer to **Appendix 1 Photo 81 - 104**).

Potential Bat Access Points

There were potential bat access points however, and these were:

BUILDING BA 1 - STABLE BLOCK EXTERNAL

- Small potential access points into the building from the gaps in the box profile sheeting.
- Flashing has opened, revealing small gaps which could be accessible.
- There is a series of windows and stable hatches (single glazed wooden windows) which were open at the time of the survey, providing access.
- As with the northern eave there are small gaps at the top of the eave in the box profile sheeting.

BUILDING BA 2 - STORAGE BARN EXTERNAL

- There are two windows on the northern elevation which are not sealed providing access points.
- Potential access gaps from the original roof timbers remain along the top of the breezeblock ridge and there are small gaps in the mortar.
- One of the small top windows was open providing access to the garage.

BUILDING BA 3 GARAGE - INTERNAL

- In the rear timber beam there are former joist holes that could provide possible shelter.

BUILDING BB - EXTERNAL

- There was also the remains of a wall/further building structure that has been demolished, this has left a gap in the double skinned wall.

Where accessible these locations were closely inspected using high powered binoculars, industrial endoscope camera and a flashlight, as were the roof and floor beneath them, but neither any bat droppings, invertebrate or lepidopteran prey remains were found. Also, no fur grease staining was observed that would have indicated the regular passage of bats, either on the box profile, flashing, external and internal windows nor the part demolished double skinned wall. After shining the light from the Darkbeam LED ultraviolet flashlight over these areas (externally or internally), no evidence of any bat urine staining was seen. However, it was concluded that buildings BA 1 and BA 2 could potentially be used by bats, and they were thought to be of negligible bat roosting suitability on the basis of the following:

- No insulation to the internal roofs due to this there will not be a consistent internal humidity and temperature suitable for bats to roost, not likely to provide appropriate conditions.
- The open/regular opened doors and windows provide draughts and water ingress. Predation in the buildings is also a risk for bat roosting. Not likely to provide appropriate conditions.
- Surveys of the wooden structures, beam ledges, window sills, tops of tables and floors undertaken using both close-focus binoculars and the UV flashlight, didn't indicate any droppings, urine or fur grease staining, or any other signs of bat occupation, and cobwebs on window sills searched for lepidoptera remains from potentially bats eating, none seen (**refer to Appendix 1 Photos 11 - 29, 38 - 58, 69, 81 - 104**). No evidence of use by bats on a regular basis.
- Whilst there were some open windows there were no signs of bat grease indicating perching prior to entering and exit seen on the external walls nor the internal whitewashed walls, cobwebs seen on the internal window ledges and over the internal walls. Gaps between timber beams and ceiling joists were investigated with no indication of bat activity or birds nests seen (**refer to Appendix 1 Photo 13,14 & 18, 30 - 31,)**). No evidence of use by bats on a regular basis.
- Stable block (BA 1) and Storage Barn (BA 2) no evidence of bat activity seen on windowsills or floors. No roosting gaps seen between floor joists and floorboards. No evidence of use by bats on a regular basis. Historic evidence of bird activity on roof joists, no current birds nests seen (**refer to Appendix 1 Photo 38 - 52**).
- Whitewashed walls and concrete floor - upon inspection of the floor no evidence of bat activity seen. Surfaces and floors examined no signs of bat activity seen. No evidence of use by bats on a regular basis.
- All accessible sections in the buildings were surveyed using close focus binoculars, as were the walls and floors, but no evidence of bats was observed. Also, as no urine staining was observed when the potential access points were lit up in light from the UV flashlight, the resulting spaces were

judged to have very low roosting suitability. No evidence of use by bats on a regular basis.

- **No evidence of either current or historical roosting bats was detected in, on, or around any part of Buildings, either internally or externally. Nor was there any evidence of previous use by roosting bats detected anywhere else within the surrounding site.**
- **During the survey, evidence was found to suggest that parts of Buildings BA 2 are being and have been used historically by nesting birds. It was also surmised that due to the time of year (July), most birds will have been active with potentially second broods or otherwise the young may have been fledged. (Refer to Appendix 1).**

In accordance with the “Bat Survey, Good Practice Guidelines 4th Ed” (Bat Conservation Trust 2023), it says, “A structure with one or more potential roost sites that could be used by individual bats, opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernative bats, (Refer to Table 2a and 2b above). **The potential suitability of Buildings BA 1 and BA 2 is assessed as ‘Low’, BA3 Negligible / Low and BA4 ‘Low’ (with the exposed part demolished brick wall providing a potential roost feature.’**

Foraging Potential and Alternative Bat Roost Potential

The Site is set in a semi rural area, immediately surrounding the Site are parcels of modified grassland present, alongside trees and young trees - self-set. Linear belts of Broadleaved woodland are positioned within proximity, supporting a drainage ditch to the south and Stanney Brook to the west.

The fields to the north and linear belts to the south and west are likely to provide habitat offering linear features suitable for foraging bats such as Common Pipistrelle, (*Pipistrellus pipistrellus*), and possibly other bat species, to help them navigate and commute, and to hunt along for their insect prey.

Overall, the individual woodland and trees **surrounding the Site** were assessed to offer **moderate suitability for foraging bats** (*Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water*), primarily pipistrelle species, but it was thought that small numbers of other species could be present. It was considered that nearby residential buildings, especially occupied dwellings, in the surrounding areas of Broad Lane to the west could offer greater potential as bat roosts. Bats favour heated, taller buildings whilst breeding.

Boundary hedgerows with associated trees do, however, provide value for commuting and foraging bats: Continuous belts of broadleaved woodland and hedgerows with associated trees connect the peripheral habitat to the wider landscape. Further, the semi/rural location of the Site limits light obscurities, **which if present**, would deter foraging and commuting bats.

TREES AND WOODLANDS

There were a number of medium/large trees adjacent to the Site and small trees to the east of the Site in the vegetated area. It is understood that all of the adjacent in the broadleaved woodlands will be retained as part of the project. It is [assumed] that The small trees in the vegetated area proposed for development in Phase 1 have been inspected for signs of potential bat roosting suitability.

Upon close visual inspection there were no signs to indicate bat activity:

w1g Other broadleaved woodland - (along the immediate boundaries) no veteran trees or ecological niches (such as rot holes, crevices and lifting bark) are identified. In light of this and the age of the broadleaved woodlands these areas were judged to be **Category 2 (of moderate value for roosting bats) in accordance with Table 3 above.**

g200 Tree(s) - As shown in Photograph 6 (above), all specimens are young, likely self-set, and have not yet reached semi-maturity: There is no evidence of ecological niches (such as loose bark, crevices and rot holes). **Category 3 Negligible/Low value in accordance with Table 3 above.**

It was also thought likely that the overall complex and some of the nearby medium sized trees, could be used by nesting birds during the nesting season. But at the time of the survey, although there was some bird activity in and around the site, no active nests were found amongst the vegetation, specifically the vegetated area proposed for development in Phase 1.

3.3.8 Badger

during walkover field assessment, no Badger features were observed on the Site. Given the scale of proposed development and no detection, construction mitigation is deemed a suitable and robust protective measure.

3.3.9 Other Mammals

The NBN data search provides 96 records of European hedgehog (*Erinaceus europaeus*) within a 2km radius of the red-line boundary, the closest NBN Atlas recorded sighting is positioned approx. 0.35km northwest of the Site, in 2017. Additionally, NBN Atlas identifies 7 records of Brown Hare (*Lepus europaeus*), with the closest northwest 0.86 km of the Site, recorded between in 2011.

The Site affords potential for use by both European hedgehog and Brown hare,

especially with the cover and shelter provided by the broadleaved woodland, ditch to the south, proximity of other residential properties and gardens and the surrounding improved permanent grassland.

3.4 INVASIVE SPECIES

3.4.1 Flora

The desk study identified the presence of 16 invasive non-native (INN) flora records, listed in Schedule 9, Part 2, of WCA 1981. There were several field survey observations of invasive species:

- g4 Habitat Parcel 1: Invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981] is abundant and spreading throughout g4 Habitat Parcel 1.
- g4 Habitat Parcel 2/3: At the time of survey, invasive non-native flora species were not recorded within Habitat Parcel 2. However, prevalence and spread of invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981] within other zones of the Site, likely means colonisation within the near future.
- g200 Trees - invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981] is abundant and spreading at the base of all trees.
- w1g Other broadleaved woodland - dominant coverage and vast spread of invasive non-native Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981].
- r2b Other rivers and streams & w50 Ditch - Notably, the banks and periphery of both watercourses support dominant and spreading invasive non-native species Himalayan balsam (*Impatiens glandulifera*) [as listed on Schedule 9 of WCA 1981].

It should also be noted that some non-native plants are very fast spreading and therefore the potential for these species to be spread around the Site later cannot be ruled out. **It is recommended that a Non-Native Invasive Species Methodology Statement is produced.**

3.4.2 Fauna

Records in the surrounding area confirm the presence of Eastern grey squirrel (*Sciurus carolinensis*) within a 2km radius, this is listed in Schedule 9, Part 1, of WCA 1981 and is listed as a Greater Manchester INNS.

At the time of the field survey no species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as an invasive non-native species were observed. However, surrounding open countryside, with connecting habitat features, may promote future utilization by INN fauna species within the Site.

4.0 ECOLOGICAL CONSTRAINTS AND RECOMMENDED MITIGATION

4.1 PROPOSED DEVELOPMENT AND MITIGATION

The proposed development comprises a phased development

- **Phase 1 – Construction of a residential lodge on land to the northeast of the Site.**
- **Phase 2 – Demolition of Buildings A-1, A-2, A-3 and subsequent construction of residential annex with associated car parking.**
- **Phase 3 – Potential demolition of Building B.**

It is considered that the proposed changes to the Site, as laid out in the planning application, can commence with minimal risk to the habitats, plus protected flora and fauna (including GCN, bats and nesting birds) , subject to the following surveys and mitigation measures being adhered to.

The aim of mitigation is to ensure that any work is carried out in a manner that avoids harm, or significant disturbance to flora and fauna, plus create new enhanced opportunities for both during and after development. However, a key issue in successful mitigation measures is the scheduled timing of the works. Ideally, all the construction should be undertaken during winter, to avoid the possibility of fauna utilising habitats for breeding, nesting and/or opportunistic roosting. The safest period will be from the first hard frosts, normally mid-December, until mid-March, although this could be earlier in a warm spring or later in a cold spring.

4.2 DESIGNATED AND NON-DESIGNATED SITES

There is 1 statutory site in a 2km radius of the development Site, Ellenroad Ring Mill Scheduled Monument, is positioned at its closest point, approx. 1.03km northeast of the proposed development Site. The next closest statutory designated Site is Rochdale Canal Site of Special Scientific Interest (SSSI), positioned at its closest point, approx. 2.06km northwest of the proposed development Site and separated by a major barrier (M62 Motorway).

There are 7 non-statutory sites within a 2km radius of the development Site. The closest is Meadow North of Moss Gate (SBI): 1.9 ha, positioned at its closest point, approx. 0.63km east of the proposed development Site. Qualifying features: Gr2 – Semi-Natural Grasslands. The small-scale nature of the proposed development and degree of separation to statutory sites and SBI denotes no negative impact for any non-statutory SBIs.

Sixty six priority habitat inventory habitats are also located in the 2km radius, with the nearest approx. 0.24km north of the Site at its closest point, Deciduous woodland PHI.

As with the SBIs in the local landscape, given the degree of spatial separation and small-scale nature of the proposed development, it is considered highly unlikely that any impacts will occur to aforementioned areas, listed within the priority habitat inventory.

4.3 HABITATS

The deciduous woodland (w1g) closest to the proposed development (southern and western aspects) needs to be protected with appropriate buffer protection zones. Whilst the footprint of works is within close range; construction works thus pose a risk of impact to such habitat. **It is therefore recommended that protective measures such as buffer zones are put in place during this project.**

There were several field survey observations of invasive species (Himalayan Balsam (*Impatiens glandulifera*)). It is recommended that a Non-Native Invasive Species Methodology Statement is produced.

Whilst the ponds are in proximity to the Site (<100m) and assessed as 'poor' condition to support GCN, these are located beyond the woodlands and Stanney Brook, with the protection of these features the ponds will be provided with a natural buffer zone. **The ditch to the south of the Site is in proximity <5m from the redline boundary a buffer protection zone is required.** In addition it is recommended that appropriate mitigation measures and RAM is required to protect any commuting amphibians (see below).

Importantly, Stanney Brook is classified as UK and Greater Manchester BAP Priority Habitat, comprising unique features, offering vital ecological connectivity and requiring focused conservation efforts. The w1g buffer zone will mitigate the impact to Stanney Brook.

4.3.1 Vascular plants

Any proposed landscaping or planting carried out during the works should consider local soil types and habitats, and as such should prioritise native species which will better tolerate the soil type present on site and provision for faunal species present in the immediacy.

As with the adjacent woodlands 'buffer zones, should be used to protect the woodlands and areas of potential colonisation with Bluebell (*Hyacinthoides non-scripta*) will then be protected from accidental destruction via temporary fencing.

As with the adjacent veteran trees, buffer zones should be installed to protect the deciduous woodland.

4.4 FAUNA

4.4.1 Invertebrates

It is anticipated that mostly common and widespread invertebrates will use the site. Although limited, notable invertebrates cannot be discounted due to the presence of suitable habitat and records of Mud [Pond] Snail 0.40km northwest of the Site with a potential pathway from Stanney Brook (in proximity). **The protection of Stanney Brook from material and dust during construction is required via suitable buffer zones, to protect the habitat for invertebrates.**

Although no deadwood or brash was noted within the development footprint at the time of field survey, any future piles should be retained in the adjacent deciduous woodlands to enhance invertebrate diversity. **Piles of brash and/or deadwood on site should be moved to these areas of retained habitat.**

4.4.2 Amphibians

There is a possibility that GCN and other amphibians (including Common toad and Common frog) may use the development footprint for foraging and/or migratory purposes: Resultantly, there is a risk of disturbing, injuring or killing individual amphibians (including GCN) during construction.

Whilst there is no requirement for further survey of watercourse habitats to determine presence or absence of GCN. **It is recommended that Reasonable Avoidance Measures (RAMs) are to be followed during project development to protect amphibian species**, including:

- Any piles of brash, large stones on the site are to be carefully searched for amphibians and mammals prior to/during removal.
- All site contractors are to be inducted by a qualified ecologist, as to the potential presence of the species, their legal responsibilities and working limits.
- During development, no hole or pit should be left uncovered over-night, to ensure that amphibians (and other wildlife such as reptiles or hedgehogs) are not trapped, and unable to escape. As such, all excavations should be checked first thing each morning, prior to the start of works that day. Any animals found within excavations should be allowed to escape and move off, or carefully removed and placed within suitable habitat cover before site work commences for the day. Alternatively, a broad wooden plank can be placed within any excavation enabling animals to escape: A scaffolding board pitched at a maximum 45-degree angle should be ideal.
- Excavated spoil should be carefully placed, with the area of placement searched prior to tipping.
- If management of Other neutral grassland (g3) is subject to management change over time, i.e. with reduced grazing pressure, swards will provide greater value to foraging and migrating amphibians: Searches are more crucial at this stage, prior to tipping of excavated spoil.
- If evidence of GCN or other amphibian is discovered, construction works should temporarily halt and a qualified ecologist should be contacted.

4.4.3 Reptiles

The site offers no suitable habitat for reptiles, with an absence of sandy heaths, woodland ridges and permanent/longstanding compost heaps or brash piles. **However, should the species occur within terrestrial habitat on Site, precautionary working methods (detailed in Section 4.4.2) will help to avoid harm to this species group.**

4.4.4 Birds

All proximity trees and hedgerows are proposed for management and retention, no impacts are foreseen with relation to any Sch.1 (WCA) specially protected raptor species such as Barn owls.

When the project removes the buildings given the current and historic evidence of birds occupying Building A2 an appropriate RAMS must be carried out.

Boundary hedgerows and associated trees are anticipated to be of value for all passerine birds. Birds of prey will also utilize large trees rooted within boundary hedgerows and the field as viewing platforms over areas of surrounding open countryside. These features will provide greater shelter and opportunities for small mammal prey. Collectively, the foraging of Barn owls (and other birds of prey) within the vicinity or using the buildings cannot be ruled out.

Regarding ground nesting birds, no nests were observed during the field walkover survey. The project could consider enhancement for nesting habitat: This should be compensated for in the final plans of the proposed development and could include bird nest boxes for passerine birds targeted for local bird species, within the adjacent Cawley Farm complex.

Importantly, although the majority of the trees and hedgerows on Site are proposed for retention, any works impacting areas of potential suitable for birds should be carried out outside of the breeding season (March to August, inclusive). If this is not possible, **a suitably experienced ecologist should check the habitat and buildings for breeding bird activity no more than 48 hours before works.** If nesting activity is found, nests must be left in situ until the young have fledged. It is recommended therefore to reduce any nest disturbance that appropriate buffer zones are placed around nest sites so that no activity involving people, or equipment is carried out within a 5 - 10m radius of active nests.

NB: All wild birds (with only minor exceptions) and their nests (whilst being built, containing eggs and/or supporting dependant young) are protected from destruction, damage and disturbance under the Wildlife and Countryside Act 1981 (as amended). **It is a punishable offence to interfere in any way with an active nest.**

In light of the bird nest removal compensation is to be provided with the incorporation of Swallow cups into buildings where feasible or integrated bird nest boxes.

4.4.5 Bats

As it is likely that different parts of the development could be worked on at separate times, it will be very unlikely that roosting bats will be disturbed. **It is recommended though that work starts as soon as possible after this survey, and that if any roof sheeting or boarding over buildings is affected by the development, these should be carefully removed by hand, as these features are the ones most likely to harbour potential for the support of roosting bats.**

It is recommended that if building work is delayed until more than 12 months between these surveys and any commencement of any building work, then the bat survey may need to be repeated, and these need to be carried out under weather conditions suitable for normal bat activity, (May to September), and must include both a daytime evidence and opportunity bat survey and assessment, and potentially at least one evening nocturnal bat activity and emergence survey (should the project NOT be completed).

As a measure of best practice and in accordance with a key principle of National Planning Policy Framework (2012), it is recommended that the scheme for this Site, incorporates biodiversity enhancement measures, and an appropriate measure will be:

- the installation of some Schwegler 1FD bat boxes or Improved Cavity Bat Box in the Knott Booth Farm complex (existing trees and in the proposed buildings). These will be attached to the existing buildings during/after completion of the building works, and these are placed as close as possible to the eaves at a gable apex and,
- Also, it is recommended that these measures are implemented to maximise the opportunities for wildlife at the site and obtain a net gain in biodiversity.

Roosting Bats

- During the PEA no evidence of bat droppings or wing remains for moths were found, an absence of this does not however rule out the presence of a summer/satellite roost.
- **The potential suitability of Buildings BA 1 and BA 2 is assessed as 'Low'.**
- **BA3 Negligible / Low and BA4 'Low' (with the exposed part demolished brick wall providing a potential roost feature.'** A RAMS Mitigation for the proposed demolition of this feature will need describing to include 'soft stripping.'

Foraging and Commuting Bats

The Deciduous Woodlands along the site (south and west) perimeter provide high value for commuting and foraging bats: These connect the Site peripheral habitat to the wider landscape.

Further, the semi-rural location of the Site limits light obscurities, however on Site external lighting is present, which may deter foraging and commuting bats. **It is**

recommended that any future lighting is positioned away from such boundary features, enabling undisturbed, continued use by foraging and commuting bat species, plus other nocturnal fauna (refer to 'Bats and Lighting' below).

- There was 'moderate' potential for both foraging bats in the individual woodland and trees surrounding the Site.
- It is likely that nesting birds have used and will use sections of Building BA2.

Negligible / low potential for the individual trees (g200) on the Site. **It is understood that these trees will be removed. To encourage future bird nesting, and to maintain navigation, foraging and commuting routes for bats and to obtain further net gains in biodiversity, it is recommended that for every tree removed replanting occurs at a ratio of 1:3.**

Bats and Lighting

Bats are sensitive to lighting and may be impacted by any proposed development, should no mitigation for lighting be considered.

Lighting mitigation should follow the guidance outlined in the Institute for Lighting Engineers document "Guidance for the Reduction of Obtrusive Lighting" (2005) and the BCT's "Bats and Artificial Lighting in the UK" (2018). The construction lighting may impact bats which are sensitive to light. Directional lighting will be achieved by angle and orientation of the beam, use of a cowl, louvre or other light shield, or a combination of these.

External lighting is proposed on the proposed residential dwelling and during the construction, **the following recommendations are to be considered within the scheme during its construction, to minimise the impacts of lighting.** The recommendations for lighting design and schemes are presented in **Appendix 8.**

- **A lighting buffer protection zone against the w1g deciduous woodlands.**

It should be remembered that bats are occasionally found in the most unexpected places. If any bats are found during unsupervised work, the consultant Mike Fisher (07745 268815) or the Bat Conservation Trust, should be notified and work stopped immediately.

Failure to do so would be a criminal offence.

Bats PEA Conclusions

1. In summary, during the preliminary survey carried out in July 2025 neither current, nor historic evidence of roosting bats were found in any part of the Site. It was also concluded that since no evidence of roosting bats, or evidence of either recent or historic bat occupation has been found during the surveys carried out in 2025. However, with reference to the 'Bat worker's Manual' (JNCC 2004) and 'Bat surveys - Good Practice Guidelines' (BCT 2023), an emergence and activity visit to the Site is recommended to provide confidence in the outcome of this survey. It is recommended that broadleaved woodland to the south of the Site is also surveyed.
2. All parts of the Knoot Booth Farm complex were currently not heated and not insulated, and were currently, in reasonable/good condition, the gables, soffits and roof, were also in reasonable condition and maintained. A thorough search had discovered no bat droppings, or invertebrate prey remains, and neither grease fur or urine staining were seen anywhere, and therefore the structures were thought to offer **low and negligible/low bat roosting suitability (PRF-1)**, (refer to Table 2a and 2b).
3. Accordingly referring to 'Good Practice Guidelines' (Collins, 2024), based on all of the evidence available and the balance of probabilities, the majority of the building structures have been inspected and no evidence found (and is unlikely to have been removed by weather or cleaning or be hidden), then a further survey bat emergence and activity survey is appropriate.
4. There is some deciduous woodland (w1g) growing along the southern boundary these will remain and whilst the trees were not found to have cracks, lifted bark and ivy that could be used by roosting bats of any species **the woodland all concluded to offer moderate bat roost suitability**, (refer to Table 3). **g200 trees on Site did not have evidence of ecological niches and were concluded to offer Negligible/Low bat roosting suitability.**
5. The immediately adjacent habitats had the potential to support low to moderate numbers of foraging common pipistrelles, but large numbers of other species of bats was unlikely. It is concluded that since there was currently no evidence of the presence of bat roosts within any part of the buildings nor within any other part of the Site, that any proposed modifications to the site, **will not have significant implications on the population status of local bat species.**
6. Since bats, particularly Pipistrelles, are opportunistic, an absence of roost evidence within any of the targeted buildings, and anywhere else within the Site, does not preclude the low possibility of small numbers of bats, using the site occasionally in the future, and/or at other times of year. **It is considered that the likelihood of a significant roost (such as a maternity roost) being established was very unlikely, with lone (summer or satellite) and/or transient roosting likelihood also being low/negligible.**

7. It was hoped that the woodlands growing both around the site boundaries and within the site itself, would be mostly unaffected by the work. Also, as bats use linear features such as lines of trees, hedgerows or walls, as foraging, navigating and commuting routes, **it was concluded that any small loss of the habitats, and any future development works on the site, would not affect the overall foraging or commuting potential for bats in the area.**
8. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) while they are breeding. There was potential for the trees, shrubs and hedgerows growing around the sites' perimeter to be used by birds for both roosting and nesting purposes, and the overall site itself to be used by ground nesting birds, but no active or historic nests had been found during the surveys (Refer to Appendix 7). Table 6 below summarises the results.

Feature	Bat Suitability	Surveys required
Building BA1, BA2	Low bat roosting and foraging suitability (PRF – 1)	1 minimum dusk emergence and activity visit required to provide confidence with the PRF - 1 conclusion. Between May - August
Building BA3	Negligible/Low roosting and foraging suitability (PRF – 1)	1 minimum dusk emergence and activity visit required to provide confidence with the PRF - 1 conclusion. Between May - August
Woodlands (w1g)	Category 2 (of Moderate value for roosting bats)	Trees proposed to be retained during the scheme. To establish bat activity 1 minimum survey required. Between May - August
g200 Trees	Category 3 (of Negligible/Low value for roosting bats)	None
Building Complex, Trees, and hedgerows.	Moderate suitability for foraging bats, primarily pipistrelle species	None

Table 6: Roosting Potential

4.4.6 Badger & Other Mammals

During walkover field assessment, Badger paths were not observed. The Site is therefore not currently in use by commuting and foraging Badgers.

Additionally, no barriers exist to prevent Badger or other mammals (including European hedgehog and Brown hare) accessing the proposed development footprint.

Given the small scale of proposed development, implementation of Reasonable Avoidance Measures (RAMs) will minimise construction impacts and prevent harm or injury to Badgers and other mammals. RAMs, as a minimum should include:

- All working hours should be limited to daylight (dawn - sunset, or dawn - 6pm in winter) to avoid disturbing any Badger or other mammal (including European hedgehog and Brown hare) within the vicinity of the development.
- A pre-commencement check of the site, any stored materials and the immediate vicinity of development footprint will be carried out prior to any works each morning in order to check for the presence of Badger other mammals.
- Materials that may cause entrapment such as plastic / metal fencing, as well as those which could be potentially harmful to terrestrial mammals such as chemicals, should not be left around the site following the cessation of daytime work.
- No bulky equipment / general construction aggregates should be left around the development area, instead leave them on bare ground away from the risk zone.
- Stockpiling of spoil material **MUST** be left un-compacted and not allowed to grass over, as if grassed over and compacted, terrestrial mammals may be encouraged to excavate new areas for refuge.
- Fires must not be used as a means of the disposing of waste materials.
- Any trenches or excavations must either be covered at the end of each working day, or a low angle (no more than 45°) sloping board of approximately 300mm width should be provisioned within any uncovered excavations to provide a means of escape for any terrestrial mammals.
- Any temporarily exposed open pipe system **MUST** be capped in such a way as to prevent Badgers gaining access, as may happen when contractors are off site.
- In the event an underground void / potential sett entrance is exposed during the works, work must cease immediately; an Ecologist must be contacted to determine if the opening forms part of a previously undiscovered tunnel network of a Badger sett. If this cannot be ruled out, works will cease, and Natural England consulted for further advice.

5.0 OPPORTUNITIES FOR ENHANCEMENT

The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.

Paragraph 170 states that this should be achieved by (in terms of this assessment only);

- a) protecting and enhancing valued landscapes, site of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

Specific enhancement recommendations for the site include the following:

- Bat and bird boxes should be placed in the Knott Booth Farm complex. A plan to show the locations of these boxes and specifications should be produced by a suitably qualified ecologist once the layout is finalised.
- Brash and/or deadwood piles could be included within the retained habitats to provide refuge and hibernating opportunities for small mammals, amphibians, reptiles and invertebrates.
- It is clear from the illustrative Site Layout provided (**Appendix 3**) that the suggested mitigation measures and ecological enhancements can be accommodated.

As a measure of best practice and in accord with a key principle of National Planning Policy Framework (2012), it is recommended that the re-development scheme for this site incorporates biodiversity enhancement measures, and an appropriate measure will be the installation of some Schwegler 1FD/ Integrated bat boxes. These will be attached to the proposed and existing agricultural buildings in the Knott Booth Farm complex, before/after the completion of the construction works, and these are placed as close to the eaves, or gable apex as possible. Also, it is recommended that these measures are implemented to maximise the opportunities for wildlife at the site and obtain a net gain in biodiversity.

5.1 BIODIVERSITY NET GAIN

Rochdale Borough Council have recognised the future requirements as per the Draft Greater Manchester Local Nature Recovery Strategy (2024/25). This is to conserve and enhance the area's biodiversity and geological features by protecting and enhancing Lancashire's environmental assets and achieving a minimum 10% net gain in biodiversity. The proposed development should avoid a net loss of biodiversity on the site and aim for an overall increase of 10% net gain.

This project will achieve BNG proposal will achieve BNG 10% Net Gain in phases, detail to be confirmed.

6.0 CONCLUSION

The PEA has met the objectives of the report, by demonstrating the following:

- The major habitats identified on site and all surrounding habitats are described provided in **Section 3**.
- Mitigation recommendations to be completed prior and during the construction phase for invertebrates, amphibians, reptiles, nesting birds, foraging, commuting and roosting bats, Badger and other mammals have been detailed in **Section 4**.
- General ecological enhancements are listed in **Section 5**.

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APPENDIX 1 - RELEVANT LEGISLATION

Legislation relating to European Protected Species (e.g. Bats and GCN)

European Protected Species and their resting places (e.g. bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CROW) Act 2000, and the Conservation of Habitats and Species Regulations 2017.

The conservation of Habitats and Species Regulations 2017 transpose the European Union's Habitat Directive (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive) into UK law. The Regulations provide for the designation and protection of 'European Sites,' and protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally kill, injure or take certain animals listed in Schedule 5;
- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection;
- Intentionally or recklessly construct any access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to the sale, possession and control of wild animals listed in Schedule 5.

Under the Conservation of Habitats and Species regulation 2017 it is an offence to:

- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely; to impair their ability;
 - To survive, to breed, to reproduce, or to rear or nurture their young, or;
 - In the case of animals of a hibernating or migratory species, to hibernate or migrate;
- To affect significantly the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal, or;
- Damage or destroy a breeding site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Great crested newt and several species of bat are listed as a SoPI under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Legislation for amphibians (other than great crested newt)

Under the Wildlife and Countryside Act 1981 (as amended) the four widespread amphibian species smooth newt (*Triturus vulgaris*), palmate newt (*Triturus helveticus*), common toad (*Bufo bufo*) and common frog (*Rana temporaria*) receive limited protection through section 9(5) only makes selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part of derivative) an offence.

Common toad is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to reptiles

All native reptile species have some degree of protection in the UK, through section 9(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). There are two different levels of protection afforded to reptiles through this legislation according to species and this is described in more detail below.

Full Protection

Sand Lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) are afforded protection under The Conservation of Habitats and Species Regulations 2010 (are species of European importance) and are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the CROW Act (200). The Conservation of Habitats and Species Regulations 2010 implements the European Union's 'Habitat Directive' (Council Directive 92/43/EEC (a) on the Conservation of Natural Habitats and the Wild Fauna and Flora) in Great Britain. The relevant sections of this legislation make it an offence to:

- Intentionally kill, injure or capture or take a reptile;
- Possess or control (live or dead animal, part of derivative);
- Deliberately (intentionally) or recklessly damage, destroy or obstruct access to a breeding site or any structure or place used for shelter or protection by a reptile;
- Disturb whilst the reptile is occupying such a structure or place; and
- Sell, offer for sale, possess, or transport for the purpose of sale (live or dead animal, part or derivative).

Sand lizard and smooth snake are listed as a SoPI under Section 41 of the NERC Act 2006.

Protection against killing, injury and trade

This level of protection under Section 9 (part 1 and 5) applies to the four widespread species of reptile, namely the common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix natrix*) and adder (*Viper berus*). Only part of sub-section 9 (1) applies, which make it an offence to:

- Intentionally kill or injure, and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Grass snake, slow worm and adder are all listed as SoPI under Section 41 of the NERC Act 2006.

Legislation relating to breeding birds

All birds, their nests and eggs are protected by the 'Wildlife and Countryside Act 1981 (as amended) and it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird; and,
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is on, on or near a nest with eggs or young; or disturb the dependent young of such a bird.

Schedule 1 of the Wildlife and Countryside Act 1981 provides further protection for selected species (including peregrine falcon (*Falco peregrinus*), barn owl (*Tyto alba*), little ringed plover (*Charadrius dubius*) and black redstart (*Phoenicurus ochruros*) during the breeding season. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. That person shall be guilty of an offence.

A number of bird species are listed as SoPI under Section 41 of the NERC Act 2006.

Conservation status - Birds of Conservation Concern (Eaton et al. 2015)

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2011. The status of birds within the UK have been regularly monitored through a series of surveys, including the national Breeding Bird Survey, Common Bird Census, sea bird monitoring programs and wetland monitoring programs. The result of this review and continued monitoring is The Population Status of Birds in the UK, Birds of Conservation Concern 4: 2015.

Birds are assessed against criteria to place each species on one of three alert lists, red, amber or green. Red list species are considered to be of high conservation concern, being either globally threatened, having historical UK population declines, having a rapid population decline or breeding range contraction of 50% or more in the last 25 years.

Amber list species are considered to be of medium conservation concern as they meet one or more of the following criteria (but none of the red list criteria). Red listed for historical decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years), a UK breeding range contraction of between 25% and 49%, a reduction of breeding or non-breeding population of 25-49% in the last 25 years, a 5 year mean of 1-300 breeding pairs in the UK, an unfavourable European conservation status, at least 50% of the UK breeding population found in 10 or fewer sites, or where the breeding population in the UK represents 20% or

more of the European breeding populations.

Green list species are considered to be of low conservation concern. They include all regularly occurring species that do not qualify under any of the red or amber criteria and are green listed. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Legislation relating to Badger

Badgers are protected under the Protection of Badgers Act 1992 (as amended) which makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett; and,
- Disturb a badger when it is occupying a sett.
-

These provisions have implications for construction and preparation works undertaken in the vicinity of an active sett and may be confounded by distance from a sett entrance. Any works resulting in ground penetration, vibration or noise near an identified badger sett entrance/s have the potential to disturb badgers and advice should be sought from a suitably experienced ecologist under such circumstances. If disturbance to an active sett is probable, then a licence may need to be obtained from Natural England before any works commence.

Legislation relating to invasive plant species

Several non-native invasive plant species such as Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), Japanese Rose (*Rosa rugosa*), variegated yellow archangel (*Lamium galeobdolon*), rhododendron (*Rhododendron ponticum*) and Japanese Knotweed (*Reynoutria japonica*) are listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to '....plant or otherwise cause the species to grow in the wild'. This includes spreading or transferring contaminated soil from one area to another.

Estate managers and landowners have a duty to pro-actively treat knotweed outbreaks. Under the Natural Environment and Rural Communities Act 2006 (NERC), subsection 14ZA (1), makes it an offence to sell, offer for sale, or to have in one's possession or transport for the purpose of sale, any Schedule 9 animal or plant or anything from which such an animal or plant can be propagated, including rhizomes of Japanese knotweed. Under subsection 14ZA (2) it is also an offence to public or cause to be published any advertisement for the sale or purchase of these animals or plants.

The Environmental Protection Act 1990 (EPA1990) contains a number of legal provisions concerning controlled waste. Any Japanese knotweed contaminated soil or plant material that is intended for discard is likely to be classified as controlled waste.

The Environmental Protection (Duty of Care) regulations 1991 also imposes a 'duty

of care' on persons concerned with controlled waste, which includes any materials incorporating Japanese Knotweed including soil, grass cuttings, general wastes and ash arising from the burning of knotweed. The duty applies to any person, who produced, imports, carries, keeps, treats or disposes of controlled waste. Failure to appropriately dispose of any material containing Japanese Knotweed may lead to prosecution under Section 33 and 34 of the EPA 1990 and Section 14 (2) of the Wildlife and Countryside Act 1981 (as amended).

If Knotweed stands are to be treated with herbicides, The Control of Pesticides Regulations (1986) applied. These regulations require any person who uses a pesticide to take all reasonable precautions to protect the health of human beings, creatures and plants, safeguard the environment and in particular avoid the pollution of water. If pesticides are to be used in or near to a watercourse, the Environment Agency should be contacted, and approval must be sought (application to use herbicides in or near water).

Waste leaving the site must be handled responsibly and in accordance with the law at all stages between its production and final recovery or disposal. Waste must be transferred to an authorised person, who is either a registered waste carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.

Additional legislation regarding the transport of Japanese Knotweed contaminated materials is covered by the Hazardous Waste Regulations 2005 (HWR 2005). This contains provisions about the handling and movement of hazardous waste. Consignment notes must be completed when any hazardous waste is transferred, which includes details about the hazardous waste properties and any handling requirements. Untreated Japanese Knotweed is not classed as hazardous waste, but material containing Knotweed which has been treated with certain herbicides, may be classified as hazardous waste.

If any waste soil of knotweed is sent for landfill either before or after treatment, it must go to a landfill that is authorised to receive it.

Bluebells

Bluebells are protected by the Wildlife and Countryside Act 1981 (as amended). It prohibits anyone from digging up bulb in the countryside and landowners from removing bluebells from their land for sale. The species is also listed on Schedule 8 of the Act in 1998 which makes trade in wild bluebell bulbs or seeds an offence.

Planning and Infrastructure Act (2025)

This act includes the new Nature Restoration Fund will allow developers to get spades in the ground faster for multiple housing and infrastructure projects, with Natural England putting in place pro-nature measures at scale to restore natural habitats and wildlife. The Government also published an implementation plan setting out how the Nature Restoration Fund will work in practice and the timelines for the first Environmental Delivery Plans. The plan confirms the government will make cleaning up rivers by removing pollution at source a priority, along with streamlining processes for developers.

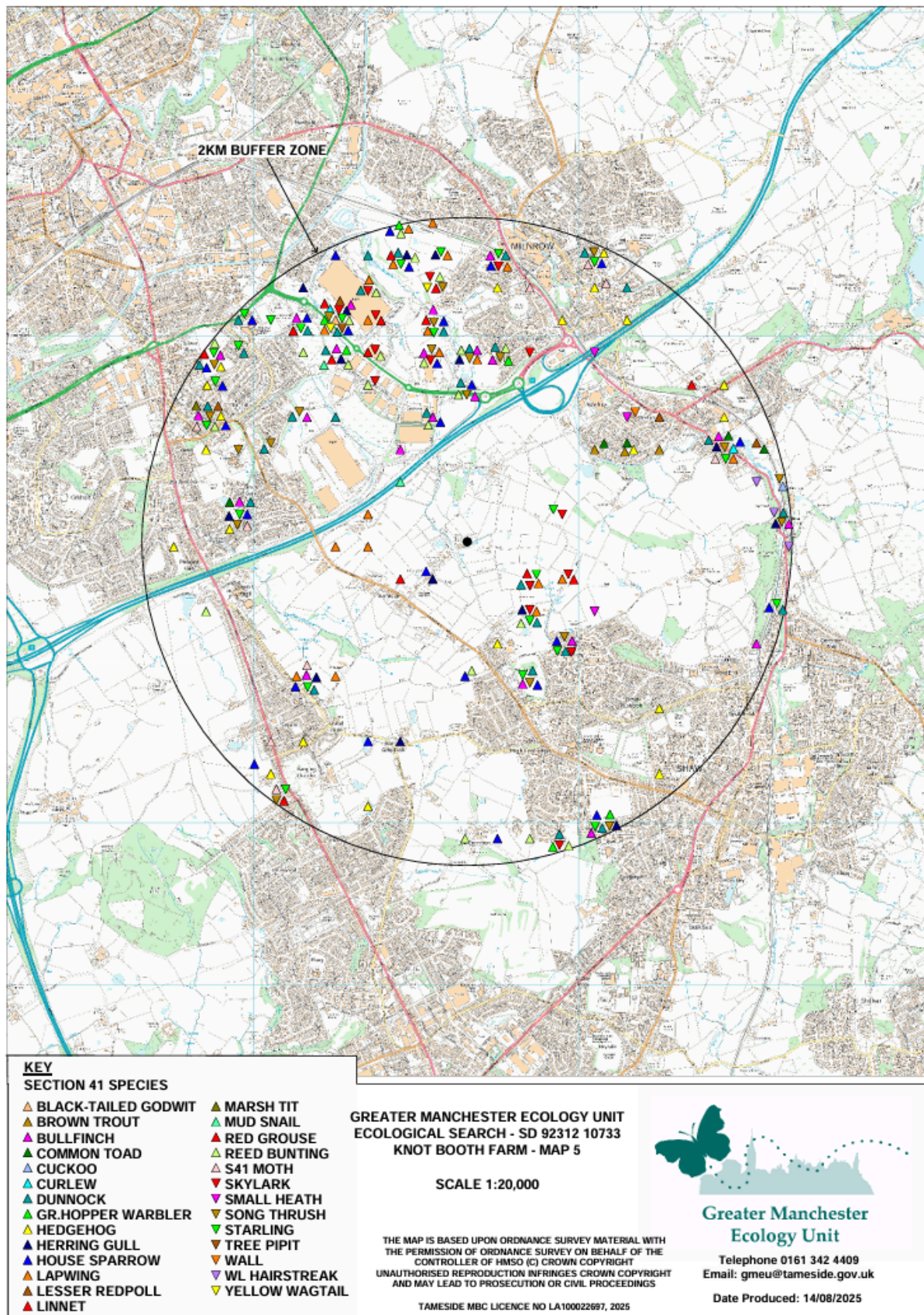
APPENDIX 2: HABITAT MAP



APPENDIX 3: SITE LAYOUT PLAN



APPENDIX 4: GMEU DATA RESULTS



APPENDIX 5: Bats: WHAT TO DO, SHOULD BATS BE FOUND DURING BUILDING WORK

All of the UK's bats and their roosts, are protected by law, (see Appendix 1), so it is important to understand these laws, if you are planning any building or remedial work that may affect or disturb a bat roost. The relevant statutory authority should be initially contacted for advice.

Having bats roosting within a building does not necessarily mean that work cannot be carried out. What it does mean is that the work will need careful consideration, especially in terms of time and materials, so that the area can continue to be used by both bats and people. Therefore, the earlier in the process the bats are taken into account, the less disruption to building plans there will be.

If at any point during either new building work, renovation work, or demolition, one or more bats are found, then all work being undertaken by contractors should stop immediately. All working machinery and contractors should be removed from the area where the bats have been found, and advice sought immediately from one of the following, on how to proceed while causing minimal disturbance to bats.

Advice can either be provided by a professional licensed ecological consultant - Echo Calls Bat Surveys on 07745 268815, the Bat Conservation Trust on 0345 1300 228, or from your Statutory Nature Conservation Organisation (SNCO) , or from Natural England on 01270 754 000.

Depending on the advice given, a licensed bat worker, or suitably qualified Natural England approved representative, will then be sent to site to liaise with the site manager, and Natural England itself. Depending on the advice given, actions will be recommended that may include the safe removal of the bat by the nominated person, only where written or verbal permission has been gained by Natural England.

Works will recommence when Natural England are satisfied that the risk to bats has been removed. If, however, it is determined that the proposed work on site contains more risk to bats than was originally thought, then it is probable that further work will only proceed under a Natural England Development Licence.

If a bat is found under a tile, slate, flashing or any other covering material, work must stop immediately. If the bat does not fly out immediately, then the area around the roost must be carefully covered over, to protect the bat from the elements and further disturbance, leaving a small gap for bats to escape voluntarily. At this point, advice must be sought as mentioned above. The materials used to cover the occupied bat roost must be free from liquid, oil, grease, and other contaminants.

It is recommended that the handling of bats be avoided wherever possible, but if it absolutely necessary, then to avoid a bat being harmed, gloves must be worn whilst handling the bat. It should be carefully caught, placed in a cardboard box with air holes in the lid, and a small container containing water. The box should then be kept in a very quiet, dark area, away from further disturbance, whilst awaiting the arrival of the licensed bat worker, or Natural England approved representative.

Failure to do any part of this could result in a criminal offence.

APPENDIX 6 – TYPES OF BAT BOXES

The aim of any mitigation is to ensure that any work is carried out in a manner that avoids harm or significant disturbance to bats, and also to create new roosting opportunities for bats both during and after the development.

Schwegler 1FD boxes are to be erected to larger trees located along the edges of the site. This type of bat box is a “general all-rounder” and is suitable for all types of bats.

These boxes are to be erected as recommended by the Bat Conservation Trust guidelines which state that

- Ideally, erect the boxes facing so they face in different directions, to provide a range of temperature conditions. For example, boxes facing from south-east to south-west allow the sun to fall on each box for part of the day. During very hot days a south-facing box may overheat, but the other boxes should have some shade during the day.
- Bat boxes should be located close to a linear vegetation feature such as a tree line or hedgerow or to lines of buildings. Some bat species use these features for navigation between their roosting site and feeding ground and to avoid flying in open and exposed areas.
- Ensure that tree branches or other items will not impede the bats' approach to the box – clear away underneath the box so the bats can land easily before crawling into the box.
- Boxes should be erected at a height of approximately 4m above ground level.



Schwegler 1FD Bat Box

This Schwegler 1FD bat box has been developed specifically for smaller bats. The interior and the type and size of the entrance hole match the requirements of smaller species. It features a special layout inside the domed roof, an increased interior height, and two grooved internal wooden front panels with precise spacing between them.

This model has proved highly effective as a nursing area.

Occupants: Small bats such as the Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Daubenton's Bat (*Myotis daubentonii*) and Common Long-eared bat (*Plecotus auritus*).

APPENDIX 7: NESTING BIRDS MITIGATION AND COMPENSATION METHODS

Birds are declining throughout the country due to loss of roost and nesting places, and as the development may disturb nesting potential on the site, artificial nests are to be erected to compensate for this possible loss. The erection of artificial nests around the complex, will provide alternative sites for all three species of bird, and make a positive contribution to their conservation.

Making a nestbox suitable for robins and other box builders

What you need

Natural nest holes do not come in standard sizes, so use these dimensions only as a guide. Any plank or sheet of about 15 mm thick weatherproof timber is suitable. However, do not use CCA pressure-treated timber, since the leachates may harm birds. Cut each section as per our plan, which you can download by clicking on the link to the right.

Dimensions

The plan gives measurements for a small and a large box. Use only the first or the second figure throughout. For starlings and great spotted woodpeckers, use the dimensions for the large box; all the others need the small one.

The bottom of the entrance hole must be at least 125 mm from the floor of the nestbox. If it's less, young birds might fall out or be scooped out by a cat. The inside wall below the entrance hole should be rough to help the young birds to clamber up when it's time for them to leave.

Putting it together

Drill drainage holes to the base of the box, and use galvanised nails or screws to assemble. It's always best to leave the box untreated. As it weathers, it will blend into its surroundings. Softwood boxes can be treated with selected water-based preservatives, which are known to be safe for animals, such as Sadolin. Apply it only to the outside of the box, and not around the entrance hole. Make sure the box dries and airs thoroughly before you put it up.

A woodpecker box should be filled with a block of balsa wood, rotting log or wood chips – woodpeckers like to excavate their own nesting cavities.

Do not nail down the lid since you will need to clean out the box in the autumn. Attach the lid with a brass or a plastic hinge that will not rust, or hinge it with a strip of leather or rubber (an old piece of bicycle inner tube will do). Fasten it down with a good catch.

How big does the hole need to be?

The entrance hole size depends on the species you hope to attract:

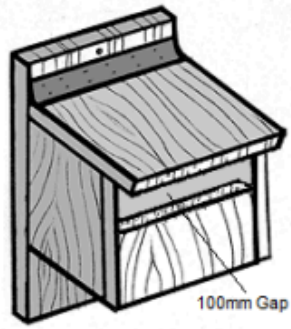
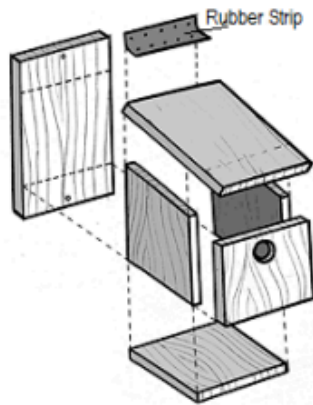
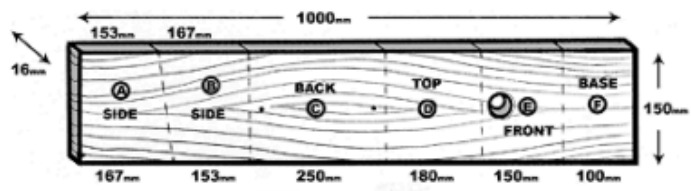
25 mm for blue, coal and marsh tits.

28 mm for great tits, tree sparrows and pied flycatchers.

32 mm for house sparrows and nuthatches.

45 mm for starlings.

The small box with a 100 mm high open front may attract robins, or pied wagtails. A wren would need a 140 mm high front panel, while spotted flycatchers and blackbirds prefer a low 60 mm front to the box.



Robin Box



TIT Box

APPENDIX 8: BATS AND LIGHTING

The detailed lighting plan on-Site should be functional and directional and in line with current guidance (Bats and Artificial Lighting at Night, August 2023). Habitat retained, enhanced or planted for roosting, foraging and/or commuting bats will need to be considered within a suitable lighting plan in order to be used by bats. Where designing with bats in mind:

- Light emitting diodes (LED) should be used, as these typically feature no UV component and as a result are less attractive to invertebrates and less disturbing to bats;
- Only luminaires with 0 % upward light ratio should be used and fitted on the horizontal to avoid excessive up-lighting, back lighting and light spill onto boundary hedgerows and trees;
- A warm white spectrum (ideally under 2700 Kelvin) should be used in order to reduce blue light component, therefore reducing the number of invertebrates attracted to the lights;
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill;
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered, although this has certain drawbacks and should only be used as directed by a lighting professional;
- Column heights should be carefully considered to minimise light spill;
- Any external security lighting should be set on motion-sensors and short (e.g., 1 minute) timers;
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats;
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed;
- Where habitat needs to be unlit (e.g., important foraging and commuting corridors/roost sites), illuminance should be below 0.2 lux on the horizontal plane and below 0.4 lux on the vertical plane.



TERMS OF BUSINESS

This fee proposal has been produced in good faith and in line with the specified details to Provide a fair reflection of our required involvement based upon our judgment and experience.

However, due to the nature of ecological survey work, this involvement may evolve should we encounter issues at the appraisal stage, if there is a significant departure from the original brief, or should unforeseen issues arise. Should this occur, we will notify you as soon as possible and prior to the addition of any further charges.

This cost estimate will remain valid for three months following the date of its production, after which we reserve the right to amend the document to reflect current market conditions. Our fee proposal includes various ecological assessment services aimed at ensuring compliance in your development project. The specific services are detailed within the fee estimate, and adjustments are noted where applicable.

The assessment works will be invoiced after the assessment/report has been produced when paid, the final report will be released to the client. Any additional services or disbursements required beyond the scope of this fee proposal will be reported to and agreed with the client, based on an hourly charge-out rate of £__ /hour plus VAT and disbursements.

By accepting this fee proposal, the client confirms: The correct ownership details for the site, including details of any adjoining land in the applicant's ownership, have been supplied.

That with respect to the Local Planning Authority/Council for the site, the applicant is not one of the following: a member of staff, an elected member, related to a member of staff, or related to an elected member.



The general term of business for Fieldology Works Ltd apply to this fee proposal. A copy of these terms is attached to this fee proposal and can also be found using the following link: [Fieldology Works Ltd Terms and Conditions](#). Fieldology Works ([google.com](#)) By accepting this fee proposal, you also accept the general terms of business for Fieldology Works Ltd.

Should you have any questions or require further clarification regarding this fee proposal, please do not hesitate to contact us

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